# MBT Basic Game Rules

## Basic Game Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Scale</td>
<td>3</td>
</tr>
<tr>
<td>1.0 Components</td>
<td>3</td>
</tr>
<tr>
<td>1.1 Rulebook</td>
<td>3</td>
</tr>
<tr>
<td>1.2 Geomorphic Mapboards</td>
<td>3</td>
</tr>
<tr>
<td>1.3 Game Cards</td>
<td>4</td>
</tr>
<tr>
<td>1.4 Data Card Keys</td>
<td>4</td>
</tr>
<tr>
<td>1.5 Data Cards</td>
<td>4</td>
</tr>
<tr>
<td>1.6 Game Counters</td>
<td>4</td>
</tr>
<tr>
<td>1.6.1 Units</td>
<td>4</td>
</tr>
<tr>
<td>1.6.2 Command Counters (Unit Orders)</td>
<td>4</td>
</tr>
<tr>
<td>1.6.3 Information Counters</td>
<td>5</td>
</tr>
<tr>
<td>1.6.4 Terrain Counters</td>
<td>5</td>
</tr>
<tr>
<td>1.7 Turn Track, Transport &amp; Summary &amp; Hidden Unit Card</td>
<td>5</td>
</tr>
<tr>
<td>1.8 Formation Summary (Playbook)</td>
<td>5</td>
</tr>
<tr>
<td>1.9 Percentile Dice</td>
<td>5</td>
</tr>
<tr>
<td>1.10 Other Items (not included)</td>
<td>5</td>
</tr>
<tr>
<td>2.0 Preparation For Play</td>
<td>5</td>
</tr>
<tr>
<td>3.0 General Procedures &amp; Rules</td>
<td>5</td>
</tr>
<tr>
<td>3.1 Definition of the Phasing Player</td>
<td>5</td>
</tr>
<tr>
<td>3.2 Reading the Dice</td>
<td>5</td>
</tr>
<tr>
<td>3.3 Vehicle Facing</td>
<td>6</td>
</tr>
<tr>
<td>3.4 Counter Use &amp; Facing</td>
<td>6</td>
</tr>
<tr>
<td>3.5 Range</td>
<td>6</td>
</tr>
<tr>
<td>3.5.1 Range in Hexes</td>
<td>6</td>
</tr>
<tr>
<td>3.5.2 Maximum Ranges</td>
<td>6</td>
</tr>
<tr>
<td>3.6 Controlling Objectives</td>
<td>6</td>
</tr>
<tr>
<td>3.7 Modifiers &amp; Adjustments</td>
<td>6</td>
</tr>
<tr>
<td>3.8 Stacking</td>
<td>7</td>
</tr>
<tr>
<td>4.0 Sequence Of Play</td>
<td>7</td>
</tr>
<tr>
<td>4.1 Basic Game Spotting Phase</td>
<td>7</td>
</tr>
<tr>
<td>4.1.1 Who may Spot?</td>
<td>7</td>
</tr>
<tr>
<td>4.1.2 Spotting Orientation</td>
<td>8</td>
</tr>
<tr>
<td>4.1.3 Determining Spotting Ranges</td>
<td>8</td>
</tr>
<tr>
<td>4.1.3.1 Vehicle Size</td>
<td>8</td>
</tr>
<tr>
<td>4.1.3.2 Over-Stacked Hex</td>
<td>8</td>
</tr>
<tr>
<td>4.1.4 Line-of-Sight</td>
<td>8</td>
</tr>
<tr>
<td>4.1.4.1 Terrain Features</td>
<td>8</td>
</tr>
<tr>
<td>4.1.4.1.1 Non-Blocking Terrain</td>
<td>8</td>
</tr>
<tr>
<td>4.1.4.1.2 Blocking Terrain</td>
<td>8</td>
</tr>
<tr>
<td>4.1.4.1.3 Building Hexes</td>
<td>8</td>
</tr>
<tr>
<td>4.1.4.1.4 Hill Hexes</td>
<td>9</td>
</tr>
<tr>
<td>4.1.4.1.5 Slope &amp; Crest Hexides</td>
<td>9</td>
</tr>
<tr>
<td>4.1.4.1.6 Gully, Ford &amp; Stream Hexes</td>
<td>9</td>
</tr>
<tr>
<td>4.1.4.1.7 Woods Hexes</td>
<td>9</td>
</tr>
<tr>
<td>4.1.4.1.8 Wrecks</td>
<td>9</td>
</tr>
<tr>
<td>4.1.4.1.9 Smoke, Brew-Up</td>
<td>10</td>
</tr>
<tr>
<td>4.1.4.1.10 Hedgerow Hexides</td>
<td>10</td>
</tr>
<tr>
<td>4.1.4.2 Determining Line-of-Sight</td>
<td>9</td>
</tr>
<tr>
<td>4.1.4.2.1 Obstacle Higher than Both</td>
<td>10</td>
</tr>
<tr>
<td>4.1.4.2.2 Obstacle Higher or Equal</td>
<td>10</td>
</tr>
<tr>
<td>4.1.4.2.3 Obstacle Equal or Lower</td>
<td>10</td>
</tr>
<tr>
<td>4.1.4.2.4 Obstacle Higher and Lower</td>
<td>10</td>
</tr>
<tr>
<td>4.1.4.2.5 Spotting Into/From Obstacles</td>
<td>11</td>
</tr>
<tr>
<td>4.1.4.2.6 Obstacle Hexides</td>
<td>11</td>
</tr>
<tr>
<td>4.1.5 Extraneous Spot Counters</td>
<td>11</td>
</tr>
<tr>
<td>4.2 Basic Game Command Phase</td>
<td>12</td>
</tr>
<tr>
<td>4.2.1 Place Commands Step</td>
<td>12</td>
</tr>
<tr>
<td>4.3 Basic Game Initiative Phase</td>
<td>12</td>
</tr>
<tr>
<td>4.3.1 Determining Initiative</td>
<td>12</td>
</tr>
<tr>
<td>4.3.2 How Initiative Works</td>
<td>12</td>
</tr>
<tr>
<td>4.4 Basic Game Combat Phase</td>
<td>12</td>
</tr>
<tr>
<td>4.4.1 Direct Fire Step</td>
<td>13</td>
</tr>
<tr>
<td>4.4.2 Overwatch Fire</td>
<td>13</td>
</tr>
<tr>
<td>4.4.3 AP Firing Sequence and Rules</td>
<td>13</td>
</tr>
<tr>
<td>4.4.3.1 Fields-of-Fire</td>
<td>13</td>
</tr>
<tr>
<td>4.4.3.1.1 Turreted Vehicles</td>
<td>13</td>
</tr>
<tr>
<td>4.4.3.1.2 Turretless 360º Vehicles</td>
<td>13</td>
</tr>
<tr>
<td>4.4.3.1.3 Non-Turreted Vehicles</td>
<td>13</td>
</tr>
<tr>
<td>4.4.3.1.4 Front Fields-of-Fire</td>
<td>14</td>
</tr>
<tr>
<td>4.4.3.1.5 Rear Field-of-Fire</td>
<td>14</td>
</tr>
<tr>
<td>4.4.3.2 Resolving AP Fire</td>
<td>14</td>
</tr>
<tr>
<td>4.4.3.2.1 The AP Range Factor</td>
<td>14</td>
</tr>
<tr>
<td>4.4.3.2.2 AP Hit Modifiers</td>
<td>15</td>
</tr>
<tr>
<td>4.4.3.2.3 AP Hit Number</td>
<td>15</td>
</tr>
<tr>
<td>4.4.3.2.4 Basic Game Hit Angle Determination</td>
<td>15</td>
</tr>
<tr>
<td>4.4.3.2.5 Determining Armor Penetration</td>
<td>16</td>
</tr>
<tr>
<td>4.4.3.2.6 Basic Game AP Damage &amp; Effects</td>
<td>16</td>
</tr>
<tr>
<td>4.5 Basic Game Movement Phase</td>
<td>17</td>
</tr>
<tr>
<td>4.5.1 General Movement Rules</td>
<td>17</td>
</tr>
<tr>
<td>4.5.1.1 Movement Procedure</td>
<td>17</td>
</tr>
<tr>
<td>4.5.1.1.1 Movement Factor</td>
<td>17</td>
</tr>
<tr>
<td>4.5.1.1.2 Movement Costs</td>
<td>18</td>
</tr>
<tr>
<td>4.5.1.1.3 Exceeding Movement Costs</td>
<td>18</td>
</tr>
<tr>
<td>4.5.1.1.4 Turning</td>
<td>18</td>
</tr>
<tr>
<td>4.5.1.1.5 Path and Road Movement</td>
<td>18</td>
</tr>
<tr>
<td>4.5.1.1.6 Movement Over Bridges</td>
<td>19</td>
</tr>
<tr>
<td>4.5.1.1.7 Reverse Moves</td>
<td>19</td>
</tr>
<tr>
<td>4.5.1.1.8 No Move Moves</td>
<td>19</td>
</tr>
<tr>
<td>4.5.1.1.9 Off Mapboard Moves</td>
<td>19</td>
</tr>
<tr>
<td>4.5.1.1.10 Vehicle Coexistence</td>
<td>19</td>
</tr>
<tr>
<td>4.6 Adjustment Phase</td>
<td>19</td>
</tr>
<tr>
<td>4.6.1 Adjust &amp; Remove Counters Step</td>
<td>19</td>
</tr>
<tr>
<td>4.6.2 End Turn Step</td>
<td>19</td>
</tr>
<tr>
<td>Glossary</td>
<td>20</td>
</tr>
<tr>
<td>Index</td>
<td>22</td>
</tr>
<tr>
<td>Credits</td>
<td>27</td>
</tr>
<tr>
<td>Terrain Key</td>
<td>28</td>
</tr>
</tbody>
</table>

© 2016, 2017 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

MBT is a game of conventional ground-oriented combat set in 1987. It models a hypothetical war between NATO and Soviet forces of the period set in West and East Germany, Czechoslovakia and the surrounding areas. 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. That is the advantage tactical games have over strategic games. 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, ATGMs, 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.

1.1 Rulebooks

All of the information required to play the game is contained in the two rulebooks. For ease of use, they include 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 rulebooks are divided into the Basic Game, and the Advanced Game (AG) and Optional Rules (OR) sections.

Some of the rule sections refer to units or capabilities for units included in the FRG and BAOR expansions or to possible future expansions. Where specific references are included, (FRG) or (BAOR) is noted.

1.2 Geomorphic Mapboards

The five double-sided geomorphic mapboards (also referred to as maps) are used to battle it out through the included scenarios. These also enable a wide variety of configurations when setting up or designing scenarios. The terrain depicted is representative of the area of West Germany garrisoned by the US V and VII Corps.

The superimposed hex grid regulates movement and determines combat results.

- 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 have coded names (NATO phonetic alphabet and mapboard number) to support encrypted communications.
• Each hex contains a unique alpha-numerical identifier, e.g., E9. Certain partial hexes may be numbered 0, e.g., E0. When referring to a hex, the first character is the mapboard number followed by a specific hex identifier, e.g., 2E9.

Note that the geomorphic mapboards from the Panzer series are fully compatible with MBT.

1.3 Game Cards
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. Find the Combat Effects Summary card on the back cover of the Playbook. 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.

1.4 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.

1.5 Data Cards
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.

1.6 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.

1.6.1 Units
These counters represent an assortment of Soviet (tan color) and US (green 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; helicopters have their two altitude options front-to-back.

1.6.2 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 must share a single Command counter thereby executing the same action.
1.9 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.

1.10 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 or 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 Game Card 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 ten’s value and which color represents the unit’s 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 M1 Abrams tank indicates that it was spotted by its fire. Rotate the counter 180 degrees 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.

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.

#### 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, the T-80BV’s 125mm gun’s APFSDS ammo has a maximum range of 33 hexes.*

### 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 call for vehicles to reduce their movement speed allowance by ¼ or ½—always round down. If a Damaged vehicle has a **SHORT HALT** command, it moves at ½ 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.*

© 2016, 2017 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
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 B) 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., US M981 FISTV.

Unarmed vehicles, e.g., M60 AVLB, MT-55A AVLB, Biber AVLB (FRG), Chieftain AVLB (BAOR), and trucks (FRG), 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 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.

© 2016, 2017 GMT Games, LLC
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 B, 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 B. 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 modifiers are cumulative. A net modifier greater than +2 is treated as providing None, Light, Medium or Heavy Cover.

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.

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.

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.

If the terrain is in any way mixed, e.g., in an Improved Position (AG) in a Woods 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.

A Soviet BMP-2 is located in a Woods hex; it is spotted out to 7 hexes.

A Soviet BMP-2 moves into a Woods hex and is marked with a Spot/Move counter; it is now spotted out to 20 hexes.

A Soviet BMP-2 fires from a Woods hex and is marked with a Spot/Fire counter; it is now spotted out to 30 hexes.

A vehicle 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, Brush, Crops, Rough, Railroad Track, Scrub, Shellhole, Stream, or Wall, 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.

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.

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

A vehicle in hex 5Q5 has a clear line-of-sight to hex 5N4. However, it does not have a line-of-sight to hex 5N3.
All Buildings are considered to be 1 story high unless indicated otherwise by a scenario’s Special Conditions.

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.

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 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.

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.

4.1.4.1.7 Woods 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.

Light Woods and Woods hexes both 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 hex.

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

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 7.10) 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.

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.

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.

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.

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.

Lower by 2 Heights: The obstacle creates a blind zone behind it equal to ½ the range in hexes (round down) from the higher vehicle to the obstacle.
11

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.

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.

4.1.4.2.4.1 Lower Height Other Than 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 Woods hexes, a 1 hex spotting perimeter exists around the edge of the Woods.
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 Woods hexes, they spot one another if the range is 1 hex.

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.

4.1.5 Extraneous Spot Counters
If it is determined that a vehicle is not spotted, remove any Spot/Fire or Spot/Move counter it may have.
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:** 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!

4.2.1 Place Commands 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 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 7.5) 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.

Quickdraw (OR) (see 7.44) enables the possibility of simultaneous fire.

**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.

**Nuclear, Biological and Chemical Weapons (NBC) weapons? Their use holds no standing in MBT. Let alone the devastating impact on the battlefield, the morality of such weapons is better suited for another discussion and not modeled in a simulation of modern warfare.**
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.
- 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., APFSDS, APDS, HEAT, HEAT-MP, and HESH, these are also classified as AP Type fire. While ATGMs are also AP Type weapons, they are not utilized in the Basic Game; they are addressed in the Advanced Game.

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.

4.4.3.1.2 Turrettless 360° Vehicles
Like turreted vehicles, vehicles with a TT Factor of 360 are classified as Turrettless 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.

4.4.3.1.3 Non-Turretted Vehicles
Non-Turretted vehicles have weapon mounts with limited fields-of-fire. They are those with a TT Factors of 60, 120 and 180. Virtually all have their weapons facing to the front, although a few have their weapons facing to the rear. Non-Turretted vehicles are only able to engage targets that fall within their front or rear Field-of-Fire depending on the position of their weapon.
4.4.3.1.4 Front Fields-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.

A Front Field-of-Fire, in this case, is defined as the area that falls within the Front 60°, 120° or 180° of its counter. All hexes bisected by the respective arc fall within its Field-of-Fire.

No fire may be directed at a target falling outside of the area described by the appropriate 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 overscored 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°, 120° or 180° 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.

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. 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

© 2016, 2017 GMT Games, LLC
That factor found above the range is the AP Range Factor.

Reference the Vehicle Data Card Key for the T-80BV. Assume the range to be 15 hexes. The AP Range Factor at that range is M – Medium.

**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 Moving (–2) in Light Cover (–1), the Net Modifier is –3.*

**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 T-80BV. Its Target Size modifier is 0.

**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.

This represents the greater challenge of hitting a target while firing and then moving with a SHORT HALT command. SB: 1 is the best rating, while SB: 0 is non-stabilized.

**Short Halt: SB: 1/2/3**

If the firing Vehicle has a SHORT HALT command and is SB: 1, 2 or 3, the modifier is −1, −2, or −3, respectively.

All vehicles have a Stabilization Rating.

**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/CIS**

If the firing vehicle is executing Overwatch Fire at a target located within its Front (or rear) 60°, 120°, or 180° Field-of-Fire—the modifier is −1. This is applicable whether the vehicle is Turreted, Turretless 360°, or Non-Turreted.

If it is equipped with a Commander Independent Sight (see 7.48)—the modifier is 0.

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/CIS**

If the firing vehicle is executing Overwatch Fire at a target located outside of its Front (or Rear) 60°, 120°, or 180° Field-of-Fire—the modifier is −3. 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.

If it is equipped with a Commander Independent Sight (see 7.48)—the modifier is −2.

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

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

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 T-80BV. Its Front Armor Factor is 90; its Rear Armor Factor is 34.

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 sub-row 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 T-80BV. Assume the range to be 15 hexes. The AP Penetration Factor for APFSDS Type ammo is 86.

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.

### 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 Combat Effects Summary (back cover of the Playbook).

#### 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, Radar and ATGM/SAM listed. Turret and Hull are specific damage areas and are utilized in the Advanced Game; Radar and SAM/ATGM are used with the Optional Rules.

#### 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

A Soviet BMP-2 (Data Card SM-4B) located in a Clear hex and a US M2A1 Bradley (Data Card UM-4A) located in a Woods hex are engaging one another at an unblocked range of 3 hexes.

The BMP-2 has a Short Halt command while the M2A1 Bradley has a Fire command. The Soviet player is the First Player.

As such, the BMP-2 resolves its fire first. Its Short Halt counter is revealed and placed with the Fire side facing the front of the vehicle counter.

The M2A1 Bradley 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 APDS ammo type, the AP Range Factor is P – Point Blank.

The AP Hit modifiers are now checked for any effect. The Net Modifier is –6 as a result of the following modifiers:

- Target in Medium Cover –3
- Shooter Short Halt, SB: 3, –3
4.5 Basic Game Movement Phase

“The 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 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.

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.

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 T-80BV. Its Movement Factor is 8T 10-16.

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 example above, 8T gives a Cross-Country movement speed allowance of 8 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 above example, Path equals 10 and Road equals 16.

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). Vehicles with SB: 1 stabilization may expend up to ¾ of the available movement speed allowance (round down).

Damaged vehicles may expend up to ½ of the available movement speed allowance (round down). All Damaged vehicles, regardless of their SB rating, 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 B. 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.

**A tracked (T) vehicle moves from ground level (Height 0) across a Slope hexside at Height 1 into a Hill hex containing Scrub 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 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 hedge 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 (60°).

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 B 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 T-80BV. It enters a Woods hex and then turns 3 hexsides expending 5 of its available Movement Speed Allowance of 8.**

**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 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 T-80BV. It is moving along a route consisting of 10 Road hexes and 6 Path hexes. It may use it Road Movement Factor of 16 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 may also move at the road/path rate of 1 of its movement speed allowance 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.

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.

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.

### 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.
## Glossary

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(-): Under-Strength Formation</td>
<td></td>
</tr>
<tr>
<td>(+): Over-Strength Formation</td>
<td></td>
</tr>
<tr>
<td>4 CMBG: 4th Canadian Mechanized Brigade Group</td>
<td></td>
</tr>
<tr>
<td>AFNORTH: NATO Allied Forces Northern Europe</td>
<td></td>
</tr>
<tr>
<td>ATG: Anti-Tank Gun</td>
<td></td>
</tr>
<tr>
<td>A: Ammo limits</td>
<td></td>
</tr>
<tr>
<td>A: Amphibious</td>
<td></td>
</tr>
<tr>
<td>AA: Anti-Aircraft</td>
<td></td>
</tr>
<tr>
<td>Active Unit: Combat units still in action counted for Command Control.</td>
<td></td>
</tr>
<tr>
<td>ACR: Armored Cavalry Regiment</td>
<td></td>
</tr>
<tr>
<td>AG: Advanced Game component or rule</td>
<td></td>
</tr>
<tr>
<td>AP: Armor Piercing</td>
<td></td>
</tr>
<tr>
<td>APC: Armored Personnel Carrier</td>
<td></td>
</tr>
<tr>
<td>APDS: Armor Piercing Discarding Sabot</td>
<td></td>
</tr>
<tr>
<td>APFSDS: Armor Piercing Fin Stabilized Discarding Sabot</td>
<td></td>
</tr>
<tr>
<td>ARM: Anti-Radiation Missile</td>
<td></td>
</tr>
<tr>
<td>Arm Car: Armored Car</td>
<td></td>
</tr>
<tr>
<td>ATG: Anti-Tank Gun</td>
<td></td>
</tr>
<tr>
<td>A-Type: Armored Type Vehicle</td>
<td></td>
</tr>
<tr>
<td>B: Bog modifier</td>
<td></td>
</tr>
<tr>
<td>BAOR: British Army of the Rhine</td>
<td></td>
</tr>
<tr>
<td>Bat: Battalion</td>
<td></td>
</tr>
<tr>
<td>Battle Group: A combined arms force</td>
<td></td>
</tr>
<tr>
<td>Bgd: Brigade</td>
<td></td>
</tr>
<tr>
<td>BHQ: Battalion headquarters</td>
<td></td>
</tr>
<tr>
<td>Block: Prevent line-of-sight</td>
<td></td>
</tr>
<tr>
<td>BMP: Boevaya Mashina Pehoty (infantry combat vehicle)</td>
<td></td>
</tr>
<tr>
<td>BRDM: Boyevaya Razvedyvatelnaya Dozornaya Mashina (combat patrol vehicle)</td>
<td></td>
</tr>
<tr>
<td>BRM: Boyevaya Razvedyvatel’nya Mashina (combat reconnaissance vehicle)</td>
<td></td>
</tr>
<tr>
<td>BTR: Bronyetransportyer (armored transporter)</td>
<td></td>
</tr>
<tr>
<td>Broken: A Morale categorization for units</td>
<td></td>
</tr>
<tr>
<td>Bty: Battery</td>
<td></td>
</tr>
<tr>
<td>BU: Subject to brew-up modifier</td>
<td></td>
</tr>
<tr>
<td>BU: Brew-up Hit</td>
<td></td>
</tr>
<tr>
<td>Bundeswehr: FRG Army</td>
<td></td>
</tr>
<tr>
<td>C: CLGP ammo limit</td>
<td></td>
</tr>
<tr>
<td>CE: Chemical energy ammo type or defense</td>
<td></td>
</tr>
<tr>
<td>CENTAG: NATO Central Army Group</td>
<td></td>
</tr>
<tr>
<td>CFV: Cavalry Fighting Vehicle</td>
<td></td>
</tr>
<tr>
<td>CGF: Soviet Central Group of Forces</td>
<td></td>
</tr>
<tr>
<td>CHQ: Company headquarters</td>
<td></td>
</tr>
<tr>
<td>CIS: Commander Independent Sight</td>
<td></td>
</tr>
<tr>
<td>CL: ATGM Class, from 1-4</td>
<td></td>
</tr>
<tr>
<td>CLGP: Cannon Launched Guided Projectile</td>
<td></td>
</tr>
<tr>
<td>cm: Centimeter</td>
<td></td>
</tr>
<tr>
<td>CM: AA counter-measures</td>
<td></td>
</tr>
<tr>
<td>Coax MG: Coaxial machinegun.</td>
<td></td>
</tr>
<tr>
<td>Combat Unit: Any armed unit or fire support sighting capability.</td>
<td></td>
</tr>
<tr>
<td>Command: Special unit classification</td>
<td></td>
</tr>
<tr>
<td>Cover: Terrain benefit</td>
<td></td>
</tr>
<tr>
<td>Coy: Company</td>
<td></td>
</tr>
<tr>
<td>CP: Cohesion Point</td>
<td></td>
</tr>
<tr>
<td>D: Laser Designator</td>
<td></td>
</tr>
<tr>
<td>Danger Close: Indirect fire affecting friendly units</td>
<td></td>
</tr>
<tr>
<td>DF: Direct Fire</td>
<td></td>
</tr>
<tr>
<td>Div: Division</td>
<td></td>
</tr>
<tr>
<td>DMGD: Damage Hit</td>
<td></td>
</tr>
<tr>
<td>DS: Discharger Smoke</td>
<td></td>
</tr>
<tr>
<td>E: Extreme range</td>
<td></td>
</tr>
<tr>
<td>Elements: Only a portion of a unit is present</td>
<td></td>
</tr>
<tr>
<td>Engineer: Special unit classification</td>
<td></td>
</tr>
<tr>
<td>ERA: Explosive Reactive Armor</td>
<td></td>
</tr>
<tr>
<td>F: GP Factor</td>
<td></td>
</tr>
<tr>
<td>F: Fast rate-of-fire</td>
<td></td>
</tr>
<tr>
<td>FASCAM: Family of Scatterable Mines</td>
<td></td>
</tr>
<tr>
<td>FISTV: Fire Support Team Vehicle</td>
<td></td>
</tr>
<tr>
<td>FlaK: Fliegerabwehrkanone (anti-aircraft gun)</td>
<td></td>
</tr>
<tr>
<td>Flakpanzer: Armored anti-aircraft vehicle</td>
<td></td>
</tr>
<tr>
<td>FO: Forward Observer, special unit classification</td>
<td></td>
</tr>
<tr>
<td>FRG: Federal Republic of Germany – West Germany</td>
<td></td>
</tr>
<tr>
<td>Füchs: Fox</td>
<td></td>
</tr>
<tr>
<td>Full Cover: Increased defense for Leg and Towed units</td>
<td></td>
</tr>
<tr>
<td>GDR: German Democratic Republic – East Germany</td>
<td></td>
</tr>
<tr>
<td>Gebirgsjäger: Mountain Light Infantry</td>
<td></td>
</tr>
<tr>
<td>Gepard: Cheetah</td>
<td></td>
</tr>
<tr>
<td>GP Defense: Alphanumeric defensive classification</td>
<td></td>
</tr>
<tr>
<td>GP Factor: Numerical weight of GP Firepower</td>
<td></td>
</tr>
<tr>
<td>GP: General Purpose</td>
<td></td>
</tr>
<tr>
<td>GPD: General Purpose Defense</td>
<td></td>
</tr>
<tr>
<td>GR: Ground-Based Radar</td>
<td></td>
</tr>
<tr>
<td>GSFG: Group of Soviet Forces Germany</td>
<td></td>
</tr>
<tr>
<td>Gun Tube: Individual artillery unit</td>
<td></td>
</tr>
<tr>
<td>H: Half-tracked mode of traction</td>
<td></td>
</tr>
<tr>
<td>Half-Track: Partially-tracked combat vehicle</td>
<td></td>
</tr>
<tr>
<td>HD: Hull-Down</td>
<td></td>
</tr>
<tr>
<td>HE: High Explosive</td>
<td></td>
</tr>
<tr>
<td>HEAT: High Explosive Anti-Tank</td>
<td></td>
</tr>
<tr>
<td>HEAT-MP: High Explosive Anti-Tank Multi-Purpose</td>
<td></td>
</tr>
<tr>
<td>HESH: High Explosive Squash Head</td>
<td></td>
</tr>
<tr>
<td>Hesitation: A Morale categorization for units</td>
<td></td>
</tr>
<tr>
<td>HHATW: Hand-held anti-tank weapon</td>
<td></td>
</tr>
<tr>
<td>Hinder: Modifies combat effects</td>
<td></td>
</tr>
<tr>
<td>HMG: Heavy Machinegun</td>
<td></td>
</tr>
<tr>
<td>HOW: Howitzer</td>
<td></td>
</tr>
<tr>
<td>HQ: Headquarters</td>
<td></td>
</tr>
<tr>
<td>HT: Half-Track</td>
<td></td>
</tr>
<tr>
<td>I: Illumination ammo limit</td>
<td></td>
</tr>
<tr>
<td>ICM: Improved Conventional Munition</td>
<td></td>
</tr>
<tr>
<td>IF: Indirect Fire</td>
<td></td>
</tr>
</tbody>
</table>

© 2016, 2017 GMT Games, LLC
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFV</td>
<td>Infantry Fighting Vehicle</td>
</tr>
<tr>
<td>IL</td>
<td>Illumination</td>
</tr>
<tr>
<td>Ilts</td>
<td>Polecat</td>
</tr>
<tr>
<td>IMP POS</td>
<td>Improved Position</td>
</tr>
<tr>
<td>IR</td>
<td>Infrared searchlight night fighting</td>
</tr>
<tr>
<td>Jagdpanzer</td>
<td>Hunting Tank</td>
</tr>
<tr>
<td>Jäger</td>
<td>Hunter (Light Infantry)</td>
</tr>
<tr>
<td>KE</td>
<td>Kinetic energy ammo type or defense</td>
</tr>
<tr>
<td>KO</td>
<td>Knock Out Hit</td>
</tr>
<tr>
<td>L</td>
<td>Leg mode of traction</td>
</tr>
<tr>
<td>L</td>
<td>Laser sight</td>
</tr>
<tr>
<td>L</td>
<td>Long range</td>
</tr>
<tr>
<td>Leg</td>
<td>Collective term for units on foot</td>
</tr>
<tr>
<td>Lüchs</td>
<td>Lynx</td>
</tr>
<tr>
<td>M/C</td>
<td>Motorcycle</td>
</tr>
<tr>
<td>M</td>
<td>Movement Factor</td>
</tr>
<tr>
<td>M</td>
<td>Medium range</td>
</tr>
<tr>
<td>M</td>
<td>Ranging Machinegun sight</td>
</tr>
<tr>
<td>M</td>
<td>FASCAM ammo limit</td>
</tr>
<tr>
<td>MA</td>
<td>All Aspect MANPADS</td>
</tr>
<tr>
<td>MANPADS</td>
<td>Man-Portable Air-Defense System</td>
</tr>
<tr>
<td>MCLOS</td>
<td>Manual command to line-of-sight</td>
</tr>
<tr>
<td>Mech</td>
<td>Mechanized</td>
</tr>
<tr>
<td>Mechanized</td>
<td>Collective term for transported forces</td>
</tr>
<tr>
<td>mm</td>
<td>Millimeter</td>
</tr>
<tr>
<td>MMG</td>
<td>Medium Machinegun</td>
</tr>
<tr>
<td>MMS</td>
<td>Mast-Mounted Sight</td>
</tr>
<tr>
<td>Mot</td>
<td>Motor</td>
</tr>
<tr>
<td>Motor</td>
<td>Transported by wheeled units</td>
</tr>
<tr>
<td>MT</td>
<td>Tail-chase MANPADS</td>
</tr>
<tr>
<td>N</td>
<td>Normal rate-of-fire</td>
</tr>
<tr>
<td>N/A</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>NATO</td>
<td>North Atlantic Treaty Organization</td>
</tr>
<tr>
<td>NORTHAG</td>
<td>NATO Northern Army Group</td>
</tr>
<tr>
<td>O</td>
<td>Optical sight</td>
</tr>
<tr>
<td>OB</td>
<td>Order of Battle</td>
</tr>
<tr>
<td>Observer</td>
<td>A unit able to call indirect fire</td>
</tr>
<tr>
<td>OR</td>
<td>Optional component or rule</td>
</tr>
<tr>
<td>P</td>
<td>Passive IR night fighting</td>
</tr>
<tr>
<td>P</td>
<td>Point Blank range</td>
</tr>
<tr>
<td>P</td>
<td>Penetration Factor</td>
</tr>
<tr>
<td>P</td>
<td>CLGP ammo limit</td>
</tr>
<tr>
<td>PAH</td>
<td>Panzerabwehrhubschrauber (Tank Defense Helicopter)</td>
</tr>
<tr>
<td>Panzer</td>
<td>Tank</td>
</tr>
<tr>
<td>Pz. Grenadier</td>
<td>Armored Infantry</td>
</tr>
<tr>
<td>Pionier</td>
<td>Combat Engineer</td>
</tr>
<tr>
<td>PGM</td>
<td>Precision Guided Munition</td>
</tr>
<tr>
<td>Plt</td>
<td>Platoon</td>
</tr>
<tr>
<td>PTS</td>
<td>Points</td>
</tr>
<tr>
<td>P-Type</td>
<td>Protected Type Vehicle</td>
</tr>
<tr>
<td>Q</td>
<td>Quick rate-of-fire</td>
</tr>
<tr>
<td>R</td>
<td>Dual Driving Controls</td>
</tr>
<tr>
<td>R</td>
<td>Range</td>
</tr>
<tr>
<td>R</td>
<td>Rapid rate-of-fire</td>
</tr>
<tr>
<td>Range Factor</td>
<td>For AP or GP fire, P, S, M, L, or E</td>
</tr>
<tr>
<td>Recce</td>
<td>Reconnaissance</td>
</tr>
<tr>
<td>Recon</td>
<td>Reconnaissance, special unit classification</td>
</tr>
<tr>
<td>Reg</td>
<td>Regiment</td>
</tr>
<tr>
<td>RHQ</td>
<td>Regiment or brigade headquarters</td>
</tr>
<tr>
<td>ROF</td>
<td>Rate-of-fire</td>
</tr>
<tr>
<td>Roll (10)</td>
<td>Rolling a single 10-sided die</td>
</tr>
<tr>
<td>Roll (100)</td>
<td>Rolling two 10-sided dice</td>
</tr>
<tr>
<td>RakJPz</td>
<td>Rakete Jagdpanzer (Rocket Hunting Tank)</td>
</tr>
<tr>
<td>S</td>
<td>Short range</td>
</tr>
<tr>
<td>S</td>
<td>Stereo sight</td>
</tr>
<tr>
<td>S</td>
<td>Smoke ammo limit</td>
</tr>
<tr>
<td>SACLOS</td>
<td>Semi-automatic command to line-of-sight</td>
</tr>
<tr>
<td>Sapper</td>
<td>Combat Engineer</td>
</tr>
<tr>
<td>SB</td>
<td>Stabilization rating</td>
</tr>
<tr>
<td>Sec</td>
<td>Section</td>
</tr>
<tr>
<td>SHEAF</td>
<td>Indirect fire pattern</td>
</tr>
<tr>
<td>Smk</td>
<td>Smoke</td>
</tr>
<tr>
<td>SP</td>
<td>ATGM Speed</td>
</tr>
<tr>
<td>SP</td>
<td>Self-propelled</td>
</tr>
<tr>
<td>Spähpanzer</td>
<td>Scout Tank</td>
</tr>
<tr>
<td>Sqd</td>
<td>Squad</td>
</tr>
<tr>
<td>Sqn</td>
<td>Squadron</td>
</tr>
<tr>
<td>ST</td>
<td>Sight type</td>
</tr>
<tr>
<td>S-Type</td>
<td>Soft Type Vehicle</td>
</tr>
<tr>
<td>S-Type</td>
<td>Thermal Imager night fighting</td>
</tr>
<tr>
<td>T</td>
<td>Tracked mode of traction</td>
</tr>
<tr>
<td>Task Force</td>
<td>Battle Group</td>
</tr>
<tr>
<td>TF</td>
<td>Task Force</td>
</tr>
<tr>
<td>TK</td>
<td>Track Hit</td>
</tr>
<tr>
<td>TO&amp;E</td>
<td>Table of Organization and Equipment</td>
</tr>
<tr>
<td>TR</td>
<td>Transport</td>
</tr>
<tr>
<td>Trp</td>
<td>Troop</td>
</tr>
<tr>
<td>TT</td>
<td>Turret Turn rating</td>
</tr>
<tr>
<td>TW</td>
<td>Tandem Warhead</td>
</tr>
<tr>
<td>Under Armor</td>
<td>Best defense for transported units</td>
</tr>
<tr>
<td>Under Cover</td>
<td>Increased defense for transported units</td>
</tr>
<tr>
<td>UNL</td>
<td>Unlimited</td>
</tr>
<tr>
<td>VP</td>
<td>Victory Point</td>
</tr>
<tr>
<td>W</td>
<td>Wheeled mode of traction</td>
</tr>
<tr>
<td>WL</td>
<td>White Light searchlight night fighting</td>
</tr>
<tr>
<td>WT</td>
<td>Weight in metric tons</td>
</tr>
<tr>
<td>ZSU</td>
<td>Zenitnaya Samokhodnaya Ustanovka (anti-aircraft self-propelled mount)</td>
</tr>
</tbody>
</table>
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; 7.8.1; 7.8.3; 7.35.1
Aircraft, Fixed-Wing: see Fixed-Wing Aircraft
Aircraft, Helicopters: see Helicopters
Alley: see Terrain, Alley
Ammo Limits: 5.14; 5.16; 6.5.1.11.4; 6.5.2.5 (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: 6.7.8.2
Anti-Aircraft Fire, Results: 6.7.8.2.2
Anti-Aircraft SAMs: 5.4.3
Anti-Aircraft, Spoofing AA Fire: 6.7.8.2.1
Anti-Aircraft, Spotting: 6.7.8.1
Anti-Aircraft, Suppressed: 6.7.8.1.1
Anti-Tank Guided Missiles: 5.1.3.3; 5.16.2.6; 6.5.2.4.2; 6.7.6.4; 6.7.6.5; 7.47
AP Damage & Effects (Advanced Game): 6.5.2.6
AP Damage & Effects (Basic Game): 4.4.3.2.6
AP Hit Angle: 4.4.3.2.4; 6.5.2.2; 6.5.2.6; 7.8.2
AP Hit Modifiers: 4.4.3.2.2; 6.5.2.5
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; 6.5.2.5 (AP Unit Grade)
AP Rate-of-Fire: 5.16.2.1; 6.5.2.1
Armor Penetration: 4.4.3.2.5; 7.12
Armored Vehicle Launched Bridge (AVLB): 7.49
ATGM: see Anti-Tank Guided Missiles
ATGM Damage: 7.47
Artillery Air Bursts: 7.38
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; 6.5.2.6; 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); 6.5.2.5 (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
Block: See Terrain, Block
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
Broken: See Morale, Broken
Buildings: See Terrain, Buildings

C

Called Indirect Fire: see Indirect Fire, Called
Camouflage: 7.24
Card, Data: 1.5
Card, Data Keys: 1.4
Card, Game: 1.3
Card, Turn Track, Summary & Hidden Unit: 1.7; 7.2
CE (Chemical Energy) Shells: 5.1.3.4; 6.5.2.4; 6.5.2.4.3; 6.5.4.3 (CE Ammo); 7.12
CE-Type Armor: 6.5.2.4.1
Checking Indirect Fire: see Indirect Fire, Checking
CLGP: 5.16.2; 5.16.2.4; 6.5.1.6.3; 6.5.1.8.1; 6.5.1.13.3
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

© 2016, 2017 GMT Games, LLC
Command Span: 7.42; 7.43
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
Commander Independent Sight (CIS): 7.48
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
Countermeasures: 5.1.3.6; 5.4.3; 6.7.8.1.1; 6.7.8.2.1
Crawling: 6.6.4.3
Crests: see Terrain, Slopes & Crests
Crew-Served Weapons; 5.1.1; 5.1.2; 5.1.3; 5.14; 5.16.2.3; 6.1.4.2
Damaged: see Aircraft, Results or Vehicle Damaged
Damaged Radio Sets: 7.23.5
Danger Close: see Indirect Fire, Danger Close
Defensive Fire: 7.15
Delayed Reaction: 7.40
Designator, Laser: 6.5.1.13.3; 6.5.2.2.5; 6.7.6.5; 7.17; 7.25
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
Dismounted FOs: 7.39
Disrupted Communications: 7.42
Ditch: see Terrain, Ditch
Dual Driving Controls: 7.33
Dual Fire: 5.14; 6.5.2.5 (Dual Fire); 6.5.4.3 (Dual Fire); 6.6.7.2
Engineer Units: 5.9.3; 6.6.1.1; 7.19; 7.31.3.3
Engineer, Terrain Combat: 7.19; 7.31.3.3
Explosive Reactive Armor (ERA): 6.5.2.4.2
FASCAM: see Terrain, Mines, FASCAM
Fields-of-Fire: 4.4.3.1; 5.1; 6.7.8.1.2; 7.16
Fire: see Terrain, On Fire
Fire Priority: 7.14
Fires: 6.5.2.5 (On Fire); 6.5.4.3 (On Fire); 7.35
Fixed-Wing Aircraft: 5.4.2; 5.5; 5.13; 6.1.4.2; 6.5.4.2.4; 6.7
Fixed-Wing 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; 6.7.8.1.1; 6.7.8.1.2; 6.7.8.2; 6.7.8.2.2 (Effective Result Eliminated); 7.26
Fixed-Wing Aircraft, ARM: 6.5.4.3 (Target P-Type or A-Type Vehicle); 6.7.3.5
Fixed-Wing Aircraft, Bombs: 6.7.3.3; 6.7.3.8; 7.26; 7.31.3; 7.35
Fixed-Wing Aircraft, Bomb Scatter: 7.26
Fixed-Wing Aircraft, Cluster Bombs: 6.5.4.3 (Target P-Type or A-Type Vehicle); 6.7.3.3.4
Fixed-Wing Aircraft, Crew: 6.7.3.1
Fixed-Wing Aircraft, Facing: 5.5
Fixed-Wing Aircraft, Flight Conditions: 6.7.2.4
Fixed-Wing Aircraft, GP Defense Factor: 6.5.4.2.4
Fixed-Wing Aircraft, High-Drag Bombs: 6.7.3.3.5
Fixed-Wing Aircraft, Incendiary Bombs: 6.5.4.3 (Target P-Type or A-Type Vehicle); 6.7.3.3.3
Fixed-Wing Aircraft, Iron Bombs: 6.7.3.3.1
Fixed-Wing Aircraft, Movement: 6.7.2
Fixed-Wing Aircraft, Observers: 6.7.3.1.2
Fixed-Wing Aircraft, PGM: 6.5.4.3 (Target P-Type or A-Type Vehicle); 6.7.3.7
Fixed-Wing Aircraft, Rockets: 6.7.3.4; 6.7.3.8; 7.31.3; 7.35
Fixed-Wing Aircraft, Size: 6.1.3
Fixed-Wing Aircraft, Speed: 6.7.2.2; 6.7.2.3.1; 6.7.2.3.2; 6.7.3.1.1; 6.7.3.2; 6.7.3.3; 6.7.3.4; 6.7.8.1.1; 6.7.8.2; 6.7.8.2.2
Fixed-Wing Aircraft, Spotting: 6.7.3.1
Fixed-Wing Aircraft, Strafing: 6.7.3.2; 6.7.3.8
Fixed-Wing Aircraft, Suppressed: 6.5.4.3 (Shooter Suppressed); 6.7.3.1.1; 6.7.3.8; 6.7.8.2.2; 6.8.4; 7.26
Fixed-Wing Aircraft, Turning: 6.7.2.3.1
Fixed-Wing Aircraft, Weapon Loads: 5.16.2.5; 6.7.1
Flamethrower: 5.1.3.7; 6.6.1.1.2; 6.6.1.2.2; 7.35.1
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; 7.39
Ford: see Terrain, Gully, Ford & Stream
Formation Summary: 1.8
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
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; 6.7.8.2; 6.8.4.1.2; 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: 6.5.4.4.2
GP Fire, Suppressed: 6.5.4.4.2
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); 6.5.2.5 (AP Unit Grade); 6.5.2.7.1; 6.5.2.7.2; 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; 6.7.3.8; 6.8.4; 7.1.4; 6.8.5.2; 7.6; 7.7.1; 7.7.2; 7.22; 7.26
Grenade Launchers: 5.1.3.5
Ground-Based Radar: 7.46
Gully: see Terrain, Gully, Ford & Stream

**Hand-Handed Anti-Tank Weapons:** 5.1.3.4; 7.10; 7.15; 7.35.3

**Ground-Based Radar:** 7.46

**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-Held Anti-Tank Weapons:** 5.1.3.4; 7.10; 7.15; 7.35.3

**Hasty Entrenchment:** see Terrain, Hasty Entrenchment

**Heat Haze:** 6.5.1.12.1 (Observer Heat Haze); 6.5.2.5 (Heat Haze); 6.5.4.3 (Heat Haze)

**Hedgerow:** see Terrain, Hedgerow

**Hedgerow Spotting:** 7.10

**Helicopters:** 5.1.3, 5.4.2; 5.16.2.5, 5.16.2.6, 6.1

**Helicopter, Combat:** 6.7.6
**Helicopter, Movement:** 6.7.5
**Helicopter, Rappelling:** 6.7.5.3.4
**Helicopter, Size:** 6.1.3
**Helicopter, Special Combats:** 6.7.9
**Helicopter, Weapons:** 6.7.4

**Hesitating:** see Morale, Hesitating

**Hidden Units:** 1.7; 7.2; 7.37

**Hills:** see Terrain, Hills

**Hit Angle, Advanced Game:** 6.5.2.2; 6.5.2.6; 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

**Hull Down, Partial:** 6.1.4.1.2; 6.1.4.3.13; 6.5.2.2.3; 6.5.4.4.2; 6.6.9; 7.13.2

**ICM:** 5.16.2; 5.16.2.4; 6.5.1.6.4; 6.5.1.8.1; 6.5.1.11.1; 6.5.1.11.4; 6.5.1.13.1; 6.5.4.3 (Target P-Type or A-Type Vehicle)

**Illumination:** 5.16.2; 5.16.2.2; 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

**Image Intensifiers:** 7.36.4.2

**Improved Position:** see Terrain, Improved Position

**Indirect Fire:** 4.4.2; 5.1.3.1; 5.2; 5.3; 5.16.2.3; 5.16.2.4; 6.1.4.3.10; 6.5.1; 6.5.2.2.1; 6.5.2.2.2; 6.5.4.3 (Target Vehicle Moving DF/IF); 6.5.4.3 (Target Vehicle in Medium or Heavy Cover); 6.6.6; 6.8.4.1.2; 7.1.2; 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, 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:** 7.5

**KE (Kinetic Energy) Shells:** 6.5.2.3.4; 7.12

**Knocked Out, see Vehicle Knocked Out**

**Laser Sight:** See Weapon Sights

**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; 6.6.1.1; 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; 6.8.4; 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; 6.7.8.1; 7.8.3; 7.37

**Long Guns:** 7.20

**Lower Hull Hits:** 7.13

**Manhandling:** see Towed, Movement

**MANPADS:** 5.1.2; 5.1.3.6

**Mapboard, Geomorphic:** 1.2; 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); 6.5.2.5 (Shooter Hesitating and Shooter Broken); 6.5.4.3 (Shooter Hesitating and Shooter Broken); 7.1; 7.4.4; 7.6

© 2016, 2017 GMT Games, LLC
Morale, Broken: 6.2.1.1; 6.5.1.12.1 (Observer Broken); 6.5.2.5 (Shooter Broken); 6.5.4.3 (Shooter Broken); 6.6.1.1; 6.6.1.2 (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); 6.5.2.5 (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: 6.8.5
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, turning: see Vehicle, Turning
Narrow Roads & Paths: 7.30
NATO Target Acquisition Bonus: 7.50
Night Fighting: 7.36.4
Observer, Indirect Fire: 6.5.1; 7.5; 7.4.3; 7.26; 7.37
Observer, Suppressed: 6.5.1.12.1 (Observer Suppressed)
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
Overview, 27 September 1987: 10.1
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; 6.7.8.1.1; 6.7.8.2; 7.6; 7.8.4; 7.16
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)
Quickdraw: 4.3.2; 7.44
Quickmarch: 6.6.4.2
Radar Damage: 7.47
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
Ranging Machinegun: See Weapon Sights
Rappelling: 6.7.5.3.4
Rate-of-Fire, See AP Rate-of-Fire
Recon Units: 5.9.2; 6.1.3.3; 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; 7.7; 7.24; 7.41
Removing Spot Counters: 7.4
Roads: See Movement, Path & Road
Rubble: see Terrain, Rubble
Rule of 5s and 10s: 6.5.4.4.2; 6.6.1.13
Scenarios, Format: 9.1
Scenarios, Designing: 9.2
SAM Damage: 7.47
Searchlights: 7.36.4.1
Sections (Leg Units): 1.7.1; 5.1; 5.1.2; 5.1.4; 6.1.3; 6.1.4.2; 6.1.4.3; 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; 6.1.4.3.8; 6.1.4.3.11; 6.5.2.7; 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; 6.5.1.12.1; 6.5.1.12.2 (Observer Hindered); 6.5.1.13; 6.5.2.5 (Smoke – Open/Closed SHEAF); 6.5.2.5 (Barrage – Open/Closed SHEAF); 6.5.4.4 (Smoke – Open/Closed SHEAF); 6.5.4.3 (Barrage – Open/Closed SHEAF); 6.5.4.3 (IF Open 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
Small Turrets: 7.45
Smoke: 5.11; 5.16.2; 6.1.4.3.10; 6.5.1.12 (Observer Hindered); 6.5.2.5 (Smoke – Open/Close SHEAF); 6.5.4.3 (Smoke – Open/Close SHEAF); 6.8.6

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: 5.16.2.2; 6.1.4.3.10; 6.5.1.5; 6.5.2.5 (Smoke – Open/Closed SHEAF); 6.5.4.3 (Smoke Open/Closed SHEAF); 6.8.6

Smoke, Dischargers: 6.5.2.5 (Smoke – Open/Closed SHEAF); 6.5.4.3 (Smoke – Open/Closed SHEAF); 6.8.6; 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; 6.5.2.5 (Smoke – Open/Closed SHEAF); 6.5.4.3 (Smoke – Open/Closed SHEAF); 6.8.6; 7.31.3.1

Smoke, Infantry: 6.8.6; 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; 6.7.8.1; 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; 6.5.2.7; 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; 7.36.2.2

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

Stereo Sight: See Weapon Sights

Suppression: 5.10; 5.15; 6.2.1.1.1; 6.5.4.4; 6.5.4.5; 6.8.4: also see, Aircraft, Leg, Towed, and Vehicle Suppressed

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; 6.1.4.3.9; 6.5.4.2.5; 6.5.4.4.3 (Bridge); 7.30; 7.31.1; 7.32

Terrain, Bridge, AVLB: 6.1.4.3.1.2

Terrain, Brush: 4.1.4.1.1; 6.5.4.2.2; 6.6.4.2; 6.7.5.3.1; 7.4; 7.35.4

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; 7.13; 7.19; 7.29; 7.30; 7.31.1; 7.35

Terrain, Crops: 4.1.4.1.1; 6.5.4.2.2; 6.6.4.2; 6.7.5.3.1; 7.4; 7.35.4

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

© 2016, 2017 GMT Games, LLC
Transporting: 1.7; 5.1.3.1; 5.1.3.2; 5.1.3.3; 5.1.3.4; 5.1.3.5; 5.15; 5.16.2.3; 6.1.3; 6.2.1.1; 6.5.2.5 (Transported Fire); 6.5.2.7.1; 6.5.2.7.2; 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

Unattached Indirect Fire Unit: 6.5.1.1.2; 6.5.1.3.1; 6.5.1.3.3; 7.28
Under Armor Transport: 6.5.4.2.3; 6.6.7.1; 6.6.7.1
Under Cover Transport: 6.5.4.2.3; 6.6.7.1; 6.6.7.1

Variable Track Damage: 7.21
Vehicle, Armor: 4.4.3.2.5; 6.5.2.3
Vehicle, Assault Cover: 7.41
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; 5.16.2.3; 6.2.1.1; 6.5.2.6; 6.5.2.7; 6.5.4.3 (Brew-Up Smoke); 6.5.4.4; 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; 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); 6.5.2.2.4; 6.5.2.6; 6.5.2.7.2; 6.5.4.4.2; 6.6.1.1.3; 7.1.1.2; 7.11; 7.34
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; 4.5.1.1.5; 4.5.1.1.5
Vehicle, Knocked-Out: 4.1.4.1.8; 4.2.1; 4.4.3.2.6; 5.15; 5.16.2.3; 6.2.1.1; 6.5.2.6; 6.5.2.7.2; 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; 6.5.2.6; 6.5.2.7.1; 6.5.2.7.2; 7.23
Vehicle, Suppressed: 5.14; 6.1.3.1; 6.5.2.5 (Shooter Suppressed); 6.5.2.6 (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); 6.5.2.5 (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; 6.5.2.7; 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
Weapon Sights: 6.5.1.13.3; 6.5.2.2.5; 6.5.2.5; 6.5.4.3; 6.7.8.1.1
Weight Limitations: 7.32
Wire: see Terrain, Wire
Woods: see Terrain, Woods
Wrecks: 4.1.4.1.8; 4.4.3.2.6; 4.5.1.1.5; 6.5.2.6; 7.27; 7.30; 7.35.2

Credits

Design and Development: James M. Day
Art Director & Package Design: Rodger B. MacGowan
Maps: Charles Kibler
Counter Art: Pete Abrams, Terry Leeds, James M. Day, and Mark Simonitch
Cover Art: Eric Williams
Rules Manuals: Charles Kibler
Playbook: Mark Simonitch
Editors: Bruce Kohrn, Rob Schoenen, Jerry West, and Fen Yan
VASSAL Development and Support: Rob Doane
Production Coordination: Tony Curtis
Producers: Tony Curtis, Rodger MacGowan, Andy Lewis, Gene Billingsley, and Mark Simonitch

© 2016, 2017 GMT Games, LLC