

# PANZER BATTLES

## Tactical Armored Warfare in World War II

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## [1.0] INTRODUCTION

*Panzer Battles* is a tactical level simulation of three World War II armored battles: between German and American forces near Arracourt, France, in September 1944; between German and Soviet

troops on the Berlin Highway in March 1945; and between German and British tanks in North Africa in May 1942.

REMOVING THE RULES FROM THIS ISSUE:

Open the magazine to the center; bend open the staples with a penknife or screwdriver; lift out the rules and close the staples.

## [2.0] HOW TO PLAY THE GAME

*Panzer Battles* is a two-Player game. The game is played in *Game-Turns*, each of which is divided into a number of *Phases*. During each *Game-Turn*, a Player may move and attack ("fire") with his units. This is done by using their various weapons systems in an attempt to damage and/or destroy Enemy units. In order to make play of the game more realistic, Players are required to plan ahead for their future actions (in a very general way) by issuing set commands to their units. As units take losses in the course of play it is possible that their morale will suffer, forcing them to withdraw temporarily from combat. A Player wins the game by accumulating more *Victory Points* than his opponent and/or by fulfilling certain stated *Victory Conditions*.

Modern warfare is a complex subject, and consequently the rules to *Panzer Battles* are also fairly complex, especially when compared to more well-known games (such as *Monopoly*, for example). The rules have been kept as short as possible; however, clarity and thoroughness of the rules are of paramount concern. Basically, the rules are written within a special and highly organized system:

1. Each separate topic is presented as an individual *Major Section*, numbered consecutively from 1.0. Further divisions within the Sections are made by *Primary Cases*, which contain the rules to certain aspects of a topic as a whole (e.g., 5.1, The Bound Command); and by *Secondary Cases*, which are the individual rules themselves (e.g., 5.11).

2. Most rules are prefaced by a *General Rule* and *Procedure*, which summarize the general subject and concept of the rules that follow.

3. The rules Sections are presented roughly in the order that the Player will be likely to encounter the particular topics while learning the game.

4. The rules make use of a certain jargon ("gamespeak") with terms that may not be familiar to Players, especially those who are new to this sort of game. If confusion arises, Players should consult the Definition of Terms, Case 3.4.

5. As a last note, Players should not be frightened off or be ill at ease about the rather legalistic aspect of the rules. We have attempted to present them in a manner that is both clear and thorough; but Players should not feel compelled to let the rules "play the game for them." If a dispute arises, a compromise should be sought. After all, while *Panzer Battles* is designed to provide a realistic simulation of ground combat in the Second World War, it is still intended to be an enjoyable game and not an exercise in constitutional law. Players are strongly encouraged to make whatever mutually acceptable modifications they feel will improve the game.

## [3.0] GAME EQUIPMENT

CASES:

### [3.1] THE GAME MAP

The game map displays all the geographical areas and features required for play. A hexagonal grid

pattern composed of individual hexagons (or "hexes") is printed on the game map to regulate the movement and location of the playing pieces on the map. Each hex is given a four-digit number. The first two digits of the number identify the specific hex column (running vertically, north to south). The last two digits identify the specific zig-zag hex row (running horizontally, west to east).

### [3.2] GAME CHARTS AND TABLES

Various visual aids are provided with the game to simplify and illustrate certain game functions. The use of these graphic aids is explained in the appropriate rules Sections. Charts and tables are located on the map and on page R16.

### [3.3] THE PLAYING PIECES

There are 200 playing pieces in each set of *Panzer Battles*, about half of which are *Informational counters*. Informational counters include Strength markers, Artillery Impact markers, Suppressed markers, etc. All of these counters indicate the current status of a given unit or hex. The actual units in the game — the vehicle and infantry platoons — are represented by *Organizational counters*. Counters representing vehicles contain information regarding the designation, Target Profile, Armor Strength, and Movement Allowance. Counters representing infantry contain information regarding the designations and Automatic Weapons Strength. Additional values for the units are provided on the individual Unit Data Sheets.

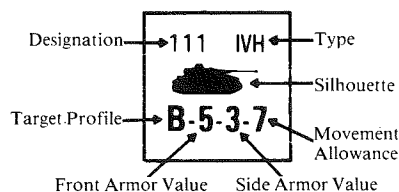
[3.31] There are two types of organizational counters: *combat units* and *non-combat units*. Combat units are represented, for play purposes, by two counters: the unit's particular organizational counter and a *Combat Strength counter*, which is always placed under the organizational counter and represents the actual strength of that unit at a given time. This strength is measured in number of *vehicles* (for vehicle units) or number of *steps* (for infantry units). The Combat Strength varies as the unit takes losses in combat or regroups. However, the organizational counter is a constant, despite strength losses or other combat results.

[3.32] The strength of a vehicle unit varies from one to five vehicles; that of an infantry unit from one to five steps. Units with 5 vehicles or steps have their strength indicated by the *lack* of any Strength Marker.

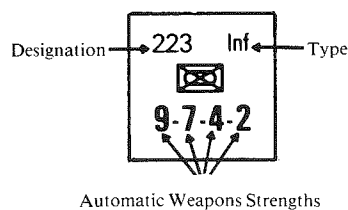
[3.33] Most organizational counters are printed on only one side, allowing them to be placed printed face down on the map until observed by the Enemy Player.

#### [3.34] Sample Units

##### VEHICLE UNIT



##### INFANTRY UNIT



UNITED STATES	
Front	Back
111 M4 C-5-3-9 	Sherman M4 main battle tank Platoon
211 M3 A-1-1-2 	M3 armored personnel carrier Platoon
213 Inf 9-7-4-2 	armored infantry Platoon
SOVIET	
113 T34 A-6-3-11 	T34/85 main battle tank Platoon
GERMAN	
122 IVH B-5-3-7 	PZ IV H main battle tank Platoon
304 V D-7-3-9 	PZ V Panther main battle tank Platoon
201 II A-2-1-8 	PZ II reconnaissance Platoon
211 III B-4-2-8 	PZ III main battle tank Platoon
231 IVE B-4-2-8 	PZ IVE close support tank
101 SDK B-0-0-8 	SDK-7 halftrack prime mover Platoon
101 88 A-0-0-0 	88mm Medium anti-tank gun Section
101 Crew 2-1-0-0 	Anti-tank Gun Crew
BRITISH	
424 Gt E-5-2-7 	Grant main battle tank Platoon
410 CS A-3-2-8 	Close Support Tank Platoon
414 Cru A-3-2-8 	Crusader II main battle tank Platoon

NEUTRAL MARKERS	
Front	Back
1	2
3	4
	Suprs
Fatigue 1	Fatigue 2
Engd	In Column
	Bty
Limber	
GAME-TURN	
CURRENT PHASE	

### [3.4] DEFINITION OF TERMS

**APC (Armored Personnel Carrier).** A type of vehicle unit, able to transport Friendly infantry units.

**Close Assault.** The procedure by which opposing units in the same hex resolve direct fire combat.

**Company.** A number of platoons (dependent on nationality) organized into a higher formation (the company itself).

**Company Status.** Any condition that mutually applies to all platoons of a given company.

**Defilade.** A *Defilade marker* represents a unit taking the maximal defensive position within a hex.

**Direct Fire.** Any attack directed at a specific defending Enemy unit and requiring a valid *Line of Sight*.

**Engaged.** Term used to describe opposing units which end a *Movement Phase* in the same hex.

**Independent Command.** Any unit treated as a separate company.

**Indirect Fire.** Any attack directed at a specific hex that does not require a valid *Line of Sight*.

**Line of Sight (LOS).** The method by which Players determine whether or not their units can see each other.

**Movement Allowance.** A value indicating the relative mobility of a unit in terms of *Movement Points*. Basically, a unit expends one or more *Movement Points* to enter each hex on the map.

**Observation Range.** The maximum length (in hexes) of the *Line of Sight* of a Friendly unit at which an Enemy unit can be successfully observed. This range varies with the type and status of the Enemy unit, as well as with terrain and weather conditions.

**Phasing Player.** The Player who is assigned the current Phase in the Game-Turn (e.g., the first Player is the Phasing Player during the First Player Indirect Fire Phase).

**Platoon.** The basic unit of the game (as represented by the playing pieces). A platoon is a unit composed of a number of vehicles or infantry steps.

**Platoon Status.** Any condition that applies to a given platoon in the game.

**Reinforcements.** Units which do not begin the game in play, but instead appear at some scheduled time during the play of the game.

**Scenario.** An organized description of orders of battle, deployments, victory conditions, and special rules that the Players will use to play a certain version of the game.

**Special Rule.** A rule in effect only during certain Scenarios, and/or only during certain Game-Turns of a game.

**Step.** A certain portion of the total strength of an infantry unit which can be lost due to combat. When a unit is out of steps, it has been completely eliminated and is removed from the game.

**Suppression.** A result of direct or indirect fire which reduces the movement and/or combat abilities of affected units. Suppressed vehicles are "buttoned up;" suppressed infantry has "hit the dirt."

**Target Profile.** A rating of each vehicle unit according to how easy it is to "hit" with direct fire. This is based on the actual height of each type of vehicle, the slope of its armor, and other such characteristics.

**Weapon System.** Any method by which Friendly units attack (fire at) Enemy units. Basically, weapon systems fall into three main categories:

**Automatic Weapons.** Infantry and small arms fire, as well as the fire of the external and co-axial machineguns of vehicle units.

**Main Gun.** Represents the conventional armament of most vehicle units as well as that of anti-tank guns. Although primarily intended to attack Enemy vehicle units, main guns may attack Enemy infantry units as well.

**Personal Anti-Tank.** Additional weapons used by infantry units to attack Enemy vehicle units.

**Victory Point.** The method by which victory is measured; the value to the Players of fulfilling certain victory conditions.

### [3.5] GAME SCALE

Each hex on the map represents 200 meters (across) of actual terrain. Each Game-Turn represents five minutes of real time. Each step of infantry represents approximately 12 men; each platoon 1 to 5 vehicles.

### [3.6] PARTS INVENTORY

One rules booklet

One sheet of die-cut counters (200 pieces)

One 22" x 34" game map (3 map areas)

Two plastic dice (not included in subscription edition)

One game box assembly (not included in subscription edition)

If any of the above parts are missing or damaged, write to:

Customer Service  
Simulations Publications, Inc.  
257 Park Avenue South  
New York, New York 10010

### [3.7] RULES QUESTIONS

Questions concerning the rules for *Panzer Battles* will be answered if phrased in such a way that a one-word reply will suffice and if the questions are accompanied by a stamped, self-addressed envelope. Mark the envelope "Rules Question: *Panzer Battles*."

## [4.0] SEQUENCE OF PLAY

### GENERAL RULE:

Each game or Scenario of *Panzer Battles* is composed of *Game-Turns*. Players move their units and engage in combat during a Game-Turn, rigidly adhering to the *Sequence of Play*. This sequence is repeated, Game-Turn by Game-Turn, until the end of the Scenario being played.

### SEQUENCE OUTLINE:

#### A. First Player Indirect Fire Phase

*Note: Indirect fire occurs only in the Arracourt Scenario. Skip Segments 1 and 3 in other Scenarios.*

**1. Plot Segment.** The first Player (as designated by the Scenario) plots his artillery fire missions. These may be delayed a certain number of Game-Turns, depending on the circumstances.

**2. Marker Removal Segment.** All Friendly artillery impact markers are removed from the map. All Suppression markers are removed from units belonging to the second Player.

**3. Resolution Segment.** Any artillery fire missions that the first Player has plotted to arrive in the present Game-Turn are resolved for accuracy; all indirect fire combats called for by these attacks are resolved.

**4. Rally Segment.** The first Player may attempt to rally those of his units with *Rally Commands* (from Phase E).

#### B. Second Player Command Phase

The second Player (as designated in the Scenario) plots commands for each of his units on a company by company basis. These commands will be carried out in the appropriate Phases, and may be changed only at the beginning of the next Friendly Command Phase (Exceptions: see Cases 13.28 and 14.12).

#### C. First Player Movement Phase

**1. Movement Segment.** The first Player may move any or all of his units, according to their company commands. As the Player moves a unit hex by hex across the map it may be affected by artillery in any artillery impact hexes it enters. In addition, the second Player may interrupt this movement at any point and attack the moving unit with opportunity fire from one of his units. After such an attack has been resolved, the first Player may attack the firing Enemy unit with one of his units, or "pass" (choose not to attack). The second Player may then use a unit which has an unfired weapon system to attack either the moving unit again or attack the first Player's unit which performed opportunity fire, or likewise pass. This sequence may continue indefinitely until both Players choose to pass. After both Players have passed, the moving unit may then resume its movement, possibly triggering more opportunity fire as it does so. This sequence continues until the first Player has completed movement of his units.

*Note: A given weapon system may perform opportunity fire only once per Phase.*

**2. Final Fire Segment.** Any units of either Player (with an Overwatch command) that did not fire in the preceding Movement Segment may do so now. This fire is resolved in the alternating manner described above, but according to the following strict sequence of rounds:

- Automatic Weapons Final Fire is resolved.
- Main Gun Final Fire is resolved.

**3. Close Assault Segment.** All units in the same hex with Enemy units resolve three rounds (i.e., completion of both *Impulses*) of close assault combat.

- Non-Phasing Player Impulse.
- Phasing Player Impulse.

**4. Joint Facing Segment.** Both Players may adjust the facing of their vehicle units.

#### D. Second Player Indirect Fire Phase

The second Player now carries out his artillery plotting and attacks, rallying, and other functions in the same manner as the first Player in Phase A.

#### E. First Player Command Phase.

The first Player now plots commands for each of his units in the same manner as the second Player in Phase B.

#### F. Second Player Movement Phase

The second Player now performs movement for his units in the same manner as the first Player in Phase C.

#### G. Record Phase

The Game-Turn marker is advanced one space on the Game-Turn Record Track, signalling the end of one Game-Turn and the start of the next.

## [5.0] COMMAND AND REGROUPING OF UNITS

### COMMENTARY:

In order to function in combat, units must be part of an effective command system. Platoon leaders can only see a small part of the battle in which they are engaged, and their actions must be guided and coordinated by their company headquarters. Each company headquarters relies in turn on some higher level of command (battalion/brigade/division). In *Panzer Battles*, this higher level of command is represented by the Player himself.

### GENERAL RULE:

In order to utilize his units in *Panzer Battles*, a Player must issue a command to each of his companies. There are five commands: *Bound*, *Overwatch*, *Bounding Overwatch*, *Withdraw*, and *Rally*. Depending on which command is issued, the component units of each company are accordingly restricted as to which actions — in terms of movement and combat — they may perform. A Player may also regroup units of the same type which have incurred losses together into a single stronger unit.

### PROCEDURE:

During each Command Phase, a Player must issue a specific command ("orders") to each of his units in the game, on a company by company basis. Each company is given one command, which remains in effect until the beginning of the next



Friendly Command Phase (Exceptions: see Cases 13.28 and 14.12). All commands are written down by each Player on a separate piece of paper. The written commands are known as the *command plot*. Command plots are assigned secretly, and are normally revealed only at the end of the Game-Turn. If Players trust one another — and have good memories — they can simply make a mental note of each of their companies' commands, and thus eliminate the need to write commands down.

**Note:** "Overwatch," "Bound," etc., are terms currently used by the US Army to describe various tactical maneuvers. For simplicity, these terms have been used in the game to describe the World War II counterparts of these maneuvers.

## CASES:

### [5.1] THE BOUND COMMAND

When issued a Bound command, all platoons of the company must either leave the hex they currently occupy during the next Friendly Movement Phase, or remain in that hex and undergo a change in status (Case 5.13).

[5.11] When fulfilling a Bound command, each unit of the company may be moved by the owning Player in accordance with the movement rules (Section 6.0).

[5.12] Units that fulfill a Bound command by movement must end the Movement Phase in a hex other than the one in which they began the Phase (i.e., units may not move "in a circle").

[5.13] Units may also fulfill a Bound command by remaining in place and undergoing a change in status. Status changes include the following:

- A. Entering or leaving column formation (Case 6.6).
- B. Entering defilade (for vehicle units) or leaving defilade (for infantry units). See Section 15.0.
- C. Embarking or disembarking from Friendly APC units (Arracourt Scenario only). See Section 16.0.
- D. Regrouping (Case 5.6).
- E. Limbering or unlimbering anti-tank guns (Case 17.31) (Arracourt Scenario only.)

[5.14] Units with a Bound command that undergo a change in status may also be moved if sufficient Movement Points are available. Any such movement is subject to Case 5.12.

[5.15] Units with Bound commands may also initiate close assault combat.

[5.16] Except for close assault, a unit with a Bound command may not perform fire combat.

### [5.2] THE OVERWATCH COMMAND

When issued an Overwatch command, all platoons of the company must remain in the hex(es) they currently occupy. They can change facing or enter defilade.

[5.21] Units given Overwatch commands are the only units that may engage in normal direct fire (see Case 5.3, Bounding Overwatch, for that command's effects in terms of Overwatch).

[5.22] A unit given an Overwatch command may initiate fire on Enemy units, either as they move, in response to the fire of Enemy units, or in the Final Fire Segment of the Movement Phase.

[5.23] Units fulfilling an Overwatch command may enter defilade in the hexes they currently occupy (see Section 15.0) or change the facing of vehicle defilade markers. This has no effect on their ability to use direct fire.

[5.24] APC units fulfilling an Overwatch command may mount Friendly infantry units in the hex they currently occupy. Infantry units fulfilling an Overwatch command may dismount from

APCs in the hex they currently occupy (see Section 16.0).

[5.25] Units issued an Overwatch command need not fire to fulfill the command.

### [5.3] THE BOUNDING OVERWATCH COMMAND

This command combines elements of both the Bound and the Overwatch commands. When issued a Bounding Overwatch command, one or more platoons of the company must fulfill a Bound command. The remainder of the company (i.e., at least one platoon) must fulfill an Overwatch command.

[5.31] The exact units within a company that are to fulfill either "part" of the Bounding Overwatch command is not determined in advance. Instead, the Player is free to determine which units will Bound and which will Overwatch at any time throughout the Phases, starting with the current Command Phase and ending in the next Friendly Movement Phase.

[5.32] For obvious reasons, companies that consist of a single unit may not be issued a Bounding Overwatch command.

[5.33] Only certain nationalities may use the Bounding Overwatch command (see Section 18.0).

### [5.4] THE WITHDRAW COMMAND

This command may be given only to companies currently in Morale state 2 or 3 due to combat losses (see Section 14.0). When given a Withdraw command, all units of the company are under the same restrictions as for a bound command, except that units may choose to remain in their hex (that is, to do nothing). However, once given a Withdraw command, a company may not be issued any further commands other than Withdraw and/or Rally, until the company has reduced its Morale state to zero (see Case 5.5).

### [5.5] THE RALLY COMMAND

When the platoons of a company take losses, there is a chance that their morale may begin to suffer (see Section 14.0). Companies may restore their morale by the Rally command. The Rally command may only be issued to companies that are currently in Morale state 2 or 3. When given a Rally command, no units of the company may expend any Movement Points, fire any of their weapons systems, initiate close assault, or undergo a change in status (see Case 5.13). Once given a Rally command, a company may not be issued any other type of command except for further Withdraw or Rally commands. This restriction continues until the company has restored its Morale state to zero.

### [5.6] REGROUPING

Two or more platoons that have taken losses in combat may be combined into a single platoon by regrouping. This may be done by any units with a Bound command that have begun a Friendly Movement Phase stacked in the same hex. Regrouping costs the units involved their entire Movement Allowance for that Phase. At the end of the Phase, only one "combined" platoon remains in the hex. The other counters are removed from the map.

[5.61] Only platoons of the same company may regroup.

[5.62] Only platoons of the exact same type (e.g., M4 to M4, infantry to infantry) may regroup.

[5.63] Platoons may only regroup up to a strength (in vehicles or steps) *less than or equal to* either's strength at the start of the scenario.

[5.64] The combined platoon formed by regrouping has all facets of its platoon status determined by the Enemy Player. He may choose any status

that applied to at least one of the component platoons to the new one. For example, if a suppressed platoon regrouped with a platoon that was not suppressed, the Enemy Player could choose to have the newly formed platoon suppressed.

[5.65] Regrouping has no effect on any company status for the newly formed platoon (it "inherits" all company status from its component platoons).

## [6.0] MOVEMENT AND "DUMMY" UNITS

### GENERAL RULE:

During his Movement Phase of each Game-Turn, a Player may move his units. He is restricted as to how he moves each unit by the command which he has issued to it (see Section 5.0). Movement may also be affected by terrain, the formation of the unit, and whether the unit is performing "charge" or "double-time" (for infantry; note that such movement incurs *fatigue*). Note that movement of a unit may be interrupted at any time by Enemy opportunity fire (Case 8.2), which may in turn make overwatch fire by a Friendly unit possible (Case 8.3). Thus the movement of a unit is constantly fraught with the potential of a large-scale firefight. A Player may also utilize "dummies" during his Movement Phase to confuse the Enemy Player as to the disposition of his real units.

### PROCEDURE:

The owning Player moves each unit (or stack of units) individually, tracing its path of movement through the hexgrid. The order in which Friendly companies move is determined by the Enemy Player, who designates any single counter. The Friendly Player then moves all units of the company to which that counter belongs. Movement is calculated in terms of Movement Points. Basically, each unit expends a minimum of one Movement Point of its Movement Allowance for each hex it enters. The actual cost for a unit to enter a hex (or cross a hexside) will vary, depending on the type of unit and the terrain involved. The effects of terrain on movement are listed on the Terrain Effects Chart (6.9). **Note:** Movement of a unit may be interrupted by opportunity fire.

**Player's Note:** The Enemy Player determines the order in which companies move since all such movement is really simultaneous. This allows the Enemy Player to make a choice about which Enemy movement he would like to see first, and thus be more likely to fire at (because a give weapons system may fire only once per Phase). In practice, however, this procedure need be followed only when Enemy and Friendly units are actually "in contact" and likely to exchange overwatch fire with one another.

### CASES:

#### [6.1] MOVEMENT INHIBITIONS AND PROHIBITIONS

[6.11] A unit may be moved as many or as few hexes as the owning Player desires; however, he may never expend more Movement Points in the movement of a unit than its total Movement Allowance in any one Movement Segment. Unexpended Movement Points may not be "saved" for use in a later Movement Segment, nor may unused Movement Points be transferred from unit to unit.

[6.12] Units may only be moved during a Friendly Movement Segment. Although there may be some "movement" as a result of close assault (due to a withdrawal), this is not considered movement *per*



se and does not require the expenditure of Movement Points.

[6.13] Units are normally moved individually hex by hex across the map. However, units which begin a Movement Phase stacked in the same hex and are stacked in the same hex at the end of that Movement Segment must be moved together (see Case 6.4).

[6.14] There are certain doctrinal restrictions placed on the ways in which the platoons of a company may be moved. These vary by nationality, and are listed in Section 18.0).

[6.15] Facing is determined by movement (see Case 11.1).

## [6.2] VEHICLE MOVEMENT

The movement of vehicles is affected by formations which they are required to enter while in some types of terrain. Unless in Column formation, vehicle units must enter Dispersed formation (see Case 6.5) when moving into town hexes, and they must enter Column formation (see Case 6.6) to gain the movement benefits for road and trail hexes. Vehicle units (with Bound or Withdraw commands) may always move one hex per Friendly Movement Segment by spending their entire Movement Allowance.

## [6.3] INFANTRY MOVEMENT

Men on foot (dismounted or "leg" infantry) move a great deal slower than vehicles. For this reason, infantry units may either be mounted (transported by Friendly APCs) or dismounted (on foot).

[6.31] All dismounted infantry units have a Movement Allowance of 2 (however, see Cases 6.32 and 6.33). Mounted infantry units have no Movement Allowance, but instead are moved with the vehicle units transporting them (see Section 16.0).

[6.32] Leg infantry units may voluntarily increase their Movement Allowance to 3 through a procedure known as *double-time*. In order for a unit to double-time, the owning Player simply declares that the unit is doing so. After completing its movement for that Segment, the unit is *fatigued* (see Case 6.7).

[6.33] Leg infantry units may voluntarily double their Movement Allowance to 3 through a procedure known as *double-time*. In order for a unit to charge, the owning Player simply declares that the unit is doing so. After completing its movement for that Segment, the unit is *fatigued* (see Case 6.7).

[6.34] One *additional* Movement Point must be expended to move a leg infantry unit from a hex at a lower height level to a hex at a higher height level (however, see Case 6.6). There is no additional cost to move a unit in the reverse direction (i.e., downhill).

[6.35] Infantry units (with Bound commands) may only be moved into a hex if they have sufficient Movement Points for that move.

## [6.4] STACKING (More than One Unit in a Hex)

There may not be more than three Friendly units of the same type (vehicle or infantry) in a hex at the end of any Segment (Exception: see Case 6.46).

[6.41] The stacking limit applies only at the end of each Segment. A Player may have any number of Friendly units move through a hex during a Segment, so long as the stacking limit is met at the end of the Segment.

[6.42] Stacking has no effect on a unit's ability to make fire attacks. For the effects of stacking on close assault, see Case 13.1.

[6.43] Stacking increases a unit's vulnerability to fire by altering the die roll on the appropriate Loss

Modifications Tables (see Cases 12.1 and 12.2). However, when resolving combat against moving units, units that are "moving together" (see Case 6.45) are considered to be stacked.

[6.44] Units stacked in the same hex are each attacked separately by any indirect fire in the hex (see Case 18.3).

[6.45] Units that begin and end a given Movement Segment stacked together must be moved together as a stack (if they are to be moved at all). Therefore, units that spend an entire Friendly Movement Phase together pay the appropriate penalty (on the Loss Modification Tables) when defending against Enemy opportunity fire.

[6.46] When transporting infantry, the APC unit counter is placed on top of its passenger infantry unit (see Section 16.0). For purposes of stacking, a vehicle transporting a passenger unit is treated as a single vehicle unit.

[6.47] There is no Movement Point cost to stack or unstack units except when such action represents infantry mounting or dismounting from vehicles (see Case 16.1).

[6.48] Friendly units that end a Segment in a hex in excess of the stacking limit are immediately eliminated. The owning Player chooses which unit(s) in the hex to eliminate.

## [6.5] DISPERSED FORMATION

Vehicle units not in Column formation that enter any town hex are automatically placed in Dispersed formation.

[6.51] Dispersed units may not observe (see Section 7.0) into any adjacent town hex. However, they may observe into all other hexes normally.

[6.52] There is no cost for a unit to enter or leave Dispersed formation. Vehicle units remain dispersed so long as they occupy a town hex; and immediately revert to "normal" (i.e., neither in Dispersed nor Column formation) after leaving such a hex. There is no limit to the number of times a unit may change formation during a given Segment.

[6.53] Dismounted infantry never enter Dispersed formation.

[6.54] Except for affecting observation, Dispersed formation has no effect on the ability of vehicle units to move or fire.

## [6.6] COLUMN FORMATION

In order to gain the movement benefits of roads and trails, units must enter Column formation. When a unit in Column moves so that its path coincides with the path of a road or trail, the unit pays only the cost for moving along that road or trail, regardless of the other terrain in the hex, or (for leg infantry) any changes in height level.

[6.61] Vehicle units may enter Column formation by remaining stationary in a hex for one *complete* Friendly Movement Segment. The unit must have a Bound command. Units may enter Column formation in any hex. (Place an "In Column" marker on the unit.)

[6.62] Vehicle units may leave Column formation during any Movement Segment at no cost and with any command. A unit may also leave Column formation during an Enemy Movement Segment, also at no cost, and with any command. However, a unit leaving Column formation in this manner may not fire during that Segment.

[6.63] Infantry units may enter Column formation at no cost, but only with a Bound command. They may leave Column formation in the same manner as vehicle units (see Case 6.62). Infantry units that are suppressed due to combat results automatically leave Column formation.

[6.64] Column formation has no effect on the stacking limits.

[6.65] Units must automatically leave Column formation when they are involved in a close assault (see Section 13.0). This is not done, however, until the unit either withdraws from the hex or one Segment of close assault combat has been completed.

[6.66] Units in Column formation may not enter defilade (see Section 15.0).

[6.67] While in Column formation, the fire (attack) strength of units is affected as follows: vehicle units are treated as "1-vehicle" units when resolving all fire attacks; infantry units are treated as "1-step" units.

[6.68] Column formation increases a unit's vulnerability to Enemy attacks by altering the die roll on the appropriate Loss Modification Tables (see Section 12.0).

[6.69] Vehicle units reduced to a strength of one vehicle are automatically considered to be in Column formation, but only for movement purposes. Such units do not have their die rolls altered for being in Column when defending against direct fire attacks. However, this does not apply to one-step infantry units; they must enter Column formation normally.

*Player's Note:* When a number of Friendly units are moving together (whether stacked or not) in Column formation (e.g., in a long line on the same road or trail), it is usually necessary to place an "In Column" marker only on the unit at the head of the column. (This is a method for reducing the number of "In Column" markers on the map.)

## [6.7] INFANTRY FATIGUE AND RESTING

While dismounted infantry normally move at a slow rate of speed, they are capable of short bursts of much faster action (see Cases 6.32 and 6.33, Double-Time and Charge). When units perform charge or double-time, they become fatigued, but may recover from fatigue by resting.

Fatigue  
1

[6.71] When units without a fatigue level perform one Segment of double-time, the units have a Fatigue 1 marker placed on them.

[6.72] Units at Fatigue Level 1 may not charge. In all other respects they are treated as normal infantry units (however, see Case 6.73).

[6.73] When units at Fatigue Level 1 perform one Segment of double-time, the units have a Fatigue 2 marker placed on them (flip the Fatigue 1 marker over).

[6.74] When units without a Fatigue Level perform one Segment of charge, the units have a Fatigue 2 marker placed on them.

[6.75] Units at Fatigue 2 may not be moved or expend Movement Points for any purpose. In all other respects they are treated as normal infantry units.

[6.76] Infantry units may reduce their Fatigue Level by resting. Resting consists of spending one Friendly Movement Segment in a hex, without expending any Movement Points. The resting unit may fire normally. For each Segment that a unit rests, its Fatigue Level is reduced by one level (i.e., from Fatigue 2 to Fatigue 1 to no fatigue).

[6.77] The effects of double-time and charge (in producing fatigue) and resting (in reducing fatigue) occur at the end of the Movement Segment.

[6.78] There is no limit to the number of times that a unit may become fatigued, recover by resting, and then become fatigued again.

[6.79] Units being transported by Friendly APC units may rest in that Segment, provided the infantry units themselves did not expend any Movement Points. Units may not rest in hexes containing Enemy units.

### [6.8] DUMMIES

Dummies are meaningless counters employed as though they were real units, so that the Enemy Player will not know whether or not a particular unspotted Friendly unit is real. In each scenario, Players may use up to the maximum number of dummies provided in the counter mix.

[6.81] Dummies are moved and positioned on the map like normal units. They do not require commands, but may be used as the Player sees fit, in order to best confuse the opposing Player.

[6.82] Dummy units are removed whenever they are observed ("spotted") by Enemy units. They may also be removed voluntarily by the owning Player (see Case 6.83).

[6.83] The owning Player may re-deploy any or all of his dummy units during any Friendly Movement Segment. This is done by physically removing the dummy counter(s) from the map, and then simply placing them in a hex containing unspotted Friendly units.

[6.84] Dummy units may not attempt to observe Enemy units. When a dummy unit is the target of an Enemy spotting attempt, the owning Player may decide whether the unit is to be considered infantry or vehicle in order to determine whether the attempt succeeds (see Section 7.0).

[6.85] Dummy units may not be used to determine the scatter of Friendly artillery fire missions (see Case 18.2).

### [6.9] TERRAIN EFFECTS CHART

(see charts and tables)

## [7.0] OBSERVATION

### GENERAL RULE:

All units are initially deployed face down on the map. They are turned face up only when observed (spotted) by one or more Enemy units. Observation may occur at any time during the Game-Turn. The distance over which a given unit may be observed varies, depending on how difficult the unit is to "see," as determined by (1) the terrain the unit occupies, (2) whether or not the unit is moving, (3) whether the unit has fired any of its weapons systems, etc. Successful observation requires both a *Line of Sight* (LOS) to the hex containing the Enemy unit in question and an *Observation Range* great enough to spot the specific Enemy unit in that hex. Once observed, a unit may continue to be observed or it may become unspotted once more.

A given unit may attempt to observe each Enemy unit once per Phase per hex the Enemy unit moves (or, should all movement be within the hex — see Case 5.13 — once per Phase). Enemy units must be observed singly; even units moving together must have observation attempts against them resolved separately.

### PROCEDURE:

When a given Friendly unit attempts to observe a given Enemy unit, the Players must first determine if there is a valid Line of Sight between the hexes that the two units occupy. If such a Line of Sight exists, the Players must then determine if the appropriate Observation Range (either Regular or Focused) permits the Enemy unit to be seen.

### CASES:

#### [7.1] LINE OF SIGHT AND ELEVATION

The map is a two-dimensional representation of a three-dimensional surface. Different colors are used to code the hexes at various elevations (height levels). Each height level indicates a 10-meter change in elevation.

A Line of Sight is a straight line extending from the center of one hex (containing the observing unit) to the center of another hex (containing the "target" unit). The existence of a Line of Sight means that the observing unit may be able to observe the hex containing the Enemy unit. Whether the Friendly unit can see the Enemy unit itself depends on whether or not the unit is within the appropriate Observation Range (see Case 7.2).

##### [7.11] Describing the Line of Sight

Place a straight edge (a transparent ruler is ideal) so that it connects the *center* of the observing hex with the *center* of the target hex. If the line so described passes *through* any elevation which could conceivably block the Line of Sight, the Player must resort to one of the methods detailed in Case 7.5 to determine whether or not the Line of Sight is obstructed.

[7.12] Town and woods hexes are considered to block the Line of Sight and extend 2 height levels (20 meters) higher than the elevation on which they stand. For example, a town hex on height level 3 represents a potential obstacle 5 height levels tall. *Note:* Units in town and woods hexes are considered to be at the height level of the terrain in which the town or woods is located (not 20 meters higher).

[7.13] The Line of Sight from one hex to another (and therefore from one unit to another) may be infinitely long. However, a unit's Observation Range may be quite limited (see Case 7.2).

#### [7.2] OBSERVATION RANGES

The Observation Ranges are a measure of how difficult it is for one unit to see another. This is determined not only by the condition of the "target" unit (whether or not it is moving, whether it is a vehicle or an infantry unit, etc.) but also by whether the target unit has previously (or is currently) been observed by the sighting unit and/or other Enemy units.

[7.21] When attempting to observe a *face down* Enemy unit, the owning Player should use the *Regular* column of the Observation Range Table (7.25), reading across on the line indicated for the particular type of target Enemy unit.

[7.22] When attempting to observe a *face up* Enemy unit, the owning Player should use the *Focused* column of the Observation Range Table (7.25), reading across on the line indicated for that particular type of Enemy unit.

[7.23] For purposes of determining the Observation Range, a unit is moving if it:

1. is moving from hex to hex
2. undergoing a change in status (see Case 5.13)
3. was moving (as defined in this Case) during the previous Friendly Movement Phase and currently has a Bound or Bounding Overwatch command.

[7.24] For purposes of determining the Observation Range, consider only the terrain in the hex currently occupied by the target unit, and ignore any other terrain (e.g., rough 1) through which the Line of Sight may pass.

[7.25] **Observation Range Table**  
(see charts and tables)

#### [7.3] EFFECTS OF OBSERVATION

[7.31] Once a Friendly unit has observed a given Enemy unit, that Enemy unit continues to be observed (and remains face up) for as long as it remains in the Friendly unit's Focused Observation Range.

[7.32] When an Enemy unit fires any of its weapons systems, it is immediately observed by all Friendly units that can trace a Line of Sight to the hex the unit occupies. At the end of the current Phase, the Enemy unit remains observed by all Friendly units within the indicated Focused Observation Range for that type of Enemy unit.

[7.33] If an observed Enemy unit is no longer observed by any Friendly units (due to lack of Line of Sight, Observation Range, or both) the unit is immediately considered to be unobserved and is once more turned face down on the map.

#### [7.4] RESTRICTIONS ON OBSERVATION

[7.41] Dummy units may never attempt to observe Enemy units.

[7.42] Units are not required to attempt to sight a given Enemy unit. The owning Player may voluntarily withhold any such sighting attempts, and thus hope to mislead the Enemy Player into thinking that a real unit is in fact a dummy.

[7.43] Within the preceding restrictions, all Friendly units may attempt to observe all Enemy units, and observation attempts may be made by either Player at any point during the Game-Turn.

#### [7.5] THE LINE OF SIGHT GAUGE AND THE LINE OF SIGHT ALGORITHM

In order to determine the Line of Sight between two units, Players may use either the Line of Sight Gauge or the Line of Sight Algorithm. They should feel free to use whatever method they find more convenient.

##### *How to Use the Line of Sight Gauge:*

1. Locate the elevation of the *higher* unit on the zero distance line.
2. Determine the range in hexes to the lower unit, and then on that line locate the height of that unit.
3. Connect the two points with a straight edge (a transparent plastic ruler is ideal). Now locate the height and distance of any suspected obstacle. If the obstacle is *higher* than the Line of Sight at the point of intersection, then the LOS is blocked. If the Line of Sight exactly intersects the obstacle, or passes over it, then the LOS is not blocked. If there is any doubt, or should the Players prefer, they may resort to the Line of Sight Algorithm instead.

##### *How to Use the Line of Sight Algorithm:*

The Algorithm is a mathematical expression of the Line of Sight Gauge. Under this procedure, a clear Line of Sight exists only if:

$$\frac{H}{D} \quad \text{is equal to or greater than} \quad \frac{h - 1.5}{d}$$

**H** = height (in meters) of higher position minus height of lower position

**D** = distance (in meters) from higher to lower position

**h** = height (in meters) of potential obstacle minus height of lower position

**d** = distance (in meters) from potential obstacle to lower position

Note that each height level indicates a vertical distance of 10 meters; each hex indicates a horizontal distance of 200 meters.

## [7.6] LINE OF SIGHT GAUGE

(see charts and tables)

## [8.0] DIRECT FIRE COMBAT AND SUPPRESSION

### GENERAL RULE:

For the most part, individual units have a number of different weapons systems. For example, the *Grant*, an American-built British tank, is equipped with a machinegun (automatic weapon), a turret-mounted 37mm gun, and a 75mm gun mounted on a sponson on the right side of the vehicle. Unless prohibited by information given on its data sheet, a vehicle or infantry unit may fire each of its weapons systems (at the same or different targets) in a given Phase.

There are four distinct types of fire: (1) *Opportunity Fire*, in which Friendly units fire at Enemy units as they move; (2) *Overwatch Fire*, in which Friendly units fire at Enemy units immediately after those Enemy units themselves have fired; (3) *Final Fire*, in which Friendly and Enemy units that have not already fired in the current Phase exchange fire; and (4) *Withdrawal Fire*, which occurs only during close assaults.

### CASES:

#### [8.1] RESTRICTIONS ON FIRE

[8.11] Only units with an Overwatch command may use direct fire (Exceptions: see Section 13.0).

[8.12] A unit may fire as many times and at as many different targets in a Segment as it has weapons systems (Exception: see Case 8.41). However, a unit may not fire the same weapons systems more than one in the same Segment, unless involved in a close assault (see Section 13.0).

[8.13] All direct fire is resolved in an alternating fashion. That is, first a unit of one Player fires a weapons system, then a unit of the other Player fires a weapons system. This procedure continues until all units have carried out the desired direct fire.

[8.14] A given unit may be attacked any number of times in the same Phase.

[8.15] All units make separate attacks on a specific Enemy unit, and these attacks are announced and resolved on an individual basis.

[8.16] Combat is not considered to be simultaneous. The results of each fire combat are applied before any additional combat takes place.

[8.17] If a Player states an attack, he must carry out that attack. He is responsible for calculating the chances of success beforehand. If he states an attack which is then found to make no sense, it is still considered to have been executed. In effect, the firing units have wasted their fire.

[8.18] Units may fire at any Enemy unit which they have successfully observed.

#### [8.2] OPPORTUNITY FIRE

[8.21] Opportunity fire (for all weapons systems) is performed during the Enemy Movement Segment. It may only be used against moving Enemy units (regularly or as defined in Case 5.13).

[8.22] A unit with an Overwatch command may withhold its fire, and is never forced to attack a given target. It may pass up one possible target in the hope that a better target will later show itself. However, a Phasing Player is never forced to "take back" the movement (or part of the movement) of a unit in order to allow an Enemy unit to attack. *Example:* If a US M4 unit moves into and then out of the Line of Sight of a German PZ IV platoon, and the German Player elects to

withhold his fire and wait for another target, he may not afterwards change his mind and have the PZ IV platoon fire "retroactively" at the M4 unit.

[8.23] Opportunity fire is normally resolved in the hex that the moving unit has entered (Exception: see Case 8.24).

[8.24] Units entering defilade may be attacked by opportunity fire. This fire is resolved before the defilading unit enters defilade. The defending unit would be treated as a moving unit on the Loss Modification Tables.

#### [8.3] OVERWATCH FIRE

Overwatch fire is the only type of direct fire that may be directed against non-moving Enemy units during a Movement Segment. Furthermore, it may only be directed at an Enemy unit that has fired previously during the Segment.

[8.31] Any unit with an Overwatch command may perform overwatch fire.

[8.32] All Friendly overwatch fire is resolved immediately after the fire of the Enemy target unit is resolved.

#### [8.4] FINAL FIRE

Final fire (for all weapons systems) is carried out during the final Final Fire Segment of each Movement Phase.

[8.41] Only weapons systems which did not fire in the preceding Movement Segment may use final fire.

[8.42] All final fire is resolved in an alternating fashion (i.e., Enemy Player fires one unit, Friendly Player fires one unit, Enemy Player fires another unit, etc. Moreover, weapons systems must fire in the order given in the Sequence of Play (Section 4.0).

#### [8.5] WITHDRAWAL FIRE

Withdrawal fire is a special form of direct fire that only occurs when a Friendly unit leaves an Enemy-occupied hex as a result of close assault (see Section 13.0).

#### [8.6] SUPPRESSION

As a result of direct and/or indirect fire, combat units may become suppressed. The effects of suppression are listed in the following Secondary Cases.

##### [8.61] Suppressed Vehicle Units

A. may not fire any of their externally controlled weapon systems (as listed on their data sheets)

B. may not be mounted or dismounted by infantry

C. receive a die adjustment on the appropriate Loss Modification Table when attacking (see Section 12.0)

D. have their Movement Allowance halved (round fractions down)

E. have their Observation Range halved (fractions rounded down); note that half of "unlimited" remains unlimited

##### [8.62] Suppressed Infantry Units

A. automatically enter defilade in the hex they are in, and

B. may not move. However, infantry units may remove their suppression during any Friendly Movement Segment by taking an immediate one-step loss. If the suppression occurred as a result of opportunity fire, this option may be taken at once (before the unit enters defilade due to A) allowing the unit to continue its movement. If this occurs, the unit must check morale as usual for a loss of one step (see Section 14.0). Note that if the sup-

pression is due to a step-loss combat result, the removal of this suppression results in an additional one-step loss.

C. receive a die roll adjustment on the Loss Modification Tables when attacking (see Section 12.0)

[8.63] All Suppression markers are automatically removed from Friendly units during the Marker Removal Segment of the Enemy Player's Indirect Fire Phase.

## [9.0] AUTOMATIC WEAPONS FIRE

### GENERAL RULE:

Automatic weapons represent the fire of machineguns, rifles, and grenade launchers. The procedures used to resolve automatic weapons fire will vary, depending on the types of attacking and defending units involved. The automatic weapons strength (at various ranges) of infantry units is printed on the counters themselves, although it may be reduced due to losses. The ability of vehicle units to fire automatic weapons is listed on the unit's data sheet: each separate MG (machinegun) listed on the sheet represents a separate automatic weapons system. Infantry automatic weapons systems have a maximum range of 5 hexes. Vehicle automatic weapons systems have a maximum range of 10 hexes.

### PROCEDURE:

#### *How to Attack with an Infantry Unit:*

1. Determine the firing unit's automatic weapons strength (printed on the counter) at the range (in hexes) between the firing unit (exclusive) and the defending unit (inclusive). This strength is reduced by one-fifth for each step the infantry unit loses (round fractions down). This strength may not be reduced to less than zero, however.

2. The attacking Player should roll two dice and consult the Automatic Weapons Combat Results Table (9.1). Cross-index the dice roll with the firing unit's attack strength to obtain the result.

3. Whatever the results of the attack, the defending Player now rolls one die and consults the appropriate Loss Modification Table (depending on whether the defending unit is infantry or vehicle (see Section 12.0).

#### *How to Attack with a Vehicle Unit:*

1. Determine the number of vehicles in the firing unit.

2. Cross-index the number of vehicles in the unit (as determined in step 1) with the range in hexes between the firing unit (exclusive) and the defending unit (inclusive) on the Vehicle Automatic Weapons Chart (9.3). The indicated number is the firing unit's attack strength for the attack.

3. The attacking Player now rolls two dice and cross-indexes the dice roll with the appropriate column on the Automatic Weapons Combat Results Table to obtain the combat result.

4. Whatever the results of step 3, the defending Player now rolls one die and consults the appropriate Loss Modification Table (depending on whether the defending unit is vehicle or infantry).

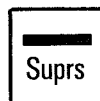
### CASES:

#### [9.1] AUTOMATIC WEAPONS COMBAT RESULTS TABLE

(see charts and tables)

#### [9.2] EXPLANATION OF MODIFIED COMBAT RESULTS

The following Case explains how each combat result is actually applied to the defending unit.





Note that these are *modified* combat results: the defending Player must first take the original combat result and consult the Loss Modification rules (see Section 12.0).

#### All Defending Units:

- = No effect (the attack has failed)

#### Infantry Only:

S = Suppressed (see Case 8.6). The defending unit is suppressed (place a Suppressed marker on the unit). If the unit is already suppressed, it remains in that state and suffers an additional one-step loss.

1,2,3 = The defending unit loses the number of steps indicated and is suppressed (if the unit was already suppressed, there is no further effect). Place a Suppressed marker on the unit and adjust the unit's strength accordingly.

#### Vehicle Only:

S,1,2,3 = Suppressed. The defending unit is suppressed (place a Suppressed marker on the unit). If the unit is already suppressed, there is no additional effect.

### [9.3] VEHICLE AUTOMATIC WEAPONS CHART

(see charts and tables)

## [10.0] MAIN GUN FIRE

#### GENERAL RULE:

This Section covers the fire of various vehicle and anti-tank main guns. Such guns have a certain gun type (listed on the unit's data sheet).

#### PROCEDURE:

##### How to Fire on an Enemy Vehicle Unit:

1. Determine the target profile of the target unit (printed on the counter), and locate its column on the Main Gun Range Attenuation Table (10.32).
2. Take the gun type of the firing unit (found on the unit data sheet) and find its sub-column in the target profile column. Cross-index this sub-column with the range (distance in hexes) between the firing and target units. The value obtained is the attack strength of the firing unit.
3. Determine the number of vehicles in the firing unit. Discover along this line on the Main Gun Anti-Vehicle Combat Results Table (10.1) the firing unit's attack strength; this will determine which column that is used for the combat resolution.
4. The attacking Player now rolls two dice and cross-indexes the dice-roll with the appropriate column (from step 3) on the Combat Results Table. (10.1).
5. Whatever the results of step 5, the defending Player now rolls one die and consults the Vehicle Loss Modification Table (12.21) to determine the actual results of the attack. This final result is applied immediately (see Section 12.0).

##### How to Fire on an Enemy Infantry Unit:

*Note:* This fire represents main guns firing high explosive (HE) shell. Such fire has a maximum range of 7 hexes, but is not otherwise affected by range.

1. Locate the column corresponding to the number of vehicles in the firing unit on the unit's row on the Main Gun HE Strength Chart (10.31). The indicated number is the unit's HE attack strength for the attack, which is resolved on the Automatic Weapons Combat Results Table (9.1).

2. The attacking Player now rolls two dice. Cross-index the die roll with the firing unit's attack strength.

3. Whatever the results of step 2, the defending Player now rolls one die and consults the Infantry Loss Modification Table (12.4) to determine the actual results of this attack. This final result is applied immediately.

#### CASES:

### [10.1] MAIN GUN ANTI-VEHICLE COMBAT RESULTS TABLE

(see charts and tables)

### [10.2] EXPLANATION OF MODIFIED COMBAT RESULTS AFFECTING VEHICLES

This Case explains how each combat result is actually applied to a defending vehicle unit (see Case 9.2 for the effects of HE fire against infantry units). Remember, these are *modified* combat results; the defending Player must first take the original combat result and consult the Loss Modification rules (Section 12.0).

#### All Defending Units:

- = No effect (the attack has failed)

1,2,3,4,5,6 = The defending unit loses the number of vehicles indicated, and is suppressed. Place a Suppressed marker on the unit and adjust the unit's strength counter accordingly.

### [10.3] MAIN GUN ATTACK STRENGTH CHARTS

#### [10.31] Main Gun HE Strength Chart

(see charts and tables)

### [10.32] Main Gun Range Attenuation Chart

(see charts and tables)

### [10.4] UNIT ELIMINATION

Whenever a unit receives a combat result of step or vehicle losses equal to or greater than its remaining steps or vehicles, the unit is eliminated and its organizational counter removed from play. Any excess losses (i.e., a step or vehicle loss result greater than the number of remaining steps or vehicles in the eliminated unit) are ignored. All combat results apply to the target unit only.

## [11.0] FACING

#### GENERAL RULE:

Vehicle units must have a definite facing at all times. That is, the "front" (see diagram following) of the counter must always point toward a specific hexside. The facing of such units determines the specific armor strength (front or side) with which a vehicle unit defends against direct fire. Facing has no effect on infantry units.

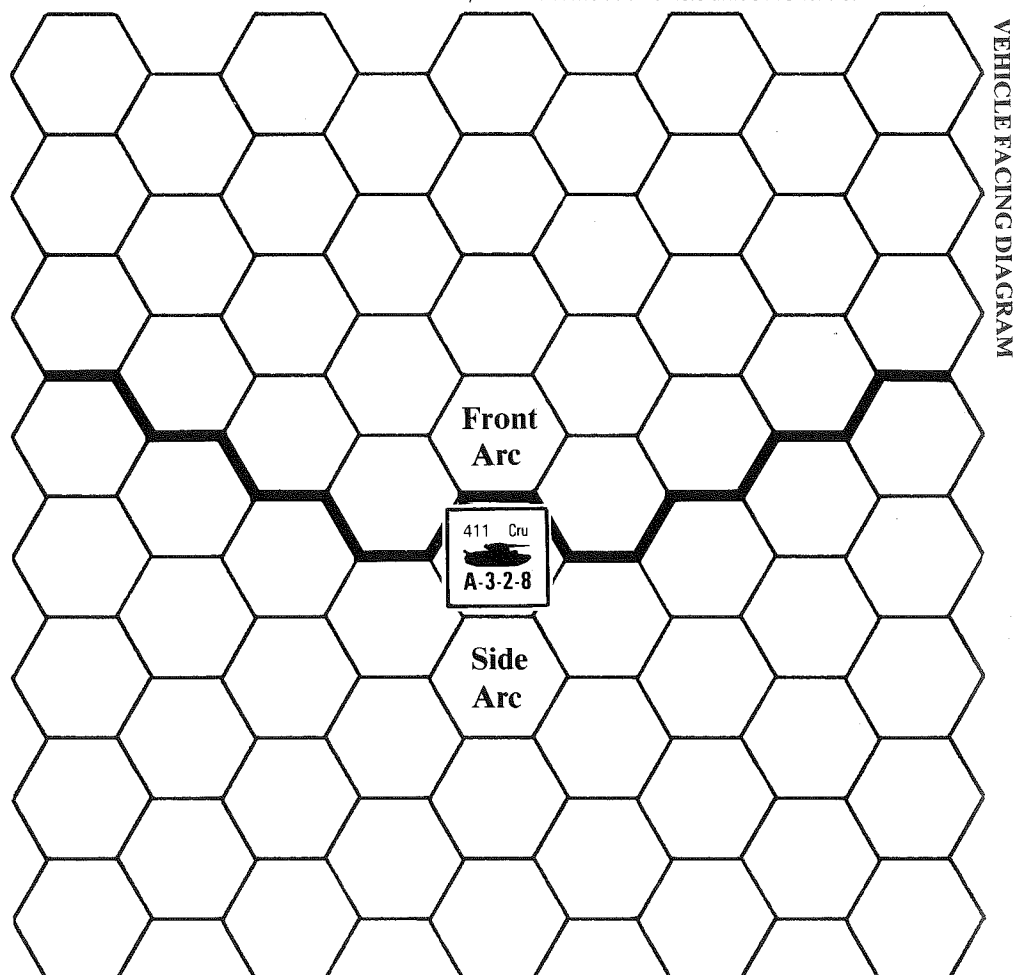
#### CASES:

### [11.1] FACING DURING MOVEMENT

[11.11] Except when moving in reverse (see Case 11.13), a vehicle unit may only move from one hex to another through its "front" hex. When not moving in a straight line, the vehicle unit must change its facing as it moves (see diagram following, on page R9).

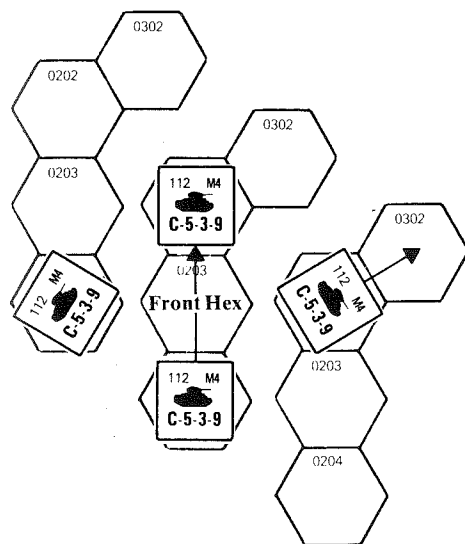
Enemy units occupying hexes in the "Front Arc" would fire at the front armor of the Crusader unit;

Enemy units in the "Side Arc" would fire at the side armor. The Firing Arc of AT guns (see 16.4) is the same as a vehicle unit's Front Arc.



[continued on page R9]

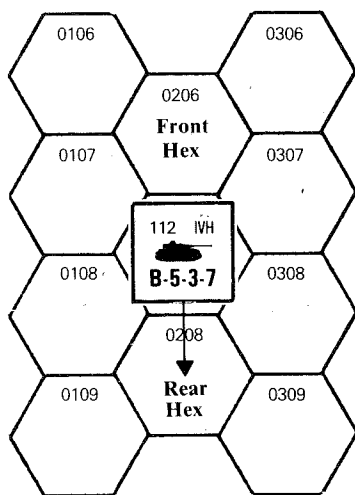
[continued from page R8]

**[11.11] DIAGRAM EXPLANATION**

The diagram shows a US M4 unit moving from hex 0204 to hex 0302. At the start of the Segment the unit is faced so that its front hex is 0104. The unit begins its movement by changing its facing, towards hex 0203. It then moves into hex 0203 and 0202, changes its facing once more, and completes its movement by entering hex 0302.

**[11.12]** Changes in facing do not require the use of any Movement Points.

**[11.13]** Vehicle units may move one hex "in reverse" by spending their entire Movement Allowance to do so. When moving in reverse, the unit simply reverses its normal movement procedure, and has its facing during movement determined by its rear (rather than front) hex. The owning Player may freely change the unit's facing after this movement.



The diagram shows a German PzIVH unit moving in reverse from hex 0207 to hex 0208. Note that the unit's facing is not affected by this movement; at the end of the Segment its front hex would be 0207.

**[11.14]** A unit's facing during movement is always in the direction of the hex into which it is moving (which affects opportunity fire). As the unit is moved, the Player changes its facing to reflect the hex in which it is located. A unit may be moved into any adjacent hex. A unit may always change its facing by up to 180° after movement, in the Joint Facing Segment.

**[11.2] CHANGING FACING WITHOUT LEAVING A HEX**

A vehicle unit may change its facing during any Friendly Movement Phase without leaving a hex. (This is true even if the unit's Movement Allowance is zero.) Such units may also change their facing during any Joint Facing Segment.

**[11.21]** When changing its facing in a hex, a unit may be turned toward any hexside.

**[11.22]** A unit may change its facing with any command. *Note:* Change of facing does not fulfill a Bound command (see Case 5.13).

**[11.23]** A unit which changes its facing is subject to Enemy opportunity fire for doing so. All such fire is resolved before the change in facing actually occurs.

**[11.3] EFFECTS OF FACING ON FIELDS OF FIRE AND OBSERVATION**

Except for anti-tank guns (see Case 16.3), facing has no effect on the ability of Friendly units to observe and/or attack Enemy units.

**[11.4] EFFECTS OF FACING ON ARMOR STRENGTH**

**[11.41]** Facing has a major effect on the defense abilities of all vehicle units, depending on the Line of Fire. A unit's facing determines exactly what armor strength the unit will defend with (see Case 12.1).

**[11.42]** Facing has no effect on the defense of anti-tank and infantry units.

**[12.0] LOSS MODIFICATION****GENERAL RULE:**

Loss Modification is a means of altering combat results obtained by the attacking Player (see sections 8.0, 9.0 and 10.0). This alteration is due to a variety of factors, such as terrain, target facing, etc. (see 12.2). Loss modification must be carried out regardless of the result of the original attack (even if the result were "no effect"). Note, however, that an original attack must actually have been made. That is, the firing unit must have had an attack strength of at least zero.

**PROCEDURE:**

After the attacking Player has obtained a combat result, the defending Player must total his loss modifiers. This is done by referring to the Loss Modifier Chart (12.4) where the defending Player checks for: (a) Target unit, (b) firing unit type, and (c) defender's terrain. Each of these modifiers is listed as an addition or subtraction from the defending Player's upcoming loss modification die roll (they are all cumulative). When a final number to be added or subtracted has been determined, the defending player should roll a single die and consult the line corresponding to the target class on the Vehicle Loss Modification Table (12.21 if the target is infantry; note that all infantry is the same target class). This die roll is modified by the sum of the loss modifiers just determined by the Player (see above), and is read as described in the following cases. A separate die roll must be made for each result on the Combat Results Table. For example, if the original combat result was "2" the defending Player would have to roll twice on the appropriate Loss Modification Table. The modified combat result is *immediately* applied to the affected unit.

*Note:* Remember that Vehicle and step loss is rolled for individually.

**CASES:****[12.1] ARMOR PENETRATION AND STRENGTH**

When resolving the loss modification for defending vehicle units attacked on the Main Gun Anti-Vehicle Combat Results Table (10.1), the owning Player should subtract the armor "value" (strength) of the defending unit (this may vary, depending on whether the front or side of the vehicle is being attacked—see Section 11.0) from the penetration value of the firing unit's weapon system (see the appropriate Data Sheet). *This penetration value is reduced by 1 for every 5 hexes (or fraction of 5) of range between the attacking and the defending units.* (For example, if the range were 11 hexes, the firing unit's penetration value would be reduced by 3). No reduction is made for combat resolved at 0 hex range (i.e. close assaults).

**[12.11]** If the result is a positive number and the firing unit's attack strength was greater than 0, then double that positive number and add the result to the defending Player's loss modification die roll. However, the total modification for the difference between penetration value and armor value under this case may never exceed plus "6" to the die roll.

**[12.12]** If the result was a positive number and the firing unit's attack strength was 0, then add that positive number to the defending player's loss modification die roll. However, the total modification of the difference between penetration value and armor value under this case may never exceed plus "3" to the die roll.

**[12.13]** If the result is a negative number, then for each point of difference subtract "2" from the defending Player's loss modification die roll. The firing unit's attack strength has no effect on this, and the total modification under this case may never be lower than minus "6" to the die roll.

**[12.14]** Although the above cases place limits on the total modification to the die roll for the difference between penetration value and armor value, this modification could be combined with other adjustments (such as defilade, stacking, etc.) to produce a final die roll adjustment in excess of the limits given.

**[12.15]** Note that the difference between armor value and penetration value will often result in losses even when the original result of the combat was "no effect."

**[12.16]** The penetration value of a firing unit may never be reduced (due to range) to less than 0.

*Example:* A German PZ IV unit is firing at the front armor of an US M4 unit. The range is 3 hexes, resulting in an attack strength of 4 on Table 10.32. After the combat has been resolved on the Main Gun Combat Results Table, the US Player would subtract the strength of the M4 unit's front armor (5) from the armor penetration value of the PZ IV's main gun (7). This would result in a die roll adjustment of plus 4 (7 minus 5 = 2, and the firing unit's attack strength is greater than 0).

**[12.2] VEHICLE LOSS MODIFICATION**

**[12.21] Vehicle Loss Modification**  
(see separate sheet)

**[12.22] Explanation of Vehicle Loss Modification Table**

- = No Effect (the original combat result is applied). -1 = Reduce the number of vehicles eliminated in the original combat result by one. If no vehicles were originally lost (i.e., the combat result was suppression or 0), then the defending unit is not affected by the combat.  $\pm 1$  = Increase the number of vehicles to be eliminated, due to the original combat result, by one.

**[12.3] INFANTRY LOSS MODIFICATION**

**[12.31] Infantry Loss Modification Table**  
(see charts and tables)

### [12.32] Explanation of Infantry Loss Modification Table

— = No Effect.

-1 = Reduce the number of steps due to eliminated in the original combat result by 1. If no steps were originally lost (i.e., the combat result was suppression or no effect), then the defending unit is completely unaffected by this particular combat.

+1 = Increase the number of steps due to eliminated in the original combat result by 1. If the original combat result was "suppression," then the defending unit loses 1 step and is suppressed. If the original combat result was "no effect," then the defending unit is suppressed, and does *not* lose a step.

### [12.4] LOSS MODIFIER CHART (see charts and tables)

### [12.5] LOSS MODIFICATION FOR MOVING

[12.51] There is a modification of -2 on the loss modification die roll if the target unit is moving. This modification applies to units which are:

- Attacked by opportunity fire while moving from hex to hex;
- Attacked during the Final Fire Segment after having moved in that Phase.
- Withdrawing from close assault;
- Fired upon at the beginning of close assault under Case 13.12;
- Attacked by opportunity fire while entering defile under an overwatch command;
- Attacked during the Final Fire Segment of the Enemy Movement Phase, if the current command and the previous command were both "bound" or "bounding overwatch" (but only for those platoons that fulfilled the "bound" part of the command).

[12.52] There is no loss modification for a target unit which is:

- Mounting or dismounting (being mounted or dismounted) without moving from hex to hex;
- Involved in close assault rounds of fire (exceptions; see Case 12.51c. and d.);
- Changing facing without leaving a hex;
- Not moving.

## [13.0] CLOSE ASSAULT

### GENERAL RULE:

During a Friendly Movement Segment a Player may move a unit (or units) into a hex containing an enemy unit (or units). This is defined as close assault. The moving units must stop in the hex being assaulted, and the Players must resolve combat during the Close Assault Segment of the Phase. Close assault is the only instance in which weapons systems may fire more than once per Phase.

### PROCEDURE

Like a boxing match, close assault is divided into three "Rounds" of the two Impulses listed in the Sequence of Play. During each Segment, all of the units involved in the close assault may fire their appropriate weapon systems at an Enemy unit in the same hex. This fire is resolved in the usual manner. At the beginning of the Close Assault Segment, Players must determine whether the units in the hex being assaulted are eligible to fire at the units moving into the hex prior to the resolution of any Rounds (see case 13.12); if so, such fire is immediately resolved. Players then proceed to the first round of close assault fire. Each Round begins with the non-Phasing Player Fire Impulse. During this Impulse, the non-Phasing Player may

have some or all of his units fire at one or more of the Enemy units in that same hex. When this fire is completed and resolved, Play moves to the Phasing Player Fire Impulse; the Phasing Player may have some or all of his units fire at one or more of the Enemy units in that same hex. This completes one Round. The next round begins with the non-Phasing Player Fire Impulse, etc., until three rounds have been completed. There is one other procedure for close assault fire, withdrawal fire, which is covered in Case 13.3.

### CASES

#### [13.1] EFFECTS OF STACKING ON CLOSE ASSAULT

[13.11] The assaulting Player may move one or more units into a hex, as he desires. The assaulting units may have begun the Movement Segment in the same or different hexes. *Note:* The number of Enemy units in a hex has no effect on stacking restrictions for Friendly units (see Case 6.4).

[13.12] At the beginning of the Close Assault Segment, but before commencing the first Round of close assault, defending units in the assaulted hex (with an Overwatch command), that did not begin the Phase engaged, may fire each of their weapon systems (under the normal restrictions) once at any assaulting units in the hex. This fire is resolved at zero hex range.

#### [13.2] CLOSE ASSAULT COMBAT

All close assault combat is resolved in the same manner as normal combat, but at a zero hex range. Fire alternates between Players; that is, all of the units of one Player may fire, then all the units of the other Player may fire, etc. When resolving the first Round of close assault combat against a vehicle unit with units that did not begin the Phase engaged, the arc with which the vehicle unit defends (front or side) is determined by the hexside through which the assault was initiated. All subsequent Rounds are resolved against the side of all engaged vehicles. This has no effect on the facing of the units.

[13.21] Fire under Case 13.12 and Case 13.3 does not occur during the three rounds of close assault combat.

[13.22] During each impulse, and during fire under Cases 13.12 and 13.3, each vehicle unit may fire one weapon system, and each infantry unit may fire its automatic weapons system as well as its personal anti-tank weapon (Arracourt only, see Section 21.0). Each unit's fire is resolved separately.

[13.23] All units in a hex which is undergoing close assault are considered to be engaged. Place an engaged marker on the hex. The "Engaged" marker is removed as soon as only one Player has units in the hex.

[13.24] A Friendly engaged unit may only fire at Enemy units in the same hex.

[13.25] Non-engaged units may not carry out direct fire attacks on engaged units. All indirect fire attacks, however, continue to be resolved normally.

[13.26] Units may not move through a hex containing engaged units, although they may move into such a hex under certain circumstances (see Case 13.27).

[13.27] When units begin a Movement Phase engaged, the Phasing Player may, within the stacking restrictions, bring other Friendly units into the hex as reinforcements under bound commands. Engaged Enemy units may not fire at these additional units under Case 13.12.

[13.28] Before units begin each close assault Round, the owning Player may give new com-

mands to the engaged units before anything else is done in the close assault Round (both Players plot simultaneously). This is the only time, other than after a change in Morale state, when commands may be given outside of the Command Phase. If part of a company is engaged, and part is not engaged, the engaged and non-engaged units may be given separate commands (though the non-engaged units may not have their commands changed).

[13.29] If a unit has an overwatch command, it must remain in the close assault at the conclusion of the round. If a unit has a bound command, it must withdraw from the hex upon conclusion of the round. If both Players have units in overwatch command at the end of the round, play proceeds to the next round, until three rounds of close assault combat are resolved. If both Players' units have bound commands, the Phasing Player withdraws first, but is not subject to withdrawal fire from the enemy units in bound command; if the withdrawal of the Phasing Player's unit blocks all possible exit hexes for the non-Phasing Player, the non-Phasing Player's units may remain in the hex despite the bound command. If there are Friendly units with bound command and Enemy units with overwatch command, the Friendly units must exit the hex and are subject to withdrawal fire. If a unit withdraws, it remains in Bound command until the next Friendly Command Phase. Withdraw commands are treated the same as bound commands for engaged units. *Note:* Suppressed infantry will take a step loss by withdrawing.

#### [13.3] WITHDRAWAL AND WITHDRAWAL FIRE

Engaged units with Overwatch commands may not withdraw from close assault. Engaged units with Bound commands *must* withdraw from the hex at the end of the round of close assault combat. All Friendly units of the same company must withdraw from a given hex at the same time. If such units are unable to withdraw, see Case 13.37.

[13.31] Withdrawing units may be placed in any adjacent hex not occupied by Enemy units. Units may not, however, withdraw into hexes in excess of the stacking limits, or into hexes from which Enemy units moved into close assault during that Movement Phase.

[13.32] All withdrawing units of the same type (vehicle or infantry) must be placed in the same hex.

[13.33] Dismounted infantry units that withdraw have their fatigue level immediately increased by 1. *Note:* This means that infantry units already at level 2 fatigue may not withdraw.

[13.34] All of the previously engaged units of the non-withdrawing Player in Overwatch command may immediately fire withdrawal fire at the withdrawing units (separately, with each of their weapons systems). This fire is resolved at 1-hex range.

[13.35] Withdrawing units do receive the die modification for movement on the Loss Modification Table.

[13.36] If an engaged unit with a Bound command is unable to withdraw due to the restrictions in this Case, its morale level is increased by 1 at the end of the Close Assault Segment.

#### [13.4] EFFECT OF RALLY COMMAND ON CLOSE ASSAULT COMBAT

Units which begin a close assault combat with a Rally command may not fire during the first Round of the combat. The owning Player *must* change their command after the first Round.



## [14.0] MORALE

### GENERAL RULE:

Companies and battalions can sustain only a certain amount of casualties before they are no longer able to function effectively as a fighting force, and must pause to regroup and rally. The basic "unit" in the game for morale purposes is the company, usually composed of three platoons. Each time a platoon of a given company suffers any casualties (losing either vehicles or steps), the morale of the company as whole must be checked. Companies have their morale expressed by entering one of three *Morale States*. The current morale status of all units is recorded on a separate piece of paper.

### PROCEDURE:

At the end of any Segment in which any of the vehicles or steps of a Friendly company have been eliminated, the owning Player must check the morale of the affected company. The Player must roll two dice and consult the Morale Table (14.2). The Player should determine the total number of vehicles (or steps) lost so far in the game by the company in question. Read across on the line corresponding to the number of vehicles (or steps) with which the company began the game (round down to the nearest number on the table). This will determine what column to use on the Morale Table. Cross-index the dice roll with the correct column to locate the indicated result. The result is *immediately* applied to all units in the company, and its marked on a separate piece of paper. *Note:* Players may agree before starting play to keep morale status and morale die rolls secret.

### CASES:

#### [14.1] MORALE CHECKS

[14.11] The morale status of a company must be checked only after the loss of one or more of their vehicles or steps. No morale check is required due to suppression results.

[14.12] Units whose current commands have become invalid due to a morale check must immediately be given some valid command by the owning Player; this new command always takes effect immediately.

#### [14.2] MORALE TABLE

(see separate sheet)

#### [14.21] Explanation of Morale Results

— = No Effect. The company's morale state is unchanged.

1 = All units of the company have their morale state increased by 1.

2 = All units of the company have their morale state increased by 2.

*Note:* All morale results are cumulative, up to a maximum of morale state 3.

#### [14.3] MORALE STATE 1

Morale state 1 has no effect other than to prepare units to enter morale states 2 and 3 after further morale checks (i.e., the morale of the company is becoming shaky, but has not yet broken.)

#### [14.4] MORALE STATE 2

[14.41] Units in morale state 2 may not be given a bound command. In order to move such units, they must be given a withdraw command (see Case 5.4).

[14.42] A unit in morale state 2 or 3 which is in close assault must withdraw into an adjacent hex after the first round of close assault combat (see Case 13.2). If the unit(s) is unable to withdraw, it is immediately eliminated.

[14.43] Units in morale state 2 may still be given an overwatch command and may continue to fire normally.

#### [14.5] MORALE STATE 3

[14.51] Like units in morale state 2, units in morale state 3 may not be given a bound command. (see Cases 14.41 and 14.42.)

[14.52] Units in morale status 3 may not be given an overwatch command, and may not fire any of their weapons systems.

#### [14.6] RALLYING COMPANIES

Companies may attempt to reduce (improve) their morale states through a procedure known as rallying. During each Rally Segment of the Friendly Indirect Fire Phase, the Phasing Player may attempt to rally those companies which have had a rally command assigned to them in the immediately preceding Friendly Command Phase. For each company the Player wishes to rally, the Player should roll one die. *If the die roll is less than or equal to* the value of the HQ of the battalion to which the company belongs (see Case 14.7), then the company has successfully rallied and its morale state is immediately reduced by 1. Any other result and the morale state of the company is unaffected.

[14.61] Companies may not attempt to rally if any unit of that company has lost any vehicles (or steps) during the preceding 7 consecutive Phases. If this should occur, it is immediately noted on a piece of paper as a reminder.

[14.62] A company may only attempt to rally once in a given Friendly Indirect Fire Phase.

[14.63] Once a company has been successfully rallied to morale state 0, the number of vehicles or steps in the company at that time is noted on the Unit's Status Sheet. All further morale checks during the game for that company are based on this reduced number of vehicles or steps. This "procedure" may recur indefinitely.

[14.64] Any company reduced below  $\frac{1}{2}$  of its original strength may not attempt to rally. Within this restriction there is no limit to the number of times during the game that a unit may enter a certain morale state, rally, and enter that morale state again.

#### [14.7] BATTALION MORALE

A battalion consists of two or more companies. Before the start of the game, each Player must roll the die once for each of his battalions. Each die roll determines the value of one of the Player's battalion HQs. The value of the battalion HQ determines the ability of all companies of that battalion to successfully rally (see Case 14.6).

#### [14.8] BATTALION HQ TABLE

(see charts and tables)

#### [14.9] HOW TO USE THE HEAD-QUARTERS TABLE

Each Player's initial battalion rating is listed in the Scenario rules. At the start of the game, the Player should roll one die for each of his headquarters units and locate the number rolled under the correct column on the Headquarters Table. He should then read across on that line to determine the headquarter's value.

**Example:** The US 37th Tank Battalion and the 10th Armored Infantry Battalion in the Arracourt Scenario (23.0) each have a HQ Rating of B. Before the start of the game, the US Player would roll one die for each battalion and consult the Battalion HQ Table (14.8). If the die roll for the 37th Battalion was a 5, the Player would locate that number under the B column of the Table, and read across on that line to locate the actual value of the

HQ. (In this case, 6). He would then repeat the process for the 10th Battalion. If that die roll were a 1, he would locate that number under the B column and read across on that line to locate the HQ's value (in this case, 3).

## [15.0] DEFILADE

### GENERAL RULE:

Units may improve their defensive abilities by entering defilade. For vehicles, this means positioning the body of each vehicle so that it is protected by some obstacle with only the turret exposed and vulnerable. For infantry, defilade means going prone behind whatever cover is available. Since very minor terrain features are suitable for this purpose — trees, small hills and depressions, buildings, etc. — units may enter defilade in any hex. (Exception: see Case 15.14).

### PROCEDURE:

The cost in Movement Points for a vehicle unit to enter defilade varies with the terrain in the hex the unit is currently occupying. A vehicle unit enters defilade simply by expending Movement Points for that purpose. There is no cost for infantry units to enter defilade (but see Case 15.42). Note that vehicle units may always enter defilade by spending an entire Friendly Movement Segment in a hex (with a bound or overwatch command), even if the unit would not ordinarily have the Movement Points to do so. Units may not fire in a Segment in which they entered defilade, even if they have an overwatch command, but they may fire in the Final Fire Segment of that Movement Phase.

### CASES:

#### [15.1] INDICATING DEFILADE

[15.11] When a vehicle unit enters defilade, a defilade marker must be placed on top of the unit. This marker must be faced towards a specific hex-side, but entirely at the owning Player's option.

[15.12] Each vehicle unit in a hex is treated separately; and they may position their defilade markers in the same or different directions, as the owning Player desires.

[15.13] Infantry units in defilade receive a defensive advantage from all directions. It is thus unnecessary to position the defilade marker in any particular way when dealing with infantry units. However, it is still required that a Player face the defilade markers for unobserved infantry units, so the Enemy Player will not know whether the unit is vehicle or infantry.

[15.14] Vehicle units may not enter defilade in a hex containing Enemy units.

[15.15] Infantry units in hexes containing Enemy units may enter defilade normally.

[15.16] The current facing of a vehicle unit has no effect on the facing of its defilade. That is, a vehicle may protect its side and/or its front by entering defilade (i.e., the three defilade hexsides may protect any combination of three contiguous hexsides of the vehicle's front or side armor, at the owning Player's choice).

#### [15.2] EFFECTS OF DEFILADE ON DIRECT FIRE

[15.21] If a vehicle unit in defilade is the target of a direct fire attack, and the Line of Fire goes through one of the unit's defilade hexsides, then there is a die roll adjustment made on the Vehicle Loss Modification Table (12.1) when resolving the results of the attack.

[15.22] If an infantry unit in defilade is the target of a direct fire attack, the Line of Fire must, by

definition, go through one of the unit's defilade hexsides. Thus, infantry units in defilade always receive the indicated die roll adjustment on the Infantry Loss Modification Table.

[15.23] If the firing unit is three or more height levels above a defending vehicle unit, then no adjustment is made on the Loss Modification Tables for the effects of defilade. Defending infantry units, however, receive the normal die roll adjustment.

### [15.3] EFFECTS OF DEFILADE ON INDIRECT FIRE AND CLOSE ASSAULT

[15.31] If any infantry unit in defilade is the target of an indirect fire or close assault attack, it always receives the indicated die roll adjustment on the Modified Combat Results Table.

[15.32] Vehicle units in defilade receive no benefit from being in defilade when defending against an indirect fire or close assault attack.

### [15.4] EFFECTS OF DEFILADE ON MOVEMENT

[15.41] There is no cost for a vehicle to leave defilade.

[15.42] There is a cost of one *additional* Movement Point for an infantry unit to leave defilade.

[15.43] There is never any additional cost for a unit (whether Enemy or Friendly) to enter a hex containing a unit in defilade.

[15.44] A defilade marker is immediately removed when the unit in defilade either leaves the hex or is eliminated.

## [16.0] TRANSPORTATION AND MOUNTED APCs AND ANTI-TANK GUNS (Arracourt only)

### CASES:

#### [16.1] TRANSPORT

Transport is a specialized form of movement which allows a vehicle unit to carry a certain amount of infantry units. It is the only time (other than stacked units) that a Player is allowed to move more than one unit at a time. Transport requires two separate operations: *mounting* and *dismounting*. Mounting represents an infantry unit boarding a Friendly vehicle. Dismounting is the opposite. While being carried by a vehicle, the infantry unit is said to be mounted.

[16.11] There is a cost of one Movement Point to the infantry unit and two Movement Points to the vehicle unit to mount or dismount. To mount, the Player places the vehicle unit on top of the infantry unit. Transporting simply involves the Player moving the vehicle unit with its passengers underneath as one, just as though the Player were moving the vehicle alone. In other words, the mounted units just ride along with the transport units. *Note:* Players may remove mounted infantry counters from the map if their location with a particular vehicle unit is noted on the unit status sheet.

[16.12] When mounting or dismounting, both units must be in the same hex. However, both units may have begun or ended the Phase in different hexes providing they are not mounted at the time. That is, they may continue moving before and/or after the mounting/dismounting operation).

[16.13] Each vehicle of an APC unit may transport one step worth of an infantry unit. Thus, for example, a five-vehicle platoon of APCs could carry a full strength (5 step) infantry unit.

[16.14] When a transporting vehicle is eliminated due to combat, any infantry (i.e., one step) that it is carrying is also eliminated. No loss modification die roll is made for the mounted infantry unit in such a case. All other combat results have no effect on mounted infantry unit.

[16.15] A Player may voluntarily eliminate steps from a Friendly infantry unit so that it may be transported by a given APC unit. The Player need not check morale for the company when doing so, but all subsequent morale checks would include those eliminated units (see Section 14.0).

[16.16] If there is "extra space" in an APC unit (for example, if a 3-vehicle APC unit were transporting a 1-step infantry unit), the infantry unit would not be affected by the loss of vehicles until the extra space was eliminated.

[16.17] While mounted, infantry units may be issued any command that they could ordinarily be given. The two units (carrying vehicle and transported infantry) need not have the same command.

#### [16.2] MOUNTED COMBAT

Mounted combat represents the direct fire abilities of the infantry while they are being transported in Friendly vehicle units. While mounted, infantry units have their automatic weapons strength halved (round fractions down), and may not fire their personal anti-tank weapons. Halving is calculated after any previously lost steps are figured in. Mounted infantry units may not fire if the vehicles in which they are mounted in are suppressed.

#### [16.3] TOWING ANTI-TANK GUNS

Anti-tank guns are normally immobile and must be towed in order to be moved. They may be *limbered* or *unlimbered* by spending one complete Friendly Movement Phase in the same hex as a Friendly halftrack unit. Place a limbered marker on the unit.

[16.31] While limbering or unlimbering, both units must have a bound command. (See Case 5.13).

[16.32] Each vehicle of an SDK halftrack platoon may tow one AT gun. If a halftrack vehicle is eliminated while towing a gun, the gun is also eliminated.

[16.33] Limbered anti-tank guns may not fire.

[16.34] Gun crews are not required to limber or unlimber anti-tank guns.

[16.35] A halftrack's movement allowance is not affected while towing a gun.

#### [16.4] ANTI-TANK GUNS

Anti-tank (AT) gun sections ( platoons) are a special kind of vehicle unit. They have no movement allowance (but may be towed—see Case 16.3) and must be stacked with a Friendly gun crew unit (see Case 16.5) in order to fire.

[16.41] Anti-tank guns may only fire at Enemy units in their "Firing Arc." This arc is determined by the facing of the AT unit, as shown on p. R8.

[16.42] Although an AT unit has no movement allowance, it may change facing in its hex in the same manner as other vehicle units (see Case 11.1).

[16.43] Each gun in an AT unit is treated as a separate vehicle for combat purposes. Their fire is resolved in the exact same manner as for the main guns of vehicle units. When defending, a result calling for the loss of one or more vehicles would cause the AT unit to lose an equivalent number of guns instead.

[16.44] Anti-tank units may only be attacked by Enemy main gun fire. Automatic weapons, artillery and HE fire have *no* effect on the AT guns.

Such fire could be directed at the AT gun's crew, however (see Case 16.4).

[16.45] A Friendly anti-tank gun unit that is close assaulted by any Enemy unit is immediately eliminated, unless one or more Friendly units (of any type) are also in the hex.

[16.46] AT units, in themselves, may not observe Enemy units.

#### [16.5] GUN CREWS

Gun crews are a special kind of infantry platoon. When stacked in the same hex as a Friendly (unlimbered) AT gun, they may fire the AT gun.

[16.51] In order to fire, both at the AT gun and its crew must currently have overwatch commands.

[16.52] Each step of a gun crew may fire one AT gun. For example, a one-step gun crew unit could only fire one gun of an AT unit, regardless of how many guns the AT unit contains.

[16.53] Gun crews may fire either their automatic weapons or their AT guns in any given Phase. They may not do both.

[16.54] Suppressed gun crews have the normal -2 loss modification applied when resolving any fire.

[16.55] Except as indicated above, gun crew units are treated as normal infantry units.

## [17.0] U.S. INDIRECT FIRE (Arracourt Only)

### GENERAL RULE:

The US Player has three batteries of off-map artillery which may execute "indirect fire" to attack Enemy units. These weapons fire only once per Game-Turn and do not require a Line of Sight. Because they are "area" weapons, all indirect fire *attacks a specific pattern of hexes* rather than an individual unit. The use of indirect fire requires a certain amount of advance planning, and the accuracy of artillery fire is determined by the ability of other Friendly units to spot (observe) the target hex.

### FIRE PLOT PROCEDURE:

During his Plot Segment of each Game-Turn, the US Player may plot the fire of his off-map artillery batteries; this fire impacts on the map two Game-Turns later. Fire plots are assigned secretly; plots should be marked clearly so the Enemy Player may verify the execution of the plots at the end of the play. Player must list on a piece of paper:

1. The intended target hex number (the "Apex" hex of a battery pattern; see Case 17.14).
2. The Game-Turn in which the fire is due to impact on the map.

*Player's Note:* The Players must construct their own fire plot sheet. We suggest a form similar to the one illustrated below. Using this type of form will simplify plotting once play begins.

#### SAMPLE FIRE PLOT

Current Game-Turn	Target Hexes	Game-Turn of Impact
Pre-Game	1925, 1926, 2120	1
Pre-Game	1925, 1926, 2120	2
1	NF NF 2120	3
NF = No Fire.		

### PROCEDURE:

#### Application of Fire

Indirect fire impacts on the map two Game-Turns after it has been plotted (e.g., fire plotted in Game-Turn 2 impacts in Game-Turn 4). When the

Friendly Resolution Segment of the Indirect Fire Phase of the correct Game-Turn occurs, the US Player takes the following steps to apply his plotted fire to the map:

1. He announces that he has indirect fire plotted to arrive.
2. He announces what his target hexes are.
3. He follows the procedure for determining scatter (see Case 17.2) to determine exactly where the fire will impact.
4. He places the appropriate Impact marker on the hex.
5. The Player proceeds to attack all the units in the impact hexes (whether Enemy or Friendly), using the correct column of the Automatic Weapons Combat Results Table.

#### CASES:

##### [17.1] REQUESTING FIRE

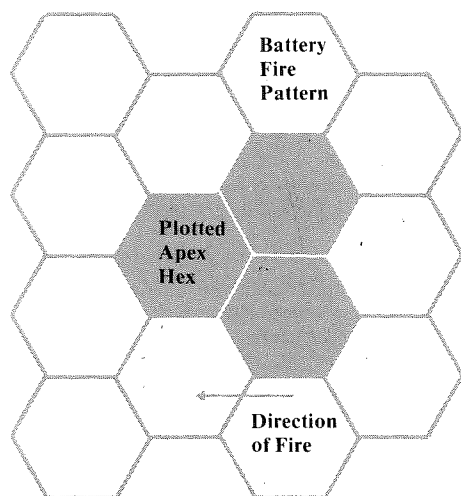
When a Player plots indirect fire, he is requesting a "fire mission." The US Player may never request more than one fire mission for each battery for any one Game-Turn.

[17.11] Artillery units are assumed to repeat their current fire mission until they are assigned a new fire mission (see Case 17.25). If a Player does not wish an artillery battery to fire, he should simply write "no fire" on the unit's fire plot.

[17.12] Indirect fire may only be requested during the Plot Segment of Friendly Indirect Fire Phases (see Sequence of Play).

[17.13] At the beginning of play, the US Player can "pre-plot" fire missions so that the fire arrives on Game-Turns 1 and 2.

[17.14] Battery patterns impact in a "triangle" of three adjacent hexes, of which the "apex" is the target hex; the other two impact hexes are on the side away from the mapedge from which the fire is coming (see Scenario rules).



[17.15] Players should note that there is no way to "shift" artillery fire from hex to hex other than by plotting a fire mission for the new target hex.

##### [17.2] DETERMINING SCATTER

When fire is due to impact on the map, the firing Player must determine how accurate that fire will be.

[17.21] The Player states what his plotted target hex is. He then determines which of his (Friendly) units on the map has the shortest Line of Sight to the target hex. This determines what column will be used on the Artillery Scatter Table (17.27). If no unit has a Line of Sight to the target hex, the Player uses the 41+ column.

[17.22] The firing Player rolls two dice and consults the proper column on the Artillery Scatter Table. This determines whether the fire is on target, scattered in the plotted target hex, or scattered in some other and more distant hex (see Case 17.26). The Player then places the appropriate Impact marker in the actual (post-scatter) impact hex, corresponding to the accuracy of the fire.

[17.23] The Player repeats the scatter routine for each of his firing units, until the accuracy of all such fire has been resolved.

[17.24] After the Player has placed all his Impact markers on the map, he resolves indirect fire attacks on each of the units in each of the impact hexes.

[17.25] When an artillery battery repeats an immediately preceding (observed) fire mission, and the plotted target hex is still being observed by a Friendly unit, then the accuracy for that fire mission is resolved on the "fire for effect" column of the Scatter Table.

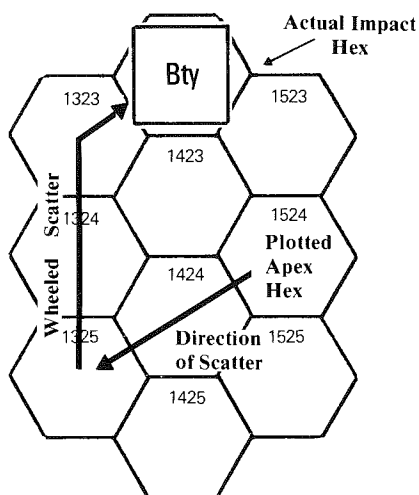
[17.26] There are four possible results from any scatter die roll. If the fire is on target or scattered in the target hex, the Player simply places the Impact marker (with the appropriate side face-up) in the plotted target hex. For all other results the following procedures are used.

##### *Scattered One Hex:*

The Player rolls one die and consults the Scatter Diagram to determine the exact direction of fire. The Impact marker is placed (with its "scattered" side up) in the indicated hex.

##### *Scatter 2, 3, or more Hexes:*

The Player rolls one die and consults the Scatter Diagram to determine the direction of scatter. He then places the Impact marker not in the indicated hex, but in the hex which is the correct number of hexes away from the plotted target hex (either 2, 3 or more). The Player then makes a second die roll and "wheels" the Impact marker in a clockwise direction one hex for each number in the die roll, staying the same distance away from the plotted impact hex (e.g., "2" equals two hexes). The Impact marker is then placed (with its "scattered" side up) in the indicated hex.



##### *Example of Scatter*

The plotted apex hex for a battery of artillery was 1524, but the fire was scattered two hexes (on an S-2 result). The US Player rolls one die and receives a result of 5. This indicates that the direction of scatter is toward hex 1325. The Player again rolls one die to determine the actual apex hex of the fire. A die roll of 3 indicates that the artillery fire must be wheeled three hexes (i.e., through 1324 and 1323 and into 1422). Hex 1422 is the actual apex hex of the artillery fire.

##### [17.27] Artillery Scatter Table (see charts and tables)

##### [17.3] EFFECTS OF INDIRECT FIRE

The effect of indirect fire on both vehicles and infantry units in each impact hex is resolved on the Automatic Weapons Combat Results Table (9.4). On-target artillery attacks all units in affected hexes with an automatic weapons strength of "8," while scattered artillery attacks with a strength of "4."

[17.31] The firing Player should roll two dice for each unit in each impact hex (it makes no difference whether they are Enemy or Friendly). He should then cross-index the dice roll with the correct column corresponding to the caliber of the firing unit. If the defending unit is infantry, the owning Player immediately rolls one die and consults the Infantry Loss Modification Table (12.2) for any alterations in results; these final results are then applied. No Modified Combat Results Table is used for vehicles defending against indirect fire. *Note:* Only those modifiers so specified are used when modifying the results of indirect fire.

[17.32] Indirect fire results are the same as for the Automatic Weapons Combat Results Table (9.1).

[17.33] Attacks by more than one artillery battery on the same hex are resolved separately.

##### [17.4] RESTRICTIONS ON INDIRECT FIRE

[17.41] The US Player may request fire on any hex on the map.

[17.42] Any Friendly unit (except dummies) may spot for indirect fire during the scatter routine.

##### [17.5] INDIRECT FIRE AGAINST MOVING UNITS

Impact markers from artillery fire missions remain on the map from the resolution of the Indirect Fire Phase in which they are placed until the Marker Removal Segment of the next Friendly Indirect Fire Phase. If a unit moves into an impact hex, the moving unit is immediately "attacked" by the indirect fire.

##### [17.6] CHANGING INDIRECT FIRE TARGET HEXES

The Player possessing indirect fire capability may freely change target hexes by plotting a new target hex on his artillery plot.

#### [18.0] DOCTRINE

##### GENERAL RULE:

Doctrine places restrictions on the manner in which units of the same company and/or battalion may move. The exact requirements of doctrine vary from nationality to nationality, and are listed below.

##### [18.1] EFFECTS OF DOCTRINE

[18.11] Certain units in the game have "independent command" and are never affected by morale restrictions. Such units are listed in the scenario instructions.

[18.12] At the beginning of any Friendly Movement Phase in which any of the units of a company do not fulfill their doctrine requirements due to movement in a previous Friendly Movement Phase, all units of that company immediately increase their morale level by 1.

[18.13] If units of a company are forced "out of doctrine" due to losses in combat, the company has one Game-Turn (the following seven consecutive Phases) to correct the situation. If the company does not meet doctrine at the end of this period, all units of the company have their morale level immediately increased by 1, and then are again subject to doctrine requirements.



## [18.2] BRITISH, GERMAN AND US DOCTRINE

All British, German and US platoons (without independent command) may not voluntarily end a Phase more than two hexes from another unit of their company. That is, there may be a maximum of one intervening hex between each of the platoons of a company. Of course, this restriction would not apply if the company were reduced to a single platoon.

[18.21] Units with independent command are listed in the special rules of each scenario. In addition to these units, the Players have the option of designating one of the platoons of each of their companies to independent command. This must be done before the start of the game and cannot be reversed. The only disadvantage to this procedure is that whenever the "remainder" of the company rolls for morale, the owning Player must shift one column to the right on the Morale Table.

[18.22] British, German and US companies may use the bounding overwatch command.

[18.23] There are no battalion morale rules for British, German or US units.

## [18.3] SOVIET DOCTRINE

[18.31] Any Soviet platoon may not voluntarily end a Phase in a hex that is not adjacent to at least one other platoon of their company.

[18.32] Any Soviet platoon may not voluntarily end a Friendly Movement Phase more than 10 hexes (inclusive) away from any of the platoons of their battalion.

[18.33] No Soviet units have independent command.

[18.34] Soviet companies may not use the bounding overwatch command.

## [19.0] SETTING UP THE GAME

### GENERAL RULE:

There are three separate scenarios (games) in *Panzer Battles*. After deciding which of the scenarios is to be used the Players set up the game. Each scenario is structured so that no units of either Player actually begin the game on the map. Instead, some or all of the units of the first Player will enter the map on Game-Turn 1, while the units of the second Player have their hex location noted prior to the beginning of the game by that Player and are not initially deployed on the map.

### [19.1] THE SECOND PLAYER

Before play begins, the second Player secretly deploys his units (within the restrictions of the scenario instructions) by writing their exact hex locations on a separate piece of paper. Any units that begin the game in defilade must have the facing of their defilade noted, in terms of compass direction.

[19.11] Units of the second Player are not placed on the map until they either move or are observed by the Enemy Player. In order to confuse his opponent, the Player may deploy and move dummy units on the map.

[19.12] *Hidden Movement (Optional)*: Should the Players desire, they may allow the units of the second Player to move secretly, by having the owning Player write down their changing locations. Once observed by an Enemy unit, such units would be placed on the map and would remain there (although possibly face-down) for the rest of the game.

## [19.2] THE FIRST PLAYER

After the second Player has deployed his units, play begins with the first Player Indirect Fire Phase of Game-Turn 1. During the subsequent Movement Phase of the Game-Turn, the first Player's units enter the map as indicated in the scenario instructions.

[19.21] Units entering the map are always considered to have a bound command.

[19.22] When not stated otherwise, units may be brought onto the map in any formation the owning Player wishes. The Player may use as many entry hexes as he desires; if more than one unit enters the map through the same hex, however, the units which do so are considered to have been "staged back" during all or part of their movement.

[19.23] Units which are staged back must first be deployed off the map, one behind the other (and/or stacked), with the lead unit positioned adjacent to the desired entry hex plus the additional cost for any hypothetical hexes that the unit would have to traverse to reach the entry hex. The terrain in such hypothetical hexes is assumed to be the same as that in the entry hex.

[19.24] Once a Player has composed the order of units which are staged back, the relative position of these units may not be altered until the units arrive on the map.

[19.25] Depending on the number of units entering at a given hex it may not be possible to enter all units onto the map during the first Game-Turn or Phase that they are available. Units that cannot enter in a given Friendly Movement Phase simply enter in some following Movement Phase.

[19.26] Units which are off the map are out of play for all game purposes, except, of course, to be moved by the Friendly Player in order to reach the map.

## [19.3] VICTORY CONDITIONS

[19.31] In certain scenarios, Players may receive Victory Points for having Friendly units exit the map. When exiting the map a unit must pay the Movement Point cost for the hypothetical hex it is presumed to be entering off the map. The terrain in this hypothetical hex is assumed to be the same as the terrain in the hex the unit last occupied. Once exited, a unit may not re-enter the map.

[19.32] In certain scenarios, Players may receive Victory Points for "controlling" a certain hex at the end of the game. A hex is assumed to be controlled by the Player who last had a Friendly unit occupy or pass through the hex. If no unit of either Player occupies or passes through a hex during the play of the game, the hex is assumed to be controlled by the second Player.

[19.33] Units in Morale State 3 and units with withdraw commands have no bearing on any "Friendly" victory conditions. That is, the owning Player never receives Victory Points for exiting such units or having them control given hexes. Of course, such units would still provide the Enemy Player with Victory Points if he were able to eliminate them.

## SCENARIOS

*Note*: Each tank of a tank platoon represents one vehicle (e.g., a three-tank platoon has three vehicles of the indicated type). For further information about unit designations, see page R15.

## [20.0] ACTION NEAR GAZALA—26 MAY 1942

*Game Length*: 10 Game-Turns.

**First Player Deployment (German)**

*Second Battalion*: 15 Panzer Division

*First Company*: Composed of three platoons, each with five PZ III main battle tanks.

*Second Company*: Composed of three platoons, each with five PZ III main battle tanks.

*Third Company*: Composed of three platoons, each with five PZ IV(E) close support tanks.

*Recon Platoon*: With five PZ II reconnaissance vehicles.

*Battalion HQ Rating*: D.

*Deployment*: All units enter on Game-Turn 1 from any hex on the south mapedge.

**Second Player Deployment (British)**

*Fourth Battalion*: County of London Yeomanry

*A (First) Squadron*: Composed of four platoons, each with four Crusader II main battle tanks; and one platoon with two close support tanks. *Note*: A Squadron is in all respects equivalent to a Company for game purposes.

*B (Second) Squadron*: Composed of four platoons, each with three Grant main battle tanks.

*C (Third) Squadron*: Composed of four platoons, each with three Crusader II main battle tanks; and one platoon with two close support tanks.

*Battalion HQ Rating*: B.

*Deployment*: B Squadron may deploy on any hex of the xx06 hexrow. A and C Squadrons enter as reinforcements from the north mapedge (see below).

### Victory Conditions

Victory Points are totaled at the end of the game. The Player with the most Victory Points at the end of the game wins.

The German Player receives Victory Points for fulfilling the following conditions:

Amount	Condition
25	eliminating one Grant tank
15	eliminating one Crusader II
10	eliminating one support tank

The British Player receives Victory Points for fulfilling the following conditions:

Amount	Condition
15	eliminating one PZ III tank
10	eliminating one PZ IV(E) tank
5	eliminating one PZ II tank

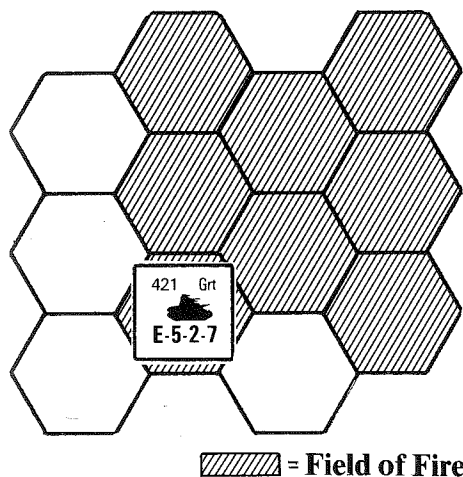
*Reinforcements*: British A and C Tank Squadrons enter the map as reinforcements from any hex of the north mapedge during the Second Player Movement Phase of Game-Turn 4. British reinforcements enter the map in the manner given in Case 21.2. The British Player may choose to withhold some or all of his scheduled reinforcements off the map, at his option. Such units could then enter the map during any subsequent Friendly Movement Phase.

### Special Rules:

- (1) Due to dust and sand conditions, no Line of Sight (see Section 7.0) may be more than 10 hexes in length.
- (2) Vehicle units may enter defilade only in rough 2 hexes.
- (3) All British close support platoons have independent command.
- (4) The German PZ II platoon has independent command.

- (5) The 75mm main gun on the British Grant tank has a special field of fire (because the gun is mounted on a sponson on the right side of the vehicle, rather than in a turret). This weapon system may only attack Enemy units currently in a hex of its field of fire (see diagram below). In addition, the 75mm gun may not be used if the firing vehicle is in defilade.

GRANT 75mm FIRING DIAGRAM



## [21.0] ARRACOURT — 20 SEPTEMBER 1944

**Game Length:** 12 Game-Turns

### First Player Deployment (US)

**Task Force Abrams:** First Tank Battalion, composed of First, Second, and Third Companies, each composed of three platoons (each with five Sherman tanks); plus 10th Armored Infantry Battalion, composed of First and Second Companies, each composed of three platoons (each with five M3 and mechanized infantry).

### Battalion HQ Rating: B

**Deployment:** Enter on Game-Turn 1 from any hex of the north mapedge west of hex 0124 (inclusive). May enter in column formation.

**Off-Map Artillery:** 3 × battery medium howitzer, from west map-edge (see Section 18.0).

### Second Player Deployment (German)

**Battlegroup Junghannis:** First Battalion, composed of Companies 1 and 2, each composed of three platoons (each with four PZ IV (H) tanks), plus one heavy anti-tank section (with two 88 anti-tank guns) and one gun crew platoon (with two steps).

### Battalion HQ Rating: B

May be deployed on or adjacent to hill 421 (hex 1712) and/or in any hex south of the 1800 hex column (inclusive). May be deployed in defilade.

### Victory Conditions

Both Players receive Victory Points according to the following schedule:

Amount	Condition
25	controlling all of the hexes of Ley, Ommeray or Moncourt (25 Victory Points for each).
25	causing any Enemy infantry or main battle tank (not APC) company to enter morale state 3 (even if that company subsequently rallies).

- |    |  |
|----|--|
| 10 | eliminating one Enemy main battle tank vehicle, or one step of an Enemy infantry unit. |
| 5  | eliminating any Enemy truck unit.  |

Victory Points are totalled at the end of the game. The Player with the most Victory Points is the winner.

### Special Rules:

- (1) The US Player may "pre-plot" the arrival of his artillery so that it impacts during Game-Turn 1. He may trace a Line of Sight while doing so as if there were a Friendly unit in hex 0124.
- (2) US infantry are also armed with bazooka (as a personal anti-tank weapon). Bazookas attack on the Main Gun Combat Results Table and have an attack strength of "0" at 1-hex range and "1" at 0-hex range. They have an armor penetration value of 3.
- (3) The German anti-tank gun section gun crew and half-track have independent command.

## [22.0] DEFENSE OF THE BERLIN HIGHWAY 22 MARCH 1945

**Game Length:** 12 Game-Turns

### First Player Deployment (Soviet):

**First Battalion:** composed of companies 1 and 2, each composed of three platoons (each with three T34/85 tanks).

**Second Battalion:** composed of Companies 1 and 2, each composed of three platoons (each with three T34/85 tanks).

**Third Battalion:** composed of Companies 1 and 2, each composed of three platoons (each with three T34/85 tanks).

**Deployment:** Enter the map on Game-Turn 1 from any hex on the east mapedge. Units must be "staged back" (see Case 21.22) and may enter in column formation.

**Battalion HQ Rating:** All battalions are rated "H".

### Second Player Deployment (German):

**First Company, Third Tank Battalion (reinforced):** Composed of Platoons 1, 2 and 3 (each with five PZ V tanks), Platoon 4 (with four PZ V tanks), and Platoon 5 (with three PZ V tanks).

**Deployment:** May be deployed in any hex west of the xx08 hex row (inclusive). All German units may be deployed in defilade.

### Victory Conditions

Victory Points are totalled at the end of the game. The Soviet Player wins if he has accumulated more Victory Points than the German Player. The German Player wins by preventing a Soviet Victory.

The Soviet Player receives Victory Points for fulfilling the following conditions:

Amount	Condition
10	eliminating one German PZ V main battle tank
10	exiting one T34/85 off the west mapedge

The German Player receives Victory Points for fulfilling the following conditions:

Amount	Condition
5	eliminating one T34/85 vehicle

### Special Rules:

- (1) All German platoons have independent command, and are not affected by morale.

## DESIGNATIONS

The three-digit designation of each unit indicates its place within some higher organization, in the following manner. The first digit indicates the unit's *battalion*; the second digit indicates its *company*; and the third digit indicates the individual platoon itself. For example, the German PZIV(E) platoon designated 231 is the "First Platoon of the Third Company of the Second Battalion." A 0 anywhere in a unit's designation indicates that it always has Independent Command and is not affected by the morale rules. Otherwise, all units with the same first and second (battalion and company) designation-digits belong to the same company for morale and command purposes (although a platoon may be detached by using Case 18.21). The infantry and M3 units of the US Second Armored Infantry Battalion (see Scenario 21.0) have the *same* designations and are treated as two *separate* companies (i.e., one infantry and one M3). The designations given on the counters match the actual historical designations of the units involved, with the exception that the US "First" Tank Battalion represents the 37th Tank Battalion and the "Second" Armored Infantry Battalion represents the 10th Battalion.

## DATA "SHEETS"

Note that each vehicle unit's Target Profile, Armor (Front and Side), and Movement Allowance are printed on its counter.

### US VEHICLES

**M4 Sherman (MBT).** *GT/P:* 3/7; *AW:* MG\* × 1.

**M3 (APC).** *GT/P:* None; *AW:* MG\* × 2.

**US INFANTRY** (Strength at Range in hexes)

**Mech Infantry.** 9 (at 0); 7 (at 1-2); 4 (at 3-4); 2 (at 5).

### GERMAN VEHICLES

**PZ IV (H) (MBT).** *GT/P:* 3/8; *AW:* MG\* × 1.

**PZ V Panther (MBT).** *GT/P:* 2/10; *AW:* MG\* × 1.

**SDK (APC).** *GT/P:* None; *AW:* MG\* × 1.

**88 (AT).** *GT/P:* 1/10; *AW:* None.

**PZ II (RV).** *GT/P:* None; *AW:* MG\* × 1.

**PZ III (MBT).** *GT/P:* 3/5; *AW:* MG\* × 1.

**PZ IV(E) (CST).** *GT/P:* 3/4; *AW:* MG\* × 1.

**GERMAN INFANTRY** (Strength at Range in hexes)

**AT Gun Crew.** 2 (at 0); 1 (at 1-2); 0 (at 3+);

### SOVIET VEHICLES

**T34/85 (MBT).** *GT/P:* 2/9; *AW:* MG\* × 1.

### BRITISH VEHICLES

**Crusader II (MBT).** *GT/P:* 3/5; *MG:* × 1.

**Grant (MBT).** *GT/P:* 75mm = 3/7; 37mm = 4/5; *MG:* × 1.

**Support Tank (CST).** *GT/P:* HE strength only; *MG:* × 1.

\*Externally-controlled weapon system (see 8.61).

**MBT** = Main Battle Tank; **APC** = Halftrack;

**MG** = Machinegun; **CST** = Close Support Tank;

**RV** = Recon Vehicle; **GT/P** = Gun

Type/Penetration; **AW** = Automatic Weapons.

## DESIGN CREDITS

Game Design/Development: **Thomas Walczyk**  
Physical Systems and Graphics:

**Redmond A. Simonsen**

Testing: **Edward Curran, Carey Gister,**

**John Kallaugher, Tony Haug et al.**

Rules Editing: **Brad Hessel, Eric Goldberg**

Production: **Orhan Agis, Robert A. Degni,**

**Kate Higgins, Ted Koller, Gail Lehrman,**

**Manfred F. Milkuhn, Bob Ryer**

## HARDWARE:

### SMALL ARMS

On the modern battlefield, the small arms of the infantry — their rifles, submachine guns, and assault rifles — often appear inconsequential when compared to the destructive power of artillery, armor, and aircraft. The machinegun usurped the rifle's place as "the essence of the infantry" as long ago as 1915, but it would still be a mistake to assume that this renders small arms unimportant. In Vietnam, half of the US casualties were to bullets, mostly fired by small arms. In lower and middle intensity conflicts throughout the world, small arms still play a vital role. The silhouette of the AK-47 with its banana-shaped 30-round magazine has itself become a symbol of revolution.

The revolution in battlefield technology that has occurred over the last decade has only now started to affect small arms. Laser sights for rifles are already in production, similar to those used in tanks, but without the ballistic computer. While these are intended primarily for police work and are too costly and complex for general issue, they are used by the 1st and 2nd Battalions, 75th Infantry, the US Army's Ranger battalions. Other weapons under consideration in the US include a "shotgun" type weapon firing projectiles that would have a much greater range and power than any existing shotgun and so would be superior even to a submachine gun at close quarters. Another experimental design, the Hughes Lockless Rifle/Machine Gun (LRMG) dispenses with the traditional brass cartridge case. The bullet's propellant is packed in plastic that is consumed when fired, therefore removing the need for cartridge ejection.

One of the most important elements of future small arms is their calibre. The British are currently evaluating a family of 4.85mm calibre weapons that would replace their 7.62mm calibre SLR rifle and GPMG machine gun as well as the 9mm Sterling sub-machine gun. The British had first decided on a small calibre rifle using an intermediate power cartridge after the Second World War, to replace the classic bolt-action Lee-Enfield, but, at US urging, dropped it in favor of the SLR that fired the standard NATO 7.62mm round. Now the US is watching the British evaluation very closely and it may be that the M-16 replacement will be of an even smaller calibre than its predecessor.

Small calibres mean lighter weapons. Also, they indicate that the individual soldier can carry more ammunition. This is quite an important concern that goes beyond the comfort of the infantryman, although that is important too. A US infantry company can fire off over half a ton of ammo in a "mad minute" of firing, and all of this will have to be resupplied, which may be difficult in the mobile battlefields of a future war. The US Army and Marine Corps both suffer from a compounded problem in this respect because their rifles (the 5.56mm M16) and light machine guns (the 7.62mm M60) use different ammunition. While this is unfortunate, it is understandable. Rifle and light machine gun rounds have different requirements. The rifle must be light — both the weapon and the ammunition. It is not called upon to undertake the sustained, long-range fires of the light machine gun, which must be able to inflict heavy loss at ranges of over 1000 meters.

The standard US infantry rifle, the M-16, has been the subject of controversy since it was first adopted. Originally produced for an Air Force specification for a "light rifle" for survival and base security work, many Marines and soldiers believe that it was then forced on them by Defense

Secretary, Robert McNamara, and his Pentagon "whiz kids" and their passion for "commonality," a key buzz-word of the early 1960s. The adoption of the M16 throughout the US armed forces defeated the goal of NATO small arms ammunition standardization on 7.62 calibre that the US had urged the decade before. While light in weight and relatively cheap and easy to produce, relying heavily on stampings and plastic parts, the M-16 was never fully trusted by the troops. The sights, on the handle, were inadequate for long-range use. Due to the low muzzle energy of the 5.56mm rounds, it suffered from gas-fouling problems.

The problem that propelled the M-16 into the pages of the media was when, to speed production, 5.56mm rounds were sent to Vietnam with a slower burning propellant than the one the M-16 was balanced to function with. The result was a higher, often "runaway" rate of fire and a high degree of separate case malfunctions and consequent jamming. A jammed rifle in action often means a casualty.

To be effective, a rifle must be simple. The Soviets found this out in World War II. They had developed the technically excellent Tokarev semi-automatic rifle before the war but, when the war broke out, they found that it was too complex to be manufactured swiftly by unskilled labor or to be

effectively used by their often sketchily-trained soldiers. The Soviets instead relied on masses of submachineguns and bolt-action rifles. The M-16 shares much of the same problem. There is no place in war for temperamental machinery. The M16A1 solved many of the problems by providing a chrome-plated chamber to reduce friction and corrosion and a heavy buffer to limit the rate of fire. Improved standardization in ammunition also helped. But dissatisfaction with the M-16 continued, especially in Marine units. Its light 5.56mm round often lost velocity when fired through brush or standing grain. Reportedly, troops scored better on the Army's "quick kill" target range with old M-1 carbines than with M-16s firing semi-automatically.

Today, there is a requirement for an M-16 replacement. The US Marine Corps, which depends on riflemen to perform its mission, believes this is a pressing item, but the Army, which controls the Research and Development purse strings, is less willing to accord it high priority. Considering that the American custom of designing weapons by committee has been compounded by the increasing politicization of the weapons procurement process over recent years, the development of the new US small arms still may be quite distant.

#### SMALL ARMS IN SERVICE

Name	Type	Cal	Wt	Eff Rnge	Opn	M/V	Mag	Rpm Cyc	Nat
Uzi	SMG	9.00	3.50	200	Bb	390	25,32,40	600	IS
Galil	Ra	5.56	3.50	400	Gas	920	35,50	600	IS
FN	Ra	7.62	4.30	500	Gas	850	20	650	BE
SLR L1A1	R	7.62	4.30	550	Gas	850	20	sa	GB
Sterling	SMG	9.00	2.70	200	Bb	430	34	550	GB
FAMAR-MAS	Ra	5.56	3.25	300	Db	960	25	900	FR
M49	R	7.50	4.70	540	Gas	835	10	sa	FR
G3	Ra	7.62	4.30	500	Rec	780	20	600	WG
CETME	Ra	7.62	4.10	550	Db	890	20	600	SP
AK-47	AsR	7.62	4.30	400	Gas	710	30	600	USSR
AKM	AsR	7.62	3.10	400	Gas	715	30	600	USSR
M14	Ra	7.62	3.90	550	Gas	855	20	750	USA
M16	Ra	5.56	2.90	400	Gas	940	20	650	USA

**Explanation:** Type. SMG: submachine gun, using pistol-type cartridge. Ra: Rifle capable of automatic fire. Uses either full-power (7.62) or reduced (5.56) cartridge. R: Rifle, capable only of semi-automatic fire. AsR: Assault Rifle: capable of automatic fire, uses intermediate power cartridge. Cal. Calibre of the weapon in millimeters. Wt. Weight of the weapon, in kilograms. Eff Rnge. Effective range, in meters. Effective range is normally defined as the range at which a weapon can score 50% hits. However, few riflemen can hit anything over 200 meters away, and any rifle is most effective at under 100 meters range. SMGs are most effective at under 50 meters range. Opn. Operation; the system used to operate the weapon and feed in new rounds. Bb: blow-back. Gas: gas-operated. Db: Delayed blow-back. Rec: Recoil operated. M/V. Muzzle velocity in meters per second. Note the high muzzle velocity of the small projectiles, but this falls off in mid-range. Mag. Magazine; size of the magazines normally used. Rpm Cyc. Rate of fire in rounds cycled per

minute. This is a theoretical figure based on how many times the weapon goes through the load-fire-eject cycle if the trigger is depressed for a full minute, disregarding loading and aiming time. In reality, maximum rates of fire are 10%-20% of these figures. Maximum aimed shots are about 5% of cyclic rate. sa: semi-automatic; weapon fires one round whenever the trigger is squeezed. In battle condition, produces a maximum of about 35 aimed rounds per minute. Nat. nationality of basic design. IS = Israel; BE = Belgium; GB = Great Britain; FR = France; WG = West Germany; SP = Spain. There is a huge amount of export and license-production in small arms. There is also a great deal of cross-fertilization between the different nations. For example, the AK-47 was based on German World War II assault rifles, while the Galil was based on the AK-47, as was the AKM. The SLR is the British version of the FN and both use the Soviet Tokarev operation.



# Panzer Battles Counter Section Nr. 1 (200 pieces): Front

Quantity of Sections of this identical type: 1. Total quantity of Sections (all types) in game: 1.

111 M4  C-5-3-9	112 M4  C-5-3-9	113 M4  C-5-3-9	121 M4  C-5-3-9	122 M4  C-5-3-9	123 M4  C-5-3-9	131 M4  C-5-3-9	132 M4  C-5-3-9	133 M4  C-5-3-9	211 M3  A1-1-12
212 M3  A1-1-12	213 M3  A1-1-12	221 M3  A1-1-12	222 M3  A1-1-12	223 M3  A1-1-12	211 Inf  9-7-4-2	212 Inf  9-7-4-2	213 Inf  9-7-4-2	221 Inf  9-7-4-2	222 Inf  9-7-4-2

UNITED STATES










223 Inf  9-7-4-2					111 T34  A6-3-11	112 T34  A6-3-11	113 T34  A6-3-11	121 T34  A6-3-11	GAME-TURN
					122 T34  A6-3-11	123 T34  A6-3-11	211 T34  A6-3-11	212 T34  A6-3-11	CURRENT PHASE

SOVIET

213 T34  A6-3-11	221 T34  A6-3-11	222 T34  A6-3-11	223 T34  A6-3-11	311 T34  A6-3-11	312 T34  A6-3-11	313 T34  A6-3-11	321 T34  A6-3-11	322 T34  A6-3-11	323 T34  A6-3-11

111 IVH  B-5-3-7	112 IVH  B-5-3-7	113 IVH  B-5-3-7	121 IVH  B-5-3-7	122 IVH  B-5-3-7	123 IVH  B-5-3-7	301 V  D-7-3-9	302 V  D-7-3-9	303 V  D-7-3-9	304 V  D-7-3-9
305 V  D-7-3-9	201 II  A-2-1-8	211 III  B-4-2-8	212 III  B-4-2-8	213 III  B-4-2-8	221 III  B-4-2-8	222 III  B-4-2-8	223 III  B-4-2-8	231 IVE  B-4-2-8	232 IVE  B-4-2-8

GERMAN

233 IVE  B-4-2-8	101 SDK  B-0-0-8	101 BB  A-0-0-0	101 Crew  2-1-0-0		Engd	422 Grt  E-5-2-7	423 Grt  E-5-2-7	424 Grt  E-5-2-7
						421 Grt  E-5-2-7		

NEUT

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








1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1

3	3	3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3	3	3

NEUTRAL

3	3	3	3	3	3	3	3	3	3	Limber
										

									
Fatigue 1	Fatigue 1	Fatigue 1	Fatigue 1	Fatigue 1	Fatigue 1	Engd	Engd	Engd	Engd

410 CS  A-3-2-8	430 CS  A-3-2-8								
431 Cru  A-3-2-8	432 Cru  A-3-2-8	433 Cru  A-3-2-8	434 Cru  A-3-2-8	411 Cru  A-3-2-8	412 Cru  A-3-2-8	413 Cru  A-3-2-8	414 Cru  A-3-2-8		

BRITISH



**Panzer Battles Counter Section Nr. 1 (200 pieces): Back**

[illegible]

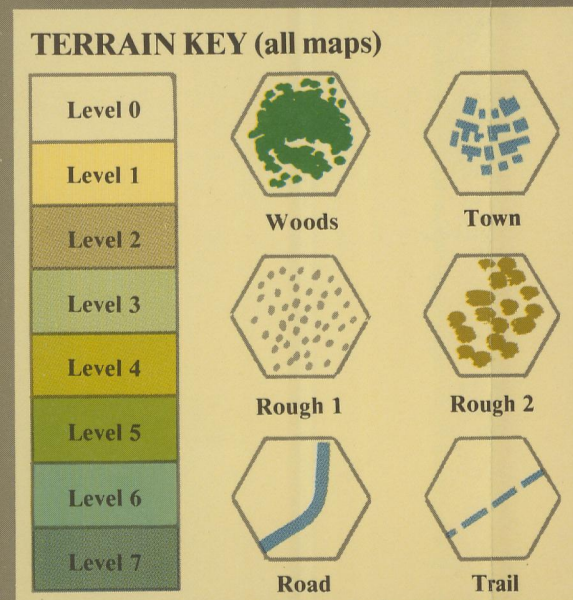
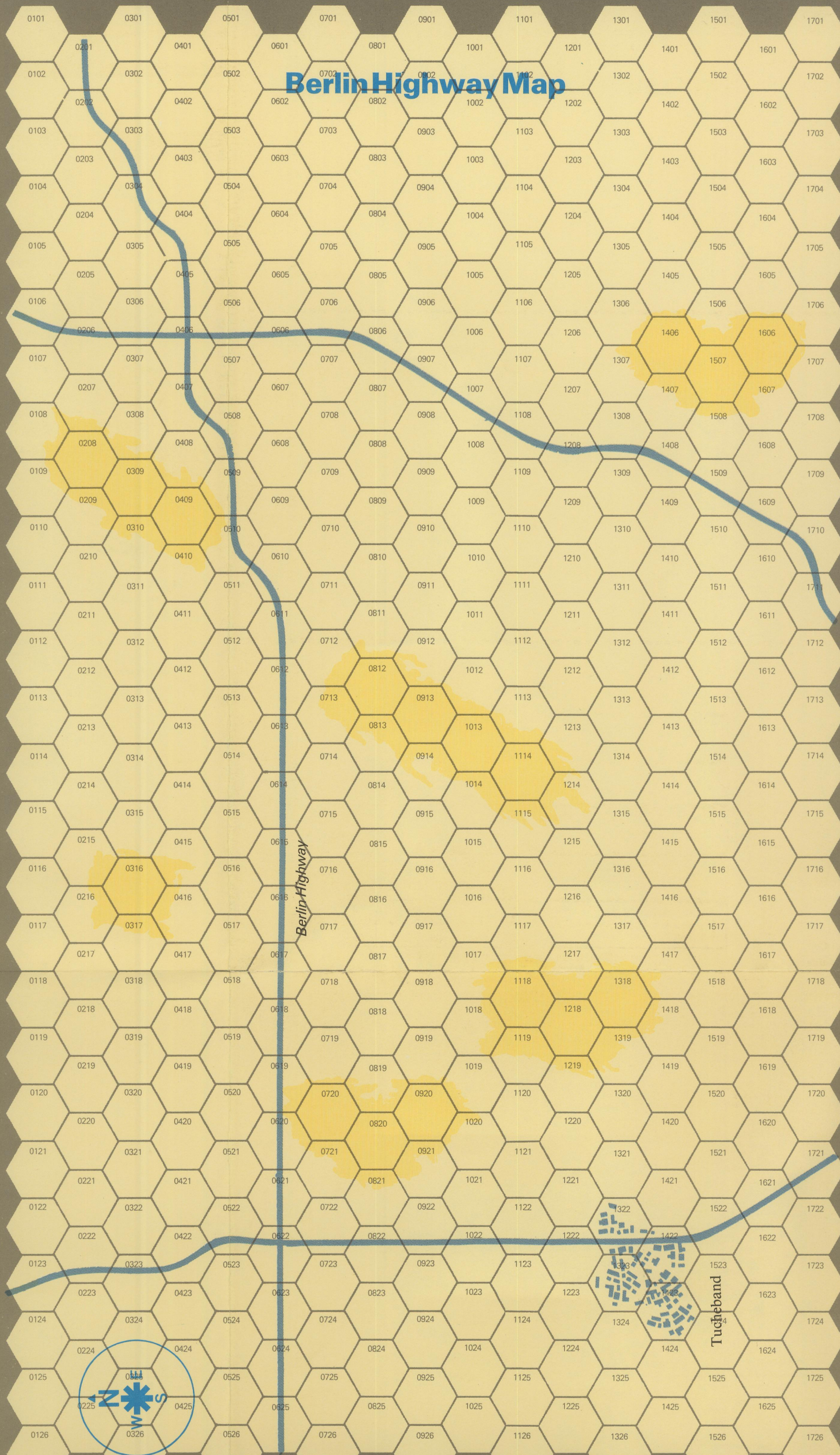
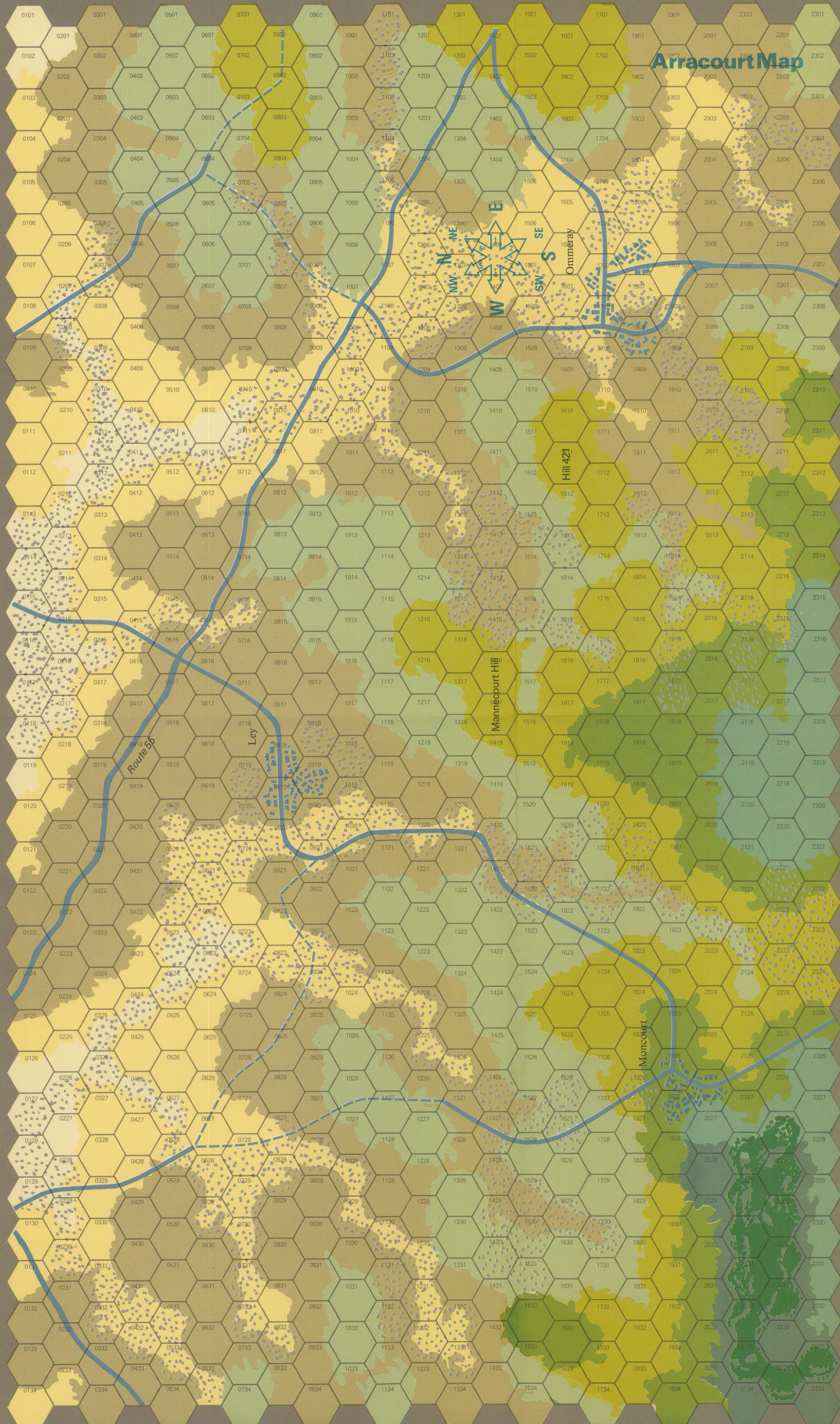
Suprs	Suprs	Suprs	Suprs	Suprs	Suprs	Suprs	Suprs	Suprs	Suprs
In Column	In Column	In Column	In Column	Fatigue 2	Fatigue 2	Fatigue 2	Fatigue 2	Fatigue 2	Fatigue 2

Bty
Bty
+ +

In Column

Bty





[12.21] VEHICLE LOSS MODIFICATION TABLE		
DIE	Loss Modifier	
+3 or less	-1	
+4 thru +8	0	
+9 or more	+1	
See Case 12.22 for explanation of results.		

[12.31] INFANTRY LOSS MODIFICATION TABLE		
DIE	Loss Modifier	
0 or less	-1	
+1 thru +7	0	
+8 or more	+1	
See Case 12.32 for explanation of results.		

GAME-TURN RECORD TRACK											
1	2	3	4	5	6	7	8	9	10	11	12

PHASE RECORD TRACK		Player 1 Indirect Fire	Player 2 Command	Player 1 Movement	Player 2 Indirect Fire	Player 1 Command	Player 2 Movement	Record begin new Turn
--------------------	--	------------------------	------------------	-------------------	------------------------	------------------	-------------------	-----------------------

[6.9] TERRAIN EFFECTS CHART			
	Movement Point Cost		
Terrain	Vehicle to Enter Defilade	Vehicle to Enter or cross	Infantry to Enter or cross
Clear	+8	2	1
Road*	-	1	1
Trail*	-	2	1
Town	+3	2	1
Woods	+3	3	2
Rough 1	+7	2	1
Rough 2	+6	3	2
Mount	NA	2	1
Infantry	NA	2	1
Discount	NA	2	1
Uplope	NA	0	+1
Downlope	NA	0	+1

\* Supersedes cost of other terrain in hex/hexside for units in column; NA = Not applicable. Note that there is no cost for infantry to enter defilade.

[7.25] OBSERVATION RANGE TABLE		
	Maximum Observation Range in hexes is:	
When target unit is ...	(Regular/Focused)	
Infantry: stationary in Clear	3/6	6/12
moving in Clear		
moving or stationary in other than Clear or is in Defilade	1/2	15/30
Vehicle: stationary in Clear	2/4	15/30
stationary in Woods or Rough 1	1/2	U/U
stationary in Defilade or Town		
moving in Clear	U/U	15/30
moving in other than Clear		
Unobserved units leaving a hex within the Line of Sight of an Enemy unit and directly entering a hex not within the Line of Sight of an Enemy unit are not considered to be observed. If the Line of Sight runs across a hexside where one hex contains blocking terrain and the other does not, the Line of Sight is considered blocked. U = Unlimited.		

[12.4] LOSS MODIFIER CHART		
Modification... if Target Unit...		
-2	is vehicle in defilade	
-2	is moving (vehicle or infantry)	
-1	is infantry in defilade (used for modifying results of both direct and indirect fire combat)	
+2	for each Friendly unit of the same type (vehicle or infantry) in the hex	
+4	is in Column Formation	
Modification... if Firing Unit...		
-1	is a suppressed vehicle	
-2	is suppressed infantry	
Modifications by Unit Type/Terrain		
Terrain	Vehicle	Infantry
Clear, Rough 2	0	-4
Town	-1	-4
Woods	-2	-1
Rough 1	-1	0
Road/Trail	other terrain in hex	
All modifications cumulative; terrain modifications for infantry used for direct and indirect fire.		

[10.1] MAIN GUN ANTI-VEHICLE COMBAT RESULTS TABLE																
Nr. of Vehicles or Steps in Firing Unit	Attack Strength															
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
One	0	1	2	3	4	5	6	7	8	9						
Two	0	1	2	3	4	5	6	7	8	9						
Three	0	1	2	3	4	5	6	7	8	9						
Four	0	1	2	3	4	5	6	7	8	9						
Five	0	1	2	3	4	5	6	7	8	9						
DICE	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
2	1	1	1	1	1	1	1	1	1	2	3	3	2	3	5	
3	1	1	1	1	1	1	1	1	1	2	3	3	2	1	1	
4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	
7	1	1	1	1	1	2	2	2	3	3	3	4	3	4	3	
8	1	1	1	1	1	1	1	1	2	2	2	2	4	4	4	
9	1	1	1	1	1	1	2	2	2	2	2	2	4	3	4	
10	1	1	1	1	1	1	1	2	2	2	2	2	4	4	4	
11	1	1	1	1	1	1	2	2	2	2	3	3	2	2	3	
12	1	1	1	1	1	1	1	2	3	3	3	2	4			
# = Number of vehicles lost, unmodified. Determine modifiers and proceed to Table 12.21.																

[14.2] MORALE TABLE															
Nr. of Vehicles or Steps in Original Company	Total Company Losses (in Vehicles or Steps)														
6 or less	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
7-10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
11-14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
15 or more	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Morale Level Increase															
dice	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
3	0	1	1	1	2	2	2	2	2	2	2	2	2	2	2
4	0	1	2	2	1	1	2	2	2	2	2	2	2	2	2
5	0	1	2	3	2	1	1	2	2	2	2	2	2	2	2
6	0	1	2	3	4	3	1	1	2	2	2	2	2	2	2
7	0	1	2	3	4	5	4	1	1	1	1	1	1	2	2
8	0	1	2	3	4	5	6	5	1	1	1	1	2	2	2
9	0	1	2	3	4	5	6	7	6	1	1	1	2	2	2
10	0	1	2	3	4	5	6	7	8	7	2	2	2	2	2
11	0	1	2	3	4	5	6	7	8	9	8	2	2	2	2
12	0	1	2	3	4	5	6	7	8	9	10	9	2	2	2
# = Morale level increase															

[10.32] MAIN GUN RANGE ATTENUATION CHART																				
Range in Hexes	Target Profile Gun Type																			
	A				B				C				D				E			
0	7	4	4	4	8	5	5	5	8	6	6	6	9	7	7	7	9	8	8	8
1-2	6	3	3	3	7	4	4	4	7	5	5	5	7	6	6	6	8	7	7	7
3-5	4	2	2	2	5	3	3	3	6	4	4	4	7	5	5	5	7	6	6	6
6-7	1	1	1	1	2	2	2	2	3	2	2	2	4	3	2	2	4	4	2	2
8-10	0	0	0	0	1	1	1	1	2	1	1	1	3	2	1	1	3	2	2	2
11-12	0	0	0	P	0	0	0	P	1	0	0	P	2	1	1	P	2	1	1	P
13-15	0	0	P	P	0	0	P	P	0	0	P	P	0	0	P	P	0	0	P	P
16 or more	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
# = Unit's attack strength, P = Prohibited.																				

[14.8] BATTALION HQ TABLE												
	Initial Headquarters Rating											
<i>Value of the HQ</i>	A	B	C	D	E	F	G	H	I	J	K	L
1	-	-	-	-	1	1	1, 2	1, 2	1, 2	1-3	1-4	
2	-	-	1	1	2	2, 3	3, 4	3-5	3-6	4-6	5-6	
3	-	1	2	2, 3	3	4, 5	5, 6	6	-	-	-	
4	1	2	3	4	4	6	-	-	-	-	-	
5	2	3	4	5	5	6	-	-	-	-	-	
6	3-6	4-6	5-6	6	6	6	-	-	-	-	-	
Avg.	5.5	5.0	4.3	3.8	3.5	2.5	2.0	1.8	1.7	1.5	1.3	
Number on column headings A-L is the die roll. "Avg." indicates the average value for a HQ rolling on that column.												