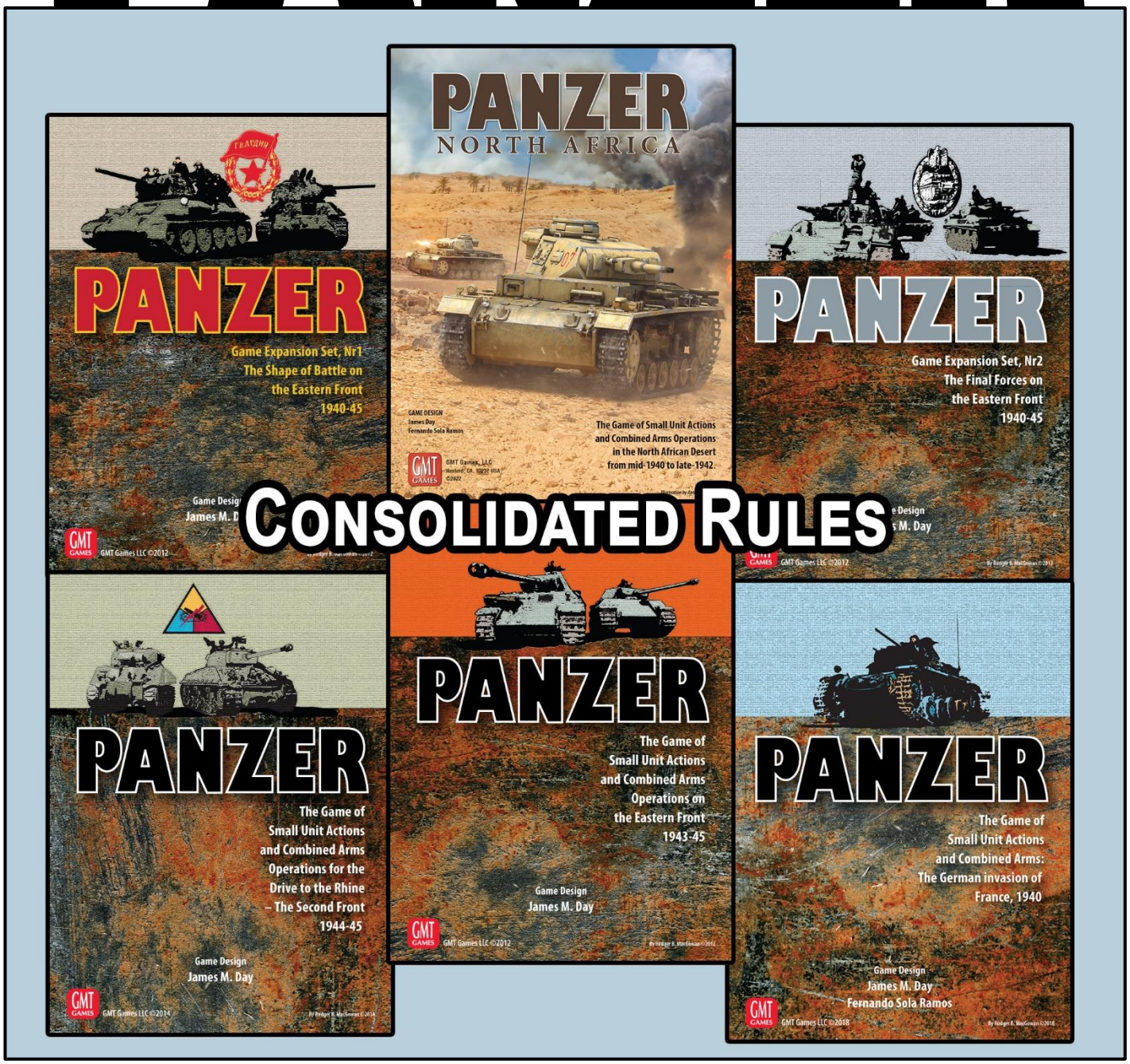
Consolidated Rules
May 2025

PANZER



GMT Games, LLC • P.O. Box 1308, Hanford, CA 93232-1308
www.GMTGames.com

© 2025 GMT Games, LLC

Table of Contents

Basic Game

INTRODUCTION 6
Scale 6
1.0 COMPONENTS 6
1.1 Rulebook 6
1.2 Mapboard and Geomorphic Mapboards 6
1.3 Terrain Overlays 7
1.4 Game Cards 7
1.5 Data Card Keys 7
1.6 Data Cards 8
1.7 Game Counters 8
1.7.1 Units 8
1.7.2 Command Counters (Unit Orders) 9
1.7.3 Information Counters 9
1.7.4 Terrain Counters 9
1.7.5 VP Reference 9
1.7.6 Other Counters 9
1.8 Turn Track, Transport & Summary & Hidden Unit Card 9
1.9 Formation Summary (Playbook) 9
1.10 Percentile Dice 10
1.11 Other Items (not included) 10
2.0 PREPARATION FOR PLAY 10
3.0 GENERAL PROCEDURES & RULES 10
3.1 Definition of the Phasing Player 10
3.2 Reading the Dice 10
3.3 Vehicle Facing 10
3.4 Counter Use & Facing 10
3.5 Range 11
3.5.1 Range in Hexes 11
3.5.2 Maximum Ranges 11
3.6 Controlling Objectives 11
3.7 Modifiers & Adjustments 11
3.8 Stacking 12
4.0 SEQUENCE OF PLAY 12
4.1 Basic Game Spotting Phase 12
4.1.1 Who may Spot? 12
4.1.2 Spotting Orientation 13
4.1.3 Determining Spotting Ranges 13
4.1.3.1 Vehicle Size 14
4.1.3.2 Over-Stacked Hex 14
4.1.4 Line-of-Sight 14
4.1.4.1 Terrain Features 14
4.1.4.1.1 Non-Blocking Terrain 14
4.1.4.1.2 Blocking Terrain 14
4.1.4.1.3 Building Hexes 15
4.1.4.1.4 Hill Hexes 15
4.1.4.1.5 Slope & Crest Hexsides 16
4.1.4.1.6 Gully, Ford & Stream Hexes 16
4.1.4.1.7 Woods & Grove Hexes 16
4.1.4.1.8 Wrecks 17
4.1.4.1.9 Smoke, Brew-Up 17
4.1.4.1.10 Hedgerow Hexsides 17
4.1.4.2 Determining Line-of-Sight 17
4.1.4.2.1 Obstacle Higher than Both 17
4.1.4.2.2 Obstacle Higher or Equal 18
4.1.4.2.3 Obstacle Equal or Lower 18
4.1.4.2.4 Obstacle Higher and Lower 18
4.1.4.2.5 Spotting Into/From Obstacles 19
4.1.4.2.6 Obstacle Hexsides 19
4.1.5 Extraneous Spot Counters 19
4.2 Basic Game Command Phase 19
4.2.2 Place Command Step 20
4.3 Basic Game Initiative Phase 20
4.3.1 Determining Initiative 20
4.3.2 How Initiative Works 20
4.4 Basic Game Combat Phase 20
4.4.1 Direct Fire Step 20
4.4.2 Overwatch Fire 21
4.4.3 AP Firing Sequence and Rules 21
4.4.3.1 Fields-of-Fire 21
4.4.3.1.1 Turreted Vehicles 21
4.4.3.1.2 Turretless 360º Vehicles 21
4.4.3.1.3 Non-Turreted Vehicles 21
4.4.3.1.4 Front Field-of-Fire 22
4.4.3.1.5 Rear Field-of-Fire 22
4.4.3.2 Resolving AP Fire 22
4.4.3.2.1 The AP Range Factor 23
4.4.3.2.2 AP Hit Modifiers 23
4.4.3.2.3 AP Hit Number 25
4.4.3.2.4 Basic Game Hit Angle Determination 25
4.4.3.2.5 Determining Armor Penetration 25
4.4.3.2.6 Basic Game AP Damage & Effects 26
4.5 Basic Game Movement Phase 28
4.5.1 General Movement Rules 28
4.5.1.1 Movement Procedure 28
4.5.1.1.1 Movement Factor 29
4.5.1.1.2 Movement Costs 29
4.5.1.1.3 Exceeding Movement Costs 30
4.5.1.1.4 Turning 30
4.5.1.1.5 Path and Road Movement 30
4.5.1.1.6 Movement Over Bridges 31
4.5.1.1.7 Reverse Moves 31
4.5.1.1.8 No Move Moves 31
4.5.1.1.9 Off Mapboard Moves 31
4.5.1.1.10 Vehicle Coexistence 31
4.6 Adjustment Phase 32
4.6.1 Adjust & Remove Counters Step 32
4.6.2 End Turn Step 32

Advanced Game

INTRODUCTION TO THE ADVANCED GAME (AG) 33
5.0 ADVANCED GAME GENERAL PROCEDURES & RULES 33
5.1 Leg Units 33
5.1.1 Squads & Half-Squads 33
5.1.2 Sections 33
5.1.3 Attached Crew-Served Weapons 33
5.1.3.1 Mortars 34
5.1.3.2 HMGs 34
5.1.3.3 Anti-Tank Rifles 34
5.1.3.4 Hand-Held Anti-Tank Weapons 34
5.1.3.5 Flamethrowers 35
5.2 Towed Units 35
5.2.1 Portée [B-14B1, B14B2 & I-6B (Panzer North Africa)] 35
5.3 Artillery Units 36
5.4 Aircraft Units 36

© 2025 GMT Games, LLC

5.4.1 Fixed-Wing Aircraft 36
5.5 Advanced Game Unit Facing 36
5.6 Minimum Range 36
5.7 Small Arms 36
5.8 Grade 37
5.8.1 Force Grade 37
5.8.2 Formation Grade 37
5.8.3 Unit Grade 37
5.9 Command, Recon, Engineer, and FO Units 37
5.9.1 Command Units 37
5.9.2 Recon Units 37
5.9.3 Engineer Units 37
5.9.4 FO Units 37
5.10 Suppression 38
5.11 Coexisting Fire, Smoke & Barrages 38
5.12 Modifiers & Adjustments 38
5.13 Stacking 38
5.14 Dual Fire 38
5.15 Bailing Out 38
5.16 Ammo Limits 39
5.16.1 Special Ammo Availability 39
5.16.2 Determining Ammo Limits 40
5.16.2.1 Basic Ammo Limits 41
5.16.2.2 Special Ammo Limits 41
5.16.2.3 (On-Map) Smoke & Illumination Ammo Limits 41
5.16.2.4 Leg & Towed Ammo Limits 41
5.16.2.5 Off-Map Artillery Ammo Limits 42
5.16.2.6 Aircraft Ammo Limits 42
5.16.2.7 German Tungsten Supply 42
6.0 ADVANCED GAME SEQUENCE OF PLAY 42
6.1 Advanced Game Spotting Phase 42
6.1.1 Who may Spot? 42
6.1.2 Spotting Orientation 42
6.1.3 Determining Spotting Ranges 42
6.1.3.1 Suppressed Units 43
6.1.3.2 Full Cover Units 43
6.1.3.3 Recon Units 43
6.1.4 Line-of-Sight 43
6.1.4.1 Hull Down & Partial Hull Down 43
6.1.4.1.1 Hull Down 43
6.1.4.1.2 Partial Hull Down 43
6.1.4.1.3 Automatic Partial Hull Down 43
6.1.4.2 Full Cover 43
6.1.4.3 Terrain Features 44
6.1.4.3.1 Building Hexes 44
6.1.4.3.2 Wall & Defilade Hexsides 45
6.1.4.3.3 Block 45
6.1.4.3.4 Ditch 46
6.1.4.3.5 On Fire 46
6.1.4.3.6 Hasty Entrenchment 46
6.1.4.3.7 Improved Position 46
6.1.4.3.8 Mines 46
6.1.4.3.9 Rubble 46
6.1.4.3.10 Smoke and Barrages 46
6.1.4.3.11 Wire 48
6.1.4.3.12 Dust 48
6.1.4.3.13 Sun Blinding 48
6.1.4.3.14 Railroad Track Hexes 48
6.2 Advanced Game Command Phase 49
6.2.1 Determine Available Commands Step 49
6.2.1.1 Determining Available Commands 49
6.2.1.1.1 Available Commands Procedure 49
6.2.1.1.2 Command Range 50
6.2.1.1.3 Sharing Available Commands 50
6.2.1.1.4 Executing Shared Commands 50
6.3 Advanced Game Initiative Phase 51
6.3.1 Determining Initiative 51
6.4 Advanced Game 1st Air Phase 51
6.5 Advanced Game Combat Phase 51
6.5.1 Indirect Fire Step 51
6.5.1.1 Announcing Indirect GP Fire 52
6.5.1.1.1 FOs – Forward Observers 52
6.5.1.1.2 Command Observers 52
6.5.1.1.3 Recon Observers 53
6.5.1.1.4 On-Map Units 53
6.5.1.2 Types of Indirect Fire Units 53
6.5.1.3 Level of Attachment 53
6.5.1.3.1 Attached 53
6.5.1.3.2 Organic 53
6.5.1.3.3 Unattached 53
6.5.1.4 Pre-Registered Points 53
6.5.1.5 Indirect Fire SHEAF 53
6.5.1.6 Indirect Fire Types 54
6.5.1.6.1 GP & Smoke Types 54
6.5.1.6.2 Illumination Type 54
6.5.1.7 Called Indirect Fire 54
6.5.1.8 Continuous or Adjusted Indirect Fire 55
6.5.1.8.1 Continuous Called Indirect Fire 55
6.5.1.8.2 Adjusting Called Indirect Fire 55
6.5.1.9 Checking Indirect Fire 55
6.5.1.10 Danger Close Indirect Fire 55
6.5.1.11 Planned Indirect Fire 55
6.5.1.11.1 Plotting Planned Indirect Fire 55
6.5.1.11.2 When Planned Fire Arrives 56
6.5.1.11.3 Adjusting Planned Indirect Fire 56
6.5.1.11.4 Smoke & Illumination Limited Ammo 56
6.5.1.12 Determining Indirect Fire Response 56
6.5.1.12.1 Called Indirect Fire Response Modifiers 56
6.5.1.13 Indirect Fire Resolution 57
6.5.2 Direct Fire Step – AP Fire 59
6.5.2.1 AP Number of Hits 59
6.5.2.2 AP Hit Angle 61
6.5.2.2.1 Track Hits 62
6.5.2.2.2 Deck Hits 62
6.5.2.2.3 Hull Down Hits 62
6.5.2.2.4 Damaged Result 63
6.5.2.3 Armor Determination 63
6.5.2.3.1 Level, Rising & Falling Shots 63
6.5.2.3.2 Front or Rear Hit Angles 63
6.5.2.3.3 Front/Side or Rear/Side Hit Angles 64
6.5.2.3.4 KE vs. CE Ammo Types 64
6.5.2.4 AP Hit Modifiers 64
6.5.2.5 AP Damage & Effects 66
6.5.2.6 Bail Out – AP Fire 66
6.5.2.6.1 Crew 66
6.5.2.6.2 Passengers 66
6.5.3 Overwatch Fire – GP Fire 67
6.5.4 Direct Fire Step – GP Fire 67
6.5.4.1 The GP Factor 67
6.5.4.2 The GP Defense Factor 68
6.5.4.2.1 Vehicle GP Defense Factors 68
6.5.4.2.2 Leg and Towed GP Defense Factors 69
6.5.4.2.3 Transported GP Defense Factors 69
6.5.4.2.4 Aircraft GP Defense Factors 70
6.5.4.2.5 Terrain GP Defense Factors 70

© 2025 GMT Games, LLC

6.5.4.3 GP Fire Modifiers 70
6.5.4.4 GP Fire Determination 73
6.5.4.4.1 No Effect Result – All Units 74
6.5.4.4.2 Vehicle suppression & Effective Results 74
6.5.4.4.3 Leg, Towed & Terrain Suppression & Effective Results 75
6.5.4.5 Bail Out – GP Fire 75
6.6 Advanced Game Movement Phase 77
6.6.1 Close Assault/Hand-to-Hand Combat Step 78
6.6.1.1 Close Assault Combat 78
6.6.1.1.1 Close Assault Combat Resolution 78
6.6.1.1.2 Close Assault Combat Modifiers 78
6.6.1.1.3 Close Assault Combat Results 80
6.6.1.2 Hand-to-Hand Combat 81
6.6.1.2.1 Hand-to-Hand Combat Resolution 81
6.6.1.2.2 Hand-to-Hand Combat Modifiers 82
6.6.1.2.3 Hand-to-Hand Combat Results 82
6.6.2 Suppression Effects – Movement 83
6.6.3 Vehicle Building Movement 83
6.6.4 Leg Movement 84
6.6.4.1 Leg Movement Factors 84
6.6.4.2 Quickmarch 85
6.6.4.3 Crawling 85
6.6.4.4 Motorcycles & Bicycles 85
6.6.4.5 Cavalry 85
6.6.5 Towed Movement – Manhandling 86
6.6.6 Barrage Movement 86
6.6.7 Transporting 86
6.6.7.1 Transport & Passenger Capacity 86
6.6.7.1.1 Mounting & Dismounting 87
6.6.7.1.2 Emergency Bail Out 87
6.6.7.2 Transported Fire 87
6.6.8 Hasty Entrenchments 88
6.6.9 Searching for Hull Down 88
6.6.10 Overrun Combat 88
6.6.10.1 Overrun Combat Resolution 89
6.6.10.2 Overrun Combat Results 89
6.6.11 Command Control with Close Assault, Hand-to-Hand and Overrun 91
6.7 Advanced Game 2nd Air Phase 91
6.7.1 Aircraft Weapon Loads 91
6.7.2 Aircraft Movement – Flying 91
6.7.2.1 Aircraft Appearance & Loitering 91
6.7.2.2 Aircraft Speed & Altitude 92
6.7.2.3 Aircraft Movement Procedure 92
6.7.2.3.1 Turning Aircraft 92
6.7.2.3.2 Dive Bomber Movement 92
6.7.3 Aircraft Combat 92
6.7.3.1 Aircraft Spotting 92
6.7.3.1.1 Aircraft Acquiring Targets 92
6.7.3.1.2 Observers Spotting for Aircraft 93
6.7.3.1.3 Blocking Terrain for Aircraft 93
6.7.3.2 Strafing 93
6.7.3.3 Bombs 94
6.7.3.4 Rockets 94
6.7.3.5 Aircraft Combat Modifiers 95
6.7.4 Anti-Aircraft Combat 95
6.7.4.1 Anti-Aircraft Spotting 95
6.7.4.1.1 Anti-Aircraft Tracking Targets 95
6.7.4.1.2 AA Fields-of-Fire 95
6.7.4.2 AA Procedure 96
6.7.4.2.1 AA Fire Results 96
6.8 Advanced Game Adjustment Phase 96
6.8.1 Pivot Step 96
6.8.2 Adjust Full Cover Step 96
6.8.3 Adjust/Remove Suppression Step 96
6.8.3.1 Adjust/Remove Suppression Modifiers 96
6.8.3.1.1 Command other than N/C 96
6.8.3.1.2 Under Direct or Indirect Fire 97
6.8.3.2 Adjust/Remove Suppression Results 97
6.8.4 Adjust/Remove Counters Step 97

Optional Rules

7.0 OPTIONAL RULES 98
7.1 Morale 98
7.1.1 Cohesion Point 98
7.1.1.1 Determining the Cohesion Point 98
7.1.1.2 Tracking the Cohesion Point 99
7.1.2 Normal Morale Check 99
7.1.3 Forced Morale Check 99
7.1.4 Morale Check Procedure 100
7.1.5 Morale Check Results 100
7.1.5.1 Hesitating 100
7.1.5.2 Broken 100
7.1.6 Recovery 101
7.1.6.1 Hesitation Recovery 101
7.1.6.2 Break Recovery 101
7.2 Hidden Units 101
7.2.1 Hidden Unit Counters 101
7.2.2 Placing Hidden Unit Counters 101
7.2.2.1 Spotting Hidden Units 101
7.2.2.2 Moving Hidden Unit Counters 101
7.2.2.3 Revealing Hidden Unit Counters 102
7.2.3 Adding Hidden Unit Counters 102
7.3 Platoon & Section Command Control 102
7.4 Without Radio Sets 102
7.4.1 Spotting Limitation 102
7.4.2 Command Limitation 102
7.4.3 Observer Limitation 103
7.4.4 Morale Limitation 103
7.5 Soviet Early War Communications 103
7.6 Tank Fright 103
7.7 Limited Spotting 103
7.7.1 Spotting Ranges 103
7.7.2 Maximum Spots 103
7.8 Turrets 104
7.8.1 Adjust Turrets 104
7.8.2 Turreted Vehicle Hit Locations 104
7.8.3 Open & Buttoned Up Turrets 105
7.8.4 Overwatch Fire 105
7.9 Smoke Dischargers 105
7.10 CE Ammo Types 105
7.10.1 CE-Type Armor 105
7.10.2 CE Ammo & S-Type Vehicles 105
7.11 BU Modifier 106
7.12 Variable AP Penetration 106
7.13 Lower Hull Hits 107
7.13.1 Changing Elevation 107
7.13.2 Height Difference 107
7.14 Fire Priority 107
7.15 CE Ammo GP Direct Fire 107
7.16 Towed Unit Platform Gun Mounts 107
7.17 Attached Weapon Loss 108
7.18 Pinning Fire 108
7.19 Engineer vs. Terrain Combat 108
7.20 Long Guns 108
7.21 Variable Track Damage 108

© 2025 GMT Games, LLC

7.22 Infantry Smoke....108
7.22.1 Direct Fire Smoke....108
7.22.2 Smoke Ammo Limits....108
7.23 Vehicle Collateral Damage....109
7.23.1 TF – Turret Front....109
7.23.2 TS/TR – Turret Side or Turret Rear....109
7.23.3 HF – Hull Front....109
7.23.4 HS/HR – Hull Side or Hull Rear....109
7.24 Camouflage....109
7.25 Weapon Malfunction....109
7.26 Indirect Fire Scatter....109
7.27 Illumination Indirect Fire Missions....110
7.28 Counter Battery Fire....110
7.28.1 Utilizing Counter Battery Fire....110
7.28.2 Resolving Counter Battery Fire....110
7.28.3 Counter-Counter Battery Fire....110
7.29 Bogging Down....111
7.30 Narrow Roads & Paths....112
7.31 Mines & Minefields....112
7.31.1 Minefield Placement....112
7.31.2 Minefield Combat....112
7.31.2.1 Anti-Vehicular Minefield Combat....112
7.31.2.2 Anti-Personnel Minefield Combat....113
7.31.3 Eliminating Minefields....113
7.31.3.1 Indirect Fire vs. Minefields....113
7.31.3.2 Bombs & Rockets vs. Minefields....113
7.31.3.3 Engineer Units vs. Minefields....113
7.32 Weight Limitations....113
7.33 Dual Driving Controls....113
7.34 Amphibious Movement....114
7.35 Fires....114
7.35.1 Start Fires....114
7.35.2 Ground Units in Fires....114
7.35.3 Hand-Held Anti-Tank Rockets....114
7.35.4 Fire in Woods & Groves....114
7.36 Terrain, Time of Day & Weather Conditions....114
7.36.1 Alternate Spotting Conditions....114
7.36.2 Cautious Movement....115
7.36.3 Ground Weather Conditions....115
7.36.4 Khamsin....115
7.37 Artillery Reconnaissance by Fire....115
7.38 Special Units....115
7.38.1 British Mounted Fire [B-5A (Panzer), B-16A (Panzer North Africa) & B-8B]....115
7.38.2 British Churchill Crocodile [B-12B (Panzer)]....115
7.38.2.1 Flame Combat....115
7.38.2.2 Fuel Trailer Hits....115
7.38.3 British FO Tanks [B-1A, B-9A (Panzer) & B-9B (Panzer North Africa)]....116
7.38.4 British White Scout Car [B-15B]....116
7.38.5 British Archer [B-12A (Panzer)]....116
7.38.6 British Littlejohn Adapter [B-16A (Panzer)]....116
7.38.7 German Schwimmwagen....116
7.38.8 US 12.7mm AAMG [U-16A (Panzer)]....116
7.38.9 German Tank Armor [G-2A (Alt) & G-12B (Alt)] 117
7.38.10 French Char B1-bis [F-4B]....117
7.38.10.1 75mm Combat....117
7.38.10.2 Rear Left Side Hull Armor....117
7.38.11 French 25mm Gun [F-5A and F-10A]....117
7.38.12 Italian L3/35 Lf [I-5A]....117
7.38.12.1 Flame Combat....117
7.38.12.2 Fuel Trailer Hits....117
7.38.13 British CS Tank Howitzers....117
7.39 Morale & Vehicle Bailout....118
7.40 Road/Path Movement [Expanded]....118
7.41 Removing Spot Counters....118
7.42 Staggered Initiative....118
7.42.1 Determining Initiative – Initial First Player....118
7.42.1.1 Subsequent Formations....118
7.42.1.2 Combining Fire....119
7.42.1.3 Overwatch Fire....119
7.42.2 Movement Phase....119
7.42.3 Streamlined Movement Phase....119
7.43 Recon Unit Capabilities [Expanded]....119
7.44 Airborne operations....119
7.44.1 Paratroops....119
7.44.1.1 Parachute Landing....119
7.44.1.2 Parachute Landing Status....120
7.44.1.3 Parachute Overwatch Fire....121
7.44.1.4 Parachute Anti-Aircraft Fire....121
7.44.2 Gliders....122
7.44.2.1 Gliders....122
7.44.2.2 Glider Landing....122
7.44.2.3 Glider Landing Status....122
7.44.2.4 Glider Overwatch Fire....123
7.45 Bocage Country....123
7.46 Artillery Air Bursts....123
7.47 Dismounted FOs....123
7.48 Delayed Reaction....124
7.49 Vehicle Assault Cover....124
7.50 Defensive Fire....124
7.51 Illumination [new counter Expansions 3 & 4]....124
7.52 Command Span....124
7.53 Voluntary Bail Out....125
7.54 Quickdraw....125
7.55 Leaders....126
7.55.1 Leader Employment....126
7.55.2 Leader Effects....126
7.55.3 Force Leaders....127
7.56 Hull and Turret Damage [new counter]....130
7.57 Tank Crew Size....130
7.58 Counters....130
7.59 Terrain....131
7.59.1 Brush....131
7.59.2 Crops....131
7.59.3 Tracks....131
7.59.4 Airfield....131
7.60 Random Recon....132
7.60.1 Movement....132
7.60.1.1 Roads, Paths & Tracks....132
7.60.1.2 Sounds....132
7.60.2 Spotting....132
GLOSSARY....133
INDEX....135

© 2025 GMT Games, LLC

Introduction

"You start out with a bag full of luck and an empty bag of experience. The trick is to fill the bag of experience before emptying the bag of luck." ~ Anonymous

Panzer is a game of conventional ground-oriented combat set on World War II. It is designed to test the tactical skills of two or more players.

As a tactical level game, the battles (scenarios) depict small unit actions. As such, any force can theoretically defeat any other force set at any time during the scenarios presented. The Soviets actually won many small unit actions in 1941, as did the Germans in 1945. That is the advantage tactical games have over strategic games. The time-bias has a much smaller impact.

These rules may seem lengthy, but in reality once the game mechanics are understood, the system is really quite intuitive and straightforward. To assist in the assimilation, the rules are organized by a number code for quick reference. The most commonly used information is contained on the various Game Cards, Data Cards and Reference Cards for easy accessibility during play.

There is no reason to sit down and open this rulebook with an intention of reading it cover to cover, memorizing each section along the way. Start with the Basic Game Rules, play a few vehicle on vehicle encounters and then advance on to the Advanced Game rules.

However, take it in stages. Keep in mind that it is quite a step from the Basic Game to the entire Advanced Game. Even given that, not all of the Advanced Game elements need be included in every single scenario.

The Optional Rules add additional depth, but they should only be tackled once the players are comfortable with the Basic and Advanced Game rules. The Optional Rules build on those concepts, so a complete understanding is important to get the most out of the Optional Rules.

In all cases, consider the Advanced Game and Optional Rules modular—add them as tastes and interests dictate.

The various text in this format are examples of play; expanding on the rules and concepts.

The various text in this format are design notes; the reasons why things are what they are, and general comments and background information.

Scale

The scale is structured to support its predominate one-to-one presentation. With that in mind, the game scale is composed of three distinct elements: force representation, ground scale, and time scale.

The force representation is one-to-one for vehicles, towed weapons and aircraft. The main leg units are squads, half-squads and sections. Leg crew-served weapons are grouped into sections of 2-3 HMGs, mortars, ATRs, etc. Off-map artillery units are batteries of 2-6 gun tubes.

The horizontal ground scale is 1 hex equals 100 meters; the vertical ground scale is one level equals 3 to 8 meters.

The time scale is fluid with each complete turn representing approximately 15 seconds to 15 minutes.

1.0 Components

Players should familiarize themselves with all game components before starting play. Some components are not used in the Basic Game and are marked with (AG) or (OR) indicating their use with the Advanced Game or Optional Rules.

The time scale is fluid with each complete turn representing approximately 15 seconds to 15 minutes.

1.1 Rulebook

All of the information required to play the game is contained in this rulebook. For ease of use, it includes diagrams, illustrations, and examples of play to speed up the learning process. A table of contents, glossary and index are also available to facilitate quick reference.

The rulebook is divided into Basic Game, Advanced Game (AG) and Optional Rules (OR) sections.

Some of the rule sections refer to units or capabilities for units included in the different expansions or to possible future expansions.

1.2 Mapboard and Geomorphic Mapboards

The 22" x 34" mapboard included in Panzer Base Game is used to battle it out through the included scenarios. The superimposed hex grid regulates movement and determines combat results.

Also included:

- Each hex has a specific terrain type that clearly dominates the hex. It affects both movement and combat.
- Each hex has a center white dot that is used when determining line-of-sight.
- Each hex has a unique numerical identifier that is used for scenario setup, victory determination, and other reference notations.
- Textual notations including hill identifiers and village names are typically utilized for setup and victory determination.
- A directional hex is used for special setup conditions and other random events.

© 2025 GMT Games, LLC

The Panzer Expansion Sets each contain one or more double-sided geomorphic mapboards (also referred to as maps).

Panzer North Africa contains six double-sided geomorphic mapboards. The terrain depicted is representative of the North African campaign area.

These maps enable a wide variety of configurations when setting up or designing scenarios.

The superimposed hex grid regulates movement and determines combat results.

Geomorphic maps have a slightly different presentation than the 22”x34” mapboard.

- They may be flipped and combined along the short or long edge to form many different configurations.
- Each hex has a specific terrain type that clearly dominates the hex. It affects both movement and combat.
- Partial hexes are playable. They are part of the mapboard containing the hex identifier when they link on two connecting maps.
- Each mapboard has a directional hex. The number in the center identifies the mapboard in play. Its hex is also used for special setup conditions and other random events.
- Each hex has a center white dot that is used when determining line-of-sight.
- Textual notations including hill and village identifiers are typically utilized for setup and victory determination. Villages may have actual names or coded names to support encrypted communications.
- Each hex contains a unique alpha-numerical identifier, e.g., E9, certain partial hexes may be numbered 0, e.g., C0. When referring to a hex, the first number is the mapboard identifier followed by a specific hex identifier, e.g., 29E9.

1.3 Terrain Overlays

Terrain overlays are used to modify and enhance mapboard terrain. Overlays are placed as called for in the Overlays section of each scenario. When placing overlays, if the overlay splashes over into adjacent hexes obscuring the terrain in that hex, especially roads and paths, that terrain is still considered in effect.

The hex with the overlay identifier is placed in the listed hex with its direction arrow facing in the indicated direction based on the map’s directional hex. *For example, from Panzer North Africa Scenario 47, LG2 34O4(6) – overlay LG2’s ID hex in Map 34’s hex O4 with the arrow facing direction 6.*

1.4 Game Cards

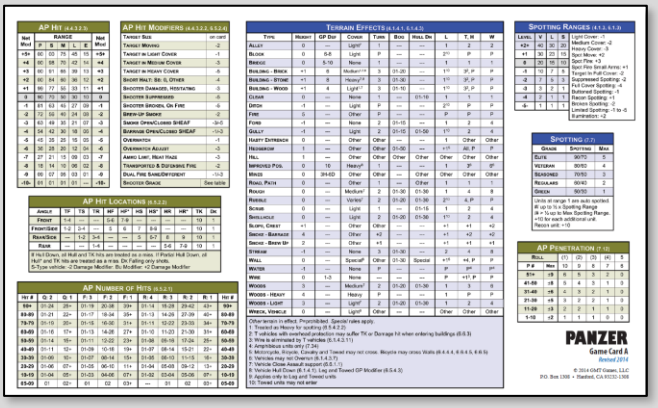
In the Panzer Base Game there are two sets of four Game Cards identified as A, B, C and D. In Panzer North Africa there are two identical Game Cards with sides A and B. These cards contain all of the combat and support tables and contain all of the tables and charts required for play.

The Combat Effects Summary is found on Game Card D in Panzer or on the back cover of the Playbook in Panzer North Africa. This card summarizes combat effects.

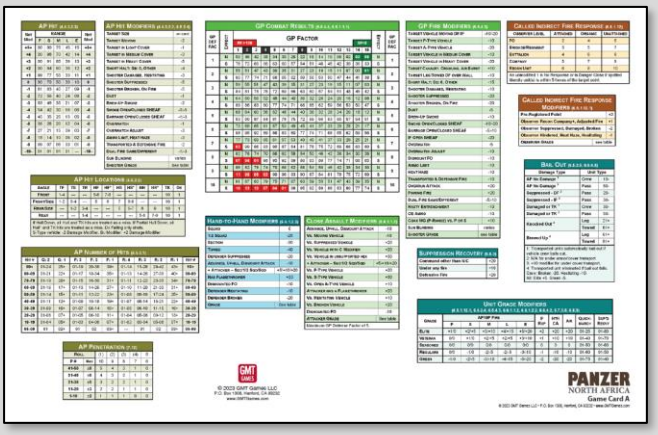
Whether it is combat determination, command control, morale, the combat effects summary, or the sequence of play, all of that information is found on one of the Game Cards.

Game Card tables and charts of similar function all have the same color title bar to help organize and direct players to similar use tables. The various tables and charts are explained throughout this rulebook.

Game Card A (Panzer)



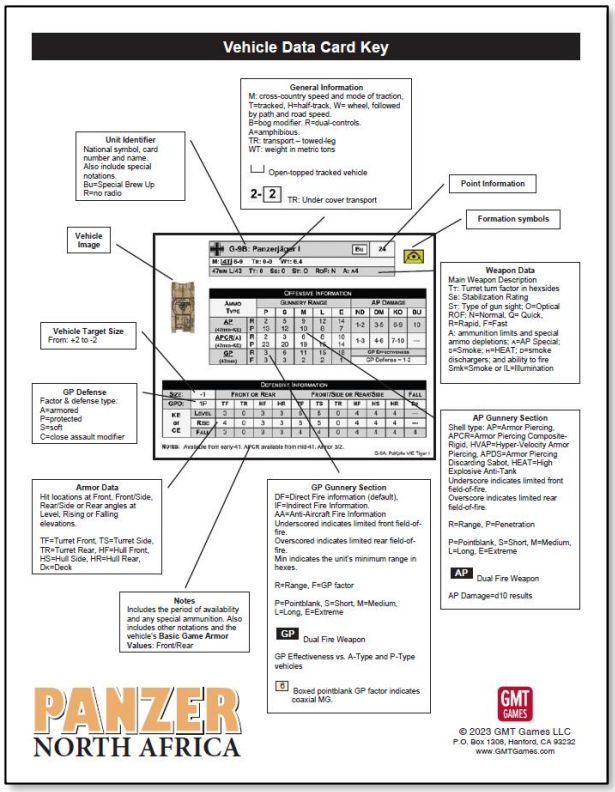
Game Card A (Panzer North Africa)



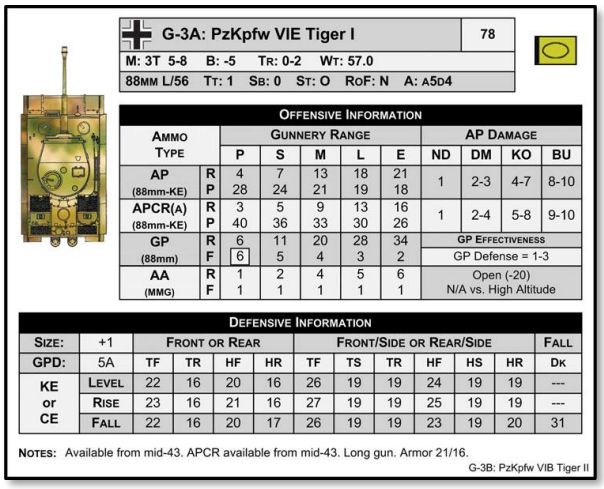
1.5 Data Card Keys

The Data Card Keys provide a summary of the information found on the numerous Data Cards. The land and air units share a great deal of common information, but also possess information unique to the particular type of unit. It is a good idea to become familiar with the various format types and presentation of data.

© 2025 GMT Games, LLC



1.6 Data Cards



G-3A: PzKpfw VIE Tiger I 78

M: 3T 5-8 B: -5 Tr: 0-2 Wt: 57.0

88mm L/56 Tt: 1 Sb: 0 St: O RoF: N A: a5d4

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP Effectiveness			
	F	[6]	5	4	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

Defensive Information

Size:	+1	Front or Rear TF	TR	HF	HR	Front/Side or Rear/Side TF	TS	TR	HF	HS	HR	Fall Dk
GPD:	5A											
KE or CE	Level	22	16	20	16	26	19	19	24	19	19	---
	Rise	23	16	21	16	27	19	19	25	19	19	---
	Fall	22	16	20	17	26	19	19	23	19	20	31

Notes: Available from mid-43. APCR available from mid-43. Long gun. Armor 21/16.

G-3B: PzKpfw VIB Tiger II

All of the specific unit information is provided on the various Data Cards. Some contain information for multiple units.

Review the various Data Cards in conjunction with their respective keys. The various sections are explained throughout this rulebook.

1.7 Game Counters

The various die-cut counters are punched out to provide playing pieces and are interchangeably referred to as counters or markers.

They are used to show information and track status. Note that with the exception of the Command counters all the other counters are two-sided. The side used depends on what information a situation requires; their use is described throughout this rulebook.

1.7.1 Units

These counters represent an assortment of German (gray color), Russian (tan color), US (green color), British & Commonwealth (light green color), and Italian (khaki color) units.

The larger counters represent vehicles, towed guns and aircraft and contain the name, national symbol, image of the unit represented, Data Card reference, individual identification number, and movement factor.

The smaller counters represent leg units and contain a national symbol, image of the unit represented, and an individual identification number. For ease of use, squads have their corresponding half-squads on the reverse side.

Vehicle

Squads Half Squads

HMG Sections Mortar Sections

Other Sections

Squad Half Squad

Mortar HMG

Other

Aircraft

Towed Gun

Towed Gun

Aircraft

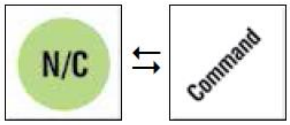
1.7.2 Command Counters (Unit Orders)

The 5 Command counters determine the actions each unit will conduct during an upcoming turn. In the Basic Game, each vehicle receives its own dedicated Command counter. When the Advanced Game's Command Control rules are employed, one or more units typically may share a single Command counter thereby executing the same action.

Command Counters

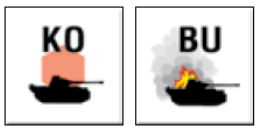
Fire Command *Move Command*

Fire/Move Command *Overwatch Command*



N/C Command

1.7.3 Information Counters



These are placed on the mapboard or directly on units to record game information or to track the status of units, e.g., KO and BU, for knocked out and brewed up vehicles.

1.7.4 Terrain Counters

These are placed directly on the mapboard to alter a hex's terrain, e.g., DITCH, BLOCK, and WIRE.

1.7.5 VP Reference

Includes VP Reference counters, in four colors, to mark specific Victory Point hexes or to use as a reminder as to the location of critical hexes.

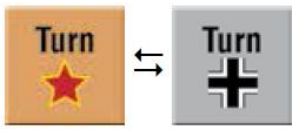
1.7.6 Other Counters

Spot Small Arms

Includes dedicated SPOT counters for marking Small Arms (see 6.1.3). If the target unit fired a weapon classified as Small Arms (see 5.7 Small Arms), it is marked with a Spot/Fire SA counter.

1.8 Turn Track, Transport & Summary & Hidden Unit Card

The two Turn Track, Transport & Summary & Hidden Unit cards include a Turn Track, and sections for Transport & Summary and Hidden Units.



While each card features a Turn Track, only one is used to track the current turn and the force designated as the First Player. If one force is utilizing the Hidden Unit rules (OR), it is probably easier to use the Turn Track on the other card.

The Transport & Summary Track helps organize units that are either being transported or are held off the mapboard as instructed by the scenario rules, a special condition, or just to better organize a hex containing a large number of units and other counters.

For transport purposes place the passenger unit(s) in one of the l0 numbered hexes. Then place its corresponding Summary counter on the transporting vehicle.

For summary purposes, place the units and counters from a hex again in one of the 10 numbered hexes. Then place its corresponding Summary counter in the appropriate hex on the mapboard. Be careful to position vehicles and towed guns along the edges of the summary hex so as to maintain their correct facing.

When used to organize hidden or off-map units, it is best to place the card somewhere away from the mapboard or under a cover sheet to hide the units from view. Place the hidden units in one of the numbered boxes. Then place its corresponding Hidden Unit counter in the appropriate hex on the mapboard.

1.9 Formation Summary (Playbook)

Formation: _____

Grade: _____ **Command:** _____

Units: _____

_____

COMMAND CONTROL & COHESION POINT													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	28

© 2025 GMT Games, LLC

The Formation Summary is used to record information about each formation in a player's force. Is not required for the Basic Game or for most elements of the Advanced Game, but becomes essential when employing the Command Control (AG) and Morale rules (OR).

It also helps players to organize their forces and keep track of various other information items. Please feel free to copy or print the page as needed.

1.10 Percentile Dice

Two sets of percentile dice are included. To keep play moving in larger games of 3 or more players, provide each player with their own set of dice.

What are percentile dice? They are a set composed of two different colored 10-sided dice each numbered from 1-10 or 0-9. They are commonly called d10s.

1.11 Other Items (not included)

A straightedge is very useful when determining any questionable lines-of-sight. Some Optional and scenario rules require random mapboard events; a standard six-sided die (commonly called a d6) is used for resolution.

Each player may also want to have a pencil handy for making notations on the Formation Summary, and a notepad for any other pertinent information necessary for Advanced Game or Optional Rules situations.

2.0 Preparation for Play

Select one of the available scenarios or feel free to design your own. Review the scenario information and position the mapboard based on the sides played.

The Setup Section of the scenario provides any special or unique requirements. In addition, the Special Conditions Section may also provide notes for the preparation of play.

Select the required unit counters and also select their corresponding Data Cards.

Give each side a set of dice, a set of Game Cards and position a Turn Track, Transport & Summary & Hidden Unit Card for ease of tracking the current turn. It is now time to open fire.

3.0 General Procedures & Rules

The following rules have an impact on more than one phase or step of the Sequence of Play, so it is a good time to review them at this point.

3.1 Definition of the Phasing Player

Players perform all actions and dice rolls for the vehicles they command—their Force. Therefore, a player is designated as the phasing player for his own vehicles. Within that context, after determining the Initiative a player is either the First or Second Player on any given Turn.

3.2 Reading the Dice

A set of two d10s (one colored and one white) generates a result from 01-00 (100), where a single d10 generates a result from 1-10 (where 0 equals 10). When rolling both d10s, players should be clear which color represents the tens value and which color represents the units value. Keep it consistent.

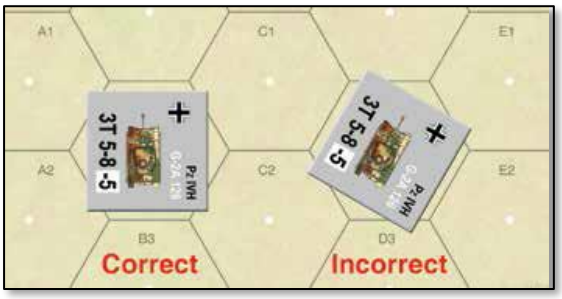
With a colored d10 & white d10 combination, if a 2 is rolled on the colored die and a 7 is rolled on the white die, the result is 27. If a 0 is rolled on the colored die and a 1 on the white die, the result is 1. If a 0 is rolled on the colored die and a 0 on the white die, the result is 100.

When a 1-100 result is required to resolve an action, roll (100) is stated; when a 1-10 result is required, roll (10) is stated.

3.3 Vehicle Facing

All vehicles have a front, side and rear facing. The fronts are shown as the top of the vehicle's pictures on each of their Data Cards, i.e., the direction in which it is facing. Vehicles must at all times face towards a hexside, not towards the angle of a hex.

Except during reverse moves, vehicles must always move with the front of the vehicle facing towards the direction of movement. During reverse moves, the vehicle moves in exactly the reverse of its front.

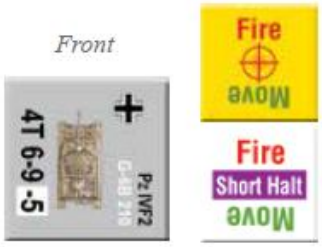


3.4 Counter Use & Facing

Counters are placed on or near a vehicle to display information about that vehicle and to indicate its Command for the current turn. Some counters have different information on the various faces of its counter that are further identified this rulebook.

The applicable information is always that which is on the face that matches the front of the vehicle. For example, the facing of the SPOT counter placed with the PzKpfw IVF2 tank indicates that it was spotted by its fire. Rotate the counter 180º and it would be spotted through movement. The side and facing determine what counter information is active in any given situation.

One of the Command counters, SHORT HALT, possesses two distinct commands—both FIRE and MOVE. For this Command, face the command that was just executed to the front of the vehicle. All FIRE commands are executed first, and then MOVE commands. Players are able to keep track of unmoved SHORT HALT vehicles, since the FIRE side is facing front until those vehicles move.



© 2025 GMT Games, LLC

A counter's active component is identified in these rules by its name/active component, if any, e.g., SPOT/FIRE.

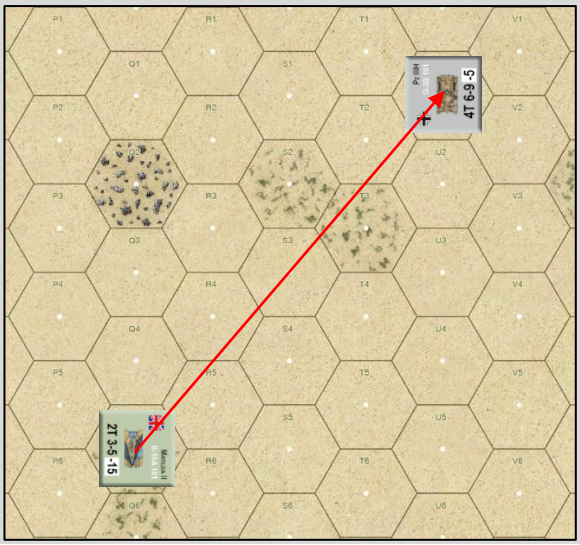
3.5 Range

Range is the distance from one vehicle to another and is always expressed as range in hexes.

3.5.1 Range in Hexes

The range in hexes is determined by counting hexes from one vehicle to another vehicle along the shortest route. Count the hex that the target vehicle occupies but not the hex that the spotting/firing vehicle occupies.

The range between the British Matilda II and the German PzKpfw IIIH is 6 hexes.



3.5.2 Maximum Ranges

All weapons have a maximum range beyond which they may not fire. Note that most vehicles have more than one ammunition type and some have more than one weapon.

The maximum range of a weapon, for an ammo type, is the range value found on a vehicle's Data Card in the E column (Extreme Range) along the R row (Range). Vehicles may never engage targets beyond their maximum range.

Reference the Vehicle Data Card Key (Panzer), the SU-76M M43's 76.2mm gun's AP ammo has a maximum range of 17 hexes.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 TR: 0-0 WT: 10.2

76.2MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A3

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP EFFECTIVENESS			
	F	5	4	3	3	2	GP Defense = 1-3			

DEFENSIVE INFORMATION												
SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	8	0	14	4	9	4	0	17	4	5	---
	RISE	8	0	18	4	10	4	0	22	4	5	---
	FALL	7	0	11	4	9	4	0	13	4	5	7

NOTES: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference the Vehicle Data Card Key of Panzer North Africa, the Panzerjäger I's 47mm's AP ammo has a maximum range of 14 hexes.

G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 TR: 0-0 WT: 6.4

47MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A4

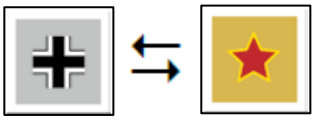
OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP EFFECTIVENESS			
	F	3	3	2	2	1	GP Defense = 1-2			

DEFENSIVE INFORMATION												
SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	3	0	3	3	5	5	0	4	4	4	---
	RISE	4	0	3	3	5	5	0	4	4	4	---
	FALL	3	0	3	3	4	4	0	4	4	4	4

NOTES: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

3.6 Controlling Objectives



Scenarios usually call for meeting certain objectives beyond just the destruction of opposing vehicles. Typically, these objectives are geographic features, e.g., a Bridge, Ford or Building hexes, hills, or exiting the mapboard, both are worth a number of victory points that are used in determining the victorious side in a scenario.

For on mapboard objectives, utilize the Control counters to track which force has control.

The Victory Conditions section of the scenarios list the conditions that must be met to capture an objective. Most require a vehicle to occupy an objective for one or more complete turns. The occupying vehicle need not be the same one that occupied an objective at the start of the turn, as long as the objective is still occupied by a friendly vehicle at the end of the turn. Once captured, continuous occupation is not required.

Unarmed vehicles may not capture objectives.

If contested, e.g., opposing units adjacent to a building hex that is On Fire, neither side controls the objective.

The turn requirement prevents players from moving vehicles in a mad dash on the very last turn to capture objectives.

3.7 Modifiers & Adjustments

Certain combat conditions call for spotting at greater than or less than the base spotting ranges.

AP Combat includes modifiers to the base spotting ranges and combat values. It typically adds or subtracts a modifier value or values from the base on the Spotting Ranges and AP Hit Tables.

SHORT HALT commands and Damage results each calls for vehicles to reduce their movement speed allowance by ½—always round down. If a Damaged vehicle has a SHORT HALT command, it moves at ¼ of the available movement speed allowance. A movement speed allowance is never less than 1.

If the original movement speed allowance is 5, ½ is 2; ¼ is 1.

© 2025 GMT Games, LLC

3.8 Stacking

A 100-meter hex is actually quite a large area, approximately 6,500 square meters, but there still is a physical limit as to what could reasonably occupy a hex before visual overcrowding occurs.

In game terms, any number of vehicles may stack in a single hex. However, if at any time a hex contains 6 or more vehicle counters (Wrecks do not count for stacking purposes), it is considered to be over-stacked and negative spotting, combat, and movement effects come into play. Those effects are outlined in the Spotting (see 4.1.3.2), Combat (see 4.4.3.2.2), and Movement (see 4.5.1.1.5) Phases sections.

4.0 Sequence of Play

SEQUENCE OF PLAY
1) Spotting Phase (4.1, 6.1)
2) Command Phase a) Determine Available Commands Step (6.2.1) b) Place Commands Step (4.2.1, 6.2.1.1.3)
3) Initiative Phase (4.3, 6.3, 7.42) a) Winner determines First or Second Player for the turn Force Grade Modifiers (AG): Elite: +40, Veteran: +20, Seasoned: 0, Regulars: -20, Green: -40
4) 1st Air Phase (6.4)
5) Combat Phase (4.4, 6.5) a) Indirect Fire Combat Step (6.5.1) i) First Player ii) Second Player b) Direct Fire Combat Step (4.4.1, 6.5.2, 6.5.4) i) First Player ii) Second Player iii) Overwatch (4.4.2, 6.5.3)
6) Movement Phase (4.5, 6.6) a) Close Assault/Hand-to-Hand Combat Step (6.6.1) i) First Player ii) Second Player b) Movement and Overrun Combat (6.6.10) Step i) Second Player ii) First Player
7) 2nd Air Phase (6.7)
8) Adjustment Phase a) Pivot Step (6.8.1) b) Adjust Turret Step (7.8) c) Adjust Full Cover Step (6.8.2) d) Adjust/Remove Suppressions Step (6.8.3) e) Adjust/Remove Morale Counters Step (7.1) f) Adjust/Remove Counters Step (4.6.1, 6.8.6) g) End Turn Step (4.6.2)
Advanced Game or Optional Rules Sequence of Play Phases and Steps

A scenario starts after all setup and preparation is complete. During a scenario, each side uses its forces in attempting to meet the scenario objective(s). A scenario is played in Turns. Each turn is divided into Phases, which may be further divided into one or more Steps.

These phases and their corresponding steps (see Sequence of Play on Game Card C in Panzer Base Game and on Game Card B in Panzer North Africa) are executed in the exact order listed.

For the Basic Game, ignore those phases and steps with red notations for the Advanced Game, or blue notations for Optional Rules.

4.1 Basic Game Spotting Phase

"If the enemy is in range, so are you." ~ Anonymous

Even though players can see the opposing vehicles on the mapboard, this does not necessarily mean that the vehicles can see each other in the context of the game.

Before a vehicle can fire on a target vehicle, that target vehicle must be spotted by the firing vehicle as described by the rules of spotting. Obviously, it makes no sense to give a FIRE command to a vehicle that cannot see any opposing vehicles.

Determining who is seen during the Spotting Phase is what makes it possible to give vehicles FIRE or SHORT HALT commands during the following Command Phase.

The spotting determination process is also followed when determining when an OVERWATCH command is triggered.

Players may freely check spotting at any time. However, keep in mind that this may "give away" a key shot or strategy. On the other hand, it just might mislead the opposing side into falling for a deceptive plan of action.

4.1.1 Who may Spot?

Any vehicle combat unit may spot opposing vehicles. For spotting purposes, a vehicle combat unit is defined as one possessing some form of offensive firepower or fire support sighting capability, e.g., Soviet T-34/85 M44 (Panzer) or German PzKpfw IIIH (Panzer North Africa).

Unarmed vehicles, e.g., trucks and prime movers, may not spot.

A continuity of spotting exists throughout a turn and from turn-to-turn. For ease of flow and game play, the different activities

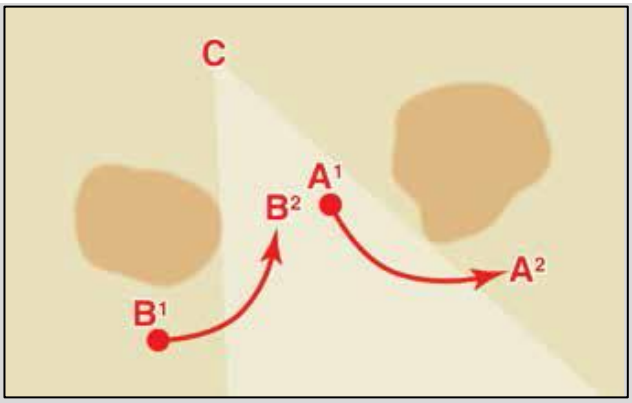
© 2025 GMT Games, LLC

performed during a turn are broken down into phases and steps. In real life these actions actually occur simultaneously, but in the context of the game, and ease of play, they are conducted sequentially.

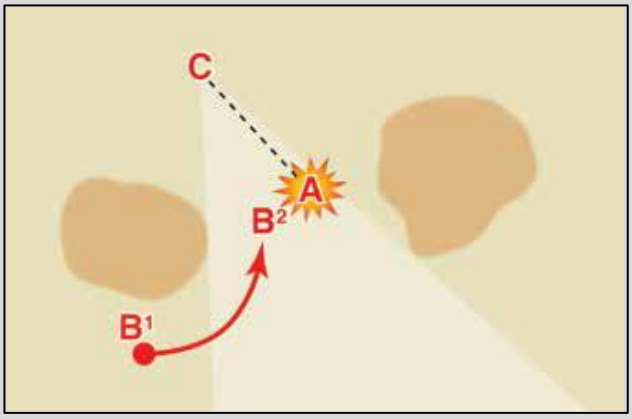
Once an opposing vehicle is spotted, it remains so as long as at least one friendly vehicle meets the range and line-of-sight requirements. Vehicles hand off spotted targets to one another as vehicles move into the area, move out, or are eliminated. As long as a single vehicle meets the spotting criteria during the Spotting Phase, an opposing vehicle remains spotted.

To fire on an opposing vehicle, it must be individually spotted by the firing vehicle as described by the rules of spotting. Handing off spotting targets does not mean friendly units are spotting for one another.

Unless the spotted vehicle moves away or all friendly vehicles move out of line-of-sight or are eliminated, the vehicle is still considered spotted.



1) A spots C since it has a SPOT/FIRE counter. B does not spot C due to blocking terrain. 2) During the following Movement Phase, while C remains stationary, A moves behind blocking terrain while B moves from behind its blocking terrain to a clear line-of-sight to C. 3) C continues to be spotted by B since it still has its SPOT/FIRE counter.



1) C spots A. B does not spot C due to blocking terrain. During the Combat Phase, C eliminates A and is marked with a SPOT/FIRE counter. 2) During the following Movement Phase, B moves from behind the blocking terrain to a clear line-of-sight to C. C is now spotted even though B moved during a later phase of the same turn.

If a spot is lost, it must be reacquired through the normal spotting and line-of-sight rules. A vehicle is not automatically spotted again if a condition changes even by the original spotting vehicle.

Once a vehicle is spotted, it just doesn't disappear from view at the end of a turn—it remains spotted. It is not realistic for spotted vehicles to automatically disappear from view at the end of a turn.

4.1.2 Spotting Orientation

Vehicle *combat* units spot in all directions (360°), not just in the direction their front faces. They may spot any and all opposing vehicles that may be spotted from their current hex.

4.1.3 Determining Spotting Ranges

Spotting ranges are based on the terrain type of the hex occupied by the target vehicle. Terrain provides both cover and concealment for vehicles; hereafter collectively referred to as Cover. It is classified as providing None, Light, Medium or Heavy Cover.

The terrain Cover types are listed in the fourth column of the Terrain Effects Table on Game Card A (Panzer Base Game) or Game Card B (Panzer North Africa), cross-referenced by the terrain type listed in the first column. The Cover type in a spotting vehicle's hex has no impact on spotting.

The corresponding spotting ranges are found in the Spotting Ranges Table on Game Card A (Panzer/Panzer North Africa). When attempting to spot a vehicle, cross-reference the V column with the base 0 row. The V column is the general spotting category for all vehicles.

The base spotting range for all vehicles is 20 hexes. In the Basic Game, this base range may increase or decrease due to the target vehicle's Cover and whether or not it fired or moved. All spotting modifiers are cumulative. A net modifier greater than +2 is treated as +2; less than –5 is treated as –5. Note that vehicles spotted via base range only are not marked with a SPOT counter.

At any time, a vehicle may be marked with either a Spot/Fire counter or a Spot/Move counter, not both.

Adjust the base spotting range by applying the Cover modifier, if any, of Light Cover –1, Medium Cover –2, or Heavy Cover –3, by moving that many rows down the table.

A German PzKpfw IIIJ Lang is located in a Medium Grove hex (Panzer North Africa); it is spotted out to 7 hexes.

SPOTTING RANGES (4.1.3, 6.1.3)

LEVEL	V	L	S
+2+	40	30	20
+1	30	23	15
0	20	15	10
-1	10	7	5
-2	7	5	3
-3	3	2	1
-4	2	1	1
-5-	1	1	1

Light Cover: -1
Medium Cover: -2
Heavy Cover: -3
Spot Move: +2
Spot Fire: +3
Spot Fire Small Arms: +1
Target In Full Cover: -2
Suppressed Spotting: -2
Full Cover Spotting: -4
Buttoned Spotting: -1
Recon Spotting: +1
Broken Spotting: -2
Limited Spotting: -1 to -5
Illumination: +2

© 2025 GMT Games, LLC

If the target vehicle moved, it is marked with a SPOT/MOVE counter; apply the +2 modifier by moving 2 rows up on the table.

A German PzKpfw IIIJ Lang moves into a Medium Grove hex and is marked with a SPOT/MOVE counter; it is now spotted out to 20 hexes.

SPOTTING RANGES (4.1.3, 6.1.3)

LEVEL	V	L	S
+2+	40	30	20
+1	30	23	15
0	20	15	10
-1	10	7	5
-2	7	5	3
-3	3	2	1
-4	2	1	1
-5-	1	1	1

Light Cover: -1
Medium Cover: -2
Heavy Cover: -3
Spot Move: +2
Spot Fire: +3
Spot Fire Small Arms: +1
Target In Full Cover: -2
Suppressed Spotting: -2
Full Cover Spotting: -4
Buttoned Spotting: -1
Recon Spotting: +1
Broken Spotting: -2
Limited Spotting: -1 to -5
Illumination: +2

If the target vehicle fired, it is marked with a SPOT/FIRE counter; apply the +3 modifier by moving 3 rows up on the table. Use the +2 row for all modifiers greater than +2.

A German PzKpfw IIIJ Lang fires from a Medium Grove hex and is marked with a SPOT/FIRE counter; it is now spotted out to 30 hexes.

SPOTTING RANGES (4.1.3, 6.1.3)

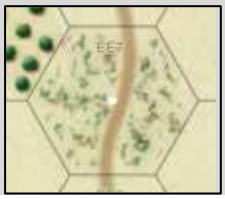
LEVEL	V	L	S
+2+	40	30	20
+1	30	23	15
0	20	15	10
-1	10	7	5
-2	7	5	3
-3	3	2	1
-4	2	1	1
-5-	1	1	1

Light Cover: -1
Medium Cover: -2
Heavy Cover: -3
Spot Move: +2
Spot Fire: +3
Spot Fire Small Arms: +1
Target In Full Cover: -2
Suppressed Spotting: -2
Full Cover Spotting: -4
Buttoned Spotting: -1
Recon Spotting: +1
Broken Spotting: -2
Limited Spotting: -1 to -5
Illumination: +2

If the terrain is in any way mixed, e.g., in an Improved Position (AG) in a Scrub hex, use the terrain type that is the most advantageous to the target vehicle; in this case utilize Heavy Cover.

If the terrain lists *Other* as its Cover type, use the other terrain type in the same hex to determine the Cover type, if any.

If a vehicle is on a Path in Scrub hex, Light Cover is in effect.



4.1.3.1 Vehicle Size
The vehicle Target Size Modifier does not impact spotting ranges.

4.1.3.2 Over-Stacked Hex
If a vehicle is located in an over-stacked hex, treat any Cover in the hex as *None*.

4.1.4 Line-of-Sight
A second aspect of spotting is line-of-sight. It is a very basic concept, and works hand-in-hand with the spotting ranges. It is defined as a straight line between two vehicles. If a line-of-sight is blocked by some obstacle located between the two vehicles (not including the two vehicles themselves or any intervening vehicles) they may not spot each other even if they fall within spotting range.

Line-of-sight is measured from the center dot in the hex containing the spotting vehicle to the center dot of the hex containing the target vehicle. An obstacle blocks line-of-sight even if it passes through only a fraction of its hex or along its hexside.

4.1.4.1 Terrain Features
Broad categories are used to represent the various terrain types in the game.

Terrain comes in two flavors, that which fills an entire hex and that which covers just a hexside. Included are terrain features printed on the mapboard and that added by placing Terrain counters. The specific Terrain types are found in the Terrain Effects Table on Game Card B and the Terrain Key located on the back of this Rulebook.

Terrain types may potentially block line-of-sight based on their Height, as found on the second column in the Terrain Effects Table. Height is measured starting at 0 for ground-level terrain. Some terrain types have an inherent height while others add height to the terrain they occupy. Vehicles, whether friendly or enemy, have no Height and never block line-of-sight.

4.1.4.1.1 Non-Blocking Terrain
Terrain with a Height of 0 or –1, e.g., Clear, Rough, Scrub, Brush, or Gully, does not block line-of-sight.

4.1.4.1.2 Blocking Terrain
Terrain with a Height of 1 or more may block line-of-sight depending on the Height of the spotting and target vehicles and their relationship to the potential blocking terrain.

© 2025 GMT Games, LLC

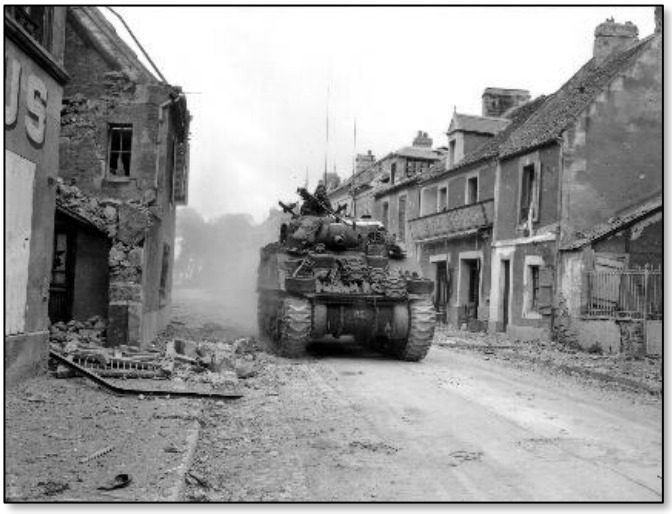
4.1.4.1.3 Building Hexes

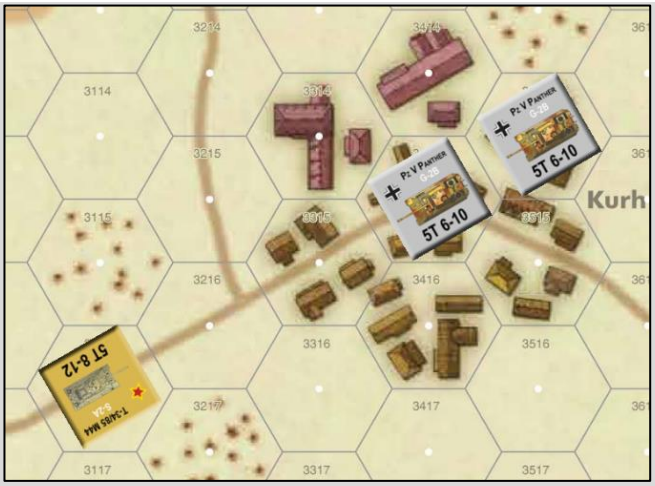
Since each hex equals 100 meters, Building hexes are not made up of single structures, but represent a cluster of structures of a particular type—Brick, Stone, or Wood. They are usually found along Paths or Roads.

Vehicles may freely enter Building hexes, as they are not actually entering the Buildings themselves, but are in the Alleyways between the Buildings. Therefore, any vehicle located in a Building hex is actually occupying Alley type terrain.

Building hexes have a height of 1 per story above ground level; a two-story Building hex has a Height of 2. All Building hex types may block line-of-sight.

Roads and Paths in a hex negate the blocking effects for units spotting along a straight line into or through a Building hex.





A vehicle in hex 3116 in map A (Panzer Base Game) has a clear line-of-sight to hex 3415. However, it does not have a line-of-sight to hex 3514.

A vehicle in hex 38X3 (Panzer North Africa) has a clear line-of-sight to hex 38AA1. However, it does not have a line-of-sight to hex 38BB1.

All Buildings are considered to be 1 story high unless indicated otherwise by a scenario's Special Conditions.

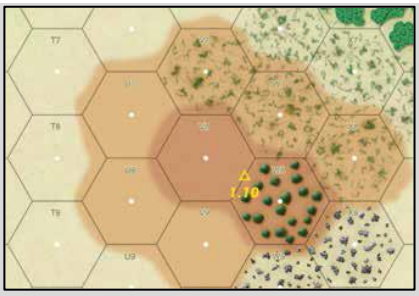
4.1.4.1.3.1 Desert Building Hexes

Desert buildings represent the typical, flat-roofed found in North Africa. Desert Buildings are only used in a scenario if specified in a scenario's Special Conditions. For example, Scenario 50 in Panzer North Africa employs Desert Buildings.

4.1.4.1.4 Hill Hexes

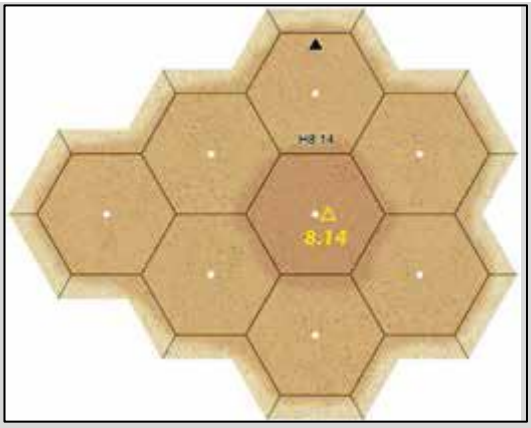
Unlike other terrain that possess inherent Height, Hills add elevation to the mapboard. However, Hills do not represent terrain—they are covered by terrain. If Rough terrain is in a Hill hex, it does not make the Hill hex any higher since Rough has a Height of 0. However, the Hill hex is Rough terrain.

Each level of a Hill adds a Height of 1. Hills are stacked in individual levels of varying colors up to any height. Heights of 4 to 5 are typically the limit.



The Hill is 2 Heights at its maximum elevation.

© 2025 GMT Games, LLC



The Hill Overlay H8.14 (Panzer North Africa) is 2 Heights at its maximum elevation.

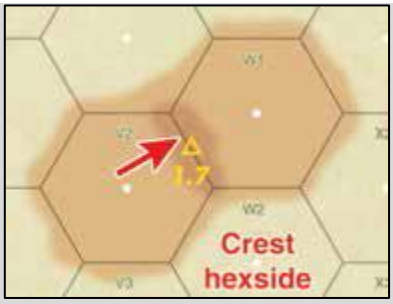
4.1.4.1.5 Slope & Crest Hexsides

Slope hexsides are the transition points from one Height or elevation, either up or down, to another. They are found only in conjunction with Hills. If a Hill is depicted without a Slope on an edge or side, that creates a sheer edge or cliff, that hexside is impassable to vehicles.

Slope Hexsides

Crest hexsides are elevation transitions or small rises in terrain. They may be found anywhere on the mapboard, but typically form breaks along hills.

Both Slope and Crest hexsides have a Height of +1. However, only Crest hexsides may individually block line-of-sight. Slope hexside are part of a Hill formation and any line-of-sight checks are made from the Hill hexsides.

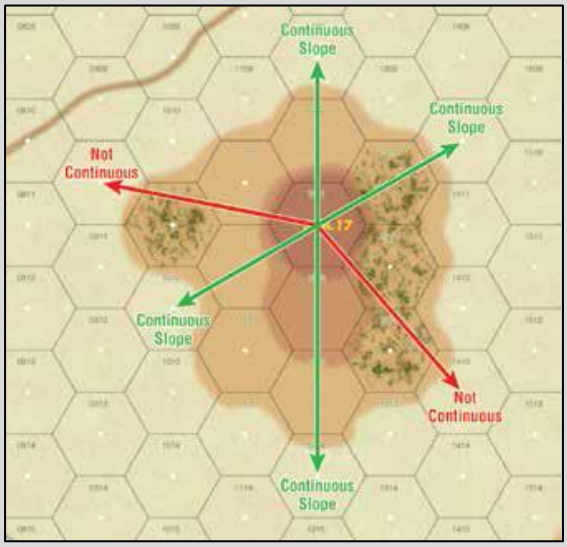


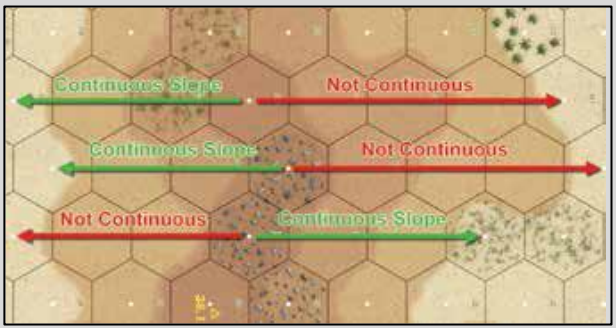
This Crest hexside equally divides Hill 1.7. Any vehicles in hexes V2 and W1 may not spot one another due to the fact that they are at Height 1, while the Crest hexside is at Height 2.

4.1.4.1.5.1 Continuous Slopes

A series of contiguous hexes with slope hexsides such that the level of each hex is one or more heights lower than the adjoining higher hex is a Continuous Slope and doesn't block line of sight as long as no other blocking terrain exists in the hexes.

Continuous Slope Examples



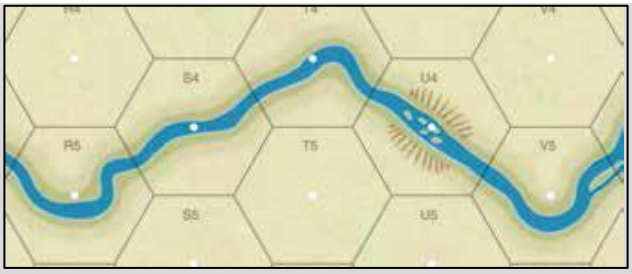


4.1.4.1.6 Gully, Ford & Stream Hexes

Gully, Ford and Stream hexes have a Height of –1; they are actually one Height lower than the surrounding terrain. These Terrain types do not block line-of-sight.

A Bridge hex that crosses a Stream hex is at Height 0, since a bridge crosses above a stream at a higher elevation.

There is a special spotting rule for Gully, Ford and Stream hexes. When spotting to a Height 1 level above their Height, only adjacent hexes may be spotted. Like Roads and Paths, units may spot along a straight line in Gully or Stream hexes.



These Stream hexes are at Height –1. The Clear hexes in the vicinity of the Stream are all at Height 0. Only those hexes adjacent to the Stream hexes may be spotted from the Stream hexes and vice versa.

4.1.4.1.7 Woods & Grove Hexes

Light Woods and Woods hexes represent stands of trees that provide cover for vehicles. Vehicles may never enter Heavy Woods hexes unless on a Road or Path.

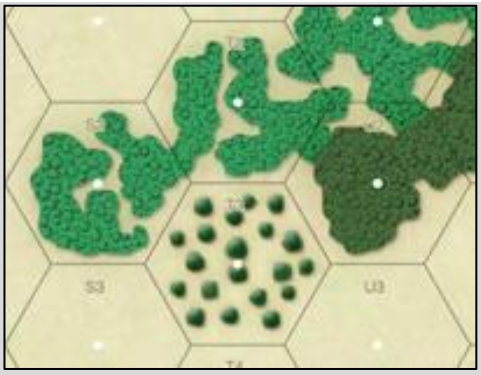
© 2025 GMT Games, LLC

Medium and Light Grove hexes represent stands of palm trees that provide cover for vehicles.

Light Woods, Woods, Light Grove and Medium Grove hexes all have a Height of 3, while Heavy Woods hexes have a Height of 4 above ground level; they may block line-of-sight.

Roads and Paths in a hex negate the blocking effects for units spotting along a straight line into or through a Woods/Grove hex.

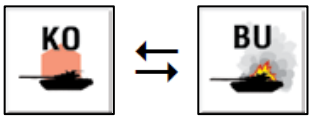
Note that vehicles in Light Woods/Woods/Grove hexes are actually at the ground level of the terrain not up at the maximum Height of the terrain.



Light Woods, Woods and Heavy Woods example

Light Grove and Medium Grove example

4.1.4.1.8 Wrecks



A Wreck is created whenever a vehicle suffers a Knock-Out (KO) or Brew-Up (BU) result from AP combat. The Wreck may also be a source of Brew-Up Smoke if that was the result of the combat. Wrecks have a Height of 0; they do not block line-of-sight.

A hex may never contain more than a single Wreck counter, although a KO counter is replaced by a BU counter due to combat results; not vice-versa.

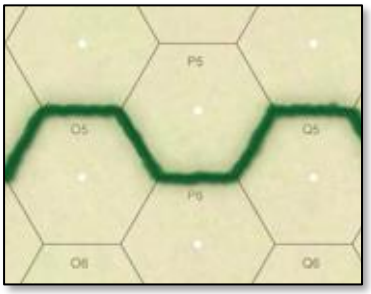
In a similar manner to Illumination rounds, Brew-Up Wrecks increase spotting ranges during night/limited visibility conditions (OR) (see 7.27).

4.1.4.1.9 Smoke, Brew-Up

Whenever a vehicle is Brewed-Up as a result of AP combat, it also creates Brew-Up Smoke as represented by the BU counter. Brew-Up Smoke has a Height of 2, but does *not* block line-of-sight. It hinders AP combat.

4.1.4.1.10 Hedgerow Hexsides

Hedgerow hexsides have Height of 1 and block line-of-sight depending on the Height of the spotting and target vehicles and their relationship to the potential blocking terrain. An Optional Rule, Hedgerow Spotting (see 7.45) expands on the limitation.



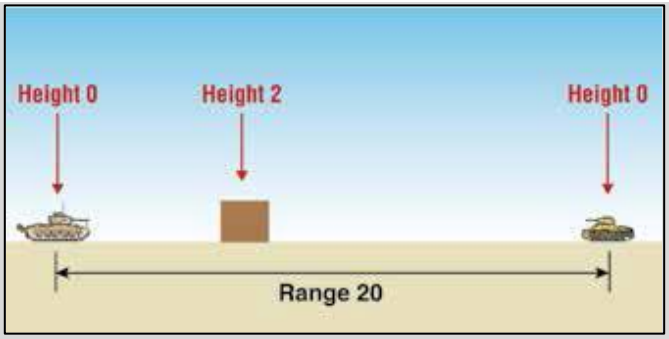
4.1.4.2 Determining Line-of-Sight

The line-of-sight for AP combat is checked from the spotting vehicle to the Height of the target vehicle. Obstacles—the highest point of any intervening terrain—affect line-of-sight based on the following conditions:

4.1.4.2.1 Obstacle Higher than Both

If the line-of-sight crosses an obstacle and it is higher than the Heights of both the spotting vehicle and the target vehicle, the line-of-sight is blocked.

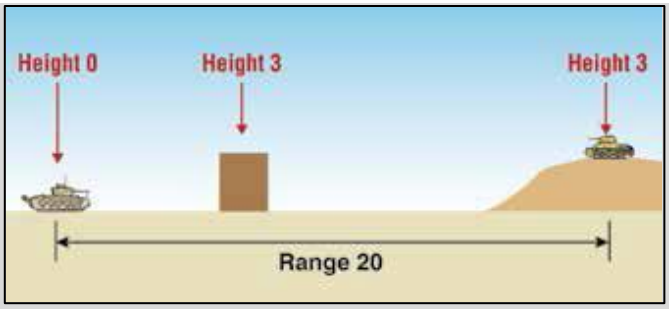
© 2025 GMT Games, LLC



The obstacle blocks line-of-sight at any range.

4.1.4.2.2 Obstacle Higher or Equal

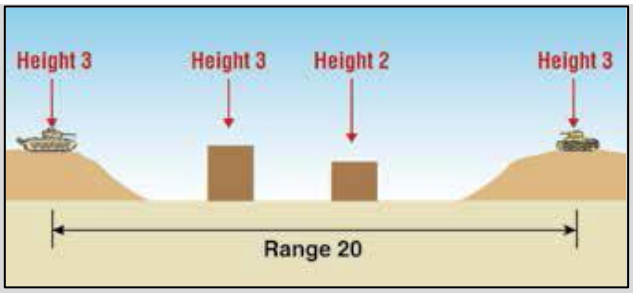
If the line-of-sight crosses an obstacle which is equal in Height to either the spotting vehicle or to the target vehicle, and is higher than the other vehicle, the line-of-sight is blocked.



The obstacle blocks line-of-sight behind it at any range.

4.1.4.2.3 Obstacle Equal or Lower

If the line-of-sight crosses an obstacle which is equal to or lower than the Height of both vehicles, the line-of-sight is not blocked.



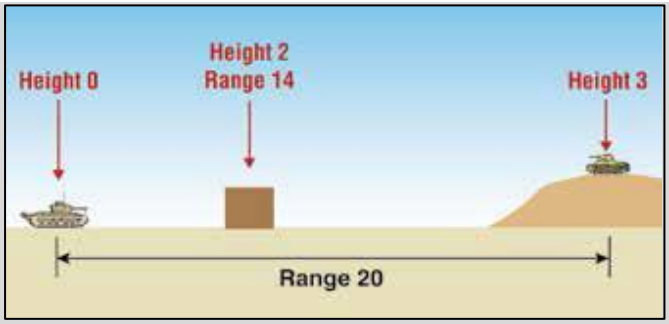
The line-of-sight is not blocked.

4.1.4.2.4 Obstacle Higher and Lower

If the line-of-sight crosses an obstacle which is higher than one vehicle but lower than the other vehicle, a line-of-sight check must be made using one of the following procedures. Count the hex that the potential obstacle occupies but not the hex the spotting vehicle occupies. A calculated Blind Zone is never less than 1 hex.

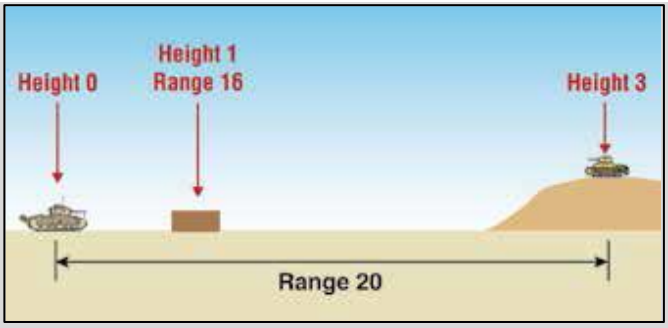
Note that in all cases the reverse is also true whether the spotting vehicle is the higher or lower vehicle in Height.

Lower by 1 Height: The obstacle creates a blind zone behind it, where no line-of-sight is possible, equal to ½ the range in hexes (round down) from the higher vehicle to the obstacle.



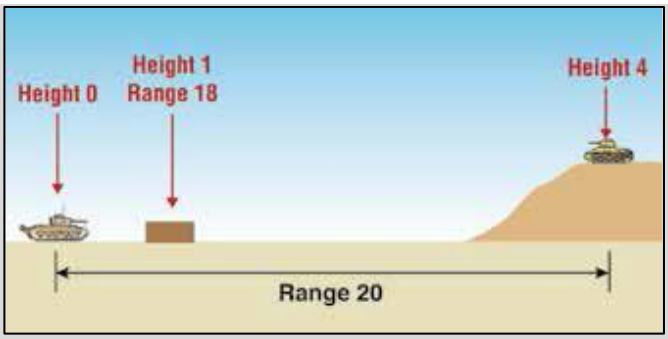
The obstacle creates a blind zone of 7 hexes (14 divided by 2) behind it. Any vehicle located at a range from 15-21 hexes from the higher vehicle may not be spotted.

Lower by 2 Heights: The obstacle creates a blind zone behind it equal to ¼ the range in hexes (round down) from the higher vehicle to the obstacle.



The obstacle creates a blind zone of 4 hexes (16 divided by 4) behind it. Any vehicle located at a range from 17-20 hexes from the higher vehicle may not be spotted.

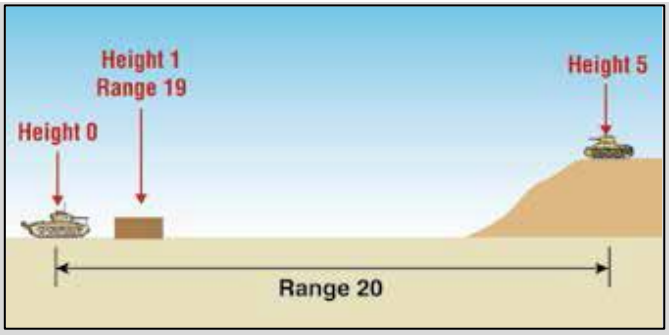
Lower by 3 Heights: The obstacle creates a blind zone behind it equal to 1/8 the range in hexes (round down) from the higher vehicle to the obstacle.



The obstacle creates a blind zone of 2 hexes (18 divided by 8) behind it. Any vehicle located at a range from 19-20 hexes from the higher vehicle may not be spotted.

Lower by 4 Heights or more: The obstacle creates a blind zone behind it equal to 1 hex from the higher vehicle to the obstacle.

© 2025 GMT Games, LLC



The obstacle creates a 1 hex blind zone behind it. Any vehicle located at a range of 20 hexes from the higher vehicle may not be spotted.

4.1.4.2.4.1 Lower above Height 0

In those cases where the lower unit is above Height 0, add the lower unit's Height to the divisor when calculating the Blind Zone, e.g., the lower unit is at Height 1, the divisors now become 3, 5 or 9.

In those cases where the lower unit is at Height –1, subtract 1 from the divisor, minimum 2; e.g., 2 remains 2, 4 becomes 3, and 8 becomes 7.

4.1.4.2.5 Spotting Into/From Obstacles

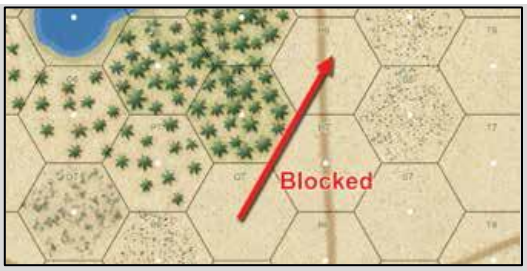
Vehicles may spot up to 1 hex into or from any Terrain type that would normally block line-of-sight unless blocked by an intervening hexside, e.g., if a target vehicle is located in a group of Grove hexes, a 1 hex spotting perimeter exists around the edge of the Grove.

The 1 hex spotting range is also applicable to vehicles located within terrain that would normally block line-of-sight. For example, if two opposing vehicles are moving through a group of Grove hexes, they spot one another if the range is 1 hex.

Line-of-sight into blocking terrain.

4.1.4.2.6 Obstacle Hexsides

A hex containing blocking terrain blocks line-of-sight even if it passes through only a small fraction of the hex. In all cases, if a hex or hexside can block line-of-sight and the line-of-sight runs exactly along one of its hexsides, the line-of-sight is blocked.



Line-of-sight is blocked by the intervening Grove hex.

4.1.5 Extraneous Spot Counters

If during the Spotting Phase it is determined that a vehicle is not spotted, remove any SPOT/FIRE or SPOT/MOVE counters it may have.

It many cases, it may not be necessary to mark all vehicles that fired or moved with SPOT counters, as the spotting ranges may be obvious, e.g., vehicles located in Clear terrain. This should help keep the mapboard a little tidier.

4.2 Basic Game Command Phase

> **"There are no bad regiments, there are only bad colonels." ~ Napoleon Bonaparte**

At the heart of the game is the Command system. With just five individual commands, players prepare and manage their vehicles for the current turn.

Each of the five Command counters has unique characteristics that distinguish its purpose.

The Commands include:

- **FIRE:** enables any vehicle combat unit to fire at a spotted vehicle during the First or Second Player Direct Fire Step (see 4.4).
- **MOVE:** enables any vehicle to move during the First or Second Player Movement Step (see 4.5).
- **SHORT HALT:** enables any vehicle combat unit to fire at a spotted vehicle during the First or Second Player Direct Fire Step (see 4.4) and then move during the First or Second Player Movement Step (see 4.5).
- **OVERWATCH (OW):** enables any vehicle combat unit to voluntarily fire at a spotted vehicle that fired in an earlier step or in response to a spotted vehicle moving during the Movement Phase. Note that the target vehicle may be spotted as a result of its current action, fire or movement; it need not have been previously spotted during the Spotting Phase.
  It is key to note that Overwatch Fire is never required. The command may never be executed.
- **NO COMMAND (N/C):** tells the vehicle to sit tight and not perform any actions. This is the default stature for all vehicles not marked with a command.

Note that the Command Phase is executed prior to the Initiative Phase. Players must therefore commit their Commands without the knowledge of who is going be the First or Second Player. Welcome to the fog-of-war!

© 2025 GMT Games, LLC

4.2.2 Place Command Step

Place a Command counter with the *Command* side visible on or adjacent to the vehicle so that the opposing side does not know what command was given. Each command enables a vehicle to perform only certain actions during specific phases or steps. When the time comes to carry out those actions, players are bound by them. Only OW and N/C commands allow a vehicle to take no specific action.

If a vehicle has a command to FIRE, MOVE, or SHORT HALT, it must execute that command—it is not an option. Care must therefore be taken when assigning commands.

In some cases, a vehicle may be Knocked Out or Brewed Up, therefore making it impossible to carry out a command.

Until a player reveals a command to perform some action; i.e., fire or movement, the command is maintained with its command side up. This also helps keep track of those vehicles that have not yet executed their commands.

Vehicles may not be given commands that cannot be executed. A vehicle that does not have any spotted targets may not have FIRE or SHORT HALT commands.

In the event a vehicle is given an illegal command, it is automatically converted to an N/C command.

4.3 Basic Game Initiative Phase

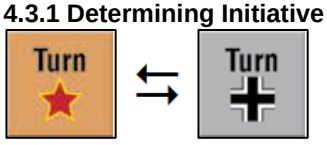
"Commanders at every level must therefore act with audacity, dash and determination, seizing the initiative and thus subordinating their opponent's will to their own." ~ Marshal Mikhail Tukhachevsky

Initiative is a key aspect of the game. Through its careful use, players control the flow of the game by controlling the First and Second Player steps.

Since the Command Phase takes place before the Initiative Phase, players must make command decisions without the advantage of looking into a crystal ball as to the order of execution.

A superior force should more often than not find itself controlling the initiative. This really comes into play in the Advanced Game where the superior force receives a positive die-roll modifier and therefore should win the initiative more often than not. Through this, it is able to dictate and control the course of battle. However, as with all things in life (and war), it is not guaranteed.

4.3.1 Determining Initiative



During the Initiative Phase, each Force rolls (100); reroll ties unless instructed otherwise in the scenario Special Conditions. The Force rolling the higher result determines who is the First Player for the current turn. Flip the Turn counter to indicate the First Player.

Staggered Initiative (OR) (see 7.42) expands the Initiative process based on formations.

4.3.2 How Initiative Works

The First Player always performs the actions listed as First Player in the Sequence of Play. The Second Player follows suit by performing the actions listed as Second Player in the Sequence of Play. It is very important to remember that combat and movement actions are performed sequentially.

If the Second Player has a vehicle with a FIRE command that is Knocked Out during the First Player's Direct Fire Step, that vehicle is Knocked Out and removed from play before the Second Player can execute its FIRE commands.

Simultaneous actions do not have First or Second Player as part of their Phase or Step. These actions are resolved in any agreeable order.

4.4 Basic Game Combat Phase

"Battles are won by superiority of fire." ~ Frederick the Great

The players execute fire combats sequentially based on the order determined previously in the Initiative Phase. In the Basic Game all fire is classified as Direct Fire.

The Basic Combat Phase includes a single Step—Direct Fire. Only Armor Piercing AP Direct and Overwatch Fire is addressed at this time. This section encompasses vehicle-to-vehicle AP combat.

4.4.1 Direct Fire Step

The First Player announces and resolves Direct Fire by revealing the Command for every vehicle with a Fire or Short Halt command as they announce their fire.

The Second Player then announces and resolves Direct Fire by those vehicles still able to fire and marked with Fire or Short Halt commands by following the same procedures.

Direct Fire is resolved under the following rules and conditions:

- FIRE and SHORT HALT commands require a legitimate spotted target that was identified during the previous Spotting Phase. Players may never place FIRE or SHORT HALT commands in anticipation of spotting a target.
- Vehicles fire in the order described in the Sequence of Play. First Player vehicles fire first during that Fire Step; Second Player vehicles fire second during that Fire Step.
- Shots are resolved individually.
- Each vehicle only fires once per turn.

© 2025 GMT Games, LLC

- Fire in each step is resolved from the positions and facings the vehicles occupy at the point the fire is resolved. The terrain occupied by the firing vehicle or its SPOT counter has no impact.
- All fire on a single opposing vehicle must be announced before any fire is resolved. If that target vehicle is eliminated before all the announced vehicles have fired, they are assumed to still have fired at the announced target. They may not then shift their fire to a new target.
- All combat results are applied immediately.
- If the vehicle does not have an existing SPOT/FIRE counter or it has a SPOT/MOVE counter, place the new SPOT/FIRE counter partially under its Command counter to signify that it is a new status. That way, there is no confusion as to the vehicle's status as of the previous Spotting Phase.
- All vehicles with FIRE or SHORT HALT commands must declare fire unless the command was placed in error, i.e., no visible targets are available.

4.4.2 Overwatch Fire

Overwatch Fire is a triggered event in response to opposition fire (during the Combat Phase) or movement (during the Movement Phase)—it fires at targets of opportunity.

After resolving direct fire, announce and resolve all desired Overwatch Fire by those vehicles marked with OW commands at opposing vehicles that fired during Indirect Fire or Direct Fire Step.

Overwatch Fire is voluntary; vehicles with OW commands are not required to fire. Since Overwatch Fire has built in penalties, it is not intended as a method of engaging spotted targets. It does, however, act as a deterrent to opposition fire and movement.

Overwatch Fire is resolved under the same rules and limitations as described for Direct Fire with the following additions:

- *All* First and Second player Direct Fire is resolved before any Overwatch Fire is announced.
- Additional Overwatch Fire may be triggered as a result of earlier Overwatch Fire. Consider it a cascading effect where one initial OW shot could trigger a whole series of follow on shots. Again, Direct Fire takes precedence.
- Spotting is confirmed at the time the Overwatch Fire is announced. A previously spotted target is not required.

4.4.3 AP Firing Sequence and Rules

Only those vehicles with an AP row in the Offensive Information section of their Data Cards may fire. AP Type fire is directed only at vehicles; it is never used against any other target type.

There are other types of AP ammo, e.g., APCR, APFSDS, APDS, HVAP, HEAT, HEAT-MP, and HESH, these are also classified as AP Type fire.

To fire at a target, it must be spotted, in range of the weapon firing, and fall within the firing vehicle's Field-of-Fire.

4.4.3.1 Fields-of-Fire

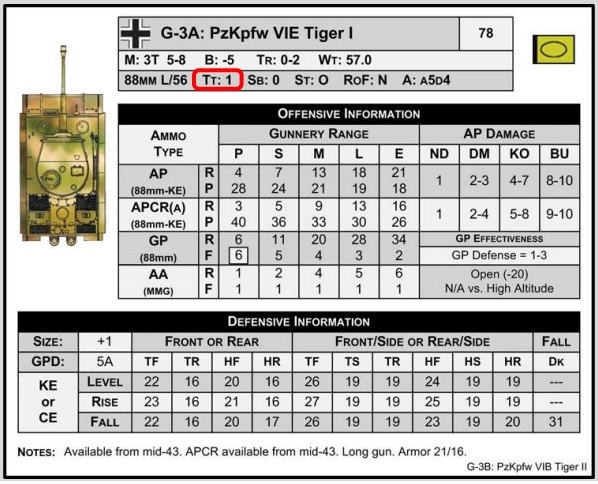
All combat vehicle units have a defined Field-of-Fire. Some have a limited field-of-fire. Those include non-turreted vehicles with fixed gun mounts.

4.4.3.1.1 Turreted Vehicles

Turreted vehicles have all-round Fields-of-Fire. Turreted vehicles are those with a TT Factor of 1, 2 or 3 in their Weapon Data section.

An Optional Rule, Turrets (see 7.8) expands on turret Fields-of-Fire and use.

Reference the Vehicle Data Card G3-A (Panzer). The PzKpfw VIE Tiger I is a turreted vehicle.



G-3A: PzKpfw VIE Tiger I	78
M: 3T 5-8 B: -5 TR: 0-2 WT: 57.0	
88MM L/56 TT: 1 SB: 0 ST: O ROF: N A: A5D4	

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP EFFECTIVENESS			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

DEFENSIVE INFORMATION												
SIZE:	+1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	5A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	22	16	20	16	26	19	19	24	19	19	---
	RISE	23	16	21	16	27	19	19	25	19	19	---
	FALL	22	16	20	17	26	19	19	23	19	20	31

NOTES: Available from mid-43. APCR available from mid-43. Long gun. Armor 21/16.

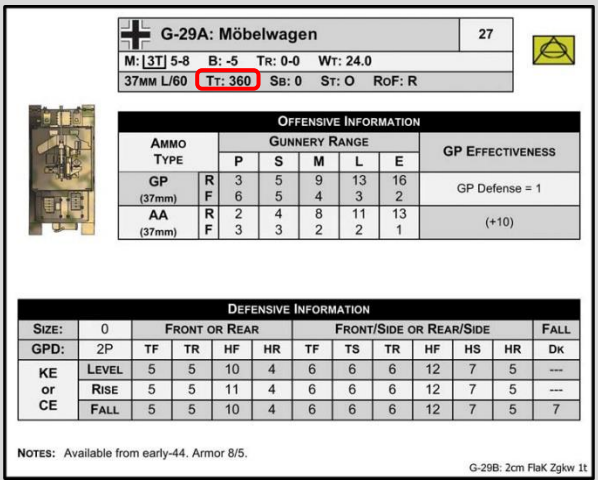
G-3B: PzKpfw VIB Tiger II

4.4.3.1.2 Turretless 360º Vehicles

Like turreted vehicles, vehicles with a TT Factor of 360 are classified as Turretless 360° and have all-round Fields-of-Fire. Their pivot guns, mounted behind gun shields or in open gun mounts, are able to engage opposing vehicles in any direction.

In the Basic Game, they are essentially the same as turreted vehicles.

Reference the Vehicle Data Card G29-A (Panzer Expansion #1). The Möbelwagen is a turretless 360º vehicle.



G-29A: Möbelwagen	27
M: 3T 5-8 B: -5 TR: 0-0 WT: 24.0	
37MM L/60 TT: 360 SB: 0 ST: O ROF: R	

OFFENSIVE INFORMATION							
AMMO TYPE		GUNNERY RANGE					GP EFFECTIVENESS
		P	S	M	L	E	
GP (37mm)	R	3	5	9	13	16	GP Defense = 1
	F	6	5	4	3	2	
AA (37mm)	R	2	4	8	11	13	(+10)
	F	3	3	2	2	1	

DEFENSIVE INFORMATION												
SIZE:	0	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	5	5	10	4	6	6	6	12	7	5	---
	RISE	5	5	11	4	6	6	6	12	7	5	---
	FALL	5	5	10	4	6	6	6	12	7	5	7

NOTES: Available from early-44. Armor 8/5.

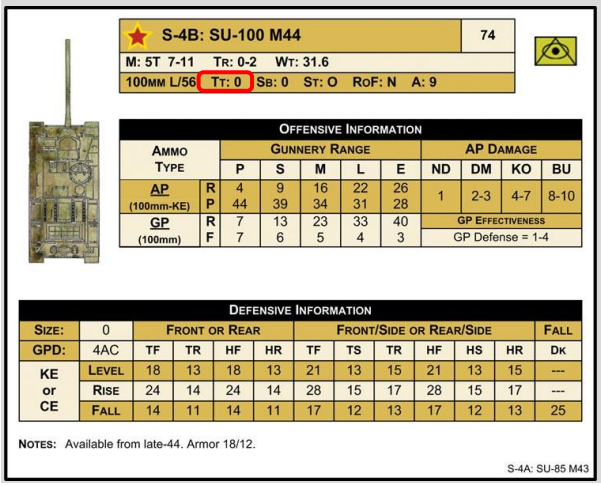
G-29B: 2cm FlaK Zgkw 1t

4.4.3.1.3 Non-Turreted Vehicles

Non-Turreted vehicles may have fixed gun mounts. They are those with a TT Factor of 0. Virtually all have their guns fixed to the front, although a few have their guns fixed to the rear. Non-Turreted vehicles are only able to engage targets that fall within their front or rear Field-of-Fire depending on the position of their gun or weapon.

© 2025 GMT Games, LLC

Reference the Vehicle Data Card S4-B (Panzer). The SU-100 M44 is a non-turreted vehicle.



S-4B: SU-100 M44	74
M: 5T 7-11 Tr: 0-2 Wt: 31.6	
100mm L/56 Tt: 0 Sb: 0 St: O RoF: N A: 9	

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (100mm-KE)	R	4	9	16	22	26	1	2-3	4-7	8-10
	P	44	39	34	31	28				
GP (100mm)	R	7	13	23	33	40	GP Effectiveness			
	F	7	6	5	4	3	GP Defense = 1-4			

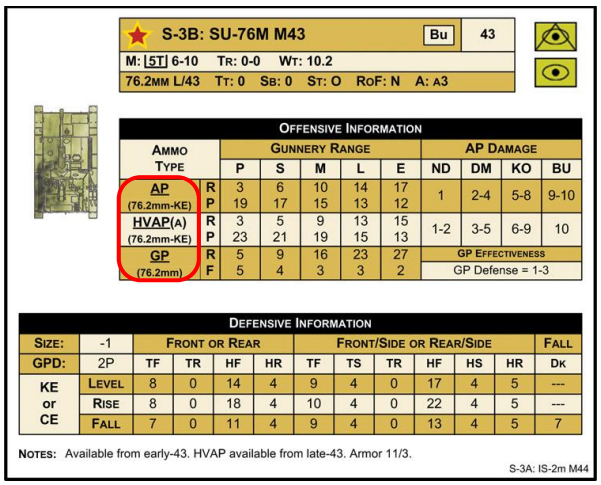
Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	4AC	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	18	13	18	13	21	13	15	21	13	15	---
	Rise	24	14	24	14	28	15	17	28	15	17	---
	Fall	14	11	14	11	17	12	13	17	12	13	25

Notes: Available from late-44. Armor 18/12.

S-4A: SU-85 M43

4.4.3.1.4 Front Field-of-Fire

A vehicle that has a limited Field-of-Fire to its front is indicated by an underscored ammo notation on its Data Card.



S-3B: SU-76M M43 Bu	43
M: [5T] 6-10 Tr: 0-0 Wt: 10.2	
76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3	

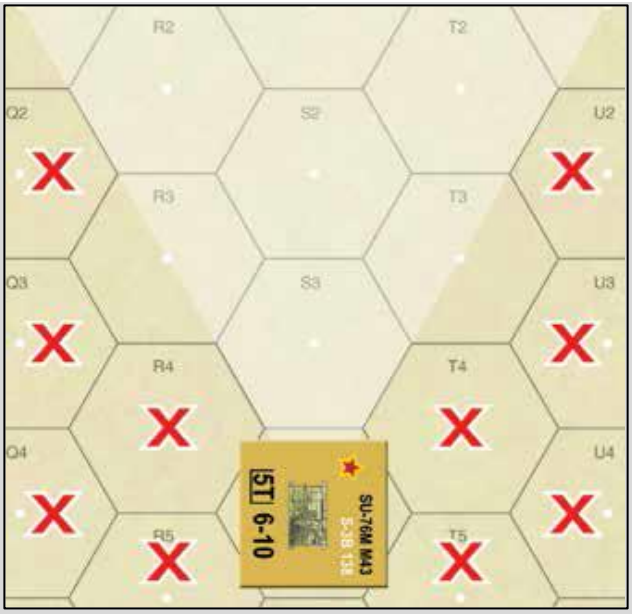
Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

A Front Field-of-Fire, in this case, is defined as the area that falls within the Front 60º of its counter. All hexes bisected by the 60º arc fall within its Field-of-Fire.



Reference the Vehicle Data Card Key, the Soviet SU-76M M43 has a Front Field-of-Fire.

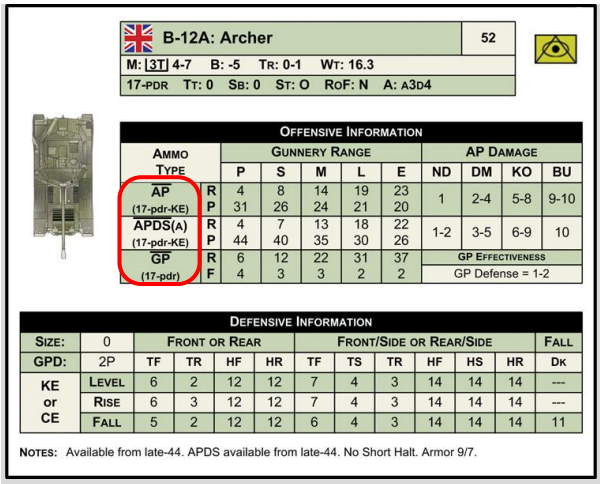
No fire may be directed at a target falling outside of the area described by the Front Field-of-Fire.

4.4.3.1.5 Rear Field-of-Fire

A vehicle that has a limited Field-of-Fire to its rear is indicated by an overscore ammo notation on its Data Card.

A Rear Field-of-Fire, in this case, is defined as the area that falls within the Rear 60° of its counter. All hexes bisected by the arc fall within its Field-of-Fire. It is the direct opposite of a Front Field-of-Fire.

No fire may be directed at a target falling outside of the area described by the Rear Field-of-Fire.



B-12A: Archer	52
M: [3T] 4-7 B: -5 Tr: 0-1 Wt: 16.3	
17-pdr Tt: 0 Sb: 0 St: O RoF: N A: A3D4	

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (17-pdr-KE)	R	4	8	14	19	23	1	2-4	5-8	9-10
	P	31	26	24	21	20				
APDS(A) (17-pdr-KE)	R	4	7	13	18	22	1-2	3-5	6-9	10
	P	44	40	35	30	26				
GP (17-pdr)	R	6	12	22	31	37	GP Effectiveness			
	F	4	3	3	2	2	GP Defense = 1-2			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	6	2	12	12	7	4	3	14	14	14	---
	Rise	6	3	12	12	7	4	3	14	14	14	---
	Fall	5	2	12	12	6	4	3	14	14	14	11

Notes: Available from late-44. APDS available from late-44. No Short Halt. Armor 9/7.

Reference the Vehicle Data Card B12-A (Panzer Expansion #3). The Archer has a Rear Field-of-Fire.

4.4.3.2 Resolving AP Fire

The firing player flips the firing vehicle's Command over to demonstrate that it is correct and announces the target.

Since the Short Halt command is a two-part Command, face the Fire half of the Command counter towards the front of the vehicle.

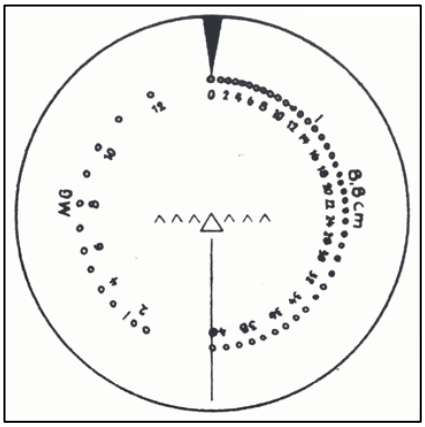
© 2025 GMT Games, LLC

This way when it comes time to move those same vehicles, players can easily identify which vehicles have not yet moved.

4.4.3.2.1 The AP Range Factor

Find the portion of the Data Card with the name of the weapon to fire in the Ammo Type column of the Offensive Information section.

Some vehicles have multiple AP ammo types as mentioned earlier. Some vehicles also have multiple AP weapons. The weapons and their AP ammo are clearly labeled to assist in matching the proper sets. In the Basic Game, only AP Type ammo should be used.



Vehicles with multiple weapons may have different Fields-of-Fire for those weapons. In all cases, shots are resolved individually.

Determine the range in hexes from the firing vehicle to the target vehicle. Move along the R – Range sub-row for the AP row until finding the value that is greater than or equal to the value that corresponds to the range in hexes.

Above that value is one of five possible outcomes:

- P – Pointblank
- S – Short
- M – Medium
- L – Long
- E – Extreme

That factor found above the range is the AP Range Factor.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). Assume the range to be 9 hexes. The AP Range Factor at that range is M – Medium.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 Tr: 0-0 Wt: 10.2

76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa). Assume the range to be 9 hexes. The AP Range Factor at that range is M – Medium.

G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 Tr: 0-0 Wt: 6.4

47mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A4

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

Notes: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

4.4.3.2.2 AP Hit Modifiers

The AP Hit modifiers are now checked to determine their effect, if any. These modifiers are found on the AP Hit Modifiers Table found on Game Card A. Many of the listed AP Hit modifiers are not utilized in the Basic Game.

All AP Hit modifiers are cumulative, and together are called the Net Modifier.

If the target vehicle is in Light Cover (–1) and the firing vehicle has a Short Halt Command (–4), the Net Modifier is –5.

Target Size

The Size of a target vehicle is found in the Defensive Information section. The possible values range from +2 to –2.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). Its Target Size modifier is –1.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 Tr: 0-0 Wt: 10.2

76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information

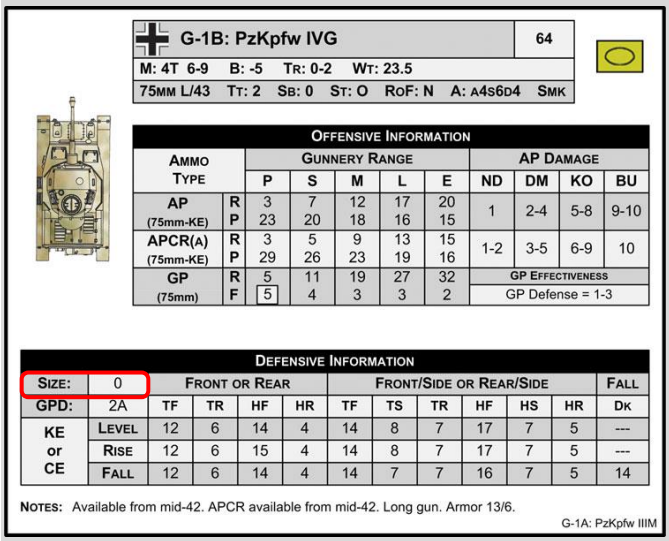
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

© 2025 GMT Games, LLC

Reference the Vehicle Data Card G-1B (Panzer) for the PzKpfw IVG. Its Target Size modifier is 0.



G-1B: PzKpfw IVG	64
M: 4T 6-9 B: -5 Tr: 0-2 Wt: 23.5	
75mm L/43 Tt: 2 Sb: 0 St: O RoF: N A: A4S6D4 Smk	

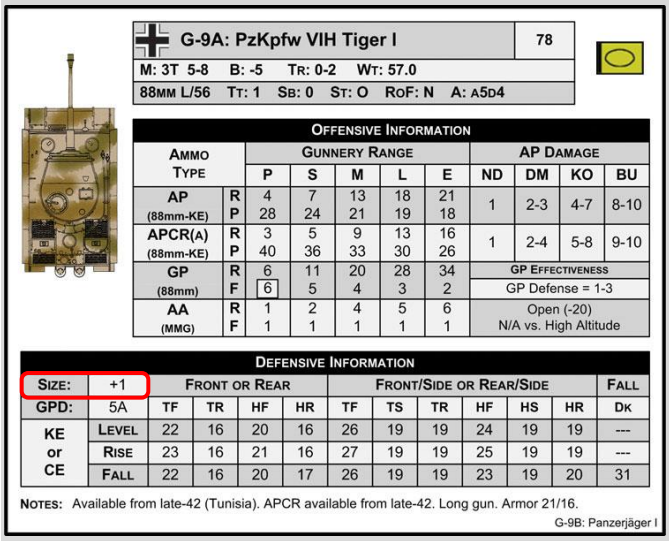
Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm-KE)	R	3	7	12	17	20	1	2-4	5-8	9-10
	P	23	20	18	16	15				
APCR(A) (75mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	29	26	23	19	16				
GP (75mm)	R	5	11	19	27	32	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	12	6	14	4	14	8	7	17	7	5	---
	Rise	12	6	15	4	14	8	7	17	7	5	---
	Fall	12	6	14	4	14	7	7	16	7	5	14

Notes: Available from mid-42. APCR available from mid-42. Long gun. Armor 13/6.

G-1A: PzKpfw IIIM

Reference the Vehicle Data Card G-9A (Panzer North Africa) for the PzKpfw VIH Tiger. Its Target Size modifier is +1.



G-9A: PzKpfw VIH Tiger I	78
M: 3T 5-8 B: -5 Tr: 0-2 Wt: 57.0	
88mm L/56 Tt: 1 Sb: 0 St: O RoF: N A: A5D4	

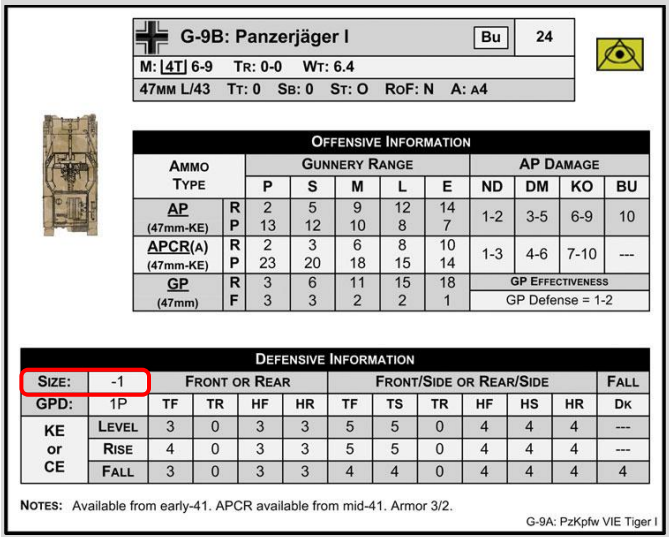
Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP Effectiveness			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

Defensive Information												
Size:	+1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	5A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	22	16	20	16	26	19	19	24	19	19	---
	Rise	23	16	21	16	27	19	19	25	19	19	---
	Fall	22	16	20	17	26	19	19	23	19	20	31

Notes: Available from late-42 (Tunisia). APCR available from late-42. Long gun. Armor 21/16.

G-9B: Panzerjäger I

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa). Its Target Size modifier is –1.



G-9B: Panzerjäger I	Bu	24
M: 4T 6-9 Tr: 0-0 Wt: 6.4		
47mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A4		

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

Notes: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

Target Moving
If the target vehicle has a Move or Short Halt command—the modifier is –2.

If the target vehicle's command is not yet visible, the controlling player must reveal it to receive the modifier (turn the Command counter face down again to show it is not yet executed).

Note that in this case, the controlling player is not required to reveal the command; respond that the command has no effect. If player chooses not to reveal the command, the modifier is 0. This limits players from taking low-odds reconnaissance-by-fire shots just to reveal commands.

Target in Light, Medium, or Heavy Cover
If the target vehicle is located in terrain classified as Light, Medium, or Heavy Cover—the modifier is –1, –3, or –5, respectively. If a vehicle is located in an over-stacked hex, treat any Cover in the hex as *None*.

Short Halt: SB: 0, Other
If the firing Vehicle has a Short Halt command and is SB: 0—the modifier is –4.

All vehicles have a Stabilization Rating. In Panzer and Panzer North Africa, it is the SB: 0 in their Weapon Data section.

This represents the greater challenge of hitting a target while firing and then moving with a Short Halt command. While some WWII era vehicles were equipped with rudimentary stabilization systems, in the context of this game, they do not provide any measurable advantage.

Shooter Damaged
If the firing vehicle was Damaged during a previous turn or previous action during the current turn—the modifier is –3.

Brew-Up Smoke
If Brew-Up Smoke originates in the firing vehicle's hex, passes through, or enters the target vehicle's Brew-Up Smoke hex—the modifier is –2.

The modifier is applied for each unique occurrence of Brew-Up Smoke the Line-of-Sight starts from or encounters; it is cumulative.

All Brew-Up Smoke created during the current Player step does not take effect until the conclusion of that step.

Overwatch
If the firing vehicle is executing Overwatch Fire at a target located within its Front (or rear) Field-of-Fire—the modifier is –1. This is applicable whether the vehicle is Turreted, Turretless 360º, or Non-Turreted.

The (rear) Field-of-Fire is used for those Non-Turreted vehicles with a rear facing gun.

Keep in mind that the Target Moving modifier is also applicable in addition to this modifier if triggered by movement.

Overwatch Adjust
If the firing vehicle is executing Overwatch Fire at a target located outside of its front (or rear) Field-of-Fire—the modifier is –3. Only Turreted and Turretless 360º vehicles may execute Overwatch Fire at target vehicles located outside of the firing vehicle's front (or rear) Field-of-Fire.

Again, the Target Moving modifier is also applicable in addition to this modifier if triggered by movement.

© 2025 GMT Games, LLC

Since vehicles typically focus their view on the area described by their primary weapon, this modifier represents the additional time required to quickly spot and engage a target located to its side or rear.

4.4.3.2.3 AP Hit Number

Reference the AP Hit Table on Game Card A. Cross-reference the AP Range Factor (see 4.4.3.2.1) with the Net Modifier (see 4.4.3.2.2). The number found there is the AP Hit Number.

If the Net Modifier is greater than +5, use the +5 row. If it is less than –10, use the –10 row. Note that with a Net Modifier of –10 and an AP Range Factor of E, it is not possible to hit a target vehicle.

If the Net Modifier is –2 and the AP Range Factor is S, the AP Hit Number is 56.

AP Hit (4.4.3.2.3)

Net Mod	RANGE P	S	M	L	E	Net Mod
+5+	00	00	75	45	15	+5+
+4	00	98	70	42	14	+4
+3	00	91	65	39	13	+3
+2	00	84	60	36	12	+2
+1	99	77	55	33	11	+1
0	90	70	50	30	10	0
-1	81	63	45	27	09	-1
-2	72	56	40	24	08	-2
-3	63	49	35	21	07	-3
-4	54	42	30	18	06	-4
-5	45	35	25	15	05	-5
-6	36	28	20	12	04	-6
-7	27	21	15	09	03	-7
-8	18	14	10	06	02	-8
-9	09	07	05	03	01	-9
-10-	01	01	01	01	---	-10-

If the Net Modifier is –6 and the AP Range Factor is P, the AP Hit Number is 36.

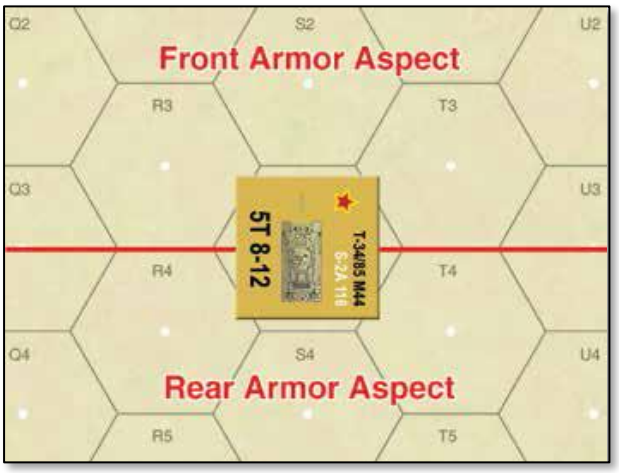
AP Hit (4.4.3.2.3)

Net Mod	RANGE P	S	M	L	E	Net Mod
+5+	00	00	75	45	15	+5+
+4	00	98	70	42	14	+4
+3	00	91	65	39	13	+3
+2	00	84	60	36	12	+2
+1	99	77	55	33	11	+1
0	90	70	50	30	10	0
-1	81	63	45	27	09	-1
-2	72	56	40	24	08	-2
-3	63	49	35	21	07	-3
-4	54	42	30	18	06	-4
-5	45	35	25	15	05	-5
-6	36	28	20	12	04	-6
-7	27	21	15	09	03	-7
-8	18	14	10	06	02	-8
-9	09	07	05	03	01	-9
-10-	01	01	01	01	---	-10-

Roll (100), if the result exceeds the AP Hit Number, the shot missed. If less than or equal to the AP Hit Number, the shot hit.

4.4.3.2.4 Basic Game Hit Angle Determination

The orientation of the target vehicle to the firing vehicle is used to determine where a vehicle is hit. In the Basic Game, vehicles have either a Front or Rear Armor Aspect.



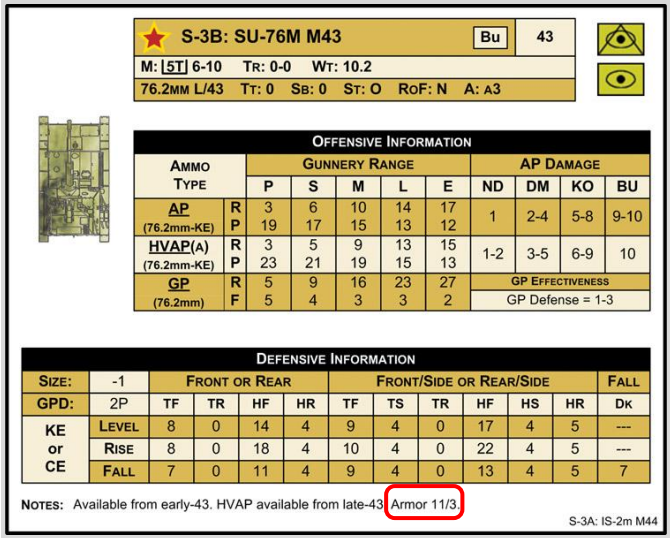
If the line-of-sight runs exactly down a hexside dividing the Front and Rear aspects, the player controlling the target vehicle determines which aspect to utilize.

4.4.3.2.5 Determining Armor Penetration

The Basic Game utilizes a streamlined method of determining armor penetration. The armor information found in the Defensive Information section is only used in the Advanced Game (AG).

The armor information in the Basic Game is found in the target vehicle's Notes Section as Armor Front Factor/Rear Factor.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). Its Front Armor Factor is 11; its Rear Armor Factor is 3.



S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 TR: 0-0 WT: 10.2

76.2MM L/43 TT: 0 SB: 0 ST: O RoF: N A: A3

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

© 2025 GMT Games, LLC

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa). Its Front Armor Factor is 3; its Rear Armor Factor is 2.

G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 TR: 0-0 WT: 6.4

47MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A4

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP EFFECTIVENESS			
	F	3	3	2	2	1	GP Defense = 1-2			

DEFENSIVE INFORMATION												
SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	3	0	3	3	5	5	0	4	4	4	---
	RISE	4	0	3	3	5	5	0	4	4	4	---
	FALL	3	0	3	3	4	4	0	4	4	4	4

NOTES: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

For armor penetration, find the portion of the firing vehicle's Data Card with the name of the firing weapon Type column of the Offensive Information section. Move along the P – Penetration subrow for the AP row until finding the value that is just below the value that corresponds to the range in hexes. That value is the AP Penetration Factor.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). Assume the range to be 9 hexes. The AP Penetration Factor for AP Type ammo is 15.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 TR: 0-0 WT: 10.2

76.2MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A3

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP EFFECTIVENESS			
	F	5	4	3	3	2	GP Defense = 1-3			

DEFENSIVE INFORMATION												
SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	8	0	14	4	9	4	0	17	4	5	---
	RISE	8	0	18	4	10	4	0	22	4	5	---
	FALL	7	0	11	4	9	4	0	13	4	5	7

NOTES: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference the Vehicle Data Card Key for Panzerjäger I (Panzer North Africa). Assume the range to be 9 hexes. The AP Penetration Factor for AP Type ammo is 10.

G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 TR: 0-0 WT: 6.4

47MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A4

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP EFFECTIVENESS			
	F	3	3	2	2	1	GP Defense = 1-2			

DEFENSIVE INFORMATION												
SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	3	0	3	3	5	5	0	4	4	4	---
	RISE	4	0	3	3	5	5	0	4	4	4	---
	FALL	3	0	3	3	4	4	0	4	4	4	4

NOTES: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

If the firing vehicle's AP Penetration Factor is greater than or equal to the target vehicle's Armor Factor, the shot penetrated. If less than the Armor Factor, the shot has no effect.

Bigger is not necessarily better. The finest Soviet anti-tank gun produced during the war was the 100mm L/56. Its anti-armor performance was superior to both the 122mm L/46 and the 152mm L/29. Why didn't more units field it? The Soviets had many more 122mm and 152mm guns in hand and they also preferred the explosive advantage those guns offered since soft targets dominated the battlefield at the end of the war.

4.4.3.2.6 Basic Game AP Damage & Effects

If the shot penetrates, apply the following:

- If the Penetration Factor is equal to or greater than the Armor Factor by 1-3, the target suffers a Damage Hit.
- If greater by 4-9, it suffers a KO.
- If greater by 10 or more, it suffers a BU.

Damage effects are also summarized on Game Card D (Panzer) or on the Combat Effects Summary (back cover of the Optional Rules Book -Panzer North Africa).

Damaged

The target vehicle was damaged by the hit. Place a DMGD counter on or next to the target vehicle.

If a damaged vehicle receives a second Damaged result, it is considered KO—Knocked-Out instead and those results apply.

If Damaged, a vehicle:

- Must apply Damage AP Hit modifiers to all future fire.
- Immediately has its remaining and future movement speed allowance reduced by ½ (round down).

Note that the DMGD counter has Turret, Hull. Malfunction, and Out of Action listed (Panzer North Africa). Turret and Hull are specific damage areas and are utilized in the Advanced Game; Malfunction and Out of Action are used with the Optional Rules.

© 2025 GMT Games, LLC

KO – Knock-Out

The vehicle was knocked out by the hit. It is no longer operable and is totally out of action.

It is considered to be eliminated and is now a Wreck in the context of the game. Remove the vehicle counter from the hex and replace it with a KO counter.

If a KO or BU counter is already in the hex, do not place a second counter.

BU – Brew Up

The vehicle was brewed up by the hit. It suffered a catastrophic hit, exploded, and caught fire. It is now a source of Brew-Up Smoke.

It is considered eliminated and is now a Wreck in the context of the game. Remove the vehicle counter from the hex and replace it by a BU counter. If a KO counter is already in the hex, replace the counter; if a BU counter is already in the hex, do not place a second counter.

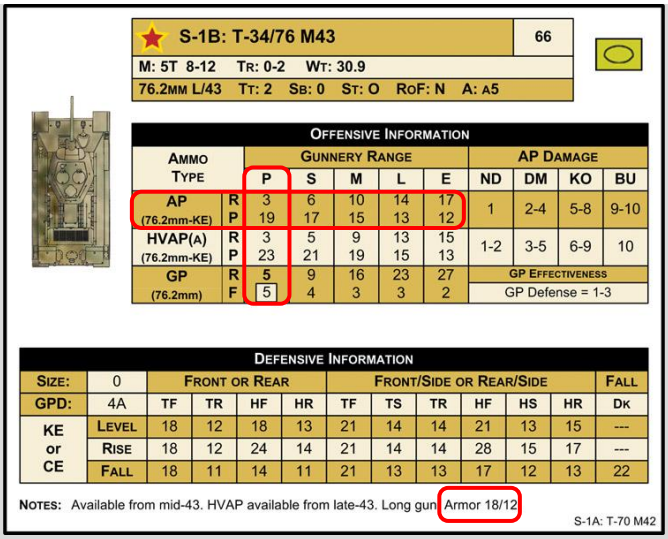
The Situation (Panzer)

A Soviet T-34/76 M43 (Data Card S-1B) located in a Clear hex and a German PzKpfw IVH (Data Card G-2A) located in a Woods hex are engaging one another at an unblocked range of 3 hexes.

The T-34/76 M43 has a SHORT HALT command while the PzKpfw IVH has a FIRE command. The Soviet player is the First Player. As such, the T-34/76 M43 resolves its fire first. Its SHORT HALT counter is revealed and placed with the FIRE side facing the front of the tank counter.

The PzKpfw IVH is within spotting range as the actual range of 3 hexes is less than 7 hexes, which is the maximum spotting range when attempting to spot a vehicle in Medium Cover.

At a range of 3 hexes for the AP ammo type, the AP Range Factor is P – Point Blank.



S-1B: T-34/76 M43 66

M: 5T 8-12 TR: 0-2 WT: 30.9

76.2MM L/43 TT: 2 SB: 0 ST: O ROF: N A: A5

OFFENSIVE INFORMATION

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

DEFENSIVE INFORMATION

Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	4A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	Level	18	12	18	13	21	14	14	21	13	15	---
	Rise	18	12	24	14	21	14	14	28	15	17	---
	Fall	18	11	14	11	21	13	13	17	12	13	22

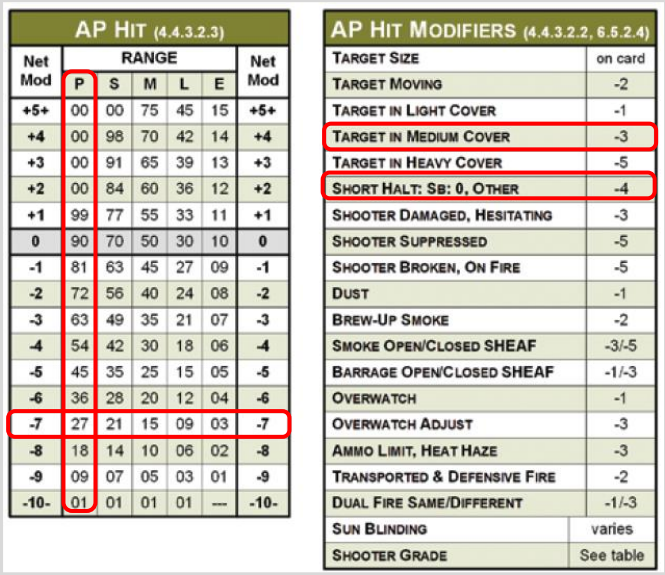
NOTES: Available from mid-43. HVAP available from late-43. Long gun Armor 18/12

S-1A: T-70 M42

The AP Hit modifiers are now checked for any effect. The Net Modifier is –7 as a result of the following modifiers:

- *Target in Medium Cover –3*
- *Target SHORT HALT –4*

The P Range column on the AP Hit Table is cross-referenced with the –7. The AP Hit Number is 27.



AP HIT (4.4.3.2.3)

Net Mod	RANGE P	S	M	L	E	Net Mod
+5+	00	00	75	45	15	+5+
+4	00	98	70	42	14	+4
+3	00	91	65	39	13	+3
+2	00	84	60	36	12	+2
+1	99	77	55	33	11	+1
0	90	70	50	30	10	0
-1	81	63	45	27	09	-1
-2	72	56	40	24	08	-2
-3	63	49	35	21	07	-3
-4	54	42	30	18	06	-4
-5	45	35	25	15	05	-5
-6	36	28	20	12	04	-6
-7	27	21	15	09	03	-7
-8	18	14	10	06	02	-8
-9	09	07	05	03	01	-9
-10-	01	01	01	01	---	-10-

AP HIT MODIFIERS (4.4.3.2.2, 6.5.2.4)

Target Size	on card
Target Moving	-2
Target in Light Cover	-1
Target in Medium Cover	-3
Target in Heavy Cover	-5
Short Halt: SB: 0, Other	-4
Shooter Damaged, Hesitating	-3
Shooter Suppressed	-5
Shooter Broken, On Fire	-5
Dust	-1
Brew-Up Smoke	-2
Smoke Open/Closed SHEAF	-3/-5
Barrage Open/Closed SHEAF	-1/-3
Overwatch	-1
Overwatch Adjust	-3
Ammo Limit, Heat Haze	-3
Transported & Defensive Fire	-2
Dual Fire Same/Different	-1/-3
Sun Blinding	varies
Shooter Grade	See table

The Soviet player rolls (100), the result is a 12; a hit is made on the PzKpfw IVH. The T-34/76 M43 is marked with a SPOT/FIRE counter under the edge of its Command counter.

It is determined that the PzKpfw IVH's Front Armor Aspect is applicable. That results in an Armor Factor of 18. Since the T-34/76 M43's AP ammo penetrates 19 at range 3, the shot penetrated.

Comparing the Penetration Factor of 19 to the Armor Factor of 18 (+1); the German tank is damaged. The PzKpfw IVH is marked with a DMGD counter.

Now the PzKpfw IVH resolves its fire. Its FIRE counter is revealed. Had it been Knocked-Out or Brewed-Up by the T-34/76 M43 during the First Player Step, it would not now have a shot. However, it must apply the just incurred Shooter Damaged modifier of –3.

© 2025 GMT Games, LLC

The T-34/76 M43 is within spotting range as the actual range of 3 hexes is less than 20 hexes which is the maximum spotting range when attempting to spot a vehicle in None Cover. Note that the just placed SPOT/FIRE counter does not yet come into play.

At a range of 3 hexes, for the AP ammo type, the AP Range Factor is P.

G-2A: PzKpfw IVH	73
M: 3T 5-8 B: -5 TR: 0-2 WT: 25.0	
75MM L/48 TT: 2 SB: 0 ST: O RoF: N A: A4S6D4 SMK	

OFFENSIVE INFORMATION

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (75mm-KE)	R	4	7	13	18	21	1	2-4	5-8	9-10
	P	25	22	19	17	16				
APCR(A) (75mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	33	30	27	22	19				
GP (75mm)	R	6	11	20	28	34	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20)			
	F	1	1	1	1	1	N/A vs. High Altitude			

DEFENSIVE INFORMATION

Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE	Level	19	6	16	4	22	8	7	19	7	5	---
	Rise	19	7	17	4	22	8	8	20	7	5	---
CEx3	Fall	19	6	16	4	22	7	7	19	7	5	17

NOTES: Available from mid-43. APCR available from mid-43. Long gun Armor 18/6. G-2B: PzKpfw V Panther

The AP Hit modifiers are now checked for any effect. The Net Modifier is –5 as a result of the following modifiers:

- *Target Moving –2*
- *Shooter Damaged –3*

The P Range column on the AP Hit Table is cross-referenced with the –5. The AP Hit Number is 45.

AP HIT (4.4.3.2.3)

Net Mod	Range P	S	M	L	E	Net Mod
+5+	00	00	75	45	15	+5+
+4	00	98	70	42	14	+4
+3	00	91	65	39	13	+3
+2	00	84	60	36	12	+2
+1	99	77	55	33	11	+1
0	90	70	50	30	10	0
-1	81	63	45	27	09	-1
-2	72	56	40	24	08	-2
-3	63	49	35	21	07	-3
-4	54	42	30	18	06	-4
-5	45	35	25	15	05	-5
-6	36	28	20	12	04	-6
-7	27	21	15	09	03	-7
-8	18	14	10	06	02	-8
-9	09	07	05	03	01	-9
-10-	01	01	01	01	---	-10-

AP HIT MODIFIERS (4.4.3.2.2, 6.5.2.4)

Target Size	on card
Target Moving	-2
Target in Light Cover	-1
Target in Medium Cover	-3
Target in Heavy Cover	-5
Short Halt: SB: 0, Other	-4
Shooter Damaged, Hesitating	-3
Shooter Suppressed	-5
Shooter Broken, On Fire	-5
Dust	-1
Brew-Up Smoke	-2
Smoke Open/Closed SHEAF	-3/-5
Barrage Open/Closed SHEAF	-1/-3
Overwatch	-1
Overwatch Adjust	-3
Ammo Limit, Heat Haze	-3
Transported & Defensive Fire	-2
Dual Fire Same/Different	-1/-3
Sun Blinding	varies
Shooter Grade	See table

The German player rolls (100), the result is a 45, a hit is made on the T-34/76 M43. The PzKpfw IVH is marked with a SPOT/FIRE counter under the edge of its Command counter.

It is determined that the T-34/76 M43's Front Armor Aspect is applicable. That results in an Armor Factor of 18. Since the PzKpfw IVH's AP ammo penetrates 25 at range 3, the shot penetrated.

Comparing the Penetration Factor of 25 to the Armor Factor of 18 (+7), results in a Knock-Out for the Soviet tank. The T-34/76 M43's counter (and any other counters) is removed from play and replaced with a KO counter.

4.5 Basic Game Movement Phase

"Aptitude for war is aptitude for movement." ~ Napoleon Bonaparte

The players execute movement sequentially based on the order determined previously in the Initiative Phase.

The Second Player announces and resolves movement for every vehicle marked with a MOVE or SHORT HALT command. Vehicles are marked with SPOT/MOVE counters as they move.

While the Second Player is moving, the First Player announces and resolves all desired Overwatch Fire by vehicles marked with unrevealed OW commands at opposing vehicles as they move.

The First Player then announces and resolves movement. While the First Player is moving, the Second Player announces and resolves all desired Overwatch Fire by vehicles marked with unrevealed OW commands at opposing vehicles as they move.

As is the case with Direct Fire, Overwatch Fire taken in the Movement Phase can result in a series of triggered Overwatch Fire responses. A vehicle that fires at a moving vehicle could then receive fire from a vehicle with unrevealed OW commands, and so on.

Note that vehicles with MOVE or SHORT HALT commands are not required to actually move from their current hex, but must still reveal their Command counter. In fact, there are certain actions that are covered in the Advanced Game rules that require movement without actually exiting a hex. However, even if they do not move from their hex, they are still considered to be moving and are marked with SPOT/MOVE counters.

4.5.1 General Movement Rules

A player may move all, some or none of the commanded vehicles up to the maximum Movement Speed Allowance.

All vehicles are marked with SPOT/MOVE counters. This replaces the SPOT/FIRE counter for the fire portion of a SHORT HALT command that was placed during the Combat Phase.

4.5.1.1 Movement Procedure

Vehicles move one at a time and must complete their entire move before the next vehicle moves. Movement costs should be called out as expended.

If there is a possibility a move may trigger Overwatch Fire, the movement should be slow enough to permit the opposing player to observe and to decide if and when to fire.

© 2025 GMT Games, LLC

Use the Command counter to mark the start of the move in case the player decides to retrace the move or if the accuracy of a move is called into question. Move the Command counter forward once the move is completed.

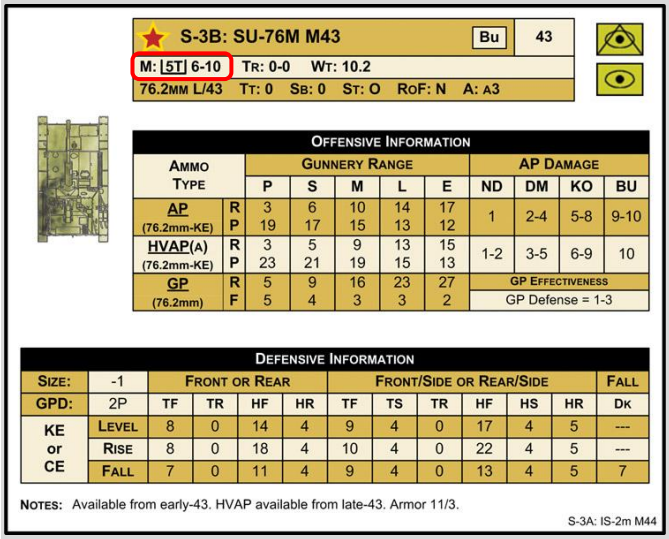
When a vehicle moves, it must always move in the direction its front faces, except for reverse moves where it is directly opposite, and keep its facing towards the direction of movement.

Vehicle facing is critical when determining the correct aspect for AP fire.

4.5.1.1.1 Movement Factor

Each vehicle has a Movement Factor that determines the distance it can move during a turn. A vehicle's Movement Factor is listed on its Data Card in the General Information section following the M:.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). Its Movement Factor is 5T 6-10. The U surrounding the 5T is covered in the Advanced Game.



S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 | Tr: 0-0 | Wt: 10.2

76.2mm L/43 | Tt: 0 | Sb: 0 | St: O | RoF: N | A: A3

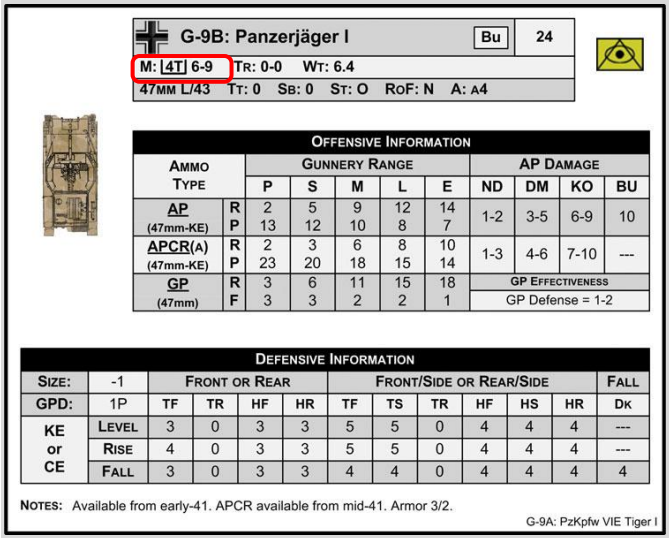
Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa). Its Movement Factor is 4T 6-9. The U surrounding the 4T is covered in the Advanced Game.



G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 | Tr: 0-0 | Wt: 6.4

47mm L/43 | Tt: 0 | Sb: 0 | St: O | RoF: N | A: A4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

Notes: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

With vehicles, the Movement Factor is made up of four distinct elements. The first two are listed in combination and determine the Cross-Country movement speed allowance and the Mode of Traction. From the *Panzer* example above (SU-76M M43), 5T gives a Cross-Country movement speed allowance of 5 and Mode of Traction of T=Tracks. Other vehicles have H=Half-track or W=Wheeled for their Mode of Traction.

The third element is the vehicle's Path movement speed allowance, and the fourth is the Road movement speed allowance. From the *Panzer* example above (SU-76M M43), Path equals 6 and Road equals 10.

Vehicles with Move commands may expend any portion of the available movement speed allowance.

Vehicles with Short Halt commands may expend up to ½ of the available movement speed allowance (round down).

Damaged vehicles may expend up ½ of the available movement speed allowance (round down). Damaged vehicles with Short Halt commands may expend ¼ of the available movement speed allowance (round down).

While a vehicle may use any part of its available movement speed allowance, the unused portion does not carry over from one turn to another. It may also not be transferred from one vehicle to another vehicle.

The movement speed allowance is expended by performing various movements which have various costs depending on the Terrain type and the vehicle's Mode of Traction.

4.5.1.1.2 Movement Costs

The cost for a vehicle to enter a hex or cross a hexside is listed on the Terrain Effects Table on Game Card A (Panzer) or on Game Card B (Panzer North Africa). All movement is considered to be Cross-Country unless the vehicle is utilizing Path or Road movement.

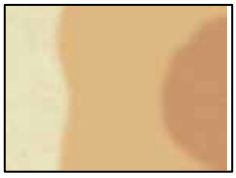
The movement cost varies for each new hex entered or hexside crossed based on the type of terrain in the hex along with the vehicle's Mode of Traction.

Moving 1 hex in Clear terrain costs 1, while moving 1 hex in Rough terrain costs 4 for a T type vehicle.

Tracked (T) and Half-tracked (H) vehicles pay the same movement costs while Wheeled (W) vehicles pay their own movement costs. Use the appropriate column for the Mode of Traction. No movement is allowed into prohibited (P) type terrain, e.g., vehicles may not enter Heavy Woods hexes.

Pay close attention to the information in T, H column on the table. While available to tracked vehicles, some terrain types are prohibited to half-tracked vehicles, e.g., crossing a Wall hexside.

Slope and Crest Hexsides

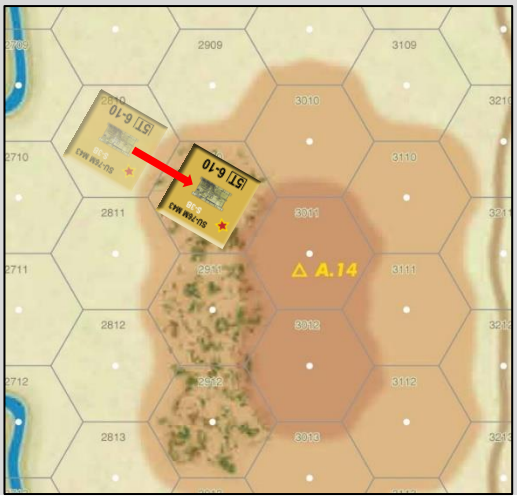


Movement between terrain of different Heights (crossing a Slope or Crest hexside) has a value added (+1 or +2) to the cost of the terrain in the destination hex. Height change costs vary per the number of levels changed, up or down, when the move is made.

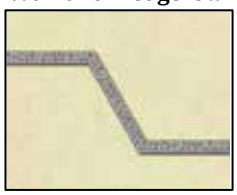
Tracked and half-tracked vehicles may not change elevation by more than 2 Heights in a single 1 hex move while wheeled vehicles are limited to a single Height change.

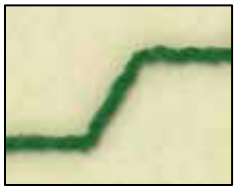
© 2025 GMT Games, LLC

A tracked (T) vehicle moves from ground level (Height 0) across a Slope hexside at Height 1 into a Hill hex containing Scrub type terrain. The vehicle expends 3 of its available movement speed allowance, 2 for the Scrub terrain and +1 for the change of 1 Height.



Wall and Hedgerow Hexsides





Movement across these hexsides for tracked vehicles only does not result in a change of Height, but costs a value added to the cost of the terrain in the destination hex. Note moving a tracked vehicle across a Hedgerow hexside costs the vehicle its entire speed allowance (see 4.5.1.1.3 Exceeding Movement Costs).

Brew-Up Smoke

Movement into or through a Brew-Up Smoke hex adds +1 to the cost of the other terrain type in the hex when moving or turning in a hex.

4.5.1.1.3 Exceeding Movement Costs

A vehicle may always move just 1 hex during its move if it has MOVE or SHORT HALT commands even if the cost of moving 1 hex exceeds the vehicle's available movement speed allowance. This exception also applies to reverse moves.

This is allowed as long as the vehicle does not expend any of its movement speed allowance while turning and does not exceed height change limitations. Otherwise, vehicles may not exceed their available movement speed allowance.

4.5.1.1.4 Turning

Turning costs apply only to vehicles. Vehicles turn by pivoting in place and then moving in a new direction. Turn costs apply only if the vehicle makes a turn in excess of one hexside (60º).

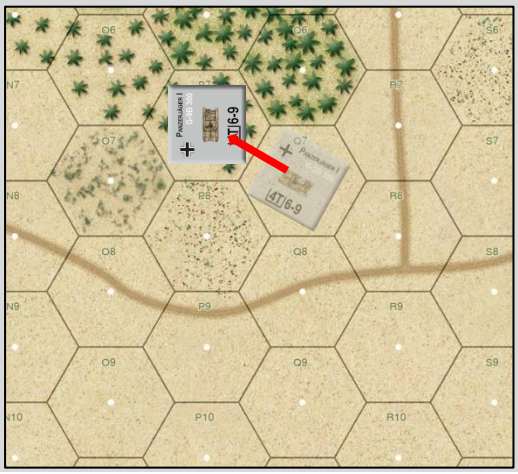
Vehicles receive one free hexside turn for each hex they occupy or enter. This could be at the beginning of a move, during a move, or at the very end of a move.

Turn costs are based on the Terrain type, not the magnitude of the turn. If the vehicle turns 2 or 3 hexsides in a hex, the turn cost is subtracted from the available movement speed allowance. Turn costs are the same during forward or reverse moves.

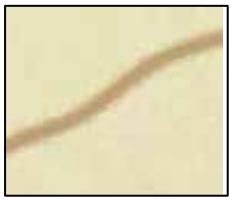
Turn costs are listed on the Terrain Effects Table on Game Card A (Panzer) or Game Card B (Panzer North Africa) in the Turn column. Vehicles may never exceed their available movement speed allowance by turning. Turning can trigger Overwatch Fire.

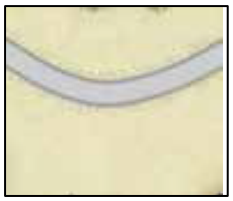
Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). It enters a Woods hex and then turns 2 hexsides expending its movement speed allowance of 5.

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa). It enters a Light Grove hex and then turns 2 hexsides expending its movement speed allowance of 4.



4.5.1.1.5 Path and Road Movement





Vehicles move faster when traversing the battlefield via Paths or Roads. Wheeled vehicles typically receive the greatest advantage while fully tracked vehicles receive the least.

Vehicles moving at Path or Road speed ignore the actual terrain costs in a hex expending only 1 of its Movement Speed Allowance for each hex entered (2 for reverse moves).

To move at the Path or Road speed, the vehicle must start its move on a Path or Road hex and follow the route described by the Path or Road for its entire move, ending its move on a Path or Road. While a vehicle may face any direction at the start the move, it must maintain its facing along the route

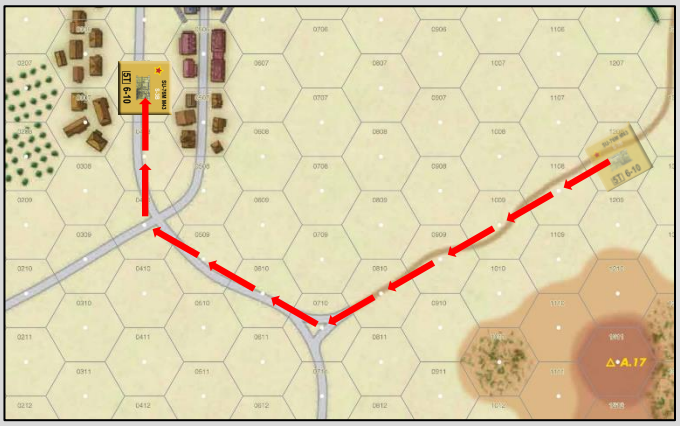
© 2025 GMT Games, LLC

described by the Path or Road for the entire move. It may not adjust its facing to a more advantageous angle, during or even at the end of the move. In other words, it is always facing the Road or Path as it would enter the next hex.

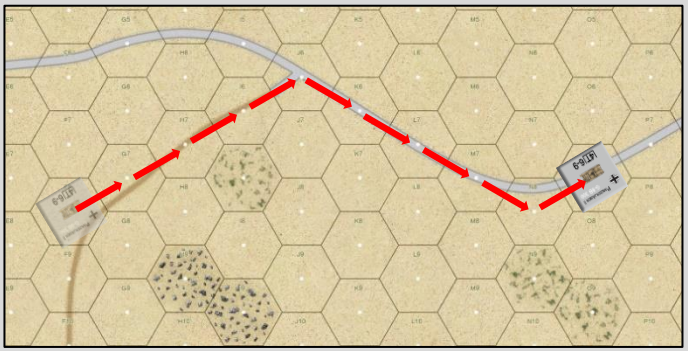
If a vehicle combines Path or Road movement with non-Path or Road movement, it must use its Cross-Country movement factor for the entire move.

If a vehicle moves along a route that combines Path and Road movement, it uses the rate based on the greatest number of hexes traversed. If equal, it utilizes the Path movement rate.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). It is moving along a route consisting of 4 Path hexes and 6 Road hexes. It may use its Road Movement Factor of 10 for the entire move.



Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa). It is moving along a route consisting of 6 Road hexes and 3 Path hexes. It may use it Road Movement Factor of 9 for the entire move.



A Wreck (KO or BU) counter or an opposing vehicle located in a Path or Road hex does not prevent movement but does stop a vehicle from using its Path or Road movement factor. If the route crosses a Wreck or an opposing vehicle, the vehicle must use its Cross-Country movement factor for the *entire* move.

A friendly vehicle located in a Path or Road hex does not stop a vehicle from using its Path or Road movement factor unless the hex is over-stacked. If the route crosses an over-stacked hex (including the moving vehicle), the vehicle must use its Cross-Country movement factor for the *entire* move.

Vehicles may enter prohibited terrain hexes, e.g., Heavy Woods, while moving on a Path or Road. However, they may never exit from the Path or Road into prohibited terrain hexes that do not include a Path or Road.

Vehicles that change height while moving along a Path or Road treat the cost of changing height as if it were 1 less than the actual value. Vehicles may still not add more than +2 for changing heights within a 1 hex move.

A vehicle is moving along a Road and is required to change 2 heights, it costs only +1 speed rather than the normal +2 for the height change.

4.5.1.1.6 Movement Over Bridges

Bridge hexes along a Path or Road are of a terrain type that matches the connecting Path or Road hex. If a bridge is connected on one end by a Path on the other end by a Road, the Bridge is treated as a Road hex.

Vehicles may not enter or exit a Bridge hex other than from its connected Path and/or Road hexes. Bridges are considered a continuation and part of its connected Path and/or Road hexes.

4.5.1.1.7 Reverse Moves

Vehicles may move in reverse during any portion of their move. When moving in reverse, the vehicle moves in the direction directly opposite from its front face.

Reverse moves cost the vehicle twice the normal movement cost for the terrain entered. Turn costs are unaffected during reverse moves.

4.5.1.1.8 No Move Moves

Vehicles with MOVE or SHORT HALT commands may remain in their current hex, they are not required to move from that hex, but they are still considered to be moving and are still marked with a SPOT/MOVE counter and are still subject to Overwatch Fire. Vehicles may also just turn in place.

4.5.1.1.9 Off Mapboard Moves

Any vehicle that moves off the mapboard is considered out of the scenario and may not return to play. It is not counted as eliminated, but it no longer has any impact on the scenario.

To move off the mapboard, a vehicle expends its movement speed allowance based on the terrain type in the hex it is exiting from.

An exception to this rule are vehicles that are not yet committed to play and are being held off the mapboard. Once they enter play, if they then move off the mapboard, they may not return to play.

In addition, vehicles may be required to exit the mapboard to meet certain victory conditions. These vehicles may not return to play once they exit, but still figure into the scenario's victory conditions.

4.5.1.1.10 Vehicle Coexistence

Vehicles may freely pass through Wrecks, and friendly and opposing vehicles without additional cost other than for the cost of the terrain entered. However, opposing vehicles may never end their movement in the same hex. Stacking limits are a consideration when moving through a hex containing opposing or friendly vehicles.

If an armed vehicle enters a hex occupied by just one or more opposing unarmed vehicles, those vehicles are automatically Knocked Out and replaced with a Wreck counter.

Since movement is resolved sequentially, there can never be a case of contention for a specific piece of ground. One side always grabs the hex first.

This is the one case where the player controlling the initiative may choose to be the Second Player, since the Second Player completes all movement before the First Player.

© 2025 GMT Games, LLC

4.6 Adjustment Phase

The players resolve the final actions for the turn and prepare for the next turn by clearing off excess counters, and advancing the TURN counter to the next turn.

4.6.1 Adjust & Remove Counters Step

Simultaneously flip over all Command counters that were not revealed. Unused OW and N/C commands are ignored.

Note any unused FIRE, SHORT HALT, or MOVE commands. Any occurrence of this situation is an illegal play as all FIRE, SHORT HALT and MOVE commands must be revealed during those respective First or Second Player Steps. Players should make certain this situation does not occur. Players may decide if these units should be subject to unexecuted Overwatch Fire. Mark all units with unused FIRE or SHORT HALT commands with SPOT/FIRE counters and units with Move commands with SPOT/MOVE counters. Remove all Command counters from the mapboard.

4.6.2 End Turn Step

The current turn is now complete. If it is the last turn of the scenario, the Victory Conditions are reviewed to determine the outcome of the scenario. If it is not the last turn of the scenario, the scenario continues on to the next turn.

© 2025 GMT Games, LLC

Introduction to the Advanced Game (AG)

The Advanced Game adds many new concepts and processes that expand on those found in the Basic Game. In some cases, the Advanced Game just adds more depth to the Basic Game. However, in other cases it adds completely new concepts. When reviewing the Advanced Game keep in mind that all Basic Game rules still apply.

In many cases, the Advanced Game may be treated as drop-in, modular rule sets. They can be used as called for or as desired, but in many cases, they are not required for play.

5.0 Advanced Game General Procedures & Rules

5.1 Leg Units

Squads are the largest leg units fielded, followed in order of size, by half-squads and sections.

Leg units are typically armed with AP and GP or AP only or GP only weapons. Their combat resolution is the same as any other AP or GP weapon. All leg units have a 360° Field-of-Fire unless suppressed.

Leg units may be further classified as motorcycle, bicycle, or cavalry units. Other than for their mode of transport, they function essentially the same as their foot-bound counterparts.

5.1.1 Squads & Half-Squads

Squads and half-squads are the primary leg units found in infantry formations. In fact, squads are actually made up of two half-squad units. Combat results may call for a squad to be reduced to a half-squad rather than total elimination. Half-squads are not reduced further, they are eliminated from play.

Squads may never voluntarily split into two half-squads. They may only be reduced to a single half-squad as a result of combat. Similarly, two half-squads may never combine to form a squad.

Squads and half-squads are always of a certain unit type as instructed by the Force List in a scenario.

Squads and half-squads are armed with their intrinsic GP weapon, plus in some cases with attached crew-served weapons. Unsuppressed squads may utilize their basic GP weapon plus all attached crew-served weapons when executing combat. Suppressed squads and half-squads may utilize their intrinsic GP weapon or a single attached weapon.

Reference the Leg Data Card Key (Panzer), German squads and half-squads may be one of Rifle, Infantry or SMG unit types in any given scenario.

G-8A: Squads, Half-squads & Sections

Squad or Half-squad: M: 2L 3 Tr: 0-2/1 Wt: 1.0/.5
Section: M: 2L 3 or M: 1L 0 Tr: 0-1 Wt: 1.0
B/C: 2W 4-6 B: -15 M/C: 6W 15-20 B: -15 Cavalry: 4L 6

Offensive Information

Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness	Pts
Rifle Squad	N	Unl	O	GP	R	2	3	6	8	10	Small Arms	27
					F	9	7	5	3	1		
Half-squad					F	6	5	3	2	1		20
Infantry Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		
Half-squad					F	3	2	2	1	1		16
SMG Squad	N	Unl	O	GP	R	1	---	2	---	3	Small Arms	20
					F	10	---	3	---	1		
Half-squad					F	6	---	2	---	1		14
Any Section	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

Defensive Information

Size:	S/L	Light Cover	4S	Heavy Cover	8S	Moving	-2
GPD:	2S	Medium Cover	6S	Full Cover	+2	Transported	1/3S

Notes: Available throughout the war.

G-8B: Mortars, HMG & Anti-Tank Weapons

Reference the Leg Data Card Key (Panzer North Africa), Italian squads and half-squads may be one of LMG, Infantry or Bersaglieri unit types in any given scenario.

I-8A: Squads, Half-squads & Sections

Squad or Half-squad: M: 2L 3 Tr: 0-2/1 Wt: 1.0/.5
Section: M: 2L 3 or M: 1L 0 Tr: 0-1 Wt: 1.0
M/C: 6W 15-20 B: -15

Offensive Information

Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness	Pts
LMG Squad	N	Unl	O	GP	R	2	3	6	8	10	Small Arms	26
					F	8	6	5	3	1		
Half-squad					F	5	4	3	2	1		19
Infantry Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		
Half-squad					F	3	2	2	1	1		16
Bersaglieri Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	24
					F	6	5	3	2	1		
Half-squad					F	4	3	2	1	1		17
Any Section	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

Defensive Information

Size:	S/L	Light Cover	4S	Heavy Cover	8S	Moving	-2
GPD:	2S	Medium Cover	6S	Full Cover	+2	Transported	1/3S

Notes: Available from mid-40.

B-8B: Mortars, HMG & Anti-Tank Weapons

5.1.2 Sections

Sections are fielded without attached weapons, i.e., Command or FO Sections, or may attach crew-served weapons, e.g., HMGs, Mortars or ATRs.

Sections have two Movement Factors. The first, 2L 3, is for sections without (w/o) any attached crew served weapons; and the second, 1L 0, is for sections with attached crew-served weapons.

All Sections are armed with their intrinsic GP weapon in addition to any attached crew-served weapons. Sections may utilize their intrinsic GP weapon or a single attached weapon when executing combat.

5.1.3 Attached Crew-Served Weapons

Many leg units have AP and/or GP Fire capable crew-served weapons attached. These include mortars, heavy machine guns, anti-tank rifles, anti-tank rocket launchers and flamethrowers.

Crew-served weapons are never fielded individually; they must be attached to a squad, half-squad or section unit. While there is no

© 2025 GMT Games, LLC

specific limit as to the number of crew-served weapons a leg unit may have attached, logic should dictate what is employed.

The scenarios dictate which leg units have attached crew-served weapons. When necessary, use the Formation Summary to indicate which units are so equipped.

The Notes Section of their Data Cards classify crew-served weapons as to their type and any other special factors.

Reference Data Cards G-8B and S-8B (Panzer), to be fielded, each of the six German and the five Soviet crew-served weapons must be attached to a leg unit.

Reference Data Cards G-8B, I-8B, and B-8B (Panzer North Africa), to be fielded, each of the four German, Italian and British crew-served weapons must be attached to a leg unit.

5.1.3.1 Mortars

Mortars loft their explosive bombs through a high arc. Mortars have two GP Gunnery sections on their Data Cards. One is for GP Direct Fire (DF) and the other is for GP Indirect Fire (IF). The appropriate Gunnery Table is referenced based on the type of fire. Mortars do not have an AP Direct Fire capability. Crew-served mortars may not fire while being transported or located in the upper floors of buildings.

Mortars are considered Small Arms (see 5.7) for spotting purposes. Some mortars have a minimum firing range (see 5.6). They may utilize indirect fire out to their maximum range from Full Cover (see 6.1.4.2).

Some vehicles field them as a primary weapon. They may not fire if located inside of a building.

Reference Data Card G-8B (Panzer & Panzer North Africa), the German 8cm GrW 34 and 5cm GrW 36 are crew-served mortars.

G-8B: Mortars, HMG & Anti-Tank Weapons

Offensive Information																
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	AP/GP Effectiveness ND	DM	KO	BU	Pts
8cm GrW 34 Smk, Il Min-2	N	8s6i6	O	GP DF IF	R F F	4 7 5	9 6 5	16 5 4	22 4 3	26 3 2	1-3				28
5cm GrW 36	N	8	O	GP	R F	1 4	2 4	3 3	4 2	5 2	1-2				9
HMG	N	Unl	O	GP	R F	2 12	4 9	7 7	10 4	12 2	Small Arms				15
Panzerfaust (160mm-CE)	N	8	O	AP 14	R P	--- ---	1 47	--- ---	--- ---	--- ---	1	2	3-5	6-10	13
RPzB 43/54 (88mm-CE)	N	8	O	AP 8	R P	1 30	--- ---	2 30	--- ---	3 30	1	2-3	4-7	8-10	19
PzB 39 ATR (7.92mm-KE)	N	Unl	O	AP	R P	2 6	3 5	6 4	8 4	10 3	1-4	5-7	8-10	---	6

Notes: Weapons must be attached to squad, ½ squad or section units. RPzB 43/54 Panzershrek available from mid-43. Panzerfaust available from late-43. All others available throughout the war. Panzerfaust and RPzB 43/54 Panzershrek are hand-held anti-tank weapons. GrW 34 and GrW 36 are mortars and are small arms for fire. PzB 39 ATR is an anti-tank rifle and is small arms for fire.

G-8A: Squads, Half-Squads & Sections

5.1.3.2 HMGs

Heavy machineguns are tripod or platform mounted automatic weapons. HMGs are GP Direct Fire weapons; they do not have an AP Direct Fire capability. Crew-served HMGs may not fire while being transported.

HMGs are considered Small Arms (see 5.7) for spotting purposes. Some vehicles carry them as their primary weapon.

Reference Data Card S-8B (Panzer) for the Soviet crew-served HMG.

5.1.3.3 Anti-Tank Rifles

Anti-tank rifles were the first ant-tank weapons to fire high-velocity bullets to defeat armored vehicles. They are AP Direct Fire weapons; they do not have a GP Fire capability (see below). They may fire while being transported.

Anti-tank rifles are classified as Small Arms (see 5.7) for spotting purposes. Some vehicles carry them as their primary weapon.

The Italian Fucile-cc S Anti-Tank Rifle was a hybrid design between that and an anti-tank gun. It has a GP Fire capability.

Reference Data Card S-8B, the Soviet PTRD-41 ATR is a crew-served anti-tank rifle.

S-8B: Mortars, HMG & Anti-Tank Weapons

Offensive Information																
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	AP/GP Effectiveness ND	DM	KO	BU	Pts
82mm BM41 Smk, Il Min-2	N	8s6i6	O	GP DF IF	R F F	5 7 5	10 6 5	18 5 4	26 4 3	31 3 2	1-3				30
50mm RM40	N	8	O	GP	R F	1 4	3 4	5 3	7 2	8 2	1-2				11
HMG	N	Unl	O	GP	R F	2 10	4 8	7 6	10 4	12 2	Small Arms				14
M1 Bazooka (66mm-CE)	N	8	O	AP 6	R P	1 20	--- ---	2 20	--- ---	3 20	1	2-3	4-7	8-10	13
PTRD-41 ATR (14.5mm-KE)	N	Unl	O	AP	R P	2 7	3 6	6 5	8 5	10 4	1-3	4-6	7-10	---	7

Notes: Weapons must be attached to squad, ½ squad or section units. PTRD-41 ATR available from late-41. M1 Bazooka available from mid-43. All others available throughout the war. M1 Bazooka is a hand-held anti-tank weapon. BM41 and RM40 are mortars and are small arms for fire. PTRD-41 ATR is an anti-tank rifle and is small arms for fire.

S-8A: Squads, Half-Squads & Sections

Reference Data Card B-8B, the British Boys Mk. I ATR is a crew-served anti-tank rifle.

B-8B: Mortars, HMG & Anti-Tank Weapons

Offensive Information																
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	AP/GP Effectiveness ND	DM	KO	BU	Pts
OML 3-in. Smk, Il Min-2	N	8s6i6	O	GP DF IF	R F F	4 7 5	8 6 4	15 5 3	21 4 3	25 3 2	1-3				26
OML 2-in. Smk, Il*	N	8s6i6	O	GP	R F	1 4	2 4	3 3	4 2	5 2	1-2				11
HMG	N	Unl	O	GP	R F	2 10	4 8	7 6	10 4	12 2	Small Arms				14
Boys Mk.1 ATR (14mm-KE)	N	Unl	O	AP	R P	2 6	3 5	6 4	8 4	10 3	1-3	4-6	7-10	---	6

Notes: Weapons must be attached to squad, ½ squad or section units. All available throughout the war. OML 3-in. and OML 2-in. are mortars and are small arms for fire. Boys Mk.1 ATR is an anti-tank rifle and is small arms for fire.

*OML 2-in IL available from 1942.

B-8A: Squads, Half-Squads & Sections

5.1.3.4 Hand-Held Anti-Tank Weapons

Hand-Held Anti-Tank Weapons (HHATW) fire HEAT (CE) rounds to defeat armored vehicles. They fire either rocket-propelled or spigot-projected shells. They may not fire while being transported or located in the upper floors of buildings unless otherwise indicated (see Data Card Notes Section).

© 2025 GMT Games, LLC

They are AP Direct Fire weapons, but they also have a fixed, non-range dependent GP Direct Fire capability (same range as AP). The fixed GP Factor is listed in their Ammo Type column. GP Direct Fire is used only when these weapons fire at a leg or towed unit.

A few Hand-Held Anti-Tank Weapons are classified as Small Arms (see 5.7) for spotting purposes, e.g., the British PIAT (see Data Card Notes Section).

If fired at a vehicle transporting leg or towed units, the GP Factor may be applied against the passengers in addition to the AP fire directed at the transporting vehicle.

Reference Data Card G-8B (Panzer), the German Panzerfaust and RPzB 43/54 are crew-served, hand-held anti-tank weapons. Their GP Direct Fire Factors are 14 and 8, respectively.

G-8B: Mortars, HMG & Anti-Tank Weapons

Offensive Information																
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range					AP/GP Effectiveness				Pts
						P	S	M	L	E	ND	DM	KO	BU	
8cm GrW 34 Smk, IL min-2	N	8s6i6	O	GP DF IF	R F F	4 7 5	9 6 5	16 5 4	22 4 3	26 3 2	1-3				28
5cm GrW 36	N	8	O	GP	R F	1 4	2 4	3 3	4 2	5 2	1-2				9
HMG	N	Unl	O	GP	R F	2 12	4 9	7 7	10 4	12 2	Small Arms				15
Panzerfaust (160mm-CE)	N	8	O	AP 14	R P	--- ---	1 47	--- ---	--- ---	--- ---	1	2	3-5	6-10	13
RPzB 43/54 (88mm-CE)	N	8	O	AP 8	R P	1 30	--- ---	2 30	--- ---	3 30	1	2-3	4-7	8-10	19
PzB 39 ATR (7.92mm-KE)	N	Unl	O	AP	R P	2 6	3 5	6 4	8 4	10 3	1-4	5-7	8-10	---	6

Notes: Weapons must be attached to squad, ½ squad or section units. RPzB 43/54 Panzershrek available from mid-43. Panzerfaust available from late-43. All others available throughout the war. Panzerfaust and RPzB 43/54 Panzershrek are hand-held anti-tank weapons. GrW 34 and GrW 36 are mortars and are small arms for fire. PzB 39 ATR is an anti-tank rifle and is small arms for fire.

G-8A: Squads, Half-Squads & Sections

5.1.3.5 Flamethrowers

Flamethrowers are devastating short-range weapons. They are treated only as combat die roll modifiers in Close Assault or Hand-to-Hand combats. They must be attached squad, half-squad or section units.

When mounted on vehicles they are treated as GP Direct Fire weapons.

5.2 Towed Units

Towed units are guns that require some form of transport as their primary means of mobility. Their crews are built-in and are not represented by separate counters. All towed units have a leg component as part of their transport capacity. A towed gun's crew never detaches from its gun. All combat results are applied to the towed gun and its crew as a single unit; they suffer the effects equally.

Most towed units may move a single hex, referred to as manhandling, without the aid of transport.

Towed units are typically armed with AP/GP or AP or GP only weapons. Their combat resolution is the same as any other AP or GP weapon. All towed units have a Front 60° Field-of-Fire. Platform Gun Mounts (OR) (see 7.16) expands on this limitation.

Some towed units have two GP Gunnery sections on their Data Cards. One is for GP Direct Fire and the other is for GP Indirect Fire. The appropriate Gunnery Table is referenced based on the type of fire.

Some may not fire if located inside of buildings or Improved Positions (see Data Card Notes Section).

Reference Data Card B-18A (Panzer North Africa), the Brisish OQF 25 pounder gun/howitzer may utilize Direct or Indirect GP Fire.

B-18A: OQF 25 pounder gun/howitzer 33

M: 1L 0 Tr: 2-2 Wt: 1.6

25 pdr FoF: 60 St: O RoF: N A: 6a4s6i4 Smk IL

Offensive Information											
Ammo Type		Gunnery Range					AP Damage				
		P	S	M	L	E	ND	DM	KO	BU	
AP(a) (25 pdr-KE)	R P	2 15	5 13	9 11	12 10	14 10	1	2-3	4-7	8-10	
GP-DF (25 pdr)	R F	4 6	7 5	13 4	18 3	22 2	GP Effectiveness GP Defense = 1-3				
GP-IF (25 pdr) min-5	R F	7 4	13 3	23 3	33 2	40 2	GP Defense = 1-3				

Defensive Information							
Size:	S	Light Cover	3S	Heavy Cover	7S	Moving	-2
GPD:	1S	Medium Cover	5S	Full Cover	+1	Transported	1/3S

Notes: Available from mid-40.

B-18B: OQF 40mm Mk III

5.2.1 Portée [B-14B1, B14B2 & I-6B (Panzer North Africa)]

Portée was the practice of carrying guns, especially anti-tank guns, on various truck beds enabling their use in mounted combat. A variation on the French term, *en portée*, it translates to "in reach."

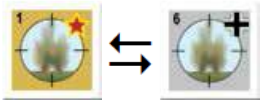
© 2025 GMT Games, LLC

Differing from other truck mounted weapons, portée guns could also quickly dismount for ground-based employment. Most often associated with British anti-tank units in North Africa, the practice was also employed by the Italians.

The mounted guns may employ Direct Fire while mounted. They may dismount following the rules for towed unit transport (see 6.6.7.1). When dismounted, replace the Portée counter with matching Truck and Anti-tank Gun counters in the hex facing in any direction.

The gun may again mount, again following the rules for towed unit transport, but in this case, requiring all of the Truck's MPs. Replace the separate Truck and Anti-tank counters with the matching Portée counter in the hex facing in any direction.

5.3 Artillery Units



Artillery batteries are represented *off-board*. ARTILLERY IMPACT counters are used to mark the impact hex of their fire. Their combat resolution is the same as any other indirect fire GP weapon.

5.4 Aircraft Units

5.4.1 Fixed-Wing Aircraft

Aircraft in Panzer and Panzer North Africa are all fixed-wing units. Fixed-wing aircraft are capable of quickly and surgically delivering a heavy and varied load of weapons. They are dedicated tactical strike aircraft or variants of other types employed in a ground attack role.

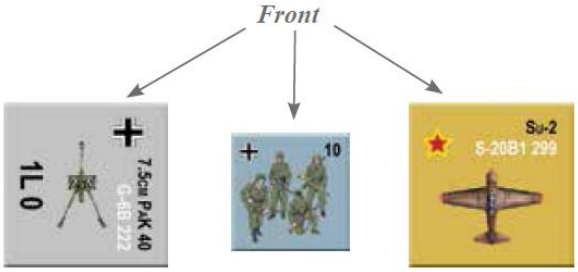
Fixed-wing aircraft are armed with GP weapons classified as strafe, bombs or rockets.

The mix and availability of these weapons varies from type to type. Their combat resolution is the same as any other GP weapons. They resolve combat and movement during either of the two Aircraft Phases.

5.5 Advanced Game Unit Facing

Leg, towed, and aircraft units have a front facing. Just like vehicles, they must at all times face towards a hexside, not towards the angle of a hex.

Leg and towed units may move in any direction. Fixedwing aircraft may only move into the hex their front is facing.



5.6 Minimum Range

Some weapons have a minimum range (the projectile must travel a certain distance before it is able to hit a target). Weapons may never engage targets at a range less than their listed minimum range. If no minimum range is listed, the unit has a minimum range of 1 hex.

Reference Data Card G-8B (Panzer and Panzer North Africa), the German 8cm GrW 34 mortar has a minimum range of 2 hexes (min-2).

G-8B: Mortars, HMG & Anti-Tank Weapons

Offensive Information																	
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	AP/GP Effectiveness ND	DM	KO	BU	Pts
8cm GrW 34 Smk, Il min-2	N	8s6i6	O	GP DF IF	R F F	4 7 5	9 6 5	16 5 4	22 4 3	26 3 2	1-3				28
5cm GrW 36	N	8	O	GP	R F	1 4	2 4	3 3	4 2	5 2	1-2				9
HMG	N	Unl	O	GP	R F	2 12	4 9	7 7	10 4	12 2	Small Arms				15
Panzerfaust (160mm-CE)	N	8	O	AP 14	R P	--- ---	1 47	--- ---	--- ---	--- ---	1	2	3-5	6-10	13
RPzB 43/54 (88mm-CE)	N	8	O	AP 8	R P	1 30	--- ---	2 30	--- ---	3 30	1	2-3	4-7	8-10	19
PzB 39 ATR (7.92mm-KE)	N	Unl	O	AP	R P	2 6	3 5	6 4	8 4	10 3	1-4	5-7	8-10	---	6

Notes: Weapons must be attached to squad, ½ squad or section units. RPzB 43/54 Panzershrek available from mid-43. Panzerfaust available from late-43. All others available throughout the war. Panzerfaust and RPzB 43/54 Panzershrek are hand-held anti-tank weapons. GrW 34 and GrW 36 are mortars and are small arms for fire. PzB 39 ATR is an anti-tank rifle and is small arms for fire.

G-8A: Squads, Half-Squads & Sections

5.7 Small Arms

Certain weapon types are classified as Small Arms. Their fire impact is less significant and their fire signature is less identifiable than larger weapons, like tank guns, and are therefore sighted at shorter ranges when fired.

Those weapons classified as Small Arms are listed in the Offensive Information section of their Data Cards in the GP or AP/GP Effectiveness column or in the Notes section.

Reference Data Card S-8B (Panzer), the Soviet HMG is classified as Small Arms.

S-8B: Mortars, HMG & Anti-Tank Weapons

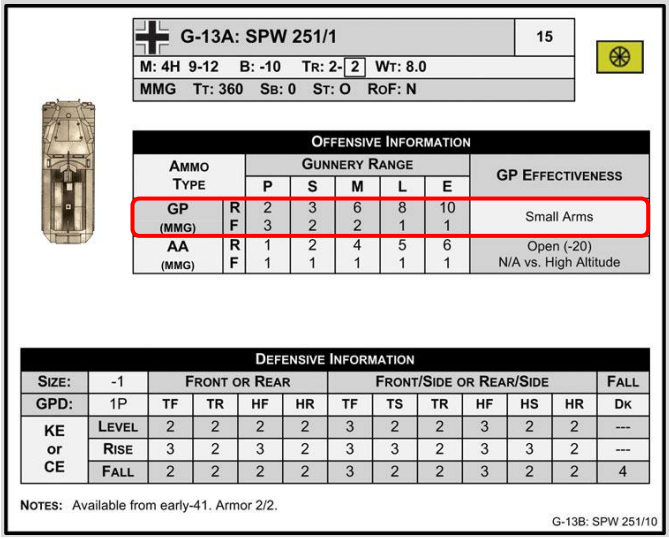
Offensive Information																	
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	AP/GP Effectiveness ND	DM	KO	BU	Pts
82mm BM41 Smk, Il min-2	N	8s6i6	O	GP DF IF	R F F	5 7 5	10 6 5	18 5 4	26 4 3	31 3 2	1-3				30
50mm RM40	N	8	O	GP	R F	1 4	3 4	5 3	7 2	8 2	1-2				11
HMG	N	Unl	O	GP	R F	2 10	4 8	7 6	10 4	12 2	Small Arms				14
M1 Bazooka (66mm-CE)	N	8	O	AP 6	R P	1 20	--- ---	2 20	--- ---	3 20	1	2-3	4-7	8-10	13
PTRD-41 ATR (14.5mm-KE)	N	Unl	O	AP	R P	2 7	3 6	6 5	8 5	10 4	1-3	4-6	7-10	---	7

Notes: Weapons must be attached to squad, ½ squad or section units. PTRD-41 ATR available from late-41. M1 Bazooka available from mid-43. All others available throughout the war. M1 Bazooka is a hand-held anti-tank weapon. BM41 and RM40 are mortars and are small arms for fire. PTRD-41 ATR is an anti-tank rifle and is small arms for fire.

S-8A: Squads, Half-Squads & Sections

© 2025 GMT Games, LLC

Reference Data Card G-13A (Panzer North Africa), the German SPW 251/1 is carrying Small Arms weapons.



G-13A: SPW 251/1	15
M: 4H 9-12 B: -10 Tr: 2-2 Wt: 8.0	
MMG Tt: 360 Sb: 0 St: O RoF: N	

Offensive Information							
Ammo Type		Gunnery Range					GP Effectiveness
		P	S	M	L	E	
GP (MMG)	R	2	3	6	8	10	Small Arms
	F	3	2	2	1	1	
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude
	F	1	1	1	1	1	

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	2	2	2	2	3	2	2	3	2	2	---
	Rise	3	2	3	2	3	3	2	3	3	2	---
	Fall	2	2	2	2	3	2	2	3	2	2	4

Notes: Available from early-41. Armor 2/2.

G-13B: SPW 251/10

5.8 Grade

Grade denotes troop quality and is rated at three different levels; from highest to lowest: Force, Formation, and Unit; of six different qualities, from best to worst: Elite, Veteran, Seasoned, Regulars and Green.

The scenario description outlines the Force, Formation and Unit Grade for the forces. Grade is an inherent trait; it never changes during a scenario.

5.8.1 Force Grade

Force Grade is the single overall rating of the Forces' collective effectiveness. Formations or the individual units within a formation may have a grade greater than, equal to, or less than the Force Grade.

Force Grade is also used to represent unbalanced situations where high-quality troops have weak leadership, e.g., Veteran troops with a Regulars Force Grade, or lesser quality troops with superior leadership, e.g., Green troops with Veteran Force Grade.

Force Grade is used as a dice roll modifier when determining the current turn's Initiative.

5.8.2 Formation Grade

A side's force is composed of one or more formations. These formations organize the individual units of a force into distinct elements for command control and morale purposes, typically at the company level.

Through the course of a scenario, individual units may not transfer from one formation to another; they remain part of that formation for the entire scenario.

5.8.3 Unit Grade

Formations are composed of individual units, each having a Unit Grade. Unit Grade is the same as a unit's Formation Grade unless otherwise indicated in a scenario's force listing. Unit Grade is used in a number of situations including: all types of combat resolution, Suppression recovery, Quickmarch, Bail Out, Indirect Fire Response, and morale status and recovery.

Individual off-map artillery units do not have a Unit Grade rating. The observer's Unit Grade is used for all artillery combat situations.

5.9 Command, Recon, Engineer, and FO Units

Special unit types have Command, Recon, Engineer and/or FO labels. These designations empower those units with unique capabilities. The notations may also be combined. In those cases, the units possess multiple capabilities.

5.9.1 Command Units

Mounted or dismounted leg units and vehicles with a Command label, CHQ (company, battery, troop (USA), or squadron (USA, France, UK) headquarters), BHQ (battalion or squadron headquarters), or RHQ (regiment or brigade headquarters), are the only command units within a headquarters formation. Most HQ formations are composed of a number of units including the command units, security forces, reconnaissance units, transport units, and forward observers.

Only those units with a Command label may exercise command authority over subordinate units.

5.9.2 Recon Units

Mounted or dismounted leg units and vehicles with a Recon label possess special reconnaissance capabilities that typify their independent role and higher level of training.

5.9.3 Engineer Units

Dismounted leg units with an Engineer label possess special combat engineer capabilities that typify their unique role within combat formations.

5.9.4 FO Units

Mounted or dismounted leg units and vehicles with an FO label possess special forward observer capabilities that enable them manage and control indirect fire capable units and aircraft.

© 2025 GMT Games, LLC

5.10 Suppression

In the Advanced Game, units may also be Suppressed as a result of GP combat or other actions, e.g., Bail Out. Suppression reduces the effectiveness of a unit for spotting (see 6.1.3.1), combat (see 6.5.2.5 and 6.5.4.3) and movement (see 6.6.2) purposes. Suppressed units have either the SUPPRESSION/ON or SUPPRESSION/OFF side of the counter facing front to indicate the status. The Suppression effects are the same for either SUPPRESSION/ON or SUPPRESSION/OFF.

Multiple Suppression results do not cause any additional impact. However, a new Suppression result on a unit is recorded by placing a SUPPRESSION/ON counter; or by rotating an existing SUPPRESSION/OFF counter to SUPPRESSION/ON.

5.11 Coexisting Fire, Smoke & Barrages

It is possible to have Fire, Smoke and/or a Barrage in the same hex and to have a line-of-sight pass through these multiple instances. In the case where coexistence occurs, apply the single largest combat modifier that provides the greatest advantage to the target unit.

If a FIRE counter and a Closed SHEAF Barrage is located in the same hex, apply the On Fire –5 AP Combat modifier or –20 GP Combat modifier. Ignore the Barrage Closed SHEAF –3 AP Combat modifier and –10 GP Combat modifier.

5.12 Modifiers & Adjustments

GP combat adds or subtracts a modifier value or values from the combat dice roll. In all cases, the indicated modifiers are cumulative.

If a GP combat calls for a +10 modifier and a –20 modifier, the net dice roll modifier is –10.

Some GP combat results require a comparison against ½ of the shooter's GP Factor. Always round down unless the original GP Factor is a 1; in that case ½ of the GP Factor is still 1.

SHORT HALT commands, Suppression and Hull Damage results each call for units to reduce their movement speed allowance by ¾ or ½, always round down. The minimum value is 1.

5.13 Stacking

If a hex, at any time, contains 6 or more vehicles and/or dismounted towed units, it is considered to be over-stacked and applies the over-stacked hex effects.

Wrecks, leg and aircraft units do not count for stacking purposes.

Those effects are outlined in the Spotting (see 4.1.3.2), Combat (see 4.4.3.2.2), and Movement (see 4.5.1.1.5) Phases sections.

5.14 Dual Fire

Some vehicle units carry two weapons types, while squads and half-squads may have multiple weapon types. These units have the ability to fire any or all of the weapons at the same time. While sections may carry multiple weapons, they may utilize only a single weapon at a time.

Dual Fire simulates the challenge of managing the fire of multiple weapons against the same or different targets.

The controlling player announces the fire normally, but must indicate if one or all of the weapons are firing and if they are firing on the same or different targets. If only one of the weapons is firing, regardless which one, the modifier is ignored.

Note that ammo limits (see 5.16) may individually apply to one or all of the weapons.

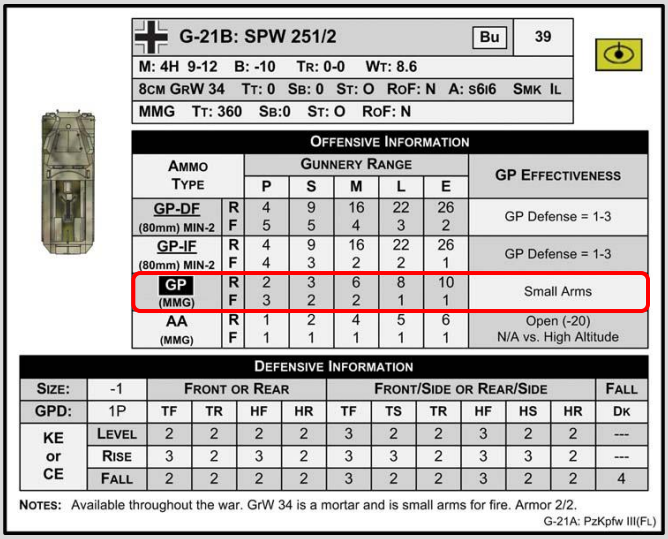
Suppressed units may not employ Dual Fire; they must select a single weapon.

If firing at different targets, the unit is bound by Combat Command Control Limitations if the unit is sharing a command with other units. If it has its own unique command, it may fire on any legitimate targets (see 6.2.1.1.3).

The Dual Fire AP/GP modifier only applies to the weapon displayed as a reverse image on the vehicle Data Card and all attached leg crew-served weapons. The other weapon is treated normally.

Dual Fire does not apply to Overrun Combat (see 6.6.10).

Reference Data Card G-21B (Panzer Expansion 1), the SPW 251/2 may fire both its 8cm mortar and its MMG. Only the MMG is subject to the Dual Fire modifiers if both weapons fire.



G-21B: SPW 251/2 | Bu | 39

M: 4H 9-12 B: -10 TR: 0-0 WT: 8.6

8CM GRW 34 TT: 0 SB: 0 ST: O RoF: N A: s6i6 SMK IL

MMG TT: 360 SB:0 ST: O RoF: N

OFFENSIVE INFORMATION

Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness
GP-DF (80mm) MIN-2	R	4	9	16	22	26	GP Defense = 1-3
	F	5	5	4	3	2	
GP-IF (80mm) MIN-2	R	4	9	16	22	26	GP Defense = 1-3
	F	4	3	2	2	1	
GP (MMG)	R	2	3	6	8	10	Small Arms
	F	3	2	2	1	1	
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude
	F	1	1	1	1	1	

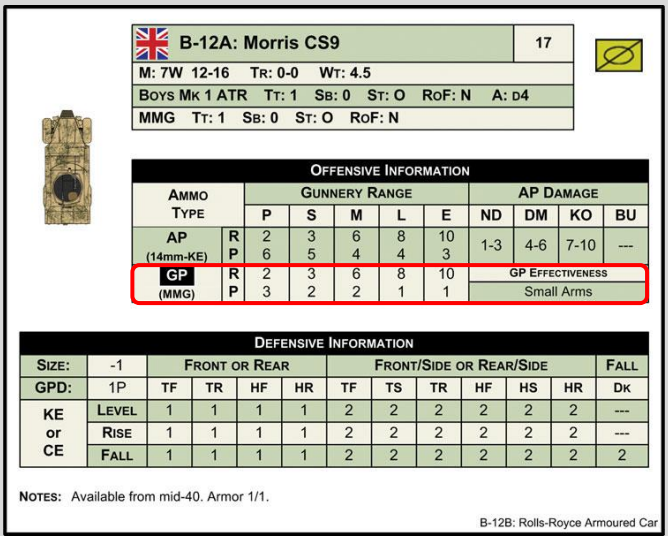
DEFENSIVE INFORMATION

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	Level	2	2	2	2	3	2	2	3	2	2	---
	Rise	3	2	3	2	3	3	2	3	3	2	---
	Fall	2	2	2	2	3	2	2	3	2	2	4

NOTES: Available throughout the war. GrW 34 is a mortar and is small arms for fire. Armor 2/2.

G-21A: PzKpfw III(FL)

Reference Data Card B-12A (Panzer North Africa), the Morris CS9 may fire both its Boys Mk I ATR and its MMG. Only the MMG is subject to the Dual Fire modifiers if both weapons fire.



B-12A: Morris CS9 | 17

M: 7W 12-16 TR: 0-0 WT: 4.5

BOYS MK 1 ATR TT: 1 SB: 0 ST: O RoF: N A: D4

MMG TT: 1 SB: 0 ST: O RoF: N

OFFENSIVE INFORMATION

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (14mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	6	5	4	4	3				
GP (MMG)	R	2	3	6	8	10	GP Effectiveness			
	P	3	2	2	1	1	Small Arms			

DEFENSIVE INFORMATION

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	Level	1	1	1	1	2	2	2	2	2	2	---
	Rise	1	1	1	1	2	2	2	2	2	2	---
	Fall	1	1	1	1	2	2	2	2	2	2	2

NOTES: Available from mid-40. Armor 1/1.

B-12B: Rolls-Royce Armoured Car

5.15 Bailing Out

Even though a vehicle was not Knocked Out or Brewed Up as a result of combat, the crew and/or passengers may still decide that the shot was just too close for comfort and elect to abandon it. In addition, when a vehicle unit transporting one or more leg or towed units is

© 2025 GMT Games, LLC

eliminated, those passenger units must determine if they are able to exit the vehicle safely or are also eliminated.

When a vehicle receives a No Damage, Damage, Knock Out, Brew Up or a Track hit from AP Fire (see 6.5.2.6), or it receives a Knock Out or Brew Up from GP Fire (see 6.5.4.4.2), there is a chance that the vehicle's crew and any leg or towed passenger units may bail out.

When a leg or towed passenger unit is Suppressed as a result of Direct or Indirect GP Fire, there is a chance that unit may bail out.

A vehicle's bailed out crew is not represented by a counter; it just melts into the battlefield. Once a vehicle is abandoned it is out of action and may not be reoccupied, by either side, for the remainder of the scenario. Place a BAIL counter on or next to the vehicle.

If there is any chance of bail out, the attempt must be made immediately after all combat is resolved affecting the vehicle, and any leg or towed passenger units, by referencing the Bail Out Table on Game Card B (Panzer) or Game Card A (Panzer North Africa) (see 6.5.2.7).

If more than one bail out condition applies, the condition affecting the transporting vehicle is resolved first. The condition affecting the passenger unit(s) may still be applicable or it may change due the vehicle's bail out outcome.

A transporting vehicle is Knocked Out by Direct GP Fire; its passenger leg unit is Suppressed by the same GP Fire. The passenger leg unit does not use the Suppressed – DF row in the Bail Out Table (20-) to determine if it bails out. It must use the Knock Out Leg row (21+) to determine if it survives the bail out.

BAIL OUT (6.5.2.6, 6.5.4.5)

Damage Type	Unit Type	
AP No Damage [1]	Crew	10-
AP No Damage [2]	Pass	50-
Suppressed - DF [3]	Pass	20-
Suppressed - IF [3]	Pass	30-
Damaged or TK [1]	Crew	30-
Damaged or TK [2]	Pass	50-
Knocked Out [4]	Leg	21+
	Towed	61+
Brewed Up [4]	Leg	61+
	Towed	81+

1: Transported units automatically bail out if vehicle crew bails out.
2: N/A for under armor/cover transport
3: +10 modifier for under cover transport.
4: Transported unit eliminated if bail out fails.
Crew: Broken -20. Hesitating -10.
All: Elite +5. Green -5.

A transporting vehicle is Damaged by Indirect GP Fire; its passenger towed unit is Suppressed by the same GP Fire. The vehicle's crew bails out. The passenger leg unit does not need to check the Bail Out Table as it automatically bails out since the vehicle crew bailed out.

5.16 Ammo Limits

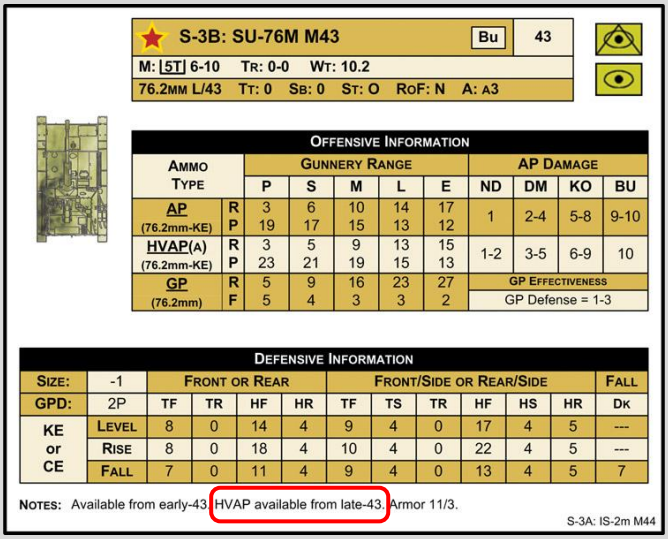
Some ammo types may only be available in limited numbers. Some combat units are only able to carry a limited amount of basic AP and GP rounds, but most units carry sufficient basic AP and GP rounds so that in the time frame modeled in a typical scenario ammo limitations are no issue.

All of these situations and units are subject to the Ammo Limit rules. The Ammo Limit rules are structured so that the players are not required to track ammo usage or shots fired. No record keeping is required, except for aircraft.

5.16.1 Special Ammo Availability

Special Ammo types include APDS, APCR, HVAP, HEAT, Smoke, and Illumination rounds. The Notes section of the Data Cards indicates when special ammo types are available. Prior to the listed date, the special ammo type may not be employed. If no date is present, the special ammo type may be used whenever the unit is available.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). Its HVAP ammo is available from late-43 until the end of the war.



S-3B: SU-76M M43 | Bu | 43
M: [5T] 6-10 TR: 0-0 WT: 10.2
76.2MM L/43 TT: 0 SB: 0 ST: O RoF: N A: A3

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

© 2025 GMT Games, LLC

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa). Its APCR ammo is available from mid-41.

G-9B: Panzerjäger I Bu 24

M: [4T] 6-9 Tr: 0-0 Wt: 6.4

47mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

Notes: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

5.16.2 Determining Ammo Limits

Data section on its Data Card followed by a letter-number combinations along the same row. For units with multiple weapons, the ammo limits, if any, are listed for each weapon. If a weapon is not subject to ammo limits, it does not have any A: type information.

The prefixes include:

- A: AP, APCR, APDS, HVAP
- G: GP
- H: HEAT
- S: Smoke
- I: Illumination
- D: Smoke Dischargers (OR) (see 7.9)

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer), while its AP and GP ammo are not subject to a limit, its HVAP special ammo has a limit of 3.

S-3B: SU-76M M43 Bu 43

M: [5T] 6-10 Tr: 0-0 Wt: 10.2

76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference the Soviet SU-152 M43 (Data Card S-5A) (Panzer), it has a limit of 5 for its basic AP and GP ammo.

S-5A: SU-152 M43 67

M: 4T 6-10 Tr: 0-2 Wt: 45.5

152mm L/29 Tt: 0 Sb: 0 St: O RoF: N A: 5

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (152mm-KE)	R	3	5	9	13	16	1	2	3-6	7-10
	P	29	25	22	20	18				
GP (152mm)	R	4	9	16	22	26	GP Effectiveness			
	F	10	8	7	5	4	GP Defense = 1-6			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	5AC	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	21	13	17	17	25	16	15	20	14	20	---
	Rise	23	13	18	19	26	18	16	21	14	23	---
	Fall	20	12	16	15	23	16	14	18	14	18	38

Notes: Available from mid-43. Armor 19/14.

S-5B1: Trucks & S-5B2: Limbers

Reference the German 7.5cm PaK 40 ATG (Data Card G-6B) (Panzer), it has a limit of 6 for its basic AP and GP ammo; 4 for Smoke, and 4 for its APCR ammo types.

G-6B: 7.5cm PaK 40 ATG 46

M: 1L 0 Tr: 2-2 Wt: 1.4

75mm L/46 FoF: 60 St: O RoF: Q A: 6S4A4 Smk

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm-KE)	R	4	7	13	18	21	1	2-4	5-8	9-10
	P	25	22	19	17	16				
APCR(A) (75mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	33	30	27	22	19				
GP (75mm)	R	6	11	20	28	34	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

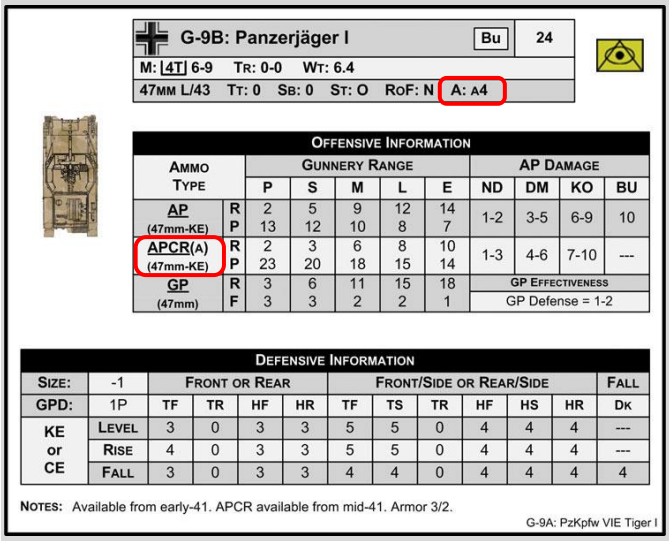
Defensive Information								
Size:	S	Light Cover	3S	Heavy Cover	7S	Moving	-2
GPD:	1S	Medium Cover	5S	Full Cover	+1	Transported	1/3S

Notes: Available from late-41. APCR available from late-42.

G-6A: 8.8cm FlaK 36 A/ATG

© 2025 GMT Games, LLC

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa), while its AP and GP ammo are not subject to a limit, its APCR special ammo has a limit of 4.



G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 Tr: 0-0 Wt: 6.4

47mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A4

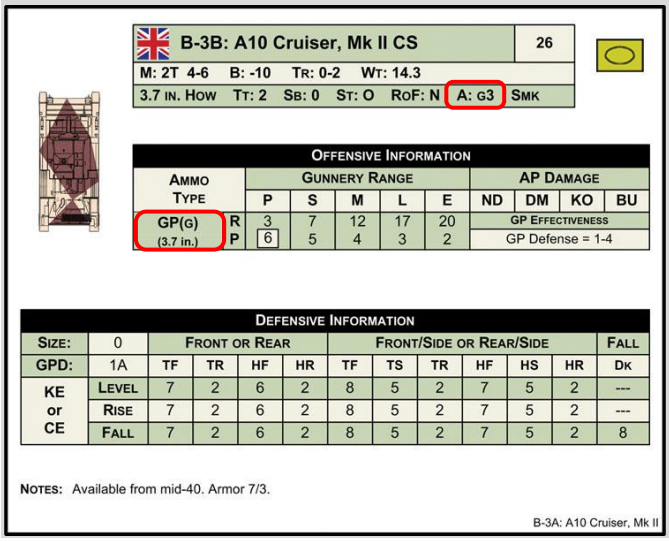
Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

Notes: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

Reference the British A10 CS (Data Card B-2B) (Panzer North Africa), it has a limit of 3 for its basic GP ammo.



B-3B: A10 Cruiser, Mk II CS | 26

M: 2T 4-6 B: -10 Tr: 0-2 Wt: 14.3

3.7 in. How Tt: 2 Sb: 0 St: O RoF: N A: G3 Smk

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
GP(G) (3.7 in.)	R	3	7	12	17	20	GP Effectiveness			
	P	6	5	4	3	2	GP Defense = 1-4			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	7	2	6	2	8	5	2	7	5	2	---
	Rise	7	2	6	2	8	5	2	7	5	2	---
	Fall	7	2	6	2	8	5	2	7	5	2	8

Notes: Available from mid-40. Armor 7/3.

B-3A: A10 Cruiser, Mk II

To determine if a unit suffers the effects of an ammo limit, before resolving the actual AP or GP combat, roll (10) and compare the result to the listed ammo limit value. If the result is greater than the ammo limit value, the unit still resolves the combat, but must apply the ammo limit effects.

5.16.2.1 Basic Ammo Limits

Resolve the shot, but the unit's rate-of-fire is reduced to N if not already N.

If AP Fire, apply the –3 Ammo Limit AP Hit modifier to the shot resolution.

If GP Fire, apply the –10 Ammo Limit GP Hit modifier to the shot resolution.

If HEAT is the only ammo type listed for a particular unit (the unit does not have an AP row on its Data Card), the unit follows this procedure for its AP and GP Fire.

Reference the Soviet SU-152 M43 (Data Card S-5A) (Panzer). The Soviet player decides to fire AP with this vehicle. Before resolving the AP Combat, the Soviet player rolls (10); the result is a 9. Since 9 is greater than the basic AP Ammo Limit of 5, it must apply the –3 Ammo Limit modifier to the AP Combat resolution. Its rate-of-fire was originally N.

5.16.2.2 Special Ammo Limits

With APDS, APCR or HVAP (A prefix) or HEAT (H prefix, see exception above), the unit resolves the fire utilizing the Gunnery section for its basic AP ammo type. It must follow the procedure for basic AP Ammo Limits.

If the unit's basic AP ammo type is also subject to an Ammo Limit, that must be determined before the fire is resolved. If it is determined that its basic AP Ammo is also subject to Ammo Limits, a –6 Ammo Limit AP Hit modifier (–3+–3) is applied.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer). The Soviet player decides to fire HVAP with this vehicle. Before resolving the AP Combat, the Soviet player rolls (10); the result is a 7. Since 7 is greater than the Ammo Limit of 3, it fires its AP ammo instead; it is not subject to Ammo Limits. The SU-76M M43's rate-of-fire is already N; it must apply the –3 Ammo Limit modifier to the AP Combat resolution.

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa). The German player decides to fire APCR with this vehicle. Before resolving the AP Combat, the German player rolls (10); the result is a 7. Since 7 is greater than the Ammo Limit of 4, it fires its AP ammo instead; it is not subject to Ammo Limits. The Panzerjäger I's rate-of-fire is already N; it must apply the –3 Ammo Limit modifier to the AP Combat resolution.

5.16.2.3 (On-Map) Smoke & Illumination Ammo Limits

With Smoke (S prefix) or Illumination (I prefix), the fire is not resolved; do not place a Smoke or Illumination counter on the mapboard. If indirect fire, do not place the Artillery Impact counter on the mapboard. The unit is still marked with a Spot/Fire counter.

5.16.2.4 Leg & Towed Ammo Limits

Some leg crew-served weapons and all towed units have Ammo Limits, including limits on their basic ammo. However, unique conditions apply to the limits on their basic ammo. The limits on special ammo types are always in effect.

These units have unlimited ammo as long as their transporting vehicle unit is within 1 hex of the towed unit or leg crew-served weapon, or the towed unit or leg crew-served weapon was placed on the mapboard at the start of the scenario, in which case there is a nearby ammo dump in the same hex.

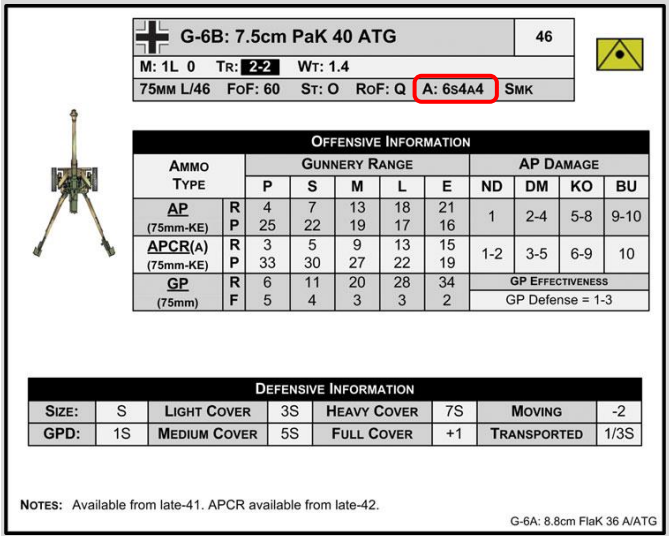
If the transporting unit moves away or is knocked out or brewed up, or if the towed unit or leg crew-served weapon moves away from its transporting unit or its ammo dump, the limit on its ammo is immediately applicable.

If the transporting unit moves back within 1 hex, or the towed unit or leg crew-served weapon returns to its starting hex with its ammo dump, the supply of ammo returns to unlimited. Only the original transporting vehicle may be used to supply ammo for that unit. It may be necessary to make a notation to keep track of units.

If the towed unit or leg crew-served weapon starts the scenario placed on the mapboard and it also has a transporting unit, it may draw its ammo supply from either source.

© 2025 GMT Games, LLC

Reference the German 7.5cm PaK 40 ATG Data Card G-6B (Panzer) or G-19B (Panzer North Africa). It has a limit of 6 for its basic AP and GP ammo; 4 for Smoke, and 4 for its APCR ammo types.



G-6B: 7.5cm PaK 40 ATG | 46

M: 1L 0 Tr: 2-2 Wt: 1.4

75mm L/46 FoF: 60 St: O RoF: Q A: 6s4a4 Smk

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm-KE)	R	4	7	13	18	21	1	2-4	5-8	9-10
	P	25	22	19	17	16				
APCR(A) (75mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	33	30	27	22	19				
GP (75mm)	R	6	11	20	28	34	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information							
Size:	S	Light Cover	3S	Heavy Cover	7S	Moving	-2
GPD:	1S	Medium Cover	5S	Full Cover	+1	Transported	1/3S

Notes: Available from late-41. APCR available from late-42.

G-6A: 8.8cm FlaK 36 A/ATG

For basic ammo, apply AP or GP Ammo Limits as listed in 5.16.2.1. For special ammo, apply AP or GP Ammo Limits as listed in 5.16.2.2

5.16.2.5 Off-Map Artillery Ammo Limits

Off-Map Artillery Batteries have an unlimited supply of GP ammo. Only Smoke (S prefix), and Illumination (I prefix) fire missions are subject to Ammo Limits; roll (10) for those fire missions.

For all special fire missions the fire is not resolved, do not place the Artillery Impact counter on the mapboard.

Scenarios may allocate a specific number of special fire missions (must still role for Ammo Limits; failure does not consume available special fire missions). In those cases, players should note the number of fire missions taken for each special fire mission.

5.16.2.6 Aircraft Ammo Limits

Due to the combat multiplying effect of fixed-wing aircraft in combat, the listed ammo limits are the exact number of strafing shots, bomb loads, rocket launches or any other particular weapon that an aircraft may employ. Do not roll for aircraft Ammo Limits. In this single case, players should note the number of actual shots taken for each weapon type.

5.16.2.7 German Tungsten Supply

As WWII progressed, the German supply of Tungsten, which is used in the manufacture of APCR ammo, steadily declined. What was available was more often than not diverted to the manufacturing of aircraft components.

While the German Data Cards support full availability of APCR ammo throughout the war, players may want to impose some restrictions on its availability.

Starting in late-1943 until the end of the war, it is not unreasonable to restrict the availability of APCR completely or to have the German player apply a modifier of +1 or +2 to the ammo limit roll (10).

6.0 Advanced Game Sequence of Play

6.1 Advanced Game Spotting Phase

6.1.1 Who may Spot?

All leg, towed, and fixed-wing aircraft units may spot opposing units. Fixed-wing aircraft may never hand off spotted targets to or have spotted targets handed off by other fixed-wing aircraft, vehicle, leg or towed units.

In the Basic Game only combat units could spot. In the Advanced Game a leg or towed passenger unit being transported by a non-combat vehicle can spot normally.

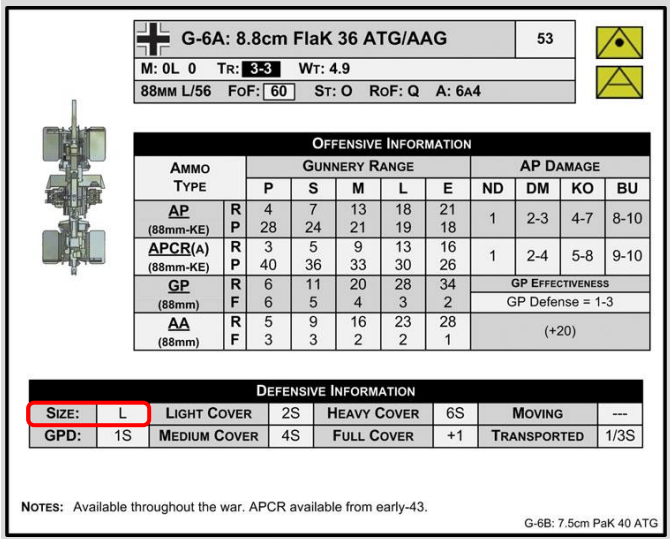
6.1.2 Spotting Orientation

Eligible units spot in all directions (360°), unless Suppressed. Aircraft may only spot to the area identified and described as their Front Field-of-Fire.

6.1.3 Determining Spotting Ranges

When attempting to spot a leg or towed unit, cross-reference their size by using the L or S column, with the base 0 row. The S column is the general spotting category for leg units unless otherwise indicated; towed units may be either L or S. Leg and towed unit size is found in the Defensive Information section of their Data Cards.

Reference Towed Data Card Key (Panzer & Panzer North Africa), the German 8.8cm FlaK 36 ATG/AAG is size L.



G-6A: 8.8cm FlaK 36 ATG/AAG | 53

M: 0L 0 Tr: 3-3 Wt: 4.9

88mm L/56 FoF: 60 St: O RoF: Q A: 6a4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP Effectiveness			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (88mm)	R	5	9	16	23	28	(+20)			
	F	3	3	2	2	1				

Defensive Information							
Size:	L	Light Cover	2S	Heavy Cover	6S	Moving	---
GPD:	1S	Medium Cover	4S	Full Cover	+1	Transported	1/3S

Notes: Available throughout the war. APCR available from early-43.

G-6B: 7.5cm PaK 40 ATG

The base spotting range for all L-sized units is 15 hexes; for S-sized units it is 10 hexes.

If the target unit fired a weapon classified as Small Arms (see 5.7), it is marked with a Spot/Fire SA counter; apply the +1 modifier by moving 1 row up in the table. If the target unit fired both Small Arms and non-Small Arms weapons (even if firing Small Arms in subsequent turns), utilize the non-Small Arms modifier for spotting.

Passenger leg and towed units are not spotted as individual units when being transported. They are part of their transporting vehicle and are therefore spotted when that vehicle is spotted.

© 2025 GMT Games, LLC

Passenger leg or towed units that dismount from their transporting vehicle are moving and are therefore marked with a SPOT/MOVE counter.

Aircraft are an exception; they do not have a unit size. All AA capable ground units may spot aircraft.

6.1.3.1 Suppressed Units

All Suppressed units can only spot to the area identified and described as their Front 60° Field-of-Fire (or Rear 60° Field-of-Fire) and apply a -2 modifier by moving 2 rows down on the Spotting Ranges Table.

Turreted, Turretless 360° and Non-Turreted vehicles can only spot to the area identified and described from the front 60° (or rear) of the vehicle and apply a -2 modifier by moving 2 rows down on the table.

6.1.3.2 Full Cover Units

Leg and towed units in Full Cover (see 6.1.4.2) are spotted by applying a -2 modifier; move 2 rows down on the table.

Leg and towed units spotting from Full Cover apply a –4 modifier by moving 4 rows down on the table.

6.1.3.3 Recon Units

Recon vehicle, leg and towed units spot by applying a +1 modifier; move 1 row up on the table.

SPOTTING RANGES (4.1.3, 6.1.3)

LEVEL	V	L	S
+2+	40	30	20
+1	30	23	15
0	20	15	10
-1	10	7	5
-2	7	5	3
-3	3	2	1
-4	2	1	1
-5-	1	1	1

Light Cover: -1
Medium Cover: -2
Heavy Cover: -3
Spot Move: +2
Spot Fire: +3
Spot Fire Small Arms: +1
Target In Full Cover: -2
Suppressed Spotting: -2
Full Cover Spotting: -4
Buttoned Spotting: -1
Recon Spotting: +1
Broken Spotting: -2
Limited Spotting: -1 to -5
Illumination: +2

6.1.4 Line-of-Sight

6.1.4.1 Hull Down & Partial Hull Down

Vehicles in Hull Down and Partial Hull Down positions mask part of the vehicle from AP Direct Fire. They do not affect sighting or the chance to actually hit the target vehicle, but negate track hits and the hits on some or most hull locations. To signify that a vehicle is hull down mark it with a Location counter with the HD side facing front. See 6.5.2.2.3 for effects.

6.1.4.1.1 Hull Down

Vehicles may find hull down positions when moving (see 6.6.9) or by occupying certain terrain types.

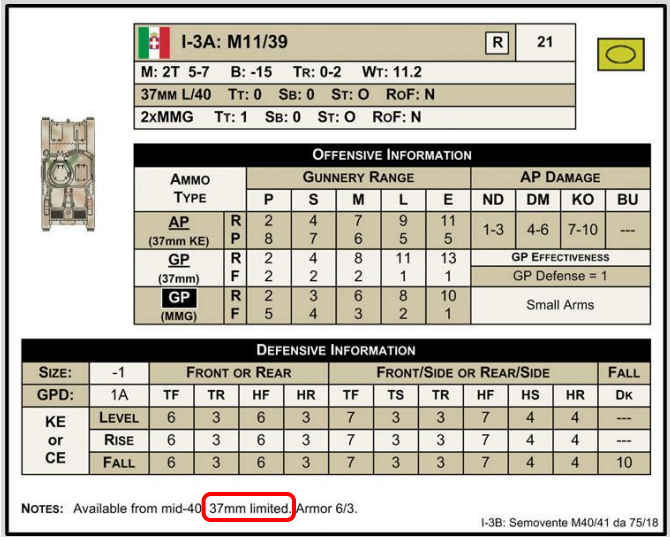
6.1.4.1.2 Partial Hull Down

Vehicles may find Partial Hull Down positions when moving (see 6.6.9), by occupying certain terrain types, or due to the height difference when determining line-of-sight.

Due to the configuration of their hull-mounted guns, some vehicles are unable to occupy a Hull Down position and bring those weapons to bear.

The affected vehicles have a special notation in the Notes section of their Data Cards indicating the *Limited* weapon. These vehicles may still occupy a Hull Down position, but the limited weapon may not fire.

Reference Data Card I-3A (Panzer North Africa), the M11/39's 37mm gun is limited.



I-3A: M11/39 R 21

M: 2T 5-7 B: -15 TR: 0-2 WT: 11.2
37MM L/40 TT: 0 SB: 0 ST: O RoF: N
2xMMG TT: 1 SB: 0 ST: O RoF: N

OFFENSIVE INFORMATION

AMMO TYPE		GUNNERY RANGE P	S	M	L	E	AP DAMAGE ND	DM	KO	BU
AP (37mm KE)	R	2	4	7	9	11	1-3	4-6	7-10	---
	P	8	7	6	5	5				
GP (37mm)	R	2	4	8	11	13	GP EFFECTIVENESS			
	F	2	2	2	1	1	GP Defense = 1			
GP (MMG)	R	2	3	6	8	10	Small Arms			
	F	5	4	3	2	1				

DEFENSIVE INFORMATION

SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	1A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	6	3	6	3	7	3	3	7	4	4	---
	RISE	6	3	6	3	7	3	3	7	4	4	---
	FALL	6	3	6	3	7	3	3	7	4	4	10

NOTES: Available from mid-40, 37mm limited, Armor 6/3.

I-3B: Semovente M40/41 da 75/18

As an alternative, the vehicle may occupy a Partial Hull Down position and still utilize the listed weapon normally. To indicate that a vehicle is in a Partial Hull Down position, mark it with two HD LOCATION counters.

When occupying an Improved Position, a vehicle can designate it as only a Partial Hull Down position by adding a HD LOCATION counter. When occupying a Brick or Stone building a unit with a limited hull-mounted weapon may not fire the listed weapon since it is hull down.

Any vehicle, not just those with limited weapons, may occupy a Partial Hull Down position.

6.1.4.1.3 Automatic Partial Hull Down

A vehicle is automatically in a Partial Hull Down Position when receiving AP Direct Fire from a unit at a lower height from a range equal to or less than the target vehicle's height advantage over the firing unit.

If the target vehicle's Height is 3 and the firing unit's Height is 0, the target vehicle is Partially Hull Down if the range is 3 or less.

6.1.4.2 Full Cover

Dismounted leg units (including motorcycle, bicycle and cavalry units) and dismounted towed units can utilize Full Cover to make maximum use of the natural cover offered by the terrain type they currently occupy. They may not enter Full Cover in Bridge, Ford or Stream hexes. Vehicles and fixed-wing aircraft may not enter Full Cover.

Leg and towed units may freely enter into or move out of Full Cover, regardless of their orders, during the Adjust Full Cover Step of the Adjustment Phase (see 6.8.3). This does not require any portion of a unit's movement speed allowance and is not considered movement for spotting purposes.

The Full Cover status selected during the Adjust Full Cover Step determines a unit's status for the next turn.

To signify that a leg unit is in Full Cover mark it with a LOCATION counter with the FC side facing front.

© 2025 GMT Games, LLC

Full Cover impacts both the spotting of the Full Cover unit and its ability to spot other units, combat, and the unit's GP Defense Factor.

Full Cover towed units may never have MOVE commands. Full Cover leg units may never have SHORT HALT commands. Sections with any attached crew-served weapons may never have MOVE commands.

Full cover leg units may initiate Close Assault and Hand-to-Hand combats against adjacent units.

Full Cover units defend against Hand-to-Hand Combats normally; there is no advantage or disadvantage.

6.1.4.3 Terrain Features

The Advanced Game adds functionality to terrain features outlined in the Basic Game and also adds the Terrain counters Block, Ditch, Fire, Hasty Entrenchment, Improved Position, Mines, Rubble, Smoke, and Wire.

With the exception of Stream, Ford, Water, and Building hexes, they are placed on the mapboard to alter a hex's terrain type. They are positioned as instructed by the Setup or Special Conditions in a scenario.

In addition, some terrain types are now subject to destruction through combat or other means (see 6.5.4.4.3).

6.1.4.3.1 Building Hexes

Tracked vehicles with overhead protection may attempt to enter (or exit) the actual buildings located in a Building hex (see 6.6.3). However, they may suffer Damage or a Track hit as a result of that movement.

Open-topped tracked vehicles and AA tracked vehicles may not attempt to enter buildings. No other vehicle types may attempt to enter buildings.

Reference the Vehicle Data Card Key (Panzer), the Soviet SU-76M M43 is an open-topped tracked vehicle. It may not enter buildings.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 TR: 0-0 WT: 10.2

76.2MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A3

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

NOTES: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference Data Card G-1A (Panzer), the German PzKpfw IIIM is not an open-topped tracked vehicle. It may enter buildings.

G-1A: PzKpfw IIIM | 53

M: 4T 6-9 B: -5 TR: 0-2 WT: 22.7

50MM L/60 TT: 2 SB: 0 ST: O ROF: Q A: A5D4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (50mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	16	14	12	10	8				
APCR(A) (50mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	30	27	23	20	18				
GP (50mm)	R	3	6	11	16	19	GP Effectiveness			
	F	[3]	3	2	2	1	GP Defense = 1-2			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE	Level	15	6	13	10	17	8	7	15	8	12	---
	Rise	15	6	13	11	17	8	7	15	9	12	---
CEx3	Fall	15	6	13	10	17	7	7	15	8	12	18

NOTES: Available from mid-42. APCR available from mid-42. Long gun. Armor 14/8.

G-1B: PzKpfw IVG

Reference the Vehicle Data Card Key (Panzer North Africa), the Panzerjäger I is an open-topped tracked vehicle. It may not enter buildings.

G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 TR: 0-0 WT: 6.4

47MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

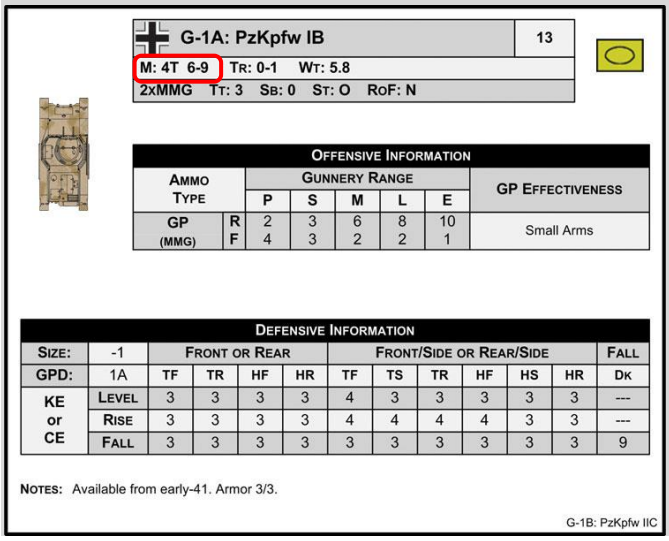
Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

NOTES: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

© 2025 GMT Games, LLC

Reference Data Card G-1A (Panzer North Africa), the German PzKpfw IB is not an open-topped tracked vehicle. It may enter buildings.



G-1A: PzKpfw IB	13
M: 4T 6-9 Tr: 0-1 Wt: 5.8	
2xMMG Tt: 3 Sb: 0 St: O RoF: N	

Offensive Information							
Ammo Type		Gunnery Range					GP Effectiveness
		P	S	M	L	E	
GP (MMG)	R	2	3	6	8	10	Small Arms
	F	4	3	2	2	1	

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	3	3	3	4	3	3	3	3	3	---
	Rise	3	3	3	3	4	4	4	4	3	3	---
	Fall	3	3	3	3	3	3	3	3	3	3	9

Notes: Available from early-41. Armor 3/3.

G-1B: PzKpfw IIC

Vehicles located inside of a building, are marked with a Location counter with the INB side facing front. They receive the Cover provided by the building terrain type. In addition, vehicles located inside Brick or Stone Buildings are Hull Down from all angles. An HD Location counter is not required.

Just like vehicles, towed units may freely enter Building hexes, as they are not actually entering the Buildings themselves, but are in the Alleyways between the Buildings. Therefore, any towed unit located in a Building hex is actually occupying Alley type terrain.

Towed units may not move inside of buildings nor may they dismount from their transport inside of buildings. In some cases, towed units may setup inside of buildings as instructed by a scenario's Setup or Special Conditions. If set up inside a building, they may not move from that position; they may still pivot. Towed units located inside of a building are marked with a Location counter with the INB side facing front. They receive the Cover provided by the building terrain type.

Leg units in building hexes automatically occupy the buildings. There is no need to mark them with a Location counter. They receive the Cover provided by the building terrain type.

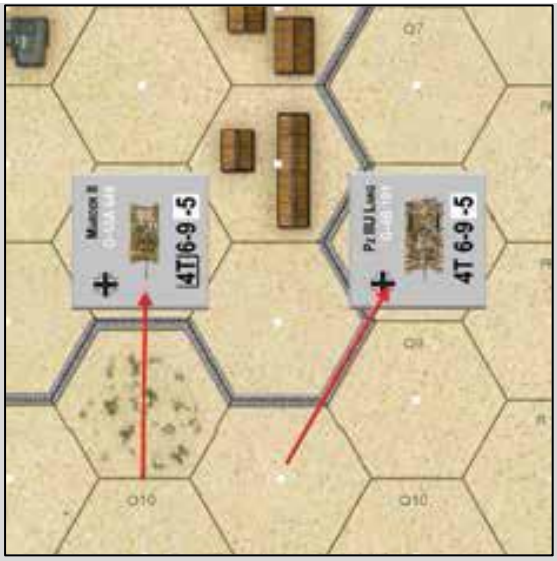
Motorcycle, bicycle and cavalry leg units also occupy buildings just like their cousins on foot. Their transport is kept in close proximity; it is not represented by a separate counter.

Leg units may move up to the top floor of multi-story buildings; i.e., buildings with a Height of 2 or more. For spotting considerations their Height is considered to be 1 less than the actual Height of the Building hex. Leg units located on the top floor of a building are marked with a Location counter with the UP side facing front.

A squad is located up in a 3 story building. For spotting, it is at a Height of 2.

6.1.4.3.2 Wall & Defilade Hexsides

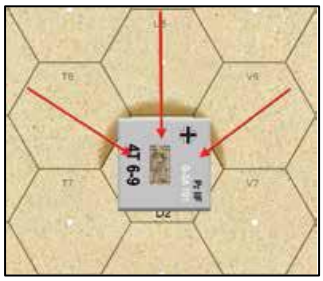
Vehicles are Hull Down when the target of AP Direct Fire that crosses or runs exactly along an adjacent Wall hexside.



Both vehicles are Hull Down.

A Defilade hexside represents terrain that contains a gentle slope, or a man-made defensive position made with stone or sandbags. They are found on Terrain Overlays with a "D" prefix.

Vehicles are Hull Down when located in a Defilade Overlay hex and the target of AP Direct Fire that crosses an adjacent Defilade hexside.



6.1.4.3.3 Block

Blocks are man-made obstacles constructed to impede vehicle and towed unit movement. Vehicles and towed units are prohibited from entering Block hexes. Block hexes provide Light Cover for leg units.

© 2025 GMT Games, LLC

6.1.4.3.4 Ditch

Ditches are man-made obstacles constructed primarily to impede vehicle and towed unit movement. Vehicles and towed units are prohibited from entering Ditch hexes. Ditch hexes provide Light Cover for leg units.

Ditch hexes have a Height of –1. They follow the same sighting rules as Streams and Gullies.

6.1.4.3.5 On Fire

A Fire (OR) (see 7.35) may start in a Building or Rubble hex as a result of GP Combat. In some cases, fires may also start in other terrain types as instructed by the Special Conditions in a scenario. A Fire hex is marked with an ON FIRE counter. Fire has a Height of 5 above ground level. All units, with the exception of aircraft, are prohibited from entering a Fire hex.

Vehicle, leg and towed units may not remain in a Fire hex once it starts. A unit that has not exited a Fire hex by the end of the next turn immediately after the fire starts is eliminated and removed from play.

Like Brew-Up Smoke, Fire does not block line-of-sight. It hinders combat. If a line-of-sight passes through a Fire hex, a modifier is applied when determining the combat results.

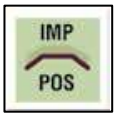
6.1.4.3.6 Hasty Entrenchment

Hasty Entrenchments are constructed by leg and towed units to provide additional cover by applying a –10 GP Combat die roll modifier.

They are large enough for only a single unit unless otherwise instructed by the Set Up or Special Conditions in a scenario. To designate which unit is in a hex with a Hasty Entrenchment, place the HASTY ENTRENCHMENT counter on top of the unit occupying the position.

If abandoned, another single friendly or enemy leg or towed unit may reoccupy it. They are interchangeable between leg and towed units, i.e., if a towed unit creates a Hasty Entrenchment, any other towed or leg unit may occupy it. In some cases, leg and towed units may also start a scenario in Hasty Entrenchments.

6.1.4.3.7 Improved Position



Improved Position is a collective term for any number of fortifications, built-up areas, bunkers, or revetments found across the battlefield. Vehicles, leg, and towed units may occupy Improved Positions. Improved Positions provide Heavy Cover for both combat and spotting. Vehicles may not Overrun Improved Positions.

They are large enough for only a single unit unless otherwise instructed by the Set Up or Special Conditions in a scenario. To designate which unit is in a hex with a an Improved Position, place the IMPROVED POSITION counter on top of the unit occupying the position.

If abandoned, another single friendly or enemy unit may reoccupy it. In some cases, units may also start a scenario in Improved Positions.

Vehicles within an Improved Position are Hull Down from all angles except the Rear Angle (or Front Angle if it reversed into the position) based on its initial setup. An HD LOCATION counter is not required. If a vehicle pivots within an Improved Position the non-HD angle remains in its original position.

6.1.4.3.8 Mines

Mines (OR) (see 7.31) are used to deny or channel the opposition movement. They are dispersed as either Hasty or Deliberate Minefields.

Both anti-personnel and anti-vehicular mines, or a combination of the two types may be dispersed in a minefield hex. Minefields are typically placed in contiguous hexes and may either be hidden or marked as known (visible) minefields.

Mines are not consumed by attacking vehicles, towed, or leg units. They are distributed throughout a hex and in a dense enough manner to maintain their full potency unless cleared.

6.1.4.3.9 Rubble

Rubble is typically the end result of the destruction of building or bridge hexes. Half-tracked and wheeled vehicles and towed units are prohibited from entering Rubble hexes. Rubble hexes provide Cover for tracked vehicles and leg units equivalent to the type of terrain it replaced.

In the case of Building hexes, units in Rubble hexes are spotted based on the type of terrain it replaced, i.e., Rubble located in a Wood or Brick Building hex provides Light and Medium cover for spotting, respectively.

6.1.4.3.10 Smoke and Barrages

On-map units as well as Artillery Batteries are capable of firing Smoke Shells (Smoke) in Indirect Fire.

Some vehicle, towed, and mortar units have the ability to Direct Fire smoke rounds instead of normal AP or GP fire. The Data Cards indicate which vehicle, towed, and mortar units are capable of firing smoke. Engineer leg units also have the ability to Direct Fire smoke rounds into an adjacent hex.

To Direct Fire smoke rounds, the unit must have a FIRE or SHORT HALT command; announce a target hex that is within the unit's line-of-sight, Field-of-Fire and range (same as GP); and does not contain any friendly units. This Closed SHEAF smoke occupies just a single hex. Direct Fire smoke does not require a spotted target to fire.

© 2025 GMT Games, LLC

Reference Data Card G-2A (Panzer), the German PzKpfw IVH may fire smoke shells; it has Smk listed in its Weapon Data section.

G-2A: PzKpfw IVH 73

M: 3T 5-8 B: -5 Tr: 0-2 Wt: 25.0

75mm L/48 Tt: 2 Sb: 0 St: O RoF: N A: A4s6D4 Smk

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm-KE)	R	4	7	13	18	21	1	2-4	5-8	9-10
	P	25	22	19	17	16				
APCR(A) (75mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	33	30	27	22	19				
GP (75mm)	R	6	11	20	28	34	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20)			
	F	1	1	1	1	1	N/A vs. High Altitude			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE	Level	19	6	16	4	22	8	7	19	7	5	---
	Rise	19	7	17	4	22	8	8	20	7	5	---
CEx3	Fall	19	6	16	4	22	7	7	19	7	5	17

Notes: Available from mid-43. APCR available from mid-43. Long gun. Armor 18/6.

G-2B: PzKpfw V Panther

Reference Data Card G-5A (Panzer North Africa), the German PzKpfw IVD may fire smoke shells; it has Smk listed in its Weapon Data section.

G-5A: PzKpfw IVD 38

M: 4T 6-9 Tr: 0-2 Wt: 21.0

75mm L/24 Tt: 2 Sb: 0 St: O RoF: N A: H7s6 Smk

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm KE)	R	2	3	6	8	10	1	2-4	5-8	9-10
	P	10	9	8	7	6				
HEAT(H) (75mm CE)	R	2	4	7	9	11	1	2-3	4-7	8-10
	P	15	15	15	15	15				
GP (75mm)	R	3	7	12	17	20	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	4	6	4	10	5	5	7	5	5	---
	Rise	8	4	6	4	10	5	5	7	5	5	---
	Fall	8	4	6	4	10	5	5	7	5	5	14

Notes: Available from early-41. HEAT available from mid-42. Armor 7/4.

G-5B: PzKpfw IVE

Reference Data Card S-8B (Panzer), the Soviet 82mm BM41 Mortar may fire smoke shells; it has Smk listed in its Type of Unit column.

S-8B: Mortars, HMG & Anti-Tank Weapons

Offensive Information																	
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range					AP/GP Effectiveness				Pts
						P	S	M	L	E	ND	DM	KO	BU	
82mm BM41 Smk, Il Min-2	N	8s6i6	O	GP DF IF	R F F	5 7 5	10 6 5	18 5 4	26 4 3	31 3 2	1-3				30
50mm RM40	N	8	O	GP	R F	1 4	3 4	5 3	7 2	8 2	1-2				11
HMG	N	Unl	O	GP	R F	2 10	4 8	7 6	10 4	12 2	Small Arms				14
M1 Bazooka (66mm-CE)	N	8	O	AP 6	R P	1 20	--- ---	2 20	--- ---	3 20	1	2-3	4-7	8-10	13
PTRD-41 ATR (14.5mm-KE)	N	Unl	O	AP	R P	2 7	3 6	6 5	8 5	10 4	1-3	4-6	7-10	---	7

Notes: Weapons must be attached to squad, ½ squad or section units. PTRD-41 ATR available from late-41. M1 Bazooka available from mid-43. All others available throughout the war. M1 Bazooka is a hand-held anti-tank weapon. BM41 and RM40 are mortars and are small arms for fire. PTRD-41 ATR is an anti-tank rifle and is small arms for fire.

S-8A: Squads, Half-Squads & Sections

Reference Data Card B-8B (Panzer North Africa), the British OML 3-in. Mortar may fire smoke shells; it has Smk listed in its Type of Unit column.

B-8B: Mortars, HMG & Anti-Tank Weapons

Offensive Information																	
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range					AP/GP Effectiveness				Pts
						P	S	M	L	E	ND	DM	KO	BU	
OML 3-in. Smk, Il Min-2	N	8s6i6	O	GP DF IF	R F F	4 7 5	8 6 4	15 5 3	21 4 3	25 3 2	1-3				26
OML 2-in. Smk, Il*	N	8s6i6	O	GP	R F	1 4	2 4	3 3	4 2	5 2	1-2				11
HMG	N	Unl	O	GP	R F	2 10	4 8	7 6	10 4	12 2	Small Arms				14
Boys Mk.1 ATR (14mm-KE)	N	Unl	O	AP	R P	2 6	3 5	6 4	8 4	10 3	1-3	4-6	7-10	---	6

Notes: Weapons must be attached to squad, ½ squad or section units. All available throughout the war. OML 3-in. and OML 2-in. are mortars and are small arms for fire. Boys Mk.1 ATR is an anti-tank rifle and is small arms for fire.

*OML 2-in IL available from 1942.

B-8A: Squads, Half-Squads & Sections

When a unit executes an Indirect Fire mission a Barrage area is created that is defined by its SHEAF Pattern. A SHEAF Pattern also defines the size of its Smoke area if firing smoke. If an on-map or mortar unit creates smoke, it occupies just a single hex. Both Smoke and Barrages have a Height of 4 above ground level.

Smoke has either Smoke/On or Smoke/Off counters to indicate its status. New smoke is recorded by placing a Smoke/On counter; or by rotating an existing Smoke/Off counter to Smoke/On.

Like Brew-Up Smoke, Smoke and Barrages do not block line-of-sight. They hinder combat. If a line-of-sight passes through a Smoke or a Barrage hex, a modifier is applied in determining the combat results. Combat modifiers for Smoke and Barrages created during the current Player step do not take effect until the conclusion of that step.

© 2025 GMT Games, LLC

Smoke created during the Indirect Fire Step takes effect in the following Direct Fire Step. Smoke created during the Direct Fire Step takes effect in the following Close Assault/Hand-to-Hand Combat Step.

In most cases, SMOKE counters are placed individually on the mapboard; they are not placed on or attached to units. To properly orient their ON and OFF sides they must be faced to a consistent hexside. Use the Directional hex as a point of reference. Typically direction 1 is used for facing counters.

6.1.4.3.11 Wire

Wire is a man-made obstacle deployed to impede leg and towed units and some vehicle movement. Halftrack and wheeled vehicles and leg and towed units are prohibited from entering Wire hexes.

Wire is destroyed after a fully tracked vehicle (T) enters its hex. If destroyed, Wire is removed from the mapboard.

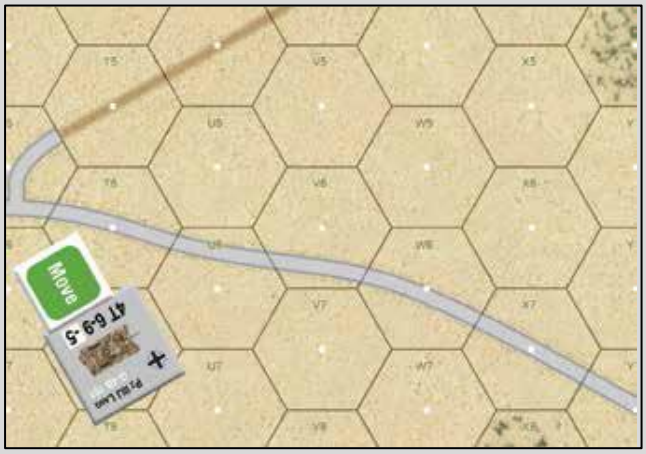
6.1.4.3.12 Dust

Dust may be created as vehicles move across the arid landscape found in North Africa. It is treated as a variation of smoke for movement and combat purposes. It is only applicable if specified in a scenario's Special Conditions. For example, Scenario 47 (Panzer North Africa) has Dust in effect.

- To create Dust, a vehicle must move ½ or more of its movement speed allowance (round down), including a 1 hex minimum move (see 4.5.1.1.3).
- It only applies when entering Clear, Brush, Path, Track, and Scrub hexes. When entering an applicable hex, place a DUST/ON counter in the hex just exited by the vehicle, no matter the terrain type of that hex just.
- Use the Directional hex as a point of reference. Typically, direction 1 is used for facing counters.
- During the Adjust/Remove Counters Step, remove all DUST/OFF counters and flip all DUST/ON counters to their DUST/OFF side.
- There may be cases where there are not enough Dust counters to place on the map. In such cases, when a vehicle moves in a straight line, place only the initial and the final DUST/ON counters to denote Dust created in all hexes moved.

Combat modifiers for Dust created during the current Player step do not take effect until the conclusion of that step.

The Situation (Panzer North Africa)



A German PzKpfw IIIJ Lang (Data Card G-4B) located in hex 39T7 is marked with a Move command. Moving at Crosscountry speed, it expends 4 MPs entering hexes 39U6, 39V6, 39W5, and 39X5. Since it moved at ½ or more of its movement speed allowance of 4, Dust is created.

Since hex 39U6 is Road terrain, no Dust is created in hex 39T7. Hex 39V6 is also Road terrain, so no Dust in hex 39U6. When entering Clear terrain hex 39W5, Dust is created in hex 39V6. Finally, when entering Clear Terrain hex 39X5, Dust is created in hex 39W5.

In the dust-covered desert battlefield, clouds were frequently created by speeding vehicles. This dust was thrown back, "following" the vehicles as they moved. These plumes were often visible at great distances.

6.1.4.3.13 Sun Blinding

Sun Blinding is a condition representing the difficulty of looking directly into the rising or setting sun. It is only applicable if specified in a scenario's Special Conditions. For example, Scenario 47 has Sun Blinding in effect.

If Sun Blinding is in effect, apply the specified AP and/or GP modifiers to all Direct Fire only if an extended line-of-sight passes the target touching the indicated edge of the mapboard.

Place the Sun counter near the affected edge for reference.

6.1.4.3.14 Railroad Track Hexes

Vehicles are Partial Hull Down from all angles when located in a hex with Railroad Tracks. They also provide additional cover to leg

© 2025 GMT Games, LLC

and towed units targeted by GP Direct Fire by applying a –5 GP Combat die roll modifier.

6.2 Advanced Game Command Phase

In the Basic Game, each vehicle received its own individual command. When employing the Command Control rules, the Determine Number of Available Commands Step is added to the Command Phase as its first Step. Each individual Formation in a Force receives a finite number of unique commands of any combination that are allocated to all of its member units.

The ability to command multiple units performing many different tasks is representative of the unit's Formation Grade. An Elite formation is understandably much more able to quickly respond to the changing battlefield conditions and to perform a greater number of tasks over a greater range than a same sized Green formation. A Green formation just does not possess the training, experience, or for that matter, the élan of an Elite formation.

Units are not forced to sit by idly while other units perform actions due to a lack of available commands. Instead, the formation's units may share the available commands.

The Formation Summary is used to record each formation's unique information, i.e., grade, command, engineer and recon units and the other member units of that formation.

6.2.1 Determine Available Commands Step

At the start of the Command Phase, the players must determine the number of Available Commands per formation within their Force. The typical Formation size is a Company. The scenarios provide Formation information on a company-level basis.

6.2.1.1 Determining Available Commands

Each Formation's Force Grade, along with its current number of active units, is used to determine its number of available commands. These two elements are cross-referenced on the Available Commands Table found on Game Card C (Panzer) or Game Card B (Panzer North Africa).

For command purposes, only those units that are not eliminated, bailed-out, knocked out, brewed up, or currently not on the mapboard may be active units.

All combat units including damaged vehicles and vehicles with Track hits are counted as active units. Suppressed units or units Hesitating (OR) (see 7.1.5) are also counted as active units. Broken (OR) (see 7.1.5) units are not active units.

Unarmed units, e.g., trucks or prime movers, are not active units unless they are within the Command Range of a combat unit from the *same* formation. Otherwise, they are not active units even though they are on the mapboard.

In addition, no more than one unarmed unit may be activated per combat unit.

This prevents all the trucks from a formation congregating in a safe, out of the way spot on the mapboard along with a single combat unit just to reap the benefits of extra commands.

Combat units are not required to be within Command Range of one another to be active units.

Units currently being transported (see 6.6.7) are not active units. However, if the transporting unit is an unarmed unit, it is counted as an active unit since by default it is within the Command Range of the combat unit it is currently transporting. Even if an unarmed unit is transporting more than one combat unit, it is still counted as a *single* active unit. If the transporting unit is a combat unit, it is counted normally as a *single* active unit regardless if transporting any units.

Recon units (see 5.9.2) are not included in a formation's active unit count even though they are part of that formation. They are a special case for command purposes. Command, Engineer, and FO units are counted normally.

For reference purposes, the scenarios summarize the total number of combat units in a formation. When Recon units are present in a formation, the summary is presented as two values, e.g., 26(24), for total units and (total less Recon units).

6.2.1.1.1 Available Commands Procedure

At first, the makeup of the Available Commands Table may seem a little different, but it is actually quite straightforward.

Across the top of the table are values from 1 to 10. The 10s column is treated as the multiplier, while columns 1 to 9 are individual values. A formation never receives less than 1 Command even if 0 is listed.

If the Formation Grade is Regulars, and the total number of active units is 7, the number of Available Commands would be 3. The 3 is found in the 7s column opposite the Regulars row.

Available Commands (6.2.1)

Grade	1	2	3	4	5	6	7	8	9	10	Cmd Rng
Elite	1	1	2	3	4	5	5	6	7	8	2 hexes
Veteran	1	1	2	3	3	4	5	5	6	7	1 hex
Seasoned	0	1	2	2	3	3	4	5	5	6	1 hex
Regulars	0	1	1	2	2	3	3	4	4	5	0 hexes
Green	0	1	1	1	2	2	3	3	3	4	0 hexes

If the Formation Grade is Veteran, and the total number of active units is 12, the number of Available Commands would be 8. The 7 found in the 10s column is added to the 1 found in the 2s column opposite the Veteran row.

Available Commands (6.2.1)

Grade	1	2	3	4	5	6	7	8	9	10	Cmd Rng
Elite	1	1	2	3	4	5	5	6	7	8	2 hexes
Veteran	1	1	2	3	3	4	5	5	6	7	1 hex
Seasoned	0	1	2	2	3	3	4	5	5	6	1 hex
Regulars	0	1	1	2	2	3	3	4	4	5	0 hexes
Green	0	1	1	1	2	2	3	3	3	4	0 hexes

If the Formation Grade is Seasoned, and the total number of active units is 27, the number of Available Commands would be 16. Two times the 6 found in the 10s column (since the number of active units is 27, the value found in the 10s column is multiplied by 2) is added to the 4 found in the 7s column opposite the Seasoned row.

Available Commands (6.2.1) x2

Grade	1	2	3	4	5	6	7	8	9	10	Cmd Rng
Elite	1	1	2	3	4	5	5	6	7	8	2 hexes
Veteran	1	1	2	3	3	4	5	5	6	7	1 hex
Seasoned	0	1	2	2	3	3	4	5	5	6	1 hex
Regulars	0	1	1	2	2	3	3	4	4	5	0 hexes
Green	0	1	1	1	2	2	3	3	3	4	0 hexes

© 2025 GMT Games, LLC

6.2.1.1.2 Command Range

Command Range is based on Formation Grade and is found in the Available Commands Table on Game Card C (Panzer) or Game Card B (Panzer North Africa).

Command Ranges:

- Elite: 2 hexes
- Veteran: 1 hex
- Seasoned: 1 hex
- Regulars: 0 (same hex)
- Green: 0 (same hex)

One important point to note is that Command Range is measured from any combat unit in a formation to any other combat unit in the same formation not just to or from Command units.

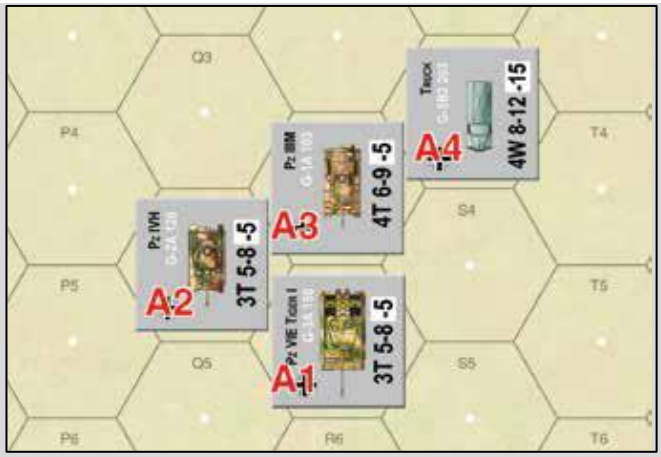
An Option Rule, Command Span (see 7.52), expands on Command Range.

6.2.1.1.3 Sharing Available Commands

Only FIRE, MOVE, SHORT HALT and OW are unique commands. N/C is not a unique command.

Combat units and activated unarmed units that are within Command Range of one another may all utilize the same unique Command counter; place a single unique Command counter in the vicinity of the units sharing the command. If units sharing commands do overlap, players must point out which units are sharing which commands.

Do not place a unique Command counter next to each unit unless they are each receiving a unique command, as each unique command placed on the mapboard counts as one towards the total of available commands.



The four German vehicles are all part of the same Company with Seasoned Formation Grade. A1, A2, A3 are within the 1 hex Command Range of one another. A4 is counted as an active unit because it is within the 1 hex Command Range of combat unit A3. However, A4 is not within Command Range of units A1 and A2. Units A1, A2 and A3 may share the same unique command. A4 could have its own unique command or share with A3, but may not share with the other two vehicles.

Commanding Vehicles on Roads and Paths

All vehicles on a road or path, moving at the road or path rate, that are stacked with or adjacent (regardless of Command Range) to the vehicle to its immediate front (except the lead vehicle) may all share a single Move command.

The vehicles must maintain their starting order and may not exceed stacking limits.

Commanding Inactive Unarmed Units

Inactive unarmed units may still be commanded. They just may not share a command with other units except on a road or path. This is a one-for-one proposition; each inactive unarmed unit must receive its own unique command.

Commanding Recon Units

Due to their independent role and typically superior training, each Recon combat and unarmed Recon unit automatically receives a unique command. This unique command does not count towards the total of available commands for its parent formation. Remember that Recon units were not counted in the total number of active units.

Non-Recon units may not share commands with Recon units. These commands are assigned and used by each individual Recon unit.

Formation Command Limitations

Formations may not share or trade available commands with units from other formations. Formations may not save unused commands from turn to turn. The total of available commands is recalculated for each new turn.

N/C (No Command) Commands

Since N/C commands are not unique commands, players may place any number of this type of command without counting towards a formation's total.

The N/C command does have a very important purpose. Suppressed units (see 6.8.3) and units with a Broken (OR) Morale status (see 7.1.5) have a much greater chance of recovery if they perform no other action.

By default, any unit without a marked command is considered to have an N/C command. Tactically speaking, in some cases it is a good plan to physically mark N/C commands so as to disguise intent.

6.2.1.1.4 Executing Shared Commands

When two or more units share the same FIRE, SHORT HALT, MOVE, or OW command they must coordinate their fire and move actions.

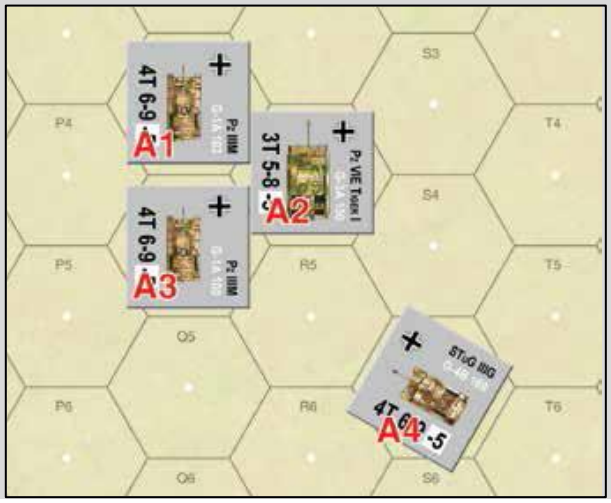
Firing – FIRE or SHORT HALT

The *targets* must all be within the firing unit's Command Range of one another to be legitimate targets. This Command Range check is measured from the targets to one another. The targets must still be within legal range from the firing units.

© 2025 GMT Games, LLC

Three Soviet units with Seasoned Formation Grade are sharing a single Fire Command. They elect to fire on three separate German targets. The three targets must all be within 1 hex of one another. A1, A2 and A3 are legitimate targets. A4 is not. With Regulars or Green Formation Grade, they could select only one of the four possible targets.

Even Elite Formation Grade would not encompass all four of the possible targets, since A4 is 3 hexes from A1. Although it could include A2, A3 and A4.



If there are more units sharing a command than available legitimate targets, more than one unit can certainly fire on the same target. If a target is eliminated before all of the units have a chance to resolve their fire, they may not shift their fire to another target.

Moving – Short Halt and Move

The units must all be within Command Range of one another at the completion of their move. If the units have different movement speed allowances, their movement is adjusted to meet the Command Range requirement.

Three units are with Regulars Formation Grade sharing a single Move command move during the Movement Phase. The three units must all be in the same hex at the completion of their move.

Overwatch

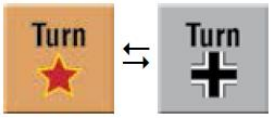
The units must all announce their fire at the same time and fire on the *same* target.

If for some reason, e.g., one or more units have a blocked line-of-sight, or the wrong ammo type, etc., they may not then fire at a different target; their Overwatch action is complete.

6.3 Advanced Game Initiative Phase

Each side's *Force* Grade Modifier is used to modify the dice roll when determining who controls the Initiative for the current turn.

6.3.1 Determining Initiative



During the Initiative Phase, each Force rolls (100) and applies their Force Grade Modifier to their roll; the net result may be greater than 100 or less than 0. Reroll ties unless instructed otherwise in the scenario Special Conditions. The Force rolling the higher result determines who is the First Player for the current turn. Flip the Turn counter to indicate the First Player.

Staggered Initiative (OR) (see 7.42) expands the Initiative process based on formations.

6.3.2 Force Grade Initiative Modifiers

- Elite: +40
- Veteran: +20
- Seasoned: 0
- Regulars: -20
- Green: -40

6.4 Advanced Game 1st Air Phase

See 6.7 Advanced Game 2nd Air Phase for all aircraft and AA operations. First review 6.5 Advanced Game Combat Phase.

6.5 Advanced Game Combat Phase

Advanced Game Combat adds the Indirect Fire Step, AP hit locations, AP number of hits, special AP ammo types, smoke and illumination ammo, ammunition limits, unit grade, bail out, and GP Combat for vehicle, leg, towed, and aircraft units.

In the new Indirect Fire Step, on-board units with Indirect Fire capability as well as off-board artillery units resolve their fire.

6.5.1 Indirect Fire Step

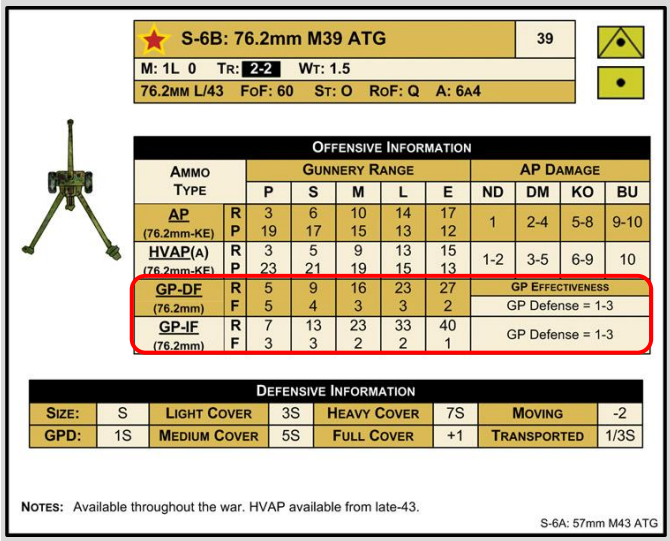
Indirect Fire is a method of engaging targets with units that are unable to spot the targets themselves due to intervening terrain, spotting range or they are located off-map. There are two types of indirect fire, Called (see 6.5.1.7) and Planned (see 6.5.1.11).

Called Indirect Fire requires a Forward Observer (FO), a Command unit, or a Recon unit who can spot the target unit to call for and observe the fall of the Indirect Fire. Units spotting for Indirect Fire are collectively called observers.

Planned Indirect Fire fires at a point on the map, on a specific turn, does not require an observer, and does not require a spotted target.

Only those units possessing a GP-IF row in the GP Gunnery section of their Data Cards may employ Indirect GP Fire. If a unit has both a GP-DF and a GP-IF row for the same weapon, only the GP-IF row is used for Indirect Fire.

Reference Data Card S-6B (Panzer), the Soviet 76.2mm M39 ATG has both GP-DF and GP-IF rows in its GP Gunnery section. It may fire Direct or Indirect GP Fire.



S-6B: 76.2mm M39 ATG 39

M: 1L 0 Tr: 2-2 Wt: 1.5

76.2mm L/43 FoF: 60 St: O RoF: Q A: 6A4

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP-DF (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			
GP-IF (76.2mm)	R	7	13	23	33	40	GP Defense = 1-3			
	F	3	3	2	2	1				

Defensive Information

Size:	S	Light Cover	3S	Heavy Cover	7S	Moving	-2
GPD:	1S	Medium Cover	5S	Full Cover	+1	Transported	1/3S

Notes: Available throughout the war. HVAP available from late-43.

S-6A: 57mm M43 ATG

© 2025 GMT Games, LLC

Reference Data Card B-6B (Panzer North Africa), the British OQF 25 pounder gun/howitzer has both GP-DF and GP-IF rows in its GP Gunnery section. It may fire Direct or Indirect GP Fire.

B-18A: OQF 25 POUNDER GUN/HOWITZER | 33

M: 1L 0 TR: 2-2 WT: 1.6

25 PDR FOF: 60 ST: O ROF: N A: 6A4s6I4 SMK IL

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP(A) (25 PDR-KE)	R	2	5	9	12	14	1	2-3	4-7	8-10
	P	15	13	11	10	10				
GP-DF (25 PDR)	R	4	7	13	18	22	GP EFFECTIVENESS			
	F	6	5	4	3	2	GP Defense = 1-3			
GP-IF (25 pdr) MIN-5	R	7	13	23	33	40	GP Defense = 1-3			
	F	4	3	3	2	2				

DEFENSIVE INFORMATION							
SIZE:	S	LIGHT COVER	3S	HEAVY COVER	7S	MOVING	-2
GPD:	1S	MEDIUM COVER	5S	FULL COVER	+1	TRANSPORTED	1/3S

NOTES: Available from mid-40.

B-18B: OQF 40mm Mk III

Units may not utilize Indirect Fire for Overwatch Fire. Overwatch Fire must be Direct Fire. Also, units may not utilize Indirect Fire against targets they can personally spot; they must use Direct Fire.

Units fire in the order described in the Sequence of Play. The First Player executes his fire before the Second Player. The Second Player must apply all Indirect Fire results inflicted by the First Player before resolving his Indirect Fire.

On-map units must have a FIRE command to execute Indirect Fire; units may not use SHORT HALT commands.

Observers must have an OW command to call for and observe Indirect Fire. They may not perform any other Overwatch related actions.

Indirect Fire is resolved from the positions and facings the units occupy at the point the fire is resolved. The terrain occupied by a firing unit or its SPOT/FIRE or SPOT/MOVE counters has no impact.

Within the following restrictions, each player may resolve Indirect Fire in any desired order.

- Each Indirect Fire shot is called for and resolved individually.
- Each unit fires only once per turn.
- After a unit fires, immediately mark it with a Spot/Fire counter.
- Each ground unit (friendly or enemy) or Terrain Type (see 6.5.4.4.3) that falls within the SHEAF Pattern is attacked individually.
- Observer units are not spotted; observing Indirect Fire is a passive action that does not involve fire or movement.

6.5.1.1 Announcing Indirect GP Fire

The firing player announces Planned Indirect Fire or calls for an Indirect Fire mission. The firing player may resolve the shots in any desired order. All Called Indirect Fire is controlled from the observer unit not the firing unit. The ability to spot a target and measure spotting range is determined from the observer unit. An individual observer may only call fire to a single target hex.

While Called Indirect Fire may involve more than one distinct source of Indirect Fire, they all fire at the same target hex. A distinct source of Indirect Fire can be any off-map artillery battery or any on-map unit capable of Indirect Fire.

Planned Fire is not called, it is plotted to arrive on a certain turn in the scenario.

6.5.1.1.1 FOs – Forward Observers

Typically, FOs are section-sized leg units most often found in company, battalion or higher echelon HQs. They may even be vehicles. They utilize the FO row in the Called Indirect Fire Response Table on Game Card B (Panzer) or Game Card A (Panzer North Africa).

Their role is to manage and control both off-map and on-map Indirect Fire units. These highly trained troops are in communication with a formation's Indirect Fire assets. Therefore, they are the most capable and reliable units for managing Indirect Fire.

In addition, FOs are the only units that have the ability to call Indirect Fire from more than one distinct source of Indirect Fire, whether off-map or on-map.

USA FOs

Due to their multi-linked communication network, USA FOs may manage the largest number of distinct sources of Indirect Fire. They may call fire from up to four distinct sources of Indirect Fire.

Other Forces FOs

The FOs from all other forces may call fire from up to two distinct sources of Indirect Fire.

6.5.1.1.2 Command Observers

Command units may call fire from one distinct source of Indirect Fire. They utilize the appropriate row, for their command level, in the Called Indirect Fire Response Table on Game Card B (Panzer) or Game Card A (Panzer North Africa).

Command observers may also be classified as Recon units. In that case, they are Command Recon Observers (see 6.5.1.1.3).

Command FO

Some Command units may also possess FO capabilities. In those cases, use the FO row instead of the unit's Command row.

Soviet Command Observers

Due to a limited communications infrastructure and a rigid artillery doctrine, Soviet Command units may only call fire from Attached (see 6.5.1.3.1) off-map artillery batteries and Attached on-map units. They may not call fire from Organic (see 6.5.1.3.2) off-map artillery batteries or Unattached (see 6.5.1.3.3) off-map artillery batteries or Unattached on-map units.

© 2025 GMT Games, LLC

6.5.1.1.3 Recon Observers
Recon units may call fire from one distinct source of Indirect Fire. Recon units are the only non-FO or non-Command units that may call Indirect Fire. They utilize the Recon row in the Called Indirect Fire Response Table on Game Card B (Panzer) or Game Card A (Panzer North Africa).

Command Recon Observers
Command observers may also be classified as Recon units. In that case, they are Command Recon Observers. They utilize the appropriate row, for their command level, in the Called Indirect Fire Response Table on Game Card B (Panzer) or Game Card A (Panzer North Africa).

Soviet Recon Observers
Soviet Recon units must follow the same limitations as Soviet Command Observers (see 6.5.1.1.2).

6.5.1.1.4 On-Map Units
A special case exists for on-map units. Two on-map units may be considered a single distinct source of Indirect Fire if they are within Command Range of one another (see 6.2.1.1.2); not within Command Range of the observer unit. They still resolve their fire response and combat as individual units.

6.5.1.2 Types of Indirect Fire Units
Off-map Indirect Fire units are all collectively referred to as artillery units and are presented in a somewhat abstracted manner.

They are classified as Light, Medium, Heavy or Super Heavy Batteries.

Reference Data Cards G-7A, S-7A, B-7A, and I-7A for off-map artillery batteries.

As opposed to off-map artillery batteries, on-map Indirect Fire units are all specific combat units. They are typically mortars and field and infantry guns.

Reference Data Cards G-8B, S-8B, B-8B, and I-8B for on-map Indirect Fire capable units.

6.5.1.3 Level of Attachment
Attachment Levels represent the degree that each Indirect Fire unit is dedicated to a specific formation, and consequently, the expected chance of response.

There are three Attachment Levels, from best to worst, Attached, Organic, and Unattached.

When dealing with Attachment Levels, it is very important to keep the hierarchy of formations in mind. In the TO&Es, formations are organized and read from the top down; i.e., the highest level formations and combat units are listed first, followed by the subordinate formations and combat units.

6.5.1.3.1 Attached
Off-map artillery batteries may be classified as Attached. While not specifically listed as part of their designation, all on-map Indirect Fire units are considered Attached to their immediate parent formation and only that formation. They are considered Unattached to all other formations.

Reference the German Panzer Kampfgruppe late-43 found in the German TO&Es (Panzer), its Panzer Grenadier Battalion (gepanzert) has an Attached Medium Battery. This battery is available to any of its battalion's eight observers as an Attached asset.

Reference the German GF2: (mot) Infantry Regiment found in the German TO&Es (Panzer North Africa), its two (mot) infantry battalions each have an Attached Medium Battery. This battery is available to any of its battalion's observers as an Attached asset.

6.5.1.3.2 Organic
Only off-map artillery batteries are classified as Organic. These batteries are found only at the highest level of a formation. They are available as Organic artillery assets to its headquarters and all of the subordinate formations.

Reference the German Panzer Kampfgruppe late-43 found in the German TO&Es (Panzer), it has one Heavy and two Medium Organic Batteries. These three batteries are available to all observers in the Kampfgruppe as Organic assets.

Reference the British BF5: Infantry Brigade found in the British TO&Es (Panzer North Africa), it has six Medium Organic Batteries. These six batteries are available to all observers in the brigade as Organic assets.

6.5.1.3.3 Unattached
Indirect Fire units are never specifically classified as Unattached. Indirect Fire units classified as Organic or Attached are considered Unattached to all other units outside of their immediate formations.

Reference the German Panzer Kampfgruppe late-43 found in the German TO&Es (Panzer), the Attached Medium Battery in the Panzer Grenadier Battalion (gepanzert) is Unattached to any other observer unit that is not part of that battalion including those found in the Regimental HQ.

Reference the German GF2: (mot) Infantry Regiment found in the German TO&Es (Panzer North Africa), the Attached Medium Batteries in the (mot) infantry battalions are Unattached to any other observer unit that is not part of that respective battalion including those found in the Regimental HQ.

6.5.1.4 Pre-Registered Points
In certain situations, especially with defensive artillery fire, off-map artillery batteries are able to *zero-in* on certain points on a battlefield. These unique hexes on the mapboard are called Pre-Registered Points. There is a higher probability that artillery fire will respond when called to a Pre-Registered Point. The scenarios indicate if Pre-Registered Fire is available and to what extent.

On-map units and unassigned off-map artillery batteries may be called to a Pre-Registered Point, but they do not receive any fire response advantage. It is only applicable to off-map artillery batteries assigned to specific Pre-Registered Points. Multiple batteries may have the same Pre-Registered Point.

Pre-Registered Points are written down before the scenario begins, after all Terrain counters are placed but before any force's units are placed on the mapboard. Use the back of the Formation Summary or any other handy source. The notation must include the Pre-Registered Point's hex and its assigned off-map battery or batteries.

6.5.1.5 Indirect Fire SHEAF
The hex area covered or impacted by Indirect Fire is called the SHEAF Pattern.

What is a SHEAF? The word finds its roots in the definition of "a collection of items bound or held together." In artillery fire it is the lines of fire that produce a desired pattern of bursts from rounds fired by two or more guns.

There are four possible Indirect Fire SHEAFs. The smallest SHEAF is used for on-map fire; it affects just a single hex –the Target Point.

© 2025 GMT Games, LLC

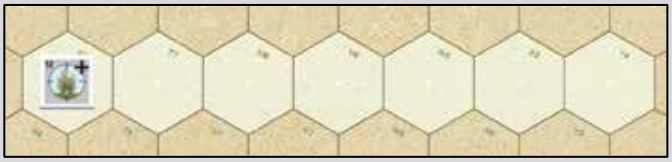
On-map units always use this Closed SHEAF Pattern for GP Indirect Fire

The other three SHEAF Patterns are used only for off-map Indirect Fire. The largest is the Open SHEAF; it impacts the Target Point and covers two hexes radiating out from the Target Point. Next is the Closed SHEAF; It impacts the Target Point and covers one hex radiating out from the Target Point. Last is the Closed Linear SHEAF Pattern; it impacts the Target Point and runs in a straight line out 6 hexes from the Target Point.

Indirect Fire SHEAFs

On-Map Closed SHEAF

Off-Map Closed SHEAF

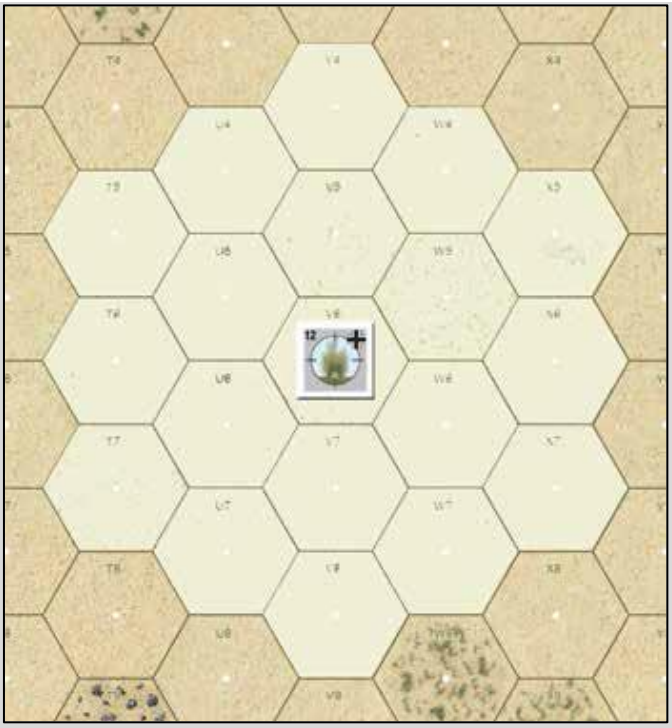


Off-Map Closed Lienar SHEAF

Whenever Indirect Fire impacts the mapboard, the player places an Artillery Impact counter for the appropriate force in the impact hex. The Artillery Impact counters are numbered to track different Indirect Fire missions. The counter remains in the hex until the fire is Checked (see 6.5.1.9) or it no longer responds. If necessary, make notations for the various Indirect Fire missions.

6.5.1.6 Indirect Fire Types

There are three possible types of Indirect Fire, GP, Smoke and Illumination (OR) (see 7.27). The Data Cards indicated which types are available to the various units.



Off-Map Open SHEAF

6.5.1.6.1 GP & Smoke Types

GP and Smoke fire missions may fire in Closed, Open and Closed Linear SHEAFs. Place a SMOKE/ON counter on the ARTILLERY IMPACT counter to denote a Smoke fire mission.

6.5.1.6.2 Illumination Type

Illumination Fire Missions may fire only in Closed SHEAFs, excluding the Closed Linear SHEAF.

6.5.1.7 Called Indirect Fire

The action of requesting Indirect Fire is referred to as Calling for fire support. Only observers may call for Indirect Fire. To call Indirect Fire, the observer must have a *spotted* target. Indirect Fire may not be called to open areas or against unspotted targets; this is often referred to as reconnaissance by fire. An Optional Rule, Artillery Reconnaissance by Fire (see 7.37) expands on this limitation. Called Indirect Fire may utilize all Indirect Fire types and Indirect Fire SHEAFs.

It can only take place when the observer unit can spot at least one non-terrain target unit. The actual Target Point of the Called Indirect Fire must be placed directly on a spotted target. The Target Point must be within the maximum range of all firing unit(s).

Just by the nature of the size of an Indirect Fire SHEAF, any number of units including both friendly and enemy units, whether spotted or not, as well as Terrain Types may be affected by a Called Indirect Fire mission.

Called Indirect Fire Response

Called Indirect Fire is subject to Fire Response (see 6.5.1.12). This represents the possibility of units not responding to a fire call. The Attachment Level of the firing unit and the type and unit grade of the observer unit determine Fire Response. The unit grade of on-map units has no impact on Fire Response.

Each firing unit being called must individually determine Fire Response, including combined units. The success or failure of one unit has no bearing on other units responding to the same call. If an

© 2025 GMT Games, LLC

individual firing unit fails to respond, it is considered to have completed its orders for that turn. It may not be used for any other Indirect Fire if an off-map unit or any other actions if an on-map unit.

Why did they not answer the call? The off-map units may be responding to other fire calls from another observer or a higher echelon, or off-map and on-map units may not receive the fire call, the call was garbled, or they are unable to correctly align their fire in time to respond.

6.5.1.8 Continuous or Adjusted Indirect Fire

Continuous and Adjusted Indirect Fire is used to maintain existing Called Indirect Fire missions from turn-to-turn. The observer unit must have an OW command and all on-map firing units must have Fire commands.

Players may never change observer units as part of continuing or adjusting Indirect Fire.

6.5.1.8.1 Continuous Called Indirect Fire

A Called Indirect Fire mission may be continued at the current Target Point hex with the existing fire SHEAF without having to roll again for Indirect Fire Response. The Indirect Fire type may be freely changed between GP and Smoke fire mission. A switch to an Illumination fire mission or back from one requires the fire be adjusted.

A continuation may take place as long as the Target Point is still spotted by the original observer unit and there is at least one spotted target unit in or adjacent to the Target Point hex. If both of these two conditions cannot be met, the Indirect Fire must be adjusted or checked.

6.5.1.8.2 Adjusting Called Indirect Fire

A Called Indirect Fire mission may be adjusted up to 3 hexes from the current Target Point and/or change the existing fire SHEAF. The Indirect Fire type may also be freely changed. With Indirect Fire adjustments, the player must again roll for Indirect Fire Response for all firing units, but applies a +1 Fire Response modifier to those units currently firing. Adjustments are very much like initial Indirect Fire calls. The 3 hex adjustment must be able to reach a spotted target unit.

If the observer has the capacity, it may call fire from additional units not currently firing as part of the Called Indirect Fire. The player must roll for Indirect Fire Response for any additional firing units. They do not apply the +1 Fire Response modifier.

6.5.1.9 Checking Indirect Fire

During a player's Indirect Fire Step, if desired, any existing Called Indirect Fire where the observer unit can still see the Target Point, may be *checked* (cancelled). Checked Indirect Fire is not resolved for the current turn.

If an Indirect Fire mission is checked, none of the firing or observer units may participate in any other Indirect Fire missions, including Planned Indirect Fire missions, during the turn in which its fire is checked. On-map units may perform any non-Indirect Fire actions, including Direct Fire.

Due to the break in communication, Called Indirect Fire missions that are no longer observed (i.e., Danger Close (see 6.5.1.10); or are now out of the observer's line-of-sight; the observer unit has orders other than Overwatch; or it was eliminated) automatically check. Fire missions may never be handed-off to another observer.

Called Indirect Fire must be checked before an observer may call a new Indirect Fire Mission and before any firing units may attempt to respond to a new Indirect Fire Mission.

Planned Indirect Fire missions are never checked; they must follow their fire plot.

6.5.1.10 Danger Close Indirect Fire

When Indirect Fire is called or adjusted (not continuous fire) to a Target Point hex that is within 5 hexes of spotted friendly units, it is possible that due to inaccuracy on the part of the observer or a firing unit the fire may instead miss the desired Target Point and instead hit a friendly unit.

Always pay close attention when calling or adjusting Indirect Fire in the proximity of friendly units. During the next turn, all Danger Close Indirect Fire automatically checks.

6.5.1.11 Planned Indirect Fire

Planned Indirect Fire missions are those plotted before the scenario begins and are scheduled to arrive sometime in the future. The advantage of Planned Indirect Fire is that it does not require an observer, does not require a spotted target, and is not subject to Fire Response.

The scenarios indicate if Planned Indirect Fire is available and to what extent.

In fact, due to the limited number of Soviet FOs and the structure and organization of the their communications network, Planned Indirect Fire was the preferred method, especially during offensive operations. Yes, it is much less flexible—welcome to the Soviet Army.

6.5.1.11.1 Plotting Planned Indirect Fire

Planned Fire is employed only by off-map artillery batteries. It is plotted before the scenario begins, after all Terrain counters are placed but before any forces' units are placed on the mapboard. Use the back of the Formation Summary or any other handy source. The Target Point for Planned Indirect Fire is plotted in the same manner as Pre-Registered Point hexes. However, Planned Indirect Fire requires a few additional pieces of information.

In addition to the Target Point hex, players must plot the turn the fire is scheduled to arrive, the type of fire mission (GP, Smoke or Illumination), the SHEAF Pattern, and the duration (number of turns) for the mission.

The maximum duration for a Planned Fire mission is five turns; it may be less. With any multi-turn Planned Fire mission, players may freely switch between GP, Smoke and Illumination fire types and Open, Closed and Closed Linear SHEAFs as indicated by the mission plot.

At the conclusion of a Planned Indirect Fire mission, the battery is unavailable for any fire missions for the next turn. A Planned Indirect Fire mission may never continue beyond its indicated plot. A battery may not be used for other fire missions as long as they are part of a Planned Indirect Fire mission or during the one turn wait period.

A five turn Planned Indirect Fire plot could read: Turn 6 (the turn of arrival), GP (the fire type), Closed (the SHEAF Pattern), 30S6 (the Target Point hex) for 2 turns (the initial duration), Smoke (new fire type), Open (new SHEAF Pattern), 1 turn (duration), GP (new fire type), Open, 2 turns (final duration for a total of 5 turns).

© 2025 GMT Games, LLC

Planned Indirect Fire Plot

Turn	Type	SHEAF	Target	Duration
6	GP	Closed	3056	2 turns
8	Smoke	Open	3056	1 turn
9	GP	Open	3056	2 turns

6.5.1.11.2 When Planned Fire Arrives

Due to the nature of the game's time scale, players may actually announce a Planned Indirect Fire mission one turn earlier or one turn later than the actual plot. Once the fire arrives, it executes sequentially as indicated by the plot.

6.5.1.11.3 Adjusting Planned Indirect Fire

On each turn of a fire mission, Planned Indirect Fire may be plotted to adjust up to 5 hexes from its current Target Point hex. It is not subject to Danger Close (see 6.5.1.10).

6.5.1.11.4 Smoke & Illumination Limited Ammo

If ammo limits are in effect for Smoke or Illumination fire, neither the ARTILLERY IMPACT counter nor the SMOKE/ON counter is placed on the mapboard. However, this does not cancel or lengthen the Indirect Fire mission.

If the next turn of the plot calls for GP fire, it is placed as plotted. If the fire plot again calls for Smoke or Illumination, the player must still check for ammo limits.

6.5.1.12 Determining Indirect Fire Response

After announcing the Indirect Fire, including its type and SHEAF Pattern, place the ARTILLERY IMPACT counter in the Target Point hex. If Planned Indirect Fire, the fire automatically responds. If Called Indirect Fire (including adjusted Called Indirect Fire), Fire Response must be determined. Each fire unit must individually determine Fire Response.

Reference the Called Indirect Fire Response Table on Game Card B (Panzer) or Game Card A (Panzer North Africa). Cross-reference the observer type with the Attachment Level of the artillery battery or on-map Indirect Fire unit. The value found is the Fire Response Factor.

The firing player rolls (10). The Called Indirect Fire Response modifiers are now checked to determine their effect, if any. These modifiers are found in the Called Indirect Fire Response Modifiers Table found on Game Card B (Panzer) or Game Card A (Panzer North Africa).

If the modified result is equal to or greater than the Fire Response Factor, the fire responds and impacts at the Target Point as marked. An Optional Rule (see 7.26) expands on this. If the modified result is less than the Fire Response Factor, the fire fails to respond; remove the Artillery Impact counter if all of the firing units fail to respond.

If the result is an unmodified 1, a Danger Close friendly fire incident may occur (see 6.5.1.10). If one or more spotted friendly units are within 5 hexes of the announced Target Point, the opposing (originally targeted) player repositions the ARTILLERY IMPACT counter over one of the spotted friendly units as if that player called the fire. If no spotted friendly units are within 5 hexes of the Target Point, the fire automatically fails to respond regardless if any modifiers would have resulted in the fire responding. It may be necessary to place additional ARTILLERY IMPACT counters if there are multiple units firing.

6.5.1.12.1 Called Indirect Fire Response Modifiers

The Indirect Fire Response roll may be subject to one or more modifiers. All Called Indirect Fire Response modifiers are cumulative.

Note that if a 1 is rolled before any modifiers are applied, the Indirect Fire is subject to Danger Close or does not respond.

Preregistered Point
If the Target Point is a plotted Pre-Registered Point for an off-map battery, the modifier is +2.

Command Recon Observer
If the observer unit is a Recon Company, Battalion, Regiment or Brigade level Command unit, the modifier is +1.

Adjusted Fire
If the fire was adjusted Called Indirect Fire (adjusted Planned Indirect Fire is not subject to Fire Response), the modifier is +1.

Observer Suppressed
If the observer unit is Suppressed, the modifier is –2.

Observer Damaged
If the observer unit's Turret is Damaged, the modifier is –2. Hull Damage has no effect.

Observer Hindered
If Brew-Up Smoke, Smoke, Barrage, and/or Fire originates in the observer unit's hex, passes through, or enters the Target Point hex, including its own barrage, the modifier is –1. The modifier is –1 regardless if the SHEAF Pattern is Open or Closed.

The modifier is applied for each unique occurrence of any and all types the line-of-sight starts from or encounters; not per each hex. It is cumulative.

Observer Heat Haze
Heat Haze is a visual anomaly that occurs during hot conditions in the desert and also in arid environments. The shimmering effect caused by dynamic atmospheric turbulence from rising ground heat, and the distortion of light passing through it, is a hindrance to clearly engaging targets. Heat Haze is in effect as instructed by a scenario's Setup or Special Conditions.

Heat Haze applies a –1 modifier. The spotting range at which the modifier is applicable depends on the size of the target.

The range is:

S-Sized Target: ≥ 3 hexes
L-Sized Target: ≥ 5 hexes
V-Sized Target: ≥ 8 hexes

Observer Hesitating
If the observer unit is Hesitating (7.1), the modifier is –1.

Observer Broken
If the observer unit is Broken (7.1), the modifier is –2.

Observer Grade
Only the observer's unit grade affects Indirect Fire, and then only whether or not Called Indirect Fire missions respond. The firing unit's grade, does not affect Indirect Fire. In fact, off-map artillery units are not graded.

Reference the Unit Grade Modifiers Table on Game Card B (Panzer) or Game Card A (Panzer North Africa). Apply the listed modifier, if any, found in the IF RSP column.

© 2025 GMT Games, LLC

- Elite: +2
- Veteran: +1
- Seasoned: 0
- Regulars: –1
- Green: –2

6.5.1.13 Indirect Fire Resolution

For Called Indirect Fire on-map units, range is measured from the firing unit or the observer unit, whichever is greater, to the Target Point hex for all units that fall within the SHEAF Pattern, regardless of their actual range. For Called Indirect Fire off-map artillery batteries, the range is measured from the observer unit to the Target Point. In either case, the range must be equal to or greater than the firing unit's minimum range and less than or equal to its maximum range.

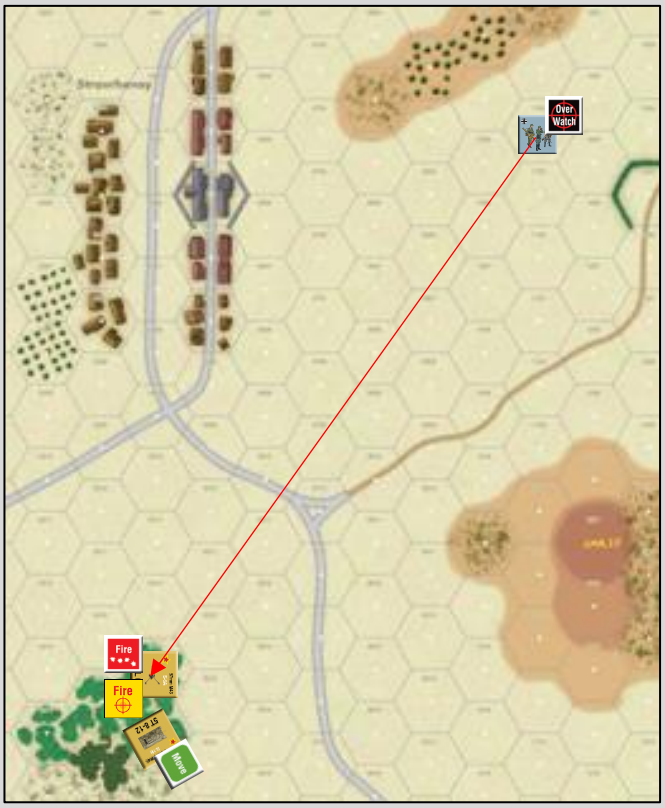
For Planned Indirect Fire, the range is always M-Medium.

For GP Fire, use that procedure in determining the results of the fire (see 6.5.4).

For smoke, place a SMOKE/ON counter on the ARTILLERY IMPACT counter to indicate that it is a Smoke fire mission.

For illumination, place an ILLUMINATION/ON counter on the Artillery Impact counter to indicate that it is a Illumination fire mission.

The Situation (Panzer)



A German FO section, Seasoned Unit Grade, is attempting to call fire from both an off-map Organic Heavy Artillery Battery and an Attached off-map Medium Artillery Battery.

The FO has a spotted target: a Soviet 57mm M43 ATG (Data Card S-6B) located in a Woods hex at a range of 12 hexes; it is marked with a SPOT/FIRE counter. An unspotted Soviet T-34/76 M43 (Data Card S-1B) is located in an adjacent Woods hex. No spotted German units are within 5 hexes of the Target Point; Danger Close is not a possibility.

The Soviet is the First Player. The German FO is marked with an OW command. The 57mm ZIS-2 M43 ATG has a FIRE command, while the T-34/76 M43 has a MOVE command.

Even though the German is the Second Player, Indirect Fire is resolved in the Indirect Fire Step of the Combat Phase, which precedes the Direct Fire Step. Therefore, the Germans resolve their Indirect Fire first.

5) Combat Phase (4.4, 6.5)
- a) Indirect Fire Combat Step (6.5.1)
  - i) First Player
  - ii) Second Player
- b) Direct Fire Combat Step (4.4.1, 6.5.2, 6.5.4)
  - i) First Player
  - ii) Second Player
  - iii) Overwatch (4.4.2, 6.5.3)

The German FO section attempts to call Indirect Fire from the two off-map batteries. As a Forward Observer it may call fire from two distinct units.

In summary, it has OW orders; there is no blocking terrain; the 57mm M43 ATG is within spotting range as the actual range of 12 is less than 15, which is the maximum spotting range for a small target in Medium Cover with a SPOT/FIRE counter.

The German player announces the fire as GP with a Closed SHEAF and places an Artillery Impact counter in the hex with the 57mm M43 ATG. The area covered by the SHEAF Pattern also includes the adjacent T-34/76 M43.

Since the two German batteries have different Attachment Levels, they have different Response numbers. The FO row is cross-referenced with the Attached column where 2 is found for the Medium Battery; under the Organic column 4 is found for the Heavy Battery. The announced Target Point hex is a Pre-Registered Point for the Heavy Battery.

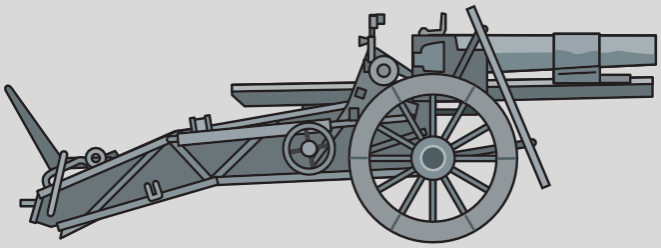
© 2025 GMT Games, LLC

Called Indirect Fire Response (6.5.1.12)			
Observer Level	Attached	Organic	Unattached
FO	2	4	6
Brigade/Regiment	3	5	7
Battalion	4	6	8
Company	5	7	9
Recon Unit	6	8	10

An unmodified 1 is No Response or is Danger Close if spotted friendly unit(s) is within 5 hexes of the target point.

Called Indirect Fire Response Modifiers (6.5.1.12.1)	
Pre-Registered Point	+2
Observer Recon Company+, Adjusted Fire	+1
Observer Suppressed, Damaged, Broken	-2
Observer Hindered, Heat Haze, Hesitating	-1
Observer Grade	see table

The German player first rolls (10) for the Medium Battery (the order is up to the German player); the result is a 5. No modifiers apply. Since 5 is not less than that battery's Response number of 2, the Medium Battery responded.



The German player now rolls (10) for the Heavy Battery; the result is a 1. An unmodified 1 normally indicates Danger Close. However, Danger Close is not possible. In any event, the Heavy Battery automatically fails to respond.

The German player first attacks the 57mm M43 ATG. At a range of 12 hexes (measured from the FO section), for the GP ammo type, the GP Factor is 8 (Data Card G-7A); the GP Range Factor is S.

G-7A: Artillery Batteries

Light, Medium, Heavy, Super Heavy and Counter Battery

Counter Battery	
Locate	01-20
Suppress	01-50
Damage	51-80
Knock Out	81-00
Any	50 Pts

3+ Turns: -10
SP Battery: +10

Offensive Information

Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness	Pts
Light Smk, IL	N	s6i6	O	GP IF	R	7	13	23	33	40	1-3	40
					F	7	6	5	4	3		
Medium Smk, IL	N	s6i6	O	GP IF	R	7	13	23	33	40	1-4	54
					F	10	8	7	5	4		
Heavy Smk, IL	N	s6i6	O	GP IF	R	7	13	23	33	40	1-6	73
					F	13	11	9	7	5		
Super Heavy Smk, IL	N	s6i6	O	GP IF	R	7	13	23	33	40	1-8	95
					F	15	13	11	8	6		

Notes: All available throughout the war. All fire is indirect.

G-7B1: Hs 129 B-1/R2 & G-7B2: Fw 190 F-1

The 57mm M43 ATG's GP Defense is 5S; it is located in Medium Cover. The GP Fire modifiers are now checked for any effect; the Net Modifier is 0.

S-6A: 57mm M43 ATG 37

M: 1L 0 Tr: 1-1 Wt: 1.5

57mm L/70 FoF: 60 St: O RoF: Q A: 6A4

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (57mm-KE)	R	3	6	11	15	18	1-2	3-5	6-9	10
	P	23	21	18	15	12				
HVAP(A) (57mm-KE)	R	2	4	7	9	11	1-3	4-6	7-10	---
	P	35	30	27	23	21				
GP (57mm)	R	5	9	16	23	27	GP Effectiveness			
	F	4	3	3	2	1	GP Defense = 1-2			

Defensive Information

Size:	S	Light Cover	3S	Heavy Cover	7S	Moving	-2
GPD:	1S	Medium Cover	5S	Full Cover	+1	Transported	1/3S

Notes: Available from mid-43. HVAP available from late-43.

S-6B: 76.2mm M39 ATG

The 8 GP Factor column on the GP Combat Table is cross-referenced with the GP Defense of 5. The two numbers found are 40 for the N-Effect and 72 for the S-Effect.

GP Combat Results (6.5.4.4, 6.6.1.1.1)

GP Def Fac	Effect	##>100 1	2	3	4	5	6	7	GP Factor 8	9	10	11	12	13	14	##<0 15	Effect	GP Def Fac
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

The German player rolls (100). The result is 59, so the net roll is 59. Since 59 is greater than 40, but not greater than 72, the combat is a Suppressed result. The Soviet anti-tank gun is marked with a Suppression/On counter.

The German player now attacks the T-34/76 M43. The range is still measured to the Target Point hex even though the T-34/76 M43 is located in a different hex. Its GP Defense is 4A.

© 2025 GMT Games, LLC

S-1B: T-34/76 M43 | 66

M: 5T 8-12 Tr: 0-2 Wt: 30.9

76.2mm L/43 Tt: 2 Sb: 0 St: O RoF: N A: a5

Offensive Information

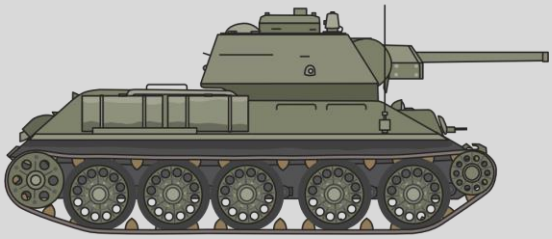
Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information

Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	4A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	18	12	18	13	21	14	14	21	13	15	---
	Rise	18	12	24	14	21	14	14	28	15	17	---
	Fall	18	11	14	11	21	13	13	17	12	13	22

Notes: Available from mid-43. HVAP available from late-43. Long gun. Armor 18/12.

S-1A: T-70 M42



The GP Fire modifiers are now checked for any effect. The Net modifier is –40 as a result of the following modifiers:

- Target Vehicle Moving IF: –20
- Target A-Type Vehicle: –20

Note that cover for the Woods terrain does not apply to Indirect Fire. The 8 GP Factor column on the GP Combat Table is cross-referenced with the GP Defense of 4. The two numbers found are 36 for the N-Effect and 68 for the S-Effect. Note that with the –40 modifier, it is not possible to achieve an Effective result.

GP Fire Modifiers (6.5.4.3)	
Target Vehicle Moving DF/IF	-10/-20
Target P-Type Vehicle	-10
Target A-Type Vehicle	-20
Target Vehicle in Medium Cover	-10
Target Vehicle in Heavy Cover	-20
Target Cavalry, Crawling, Air Burst	+10
Target Leg/Towed DF over Wall	-10
Short Halt: Sb: 0, Other	-15
Shooter Damaged, Hesitating	-10
Shooter Suppressed	-20
Shooter Broken, On Fire	-20
Brew-Up Smoke	-10
Smoke Open/Closed SHEAF	-10/-20
Barrage Open/Closed SHEAF	-5/-10
IF Open SHEAF	-20
Overwatch	-5
Overwatch Adjust, Dismount FO	-10
Ammo Limit, Heat Haze	-10
Transported & Defensive Fire	-10
Overrun Attack, Pinning Fire	+20
Dual Fire Same/Different	-5/-10
Hasty Entrenchment, CE Ammo	-10
Coax MG (P-Range) vs. P or S	+10
Shooter Grade	see table

GP Combat Results (6.5.4.4, 6.6.1.1.1)

GP Def Fac	Effect	GP Factor ## >100 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 ##<0	Effect	GP Def Fac
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

The German player rolls (100). The result is 88, so the net roll is 48 (88 – 40). Since 48 is greater than 36 but not greater than 68, the T-34/76 M43 is Suppressed. The Soviet tank is marked with a Suppression/On counter.

6.5.2 Direct Fire Step – AP Fire

The Advanced Game adds a number of new concepts to the Basic Game. Now, in addition to vehicles other units may also employ AP Direct Fire.

AP Fire is still directed only at vehicles, but no special counters are required for the various choices; they are declared at the time of the fire.

6.5.2.1 AP Number of Hits

AP weapons do not necessarily have the same Rates-of-Fire. Four distinct Rates-of-Fire are modeled in the game. They are identified by a single character:

- N: Normal
- Q: Quick
- R: Rapid
- F: Fast

© 2025 GMT Games, LLC

The Rate-of-Fire for a specific weapon is listed on the same row as the weapon's name following ROF.

Reference the Vehicle Data Card Key (Panzer), the SU-76M M43's Rate-of-Fire for its 76.2mm L43 gun is N –Normal.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 Tr: 0-0 Wt: 10.2

76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference the Towed Data Card Key (Panzer and Panzer North Africa), the 8. 8cm FlaK 36's Rate-of-Fire for its 88mm L/56 gun is Q – Quick.

G-6A: 8.8cm FlaK 36 ATG/AAG | 53

M: 0L 0 Tr: 3-3 Wt: 4.9

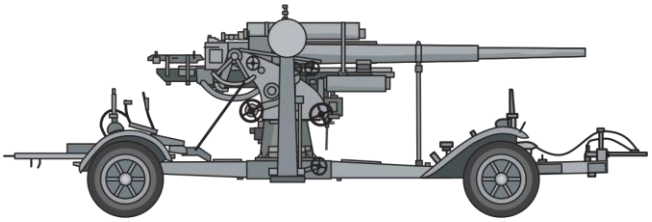
88mm L/56 FoF: 60 St: O RoF: Q A: 6A4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP Effectiveness			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (88mm)	R	5	9	16	23	28	(+20)			
	F	3	3	2	2	1				

Defensive Information							
Size:	L	Light Cover	2S	Heavy Cover	6S	Moving	---
GPD:	1S	Medium Cover	4S	Full Cover	+1	Transported	1/3S

Notes: Available throughout the war. APCR available from early-43.

G-6B: 7.5cm PaK 40 ATG



Reference Vehicle Data Card G-9A (Panzer North Africa), the PzKpfw VIH Tiger I's Rate-of-Fire for its 88mm L/56 gun is N – Normal.

G-9A: PzKpfw VIH Tiger I | 78

M: 3T 5-8 B: -5 Tr: 0-2 Wt: 57.0

88mm L/56 Tt: 1 Sb: 0 St: O RoF: N A: A5D4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP Effectiveness			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

Defensive Information												
Size:	+1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	5A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	22	16	20	16	26	19	19	24	19	19	---
	Rise	23	16	21	16	27	19	19	25	19	19	---
	Fall	22	16	20	17	26	19	19	23	19	20	31

Notes: Available from late-42 (Tunisia). APCR available from late-42. Long gun. Armor 21/16.

G-9B: Panzerjäger I

Why do towed units typically have a higher Rate-of-Fire than vehicles for the same gun? Most towed guns have multiple ammunition handlers, and they are not lugging shells around a vehicle's close confines.

No additional die roll is required when determining the number of hits. The same AP Hit Number Roll (100) is used by referencing the AP Number of Hits Table on Game Card A.

Multiple hits are not a consideration with GP Fire. The impact of Rate-of-Fire is already factored into the weight of GP Fire.

N Rate-of-Fire

The N Rate-of-Fire is not referenced in the table. If the result is equal to or less than the AP Hit Number, one hit is made. If the result exceeds the AP Hit Number, the shot missed.

Q, R and F Rates-of-Fire

With these three Rates-of-Fire, it is possible to achieve multiple hits on a target or targets. All additional hits are resolved individually. Find the row containing the AP Hit Number in the left or right hand column of the table.

Cross-reference the Hit Number row with the columns corresponding to the weapon's Rate-of-Fire. If the result exceeds the AP Hit Number, all shots missed. If the result is equal to or less than the AP Hit Number, one or more hits were made. The number of hits made is found at the top of the sub-column in whose die-roll range the result falls.

A shot at S range with a net modifier of -2 has an AP Hit Number of 56. The firing gun has a Rate-of-Fire of F. The values listed in the table are 01-11 in the F: 3 sub-column, 12-22 in the F: 2 sub-column, and finally, 23+ in the F: 1 subcolumn. So, after rolling, if the result was from 01-11 three hits are made; from 12-22 two hits are made; from 23-56 one hit was made; and if 57 or higher, the shot missed.

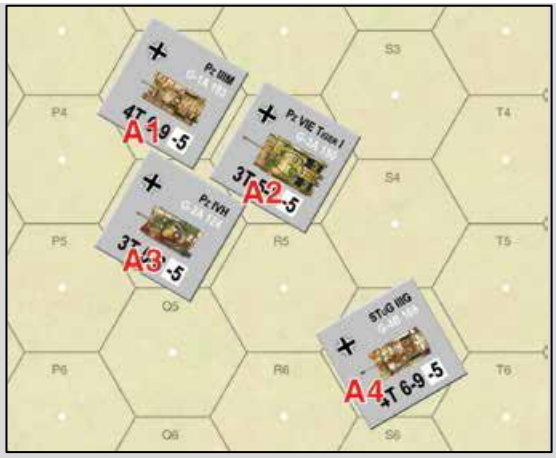
© 2025 GMT Games, LLC

AP Hit (4.4.3.2.3)						
Net Mod	RANGE					Net Mod
	P	S	M	L	E	
+5+	00	00	75	45	15	+5+
+4	00	98	70	42	14	+4
+3	00	91	65	39	13	+3
+2	00	84	60	36	12	+2
+1	99	77	55	33	11	+1
0	90	70	50	30	10	0
-1	81	63	45	27	09	-1
-2	72	56	40	24	08	-2
-3	63	49	35	21	07	-3
-4	54	42	30	18	06	-4
-5	45	35	25	15	05	-5
-6	36	28	20	12	04	-6
-7	27	21	15	09	03	-7
-8	18	14	10	06	02	-8
-9	09	07	05	03	01	-9
-10-	01	01	01	01	---	-10-

AP Number of Hits (6.5.2.1)										
Hit #	Q: 2	Q: 1	F: 3	F: 2	F: 1	R: 4	R: 3	R: 2	R: 1	Hit #
90+	01-24	25+	01-19	20-38	39+	01-14	15-28	29-42	43+	90+
80-89	01-21	22+	01-17	18-34	35+	01-13	14-26	27-39	40+	80-89
70-79	01-19	20+	01-15	16-30	31+	01-11	12-22	23-33	34+	70-79
60-69	01-16	17+	01-13	14-26	27+	01-10	11-20	21-30	31+	60-69
50-59	01-14	15+	01-11	12-22	23+	01-08	09-16	17-24	25+	50-59
40-49	01-11	12+	01-09	10-18	19+	01-07	08-14	15-21	22+	40-49
30-39	01-09	10+	01-07	08-14	15+	01-05	06-10	11-15	16+	30-39
20-29	01-06	07+	01-05	06-10	11+	01-04	05-08	09-12	13+	20-29
10-19	01-04	05+	01-03	04-06	07+	01-02	03-04	05-06	07+	10-19
05-09	01	02+	01	02	03+	---	01	02	03+	05-09

An added bonus of Q, R or F Rates-of-Fire is that additional hits may spread to other target vehicles. To spread additional hits to other targets, all the additional targets must be within the firing unit's Command Range of the original target vehicle. This Command Range check is based on the firing unit's *Unit* Grade (not its Formation Grade, as is the case with sharing commands) and is measured from the original target to any other potential targets.

The additional targets must still be legal targets and fall within the same AP Range Factor (or closer) as the original target. The additional hits are spread *before* determining damage from the hits.



A unit with Veteran Unit Grade and a R Rate-of-Fire fires at A3. It may spread any additional hits to A1 and/or A2; they are both within 1 hex of A3. It may not spread any hits to A4.

With Regulars or Green Unit Grade, it is not possible to spread any additional hits; Elite Unit Grade would include A4.

6.5.2.2 AP Hit Angle

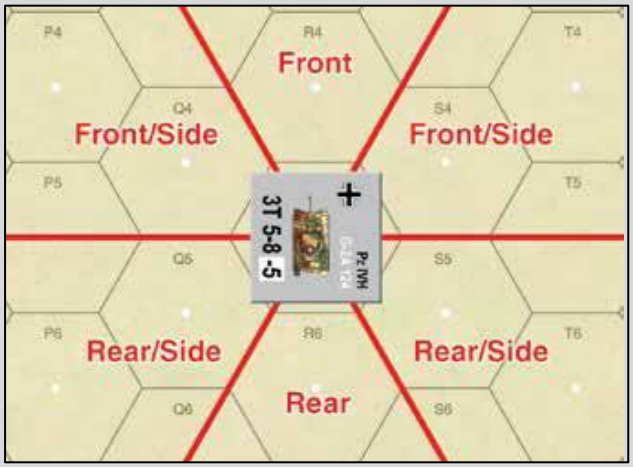
In the Basic Game, the orientation of the target vehicle to the firing unit was based on just two Hit Angles—Front and Rear. The Advanced Game has six Hit Angles—Front, Front/Side (right and left), Rear/Side (right and left), and Rear. Within these Hit Angles there are now eight unique Hit Locations.

- TF: Turret Front
- TS: Turret Side
- TR: Turret Rear
- HF: Hull Front
- HS: Hull Side
- HR: Hull Rear
- TK: Track
- DK: Deck

Note that all vehicles have turret-hit locations even those classified as Non-Turreted or Turretless 360°. This is because those vehicles typically have turret-like superstructures or gun shields. It also allows for a uniformity of data presentation.

The six Hit Angles (Front, Front/Side, Rear/Side and Rear) are oriented around a vehicle with the right and left side as mirror images of one another. The orientation of the target vehicle to the firing vehicle's line-of-sight is used to determine where a vehicle is hit.

Hit Angles



If the line-of-fire runs exactly along a hexside dividing two angles, the player controlling the target determines which of the two angles to utilize.

After determining the Hit Angle, roll (100). Compare the tens result to the values listed in the Hit Angle row in the AP Hit Locations Table on Game Card A. Do not lose sight of the units result of the dice roll as that is used for damage determination (see 6.5.2.6). Small Turrets (OR) (see 7.45) may change a turret hit location to a hull hit.

© 2025 GMT Games, LLC

With a Front/Side Hit Angle, a 76 is rolled. The 7 indicates a HS – Hull Side Hit Location. The 6 is used when determining damage.

AP Hit Locations (6.5.2.2)

Angle	TF	TS	TR	HF	HF*	HS	HS*	HR	HR*	TK	Dk
Front	1-4	---	---	5-6	7-9	---	---	---	---	10	1
Front/Side	1-2	3-4	---	5	6	7	8-9	---	---	10	1
Rear/Side	---	1-2	3-4	---	---	5	6-7	8	9	10	1
Rear	---	---	1-4	---	---	---	---	5-6	7-9	10	1

If Hull Down, all Hull and TK hits are treated as a miss. If Partial Hull Down, all Hull* and TK hits are treated as a miss. Dk Falling only shots.
S-Type vehicle: -2 Damage Modifier. Bu Modifier: +2 Damage Modifier

6.5.2.2.1 Track Hits

With a result of 10, the Hit Location is TK – Track, the vehicle suffers damage immediately. Skip any further damage determinations. Any subsequent Track hits do not cause any additional damage and are ignored.

Track Hit is a generic term used to describe a mobility hit on a vehicle; it applies equally to tracked, halftracked and wheeled vehicles. An Optional Rule, Variable Track Damage (see 7.21) adds variability to the automatic damage. Place a Track counter on or next to the target vehicle. A vehicle may have both a Track Hit and a Damage Hit.

A vehicle with a Track Hit may not move or pivot for the remainder of the scenario including the Move portion of any command not yet executed. If the vehicle is currently moving, it immediately stops and may not change its facing. It is also subject to Bailing Out.

Any combat not yet resolved still treats the vehicle as if it is moving.

A vehicle with a Short Halt command receives a Track Hit from fire from the First Player. When it resolves its fire as the Second Player, it is still considered to be moving.

A vehicle with a Move command receives a Track Hit during the Indirect Fire Step. It is still considered to be moving during the subsequent Direct Fire Step.

Vehicles sharing Move or Short Halt commands must maintain Command Range upon completion of their move. However, if one or more of those units receive a TK Hit preventing movement, the remaining units may move normally, leaving the tracked unit behind, as long as the those remaining units maintain Command Range upon completion of their move.

6.5.2.2.2 Deck Hits

If the hit is from falling shot; i.e., the firing unit's Height is greater than the target vehicle's Height, there is a chance that the target vehicle's Deck Armor is hit.

With a result of 1 and falling shot, the Hit Location is DK – Deck. The Deck Armor is hit, and it is used when determining if the shot penetrated. The other Hit Location listed in the table is ignored.

With a Rear/Side Hit Angle and falling shot, a 14 is rolled. The 1 would normally indicate a TS – Turret Side Hit Location. However, since it is falling shot it is treated as a DK Hit instead. The 4 is used when determining damage.

AP Hit Locations (6.5.2.2)

Angle	TF	TS	TR	HF	HF*	HS	HS*	HR	HR*	TK	Dk
Front	1-4	---	---	5-6	7-9	---	---	---	---	10	1
Front/Side	1-2	3-4	---	5	6	7	8-9	---	---	10	1
Rear/Side	---	1-2	3-4	---	---	5	6-7	8	9	10	1
Rear	---	---	1-4	---	---	---	---	5-6	7-9	10	1

If Hull Down, all Hull and TK hits are treated as a miss. If Partial Hull Down, all Hull* and TK hits are treated as a miss. Dk Falling only shots.
S-Type vehicle: -2 Damage Modifier. Bu Modifier: +2 Damage Modifier

6.5.2.2.3 Hull Down Hits

When Hull Down or Partial Hull Down, portions of the vehicle are protected from AP Fire, rendering those hits ineffective.

When in a Hull Down position, all Hull, Hull* and TK Hit locations are treated as a miss instead of a hit.

With a Front/Side Hit Angle and Hull Down, Hit Locations 5 through and including 10 are treated as a miss instead.

AP Hit Locations (6.5.2.2)

Angle	TF	TS	TR	HF	HF*	HS	HS*	HR	HR*	TK	Dk
Front	1-4	---	---	5-6	7-9	---	---	---	---	10	1
Front/Side	1-2	3-4	---	5	6	7	8-9	---	---	10	1
Rear/Side	---	1-2	3-4	---	---	5	6-7	8	9	10	1
Rear	---	---	1-4	---	---	---	---	5-6	7-9	10	1

If Hull Down, all Hull and TK hits are treated as a miss. If Partial Hull Down, all Hull* and TK hits are treated as a miss. Dk Falling only shots.
S-Type vehicle: -2 Damage Modifier. Bu Modifier: +2 Damage Modifier

When in a Partial Hull Down position, all Hull* and TK Hit locations are treated as a miss instead of a hit.

With a Front/Side Hit Angle and Partial Hull Down, Hit Locations 6, and 8, 9, 10 are treated as a miss instead.

AP Hit Locations (6.5.2.2)

Angle	TF	TS	TR	HF	HF*	HS	HS*	HR	HR*	TK	Dk
Front	1-4	---	---	5-6	7-9	---	---	---	---	10	1
Front/Side	1-2	3-4	---	5	6	7	8-9	---	---	10	1
Rear/Side	---	1-2	3-4	---	---	5	6-7	8	9	10	1
Rear	---	---	1-4	---	---	---	---	5-6	7-9	10	1

If Hull Down, all Hull and TK hits are treated as a miss. If Partial Hull Down, all Hull* and TK hits are treated as a miss. Dk Falling only shots.
S-Type vehicle: -2 Damage Modifier. Bu Modifier: +2 Damage Modifier

© 2025 GMT Games, LLC

6.5.2.2.4 Damaged Result

In the Basic Game a Damaged Result affects both the target vehicle's combat and movement. In the Advanced Game, a Damaged Result affects *either* the target vehicle's Combat or Movement, not both.

If a vehicle is marked with a TURRET DMGD counter (see 6.5.2.5), it must apply all Shooter Damaged modifiers. Its movement is not affected by the damage.

If a vehicle is marked with a HULL DMGD counter (see 6.5.2.5), it has its remaining and future movement speed allowance reduced by ½ (round down). Its combat is unaffected by the damage.

If a damaged vehicle receives a second Damaged result regardless of type, it is considered KO – Knocked-Out– instead and those results apply.

Vehicles sharing MOVE or SHORT HALT commands must maintain Command Range upon completion of their move. However, if one or more of those units suffer HULL DMGD or bogging, thereby limiting movement, all attempts must be made to maintain Command Range upon completion of their move. If this is not possible, there may be cases where the moving units may not be able to maintain Command Range. Units are not required to retrace their movement.

For tanks with hull mounted guns, e.g., F-4B Char B1-bis, S-33B M3 Lee, and B-11A Grant I, these weapons must apply all Shooter Damaged modifiers with Hull Damage; these hull mounted guns are unaffected by Turret damage.

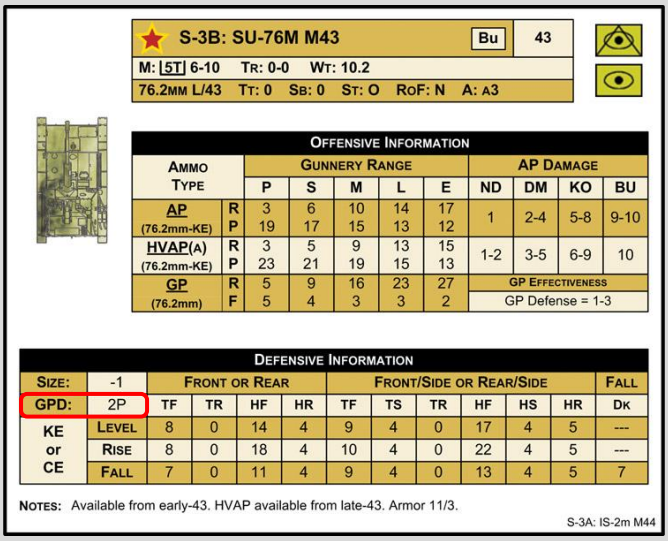
6.5.2.3 Armor Determination

The values found in a vehicle's Data Card Defensive Information section represent its Armor Factor (armor thickness adjusted forarmor composition and shot angle) for each Target Angle and each Hit Location.

From a defensive standpoint, vehicles are classified as A-Type (Armored), P-Type (Protected) or S-Type (Soft). Both A-Type and P-Type vehicles carry armor, however, P-Type vehicles are typically open-topped and are less common. S-Type vehicles are unarmored.

A-Type and P-Type vehicles have the specific Hit Locations listed while S-Type vehicles have an Armor Factor of 0 for all Hit Locations.

Reference the Vehicle Data Card Key (Panzer), the SU-76M M43's GP Defense Factor is 2P. The P suffix indicates that it is a P-Type vehicle.



S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 TR: 0-0 WT: 10.2

76.2MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A3

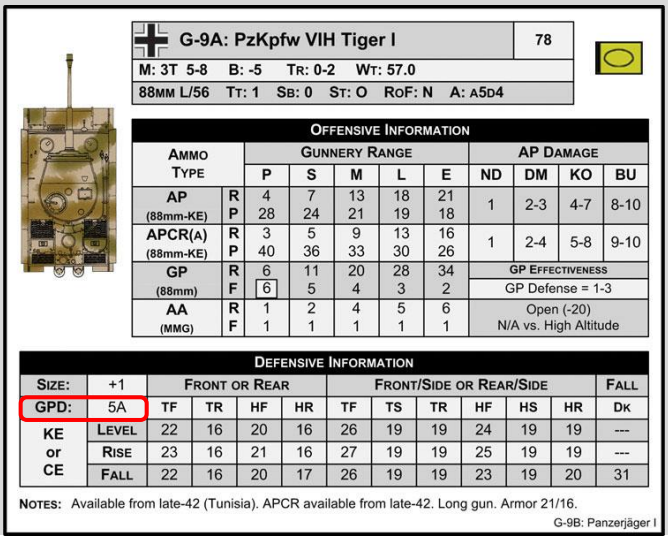
OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP EFFECTIVENESS			
	F	5	4	3	3	2	GP Defense = 1-3			

DEFENSIVE INFORMATION												
SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	8	0	14	4	9	4	0	17	4	5	---
	RISE	8	0	18	4	10	4	0	22	4	5	---
	FALL	7	0	11	4	9	4	0	13	4	5	7

NOTES: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference Vehicle Data Card G-9A (Panzer North Africa), the PzKpfw VIH Tiger I's GP Defense Factor is 5A. The A suffix indicates that it is an A-Tpe vehicle.



G-9A: PzKpfw VIH Tiger I | 78

M: 3T 5-8 B: -5 TR: 0-2 WT: 57.0

88MM L/56 TT: 1 SB: 0 ST: O ROF: N A: A5D4

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP EFFECTIVENESS			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

DEFENSIVE INFORMATION												
SIZE:	+1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	5A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	22	16	20	16	26	19	19	24	19	19	---
	RISE	23	16	21	16	27	19	19	25	19	19	---
	FALL	22	16	20	17	26	19	19	23	19	20	31

NOTES: Available from late-42 (Tunisia). APCR available from late-42. Long gun. Armor 21/16.

G-9B: Panzerjäger I

6.5.2.3.1 Level, Rising & Falling Shots

In the Basic Game, all AP Direct Fire was treated as Level Shot. In reality, changing a shot's angle of inclination, either above or below a target, affects the geometry of the target's armor basis. In most cases, falling shots decreases armor effectiveness while rising shots increase armor effectiveness.

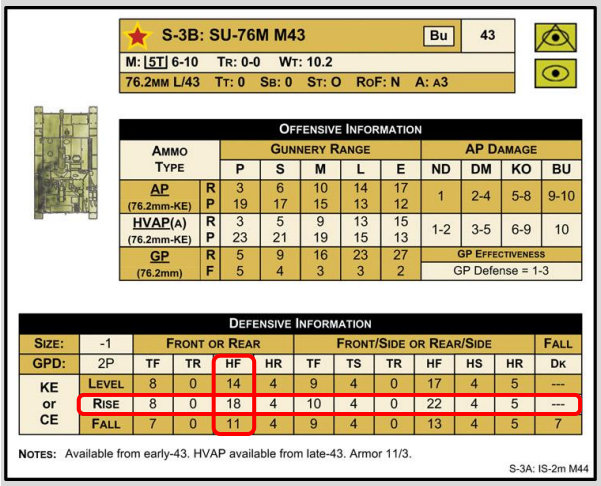
For Level Shots (firing Height and target Height equal), use the Level row; for Falling Shots (firing Height greater than target Height), use the Falling row; for Rising Shots (firing Height is less than target Height), use the Rising row. An Optional Rule, Lower Hull Hits (see 7.13) expands on Rising Shots.

6.5.2.3.2 Front or Rear Hit Angles

TF, TR, HF and HR Hit Locations are listed. It is impossible to hit the TS or HS at these angles.

© 2025 GMT Games, LLC

Reference the Vehicle Data Card Key (Panzer), a Front Angle, Rising Shot hitting the HF. The SU-76M M43's Armor Factor is 18.



S-3B: SU-76M M43 | Bu | 43
M: [5T] 6-10 Tr: 0-0 Wt: 10.2
76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: a3

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

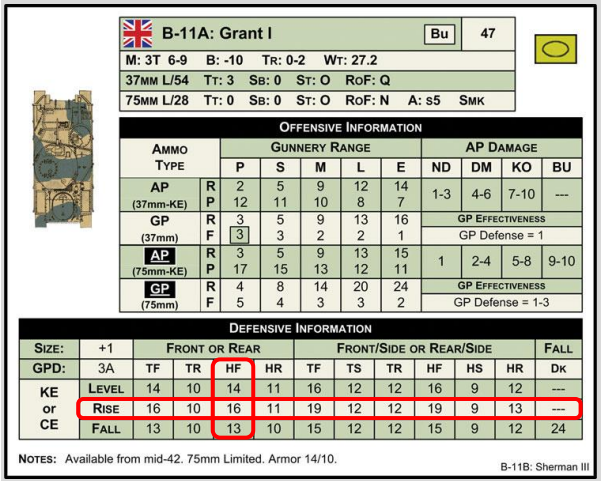
Defensive Information

Size:	-1	Front or Rear TF	TR	HF	HR	Front/Side or Rear/Side TF	TS	TR	HF	HS	HR	Fall Dk
GPD:	2P											
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference Vehicle Data Card B-11A Grant I (Panzer North Africa), a Front Angle, Rising Shot hitting the HF. The Grant I's Armor Factor is 16.



B-11A: Grant I | Bu | 47
M: 3T 6-9 B: -10 Tr: 0-2 Wt: 27.2
37mm L/54 Tt: 3 Sb: 0 St: O RoF: Q
75mm L/28 Tt: 0 Sb: 0 St: O RoF: N A: s5 Smk

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (37mm-KE)	R	2	5	9	12	14	1-3	4-6	7-10	---
	P	12	11	10	8	7				
GP (37mm)	R	3	5	9	13	16	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1			
AP (75mm-KE)	R	3	5	9	13	15	1	2-4	5-8	9-10
	P	17	15	13	12	11				
GP (75mm)	R	4	8	14	20	24	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information

Size:	+1	Front or Rear TF	TR	HF	HR	Front/Side or Rear/Side TF	TS	TR	HF	HS	HR	Fall Dk
GPD:	3A											
KE or CE	Level	14	10	14	11	16	12	12	16	9	12	---
	Rise	16	10	16	11	19	12	12	19	9	13	---
	Fall	13	10	13	10	15	12	12	15	9	12	24

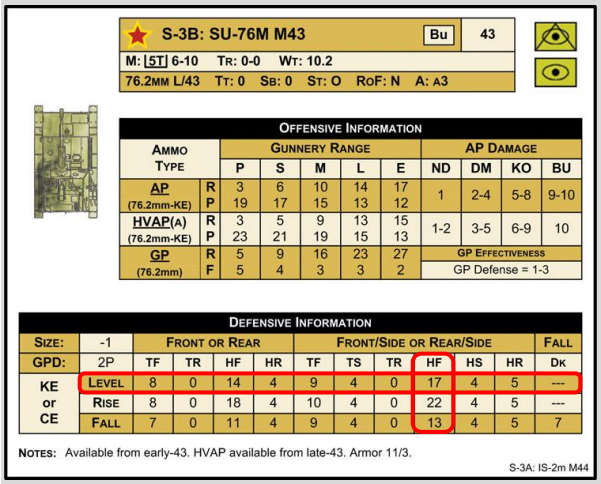
Notes: Available from mid-42. 75mm Limited. Armor 14/10.

B-11B: Sherman III

6.5.2.3.3 Front/Side or Rear/Side Hit Angles

TF, TS, TR, HF, HS, and HR Hit Locations are listed.

Reference the Vehicle Data Card Key (Panzer), a Front/Side Angle, Level Shot hitting the HF. The SU-76M M43's Armor Factor is 17.



S-3B: SU-76M M43 | Bu | 43
M: [5T] 6-10 Tr: 0-0 Wt: 10.2
76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: a3

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

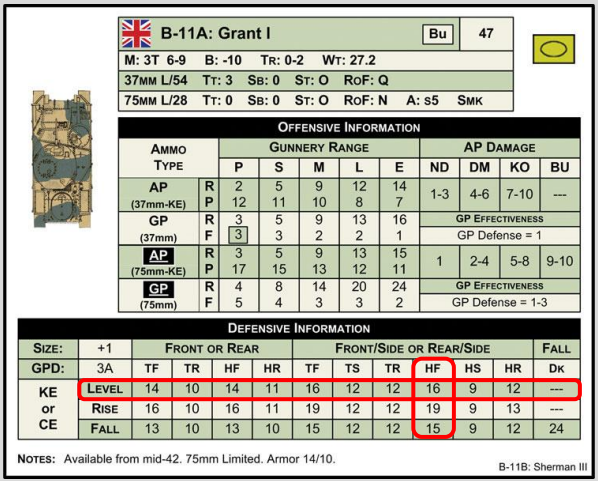
Defensive Information

Size:	-1	Front or Rear TF	TR	HF	HR	Front/Side or Rear/Side TF	TS	TR	HF	HS	HR	Fall Dk
GPD:	2P											
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference Vehicle Data Card B-11A Grant I, a Front/Side Angle, Level Shot hitting the HF. The Grant I's Armor Factor is 16.



B-11A: Grant I | Bu | 47
M: 3T 6-9 B: -10 Tr: 0-2 Wt: 27.2
37mm L/54 Tt: 3 Sb: 0 St: O RoF: Q
75mm L/28 Tt: 0 Sb: 0 St: O RoF: N A: s5 Smk

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (37mm-KE)	R	2	5	9	12	14	1-3	4-6	7-10	---
	P	12	11	10	8	7				
GP (37mm)	R	3	5	9	13	16	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1			
AP (75mm-KE)	R	3	5	9	13	15	1	2-4	5-8	9-10
	P	17	15	13	12	11				
GP (75mm)	R	4	8	14	20	24	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information

Size:	+1	Front or Rear TF	TR	HF	HR	Front/Side or Rear/Side TF	TS	TR	HF	HS	HR	Fall Dk
GPD:	3A											
KE or CE	Level	14	10	14	11	16	12	12	16	9	12	---
	Rise	16	10	16	11	19	12	12	19	9	13	---
	Fall	13	10	13	10	15	12	12	15	9	12	24

Notes: Available from mid-42. 75mm Limited. Armor 14/10.

B-11B: Sherman III

6.5.2.3.4 KE vs. CE Ammo Types

AP ammo types are classified as either KE – Kinetic Energy or CE – Chemical Energy, as listed in the Ammo Type or Types of Unit columns of the Data Cards. This information matches the Defensive Information section of the vehicle Data Cards.

Whether the hit is from KE or CE type ammo, the vehicle Armor Factors are as listed. An Optional Rule (see 7.10) expands on CE ammo types.

6.5.2.4 AP Hit Modifiers

The Advanced Game adds a number of new AP Direct Fire modifiers.

Shooter Suppressed

If the firing unit was Suppressed during a previous turn or previousaction during the current turn—the modifier is –5.

Smoke – Open/Closed SHEAF

If Smoke originates in the firing unit's hex, passes through, or enters the target unit's Smoke hex—the modifier is either –3 or –5 depending whether the Smoke's Fire SHEAF is either Open or Closed. It is Closed for all on-map units.

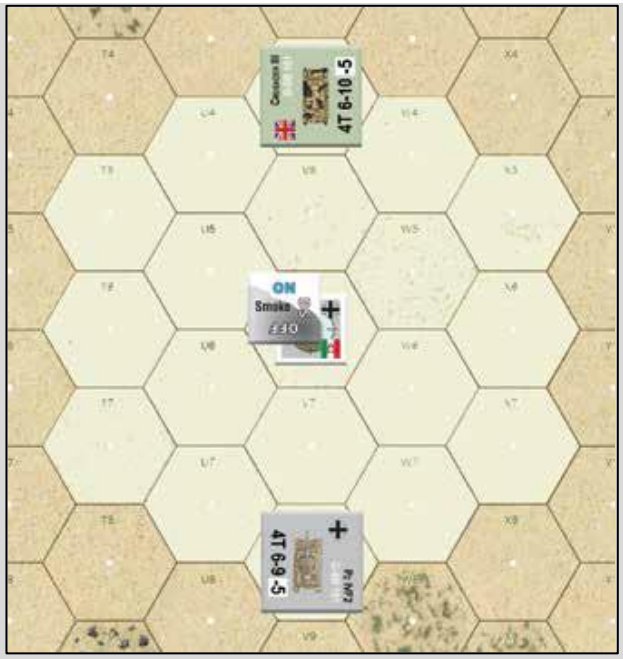
The modifier is applied for each unique occurrence of Smoke that the line-of-sight starts from or encounters; not per each hex in its Fire SHEAF. It is cumulative.

Barrage – Open/Closed SHEAF

If a Barrage originates in the firing unit's hex, passes through, or enters the target unit's Barrage hex—the modifier is either –1 or –3 depending whether the Barrage's Fire SHEAF is either Open or Closed. It is Closed for all on-map units.

© 2025 GMT Games, LLC

The modifier is applied for each unique occurrence of a Barrage that the line-of-sight starts from or encounters; not per each hex in its Fire SHEAF. It is cumulative.



Both the German PzKpfw IVF2 and the British Crusader III fall within the same Open SHEAF Smoke Barrage; the modifier is –3. Only one unique occurrence of Smoke is in play, and the Smoke modifier takes precedence over the Barrage modifier (see 5.11).

Dust
If Dust originates in the firing vehicle's hex, passes through, or enters the target vehicle's Dust hex—the modifier is –1.

The modifier is applied for each unique occurrence of Dust the Line-of-Sight starts from or encounters; it is cumulative.

Combat modifiers for Dust created during the current Player step do not take effect until the conclusion of that step.

On Fire
If the line-of-sight passes through a Fire hex—the modifier is –5. The modifier is applied for each unique occurrence of Fire that the line-of-sight encounters; it is cumulative.

On the rare occasions that a target unit or a firing unit is located within a Fire hex, the modifier is also applied for each of those situations.

Ammo Limit
If the firing unit has Ammo Limits in effect (see 5.16)—the modifier is –3.

Transported Fire
If a passenger leg unit is firing an attached AP type weapon—the modifier is –2.

Heat Haze
Heat Haze is a visual anomaly that occurs during hot conditions in the desert and also in arid environments. The shimmering effect caused by dynamic atmospheric turbulence from rising ground heat, and the distortion of light passing through it, is a hindrance to clearly engaging targets. Heat Haze is in effect as instructed by a Scenario's Setup or Special Conditions.

Heat Haze affects the combat results by applying a –3 modifier to AP Direct Fire. The spotting range at which the modifier is applicable depends on the size of the target.

The range is:

• V Sized Target: ≥ 8 hexes

All vehicles are considered as V Sized targets regardless of their listed Target Size Modifier.

Sun Blinding
If Sun Blinding is in effect, apply the scenario specified AP modifier.

Dual Fire
If the Dual Fire weapon (see 5.14) is firing at the same target as the unit's primary weapon—the Dual Fire modifier is –1. However, if the Dual Fire weapon is firing at a different target—the modifier is –3.

Note that the Dual Fire modifier only applies to the Dual Fire weapon, the one displayed as a reverse image, on vehicle Data Card or any attached leg weapon.

A German Rifle squad fires both its GP small arms and an attached PzB 39 ATR. The anti-tank rifle must apply the Dual Fire modifier of –1 if it fires at the same vehicle or –3 if it fires at a different vehicle than the GP small arms.

Shooter Hesitating (OR)
If the firing unit is Hesitating (see 7.1.5.1) due to a Morale Check during a previous turn or previous action during the current turn—the modifier is –3.

Shooter Broken (OR)
If the firing unit is Broken (see 7.1.5.2 due to a Morale Check during a previous turn or previous action during the current turn—the modifier is –5.

AP Unit Grade
The AP Direct Fire Unit Grade modifiers are referenced in the Unit Grade Modifiers Table on Game Card B (Panzer) or Game Card A (Panzer North Africa). It is based on the firing unit's Unit Grade. The Force or Formation Grade of the firing unit or the target Unit's Grade has no impact.

The AP and GP Unit Grade Modifiers share space in the table; the AP modifiers are those preceding the slash.

The AP Range Factor is used to determine the applicable modifier, if any. Note that Seasoned Grade is considered the baseline and, therefore, does not have any modifiers.

With Regulars Unit Grade and an AP Range Factor of M the AP Unit Grade modifier is –2.

With Elite Unit Grade and an AP Range Factor of M the AP Unit Grade modifier is +3.

UNIT GRADE MODIFIERS (6.5.1.12.1, 6.5.2.4, 6.5.4

GRADE	AP/GP FIRE				
	P	S	M	L	E
ELITE	+1/0	+2/+5	+3/+10	+4/+15	+5/+20
VETERAN	0/0	+1/0	+2/+5	+2/+5	+3/+10
SEASONED	0/0	0/0	0/0	0/0	0/0
REGULARS	0/0	-1/0	-2/-5	-2/-5	-3/-10
GREEN	-1/0	-2/-5	-3/-10	-4/-15	-5/-20

© 2025 GMT Games, LLC

6.5.2.5 AP Damage & Effects

If the shot penetrates, the Offensive Information section, AP Damage, on the firing unit's Data Game Card is referenced to determine the amount of damage caused by the penetrating hit. An Optional Rule, Variable AP Penetration (OR) adds variability to the AP Penetration Factor (see 7.12).

Now the unit's result from the Hit Angle roll (see 6.5.2.2) is applied. One of four distinct outcomes is possible: ND – No Damage, DM – Damaged, KO – Knocked Out, or BU – Brew Up.

If the target is an S-Type vehicle, a –2 modifier is applied to *unit's* result; the net result is never less than 1. This reflects the reduced effectiveness of AP ammo versus unarmored vehicles. An Optional Rule expands on Brew Up results (see 7.11).

ND – No Damage

The shot penetrated, but did no appreciable damage—it is a dud. The vehicle suffers no ill effects from the hit, but is subject to Bailing Out.

DM – Damaged

If the Hit Location is TF, TS, TR or DK, mark the vehicle with a DMGD counter with the TURRET side facing front.

If the Hit Location is HF, HS, or HR, mark the vehicle with a DMGD counter with the HULL side facing front.

In addition, the vehicle is subject to Bailing Out.

KO – Knock Out

In addition to the effects outlined in the Basic Game, any passenger units are subject to Bailing Out.

BU – Brew Up

In addition to the effects outlined in the Basic Game, any passenger units are subject to Bailing Out.

When a vehicle suffers a brew up result, all *friendly* ground units in the same hex are immediately Suppressed. It does not apply to passengers Under Cover (see 6.5.4.2.3).

6.5.2.6 Bail Out – AP Fire

6.5.2.6.1 Crew

If the target receives a No Damage, Damage or Track Hit result, its crew may decide to abandon the vehicle. Find the appropriate *Crew* row on the Bail Out Table on Game Card B (Panzer) or Game Card A (Panzer North Africa) for the result, e.g., if the vehicle suffered a Track Hit, the dice roll value for TK – Crew is 30– (30 or less).

Roll (100). If the vehicle's Unit Grade is Elite, a +5 modifier is applied; if Green Unit Grade, a –5 modifier is applied. If the vehicle is Broken (OR) (see 7.1), a –20 modifier is applied; if Hesitating (OR) (see 7.1), a –10 modifier is applied. If the result is equal to or less than the value, the crew Bails Out.

If the vehicle is transporting leg and/or towed units when its crew Bails Out, all passenger units automatically Bail Out; no roll is necessary. They are placed in the same hex as the transporting vehicle. They may face in any direction and are marked with a SUPPRESSION/ON counter.

Vehicles that receive multiple No Damage results must check for Bail Out for each occurrence; additional Track Hits are ignored.

6.5.2.6.2 Passengers

No Damage, Damage or Track Hit

If a vehicle transporting leg and/or towed units receives a No Damage, Damage or Track Hit result, and its crew does not Bail Out, its passengers may each still decide to Bail Out. Find the appropriate *Pass* row for the result, e.g., if the vehicle suffered a No Damage Hit, the dice roll value for AP No Damage – Pass is 50-. If the vehicle provides Under Cover transport, do not roll for Bail Out (see 6.5.4.2.3).

Roll (100); roll separately for each passenger unit. If the passenger's Unit Grade is Elite, a +5 modifier is applied; if Green Unit Grade, a –5 modifier. If the result is equal to or less than the value, the passenger unit Bails Out. It is placed in the same hex as the transporting vehicle. It may face in any direction and is marked with a SUPPRESSION/ON counter.

For vehicles that receive multiple No Damage or Track Hit results, their passengers must check for Bail Out for each occurrence.

Knock Out or Brew Up

If a vehicle transporting leg and/or towed units receives a Knock Out or a Brew Up result, the passenger units must each determine if they *successfully* Bail Out or are eliminated along with the transporting vehicle. Find the appropriate *Pass* row for the result, e.g., if the vehicle suffered a Knock Out Hit, the dice roll value for Knocked Out – Towed is 61+ (61 or more).

Roll (100); roll separately for each passenger unit. If the passenger's Unit Grade is Elite, a +5 modifier is applied; if Green Unit Grade, a –5 modifier. If the result is equal to or greater than the value, the passenger unit successfully Bails Out; otherwise, it is eliminated. If successful, it is placed in the same hex as the transporting vehicle. It may face in any direction and is marked with a SUPPRESSION/ON counter.

The Situation (Panzer)

Continuing the AP Direct Fire example from the Basic Game, everything remains the same with the exception of the Hit Angle, Hit Location and Damage determinations.

It is determined that the PzKpfw IVH's Front/Side Hit Angle is applicable. The Soviet player rolls (100) with a result of 63. The 6 tens result indicates a HF Hit Location.

© 2025 GMT Games, LLC

AP Hit Locations (6.5.2.2)											
Angle	TF	TS	TR	HF	HF*	HS	HS*	HR	HR*	TK	Dk
Front	1-4	---	---	5-6	7-9	---	---	---	---	10	1
Front/Side	1-2	3-4	---	5	6	7	8-9	---	---	10	1
Rear/Side	---	1-2	3-4	---	---	5	6-7	8	9	10	1
Rear	---	---	1-4	---	---	---	---	5-6	7-9	10	1

If Hull Down, all Hull and TK hits are treated as a miss. If Partial Hull Down, all Hull* and TK hits are treated as a miss. Dk Falling only shots.
S-Type vehicle: -2 Damage Modifier. Bu Modifier: +2 Damage Modifier

Comparing the Penetration Factor of 19 to the Armor Factor of 19, the shot penetrated. The 3 units result indicates that the German tank is damaged (from the T-34/76 M43's Data Card). The PzKpfw IVH is marked with a DMGD counter with the HULL side facing front.

S-1B: T-34/76 M43 66

M: 5T 8-12 Tr: 0-2 Wt: 30.9
76.2mm L/43 Tt: 2 Sb: 0 St: O RoF: N A: A5

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	4A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	18	12	18	13	21	14	14	21	13	15	---
	Rise	18	12	24	14	21	14	14	28	15	17	---
	Fall	18	11	14	11	21	13	13	17	12	13	22

Notes: Available from mid-43. HVAP available from late-43. Long gun. Armor 18/12.

S-1A: T-70 M42

G-2A: PzKpfw IVH 73

M: 3T 5-8 B: -5 Tr: 0-2 Wt: 25.0
75mm L/48 Tt: 2 Sb: 0 St: O RoF: N A: A4S6D4 Smk

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm-KE)	R	4	7	13	18	21	1	2-4	5-8	9-10
	P	25	22	19	17	16				
APCR(A) (75mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	33	30	27	22	19				
GP (75mm)	R	6	11	20	28	34	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE	Level	19	6	16	4	22	8	7	19	7	5	---
	Rise	19	7	17	4	22	8	8	20	7	5	---
CEx3	Fall	19	6	16	4	22	7	7	19	7	5	17

Notes: Available from mid-43. APCR available from mid-43. Long gun. Armor 18/6.

G-2B: PzKpfw V Panther

The PzKpfw IVH must check for Bail Out; it has Seasoned Unit Grade. The German player rolls (100). The result is 57; thereis no modifier. Since 57 is greater than 30, the crew stays put.

Bail Out (6.5.2.6, 6.5.4.5)		
Damage Type	Unit Type	
AP No Damage [1]	Crew	10-
AP No Damage [2]	Pass	50-
Suppressed - DF [3]	Pass	20-
Suppressed - IF [3]	Pass	30-
Damaged or TK [1]	Crew	30-
Damaged or TK [2]	Pass	50-
Knocked Out [4]	Leg	21+
	Towed	61+
Brewed Up [4]	Leg	61+
	Towed	81+

1: Transported units automatically bail out if vehicle crew bails out.
2: N/A for under armor/cover transport
3: +10 modifier for under cover transport.
4: Transported unit eliminated if bail out fails.
Crew: Broken -20. Hesitating -10.
All: Elite +5. Green -5.

It is determined that the T-34/76 M43's Front Hit Angle is applicable.The German player rolls (100) with a result of 47. The 4 tens result indicates a TF Hit Location. Comparing the Penetration Factor of 25 to the Armor Factor of 18, the shot penetrated. The 7 units result indicates that the Soviet tank is Knocked Out (from the PzKpfw IVH's Data Card). The T-34/76 M43's counter (and any other counters) is removed from play and replaced with a KO counter.

6.5.3 Overwatch Fire – GP Fire

The rules for GP Overwatch Fire are the same as outlined for AP Overwatch Fire (see 4.4.2) except for the application of the GP Fire modifiers.

6.5.4 Direct Fire Step – GP Fire

In the game, GP (for General Purpose) is a collective term representing all types of fire that rely on explosive force (HE shells from guns, artillery, mortars, etc.) or weight of fire (rifles, machineguns, etc.) for their effect.

GP Fire comes in two flavors—Direct and Indirect. The procedures for GP Direct Fire are the same as AP Direct Fire in that it is directed at a single target. Whereas GP Indirect Fire affects each unit and terrain individually in an area based on the size of the SHEAF Pattern. Most units may employ only Direct or Indirect GP Fire. However, a few units have the ability to utilize either type.

Only those units possessing a GP row in the Offensive Information section of their Data Cards may employ Direct or Indirect GP Fire.

As a Direct Fire action, all rules for Direct Fire are applicable to GP Direct Fire.

6.5.4.1 The GP Factor

Determine the range in hexes from the firing unit to the target. Move along the R – Range sub-row for the GP row until finding the value that is greater than or equal to the value that corresponds to the range

in hexes. That value found directly below the appropriate range along the F – Factor sub-row is the GP Factor.

Reference the Vehicle Data Card Key for the SU-76M M43 (Panzer), the range is 7 hexes. Its GP Factor is 4.

S-3B: SU-76M M43 Bu 43

M: [5T] 6-10 Tr: 0-0 Wt: 10.2

76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information

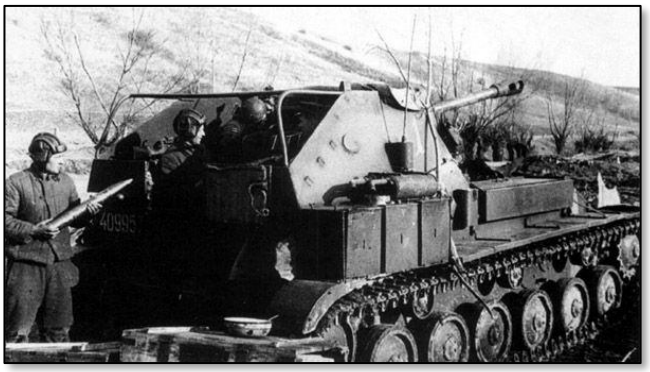
Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44



Reference Data Card G-8A for the Rifle Squad (Panzer and Panzer North Africa). The range is 5 hexes; its GP factor is 5.

G-8A: Squads, Half-squads & Sections

Squad or Half-squad: M: 2L 3 Tr: 0-2/1 Wt: 1.0/.5

Section: M: 2L 3 or M: 1L 0 Tr: 0-1 Wt: 1.0

B/C: 2W 4-6 B: -15 M/C: 6W 15-20 B: -15 Cavalry: 4L 6

Offensive Information

Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness	Pts
Rifle Squad	N	Unl	O	GP	R	2	3	6	8	10	Small Arms	27
					F	9	7	5	3	1		
Half-squad					F	6	5	3	2	1		20
Infantry Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		
Half-squad					F	3	2	2	1	1		16
SMG Squad	N	Unl	O	GP	R	1	---	2	---	3	Small Arms	20
					F	10	---	3	---	1		
Half-squad					F	6	---	2	---	1		14
Any Section	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

Defensive Information

Size:	S/L	Light Cover	4S	Heavy Cover	8S	Moving	-2
GPD:	2S	Medium Cover	6S	Full Cover	+2	Transported	1/3S

Notes: Available throughout the war.

G-8B: Mortars, HMG & Anti-Tank Weapons

Reference the Vehicle Data Card Key for the Panzerjäger I (Panzer North Africa), the range is 7 hexes. Its GP Factor is 2.

G-9B: Panzerjäger I Bu 24

M: [4T] 6-9 Tr: 0-0 Wt: 6.4

47mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A4

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

Notes: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

Reference Data Card I-8A for the LMG Squad (Panzer North Africa). The range is 5 hexes; its GP factor is 5.

I-8A: Squads, Half-squads & Sections

Squad or Half-squad: M: 2L 3 Tr: 0-2/1 Wt: 1.0/.5

Section: M: 2L 3 or M: 1L 0 Tr: 0-1 Wt: 1.0

M/C: 6W 15-20 B: -15

Offensive Information

Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness	Pts
LMG Squad	N	Unl	O	GP	R	2	3	6	8	10	Small Arms	26
					F	8	6	5	3	1		
Half-squad					F	5	4	3	2	1		19
Infantry Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		
Half-squad					F	3	2	2	1	1		16
Bersaglieri Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	24
					F	6	5	3	2	1		
Half-squad					F	4	3	2	1	1		17
Any Section	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

Defensive Information

Size:	S/L	Light Cover	4S	Heavy Cover	8S	Moving	-2
GPD:	2S	Medium Cover	6S	Full Cover	+2	Transported	1/3S

Notes: Available from mid-40.

B-8B: Mortars, HMG & Anti-Tank Weapons

6.5.4.2 The GP Defense Factor

All units have a GP Defense Factor. That value is cross-referenced with the GP Factor on the GP Combat Results Table on Game Card B (Panzer) or Game Card A (Panzer North Africa) to resolve GP Fire.

6.5.4.2.1 Vehicle GP Defense Factors

Vehicle GP Defense Factors are listed on their Data Cards. It is an alphanumeric value that indicates both the GP Defense Factor and the Target Type. Vehicles are Target Types A, P or S. The vehicle GP Defense Factor is a fixed value.

© 2025 GMT Games, LLC

Reference the Vehicle Data Card Key (Panzer), the SU-76M M43's GP Defense Factor is 2 and its Target Type is P.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 Tr: 0-0 Wt: 10.2

76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference the Vehicle Data Card Key (Panzer North Africa), the Panzerjäger I's GP Defense Factor is 1 and its Target Type is P.

G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 Tr: 0-0 Wt: 6.4

47mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

Notes: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

6.5.4.2.2 Leg and Towed GP Defense Factors

Leg and towed GP Defense Factors are listed on their Data Cards. It is an alphanumeric value that indicates both the GP Defense Factor and the Target Type. All leg and towed units are Target Type S.

The GP Defense Factors for these units is based on the terrain occupied, whether or not it is in Full Cover or whether or not it is moving. The GPD (GP Defense Factor) is listed for all Terrain types classified as None for Cover. The remaining GP Defense Factors are for Terrain types classified as Light Cover, Medium Cover, or Heavy Cover.

If in Full Cover (see 6.1.4.2) add 1 or 2 to the listed GP Defense Factor. If moving (it has a Move or a Short Halt command) subtract 2. The net GP Defense Factor is never less than 1 or greater than 10.

If there is more than one Terrain type in a target's hex, e.g., an Improved Position in Rough terrain, use the Terrain type with the highest GP Defense Factor. If the terrain lists Other as its Cover type, use the other Terrain type in the same hex to determine the Cover type, if any.

Note that while Wood and Brick Buildings are considered Heavy Cover for spotting purposes, they are considered Light and Medium Cover, respectively, when determining AP Hit Modifiers and the GP Defense Factor.

Crops is treated as Medium Cover for Spotting purposes only. It is considered None when determining AP Hit Modifiers and determining the GP Defense Factor.

Brush and Sand terrain are treated as Light Cover for Spotting purposes only. They are considered None when determining AP Hit Modifiers and determining the GP Defense Factor.

Leg units located on Desert Building rooftops are considered in Light Cover even if located in Brick or Stone Building hexes.

Reference the Leg Data Card Key (Panzer North Africa), for any Italian leg unit.

If occupying a Clear hex, not in Full Cover, and not moving, its GP Defense Factor is 2S.

If occupying a Medium Grove hex, not in Full Cover, but moving, its GP Defense Factor is 4S – 6S for Medium Cover and –2 for moving.

If occupying an Improved Position, in Full Cover, and not moving, its GP Defense Factor is 10S – 8S for Heavy Cover and +2 for Full Cover.

I-8A: Squads, Half-squads & Sections

Squad or Half-squad: M: 2L 3 Tr: 0-2/1 Wt: 1.0/.5

Section: M: 2L 3 or M: 1L 0 Tr: 0-1 Wt: 1.0

M/C: 6W 15-20 B: -15

Offensive Information														
Type of Unit	RoF	A	St	Ammo Type		Gunnery Range					GP Effectiveness	Pts
						P	S	M	L	E		
LMG Squad	N	Unl	O	GP	R	2	3	6	8	10	Small Arms	26
					F	8	6	5	3	1		
Half-squad					F	5	4	3	2	1		19
Infantry Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		
Half-squad					F	3	2	2	1	1		16
Bersaglieri Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	24
					F	6	5	3	2	1		
Half-squad					F	4	3	2	1	1		17
Any Section	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

Defensive Information							
Size:	S/L	Light Cover	4S	Heavy Cover	8S	Moving	-2
GPD:	2S	Medium Cover	6S	Full Cover	+2	Transported	1/3S

Notes: Available from mid-40.

B-8B: Mortars, HMG & Anti-Tank Weapons

6.5.4.2.3 Transported GP Defense Factors

When GP Fire is directed at a vehicle transporting leg and/or towed units, the transporting vehicle and any passengers may be attacked by the same GP Fire. Passengers are never attacked separately from the transporting vehicle. They are only attacked as part of GP Fired directed at the transporting vehicle.

The firing unit's GP Factor is first compared against the transporting vehicle and then against each individual passenger. Each unit has its own GP combat roll (100) to determine the results. The combat results, if any, are applied as they occur.

If there is a chance of Bail Out, the attempt(s) is made after all combats affecting the transporting vehicle and passenger units are resolved.

Passenger leg and towed units transported by an Under Cover capable vehicle have a set GP Defense of 3S. Passenger leg or towed

© 2025 GMT Games, LLC

units transported by a *non-Under Cover* capable vehicle have a set GP Defense of 1S.

The Terrain type and movement status of the transporting vehicle has no impact on the passengers' GP Defense Factor.

Reference the Vehicle Key Card for the Under Cover transport indicator.

General Information
M: cross-country speed and mode of traction, T=tracked, H=half-track, W= wheel, followed by path and road speed.
B=bog modifier. R=dual-controls.
A=amphibious.
TR: transport – towed-leg
WT: weight in metric tons

Open-topped tracked vehicle

2-2 TR: Under cover transport

Reference Data Card G-5A (Panzer) and G-13A (Panzer North Africa). The SPW 251/1 is an Under Cover capable vehicle.

G-5A: SPW 251/1 | 15

M: 4H 9-12 B: -10 TR: 2-2 WT: 8.0
MMG TT: 360 SB: 0 ST: O ROF: N

OFFENSIVE INFORMATION

Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness
GP (MMG)	R	2	3	6	8	10	Small Arms
	F	3	2	2	1	1	
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude
	F	1	1	1	1	1	

DEFENSIVE INFORMATION

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	Level	2	2	2	2	3	2	2	3	2	2	---
	Rise	3	2	3	2	3	3	2	3	3	2	---
	Fall	2	2	2	2	3	2	2	3	2	2	4

NOTES: Available throughout the war. Armor 2/2.

G-5B1: Prime Movers & G-5B2: Trucks

Reference Data Card G-5B (Panzer) and G-16B (Panzer North Africa). Trucks and Prime Movers are all non-Under Cover capable vehicles.

G-16B1: Prime Movers

SDKFZ 10:	M: 6H 11-14	TR: 1-2	WT: 4.9	9
SDKFZ 11:	M: 5H 9-12	B: -5 TR: 2-2	WT: 7.1	11
SDKFZ 7:	M: 4H 8-11	B: -10 TR: 3-3	WT: 11.0	13

DEFENSIVE INFORMATION

Size:	SDKFZ 10, 11: -1, SDKFZ 7: 0	GPD:	All: 1S
KE or CE	All locations, Level, Rising and Falling: 0		

NOTES: Available from early-41. Armor 0/0.

G-16B2: Trucks R

Light:	M: 4W 8-12	B: -15 TR: 1-1	WT: 2.0	6
Medium:	M: 4W 8-12	B: -15 TR: 2-2	WT: 6.0	9
Heavy:	M: 4W 8-12	B: -15 TR: 3-3	WT: 10.0	12

DEFENSIVE INFORMATION

Size:	Light: -1, Medium: 0, Heavy: +1	GPD:	All: 1S
KE or CE	All locations, Level, Rising and Falling: 0		

NOTES: Available from early-41. Armor 0/0.

G-16A: PSW 231

6.5.4.2.4 Aircraft GP Defense Factors

Aircraft GP Defense Factors are listed on their Data Cards. It is an alphanumeric value that indicates both the GP Defense Factor and the Target Type. All aircraft units are Target Type S.

6.5.4.2.5 Terrain GP Defense Factors

Blocks, Bridges, Buildings, Improved Positions, Mines, and Wire may be destroyed as a result of non-small arms GP Fire; they have GP Defense Factors. The Terrain Effect Table on Game Card A (Panzer) or Game Card B (Panzer North Africa) lists GP Defense Factors for terrain in the GP Def column.

They are all S-Type targets and are attacked by Direct or Indirect GP Fire. AP Fire has no effect against terrain targets. No other Terrain types have a GP Defense Factor. Terrain types are never Suppressed. The combat either results in their elimination or has no effect.

The scenarios indicate the GP Defense Factor for variable defense terrain features; i.e., Blocks, Bridges and Wire. If none is listed, they may not be attacked. Terrain types lacking a GP Defense Factor are not subject to destruction unless instructed otherwise by a Scenario's Setup or Special Conditions.

Terrain is only attacked by GP Direct Fire when a target occupies a vulnerable terrain type when it is attacked. Engineers (OR) (see 7.19) are the only combat units that may directly attack Terrain. They do not require a target. Their special abilities enable them to attempt to destroy terrain features.

Terrain is also incidentally attacked by GP Indirect Fire and aircraft bombs and rockets. If a vulnerable Terrain type falls within an Indirect Fire SHEAF or bomb or rocket impact patterns, it is attacked whether or not co-located with a target.

6.5.4.3 GP Fire Modifiers

The GP Fire modifiers are now checked to determine their effect, if any. These modifiers are found on the GP Fire Modifiers Table found on Game Card A. Unless otherwise indicated, a modifier is applicable to both GP Direct Fire (DF) and GP Indirect Fire (IF).

GP Fire modifiers affect the GP combat dice roll (100). All GP Fire modifiers are cumulative, and together are considered the Net Modifier.

If the target is an A-Type Vehicle (–20) and the firing unit has Turret Damage (–10), the Net Modifier is –30.

Target Vehicle Moving DF/IF

If the target vehicle has a MOVE or SHORT HALT command—the modifier for Direct Fire (DF) is –10 or –20 for Indirect Fire (IF).

If the target vehicle's command is not yet visible, the controlling player must reveal it to receive the modifier (turn the Command counter face down again to show it is not yet executed).

Note that in this case, the controlling player is not required to reveal the command; respond that the command has no effect. If the player chooses not to reveal the command, the modifier is 0.

The IF modifier is not applicable with Planned Indirect Fire or vehicles that voluntarily move within a Barrage.

Target P-Type or A-Type Vehicle

If the target is a P-Type or an A-Type vehicle, the modifier is –10 or –20, respectively.

© 2025 GMT Games, LLC

Target Vehicle in Medium or Heavy Cover
If the target vehicle is located in terrain classified as Medium or Heavy Cover, the modifier is –10 or –20, respectively. If a vehicle is located in an over-stacked hex, treat any Cover in the hex as None.

For Indirect Fire and aircraft, this modifier only applies to vehicles located in Cover that provides overhead protection. Medium Cover—inside of a Brick Building; Heavy Cover—inside of a Stone Building or in an Improved Position. All other terrain is treated as None.

Target Cavalry
If the target is a cavalry unit, the modifier is +10.

Leg Crawling
If the target is a crawling leg unit, the modifier is +10.

Target Leg/Towed DF over Wall Hexside
If a leg or towed unit is the target of GP Direct Fire that crosses or runs exactly along a Wall hexside (see 6.1.4.3.2), the modifier is –10.

Target Leg/Towed DF Railroad Track Hex
If a leg or towed unit is the target of GP Direct Fire and is located in a Railroad Track hex (see 6.1.4.3.14), the modifier is –5.

Short Halt: SB: 0, Other
If the firing unit has a Short Halt command and is a vehicle with SB: 0 or is a non-vehicle unit, the modifier is –15.

Shooter Damaged
If the firing unit's turret was Damaged during a previous turn or previous action during the current turn, the modifier is –10.

Shooter Suppressed
If the firing unit was Suppressed during a previous turn or previous action during the current turn, the modifier is –20.

Shooter Hesitating (7.1)
If the firing unit is Hesitating (see 7.1.5.1) due to a Morale Check during a previous turn or previous action during the current turn, the modifier is –10.

Shooter Broken (7.1)
If the firing unit is Broken (see 7.1.5.2) due to a Morale Check during a previous turn or previous action during the current turn, the modifier is –20.

On Fire
If the line-of-sight passes through a Fire hex, the modifier is –20. The modifier is applied for each unique occurrence of Fire the line-of-sight encounters; it is cumulative. It does not apply to Indirect Fire or Aircraft Combat.

On the rare occasions that a target unit or a firing unit is located within a Fire hex, the modifier is also applied for each of those situations.

Brew-Up Smoke
If Brew-Up Smoke originates in the firing unit's hex, passes through, or enters the target's Brew-Up Smoke hex, the modifier is –10. It does not apply to Indirect Fire or Aircraft Combat.

The modifier is applied for each unique occurrence of Brew-Up Smoke that the line-of-sight starts from or encounters; it is cumulative.

Dismounted FO (7.47)
If the firing unit is a Dismounted FO, the modifier is –10.

Smoke – Open/Closed SHEAF
If Smoke originates in the firing unit's hex, passes through, or enters the target unit's Smoke hex, the modifier is either –10 or –20 depending whether the Smoke's Fire SHEAF Pattern is either Open or Closed. It does not apply to Indirect Fire or Aircraft Combat.

The modifier is applied for each unique occurrence of Smoke that the line-of-sight starts from or encounters; not per each hex in its Fire SHEAF. It is cumulative.

Barrage – Open/Closed SHEAF
If a Barrage originates in the firing unit's hex, passes through, or enters the target unit's Barrage hex, the modifier is either –5 or –10 depending whether the Barrage's Fire SHEAF is either Open or Closed. It does not apply to Indirect Fire or Aircraft Combat.

The modifier is applied for each unique occurrence of a Barrage that the line-of-sight starts from or encounters; not per each hex in its Fire SHEAF. It is cumulative.

Dust
If Dust originates in the firing vehicle's hex, passes through, or enters the target vehicle's Dust hex—the modifier is –5.

The modifier is applied for each unique occurrence of Dust the Line-of-Sight starts from or encounters; it is cumulative.

Combat modifiers for Dust created during the current Player step do not take effect until the conclusion of that step.

IF Open SHEAF
If an off-map artillery battery is utilizing an Open SHEAF Pattern, the modifier is –20. This modifier is not applicable to on-map Indirect Fire units.

Overwatch
If the firing vehicle is executing Overwatch Fire at a target located within its Front (or rear) Field-of-Fire, the modifier is –5. This is

© 2025 GMT Games, LLC

applicable whether the vehicle is Turreted, Turretless 360°, or Non-Turreted.

The Rear Field-of-Fire is used for those Non-Turreted vehicles with a rear facing gun.

Keep in mind that the Target Moving modifier is also applicable in addition to this modifier if triggered by movement.

Overwatch Adjust
If the firing vehicle is executing Overwatch Fire at a target located outside of its Front (or Rear) Field-of-Fire, the modifier is –10. Only Turreted and Turretless 360° vehicles may execute Overwatch Fire at target vehicles located outside of the firing vehicle's Front (or Rear) Field-of-Fire.

Again, the Target Moving modifier is also applicable in addition to this modifier if triggered by movement.

Ammo Limit
If the firing unit has Ammo Limits in effect (see 5.16), the modifier is –10.

Heat Haze
Heat Haze is a visual anomaly that occurs during hot conditions in the desert and also in arid environments. The shimmering effect caused by dynamic atmospheric turbulence from rising ground heat, and the distortion of light passing through it, is a hindrance to clearly engaging targets. Heat Haze is in effect as instructed by a Scenario's Setup or Special Conditions. It does not apply to Indirect Fire.

Heat Haze applies a –10 modifier. The spotting range at which the modifier is applicable depends on the size of the target.

The range is:

S-Sized Target: ≥ 3 hexes
L-Sized Target: ≥ 5 hexes
V-Sized Target: ≥ 8 hexes

Sun Blinding
If Sun Blinding is in effect, apply the scenario specified GP modifier, if any.

Transported Fire
If a passenger leg unit is firing its GP weapon, the modifier is –10.

Defensive Fire (7.50)
If the firing unit is employing Defensive Fire, the modifier is –10.

Overrun Attack
If a vehicle is executing an Overrun Attack against a leg or towed unit, the modifier is +20.

Dual Fire
If the Dual Fire weapon (see 5.14) is firing at the same target unit as the unit's primary weapon, the Dual Fire modifier is –5. However, if the Dual Fire weapon is firing at different target units, the modifier is –10.

Note that the Dual Fire modifier only applies to the Dual Fire weapon, the one displayed as a reverse image, on vehicle Data Cards or any attached leg weapon.

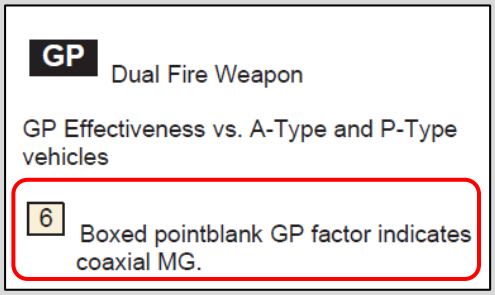
Pinning Fire (7.18)
If a unit is executing Pinning Fire (see 7.18), the modifier is +20. Pinning Fire is available only to Small Arms GP Direct Fire.

Hasty Entrenchment
If a target leg or towed unit is located in a Hasty Entrenchment, the modifier is –10.

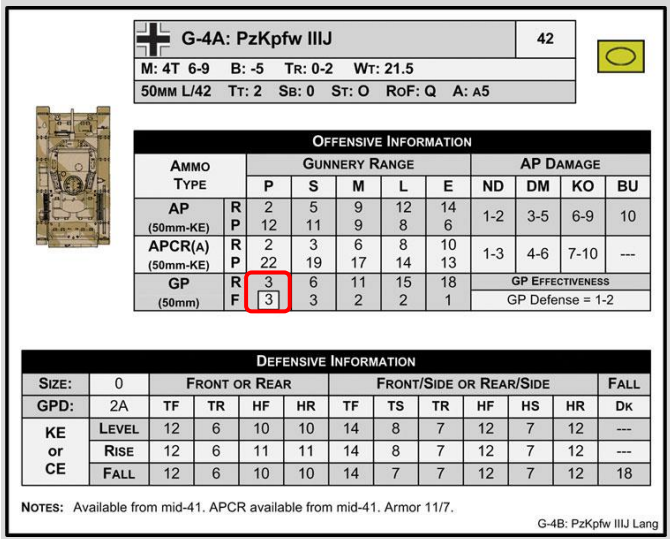
CE Ammo (7.15)
If the target of a CE type ammo (see 6.5.2.4), the modifier is –10.

Coax MG (P-Range) vs. P or S
If a Coax MG equipped vehicle unit is firing at a P-Type or a S-Type vehicle or any leg or towed unit from Pointblank Range (P), the modifier is +10.

Reference the Vehicle Data Card Key for the Coax MG indicator. A boxed pointblank GP factor indicates coaxial MG.



Reference Data Card G-4A (Panzer North Africa). The PzKpfw IIIJ has a Coax MG, as indicated by the boxed GP factor at P range.



G-4A: PzKpfw IIIJ | 42

M: 4T 6-9 B: -5 Tr: 0-2 Wt: 21.5

50mm L/42 Tt: 2 Sb: 0 St: O RoF: Q A: a5

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (50mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	12	11	9	8	6				
APCR(a) (50mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	22	19	17	14	13				
GP (50mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information

Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	12	6	10	10	14	8	7	12	7	12	---
	Rise	12	6	11	11	14	8	7	12	7	12	---
	Fall	12	6	10	10	14	7	7	12	7	12	18

Notes: Available from mid-41. APCR available from mid-41. Armor 11/7.

G-4B: PzKpfw IIIJ Lang

Air Burst (7.46)
If the target of an Air Burst, the modifier is +10.

GP Unit Grade
The GP Direct Fire Unit Grade modifiers are referenced on the Unit Grade Modifiers Table on Game Card B (Panzer) or Game Card A (Panzer North Africa). It is based on the firing unit's Unit Grade. The Force or Formation Grade of the firing unit or the target unit's grade has no impact.

The AP and GP Unit Grade modifiers share space on the table; the GP modifiers are those following the slash.

The GP Range Factor is used to determine the applicable modifier, if any. Note that Seasoned Grade is considered the baseline and, therefore, does not have any modifiers.

© 2025 GMT Games, LLC

With Veteran Unit Grade and an GP Range Factor of L the GP Unit Grade Modifier is +5.

UNIT GRADE MODIFIERS (6.5.1.12.1, 6.5.2.4, 6.5.4

GRADE	AP/GP FIRE				
	P	S	M	L	E
ELITE	+1/0	+2/+5	+3/+10	+4/+15	+5/+20
VETERAN	0/0	+1/0	+2/+5	+2/+5	+3/+10
SEASONED	0/0	0/0	0/0	0/0	0/0
REGULARS	0/0	-1/0	-2/-5	-2/-5	-3/-10
GREEN	-1/0	-2/-5	-3/-10	-4/-15	-5/-20

6.5.4.4 GP Fire Determination

For Direct and Indirect GP Fire reference the GP Combat Results Table on Game Card B (Panzer) or Game Card A (Panzer North Africa). Cross-reference the GP Factor column (see 6.5.4.1) with the GP Defense Factor row (see 6.5.4.2). Two numbers are listed: one for the N-Effect and a second for the S-Effect.

If the GP Factor is 5 and the GP Defense Factor is 3, the N Effect is 43 and the S-Effect is 72.

GP COMBAT RESULTS (6.5.4.4, 6.6.1.1.1)

GP DEF FAC	EFFECT	GP FACTOR ## >100														##<0	EFFECT	GP DEF FAC
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

Roll (100) and modify the result by the net GP modifier (see 6.5.4.3), if any. In this case, the modified result may be greater than 100 (with a red background at the lower left section of the table) or less than 0 (with a green background at the upper right of the table).

If the final modified dice roll is equal to or less than the N Effect number, the fire had No Effect.

If equal to or less than the S Effect number but greater than the NEffect number, the target is Suppressed.

If greater than the S-Effect number, the target suffered an Effective result.

If a vehicle target is transporting leg and/or towed units, roll (100) individually for each GP Fire Determination. While the GP Factor remains the same, the GP Defense Factors and/or the net GP modifiers may be different.

If GP Fire is directed at a target that also affects terrain, roll (100) individually for each GP Fire determination. In the case where GP Fire affects both units and a terrain, determine the combat results against the unit before determining the results against the Terrain.

All GP Fire Effects are summarized in the Combat Effects Summary on Game Card D (Panzer) or on the back of the Optional Rules booklet (Panzer North Africa).

If the GP Factor is 7, the GP Defense Factor is 5, and the modified result is 60, the target is Suppressed.

GP COMBAT RESULTS (6.5.4.4, 6.6.1.1.1)

GP DEF FAC	EFFECT	GP FACTOR ## >100														##<0	EFFECT	GP DEF FAC
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

If the GP Factor is 2, the GP Defense Factor is 9, and the modified result is 109, the target suffered an Effective result.

GP COMBAT RESULTS (6.5.4.4, 6.6.1.1.1)

GP DEF FAC	EFFECT	GP FACTOR ## >100														##<0	EFFECT	GP DEF FAC
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

If the GP Factor is 15, the GP Defense Factor is 2, and the final modified result is –1, the fire had No Effect.

© 2025 GMT Games, LLC

GP Combat Results (6.5.4.4, 6.6.1.1.1)

GP Def Fac	Effect	GP Factor ## >100													##<0		Effect	GP Def Fac
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

6.5.4.4.1 No Effect Result – All Units

The GP Fire caused no appreciable damage and is ignored.

6.5.4.4.2 Vehicle suppression & Effective Results

When determining GP Fire effects against vehicle units, there are three elements that must be considered:

- If the GP Fire is from a S-Small Arms or non-S-Small Arms type weapons.
- If the vehicle Target Type is A, P or S.
- If the rule of 5s and 10s applies (see below).

Small Arms & Non-Small Arms

The Data Cards indicate if a particular weapon is Small Arms (see 5.7). If not, it is non-Small Arms.

Vehicle Target Type

The Data Cards indicate a vehicle's Target Type (see 6.5.2.3).

The Rule of 5s and 10s

A Track Hit or a Damaged result may apply whenever the final modified result ends in a 5; i.e., 75 or 95, or a 10; i.e., 40 or 60. These are the only cases when a vehicle may suffer a Track Hit or Damage result from GP Fire.

Suppressed Result, Non-Small Arms vs. A, P or S-Type

The vehicle is Suppressed. Place a Suppression/On counter on or next to it.

Effective Result, Non-Small Arms vs. A or P-Type

Effective Result only if a shooter's maximum GP Effectiveness Factor is greater than or equal to the target vehicle's GP Defense Factor. Otherwise, the target vehicle is Suppressed by an Effective Result. GP Effectiveness Factors are listed on the Data Cards in the Offensive Information section.

An Optional Rule, Turrets (see 7.8) expands on the GP Effectiveness Factor.

If an Effective Result and the final modified result ends in 5, the target vehicle is Damaged. The shooter rolls (10). If the result is equal to or less 4, place a Turret Dmgd counter on or next it; otherwise place a Hull Dmgd counter on or next it. If an unarmed vehicle is damaged, it suffers automatic Hull Damage. The vehicle's crew is subject to Bail Out.

If an Effective Result and the final modified result ends in 10, the target vehicle received a Track Hit. Place a TK counter on or next to it. The vehicle's crew is subject to Bail Out. If hit by GP Direct Fire and the vehicle is Hull Down or Partial Hull Down, a TK hit is treated as No Effect.

If an Effective Result and the final modified result does not end in a 5 or a 10, the vehicle unit is Knocked Out or Brewed Up. The shooter rolls (10). If the result is equal to or less than maximum GP Effectiveness Factor, the vehicle Brews Up (see 6.5.2.5), otherwise it is Knocked out (see 6.5.2.5). Passenger units must attempt to bail out (see 6.5.4.5).

When a vehicle suffers a brew up result, all *friendly* ground units in the same hex are immediately Suppressed. It does not apply to passengers Under Cover (see 6.5.4.2.3).

Reference the Vehicle Data Card Key (Panzer), the SU-76M M43's GP Effectiveness Factor is 1-3.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 Tr: 0-0 Wt: 10.2

76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

Reference the Vehicle Data Card Key (Panzer North Africa), the Panzerjäger I's GP Effectiveness Factor is 1-2.

G-9B: Panzerjäger I | Bu | 24

M: [4T] 6-9 Tr: 0-0 Wt: 6.4

47mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A4

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (47mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	13	12	10	8	7				
APCR(A) (47mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	23	20	18	15	14				
GP (47mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	3	0	3	3	5	5	0	4	4	4	---
	Rise	4	0	3	3	5	5	0	4	4	4	---
	Fall	3	0	3	3	4	4	0	4	4	4	4

Notes: Available from early-41. APCR available from mid-41. Armor 3/2.

G-9A: PzKpfw VIE Tiger I

Effective Result, Non-Small Arms vs. S-Type

If an Effective Result and the final modified result ends in a 5 or 10; follow the previous steps. If an unarmed vehicle is damaged, it suffers automatic Hull Damage. If the final modified result did not

© 2025 GMT Games, LLC

end in a 5 or a 10, the vehicle is Knocked Out or Brewed Up; follow the previous steps.

Suppressed Result, Small Arms vs. A-Type
If the GP Range Factor is Point Blank (P), the vehicle is Suppressed. Place a SUPPRESSION/ON counter on or next to it. If at any other range, the result is treated as a No Effect result.

Suppressed Result, Small Arms vs. P-Type
If the GP Range Factor is Point Blank (P) or Short (S), the vehicle is Suppressed. Place a SUPPRESSION/ON counter on or next to it. If at any other range, the result is treated as a No Effect result.

Suppressed Result, Small Arms vs. S-Type
The vehicle is Suppressed from any range. Place a SUPPRESSION/ON counter on or next to it.

Effective Result, Small Arms vs. A-Type
If the GP Range Factor is Point Blank (P) or Short (S), the vehicle is Suppressed instead. Place a SUPPRESSION/ON counter on or next to it. If at any other range, the result is treated as a No Effect result.

In this context, it is impossible for small arms to achieve an Effective Result against an A-Type vehicle unit. An Optional Rule, Turrets (see 7.8) expands on Small Arms effectiveness.

Effective Result, Small Arms vs. P-Type
If the GP Range Factor is Point Blank (P), the vehicle is Damaged; follow the previous steps. The vehicle's crew is subject to Bail Out. If the GP Range Factor is Short (S), the vehicle is Suppressed instead. Place a SUPPRESSION/ON counter on or next to it. If at any other range, the result is treated as a No Effect result.

Effective Result, Small Arms vs. S-Type
If an Effective Result and the final modified result ends in a 5 or 10; follow the previous steps. If the final modified result did not end in a 5 or a 10, the vehicle is Knocked Out or Brewed Up. The attacker rolls (10), if the result is equal to or less than ½ of the firing unit's GP Factor (round down), the vehicle Brews Up, otherwise the vehicle is Knocked out. Passenger must attempt to bail out (see 6.5.4.5).

When a vehicle suffers a brew up result, all *friendly* ground units in the same hex are immediately Suppressed. It does not apply to passengers Under Cover (see 6.5.4.2.3).

6.5.4.4.3 Leg, Towed & Terrain Suppression & Effective Results

Suppressed Result, Non-Small Arms or Small Arms
The unit is Suppressed. Place a SUPPRESSION/ON counter on or next to it. Passenger units may Bail Out (see 6.5.4.5).

Effective Result, Non-Small Arms or Small Arms
The target unit is either eliminated or reduced in size by the fire.

If the target is anything other than a squad, it is eliminated and removed from play. If it is a squad, it is reduced to a half-squad and is Suppressed. Flip a squad counter to its half-squad side and place a SUPPRESSION/ON counter on or next to it. Any attached weapons are unaffected by this reduction. An Optional Rule, Attached Weapon Loss (see 7.17) expands on Attached Weapon loss.

Effective Result, Non-Small Arms vs. Terrain
Roll (100) a second time (except for mines). If a second Effective Result, the target Terrain Type is eliminated. All other results are ignored.

Two effective results? Terrain occupies the entirety of a 100 meter hex. It is not a just a single target. It takes much more to eliminate the terrain in an entire hex.

Building

It is Destroyed. Place a RUBBLE counter in its hex. May start On Fire (OR) (see 7.35). All units occupying an eliminated building hex are immediately eliminated. All units are removed from play; do not place wrecks.

Bridge

It is Destroyed. Place a RUBBLE counter in its hex. The hex is now prohibited terrain for all units. All units occupying an eliminated bridge are also immediately eliminated. All units are removed from play; do not place wrecks.

Improved Position

It is Destroyed and removed from the mapboard. Place a RUBBLE counter in its hex. Any unit occupying an eliminated Improved Position is immediately eliminated. All units are removed from play; do not place wrecks.

Blocks, Mines or Wire
They are Destroyed and removed from the mapboard. Any units occupying eliminated Blocks, Mines or Wire terrain are unaffected; they do not suffer any additional combat results.

6.5.4.5 Bail Out – GP Fire

A Bail Out may occur if Direct or Indirect GP Fire results in a Suppression, Track, Damage, Knock Out or Brew Up. The GP Bail Out process is exactly the same as the AP Bail Out process (see 6.5.2.7). Suppression applies only to passengers. Vehicle crews do not bail out when Suppressed. With multiple passengers, only the Suppressed units must check for Bail Out. The other passengers and the transporting vehicle are unaffected if a passenger Bails Out.

Passengers that receive subsequent Suppression results are not required to check for Bail Out if they are marked with a SUPPRESSION/ON counter. However, if a unit has a SUPPRESSION/OFF counter changed to SUPPRESSION/ON, it must check for Bail Out.

The Situation (Panzer)

A Soviet SU-76M M43 (Data Card S-3B), Regulars Unit Grade, located in a Clear hex and a German Rifle squad (Data Card G-8A), Veteran Unit Grade, located in a Scrub hex are engaging one another at an unblocked range of 3 hexes.

Both units are at the same Height and have FIRE commands. The German player is the First Player. As such, the Rifle squad resolves its fire first. Its Fire command is revealed.

The SU-76M M43 is within spotting range as the actual range of 3 hexes is less than 20 hexes, which is the maximum spotting range when attempting to spot a vehicle in None type Cover.

© 2025 GMT Games, LLC

SPOTTING RANGES (4.1.3, 6.1.3)

LEVEL	V	L	S
+2+	40	30	20
+1	30	23	15
0	20	15	10
-1	10	7	5
-2	7	5	3
-3	3	2	1
-4	2	1	1
-5-	1	1	1

Light Cover: -1
Medium Cover: -2
Heavy Cover: -3
Spot Move: +2
Spot Fire: +3
Spot Fire Small Arms: +1
Target In Full Cover: -2
Suppressed Spotting: -2
Full Cover Spotting: -4
Buttoned Spotting: -1
Recon Spotting: +1
Broken Spotting: -2
Limited Spotting: -1 to -5
Illumination: +2

At a range of 3 hexes for GP Direct Fire, the GP Range Factor is S – Short Range, and GP Factor is 7. The SU-76M M43's GP Defense Factor is 2P.

G-8A: Squads, Half-squads & Sections

SQUAD OR HALF-SQUAD: M: 2L 3 TR: 0-2/1 WT: 1.0/.5
SECTION: M: 2L 3 OR M: 1L 0 TR: 0-1 WT: 1.0
B/C: 2W 4-6 B: -15 M/C: 6W 15-20 B: -15 CAVALRY: 4L 6

OFFENSIVE INFORMATION

TYPE OF UNIT	ROF	A	ST	AMMO TYPE		GUNNERY RANGE P	S	M	L	E	GP EFFECTIVENESS	PTS
RIFLE SQUAD	N	UNL	O	GP	R	2	3	6	8	10	Small Arms	27
HALF-SQUAD					F	9	7	5	3	1		20
					F	6	5	3	2	1		
INFANTRY SQUAD	N	UNL	O	GP	R	1	2	4	6	7	Small Arms	22
HALF-SQUAD					F	5	4	3	2	1		16
					F	3	2	2	1	1		
SMG SQUAD	N	UNL	O	GP	R	1	---	2	---	3	Small Arms	20
HALF-SQUAD					F	10	---	3	---	1		14
					F	6	---	2	---	1		
ANY SECTION	N	UNL	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

DEFENSIVE INFORMATION

SIZE:	S/L	LIGHT COVER	4S	HEAVY COVER	8S	MOVING	-2
GPD:	2S	MEDIUM COVER	6S	FULL COVER	+2	TRANSPORTED	1/3S

NOTES: Available throughout the war.

G-8B: Mortars, HMG & Anti-Tank Weapons

S-3B: SU-76M M43 Bu 43

M: 5T 6-10 TR: 0-0 WT: 10.2
76.2MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A3

OFFENSIVE INFORMATION

AMMO TYPE		GUNNERY RANGE P	S	M	L	E	AP DAMAGE ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP EFFECTIVENESS			
	F	5	4	3	3	2	GP Defense = 1-3			

DEFENSIVE INFORMATION

SIZE:	-1	FRONT OR REAR TF	TR	HF	HR	FRONT/SIDE OR REAR/SIDE TF	TS	TR	HF	HS	HR	FALL DK
GPD:	2P											
KE or CE	LEVEL	8	0	14	4	9	4	0	17	4	5	---
	RISE	8	0	18	4	10	4	0	22	4	5	---
	FALL	7	0	11	4	9	4	0	13	4	5	7

NOTES: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

The GP Fire modifiers are now checked for any effect. The Net Modifier is –10 as a result of the following modifier:

- *Target P-Type Vehicle –10*

GP FIRE MODIFIERS (6.5.4.3)

TARGET VEHICLE MOVING DF/IF	-10/-20
TARGET P-TYPE VEHICLE	-10
TARGET A-TYPE VEHICLE	-20
TARGET VEHICLE IN MEDIUM COVER	-10
TARGET VEHICLE IN HEAVY COVER	-20
TARGET CAVALRY, CRAWLING, AIR BURST	+10
TARGET LEG/TOWED DF OVER WALL	-10
SHORT HALT: SB: 0, OTHER	-15
SHOOTER DAMAGED, HESITATING	-10
SHOOTER SUPPRESSED	-20
SHOOTER BROKEN, ON FIRE	-20
BREW-UP SMOKE	-10
SMOKE OPEN/CLOSED SHEAF	-10/-20
BARRAGE OPEN/CLOSED SHEAF	-5/-10
IF OPEN SHEAF	-20
OVERWATCH	-5
OVERWATCH ADJUST, DISMOUNT FO	-10
AMMO LIMIT, HEAT HAZE	-10
TRANSPORTED & DEFENSIVE FIRE	-10
OVERRUN ATTACK, PINNING FIRE	+20
DUAL FIRE SAME/DIFFERENT	-5/-10
HASTY ENTRENCHMENT, CE AMMO	-10
COAX MG (P-RANGE) VS. P OR S	+10
SHOOTER GRADE	see table

The 7 GP Factor column on the GP Combat Table is crossreferenced with the GP Defense Factor of 2. The two numbers found are 31 for the N-Effect and 62 for the S-Effect.

GP COMBAT RESULTS (6.5.4.4, 6.6.1.1.1)

GP DEF FAC	EFFECT	GP FACTOR ##>100 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 ##<0	EFFECT	GP DEF FAC
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

The German player rolls (100). The result is 81, so the net roll is 71 (81-10). Since 71 is greater than 62 the combat is an Effective Result. The Rifle squad is marked with a SPOT/FIRE SA counter under the edge of its Command counter.

Since the GP Range Factor is S, and the SU-76M M43 is a P-Type vehicle, the actual result is a Suppression. The SU-76M M43 is marked with a SUPPRESSION/ON counter.

Now the SU-76M M43 resolves its fire. Its FIRE counter is revealed. It must apply the just incurred Shooter Suppressed modifier. The Rifle squad is within spotting range as the actual range of 3 hexes is less than 5 hexes, which is the maximum spotting range when attempting to spot a S-Sized Target in Light Cover.

© 2025 GMT Games, LLC

SPOTTING RANGES (4.1.3, 6.1.3)

LEVEL	V	L	S
+2+	40	30	20
+1	30	23	15
0	20	15	10
-1	10	7	5
-2	7	5	3
-3	3	2	1
-4	2	1	1
-5-	1	1	1

Light Cover: -1
Medium Cover: -2
Heavy Cover: -3
Spot Move: +2
Spot Fire: +3
Spot Fire Small Arms: +1
Target In Full Cover: -2
Suppressed Spotting: -2
Full Cover Spotting: -4
Buttoned Spotting: -1
Recon Spotting: +1
Broken Spotting: -2
Limited Spotting: -1 to -5
Illumination: +2

At a range of 3 hexes for GP Direct Fire, the GP Range Factor is P – Point Blank, and GP Factor is 5. The Rifle squad's GP Defense Factor is 4S.

S-3B: SU-76M M43 Bu 43

M: 5T 6-10 TR: 0-0 WT: 10.2
76.2MM L/43 TT: 0 SB: 0 ST: O ROF: N A: A3

OFFENSIVE INFORMATION

AMMO TYPE		GUNNERY RANGE P	S	M	L	E	AP DAMAGE ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP EFFECTIVENESS			
	F	5	4	3	3	2	GP Defense = 1-3			

DEFENSIVE INFORMATION

SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	8	0	14	4	9	4	0	17	4	5	---
	RISE	8	0	18	4	10	4	0	22	4	5	---
	FALL	7	0	11	4	9	4	0	13	4	5	7

NOTES: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

G-8A: Squads, Half-squads & Sections

SQUAD OR HALF-SQUAD: M: 2L 3 TR: 0-2/1 WT: 1.0/.5
SECTION: M: 2L 3 OR M: 1L 0 TR: 0-1 WT: 1.0
B/C: 2W 4-6 B: -15 M/C: 6W 15-20 B: -15 CAVALRY: 4L 6

OFFENSIVE INFORMATION

TYPE OF UNIT	ROF	A	ST	AMMO TYPE		GUNNERY RANGE P	S	M	L	E	GP EFFECTIVENESS	PTS
RIFLE SQUAD HALF-SQUAD	N	UNL	O	GP	R	2	3	6	8	10	Small Arms	27
					F	9	7	5	3	1		20
					F	6	5	3	2	1		
INFANTRY SQUAD HALF-SQUAD	N	UNL	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		16
					F	3	2	2	1	1		
SMG SQUAD HALF-SQUAD	N	UNL	O	GP	R	1	---	2	---	3	Small Arms	20
					F	10	---	3	---	1		14
					F	6	---	2	---	1		
ANY SECTION	N	UNL	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

DEFENSIVE INFORMATION

SIZE:	S/L	LIGHT COVER	4S	HEAVY COVER	8S	MOVING	-2
GPD:	2S	MEDIUM COVER	6S	FULL COVER	+2	TRANSPORTED	1/3S

NOTES: Available throughout the war.

G-8B: Mortars, HMG & Anti-Tank Weapons

The GP Fire modifiers are now checked for any effect. The Net Modifier is –20 as a result of the following modifier:

- *Shooter Suppressed –20*

GP FIRE MODIFIERS (6.5.4.3)

TARGET VEHICLE MOVING DF/IF	-10/-20
TARGET P-TYPE VEHICLE	-10
TARGET A-TYPE VEHICLE	-20
TARGET VEHICLE IN MEDIUM COVER	-10
TARGET VEHICLE IN HEAVY COVER	-20
TARGET CAVALRY, CRAWLING, AIR BURST	+10
TARGET LEG/TOWED DF OVER WALL	-10
SHORT HALT: SB: 0, OTHER	-15
SHOOTER DAMAGED, HESITATING	-10
SHOOTER SUPPRESSED	-20
SHOOTER BROKEN, ON FIRE	-20
BREW-UP SMOKE	-10
SMOKE OPEN/CLOSED SHEAF	-10/-20
BARRAGE OPEN/CLOSED SHEAF	-5/-10
IF OPEN SHEAF	-20
OVERWATCH	-5
OVERWATCH ADJUST, DISMOUNT FO	-10
AMMO LIMIT, HEAT HAZE	-10
TRANSPORTED & DEFENSIVE FIRE	-10
OVERRUN ATTACK, PINNING FIRE	+20
DUAL FIRE SAME/DIFFERENT	-5/-10
HASTY ENTRENCHMENT, CE AMMO	-10
COAX MG (P-RANGE) VS. P OR S	+10
SHOOTER GRADE	see table

The 5 GP Factor column on the GP Combat Table is crossreferenced with the GP Defense Factor of 4. The two numbers found are 48 for the N-Effect and 77 for the S-Effect.

GP COMBAT RESULTS (6.5.4.4, 6.6.1.1.1)

GP DEF FAC	EFFECT	GP FACTOR ## >100 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 ##<0	EFFECT	GP DEF FAC
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

The Soviet player rolls (100). The result is 64, so the net roll is 44 (64-20). Since 44 is less than 48 the combat had No Effect. The SU-76M M43 is marked with a SPOT/FIRE counter under the edge of its Command counter.

6.6 Advanced Game Movement Phase

This adds the Close Assault and Hand-to-Hand Combat and Overrun Combat to the Movement Phase, in addition to a few special movement situations and movement for leg and towed units.

Close Assaults are a form of GP Fire simulating the actions of leg units attacking vehicles at extremely close range. This is the most effective means of attacking vehicles with leg units. It differs from GP Direct Fire in that they are resolved in the Hand-to-Hand/Close Assault Step of the Movement Phase rather than the Combat Phase.

© 2025 GMT Games, LLC

Hand-to-Hand Combats are special attacks simulating the actions of leg units attacking other leg or towed units at extremely close range with individual soldiers from both sides typically coming to blows.

As part of normal movement, vehicles may engage leg or towed units by Overrunning their positions.

6.6.1 Close Assault/Hand-to-Hand Combat Step

Eligible leg units engage vehicles (Close Assault) or other leg or towed units (Hand-to-Hand Combat) by close combat.

Why its own step? This prevents Second Player units from moving away from First Player units before they attack.

6.6.1.1 Close Assault Combat

Only unsuppressed, unbroken (OR) (see 7.1.5.2) or non-hesitating (OR) (see 7.1.5.1) squads, half-squads and sections may initiate Close Assaults. Towed units may not initiate Close Assaults. They may attack in any direction. If a leg unit is Suppressed before it can initiate a Close Assault, it cannot then attack.

To Close Assault, dismounted leg units must have a MOVE command. In a special form of Close Assault, passenger units may also dismount into a Close Assault.

Close Assault is the only method where Engineer units may attack Terrain features (OR) (see 7.19).

Only spotted vehicles, when announcing the close assault, (and terrain by engineer units) are attacked by a Close Assault. The attacking units must be adjacent to a target to initiate the attack. Squads, half-squads and sections (w/o attached weapons) may expend 1 of their movement speed allowance to move adjacent to a target; this is called an Advancing Attack. The target must be spotted *before* the unit moves. Vehicles cannot be attacked if they are two or more Heights above or below the attacking unit.

Each leg unit may only attack a single vehicle. If there is more than one vehicle in a hex, the others are ignored. If more than one unit in the same hex is attacking the same vehicle, they must combine their attack. One of the units is identified as the primary attacker; there may be any number of additional attackers from the same hex. If units located in another hex are attacking the same vehicle, the attacks are resolved separately in any order desired.

All Close Assaults against the same vehicle must be announced before the first is resolved. If a common target is eliminated before all of the Close Assaults are resolved, the remaining units may then move normally, but they may not initiate a Close Assault or enter into Hand-to-Hand with an unannounced target. Although the attacking units are technically firing, they are marked with SPOT/MOVE counters.

While Close Assaults take place during the Movement Phase, they do not trigger Overwatch Fire unless the attacking unit is executing an Advancing Attack. In that case, the Overwatch Fire is resolved before the Close Assault.

Passenger leg units may dismount (see 6.6.7.1.1) and then immediately Close Assault an adjacent unit. This is called a Dismount Attack. They may not combine their attack with any other units in the hex. The target must be spotted before any movement takes place and the attacking unit(s) dismounts.

This special form of Close Assault actually takes place during the Movement Step of the Movement Phase along with normal movement, not during the Close Assault/Hand-to-Hand Combat Step. The movement of the transporting vehicle unit may trigger Overwatch Fire, but once the leg unit dismounts, Overwatch Fire may not be taken.

6.6.1.1.1 Close Assault Combat Resolution

The First Player announces and resolves all Close Assault and Hand-to-Hand combats in any order followed by the Second Player. Close Assault is a form of GP Direct Fire, but utilizes its own unique set of modifiers.

All leg units use common GP Factors based on the size of primary unit.

- Squad: 8
- Half-squad: 4
- Section: 2

Reference the GP Combat Results Table on Game Card B (Panzer) or Game Card A (Panzer North Africa). These common GP Factors are highlighted on the table. Cross-reference the attacking unit's GP Factor with the target's GP Defense Factor. If the vehicle's GP Defense Factor is greater than 5, it is treated as 5.

Roll (100) and modify the result by the net Close Assault modifier (see 6.6.1.1.2), if any. In this case, the modified result may be greater than 100 or less than 0.

6.6.1.1.2 Close Assault Combat Modifiers

The Close Assault modifiers are used exclusively. All modifiers are cumulative. The terrain occupied by either side has no impact on Close Assault combat.

Advance Attack
If the attacking unit(s) expended movement to move adjacent to the target, the modifier is –10.

Uphill Attack
If the target is 1 Height above the attacking unit(s), the modifier is –10.

Dismount Attack
If the attacking unit dismounted into the attack, the modifier is –10.

Vs. Moving Vehicle
If the target vehicle is moving, the modifier is –10.

If the target vehicle's command is not yet visible, the controlling player must reveal it to receive the modifier (turn the Command counter face down again to show it is not yet executed).

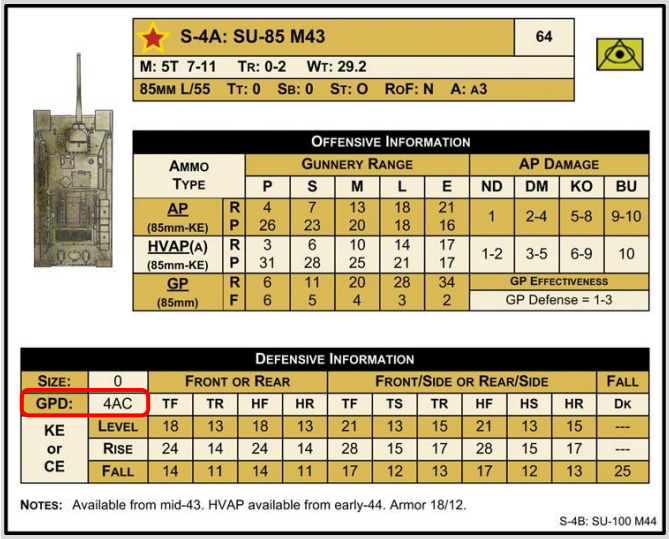
Note that in this case, the controlling player is not required to reveal the command; respond that the command has no effect. If player chooses not to reveal the command, the modifier is 0.

Vs. Suppressed Vehicle
If the defending vehicle is Suppressed, the modifier is +20.

© 2025 GMT Games, LLC

Vs. Vehicle with C Modifier
If a target vehicle has a C Close Assault indicator on its Data Card, the modifier is +20.

Reference the Soviet SU-85 M43 (Panzer Data Card S-4A) for the C indicator.



S-4A: SU-85 M43 64

M: 5T 7-11 Tr: 0-2 Wt: 29.2

85mm L/55 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (85mm-KE)	R	4	7	13	18	21	1	2-4	5-8	9-10
	P	26	23	20	18	16				
HVAP(A) (85mm-KE)	R	3	6	10	14	17	1-2	3-5	6-9	10
	P	31	28	25	21	17				
GP (85mm)	R	6	11	20	28	34	GP Effectiveness			
	F	6	5	4	3	2	GP Defense = 1-3			

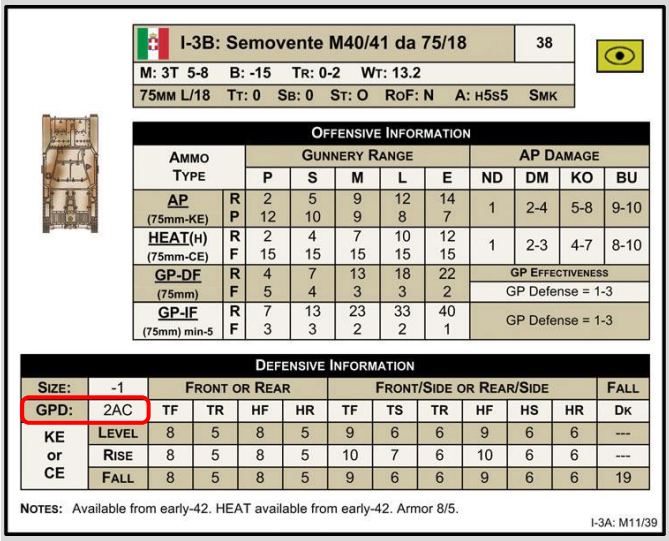
Defensive Information

Size: 0		Front or Rear				Front/Side or Rear/Side						Fall
GPD: 4AC		TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	18	13	18	13	21	13	15	21	13	15	---
	Rise	24	14	24	14	28	15	17	28	15	17	---
	Fall	14	11	14	11	17	12	13	17	12	13	25

Notes: Available from mid-43. HVAP available from early-44. Armor 18/12.

S-4B: SU-100 M44

Reference the Semovente M40/41 da 75/18 (Panzer North Africa Data Card I-3B) for the C indicator.



I-3B: Semovente M40/41 da 75/18 38

M: 3T 5-8 B: -15 Tr: 0-2 Wt: 13.2

75mm L/18 Tt: 0 Sb: 0 St: O RoF: N A: H5S5 Smk

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (75mm-KE)	R	2	5	9	12	14	1	2-4	5-8	9-10
	P	12	10	9	8	7				
HEAT(H) (75mm-CE)	R	2	4	7	10	12	1	2-3	4-7	8-10
	F	15	15	15	15	15				
GP-DF (75mm)	R	4	7	13	18	22	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			
GP-IF (75mm) min-5	R	7	13	23	33	40	GP Defense = 1-3			
	F	3	3	2	2	1				

Defensive Information

Size: -1		Front or Rear				Front/Side or Rear/Side						Fall
GPD: 2AC		TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	5	8	5	9	6	6	9	6	6	---
	Rise	8	5	8	5	10	7	6	10	6	6	---
	Fall	8	5	8	5	9	6	6	9	6	6	19

Notes: Available from early-42. HEAT available from early-42. Armor 8/5.

I-3A: M11/39

This modifier represents vehicles with very limited or no self-defense weapons; typically Coax MGs or MMGs in closed mounts.

Vehicle in Unsupported Hex
Attacks by leg units in close terrain can be overwhelming for vehicles. The Terrain Effects Table on Game Card A (Panzer) or Game Card B (Panzer North Africa) lists the terrain types subject to support, e.g., buildings, woods and groves.

Only unbroken (OR) (see 7.1) squads and half-squads may support vehicles. The leg unit must be in the same hex as the vehicle. A dismounted squad-size unit supports up to two vehicles, while a half-squad supports a single vehicle.

The leg units may be mounted. If mounted, support is on a one-for-one basis. A squad would support only its transporting vehicle.

If the vehicle is unsupported, the modifier is +30.

The most obvious example is vehicles unsupported in urban areas—never a good idea.

+ Attacker
Additional attackers use common modifiers based on the unit.

- Section: the modifier is +5 per additional unit
- Half-squad: the modifier is +10 per additional unit
- Squad: the modifier is +20 per additional unit

Vs. P-Type Vehicle
If a target vehicle is a P-Type, the modifier is +20.

Vs. S-Type Vehicle
If a target vehicle is a S-Type, the modifier is +30.

Vs. Open A-Type Vehicle (7.8)
If the target vehicle is an open A-Type, the modifier is +10.

Attacker has a Flamethrower
If any of the attacking units has an attached flamethrower, the modifier is +20.

Vs. Hesitating (7.1)
If the defending vehicle is hesitating, the modifier is +10.

Vs. Broken (7.1)
If the defending vehicle is broken, the modifier is +20.

Dismounted FO (7.47)
If Dismounted FO, the modifier is –10.

Attacker Unit Grade
The Unit Grade modifiers for Close Assault combat are found in the HTH CA column in the Unit Grade Modifiers Table on Game Card B (Panzer) or Game Card A (Panzer North Africa). This modifier applies to only the primary attacker, and is based on that unit's Unit Grade. If there are additional attacking units, their Unit Grade is not applicable.

© 2025 GMT Games, LLC

If the Unit Grade of the attacking unit is Regulars, the Close Assault Unit Grade Modifier is –10.

UNIT GRADE MODIFIERS (6.5.1.12.1, 6.5.2.4, 6.5.4.3, 6.6.1.1.2, 6							
GRADE	AP/GP FIRE					IF RSP	HTH CA
	P	S	M	L	E		
ELITE	+1/0	+2/+5	+3/+10	+4/+15	+5/+20	+2	+20
VETERAN	0/0	+1/0	+2/+5	+2/+5	+3/+10	+1	+10
SEASONED	0/0	0/0	0/0	0/0	0/0	0	0
REGULARS	0/0	-1/0	-2/-5	-2/-5	-3/-10	-1	-10
GREEN	-1/0	-2/-5	-3/-10	-4/-15	-5/-20	-2	-20

6.6.1.1.3 Close Assault Combat Results

If the vehicle has an unrevealed command, i.e., MOVE or OW, it may still execute it during the appropriate Step or Phase.

Suppressed Result

The vehicle is Suppressed. Place a SUPPRESSION/ON counter on or next to it. If the vehicle already has a SUPPRESSION/OFF counter, it is replaced by a SUPPRESSION/ON counter.

Effective Result

With Close Assault combats, Effective Results yield a Damaged, Track, Knock Out or Brew Up regardless of the target vehicle unit's Target Type. Follow the rule of 5s and 10s for vehicle GP Fire (see 6.5.4.4.2) to determine Damage or a Track Hits.

Close Assaults versus a Bailed Out vehicle is an automatic Effective Result. Roll (10) for Knock Out or Brew Up.

If the final modified result does not end in a 5 or a 10, the vehicle is Knocked Out or Brewed Up. If the Close Assault included a flamethrower, the vehicle automatically Brews Up. Otherwise, the attacker rolls (10), if the result is equal to or less than ½ of the primary unit's GP Factor (see 6.6.1.1.1), the vehicle unit Brews Up, otherwise the vehicle unit is Knocked out. Passenger units must attempt to Bail Out (see 6.5.4.5).

When a vehicle suffers a Brew Up result, all *friendly* ground units in the same hex are immediately Suppressed. It does not apply to passengers Under Cover (see 6.5.4.2.3).

If the target is eliminated, any or all of the attacking units may move into the hex previously occupied by the defending vehicle if no other opposing units are present in the hex or they may remain in their original hex. This move does not trigger Overwatch Fire.

The Situation (Panzer North Africa)

A British Infantry squad (Panzer North Africa Data Card B-8A), Regulars Unit Grade, located in Medium Grove hex is Close Assaulting a Suppressed Italian Semovente M40/41 da 75/18 (Panzer North Africa Data Card I-3B) located in a Scrub hex at a range of 1 hex.

I-3B: Semovente M40/41 da 75/18 — 38

M: 3T 5-8 B: -15 TR: 0-2 WT: 13.2

75MM L/18 TT: 0 SB: 0 ST: O ROF: N A: H5S5 SMK

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm-KE)	R	2	5	9	12	14	1	2-4	5-8	9-10
	P	12	10	9	8	7				
HEAT(H) (75mm-CE)	R	2	4	7	10	12	1	2-3	4-7	8-10
	F	15	15	15	15	15				
GP-DF (75mm)	R	4	7	13	18	22	GP EFFECTIVENESS			
	F	5	4	3	3	2	GP Defense = 1-3			
GP-IF (75mm) min-5	R	7	13	23	33	40	GP Defense = 1-3			
	F	3	3	2	2	1				

DEFENSIVE INFORMATION												
SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	2AC	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	8	5	8	5	9	6	6	9	6	6	---
	RISE	8	5	8	5	10	7	6	10	6	6	---
	FALL	8	5	8	5	9	6	6	9	6	6	19

NOTES: Available from early-42. HEAT available from early-42. Armor 8/5.

I-3A: M11/39

Both units are at the same height and have MOVE commands. The Italian player is the First Player.

Even though the British player is the Second Player, Close Assault combat is resolved in the Close Assault/Hand-to-Hand Combat Step of the Movement Phase, which precedes the Movement Step. Since the British unit is already adjacent, Overwatch Fire is not triggered.

The Infantry squad's GP Factor is 8; not 5 as listed on its Data Card. The Semovente's GP Defense Factor is 2AC.

The Close Assault modifiers are now checked for any effect.

CLOSE ASSAULT MODIFIERS (6.6.1.1.2)	
ADVANCE, UPHILL, DISMOUNT ATTACK	-10
VS. MOVING VEHICLE	-10
VS. SUPPRESSED VEHICLE	+20
VS. VEHICLE WITH C MODIFIER	+20
VS. VEHICLE IN UNSUPPORTED HEX	+30
+ ATTACKER – SEC/1/2 SQD/SQD	+5/+10/+20
VS. P-TYPE VEHICLE	+20
VS. S-TYPE VEHICLE	+30
VS. OPEN A-TYPE VEHICLE	+10
ATTACKER HAS A FLAMETHROWER	+20
VS. HESITATING VEHICLE	+10
VS. BROKEN VEHICLE	+20
DISMOUNTED FO	-10
ATTACKER GRADE	See table
Maximum GP Defense Factor of 5.	

UNIT GRADE MODIFIERS (6.5.1.12.1, 6.5.2.4, 6.5.4.3, 6.6.1.1.2, 6							
GRADE	AP/GP FIRE					IF RSP	HTH CA
	P	S	M	L	E		
ELITE	+1/0	+2/+5	+3/+10	+4/+15	+5/+20	+2	+20
VETERAN	0/0	+1/0	+2/+5	+2/+5	+3/+10	+1	+10
SEASONED	0/0	0/0	0/0	0/0	0/0	0	0
REGULARS	0/0	-1/0	-2/-5	-2/-5	-3/-10	-1	-10
GREEN	-1/0	-2/-5	-3/-10	-4/-15	-5/-20	-2	-20

The Net Modifier is +20 as a result of the following modifiers:

- *Moving Vehicle –10*
- *Vehicle with C Modifier +20*
- *Vehicle Suppressed +20*

© 2025 GMT Games, LLC

• *Infantry Squad Regulars Unit Grade –10*

The 8 GP Factor column on the GP Combat Table is crossreferenced with the GP Defense of 2. The two numbers found are 27 for the N-Effect and 59 for the S-Effect.

GP COMBAT RESULTS (6.5.4.4, 6.6.1.1.1)

GP DEF FAC	EFFECT	GP FACTOR ## >100													##<0		EFFECT	GP DEF FAC
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

The British player rolls (100). The result is 45, so the net roll is 65 (45+20). Since 65 is greater than 59 the combat is an Effective Result. The Semovente is damaged since the net result ended in 5. The British player rolls (10). The result is 3. A TURRET DMGD *counter is placed on or next to it.*

The Infantry squad is marked with a SPOT/MOVE *counter.*

6.6.1.2 Hand-to-Hand Combat

It is a fight 'til the bitter end that uses a die roll comparison between the opposing sides. This is the only case in the game where the defending side rolls off during combat.

Only unsuppressed, unbroken (OR) (see 7.1.5.2) or non-hesitating (OR) (see 7.1.5.1) squads, half-squads and sections may initiate Hand-to-Hand combat. Towed units may not initiate Hand-to-Hand combat. They may attack in any direction. If a unit is Suppressed before it can initiate the combat, it may not then initiate the attack.

To engage in Hand-to-Hand combat, dismounted leg units must have a MOVE command. In a special form of Hand-to-Hand combat, passenger units may also dismount into a Hand-to-Hand combat.

Only spotted dismounted leg and towed units, when announcing the combat, may be attacked by Hand-to-Hand combat. The attacking units must be adjacent to a target to initiate the attack. Squads, half-squads and sections (w/o attached weapons) may expend 1 of their movement speed allowance to move adjacent to a target; this is called an Advancing Attack. The target must be spotted *before* the unit moves. Units may not be attacked if they are two or more Heights above or below the attacking unit.

Each leg unit may only attack a single target. If there is more than one target in a hex, the others are ignored. If more than one unit in the same hex is attacking the same target, they must combine their attack. One of the units is identified as the primary attacker; there may be any number of additional attackers from the same hex. If units located in another hex are attacking the same target, the attacks are resolved separately in any order desired.

All Hand-to-Hand combats against the same target must be announced before the first is resolved. If a common target is eliminated before all of the attacks are resolved, the remaining units may then move normally, but they may not initiate a Close Assault or enter into a Hand-to-Hand Combat with an unannounced target. Although the attacking units are technically firing, they are marked with SPOT/MOVE counters.

While Hand-to-Hand combats take place during the Movement Phase, they do not trigger Overwatch Fire unless the attacking unit is executing an Advancing Attack. In that case, the Overwatch Fire is resolved before the Hand-to-Hand combat.

Passenger leg units may dismount and then immediately enter Hand-to-Hand combat with an adjacent unit. This is called a Dismount Attack. They may not combine their attack with any other units in their hex. The target must be spotted *before* any movement takes place and the attacking unit(s) dismounts.

This special form of Hand-to-Hand combat actually takes place during the Movement Step of the Movement Phase along with normal movement, not during the Close Assault/Hand-to-Hand Combat Step. The movement of the transporting vehicle unit may trigger Overwatch Fire, but once the leg unit dismounts, Overwatch Fire may not be taken.

6.6.1.2.1 Hand-to-Hand Combat Resolution

The First Player announces and resolves all Hand-to-Hand and Close Assault combats in any order followed by the Second Player. Hand-to-Hand combat is resolved through a die roll comparison; high side wins; roll again for ties.

Both sides roll (100) and modify each of their results by the net Hand-to-Hand modifier (see 6.6.1.2.2), if any. In this case, the modified result may be greater than 100 or less than 0.

© 2025 GMT Games, LLC

6.6.1.2.2 Hand-to-Hand Combat Modifiers

The Hand-to-Hand modifiers are used exclusively. All modifiers are cumulative and are applied to each side. The terrain occupied by either side has no impact on Hand-to-Hand Combat.

Squad
If the primary attacking unit and/or the defending unit is a squad, the modifier is 0.

Half-squad
If the primary attacking unit and/or the defending unit is a half-squad, the modifier is –25.

Section
If the primary attacking unit and/or the defending unit is a section, the modifier is –30.

Towed
If the defending unit is a towed unit, the modifier is –40.

Defender Suppressed
If the defending unit is Suppressed, the modifier is –20.

Advance Attack
If any attacking unit(s) expended movement to move adjacent to the target, the modifier is –10.

Uphill Attack
If the target is 1 Height above the attacking unit(s), the modifier is –10.

Dismount Attack
If the attacking unit dismounted into the attack, the modifier is –10.

+ Attacker
Additional attackers use common modifiers based on the unit.

- Section: the modifier is +5 per additional unit
- Half-squad: the modifier is +10 per additional unit
- Squad: the modifier is +20 per additional unit.

Has Flamethrower
If any of the attacking units and/or the defending unit has an attached flamethrower, the modifier is +20.

Cavalry Unit
If the primary attacking unit and/or the defending unit is a cavalry unit, the modifier is +20.

Dismounted FO (7.47)
If Dismounted FO, the modifier is –10.

Defender Hesitating (7.1)
If the defending unit is hesitating, the modifier is –10.

Defender Broken (7.1)
If the defending unit is broken, the modifier is –20.

Unit Grade
The Unit Grade modifiers for Hand-to-Hand combat are found in the HTH CA column in the Unit Grade Modifiers Table on Game Card B (Panzer) or Game Card A (Panzer North Africa). This modifier applies to both the primary attacker and the defender, and is based on each unit's Unit Grade. If there are additional attacking units, their Unit Grade is not applicable.

6.6.1.2.3 Hand-to-Hand Combat Results

Hand-to-Hand combat requires that both sides roll (100), comparing the net results with the higher side winning the engagement; re-roll all ties. Hand-to-Hand combat ultimately results in one side's elimination even if it takes multiple roll-offs. Only one side is left standing.

If the target has an unrevealed command (i.e., MOVE or OW) it may still execute it during the appropriate Step or Phase.

Attacker Higher Result
If the target is a squad, it is reduced to a half-squad (it is not Suppressed). Flip the squad counter to its half-squad side. Any attached weapons are unaffected by this reduction. An Optional Rule (see 7.17) expands on attached weapon loss.

The defending side must now recalculate its modifiers based on a half-squad-sized unit and another roll-off takes place.

If the target is anything other than a squad, it is eliminated and removed from play.

If the target is eliminated, any or all of the attacking units may move into the hex previously occupied by the defending unit if no other opposing units are present in the hex or they may remain in their original hex. This move does not trigger Overwatch Fire.

Defender Higher Result
If the primary attacker is a squad it is reduced to a half-squad (it is not Suppressed). Flip the squad counter to its half-squad side. Any attached weapons are unaffected by this reduction. An Optional Rule (see 7.17) expands on attached weapon loss.

The attacking side must now recalculate its modifiers based on a half-squad-sized unit. If there are other squad-sized units as part of the attack, the attacking player may designate one of those units as the primary unit and recalculate the modifiers. In either case, another roll-off takes place.

If the primary attacking unit is a half-squad or section-sized unit, it is eliminated and removed from play. If it was the only attacking unit, the defending side wins the engagement and the combat is complete. If there are additional attacking units, one of those units must be designated as the primary unit. Recalculate its modifiers based on the new unit and another roll-off takes place.

If the attacking side is eliminated, the defending unit remains in its original hex.

The Situation (Panzer)

A German Rifle squad and an Infantry half-squad, both Veteran Unit Grade, in a Woods hex are attacking a Soviet SMG squad, Regulars Unit Grade, in a Woods hex at a range of 1 hex.

Both sides are at the same height. Both German units have MOVE commands; the Soviet unit has an OW command. The German player is the First Player.

© 2025 GMT Games, LLC

The German side resolves its attack first. The German player designates the Rifle squad as the primary attacker. Since the German units are at a range of 1 hex, Overwatch Fire is not triggered.

The German player determines that his Net Modifier is +20 as a result of the following modifiers:

- *Additional half-squad sized attacker +10*
- *Veteran Unit Grade +10*

HAND-TO-HAND MODIFIERS (6.6.1.2.2)	
SQUAD	0
1/2 SQUAD	-25
SECTION	-30
TOWED	-40
DEFENDER SUPPRESSED	-20
ADVANCE, UPHILL, DISMOUNT ATTACK	-10
+ ATTACKER – SEC/1/2 SQD/SQD	+5/+10/+20
HAS FLAMETHROWER	+20
CAVALRY UNIT	+20
DISMOUNTED FO	-10
DEFENDER HESITATING	-10
DEFENDER BROKEN	-20
GRADE	See table

UNIT GRADE MODIFIERS (6.5.1.12.1, 6.5.2.4, 6.5.4.3, 6.6.1.1.2, 6							
GRADE	AP/GP FIRE					IF RSP	HTH CA
	P	S	M	L	E		
ELITE	+1/0	+2/+5	+3/+10	+4/+15	+5/+20	+2	+20
VETERAN	0/0	+1/0	+2/+5	+2/+5	+3/+10	+1	+10
SEASONED	0/0	0/0	0/0	0/0	0/0	0	0
REGULARS	0/0	-1/0	-2/-5	-2/-5	-3/-10	-1	-10
GREEN	-1/0	-2/-5	-3/-10	-4/-15	-5/-20	-2	-20

The Soviet player determines that his Net Modifier is –10 as a result of the following modifier:

- *Regulars Unit Grade –10*

UNIT GRADE MODIFIERS (6.5.1.12.1, 6.5.2.4, 6.5.4.3, 6.6.1.1.2, 6							
GRADE	AP/GP FIRE					IF RSP	HTH CA
	P	S	M	L	E		
ELITE	+1/0	+2/+5	+3/+10	+4/+15	+5/+20	+2	+20
VETERAN	0/0	+1/0	+2/+5	+2/+5	+3/+10	+1	+10
SEASONED	0/0	0/0	0/0	0/0	0/0	0	0
REGULARS	0/0	-1/0	-2/-5	-2/-5	-3/-10	-1	-10
GREEN	-1/0	-2/-5	-3/-10	-4/-15	-5/-20	-2	-20

The German player rolls (100). The result is 13, so the net roll is 33 (13+20). The Soviet player rolls (100). The result is 65, so the net roll is 55 (65-10).

Since the Soviet player's 55 is greater than the German player's 33, the German Rifle squad is reduced to Rifle half-squad; the Hand-to-Hand combat continues.

The German player must recalculate the Net Modifier; it is now –5 as a result of the following modifiers:

- *Half-squad (the primary attacking unit is now a half-squad) –25*
- *Additional half-squad sized attacker +10*
- *Veteran Unit Grade +10*

The Soviet's side's Net Modifier is unchanged at –10.

The German player rolls (100). The result is 72, so the net roll is 67 (72-5). The Soviet player rolls (100). The result is 51, so the net roll is 41 (51-10).

Since the German player's 67 is greater than the Soviet player's 41, the Soviet SMG squad is reduced to a SMG half-squad; the Hand-to-Hand combat continues.

The German side's Net Modifier is unchanged at –5.

The Soviet player must recalculate the Net Modifier; it is now –35 as a result of the following modifiers:

- *Half-squad (now SMG half-squad) –25*
- *Regulars Unit Grade –10*

The German player rolls (100). The result is 48, so the net roll is 43 (48-5). The Soviet player rolls (100). The result is 62, so the net roll is 27 (62-35).

Since the German player's 43 is greater than the Soviet player's 27, the Soviet SMG half-squad is eliminated. The German player won the Hand-to-Hand combat.

The German player decides to occupy the Soviet hex with just the Rifle half-squad.

Both the German Rifle half-squad and Infantry half-squad are marked with SPOT/MOVE counters.

6.6.2 Suppression Effects – Movement

Suppressed units move at only ½ of their normal movement speed allowance (round down) whether moving cross-country or on paths or roads. Suppressed units with SHORT HALT commands move at only ¼ (½ of ½) of their normal movement speed allowance (round down). Suppressed and Damaged units with SHORT HALT commands move at only ⅛ (½ of ½ of ½) of their normal movement speed allowance (round down). A movement speed allowance is never less than 1.

Suppressed vehicles may initiate Overrun combat as long as all of the Overrun requirements are still met.

Suppressed leg units may not initiate Close Assault or Hand-to-Hand combat. They may, however, be the targets of Hand-to-Hand combat.

6.6.3 Vehicle Building Movement

At the point a tracked vehicle attempts to enter or exit a building in its current hex (if entering from an adjacent hex, it pays movement cost for just for the Building not the Alley), it must first check for damage before actually entering or exiting. Open-topped or vehicles transporting any unit may not enter buildings. Vehicles may not reverse into buildings.

Reference the VEHICLE INTO section of the Building Effects Table on Game Card B. Determining if there is Damage or a Track hit is a two-step process.

Determine the type of Building hex: Wood, Brick or Stone. Then determine the vehicle's GP Defense Factor. Roll (100) and add 5 times the GP Defense Factor to the result.

If a Soviet SU-85 M43 (Panzer Data Card S-4A) attempts to enter or exit a building, it applies +20 (4AC x5) to the result.

If a Semovente M40/41 da 75/18 (Panzer North Africa Data Card I-3B) attempts to enter or exit a building, it applies +10 (2AC x5) to the result.

© 2025 GMT Games, LLC

If the net result falls within the range listed in the HIT# column, the vehicle suffers Damage or a Track Hit. If the net result does not fall within the range, the vehicle enters or exits the building normally paying the listed terrain cost.

If the net result falls within the range, roll (100) again and reference the result based on the listed ranges in the TK and DMGD columns.

If damaged, roll (10). If the result is less than or equal to 4, the vehicle suffers Turret Damage, otherwise Hull Damage.

The SU-85 M43 (Panzer) attempts to enter a Brick Building, the Soviet player rolls (100). The result is 22; the net result is a 42 (22+20). Since 42 falls within the 01-65 range for a Brick Building, the SU-85 M43 did sustain Damage or a Track Hit.

The Soviet player rolls (100) again. The result is 77. It falls within 66-00. The SU-85 M43 is damaged. The Soviet player rolls (10): the result is 3. The tank is marked with a TURRET DMGD counter.

BUILDING EFFECTS (6.6.3, 7.35)

Building Type	Fire Start				Vehicle Into		
	GP Attack Factor				Damage Type		
	3-5	6-8	9-11	12+	Hit#	TK	DMGD
Stone, Stone Rubble	---	---	01-10	01-20	01-80	01-50	51-00
Brick, Brick Rubble	---	01-10	01-20	01-30	01-65	01-65	66-00
Wood, Wood Rubble	01-10	01-20	01-30	01-40	01-50	01-80	81-00
Small Arms may not start fires. Rubble -10 modifier.					+5 per GP Defense.		

The Semovente (Panzer North Africa) attempts to enter a Brick Building, the Italian player rolls (100). The result is 32; the net result is a 42 (32+10). Since 42 falls within the 01-65 range for a Brick Building, the Semovente did sustain Damage or a Track Hit.

The Italian player rolls (100) again. The result is 77. It falls within 66-00. The Semovente is damaged. The Italian player rolls (10); the result is 9. The tank is marked with a HULL DMGD counter.

If a vehicle suffers a Track Hit when attempting to enter a building, it stops movement before entering the building; it remains in the alley. If it suffers a Track Hit while attempting to exit a building, it stops movement before exiting the building; it remains inside the building.

If a vehicle is damaged when attempting to enter a building, it still enters the building if it has sufficient movement speed allowance remaining; otherwise, it remains in the alley. If it is damaged while attempting to exit a building, it still exits the building if it has sufficient movement speed allowance remaining; otherwise, it remains inside the building. A vehicle may always move one hex if it does not expend any movement turning.

6.6.4 Leg Movement

For movement, leg-type units are squads, half-squads, sections and towed units.

6.6.4.1 Leg Movement Factors

Each leg unit has a Movement Factor that determines the distance it can move during a turn. A leg unit's Movement Factor is listed on its Data Card in the General Information section following the M:.

Reference the Leg Data Card Key (Panzer North Africa) for a Squad or Half-squad. Its Movement Factor is 2L 3.

I-8A: Squads, Half-squads & Sections

Squad or Half-squad: M: 2L 3 Tr: 0-2/1 Wt: 1.0/.5
Section: M: 2L 3 or M: 1L 0 Tr: 0-1 Wt: 1.0
M/C: 6W 15-20 B: -15

Offensive Information

Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness	Pts
LMG Squad	N	Unl	O	GP	R	2	3	6	8	10	Small Arms	26
					F	8	6	5	3	1		
Half-squad					F	5	4	3	2	1		19
Infantry Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		
Half-squad					F	3	2	2	1	1		16
Bersaglieri Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	24
					F	6	5	3	2	1		
Half-squad					F	4	3	2	1	1		17
Any Section	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

Defensive Information

Size:	S/L	Light Cover	4S	Heavy Cover	8S	Moving	-2
GPD:	2S	Medium Cover	6S	Full Cover	+2	Transported	1/3S

Notes: Available from mid-40.

B-8B: Mortars, HMG & Anti-Tank Weapons

For leg-type units, the Movement Factor is made up of three distinct elements. The first two are listed in combination and determine the Cross-Country movement speed allowance and the Mode of Traction. L=Leg.

The third element is the Quickmarch movement speed allowance. Leg units do not have Path or Road information.

Dismounted towed units and cavalry, bicycle and motorcycle leg units located in a Path or Road hex do not prevent movement but do stop a vehicle from using its Path or Road movement speed factor. Squads, half-squads and sections on foot (not cavalry, bicycle or motorcycle units) located in a Path or Road hex do not stop a vehicle from using its Path or Road movement speed factor.

© 2025 GMT Games, LLC

Leg units move in a similar manner as that described for vehicles in the Basic Game. They expend a portion of their movement speed allowance based on the Terrain type. They do not have a turn cost; they may move freely in any direction. They may enter prohibited terrain if transported by a vehicle. As they are utilizing the vehicle's movement abilities.

Like vehicles, they may always move one hex, as long as it is a legal move. Otherwise, they may not exceed the available movement speed allowance.

Leg units move up or down in buildings by expending 1 Movement Factor.

Squads, and half-squads and sections (w/o attached weapons) may not change elevation by more than 2 Heights in a single 1 hex move. Note: Motorcycle and bicycle leg units (see 6.6.4.4) are wheeled vehicles for movement.

Squads, half-squads and sections (w/o attached weapons) with SHORT HALT commands may expend up to ½ of the available movement speed allowance (round down). Sections (with attached weapons) may not be given SHORT HALT commands.

Suppressed units with SHORT HALT commands may expend ¼ of the available movement speed allowance (½ times ½).

6.6.4.2 Quickmarch

Unsuppressed, unbroken (OR) (see 7.1.5.2) or non-hesitating (OR) (see 7.1.5.1) dismounted squads, half-squads and sections (w/o attached weapons), including all cavalry units, have the ability to move double-quick or quickmarch, enabling the unit to move faster than normal. On the other hand, Quickmarch does have a downside; the unit may be Suppressed as a result of the move.

Due to their equipment loads, sections with attached weapons may not quickmarch. Squads and half-squads may quickmarch even if they have attached weapons.

The unit may start its move in any terrain hex, but the entire move must traverse and end in Brush, Clear, Crops, Path or Road hexes. It may change a single Height.

A unit may not quickmarch into Close Assault or Hand-to-Hand combats.

The unit must have a MOVE command to quickmarch. It then moves normally, using its quickmarch movement speed allowance. At the end of the move, determine if it is Suppressed.

Quickmarch Suppression is based on Unit Grade. Reference the Quickmarch column in the Unit Grade Modifiers Table on Game Card B (Panzer) or Game Card A (Panzer North Africa).

The moving player rolls (100). If the result falls within the listed range, the unit is Suppressed and is marked with a SUPPRESSION/ ON counter.

After a Veteran unit completes a quickmarch, it has a Suppression range of 01-40.

UNIT GRADE MODIFIERS (6.5.1.12.1, 6.5.2.4, 6.5.4.3, 6.6.1.1.2, 6.6.1.2.2, 6.6.4.2, 6.8.3)

GRADE	AP/GP FIRE					IF RSP	HTH CA	AIR	QUICK-MARCH	SUP'D RECVY
	P	S	M	L	E					
ELITE	+1/0	+2/+5	+3/+10	+4/+15	+5/+20	+2	+20	+20	01-25	01-80
VETERAN	0/0	+1/0	+2/+5	+2/+5	+3/+10	+1	+10	+10	01-40	01-70
SEASONED	0/0	0/0	0/0	0/0	0/0	0	0	0	01-50	01-60
REGULARS	0/0	-1/0	-2/-5	-2/-5	-3/-10	-1	-10	-10	01-60	01-50
GREEN	-1/0	-2/-5	-3/-10	-4/-15	-5/-20	-2	-20	-20	01-75	01-40

6.6.4.3 Crawling

Unsuppressed squads, half-squads and sections (w/o attached weapons) in Full Cover (see 6.1.4.2) may move only 1 hex by crawling while maintaining their Full Cover status.

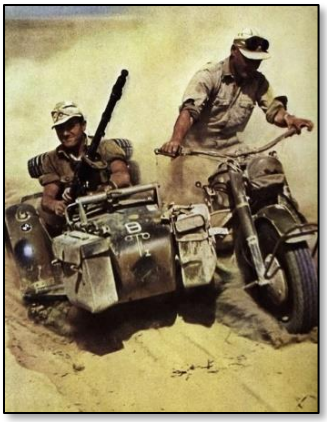
Crawling units cannot:

- Have SHORT HALT commands
- Change elevation
- Move adjacent to an opposing unit spotted by any friendly unit
- Move up or down in a building

Crawling is not considered moving for combat or spotting purposes. Units are not marked with a SPOT/MOVE counter. However, all GP Direct and Indirect Fires apply a +10 modifier.

6.6.4.4 Motorcycles & Bicycles

Squads, half-squads and sections can be designated as Motorcycle (M/C) or Bicycle (B/C) units. In those cases, the leg units use the listed W=Wheeled Movement Factors found on their Data Cards instead of the normal Leg Movement Factors. They execute movement as if they were Wheeled vehicles. They still spot and are spotted as normal leg units.



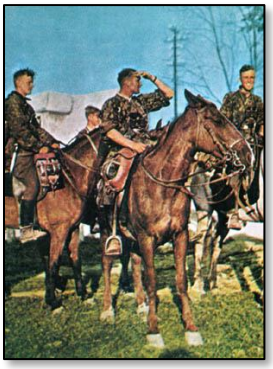
In game terms, they never separate from their motorcycles or bicycles. Their transport is always kept in close proximity, but is not represented by a separate counter.

Mororcycle or bicylce units may not traverse Hedgerow, Wall or Defilade hexsides. They never conduct Overrun combats.

They conduct Close Assault and Hand-to-Hand combats in the normal manner as described in those sections of the rules; however, in this case, Advancing Attacks are at ½ of their motorcycle or bicycle movement speed allowances.

6.6.4.5 Cavalry

Both German and Soviet forces fielded horse-borne infantry forces as did the forces of other nations.



Squads, half-squads, and sections are designated as Cavalry units. In those cases, the leg units actually use the listed Cavalry Movement Factors found on their Data Cards instead of the normal Leg Movement Factors. They still execute movement as leg units. They still spot as normal leg units, but are spotted as L Sized targets.

In game terms, these units never separate from their horses. They are always kept in close proximity, but are not represented by a separate counter.

Cavalry units (with or w/o attached weapons) may not change elevation by more than 2 Heights in a single 1 hex move.

© 2025 GMT Games, LLC

They may not traverse Hedgerow hexsides. They never conduct Overrun combats.

They conduct Close Assault and Hand-to-Hand combats in the normal manner as described in those sections of the rules; however, in this case, Advancing Attacks are at ½ of their cavalry movement speed allowance.

Cavalry units quickmarch normally, but apply +20 modifier to the Suppression determination.

6.6.5 Towed Movement – Manhandling

Towed units are anti-tank guns, infantry guns and anti-aircraft guns. They all have a L=Leg listed on the Movement Row of their Data Cards. While their most efficient method of movement is transport by an appropriate vehicle or limber, all but the very large guns do possess an inherent, but limited movement capability. Moving a towed unit without the assistance of transport is called manhandling.

Like leg units, the Towed Movement Factor is composed of three elements or allowances. The first two are listed in combination and determine the Cross-Country movement.

The third element, which is always 0, is the Quickmarch movement factor. Towed units do not have Path and Road information.

Towed units may move only 1 hex per turn. They do not have a turn cost; they may move freely in any direction. They may change only a single Height. They may not traverse Hedgerow, Wall or Defilade hexsides or inside buildings. They may not have SHORT HALT commands. They may enter prohibited terrain only if transported by vehicle.

Like vehicles, they may always move one hex, as long as it is a legal move. Otherwise, they may not exceed the available movement speed allowance.

6.6.6 Barrage Movement

Since Indirect Fire actually takes place throughout a turn, units that move to a new position that falls within the area described by an Indirect Fire SHEAF Pattern are immediately attacked by those Indirect Fire units represented by the SHEAF Pattern.

The moving unit is attacked just once for any movement within a SHEAF Pattern by each Indirect Fire unit no matter how many hexes of that pattern they enter. If SHEAF Patterns overlap, that could result in multiple attacks.

Since units with MOVE or SHORT HALT commands are not required to enter a new hex, units that start the Movement Phase under a Barrage are not required to actually move to a new position, thereby avoiding additional attacks. Vehicles searching for a Hull Down in a hex are attacked.

Vehicles that move within a Barrage do not apply the –20 Target Vehicle Moving modifier.

Units may pivot without incurring additional attacks.

6.6.7 Transporting

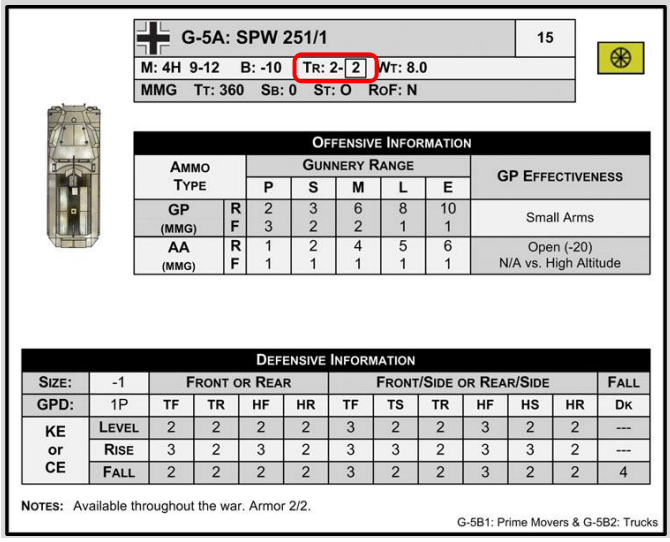
Leg and towed units can be transported (carried or towed) by vehicle and limbers (both referred to as vehicles). Units being transported are classified as passengers mounted on vehicles while non-transported units are classified as dismounted. Passengers are not marked with a separate command.

Place the vehicle counter under the units it is transporting or utilize the Summary Card.

6.6.7.1 Transport & Passenger Capacity

All vehicles have a Transport Capacity Factor on the Movement Row of their Data Cards; it is listed as TR: #-#. The first value is the vehicle's Towed Capacity, the second value is its Leg Capacity. Some vehicles provide *Under Cover* protection for passenger leg or towed units. Their Leg Capacity value is squared. Reference the General Information of the Vehicle Data Card Key.

Reference the German SPW 251/1 (Panzer Data Card G-5A, Panzer North Africa Data Card G-13A). The SPW 251/1 provides Under Cover protection for passenger leg units.



G-5A: SPW 251/1						15
M: 4H 9-12	B: -10	TR: 2-2	WT: 8.0			
MMG	TT: 360	SB: 0	ST: O	ROF: N		

OFFENSIVE INFORMATION							
AMMO TYPE		GUNNERY RANGE					GP EFFECTIVENESS
		P	S	M	L	E	
GP (MMG)	R	2	3	6	8	10	Small Arms
	F	3	2	2	1	1	
AA (MMG)	R	1	2	4	5	6	Open (-20)
	F	1	1	1	1	1	N/A vs. High Altitude

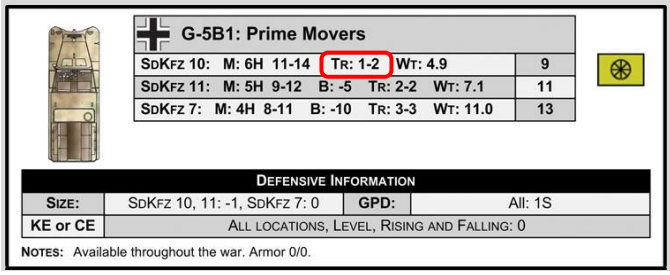
DEFENSIVE INFORMATION												
SIZE:	-1	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	1P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	2	2	2	2	3	2	2	3	2	2	---
	RISE	3	2	3	2	3	3	2	3	3	2	---
	FALL	2	2	2	2	3	2	2	3	2	2	4

NOTES: Available throughout the war. Armor 2/2.

G-5B1: Prime Movers & G-5B2: Trucks

Vehicles that have both a Towed and Leg Capacity may transport either type. Vehicles that have a Leg Capacity but 0 for their Towed Capacity may only transport leg units. Vehicles that have 0 for both may not transport either type.

Reference the German Prime Movers. The SdKfz 10's Transport Capacity is 1-2. Its Towed Capacity is 1 while its Leg Capacity is 2.



G-5B1: Prime Movers					
SDKFZ 10:	M: 6H 11-14	TR: 1-2	WT: 4.9		9
SDKFZ 11:	M: 5H 9-12	B: -5	TR: 2-2	WT: 7.1	11
SDKFZ 7:	M: 4H 8-11	B: -10	TR: 3-3	WT: 11.0	13

DEFENSIVE INFORMATION			
SIZE:	SDKFZ 10, 11: -1, SDKFZ 7: 0	GPD:	All: 1S
KE or CE	ALL LOCATIONS, LEVEL, RISING AND FALLING: 0		

NOTES: Available throughout the war. Armor 0/0.

Leg and towed units have a Passenger Capacity. The data is presented as a reverse image indicating that they are passenger units. Their capacity indicates how much space they, their equipment and ammunition requires while being transported.

© 2025 GMT Games, LLC

Reference the Panzer Leg Data Card Key. A German section has a Passenger Capacity of 0-1 (reverse indicates that it is a passenger unit). Its Towed Passenger Capacity is 0 while its Leg Passenger Capacity is 1.

G-8A: Squads, Half-squads & Sections

Squad or Half-squad: M: 2L 3 Tr: 0-2/1 Wt: 1.0/.5
Section: M: 2L 3 or M: 1L 0 Tr: 0-1 Wt: 1.0
B/C: 2W 4-6 B: -15 M/C: 6W 15-20 B: -15 Cavalry: 4L 6

Offensive Information

Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness	Pts
Rifle Squad Half-squad	N	Unl	O	GP	R	2	3	6	8	10	Small Arms	27
					F	9	7	5	3	1		20
					F	6	5	3	2	1		
Infantry Squad Half-squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		16
					F	3	2	2	1	1		
SMG Squad Half-squad	N	Unl	O	GP	R	1	---	2	---	3	Small Arms	20
					F	10	---	3	---	1		14
					F	6	---	2	---	1		
Any Section	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

Defensive Information

Size:	S/L	Light Cover	4S	Heavy Cover	8S	Moving	-2
GPD:	2S	Medium Cover	6S	Full Cover	+2	Transported	1/3S

Notes: Available throughout the war.

G-8B: Mortars, HMG & Anti-Tank Weapons

The Passenger Capacity for Towed units has both a leg and towed component. This represents not only the capacity required for the weapon itself but also the capacity required for its crew, equipment and ammunition. When transporting a towed unit, the transporting vehicle may not move in reverse.

Reference the Towed Data Card Key. The 8.8cm FlaK 36 has a Passenger Capacity of 3-3 (reverse indicates that it is a passenger unit). Both its Towed and Leg Capacities are 3 each.

G-6A: 8.8cm FlaK 36 ATG/AAG 53

M: 0L 0 Tr: 3-3 Wt: 4.9
88mm L/56 FoF: 60 St: O RoF: Q A: 6A4

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP Effectiveness			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (88mm)	R	5	9	16	23	28	(+20)			
	F	3	3	2	2	1				

Defensive Information

Size:	L	Light Cover	2S	Heavy Cover	6S	Moving	---
GPD:	1S	Medium Cover	4S	Full Cover	+1	Transported	1/3S

Notes: Available throughout the war. APCR available from early-43.

G-6B: 7.5cm PaK 40 ATG

To transport a leg or towed unit, the vehicle's Transport Capacity must be equal to or greater than the passenger unit's Passenger Capacity. A vehicle may transport as many individual leg units as its Transport Capacity can accommodate; it may tow only a single unit regardless of its Transport Capacity.

6.6.7.1.1 Mounting & Dismounting

For passengers, mounting is movement; they must have Move commands. On the other hand, vehicles may mount or dismount passengers when moving or stationary. Hesitating (OR) (see 7.1) or Broken (OR) (see 7.1) status does not impact the transport process other than the movement effects for those units.

Passengers Mounting

Unsuppressed squads, half-squads, and sections (w/o attached weapons) must have a Move command and be adjacent to or in the same hex with the transporting vehicle. Suppressed squads and half-squads and all sections (with attached weapons) and towed units must have a Move command and be in the same hex with the transporting vehicle.

All passenger units expend their entire Movement Speed Allowance mounting.

Passengers Dismounting

Unsuppressed squads, half-squads and sections (w/o attached weapons) are placed adjacent to or in the same hex with the transporting vehicle. They may not dismount off map. Suppressed squads and half-squads and sections (with attached weapons) and towed units must be placed in the same hex with the transporting vehicle.

All passenger units expend their entire Movement Speed Allowance dismounting; they are marked with a Spot/Move counter. They may face in any direction.

Vehicle Mounting & Dismounting

All Suppressed or unsuppressed vehicles may mount and/or dismount passengers. They may have any Command marked.

If marked with a Move or Short Halt command, vehicles expend ½ of their available Movement Speed Allowance (round down) mounting or dismounting any number of passengers. They may mount or dismount any number of passengers in a single hex or perform both actions at the same time in a single hex.

The process of mounting or dismounting passengers may take place anytime during a vehicle's move as long as it has the requisite Movement Speed Allowance. A vehicle may mount/dismount units and then move; it may move and then mount/dismount units; or it may move, mount/dismount units and then continue moving.

6.6.7.1.2 Emergency Bail Out

All unsuppressed passengers may Bail Out during a player's portion of the Movement Phase (First or Second Player) at no cost to a transporting vehicle with a Move or Short Halt command at any point during its move.

Any passenger utilizing an emergency Bail Out must be placed in the same hex as the transporting vehicle at the point they bail out and are marked with a Suppression/On counter. They may face in any direction.

Passengers may never use an emergency Bail Out to avoid announced OW Fire. They may use emergency Bail Out after resolving an announced OW Fire.

Hesitating (OR) (see 7.1) or Broken (OR) (see 7.1) status does not impact emergency bail out.

6.6.7.2 Transported Fire

Squads, half-squads and sections may utilize Direct GP Fire while transported. Any attached anti-tank rifles may also fire.

The passenger may fire, or observe for indirect fire, if their transporting vehicle has any command except Move.

A passenger makes its own spotting attempt. It may fire at the same target if the vehicle is also firing, or at any other spotted target. Dual Fire modifiers are applied only based on the passenger's fire. The passenger must apply the appropriate Transported Combat AP (-2)

© 2025 GMT Games, LLC

or GP (–10) modifier to all fire. It does not apply the SHORT HALT modifier.

Since passenger units are not spotted separately from their transporting vehicle, the transporting vehicle is marked with the appropriate SPOT/FIRE counter depending on the nature of the Transported Combat, i.e., small arms or not. If the transporting vehicle unit already has a SPOT/FIRE counter other than for small arms, it is retained.

6.6.8 Hasty Entrenchments

Unsuppressed, dismounted leg units, including motorcycle, bicycle, and cavalry units, and unsuppressed, dismounted towed units are able to *dig in* by constructing shallow cover—a Hasty Entrenchment. To construct a Hasty Entrenchment, a unit must be in Full Cover and have a N/C command. Once emplaced, Hasty Entrenchments are not removed.

It takes 4 turns to construct a Hasty Entrenchment; the turns need not be consecutive. The Hasty Entrenchment counter has four sides, three numbered 1 through 3 and one labeled Hasty. Place the counter with the 1 side facing forward after the first turn of construction. As each turn of construction is completed, rotate the counter to the next side. The construction status is updated during the Adjust Full Cover Step.

One unit may start construction, only to have it completed by another unit. If abandoned before construction is complete, use the Directional hex as a point of reference.

The required number of turns is the same regardless of the type or size of unit constructing a Hasty Entrenchment, except engineers.

Due to their construction training and on-hand equipment, engineers require only 2 turns to construct a Hasty Entrenchment. After the first turn of construction place the counter with the 2 side facing forward. The second turn completes the construction. Engineers require 1 turn to complete an abandoned Hasty Entrenchment numbered 1 through 3.

6.6.9 Searching for Hull Down

Many Terrain types contain irregularities that could provide vehicles with a Hull Down or Partial Hull Down position. Reference the Hull Dn column in the Terrain Effects Table on Game Card A (Panzer) or Game Card B (Panzer North Africa). Only those Terrain types with a listed numerical range may provide a position unless otherwise instructed by the Set Up or Special Conditions in a scenario.

Any vehicle may attempt to find a position. It must have a MOVE command and expends all of its movement speed allowance searching in its current hex.

The moving player rolls (100), if the result falls within the listed range, the vehicle found a position and is marked with a LOCATION/HD counter(s).

A vehicle may search for a Hull Down or Partial Hull Down position. Announce the type before rolling. When searching for a Partial Hull Down position, apply a –20 modifier.

It makes sense that smaller vehicles should have more luck finding a position than larger vehicles. Apply the following modifiers, based on the vehicle's size:

- Size +2: the modifier is +10
- Size +1: the modifier is +5
- Size 0: no modifier
- Size –1: the modifier is –5
- Size –2: the modifier is –10

It also makes sense that Unit Grade should have an impact. Apply the following modifiers, based on the vehicle's Unit Grade:

- Elite: the modifier is –10
- Veteran: the modifier is –5
- Seasoned: no modifier
- Regulars: the modifier is +5
- Green: the modifier is +10

The vehicle may turn in the hex to face any hexside. The position is found moving either forward or in reverse.

Vehicles in these positions are Hull Down from all angles except the Rear/Side and Rear (or Front/Side and Front if it reversed into the position).

If a vehicle is marked with a MOVE or SHORT HALT command, it abandons the position even if it remains in its current hex. Remove its LOCATION/HD counter(s). To reassume the position, it must search again. Once a vehicle abandons a position, no other vehicle may occupy it without first searching.

Since vehicles expend all of their movement speed allowance searching, passengers may not mount or dismount, except for Emergency Bail Out.

If the potential for Bogging Down (OR) (see 7.29) also exists, the player must first determine if a vehicle bogs down. If it bogs down, it may not search.

6.6.10 Overrun Combat

Overrun combat is a shock form of GP Fire where vehicles literally drive into the positions occupied by leg and towed units potentially crushing units in their path. It is different from normal GP Fire since it is resolved during the Movement Step of the Movement Phase rather than the Combat Phase.

Only non-hesitating (OR) (see 7.1) or unbroken (OR) (see 7.1) vehicle combat units may Overrun. Suppressed and/or Damaged vehicles may Overrun. However, they must apply those GP Fire modifiers and movement limitations.

To Overrun, vehicles must have a MOVE command; vehicles with SHORT HALT commands may not Overrun. They may Overrun only a single dismounted leg or towed unit; the target must have been dismounted at the start of the turn. If more than one vehicle is

© 2025 GMT Games, LLC

attacking the same target, they resolve their attacks separately. The target must be spotted before the vehicle starts its move.

All Overruns of a common target must be announced before the first combat is resolved. If a common target is eliminated before all of the Overruns are resolved, the remaining vehicles may move normally, but may not Overrun another target.

The Overrunning vehicle unit must have a sufficient movement speed allowance available to enter the target's hex. The terrain occupied by the target must be legal for vehicle movement; i.e., a vehicle cannot Overrun a target in a Heavy Woods or a Block hex.

If the vehicle unit is Overrunning a target located inside a building, it must attempt to enter the building before initiating the Overrun. If the vehicle suffers a TK Hit, it must stop outside of the building before initiating the attack. If its Hull is Damaged, it must then immediately halve its remaining movement speed allowance and apply that GP Fire modifier.

Although Overrunning units are technically firing, they are marked with SPOT/MOVE counters.

Since Overruns take place during the Movement Phase, it may trigger Overwatch Fire. It is triggered before the vehicle moves into the target's hex or after it exits, but not while conducting the Overrun.

6.6.10.1 Overrun Combat Resolution

The GP Factors at a range of 1 hex for all of the Overrunning vehicle's weapons, excluding AA Factors, (subject to minimum range and ammo limits) plus the GP Factor of any passenger squads, half-squads and sections are added together. Attached weapons are not part of the Overrun. If the total GP Factor is greater than 15, use the 15 column.

The terrain occupied by the target determines its GP Defense Factor.

Roll (100) and apply all appropriate GP Direct Fire modifiers. Since Overruns are not executed with a SHORT HALT commands, that modifier is not applicable.

If the target is eliminated and there are no other opposing units in the hex, the vehicle may remain in the hex. If the vehicle is able to continue moving it may do so. If it does not have any movement speed allowance remaining and the target or any other opposing units are still in the hex, the vehicle is placed back in the hex from which it entered the Overrun.

6.6.10.2 Overrun Combat Results

If the target has a SUPPRESSION/OFF counter, it is replaced by a SUPPRESSION/ON counter regardless of the outcome of the Overrun. If it has an unrevealed command; i.e., Move or OW, it may still execute that command during the appropriate Step or Phase.

Suppressed Result

The target is Suppressed. Place a SUPPRESSION/ON counter on or next to it. Ignored if already Suppressed.

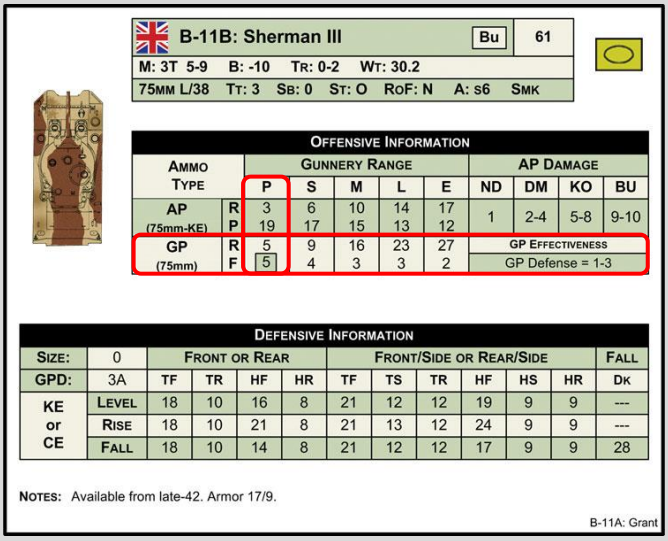
Effective Result

If the target is a squad, it is reduced to a half-squad and Suppressed. Flip the squad counter to its half-squad side and mark it with a SUPPRESSION/ON counter on or next to it. Any attached weapons are unaffected by this reduction. An Optional Rule (see 7.17) expands on attached weapon loss.

If the target is anything other than a squad, it is eliminated and removed from play.

The Situation (Panzer North Africa)

A British Sherman III (Data Card B-11B), Veteran Unit Grade, located in a Clear hex is Overrunning a spotted German Rifle halfsquad (Data Card G-8A) located in a Scrub hex at a range of 2 hexes. Both units are at the same height.



B-11B: Sherman III | Bu | 61

M: 3T 5-9 B: -10 TR: 0-2 WT: 30.2

75MM L/38 TT: 3 SB: 0 ST: O ROF: N A: S6 SMK

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
GP (75mm)	R	5	9	16	23	27	GP EFFECTIVENESS			
	F	5	4	3	3	2	GP Defense = 1-3			

DEFENSIVE INFORMATION												
SIZE:	0	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	LEVEL	18	10	16	8	21	12	12	19	9	9	---
	RISE	18	10	21	8	21	13	12	24	9	9	---
	FALL	18	10	14	8	21	12	12	17	9	9	28

NOTES: Available from late-42. Armor 17/9.

B-11A: Grant

© 2025 GMT Games, LLC

G-8A: Squads, Half-squads & Sections

Squad or Half-squad: M: 2L 3 Tr: 0-2/1 Wt: 1.0/.5
Section: M: 2L 3 or M: 1L 0 Tr: 0-1 Wt: 1.0
M/C: 6W 15-20 B: -15

Offensive Information

Type of Unit	RoF	A	St	Ammo Type		Gunnery Range P	S	M	L	E	GP Effectiveness	Pts
Rifle Squad	N	Unl	O	GP	R	2	3	6	8	10	Small Arms	27
					F	9	7	5	3	1		
Half-squad					F	6	5	3	2	1		20
Infantry Squad	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	22
					F	5	4	3	2	1		
Half-squad					F	3	2	2	1	1		16
SMG Squad	N	Unl	O	GP	R	1	---	2	---	3	Small Arms	20
					F	10	---	3	---	1		
Half-squad					F	6	---	2	---	1		14
Any Section	N	Unl	O	GP	R	1	2	4	6	7	Small Arms	10
					F	2	2	1	1	1		

Defensive Information

Size:	S/L	Light Cover	4S	Heavy Cover	8S	Moving	-2
GPD:	2S	Medium Cover	6S	Full Cover	+2	Transported	1/3S

Notes: Available from early-41.

G-8B: Mortars, HMG & Anti-Tank Weapons

The Sherman III has a Move command. The Rifle half-squad has an OW Command. The German player is the First Player.

In the Movement Step, the Second Player moves first. The British tank expends 3 of its movement speed allowance entering the Rifle half-squad's hex (1 for a Clear hex and 2 for a Scrub hex). It has none of its movement speed allowance remaining.

Since the British unit is 2 hexes from its intended target, Overwatch Fire could be triggered. The German half-squad takes Overwatch Fire as the British tank enters the adjacent hex.

At a range of 1 hex, the half-squad's GP Factor is 6; the GP Range Factor is P-Point Blank. The tank's GP Defense is 3A.

The GP Fire modifiers are now checked for any effect. The Net Modifier is –35 as a result of the following modifiers:

- *Target Vehicle Moving DF –10*
- *Target A-Type Vehicle –20*
- *Overwatch –5*

GP Fire Modifiers (6.5.4.3)

Target Vehicle Moving DF/IF	-10/-20
Target P-Type Vehicle	-10
Target A-Type Vehicle	-20
Target Vehicle in Medium Cover	-10
Target Vehicle in Heavy Cover	-20
Target Cavalry, Crawling, Air Burst	+10
Target Leg/Towed DF over Wall	-10
Short Halt: Sb: 0, Other	-15
Shooter Damaged, Hesitating	-10
Shooter Suppressed	-20
Shooter Broken, On Fire	-20
Brew-Up Smoke	-10
Smoke Open/Closed SHEAF	-10/-20
Barrage Open/Closed SHEAF	-5/-10
IF Open SHEAF	-20
Overwatch	-5
Overwatch Adjust, Dismount FO	-10
Ammo Limit, Heat Haze	-10
Transported & Defensive Fire	-10
Overrun Attack, Pinning Fire	+20
Dual Fire Same/Different	-5/-10
Hasty Entrenchment, CE Ammo	-10
Coax MG (P-Range) vs. P or S	+10
Shooter Grade	see table

The GP Factor 6 column on the GP Combat Table is crossreferenced with the GP Defense Factor of 3. The two numbers found are 39 for the N-Effect and 69 for the S-Effect.

GP Combat Results (6.5.4.4, 6.6.1.1.1)

GP Def Fac	Effect	GP Factor ## >100 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 ##<0	Effect	GP Def Fac
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

The German player rolls (100). The result is 71, so the net roll is 36 (71-35). Since 36 is less than 39 it had No Effect.

At first glance, this seems like a wasted shot. It is not. Had the tank been Suppressed, it would not have adequate movement speed allowance remaining to enter the half-squad's hex (3-1=2. ½ of 2 = 1). The tank continues moving and enters the German occupied hex.

At a range of 1 hex, the tank's GP Factor is 5; the GP Range Factor is P-Point Blank. The Rifle half-squad's GP Defense Factor is 4S.

The GP Fire modifiers are now checked for any effect. The Net Modifier is +30 as a result of the following modifiers:

- *Coax MG +10*
- *Overrun Combat +20*

GP Fire Modifiers (6.5.4.3)

Target Vehicle Moving DF/IF	-10/-20
Target P-Type Vehicle	-10
Target A-Type Vehicle	-20
Target Vehicle in Medium Cover	-10
Target Vehicle in Heavy Cover	-20
Target Cavalry, Crawling, Air Burst	+10
Target Leg/Towed DF over Wall	-10
Short Halt: Sb: 0, Other	-15
Shooter Damaged, Hesitating	-10
Shooter Suppressed	-20
Shooter Broken, On Fire	-20
Brew-Up Smoke	-10
Smoke Open/Closed SHEAF	-10/-20
Barrage Open/Closed SHEAF	-5/-10
IF Open SHEAF	-20
Overwatch	-5
Overwatch Adjust, Dismount FO	-10
Ammo Limit, Heat Haze	-10
Transported & Defensive Fire	-10
Overrun Attack, Pinning Fire	+20
Dual Fire Same/Different	-5/-10
Hasty Entrenchment, CE Ammo	-10
Coax MG (P-Range) vs. P or S	+10
Shooter Grade	see table

© 2025 GMT Games, LLC

The GP Factor 5 column on the GP Combat Table is crossreferenced with the GP Defense Factor of 4. The two numbers found are 48 for the N-Effect and 77 for the S-Effect.

GP COMBAT RESULTS (6.5.4.4, 6.6.1.1.1)

GP DEF FAC	EFFECT	GP FACTOR ## >100													##<0		EFFECT	GP DEF FAC
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	N	50	46	42	38	34	30	26	22	18	14	10	06	02	02	06	N	1
	S	75	72	69	66	63	60	57	54	51	48	45	42	39	36	33	S	
2	N	55	51	47	43	39	35	31	27	23	19	15	11	07	03	01	N	2
	S	80	77	74	71	68	65	62	59	56	53	50	47	44	41	38	S	
3	N	59	55	51	47	43	39	35	31	27	23	19	15	11	07	03	N	3
	S	84	81	78	75	72	69	66	63	60	57	54	51	48	45	42	S	
4	N	64	60	56	52	48	44	40	36	32	28	24	20	16	12	08	N	4
	S	89	86	83	80	77	74	71	68	65	62	59	56	53	50	47	S	
5	N	68	64	60	56	52	48	44	40	36	32	28	24	20	18	12	N	5
	S	93	90	87	84	81	78	75	72	69	66	63	60	57	54	51	S	
6	N	73	69	65	61	57	53	49	45	41	37	33	29	25	21	17	N	6
	S	98	95	92	89	86	83	80	77	74	71	68	65	62	59	56	S	
7	N	77	73	69	65	61	57	53	49	45	41	37	33	29	25	21	N	7
	S	02	99	96	93	90	87	84	81	78	75	72	69	66	63	60	S	
8	N	82	78	74	70	66	62	58	54	50	46	42	38	34	30	26	N	8
	S	07	04	01	98	95	92	89	86	83	80	77	74	71	68	65	S	
9	N	86	82	78	74	70	66	62	58	54	50	46	42	38	34	30	N	9
	S	11	08	05	02	99	96	93	90	87	84	81	78	75	72	69	S	
10	N	91	87	83	79	75	71	67	63	59	55	51	47	43	39	35	N	10
	S	16	13	10	07	04	01	98	95	92	89	86	83	80	77	74	S	

The British player rolls (100). The result is 49, so the net roll is 79 (49+30). Since 79 is greater than 77 it is an Effective Result. The German half-squad is eliminated and removed from the mapboard.

Since the German unit was eliminated, the Sherman III remains in the hex. It is marked with a SPOT/MOVE counter.

6.6.11 Command Control with Close Assault, Hand-to-Hand and Overrun

When executing movement based combats, if units are sharing a MOVE command, they may only attack the same target unit. It is possible for units to share a MOVE command that are unable to execute a combat, e.g., a squad sharing a MOVE command with a vehicle where the squad is executing a Close Assault, or three squads sharing a MOVE command where a Hand-to-Hand combat is to take place and only two of the squads may take part in the combat.

In any case, the remaining units must still meet Command Range requirement at the *completion* of the Movement Phase even if they do not take part in a combat.

6.7 Advanced Game 2nd Air Phase

"Victory, speedy and complete, awaits the side that employs air power as it should be employed." ~ Marshal of the Royal Air Force Sir Arthur Harris

All aircraft in *Panzer* are dedicated ground attack types or variants of other types employed in a ground attack role. Air-to-Air combat does not take place and is not modeled.

Aircraft fly only in the daytime and only during clear weather conditions. Keep this in mind when designing scenarios. Therefore, only one side should have aircraft available in any given scenario. It is assumed that that side has achieved local air superiority for the time covered by the scenario.

That being said, the two Air Phases are not divided into First and Second Player Steps; just the side with local air superiority can fly and attack during the two Air Phases.

Why have two Air Phases? It enables aircraft to either fly in anticipation of opposition combat and movement or in response to it.

Where there are aircraft there is anti-aircraft fire. While aircraft units are flying across the mapboard, AA capable ground units may fire at them with their anti-aircraft weapons.

Ground-based anti-aircraft fire was notoriously a hit-and-miss proposition as on average thousands upon thousands of rounds were expended to shoot down just a single aircraft. In reality, fighter aircraft destroyed the vast majority of ground attack aircraft. While just about any vehicle or leg unit carried weapons with a limited AA capability, the chance of those units actually hitting or impacting the action of a ground attack aircraft was so small that there is no point in cluttering up the game with all those extremely low probability shots. Therefore, only dedicated AA units and some vehicle mounted weapons have AA capability.

6.7.1 Aircraft Weapon Loads

Aircraft are capable of delivering a heavy load of ordnance from strafing to bombs and rockets. The Aircraft Data Cards list the available weapon loads. All aircraft carry Strafing weapons.

In the case where an Aircraft Data Card lists both Rockets and Bombs, the controlling player must select either one of those two options before the scenario begins and note that information for reference.

It is highly recommend that the Aircraft Limited Ammo rule is employed (see 5.16.2.6). Otherwise, aircraft would have an unlimited number of attacks available, greatly distorting their actual capabilities.

6.7.2 Aircraft Movement – Flying

Aircraft never remain on the mapboard during the course of a scenario. They appear individually, enter the mapboard along one edge, move across the mapboard, attack and are attacked, themselves, and then, if they survive, exit the mapboard along another edge.

6.7.2.1 Aircraft Appearance & Loitering

Unless instructed otherwise by a Scenario's Setup or Special Conditions, aircraft may initially appear on any turn of a scenario and in either the 1st or 2nd Air Phase.

However, once an aircraft unit initially appears, it may loiter (is available for use) for only a total of five consecutive turns, including the turn in which it makes its first appearance.

After making its initial appearance an aircraft may reappear, i.e., fly, each turn, in either the 1st or 2nd Air Phase, not both. Whether or not it appears during a turn, the five-turn limit is still in effect.

© 2025 GMT Games, LLC

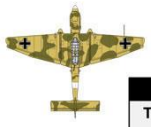
On its initial appearance, it may appear on any edge of the mapboard. Subsequent appearances must be on the edge from which it exited the mapboard during the previous turn. However, if it skips one or more turns before reappearing, it may then reappear on any mapboard edge. These skipped turns do, however, count towards the five turn loiter limit.

6.7.2.2 Aircraft Speed & Altitude

Aircraft fly at one of two speeds: Slow or Fast, and at one of three altitudes: Low, Medium or High. The aircraft's Speed and Altitude are announced when the aircraft is placed on the mapboard's edge.

Note that some aircraft may only fly at Slow Speed.

Reference the German Ju 87B-1 (Panzer Data Card G-34B1, Panzer North Africa Data Card G-7B1). The Ju 87B-1 must fly at slow speed.



G-7B1: Ju 87 B-1 — 53

1-1,200HP INLINE ENGINE SP: 400 KM/H WT: 6.4 — GPD: 2S

2-7.92MM, 1-7.92MM (REAR)

OFFENSIVE INFORMATION											
TYPE OF UNIT	RoF	A	ST	AMMO TYPE		GUNNERY RANGE					GP EFFECTIVENESS
						P	S	M	L	E	
STRAFE	N	3	O	GP	F	1					Small Arms
BOMBS	N	1	O	GP	F	10 (dive only)					1-8
BOMBS	N	2	O	GP	F	3					1-8

NOTES: Known as the *Stuka*. Available from early-41. Dive bomber. Must fly at Slow Speed.

An aircraft's Speed and Altitude affect its ability to maneuver and to make certain attacks and impacts its vulnerability to antiaircraft fire.

An aircraft's Speed and Altitude remain in effect for its current turn, unless conducting a Dive Bombing Attack (see 6.7.2.3.2) or is damaged, but may change in subsequent turns.

6.7.2.3 Aircraft Movement Procedure

An aircraft moves in the direction its front is facing (no reverse moves here!). It does not possess a movement speed allowance nor does it pay for movement; it is considered to be flying above all mapboard terrain.

6.7.2.3.1 Turning Aircraft

An aircraft's ability to turn while moving is based on its Speed. Altitude does not impact turning.

Aircraft at Slow Speed may make a single hexside right-hand or left-hand turn anytime during its move across the mapboard. After turning, it must fly in a straight line until it exits the mapboard. The turn is optional.

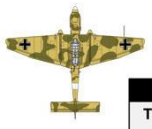
An aircraft at High Speed may not turn; it flies straight across the mapboard until it exits.

6.7.2.3.2 Dive Bomber Movement

Aircraft making Dive Bombing Attacks (the Notes Section of the Aircraft Data Cards indicates this capability) use a special combination movement.

It enters the mapboard at High Altitude (all Dive Bombers fly at Slow Speed). Once it completes its attack, it exits the mapboard at Low Altitude.

Reference the German Ju 87B-1 (Panzer Data Card G-34B1, Panzer North Africa Data Card G-7B1). The Ju 87B-1 is a dive bomber.



G-7B1: Ju 87 B-1 — 53

1-1,200HP INLINE ENGINE SP: 400 KM/H WT: 6.4 — GPD: 2S

2-7.92MM, 1-7.92MM (REAR)

OFFENSIVE INFORMATION											
TYPE OF UNIT	RoF	A	ST	AMMO TYPE		GUNNERY RANGE					GP EFFECTIVENESS
						P	S	M	L	E	
STRAFE	N	3	O	GP	F	1					Small Arms
BOMBS	N	1	O	GP	F	10 (dive only)					1-8
BOMBS	N	2	O	GP	F	3					1-8

NOTES: Known as the *Stuka*. Available from early-41. Dive bomber. Must fly at Slow Speed.

6.7.3 Aircraft Combat

Aircraft may attack ground units by strafing and with rockets or bombs. Aircraft units differ from ground units in that they may make as many attacks as desired, one per acquired target, or as many as are possible during the course of one move across the mapboard. They may make these attacks from any legal point during their move.

6.7.3.1 Aircraft Spotting

Due to their high-speed relative to ground units, aircraft are limited in their ability to spot targets. As with all combat, aircraft must have a spotted target to make any type of attack.

Aircraft may only spot those units, with an unblocked line-of-sight, that fall within their Front 60° Field-of-Fire.

6.7.3.1.1 Aircraft Acquiring Targets

Aircraft require a certain amount of movement to acquire (spot) targets. The aircraft must have an unblocked line-of-sight to the target and maintain it within its Front Field-of-Fire for the entire movement requirement.

The aircraft may turn and still acquire a target as long as the target remains in its Front Field-of-Fire.

Acquisition Ranges are based on the aircraft's Speed and Altitude and are found on the AA/Aircraft Spotting Table on Game Card B in the Acquire column.

© 2025 GMT Games, LLC

The aircraft is flying Fast at Low Altitude. To acquire a target, it must move 10 hexes with an unblocked line-of-sight to the target.

AA/Aircraft Spotting (6.7.3.1)		
Speed/Altitude	Acquire	Track
Slow/Low	5	2
Slow/Medium, Fast/Low	10	4
Slow/High, Fast/Medium	15	6
Fast/High	20	8

If Suppressed, double the range requirement for any new acquisitions. If Suppressed before it acquires a target, it must still meet the doubled requirement but subtracts the number of hexes already expended acquiring the target.

Unblocked ground units that are closer to a mapboard edge than the minimum required Acquisition Range may still be acquired. The aircraft is considered to have expended any required hexes of movement off the mapboard as it was flying up to the edge of the mapboard. Once it is on the mapboard, it must acquire any subsequent targets by meeting the movement requirement.

After completing an attack, an aircraft may start acquiring its next target from that point or exit the mapboard. An aircraft never has more than one acquired target at a time.

Once a dive bomber completes its attack, it may acquire its new target using the Low Altitude information.

Aircraft cannot acquire targets located *inside* any Building hexes or Improved Positions, or located in Light Woods, Woods, Heavy Woods, Light Grove, or Grove hexes without the assistance of an FO unit.

6.7.3.1.2 Observers Spotting for Aircraft

Ground units located *inside* Buildings or Improved Positions, or located in Light Woods, Woods, Heavy Woods, Light Grove, or Grove hexes may not be acquired by aircraft unless a friendly FO unit can spot the target for the aircraft.

No other observers may spot for aircraft. If an FO unit is unavailable, the aircraft cannot acquire targets located in those terrain types.

The FO unit must have a clear line-of-sight to the target unit, and it must be within spotting range of the FO unit. The FO unit may simultaneously spot a single target for multiple aircraft.

The FO must have an OW command to spot for aircraft and it may not perform any other Overwatch related actions or observe for Indirect Fire.

Even with an FO Unit spotting a target, the aircraft unit must still acquire the target (see 6.7.3.1.1).

6.7.3.1.3 Blocking Terrain for Aircraft

In addition to Acquisition Range, an aircraft unit must have an unblocked line-of-sight to the target during its entire Acquisition Range movement.

Determining the line-of-sight from an aircraft to a target is a simpler process due to its higher altitude. The line-of-sight from an aircraft to a target is potentially blocked if the target is within a specific number of hexes of a specific height obstacle based on the Altitude of the aircraft. The aircraft's speed has no impact.

Potential blocking terrain heights are based on the highest point of the terrain, i.e., the tops of woods, groves or buildings. Based on the aircraft Altitude, the line-of-sight is blocked if the ground unit is adjacent to an obstacle or 1 additional hex from the obstacle for each Height over the listed base. The blocking ranges are found on the Aircraft Line-of-Sight Table on Game Card C (Panzer) or Game Card B (Panzer North Africa).

An aircraft is at Low Altitude. The line-of-sight is blocked if the target is within 1 or 2 hexes of a Woods hex (Height 3).

AA/Aircraft Line-of-Sight (6.7.3.1.3)	
Altitude	Distance
Low	1 hex/H2, 2 hexes/H3, 3 hexes/H4 ...
Medium	1 hex/H4, 2 hexes/H5, 3 hexes/H6 ...
High	1 hex/H6, 2 hexes/H7, 3 hexes/H8 ...
Aircraft units may not acquire targets located inside Building hexes or Improved Positions, or in Light Woods, Woods, or Heavy Woods hexes. AA Units inside Buildings may not track aircraft.	

The line-of-sight is blocked if the target is within 3 hexes or less of a Heavy Woods hex (Height 4).

AA/Aircraft Line-of-Sight (6.7.3.1.3)	
Altitude	Distance
Low	1 hex/H2, 2 hexes/H3, 3 hexes/H4 ...
Medium	1 hex/H4, 2 hexes/H5, 3 hexes/H6 ...
High	1 hex/H6, 2 hexes/H7, 3 hexes/H8 ...
Aircraft units may not acquire targets located inside Building hexes or Improved Positions, or in Light Woods, Woods, or Heavy Woods hexes. AA Units inside Buildings may not track aircraft.	

The aircraft is a Medium Altitude, the line-of-sight is blocked if the target is adjacent to a Heavy Woods hex (Height 4).

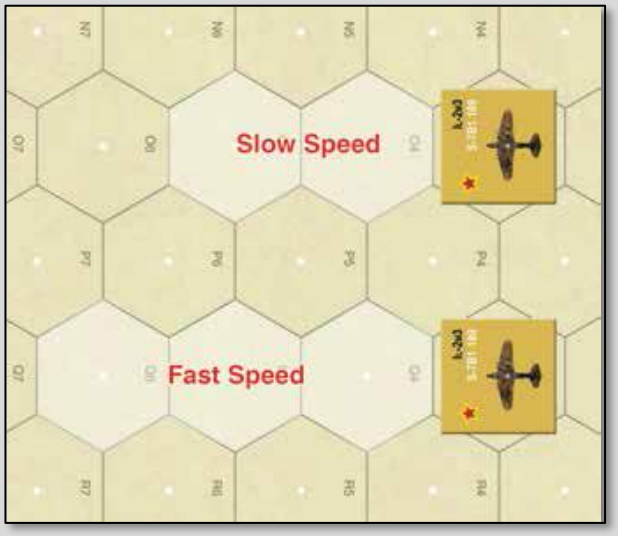
AA/Aircraft Line-of-Sight (6.7.3.1.3)	
Altitude	Distance
Low	1 hex/H2, 2 hexes/H3, 3 hexes/H4 ...
Medium	1 hex/H4, 2 hexes/H5, 3 hexes/H6 ...
High	1 hex/H6, 2 hexes/H7, 3 hexes/H8 ...
Aircraft units may not acquire targets located inside Building hexes or Improved Positions, or in Light Woods, Woods, or Heavy Woods hexes. AA Units inside Buildings may not track aircraft.	

6.7.3.2 Strafing

All aircraft are armed with a certain number of internal machineguns and/or cannons. These are GP weapons that utilize a Strafe Pattern based on the Speed of the aircraft. Strafing attacks must be conducted from Low Altitude. All small arms strafing is considered Point Blank Range.

If the aircraft unit is strafing at Slow Speed, it hits the target unit's hex immediately in front of the aircraft and the next hex. If the aircraft is strafing at Fast Speed, it hits the target unit's hex immediately in front of the aircraft and the next two hexes.

Strafing patterns:



Each ground unit (friendly or enemy) or Terrain Type (see 6.5.4.4.3) that falls within the Strafe Pattern is attacked individually. Each strafing attack is considered a single attack for aircraft Ammo Limits (see 5.16.2.6) purposes no matter the number of individual ground or Terrain Types that are actually attacked.

Strafing attacks use the GP Fire procedure (see 6.5.4). The Aircraft Combat modifiers are also checked to determine their effect, if any (see 6.7.3.5). These modifiers are found on the AA/Aircraft Modifiers Table found on Game Card C (Panzer) or Game Card B (Panzer North Africa).

6.7.3.3 Bombs

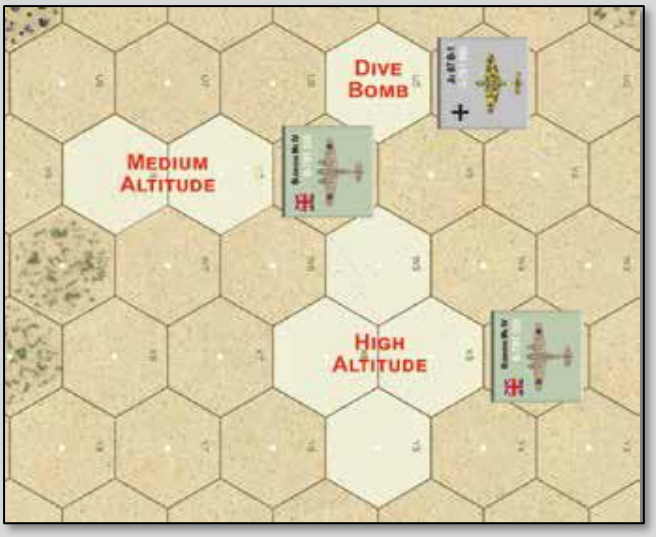
Bombs are dropped from Low, Medium or High Altitude and hit the target unit's hex immediately in front of the aircraft. Dive bomb attacks are dropped from Low Altitude. Non-dive bomb attacks are dropped from Medium or High Altitude. An Optional Rule (see 7.26) adds the chance of Bomb Scatter.

Bombs are GP weapons that have a Blast Pattern based on the Altitude of the aircraft. Dive bomb attacks affect just the target unit's hex. Bombs dropped from Medium Altitude affect the target unit's hex and the next hex. Bombs dropped from High Altitude affect the target unit's hex, the next hex, and the two adjacent hexes.

Each ground unit (friendly or enemy) or Terrain Type (see 6.5.4.4.3) that falls within the Bombing Pattern is attacked individually. Each bombing attack is considered a single attack for aircraft Ammo Limits (see 5.16.2.6) purposes no matter the number of individual ground or Terrain Types that are actually attacked.

Bombing attacks use the GP Fire procedure (see 6.5.4). The Aircraft Combat modifiers are also checked to determine their effect, if any (see 6.7.3.5). These modifiers are found on the AA/Aircraft Modifiers Table found on Game Card C (Panzer) or Game Card B (Panzer North Africa).

Bomb patterns:



6.7.3.4 Rockets

Rockets represent a salvo of multiple projectiles that are fired at an acquired target directly to the front of the aircraft. They affect just the target unit's hex.

Rockets must be launched from Low Altitude. Like ground-based GP weapons, Rockets have a GP Range Factor and a GP Factor. They have a range of 2-10 hexes.

Each ground unit or Terrain Type (see 6.5.4.4.3) in the target's hex is attacked individually. Each rocket attack is considered a single attack for aircraft Ammo Limits (see 5.16.2.6) purposes no matter the number of individual ground or Terrain Type that are actually attacked.

Rocket attacks use the GP Fire procedure (see 6.5.4). The Aircraft Combat modifiers are also checked to determine their effect, if any (see 6.7.3.5). These modifiers are found on the AA/Aircraft

Rocket hexes in range:

© 2025 GMT Games, LLC

Modifiers Table found on Game Card C (Panzer) or Game Card B (Panzer North Africa).

6.7.3.5 Aircraft Combat Modifiers

All Aircraft Combat Modifiers are cumulative with any other GP modifiers applicable to the aircraft (Damaged or Suppressed) or the target, and together is called the Net Modifier.

Unit Grade modifiers apply only to strafing and rocket Attacks. Use Extreme Range when determining Strafing Attack Unit Grade modifiers.

Attack at Low Altitude

If the aircraft is attacking from Low Altitude (strafing, dive bombing and rockets), the modifier is +20.

Attack at Medium Altitude

If the aircraft is attacking from Medium Altitude (bombing), the modifier is +10.

Attack at Fast Speed

If the aircraft is attacking at Fast Speed (any), the modifier is –20.

6.7.4 Anti-Aircraft Combat

Not all ground units have the ability to use anti-aircraft fire. Only those units with an AA row in the Gunnery section of their Data Cards may use anti-aircraft fire. If there is no AA row, the unit may not employ anti-aircraft fire. AA units must have an OW command to execute AA fire.

6.7.4.1 Anti-Aircraft Spotting

Due to their relative high speed, aircraft must be tracked (spotted) before AA units are able to fire at them.

AA units have a 360o Line-of-Sight when tracking aircraft. They may only track those aircraft, with an unblocked line-of-sight.

6.7.4.1.1 Anti-Aircraft Tracking Targets

AA units require a certain number of hexes of aircraft movement to track a target. The AA unit must have an unblocked line-of-sight to the aircraft for the entire movement requirement. Aircraft turns do not impact the acquisition requirement.

Tracking Ranges are based on the aircraft's Speed and Altitude and are found on the AA/Aircraft Spotting Table on Game Card C (Panzer) or Game Card B (Panzer North Africa) in the Track column.

The aircraft is flying Fast at Medium Altitude. To track it, an AA must have an unblocked line-of-sight to the aircraft for 6 hexes of the aircraft's movement.

AA/Aircraft Spotting (6.7.3.1)

Speed/Altitude	Acquire	Track
Slow/Low	5	2
Slow/Medium, Fast/Low	10	4
Slow/High, Fast/Medium	15	6
Fast/High	20	8

If Suppressed, double the range requirement for any new track. If Suppressed before it tracks a target, it must still meet the doubled requirement but subtracts the number of hexes already accumulated tracking the target.

Unblocked aircraft that appear on the mapboard edge are automatically acquired. The AA unit is considered to have acquired the target as it was flying up to the edge of the mapboard.

In addition to the Tracking Range, AA units must have an unblocked line-of-sight to the target aircraft during its entire Tracking Range movement. The method and determination is the same process as for determining blocking terrain for aircraft acquisition, just in reverse. If the aircraft can see the AA unit, the AA unit can see the aircraft (see 6.7.3.1.3).

All AA weapons are GP weapons. Each AA unit may take one Overwatch AA shot per turn no matter how many different aircraft they may track. AA fire must be announced. If announced after an aircraft announces its combat, the AA fire is resolved after the aircraft resolves its combat.

AA units *inside* Buildings or Improved Positions may not track or fire at aircraft.

6.7.4.1.2 AA Fields-of-Fire

AA units have a 360º Line-of-Sight when tracking aircraft. To fire at a tracked aircraft, it must fall within the AA unit's Field-of-Fire.

Turreted & Turretless 360º Vehicles & Vehicle Mounted AA (HMG) & AA (MMG)

These vehicles and weapons have all-round Fields-of-Fire for AA Fire. Some vehicles must have an Open Turret (OR) (see 7.8) for AA Fire.

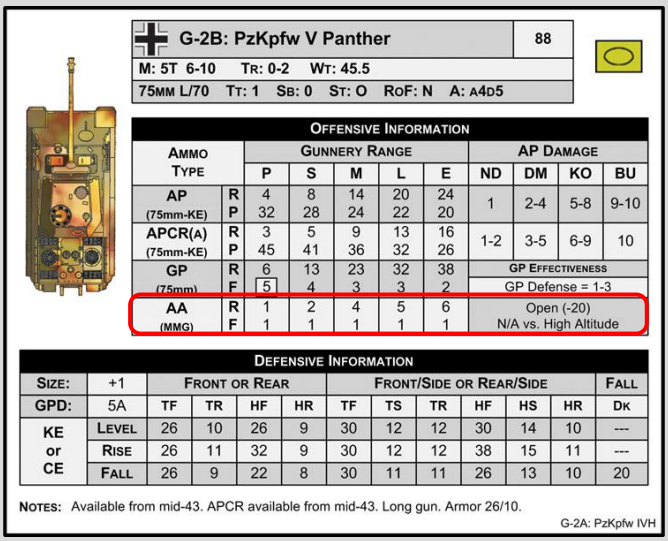
Towed Units

Towed units have a Front Field-of-Fire. Platform Gun Mounts (OR) (see 7.16) expands on this limitation.

High Altitude Restriction

Some AA units may not fire at aircraft at High Altitude. They have N/A vs. High Altitude listed.

Reference the German PzKpfw V Panther (Panzer Data Card G-2B). The PkKpfw V Panther must have an Open Turret (OR) for AA fire. The AA MMG may not fire at aircraft at High Altitude..



G-2B: PzKpfw V Panther 88

M: 5T 6-10 Tr: 0-2 Wt: 45.5

75mm L/70 Tt: 1 Sb: 0 St: O RoF: N A: A4D5

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (75mm-KE)	R	4	8	14	20	24	1	2-4	5-8	9-10
	P	32	28	24	22	20				
APCR(A) (75mm-KE)	R	3	5	9	13	16	1-2	3-5	6-9	10
	P	45	41	36	32	26				
GP (75mm)	R	6	13	23	32	38	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20)			
	F	1	1	1	1	1	N/A vs. High Altitude			

Defensive Information

Size:	+1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	5A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	26	10	26	9	30	12	12	30	14	10	---
	Rise	26	11	32	9	30	12	12	38	15	11	---
	Fall	26	9	22	8	30	11	11	26	13	10	20

Notes: Available from mid-43. APCR available from mid-43. Long gun. Armor 26/10.

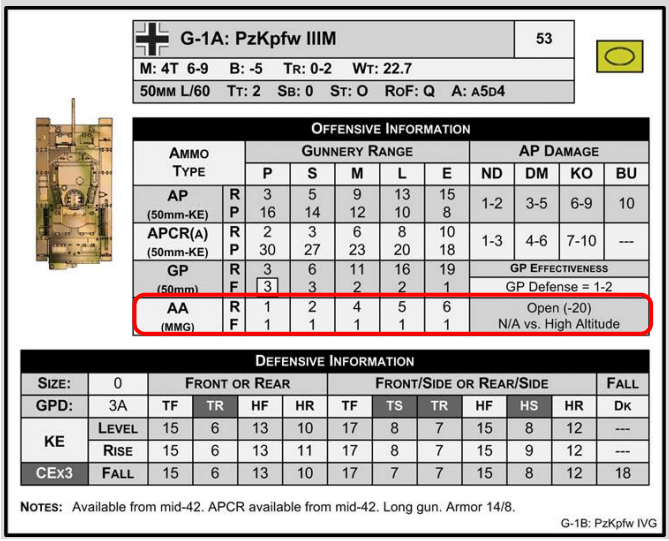
G-2A: PzKpfw IVH

6.7.4.2 AA Procedure

AA fire uses the GP Fire procedure (see 6.5.4) with the exception that Overwatch GP Fire modifiers are not applicable.

All AA Combat modifiers are cumulative with any other GP fire modifiers applicable to the AA unit and together are called the Net Modifier. These modifiers are found on the AA/Aircraft Modifiers Table found on Game Card C (Panzer) or Game Card B (Panzer North Africa).

Reference the German PzKpfw IIIM (Panzer Data Card G-1A), it has a –20 modifier for its MMG.



G-1A: PzKpfw IIIM | 53

M: 4T 6-9 B: -5 Tr: 0-2 Wt: 22.7

50mm L/60 Tt: 2 Sb: 0 St: O RoF: Q A: A5D4

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (50mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	16	14	12	10	8				
APCR(A) (50mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	30	27	23	20	18				
GP (50mm)	R	3	6	11	16	19	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			
AA (MMG)	R	1	2	4	5	6	Open (-20)			
	F	1	1	1	1	1	N/A vs. High Altitude			

Defensive Information

Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE	Level	15	6	13	10	17	8	7	15	8	12	---
	Rise	15	6	13	11	17	8	7	15	9	12	---
CEx3	Fall	15	6	13	10	17	7	7	15	8	12	18

Notes: Available from mid-42. APCR available from mid-42. Long gun. Armor 14/8.

G-1B: PzKpfw IVG

AA vs. Fast Speed or High Altitude

If the aircraft is flying at Fast Speed or at High Altitude, the modifier is –10 for each.

AA vs. Low Altitude

If the aircraft is flying at Low Altitude, the modifier is +10.

6.7.4.2.1 AA Fire Results

Aircraft are either eliminated (Effective Result), damaged (Effective Result), Suppressed, or missed (no Effect Result) as a result of AA fire.

No Effect Result

The shot missed the aircraft or did no appreciable damage; it continues its flight unabated.

Suppressed Result

The aircraft is Suppressed. Place a Suppression/On counter next to it. Suppressed aircraft are limited in both combat (see 6.5.4.3) and the ability to acquire new targets (see 6.7.3.1.1).

Effective Result – Damaged

If the final modified dice roll ends in a 5 or 10, the target aircraft is Damaged. Place a Dmgd counter next to it. Damaged aircraft are limited in combat (see 6.5.4.3). If damaged a second time, it is eliminated.

In addition, the aircraft must now fly at Slow Speed for the remainder of the current turn and future turns. If it is currently at Fast Speed it is immediately reduced to Slow Speed.

Effective Result – Eliminated

If the final modified dice roll does not end in a 5 or 10, the target aircraft is shot down and crashes. Roll (10). The result is the number of hexes the aircraft moves forward from its front facing before it crashes into the ground. Divide the result by 2 (round down) if the aircraft unit was at Low Altitude.

Each ground unit and Terrain Type occupying the crash hex is attacked individually with a GP Factor of 15. It is considered a non-small arms attack against all vehicles regardless of their GP Defense Factor. May start Fires (OR) (see 7.35).

Aircraft may never intentionally crash.

6.8 Advanced Game Adjustment Phase

Advanced Game Adjustment adds the Pivot, Full Cover, and Adjust/Remove Suppression Steps. The Adjust/Remove Counters step is expanded. Players simultaneously execute the Adjustment Steps in the order listed.

6.8.1 Pivot Step

Regardless of their commands, all dismounted leg and towed units, in any order, may change their facing to any hexside—pivot in place. Pivot does not expend movement; it is not marked with a Spot/Move counter.

6.8.2 Adjust Full Cover Step

In any order, dismounted leg units (including motorcycle, bicycle and cavalry units) and dismounted towed units freely move into or out of Full Cover, regardless of their commands.

Adjust Hasty Entrenchment counters as necessary.

6.8.3 Adjust/Remove Suppression Step

In any order, the players first attempt to remove all Suppression/Off counters from their units. The ability to recover from a Suppression is based on a unit's Unit Grade, whether it was attacked and its Command during the current turn.

Reference the Unit Grade modifiers and the Suppression Recovery Tables, both found on Game Card B (Panzer) or Game Card A (Panzer North Africa).

The base recovery range is found in the Sup'd Recvy column of the Unit Grade Modifiers Table. The terrain occupied by unit has no impact on its recovery. Roll (100) and apply any applicable Suppression modifiers found in the Suppression Recovery Table.

6.8.3.1 Adjust/Remove Suppression Modifiers

These are used exclusively and are cumulative. These modifiers do not apply to aircraft; they always use their base recovery range.

6.8.3.1.1 Command other than N/C

Units have a much greater chance of recovering from a Suppression is they attempt no actions during the turn. If the Suppressed unit has a command other than N/C marked for the current turn, the modifier is +20.

© 2025 GMT Games, LLC

6.8.3.1.2 Under Direct or Indirect Fire

If the Suppressed unit was attacked by AP or GP Direct Fire or GP Indirect Fire during the current turn; the modifier is +10. If there is any difficulty recalling which Suppressed units were attacked, mark them with Under Fire counters.

The effectiveness of the fire is not a factor, just that it occurred. It does not matter how many times a unit is attacked, just if any of these fire types occurred. It is not cumulative.

6.8.3.2 Adjust/Remove Suppression Results

If the net result falls within the listed range, the SUPPRESSION/OFF counter is removed. If the result does not fall within the listed range, the SUPPRESSION/OFF counter is retained; it is not replaced by a SUPPRESSION/ON counter.

The Situation (Panzer)

A Soviet Rifle squad, Regulars Unit Grade, marked with a SUPPRESSION/OFF counter is attempting to recover. It has a Fire command for the current turn and was subject to Direct GP Fire.

The Sup'd Recvy range for Regulars Unit Grade is 01-50. The net modifier is +30:

- *Command other than N/C +20*
- *Under any Fire +10*

The Soviet player rolls (100). The result is 29, so the net result is 59 (29+30). Since 59 does not fall within the indicated range, the Rifle squad retains its SUPPRESSION/OFF counter.

6.8.4 Adjust/Remove Counters Step

Remove all UNDER FIRE, SMOKE/OFF, and DUST/OFF counters and any Smoke/DS (OR) counter that is under its vehicle. Replace all SMOKE/ON, DUST/ON, SUPPRESSION/ON, HESITATION/ON (OR), and BREAK/ON (OR) counters with their corresponding Off counters and place any SMOKE/DS counter (OR) under the vehicle that fired it.

Credits – Panzer

Design and Development: James M. Day

Art Director, Cover Art & Package Design: Rodger B. MacGowan

Maps: Charles Kibler

Counters: James M. Day, Pascal Da Silva and Mark Simonitch

Rulebooks: Charles Kibler

Scenario Book: Mark Simonitch

Playtesters: Jay Wissmann, Michael Craighead, Rob Doane, Craig Taylor, Jeff Billings, and many others

Proofreaders: Hans Korting, Jay Wissmann, Bob Schindler, and Robert Delwood

Production Coordination: Tony Curtis

Producers: Tony Curtis, Rodger MacGowan, Andy Lewis, Gene Billingsley, and Mark Simonitch

Credits – Panzer North Africa

Design and Development: James M. Day & Fernando Sola Ramos

Art Director: Justin Martinez & Mark Simonitch

Layout: Charles Kibler

Map Art: Charles Kibler

Counter Art: James M. Day, Dariusz Buraczewski, and Mark Simonitch

Playtesters: Art Bennett, Charles Coleman, Brett Dedrick, Rob Doane, Matt Dobbs, Jeff Donigian, Philippe Jathan, John Lawton, Pete Maidhof, Big Bob Miller, Alan Sawyer, Mike Sinnott, Keith Tracton, and Jay Wissmann

Original Playtest Support: Craig Taylor

VASSAL Development and Support: Rob Doane

Production Coordination: Kai Jensen

Producers: Tony Curtis, Rodger MacGowan, Andy Lewis, Gene Billingsley, and Mark Simonitch

Consolidated Rules: Fernando Sola Ramos

Latest update: May 2025

© 2025 GMT Games, LLC

7.0 Optional Rules

Optional Rules should be thought of as nothing more than that—optional. While typically adding more depth or realism to certain aspects of the game, many of them come with a cost—greater complexity and/or record keeping—and therefore increase play time.

There is no requirement to employ any or all of the Optional Rules. They each stand on their own merits and are not necessarily interdependent.

7.1 Morale

"The worst cowards, banded together, have their power." ~ Homer, The Iliad

Morale is a descriptive term used to convey the overall status of a formation's ability to stand in a fight. Keep in mind that a formation's morale is totally different from its Grade. Grade, at the Force, Formation or Unit level, is a measure of skill and training, while Morale is a measure of relative stability in the face of the enemy.

Two key elements make up the Morale System: the Numeric Cohesion Point and the Break Point. The Numeric Cohesion Point should be thought of as the trigger point. Until it is reached, a formation functions normally in all respects, although certain special events may cause a unit to take a Morale Check. After the Numeric Cohesion Point is reached, the units within a formation become more likely to break with each passing turn.

The Break Point is a representation of probability of a unit's breaking. Breaking is not automatic. Some units have a greater chance of breaking than others. Once a unit breaks, it is severely limited in its ability to function and must recover before it can again function normally.

A third element also comes into play: Hesitation. A unit may not break, but it is not quite certain of its situation; it is Hesitating. The addition of this element or status removes breaking as an all or nothing situation. The impact of Hesitation is not as severe as breaking. In addition, units automatically recover from Hesitation.

While a formation's units are more effective when operating within Command Range of non-command units, this can have just the opposite effect once morale starts to break down. Fear, the inability to function effectively, or whatever breaking actually represents, unfortunately breeds more of the same. Breaking has a tendency to cascade through a formation once it starts; units see other broken units and more often than not decide to join the fray.

When employing the Morale Option, players must record each formation's Morale information on a Formation Summary. List the Formation's name and circle its Numeric Cohesion Point in the Cohesion Point Box for that formation.

7.1.1 Cohesion Point

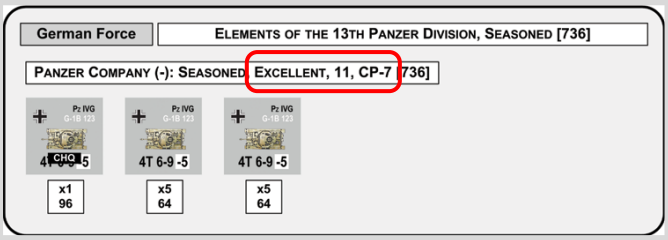
The Cohesion Point is an expression of a formation's initial unit composition. It is presented as a descriptive term as one of nine possible levels from Superb (the best) to Poor (the worst). That information is then translated into the formation's Numeric Cohesion Point listed as CP #.

Only Combat units are counted when determining a formation's Numeric Cohesion Point. The loss of non-combat units does not count toward a formation's Cohesion Point.

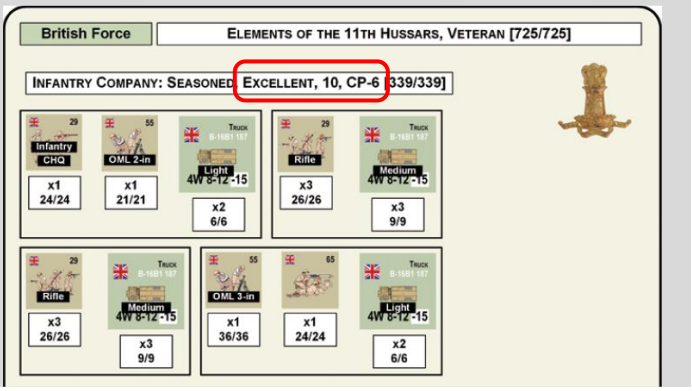
However, all units in a formation, whether combat or non-combat, are subject to Morale Checks.

Scenarios indicate each formation's Cohesion Point and Numeric Cohesion Point.

Reference Scenario 1 (Panzer), The Crossings: Ukraine, late 1943. The German Panzer Company (-) has a Cohesion Point of Excellent and a Numeric Cohesion Point of CP-7.



Reference Scenario 47 (Panzer North Africa), The Frontier Wire: Raid on Sidi Omar, Libyan-Egyptian Border, 12 June 1940. The British Infantry Company has a Cohesion Point of Excellent and a Numeric Cohesion Point of CP-6.



Use the Determining the Cohesion Point process (see 7.1.1.1) to vary a scenario's listed Cohesion Point or when creating scenarios.

7.1.1.1 Determining the Cohesion Point

Reference the Cohesion Point and Numeric Cohesion Point Tables on Game Card C (Panzer) or Game Card B (Panzer North Africa). The Cohesion Point is calculated by rolling (100) and by combining the modifiers listed on the Cohesion Point Table for the correct nationality/time period and then adding any adjustments for Formation Grade from the Cohesion Modifiers Table.

© 2025 GMT Games, LLC

The result is then checked on the Numeric Cohesion Point Table to determine the actual Numeric Cohesion Point. It is read in the same manner as the Available Commands Table (see 6.2.1.1.1).

The period is early-42 for a Soviet Veteran formation fielding 17 combat units. The Soviet player rolls (100); the result is a 63. The Soviet Nationality modifier of –20 is added to the Veteran Formation modifier of +10 resulting in a total modifier of –10. The net result is 53 (63-10).

COHESION POINT (7.1.1)

NATION	YEAR					
	'40	'41	'42	'43	'44	'45
SOVIET	---	-30	-20	-10	0	0
GERMANY	+30	+25	+20	+15	+10	0
USA*	---	---	-20	-10	0	+10
UK	-20	-10	0	0	0	+10
FRANCE	-20	0	0	0	0	0
ITALY	-30	-20	-20	-30	---	---

* USA -20 also in early-43.
For Germany, USA, UK or France '44+, no more than ± 2 levels. For Soviet, France '40 or Italy, no more than +1 level; may decrease to any level.

COHESION MODIFIERS (7.1.1)

GRADE	MODIFIER
ELITE	+20
VETERAN	+10
SEASONED	---
REGULARS	-10
GREEN	-20

NUMERIC COHESION POINT (7.1.1)

MORALE	FACTOR	1	2	3	4	5	6	7	8	9	10
SUPERB	91+	1	2	2	3	4	5	6	6	7	8
EXCEPTIONAL	86-90	1	1.5	2	3	4	4.5	5	6	7	7.5
OUTSTANDING	76-85	1	1	2	3	4	4	5	6	6	7
SUPERIOR	66-75	1	1	2	2.5	3	4	4.5	5	6	6.5
EXCELLENT	56-65	1	1	2	2	3	4	4	5	5	6
GOOD	46-55	0.5	1	2	2	3	3	4	4.5	5	5.5
ADEQUATE	36-45	1	1	2	2	3	3	4	4	5	5
FAIR	26-35	0.5	1	1	2	2	3	3	3.5	4	4.5
POOR	25 OR LESS	0	1	1	2	2	2	3	3	4	4

On the Numeric Cohesion Point Table, 53 is found in the 46-55 row; the Soviet Veteran formation is considered to have Good Morale.

Since the formation has 17 combat units, add the values found under the 10 and 7 columns. The final result is 9.5 (rounded down). 9 is the Numeric Cohesion Point.

NUMERIC COHESION POINT (7.1.1)

MORALE	FACTOR	1	2	3	4	5	6	7	8	9	10
SUPERB	91+	1	2	2	3	4	5	6	6	7	8
EXCEPTIONAL	86-90	1	1.5	2	3	4	4.5	5	6	7	7.5
OUTSTANDING	76-85	1	1	2	3	4	4	5	6	6	7
SUPERIOR	66-75	1	1	2	2.5	3	4	4.5	5	6	6.5
EXCELLENT	56-65	1	1	2	2	3	4	4	5	5	6
GOOD	46-55	0.5	1	2	2	3	3	4	4.5	5	5.5
ADEQUATE	36-45	1	1	2	2	3	3	4	4	5	5
FAIR	26-35	0.5	1	1	2	2	3	3	3.5	4	4.5
POOR	25 OR LESS	0	1	1	2	2	2	3	3	4	4

Any unit of this Soviet Veteran formation may break when it accumulates 9 or more combat unit casualties.

Consider all factors above the same, but with a formation of 24 combat units. Add the values found under the 10x2 and 4 columns. The final result is 13, the Numeric Cohesion Point.

When varying the listed Cohesion Pont in an existing scenario, certain limitations apply:

For German, USA (Late '43+), French (1944+) or UK formations, do not increase or decrease the listed Cohesion Point by more than two levels.

If the listed Cohesion Point is Excellent, do not increase it above Outstanding or below Adequate.

For Soviet, USA (1942-Early '43), French (1940) or Italian formations do not increase the listed Cohesion Point by more than one level; it may decrease to any level.

If the listed Cohesion Point is Excellent, do not increase it above Superior. However, it may fall all the way to Poor.

As an added twist, wait to determine the Cohesion Point until a formation suffers it first loss. That way players are unsure of a formation's Cohesion Point until a battle is engaged, a much more realistic situation.

7.1.1.2 Tracking the Cohesion Point

As a formation suffers combat unit losses, check off one number, starting at 1, for each of its eliminated *combat* leg or towed units (the reduction of a squad to a half-squad is not recorded) and each of its *combat* vehicles Bailed Out, Knocked Out or Brewed Up (Track or Damaged results are not recorded). Artillery and aircraft losses do not count.

Once a formation's recorded losses reach its Numeric Cohesion Point its remaining combat and non-combat units are subject to Breaking.

7.1.2 Normal Morale Check

Once a formation equals or exceeds its numeric Cohesion Point, all combat or non-combat units from the formation must immediately take a Morale Check whenever a unit:

- Moves from its current hex.
- Is attacked by Direct or Indirect Fire, or any air attack.
- Is attacked by Overrun, Close Assault, or Hand-to-Hand combat.
- Has a formation vehicle Brew Up in the same hex.
- Has a formation *command* unit eliminated that is within Command Range (see 6.2.1.1.2). The command unit must be in the unit's chain of command, e.g., if a unit is part of company A it is not affected if a command unit from company B is eliminated. However, it is affected if its battalion or higher command unit is eliminated. This requirement also applies to command units if a higher level command unit is eliminated.
- Is a leg or towed unit that has a formation leg or towed unit eliminated by Overrun or Hand-to-Hand combat in the same hex.

All Morale Checks are taken at the completion of the triggering event, e.g., a move is completed or the Hand-to-Hand combat has determined a victor.

7.1.3 Forced Morale Check

If a unit's formation has not yet reached its Cohesion Point, combat and non-combat units are required to immediately take a Morale Check whenever a unit:

- Receives a flame attack as part of Close Assault or Hand-to-Hand combat.
- Is attacked by Overrun combat, except if occupying an Improved Position or Building hex.
- Has a formation *command* unit eliminated that is within Command Range (see 7.1.2).

© 2025 GMT Games, LLC

- Is a leg or towed unit that has a formation leg or towed unit eliminated by Overrun or Hand-to-Hand combat in the same hex.

Once a formation reaches its Numeric Cohesion Point, all of its units follow the Morale Check conditions (see 7.1.2).

7.1.4 Morale Check Procedure

The Break Point Table on Game Card C (Panzer) or Game Card B (Panzer North Africa) is used whenever a unit takes a Morale Check. The row on the table that corresponds to the unit's nationality is used to determine if the unit Breaks, Hesitates or is unaffected by the Morale Check.

If a unit Breaks it is marked with a BREAK/ON counter; if it Hesitates, it is marked with a HESITATION/ON counter. If a Broken unit receives a Hesitation result, it retains its current Break status (On or Off) instead.

Roll (100) and apply all applicable modifiers:

Elite Unit Grade
If the unit's Unit Grade is Elite, the modifier is +20.

Veteran Unit Grade
If the unit's Unit Grade is Veteran, the modifier is +10

Regulars Unit Grade
If the unit's Unit Grade is Regulars, the modifier is –10.

Green Unit Grade
If the unit's Unit Grade is Green, the modifier is –20.

In Medium Cover
If the unit is in Medium Cover, the modifier is +10.

In Heavy Cover
If the unit is in Heavy Cover, the modifier is +20.

Unbroken Command Unit in Cmd Rng
If an unbroken (it may be Hesitating, Suppressed or Damaged) *command* unit from the unit's formation (see 7.1.2) is within Command Range, the modifier is +20.

The maximum is +20 no matter how many command units are within Command Range.

Suppressed or Damaged
If the unit is Suppressed or Damaged, the modifier is –20 each.

Forced Morale Check
If the unit is taking a Forced Morale Check, the modifier is +20.

Broken unit from Formation in Cmd Rng
If any Broken unit from the same formation is in Command Range of the unit, the modifier is –10.

Spotted Unit within 2 Hexes
If there is a spotted opposing unit within 1 or 2 hexes, the modifier is –20.

Spotted Unit within 5 hexes
If there is a spotted opposing unit within 3, 4 or 5 hexes, the modifier is –10.

Suppressed and Full Cover units are less able to spot units. Ignorance is bliss.

Command other than N/C
If the unit has a command other than N/C marked for the current turn, the modifier is –20.

7.1.5 Morale Check Results

If a unit Breaks or is Hesitating, it is subject to the following limitations until it recovers.

7.1.5.1 Hesitating

Any unit with a HESITATION/ON or HESITATION/OFF counter has the following limitations:

- If employing Direct or Indirect Fire, applies the following modifiers:
  - o –3 to all AP combat
  - o –10 to all GP combat
- May not initiate Overrun, Close Assault or Hand-to-Hand combat.
- If in Hand-to-Hand combat, the modifier is –10.
- Moves at normal speed; automatically changed to HESITATION/ON if currently HESITATION/OFF.
- For Called or continuous Indirect Fire response, the modifier is 1.
- Vehicle crew checking for Bail Out, the modifier is –10.

7.1.5.2 Broken

Any unit with a BREAK/ON or BREAK/OFF counter has the following limitations:

- Does not count as an active unit for command purposes; have their command span reduced to 0.
- Applies a –2 spotting modifier by moving 2 down on the table.
- If employing Direct or Indirect Fire, applies the following modifiers:
  - o –5 to all AP combat
  - o –20 to all GP combat
- May not initiate Overrun, Close Assault or Hand-to-Hand combat.
- If in Hand-to-Hand combat– the modifier is –20.
- Moves at ½ speed (round down); this is cumulative with other movement modifiers. Automatically changed to BREAK/ON if currently BREAK/OFF.
- For Called or Continuous Indirect Fire Response, the modifier is –2.
- Vehicle crew checking for Bail Out, the modifier is –20.

The Situation (Panzer North Africa)

A German Rifle squad, Veteran Unit Grade, located in a Scrub hex was just Overrun by a British Crusader II. It was Suppressed. The British tank is now adjacent to and is now off to the rear/side of the German Rifle squad. The German formation is not yet at its

© 2025 GMT Games, LLC

Cohesion Point. An unbroken command unit from its formation is within Command Range directly to its rear.

Due to the fact that the German Rifle squad was Overrun, it must make an immediate Forced Morale Check even though its formation is not yet at its Cohesion Point.

The net modifier is +30:

- *Veteran Unit Grade (+10)*
- *Suppressed (–20)*
- *Unbroken command unit within Cmd Rng (+20)*
- *Forced Morale Check (+20).*

The Spotted Unit within 2 Hexes modifier is not applied since the German Rifle squad is Suppressed, and Suppressed units may only spot directly to their front. The Crusader II is not within its line-of-sight.

The German player rolls (100). The result is 36; the net result is a 66 (36+30). Since 66 falls within the Hesitation Range (51-70) on the German row on the Break Point Table, the German Rifle squad is marked with a Hesitation/On counter.

BREAK POINT (7.1.4)

NATION	BREAK	HESITATE
SOVIET	01-40	41-60
GERMANY	01-50	51-70
USA	01-60	61-80
UK	01-60	61-80
FRANCE '40	01-70	71-90
FRANCE '41+	01-60	61-80
ITALY	01-70	71-90

7.1.6 Recovery

During the Adjustment/Remove Morale Counters Step of the Adjustment Phase units may attempt to Recover.

7.1.6.1 Hesitation Recovery

All units with HESITATION/OFF counters automatically recover; remove the counters.

7.1.6.2 Break Recovery

All units with BREAK/OFF counters may attempt to recover. This is just like suppression recovery, but in this case, all units have a base recovery range of 51-00 regardless of Unit Grade. If a unit recovers, remove the counter.

Roll (100) and apply all applicable modifiers (see 7.1.4).

7.2 Hidden Units

In board wargames, it is often very difficult to maintain the element of surprise and concealment when all on-map units are displayed in full view. It is also a very difficult and time consuming process to plot hidden movement either before the start of a scenario, or, for that matter, during a scenario.

This option helps to bridge the gap between fully open deployment and plotting hidden units.

7.2.1 Hidden Unit Counters

As dictated by a scenario's Special Conditions one or both forces' ground units may start a scenario Hidden; replaced by a HIDDEN UNIT counter. These counters are provided in two sets, red and gray. Assign one color to one side and the other color to the other side.

A Hidden Unit counter may be used to represent nothing, a fake position to fool the opposing side, or one or more units from the *same* formation. A HIDDEN UNIT counter may not represent units from different formations.

7.2.2 Placing Hidden Unit Counters

For HIDDEN UNIT counters that actually represent one or more units, place the counter in any legal hex. A counter may be used to represent a mix of vehicle, towed and leg units or just one particular type. The number of HIDDEN UNIT counters on the mapboard may not exceed the designated limit in a scenario.

Place the hidden units on the Turn Track, Transport & Summary and Hidden Unit Card in the box that corresponds to the number on the HIDDEN UNIT counter. Place the card in a secure location away from the prying eyes of the opposing players. The hex of the HIDDEN UNIT counter represents the actual location of at least one of the hidden units.

For fake HIDDEN UNIT counters, just place it on the map board in any legal hex. Obviously, no units are placed on the hidden unit card.

7.2.2.1 Spotting Hidden Units

Players spot HIDDEN UNIT counters just like any other ground units. The actual position of the units around a counter is not known until the units are placed on the mapboard, so the counter itself is used for spotting determination. If a counter is spotted, all of the units represented by that counter are placed on the mapboard whether or not all of the units could actually be spotted.

The unit type represented by a HIDDEN UNIT counter that affords the greatest spotting range is used when determining spotting.

If a HIDDEN UNIT counter represents 1 vehicle and 10 leg units, the vehicle is still used when determining spotting range.

At least one hidden unit of the type spotted must be placed in the hex occupied by the HIDDEN UNIT counter. The remainder of the units may be placed in that hex or any legal hex (by not crossing impassable terrain) within Command Range of the counter; units may face in any direction.

Players may treat fake counters as any unit type, vehicle, towed or leg. However, when an opposing unit reaches the range at which even a leg unit would be spotted, the owning player must reveal the HIDDEN UNIT counter as a fake.

7.2.2.2 Moving Hidden Unit Counters

Players may move HIDDEN UNIT counters just like regular ground units. If the counter represents one or multiple types, it may not move faster than the Movement Factor of the slowest hidden unit.

Hidden units may mount or dismount following the normal rules for those actions. Moving HIDDEN UNIT counters are subject to greater spotting ranges just like visible units. Hidden units may enter Full Cover.

© 2025 GMT Games, LLC

Fake counters may move as if they were any unit type. However, if a fake counter moves at a rate that would suggest it is a vehicle, it can not then be treated as a towed or leg unit for spotting purposes.

7.2.2.3 Revealing Hidden Unit Counters

With the exception of Indirect Fire, any hidden unit that engages in any other form of combat is automatically revealed and *all* units represented by the HIDDEN UNIT counter are placed on the mapboard (see 7.2.2.1). Units that either observe for or engage in Indirect Fire are not revealed by that fire.

Any HIDDEN UNIT counter that is the target of Indirect Fire or an Aircraft bomb or rocket attack is automatically revealed and all units represented by the HIDDEN UNIT counter are placed on the mapboard (see 7.2.2.1).

7.2.3 Adding Hidden Unit Counters

While not quite as mysterious as units that start a scenario hidden, players may, during the course of a scenario, hide units that are not currently spotted by removing them from the mapboard and replacing them with one or more HIDDEN UNIT counters. These units must still be from the same formation. Fake counters may also be added. The number of existing and new HIDDEN UNIT counters may not exceed the designated limit.

7.3 Platoon & Section Command Control

Only combat units and *activated* unarmed units that are all from the same Platoon, Section or Troop (UK) Formation and are within Command Range of one another may utilize the same unique Command counter. Units from other platoons, sections or troops, including noncommand HQ units, even if they are part of the same formation may not share the same command.

Command units from the same formation, at any level, may share commands with subordinate platoons or sections, e.g., regimental Command units may share a command with a platoon or section unit in their regiment.

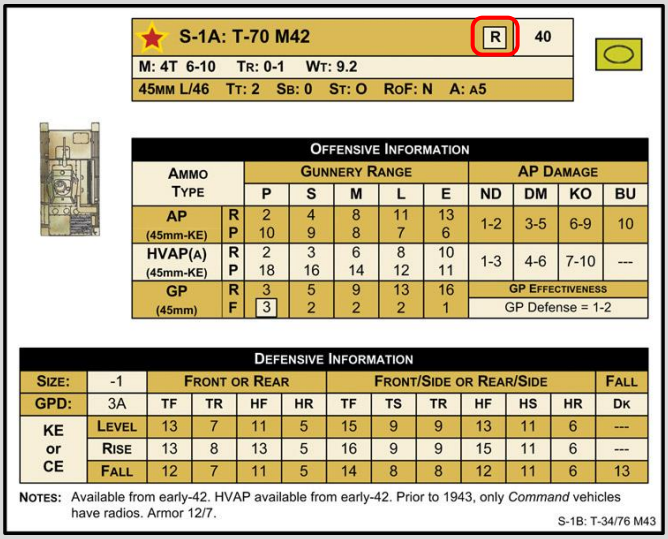
The command unit must be in the unit's chain of command, e.g., if a unit is part of company A it may not share with a command unit that is from company B.

Utilization of this option requires the players to document the Formation organization for each platoon and section. The unit numbers for each platoon or section should be noted on the Formation Summary.

7.4 Without Radio Sets

In the early stages of the war, and even throughout the war, many vehicles were not equipped with radio sets or were only equipped with rudimentary Morse code sets. This greatly limited their tactical flexibility, forcing the vehicles to fight and move in close proximity to one another. Those vehicles without radio sets have an R notation listed in the Unit Identifier section of their Data Cards.

Reference Data Card S-1A (Panzer), the Soviet T-70 M42 has the without radio set notation.



S-1A: T-70 M42 | R | 40

M: 4T 6-10 TR: 0-1 WT: 9.2

45MM L/46 TT: 2 SB: 0 ST: O ROF: N A: A5

OFFENSIVE INFORMATION

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (45mm-KE)	R	2	4	8	11	13	1-2	3-5	6-9	10
	P	10	9	8	7	6				
HVAP(A) (45mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	18	16	14	12	11				
GP (45mm)	R	3	5	9	13	16	GP Effectiveness			
	F	3	2	2	2	1	GP Defense = 1-2			

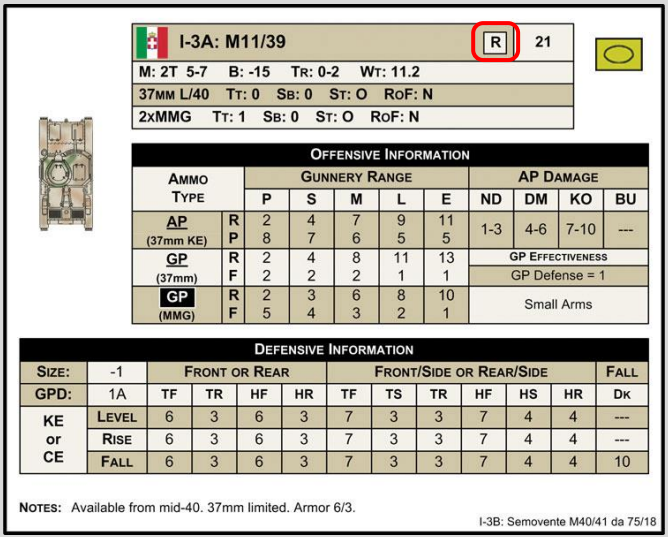
DEFENSIVE INFORMATION

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	Level	13	7	11	5	15	9	9	13	11	6	---
	Rise	13	8	13	5	16	9	9	15	11	6	---
	Fall	12	7	11	5	14	8	8	12	11	6	13

NOTES: Available from early-42. HVAP available from early-42. Prior to 1943, only *Command* vehicles have radios. Armor 12/7.

S-1B: T-34/76 M43

Reference Data Card I-3A (Panzer North Africa), the Italian M11/39 has the without radio set notation.



I-3A: M11/39 | R | 21

M: 2T 5-7 B: -15 TR: 0-2 WT: 11.2

37MM L/40 TT: 0 SB: 0 ST: O ROF: N

2xMMG TT: 1 SB: 0 ST: O ROF: N

OFFENSIVE INFORMATION

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (37mm KE)	R	2	4	7	9	11	1-3	4-6	7-10	---
	P	8	7	6	5	5				
GP (37mm)	R	2	4	8	11	13	GP Effectiveness			
	F	2	2	2	1	1	GP Defense = 1			
GP (MMG)	R	2	3	6	8	10	Small Arms			
	F	5	4	3	2	1				

DEFENSIVE INFORMATION

Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	Level	6	3	6	3	7	3	3	7	4	4	---
	Rise	6	3	6	3	7	3	3	7	4	4	---
	Fall	6	3	6	3	7	3	3	7	4	4	10

NOTES: Available from mid-40. 37mm limited. Armor 6/3.

I-3B: Semovente M40/41 da 75/18

Many of these vehicles were later fitted with radio sets or command vehicles of their type were equipped with radio sets. The Notes section of their Data Cards lists these exceptions.

7.4.1 Spotting Limitation

Vehicles from one platoon, section or troop (UK) may not hand off spotted targets (see 4.1.1) to or receive spotted targets from units from a different platoon, section or troop (UK).

7.4.2 Command Limitation

Vehicles from the same platoon, section or troop (UK) must share the same Command counter no matter the number of available commands. Their Command Range is treated as 0 regardless if their Formation Grade is Seasoned, Veteran or Elite.

If a tank suffers a track hit the remaining platoon members may leave it behind (see 6.5.2.2.1). Damaged vehicles may not be separated from the platoon. If a platoon member suffers a track hit,

© 2025 GMT Games, LLC

in later turns, it may be assigned a command up to limits of what is available to the company.

Recon vehicles maintain all of their special abilities with the exception of the Observer Limitation (see below).

7.4.3 Observer Limitation
Vehicles may not call Indirect Fire or observe targets for aircraft.

7.4.4 Morale Limitation
To receive the modifier associated with the presence of an unbroken command unit, that command unit, regardless if it is equipped with a radio set, must occupy the same hex as the vehicle taking a morale check.

Some of the early war tactical advantages demonstrated by the German forces can be attributed to the wise installation of radio sets in their vehicles.

7.5 Soviet Early War Communications
When the Germans invaded the Soviet Union in 1941, the Soviet communications network was somewhat primitive, lacking an adequate number of radios and also challenged with having to manage poor indirect fire integration.

To model these limitations, for scenarios set in 1941, Soviet Observers should apply a –2 modifier to all Indirect Fire calls. For scenarios set in 1942, Soviet Observers should apply a –1 modifier to all Indirect Fire calls. Planned Indirect Fire is unaffected by these limitations.

For any scenario, the players certainly could determine that better supplied or trained Soviet units are available during 1941 or 1942 and not apply or adjust these modifiers.

7.6 Tank Fright
Prior to executing Close Assault attacks, leg units must first pass a Forced Morale Check (see 7.1.3). This option applies to all forces in 1941. At their discretion, players may also apply this option at any time during the war to leg units with Green Unit Grade.

This Morale Check does not use the Spotted Unit Morale Check modifiers. All of the other listed Break Point modifiers are applicable.

Units executing an Advancing Attack (see 6.6.1.1) conduct this Morale Check prior to executing the move. The Tank Fright Morale Check does not in and of itself trigger Overwatch Fire, the unit must still actually move.

If the Morale Check result is *Break*, mark the unit with a SUPPRESSED/ON counter instead. If the result is *Hesitate*, mark the unit with a SUPPRESSED/OFF counter instead. If the unit passes the Morale Check, it conducts the Close Assault normally.

7.7 Limited Spotting
The absolute nature of spotting a target unit is a chance situation, especially as spotting ranges increase. With this option players must attempt to spot units when the spotting range is greater than 1; units at a range of 1 are still automatically spotted.

7.7.1 Spotting Ranges
The ability to spot is based on the spotting unit's Unit Grade and its range to the target unit. Reference the Spotting (OR) Table on Game Card A (Panzer) or Game Card B (Panzer North Africa).

For each Unit Grade, two values are listed: if the spotting range is equal to or less than ½ of the maximum spotting range (round down) use the first value; for ranges greater than ½ up to the maximum range use the second value.

If more than one friendly unit is attempting to spot the same opposing unit, utilize the friendly unit that has the greatest probability of actually spotting the target unit since only one attempt is made to spot a unit; each spotting unit does not roll individually. However, for each unit attempting to spot the same target unit, apply a +10 modifier to the attempt. A spotted target is handed off to other friendly units as long as the target unit is within their maximum spotting range.

Roll (100) if the result is less than or equal to the listed value, it is spotted. Failure does not cancel Overwatch Fire.

Two German PzKpfw IIIMs, Veteran Unit Grade, are both attempting to spot a Soviet T-34/76 M42 located in a Woods hex at a range of 4 hexes. Since the spotting range of 4 hexes is greater than ½ of 7, the German player must roll (100) with a result of 70 or less (60+10) to spot the T-34/76 M42.

SPOTTING (7.7)

GRADE	SPOTTING	MAX
ELITE	90/70	5
VETERAN	80/60	4
SEASONED	70/50	3
REGULARS	60/40	2
GREEN	50/30	1

Units at range 1 are auto spotted.
#/ up to ½ x Spotting Range
/# > ½ up to Max Spotting Range.
+10 for each additional unit.
Recon unit: +10

7.7.2 Maximum Spots
A subset of this option limits the total number of spotted units a single unit is able to maintain. This limitation is also based on its Unit Grade.

Reference the Spotting (OR) Table on Game Card A (Panzer) or Game Card B (Panzer North Africa). The value listed in the Max column is the maximum number of spots a unit of any particular Unit Grade may individually maintain including hand-offs. Any spots in excess of the Max value are ignored or must be removed.

© 2025 GMT Games, LLC

7.8 Turrets

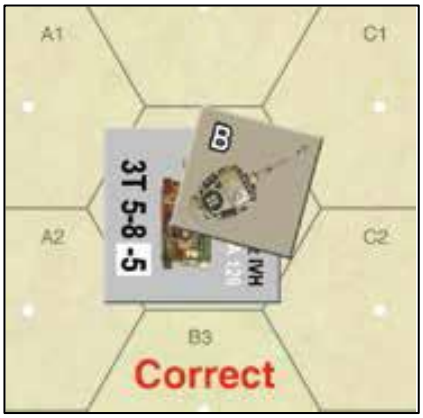
This option adds moveable Turret counters for vehicles. Turret counters display an image of either a German, Italian, or a British turret, but any may be utilized as there is no functional difference between the three types. The front side of the counter designates Open turrets while the reverse B side designates Buttoned-up turrets.

The use of Turret counters enables turreted vehicles to face their turrets to different hexsides from their hulls. This presents a more realistic game model as turreted vehicles may only direct fire at targets that fall within their turret's Field-of-Fire (60°). It also enables them to minimize the impact of the Overwatch Adjust modifier by positioning their turrets to cover specific areas.

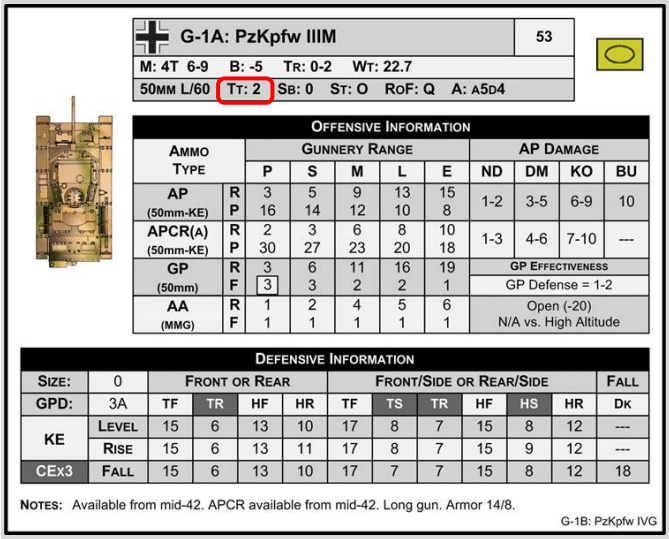
Whether a turret is open or buttoned-up also impacts the potential damage sustained from GP Fire by A-Type vehicles.

7.8.1 Adjust Turrets

Like vehicle counters, turrets must face a specific hexside. They are adjusted during movement and/or the Adjust Turret Step of the Adjustment Phase. The maximum number of hexsides a turret may turn is equal to its TT Factor found in the Weapon Data row of its Data Card. TT Factors range from 1 to 3. Turretless vehicles have a factor of 0.



Reference Data Card G-1A (Panzer), the German PzKpfw IIIM's TT Factor is 2. Its turret may turn 1 or 2 hexsides.



G-1A: PzKpfw IIIM | 53

M: 4T 6-9 B: -5 TR: 0-2 WT: 22.7

50MM L/60 TT: 2 SB: 0 ST: O ROF: Q A: A5D4

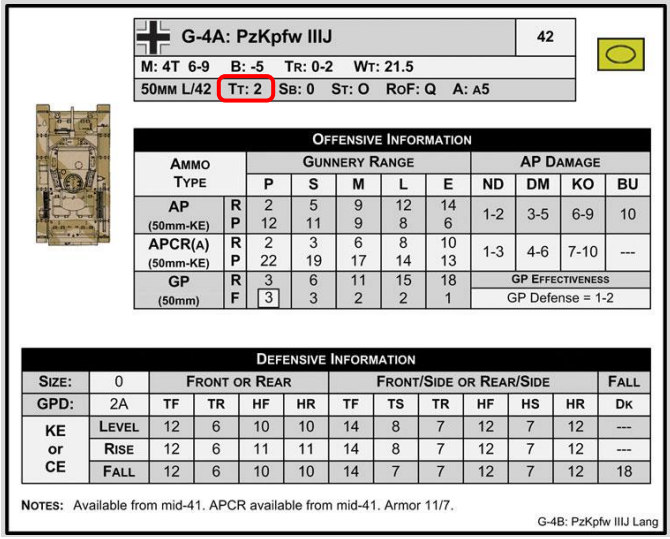
Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (50mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	16	14	12	10	8				
APCR(A) (50mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	30	27	23	20	18				
GP (50mm)	R	3	6	11	16	19	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE	Level	15	6	13	10	17	8	7	15	8	12	---
	Rise	15	6	13	11	17	8	7	15	9	12	---
CEx3	Fall	15	6	13	10	17	7	7	15	8	12	18

Notes: Available from mid-42. APCR available from mid-42. Long gun. Armor 14/8.

G-1B: PzKpfw IVG

Reference Data Card G-4A (Panzer North Africa), the German PzKpfw IIIJ's TT Factor is 2. Its turret may turn 1 or 2 hexsides.



G-4A: PzKpfw IIIJ | 42

M: 4T 6-9 B: -5 TR: 0-2 WT: 21.5

50MM L/42 TT: 2 SB: 0 ST: O ROF: Q A: A5

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (50mm-KE)	R	2	5	9	12	14	1-2	3-5	6-9	10
	P	12	11	9	8	6				
APCR(A) (50mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	22	19	17	14	13				
GP (50mm)	R	3	6	11	15	18	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1-2			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE or CE	Level	12	6	10	10	14	8	7	12	7	12	---
	Rise	12	6	11	11	14	8	7	12	7	12	---
	Fall	12	6	10	10	14	7	7	12	7	12	18

Notes: Available from mid-41. APCR available from mid-41. Armor 11/7.

G-4B: PzKpfw IIIJ Lang

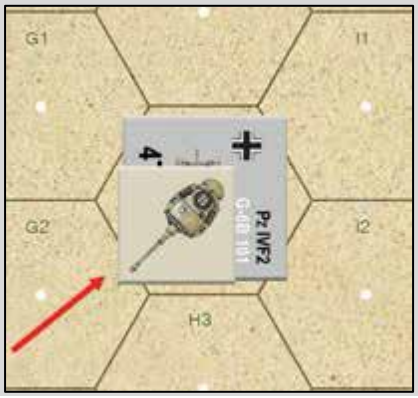
As a vehicle moves, it may adjust its turret up to its listed TT Factor for each new hex entered or maintain its turret's facing in relation to its hull. The non-phasing player may fire eligible units in Overwatch at any time while the phasing player adjusts a turret, by simply interrupting the phasing player, prior to or after a turret adjustment. Tracked vehicles retain their listed TT Factor. A Damaged vehicles' TT Factor is reduced to 1 if not already a 1.

7.8.2 Turreted Vehicle Hit Locations

When a vehicle is hit by AP Direct Fire, its turret may have the same or a different Hit Angle than its hull. When determining the Hit Location, if the Hit Location is a Hull Hit, continue on to the next step.

However, if the result is a Turret Hit, an additional check is made. If the Turret's Hit Angle is the same as the Hull's Hit Angle continue on to the next step. However, if it is not, determine its Hit Angle and apply the same result (the dice are not rolled again) against the Turret's Hit Angle.

A German PzKpfw IVF2, Data Card G-6B (Panzer North Africa), Level Shot Hit Angle is Rear/Side. The British player rolls (100) the result is 39. The Hit Location is TR. However, the German tank's turret is actually positioned on its Hull's Rear/Side directly facing the British unit making the Turret's Hit Angle Front. The Hit Location is now TF. The Armor Value is 12 as opposed to 9, a 133% advantage.



7.8.3 Open & Buttoned Up Turrets

A-Type vehicle turrets are positioned as Open or Buttoned Up. This Turret status is selected during the Adjust Turret Step of the Adjustment Phase and applies to the entire next turn. Turret status may not change during a turn.

Non-turreted A-Type vehicles may Button Up; they just, of course, do not adjust their turrets. There are turreted P-Type vehicles; however, they never Button Up.

Turret status affects a vehicle's ability to spot targets and the impact of Direct or Indirect GP Fire and Aircraft Combat. Vehicles with Open Turrets spot normally, but are more susceptible to GP Fire and Aircraft Combat. Vehicles with Buttoned Up turrets have spotting limitations, but resolve GP Fire normally.

Vehicles with Buttoned Up turrets must apply a –1 Spotting modifier by moving 1 row down on the table.

Vehicles with Open Turrets may suffer increased damage from GP Fire. AP Direct Fire is not affected.

- With non-small arms fire with an Effective Result, the vehicle is Damaged if the shooter's maximum GP Effectiveness Factor is less than the vehicle's GP Defense.
- With small arms fire with an Effective Result at Point Blank Range, the vehicle is Damaged.

7.8.4 Overwatch Fire

If the firing vehicle is executing Overwatch Fire at a target located outside of the turret's Field-of-Fire—the modifier is –3. Based on its TT Factor, the turret must be able to adjust its facing a number of hexsides to place the target within its Field-of-Fire. This becomes the turret's new facing.

Again, the Target Moving modifier is also applicable in addition to this modifier if triggered by movement.

7.9 Smoke Dischargers

Vehicles equipped with Smoke Dischargers (see 5.16.2) may create a smoke cloud that covers just that vehicle and any units it is transporting. It may attempt to create a smoke cloud only once per turn during its Command Phase before placing its command.

Since this process actually takes place before the current turn's Initiative Phase, the previous turn's First Player places all DS smoke first followed by the Second Player.

To determine if a vehicle creates a smoke cloud, roll (10) and compare the result to the listed Ammo Limit value (see 5.16.2.3). If the result is less than or equal to the Ammo Limit value, place a SMOKE/DS counter on the vehicle; if it is greater than the Ammo Limit value, the attempt failed.

The smoke cloud is treated as Open/SHEAF Smoke that applies only to fire to or from the vehicle and its passengers not to any other units in the hex. It does not apply to Indirect Fire or Aircraft Combat.

The SMOKE/DS counter is removed during the current turn's Adjust/Remove Counters Step (see 6.8.4) or if the vehicle moves to a new hex or moves within its hex. Place the counter under the vehicle unit; vehicles may not create discharger smoke in consecutive turns. It is removed during the next turn's Adjust/Remove Counters Step.

7.10 CE Ammo Types

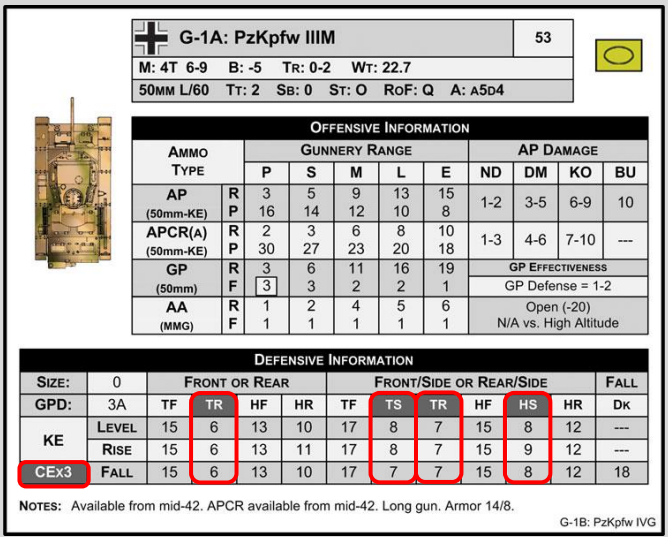
With the advent of HEAT-Type anti-tank shells, including those fired from guns as well as hand-held anti-tank weapons, the Germans were the first to develop countermeasures to degrade or attempt to defeat their performance.

This took the form of light armor skirts or plates mounted in such a way to create a standoff distance from the main armor. This would theoretically cause a HEAT shell to pre-detonate, thereby reducing its penetrative power.

7.10.1 CE-Type Armor

German vehicles so equipped have special notations in the Defensive Information section of their Data Cards. Those protected Hit Locations are highlighted. In addition, a CEx# notation indicates to what extent the CE-Type Armor increases the listed Armor Factor.

Reference Data Card G-1A (Panzer), the German PzKpfw IIIM's TS, TR and HS are protected from CE-Type shells. It also has CEx3 listed. If a HEAT shell strikes its HS with a Level shot, the Armor Factor is 24.



G-1A: PzKpfw IIIM	53
M: 4T 6-9 B: -5 TR: 0-2 WT: 22.7	
50MM L/60 TT: 2 SB: 0 ST: O ROF: Q A: A5D4	

OFFENSIVE INFORMATION

AMMO TYPE		GUNNERY RANGE P	S	M	L	E	AP DAMAGE ND	DM	KO	BU
AP (50mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	16	14	12	10	8				
APCR(A) (50mm-KE)	R	2	3	6	8	10	1-3	4-6	7-10	---
	P	30	27	23	20	18				
GP (50mm)	R	3	6	11	16	19	GP EFFECTIVENESS			
	F	3	3	2	2	1	GP Defense = 1-2			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

DEFENSIVE INFORMATION

SIZE:	0	FRONT OR REAR				FRONT/SIDE OR REAR/SIDE						FALL
GPD:	3A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	DK
KE	LEVEL	15	6	13	10	17	8	7	15	8	12	---
	RISE	15	6	13	11	17	8	7	15	9	12	---
CEx3	FALL	15	6	13	10	17	7	7	15	8	12	18

NOTES: Available from mid-42. APCR available from mid-42. Long gun. Armor 14/8.

G-1B: PzKpfw IVG

German add-on armor was very susceptible to battlefield damage. It was not uncommon to find vehicles with their side skirts, and to a lesser extent turret armor, missing. Feel free to field vehicles with missing armor.

7.10.2 CE Ammo & S-Type Vehicles

CE rounds vs. S-Type vehicles do not apply the –2 damage modifier.

7.11 BU Modifier

Based on their turret layout or ammo storage, some vehicles are more susceptible to explosive damage when receiving a Knocked Out result from combat. Those vehicles have a *BU* notation listed in the Unit Identifier section their Data Cards.

The Bu modifier does not increase the overall chance of damage; it just increases the chance of a Knock Out becoming a Brew Up. A modified Damage Result is never greater than 10. It is not applicable with Basic Game Damage. The modifiers are +2 for AP Fire and –2 for GP Fire.

Reference the Vehicle Data Card Key (Panzer), the Soviet SU-76M M43 has the BU notation listed.

S-3B: SU-76M M43 | Bu | 43

M: [5T] 6-10 Tr: 0-0 Wt: 10.2

76.2mm L/43 Tt: 0 Sb: 0 St: O RoF: N A: A3

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (76.2mm-KE)	R	3	6	10	14	17	1	2-4	5-8	9-10
	P	19	17	15	13	12				
HVAP(A) (76.2mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	23	21	19	15	13				
GP (76.2mm)	R	5	9	16	23	27	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2P	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	8	0	14	4	9	4	0	17	4	5	---
	Rise	8	0	18	4	10	4	0	22	4	5	---
	Fall	7	0	11	4	9	4	0	13	4	5	7

Notes: Available from early-43. HVAP available from late-43. Armor 11/3.

S-3A: IS-2m M44

A German StuG IIIG (Panzer Data Card G-4B) penetrates it with its AP ammo and rolls a 7 result for damage. That would normally result in a Knock Out. However, with the +2 BU modifier applied, the 7 result is now a 9, resulting in a Brew Up.

G-4B: StuG IIIG | 63

M: 4T 6-9 B: -5 Tr: 0-2 Wt: 23.9

75mm L/48 Tt: 0 Sb: 0 St: O RoF: N A: A3s5D4 Smk

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (75mm-KE)	R	4	7	13	18	21	1	2-4	5-8	9-10
	P	25	22	19	17	16				
APCR(A) (75mm-KE)	R	3	5	9	13	15	1-2	3-5	6-9	10
	P	33	30	27	22	19				
GP (75mm)	R	6	11	20	28	34	GP Effectiveness			
	F	5	4	3	3	2	GP Defense = 1-3			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	3AC	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE	Level	16	6	16	6	19	7	7	19	7	7	---
	Rise	17	6	17	6	20	7	7	20	7	7	---
CEx3	Fall	16	6	16	6	19	7	7	19	7	7	21

Notes: Available from early-43. APCR available from early-43. Armor 16/6.

G-4A: Marder II

If the same StuG IIIG instead achieves an Effective Result with GP Fire and rolls a 5 damage result, the –2 BU modifier is applied; the 5 result is now a 3, resulting in a Brew Up.

Reference Data Card B-5A (Panzer North Africa), the British Crusader I has the BU notation listed. An Italian M13/40 (Panzer North Africa Data Card I-1A) penetrates it with its AP ammo and rolls a 8 result for damage. That would normally result in a Knock Out. However, with the +2 BU modifier applied, the 8 result is now a 10, resulting in a Brew Up.

B-5A: Crusader I | Bu | 33

M: 4T 6-10 B: -5 Tr: 0-2 Wt: 19.1

2 pdr Tt: 2 Sb: 0 St: O RoF: Q

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (2 pdr-KE)	R	2	5	9	12	14	1-3	4-6	7-10	---
	P	13	12	10	9	7				
GP (Coax MMG)	R	2	3	6	8	10	GP Effectiveness			
	P	3	2	2	1	1	Small Arms			

Defensive Information												
Size:	-1	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	9	8	9	8	11	9	10	10	5	7	---
	Rise	9	10	9	8	11	11	11	11	5	7	---
	Fall	9	8	9	8	11	8	9	10	5	7	12

Notes: Available from mid-1941. Armor 9/7.

B-5B: Crusader I CS

If the same M13/40 instead achieves an Effective Result with GP Fire and rolls a 4 damage result, the –2 BU modifier is applied; the 4 result is now a 2, resulting in a Brew Up.

7.12 Variable AP Penetration

AP penetrations values (KE and CE-Type shells) are presented in absolute terms based on a long study of ballistic data. The actual penetration values did vary due to the variances in the quality of the shells or caused by slight deviations in the angle of impact or the quality of the vehicle armor at any given impact point.

With this option, whenever an AP Hit is made, before the Hit Location-Damage roll, the firing player rolls (10x2) and references the AP Penetration (OR) Table on Game Card A. Reference the row on the table that corresponds to the listed AP Penetration Factor.

The two dice are read separately. Add the two listed results together to find the total adjustment. It may not be plus or minus greater than the listed Max Value.

Note that dice roll results of 1, 2, 3, and 4 subtract from the AP Penetration Factor, while results of 7, 8, 9, and 10 add to it. Results of 5 and 6 have no effect.

With an AP Penetration Factor of 27, the roll (10) results are 10 and 4. The Total Adjustment is +2. The 10 result adds 3 to the Penetration Factor while the 4 result subtracts 1.

© 2025 GMT Games, LLC

AP PENETRATION (7.12)						
ROLL		(1)	(2)	(3)	(4)	5
P #	Max	10	9	8	7	6
51+	±9	6	5	3	2	0
41-50	±8	5	4	3	1	0
31-40	±6	4	3	2	1	0
21-30	±5	3	2	2	1	0
11-20	±3	2	2	1	1	0
1-10	±2	1	1	1	0	0

With an AP Penetration Factor of 18, the roll (10) results are 1 and 2. The Total Adjustment is –3. The 1 subtracts 2 from the Penetration Factor while the 2 result also subtracts 2. However, the Max adjustment is ±3.

AP PENETRATION (7.12)						
ROLL		(1)	(2)	(3)	(4)	5
P #	Max	10	9	8	7	6
51+	±9	6	5	3	2	0
41-50	±8	5	4	3	1	0
31-40	±6	4	3	2	1	0
21-30	±5	3	2	2	1	0
11-20	±3	2	2	1	1	0
1-10	±2	1	1	1	0	0

As an added variable to this option, subtract 1 from all Soviet roll (10) results when determining variable AP Penetration. This simulates the lower quality of Soviet metallurgy and its effect on their AP shells.

7.13 Lower Hull Hits

This option models the possibility of hitting a vehicle's less armored lower hull front with AP Direct Fire. It is only possible when a moving vehicle is changing elevation or its Height is 2 or more above an opposing unit.

7.13.1 Changing Elevation

When a vehicle moves out of a Gully, Ford or Stream hex or crosses a Wall hex, any *overwatching* unit at a Height equal to the Vehicle's new Height hitting the HF utilizes an Armor Factor equal to ½ (round down, not less than 1) of the listed Rising HF Armor Factor. Note that Rising Shot is utilized even though it is actually a Level Shot.

7.13.2 Height Difference

When the target vehicle is not in a Hull Down or an automatic Partial Hull Down position and the firing unit's range is equal to or less than twice the Height difference hitting the HF utilizes an Armor Factor equal to ½ (round down, not less than 1) of the listed Rising HF Armor Factor.

If the target vehicle's Height is 3 and the firing unit's Height is 0, the firing may hit the target vehicle's lower hull if the range is 4, 5 or 6. The target vehicle is Partially Hull Down if the range is 3 or less (see 6.1.4.1.3).

7.14 Fire Priority

In the heat of battle, vehicles typically engage opposing vehicle targets posing the greatest threat and those tend to be the closest targets. A vehicle with a FIRE or SHORT HALT command must fire at the closest opposing vehicle combat unit (see 4.1.1) unless it is already engaged by another vehicle from the same formation. Friendly leg and towed units firing at a vehicle do not offset this requirement.

7.15 CE Ammo GP Direct Fire

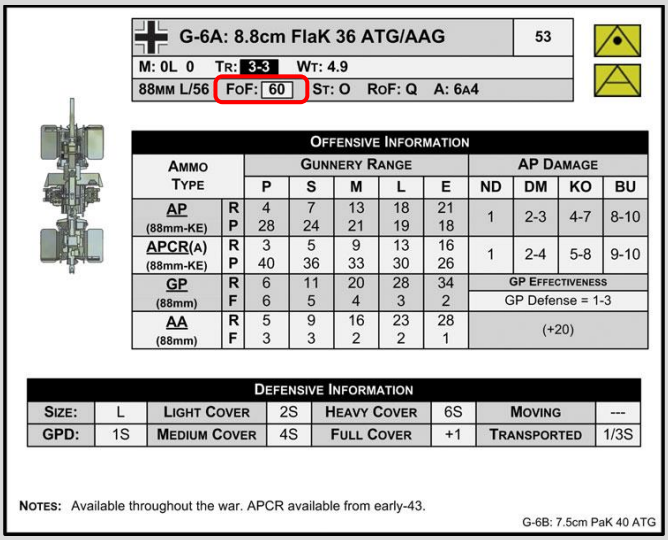
CE-Type ammo has considerable explosive force and can be used for GP Direct Fire. However, the construction of the shells makes them somewhat less effective in open areas.

When hand-held ant-tank rocket weapons are fired at dismounted leg or towed units in terrain other than inside of buildings or Improved Positions, apply a –10 modifier.

7.16 Towed Unit Platform Gun Mounts

Some anti-tank and anti-aircraft guns were mounted on platform or turntable mounts that enabled them to quickly engage targets located in any direction. The Towed Data Cards indicate which units have Platform Gun Mounts.

Reference Towed Data Card Key, the German 8.8cm FlaK 36 ATG/AAG has a Platform Gun Mount.



G-6A: 8.8cm FlaK 36 ATG/AAG | 53

M: 0L 0 TR: 3-3 WT: 4.9

88MM L/56 FOF: 60 ST: O ROF: Q A: 6A4

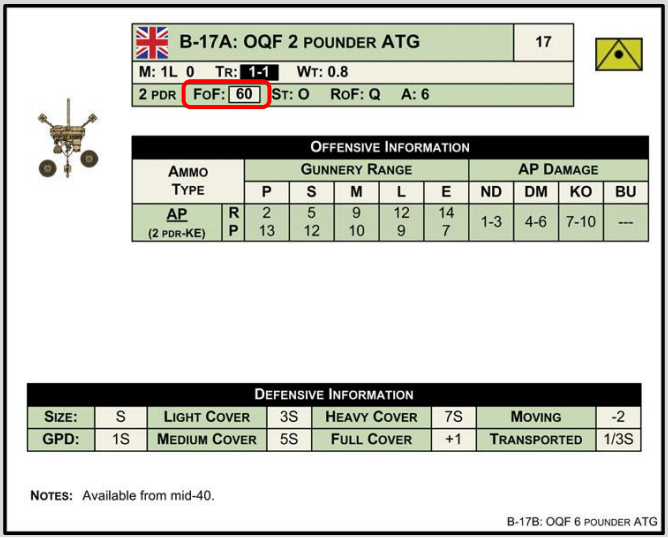
OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (88mm-KE)	R	4	7	13	18	21	1	2-3	4-7	8-10
	P	28	24	21	19	18				
APCR(A) (88mm-KE)	R	3	5	9	13	16	1	2-4	5-8	9-10
	P	40	36	33	30	26				
GP (88mm)	R	6	11	20	28	34	GP EFFECTIVENESS			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (88mm)	R	5	9	16	23	28	(+20)			
	F	3	3	2	2	1				

DEFENSIVE INFORMATION							
SIZE:	L	LIGHT COVER	2S	HEAVY COVER	6S	MOVING	---
GPD:	1S	MEDIUM COVER	4S	FULL COVER	+1	TRANSPORTED	1/3S

NOTES: Available throughout the war. APCR available from early-43.

G-6B: 7.5cm PaK 40 ATG

Reference Data Card B-17A (Panzer North Africa), the British OQF 2 pounder ATG has a Platform Gun Mount.



B-17A: OQF 2 POUNDER ATG | 17

M: 1L 0 TR: 1-1 WT: 0.8

2 PDR FOF: 60 ST: O ROF: Q A: 6

OFFENSIVE INFORMATION										
AMMO TYPE		GUNNERY RANGE					AP DAMAGE			
		P	S	M	L	E	ND	DM	KO	BU
AP (2 PDR-KE)	R	2	5	9	12	14	1-3	4-6	7-10	---
	P	13	12	10	9	7				

DEFENSIVE INFORMATION							
SIZE:	S	LIGHT COVER	3S	HEAVY COVER	7S	MOVING	-2
GPD:	1S	MEDIUM COVER	5S	FULL COVER	+1	TRANSPORTED	1/3S

NOTES: Available from mid-40.

B-17B: OQF 6 POUNDER ATG

Like Turretless 360° vehicles, for the purposes of Overwatch and Anti-Aircraft Fire, their Field-of-Fire is always assumed to be facing

© 2025 GMT Games, LLC

the target. These units always use the Overwatch Front Modifier for all Overwatch Shots.

If they fire at a target located in their Side or rear Fields-of-Fire, pivot the towed unit to face the correct Field-of-Fire.

7.17 Attached Weapon Loss

When a full squad is reduced as a result of GP Fire or Hand-to-Hand combat, roll (10) for each attached weapon the squad was carrying. On a result of 1-5, the attached weapon is destroyed.

If the squad was carrying more than one attached weapon, apply a –2 modifier to the first roll (10). Randomly select which is the first attached weapon.

7.18 Pinning Fire

Ground units employing small arms Direct GP Fire against leg or towed units may use Pinning Fire against the target. Pinning Fire simulates a unit spraying fire in the proximity on a target unit to pin or force them to keep their heads down as opposed to trying to eliminate them.

Pinning Fire may be used with FIRE, SHORT HALT or OW commands. It must be declared at the point the fire is announced. The GP Fire is resolved normally; the +20 Pinning Fire modifier is applied.

An Effective Result is treated as a Suppressed result instead. It is not possible to achieve an Effective Result with Pinning Fire.

7.19 Engineer vs. Terrain Combat

Engineer squads, half-squads and sections are the only ground units that may directly attack certain types of terrain. All Terrain types possessing a GP Defense Factor, with the exception of Building hexes, may be attacked as if they are normal ground units.

The engineer unit must have a MOVE command. With an Effective Result roll (100) again. These attacks utilize the Close Assault combat procedures. With two Effective Results the Terrain type is destroyed; otherwise there is no effect.

7.20 Long Guns

If utilizing the Optional Turrets Rule (see 7.8), some turreted vehicles have long guns that can inhibit their movement in Alley, Woods and Light Woods hexes. Units so equipped have Long Gun listed in the Notes section of their Data Card.

If a Long Gun turreted vehicle unit moves into or within an alley hex or a Woods or Light Woods hex, its turret must be positioned directly to the vehicle's front or rear. While stationary, it may turn its turret to any hexside.

If a Long Gun turreted vehicle unit is following the route described by a Path or Road (see 4.5.1.1.5), its turret may be positioned in any direction.

7.21 Variable Track Damage

In reality, small caliber guns would have a difficult time achieving a track hit against many of the more heavily armored vehicles. With this option, an additional calculation is required to determine if a track hit is actually made. This same method of calculation is used whether firing AP or GP weapons.

Double the firing unit's maximum GP Effective Factor for its GP weapon. If the result is equal to or greater than the target's GP Defense Factor, the Track Hit was made; if it is less, the Track Hit is treated as a miss instead. If treated as a miss, no Bail Out attempt is required.

For firing units with small arms or for those that lack a GP weapon, they are assumed to have a doubled factor of 1. Hand-held anti-tank weapons are excluded from this calculation.

A Soviet T-70 M42 (Panzer Data Card S-1A) made a Track Hit on a German PzKpfw VIE Tiger I (Panzer Data Card G-3A). The T-70 M42's maximum GP Effectiveness Factor is 2. That value is doubled to 4 and compared to the PzKpfw VIE Tiger I's GP Defense of 5A. Since 4 is less than 5, the Track Hit is treated as a miss.

A British OQF 6 pounder ATG (Panzer North Africa Data Card B-17B) made a Track Hit on a German PzKpfw VIH Tiger I (Panzer North Africa Data Card G-9A). The OQF 6 pounder's maximum GP Effectiveness Factor is 2. That value is doubled to 4 and compared to the PzKpfw VIH Tiger I's GP Defense of 5A. Since 4 is less than 5, the Track Hit is treated as a miss.

Note that even though the OQF 6 pounder's GP-type is not available until early-43, it is still utilized as reference.

7.22 Infantry Smoke

Squads and half-squads receive a Smoke Ammunition limit based on their nationality, Unit Grade and engineer status. Unsuppressed, nonhesitating, and non-broken units may create smoke in their current hex if it does not contain any other dismounted leg or towed units.

7.22.1 Direct Fire Smoke

Only units with FIRE or SHORT HALT commands may place smoke within the Ammo Limits (see 5.16.2) constraints as Small Arms Fire. The unit may still utilize any attached weapons.

Place a SMOKE/ON counter in the hex. The smoke affects just the target unit and is the equivalent of an Open SHEAF Pattern.

7.22.2 Smoke Ammo Limits

Smoke Ammo limits by Nationality:

- German: S5
- Soviet: S2
- USA: S5
- UK: S4
- France '41+: S3
- France '44: S5
- Italy: S3

Special Ammo Limit modifiers:

- Elite Unit Grade: +2
- Veteran Unit Grade: +1
- Green Unit Grade: –1
- Engineer: +3

© 2025 GMT Games, LLC

7.23 Vehicle Collateral Damage

This option requires some form of record keeping or unit notation.

Any AP hit on an A-Type or P-Type vehicle that penetrates but results in No Damage may cause Collateral Damage. Each collateral hit is only applied once. Cross-reference with the vehicle hit location and roll (10):

7.23.1 TF – Turret Front

On a result of 1: Optics damaged.

Apply a –1 AP Direct Fire modifier for the remainder of the scenario.

Apply a –5 GP Direct Fire modifier for the remainder of the scenario.

On a result of 2: Coax MG damaged if equipped, otherwise, mark a SUPPRESSED/ON counter.

The vehicle no longer applies the +10 Coax MG modifier to GP Direct Fire or Overrun combats.

On a result of 3-10: No effect.

7.23.2 TS/TR – Turret Side or Turret Rear

On a result of 1: Turret Ring.

The turret is fixed in its current position. It may not rotate for the remainder of the scenario.

For Turretless 360º (see 4.4.3.1.2) and Turretless (see 4.4.3.1.1) vehicles, mark a SUPPRESSED/ON counter.

On a result of 2: Radio damaged.

The vehicle loses any *Command* and/or Recon abilities. For ultimate realism, the vehicle must also follow Optional Rule 7.4, Without Radio Sets.

On a result of 3-10: No effect.

7.23.3 HF – Hull Front

On a result of 1: Running Gear Damage.

The vehicle loses 2 Movement Factors (minimum 1) for the remainder of the scenario.

On a result of 2-10: No effect.

7.23.4 HS/HR – Hull Side or Hull Rear

On a result of 1: Fuel Damage—at the beginning of each Movement Phase roll (10).

On a result of 1: the vehicle is out of fuel for the remainder of the scenario. Mark a TK Hit (including Bail Out attempt).

On a result of 2: the vehicle catches fire and suffers a BU Hit (including Bail Out attempt and Suppression effects).

On a result of 3-10: No effect.

On a result of 2-10: No effect.

7.24 Camouflage

As dictated by a scenario's Special Conditions one or both forces' ground units may limit the ability of opposing forces to spot them by the use of camouflage. Only those units that start a scenario setup on the mapboard may camouflage. Use the Formation Summary to list camouflaged units.

Camouflage does not function in the same manner as Hidden units (see 7.2). Camouflaged units remain on the mapboard at all times. The controlling player must announce a camouflaged unit at the point the opposing player announces a spot. Camouflaged units are automatically spotted at a range of 1 hex.

After meeting normal spotting range requirements, the spotting player rolls (10); the result must be less than or equal to the spotting range found on the Spotting Ranges Table on Game Card A (Panzer) or Game Card B (Panzer North Africa) for the unit being spotted. Spotting units hand off spotted camouflaged units to other friendly units at the same range or less.

If a unit attempts to spot a vehicle located in a Woods hex, the spotting player must roll a 7or less to spot the vehicle.

Camouflaged units permanently lose their camouflage status once they execute a MOVE or SHORT HALT command. They also permanently lose their camouflage status once they execute a FIRE or OW command if an opposing unit meets the normal spotting range requirements. No spotting roll is necessary.

7.25 Weapon Malfunction

AP Direct Fire combat resulting in 00 or GP Direct Fire combat resulting in an unmodif ied 01 is treated as a weapon malfunction.

It may not fire again until repaired. The combat that resulted in the malfunction is resolved normally.

To repair, roll (10) at the *end* of the Command Phase:

- If the final result is a 2 or less, the weapon is repaired and functions normally on all subsequent turns.
- If the result is a 10, the weapon is permanently out of action and may not attempt repair during future turns.
- If the unit has an N/C Command, apply a –2 modifier.

7.26 Indirect Fire Scatter

When the modified response roll equals the value listed for the observer on the Called Indirect Fire Response Table on Game Card B (Panzer) or Game Card A (Panzer North Africa), the Impact Point for that firing unit missed the designated target hex and has scattered 1 or 2 hexes.

Roll (10). On a result of 1-6, it scatters 1 hex; on a result of 7-10, it scatters 2 hexes. It may be easier when determining fire response to just roll (10x2) on the chance fire scatter occurs. Roll (d6) and reference the Directional Hex on the mapboard or geomorphic map panel and move the Impact Point the required number of hexes in the indicated direction.

If the new Impact Point is still within the observer's line-of-sight, the Indirect Fire may be continued or adjusted normally next turn.

© 2025 GMT Games, LLC

An expansion of this optional rule adds aircraft bomb scatter. If bombs are dropped from an aircraft flying at Medium or High Altitude that was attacked by Anti-Aircraft fire within 5 hexes of the drop hex, may result in bomb scatter.

- If a No Effect result from the Anti-Aircraft Fire, roll (10). If the result is a 1 or a 2, the bombs scatter.
- If a Suppressed or Damage result from the Anti-Aircraft Fire, roll (10). If the result is 6 or less, the bombs scatter.
- Based on the Aircraft's Unit Grade, apply the following modifiers:
  - o Elite: +2
  - o Veteran: +1
  - o Regulars: –1
  - o Green: –2

Roll (d6) and reference the Directional Hex on the mapboard or geomorphic map and move the Impact Point in the indicated direction 1 hex if at Medium Altitude or 2 hexes if at High Altitude.

7.27 Illumination Indirect Fire Missions

Illumination Fire Missions are used to increase spotting ranges during night/limited visibility conditions. Illumination rounds may be fired only in non-linear Closed SHEAFs. Illumination rounds function in a similar manner as Smoke rounds with an On/Off state.

They illuminate the area described by the SHEAF Pattern. Any unit within the area applies a +2 spotting modifier as long as the area remains illuminated. The illumination modifier never increases the Spotting Level above 0.

Illumination has either ILLUMINATION/ON *or* ILLUMINATION/OFF *counters to indicate its status.*

Illumination is recorded by placing an ILLUMINATION/ON *counter; or by rotating an existing* ILLUMINATION/OFF *counter to* ILLUMINATION/ON. ILLUMINATION/OFF *counters are removed during the Adjust/Remove Counters Step, see 6.8.4.*

7.28 Counter Battery Fire

Counter Battery Fire is the action of locating opposing off-map artillery batteries and then executing disruptive fire missions to suppress or eliminate those batteries.

Counter Battery Fire is conducted only by off-map batteries dedicated to counter battery fire missions. They are not the same organic or attached batteries assigned to the support of the friendly forces. They must be included as specific Counter Battery Fire assets in the list of friendly forces in a scenario.

7.28.1 Utilizing Counter Battery Fire

A Counter Battery unit is considered to be available at all times, may be used any number of times, and each may attempt to find one opposing off-map artillery battery per turn. Whenever opposing off-map artillery responds to Called Indirect Fire, continues a fire mission or arrives as planned fire, "counter battery fire" may be announced.

All Counter Battery Fire takes places after the targeted artillery battery resolves the fire mission for the current turn.

7.28.2 Resolving Counter Battery Fire

For each Counter Battery Fire announced, the controlling player rolls (100) to first determine if its counter battery firing unit located the targeted artillery battery.

Reference the Artillery Data Card for the Counter Battery Fire information. If the location result falls within the range of 01-20, the artillery battery is located. Otherwise, the location attempt failed.

The following location modifiers apply:

- If the targeted artillery battery's current fire mission equals or exceeds the listed number of consecutive turns, e.g., German counter battery attempting to locate a battery firing for 3 or more consecutive turns, apply a –10 modifier.
- If the targeted artillery battery is self-propelled (SP), apply a +10 modifier.
- If a Soviet counter battery unit attempts to locate in 1941 or 1942, apply a +10 or +5 modifier, respectively.
- If an Italian counter battery unit attempts to locate in 1940 or early-1941, apply a +10 or +5 modifier, respectively.

If the artillery battery is located, roll (100).

- On a result of 01-50, the targeted artillery battery is suppressed.
  - o Suppressed artillery batteries may still function and conduct normal operations, but apply the Shooter Suppressed –20 GP Fire modifier (see 6.5.4.3). Place a SUPPRESSED/ON counter on the battery's Data Card for reference.
  - o All artillery batteries have a fixed recovery range of 01-50 when attempting to recover from Suppression. No Suppression modifiers apply.
- On a result of 51-80, the targeted artillery battery is Damaged.
  - o Damaged artillery batteries may still function and conduct normal operations, but apply the Shooter Damage –10 GP Fire modifier (see 6.5.4.3). Place a DMGD counter on the battery's Data Card for reference.
  - o All damaged batteries apply a –2 modifier when determining fire response.
  - o A second damage results in a Knock Out.
- On a result of 81-00, the artillery battery is Knocked Out.
  - o It may not fire for the remainder of the scenario.
  - o Its listed Victory Points are awarded to the opposing side.

7.28.3 Counter-Counter Battery Fire

If both forces possess Counter Battery Fire assets, they are also subject to Counter-Counter Battery Fire. Once Counter Battery Fire is announced and resolved an opposing Counter Battery Fire unit may attempt to locate and fire on the first counter battery unit.

In this case, a Suppression result is ignored. A Damage or Knock Out result eliminates a counter battery unit for the remainder of the scenario. Its listed Victory Points are awarded to the opposing side.

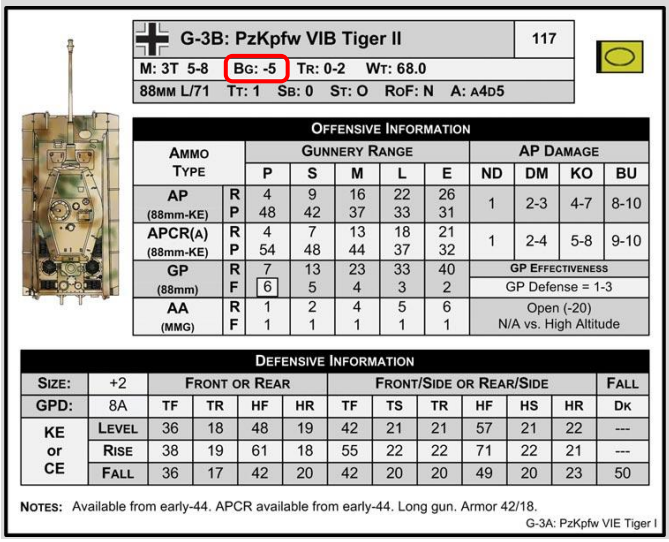
© 2025 GMT Games, LLC

7.29 Bogging Down

Unhidden vehicles are subject to Bogging Down in some terrain types. Reference the Bog column on the Terrain Effects Table on Game Card A (Panzer) or Game Card B (Panzer North Africa). Only those Terrain types with a listed numerical range are subject to Bogging unless otherwise instructed by the Set Up or Special Conditions in a scenario.

Some vehicles have a positive or negative Bog modifier listed in the Movement row or in their Notes section of their Data Cards and on their counters. In addition, all vehicles currently towing another unit, apply a –5 modifier.

Reference the German PzKpfw VIB Tiger II (Panzer Data Card G-3B), it has a B: –5 listed. It applies a –5 Bog modifier.



G-3B: PzKpfw VIB Tiger II 117

M: 3T 5-8 BG: -5 TR: 0-2 WT: 68.0

88MM L/71 TT: 1 SB: 0 ST: O ROF: N A: A4D5

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (88mm-KE)	R	4	9	16	22	26	1	2-3	4-7	8-10
	P	48	42	37	33	31				
APCR(A) (88mm-KE)	R	4	7	13	18	21	1	2-4	5-8	9-10
	P	54	48	44	37	32				
GP (88mm)	R	7	13	23	33	40	GP Effectiveness			
	F	6	5	4	3	2	GP Defense = 1-3			
AA (MMG)	R	1	2	4	5	6	Open (-20) N/A vs. High Altitude			
	F	1	1	1	1	1				

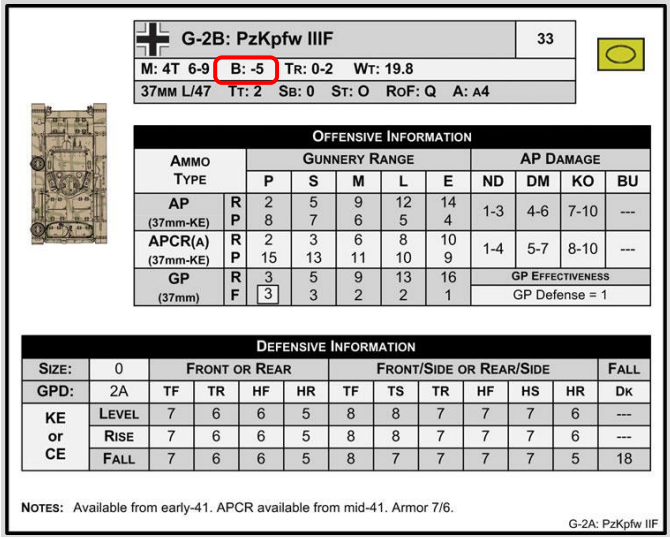
Defensive Information

Size:	+2	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	8A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	36	18	48	19	42	21	21	57	21	22	---
	Rise	38	19	61	18	55	22	22	71	22	21	---
	Fall	36	17	42	20	42	20	20	49	20	23	50

Notes: Available from early-44. APCR available from early-44. Long gun. Armor 42/18.

G-3A: PzKpfw VIE Tiger I

Reference the German PzKpfw IIIF (Panzer North Africa Data Card G-2B), it has a B: –5 listed. It applies a –5 Bog modifier.



G-2B: PzKpfw IIIF 33

M: 4T 6-9 B: -5 TR: 0-2 WT: 19.8

37MM L/47 TT: 2 SB: 0 ST: O ROF: Q A: A4

Offensive Information

Ammo Type		Gunnery Range P	S	M	L	E	AP Damage ND	DM	KO	BU
AP (37mm-KE)	R	2	5	9	12	14	1-3	4-6	7-10	---
	P	8	7	6	5	4				
APCR(A) (37mm-KE)	R	2	3	6	8	10	1-4	5-7	8-10	---
	P	15	13	11	10	9				
GP (37mm)	R	3	5	9	13	16	GP Effectiveness			
	F	3	3	2	2	1	GP Defense = 1			

Defensive Information

Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	2A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	7	6	6	5	8	8	7	7	7	6	---
	Rise	7	6	6	5	8	8	7	7	7	6	---
	Fall	7	6	6	5	8	7	7	7	7	5	18

Notes: Available from early-41. APCR available from mid-41. Armor 7/6.

G-2A: PzKpfw IIF

If any vehicle has a MOVE or SHORT HALT command while occupying one of the listed Terrain types, it first checks for Bogging Down. Vehicles employing the Path or Road bonus are not subject to bogging.

A vehicle entering a hex of the listed Terrain types does not check for bogging. However, if it attempts to exit the hex or move within the hex, e.g., searching for a Hull Down position or entering a building, it must check for bogging before exiting the hex or moving within the hex.

The controlling player rolls (100). If the net result (modified for any vehicle specific modifiers) falls within the listed range for the Terrain type, the vehicle immediately ceases movement and may not turn for the remainder of the turn.

A German PzKpfw VIB Tiger II, Data Card G-3B, attempts to exit a Rough terrain hex. If the German player rolls (100) with a net result of 30 or less (the Tiger II applies a –5 modifier), it bogs down.

A German PzKpfw IIIF, Data Card G-2B, attempts to exit a Rough terrain hex. If the German player rolls (100) with a result of 30 or less (the PzIIIF applies a –5 modifier), it bogs down.

A bogged vehicle moves during the next turn with no additional penalties. It must again check for bogging before exiting or moving within the hex. Passengers mount or dismount normally from a bogged vehicle. A bogged vehicle still marks a SPOT/MOVE counter.

Vehicles sharing MOVE or SHORT HALT commands must maintain Command Range upon completion of their move. However, if one or more of those units bog, thereby limiting movement, all attempts must be made to maintain Command Range upon completion of their move. If this is not possible, there may be cases where the moving units may not be able to maintain Command Range. Units are not required to retrace their movement.

© 2025 GMT Games, LLC

7.30 Narrow Roads & Paths

As dictated by a scenario's Special Conditions roads and paths through Building hexes or Woods, Light Woods or Heavy Woods hexes may be classified as Narrow Roads or Paths. This Optional Rule could also apply to a narrow bridge.

In those cases, vehicles and dismounted towed units may not enter or move through a hex occupied by opposing vehicles. Vehicles may only move through a hex occupied by dismounted towed or leg units by Overrun combat. All units may enter a hex occupied by friendly vehicles, towed units or a wreck, but may not exit the hex. Dismounted leg unit movement is not restricted.

Vehicles and dismounted towed units may not exceed stacking limits (see 5.13). The order of entry of the units in a hex are stacked first on top (excluding wrecks).

By expending their entire movement speed allowance, tracked vehicles with a Move command may attempt to push a wreck, immobile vehicle, or towed unit to the shoulder of the road or path hex.

- The pushing vehicle's Weight must be equal to or greater than the immobile unit.
- Roll (100). On a result of 51+, the immobile unit is moved to the shoulder of the road or path, but still considered to be in the same hex. Otherwise, no movement is possible.
- For each full 5 tons of additional Weight the pushing vehicle has over the unit to be pushed, apply a +5 modifier.
- Units pushed to the shoulder of a road do not stop a vehicle from using its Path or Road movement factor.

When a German PzKpfw VIB Tiger II (Panzer Data Card G-3B), attempts to push an immobile PzKpfw IVH (Data Card G-2A), it applies a +30 modifier.

When a German PzKpfw IVD (Panzer North Africa Data Card G-5A), attempts to push an immobile PzKpfw IB (Data Card G-1A), it applies a +15 modifier.

This Optional Rule could also apply to sunken roads. Players may at their option or as dictated by a scenario's Special Conditions, allow units to exit the sides of a sunken road. Sunken roads typically have a Height of –1.

7.31 Mines & Minefields

Mines are employed to deny or channel movement into an area or in a certain direction. In some respects, they are an effective offensive weapon not just a defensive weapon.

There are two types of mines: anti-vehicular (effective against vehicle units) and anti-personnel (effective against dismounted leg and towed units). Anti-vehicular mines have the capability of damaging or inflicting track hits on vehicles. Anti-personnel mines can inflict effective results on leg and towed units. Unless otherwise indicated, minefields may contain either or both types.

Mines are not employed individually; they are laid in minefields covering multiple hexes. Correspondingly, there are two types of minefields: Hasty and Deliberate.

The scenarios indicated the type and availability of mines.

7.31.1 Minefield Placement

Minefields typically occupy a multiple hex area of the mapboard. The controlling player plots their location during the setup of a scenario after all terrain counters are placed on the mapboard, but before any units are placed. In most cases, the location of minefields is kept hidden from the opposing side. The scenarios indicate when a visible minefield is in play.

Use the back of the Formations Summary to note their type and location. Once placed, minefields may not move or alter their type.

Minefields may not be placed in bridge (although they may be placed in any path or road hex), building, alley, ditch, ford, gully, Improved Position, rubble, shell hole, stream, or water hexes. The plotted location of a minefield may surround these terrain types, but may not occupy their hex.

Minefield plots must include the minefield hexes, the type of minefield (Hasty or Deliberate) and the type of mine (anti-vehicular, antipersonnel or both). Unless otherwise indicated, a minefield's hexes must be contiguous.

A legal 4 hex minefield plot includes hexes 0807, 0907, 1008, and 1009 (Panzer Map A).

A legal 5 hex minefield plot includes hexes 29N5, 2905. 29P6, 29Q6, and 29Q7 (Panzer North Africa Map 29).

7.31.2 Minefield Combat

Friendly units are assumed to know the exact placement of minefields and the clear paths through them unless otherwise indicated by the scenario. They may freely move through friendly minefield hexes without being attacked.

When an opposing unit *enters* a minefield hex, the controlling player *must* announce that a minefield hex was entered and resolve the minefield attack. The controlling player is not required to announce the entry into a minefield hex if a vehicle enters an anti-personnel minefield or a dismounted leg or towed unit enters an anti-vehicular minefield hex. Once a minefield hex is discovered, the opposing player may place a MINEFIELD counter as a reminder of its location.

Leg or towed units that dismount into an anti-personnel minefield hex are immediately attacked. Leg or towed units that mount a vehicle while occupying anti-personnel minefield hex are not attacked as a result of mounting.

Units that move within a minefield hex are attacked again.

7.31.2.1 Anti-Vehicular Minefield Combat

Reference the Minefield Effects Table on Game Card B and find the column containing the vehicle's GP Defense Factor; the vehicle's target type A, P or S is not a factor. Cross-reference this with the two rows indicating the type of minefield, Deliberate or Hasty.

© 2025 GMT Games, LLC

The player controlling the minefield rolls (100) and the indicated result, if any, is immediately applied with the normal effects for that type.

A vehicle with a GP Defense Factor of 5A enters an opposing Hasty Anti-Vehicular Minefield, a roll (100) result of 01-10 is a Damage Hit, a result of 11-50 is a TK Hit, while a result of 51+ has no effect.

MINEFIELD EFFECTS (7.31)

Field Type	Hit Type	Target Type: Vehicle GPD 1-3	4-6	7+	Leg Towed
Deliberate	EF	---	---	---	01-70
	Dmgd	01-40	01-30	01-20	---
	TK	41-70	31-70	21-70	---
Hasty	EF	---	---	---	01-50
	Dmgd	01-20	01-10	01-05	---
	TK	21-50	11-50	06-50	---

EF: Effective GP hit. Squads reduced to 1/2 squads and suppressed. -20 modifier if entered by quickmarch.

Note that transported leg or towed units bailing out into an antipersonnel minefield are immediately attacked.

7.31.2.2 Anti-Personnel Minefield Combat

Reference the Minefield Effects Table on Game Card B and find the Leg & Towed column and cross-reference this with the row indicating the type of minefield, Hasty or Deliberate.

The player controlling the minefield rolls (100) and the indicated result, if any, is immediately applied with the normal effects for that type.

A leg unit enters an opposing Deliberate Anti-Personnel Minefield, a roll (100) result of 01-70 is an Effective Result, while a result of 71+ has no effect.

MINEFIELD EFFECTS (7.31)

Field Type	Hit Type	Target Type: Vehicle GPD 1-3	4-6	7+	Leg Towed
Deliberate	EF	---	---	---	01-70
	Dmgd	01-40	01-30	01-20	---
	TK	41-70	31-70	21-70	---
Hasty	EF	---	---	---	01-50
	Dmgd	01-20	01-10	01-05	---
	TK	21-50	11-50	06-50	---

EF: Effective GP hit. Squads reduced to 1/2 squads and suppressed. -20 modifier if entered by quickmarch.

Squads are reduced to a half-squad and Suppressed, while all other leg and towed units are eliminated by an Effective Result.

If a squad, half-squad or section enters or moves within an antipersonnel minefield using Quickmarch (see 6.6.4.2), apply a –20 modifier.

7.31.3 Eliminating Minefields

Minefield are not consumed or used up by attacking ground units. They are deployed densely enough to attack all units that may enter their location for the duration of the scenario. They may be eliminated in three ways: by Indirect Fire, aircraft bombs and rockets, or by engineer leg units.

Minefields have a GP Defense Factor and are treated as a Terrain type. However, in the case of mines, only a single effective result is required for elimination. Unless indicated otherwise in a scenario, Hasty minefields have a GP Defense Factor of 3 while Deliberate minefields have a GP Defense Factor of 6.

7.31.3.1 Indirect Fire vs. Minefields

Both off-map and on-map Indirect Fire attacks *visible* minefield hexes that fall within the area defined by their SHEAF Patterns. Smoke and Illumination Fire Missions do not attack minefields.

7.31.3.2 Bombs & Rockets vs. Minefields

Aircraft bombs and rockets attack *visible* minefield hexes that fall within the area defined by the bomb or rocket impact patterns.

On the off chance an aircraft crashes into a visible minefield hex, it attacks it with 15 GP Factors.

7.31.3.3 Engineer Units vs. Minefields

Engineer leg units attack *visible* minefield hexes in the same manner as other terrain types.

Why only visible minefield hexes? It is the cleanest method of dealing with minefield elimination without a great deal of record keeping, delayed elimination determination, or forcing the controlling player to reveal the location of hidden minefields.

As an offset, it requires only a single Effective Result to clear a minefield hex.

7.32 Weight Limitations

Bridges may be assigned a weight limitation in a scenario. Unless specifically addressed, the weight limit for a bridge is considered unlimited and any unit may cross it. If a unit is too heavy to cross a bridge, it must use an alternate route; it may not enter the bridge.

A scenario may designate that a stream is frozen over and may also indicate a weight limit for its ice. Units that may cross the ice treat the terrain as if it were Clear terrain. If a unit is too heavy for the ice, it may only cross at a Ford by expending the indicated movement costs.

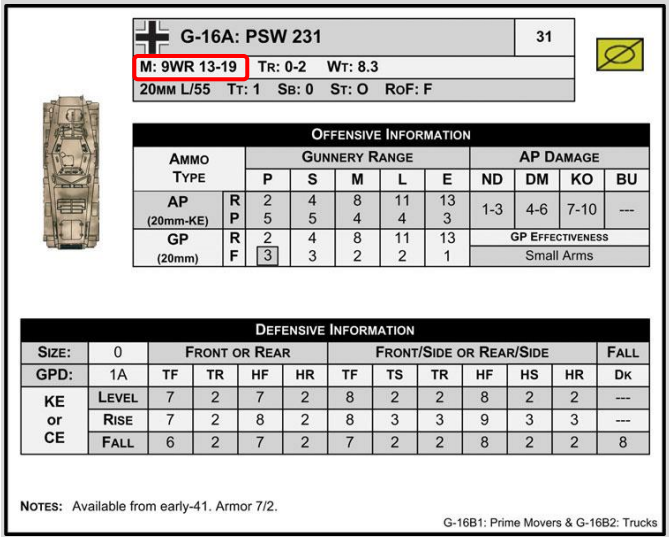
7.33 Dual Driving Controls

A few armored cars are equipped with dual-driving controls that enable them to move in reverse without expending the twice normal movement cost for the terrain entered. They expend the same cost

© 2025 GMT Games, LLC

as if they are moving forward. Units so equipped have an R following their mode of traction on their Data Card.

Reference the German PSW 231 (Panzer North Africa Data Card G-16A), it has dual-driving controls.



G-16A: PSW 231 | 31

M: 9WR 13-19 | Tr: 0-2 | Wt: 8.3

20mm L/55 | Tt: 1 | Sb: 0 | St: O | RoF: F

Offensive Information										
Ammo Type		Gunnery Range					AP Damage			
		P	S	M	L	E	ND	DM	KO	BU
AP (20mm-KE)	R	2	4	8	11	13	1-3	4-6	7-10	---
	P	5	5	4	4	3				
GP (20mm)	R	2	4	8	11	13	GP Effectiveness			
	F	3	3	2	2	1	Small Arms			

Defensive Information												
Size:	0	Front or Rear				Front/Side or Rear/Side						Fall
GPD:	1A	TF	TR	HF	HR	TF	TS	TR	HF	HS	HR	Dk
KE or CE	Level	7	2	7	2	8	2	2	8	2	2	---
	Rise	7	2	8	2	8	3	3	9	3	3	---
	Fall	6	2	7	2	7	2	2	8	2	2	8

Notes: Available from early-41. Armor 7/2.

G-16B1: Prime Movers & G-16B2: Trucks

7.34 Amphibious Movement

A few vehicles have an amphibious movement capability enabling them to traverse impassable streams or water hexes. Units so equipped have an *A* following their mode of traction on their Data Card.

Amphibious units may only move one hex per turn when entering an impassable stream or water hex. They may not transport towed units.

If an amphibious unit suffers a Track Hit, is Damaged, Knocked Out or Brewed Up while occupying an impassable stream or water hex, it immediately sinks and is eliminated and removed from play. No Bail Out is possible.

7.35 Fires

Buildings or Rubble may catch fire and burn as a result of Direct GP Fire that is directed at units located in a building or rubble hex or Indirect GP Fire and aircraft bombs and rockets that includes a building or rubble hex that fall within the SHEAF or impact patterns. Close Assaults, Overruns and Hand-to-Hand combats do not normally start fires.

In all cases, there can only be one fire in a hex; it is either on fire or not. Once a fire starts, it continues to burn for the remainder of the scenario.

7.35.1 Start Fires

Indirect or Aircraft delivered GP Fire directed at a unit occupying the hex or if it falls within a SHEAF or impact pattern must be checked to determine if a fire has started. The check for fire starts anytime during the Adjustment Phase. Small arms may not start fires.

Reference the Building Effects Table on Game Card B and cross-reference the building/rubble type with the largest GP Factor that was directed at a building or rubble hex during the turn. No matter how many shots were directed at the hex during a turn, only one fire determination is made.

Roll (100). If the result falls within the listed range a fire starts. Mark the building or rubble hex with an On Fire counter.

If checking for a fire start in Rubble hex, apply a –10 modifier.

8 GP Factors are directed at a unit in a Brick Building hex. If the roll (100) result is 10 or less, a fire starts.

Close Assaults, Overruns and Hand-to-Hand combats may not start fires unless a flamethrower was utilized in the attack. If a flamethrower was involved in an attack directed at a target in a building or rubble hex, the fire automatically starts.

7.35.2 Ground Units in Fires

Ground units may not remain in a fire hex. Any ground unit that has not vacated a fire hex by the end of the next turn after the fire started is eliminated and removed from play. Do not place Wreck counters.

7.35.3 Hand-Held Anti-Tank Rockets

As an added option, if a hand-held anti-tank rocket fires at a vehicle located in a building or rubble hex and the shot misses, determine if the errant shot starts a fire; utilized their fixed GP Factor listed in Ammo Type column.

7.35.4 Fire in Woods & Groves

As indicated by the scenarios, fires may start in Woods, Light Woods, Heavy Woods, Light Grove or Grove hexes. These Terrain types are not listed on the Game Card as this option is treated as special case only.

The scenario must list that the Woods, Light Woods, Heavy Woods, Light Grove or Grove hexes are treated as if they are a Wood, Brick or Stone Building hex, plus any additional modifiers, for starting a fire purposes.

A scenario's Special Conditions could list that fires may start in Woods and Heavy Woods hexes (both treated as a Wood Type Building) also applying a –5 modifier.

7.36 Terrain, Time of Day & Weather Conditions

The basic conditions in the game are daytime, clear weather and no adverse terrain conditions. However, in many cases alternative conditions may exist. The scenarios indicate if any alternate conditions are applicable.

7.36.1 Alternate Spotting Conditions

The time of day when a scenario takes place may have limited visibility. Limited visibility applies a –1 to –5 spotting modifiers so it works well to represent dusk, twilight or dusty conditions as well as fog or moonlight conditions.

Battles, other than chance encounters or small unit infiltrations, rarely took place during total night or very poor conditions.

© 2025 GMT Games, LLC

7.36.2 Cautious Movement
During periods of limited visibility, units naturally were more cautious when executing movement.

If the scenario calls for it, reduce vehicle movement factor by ½ (round down). Squads and half-squads may not quickmarch. During limited visibility conditions, vehicles reduce the vehicle path and road movement factor by ½ (round down); during very limited visibility conditions vehicles may not use the path or road movement bonus (see 4.5.1.1.5).

7.36.3 Ground Weather Conditions
Combat forces did not take a vacation during the winter. As such, less than desirable ground conditions such as snow or mud could dominate a battlefield. In addition, during snow conditions, streams may be frozen over or overflowing their banks making them impassable during springtime thawing or rainy conditions.

These special ground conditions may be designated as applicable to only certain portions of the mapboard.

With *snow* ground conditions, add 1 to the listed movement cost for all impacted Terrain types.

With *mud* ground conditions, double the listed bogging range for all impacted Terrain types.

During snow or mud conditions, transporting vehicles must apply a –5 modifier per each unit of the passenger unit's towed capacity when checking for bogging.

7.36.4 Khamsin
Khamsins are desert dust and sand storms that swept the battlefield in North Africa. During Khamsins, spotting modifiers apply as well as Combat modifiers and potentially Cautions Movement. The specific Khamsin effects are listed in the scenario's Limited Spotting Table.

Khamsin effects are only applicable if specified in a scenario's Setup Conditions. For example, scenarios 71 and 73 in Panzer North Africa have Khamsin effects.

7.37 Artillery Reconnaissance by Fire
The standard artillery rules do not allow the possibility of calling fire against an unsighted hex, i.e., the target hex must contain at least one spotted unit. In reality, the ability to target open areas is a major force multiplier of artillery fire. It is strongly recommended that this Optional Rule only be employed if the Hidden units option (see 7.2) is also in play.

To call artillery reconnaissance fire, the observer must have a clear line-of-sight to the target hex and must be within the maximum range of the firing unit. Only an FO may call artillery reconnaissance by fire and only from a single artillery battery; on-map units may not be utilized. It must be a Closed SHEAF, GP Fire mission. In addition to all the other Fire Response modifiers, the FO must also apply a –2 Fire Response modifier.

The fire must check the next turn; it may not be adjusted or continued.

Why a –2 Fire Response modifier? Yes, it is really not any more difficult to call reconnaissance by fire than standard Indirect Fire. However, having the knowledge of where the opposing forces are most likely located, even if employing hidden units, is a very large advantage those in the real world do not possess. The –2 modifier just balances that out.

7.38 Special Units
A few units have special capabilities that require some explanation and a few additional rules.

7.38.1 British Mounted Fire [B-5A (Panzer), B-16A (Panzer North Africa) & B-8B]
HMG, OML 2-in Mortars, and OML 3-in Mortar Sections transported by Universal Carriers may fire without first dismounting.

Their field-of-fire and their fire capabilities are unaffected if they fire while mounted. They may dismount and fire normally. They are not required to fire while mounted.

7.38.2 British Churchill Crocodile [B-12B (Panzer)]
The Churchill Crocodile was a specially modified version of the standard Churchill VII tank with an added flamethrower capability.

These tanks first entered combat at the Normandy landings on D-Day and saw much use after that in support of British, Commonwealth and U.S. units. In Northwest Europe, the three Crocodile regiments formed the 31st Armoured Brigade. In Italy, they formed part of the 25th Armoured Brigade. A troop typically fielded four vehicles.

The flame fuel was towed in a detachable armored trailer. The trailer could be quickly jettisoned if it became damaged or knocked out.

7.38.2.1 Flame Combat
The Crocodile's Ronson flamethrower was mounted in the hull front in place of the bow machinegun. Therefore, the flamethrower is limited to a front field-of-fire. As long as the fuel trailer is connected to the tank, it may not move in reverse.

7.38.2.2 Fuel Trailer Hits
The fuel trailer is subject to being hit separately from the towing Churchill tank unit and it must be determined if any Rear-Side or Rear Hit Locations hits actually hit the fuel trailer instead of the tank itself. Note that HS hits from the Front-Side may not hit the fuel trailer.

Roll (100):

- For HS hits, if the result falls within 01-25 the trailer is hit. Otherwise, resolve the hit normally on the Churchill Crocodile.
- For HR hits, if the result falls within 01-60 the trailer is hit. Otherwise, resolve the hit normally on the Churchill Crocodile. The trailer has an armor value of 5 from all angles and elevations. If the hit penetrates, damage is applied normally.
- If a BU result, the trailer is immediately jettisoned. No further flame combat is possible. The Churchill Crocodile is immediately suppressed (AG) along with any friendly units in the same hex.

© 2025 GMT Games, LLC

- If a KO result, the trailer is immediately jettisoned. No further flame combat is possible.
- If a Dmgd result, the Ammo Limit for the Ronson flamethrower is immediately reduced to A: 5. Place the DMGD counter at the rear of the tank or under it to indicate that the damage applies just to the Ronson flamethrower. If damaged a second time, the trailer is immediately jettisoned. No further flame combat is possible. Once the trailer is jettisoned for any reason, the Churchill Crocodile may continue to operate normally. It may be voluntarily jettisoned at any time whether it is damaged or not.

7.38.3 British FO Tanks [B-1A, B-9A (Panzer) & B-9B (Panzer North Africa)]

British observation post tanks (OPs) mounted dummy wooden guns in place of the 75mm gun that normally equips the tanks, requiring the tank to utilize the turret mounted coax machinegun as their main weapon. When these vehicles are fielded as FO tanks, they must use just the GP-OP row on their Data Cards. Non-OP tanks of the same type do not utilize the GP-OP row.

7.38.4 British White Scout Car [B-15B]

The US designed/built White Scout car was often pressed into service for infantry transport. When utilized in that role, change the transport capacity to Tr: 0-2, but reduce the transported squad's GPD to 2S due to the extra troops.

Players may also utilize this option with the Soviet version of this vehicle, the M3A1 Scout Car [S-15A].

7.38.5 British Archer [B-12A (Panzer)]

The Archer was a modification of the Valentine tank mounting the hard-hitting 17-pdr gun. The rear facing gun recoiled directly through the driver's position when fired limiting quick move and fire actions. Therefore, the Archer may not utilize SHORT HALT orders.

7.38.6 British Littlejohn Adapter [B-16A (Panzer)]

The British Littlejohn Adapter enabled 2-pdr armed units to fire a special ammo type APCNR (Armored Piercing Composite Non-Rigid) called APSV (Armored Piercing Super Velocity) in use. It used a squeeze-bore principle similar to the German 2.8cm sPzB 41.

In this case, the special 40mm round was compressed to 30mm once it exited the Littlejohn Adapter mounted at the end of the standard 2-pdr barrel. The higher compression produced, combined with a round that had a higher weight compared to its cross-section greatly increased its performance.

The adapter was attached in a semi-permanent fashion. Therefore, both standard AP and APSV ammo types may not be fired by a unit mounting the adapter; it carries one or the other ammo type during a scenario.

The "Littlejohn" title was literally derived from the name of its Czech designer, František Janeček.

7.38.7 German Schwimmwagen

The German Schwimmwagen was a small light truck with an amphibious capability. Since it does not have an individual Data Card (use G-5B2 Truck counters), its specifications are listed below:

- PTS: 3
- M: 6WA 12-18 B: –15
- TR: 0-1*
- WT: 1.3
- Unarmed
- GPD: 1S
- SIZE: –2
- KE or CE: All Locations, Level, Rising, or Falling: 0

NOTES: Available from early-41. Armor 0/0. May transport only section-sized leg units.

7.38.8 US 12.7mm AAMG [U-16A (Panzer)]

The 12.7mm AAMG was small and light enough to be manhandled *inside* of a building. During the course of a scenario, this unit may move inside of a building when occupying a Building hex. Mark the unit with a LOCATION counter with the INB side facing front. When inside of a building, it may no longer spot aircraft.

Players may also utilize this option with the Soviet 12.7mm AAMG [S-30B] too.

© 2025 GMT Games, LLC

7.38.9 German Tank Armor [G-2A (Alt) & G-12B (Alt)]
[Available in Panzer Expansion #3]
At their option, players may employ these alternate versions of the German PzKpfw IVH and PzKpfw IVJ Data Cards. They reflect different values for TF Front and Front/Side Armor and Points.

Thanks to Brent Pollock for this suggestion.

7.38.10 French Char B1-bis [F-4B]
The Char B1-bis turret and 47mm main gun were the same as those fitted on the S-35 [F-4A]. The Char B1-bis also carried a bow-mounted 75mm howitzer that was aimed and fired by the vehicle's driver.

The 75mm gun was elevated normally, but its lateral position was fixed. The driver had to slew the vehicle to the left or right to train the gun in the horizontal plane. To aid in this, a special hydrostatically controlled differential was used to provide the correct adjustments to the steering.

7.38.10.1 75mm Combat
The 75mm gun is Limited (see 6.1.4.1.2). It may not fire when the vehicle occupies a hull down position, but may fire when it occupies a partial hull down position. It may not utilize SHORT HALT orders to fire. It also has an AP ammo limit of A3 and is subject to the Dual Fire rules (see 5.14).

If the 75mm gun fires at a moving target, an additional –1 AP or –5 GP modifier is applied in addition to any other terrain, moving or Overwatch modifiers.

7.38.10.2 Rear Left Side Hull Armor
The Char B1-bis' left rear hull side sported a fairly large engine air intake grill, which represented a somewhat weaker spot in her otherwise excellent armor. Whenever the left Rear/Side hit location is a 5 or 6, ignore the listed Armor Value and instead treat it as a value of 8 for penetration purposes from all elevations.

Note that the hit locations are still subject to Hull Down and Partial Hull Down limitations.

7.38.11 French 25mm Gun [F-5A and F-10A]
The French 25mm anti-tank gun [F-10A] and the 25mm gun armed AMD 35 [F-6A] had similar AP performance even though the two guns' lengths in calibers were different, L/73 vs. L/60, respectively.

The 25mm CA35 gun mounted on the AMD 35 fired AP rounds with a heavier charge resulting in a higher muzzle velocity that compensated for its shorter barrel.

7.38.12 Italian L3/35 Lf [I-5A]
The L3/35 Lf was a specially modified version of the standard L3/35 tank with an added flamethrower capability.

The flame fuel was towed in a detachable armored trailer. The trailer could be quickly jettisoned if it became damaged or knocked out.

7.38.12.1 Flame Combat
The tank's flamethrower was mounted in the hull front in place of one of the MMGs. Therefore, the flamethrower is limited to a front field-of-fire. As long as the fuel trailer is connected to the tank, it may not move in reverse.

7.38.12.2 Fuel Trailer Hits
The fuel trailer is subject to being hit separately from the towing L3/35 Lf tank unit and it must be determined if any Rear-Side or Rear Hit Locations hits actually hit the fuel trailer instead of the tank itself. Note that HS hits from the Front-Side may not hit the fuel trailer.

Roll (100):

- For HS hits, if the result falls within 01-25 the trailer is hit. Otherwise, resolve the hit normally on the L3/35 Lf.
- For HR hits, if the result falls within 01-60 the trailer is hit. Otherwise, resolve the hit normally on the L3/35 Lf. The trailer has an armor value of 5 from all angles and elevations. If the hit penetrates, damage is applied normally.
- If a BU result, the trailer is immediately jettisoned. No further flame combat is possible. The L3/35 Lf is immediately suppressed (AG) along with any friendly units in the same hex.
- If a KO result, the trailer is immediately jettisoned. No further flame combat is possible.
- If a Dmgd result, the Ammo Limit for the flamethrower is immediately reduced to A: 5. Place the DMGD counter at the rear of the tank or under it to indicate that the damage applies just to the flamethrower. If damaged a second time, the trailer is immediately jettisoned. No further flame combat is possible. Once the trailer is jettisoned for any reason, the L3/35 Lf may continue to operate normally. It may be voluntarily jettisoned at any time whether it is damaged or not.

7.38.13 British CS Tank Howitzers
The early war A9 (B-2A) and A10 (B-2B) (Panzer North Africa) Close Support (CS) tanks fielded a 3.7in. howitzer that primarily fired smoke. At the time, the tactical theory was to "smoke parts of an enemy force" to cut them off from the battle to secure a numerical, if limited, advantage over the remaining force. It has an ammo limit of A: G3 reflecting its limited GP fire capability.

© 2025 GMT Games, LLC

In contrast, the Crusader I (B-5B), Crusader II (B-6B), and Matilda II (B-10A) Close Support (CS) tanks fielded a 3in. howitzer with full GP fire capability and less focus on the use of smoke.

7.39 Morale & Vehicle Bailout

Morale status does have an impact when attempting to bail out from broken and hesitating vehicles. When employing this option, apply the following:

- If the vehicle is Broken, the modifier is –20
- If the vehicle is Hesitating, the modifier is –10.

7.40 Road/Path Movement [Expanded]

Vehicles may move at the road/path rate of 1 movement factor per hex (not at the bonus movement rate or change elevation bonus) when on a road/path through terrain even if they did not start on a road/path when moving along a road/path. It must maintain facing while moving.

Thanks to Richard Bing for suggesting this optional rule.

7.41 Removing Spot Counters

Originally included in the playtest version of the game, this Optional Rule was a secondary part of the Limited Spotting Optional Rule (see 7.7) where eligible SPOT/FIRE and SPOT/MOVE counters were checked to see if they were removed. Employing this Optional Rule will add a fair amount of play time to a scenario. Reference the Spot Removal Table (OR) on Game Card B (Panzer North Africa).

During the Spotting Phase of each turn for each unit with a SPOT/FIRE and SPOT/MOVE counter: SPOT counters *not* eligible for removal:

- Spotted unit occupies None-type Cover.
- Spotted unit is adjacent to one or more Unsuppressed, Non-Full Cover, Unbroken opposing combat units.

SPOT counters eligible for removal:

- Spotted unit occupies Light, Medium or Heavy Cover. Note that all Building hexes are treated as Heavy Cover for spotting for leg units and for vehicles and towed units inside the buildings.

Count of the number of Unsuppressed, Non-Full Cover, Unbroken opposing combat units who are able to spot the unit. Based on the count above, for each Cover type, two values are listed: if the spotting range for any of the units included in the above count is equal to or less than 1/2 of the maximum spotting range (round down) use the first value; for ranges greater than ½ up to the maximum range use the second value.

Roll (100) if the net result is less than or equal to the listed value, the SPOT counter is removed.

Apply the following modifiers:

- Based on the highest Unit Grade of any of the units included in the above count, apply the indicated modifier.
- If one or more Recon units are included in the above count, a +10 modifier applies.

An OQF 6-pounder ATG with a SPOT/FIRE counter is located in a Grove hex. No German units are adjacent to its hex. Two Seasoned PzKpfw IVF1s and a single Veteran PzKpfw IVF2 are able to spot it. The two Mark IVF1s are at a range of 10, while the Mark IVF2 is at a range of 6.

Cross-referencing the Medium Cover row with the 3-5 units column on the Spot Removal (OR) table, the values listed are 20/40. Since at least one of the German tanks is at 1/2 range or less (15/2, round down), the 20 value is applicable. The British player rolls (100) and applies a +10 modifier for the Mark IVF2's Veteran Grade. If the net result is 20 or less, the SPOT counter is removed.

SPOT REMOVAL (7.41)

COVER	1-2	3-5	6+
NONE	--/--	--/--	--/--
LIGHT	20/40	10/30	--/20
MEDIUM	30/50	20/40	10/30
HEAVY	40/60	30/50	20/40

#/ up to ½ max spotting range
/# > ½ to max spotting range
Elite Grade: +20
Veteran Grade: +10
Regulars Grade: -10
Green Grade: -20
Recon unit: +10

7.42 Staggered Initiative

Originally published in *Panzer Expansion 3*, this is an alternative method of determining the Initiative for each turn as opposed to the single roll (100) method (see 4.3 & 6.3). Depending on the granularity employed, it may add a fair amount of play time to a scenario.

In this approach, Initiative is triggered on a formation by formation basis. To keep it manageable, base it on the largest formations possible. In scenarios that field multiple companies per force, use companies as the basis. With smaller scenarios of a single company per side, use a company's individual platoons and sections as depicted in the force summaries; or use any predetermined grouping. The players need to agree upfront as to the initiative organization used and maintain that structure throughout the scenario.

It should be noted that this option requires that players note the order in which the Initiative was triggered, because the same order, in reverse, is followed during the Movement Phase [Exception see 7.42.3].

7.42.1 Determining Initiative – Initial First Player

During the Initiative Phase each Force selects a specific formation, rolls (100) and applies their Force Grade Modifier to their roll; the net result may be greater than 100 or less than 0. Reroll ties unless instructed otherwise in the scenario Special Conditions. Note that while formations trigger initiative on a formation by formation basis, Force Grade, not Formation or Unit Grade determines the modifier to apply.

The Force rolling the higher result is the First Player for the Indirect Fire Combat Step and resolves all Indirect Fire followed by the Second Player. Flip the Turn counter to indicate the initial First Player.

In scenarios where one or both Forces apply a Initiative DRM based on whether or not they won the Initiative during the previous turn, its application is determined by which Force was designated as the initial First Player the previous turn.

The First Player from above then utilizes the announced formation to resolve its fire first during the following Direct Fire Combat Step. Make a note of the formation executing its Direct Fire.

7.42.1.1 Subsequent Formations

After resolving the initial formation's Direct Fire, each Force again identifies a formation and rolls (100) and applies their Force Grade

© 2025 GMT Games, LLC

Modifier to their roll. The Force rolling the higher result is next to resolve its formation's fire during the Direct Fire Combat Step. The formation now firing may be from the same Force or the other Force. Make a note of the formation now executing its Direct Fire.

Continue identifying formations to next resolve their Direct Fire until all Direct Fire is complete. Note that one Force may have a greater number of formations than the other or resolve all of its Force's Direct Fire before the other Force. In that case, all of a Force's remaining formations resolve their fire in any order desired. The order of execution is still noted.

7.42.1.2 Combining Fire

All of a formation's fire on a single opposing unit must be announced before any of that formation's fire is resolved. Subsequent formations may again fire on this same unit by announcing all fire against the same opposing unit before any of that formation's fire is resolved.

Note that this is an exception to the rule where all units had to announce their Direct Fire against a single opposing unit before that fire was resolved (see 4.4.1, 6th bullet).

A unit that must take a Morale Check due to Direct Fire, takes a single check after all fire directed at it is resolved from all opposing formations. Use Under Fire counters as necessary to note pending checks. However, it must take the Morale Check before it resolves its own Direct Fire even if all opposing units have not yet fired. It still only takes a single Morale Check.

7.42.1.3 Overwatch Fire

After all formations have executed their Direct Fire, resolve all Overwatch Fire with the original First Player announcing and resolving its Overwatch Fire followed by the original Second Player.

7.42.2 Movement Phase

During that Step, the initial First Player announces and resolves all Close Assaults/Hand-to-Hand Combats followed by the initial Second Player.

During the Movement and Overrun Combat Step, formations execute their movement in reverse order with the last formation to resolve its Direct Fire moving first followed in reverse order ending with the formation that resolved its fire first moving last.

Overwatch Fire may trigger normally as each formation resolves its movement.

A unit that must take a Morale Check due to being Overrun, takes a single check after all Overruns directed at it are resolved.

7.42.3 Streamlined Movement Phase

The Movement Phase is executed as described in the Basic and Advanced Game. This eliminates the need to note the formation order in which the Initiative was initially triggered. The initial Second Player moves all units, followed by the initial First Play.

7.43 Recon Unit Capabilities [Expanded]

In addition to their current capabilities, recon units may also apply:

- +1 Spotting modifier on the Spotting Ranges Table
- +10 modifier when employing OR 7.7
- –1 modifier when employing OR 7.24
- +10 modifier when employing OR 7.41

7.44 Airborne operations

Airborne operations include the use of both paratroops and gliders. Both were a critical element of many Allied operations in Northwest Europe and in the Mediterranean. To a much lesser extent, Germany utilized and even maintained an airborne capability into the later stages of the war, although nothing approaching the massive scale employed by the Allies.

7.44.1 Paratroops

Parachute (airborne) infantry were often employed to spearhead attacks, screen ground forces, knock out or capture key positions and disrupt enemy lines of supply, movement and communications.

Their use requires plotting the turn of arrival and their Drop Zone hex. They are then "dropped" on the mapboard during the Movement Phase of their turn of arrival. They may be targeted by Overwatch Fire as moving units (see 7.44.1.3). Since aircraft are not utilized, paratroops are typically not subject to Anti-Aircraft Fire, but may be attacked in an abstract manner (see 7.44.1.4).

Any hex on the mapboard may be designated as a Drop Zone hex, even illegal landing hexes. The same Drop Zone hex may be plotted for any number of parachute units, although no more than 3 individual units may land in the same hex. Pathfinders are typically placed on the mapboard and are not dropped.

The possible turns of arrival are outlined in each Scenario's Setup Section. This information must be plotted prior to the placement of opposing forces. The conditions for use of Pathfinders are also outlined in each Scenario's Setup Section.

7.44.1.1 Parachute Landing

On the turn of arrival, during their Movement Phase, the paratroop units being dropped that turn are individually placed in their Drop Zone hex in any order desired.

1. Each unit must each check for scatter. Roll (d6); this represents the first scatter direction. Roll (d6) a second time to determine the second scatter direction. Reference the Directional Hex on the mapboard or geomorphic mapboards to determine the scatter directions. Keep the order of the scatter directions in hand.

2. Now roll (100) and reference the following Paratroop Scatter Table (OR) (also located on the back cover of Panzer Expansion #3) to determine how far the unit scatters in the first direction. Move the unit in the first direction the listed number of hexes. Then roll (100) a second time to determine how far the unit scatters in the second

© 2025 GMT Games, LLC

direction. Move the unit in the second direction the listed number of hexes; this is the unit's landing hex. Note that a unit could scatter 0 hexes in either or both directions or return to its original Drop Zone hex.

PARATROOP SCATTER (OR)			
RESULT	HEXES	RESULT	HEXES
01-10	0	59-68	5
11-22	1	69-78	6
23-34	2	79-88	7
35-46	3	89-95	8
47-58	4	96-00	9
Day Conditions: -20 Dusk Conditions: -10 Pathfinder: -20 (Moonlight only) A net result of less than 01 is 01.			

3. The number of hexes scattered assumes the paratroops are landing during Moonlight conditions. If during Day or Dusk Conditions, apply the listed modifier to each scatter roll.

4. Pathfinders only affect the original Drop Zone hex. If a Pathfinder is located in the Drop Zone hex, a -20 modifier applies only during Moonlight conditions to both scatter determinations.

5. If 3 or more friendly units (excluding Pathfinders) are currently located in the final landing hex (not the original Drop Zone hex or first scatter hex), reroll to determine the number of hexes to scatter, procedure 2 above. Otherwise, the paratroop unit lands; check for landing status.

6. If a paratroop unit would scatter off the mapboard, the unit is instead placed in the edge hex and is moved no further. If this happens on the first scatter direction, the second scatter direction is ignored. If any opposing units are currently located in the edge landing hex, they are ignored as the paratroop unit is not actually located in that hex. Make a note of the number of hexes the unit was unable to scatter. This represents the number of turns the unit must wait before it becomes active. Once it becomes active, it may start in its edge landing hex or an adjacent hex, if free of opposing units. Otherwise, it may be moved to a further adjacent hex that is free of opposing units. Until it is active, it may not be targeted. It may be the target of Overwatch Fire the tum it becomes active.

7. If a paratroop unit lands in a hex containing just one or more opposing vehicles (no leg and/or towed units), after determining the paratroop unit's Landing Status, roll (d6) and reference the Directional Hex. Move the paratroop unit 1 hex in the indicated direction. If that hex is also occupied by just one or more opposing vehicles, roll (d6) again and move the unit 1 hex in the indicated direction until it lands in hex free of opposing vehicles. Do not again check for landing status. If the unit would move off the mapboard, rerol1 (d6).

8. If a paratroop unit lands a hex containing one or more opposing leg and/or towed units (the hex may also contain vehicles), an immediate Hand-to-Hand Combat is resolved after determining the paratroop unit's Landing Status. In this case, the opposing player chooses the defending unit in the combat if more than one leg and/or towed unit is in the landing hex. The paratroop unit applies a -10 modifier in addition to any other applicable modifiers (including Suppression) and may not utilize an attached flamethrower. This is the only case in which a Suppressed attacking leg unit may initiate a Hand-to-Hand Combat. Once the combat is resolved, if victorious, the paratroop unit occupies the hex if it is free from opposing units; if occupied by just vehicles, follow procedure 7 to move to a new hex. Do not again check for landing status. If additional opposing leg and/or towed units remain in the hex or the hex just moved into, additional Hand-to-Hand Combats are resolved until the paratroop unit is eliminated or all opposing leg and/or towed units are eliminated. For all subsequent combats the opposing player again chooses the defending unit in the combat, but the paratroop unit does not apply the -10 modifier.

7.44.1.2 Parachute Landing Status

With the exception of a paratroop unit that would scatter off the mapboard, once determining the actual landing hex, landing status is checked on the following Landing Status Table (OR) (also located on the back cover of Panzer Expansion #3).

Roll (100) and reference the terrain type in the landing hex:

- **NE (No Effect)**: the unit is unaffected and may begin normal ground operations.
- **SPR (Suppressed)**: the unit is Suppressed; mark it with a SUPPRESSED/ON counter.
- **HELM (Half-Eliminated)**: a half-squad or section is eliminated; a squad is reduced to a half-squad and Suppressed; mark it with a SUPPRESSED/ON counter.
- **ELM (Eliminated)**: the unit is eliminated.

1. Terrain hexsides, i.e., Crests, Hedgerows, Slopes, and Walls, do not affect paratroop landing status.

2. If a Stream hex is impassable, it is treated as a Water hex.

3. If Barrage Smoke is located in the landing hex, the modifier is +10. Wreck Smoke has no effect.

4. After determining landing status, paratroop units are immediately attacked by anti-personnel mines in the landing hex.

5. After determining landing status, paratroop units are immediately attacked by any barrages in the landing hex.

© 2025 GMT Games, LLC

LANDING STATUS (OR)				
TERRAIN	NE	SPR	HELM	ELM
BLOCK	01-40	41-80	81-90	90-00
BRIDGE	---	01-20	21-70	71-00
BUILDING	---	01-20	21-50	51-00
CLEAR	01-90	91-00	---	---
CREST	---	01-40	41-80	81-00
DITCH	01-20	21-60	61-80	81-00
FIRE	---	---	---	01-00
FORD	01-85	86-00	---	---
GULLY	01-20	21-60	61-80	81-00
HEDGEROW	---	01-40	41-80	81-00
LEG, TOWED	01-00	---	---	---
ROUGH	01-40	41-80	81-00	---
RUBBLE	01-20	21-60	61-80	81-00
SCRUB	01-85	86-00	---	---
SHELLHOLE	01-50	60-90	91-00	---
SLOPE	01-40	41-70	71-00	---
STREAM	01-10	11-40	41-80	81-00
VEHICLE	01-00	91-00	---	---
WALL	---	01-60	61-00	---
WATER	---	---	---	01-00
WIRE	---	---	---	01-00
WOODS	01-20	21-60	61-80	81-00
WOODS-HV	01-10	11-30	31-60	61-00
WOODS-LT	01-30	31-80	81-90	91-00
WRECK	01-90	91-00	---	---

Hasty Entrenchment, Hill, Improved Position, Mines, Road/Path, and Smoke types utilize the other terrain in the hex.
Gliders: +20
Suppressed or Damaged: +20
A net result greater than 00 is 00.

The Situation

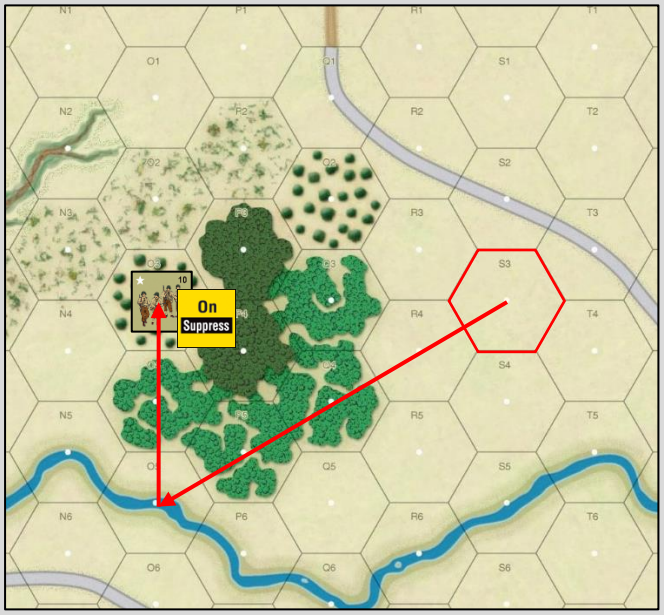
A paratroop squad's Drop Zone hex is 19S3. Its two scatter directions are 5 and 1.

For the first scatter direction (5), a 52 is rolled, moving the squad 4 hexes to hex 19O5.

For the second scatter direction (1), a 27 is rolled, moving the squad 2 hexes to hex 19O3, its landing hex.

PARATROOP SCATTER (OR)			
RESULT	HEXES	RESULT	HEXES
01-10	0	59-68	5
11-22	1	69-78	6
23-34	2	79-88	7
35-46	3	89-95	8
47-58	4	96-00	9

Day Conditions: -20
Dusk Conditions: -10
Pathfinder: -20 (Moonlight only)
A net result of less than 01 is 01.



Checking the landing status for Light Woods, a 76 is rolled; the squad is Suppressed.

LANDING STATUS (OR)				
TERRAIN	NE	SPR	HELM	ELM
WIRE	---	---	---	01-00
WOODS	01-20	21-60	61-80	81-00
WOODS-HV	01-10	11-30	31-60	61-00
WOODS-LT	01-30	31-80	81-90	91-00
WRECK	01-90	91-00	---	---

7.44.1.3 Parachute Overwatch Fire

Once a parachute unit reaches in final landing hex, i.e., after all Hand-to-Hand Combats are resolved, if any, it is subject to normal Overwatch Fire as it is considered a moving unit.

7.44.1.4 Parachute Anti-Aircraft Fire

At the players' option, they may apply this method of resolving anti-aircraft fire against paratroops. Allocate the anti-aircrft fire against all or a portion of the paratroops based on any desired methodology, e.g., by mapboard or turn.

It consists of a single GP Fire Combat versus each paratroop "stick" dropped. Note that paratroops did not typically jump during Day or Dusk conditions in the vicinity of any significant anti-aircraft fire.

© 2025 GMT Games, LLC

A paratroop "stick" is defined as all paratroop units plotted to land in the same hex during the same turn up to a maximum of 3 squads or the equivalent in transport capacity, e.g., a squad and 4 half-squads. Pathfinder units are not subject to anti-aircraft fire. Roll (100) for each "stick" and apply the indicated result to all of its units:

- On a net result of 101+, the "stick" suffers an ELM (see 7.44.1.2).
- On a net result of 94-100, the "stick" suffers an HELM (see 7.44.1.2).
- On a net result of 81-93, the "stick" suffers an SPR (see 7.44.1.2).
- During Dusk conditions, apply a +5 modifier.
- During Day conditions, apply a +10 modifier.

7.44.2 Gliders

Often overshadowed by the more glamorous paratroopers, glider troops nonetheless played a very important part in airborne operations. Both US and British airborne divisions included regiment and brigade sized formations of glider troops.

Their use requires plotting the turn of arrival and the side of the mapboard from which they will enter. They are then placed on the mapboard during either Air Phase of their turn of arrival. Since gliders are aircraft, they are subject to anti-aircraft Fire (see 6.7.4.2).

Any side of the mapboard may be designated as the Arrival Area. The same Arrival Area may be designated for any number of gliders.

The possible turns of arrival are outlined in each Scenario's Setup Section. This information must be plotted prior to the placement of opposing forces.

7.44.2.1 Gliders

There are two types of gliders included in Panzer Expansion #3, the CG-4A Waco and the AS.51 Horsa. Both were utilized by US and British glider forces. In British service, the Waco was known as the Hadrian. Since they do not have individual Data Cards, their specifications are listed below:

CG-4A Waco/Hadrian #336

- PTS: 45
- SP: 175 Km/h
- TR: 0-2
- WT: 3.4
- Unarmed
- GPD: 1S
- Landing Distance: 2 hexes

NOTES: May transport a single Jeep (U-17A), when doing so, the transport capacity is reduced to TR: 0-1*; may only transport section-sized leg units.

AS.51 Horsa #344

- PTS: 60
- SP: 160 Km/h
- TR: 1-4
- WT: 7.0
- Unarmed
- GPD: 2S
- Landing Distance: 3 hexes

NOTES: When transporting a towed unit, the transport capacity is reduced to TR: 1-1. May transport a single Jeep (U-17A), when doing so, the transport capacity is reduced to TR: 0-2.

7.44.2.2 Glider Landing

On the turn of arrival, during either the lst or 2nd Air Phase, the gliders arriving that turn are individually placed in any edge hex in their Arrival Area in any order desired.

1. The player controlling the glider places it in the edge hex while the opposing player faces the glider to any one of two or three possible hexsides facing inward on the map or map panel.

EXAMPLE: If a glider is placed in hex 19A5, it may face either hexside 2 or 3. If placed in hex 19J10, it mayface hexside 1, 2 or 6.

2. A glider enters at Slow Speed and Low Altitude. It flies just like other aircraft (see 6.7.2) to its landing hex. It must land during the current Air Phase.

3. A glider may make two turns as long as it moves at least 3 hexes between turns. If Suppressed by anti-aircraft Fire, it may not make any remaining turns.

4. If Damaged by anti-aircraft Fire, roll (10). The result is the number of hexes the glider moves forward from its front facing before it touches down. If it moves off the mapboard, it and all passenger units are eliminated.

5. If eliminated by anti-aircraft fire, follow the crash procedure (see 6.7.4.2.1); the crash GP Factor is 10. All passenger units are also eliminated.

6. Once a glider reaches its Landing Hex, the player announces that the glider is touching down.

7.44.2.3 Glider Landing Status

Glider landing status is checked on the Landing Status Table (OR) (located above and also on the back cover of Panzer Expansion #3).

Roll (100) and reference the terrain type in the landing hex; apply the result to all passenger units:

- **NE (No Effect)**: the passenger units are unaffected and may begin normal ground operations.
- **SPR (Suppressed)**: the passenger units are Suppressed; mark them with a SUPPRESSED/ON counter.
- **HELM (Half-Eliminated)**: passenger half-squads, sections, and towed units are eliminated; passenger squads are reduced to half-squads and Suppressed; mark them with a SUPPRESSED/ON counter.
- **ELM (Eliminated)**: all passenger units are eliminated.

1. Gliders automatically apply a +20 modifier.

2. If a Pathfinder is located in the touchdown hex, a -10 modifier applies only during Moonlight conditions.

© 2025 GMT Games, LLC

3. If the glider is Suppressed and/or Damaged, apply a +20 modifier for each status.

4. If a Stream hex is impassable, it is treated as a Water hex.

5. If Barrage Smoke is located in a landing hex, a +10 modifier is applied if checking the hex. Wreck Smoke has no effect.

6. Gliders have a Landing Distance equal to 2 or 3 hexes. This represents the number of hexes a glider will move, including its touchdown hex, from its front facing once it touches down until it reaches its final landing hex.

7. If a glider changes elevation down 1 or 2 levels by crossing a Slope hexside, 1 hex is added to its Landing Distance. If it changes elevation up 1 or 2 levels by crossing a Slope hexside, 1 hex is subtracted from its Landing Distance. In this case, a glider must still resolve the Slope hexside landing status even if it does not enter the next hex. If it changes elevation up or down by 3 or more levels or crosses a sheer edge or cliff, it is eliminated and all passengers are also eliminated.

8. A glider must check landing status for each hex it enters while landing only if the terrain type in a hex is different from the terrain type in the previous hex.

If the first landing hex is Clear terrain and the second landing hex is also Clear terrain, only the first hex is checked.

9. If crossed, a terrain hexside is checked for landing status regardless of the terrain type in the two connecting hexes.

10. No matter the outcome, the glider is replaced with a WRECK counter in the final landing hex and removed from play. If the passenger units are not eliminated in the landing they are also placed in the final landing hex. They may face in any direction.

11. If the final landing hex contains any opposing units, roll (d6) and reference the Directional Hex. Move all passenger units 1 hex in the indicated direction. If that hex is also occupied by any opposing units, roll (d6) again and move the units 1 hex in the indicated direction until it lands in hex free of opposing units. Do not again check for landing status. If the units would move off the mapboard, reroll (d6).

12. Prior to determining landing status, gliders are immediately attacked by any anti-vehicular mines in a landing hex. Track hits are ignored. If Damaged, the glider applies that status to any remaining landing status checks.

13. Prior to determining landing status, gliders are immediately attacked by any barrage in a landing hex. If Suppressed or Damaged, the glider applies that status to any remaining landing status checks. If Eliminated, replace the glider with a WRECK counter and eliminate all passenger units.

14. After determining landing status, passenger units are immediately attacked by any mines in the final landing hex.

An AS.51 Horsa, transporting a squad, a half-squad and a section, touches down in hex 19L2 moving in direction 3.

It has a Landing Distance of 3 hexes, so it will complete its landing in hex 19N3.

Checking the landing status of the first landing hex, Clear terrain, 62 is the rolled for a net result of 82; No Effect (NE).

The landing status of the second landing hex must be checked because it is not Clear terrain; it is Gully terrain. 48 is rolled for a net result of 68; Half-Eliminated (HELM). The half-squad and the section are eliminated and the squad is reduced to a half-squad and Suppressed.

The landing status of the third landing hex must be checked because it is not Gully terrain; it is Scrub terrain. 69 is rolled for a net result of 89; Suppression (SPR). Since the remaining half-squad is already Suppressed, no further action is taken.

A Wreck and the Suppressed half-squad are both placed in hex 19N3 and the glider is removedfrom play.

7.44.2.4 Glider Overwatch Fire

Once a glider reaches its final landing hex, the passenger units are subject to normal Overwatch Fire as they are considered moving units.

7.45 Bocage Country

Bocage is a Norman word that refers to fields and country lanes located between narrow low ridges and banks enclosed by tall thick hedgerows. This is the infamous terrain in Normandy referred to as the "Hedgerows" by the US forces.

Hedgerow hexsides basically block the line-of-sight of units on opposite sides. With this option, leg units may "dig in" to Hedgerow hexsides enabling them to expand their ability to spot units on the opposite side of Hedgerow hexsides.

To dig a leg unit into a Hedgerow hexside, it must have a MOVE command. It remains in its current hex and is marked with a LOCATION counter with the INB side facing front. It may also be in Full Cover by marking it with a second LOCATION counter with the FC side facing front.

Once dug in to a Hedgerow hexside, a leg unit may spot and be spotted normally as if the Hedgerow hexside did not exist. In the same manner as Brick Building hexes, it is considered to be in Heavy Cover for spotting and to be in Medium Cover for defensive purposes on either side of the Hedgerow hexside.

To exit from a dug in Hedgerow hexside, mark a MOVE or SHORT

HALT command. The INB LOCATION counter is removed during the Movement Phase. It now occupies the hex adjacent to the Hedgerow hexside it started from. It may Crawl out if eligible.

Thanks to Jeff Coyle for suggesting this optional rule.

7.46 Artillery Air Bursts

All Indirect Fire, mortar Direct Fire and aircraft delivered bombs or rockets directed at targets located in Light Woods, Woods, Heavy Woods, Light Grove or Grove hexes may cause additional damage due to shrapnel/splinters created from explosions in the trees.

Affects all 'S' and 'P' type targets and Open 'A' type targets (OR, see 7.8) by applying +10 modifier.

7.47 Dismounted FOs

Integrated vehicle crew based FOs may separate from the crew and dismount and move independently from their parent vehicle. The FO dismounts normally; add a leg unit section to represent the dismounted FO. If required due to combat results, it may not bail out from the parent vehicle crew and act as an independent leg unit.

When dismounted, it functions as a leg FO unit. However, it applies a –10 modifier for all GP Fire, Close Assault and Hand-to-Hand Combats it initiates. The parent vehicle is unaffected and may operate normally as an independent unit.

© 2025 GMT Games, LLC

The FO section may remount its parent vehicle normally; remove the leg unit section. It may also mount a different vehicle as a normal passenger unit.

7.48 Delayed Reaction

Units may not be prepared for action or may be surprised by the appearance of opposing forces. Therefore, there is a delay in responding to sighting opposing units. This is represented by a delay before the unit may operate normally. Until that time, the unit must have an N/C command marked.

Scenarios 28, 31 (Panzer Expansion #3) and 49 (Panzer North Africa) have Delayed Reactions.

In Scenario 28, if a German vehicle spots a US unit moving during turn 5, it may mark any command starting in turn 6.

In Scenario 31, if a British unit spots a German vehicle on turn 1, it may mark any command starting in turn 3.

In Sceanrio 49, if an Italian tank crew spots a British unit moving during turn 5, it may mark a Move command starting in turn 6.

7.49 Vehicle Assault Cover

Vehicles normally provide Light Cover for leg units when located in the same hex. With this Optional Rule, when advancing, a limited number of leg units are also able to utilize the cover from vehicles.

All vehicle types may provide assault cover for leg units. Each vehicle provides Light Cover for a squad, or two half-squads, or a half-squad and a section, or 2 sections sized units. Covered leg units do not apply the –2 GP Defense Movement modifier.

The covered leg unit(s) must be dismounted, not in Full Cover and start its turn in the same hex as the vehicle. The vehicle and the covered leg unit(s) must share the same MOVE or SHORT HALT command. If the units are from different formations (exception to 6.2.1.1.3), the shared command may be from either formation. During their Movement Phase, the vehicle and covered leg unit(s) are moved at the same time to indicate Vehicle Assault Cover and must remain in the same hex.

Leg units may utilize Vehicle Assault Cover to execute Hand-to-Hand or Close Assault Combats against adjacent units or to advance into Hand-to-Hand or Close Assault Combats both with a MOVE command.

The vehicle and the covered leg unit(s) may be individually targeted for Direct and Overwatch Fire.

Thanks to Randall Garlington for suggesting this optional rule.

7.50 Defensive Fire

The Command Control rules limit the number of unique commands each company may utilize per turn potentially forcing some of the units to mark N/C commands (see 6.2.1). Typically, a unit may not perform any actions when marked with an N/C command.

When employing this option, units with N/C commands may defend themselves, but only when fired upon with Direct AP or GP Fire. If fired upon, the unit may return fire, as if Overwatching, against a single firing unit if it can spot the unit and it is within its Field-of-Fire. If also employing Optional Rule 7.8 Turrets, see section 7.8.4.

It must apply a –2 AP Hit Modifier or a –10 GP Fire Modifier in addition to any other applicable modifiers including the applicable Overwatch modifier.

If later attempting to recover from a Suppression or Morale Break after utilizing Defensive Fire, apply the Command other than N/C +20/–20 modifier.

7.51 Illumination [new counter Expansions 3 & 4]

See 7.27.

7.52 Command Span

Even in a tactical setting, command units perform critical roles beyond the function of morale support and recovery. By maintaining communications with their subordinate units, they effectively carry out a command role.

To maintain communications, subordinate units must be within a certain range of their command unit(s). In turn, the command units must be within a certain range of higher level command units. In game terms, these various ranges are called Command Span.

While many different command elements are affected, Command Span focuses on a subordinate unit's ability to engage in combat and maneuver across the battlefield.

Combat is a more basic element than maneuver. Units commanded to Fire or Overwatch are much more able to carry out those commands without interaction from their command unit(s) than those units ordered to Move or Short Halt. N/C commands are unaffected by Command Span.

Company (CHQ)

The CHQ is the smallest, or lowest command level. The Command Span from any CHQ is 10 hexes to any subordinate unit from its formation. A subordinate unit only needs to be within range of a single CHQ from its formation if more than one CHQ is available. CHQs do not provide any command authority for units outside of their formation.

Typically, the company-level Command Span is not modified for Formation Grade, although it may increase or decrease due to other factors, for example, nationality, a large number of subordinate units (decrease) or a defensive posture (increase).

- If *any* company-level subordinate units are out of the Command Span, excluding recon units, and any units will be moving, again excluding recon units, (Move and/or Short Halt commands), regardless if those specific units are out of the Command Span or not, the maximum number of Move and/or Short Halt commands available is equal to ½ (round down) of the total available commands (minimum 1). The total number of available commands is not affected.

© 2025 GMT Games, LLC

- After the loss of *all* company CHQs (elimination, bail out, knock out or brew up), there is a permanent reduction of the total available Move and/or Short Halt commands by ½ (round down) of the total available commands. The total number of available commands is not affected.
- Units without radio sets (see 7.4) have their Command Span reduced to 0.

Reference Scenario 6 (Panzer): Assault. The Soviet CHQ's Command Span is decreased to 8 hexes due to the size of the company.

At full-strength and all leg units mounted, the company has 17 combat units. With Seasoned Formation Grade, it has a total of 10 available commands. If any of the company's units are greater than 8 hexes from the CHQ T-34/85 M44, the number of available Move and/or Short Halt commands is limited to 5 (10/2) of the available 10 commands.

Reference Scenario 50 (Panzer North Africa): Operation Compass: Breaching the Fortress. The Italian Infantry CHQ Command Span is decreased to 5 hexes due to troop quality and the size of the company.

At full-strength and all leg units mounted, the company has 23 combat units. With Regulars Formation Grade, it has a total of 11 available commands. If any of the company's units are greater than 5 hexes from the CHQ Half-Squad, the number of available Move and/or Short Halt commands is limited to 5 (11/2 round down) of the available 11 commands.

Battalion (BHQ)
The BHQ is the intermediate, or middle command level. All CHQs are subordinate to one or more BHQs. The Command Span from *any* BHQ is 20 hexes to its subordinate CHQs.

Typically, the battalion-level Command Span is not modified for Formation Grade, although, like company-level command spans, it may be increased or decreased due to other factors.

In many cases, BHQs will be positioned somewhere off map, since they are not listed as part of a scenario's forces. In that case, it is assumed that any CHQs are within the 20 hex Command Span even if located more than 20 hexes from the mapboard edge. A scenario could include special conditions where this could be modified or adjusted.

- If a CHQ is out of the Command Span from its BHQ, its formation must move two rows down in the Available Commands table, minimum Green, when determining its available commands.
- After the loss of all BHQs (elimination, bail out, knock out or brew up), there is a permanent move of two rows down in Available Commands table, minimum Green, when determining its available commands.
- Units without radio sets (see 7.4) have their Command Span reduced to 0.

Regiment (RHQ)
The RHQ is the highest, or top command level. All BHQs are subordinate to one or more RHQs. The Command Span from any RHQ is 20 hexes to its subordinate BHQs.

Typically, the regiment-level Command Span is not modified for Formation Grade, although, like battalion-level command spans, it may be increased or decreased due to other factors.

In just about all cases, RHQs will be positioned off map, since they are not listed as part of a scenario's forces. In that case, it is assumed that any BHQs are within the 20 hex Command Span even if also located off map or located more than 20 hexes from the mapboard edge. A scenario could include special conditions where this could be modified or adjusted.

- If a BHQ is out of the Command Span from its RHQ, all of its company-level formations must move two rows down in the Available Commands table, minimum Green, when determining its available commands. Cumulative with Battalion-level above.
- After the loss of all RHQ (elimination, bail out, knock out or brew up), there is a permanent move of two rows down in Available Commands table, minimum Green, when determining its available commands. Results are cumulative.
- Units without radio sets (see 7.4) have their Command Span reduced to 0.

7.53 Voluntary Bail Out

Bailout is normally a non-player controlled event triggered by specific combat results. However, this may result in challenging situations when employing the Command Span optional rule (see 7.52).

Damaged Vehicles or vehicles with just Hull Damage (see 7.56) and Track hits invariably fall behind, causing gaps in the required command span when commanding moving units.

Players may prefer to place those vehicles out of action. When the situation arises, during the Adjust/Remove Counters Step (see 6.8.4) of the Adjustment Phase, place a Bail counter on or next to the vehicle.

7.54 Quickdraw

Quickdraw is a method by which a Second Player Unit (SPU) simultaneously executes Direct Fire against a First Player unit (FPU) that just announced Direct Fires against that SPU. To execute Quickdraw, the SPU:

- Is unsuppressed, unbroken and not hesitating.
- Must have an unrevealed Fire Command.
- Must have spotted the FPU during the current turn's Spotting Phase and has the FPU within its current field-of-fire.
- Must have Unit Grade superior to that of the FPU.
- Reduces its RoF to 'N' if not already 'N'.

A first player S-35 (Panzer Expansion #4) with Seasoned Unit Grade announces Direct Fire against a second player PzKpfw IIIF with Veteran Unit Grade with an unrevealed Fire Command. The two vehicles (the Panzer III must fire its 37mm gun with a RoF of N) resolve their Direct Fire in any order, only applying any combat results after both have resolve their fire.

© 2025 GMT Games, LLC

7.55 Leaders

Leaders add a powerful new dynamic to Panzer. They represent individuals of various ranks and skills that can influence gameplay in a number of unique ways. In almost all cases, scenarios do not indicate the presence of any particular leader or leaders. Players may freely add any number of leaders or none at all. Just decide by mutual agreement. Follow the recommended command structure below, or just go with whatever works. There is no correct or incorrect approach as battlefield conditions make for very fluid situations. There may be occasions where junior officers or NCOs find themselves in overall command or senior officers are commanding only a small contingent.

For the purposes of these rules, RHQ level (regiment/brigade) commanders are not addressed. Those commanders are considered to operate off-map or, when on-map, without a named leader.

7.55.1 Leader Employment

At the start of a scenario, leaders must attach to any vehicle, leg or towed unit; they may not attach to aircraft. They may also arrive later in a scenario as part of a relief or reinforcement formation, again attached to any vehicle, leg or towed unit.

Leaders never operate independently. They must attach to a combat unit at all times; place the leader counter under the attached unit. A unit may only have a single attached leader. The attached unit's Grade or its Formation Grade is unaffected by the presence of a leader.

Leaders are never individually targeted. If in play, they are visible at all times unless part of a hidden unit. If the attached unit is lost (elimination, bail out, knock out or brew up), the leader is permanently removed from play. Leaders do not have VPs and, therefore, do not factor in when determining victory in a scenario whether they are present, survive or are lost.

No VPs? What value can be placed on the impact a leader or leaders does or does not have on the outcome of a scenario? In many cases, it could be purely subjective or emotional. There may be a favorite leader or one that turns the tide of battle or has no measurable impact. It is really up to the players to make that determination.

If attached to a vehicle, leg or towed unit designated in a scenario as an FO or command unit (BHQ or CHQ), the leader automatically assumes the role as that FO or command unit. Leaders do not gain or lose FO or command statues when transferring to a new unit even if that new unit is also an FO or command unit. Integrated vehicle crew based FO leaders may dismount; exception to below (see 7.47).

Leaders attached to a vehicle may never transfer to another unit; they remain with that vehicle for the duration of the scenario. Leaders attached to leg or towed units, may transfer to another leg or towed unit from the same formation when located in the same hex; they may not transfer to vehicles. If an FO or command unit (BHQ or CHQ) that status transfers with the leader.

No specific command is required to transfer, just shift the leader counter to the new leg or towed unit at the conclusion of the Adjustment Phase after all of the adjustment steps are complete.

Leaders may not transfer from a leg or towed unit that is suppressed, hesitating and/or broken. However, they may transfer to a suppressed, hesitating and/or broken leg or towed unit.

7.55.2 Leader Effects

- (A) AP Combat: + AP Hit modifier
- (G) GP Combat: + GP dice roll modifier
  - Also used for Close Assault, Hand-to-Hand and Overrun combat resolutions
- (S) Suppression Recovery: – dice roll modifier
- (M) Morale: + dice roll modifier
- (P) Spotting: + Spotting Ranges modifier
- (R) IF Response: + Indirect Fire Response modifier

General

Command: In the same manner as Recon units, all leaders automatically command the attached unit; this command does not count towards its formation's command limit.

Leader modifiers are cumulative with all other combat, suppressed, morale, spotting or IF response modifiers. Leaders may apply any and all applicable modifiers during a turn. If more than one leader could be applicable, only the modifiers from a single leader come into play. Multiple leader modifiers are never applicable at the same time on the same unit.

It is not necessary to utilize the same leader for all actions; if there is a choice, utilize the leader that offers the greatest advantage.

AP and GP Combat

(A) AP and (G) GP Combat modifiers apply to all of the attached unit's weapons and any attached weapons. If the leader is also acting as a command unit (BHQ or CHQ), a single leader's (A) AP or (G) GP Combat modifiers are applicable to all other units' weapons and any attached weapons from the same formation within command range.

Close Assault and Hand-to-Hand Combat

Close Assault and Hand-to-hand Combat modifiers apply singly per combat, not per unit in the combat, and only to the combat including the leader regardless if the leader is also acting as a command unit (BHQ or CHQ). The attached unit does not need to be the primary attacker.

Overrun Combat

Overrun modifiers apply only to the attached vehicle. They do not apply to any other Overrun combats even against the same target unit regardless if the leader is also acting as a command unit (BHQ or CHQ).

Suppression

The (S) Suppress modifier applies only to the attached unit unless the leader is also acting as a command unit (BHQ or CHQ). In those cases, a single leader's (S) Suppress modifier is applicable to all other units from the same formation within command range.

Morale

The (M) Morale modifier applies only to the attached unit unless the leader is also acting as a command unit (BHQ or CHQ). In those cases, a single leader's (M) Morale modifier is applicable to all other units from the same formation within command range.

This modifier is an exception and is in addition to the +20 Command Unit with in Cmd Rng limit (see 7.1.4).

© 2025 GMT Games, LLC

Spotting
The (P) Spotting modifier applies only to the attached unit regardless if the leader is also acting as a command unit (BHQ or CHQ).

If attached to a recon unit, this modifier is in addition to the +1 Recon Spotting modifier (see 7.43).

Spotting modifiers do not apply to optional rules 7.4 and 7.7; the application of those rules is unaffected by attached leaders.

IF Response
The (R) IF Response modifier applies only to leaders when acting as FOs, command units (BHQ or CHQ), or attached to recon units and applies only to the attached unit regardless if the leader is also acting as a command unit (BHQ or CHQ).

If the result is an unmodified 1, a Danger Close friendly fire incident may still occur (see 6.5.1.10).

7.55.3 Force Leaders
Ten double-sided leader counters are included for each force for a total of twenty individual leaders—two of each rank.

Rank titles are not included on the individual Leader counters. Some are just too long or the requisite abbreviations would not be clear. So, just the leader surnames along with their national rank insignia are included.

Across the forces, equivalent ranks do not exist across all of the nations. Some interpretations were made to keep the information consistent.

The following tables summarize each force's leaders to assist in associating the various rank insignia with the rank titles and leaders. Also included are recommended command structures.

German

- **CHQ**: Lieutenant or Captain; additional CHQ from same formation the same rank or one or two ranks lower
- **BHQ**: Major or Lt. Colonel; additional BHQ from same formation the same rank or one or two ranks lower
- **FO**: Typically a junior officer or senior NCO
- **Platoon**: Typically a junior officer or senior NCO

In the German Heer, there was a strictly defined system of corps colors on collar patches, uniform piping and the colored edging around the shoulder boards or shoulder straps. This system of colors, Waffenfarben, denoted combat service branches, administrative and ministerial areas, and the general staff.

Rose-Pink: all Panzer Troops, e.g., Bauer, Sauer

White: Infantry, e.g., Steiner, Winter

Golden-Yellow: Reconnaissance, e.g., Mayer, Pfeiffer

Copper-Brown: Motorcycle Infantry, e.g., Lehmann, Klein

Red: Artillery, Assault Guns, e.g., Schmidt, Otto

Meadow-Green: Panzergrenadiers, Motorized Infantry, e.g., Lange, Winkler

Light-Green: Jäger, Mountain Troops, e.g., Weber

Black: Pioniere, Armored Engineers, e.g., Koch, Haas

These are provided for illustrative purposes only, and do not limit the use of leader counters in any particular scenario or setting. Other colors, not included here, were also utilized, e.g., blue for supply troops.

German Leaders (Panzer)		
Koch	Corporal	Unteroffizier
Bauer	Corporal	Unteroffizier
Weber	Jr. Sergeant	Unterfeldwebel
Kappel	Jr. Sergeant	Unterfeldwebel
Krüger	Sergeant	Feldwebel
Werner	Sergeant	Feldwebel
Steiner	Staff Sergeant	Oberfeldwebel
Herrmann	Staff Sergeant	Oberfeldwebel
Mayer	Sr. Sergeant	Hauptfeldwebel
Walter	Sr. Sergeant	Hauptfeldwebel
Möller	2nd Lieutenant	Leutnant
Huber	2nd Lieutenant	Leutnant
Scholz	Lieutenant	Oberleutnant
Hahn	Lieutenant	Oberleutnant
Lehmann	Captain	Hauptmann
Wissmann	Captain	Hauptmann
Schmidt	Major	Major
König	Major	Major
Lange	Lt. Colonel	Oberstleutnant
Schäfer	Lt. Colonel	Oberstleutnant

German Leaders (Panzer North Africa)		
Haas	Corporal	Unteroffizier
Voigt	Corporal	Unteroffizier
Stein	Jr. Sergeant	Unterfeldwebel
Sommer	Jr. Sergeant	Unterfeldwebel
Otto	Sergeant	Feldwebel
Brandt	Sergeant	Feldwebel
Winter	Staff Sergeant	Oberfeldwebel
Bergmann	Staff Sergeant	Oberfeldwebel
Pfeiffer	Sr. Sergeant	Hauptfeldwebel
Sauer	Sr. Sergeant	Hauptfeldwebel
Löwe	2nd Lieutenant	Leutnant
Wagner	2nd Lieutenant	Leutnant
Becker	Lieutenant	Oberleutnant
Schultz	Lieutenant	Oberleutnant
Klein	Captain	Hauptmann
Wissmann	Captain	Hauptmann
Jassen	Major	Major
Köhler	Major	Major
Winkler	Lt. Colonel	Oberstleutnant
Jäger	Lt. Colonel	Oberstleutnant

© 2025 GMT Games, LLC

Soviet

- **Tank CHQ**: Sr. Lieutenant or Captain
- **Motor Rifle CHQ**: Lieutenant or Sr. Lieutenant
- **Tank BHQ**: Major or Lt. Colonel
- **Motor Rifle BHQ**: Major or Captain, in some cases Lt. Colonel
- **FO**: Typically a junior officer
- **Tank and Motor Rifle Platoon**: Jr. Lieutenant or senior NCO

Note that in most cases, Soviet companies and battalions included a non-command level political officer (zampolit), often a Lieutenant or Jr. Lieutenant.

Unlike many forces, the Soviet Army did not foster a professional class of NCOs. In most cases, Soviet Army NCOs did not fill many of the specialized and leadership roles typically held by other NCOs; those were filled by Soviet officers. In contrast, Soviet Army NCOs filled many of the roles held by other ranks in other nations. As a result, their numbers were somewhat larger as a fraction of the total forces.

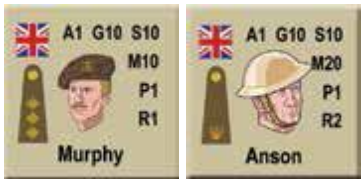
Soviet Leaders		
Zolotov	Jr. Sergeant	Mladshiy Serzhant
Rostov	Jr. Sergeant	Mladshiy Serzhant
Azarov	Sergeant	Serzhant
Khovansky	Sergeant	Serzhant
Ivanov	Sr. Sergeant	Starshiy Serzhant
Rodin	Sr. Sergeant	Starshiy Serzhant
Sharov	Sergeant Major	Starshina
Pashin	Sergeant Major	Starshina
Turbin	Jr. Lieutenant	Mladshiy Leytenant
Koskov	Jr. Lieutenant	Mladshiy Leytenant
Filippov	Lieutenant	Leytenant
Leskov	Lieutenant	Leytenant
Sokolov	Sr. Lieutenant	Starshiy Leytenant
Orlov	Sr. Lieutenant	Starshiy Leytenant
Yazov	Captain	Kapitan
Marin	Captain	Kapitan
Chekhov	Major	Mayor
Dmitriyev	Major	Mayor
Nardin	Lt. Colonel	Podpolkovnik
Vanzin	Lt. Colonel	Podpolkovnik

US

- **CHQ**: 1st Lieutenant or Captain; additional CHQ from same formation the same rank or one or two ranks lower
- **BHQ**: Major or Lt. Colonel; additional BHQ from same formation the same rank or one or two ranks lower
- **FO**: Typically a junior officer or senior NCO
- **Platoon**: 2nd Lieutenant or senior NCO

US Leaders	
Martin	Corporal
Jones	Corporal
Gardner	Sergeant
Wilson	Sergeant
Hollister	Staff Sergeant
Collier	Staff Sergeant
Powers	Technical Sergeant
Hall	Technical Sergeant
Hamill	First Sergeant
Moretti	First Sergeant
Shaw	2nd Lieutenant
Cobb	2nd Lieutenant
Turner	1st Lieutenant
Carpenter	1st Lieutenant
Miller	Captain
Pike	Captain
Crawford	Major
Hunt	Major
Anderson	Lt. Colonel
Davenport	Lt. Colonel

© 2025 GMT Games, LLC



British

- **CHQ**: Lieutenant or Captain; additional CHQ from same formation the same rank or one or two ranks lower
- **BHQ**: Major or Lt. Colonel; additional BHQ from same formation the same rank or one or two ranks lower
- **FO**: Typically a junior officer or senior NCO
- **Platoon**: Typically a junior officer or senior NCO

British Leaders (Panzer)	
Fields	Lance Corporal
Martin	Lance Corporal
Bartlett	Corporal
Green	Corporal
McPhee	Sergeant
Owen	Sergeant
Turner	Staff Sergeant
Riley	Staff Sergeant
McIntosh	Sergeant Major
Flynn	Sergeant Major
Young	2nd Lieutenant
Clarkson	2nd Lieutenant
Foster	Lieutenant
Campbell	Lieutenant
Howard	Captain
Murphy	Captain
Donaldson	Major
Hughes	Major
Sherwood	Lt. Colonel
Alexander	Lt. Colonel

British Leaders (Panzer North Africa)	
Wright	Lance Corporal
Robinson	Lance Corporal
Lewis	Corporal
Jackson	Corporal
Thompson	Sergeant
Ames	Sergeant
Dunbar	Staff Sergeant
Ransom	Staff Sergeant
Joyce	Sergeant Major
Green	Sergeant Major
McRoberts	2nd Lieutenant
Craig	2nd Lieutenant
Harker	Lieutenant
Matherson	Lieutenant
Stevens	Captain
Burton	Captain
Anson	Major
Adams	Major
Crofts	Lt. Colonel
Kirkland	Lt. Colonel

French

- **CHQ**: Lieutenant or Captain; additional CHQ from same formation the same rank or one or two ranks lower
- **BHQ**: Major or Lt. Colonel; additional BHQ from same formation the same rank or one or two ranks lower
- **FO**: Typically a junior officer or senior NCO
- **Platoon**: 2nd Lieutenant or senior NCO

The color of French officer sleeve and cap rank insignia denoted service branch. The cavalry arms wore silver while the other arms wore gold. The Lt. Colonel rank was the exception where alternating silver and gold flashes were utilized.

French Leaders		
Beauforte	Corporal	Caporal
Lacombe	Corporal	Caporal
Martin	Sr. Corporal	Caporal-Chef
Bernard	Sr. Corporal	Caporal-Chef
Thomas	Jr. Sergeant	Sous-Sergent
Duval	Jr. Sergeant	Sous-Sergent
Roux	Sergeant	Sergent
Michel	Sergeant	Sergent
Moulin	Sergeant Major	Sergent-Chef
Jeanne	Sergeant Major	Sergent-Chef
Moreau	2nd Lieutenant	Sous-Lieutenant
Carpentier	2nd Lieutenant	Sous-Lieutenant
Hamon	Lieutenant	Lieutenant
Lefèvre	Lieutenant	Lieutenant
Lassigny	Captain	Capitaine
Tanguy	Captain	Capitaine
Dubois	Major	Commandant
Simon	Major	Commandant
Hébert	Lt. Colonel	Lieutenant-Colonel
Robert	Lt. Colonel	Lieutenant-Colonel

© 2025 GMT Games, LLC

Italian

- **CHQ**: Lieutenant or Captain; additional CHQ from same formation the same rank or one or two ranks lower
- **BHQ**: Major or Lt. Colonel; additional BHQ from same formation the same rank or one or two ranks lower
- **FO**: Typically a junior officer or senior NCO
- **Platoon**: 2nd Lieutenant or senior NCO

Italian Leaders		
Alessi	Corporal	Caporale
Donato	Corporal	Caporale
Sangiamo	Senior Corporal	Caporale Maggiore
DiBrico	Senior Corporal	Caporale Maggiore
Romagnolo	Sergeant	Sergente
Contino	Sergeant	Sergente
Gaspari	Senior Sergeant	Sergente Maggiore
DeVita	Senior Sergeant	Sergente Maggiore
Leonardi	Warrant Officer	Maresciallo Maggiore
Ricci	Warrant Officer	Maresciallo Maggiore
Giovine	2nd Lieutenant	Sottotenente
Sposaro	2nd Lieutenant	Sottotenente
Falconi	Lieutenant	Tenente
Ferenzi	Lieutenant	Tenente
Benigni	Captain	Capitano
Russo	Captain	Capitano
Oriani	Major	Maggiore
Talarico	Major	Maggiore
Evangelisti	Lt. Colonel	Tenente Colonnello
Graziano	Lt. Colonel	Tenente Colonnello

7.56 Hull and Turret Damage [new counter]

See 6.5.2.2.4, 6.5.2.5, and 6.5.4.4.2.

7.57 Tank Crew Size

Following their debut during the Great War, tank design went through a number of innovative stages. By the late 1930s, it was determined that crew effectiveness was not only governed by the physical positions within a tank, but also the by the distribution of duties, i.e., commander, gunner, loader, driver, and, possibly, other roles, e.g., hull machine gunner.

As such, a three-man crew was considered the minimum size for an effective distribution of duties. With one crew member acting as a driver, and the remaining two crew members assuming the roles of gunner, loader and commander.

It goes without saying that a tank commander's effectiveness was reduced by splitting time between roles like commander/loader or commander/gunner. That is why the most effective tanks had four or five man crews, where each crew member assumed only a single role.

A number of early war tanks had two-man crews where the commander also acted as the loader and gunner or in some rare cases, three-man crews where the commander still performed all three roles. This placed a huge demand on him and, understandably, had a negative impact on his situational awareness, thereby reducing his effectiveness in all three roles.

In those cases where one man had to perform all three roles, these tanks have a "CREW" notation listed on their Data Cards. This is found immediately below the vehicle's Points in the upper right corner of their data card, e.g., F-1A R-35.

Apply the following modifiers and effects:

- –1 Direct Fire AP modifier
- –5 GP Direct Fire modifier
- If also acting as a CHQ, –1 total available commands (minimum 1). If more than one "Crew-Type" CHQ is available to the formation, the modifier is still only –1.
- If also acting as a BHQ, reduce its Command Span to 10 hexes to its subordinate CHQs. If already less than 10 hexes, retain that Command Span.
- If also acting as a RHQ, reduce its Command Span to 15 hexes to its subordinate BHQs. If already less than 15 hexes, retain that Command Span.

Note that Morale, Called Artillery Response and Overrun Combats are not affected since the tank commander is considered to be fully focused on those actions at the time of execution.

In addition to the tanks included in Panzer Expansion #4, the following tank would also fall under this optional rule:

- Soviet S-1A T-70 M42

Note that the design of this optional rule excludes those vehicles armed only with machineguns (MMGs), e.g., German G-35A (Panzer)/G-1A (Panzer North Africa) PzKpfw IB, and those armed with guns and heavy machineguns (HMGs) fed by multi-round magazines, e.g., F-5B2 AMR-35(H) or B-13A (Panzer North Africa) Humber Mk. II/III.

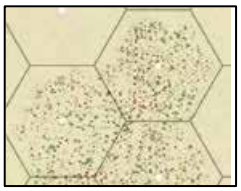
7.58 Counters

Included in Expansion 4, two new referenced counters were introduced to aid in play: Spot Small Arms and VP Reference. See 1.7.5 and 1.7.6.

© 2025 GMT Games, LLC

7.59 Terrain

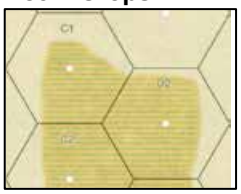
7.59.1 Brush



Brush terrain, e.g., 24J2, is treated as Light Cover for Spotting purposes but is considered None when determining the GP Defense Factor. Height is 0. Hull Down 01-10.

The movement cost is 1 for all Modes of Traction, i.e., L, T, H or W.

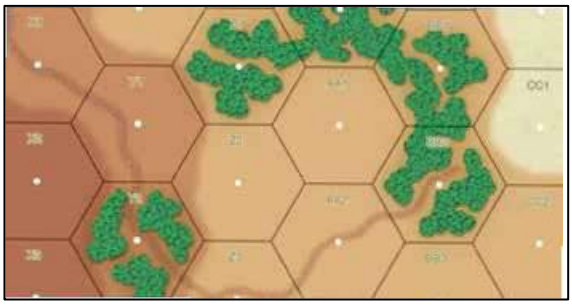
7.59.2 Crops



Crops terrain, e.g., 24D2, is treated as Medium Cover for Spotting purposes but is considered None when determining the GP Defense Factor. Height is 0. Hull Down 01-10.

The movement cost is 1 for all Modes of Traction, i.e., L, T, H or W.

7.59.3 Tracks



Track terrain represents the third tier of movement benefit after Roads and Paths. Hexes 21P5, 21CC2, 21FF2, 22V3, 22Y2 and 22BB2 (Panzer Expansion #4) are examples of Track terrain.

Vehicles do not possess a specific Track movement rate. Vehicles moving on a Track ignore the actual terrain costs in a hex expending only 1 of their Movement Speed Allowance for each hex entered (2 for reverse moves). Unlike Roads and Paths, vehicles are not required to start their move on a Track hex or to follow the route described by the Track for their entire move, or ending their move on a Track, but must enter a track hex and exit a track hex from a Track hexside to benefit.

Vehicle moves along a route that combines Track with Path and/or Road movement, use the Track rate for the entire move.

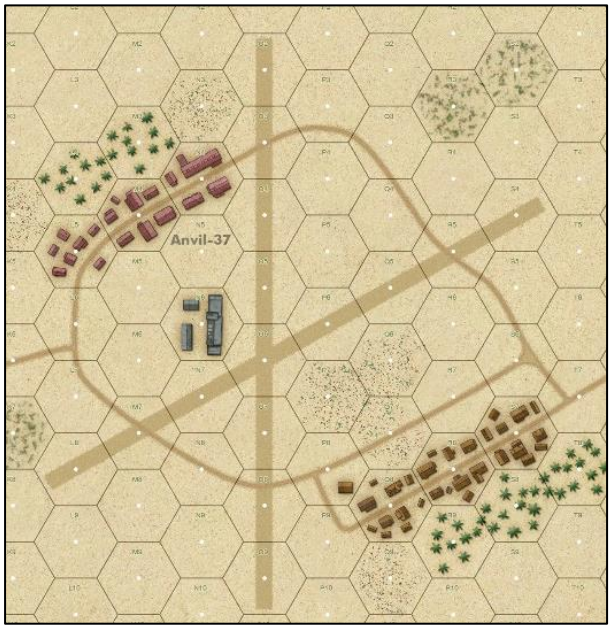
Tracks may be designated as narrow (see 7.30 Narrow Roads & Paths).

7.59.4 Airfield

Anvil-37 is the code name for the airfield located on mapboard 37 (Panzer North Africa).

It has two crossing runways, e.g., hex 37O5. Its main building is the control tower located in hex 37N6 with other support buildings, e.g., hangers, storage and maintenance, positioned around the airfield. The control tower hex is three stories high; the support building hexes are two stories high.

The wood buildings located along the road near the airfield, while not technically part of the airfield, are used for temporary housing and coordination when the airfield is in use for military operations. These building hexes are one story high.



Vehicle Movement

The runways and taxiways are considered Path hexes for vehicle movement. A Wreck (KO or BU) counter or an opposing vehicle does not prevent a vehicle from using its Path movement factor.

Arming & Refueling

Note that the following rules are not intended as a primer on aircraft operations and are therefore presented in a somewhat abstract form.

Scenarios may designate Anvil-37 for use as an arming and refueling point for aircraft. Typically, damaged aircraft may not be repaired.

Land aircraft (exception to 6.7.2 Aircraft Movement – Flying) along either of the two runways.

To land, aircraft must be at Slow Speed at Low Altitude.

It takes three Air Phases to arm and refuel aircraft. For example, if one lands in the 2nd Air Phase of turn 10, it could again take off in the 2nd Air Phase of turn 11. There are adequate resources to manage any number of aircraft at the same time. Scenarios may allow for alternate weapon loads.

Once refueled, aircraft reset their Loiter period (see 6.7.2.1 Aircraft Appearance & Loitering). They must take off at Slow Speed at Low Altitude along either of the two runways.

If a runway has a destroyed hex or hexes, aircraft must use the alternate runway. If both runways are destroyed, aircraft may not land or take off.

Direct Fire and Landed Aircraft

Landed aircraft may be spotted and attacked as S-Type vehicles for AP or GP Direct Fire. They are +2 Size for AP Direct Fire. If Knocked Out or Brewed Up, place the appropriate Wreck counter in the hex.

Note that landed aircraft could take off during the 1st Air Phase, negating them as a target. If that is the case, the ground units do not violate rule 4.6.1, although the Fire or Short Halt command is still considered executed.

Aircraft use their GP Defese Factor if 4 or less. If the GP Defense Factor is 5 or more, the maximum GP Defense is 4.

© 2025 GMT Games, LLC

Controlling Anvil-37

Typically, to control the airfield, the control tower hex (37N6) must be occupied while at the same time a surrounding area designated in the Victory Conditions is completely free of opposing combat ground units (opposing aircraft do not exert control). Once these requirements are met, place the appropriate Control counter in the control tower hex.

Scenarios 66 and 67 (Panzer North Africa) have Anvil-37 as its objective.

7.60 Random Recon

This simulates units searching for an opposing force that may or may not exist within a search grid. The searching units move in a quasi-random manner varying their direction and amount of movement.

7.60.1 Movement

All units designated as Random Recon must have MOVE commands. Units individually determine movement, in any order, as determined by the controlling Force.

Before moving:

- Roll (d6); the result represents the direction of movement. Reference the directional hex on the mapboard to determine the direction of movement.
- Roll (10); and reference the Random Recon table listed in the scenario to determine how many hexes the unit may move.
- A unit must move at least 1 hex in the indicated direction unless prevented by prohibited terrain, e.g., vehicle into Heavy Woods or moving off-map. Amphibious units may treat an amphibious move as prohibited terrain; they are not required to enter traversable water hexes.
- The unit may move 2 or more hexes, as determined by the controlling Force, in the indicated direction up to and including the value determined from the Random Recon table as long as it follows the Movement rules.
- A unit may never exceed its Movement Factor or enter prohibited terrain. As such, a unit may be limited to less than the maximum number of hexes or no movement or pivoting if facing prohibited terrain.

7.60.1.1 Roads, Paths & Tracks

Random Recon vehicles starting their movement on Road, Path or Track hexes may employ the following special conditions. Leg and towed units are not eligible.

- Vehicles are eligible for the Road, Path and Track movement bonus. They may combine Road, Path and Track movement.
- They may continue to follow the route described by the Road, Path or Track deviating from the direction of movement. They are not required to exit the Road, Path or Track. For the first hex of movement, the vehicle must first move in the direction that matches or is closest to the direction of movement determined above. For example, if the direction of movement is ‘4’ and a Road faces hexsides ‘5’ and ‘2’, the unit must move in direction ‘5’. If more than one hexside is closest to the direction of movement, the controlling force chooses the direction of movement. The vehicle may then follow the route described by the Road, Path or Track up to and including the value determined from the Random Recon table as long as it does not exit the Road, Path, or Track and follows the Movement rules and does not exceed its Movement Factor.

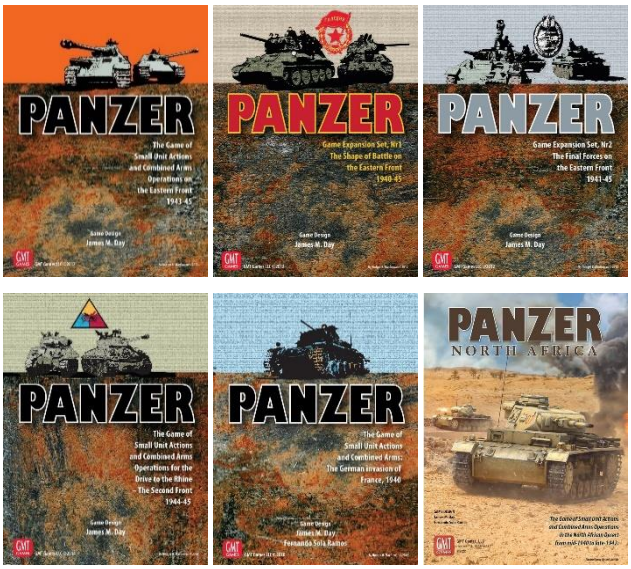
7.60.1.2 Sounds

Combat and vehicles, especially tracked vehicles, create sound when moving that may be detected by Random Recon units. Note that detection just provides a point of reference as to where a unit may be located. It must still be spotted.

- Any opposing tracked ‘T’ or half-tracked ‘H’ vehicle that moves (MOVE or SHORT HALT command) within 10 hexes at any point during its movement, regardless of intervening terrain, of a Random Recon unit, is detected.
- Any opposing wheeled ‘W’ vehicle that moves (MOVE or SHORT HALT command) within 5 hexes during its movement, regardless of intervening terrain, of a Random Recon unit, is detected.
- Moving leg and towed (manhandling) units are never detected.
- Any non-small arms fire, impacting artillery, mortar, or an explosion, e.g., aircraft bombs or bridge destruction by engineers, anywhere on the map, regardless of intervening terrain, of a Random Recon unit, is detected.
- Any small arms fire (including Close Assault and Hand-to-Hand combats) within 10 hexes, regardless of intervening terrain, of a Random Recon unit, is detected.
- Random Recon units may move to the hexside facing the direction of the detected sound following a straight path ignoring both the direction of movement and the value determined from the Random Recon table as long as it follows the Movement rules and does not exceed its Movement Factor. If more than one hexside faces a detected sound, the controlling force chooses the direction of movement.
- Random Recon units may continue movement to a detected sound by marking the hex with a VP counter.

7.60.2 Spotting

Random Recon units spot normally. Once an opposing unit is spotted, Random Recon is immediately cancelled and normal game play commences. Any Random Recon units that have not yet resolved their movement may move normally.



© 2025 GMT Games, LLC

Glossary

(-): Under-Strength Formation
(+): Over-Strength Formation
A/ATG: Anti-Aircraft/Anti-Tank Gun
A: Ammo limits
A: Amphibious
AA: Anti-Aircraft
AAA: Anti-Aircraft Artillery
AAG: Anti-Aircraft Gun
AAMG: Anti-Aircraft Machinegun
Abteilung: Detachment
Active Unit: Combat units still in action counted for Command Control.
AG: Advanced Game component or rule
AMC: Automitrailleuse de Combat – Arm Car
AMD: Automitrailleuse de Découverte – Arm Car
AP: Armor Piercing
APC: Armored Personnel Carrier
APC: Armored Piercing Capped
APCR: Armor Piercing Composite Rigid
APDS: Armor Piercing Discarding Sabot
APFSDS: Armor Piercing Fin Stabilized Discarding Sabot
Arm Car: Armored Car
Armata Corazzata Africa: Armored Army Africa
ATG: Anti-Tank Gun
ATR: Anti-Tank Rifle. Hand-held anti-tank weapon.
A-Type: Armored Type Vehicle
Aufklärung: Reconnaissance Forces
B/C: Bicycle
BA: Broneavtomobil – Armored Car
Bat: Battalion
Battle Group: A combined arms force
Bgd: Brigade
BHQ: Battalion headquarters
Bis: Second version
Block: Prevent line-of-sight
BM: Batalyonny Minomyot – battalion mortar
Broken: A Morale categorization for units
BT: Bystrochodny Tankovy – Fast Tank
Bty: Battery
BU: Subject to brew-up modifier
BU: Brew-up
cc: Controcarro
CC: Combat Command – CCA, CCB, CCR
CE: Chemical energy ammo type or defense
CGMC: Combination Gun Motor Carriage
Char: Char d'Assaut – "Chariot" ~ tank
CHQ: Company headquarters
cm: Centimeter
Coax MG: Coaxial machinegun.
Combat Unit: Any armed unit. Unarmed units are not combat units.
Command: Special unit classification
Controcarro: Anti-tank
Cover: Terrain benefit
Coy: Company
CP: Cohesion Point
Danger Close: Indirect fire affecting friendly units
DF: Direct Fire
Div: Division
DMGD: Damage Hit
DS: Discharger Smoke
E: Extreme range
Elements: Only a portion of a unit is present
Engineer: Special unit classification
F: GP Factor
F: Fast rate-of-fire
FlaK: Fliegerabwehrkanone – anti-aircraft gun
Flakpanzer: Armored anti-aircraft vehicle
FO: Forward Observer, special unit classification
Fucile: Rifle
Full Cover: Increased defense for Leg and Towed units
Fusilier: Infantry or reconnaissance
Gebirgsjäger: Mountain Light Infantry
Gepanzert: Armored
GP Defense: Alphanumeric defensive classification
GP Factor: Numerical weight of GP Firepower
GP: General Purpose
GOC: General Officer Commanding
GPD: General Purpose Defense
Grenadier: Infantry
GrW: Granatenwerfer – mortar
Gun Tube: Individual artillery unit
H: Half-tracked mode of traction
Half-Track: Partially-tracked combat vehicle
HD: Hull-Down
HE: High Explosive
HEAT: High Explosive Anti-Tank
HEAT-MP: High Explosive Anti-Tank Multi-Purpose
Heer: German Army
Hesitation: A Morale categorization for units
HHATW: Hand-held anti-tank weapon
Hinder: Modifies combat effects
HMC: Howitzer Motor Carriage
HMG: Heavy Machinegun
HOW: Howitzer
HQ: Headquarters
HT: Half-Track
I: Illumination ammo limit
IF: Indirect Fire
IG: Infantry Gun
IL: Illumination
IMP POS: Improved Position
IR: Infrared searchlight night fighting
Jagdpanzer: Tank Destroyer
Jäger: Hunter – Light Infantry
Kampfgruppe: Battlegroup
KE: Kinetic energy ammo type or defense
KG: Kampfgruppe – Battlegroup
KO: Knock Out Hit
KwK: Kampfwagenkanone – tank gun
L: Leg mode of traction
L: Long range
le: Leichte – light
Leg: Collective term for units on foot
Luftwaffe: German Air Force
M/C: Motorcycle
M: Movement Factor
M: Medium range
M: Ranging Machinegun sight
Mech: Mechanized
Mechanized: Collective term for transported forces
Mecz: Mechanized
mm: Millimeter
MMC: Mortar Motor Carriage

© 2025 GMT Games, LLC

MMG: Medium Machinegun
Mot: Motor
Mot: Motorized
Motorized: Transported by wheeled units
N: Normal rate-of-fire
N/A: Not Applicable
O: Optical sight
OB: Order of Battle
Observer: A unit able to call indirect fire
OML: Ordnance Muzzle-Loading
OQF: Ordnance Quick-Firing
OR: Optional component or rule
P: Point Blank range
P: Penetration Factor
PaK: Panzerabwehrkanone – anti-tank gun
Panzer: Armor
Pz. Grenadier: Armored Infantry
Panzerarmee Afrika: Panzer Army Africa
Panzerfaust: Armored Fist. Hand-held anti-tank weapon
Panzerjäger: Tank Hunter
PIAT: Projector Infantry Anti-Tank. Hand-held anti-tank weapon
Pionier: Combat Engineer
Plt: Platoon
PSW: Panzerspähwagen – armored car
PTRD: ProtivoTankovoye Ruzhyo Degtyaryova – antitank rifle. Hand-held anti-tank weapon
PTS: Points
P-Type: Protected Type Vehicle
PzB: Panzerbüchse – anti-tank rifle. Hand-held anti-tank weapon.
PzKpfw: Panzerkampfwagen – tank
Q: Quick rate-of-fire
R: Dual Driving Controls
R: w/o a radio
R: Range
R: Rapid rate-of-fire
Raggruppamento: Italian Battle Group
Range Factor: For AP or GP fire. P, S, M, L, or E
RCT: Regimental Combat Team – Task Force
RECAM: Raggruppamento Esplorante
Recce: Reconnaissance
Recon: Reconnaissance, special unit classification
Reg: Regiment
Regia Aeronautica: Royal Italian Air Force
Regio Esercito: Royal Italian Army
RHQ: Regiment or brigade headquarters
RM: Rotny Minomyot – company mortar
ROF: Rate-of-fire
Roll (10): Rolling a single 10-sided die
Roll (100): Rolling two 10-sided dice
RPzB 43/54: Panzershreck – Armored Terror. Hand-held antitank Weapon
RPzB: Rakete Panzerbüchse – Anti-Tank Rocket
RTR: Royal Tank Regiment
s: Schwere – heavy
S: Short range
Sapper: Combat Engineer
SB: Stabilization rating
Schwere: Heavy
SdKfz: Sonderkraftfahrzeug – special purpose
Sec: Section
Semoventte: Self-propelled
SHEAF: Indirect fire pattern
SMG: Submachinegun
Smk: Smoke
SP: Self-propelled
Spähpanzer: Scout Tank
SPW: Schützenpanzerwagen – APC
Sqd: Squad
Sqn: Squadron
ST: Sight type
StuG: Sturmgeschütz – assault gun
StuH: Sturmhaubitze – assault howitzer
S-Type: Soft Type Vehicle
SU: Samokhodnaya Ustanovka – Assault Gun
T: Tracked mode of traction
Task Force: Battlegroup
TF: Task Force
TK: Track Hit
TO&E: Table of Organization and Equipment
TR: Transport
Trp: Troop
Tt: Turret Turn rating
Under Armor: Best defense for transported units
Under Cover: Increased defense for transported units
UNL: Unlimited
Vierling: Four-barreled
VP: Victory Point
W: Wheeled mode of traction
WL: White Light searchlight night fighting
Wt: Weight in metric tons
Zgkw: Zugkraftwagen – prime mover

© 2025 GMT Games, LLC

Index

Note: Topics with multiple entries may have one or more primary sections highlighted in **bold** text.
Main section references, e.g., 4.6, 5.9.1, 6.10, or 6.7.3.1, and some highlighted primary sections typically have additional references for the topic in the subsections immediately following the entry.

A

Adjusting Indirect Fire: see Indirect Fire, Adjusting
Adjustment, End Turn Phase: **4.6**; 6.1.4.2; **6.8**; 7.1.6; 7.8.1; 7.8.3; 7.35.1
Aircraft, Altitude: **6.7.2.2**; 6.7.2.3.2; 6.7.3.1.1; 6.7.3.1.3; 6.7.3.2; 6.7.3.3; 6.7.3.4; 6.7.3.5; 6.7.4.1.1; 6.7.4.1.2; 6.7.4.2; 6.7.4.2.1. (Effective Result Eliminated); 7.26
Aircraft, Bombs: **6.7.3.3**; 6.7.3.5; 7.26; 7.31.3; 7.35
Aircraft, Facing: 5.5
Aircraft, GP Defense Factor: 6.5.4.2.4
Aircraft, Movement: 6.7.2
Aircraft, Observers: 6.7.3.1.2
Aircraft, Rockets: **6.7.3.4**; 6.7.3.5; 7.31.3; 7.35
Aircraft, Size: 6.1.3
Aircraft, Speed: **6.7.2.2**; 6.7.2.3.1; 6.7.2.3.2; 6.7.3.1.1; 6.7.3.1.3; 6.7.3.2; 6.7.3.5; 6.7.4.1.1; 6.7.4.2; 6.7.4.2.1
Aircraft, Spotting: 6.7.3.1
Aircraft, Strafing: **6.7.3.2**; 6.7.3.5
Aircraft, Suppressed: 6.5.4.3 (Shooter Suppressed); 6.7.3.1.1; 6.7.3.5; 6.7.4.2.1; 6.8.3; 7.26
Aircraft, Turning: 6.7.2.3.1
Aircraft, Weapon Loads: 6.7.1
Aircraft Units: **5.4**; 5.5; 5.13; 6.1.4.2; 6.5.4.2.4; 6.7
Alley: see Terrain, Alley
Ammo Limits: 5.14; **5.16**; 6.5.1.11.4; 6.5.2.4 (Ammo Limit); 6.5.4.3 (Ammo Limit); 6.6.10.1; 6.7.3.2; 6.7.3.3; 6.7.3.4; 7.22.2
Amphibious Movement: 7.34
Anti-Aircraft, Fire: 6.7.4.2
Anti-Aircraft Fire, Results: 6.7.4.2.1
Anti-Aircraft, Spotting: 6.7.4.1
Anti-Aircraft, Suppressed: 6.7.4.1.1
Anti-Tank Rifles: **5.1.3.3**; 6.6.7.2
AP Damage & Effects (Advanced Game): 6.5.2.5
AP Damage & Effects (Basic Game): **4.4.3.2.6**
AP Hit Angle: **4.4.3.2.4**; **6.5.2.2**; 6.5.2.5; 7.8.2
AP Hit Modifiers: **4.4.3.2.2**; **6.5.2.4**
AP Hit Number: **4.4.3.2.3**; 6.5.2.1
AP Fire: **4.4.3**; 5.15; 5.16.2.1; **6.5.2**
AP Fire, No Effect: 4.4.3.2.5; 6.5.4.2.5
AP Number of Hits: 6.5.2.1
AP Range Factor: **4.4.3.2.1**; 4.4.3.2.3; 6.5.2.1; 6.5.2.4 (AP Unit Grade)
AP Rate of Fire: 5.16.2.1; **6.5.2.1**
Armor Penetration: **4.4.3.2.5**; 7.12
Armor Penetration, Variable: **7.12**
Artillery Reconnaissance by Fire: see Indirect Fire, Reconnaissance by Fire
Artillery Units: **5.3**; 5.8.3; 6.5.1.2
Attachment Level: **6.5.1.3**; 6.5.1.7; 6.5.1.12
Attached Indirect Fire Unit: 6.5.1.1.2; **6.5.1.3.1**; 6.5.1.3.3; 7.28
Attached Weapon Loss: 7.17

B

Bail Out: **5.15**; 6.5.2.5; 6.5.2.6; 6.5.4.2.3; 6.5.4.4.2; 6.5.4.4.3; 6.5.4.5; 6.6.1.1.3; 6.6.9; 7.23.4; 7.31.2; 7.34
Bail Out, Emergency: 6.6.7.1.2
Barrages: 5.11; **6.1.4.3.10**; 6.5.1.12.1 (Observer Hindered); 6.5.2.4 (Barrage – Open/Closed SHEAF); 6.5.4.3 (Target Vehicle Moving DF/IF); 6.5.4.3 (Barrage – Open/Closed SHEAF)
Barrages, Movement: 6.6.6
Bicycles: 6.6.4.4
Block: See Terrain, Block
Bocage Country: 7.45
Bogging Down: 6.6.9; **7.29**; 7.36.3
Break Point: **7.1**; 7.1.4; 7.6
Brew Up: see Vehicle, Brew Up
Brew Up +2 Modifier: 7.11
Bridges: see Terrain, Bridges
Buildings: See Terrain, Buildings

C

Called Indirect Fire: see Indirect Fire, Called
Camouflage: 7.24
Card, Data: 1.6
Card, Data Keys: 1.5
Card, Game: 1.4
Card, Turn Track, Summary & Hidden Unit: 1.8; 7.2
Cavalry: 6.6.4.5
CE (Chemical Energy) Shells: 5.1.3.4; **6.5.2.3.4**; 6.5.4.3 (CE Ammo); 7.10; 7.12; 7.15
Checking Indirect Fire: see Indirect Fire, Checking
Close Assault Combat: 5.1.3.5; **6.6.1.1**; 6.6.2; 6.6.4.2; 6.6.4.4; 6.6.4.5; 6.6.11; 7.1.2; 7.1.3; 7.1.5.1; 7.1.5.2; 7.6; 7.19; 7.35
Close Assault Combat, Modifiers: 6.6.1.1.2
Coexistence: 4.5.1.1.10
Cohesion Point: **7.1.1**; 7.1.2
Command Control: 5.8.2; 5.14; **6.2.1**; 6.6.11; 7.3
Command Range: 6.2.1.1; **6.2.1.1.2**; 6.2.1.1.3; 6.2.1.1.4; 6.5.1.1.4; 6.5.2.1; 6.5.2.2.1; 6.6.11; 7.1.2; 7.1.3; 7.1.4 (Unbroken Command Unit in Cmd Rng); 7.1.4 (Broken Unit from Formation in Cmd Rng); 7.2.2.1; 7.3; 7.4.2
Command Span: 7.52
Command Units: **5.9.1**; 6.2.1.1.2; 6.5.1; 6.5.1.1.2; 6.5.1.12.1 (Command Recon Observer); 7.1.2; 7.1.3; 7.1.4 (Unbroken Command Unit in Cmd Rng); 7.3; 7.4.4
Commands, Sharing: 5.14; **6.2.1.1.3**; 6.5.2.2.1; 6.6.11
Continuous Indirect Fire: see Indirect Fire, Continuous
Counter Battery Fire: see Indirect Fire, Counter Battery
Counters, Command: **1.7.2**; 4.2.1; 4.4.1; 4.4.3.2; 4.5.1
Counters, Information: 1.7.3
Counters, Terrain: **1.7.4**; 4.1.4.1; 6.1.4.3
Counters, Units: 1.7.1
Crawling: 6.6.4.3
Crests: see Terrain, Slopes & Crests
Crew-Served Weapons; 5.1.1; 5.1.2; **5.1.3**; 5.14; 5.16.2.4; 6.1.4.2

D

Damaged: see Aircraft, Results or Vehicle Damaged
Danger Close: see Indirect Fire, Danger Close
Defensive Fire: 7.50
Delayed Reaction: 7.48
Desert Buildings: 4.1.4.1.3.1, see Terrain Buildings
Dice, Percentile: **1.10**; 3.2
Direct Fire: **4.4.1**; 4.4.2; 6.1.4.1; 6.1.4.3.2; 6.1.4.3.10; **6.5.2**; **6.5.4**; 7.1.2; 7.1.3; 7.8; 7.13; 7.15; 7.22.1; 7.23.1; 7.25
Direct Fire Smoke: see Smoke, Direct Fire
Ditch: see Terrain, Ditch
Dual Driving Controls: 7.33
Dual Fire: **5.14**; 6.5.2.4 (Dual Fire); 6.5.4.3 (Dual Fire); 6.6.7.2

© 2025 GMT Games, LLC

Dust: **6.1.4.3.12**, 6.5.2.4, 6.5.4.3, 6.8.4

E

Engineer Units: **5.9.3**; 6.6.1.1; 7.19; 7.31.3.3
Engineer, Terrain Combat: 7.19; 7.31.3.3

F

Flamethrowers: **5.1.3.5**; 6.6.1.1.2 (Attacker has a Flamethrower); 6.6.1.1.3 (Effective Result); 6.6.1.2.2 (Has a Flamethrower); 7.35.1
Formation Summary: 1.9
Fields-of-Fire: **4.4.3.1**; 5.1; 6.7.4.1.2; 7.16
Fire: see Terrain, On Fire
Fire Priority: 7.14
Fires: 6.5.2.4 (On Fire); 6.5.4.3 (On Fire); **7.35**
FO Units: 5.1.2; **5.9.4**; 6.2.1.1; 6.5.1; 6.5.1.1.1; 6.5.1.1.2; 6.5.1.1.3; 6.7.3.1.1; 6.7.3.1.2; 7.37, 7.47
Ford: see Terrain, Gully, Ford & Stream
Forward Observer: see FO Units
Full Cover: 5.1.3.1; 6.1.3.2; **6.1.4.2**; 6.5.4.2.2; 6.6.4.3; 6.6.8; 6.8.2; 7.2.2.2

G

GP Fire/Factor: 5.1.3.1; 5.1.3.2; 5.1.3.3; 5.1.3.4; 5.1.3.5; 5.2; 5.15; 5.16.2.1; **6.5.1**; 6.5.3; **6.5.4**; 6.6.1.1.1; 6.6.1.1.3; 6.6.7.2; 6.6.10; 6.7.3.2; 6.7.3.3; 6.7.3.4; 6.7.4.2; 6.8.3.1.2; 7.8.3; 7.15; 7.17; 7.18; 7.23.1; 7.25; 7.28.2; 7.35; 7.37
GP Fire, Effective: 6.5.4.4.2; 6.5.4.4.3
GP Fire, No Effect: 6.5.4.4; **6.5.4.4.1**
GP Fire, Suppressed: 6.5.4.4.2; 6.5.4.4.3
GP Hit Modifiers: 6.5.4.3
Grade, Force: **5.8.1**; 6.3
Grade, Formation: **5.8.2**; 6.2.1.1; 6.2.1.1.2; 7.1.1.1; 7.4.2
Grade, Unit: **5.8.3**; 6.5.1.7 (Called Indirect Fire Response); 6.5.1.12 (Observer Grade); 6.5.2.1 (Q, R and F Rates-of-Fire); 6.5.2.4 (AP Unit Grade); 6.5.2.6.1; 6.5.2.6.2; 6.5.4.3 (GP Unit Grade); 6.6.1.1.2 (Attacker Unit Grade); 6.6.1.2.2 (Unit Grade); 6.6.4.2; 6.7.3.5; 6.8.3; 7.1.4; 7.1.6.2; 7.6; 7.7.1; 7.7.2; 7.22; 7.26
Grove: see Terrain, Medium and Light Groves
Gully: see Terrain, Gully, Ford & Stream

H

Hand-Held Anti-Tank Weapons: **5.1.3.4**; 7.10; 7.15; 7.35.3
Hand-to-Hand Combat: 5.1.3.5; 6.1.4.2; **6.6.1.2**; 6.6.4.2; 6.6.4.4; 6.6.4.5; 6.6.11; 7.1.2; 7.1.3; 7.1.5.1; 7.1.5.2; 7.17; 7.35.1
Hand-to-Hand Combat, Modifiers: 6.6.1.2.2
Hasty Entrenchment: see Terrain, Hasty Entrenchment
Heat Haze: 6.5.1.12.1 (Observer Heat Haze); 6.5.2.4 (Heat Haze); 6.5.4.3 (Heat Haze)
Hedgerow: see Terrain, Hedgerow
Hidden Units: 1.8; **7.2**; 7.37
Hills: see Terrain, Hills
Hit Angle, Advanced Game: **6.5.2.2**; 6.5.2.5; 7.8.2
Hit Angle, Basic Game: **4.4.3.2.4**
HMGs: 5.1.3.2
Hull Down: **6.1.4.1**; 6.1.4.3.1; 6.1.4.3.2; 6.1.4.3.7; 6.5.2.2.3; 6.5.4.4.2; 6.6.9; 7.13.2; 7.29
Hull Down, Partial: **6.1.4.1.2**; 6.5.2.2.3; 6.5.4.4.2; **6.6.9**; 7.13.2

I

Illumination: 5.16; 6.5.1.6.2; 6.5.1.8.1; 6.5.1.11.1; 6.5.1.11.4; 6.5.1.13; **7.27**; 7.31.3.1
Improved Position: see Terrain, Improved Position
Indirect Fire: 4.4.2; 5.1.3.1; 5.2; 5.3; 5.16.2.3; 6.1.4.3.10; **6.5.1**; 6.5.2.2.1; 6.5.4.2.5; 6.5.4.3 (Target Vehicle Moving DF/IF); 6.5.4.3 (Target Vehicle in Medium or Heavy Cover); 6.6.6; 6.8.3.1.2; 7.1.2; 7.1.5.1; 7.1.5.2; 7.2.2.3; 7.4.3; 7.5; 7.26; 7.27; 7.28; 7.31.3; 7.37
Indirect Fire, Adjusting: **6.5.1.8.2**; 6.5.1.10; 6.5.1.11.3; 6.5.1.12; 6.5.1.12.1 (Adjusted Fire); 7.26; 7.37
Indirect Fire, Air Bursts: 7.46
Indirect Fire, Called: 6.5.1.1; 6.5.1.1.1; 6.5.1.1.2; 6.5.1.1.3; 6.5.1.4; **6.5.1.7**; 6.5.1.8.1; 6.5.1.8.2; 6.5.1.9; 6.5.1.10; 6.5.1.12; 6.5.1.13; 7.1.5.1; 7.1.5.2; 7.26; 7.28.1
Indirect Fire, Checking: 6.5.1.9
Indirect Fire, Continuous: **6.5.1.8.1**; 6.5.1.10; 7.1.5.1; 7.1.5.2
Indirect Fire, Counter Battery: 7.28
Indirect Fire, Danger Close: **6.5.1.10**; 6.5.1.11.3; 6.5.1.12; 6.5.1.12.1
Indirect Fire, Illumination: 7.27
Indirect Fire, Observer: 6.5.1
Indirect Fire, Planned: 6.5.1.1; 6.5.1.9; **6.5.1.11**; 6.5.1.12; 6.5.1.12.1 (Adjusted Fire); 6.5.1.13; 6.5.4.3 (Target Vehicle Moving DF/IF); 7.5; 7.28.1
Indirect Fire, Reconnaissance by Fire: 7.37
Indirect Fire, Response: 5.8.3; 6.5.1.1; 6.5.1.3; 6.5.1.4; 6.5.1.7; 6.5.1.8.1; 6.5.1.8.2; 6.5.1.11; **6.5.1.12**; 7.1.5.1; 7.1.5.2; 7.26; 7.28.2; 7.37
Indirect Fire, Scatter: 7.26
Initiative: **4.3**; 4.4; 4.5; 5.8.1; **6.3**
Initiative, Staggered: 7.42

K

Khamsin: 7.36.4
KE (Kinetic Energy) Shells: **6.5.2.3.4**; 7.12
Knocked Out, see Vehicle Knocked Out

L

Leaders: 7.55
Leg, Facing: 5.5
Leg, GP Defense Factor: **6.5.4.2.2**; 6.5.4.2.3
Leg, GP Effective Result: 6.5.4.4.3; 6.6.10.2; 7.18; 7.31.2.2
Leg, Movement: 6.1.4.3.1; **6.6.4**
Leg, Size: **6.1.3**; 6.5.1.12.1 (Observer Heat Haze); 6.5.2.4 (Heat Haze); 6.5.4.3 (Heat Haze)
Leg, Suppressed: 5.1.1; 5.14; 6.1.3.1; 6.5.2.4 (Shooter Suppressed); 6.5.4.3 (Shooter Suppressed); 6.5.4.4.3; 6.6.1.1; 6.6.1.1.2 (Vs. Suppressed Vehicle); 6.6.1.2; 6.6.1.2.2 (Defender Suppressed); 6.6.1.2.3; 6.6.2; 6.6.4.1; 6.6.4.2; 6.6.7.1.1; 6.8.3; 7.1.4; 7.18; 7.31.2.2
Leg Units: see Squads & Half-Squads and Sections
Limited Spotting: 7.7
Line-of-Sight: 1.2; **4.1.4**; 4.4.3.2.2 (Brew-Up Smoke); 4.4.3.2.4; **6.1.4**; 6.5.1.9; 6.5.1.12.1 (Observer Hindered); 6.5.2.2; 6.5.4.2 (Smoke, Barrage, On Fire); 6.5.4.3 (On Fire, Brew Up Smoke, Smoke, Barrage); 6.7.3.1; 6.7.4.1; 7.8.3; 7.37
Long Guns: 7.20
Lower Hull Hits: 7.13

M

Manhandling: see Towed, Movement
Mapboard: **1.2**; 4.1.4.1
Mapboard, Geomorphic: **1.3**; 4.1.4.1
Mines & Minefields: see Terrain, Mines
Modifiers & Adjustments: **3.7**; **5.12**
Morale: 5.8.2; 5.8.3; 6.2.1.1.3 (N/C Commands); 6.5.2.4 (Shooter Hesitating and Shooter Broken); 6.5.4.3 (Shooter Hesitating and Shooter Broken); 7.1; 7.4.4; 7.6

© 2025 GMT Games, LLC

Morale, Broken: 6.2.1.1; 6.5.1.12.1 (Observer Broken); 6.5.2.4 (Shooter Broken); 6.5.4.3 (Shooter Broken); 6.6.1.1; 6.6.1.1.2 (Vs. Broken); 6.6.1.2.2 (Defender Broken); 6.6.4.2; 6.6.7.1.1; 6.6.7.1.2; 6.6.10; **7.1**; 7.22
Morale, Check, Normal: **7.1.2**; 7.1.5
Morale, Check, Forced: **7.1.3**; 7.1.5
Morale, Hesitating: 6.2.1.1; 6.5.1.12.1 (Observer Hesitating); 6.5.2.4 (Shooter Hesitating); 6.5.4.3 (Shooter Hesitating); 6.6.1.1; 6.6.1.1.2 (Vs. Hesitating); 6.6.1.2; 6.6.1.2.2 (Defender Hesitating); 6.6.4.2; 6.6.7.1.1; 6.6.7.1.2; 6.6.10; **7.1**; 7.22
Morale, Recovery: 7.1.6
Morale, Vehicle Bailout: 7.39
Mortars: **5.1.3.1**; 6.5.1.2; 6.5.4
Motorcycles: 6.6.4.4
Movement Costs: 4.5.1.1.2
Movement Costs, Exceeding: 4.5.1.1.3
Movement Factor: 1.7.1; **4.5.1.1.1**;.6.6.2; **6.6.4.1**; **6.6.5**; 7.2.2.2
Movement, No Move Moves: 4.5.1.1.8
Movement, Off Mapboard: 4.5.1.1.9
Movement, Path & Road: 4.5.1.1.1; 4.5.1.1.2; **4.5.1.1.5**; 6.2.1.1.3; 7.20; 7.30; 7.36.2
Movement, Road & Path [expanded]: 7.40
Movement, Turning: see Vehicle, Turning

N

Narrow Roads & Paths: 7.30

O

Objectives, Controlling: 3.6
Observer, Spotting for Aircraft: 6.7.3.1.2
Observer, Indirect Fire: **6.5.1**; 7.5; 7.4.3; 7.26; 7.37
Observer, Suppressed: 6.5.1.12.1 (Observer Supressed)
Off Mapboard Moves: 4.5.1.1.9
Organic Indirect Fire Unit: 6.5.1.1.2; **6.5.1.3.2**; 6.5.1.3.3; 7.28
Overrun Combat: 5.14; 6.5.4.3 (Overrun Attack); 6.6.2; 6.6.4.4; 6.6.4.5; **6.6.10**; 6.6.11; 7.1.2; 7.1.3; 7.1.5.1; 7.1.5.2; 7.23.1; 7.30
Overwatch Fire: **4.4.2**; 4.4.3.2.2 (Overwatch and Overwatch Adjust); 4.5; 6.2.1.1.4; 6.5.1; 6.5.3; 6.5.4.3 (Overwatch and Overwatch Adjust); 6.6.1.1; 6.6.1.2; 6.6.10; 6.7.4.1.1; 6.7.4.2; 7.6; 7.8.4; 7.16

P

Paths: see Movement, Path & Road
Phasing Player, Definition: 3.1
Platoon & Section Command Control: 7.3
Pinning Fire: 7.18
Pivot: 6.1.4.3.1; 6.6.6; **6.8.1**; 7.16
Pre-Registered Points: **6.5.1.4**; 6.5.1.12.1 (Preregistered Point)

Q

Quickdraw: 7.54
Quickmarch: 6.6.4.2

R

Range in Hexes: 3.5.1
Range, Maximum: 3.5.2
Range, Minimum: 5.1.3.1; **5.6**; 6.5.1.13; 6.6.10.1
Rate of Fire, See AP Rate of Fire
Recon Units: **5.9.2**; 6.2.1.1; 6.2.1.1.3 (Commanding Recon Units); 6.5.1; 6.5.1.1.2; 6.5.1.1.3, 7.43
Removing Spot Counters: 7.41
Roads: See Movement, Path & Road
Rubble: see Terrain, Rubble
Rule of 5s and 10s: **6.5.4.4.2**; 6.6.1.1.3

S

Sections (Leg Units): 1.7.1; 5.1; **5.1.2**; 5.14; 6.1.4.2; 6.1.4.3.1; 6.1.4.3.3; 6.1.4.3.4; 6.1.4.3.5; 6.1.4.3.6; 6.1.4.3.7; 6.1.3.4.9; 6.1.4.3.11; 6.5.2.6; 6.5.4.2.2; 6.5.4.2.3; 6.5.4.3 (Target Leg/Towed over Wall Hexside and Hasty Entrenchment); 6.5.4.4; 6.6.1.1; 6.6.1.2; 6.6.4.1; 6.6.4.2; 6.6.4.3; 6.6.4.4; 6.6.4.5; 6.6.7.1.1; 6.6.7.2; 6.6.8; 6.6.10; 7.14; 7.15; 7.18; 7.19
SHEAF: 6.1.4.3.10; **6.5.1.5**; 6.5.1.6.1; 6.5.1.6.2; 6.5.1.7; 6.5.1.8.1; 6.5.1.8.2; 6.5.1.11.1; 6.5.1.12; 6.5.1.12.1 (Observer Hindered); 6.5.1.13; 6.5.2.4 (Smoke - Open/Closed SHEAF); ; 6.5.2.4 (Barrage - Open/Closed SHEAF); 6.5.4; 6.5.4.3 (Smoke - Open/Closed SHEAF); 6.5.4.3 (Barrage - Open/Closed SHEAF); 6.5.4.3 (IF Open SHEAF); 6.6.6; 7.9; 7.22.1; 7.27; 7.31.3.1; 7.35; 7.37
Slopes: see Terrain, Slopes & Crests
Small Arms: 5.1.3.1; 5.1.3.2; 5.1.3.3; 5.1.3.4; **5.7**; 6.1.3; 6.5.4.3 (Pinning Fire); 6.5.4.4.2; 6.5.4.4.3; 6.6.7.2; 6.7.3.2; 7.8.3; 7.18; 7.21; 7.22.1; 7.35.1
Smoke: 5.11; 5.16.2; 6.1.4.3.10; 6.5.1.12 (Observer Hindered); 6.5.2.4 (Smoke - Open/Close SHEAF); 6.5.4.3 (Smoke - Open/Close SHEAF); 6.8.4
Smoke, Brew-up: 4.1.4.1.8; **4.1.4.1.9**; 4.4.3.2.2 (Brew-Up Smoke); 4.4.3.2.6; 4.5.1.1.2; 6.5.1.12.1 (Observer Hindered); 6.5.4.3 (Brew-Up Smoke)
Smoke, Direct Fire: 5.16.2; **6.1.4.3.10**; 6.5.1.5; 6.5.2.4 (Smoke - Open/Closed SHEAF); 6.5.4.3 (Smoke - Open/Closed SHEAF); 6.8.4
Smoke, Dischargers: 6.5.2.4 (Smoke - Open/Closed SHEAF); 6.5.4.3 (Smoke - Open/Closed SHEAF); 6.8.4; **7.9**
Smoke, Indirect Fire: **6.1.4.3.10**; 6.5.1.6.1; 6.5.1.8.1; 6.5.1.11.1; 6.5.1.11.4; 6.5.1.12.1 (Observer Hindered); 6.5.1.13; 6.5.2.4 (Smoke - Open/Closed SHEAF); 6.5.4.3 (Smoke - Open/Closed SHEAF); 6.8.4; 7.31.3.1
Smoke, Infantry: 6.8.4; **7.22**
Spotting: 3.8; **4.1**; 4.2 (Overwatch); 4.4.1; 4.4.2; 5.1.3.1; 5.1.3.2; 5.1.3.3; 5.1.3.4; **6.1**; 6.5.1; 6.5.4.2.2; 6.6.4.3; 6.6.7.2; 6.7.3.1; 6.7.4.1; 7.1.5.2; 7.2.2.1; 7.2.2.2; 7.4.1; 7.7; 7.8.3; 7.24; 7.27; 7.36.1
Squads & Half-Squads (Leg Units): 1.7.1; 5.1; **5.1.1**; 5.14; 6.1.4.3.1; 6.1.4.3.3; 6.1.4.3.4; 6.1.4.3.5; 6.1.4.3.6; 6.1.4.3.7; 6.1.3.4.9; 6.1.4.3.11; 6.5.2.6; 6.5.4.2.2; 6.5.4.2.3; 6.5.4.3 (Target Leg/Towed over Wall Hexside and Hasty Entrenchment); 6.6.1.1; 6.6.1.1.2 (Vehicle in Unsupported Hex); 6.6.1.2; 6.6.4.1; 6.6.4.2; 6.6.4.3; 6.6.4.4; 6.6.4.5; 6.6.7.1.1; 6.6.7.2; 6.6.8; 6.6.10; 7.14; 7.15; 7.18; 7.19; 7.22; 7.31.2.2; 7.36.2
Soviet Early War Communications: 7.5
Special Units: 7.38
Stacking: **3.8**; 4.1.3.2; 4.5.1.1.10; **5.13**; 6.2.1.1.3 (Commanding Vehicles on Roads and Paths); 7.30
Stream: see Terrain, Gully, Ford & Stream
Sun Blinding: **6.1.4.3.13**, 6.5.2.4, 6.5.4.3
Suppression: **5.10**; 5.15; 6.2.1.1; 6.5.4.4; 6.5.4.5; 6.8.3: also see, Aircraft, Leg, Towed, and Vehicle Suppressed

T

Tank Fright: 7.6
Terrain, Alley: **4.1.4.1.3**; 6.1.4.3.1; 6.6.3; 7.20; 7.31.1
Terrain, Bridges: 3.6; 4.1.4.1.6; 4.5.1.1.6; 6.1.4.2; 6.1.4.3.9; 6.5.4.2.5; 6.5.4.4.3 (Bridge); 7.30; 7.31.1; 7.32
Terrain, Block: **6.1.4.3.3**; 6.5.4.2.5; 6.5.4.4.3 (Blocks, Mines or Wire)

© 2025 GMT Games, LLC

Terrain, Non-Blocking: **4.1.4.1.1**; 4.1.4.1.6; 4.1.4.1.9; 6.1.4.3.5; 6.1.4.3.10
Terrain, Blocking: **4.1.4.1.2**; 4.1.4.1.3; 4.1.4.3.4; 4.1.4.1.5; 4.1.4.1.7; 4.1.4.2.5; 4.1.4.2.6; 6.7.3.1.3
Terrain, Buildings: 3.6; **4.1.4.1.3**; 6.1.4.1.2; 6.1.4.3.1; 6.1.4.3.5; 6.1.4.3.9; 6.5.4.3 (Target Vehicle in Medium or Heavy Cover); 6.5.4.2.5; 6.5.4.4.3 (Building); 6.6.3; 6.6.4.3; 6.6.10; 6.7.3.1.1; 6.7.3.1.2; 7.1.3; 7.19; 7.29; 7.30; 7.31.1; 7.35
Terrain, Ditch: **6.1.4.3.4**; 7.31.1
Terrain, GP Defense Factor: 6.5.4.2.5
Terrain, GP Effective Result: 6.5.4.4.3; 7.19
Terrain, Grove: **4.1.4.1.7**; 4.1.4.2.5; 6.7.3.1.1; 6.7.3.1.2; 6.7.3.1.3; 7.20; 7.30; 7.35.4
Terrain, Gully, Ford & Stream: 3.6; 4.1.4.1.1; **4.1.4.1.6**; 6.1.4.2; 6.1.4.3; 7.13.1; 7.31.1; 7.32; 7.34
Terrain, Hasty Entrenchment: **6.1.4.3.6**; 6.5.4.3 (Hasty Entrenchment); **6.6.8**; 6.8.2
Terrain, Hedgerow: 4.5.1.1.2 (Wall and Hedgerow Hexsides); 6.6.4.4; 6.6.4.5
Terrain, Hills: **4.1.4.1.4**; 4.1.4.1.5
Terrain, Improved Position: 6.1.4.1.2; **6.1.4.3.7**; 6.5.4.3 (Target Vehicle in Medium or Heavy Cover); 6.5.4.4.3 (Improved Position); 7.1.3; 7.31.1
Terrain, Mines: **6.1.4.3.8**; 6.5.4.2.5; 6.5.4.4.3 (Blocks, Mines or Wire); **7.31**
Terrain, On Fire: 3.6; 5.11; **6.1.4.3.5**; 6.5.2.4 (On Fire); 6.5.4.3 (On Fire); 6.5.4.4.3 (Building); **7.35**
Terrain, Rubble: 6.1.4.3.5; **6.1.4.3.9**; 6.5.4.4.3 (Building, Bridge and Improved Position); 7.31.1; 7.35
Terrain, Slope & Crests: **4.1.4.1.5**; 4.5.1.1.2
Terrain, Time of Day & Weather Conditions: **7.36**
Terrain, Walls: 4.5.1.1.2 (Wall and Hedgerow Hexsides); **6.1.4.3.2**; 6.5.4.3 (Target Leg/Towed DF over Wall Hexside); 6.6.4.4; 7.13.1
Terrain, Wire: **6.1.4.3.11**; 6.5.4.2.5; 6.5.4.4.3 (Blocks, Mines or Wire)
Terrain, Woods: **4.1.4.1.7**; 4.1.4.2.5; 6.7.3.1.1; 6.7.3.1.2; 6.7.3.1.3; 7.20; 7.30; 7.35.4
Towed Units: **5.2**; 5.5; 5.13; 5.15; 5.16.2.4; 6.1.3; 6.1.3.2; 6.1.4.2; 6.1.4.3.1; 6.1.4.3.3; 6.1.4.3.4; 6.1.4.3.5; 6.1.4.3.6; 6.1.4.3.7; 6.1.3.4.9; 6.1.4.3.11; 6.5.2.6; 6.5.4.2.2; 6.5.4.2.3; 6.5.4.3 (Target Leg/Towed over Wall Hexside and Hasty Entrenchment); 6.5.4.4; 6.6.1.2; 6.6.4.1; 6.6.5; 6.6.7.1; 6.6.7.1.1; 6.6.8; 6.6.10; 6.7.4.1.2; 6.8.1; 7.14; 7.15; 7.18; 7.22; 7.30; 7.31.2.2; 7.34
Towed, Facing: 5.5
Towed, GP Defense Factor: **6.5.4.2.2**; 6.5.4.2.3
Towed, GP Effective Result: **6.5.4.4.3**; **6.6.10.2**; 7.18; 7.31.2.2; 7.31.3
Towed, Movement (Manhandling): 6.1.4.3.1; **6.6.5**
Towed, Size: 6.1.3
Towed, Suppressed: 6.1.3.1; 6.5.2.4 (Shooter Suppressed); 6.5.4.3 (Shooter Suppressed); 6.5.4.4.3; 6.6.1.2.3; 6.6.2; 6.6.7.1.1; 7.18; 7.31.2.2
Track Hit: see Vehicle, Track Hit
Tracks: 4.5.1.1.11
Transported Fire: 6.5.2.4 (Transported Fire); 6.5.4.3 (Transported Fire); **6.6.7.2**
Transporting: 1.8; 5.1.3.1; 5.1.3.2; 5.1.3.3; 5.1.3.4; 5.1.3.5; 5.15; 5.16.2.4; 6.1.3; 6.2.1.1; 6.5.2.4 (Transported Fire); 6.5.2.6.1; 6.5.2.6.2; 6.5.4.2.3; 6.5.4.3 (Transported Fire); 6.5.4.4; 6.5.4.5; 6.6.1.1.2 (Vehicle in Unsupported Hex); 6.6.4.1; 6.6.3; **6.6.7**; 7.9; 7.31.2.1; 7.36.3
Turrets: 7.8

U

Unattached Indirect Fire Unit: 6.5.1.1.2; 6.5.1.3.1; **6.5.1.3.3**; 7.28

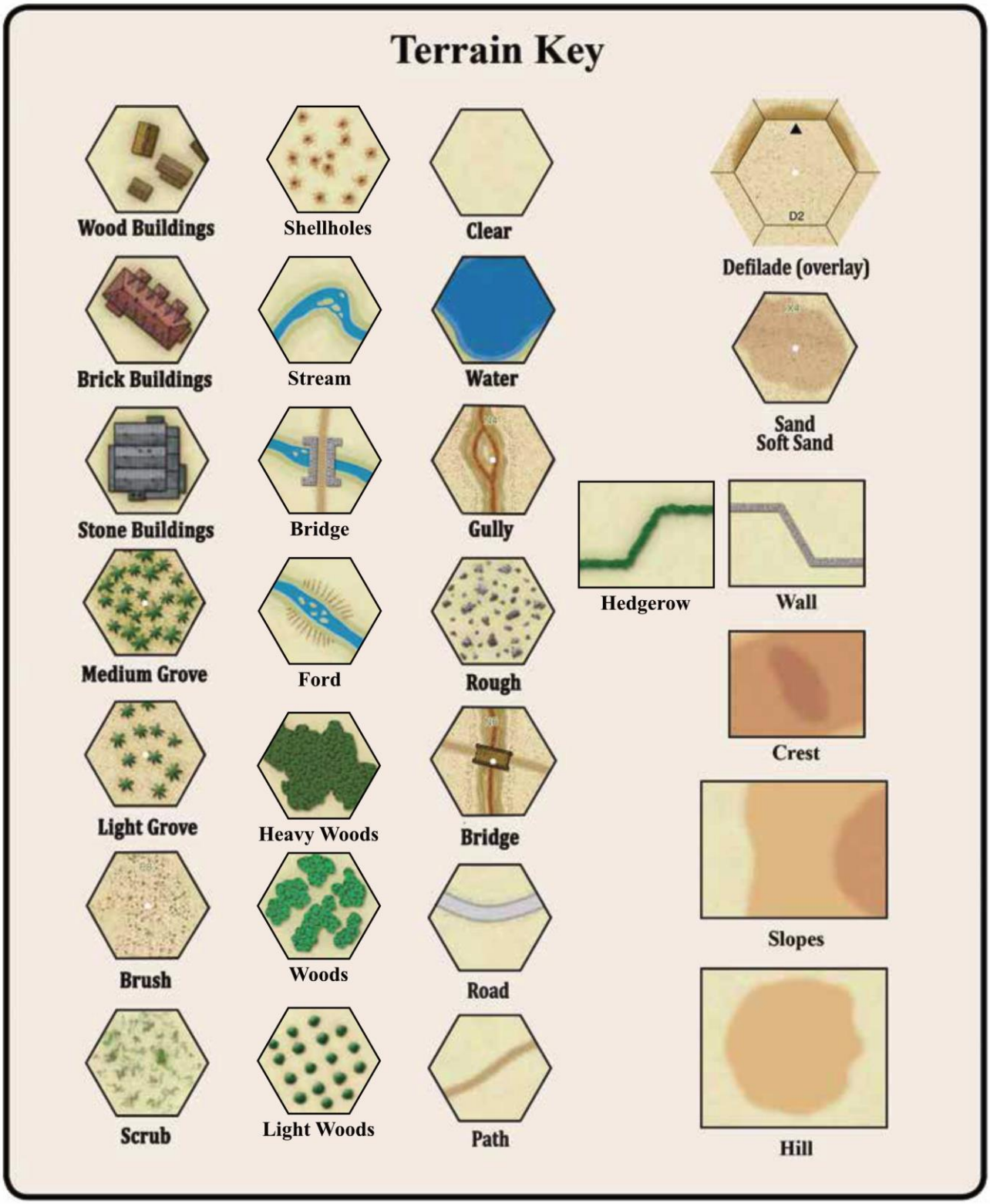
V

Variable Track Damage: 7.21
Vehicle, Armor: **4.4.3.2.5**; **6.5.2.3**
Vehicle, Assault Cover: 7.49
Vehicle, Brewed-Up: 4.1.4.1.8; 4.1.4.1.9; 4.2.1; 4.4.3.2.2 (Brew-Up Smoke); **4.4.3.2.6**; 4.5.1.1.2 (Brew-Up Smoke); 5.15; 5.16.2.4; 6.2.1.1; **6.5.2.5**; 6.5.2.6; 6.5.4.3 (Brew-Up Smoke); 6.5.4.4.2; 6.5.4.5; 6.6.1.1.3; 7.1.1.2; 7.1.2; 7.11; 7.34
Vehicle, Collateral Damage: 7.23
Vehicle, Damaged: 3.7; 6.5.2.2.4 (Hull & Turret Damage); 4.4.3.2.2 (Shooter Damaged); **4.4.3.2.6**; 4.5.1.1.1; 6.2.1.1; 6.5.1.12.1 (Observer Damaged); **6.5.2.5**; 6.5.2.6; 6.5.4.3 (Shooter Damaged); 6.5.4.4.2; 6.6.1.1.3; 6.6.2; 6.6.3; 6.6.10; 7.1.1.2; 7.1.4 (Suppressed or Damaged)
Vehicle, Deck Hit: 6.5.2.2.2
Vehicle, GP Defense Factor: 6.5.4.2.1
Vehicle, GP Effective Result: 6.5.4.4.2; 6.6.1.1.3: 7.8.3; also see,
Vehicle, Knocked Out and Vehicle, Brewed Up
Vehicle, Facing: **3.3**; 4.5.1.1; 4.5.1.1.5
Vehicle, Knocked-Out: 4.1.4.1.8; 4.2.1; **4.4.3.2.6**; 5.15; 5.16.2.4; 6.2.1.1; **6.5.2.5**; 6.5.2.6.2; 6.5.4.4.2; 6.5.4.5; 6.6.1.1.3; 7.1.1.2; 7.11; 7.34
Vehicle, Movement Buildings: **6.6.3**; 6.6.10
Vehicle, Movement: 1.7.1; **4.5.1**; 6.1.4.3.1; 6.1.4.3.3; 6.1.4.3.4; 6.1.4.3.5; 6.1.4.3.8; 6.1.4.3.11; 6.2.1.1.4; 6.5.2.2.1; 6.6.2; 6.6.3; 6.6.9; 6.6.10; 7.1.5.2; 7.2.2.2; 7.20; 7.23.4; 7.29; 7.30; 7.33; 7.34; 7.36
Vehicle, No Damage: **4.4.3.2.5**; 5.15; **6.5.2.5**; 6.5.2.6.1; 6.5.2.6.2; 7.23
Vehicle, Suppressed: 5.14; 6.1.3.1; 6.5.2.4 (Shooter Suppressed); 6.5.2.5 (BU - Brew Up); 6.5.4.3 (Shooter Suppressed); 6.5.4.4.2; 6.6.1.1.2 (Vs. Suppressed Vehicle); 6.6.1.1.3; 6.6.2; 6.6.7.1.1; 6.6.10; 6.6.10.2; 7.1.4 (Suppressed or Damaged)
Vehicle, Reverse Moves: **4.5.1.1.7**; 7.33
Vehicle, Searching for Hull Down: **6.6.9**; 7.29
Vehicle, Size: 4.1.3.1; 4.4.3.2.2 (Target Size); 6.5.1.12.1 (Observer Heat Haze); 6.5.2.4 (Heat Haze); 6.5.4.3 (Heat Haze); 6.6.9
Vehicle, Track Hit: 5.15; 6.1.4.3.1; **6.5.2.2.1**; 6.5.2.6; 6.5.4.4.2;6.6.3; 7.21; 7.34
Vehicle, Turning: 4.5.1.1.3; **4.5.1.1.4**

W

Wall: see Terrain, Walls
Weapon Malfunction: 7.25
Weight Limitations: 7.32
Wire: see Terrain, Wire
Without Radio Sets: **7.4**; 7.23.2
Woods: see Terrain, Woods
Wrecks: **4.1.4.1.8**; 4.4.3.2.6; 4.5.1.1.5; 6.5.2.5; 7.30; 7.35.2

© 2025 GMT Games, LLC



GMT Games, LLC
P.O. Box 1308, Hanford, CA 93232-1308
www.GMTGames.com

© 2025 GMT Games, LLC