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[1.0] INTRODUCTION

The WestWall game system is an operational simulation of the battles on the frontiers of the Reich in 1944-45. Each game in the system represents a clash between the German Army and the American and British Armies, which had pursued it across France to the barrier of the WestWall fortifications. The Playing Pieces represent the actual units which participated in the battles and the maps represent the actual terrain over which those units fought. Two rule folders are provided. The first contains Standard Rules, which are common to all the games in the WestWall system. The second folder contains Exclusive Rules for each game in the system and the Initial Deployment and Reinforcement Rules.

The game has been designed to insure maximum playability and maximum reality (in that order). In order to achieve these goals, the physical components, as well as the game rules, have been designed to make the game easier to understand and play. The components include a smaller, more compact playing map, never more than a hundred playing pieces and standardized rules.

The standardization makes it easier for the gamer to go from one game to another within the series. It also enables the games’ designers to concentrate on the realistic aspects of the games (the standardization generally takes care of any playability problems).

[2.0] GAME EQUIPMENT

[2.1] THE GAME MAP

Each of the 22” x 17” mapp sheets portrays the battle area. A hexagonal grid is superimposed over the terrain features on the map sheet in order to regularize movement and positioning of the playing pieces.

To make the map lie flat, back-fold it against the creases. Small pieces of masking tape may be used at the corners of the map to hold it taut.

[2.2] GAME CHARTS AND TABLES

Various visual aids are provided for the Players in order to simplify and illustrate certain game functions. These are the Combat Results Table, the Terrain Effects Chart and the Reinforcement Charts.

[2.3] THE PLAYING PIECES

The cardboard pieces represent the actual military units that took part in the historical battles. The numbers and symbols on the pieces represent strength, movement capability and type of unit represented by the piece. These playing pieces will hereafter be referred to as “units.”

[2.3.1] How to Read the Units

Non-Artillery Unit:

\[ \begin{array}{c}
\text{Designation} \\
\text{Attack Strength} \\
\text{Defense Strength} \\
\text{Artillery Unit:} \\
\text{Barrage Strength} \\
\text{Defense Strength} \\
\text{Range Allowance} \\
\text{Movement Allowance} \\
\text{FFP Strength} \\
\end{array} \]

Unit Types
- Armor
- Airborne Infantry
- Mechanized
- Artillery
- Reconnaissance
- Engineer
- Self-Propelled Artillery
- Glider (airborne)
- Infantry
- Airborne Artillery

Unit Sizes
1 = company; II = battalion; III = regiment; X = brigade.

Unit Designations
Units may be identified by a single number or by a multi-part designation. In multi-part designations, the number to the right is the unit’s superior formation. This may be either a division, regiment or brigade. Battalion-sized units are numbered consecutively within the regiment. As a general rule, there are three battalions per regiment, and three brigades or regiments per division. Numbers to the right of the unit type symbol denote divisional identity.

[2.3.2] Definition of Terms

Attack Strength is the relative strength of a non-artillery unit with regard to attacking other units, expressed in terms of Attack Strength Points.

Defense Strength is the relative strength of a unit with regard to defending against the attacks of Enemy units, and is expressed in terms of Defense Strength Points.

Barrage Strength is the relative strength of an artillery unit when attacking Enemy units, and is expressed in terms of Barrage Strength Points.

Final Protective Fire (FFP) Strength is the relative ability of an artillery unit to add to the Defense Strength of Friendly units, and is expressed in terms of FFP Strength Points.

Movement Allowance is the maximum number of clear terrain hexes through which a unit may be moved in a single Movement Phase; each such hex requires one Movement Point of the Movement Allowance. More than one Movement Point may be expended for some hexes.

Range Allowance is the maximum number of hexes from the hex of an artillery unit using its FFP or Barrage Strength (exclusive), to the defending unit’s hex (inclusive).

[2.4] GAME SCALE

Each hexagon on the map sheet represents from 500 to 2000 meters of real terrain from side to side. Each Game Turn is the equivalent to twelve to 24 hours of real time.

[2.5] PARTS INVENTORY

<table>
<thead>
<tr>
<th>Foliio Game: Quadrigeame</th>
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</thead>
<tbody>
<tr>
<td>Game Map</td>
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<td>Die-Cut Counter Sheet</td>
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<tr>
<td>Standard Rules Folder</td>
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<td>Exclusive Rules Folder</td>
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<tr>
<td>Die (or Randomizer)</td>
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<tr>
<td>Game Box</td>
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<td>Foliio (Folder)</td>
</tr>
</tbody>
</table>

If any parts are missing or damaged, please write: Customer Service
Simulations Publications, Inc.
44 East 23rd Street
New York, N.Y. 10010

Questions regarding the rules of the game (stated in a “yes” or “no” or multiple choice manner) will be answered, if accompanied by a stamped, self addressed envelope.
[3.0] SETTING UP THE GAME

The cardboard playing pieces should be punched out of the Unit Counter Sheet. The differently colored units represent forces of the opposing sides. The map sheet should be unfolded and then back-folded against the creases to make it lie flat. Players should determine which side each will play. The Players then consult their respective Initial Deployment Charts. These charts tell the strengths of each unit which is in play (on the map) during the first Game-Turn. Unit values are listed as follows: Attack Strength - Defense Strength - Movement Allowance. For artillery units: Barrage Strength - Final Protective Fire Strength - Range Allowance/Defense Strength - Movement Allowance. Units may be assigned specific set-up hexes or Players may be instructed to choose the set-up hexes for these units, in which case, one Player or the other will be instructed to “deploy first.” After all the units in the Initial Deployment have been set-up, all remaining units should be placed aside and brought into play according to the Reinforcement Schedule.

The Scenario Special Rules indicate which Player is the First Player. The Victory Conditions tell how the game is won. Play proceeds according to the Sequence of Play for the number of Game-Turns specified in the Scenario. The Turn Marker is placed on the Turn Record Track in the first space (unless otherwise specified).

[4.0] SEQUENCE OF PLAY

This game is played in successive Game-Turns, composed of alternate Player-Turns. During each Game-Turn, the Players maneuver their units and resolve combat in sequence, according to the following outline and within the limits provided by the rules which follow. At the conclusion of the last Game-Turn, the Victory Conditions are consulted and a winner is determined.

[4.1] SEQUENCE OUTLINE

THE GAME-TURN

The Game-Turn is divided into a First Player-Turn and a Second Player-Turn. The Player whose Player-Turn is currently in progress is termed the “Phasing Player.” The activity which may take place during each Phase is outlined below.

1. FIRST PLAYER-TURN

a. Movement Phase: The Phasing Player may move all, some or none of his units as he desires, within the limits and restrictions of the rules of Movement, Zones of Control, Terrain Effects and Exclusive Rules of the game. The Phasing Player may bring Reinforcements onto the map as allowed by his Reinforcement Schedule and the Reinforcement Rules. The non-Phasing Player may not move his units.

b. Combat Phase: The Phasing Player uses his units to attack the non-Phasing Player’s units. The Phasing Player may execute his attacks in any order he desires. Each attack follows this sub-sequence, where appropriate:
   a. The Phasing Player states the number and strength of his attacking ground units.
   b. The Phasing Player allocates Barrage Strength Points (if he wishes) from both Artillery units and Ground Support Points.
   c. The non-Phasing Player allocates Final Protective Fire Strength (if he wishes) from non-adjacent Artillery units and Ground Support Points.
   d. The Combat Differential (total attacking strength minus total defending strength) is calculated, the terrain type occupied by the defending unit is found and the combat differential column from that line is consulted. The die is rolled under that heading (see Combat Results Table) and the indicated result is immediately applied.
   e. During the Combat Phase, neither Player may move his units, except when called for as a result of combat.

2. SECOND PLAYER-TURN

The Second Player now becomes the Phasing Player and executes Movement and Combat in the sequence described above.

3. GAME-TURN RECORD INTERPHASE

The Turn Marker is advanced one space along the Turn Record Track, signaling the start of a new Game-Turn.

[5.0] MOVEMENT

GENERAL RULE:

During his Movement Phase, the Phasing Player may move as many or as few of his units as he desires. The units may be moved in any direction or combination of directions.

PROCEDURE:

Units are moved one at a time, tracing a path of contiguous hexes through the hex grid. As each unit enters a hex, the unit pays one or more Movement Points from its Movement Allowance.

CASES:

[5.1] MOVEMENT RESTRICTIONS AND PROHIBITIONS

- Movement may never take place out of sequence. A Player’s units may be moved only during his own Movement Phase. During the Combat Phase, a unit which is either attacking or defending may be called upon to advance or retreat after combat is completed. During the Enemy Player’s Movement Phase and during both Players’ Combat Phases, except when advancing or retreating as a result of combat, Friendly units must not be moved.

- A Friendly unit may never enter a hex containing an Enemy unit.

- A unit may never expend more Movement Points than its total Movement Allowance in any one Movement Phase. A unit may expend all, some or none of its Movement Points in any one Game-Turn, but unused Movement Points may not be accumulated until another Movement Phase or transferred to another unit.

- A unit may never exit an Enemy-controlled hex during any Movement Phase. An Enemy-controlled hex may be left only during a retreat or advance as a result of combat (unless otherwise noted in the Exclusive Rules).

- Once a unit has been moved and the Player’s hand taken from the piece, it may not be moved any further during the Player-Turn nor may it change its move without the consent of the opposing Player.

- There are no supply rules (unless otherwise noted in a specific game’s Exclusive Rules). Units are considered to be “in supply” at all times. Isolation has no effect on movement or combat.

[5.2] EFFECTS OF TERRAIN

- A unit must expend one Movement Point to enter a clear terrain hex. To enter other types of hexes, a unit must expend more than one Movement Point. When the Terrain Effects Chart calls for a Movement Point expenditure to cross a terrain hexside, this cost is in addition to the terrain cost for entering the hex. Movement Point costs are summarized on the Terrain Key on the map. Movement Point costs are cumulative.

- A unit which moves from one road hex directly to an adjacent road hex through a road hexside expends only ½ Movement Point, regardless of other terrain in the hex.

- A unit which moves from one trail hex directly into an adjacent trail hex through a trail hexside expends one Movement Point, regardless of other terrain in the hex.

- Armored, reconnaissance, mechanized and self-propelled artillery units may never enter a rough, broken or forest hex, or pass through a river or stream hexside, except through road or trail hexsides. If forced to retreat through a non-road, non-trail hexside into a rough, broken or forest hex or across a river or stream hexside, units of the type listed above are eliminated instead.

- A unit may not enter a hex if it does not have sufficient Movement Points remaining to pay the Movement Point cost to enter the hex itself and the hexside being crossed.

[5.3] EFFECTS OF OTHER FRIENDLY UNITS

- A Friendly unit may move through hexes occupied by other Friendly units (at no extra Movement Point cost), but may not end the Movement or Combat Phases stacked in the same hex with another Friendly unit. Stacking is prohibited.

- There is no limit to the number of Friendly units that may pass through a single hex in a Game-Turn.

- Friendly-controlled hexes never interfere with Friendly movement.

[6.0] ZONES OF CONTROL

GENERAL RULE:

The six hexes immediately surrounding a hex constitute the Zone of Control (ZOC) of any unit in that hex. Hexes upon which a unit exerts a Zone of Control are called Controlled Hexes and inhibit the movement of Enemy units: All units must cease movement when they enter an Enemy-controlled hex.

CASES:

[6.1] EFFECTS OF MOVEMENT

- All units exert a Zone of Control at all times, regardless of the Player or Turn-During the entire Game-Turn. The presence of Zones of Control is never affected by other units, Enemy or Friendly.

- Units do not pay any additional Movement Points to enter an Enemy-controlled hex.

- There are only two ways to exit a hex in an Enemy Zone of Control: Either by retreat or advance as a result of combat, or by removal of the Enemy unit exerting the Zone of Control as a result of combat.

[6.2] MULTIPLE ZONES

- If there are both Enemy and Friendly Zones of Control cast over a given hex, they have no effect on each other: both Zones co-exist and the hex is mutually controlled by both Players.

- There is no additional effect when more than one unit casts its Zone of Control onto a given hex.

- Obviously, if a given unit is in an Enemy-controlled hex, the Enemy unit is also in its controlled hex. The two units are equally and mutually affected.

[6.3] EFFECTS OF TERRAIN

- Zones of Control extend into all types of terrain hexes and across all types of terrain hexsides, except those prohibited to all unit types.
[6.32] Zones of Control of armored, reconnaissance, mechanized and self-propelled artillery do extend into broken, rough and woods hexes, and these units may attack into these terrain types, even though they may not enter them.

[6.33] Zones of Control never extend through non-bridge river hexides, and Non-Artillery units may never attack across non-bridge river hexides. All Zones of Control do, however, extend across non-bridge stream hexides, and units may attack across them. (Perry’s are non-bridge hexides.)

Example:

![Diagram]

[7.0] COMBAT

GENERAL RULE:
Combat between adjacent opposing units is mandatory. Artillery units (8.0) are the only units which may attack units to which they are not adjacent. See also Ground Support Rules (9.0).

The Phasing Player is termed the attacker; the other Player, the defender, regardless of the overall strategic situation.

PROCEDURE:
Total the Attack Strength, Barrage Strength and Ground Support Strength of all attacking units involved in a specific attack; total the Defense Strength and the Final Protective Fire of all units which are the object of a specific attack. Subtract the total Strength of the defending units from the total Strength of the attacking units. The result is the Combat Differential expressed in Points. It may be either a positive or a negative number.

Consult the Combat Results Table, and find the terrain-type which the defending unit occupies. Directly across that line, find the appropriate Combat Differential Column. Roll the die under that column heading, and then apply any Combat Results immediately, before resolving any additional attacks that are being made in the same Combat Phase. Example: If thirteen Strength Points were attacking a unit with four Strength Points in a Town hex, the Combat Differential would be +9. The attack would be resolved at +9.11 on the line corresponding to Town terrain. (A die roll of five would result in a D-1.)

Having determined the proper column on the Combat Results Table (7.6.1), the attacker rolls the die. The result indicates a line which is cross-indexed with the proper column. The intersection of line and column yields a Combat Result. This should be immediately applied to the involved units, before going on to resolve any other combat. Separate combat results may be resolved in any order that the attacker wishes, so long as all combat are resolved during that Combat Phase.

CASES:

[7.1] WHICH UNITS ATTACK

[7.1.1] Every non-Phasing unit that has a Phasing unit adjacent to it must be attacked by some Phasing unit during that Combat Phase. The Phasing Player may resolve these attacks in any fashion desired, as long as all adjacent units are attacked within the requirements of Case 7.2.

[7.1.2] All of the Phasing Player’s units which end the Movement Phase in an Enemy-controlled hex must attack some Enemy unit during the ensuing Combat Phase. The Phasing Player may choose which units will attack each defending unit, as long as all adjacent Friendly units participate in an attack.

[7.1.3] A defending unit may be attacked by as many as six adjacent units, with possible additional Artillery Barrage Strength (see 8.0) and Ground Support (see 9.0).

[7.1.4] No unit may attack more than once per Combat Phase, and no Enemy unit may be attacked more than once per Combat Phase.

[7.1.5] Non-Artillery units may only attack if in a hex adjacent to the defending unit(s).

[7.2] MULTIPLE UNIT AND MULTI-HEX COMBAT

[7.2.1] If a Phasing Player’s unit is in the Zone of Control of more than one Enemy unit, it must attack all those adjacent Enemy units which are not engaged by some other attacking unit.

[7.2.2] Units in two or more different hexes may combine their Combat Strengths and attack a single hex, if all the attacking units are adjacent to (or within range of) the Enemy-occupied hex.

[7.2.3] Attacks may involve any number of attacking or defending units. For the attacks to be resolved as a single combat, however, all the attacking units must be adjacent to all the defending units, with the addition of Barraging Artillery units, which need not be adjacent.

[7.3] COMBAT STRENGTH UNITY

A given unit’s Attack and Defense Strengths are always unitary. That is, a unit’s Strength may not be divided among different combat, either for attack or defense.

[7.4] EFFECTS OF TERRAIN

[7.4.1] Defending units, only, benefit from the terrain in the hex they occupy and/or that hex’s perimeter hexides. Terrain in hexes occupied by attacking units has no effect on combat.

[7.4.2] Defending units do not benefit from Stream hexides unless all attacking units that defending unit(s) is attacking across Stream hexides.

[7.4.3] The effect of terrain (on combat) has been integrated into the Combat Results Table. Simply find the terrain which the defending unit benefits from, trace over to the proper Combat Differential Column, and roll the die under that column heading.

[7.4.4] A defending unit always benefits from the most advantageous terrain to which it is entitled. Example: An attack against a unit in rough terrain behind a stream might be resolved at the rough terrain line of the Combat Results Table.

[7.4.5] When two or more defending units are being attacked in a single combat and are on two different types of terrain, each having a different Combat Differential line, then all defending units benefit from the applicable terrain most favorable to the defender.

[7.5] DIVERSIONARY ATTACKS

[7.5.1] In making a series of attacks, a Player may allocate his attacking units so that some attacks are made at “poor” Differentials, so that adjacent attacks may be made at more advantageous Differentials (by attacking force to the major objectives). These attacks are known as diversionary or holding attacks.

[7.5.2] The Phasing Player may never voluntarily reduce the Differential of any given attack.

[7.6] COMBAT RESOLUTION

[7.6.1] Combat Results Table (See Exclusive Rules.)

[7.6.2] Explanation of Combat Results

D1, 2, 3, or 4 = Defender Retreats: the indicated number of hexes (1, 2, 3, 4). Each Player retreats his own units. He must retreat his units in accordance with the Retreat Rules (See Case 7.7). Units must retreat across prohibited hexides (see Terrain Key).

A1 or 2 = Attacker Retreats: the indicated number of hexes.

Br = Both the attacking and defending units must retreat one hex. The defender retreats first. (Thus, if the defending unit is surrounded by units or Zones of Control, it is eliminated.) The attacking units then retreat.

Ae = Attacker Eliminated: All attacking units are eliminated. Defender may advance into the hex.

De = Defender Eliminated: All defending units are eliminated. Attacker may advance into the hex.

[7.7] HOW TO RETREAT

When the Combat Result requires a Player’s units be retreated, the Owing Player must immediately move those units the indicated number of hexes away from their combat position. This movement is not normal movement and is subject to the following restrictions. If the unit is unable to retreat within these restrictions, it is eliminated instead.

[7.7.1] In retreating, a unit may initially leave an Enemy-controlled hex; thereafter, it may not enter an Enemy-controlled hex. Friendly units do not negate Enemy Zones of Control for purposes of retreat.

[7.7.2] A retreating unit may not cross a prohibited hexide (see Terrain Key and Case 5.24).

[7.7.3] Where possible, a retreating unit must retreat into and through vacant hexes. If no other route is available, the retreating unit may move through Friendly occupied hexes, displacing every Friendly unit whose hex it moves through or into (see Case 7.8).

[7.7.4] In all cases, the retreating unit must terminate its retreat the Combat Result-indicated number of hexes away from its former combat position. If it cannot, and can retreat only a portion of the number of obligated hexes, it is eliminated in the last hexes to which it is able to retreat. The retreat path (see Case 7.91) terminates in the hex a unit is eliminated in.

[7.8] DISPLACEMENT

[7.8.1] If Friendly units occupy hexes in the only possible retreat route available to a retreating unit, those Friendly units are displaced (moved out of their hexes) by the retreating unit. The displaced unit is moved one hex (by the Owning Player) as if it were itself retreating. Then, the retreating unit enters the vacated hexes. If necessary, continues its retreat. The retreating unit may displace as many units as necessary to retreat the indicated number of hexes.

[7.8.2] If the displacement would cause any of the displaced units to be eliminated, the retreating unit is eliminated instead. Displaced units can themselves displace other Friendly units in a sort of chaining reaction of displacement. If that is the only permitted path of displacement open to the retreating unit, a unit may be displaced more than once per Combat Phase, if that is the only alternative. Displaced Artillery units which have not yet engaged in combat, may not fire during that Combat Phase. Units may not displace other Friendly units if they have other paths of retreat open to them.

[7.8.3] If a retreating unit displaces a unit in a hex which the Phasing Player had intended to Barrage...
[7.9] ADVANCE AFTER COMBAT
[7.91] Whenever an Enemy unit is forced to retreat (or is eliminated) as a result of combat, it will leave a path of vacant hexes behind it called the Path of Retreat (this includes hexes vacated pursuant to Case 7.74). Any or all Friendly victorious units which participated in the combat and were adjacent to the retreated unit are allowed to advance along the Enemy Path of Retreat.
[7.92] The advancing victorious units may cease advancing at any hex along the Path of Retreat.
[7.93] Advancing victorious units may ignore Enemy Zones of Control.
[7.94] Only victorious units which were adjacent to the retreating unit during the combat and participated in that combat may advance. Non-adjacent Artillery units may not advance after combat.
[7.95] An advancing unit may not stray from the Path of Retreat.
[7.96] The option to advance must be exercised immediately, before any other combat resolution. Units are never forced to advance after combat. After advancing, they may not attack or be attacked in that phase (see Case 7.14), even if they are not in the healing range or be resolved, or who were not involved in combat. However, advances are useful in cutting off the retreat of Enemy units whose combat has not yet been resolved.
[7.97] Example: A defeated unit retreating three hexes may be blocked by up to three victorious units in its Path of Retreat.

[8.0] ARTILLERY
GENERAL RULE:
Artillery units may participate in combat from adjacent and non-adjacent hexes. The artillery unit's Barrage Attack Strength may be used to attack Enemy units. The artillery unit's final Protective Fire Strength may be used to supplement the Defense Strength of other Friendly defending units. In either case, Artillery units need not be adjacent to, but must be in range of the defending unit. An Artillery unit may use both its Barrage Strength and Final Protective Fire Strength in a single Game-Turn. When attacked, an Artillery unit defends itself with its own Defense Strength.

CASES:
[8.1] BARRAGE ATTACKS
[8.11] Artillery units may attack non-adjacent Enemy units up to the extent of their Range Allowance, but they are never forced to attack an Enemy unit merely because it is within range.

[8.44] When an Artillery unit supplies FPF, it neither benefits nor suffers from the Combat Result.
[8.45] FPF may not be used to supplement the Defense Strength of a Friendly unit which is under attack solely by Enemy Artillery (either adjacent or non-adjacent) and/or Ground Support.
[8.46] Each Artillery unit may use its Final Protective Fire only once per Game-Turn.

[8.5] DEFENSE
When an Artillery unit is attacked in any fashion, it uses its Defense Strength not FPF.

[8.6] TERRAIN EFFECTS
[8.61] Artillery may use its Barrage or FPF Strength anywhere within its Range Allowance, regardless of intervening terrain or units (either Friendly or Enemy).
[8.62] Defending units benefit fully from terrain in the hex they occupy when attacked by Artillery (regardless of range). Defending units do not receive any hexside benefits if attacked solely by Artillery and/or Ground Support. Defending units do receive hexside benefits if they are subject to a Combined Attack involving non-Artillery units, all of which are attacking across the terrain hexside type in question.

[9.0] GROUND SUPPORT
GENERAL RULE:
Some Artillery and/or Air Power in the game are not represented by units, but rather by the allocation of Ground Support Points on a Game-Turn by Game-Turn basis. These Points are allotted in the Scenario. The Players must record (on scratch paper) the allocation and expenditure of Ground Support Points. Ground Support Points are presumed to come from outside the playing area and do not have any range limitations (unless otherwise stated in the Exclusive Rules).

PROCEDURE:
Ground Support Points may be used during any Combat Phase, exactly as if they were Artillery, and can function as Barrage and FPF. Example: A Player has ten Ground Support Points allocated in a given Game-Turn. When he is the Phasing Player, he may use these Points as Barrage Strength Points. When he is the non-Phasing Player, he may use these same Points as FPF.

CASE:
[9.1] RESTRICTIONS AND PROHIBITIONS
[9.11] One Ground Support Point equals one Artillery Strength Point (both Barrage and FPF).
[9.12] A Player may assign all available Ground Support Points to one target unit, or he may split them up between as many targets as he sees fit.
[9.13] Ground Support Points have unlimited range. They may attack any Enemy unit on the map.
[9.14] Ground Support may not be accumulated from Game-Turn to Game-Turn. If they are not used in the Game-Turn allocated by the Scenario, they are lost.
### [7.61] INTEGRATED COMBAT RESULTS TABLE

<table>
<thead>
<tr>
<th>Terrain Type</th>
<th>Combat Differential (Attacking Strength minus Defending Strength)</th>
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<tr>
<td>Rough</td>
<td>-2 -1 0 +1 +2,3 +4,5 +6-8 +9-11 +12</td>
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<td>Broken, Town</td>
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<td>Woods, Stream</td>
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<tr>
<td></td>
<td>Ae</td>
<td>Ae</td>
<td>A2</td>
<td>A1</td>
<td>A1</td>
<td>Br</td>
</tr>
</tbody>
</table>

Attacks at less than the lowest differential are resolved at the lowest differential. Attacks at greater than +12 are resolved as +12 attacks.

**EXPLANATION OF RESULTS:**
- **Ae** = Attacker Eliminated;
- **A1, 2** = Attacker retreats the indicated number of hexes;
- **Br** = Attacker and defender retreat one hex, defender first;
- **D1,2,3,4** = Defender retreats the indicated number of hexes;
- **De** = Defender eliminated.
[10.0] INTRODUCTION

Arnhem is a simulation on the operational level of combat between German and Allied forces during Operation Market-Garden in September of 1944. Three Allied airborne divisions were dropped up to sixty miles behind German lines in an attempt to establish a bridgehead over the Neder Rijn at Arnhem.

[11.0] CITY HEXES

GENERAL RULE:
Certain hexes on the map are designated City hexes. These hexes are treated exactly like Town hexes with the following exceptions.

[11.1] EFFECTS ON COMBAT

Units occupying, entering or retreating into City hexes may reduce all remaining retreat results by two hexes. Thus a remaining retreat of D1/D2 or Br may, at the Owning Player’s option, become “no effect” results. A1 or A2 may also be treated as “no effect” results. All “elimination” results are treated normally. A D3 must result in a retreat of at least one hex, and a D4 must result in a retreat of at least two hexes. In all other ways, units in City hexes are treated as though they were in normal Town hexes. [Airborne artillery receive no reduction.]

[12.0] CANAL AND RAIL BRIDGE DEMOLITION

GENERAL RULE:
All Canal and Railroad Bridges are subject to demolition. Highway Bridges over Rivers are never subject to demolition at any point (see Terrain Key). All Bridges’ effects on Movement are identical.

[12.1] HOW BRIDGES ARE REPAIRED

Only Canal Bridges may be repaired. They may only be repaired by the Allied Engineer unit (see Section 13.0). Railroad Bridges may not be repaired.

[12.2] PLAYS MUST RECORD ON A SEPARATE PIECE OF PAPER WHICH BRIDGES ARE CONSIDERED DESTROYED AND WHICH INTACT.

[13.0] ALLIED ENGINEER UNIT

GENERAL RULE:
The Allied Engineer unit is an abstracted unit which represents the various Engineer organizations available to the Allied ground forces in the game. The Engineer unit is able to perform certain special functions: 1) It may repair previously demolished Canal Bridges. 2) It may assist Allied airborne and glider units in crossing River hexes. It may perform either of these functions any number of times.

CASES:

[13.1] REPAIR OF PREVIOUSLY DEMOLISHED CANAL BRIDGES

To repair a previously demolished Canal Bridge, the Engineer unit must remain stationary in a hex adjacent to the demolished Canal Bridge hexside free of Enemy Zones of Control for an entire German Player-Turn. If the above conditions are met, the Bridge is considered to have been repaired and functions as a normal Bridge for the remainder of the game.

The Engineer unit may repair as many Bridges as it is adjacent to in one German Player-Turn.

[13.2] ASSISTING IN RIVER CROSSING AND ASSAULT

[13.21] When, during any Allied Movement Phase, the Engineer unit is adjacent to a River hexside the Allied Player may use it to allow airborne and glider units to cross the River in that or subsequent Movement Phases. This is done provided the Engineer spends no additional Movement Points during that Allied Player-Turn, and is free of Enemy Zones of Control.

[13.22] In order for an airborne or glider unit to use the Engineer unit in crossing the River, it must pass through the Engineer unit’s hex and then into the hex on the other side of the River (vice-versa), paying the appropriate cost for the terrain in the hex. The crossing unit does not pay any additional MP’s for the River hexside.

[13.23] Airborne and glider units may pass through all hexes adjacent to the Engineer unit. They may cross the River with aid of the Engineer unit into an Enemy-controlled hex. [Airborne artillery units may not make such crossings.]

[13.24] One airborne or glider unit may end the Movement Phase stacked with the Engineer unit. The unit must attack one adjacent Enemy unit through a River hexside to which it is adjacent. This is a special exception to the rules prohibiting stacking and attack through River hexes. The attack is resolved on the “Stream” line of the Combat Results Table. If it is unable to advance after combat through the River hexside, it is immediately eliminated.

[13.25] Allied units may never retreat after combat through any River hexside, or out of the hex containing the Engineer unit (they are eliminated instead). German units may never advance after combat across a River hexside.

[13.3] REPLACEMENT OF ENGINEER UNIT

If the Engineer unit is eliminated, it re-enters the
game map on the following Allied Movement Phase at hex 0105 or 0106. This represents a replacement unit and the destroyed unit does not count towards Victory Points.

[14.0] ARTILLERY AND GROUND SUPPORT POINTS

GENERAL RULE:
Restrictions are placed on the use of Ground Support Points and the use of Artillery units and their ability to function in the game. These restrictions reflect the poor coordination of Artillery and Allied Tactical Air Support.

[14.1] RESTRICTIONS

Only the Allied Player receives Ground Support Points; these points may only be applied as FPF or Barrage Strength Points within three hexes of any Allied non-airborne unit.

[14.1.2] Artillery Restrictions
Neither Player may use more than two Artillery units in any single Combat in any Phase for either Barrage or FPF. There is no such restriction for Support Points.

[15.0] REINFORCEMENTS

GENERAL RULE:
Both Players receive Reinforcements. These appear during the Owning Player’s Movement Phase on the Game-Turn indicated on the Reinforcement chart. The Movement Schedule states the Game-Turn of appearance, the number of units, the Strength and Movement Value and specific hex or map edge on which they enter.

PROCEDURE:
During his Movement Phase, the Owning Player places a Reinforcing unit in the scheduled hex or on any mapedge hex between the specified hexes (inclusive). The Owning Player may place them at any time during his Movement Phase.

CASES:

[15.1] MOVEMENT OF GROUND REINFORCEMENTS

[15.1.1] Reinforcements are presumed to be poised adjacent to the map. When placed on the map a Reinforcing unit expands Movement Points to enter the entry hex according to the Terrain Key. In almost all cases, the Reinforcements are entered onto a hex which has a road leading off the map; these units expand Movement Points at the road movement rate to enter the map.

[15.1.2] In several cases, more than one unit is scheduled to appear in the same hex on the same Game-Turn. These units are deployed off map, one behind the other, with the lead unit poised adjacent to the map entry hex itself. If the entry hex is a road hex, a hypothetical road may be presumed to stretch off the map, away from the entry hex.

[15.1.3] As each unit enters the map, it will pay the cost for entering the entry hex, plus any additional cost for any hypothetical clear terrain hexes that it would have to traverse to reach the entry hex. If units are entering on a road hex, they are considered to be moving through hypothetical road hexes until they reach the map. Example: The lead unit in the column would pay ½ Movement Point to enter the map; the second unit would pay 1 Movement Point to enter the map; the third, ½ Movement Points, etc.

[15.1.4] Once on the map, Reinforcements may be moved normally. The Owning Player may begin the arrival of his Reinforcements at any time during his Movement Phase.

[15.2] RESTRICTIONS

[15.2.1] Reinforcements may not enter a hex which is, at that point, occupied by an Enemy unit. A Reinforcing unit may enter an Enemy-controlled hex but it must cease movement therein.

[15.2.2] If, and only if, a scheduled entry hex is occupied by an Enemy unit, or a Friendly unit in an Enemy Zone of Control, the Reinforcement unit may enter the nearest unblocked map edge hex to the scheduled hex, in the direction of the nearest Friendly unit.

[15.2.3] A Player may deliberately withhold Reinforcements from Game-Turn to Game-Turn, bringing them into play (if at all) on some later Turn.

[15.2.4] Regardless of whether a Reinforcement unit is brought into play on its scheduled Turn, it must appear in its scheduled hex or alternate (see Case 15.2.2).

[15.2.5] Until they enter the map, Reinforcements have no effect on play; they may in no fashion attack Enemy units or hinder their movement until they enter the map.

[15.3] AIRBORNE REINFORCEMENTS

Only the Allied Player receives airborne reinforcements. These reinforcements are treated differently from normal reinforcements, according to the following rules. (German reinforcements designated as airborne are treated as normal infantry units.)

[15.3.1] How Airborne Reinforcements Arrive
On the Reinforcement Schedule, airborne Reinforcements are listed as arriving within one hex of a specific hex. During his Movement Phase, the Allied Player may place the airborne reinforcements anywhere within one hex of the specified hex. Only one unit may be placed per hex. Airborne Reinforcements may arrive in an Enemy Zone of Control; they may not arrive in an Enemy-occupied hex. If forced to arrive in an Enemy-occupied hex, they are immediately eliminated.

[15.3.2] Movement Restrictions on the Turn of Arrival.
During the Turn on which airborne Reinforcements arrive on the map, they have a Movement Allowance of three. They are considered to have been redeployed from Movement Points upon arrival. After their initial Game-Turn on the map, airborne units may use their full, prearranged Movement Allowance.

[15.3.3] Airborne units may not land in hexes occupied by Friendly or Enemy units. If airborne units are forced to land in any occupied hexes, they are eliminated instead.

[15.3.4] Delay of Airborne Reinforcements
Airborne Reinforcements may only be delayed if Weather Rules are being used. If the Allied Player chooses to delay his airborne Reinforcements, they may arrive on any subsequent fair weather Turn.

[15.3.5] Airborne Supply Drop Zone (DZ) Counters

These counters are not units, but represent the “center” of the airborne division’s operating areas. It was necessary for command and control purposes, as well as supply and division cohesion. These counters do not have a Zone of Control or a Combat Strength. Both Players may move freely through them, and the Movement Phase stacked with them. They may never be destroyed, although they may be overrun by German units. See the rules relating to Lines of Communication (17.3).

[15.3.6] Placement of DZ Counters

In Scenario 18.1, DZ counters must be placed in the specified hexes. In Scenario 18.2, they may be placed in any hex at the Allied Player’s discretion. Before play begins, the Allied Player secretly notes the numbers of the hexes in which he wishes to deploy his DZ Counters. The Player then places his initial forces. After the German units are in place, the Allied Player places the DZ counters as he has noted them. Play of the game then begins.

[15.3.7] The Allied Player may deploy his DZ counters anywhere on the map, within the following restrictions:

1) The hex of placement must be at least three hexes away from the nearest City hex or Bridged Hexside.
2) DZ counters must be placed at least 14 hexes away from each other.

[15.3.8] It is possible for DZ counters to be placed in a hex occupied by German units. This has no effect on the combat value of the Allied units scheduled to drop around that Drop Zone counter.

[15.3.9] Optionally, the Allied Player may delay placement of any or all DZ counters until later Game-Turns. The placement of these DZ counters is noted at the beginning of the game, but placement may be delayed until after the first Game-Turn. The Turn on which it is to be placed must also be noted at the beginning of the game. The airborne units of the division bearing the number of the delayed DZ counter(s) may not be dropped until the DZ counter is placed on the map. The DZ counter may not be placed during any Poor Weather Game-Turn (see Case 16.1.1).

[15.4] EXITING THE MAP

Only the German Player may exit his units from the map. An exiting unit must expend Movement Points to enter an imaginary hex presumed to be adjacent to the map edge. The terrain in this imaginary hex is presumed to be similar to the terrain in the hex from which the unit exited.

[15.4.1] Where German Units Are Exit
German units may only exit the map in certain areas. They may exit the west side of the map between hexes 0601 and 2301, inclusive. They may exit the east side of the map between hexes 0126 and 2726, inclusive. German units may not voluntarily exit from any other map edges.

[15.4.2] Effects on Exited German Units
German units which exit the map are available as reinforcements. They may be taken as reinforcements on any subsequent Game-Turn. Units which exited the west side of the map are available as reinforcements only on the west side of the map between hexes 0601 and 2301, inclusive. Units which exited from the east side of the map are available as reinforcements only on the east side of the map between hexes 0126 and 0726, inclusive.

[15.4.3] When Units May Exit
German units may only exit the map during the Movement Phase of the German Player-Turn. A unit may not exit the map as a result of combat. If it does so, then it is eliminated.

[16.0] WEATHER

[Optional in the Historical Scenario, Mandatory in the Alternate Plan Scenario]

COMMENTARY:
The weather throughout Operation Market-Garden was of considerable importance. The last three days of the operation, for example, made it impossible for Allied aircraft to operate effectively.
Some [Montgomery, for example] contend that, had the weather been better, the Allies would have won the battle decisively. September weather around the North Sea is variable, at best, but the Allies did not have particularly good "luck."

**GENERAL RULE:**

There are three grades of weather: Good, Fair, and Poor. Weather on the First Game-Turn is considered to be Good in all Scenarios. Beginning on the Second and all subsequent Game-Turns, the Allied Player rolls a die to determine the weather for the entire Game-Turn.

**PROCEDURE:**

Immediately preceding the Allied Movement Phase, a die roll is made. A die roll of "1" means that the weather remains the same as it was on the previous Game-Turn. A die roll of "2" means that the weather is Good. A die roll of "3" or "4" means that the weather is Fair. A die roll of "5" or "6" means that the weather is Poor.

**CASES:**

16.1] EFFECTS OF WEATHER ON AIRBORNE REINFORCEMENTS

16.1.1] When using the weather rules, Allied Airborne Reinforcements must arrive within seven hexes of the Drop Zone marker which matches their divisional designation. They may not arrive in any City hex or any hex adjacent to a City hex. [When not using this rule, Airborne Reinforcements arrive in the hexes specified in Case 18.13.]

16.1.2] Allied Airborne Reinforcements arrive only during Good and Fair Weather Game-Turns, as follows:

- On the first and all subsequent Good Weather Game-Turns — 25 Airborne units of the Allied Player’s choice.
- On the first and all subsequent Fair Weather Game-Turns — 5 Airborne units of the Allied Player’s choice.
- On the first and all subsequent Poor Weather Game-Turns — No Airborne Reinforcements may be taken.

16.2] EFFECTS OF WEATHER ON ALLIED GROUND SUPPORT POINTS

The availability of Allied Ground Support Points is contingent upon Good or Fair weather in the Game-Turn and they are available as follows:

- On Poor Weather Game-Turns — The Allied Player receives no Ground Support Points.

16.3] OTHER EFFECTS

Weather has no effect on movement, or any other aspects of play, except those in 16.1 and 16.2.

16.0] VICTORY CONDITIONS

**COMMENTARY:**

It is important for the Allied Player to realize that he has available two distinct types of combat units. One type is airborne (airborne, airborne artillery and glider), and the other is ground troops of the XXX Corps (essentially, all those units which enter the game on the southern mapedge). The Allied Player may only win decisively if he pushes his ground troops (at least the bulk of them) north of the Waal River, and uses his airborne units, with the aid of some ground units, to keep open a Line of Communication to those units north of the Waal.

**GENERAL RULE:**

Victory is judged at the end of the game on the basis of Victory Points scored by the Players during the course of play and at the end of the game. Victory Points are awarded to the Allied Player primarily for the achievement of geographical objectives and secondarily for the elimination of German units. Victory Points are awarded to the German Player for eliminating Allied units and for Allied units which are unable to trace an appropriate Line of Communications.

**PROCEDURE:**

There is no Victory Point Record Chart. Players must keep track of Victory Points on a piece of scratch paper.

**CASES:**

16.1] VICTORY POINT SCHEDULE

16.1.1] Points Awarded the Allied Player

1. The Allied Player receives one Victory Point for every German unit eliminated.
2. The Allied Player receives three Victory Points for every non-airborne, non-glider unit north of the Waal River (2726-3005) at the end of each Game-Turn, if the unit in question can trace a Line of Communication (see Case 17.3).
3. The Allied Player receives ten Victory Points for every non-airborne, non-glider unit north of the Neder Rijn (between hexes 3760 and 3424) at the end of the game, if the unit in question can trace a Line of Communication off the map at the end of the game.

16.1.2] Points Awarded the German Player

1. The German Player receives five Victory Points for every Allied unit destroyed.
2. The German Player receives three Victory Points at the end of each Game-Turn for every Allied unit which is unable to trace an appropriate Line of Communications.

16.2] TERRITORIAL OBJECTIVES

Only the Allied Player receives Victory Points for the attainment of geographical objectives, as listed in the Victory Point Schedule. These Points are awarded to the Allied Player at the end of each Game-Turn for units of the appropriate type which have achieved the geographical objectives and can trace a Line of Communications.

16.3] LINE OF COMMUNICATION

All Allied units in the game (except the Polish units) are subject to rules governing Lines of Communication. Lines of Communication are traced differently for Airborne and non-Airborne units [glider units are considered "airborne"].

16.3.1] Non-airborne units must trace a Line of Communication off the southern map edge at hex 0105 or 0106. The Line of Communication is a series of contiguous hexes. Once the line is traced into a trail hex, all remaining hexes must be connected by road or trail hexides. Once traced into a road hex, all remaining hexes must be connected by Road hexides.

16.3.2] Airborne units (all the units, except Polish units, which enter the game as Airborne Reinforcements) must trace a Line of Communication to the Airborne Supply Drop Zone marker which matches their divisional designation. The Line of Communication may be traced through any type of hexes, but may be no more than seven hexes in length.

16.3.3] Lines of Communication may never be traced into or through Enemy units or Enemy Zones of Control. Friendly units, however, do negate Enemy Zones of Control for purposes of tracing a Line of Communication.

16.3.4] Lines of Communication may never be traced through unbridged River or Stream hexides.

16.3.5] Lines of Communication are traced at the end of each German Player-Turn, and the German Player is awarded three Victory Points for every Allied unit which is unable to trace an appropriate line for each Turn which it is unable to do so.

17.36] Polish units which are controlled by the Allied Player, and all German units, are never subject to the rules governing Lines of Communication.

17.4] LEVELS OF VICTORY

Victory is determined by comparing the total Victory Points won by each Player, stating the comparison as a ratio (German Player to Allied Player) and evaluating the ratio against the schedule below.

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Victory Level</th>
<th>German Strategic</th>
<th>Allied Tactical</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 or more to 1</td>
<td>German Strategic</td>
<td>German Tactical</td>
<td></td>
</tr>
<tr>
<td>2.0 to 1</td>
<td>Draw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 and 1.99 to 1</td>
<td>Allied Tactical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 or less to 1</td>
<td>Allied Strategic</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[18.0] THE SCENARIOS

**GENERAL RULE:**

Each Scenario specifies each Player’s Initial Order of Battle and Reinforcements. Units are identified by their Strength and Movement values, as well as by their historical designation. Units must be deployed in the map area or specific hexes listed.

**PROCEDURE:**

Place a unit in the specified type on each of the hexes listed for that type. Hex numbers are shown in parentheses following each unit’s designation. Unit designations are important for play of the game; Allied airborne, glider and airborne artillery units must be set up according to their historical designations.

**CASES:**

[18.1] SCENARIO 1: Historical Scenario

18.1.1] ALLIED INITIAL DEPLOYMENT

<table>
<thead>
<tr>
<th>Unit Type</th>
<th>X</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft</td>
<td>3-3-7</td>
<td>Hex</td>
</tr>
<tr>
<td>Unit Type</td>
<td>4-4-7</td>
<td>Hex</td>
</tr>
<tr>
<td>Unit Type</td>
<td>2-2-12</td>
<td>Hex</td>
</tr>
<tr>
<td>Unit Type</td>
<td>2-2-7</td>
<td>Hex</td>
</tr>
</tbody>
</table>

[18.12] ALLIED AIRBORNE REINFORCEMENTS

Airborne Reinforcements are placed at one of the hexes specified in this Scenario (see Case 16.11).
[18.14] ALLIED GROUND REINFORCEMENT SCHEDULE

Ground Reinforcements enter the map on hex 0106 or 0105 (see Case 15.1).

On Game-Turn Two:

| Unit Type: | 4-3-10 | Designation: | 31/32, 2D/231 |
| Unit Type: | 3-3-7 | Designations: | 31/32, 2D/231 |
| Unit Type: | 4-2-7-3-10 | Designation: | 55 |
| Unit Type: | 3-3-10 | Designation: | Engineer |

On Game-Turn Three:

| Unit Type: | 2-1/3-4-3-10 | Designations: | 15/19, 44 |
| Unit Type: | 4-3-10 | Designations: | 31/32, 2D/231 |
| Unit Type: | 5-5-7 | Designations: | 32, 129 |
| Unit Type: | 4-2-7-2-6 | Designation: | 153 |

On Game-Turn Four:

| Unit Type: | 5-5-7 | Designations: | 130, 214 |

On Game-Turn Five:

| Unit Type: | 4-2-7-2-6 | Designations: | 94, 112, 179 |

On Game-Turn Eight:

| Unit Type: | 4-3-10 | Designation: | 3/29 |

[18.15] GERMAN REINFORCEMENT SCHEDULE

German Reinforcements enter the map on hex 0397-3916.

On Game-Turn One:

| Unit Type: | 3-3-7 | Hexes: | 1/6T, 2/6T (3907-3916) |
| Unit Type: | 5-5-10 | Hex: | 31/32 (3925) |
| Unit Type: | 4-4-7 | Hex: | 3/35 (3925) |
| Unit Type: | 3-2-7-3-7 | Hex: | 2/6T (3932) |
| Unit Type: | 2-2-12 | Hex: | 10 (3326) |
| Unit Type: | 3-3-10 | Hex: | 2/6T (3326) |

On Game-Turn Two:

| Unit Type: | 3-3-7 | Hex: | 3/35 (3907-3916) |
| Unit Type: | 5-5-10 | Hex: | 31/32 (3926) |
| Unit Type: | 4-4-7 | Hex: | 31/32 (3927) |

On Game-Turn Three:

| Unit Type: | 2-2-7 | Hex: | 1/6PT (3926-3928) |
| Unit Type: | 3-2-7-3-7 | Hex: | 95 (3925) |
| Unit Type: | 3-4-7 | Hex: | 2/6T (3326) |
| Unit Type: | 4-3-10 | Hex: | 2/6T (3326) |
| Unit Type: | 2-2-7-2-7 | Hex: | Wtr (3326-3328) |
| Unit Type: | 2-2-7 | Hex: | 1/1PT, 2/1PT (1726-2726) |

On Game-Turn Four:

| Unit Type: | 4-4-10 | Hex: | 1/10S (3326) |
| Unit Type: | 3-2-7-3-7 | Hex: | 2/10S (3326) |

On Game-Turn Five:

| Unit Type: | 3-7-3 | Hexes: | 1/Hber, 2/Hber (3071-3071) |
| Unit Type: | 5-5-10 | Hex: | 2/10S (3071-3071) |
| Unit Type: | 2-7-2-7 | Hex: | 3/10S (3326) |

On Game-Turn Seven:

| Unit Type: | 3-3-7 | Hexes: | 1/6, 2/6 (3091-3091) |
| Unit Type: | 1-2-7 | Hex: | 1/2 (3091-3091) |

On Game-Turn Eight:

| Unit Type: | 2-3-7 | Hex: | 1/Hngw (3091-3091) |

[18.16] ALLIED GROUND SUPPORT POINTS

Game-Turn One: none.
Game-Turn Two: three.
Game-Turn Three: seven.
Game-Turn Four: three.
Game-Turn Five: three.
Game-Turn Six: none.
Game-Turn Seven: seven.
Game-Turn Eight: Nine and Ten: none.

[18.17] SPECIAL RULES

1. The Allied Player is the First Player. His Play is first in each Game-Turn.
2. If both Play agree to use the Weather Option, refer to the Airborne Reinforcement and Ground Support Point Procedure, as noted in the Weather Rules.
3. The Scenario Length is ten Game-Turns.

[18.2] SCENARIO II: Free Deployment Scenario

[18.21] ALLIED INITIAL PLACEMENT

Only the Allied Airborne Supply Drop Zone Counters begin the game on the map, and are placed at the discretion of the Allied Player (see Cases 15.36 - 15.39).

[18.22] GERMAN INITIAL DEPLOYMENT

Unit Type: 3-3-7, Hex: Any hex north of the Neder Rijn.

Unit Type: 4-4-7, Hex: Any hex north of the Neder Rijn.

Unit Type: 2-2-7, Hex: 1/1PT, 2/1PT (1726-2726).

Unit Type: 1-2-7, Hexes: 1/406, 2/406 (any hex in Germany).

German units are placed by the German Player as noted, within the following restrictions:

1. All German units except for the BrDF (unit) must be placed at least two hexes away from the nearest City hex on the map.
2. No German unit may be placed within five hexes of the southern map edge.

[18.23] ALLIED AIRBORNE REINFORCEMENT SCHEDULE

Allied airborne Reinforcements arrive within seven hexes of the DZ Marker which matches their divisional designation only. They may not arrive in or adjacent to a City hex.

[18.24] ALLIED GROUND REINFORCEMENT SCHEDULE

Allied ground Reinforcements are available as listed in the Historical Scenario.

[18.25] GERMAN REINFORCEMENT SCHEDULE

German Reinforcements are available as listed in the Historical Scenario.

[18.26] SPECIAL RULES

1. The Allied Player is the First Player (see Cases 15.36 - 15.39).
2. All Weather Rules are in effect during the play of this Scenario. The Allied Airborne Reinforcements and all Ground Support Points are determined as outlined in the Weather Rules (16.0).
3. Scenario Length is ten Game-Turns.

DESIGN CREDITS

Game Design: Jay Nelson
Physical Systems and Graphics: Redmond A. Simonsen
Development: Christopher Allen, Jay Nelson
Production: Manfred F. Mulkau, Larry Catalano, Kevin Zucker, Linda Mosca.

[7.61] INTEGRATED COMBAT RESULTS TABLE

<table>
<thead>
<tr>
<th>Terrain Type</th>
<th>Combat Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rough</td>
<td>-2</td>
</tr>
<tr>
<td>Broken, Town</td>
<td>-3</td>
</tr>
<tr>
<td>Woods, Stream</td>
<td>-5</td>
</tr>
<tr>
<td>Grove, Bridge</td>
<td>-7</td>
</tr>
</tbody>
</table>

| Die Roll | A1 | A1 | A1 | Br | D1 | D2 | D2 | D2 | D2 | D2 | D2 | D2 | D2 | D2 | D2 | D2 |
|----------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|          | 1  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|          | 2  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|          | 3  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|          | 4  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|          | 5  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|          | 6  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

Attacks at less than the lowest differential are resolved at the lowest differential. Attacks at greater than +12 are resolved as +12 attacks.

EXPLANATION OF RESULTS: Ae = Attacker Eliminated; A1, 2 = Attacker retreats the indicated number of hexes; Br = Attacker and defender retreat one hex, defender first; D1,2,3,4 = Defender retreats the indicated number of hexes; De = Defender eliminated.
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11.0 REINFORCEMENTS
11.1 Movement of Reinforcements
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12.1 Restrictions
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15.0 SCENARIOS:
   HOW TO SET UP AND PLAY THE GAME
15.1 Scenario I: Spearhead
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[10.0] INTRODUCTION
The Siege of Bastogne is a battle level simulation of the battles that took place in December 1944 near the town of Bastogne in southern Belgium during the Battle of the Bulge (the German Ardennes Offensive). The battle was divided into two distinct phases, and a scenario is provided that covers each phase as a self-contained game. Also included is a Campaign Game that allows the players to refight the series of engagements as a single, continuous game. The first Scenario, Spearhead, treats the period from December 18-21, 1944. It presents the phase of the battle when the spearhead of the German 5th Panzer Army first approached the vital road and communication center at Bastogne. The second Scenario, the Relief of Bastogne, depicts the situation from December 21-26, the period of Patton’s drive up from the south to relieve the siege of Bastogne and open a supply line to the defenders. Each Game-Turn represents one-half day of actual time, and the scale of the map is approximately 850 meters per hex.

[11.0] REINFORCEMENTS
GENERAL RULE:
Both Players receive Reinforcements as directed by the Reinforcement Schedule for each Scenario. These units appear during the Owning Player’s Movement Phase on the Game-Turn indicated on the Reinforcement Schedule. The Reinforcement Schedule states the Game-Turn of appearance, the Strengths and designations, and the map edge on which they enter.

PROCEDURE:
During his Movement Phase, the Owning Player places each Reinforcing unit on any of the specified hexes on the map edge, as designated on the Reinforcement Schedule. They may be brought into play in any order and at any time during the Owning Player’s Movement Phase.

CASES:
[11.1.0] MOVEMENT OF REINFORCEMENTS
[11.1.1] The hex first entered by a Reinforcement unit must be one of those map edge hexes designated for that unit by the Reinforcement Schedule. All Reinforcement units must expend Movement Points according to the Terrain Key in order to enter that first hex. All terrain restrictions apply to entry hexes.
[11.1.2] When the entry hex contains a road (or trail) leading off of the map, Reinforcement units may enter that hex at the road (or trail) movement rate.
[11.1.3] Any number of units may enter through the same entry hex. There are no movement penalties or restrictions imposed on subsequent Reinforcement units entering through the same hex during a single Movement Phase. (Units may never end the Movement Phase stacked.)
[11.1.4] Once on the map, Reinforcements may be moved normally. The Owning Player may sequence the arrival of his Reinforcements with the movement of his already-present units in any order as he sees fit.

[11.2] RESTRICTIONS
[11.2.1] Reinforcements may not enter a hex which is, at that point, occupied by an Enemy unit. A Reinforcing unit may enter an Enemy-controlled hex (but it must cease movement therein).
[11.2.2] A Player may deliberately withhold Reinforcements from Game-Turn to Game-Turn, bringing them into play (if at all) on some later Turn. Regardless of which Turn Reinforcements are brought in, they must appear in one of their scheduled hexes.
[11.2.3] Reinforcements that have not yet entered the map have no effect upon the movement of either Player’s units.

[12.0] EXITING THE MAP
GENERAL RULE:
The German Player is required to exit units from the map. An exiting unit must expend Movement Points to enter an imaginary hex presumed to be adjacent to the map edge. The terrain in this imaginary hex is presumed to be similar to the terrain in the hex from which the unit exited. This includes the use of road and rail movement by exiting units moving off of the map through hexes that contain roads or trails that lead off the map from the exit hex.

CASES:
[12.1] RESTRICTIONS
[12.1.1] Once a unit exits the map, it may not return.
[12.1.2] A unit may not exit the map as a result of combat. If it does so, then it is eliminated. Units may only exit the map during the German Player’s Movement Phase.

[13.0] AIRBORNE UNITS
GENERAL RULE:
The Airborne units on both sides are to be treated as infantry units. These units were employed strictly as infantry, even though the U.S. airborne troops were trained paratroopers. German airborne units were parachute in name only.

[14.0] ARTILLERY
GENERAL RULE:
Neither Player may add more Ground Support or Artillery Strength Points (either Barrage or FFP) to an individual combat situation than there are Friendly Ground Strength Points (Attack or Defense) participating. The maximum number of Artillery Strength Points allowed is determined by totaling the appropriate (Barrage or FFP) Strength of the participating Friendly non-Artillery units. Both adjacent and non-adjacent Artillery units count against this limit. Each unit’s Strength is considered an integral whole, which may not be divided or rounded.

[15.0] SCENARIOS:
   HOW TO SET UP AND PLAY THE GAME
GENERAL RULE:
The instructions for each Scenario include: Historical Notes, detailing briefly the events and circumstances of the Scenario; each Player’s Initial Order of Battle; and the initial units’ deployment hexes; the Reinforcement Schedule for each Player; Special Rules in effect for that particular Scenario; the length (in Game-Turns) of the Scenario; and the special Victory Conditions of that Scenario.

PROCEDURE:
Unit designations are listed first, followed by the unit type and quantity in parentheses. (No quantity is shown if there is only one unit of that type.) Units are deployed according to the instructions which precede each group of units. Unit designations are provided for reference only. Players may ignore them.

[15.1] SCENARIO I, SPEARHEAD
[15.1.1] HISTORICAL NOTES
This Scenario portrays the situation from December 18-21, 1944, when the spearhead of the German 5th Panzer Army, including the 2nd Panzer Division, Panzer Lehr and the 26th Volks Grenadier Division, approached the important communication center at Bastogne. This vital area was defended by improvised teams from the 9th and 10th Armored Divisions with the 101st Airborne Division being rushed in behind them. The Germans attempted to take Bastogne and establish a continuous east-west road link, while keeping to their timetable by moving the bulk of both Panzer Divisions on towards the Meuse River to the
west by December 23. The Americans were simply trying to hold Bastogne at all costs.

[15.12] U.S. INITIAL DEPLOYMENT
Deploy in any hex, except hexrows 2800 and 2900:
S(3-a-12-3), (2-a-12-3), 611(5-4-12), 73 and S3(4two 1-a-12-12-2).
Deploy in any hex within two hexes of Bastogne
hexes inclusive:
200(4-a-12-3), 301(4-3-12), 420(1-2-12-2).

[15.13] GERMAN INITIAL DEPLOYMENT
No German units begin the game on the map.

[15.14] U.S. REINFORCEMENT SCHEDULE
Arriving on Game-Turn Two, on any hex on western mapepds:
2/506, 3/506, 1/327, 2/327 and 3/327 (twelve 2-4-7’s); 1011-2-2(2-7-7).
Arriving on Game-Town Three, on any hex on western or southern mapepds:
305(3-4-7), 755 and 909 (two 3-2-18-1’7’s).

[15.15] GERMAN REINFORCEMENT SCHEDULE
Arriving on Game-Town One, on hex 2913:
1/3 and 2/3 (two 6-4-12’s), 1/304, 2/304, 1/902 and
2/902 (four 5-5-12’s), 2/3-2(3-3-4).
Arriving on Game-Town Two, on any hex on eastern mapepds, between hexes 2908 and 2915, inclusive:
1/25(5-5-12), 1/903 and 2/903 (two 4-4-12’s),
2/5-4-7, Lehr(2-3-4-1), 1/77, 2/77, 3/77, 1/78,
2/78, 3/78 (six 3-3-7’s), 23-2(18-1-12), 24-2(12-12-12).
Arriving on Game-Town Four, on any hex mapepds between 2908 and 2921, inclusive:
1/901, 2/901 (two 5-5-12’s), 1/39, 2/39, 3/39 (three
3-3-7’s), 26(3-12-3), 26(3-18-1-7), 26(4-2-12-1-7),
Lehr(3-2-18-1-12), Lehr(4-2-12-12).
Arriving on Game-Town Seven, on any hex on the eastern mapepds south of 2928, inclusive:
1/13, 2/13, 1/14 and 2/14 (four 3-3-7’s), 1/15 and
2/15 (two 3-3-12’s), 5/3-2(18-1-7), 5/4-2(12-1-7).

[15.16] SPECIAL RULES
1. The German Player is the First Player. His Player-Turn is first in every Game-Turn.
2. The Scenario Length is seven Game-Turns.

[15.17] VICTORY CONDITIONS
The German Player receives one Victory Point for each unit of the 3rd Panzer Regiment (1/3 and 2/3 armor battalions) and of the Panzer Lehr Division (1/901, 2/901, 1/902, 2/902, 1/903, 2/903 mechanized battalions, Lehr reconnaissance battalions and two Lehr self-propelled artillery battalions) which exit off the western mapepds (only). These units have divisional designations to the right of the unit type symbol for easier identification. Additionally, the German Player receives ten Victory Points for the control of Bastogne. A Player controls Bastogne if his units occupy or were the last to pass through both hexes of Bastogne (1317 and 1416). Enemy Zones of Control have no effect upon Victory Conditions. Exited units need not have a Line of Communication.

The U.S. Player receives three Victory Points for each of the specified German Reinforcements which fails to reach the map. Additionally, the U.S. Player receives twelve Victory Points if he was the last to occupy Bastogne. He also receives six Victory Points if neither Player controls Bastogne.

[15.2] SCENARIO II.
THE RELIEF OF BASTOGNE

[15.21] HISTORICAL NOTES
Patton began moving elements of his Third Army northwards towards the “Bulge” as early as December 18. By the time the assault units were assembled, the siege of Bastogne had begun, and the main objective of Patton’s attack became the relief of the 101st Airborne Division. The main burden of the relief fell on the seasoned veterans of the U.S. 4th Armored Division. The way to Bastogne was blocked by the German 5th Parachute Division, whose tenacious defensive battles ranks among the finest.

[15.22] U.S. INITIAL DEPLOYMENT
No U.S. units begin the game on the map.

[15.23] GERMAN INITIAL DEPLOYMENT
Deploy in any hex more than two hexes from the southern mapepds, and more than four hexes from both Bastogne hexes (1317 and 1416).
1/13, 2/13, 1/14 and 2/14 (four 3-3-7’s), 1/15, 2/15
(two 3-3-12’s), 5/4-2(12-1-7), 5/3-2(18-1-7).

[15.24] U.S. REINFORCEMENT SCHEDULE
Arriving on Game-Town Nine, on any hex on the southern mapepds:
8 and 35 (two 4-3-12’s), 37(5-3-12), 10, 51 and 53
(three 5-5-12’s), 25(1-3-12), 70(4-5-12), 22, 94 and
253 (three 1-2-12-2’s), 177 and 776 (the 3-2-18-1-7’s).

[15.25] GERMAN REINFORCEMENT SCHEDULE
Arriving on Game-Town Ten, on any hex on the eastern mapepds:
1/318 and 2/318 (two 2-3-7’s).

[15.26] GERMAN REINFORCEMENT SCHEDULE
Arriving on Game-Town Eleven, on any hex on the southern mapepds:
6(2-12-3).

[15.27] VICTORY CONDITIONS
Same as in Case 15.17. However, the specified German Reinforcements must be exited before the end of Game-Town Eight in order for the German Player to receive Points for them. The U.S. Player receives three Points for each of the specified German units which fails to exit the map before the end of Game-Town Eight.

[16.0] GAME NOTES

[16.1] PLAYERS’ NOTES
The Spearhead Scenario places the burden squarely on the German Player’s shoulders. He must continually attack towards Bastogne with every unit under his command. He should easily be able to envelop the town to both the north and south, and subsequently maintain strong concentric pressure. Since the bulk of the German armored punch must be withdrawn during the last Turn, those units must be effectively disengaged by then before. This implies that the objective must be within reach by the end of the Fifth Turn. To accomplish this, the German Player must eliminate U.S. units at every opportunity early in the game, and pin down U.S. maneuver forces by advancing after combat with infantry into contact with the U.S. units. Be wary of U.S. attempts to pin straggling German panzers that need to be withdrawn on the last Turn, and do not give him the opportunity to eliminate enough of the withdrawing panzers to gain an automatic victory.

The U.S. Player has two routes to follow. He can commit everything to the defense of Bastogne or he can lure the German forward, allowing him to take Bastogne and thus either snip off enough of the withdrawing units or tangle and pin them down so that they are unable to withdraw. If the defense of Bastogne is chosen, it must be tenacious. Time is on the U.S. Player’s side. Trade
units for time and space. This usually means sacrificing both armored combat commands early and holding on with the battered 101st to the bitter end.

In the Relief Scenario, the U.S. Player must push continually. The paucity of German units means a very thin line indeed. Try to spring as many holes as possible. Any shot to eliminate a German unit should be taken, but do not advance after retreating German attackers, because this pins down units during the U.S. Movement Phase. A broad front advance is best.

The German Player is faced with a seemingly impossible task, but by using the terrain, giving it up as often as is needed, the U.S. advance can be slowed and the game won. Do not hold strong positions if doing so means weakening the rest of the line. Accept retreats and never expose units in positions where they may be surrounded. If the U.S. Player achieves a breakthrough, you can always maneuver your units to cut the Line of Communication behind him.

In the Campaign Game, it is the German Player who will have difficulty in the long run. He should press his early advantage while it lasts and then hang on.

[16.2] DESIGNER’S NOTES
The Ardennes Offensive was a desperate battle for the troops on both sides. The German soldiers knew that the end was near, but in their last great offensive they still held a glimmer of hope. In order to achieve any success at all, the offensive would have to go very well. For the Americans, the tables had been turned. Used to fighting a war of overwhelming logistics, American units found themselves cut-off, unsupplied and outnumbered.

The situation was even more psychologically devastating because of the level of surprise the German attack had achieved, and general feeling among the U.S. troops prior to the attack that the Germans were beaten and the war was almost over. Even though the region around the peaceful Belgian village of Bastogne represented a small corner of the campaign, the action there typified the entire battle.

The game has a semi-tactical flavor that makes it unique among the myriad of games dealing with the “Bulge.” It captures the situation that tottered around the now historic town for the most important days of the battle. The counter limitations prevented carrying the scenarios out to include the major attacks that occurred in the area through early January; however, these scenarios tended to be less interesting than those provided.

DESIGN CREDITS
Game Design: Larry Pinsky
Physical Systems and Graphics: Redmond A. Simonsen
Game Development:
Christopher Allen, Larry Pinsky
Production: Manfred F. Milkauhn, Larry Catalano, Kevin Zucker, Linda Mosca.
### INTEGRATED COMBAT RESULTS TABLE

<table>
<thead>
<tr>
<th>Terrain Type</th>
<th>Combat Differential (Attacking Strength minus Defending Strength)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rough</td>
<td>-2 -1 0 +1 +2,3 +4,5 +6-8 +9-11 +12</td>
</tr>
<tr>
<td>Broken, Town Woods, Stream</td>
<td>-3 -2 -1 0 +1 +2,3 +4,5 +6-8 +9-11 +12</td>
</tr>
<tr>
<td>Grove, Bridge</td>
<td>-5 -4,3 -2 -1 0 +1 +2,3 +4,5 +6-8 +9-11 +12</td>
</tr>
<tr>
<td>Clear, Mixed</td>
<td>-7 -6,5 -4,3 -2 -1 0 +1 +2,3 +4,5 +6-8 +9-11 +12</td>
</tr>
</tbody>
</table>

**Die Roll:**

- 1: A1 A1 A1 Br D1 D2 D2 D2 D2 D3 D4 De
- 2: A1 A1 A1 A1 Br D1 D2 D2 D2 D2 D2 D3 D4
- 3: A1 A1 A1 A1 A1 Br D1 D2 D2 D2 D2 D2 D3 D4
- 4: A2 A1 A1 A1 Br Br D1 D2 D2 D2 D2 D2 D2 D3
- 5: A2 A2 A1 A1 A1 A1 Br Br D1 D2 D2 D2 D2 D2 D2 D3
- 6: Ae Ae A2 A1 A1 A1 Br Br Br Br D2 D2 D2 D2

Attacks at less than the lowest differential are resolved at the lowest differential. Attacks at greater than +12 are resolved as +12 attacks.

**EXPLANATION OF RESULTS:**
- **Ae** = Attacker Eliminated; **A1, 2** = Attacker retreats the indicated number of hexes; **Br** = Attacker and defender retreat one hex, defender first; **D1,2,3,4** = Defender retreats the indicated number of hexes; **De** = Defender eliminated.
[10.0] INTRODUCTION

Hürtgen Forest is a simulation, on the battalion/regiment level, of combat between U.S. and German forces near the Belgian-German border in November of 1944.

[11.0] SPECIAL ARTILLERY RULES

GENERAL RULE:
Both Players are restricted in their use of Artillery units for both Barrage and FPF during each individual combat.

CASES:
[11.1] GENERAL USE
[11.11] During every Combat Phase, both Players are limited in the number of Artillery units that may engage in each single, individual combat.
[11.12] Both adjacent and non-adjacent Artillery units count toward the maximum allowed usage per individual combat.

[11.21] The U.S. Player, as the Phasing Player, may use a maximum of four Artillery units when attacking per individual combat.
[11.22] The U.S. Player, as the non-Phasing Player, may use a maximum of three Artillery units for FPF per individual combat.

[11.3] GERMAN ARTILLERY UNIT RESTRICTIONS
[11.31] The German Player, as the Phasing Player, may use a maximum of two Artillery units per individual combat when attacking.
[11.32] The German Player, as the non-Phasing Player, may use only one Artillery unit for FPF per individual combat.

[11.4] GROUND SUPPORT POINTS
[11.41] The U.S. Player receives a maximum of 20 Ground Support Barrage Strength Points per Game-Turn to help supplement his attacks.
[11.42] The U.S. Player can only use up to five Ground Support Barrage Strength Points per individual combat.
[11.43] The U.S. Player may not use his Ground Support Points for FPF.
[11.44] Ground Support Points are not restricted in range. They may be used in any hex on the map.

[12.0] THE 116TH PANZER DIVISION

GENERAL RULE:
In order to reft in time for the Ardennes Offensive, the 116th Panzer Division had to break off and pull out of the line. All units of the 116th Panzer Division must exit the map by the specified Game-Turn. These units’ divisional designation appears to the right of their unit type symbol. All units with 116th Divisional designations must exit the map.

PROCEDURE:
All units of the 116th Panzer Division must exit either the east or south edge of the map by Game-Turn Four (see Section 14.0). Otherwise, the German Player is subject to penalties.

CASES:
[12.1] PENALTIES
[12.11] For each German unit of the 116th Panzer Division that does not exit the map by Game-Turn Four, the U.S. Player receives five Victory Points for each succeeding Game-Turn that the unit begins on the map.
[12.12] U.S. Player does receive this Victory Point bonus for destroyed units of the 116th Panzer Division. (Of course, the destroyed units count as destroyed units for Victory Point purposes).

[12.13] Example: Four units of the 116th Panzer Division exit on Game-Turn Four, two units of the 116th exit on Game-Turn Five, and one unit of the 116th exits on Game-Turn Six; the U.S. Player would receive twenty Victory Points.

[13.0] REINFORCEMENTS

GENERAL RULE:
Both Players receive Reinforcements. These appear during the Ownings Player’s Movement Phase on the Game-Turn indicated on the Reinforcement Schedule. The Reinforcement Schedule states the Game-Turn of appearance, the number of units, the Strength and Movement Allowance and the specified hex on which they enter.

PROCEDURE:
During his Movement Phase, the Ownings Player places a Reinforcing unit in the scheduled hex. The Ownings Player may place them at any time during his Movement Phase.

CASES:
[13.1] MOVEMENT OF REINFORCEMENTS
[13.11] Reinforcements are presumed to be poised adjacent to the map. When placed on the map a Reinforcing unit expends Movement Points to enter the entry hex according to the Terrain Key. In almost all cases, the Reinforcements are entered onto a hex which has a road leading off the map; these units expend Movement Points at the road movement rate to enter the map.
[13.12] In several cases, more than one unit is scheduled to appear in the same Game-Turn. These units are deployed off map, one behind the other, with the lead unit poised adjacent to the map entry hex itself. If the entry hex is a road hex, a hypothetical road may be presumed to stretch off the map, away from the entry hex.
[13.13] As each unit enters the map, it will pay the cost for entering the entry hex, plus any additional cost for any hypothetical clear terrain hexes that it would have to traverse to reach the entry hex. If units are entering on a road hex, they are considered to be moving through hypothetical road hexes until they reach the map. Example: The lead unit in a column would pay ½ Movement Point to enter the map, the second unit would pay 1 Movement Point to enter the map, the third 1½ Movement Points, etc.
[13.14] Once on the map, Reinforcements may be moved normally. The Ownings Player may begin the arrival of his Reinforcements at any time during his Movement Phase.

[13.2] RESTRICTIONS
[13.21] Reinforcements may not enter a hex which is, at that point, occupied by an Enemy unit. A Reinforcing unit may enter an Enemy-controlled hex (but it must cease movement therein).
[13.22] If, and only if, a scheduled entry hex is occupied by an Enemy unit, or a Friendly unit in an Enemy Zone of Control, the Reinforcing unit may enter the nearest unoccupied map edge hex to the scheduled hex, in the direction of the nearest Friendly unit.
[13.23] A Player may deliberately withhold Reinforcements from Game-Turn to Game-Turn, bringing them into play (if at all) on some later Turn.
[13.24] Regardless of whether a Reinforcement unit is brought into play on its scheduled Turn, it must appear in its scheduled hex or alternate (see Case 13.22).
[13.25] Until they enter the map, Reinforcements have no effect on play; they do not cast a Zone of Control onto the map, nor may they attack Enemy units until they enter the map.
[14.3] LINE OF COMMUNICATIONS
[15.31] In order to receive Victory Points for towns on the map, the U.S. Player must be able to trace a Line of Communications from the hexes in the town back to the west edge of the map.
[15.32] A Line of Communications is defined as a series of contiguous hexes not blocked by Enemy units or their Zones of Control.
[15.33] A Line of Communications may not be traced through more than two rough terrain hexes.
[15.34] A Line of Communications may only be traced across a stream via a bridge hexside. It may not enter or cross prohibited terrain.

[15.4] LEVELS OF VICTORY
Victory is determined by comparing the total Victory Points won by each Player, stating the comparison as a ratio (U.S. Player to German Player) and evaluating this ratio against the schedule below.

<table>
<thead>
<tr>
<th>Ratio</th>
<th>Victory Level</th>
</tr>
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<tbody>
<tr>
<td>4.0 or more to 1 between 3.0 and 3.99 to 1 between 2.0 and 2.99 to 1 between 1.5 and 1.99 to 1 between 1.0 and 1.49 to 1 1.0 or less to 1</td>
<td>U.S. Decisive U.S. Substantive U.S. Marginal German Marginal German Substantive German Decisive</td>
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</table>

[16.0] THE SCENARIOS

[16.1] HISTORICAL SCENARIO
**Historical Notes**
The Scenario covers the U.S. Offensive through the Hurtgen Forest in an effort to breakout into the Roer Plain to the east. The U.S. 1st Army's offensive, which began on November 15, 1944, runs into stiff resistance from patchwork German units from various understrength divisions and almost impossible terrain. The Germans must hold while units are stripped all along the front to refit and prepare for the Ardennes Offensive.

**Objectives**

<table>
<thead>
<tr>
<th>Objective</th>
<th>Identifying Hex Nr.</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kommerscheid</td>
<td>1524</td>
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<td>Vossenack</td>
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<td>5</td>
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<td>Germeter</td>
<td>0819</td>
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<td>25</td>
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<td>Nideggen</td>
<td>2919</td>
<td>25</td>
</tr>
<tr>
<td>Schmidt</td>
<td>1726</td>
<td>25</td>
</tr>
</tbody>
</table>

**U.S. INITIAL DEPLOYMENT**


**German Initial Deployment**

| Unit Type | 2-3-2. Hexes: 20 (0203), 29 (0310), 42 (0311), 45 (0720), 43 (0721), 26 (1020). |
| Unit Type | 3-1-20-1-7. Hexes: 44 (0322), 56 (0108). |

**German Reinforcement Schedule**

Same as in Case 16.14.

**German Reinforcement Schedule**

Same as in Case 16.15.

**Special Rules**

1. The German Player deploys first; the U.S. Player is the First Player; his Player-Turn is first in every Game-Turn.
2. The Scenario Length is fourteen Game-Turns.
[17.0] GAME NOTES

[17.1] DESIGNER'S NOTES

The battle for Hurtgen Forest got under way in September and didn’t conclude until December. Because of the need for all the games in the Westwall Quadrangle to fit into the same system, the full battle could not be successfully simulated. So, the game only covers the major aspect of the long engagement, and this one best typifies the type of battle it was.

In order to show the operational radius in the dense forest, the scale used was 500 meters per hex. This meant that only certain areas of the Forest could be encompassed. A decision was made to omit the areas of operation of the 1st U.S. Infantry Division. The inclusion of this unit would create other problems, in that those and the German units opposing them would have to be included. Obviously, the limited counter mix was a factor. Also, it would force a change in scale of the unit sizes and this would directly have an effect on the “feel” of the simulation.

An interesting aspect of the battle was the withdrawal of the 116th Panzer Division. This unit was recalled from the battle so that it could refit and reequip for the impending German Ardennes Offensive.

The Germans, though already pushed east of the Siegfried Line, were able to utilize the dense forest and rugged terrain well. They used log emplace- ments, mines and barbed wire extensively, and, when forced to retreat, began to dig in again quickly. Though greatly understrength and full of over- and under-age troops, the handful of veteran NCO’s held the German units together defensively. Also, fortunately for the Germans, their generals were always able to find a division to throw into the fight when things were getting rough.

On the other side of the ledger, the Americans found that the Forest almost totally neutralized their firepower advantage. The tanks that were distributed among the infantry battalions were almost useless. In addition, the heavy fog that blanketed the area put an end to any possible ground support. It was a true infantryman’s slog.

There are a few good reference sources that were consulted in doing the game. The best of these was The Siegfried Line, which is part of the U.S. Army in World War II Series, put out by the Office of Military History. The information is fairly detailed and there are good maps. Another excellent source is Hurtgen Forest, written by MacDonald, who contributed to the Office of Military History’s book. There are also the histories of the individual units that took part in the fighting. Available from Ft. Knox was a privately-done study on armor in the Hurtgen Forest, with emphasis on the 5th Armored Division’s CCR.

Nothing was discovered on the Germans, but the German Army Handbook, put out by the U.S. Army, was consulted to reveal information on German doctrine and tactics.

[17.2] PLAYERS’ NOTES

The U.S. Player

At the outset, the U.S. Player must study the terrain and his objectives carefully to decide where he should put his offensive emphasis. The U.S. cannot afford to make too many wide-spread attacks. They must concentrate their efforts on two or three areas only. The off-board artillery is a great asset and must be used to its maximum to guarantee a successful offensive.

The major areas to concentrate on should be the southern and possibly western approaches to Hurtgen. From there, the U.S. Player should drive northward along the main road and adjoining open plain towards the other towns. The CCR armored units should combine in this thrust.

The other area of assault should be in the northern area, 4th Divisional sector, where the effort should be made to drive towards Grosshau and the open plain. The going here was and most likely will be slow.

Secondary efforts could be made from Vossenack eastward. But this is dangerous and would drain resources from the major move against Hurtgen. Otherwise, Schmidt may be considered. Though it looks relatively close, it is a tough nut to crack. In most cases, it’s not worth the effort.

The U.S. Player should also place close attention in trying to engage units of the 116th Panzer Division. If the U.S. can delay their withdrawal, it will mean Victory Points.

The German Player

The overall mode of the Germans is a defensive one, though they must keep an eye towards local counterattacks. The terrain should be used to its utmost, both as a benefit to defense and as a hindrance to U.S. mobility.

An attack on Vossenack can be contemplated as it is a most vulnerable position. Success here could force the U.S. to divert reinforcements to the area placing a drain on the U.S. offense elsewhere.

The German Player must make an important decision in the game and that is to what extent should the 116th be committed. It is the most powerful German force in the game. If the German Player sees a good opportunity to eliminate a few U.S. units or make a key counterattack, then by all means use the units, though it will delay their departure. The German Player must also proceed with caution, since he cannot afford to delay these units too long.

DESIGN CREDITS

Game Design: Howard Barasch
Physical Systems and Graphics: Redmond A. Simonsen
Game Development: Christopher Allen, Howard Barasch
Production: Manfred F. Millkahn, Larry Catalano, Kevin Zucker, Linda Mosca.
### INTEGRATED COMBAT RESULTS TABLE

<table>
<thead>
<tr>
<th>Terrain Type:</th>
<th>Combat Differential (Attacking Strength minus Defending Strength)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rough</td>
<td>-2               -1               0               +1             +2,3           +4,5           +6-8           +9-11         +12</td>
</tr>
<tr>
<td>Broken, Town</td>
<td>-3               -2               -1               0              +1             +2,3           +4,5           +6-8           +9-11         +12</td>
</tr>
<tr>
<td>Woods, Stream</td>
<td>-5               -4,3             -2               -1             0              +1             +2,3           +4,5           +6-8           +9-11         +12</td>
</tr>
<tr>
<td>Grove, Bridge</td>
<td>-7               -6,5             -4,3             -2             -1             0              +1             +2,3           +4,5           +6-8           +9-11         +12</td>
</tr>
<tr>
<td>Clear, Mixed</td>
<td></td>
</tr>
</tbody>
</table>

**Die Roll: 1**

- A1  A1  A1  Br  D1  D2  D2  D2  D2  D3  D4  De
- A1  A2  A1  A1  Br  D1  D2  D2  D2  D2  D2  D4
- A1  A1  A1  A1  Br  Br  D1  D2  D2  D2  D2  D3
- A1  A1  A1  A1  Br  Br  Br  D1  D2  D2  D2  D4
- A1  A1  A1  A1  Br  Br  Br  Br  D1  D2  D2  D3
- Ae  Ae  A2  A1  A1  A1  A1  A1  Br  Br  Br  D2  D2

Attacks at less than the lowest differential are resolved at the lowest differential.
Attacks at greater than +12 are resolved as +12 attacks.

**EXPLANATION OF RESULTS:**
- Ae = Attacker Eliminated; A1, 2 = Attacker retreats the indicated number of hexes; Br = Attacker and defender retreat one hex, defender first; D1,2,3,4 = Defender retreats the indicated number of hexes; De = Defender eliminated.
[10.0] INTRODUCTION

Remagen is a simulation on the battalion/regimental level of the operations from 7 March to 17 March 1945 that saw the U.S. Army cross the Rhine River in force at the town of Remagen. An optional Scenario is provided to show what might have happened if the Germans had reacted quicker to the U.S. seizure of the Ludendorff Bridge.

[11.0] BRIDGES

GENERAL RULE:
There are two types of Bridges in the game: the Ludendorff railroad Bridge (which is printed on the map sheet) and two Float Bridges. The Ludendorff Bridge is semi-permanent in that it need not be built, but can be destroyed. Once destroyed, it cannot be rebuilt. The Float Bridges are placed on the map at the U.S. Player’s discretion and may be destroyed. Unlike the Ludendorff Bridge, Float Bridges can be replaced once destroyed. Only the U.S. Player has the capacity to place Float Bridges; only the German Player has the capacity to destroy Bridges.

CASES:
[11.1] BUILDING FLOAT BRIDGES
[11.11] There are two Float Bridges in the game. They may be placed in any Rhine River hex which is not adjacent to Enemy units or Zones of Control.

[11.12] Once placed on Game-Turn Thirteen, the other on Game-Turn Fourteen.

[12.0] REINFORCEMENTS

GENERAL RULE:
Both Players receive Reinforcements. These appear during the Opening Player’s Movement Phase on the Game-Turn indicated on the Reinforcement Schedule. The Reinforcement Schedule states the Game-Turn of appearance, the designation of units, the Strength and Movement Value, and the Lettered hexes which they enter into.

PROCEDURE:
During his Movement Phase, the Opening Player places a Reinforcing unit in one of the scheduled lettered hexes. The Opening Player may place them at any time during his Movement Phase.

CASES:
[12.1] MOVEMENT OF REINFORCEMENTS
[12.11] Reinforcements are presumed to be poised adjacent to the map. When placed on the map, a Reinforcing unit expends Movement Points to enter the entry hex, according to the Terrain Key. In almost all cases, the Reinforcements can enter onto a hex which has a road leading off the map; these units expend Movement Points at the road movement rate to enter the map.

[12.12] Once on the map, Reinforcements may be moved normally. The Opening Player may begin the arrival of his Reinforcements at any time during his Movement Phase.

[12.13] Any number of units may enter into the same hex in the same Movement Phase. These units pay the Movement Point cost for the entry hex, and pay no additional Points for imaginary hexes off map.

[12.2] RESTRICTIONS
[12.21] Reinforcements may not enter a hex which is, at that point, occupied by an Enemy unit or in an Enemy Zone of Control.

[12.22] Reinforcements may not enter a hex which is at that point occupied by an Enemy unit or in an Enemy Zone of Control.

[12.22] If, and only if, all of the lettered entry hexes designated are occupied by Enemy units or Enemy Zones of Control, units scheduled to arrive there may arrive in the next entry area in alphabetical order. Example: German Reinforcements which could not enter in area “C,” would be able to enter in area “D,” or if area “D” was also blocked, area “E.”

[12.23] A Player may never withhold Reinforcements from Game-Turn to Game-Turn.
does not constitute a violation of this rule. If a gap in the Continuous Front does exist at the end of the U.S. Player-Turn, the German Player is awarded five Victory Points for each hex in the gap which is neither occupied by U.S. units or their Zones of Control. Terrain effects are immaterial in computing the number of hexes in a specific gap.

[15.0] U.S.
LIMIT OF ADVANCE
GENERAL RULE:
In reality, the U.S. was anxious to establish a firm foothold on the east side of the Rhine, once the chance presented itself, but did not want to make too big an effort (nor could they afford the troops to do so at the time). Therefore, their advance was deliberately restricted. No U.S. unit may advance beyond the U.S. Limit of Advance Line. However, U.S. Zones of Control do extend across that Line and German units adjacent to the Line may be attacked, although the U.S. units may not advance after combat. This Line has no effect on the use of Artillery in any hex on the map which is within range of U.S. Artillery. Any U.S. unit that advances beyond the U.S. Limit of Advance Line is considered eliminated immediately upon doing so.

Note: This simulates the strictures under which the U.S. forces historically operated. To simulate optimum conditions for U.S. forces, Players may agree to ignore the restrictions in Section 15.0. In this case, the U.S. Limit of Advance Line is ignored.

[16.0] VICTORY CONDITIONS
GENERAL RULE:
Victory is judged at the end of a Scenario on the basis of Victory Points scored by the Players. Victory Points are awarded to Players for the elimination of Enemy units and seizure of territorial objectives.

PROCEDURE:
There is no Victory Point Record Track. Players must keep track of Victory Points scored on a piece of scrap paper.

CASES:
[16.1] TOWN OBJECTIVES
[16.11] Case 16.12 lists Victory Points received for each town by each Player if that Player’s units occupy that town. These Points are awarded to the Player at the end of the game on the condition that his units occupy the town. Occupation is defined as having a Friendly unit in every hex of the town (not just the identifying hex number listed below), or having a Friendly unit’s Zone of Control in each hex of the town, with no Enemy units or Enemy Zones of Control in any of the town’s hexes.

[16.12] VICTORY POINT VALUES FOR TERRITORIAL OBJECTIVES

<table>
<thead>
<tr>
<th>Objective</th>
<th>Hex Nr.</th>
<th>U.S. German</th>
</tr>
</thead>
<tbody>
<tr>
<td>Königswinter</td>
<td>0803</td>
<td>10 10</td>
</tr>
<tr>
<td>Honrf</td>
<td>0908</td>
<td>10 10</td>
</tr>
<tr>
<td>Linz</td>
<td>0919</td>
<td>5 20</td>
</tr>
<tr>
<td>Honningen</td>
<td>0928</td>
<td>10 10</td>
</tr>
<tr>
<td>Rheinbreitbach</td>
<td>0711</td>
<td>5 20</td>
</tr>
</tbody>
</table>

[16.2] TERRITORIAL OBJECTIVES

[16.21] In addition to Points received as per Case 16.1, the U.S. Player receives Points for each infantry unit in excess of ten on or to the east of the Autobahn (the road which runs from hex 1501 through 1902 and 2517 to 2926) at the end of the game, within the restrictions of Case 14.13.

[16.22] The U.S. Player receives no Victory Points for the Autobahn if he has ten or fewer infantry units on or to the east of the Autobahn at the end of the game. But for each infantry unit in excess of ten which is on or to the east of the Autobahn, the U.S. Player receives five Victory Points (see 16.41).

[16.23] If the U.S. Player has no infantry units on or to the east of the Autobahn at the end of the game, the German Player receives twenty Victory Points.

[16.24] The German Player receives twenty Victory Points for each unit (if any) of any type to the west of the Rhein (see Case 16.43).

[16.3] VALUE OF UNITS IN VICTORY POINTS

[16.31] Each U.S. unit has a numerical Victory Point value equivalent to its Attack Strength (or Barrage Strength). Each German unit has a numerical Victory Point value equivalent to twice its Attack Strength (or Barrage Strength).

[16.32] Victory Points are awarded to a Player when he eliminates Enemy units. For example, if the U.S. Player eliminated a German 2-1-17/1-7 unit, he would receive four Victory Points; if the German Player eliminated a U.S. 3-6-7 unit, he would receive three Victory Points.

[16.4] LINE OF COMMUNICATION

[16.41] U.S. units in order to receive Victory Points for being on or to the east of the Autobahn, must be able to trace a Line of Communication back to the west edge of the map.

[16.42] A Line of Communication is defined as a series of contiguous hexes not blocked by Enemy units or their Zones of Control. A Line of Communication may not enter or cross prohibited terrain.

[16.43] German units, in order to receive Victory Points for being west of the Rhein, must also be able to trace a Line of Communication back to the east edge of the map.

[16.5] LEVELS OF VICTORY

Victory is determined by comparing the total Victory Points won by each Player, subtracting the number of German Victory Points from the number of U.S. Victory Points and cross-referencing the difference on the chart below to determine the Victory Level.

<table>
<thead>
<tr>
<th>Number of Excess U.S. Points</th>
<th>Victory Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 or more</td>
<td>US Decisive</td>
</tr>
<tr>
<td>40 to 49</td>
<td>US Substantive</td>
</tr>
<tr>
<td>30 to 39</td>
<td>US Marginal</td>
</tr>
<tr>
<td>20 to 29</td>
<td>Draw</td>
</tr>
<tr>
<td>10 to 19</td>
<td>German Marginal</td>
</tr>
<tr>
<td>0 to 9</td>
<td>German Substantive</td>
</tr>
<tr>
<td>Less than 0</td>
<td>German Decisive</td>
</tr>
</tbody>
</table>

[17.0] THE SCENARIOS

GENERAL RULE:
There are two Scenarios in Remagen. The first is the Historical Scenario; the second represents the situation as it might have been if the German forces had reacted more quickly to the U.S. capture of the Ludendorff Bridge. The instructions for each Scenario include each Player’s Initial Deployment, Reinforcements, Special Rules in effect for each particular Scenario, and the length in Game-Turns of the Scenario.

PROCEDURE:
Place a unit of the specified type on each of the hexes listed for that type. Lettered hexes are shown in parentheses following the group of units which arise there. Unit designations are provided for reference only; Players may ignore them.

Reinforcements may be placed in any hexes which contain the letter code identical to that listed next to their designation (see Section 13.0).

CASES:
[17.1] SCENARIO I, HISTORICAL SCENARIO

[17.11] U.S. INITIAL DEPLOYMENT

| Unit Type | 3-6-7 Hex: 27 (0517) |

| Unit Type | 1-1-7 Hex: (0716) |

| Unit Type | 3-6-7 Designations: 1/27, 2/47, 3/47, 1/311, 2/311, 3/311, 1/310, 60, 52, 2/310, 3/310 |

| Unit Type | 3-4-15-1-7 Designations: 9 |

| Unit Type | 3-4-15-1-7 Designations: 1/39, 2/39, 3/39 |

| Unit Type | 3-6-7 Designations: 1/393, 2/393, 1/394, 2/394, 3/394, 1/395, 2/395, 3/395, 1/396, 2/396, 3/396, 1/102, 2/102, 3/102, 3/393 |

| Unit Type | 3-4-15-1-7 Designations: 78, 99 |

| Unit Type | 3-6-7 Designations: 1/116, 2/116, 1/126, 2/26, 3/26, 1/18, 2/18, 3/18 |

| Unit Type | 3-4-15-1-7 Designations: 1 |

[17.14] GERMAN INITIAL DEPLOYMENT

[17.17] U.S. REINFORCEMENT SCHEDULE

| Unit Type | 2-4-7 Designations: 111, 110 (Area E) |

| Unit Type | 2-1-12 Designation: 15 (Area E) |

| Unit Type | 2-1-17/1-7 Designations: 11 (Area E) |

| Unit Type | 3-2-20-1-7 Designation: 30 (Area D) |

| Unit Type | On Game-Turn Eight: |

| Unit Type | 1-1-12 Designation: 106 (Area E) |

| Unit Type | 1-2-7 Designations: 901, 902 (Area D) |

| Unit Type | On Game-Turn Twelve: |

| Unit Type | 3-1-17-1-7 Designations: 130 (Area D) |

| Unit Type | 1-1-12 Designation: 32 (Area D) |

| Unit Type | On Game-Turn Nine: |

| Unit Type | 1-2-7 Designations: 10, 11 (Area D) |

| Unit Type | 2-1-17/1-7 Designation: 9 (Area D) |

| Unit Type | On Game-Turn Sixteen: |

| Unit Type | 4-7-7 Designation: 130 (Area F) |

| Unit Type | 1-2-7 Designation: 694, 695, 696 (Area F) |

| Unit Type | 2-1-17/1-7 Designations: 340 (Area F) |

| Unit Type | 3-2-20-1-7 Designation: 30 (Area F) |

| Unit Type | On Game-Turn Twenty-Five: |

| Unit Type | 2-2-7 Designations: 39, 77, 78 (Area E or F) |

| Unit Type | 2-1-17/1-7 Designations: 326 (Area F) |

| Unit Type | 3-4-15-1-7 Designations: 62, 3 (Area C) |

| Unit Type | 3-4-15-1-7 Designations: 3, 5 (Area C or D) |

[17.15] SPECIAL RULES

1. The U.S. Player is the First Player. His Player-Turn is first in every Game-Turn.

2. The Scenario Length is thirty Game-Turns.

3. Game-Turns 2, 5, 8, 11, 14, 17, 20, 23, 26 and 29 are Night Game-Turns.
[18.0] GAME NOTES

Translating the battle of the Remagen bridgehead into a game posed several problems. The Germans were caught completely off guard. Traffic jams on the east bank of the Rhine prevented reinforcements from being committed until the American bridgehead was secure and those units which were committed were so understrength as to be mere shadows of themselves. Once the Americans broke out of the immediate bridgehead area, they had a free run. The only thing holding them back was the caution of the corps commander (for which he was later relieved) and the desire to avoid converting this into the main thrust over the Rhine because the flanking armies were not ready to make their own crossings.

Given a fixed order of appearance, the Americans can defeat the Germans in detail in the game unless certain restrictions are imposed. The first was the continuous front line trace. Aside from being militarily valid, it prevents the Americans from throwing their entire force on the few German units on the map. The second was the limit of advance rule. Even with a continuous front line trace, the Americans can drive the Germans right off the map before German numbers are large enough to hold on. They can actually push the Germans so that they are driven right off the map and the Americans occupy each map edge hex, while keeping a continuous front line trace. The limit of advance is the historical line achieved by March 17.

As the main American objective was the autobahn, this was an obvious victory condition. To prevent an unrealistic, narrow drive to the autobahn, victory conditions were also assigned for the towns along the river. They were primarily assigned based on the German ability to regain them since the Americans can usually move into all of them at will and must be driven out, if possible.

Originally there were some rather ornate rules on building and destroying the bridges but in reality, by March 17 the Remagen bridge had been closed for 4 days for repairs and some eight float bridges were across. The Germans were never able to seriously interdict the American flow of supplies so rather than turn the game into a bridge building and repair exercise, these rules were deleted.

Several German divisions have only two regiments instead of three. This was a compromise forced in part by the counter mix and also by the German weakness. In many cases to assign an attack strength of “1” in comparison to the Americans is charitable. The elimination of a regiment, combined with the strength of the remaining regiments more nearly approximates the strength of the whole division.

In essence, the battle was one which the Americans could not lose and the problem was to come up with some conditions under which they could be made to lose in the game.

DESIGN CREDITS
Game Design: Stephen Patrick
Physical Systems and Graphics: Redmond A. Simonsen
Game Development: Christopher Allen, Stephen Patrick
Production: Manfred F. Milkuhn, Larry Catalano, Kevin Zucker, Linda Mosca.
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<tr>
<th>Terrain Type</th>
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</thead>
<tbody>
<tr>
<td>Rough</td>
<td>-2  -1  0  +1  +2,3  +4,5  +6-8  +9-11  +12</td>
</tr>
<tr>
<td>Broken, Town Woods, Stream</td>
<td>-3  -2  -1  0  +1  +2,3  +4,5  +6-8  +9-11  +12</td>
</tr>
<tr>
<td>Grove, Bridge</td>
<td>-5  -4,3 -2  -1  0  +1  +2,3  +4,5  +6-8  +9-11  +12</td>
</tr>
<tr>
<td>Clear, Mixed</td>
<td>-7  -6,5 -4,3 -2  -1  0  +1  +2,3  +4,5  +6-8  +9-11  +12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Die Roll</th>
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<th>A1</th>
<th>A1</th>
<th>A1</th>
<th>Br</th>
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<th>D2</th>
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<th>D4</th>
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<tbody>
<tr>
<td></td>
<td>2</td>
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<td>A1</td>
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<td>Br</td>
<td>Br</td>
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<td>A1</td>
<td>Br</td>
<td>Br</td>
<td>Br</td>
<td>Br</td>
</tr>
</tbody>
</table>

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- **A1, 2** = Attacker retreats the indicated number of hexes;
- **Br** = Attacker and defender retreat one hex, defender first;
- **D1,2,3,4** = Defender retreats the indicated number of hexes;
- **De** = Defender eliminated.