

RULES OF PLAY



HELL'S HIGHWAY

Holland, 1944

Operation Market Garden



RULES OUTLINE

Introduction

Glossary of Terms

1. The Game Map

- 1.1 Terrain
- 1.2 German Reserve Boxes
- 1.3 Supply Tracks
- 1.4 Game-Turn Track
- 1.5 Terrain Effects Chart

2. The Playing Pieces

- 2.1 How to Read the Units
- 2.2 Summary of Markers

3. Sequence of Play

4. Unit Modes

- 4.1 Combat Mode
- 4.2 Entering Travel Mode
- 4.3 Leaving Travel Mode
- 4.4 Effects of Travel Mode

5. Controlling Hexes

- 5.1 Heavy Control
- 5.2 Light Control
- 5.3 No Control

6. Movement

- 6.1 Movement Costs
- 6.2 Movement Restrictions
- 6.3 Combat Mode Movement
- 6.4 Travel Mode Movement
- 6.5 Motorized Exploitation Movement
- 6.6 Water Barriers and Bridges
- 6.7 Ferry Crossings
- 6.8 Evacuation

7. Stacking

8. Fire Combat

- 8.1 General Fire Restrictions
- 8.2 Declaring Offensive Fire
- 8.3 Declaring Defensive Fire
- 8.4 Resolving Defensive Fire
- 8.5 Resolving Offensive Fire
- 8.6 Fire Modifiers

9. Fire Results

- 9.1 Disruption
- 9.2 Step Loss
- 9.3 Retreat
- 9.4 Advance After Combat

10. Artillery

- 10.1 Artillery Fire Requirements
- 10.2 Spotting
- 10.3 Artillery Communication
- 10.4 Artillery Disruption
- 10.5 Self-Propelled Artillery

11. Headquarters Units

- 11.1 HQ Capabilities
- 11.2 Combat Engineers
- 11.3 Bridge Engineers
- 11.4 Anti-Tank Weapons
- 11.5 HQ Flak
- 11.6 HQ's in Combat
- 11.7 HQ Depletion and Suppression
- 11.8 Catastrophic Loss

Introduction

SEPTEMBER, 1944: The race across France and the low countries by the Allied Armies in Europe had ground to a halt. Their advances throughout the summer had far exceeded the expectations of Allied planning. The supply network required to keep the offensive going had broken down. The shattered German armies facing the Allies used the respite to regroup in front of the stalled drive.

General Eisenhower and his commanders debated the best course of action for regaining the momentum and completing the destruction of Germany's Third Reich. Ike favored the broad front strategy, an approach that would insure the gradual erosion of Germany's ability to resist all along the front line. Field Marshal Montgomery, however, backed the single thrust strategy. He believed that all resources should be gathered against one point in the line for a breakthrough, followed by one powerful, narrow drive to Berlin.

Throughout the summer of 1944, Montgomery proposed a number of Operations employing his philosophy. These were not carried out until, in the second week of September, Monty proposed a combined airborne and ground operation codenamed *Market-Garden*. The objective of this plan was to seize and hold a series of highways and bridges in Holland that would give the Allies a bridgehead across the Neder Rijn (Lower Rhine River). Once the operation was completed, this bridgehead could be used as the jump-off point for advances into the Ruhr, the industrial heart of Germany. Success of the operation could bring the war to an end by Christmas.

The airborne part of the plan (*Market*) would place three and one-half airborne divisions, comprising about 35,000 troops, in German-occupied Holland to seize the objectives. The U.S. 101st Airborne Division would be dropped 30 kilometers behind the front line to secure canal bridges north of Eindhoven. The U.S. 82nd Airborne would land 70 km north of the front to secure bridges across the Maas and Waal rivers. The British First Airborne Division would be charged with the ultimate objective. They were to airland 90 km behind the front and gain control of the large highway bridge across the Neder Rijn in the city of Arnhem. The Polish First Airborne Brigade would reinforce their effort.

In the ground operation (*Garden*) British XXX Corps, spearheaded by the powerful Guards Armoured Division, would break out of its current bridgehead and drive up the main highway, linking up first with the 101st, then the 82nd and finally — no more than 48 hours after jumping-off — with the British 1st across the Neder Rijn.

Uncharacteristically, Eisenhower liked Monty's ambitious plan and gave the go-ahead. However, there were problems to overcome. There were not enough transport aircraft and gliders to fly all the airborne troops from England (where they were stationed) to their objectives in Holland. Many airplanes would have to fly two or three times, and thus the entire airlift operation would have to be spread out over a number of days. Of course, if the weather did not hold up, the lifts after the operation's D-Day would have to be delayed further.

The Commander of the British First Airborne Division, Major General R.E. Urquhart, was concerned about his formation's assigned drop zone. The terrain around Arnhem was not suitable for parachute and glider landings, so his troops would have to come down ten kilometers from their objective. He hoped that enemy resistance would be light while his men advanced on the city.

The Allies believed that the German opposition in the *Market-Garden* area was weak and disorganized despite British intelligence and Dutch underground reports indicating German armored forces in the vicinity of Arnhem. Other warnings were also seen as insignificant. For example, because of the soft terrain in the Dutch lowlands, the tanks and heavy vehicles of XXX Corps would not be able to maneuver off the main highway for much of its distance, and would be forced to advance in a vulnerable single column. Despite these drawbacks, the audacity of Monty's plan, the patriotic desire of the airborne forces to get into battle, and the unwillingness to "rock the boat" meant that Operation *Market* would proceed as planned, with D-Day set for September 17th.

Were it not for the mysterious hand of fate, Germany's "weak and disorganized" forces might have fallen to the power of *Market-Garden*. However, in the first week of September, Field Marshal Gerd von Rundstedt, commander of all German forces in the west, ordered his 2nd

- | | | |
|--|--|---|
| <p>12. Supply</p> <p>12.1 Supply Sources</p> <p>12.2 Supply Points</p> <p>12.3 Spending Supply Points for Fire</p> <p>12.4 Spending Steps for Fire</p> <p>12.5 Isolated Forces</p> <p>12.6 XXX Corps Supply</p> <p>12.7 Air Resupply</p> <p>13. Prepared and Entrenched Positions</p> <p>13.1 Building a Prepared Position</p> <p>13.2 Building an Entrenched Position</p> <p>13.3 Properties of Prepared and Entrenched Positions</p> <p>14. Bridge Demolition and Repair</p> <p>14.1 Bridge Demolition</p> <p>14.2 Bridge Repair</p> <p>14.3 Rewiring a Bridge</p> | <p>15. Airpower</p> <p>15.1 Air Strikes</p> <p>15.2 Flak</p> <p>15.3 Interdiction</p> <p>16. German Reserves</p> <p>16.1 Reserve Movement</p> <p>16.2 Reserve Box Restrictions</p> <p>16.3 Exiting the Map</p> <p>17. Allied Reinforcements</p> <p>17.1 Allied Ground Reinforcements</p> <p>17.2 Initial Allied Airlandings</p> <p>17.3 Allied Airlandings During Play</p> <p>17.4 Airlanding Procedure</p> <p>17.5 Changing Drop Zones</p> <p>18. Playing the Scenarios</p> <p>18.1 German Initial Set-Up</p> <p>18.2 Allied Initial Set-Up</p> <p>18.3 Special Game-Turn 1 Rules</p> <p>18.4 Victory Points (VP's)</p> | <p>19. XXX Corps Breakout</p> <p>19.1 Set-Up</p> <p>19.2 Reinforcements</p> <p>19.3 Special German Access Areas</p> <p>19.4 XXX Corps Exit</p> <p>19.5 Victory Conditions</p> <p>20. The Besieged</p> <p>20.1 Set-Up</p> <p>20.2 Reinforcements</p> <p>20.3 XXX Corps Supply Sources</p> <p>20.4 Victory Conditions</p> <p>21. Operation Market-Garden Campaign Scenarios</p> <p>21.1 Historical Scenario</p> <p>21.2 Hidden Airborne Reinforcement Scenario</p> <p>21.3 Free Deployment Scenario</p> <p>Order of Battle</p> <p>Designer's Notes</p> <p>Examples of Combat</p> <p>Unit Type Chart</p> |
|--|--|---|

SS Panzer Corps to pull out of the front for rest and refit. He planned to build a mobile reserve around this battered armor group in preparation for the resumption of Allied attacks. He sent the Corps and a number of training units to Arnhem, a quiet town miles from the front, thus setting the stage for one of the Western Allies' fiercest and most tragic battles.

Operation *Market-Garden*, the largest airborne assault in history, failed. The British First Airborne division was isolated and destroyed as a fighting unit. The highway from Belgium to Arnhem was nicknamed "Hell's Highway" by its combatants as XXX Corps and the American paratroopers struggled for 10 gruelling days to reach Arnhem. When the smoke cleared, the Allies held an 80 km salient to nowhere, with its tip between the Waal and the Neder Rijn. The Allies would not cross the bridge at Arnhem until the following spring.

Hell's Highway is a two-player game simulating the nine critical days of Operation Market-Garden. One player assumes command of the British, U.S. and Polish forces attempting to establish a bridgehead across the Neder Rijn. The other Player controls the German units in Nazi-occupied Holland attempting to repel the Allies.

Hell's Highway is not a simple game, but it rewards the players with intense competition and a study of operational warfare in World War II. The rules must be thoroughly understood to get the most out of play. However, it is not necessary to read every word before playing. The rules are organized in a new annotated format with the major concepts and procedures of the game presented in the main body of the rules on the left side of each page. The righthand column contains examples, comments, exceptions, and other helpful details. Note however, that the glossary, the sequence of play, the combat example and the scenarios are presented in a non-annotated two-column format. All the charts and tables used in the game are printed on two identical player-aid cards for easy reference. By reading through only the main rules body, inspecting the maps and looking over the Charts and Tables, you can begin play.

Hell's Highway may be played in five different scenarios. XXX Corps Breakout uses only Map A and is recom-

mended for those playing the game for the first time. Three of the scenarios present the entire campaign with varying degrees of player control over the deployment options facing the Allies and the Germans. The unique nature of the campaign scenarios makes them especially suitable for team play. If a third player is involved, the Allied side should be split in two with one player in command of XXX Corps and the 101st Airborne while his cohort controls the 82nd Airborne, the 1st Airborne, and the Polish Brigade. If there is a fourth player, the German side should be split with one player controlling the 2nd SS Panzer Corps while the other player commands the 15th and 1st Parachute Armies.

A complete copy of *Hell's Highway* includes:

- Two different 20" x 28" game-maps.
- Two different sheets of die-cut counters (260 pieces each).
- Two identical 8" x 11" player-aid cards.
- One 44-page rules booklet.
- One six-sided die.
- One gamebox and counter tray.

If you have a rules question, please write to Victory Games, phrasing your questions so that they may be answered by a simple sentence, word, or number. You must enclose a stamped, self-addressed envelope. Write to:

Victory Games
43 West 33rd St.
New York, NY 10001

Attn: Hell's Highway Question

Note: Whenever a die roll is called for during play, roll one die only. There are no multiple die rolls in *Hell's Highway*.

A Feedback Card is also enclosed in this game. This card is used by Victory Games to help evaluate published games and to determine the nature of future publications. As a Victory Games customer, your comments are invaluable, and we urge you to complete and return this card to us.

Glossary of Terms

Unit terminology is described in 2.1.

TERMS USED IN COMBAT

Attacking Target. An *active* unit that is conducting *direct offensive fire*. An attacking target may be subject to *defensive fire* and, if adversely affected, may not conduct its fire.

Defending Target. An *inactive* unit or stack of two inactive units that is the object of an enemy attack. The defending target may be affected by *offensive fire* conducted in the attack.

Defensive Fire. Fire conducted by an *inactive* unit against an *attacking target*.

Direct Fire. Offensive or defensive fire conducted by a unit in a hex adjacent to its target, representing small arms fire and close assault. An *active* unit that could move into its target hex (disregarding enemy units) may conduct *direct offensive fire*. An *inactive* unit that is a *defending target* may conduct *direct defensive fire*. An *inactive* unit not under attack that is adjacent to an attacking target and could move into its hex (disregarding enemy units) may conduct *direct defensive fire*. Artillery units may not conduct direct fire.

Fire Modifier. A number added to the die roll when resolving an offensive or defensive fire. The fire modifier depends on the type of target unit, the terrain the target occupies, whether direct or indirect fire is being resolved, and other factors.

Flanking Fire. Offensive fire conducted against a defending target in Travel Mode. All indirect offensive fire against such a target is flanking fire. Direct offensive fire against such a unit is considered flanking fire, if conducted from a hex not connected to the target hex by road.

Indirect Fire. Offensive or defensive fire conducted by a unit with *heavy weapons* in a hex adjacent to its target, or by an artillery unit within *range* of its target. A non-artillery unit without heavy weapons may not conduct indirect fire.

Offensive Fire. Fire conducted by an *active* unit against an *inactive* unit. All the active units that are firing at a single *defending target* in one Fire Phase conduct one offensive fire.

Ranged Fire. Offensive or defensive *indirect* fire conducted by an artillery unit in a hex not adjacent to but within range of its target.

OTHER GAME TERMS

Active Unit. A unit belonging to the player whose Player-Turn is in progress. Units belonging to the opposing player are called *inactive* units.

Artillery Communication. A communication path of any length traced between an artillery unit and a unit that is *spotting* the artillery's target. An artillery unit that is unable to spot its target and cannot spot an eligible unit that can spot its target must be in artillery communication with a unit that can spot the target in order to fire. Artillery communication must be traced through an HQ if either the artillery unit or the spotting unit is part of a formation.

Catastrophic Loss. The breaking point of a *formation*, after which it ceases to perform as an effective force. A formation suffers catastrophic loss when its units have lost a total number of *steps* equal to the formation's *Catastrophic Loss Limit*.

Combat Mode. The normal state of a unit (as opposed to Travel Mode). A unit moving in Combat Mode may not use roads.

Communication. A path of hexes traced between two friendly units or a unit and a specific hex. Units trace communication to determine *supply*, *isolation* and artillery *spotting*. A player may trace communication from one hex to another if he can show a path of connected hexes between them that does not pass over a *canal* or *river* hex-side and does not contain an *enemy-controlled* or *enemy-occupied* hex. A friendly unit negates enemy control in the hex it occupies for this purpose. Communication may be

1. The Game Map

The two maps together portray the area of German-occupied Holland where the campaign occurred. Map A is used for the XXX Corps Breakout scenario, and Map B is used for the Besieged scenario. The two maps may be placed together and used for the Market-Garden Campaign scenarios. We will assume that the maps are being used together and will refer to them collectively as the game map.

A hexagonal grid is superimposed over the terrain features to aid the placement and movement of the playing pieces. Each hexagon (hex), has its own four-digit identity number.

1.1 Terrain

The terrain symbology used on the game map is identified in the Terrain Effects Chart (see map).

A hex containing more than one of the following terrain types is considered to contain *only* the single terrain type listed here first. Woods, Rough, Broken, Mixed, or Clear. These terrain types are sometimes combined on the map for aesthetic purposes only.

Towns, Hilltops, Major Roads, and Minor Roads exist in addition to other terrain in the hexes. The following features run along hexsides: Streams, Canals, Rivers,

- The game map is based on maps drawn in 1943 by the U.S. Army Map service. The original scale of the source maps is 1:100,000. We have enlarged the maps slightly so that each hex represents an area 1250 meters across.

TERRAIN PRECEDENCE

Woods
Rough
Broken
Mixed
Clear

traced across any *stream* hexside or across a river or canal hexside with an intact *crossing*.

Control. The presence a unit in *Combat Mode* exerts into the six hexes around it. A unit may exert *heavy* control, *light* control, or no control.

Crossing. A bridge or ferry.

Crossroads. A road hex with more than two hexsides crossed by any type of road (such as hex 0318 or 1213).

Depleted. State of an HQ unit that cannot trace communication to a valid *supply source* or only to a supply source that has no Supply Points. A depleted HQ may not use its HQ capabilities.

Disruption. Temporary loss of effectiveness by a unit, incurred as a result of enemy fire or enemy airstrike. An Allied airborne unit may become disrupted by airlanding. An artillery unit becomes disrupted each time it fires. A disrupted unit may not move or fire and exerts no control.

Evacuation. A special night move whereby a unit in formation that has suffered *catastrophic loss* is removed from play to prevent its elimination by the enemy.

Exploitation. A special move that may be made by *motorized* units in *Travel Mode* following the favorable outcome of a friendly attack. Although an exploitation move occurs during the Fire Phase, it is treated as a normal move.

Garrison. A German infantry detachment of especially low quality assigned to specific guard duty (noted by a "G" as its sole designation). All garrison units are *static*; they exert no control and may not conduct any type of fire. However, unlike other static units, a garrison unit is not eliminated when it becomes disrupted by enemy fire. It is eliminated if it incurs a numerical fire result or when another German unit ends its move in the garrison's hex (the garrison troops are absorbed by the larger unit).

Interdicted Hex. A hex in which the Allied player has spent a *Tac Air Point* on *interdiction*. A German unit in *Travel*

Mode may not enter an interdicted hex. A German unit in *Combat Mode* must spend three additional Movement Points to leave an interdicted hex.

Isolated. State of a unit that is unable to trace communication to a valid *Supply Source*. An isolated unit may become an *isolated force*.

Isolated Force. A unit or group of units that are *isolated* but able to trace communication to each other during the friendly Communication Phase. An isolated force may receive *Supply Points* at the time it is formed.

Movement Point Allowance. The number of *Movement Points* a unit may spend when moving in one friendly Movement Phase. Most units have a Movement Point Allowance of 6; however, see Section 6. Movement Point Allowances are not printed on the counters.

Out of Supply. State of a unit that is able to trace communication to a valid *supply source* that possesses no *Supply Points*. An out of supply unit risks losing steps when it fires. A unit in an *isolated force* is out of supply if the force possesses no *Supply Points*.

Spotting. A prerequisite of artillery fire. A unit may spot a target unit for artillery fire if adjacent to the target unit or on a hilltop within two hexes of the target unit.

Supply Source. A hex representing the supply depot or supply network of a *Command*. Units that can trace communication to a supply source of their Command have access to the Command's *Supply Points*.

Suppressed. State of an HQ that fulfills the requisites of *depletion* and cannot trace communication to a single unit of its *formation*. A suppressed HQ may not perform any game functions.

Travel Mode. Mode entered by a unit to show that it is in transport or foot march columns. A unit that is moving in Travel Mode may use roads to aid its movement and is sometimes referred to as a *travelling* unit. A unit in Travel Mode may not fire and does not exert *control*.

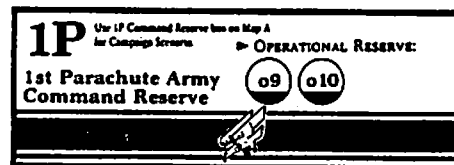
National Borders (which do not affect play), and the Allied Start Line. Bridges and Ferries cross certain Stream, Canal, and River hexsides.

Certain hexes along the mapedge form German Access Areas, each of which contains two to six hexes from which German units may enter or leave the map. Each area has an Identity code (e.g., e3) matching that of a Tactical Reserve Box.

1.2 German Reserve Boxes

The hexfield is surrounded by three types of color-coded German Reserve Boxes used exclusively by the German player. German units may move from the map to these boxes and vice versa, and may move from one box to another that shares the same designation.

Tactical Reserve (TR) Boxes represent areas just off the mapedge. Each has an identity code and connects with one German Access Area. Each TR Box is also connected to one Operational Reserve Box. Each Operational Reserve (OR) Box is connected to two, three, or four TR boxes and one Command Reserve Box. Each Command Reserve (CR) Box is connected to four OR boxes. There are three CR Boxes, one for each German Command in the game. All the TR and OR Boxes that lead into a given CR



Box serve the same Command and are not connected to any boxes in the other commands. Each of a box's connections is noted after the symbol (►) in the box.

1.3 Supply Tracks

There are eight Supply Tracks on the map, one for each Command in the game. These are used to record the current number of Supply Points each Command has. The number of Points allotted each Command at the beginning of the scenario is indicated in the proper space, by scenario number.

1.4 Game-Turn Track

The Game-Turn Track is used to record the passage of Game-Turns. The track indicates the type of turn underway (AM, PM, or Night), whether it is a Resupply turn, and lists historical dates. The AM and PM turns are also called Daylight turns.

1.5 Terrain Effects Chart

The Terrain Effects Chart is printed on each map. This chart shows all the terrain types on the map, lists the Movement Point costs for all types of units to enter each terrain type, and lists fire modifiers applied to all types of target units in the various terrain types. Notes and a summary of additional fire modifiers are also listed.

2. The Playing Pieces

The 520 playing pieces are divided into two general types. Units represent the military forces that the players control. Markers are placed on units, on tracks, or on the map to denote specific information.

The German player controls all the German units. The Allied player controls all British, American, and Polish units. The markers are used by one or both players, as noted in 2.2. Before beginning play, punch out the playing pieces and sort them by type and nationality.

2.1 How to Read the Units

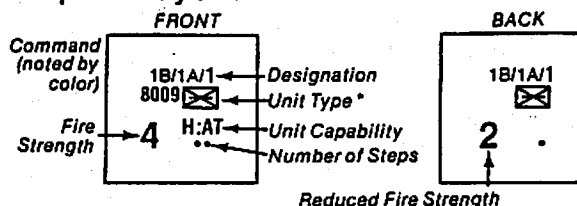
Each unit is a distinct combat force, usually a battalion in size. Each unit is shown on one to four counter-faces, on one or two counters, each face of which represents the unit at a different step level. A unit with one or two steps has only one counter, with one or two printed sides. A unit with three or four steps has two counters, with two printed sides on the initial counter and one or two printed sides on the replacement counter. A replacement counter is distinguishable from an initial counter by an "R" on the counter. Only one counter representing a given unit is in play at one time.

Command. Each unit counter is color-coded to indicate that command to which it belongs. A unit's command determines which supply source the unit uses (see 12.1), the area in which the unit enters play, which artillery units the unit may use, and — if German — which Reserve Boxes the unit may enter.

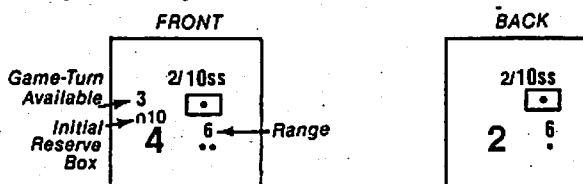
Each of the four Allied airborne commands is also a formation (see Designation, below). Each of the other commands includes more than one formation and independent units.

TIME SCALE: Six hours per Daylight (AM or PM) Game-Turn; 12 hours per Night Game-Turn. Because a Night turn represents a longer period of time than a Daylight turn, there are no special restrictions on what players may do during Night turns, except that no air operations are permitted during Night Game-Turns.

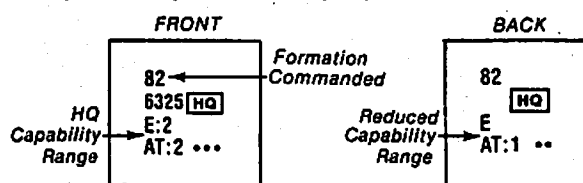
Sample Infantry Unit



Sample Artillery Unit



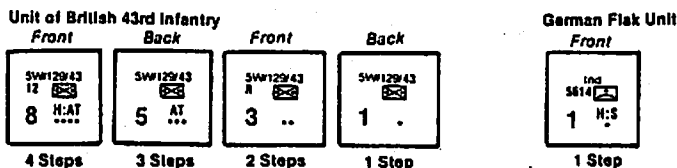
Sample Headquarters Unit (HQ)



*See Unit Type Chart (page 44 or on player-aid card) for explanation.

Note that any symbology not labelled on the sample artillery and HQ units is read as on the sample infantry unit.

STEP EXAMPLE: Each British motorized infantry unit in the 43rd Infantry Division (noted by a boldface 43 in the counter designation) has four different counter-faces on the fronts and backs of two counters, showing the unit with 4 steps (full strength), 3 steps, 2 steps, and 1 step (weakest). As another example, every German flak unit has only 1 step, shown on the front of one counter.



• There are a total of eight Commands, distinguished in the counter-mix by colors:

- First British Airborne Division (Red)
- British XXX (30) Corps (Tan)
- Polish First Parachute Brigade (Yellow-orange)
- US 101st Airborne Division (Light green)
- US 82nd Airborne Division (Dark green)
- German 15th Army (Grey)
- German First Parachute Army (Blue-grey)
- German 2nd SS Panzer Corps (Green-grey)

Designation. The historical identity number of the unit. Each unit has one, two, or three designations, separated by slashes (/). Only the rightmost designation affects play. If this number is in **bold type**, it denotes the unit as part of a formation (usually a division). If the rightmost number is not in bold type, it is the unit's brigade, regiment, battalion, or divisional remnant designation and denotes that the unit is independent.

Fire Strength. A quantification of the unit's relative fire power, used when a unit conducts any type of fire. A unit's Fire Strength does not affect fire conducted against it. A unit's Fire Strength is reduced as it loses steps.

Formation. Each unit with a **boldface** designation is part of a formation. All other units are independent. Units of a formation have access to the capabilities represented by the HQ unit of that formation (see HQ capability, below), and may use the artillery units in the formation. All formations represent historical divisions, except for the Polish 1st Parachute Brigade.

Formation Commanded. The division that the HQ unit commands. All units in the same formation may use the HQ's capabilities and depend on the HQ for artillery communication (see 10.3).

Game-Turn Available. The Game-Turn in which the unit is first available to enter play. Certain units have a four-digit hex number instead; these are placed on the map at the start of play. A German unit or an Allied XXX Corps unit may enter play on its listed Game-Turn or any one thereafter. An Allied airborne unit may enter play on or after its listed Game-Turn if the Allied player has an Air-landing Point available (see 17.3).

HQ Capability. An HQ may possess any of the following special attributes: AT (anti-tank); E (combat engineer); B (bridge engineer); F (flak). These capabilities may be "lent" to any unit in the HQ's formation that is within the hex range listed for that capability (see 11.1). HQ capabilities may be reduced in range or lost as an HQ loses steps.

Initial Reserve Box. The I.D. Code of the Reserve Box to which a German reserve unit is initially assigned. On its Game-Turn of entry, the unit is placed in and may be moved from this off-map area.

Number of Steps. A quantification of the unit's size and morale. A unit has from one to four steps at the start of play, shown by one to four bullets (•) on the counter. Steps affect a unit's Fire Strength and its ability to stack with other units. A unit may lose steps as a result of enemy fire, lack of Supply Points, or — in the case of Allied airborne units — upon airlanding.

Range. The maximum number of hexes that may lie between a hex occupied by an artillery unit conducting indirect fire (exclusive) and the hex it is firing into (inclusive).

The tracing of range is not affected by the presence of friendly or enemy units, or by terrain.

Unit Capability. A unit may have any of the following special attributes, indicated on its counter: H, AT, S. Note that a unit's capability may be lost as the unit incurs step losses.

EXCEPTION: When playing the Free Deployment Campaign Scenario (21.3), the middle designation of Allied airborne units affects Allied set-up.

• A key to all unit designations can be found in the Order of Battle on page 22.

• There are a total of 13 formations:

GERMAN (7)

10th SS Panzer Division: 10SS

(units divided among 2 Commands)

9th SS Panzer Division: 9SS

(units divided among 2 Commands)

59th Infantry Division: 59

84th Infantry Division: 84

85th Infantry Division: 85

180th Infantry Division: 180

7th Parachute Division: 7F

ALLIED (6)

43rd Infantry Division: G

43rd Infantry Division: 43

First Airborne Division: 1 (also a Command)

82nd Airborne Division: 82 (also a Command)

101st Airborne Division: 101 (also a Command)

Polish First Parachute Brigade: P1 (also a Command)

EXAMPLE: An artillery unit with a range of 3, situated in hex 1016, may fire into hex 1013, but not into hex 1012.

EXCEPTION: An artillery unit's range is increased by one when it occupies a hilltop hex.

- **H (Heavy Weapons).** The unit exerts heavy control and may conduct indirect fire.
- **AT (Anti-Tank).** The unit receives an anti-tank bonus of +1 to the die roll when firing at an armored unit. All pure anti-tank units possess this capability.
- **S (Static).** The unit cannot move, nor retreat, nor conduct direct offensive fire. Any static unit, other than a garrison, is eliminated when it incurs any adverse combat result.

2.2. Summary of Markers

A Travel Mode marker is placed atop any type of unit to indicate that the unit is in Travel Mode.

An Attacker Disrupted marker is placed atop a unit that becomes disrupted while attacking, atop an artillery unit that fires during its Combat Phase, or atop a unit hit by a successful airstrike.

A Defender Disrupted marker is placed atop a unit that becomes disrupted while defending in combat, airlanding, or on an artillery unit that fires during the enemy Combat Phase.

If only one unit in a hex occupied by two units becomes disrupted, the marker should be placed atop the disrupted unit and beneath the non-disrupted unit. If both units in a hex are disrupted, one marker is placed atop both.

A Bridge Destroyed marker is placed adjacent to a bridge that the German player successfully destroys, to indicate that the bridge may not be used by either player.

A Bridge Intact marker is placed adjacent to a bridge that the German player fails or declines to destroy, or on which the Allied player has completed repairs, to indicate that the German player may not attempt to destroy the bridge again until he rewires it.

A Bridge Under Repair marker is placed adjacent to a destroyed bridge that the Allied player is in the process of repairing.

A Command Supply marker is placed on the Supply Track matching the Command listed on the marker to indicate how many Supply Points the Command possesses.

An Airborne Supply Head marker is placed on the game map to show the hex location in which the Allied airborne command listed on the marker receives Supply Points.

An Isolated Force marker is placed atop a unit or with a group of units to indicate that they are cut off from their supply source, but in communication with each other. The number on the marker identifies the force.

An Isolated Force Supply marker is placed on the Supply Track of an isolated force's command to indicate how many Supply Points the force has. The identity number on the marker matches the number on the Isolated Force marker.

An Interdicted marker is placed in any hex that the Allied player interdicts with a Tac Air Point. An Interdicted hex inhibits German movement.

The Game-Turn marker is placed on the Game-Turn Track to indicate the current turn.

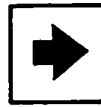
A Prepared Position marker is placed atop a unit that begins the game in, or has constructed, a prepared position.

A Prepared Position Construction marker is placed atop a unit that is in the process of building a prepared position.

An Entrenched Position marker is placed atop a unit that begins the game in, or has constructed, an entrenched position.

An Entrenched Position Construction marker is placed atop a unit that is in the process of building an entrenched position.

- The Travel Mode marker is merely a mnemonic. It does not indicate the direction in which a unit must move.



Travel Mode



Attacker Disrupted



Defender Disrupted

- Travel Mode and Disrupted markers are each printed in both Allied and German colors, for use with appropriate forces.



Bridge Destroyed



Bridge Intact



Bridge Under Repair

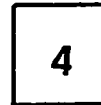
- When any of the three types of Bridge Status markers is used, place it in either hex adjacent to the bridge with the arrow on the marker pointing to the appropriate bridge hexside.



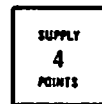
Command Supply



Airborne Supply Head



Isolated Force



Isolated Force Supply

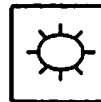


Interdicted



Game-Turn

- The Game-Turn marker is color-coded on either side to indicate that the Allied or German Player-Turn is in progress.



Prepared Position



Prepared Position Construction



Entrenched Position



Entrenched Position Construction

ABBREVIATED SEQUENCE OF PLAY

1. Weather Phase
2. Resupply Phase (AM Game-Turns only)

ALLIED PLAYER-TURN

3. Allied Air Phase
4. Allied Command Phase
 - a. Remove Allied AD markers.
 - b. Assign unit modes.
 - c. Begin bridge repair and prepared and entrenched position construction. Complete last turn's bridge repair and prepared and entrenched position construction.
5. Allied Movement Phase
6. Allied Fire Phase
7. Allied Communication Phase
 - a. Remove Allied DD markers.
 - b. Check Allied lines of communication.
 - c. Complete this turn's stream bridge repair and this turn's prepared position construction begun with engineer aid.

GERMAN PLAYER-TURN

8. German Air Phase
9. German Command Phase
 - a. Remove German AD markers.
 - b. Assign unit modes.
 - c. Rewire intact bridges. Begin prepared and entrenched position construction. Complete last turn's prepared and entrenched position construction.
10. German Movement Phase
11. German Fire Phase
12. German Communication Phase
 - a. Remove German DD markers.
 - b. Check German lines of communication.
 - c. Complete this turn's prepared position construction begun with engineer aid.

3. Sequence of Play

Hell's Highway is played in a variable number of Game-Turns, depending on the scenario the players choose. Each Game-Turn is composed of a number of Phases, some of which are ordered into an Allied and a German Player-Turn. During his turn, each player moves and attacks with his units following the structure outlined below. A player is called the Active or Attacking player during his Player-Turn, and the Inactive or Defending player during his opponent's Player-Turn. His units are sometimes called active or inactive units, as appropriate. The completion of this sequence constitutes one Game-Turn and is repeated as many times as the scenario calls for.

1. WEATHER PHASE

The German player rolls the die and consults the Weather Table to determine the type of weather prevalent for the duration of the Game-Turn: Clear, Cloudy, or Overcast. The weather type affects the number of Tactical Air points both players receive and the number of Airlanding Points the Allied player receives. There is no die roll for weather during a Night Game-Turn.

2. RESUPPLY PHASE

If the Game-Turn Track indicates that this is a Resupply Game-Turn, each player adjusts the markers on his Supply Tracks to indicate the receipt of new Supply Points. The German player receives Supply Points as noted on his three Supply Tracks. The Allied player uses the Air Resupply Table to determine how many Supply Points each of his Airborne Commands receives.

Allied Player-Turn

The Allied player conducts Phases 3 through 7.

3. ALLIED AIR PHASE

Expend available Tac Air Points and Airlanding Points. Each Tac Air Point is used to conduct one airstrike against a German unit within 10 hexes of any XXX Corps Command HQ or one interdiction on a specific hex located within 20 hexes of any XXX Corps Command HQ. Each Airlanding Point is used to enter one airborne reinforcement unit into play. After all such reinforcements are placed in eligible drop zone hexes on the map, use the Airlanding Table to determine how each unit is affected by the drop.

4. ALLIED COMMAND PHASE

A. Remove all Attacker Disrupted markers from Allied units.

B. Assign each Allied unit to Combat or Travel Mode by placing or removing the Travel Mode marker on each.

C. Eligible HQ units may begin repairing destroyed bridges. Eligible infantry, anti-tank, and motorized infantry units may begin constructing prepared or entrenched positions. All canal bridge repair begun last turn is now completed. All entrenched position construction begun last turn is completed. All prepared position construction begun last turn without the aid of combat engineers is completed. Place or remove the appropriate markers to indicate these activities.

5. ALLIED MOVEMENT PHASE

Move any or all Allied units in Combat or Travel Mode, one unit at a time. Each unit may expend up to 6 Movement

Points as it moves. Exception: Motorized units in Travel Mode may move an unlimited number of hexes along roads (see 6.4). Up to six available ground reinforcement units may enter play in Combat or Travel Mode. If any Allied unit moves adjacent to a bridge or ferry, the German player may immediately attempt to destroy the crossing.

6. ALLIED FIRE PHASE

Each German unit or stack that is adjacent to or within range of any non-disrupted Allied units in Combat Mode may be attacked by those Allied units. Each attack is resolved separately, as follows:

1. Declare which German unit or stack is being attacked and which Allied units are attacking it. Specify which attacking units are using direct fire and which are using indirect fire. Declare use of available HQ capabilities.

2. The German player declares defensive fire. He specifies which defending units are firing at which attacking target units, and whether each defending unit is conducting direct or indirect fire. He may also declare use of available HQ capabilities.

3. The German player resolves defensive fire against each attacking target unit separately. Use the Fire Table to determine if attacking target units become disrupted and/or lose steps as a result of defensive fire.

4. Resolve the attack as one offensive fire, using all the involved Allied units that were not disrupted by German defensive fire. Use the Fire Table to determine if the German units become disrupted, retreat, or lose steps as a result of offensive fire.

5. If the defending target retreated or was destroyed by offensive fire, Allied units that conducted direct fire may advance into the vacated hex. Allied motorized units in Travel Mode that are adjacent to the vacant hex may receive an exploitation move.

7. ALLIED COMMUNICATION PHASE

- A. Remove all Defender Disrupted markers from Allied units.

- B. Check all Allied lines of communication. If an Allied unit (or units) is now isolated, it becomes an isolated force. Immediately assign it Supply Points from the Supply Track of its Command.

- C. All stream bridge repair begun this Player-Turn is now completed. All prepared position construction begun this turn with the aid of combat engineers is completed. Place the appropriate markers to show these endeavors.

German Player-Turn

The German player conducts Phases 8 through 12.

8. GERMAN AIR PHASE

If a Tac Air Point is received this turn, expend it to conduct one airstrike against any Allied unit more than 10 hexes from an Allied XXX Corps HQ.

9. GERMAN COMMAND PHASE

- A. Remove all Attacker Disrupted markers from German units.

- B. Assign each German unit to Combat or Travel Mode. Place each available German reinforcement in its listed Reserve Box.

- C. Eligible HQ units may rewire intact bridges for demolition. Eligible units may begin constructing prepared or entrenched positions. Prepared and entrenched position construction begun last turn is now completed.

10. GERMAN MOVEMENT PHASE

Move any or all German units in Combat or Travel Mode. German reserve units may enter play from the appropriate TR or OR Box. German units on the map may move into a TR Box. Units already in a Reserve Box may move to a connected Reserve Box.

11. GERMAN FIRE PHASE

A. Each Allied unit that is adjacent to or within range of any non-disrupted German units in Combat Mode may be attacked by those German units. Each attack is resolved separately as follows:

1. German Offensive Fire Declaration
2. Allied Defensive Fire Declaration
3. Allied Defensive Fire Resolution
4. German Offensive Fire Resolution
5. German Advance

12. GERMAN COMMUNICATION PHASE

- A. Remove all Defender Disrupted markers from German units. Remove all Allied Air Interdiction markers from the map.

- B. Check German lines of communication. Create isolated Forces where appropriate.

- C. All prepared position construction begun this turn with the aid of combat engineers is completed.

One Game-Turn is now complete and another is begun. Advance the Game-Turn marker one space along the Game-Turn Track. If this is the last Game-Turn of the scenario, assess victory.

4. Unit Modes

Every unit is in Travel Mode or Combat Mode at any given time. A unit's mode affects its ability to move, have combat, and inhibit enemy activity. During his Command Phase, the player decides which mode each of his units will be in for the Game-Turn.

A unit's mode may be changed only during the owning player's Command Phase or — in certain cases — as a result of enemy fire. A disrupted unit may not change mode.

4.1 Combat Mode

Combat Mode is the normal mode of a unit. A unit must be in combat mode to conduct any type of fire. Most units in Combat Mode may move, but none may use roads. A unit in Combat Mode has a Movement Allowance of 6.

4.2. Entering Travel Mode

Any unit may enter Travel Mode during its Command Phase as long as the following restrictions are met:

- A motorized unit must be in a road hex and in supply.
- A non-motorized unit must be in a road hex or a hex with clear terrain.
- A non-motorized artillery or flak unit must be in a road hex or a hex with terrain that it is allowed to enter (see Movement Chart).
- The unit may not be in a hex occupied by another friendly unit in Combat Mode unless the hex contains a major road or terrain the unit may enter in Travel Mode.
- The unit may not be in a hex adjacent to an enemy unit in Combat Mode, unless the hex is occupied by another friendly unit that exerts control.
- The unit may not be in a hex occupied by another friendly unit in Travel Mode.
- A static unit or a non-motorized HQ unit may not enter Travel Mode.
- An Allied airborne artillery or reconnaissance unit may not enter Travel Mode during the turn it airlands.

4.3 Leaving Travel Mode

A non-artillery unit in Travel Mode may change to Combat Mode during its Command Phase in any hex containing terrain it may enter in Combat Mode (see Terrain Effects Chart), regardless of the presence of enemy units. For example, an armored unit may leave Travel Mode in mixed terrain, but not in broken terrain.

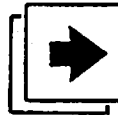
A unit in Travel Mode that becomes disrupted at any time immediately changes to Combat Mode.

A unit in XXX Corps Command in Travel Mode that is not on a supply source hex during the friendly Command Phase must immediately change to Combat Mode (see 12.1).

4.4 Effects of Travel Mode

A unit in Travel Mode may use major and minor roads to aid its movement. A travelling motorized unit has an unlimited Movement Allowance, but may move only on roads. A travelling non-motorized unit has a Movement Allowance of 6. Such a unit may move on roads and in certain terrain hexes, as noted on the Terrain Effects Chart. Artillery and flak may move only when in Travel Mode (see 6.4).

Travel Mode



Combat Mode



EXCEPTION: Allied ground reinforcements and German reserve units may enter in either Combat or Travel Mode, at the owning player's choice during his Movement Phase.

EXCEPTION: An artillery or flak unit in Combat Mode cannot move at all.

• **Special XXX Corps Command Travel Mode Restriction**
All units of British XXX Corps Command are motorized and depend on their ever-lengthening logistical tail for the large amounts of fuel and other supplies necessary to the maintenance of their offensive. Because of this situation, a unit in XXX Corps Command must not only be in a road hex and be in supply to enter Travel Mode, but that road hex must be a XXX Corps Command Supply Source (see 12.1 for definition).

• A unit already in Travel Mode in an enemy-controlled hex during the Command Phase may remain in Travel Mode.

• An artillery unit in Travel Mode may leave Travel Mode in any type of terrain except rough.

EXCEPTION: A unit may leave Travel Mode in a town hex, regardless of other terrain in the hex. If the other terrain is normally prohibitive, the unit cannot move at all until it re-enters Travel Mode, nor may it conduct direct offensive fire nor retreat from the hex. The unit may conduct all other types of fire for which it is otherwise eligible.

EXCEPTION: If the unit occupies a hex that prohibits the unit from entering Combat Mode, the unit remains in Travel Mode and is disrupted.

EXCEPTION: If the unit occupies a hex that prohibits the unit from entering Combat Mode, the unit remains in Travel Mode, but cannot move at all in the ensuing Allied Movement Phase.

• A unit in Travel Mode is sometimes called a Travelling unit.

A unit in Travel Mode exerts no control. A unit in Travel Mode may not perform the following actions:

- Exit a hex under any type of enemy control.
- Conduct any type of fire.
- Occupy or construct prepared or entrenched positions.
- Spot for artillery fire.

An HQ in Travel Mode may not use any of its HQ capabilities.

5. Controlling Hexes

Most units in Combat Mode exert control into the six hexes adjacent to the hex each occupies. A hex within a unit's control is considered controlled by that unit during all Phases of the Game-Turn. Thus, a hex may be in friendly control (if adjacent to a unit owned by the player), in enemy control (if adjacent to a unit owned by the enemy player), or in both enemy and friendly control (if adjacent to opposing units). Enemy movement in a hex in friendly control is inhibited or prohibited. Each unit exerts one of three types of control: heavy, light, or none.

5.1 Heavy Control

Heavy control is exerted into the six hexes adjacent to a unit with heavy weapons in Combat Mode.

Heavy control extends into all types of terrain. Exceptions: Heavy control exerted into a city hex and/or across a river or canal hexside (regardless of crossings) is treated as light control for all purposes.

A unit must cease its movement for the turn upon entering a hex in heavy enemy control. A unit in Combat Mode may move out of such a hex at a cost of three additional Movement Points, but only if the unit has not yet expended any Movement Points this turn and does not move directly into a hex under any type of enemy control.

5.2 Light Control

Light control is exerted into the six hexes adjacent to a unit in Combat Mode without heavy weapons.

Light control does not extend into city hexes or across river or canal hexsides.

A unit in Combat Mode need not stop moving when it enters a hex in light enemy control. Such a unit may move out of a hex in light enemy control at a cost of two additional Movement Points and may move directly into a hex under light enemy control or no enemy control. A unit that moves from one hex in light enemy control directly to another hex in light enemy control must stop moving.

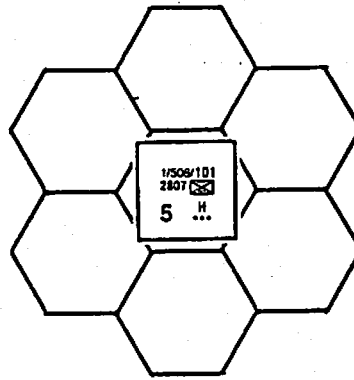
5.3 No Control

The following unit types exert no control:

- Artillery.
- Flak without heavy weapons.
- Garrison.
- Headquarters.
- Any disrupted unit.
- Any unit in Travel Mode.

6. Movement

During his Movement Phase, each player may move any number of his units that are in play. Each unit moves one at a time, hex-by-hex, in any direction that the player wishes. As a unit enters a hex, it expends a certain number of Movement Points, depending on the terrain in the hex and other variables. When a unit has expended a number of Movement Points up to its Movement Point Allowance,



- There is no additional effect when more than one unit controls a hex.
- A unit controls even a hex that it is prohibited, by terrain, from entering.
- The type of control a unit exerts is unaffected by prepared or entrenched positions.

EXCEPTION: A flak unit with heavy weapons exerts light control.

- Heavy control extends across stream hexsides and into towns.

EXCEPTIONS: See 5.3, following.

- A unit cannot move from a hex in light enemy control directly into a hex in heavy enemy control.

- Self-propelled artillery does exert control.
- A flak unit with heavy weapons exerts light control.

MOVEMENT POINT ALLOWANCES (MPA)

- A unit in Combat Mode has an MPA of 6, except an artillery or flak unit in Combat Mode has an MPA of 0.
- A non-motorized unit in Travel Mode has an MPA of 6.
- A motorized unit in Travel Mode has an unlimited MPA, but can move only on roads.
- A static or garrison unit has an MPA of 0.
- A disrupted unit has an MPA of 0.

the unit must stop moving for the turn. When the player has moved all the units he wishes to or can in the turn, his Movement Phase ends.

6.1 Movement Costs

The basic cost to enter a hex is one Movement Point. The cost to enter some terrain hexes is higher (or lower), while other terrain hexes may not be entered at all by certain units. The Terrain Effects Chart lists the costs to enter each type of hex, depending on the type of unit moving and its mode. The chart also lists other movement costs (such as hexsides and enemy controlled hexes), and notes appended to the chart include important movement restrictions.

Movement costs listed for a town or road on the Terrain Effects Chart are used instead of other terrain in the hex.

When a hexside (such as a bridge) has a "+" cost attached to it, that cost is in addition to the cost for entering the hex. A "0" indicates that the bridge may be crossed at no additional cost.

As noted on the Unit Type Chart, motorized infantry and armored infantry units are considered non-motorized when in Combat Mode and motorized when in Travel Mode.

6.2 Movement Restrictions

A unit may not enter or pass through a hex containing an enemy unit.

A unit is never required to move, or to expend its entire Movement Point Allowance. However, a unit may not lend or accumulate unused Movement Points.

A unit may never exceed its Movement Point Allowance, even to move only one hex.

When a player has completed his moves for the turn, his units must meet the stacking restrictions (see Section 7).

Allied units may not move off the map. German units may move off the map from Access Area hexes into TR Boxes (see 16.3).

6.3. Combat Mode Movement

A unit in Combat Mode may move through any number of friendly units in any mode at no additional cost.

A unit in Combat Mode must stop moving for the turn upon entering a hex in heavy enemy control.

A unit in Combat Mode is not required to stop upon entering a hex in light enemy control, if it can expend enough Movement Points to continue moving (+2 Movement Points).

A unit in Combat Mode that begins the friendly Movement Phase in a hex in heavy enemy control may move out of that hex at a cost of three additional Movement Points. The first hex entered in this move may not be in any type of enemy control.

6.4 Travel Mode Movement

A unit in Travel Mode expends Movement Points in various ways, as noted on the Terrain Effects Chart. A travelling unit ignores the terrain in a hex when moving from road hex to an adjacent hex connected by the same road. A motorized travelling unit may only enter a hex through a connecting road hexside. All other types of travelling units may enter a hex by road or, if the hex contains terrain the unit may enter in Travel Mode, by paying the listed terrain cost for the hex.

A unit in Travel Mode may never enter or pass through a hex containing another friendly unit in Travel Mode.

A unit in Travel Mode may not move adjacent to an enemy unit in Combat Mode that exerts control unless the hex being entered is occupied by a friendly unit in Combat Mode that exerts control.

EXAMPLE: A US parachute infantry unit is moving. It enters a clear hex (1 MP), a mixed hex (1 MP), and a broken hex (2 MP's). It has spent 4 MP's and is adjacent to a woods hex and a broken hex. It does not have enough MP's remaining to enter the woods hex (3 MP's), so it moves into the broken hex, spending the last 2 of its 6 MP's.

- In order for a motorized infantry or armored infantry unit to enter Travel Mode, it must occupy a hex that it could enter — as a motorized unit — while in Travel Mode. The XXX Corps Command Travel Mode restrictions apply as well, to units of that Command.

EXCEPTION: A unit may enter a hex occupied solely by an enemy HQ.

- An infantry unit in Combat Mode could not move from a hex in heavy enemy control, across a bridge, into an adjacent forest hex (cost: 7 Movement Points).

EXCEPTION: See Scenario 19.

- However, a unit cannot move directly from a hex in light enemy control to a hex in heavy enemy control; and a unit that moves from one hex in light enemy control directly to another hex in light enemy control must stop moving.

- A motorized unit in Travel Mode may move through an unlimited number of connected road hexes. Thus, if unobstructed by enemy units and friendly units in Travel Mode, such a unit could traverse the entire game map in one move, as could a real military formation under ideal, uncontested conditions.

- A unit eligible to enter a hex by either (a) road or (b) paying the terrain cost may enter the hex by either manner, at the owning player's discretion.

- A unit in Travel Mode can enter or move through a hex adjacent to an enemy unit that does not exert control, including an enemy unit in Travel Mode.

A unit in Travel Mode may not move at all when in an enemy-controlled hex.

Any type of unit travelling on a major road may enter or pass through hexes occupied by friendly units in Combat Mode. A non-motorized unit travelling without using a road may enter or pass through hexes occupied by friendly units in Combat Mode.

Any type of unit travelling on a minor road may not enter a hex containing a friendly unit in any mode, and may not move adjacent to another unit in Travel Mode on the same minor road. Exceptions: Units travelling on minor roads may move adjacent to each other when either unit is in a cross-roads or city hex.

A travelling motorized unit may not use a minor road if, at the beginning of its move (not the beginning of the Movement Phase) it is adjacent to another motorized unit in Travel Mode in a hex connected by any type of road. This rule applies regardless of how far the travelling unit moves in the turn before it uses a minor road. Exception: If the unit that is going to move or the adjacent unit is in a cross-roads or city hex, the moving unit may use a minor road.

An Allied ground reinforcement in Travel Mode may not use a minor road on the turn it enters play.

EXAMPLE

All five units are Allied motorized. The Allied Movement Phase is in progress. Units A and E are in Combat Mode and have already moved. Units B, C, and D have yet to move and wish to follow A down the minor road.

B cannot move on the minor road, since it began its move adjacent to C; so B moves along the major road and passes through E.

C can then move on the minor road, since B has already moved away and D is in a crossroads hex. C moves to hex 0706, adjacent to A. C cannot enter or pass through A's hex because of the minor road restriction.

D can then move on the minor road following C. However, it must stop in hex 0604, two hexes away from C, because of the minor road restrictions.

Note that if the units were not moved in the preceding order, some of the moves would not be allowed, since a unit in Travel Mode cannot enter a hex with another unit in Travel Mode.

6.5 Motorized Exploitation Movement

A motorized unit in Travel Mode that is adjacent to an enemy-occupied hex during the friendly Fire Phase may be allowed an exploitation move if...

- All the enemy units in the hex or eliminated or retreat as a result of combat, and...
- The motorized unit's hex and the enemy-occupied hex are connected by road.

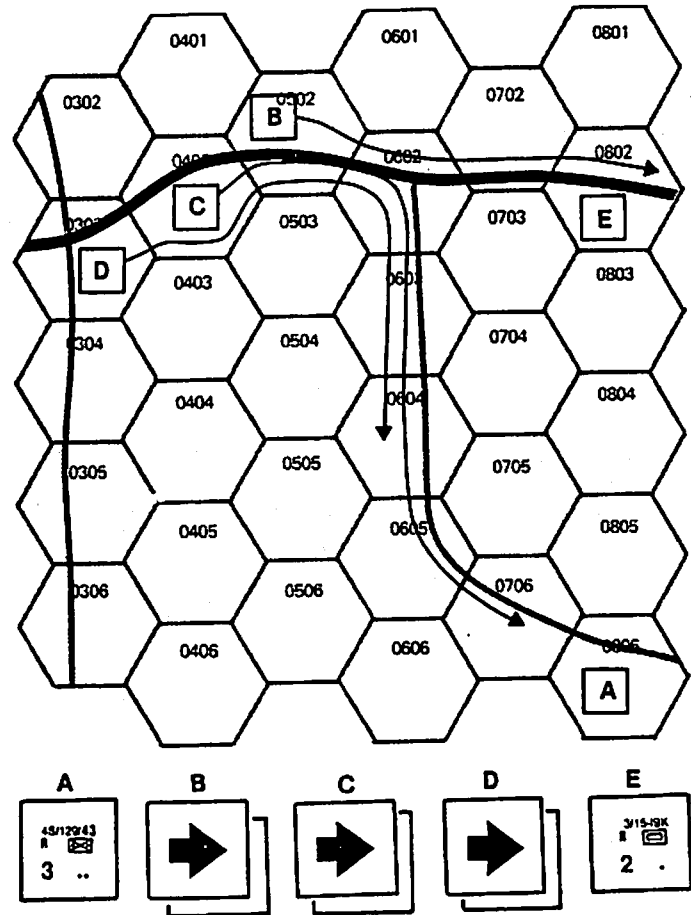
If these conditions are met, the motorized unit may move immediately after the combat is resolved as if it were the friendly Movement Phase, as far as it wishes or can, through road hexes. All the restrictions of motorized Travel Mode movement apply. The first hex entered in an exploitation move must be the hex just vacated by the enemy unit(s). This "free" move must be conducted immediately, before any other combats are resolved, if at all.

If a number of friendly motorized units in Travel Mode are organized into an exploitation column at the instant of combat, they may all receive an exploitation move if the enemy is dislodged from its hex. If the lead unit of the column becomes eligible for an exploitation move, all units in the exploitation column may immediately follow the move of the lead unit, hex-by-hex, staying in the same order, but only through major road hexes.

- A motorized unit in Travel Mode cannot enter the same hex twice in a single move (i.e., the unit cannot reverse direction). This rule prevents a single unit from darting about the map, checking every bridge in sight for demolition.

- The minor road restrictions represent the congestion and traffic problems that arise when military forces use a narrow road instead of a multi-lane road.

Crossroads. A road hex with more than two hexsides crossed by any type of road (such as hex 0318 or 1213).



- An exploitation column is an uninterrupted chain of friendly motorized units in Travel Mode, each adjacent to the next, all on the same major road. The lead unit in the column must be adjacent to the enemy-occupied hex. The column may contain any number of eligible units.

6.6 Water Barriers and Bridges

There are three types of water barriers on the map:

- A stream hexside may be crossed only by infantry and anti-tank units in Combat Mode, at a cost of two additional Movement Points.
- A canal or river hexside may be crossed only by Allied airborne infantry units in Combat Mode with the aid of bridge engineers, at a cost of three additional Movement Points.

Any of these hexsides that is traversed by a bridge may be crossed by any type of unit in Combat or Travel Mode, as noted on the Terrain Effects Chart.

A bridge may not be used for movement if both hexes adjoining the bridge are adjacent to an enemy unit that exerts any type of control (even if a unit does not actually control either hex, due to terrain).

6.7 Ferry Crossings

Certain river hexsides are crossed by ferries. A ferry may be used by a unit to cross the river at the ferry hexside at a very slow rate.

A unit may cross a river by ferry only if the following requirements are met throughout the move:

- Neither hex adjoining the ferry is enemy-occupied or in any type of enemy control.
- The unit begins the Movement Phase in Travel Mode and in one of the two hexes joined by the ferry.
- The unit is not disrupted or suppressed.
- No other unit has used the given ferry for movement in the current Game-Turn.

A non-motorized infantry unit or any unit with only one step may cross a river by ferry as its entire move for the turn. The unit moves across the ferry hexside and may move no further that turn.

Any other type of unit must spend two Game-Turns to cross a river by ferry. An in-progress two-turn ferry move must be abandoned if either ferry hex becomes enemy-controlled or the unit is fired upon.

A ferry is considered a minor road hexside, thus allowing any type of unit in Travel Mode to use the ferry regardless of the terrain in either adjoining hex.

6.8 Evacuation

A unit that is part of a formation that has suffered catastrophic loss may be evacuated during the friendly Movement Phase if the following requirements are met:

- The current Game-Turn is a Night turn.
- If the unit is Allied, it must be able to trace communication to any HQ of XXX Corps Command that is in supply.
- If the unit is German, it must be in supply.
- The unit must be able to move at least one hex.

If all these requirements are met, the unit is evacuated simply by removing it from the map. An evacuated unit may not re-enter play, but is not considered eliminated for Victory Point purposes (see 18.4). However, steps that an evacuated unit lost while in play may count for enemy VP's. Any number of eligible units may be evacuated in a single Night Game-Turn.



- Lake hexsides (i.e., between hexes 6623 and 6724) have the same properties as river hexsides.

- For details, see 11.3.

- A destroyed bridge cannot be used.



- A destroyed ferry cannot be used.

- A unit that is fired upon while using a ferry is considered to occupy the hex from which the ferry crossing began—for purposes of resolving the fire—that hex is considered to be clear terrain.

EXAMPLE: A motorized infantry unit with three steps that commences a ferry crossing on Game-Turn 3 would not actually be in the hex across the river and eligible to move until the beginning of Game-Turn 5.

- However, a hex containing a road and a ferry is not necessarily a cross-roads hex.

- For details, see 11.8.

- Allied bridge engineers may allow a unit to trace communication across a river or canal for this purpose (see 11.3).

- Independent units and units in a formation that has not suffered catastrophic loss may not be evacuated.

7. Stacking

A hex may be occupied by one or two friendly units. However, the total number of steps in a hex may not exceed five. Units may stack together regardless of type, parent formation, or mode. Exception: Two units in Travel Mode may not stack together.

A headquarters unit does count as a unit for purposes of stacking, but is considered to have only one step for stacking purposes, regardless of how many steps it may actually possess.

A unit may move through other units in excess of stacking restrictions, but the stacking restrictions must be obeyed at all other times.

If a stack of units is found to exceed the stacking limit, the excess units must be eliminated (owning player's choice).

A German garrison unit is eliminated whenever a German unit completes its move in the garrison unit's hex.

8. Fire Combat

During his Fire Phase, a player may have his units conduct any number of attacks against enemy units. The aim of a single attack is to disrupt, reduce, or force the retreat of all the enemy units in one hex (the defending target). In an attack, inactive units conduct defensive fire at attacking targets, and then attacking units conduct offensive fire at the defending target.

A single attack includes any number of eligible units: the inactive units that are the defending target; active units adjacent to the defending target; other inactive units adjacent to the attacking units; and active and inactive artillery units within range. Depending on their type and combat situation, some units will conduct direct fire while others will conduct indirect fire.

A single unit may not fire in more than one attack per Combat Phase, and may not be the target of more than one attack per Combat Phase. A unit is never forced to attack. If two inactive units occupy a hex, they both must be attacked if either is to be attacked.

8.1 General Fire Restrictions

The following units may not conduct any type of fire:

- A unit in Travel Mode.
- A disrupted unit.
- A static unit without heavy weapons.
- A headquarters unit.
- A unit that has already fired in the current Combat Phase.

An artillery unit may not conduct direct fire.

A pure anti-tank unit may not conduct direct fire at a non-armored target.

8.2 Declaring Offensive Fire

The active player may resolve his attacks in any order he desires. Each attack is resolved separately. After the attacker announces an attack by indicating a specific defending target, he conducts the following steps.

1. Declare which attacking units are conducting direct offensive fire against the defending target. A unit may conduct direct offensive fire if the following requirements are met:

- The firing unit is adjacent to the defending target.
- The defending target hex contains terrain the firing unit could enter in Combat Mode.
- The firing unit could cross the hexside separating it from the defending target hex in Combat Mode.

EXAMPLE: Two full-strength infantry battalions of the US 82nd Airborne Division (3 steps each) cannot stack together. If either of the two units loses a step, however, they can stack together.

EXCEPTION: A unit in Travel Mode can never move through another unit in Travel Mode and is sometimes prevented from moving through a unit in Combat Mode (see 6.4).

Direct Fire. Offensive or defensive fire conducted by a unit in a hex adjacent to its target, representing small arms fire and close assault.

Indirect Fire. Offensive or defensive fire conducted by a unit with heavy weapons in a hex adjacent to its target, or by an artillery unit within range of its target.

- A static unit with heavy weapons can conduct defensive fire, but cannot conduct any type of offensive fire.

- This restriction does not apply to other unit types with anti-tank capability.

- No unit can conduct direct fire across a river or canal hexside, unless crossed by an intact bridge (the river assault penalty is then applied; see 8.6).



May not conduct direct offensive fire into broken, rough, or woods terrain.



May not conduct direct offensive fire into rough or woods terrain.

- None of the preceding units shown can conduct direct offensive fire across a stream hexside unless crossed by a bridge.

2. Declare which attacking units are conducting indirect offensive fire against the defending target. Units may conduct indirect fire even if no units are assigned to direct fire. A non-artillery unit may conduct indirect offensive fire if it has heavy weapons and is adjacent to the defending target. An artillery unit may conduct indirect offensive fire if:

- It is within range of the defending target.
- It is not in an enemy-controlled hex.
- The defending target is spotted for ranged fire.

3. Declare the use of any headquarters engineer or anti-tank support for the attack. A headquarters may give support if at least one attacking unit conducting direct offensive fire is from the HQ's formation and is within range of the HQ.

4. Calculate whether the entire attack will be resolved as direct or indirect fire. If more than half the declared units are conducting indirect fire, the entire attack will be resolved as indirect fire, regardless of the effects of defensive fire. If at least half the declared units are conducting direct fire, the attack may be resolved as direct fire (defensive fire could still cause the attack to be resolved as indirect fire). Offensive fire is not resolved upon declaration; first, the defending player has the opportunity to declare and resolve defensive fire.

8.3 Declaring Defensive Fire

After the Active player has finished declaring an attack, the Inactive player may declare defensive fire according to the following steps. Any attacking target units may be the target of defensive fire.

1. Declare which attacking target units will be fired upon by the defending target. As long as the restrictions of 8.1 are met, the defending target unit may always conduct direct defensive fire against one attacking target unit of the defender's choice. If there are two defending target units, each unit fires at a different attacking target unit; they may not fire at the same unit unless there is only one attacking target unit.

2. Declare which units other than the defending target(s) are conducting direct defensive fire. A unit not under attack may conduct direct defensive fire at one attacking target if:

- It is adjacent to the attacking target unit.
- The attacking target unit is in a hex with terrain the firing unit could enter in Combat Mode.
- The firing unit could cross the hexside between it and the attacking target unit in Combat Mode.

3. Declare which units will conduct indirect defensive fire. A non-artillery unit not under attack may conduct indirect defensive fire at one attacking target unit if it has heavy weapons and is adjacent to the unit. An artillery unit may conduct indirect defensive fire at one attacking target unit if:

- The attacking target unit is spotted for ranged fire.
- It is within range of the defending target.
- It is not in an enemy-controlled hex.

- No terrain prevents indirect fire.

- If such a unit can conduct direct or indirect fire, the owning player can choose either, at his discretion.

EXCEPTION: An artillery unit that is adjacent to the defending target and is stacked with a unit that exerts control can conduct indirect fire on the target, regardless of enemy control.

- For details, see 10.1.

Range. The maximum number of hexes that may lie between a hex occupied by an artillery unit conducting indirect fire (exclusive) and the hex it is firing into (inclusive).

- Use of HQ engineer support costs one Supply Point at the moment of declaration (see 11.2).

EXAMPLE: In a single German attack, two active units are conducting direct fire while three other active units are conducting indirect fire. The attack is declared an indirect fire. If the German player had not included one of his indirect fire units, making the direct/indirect ratio even, the attack would be declared a direct fire. However, this declaration may change when the fire is resolved, as shown in the example accompanying 8.5.

Attacking Target. An active unit that is conducting direct offensive fire. An attacking target may be subject to defensive fire and, if adversely affected, may not conduct its fire.

- Defensive fire can never be conducted against an attacking unit assigned to indirect offensive fire.
- No terrain prevents direct defensive fire conducted by the defending unit.

EXCEPTION: An artillery unit that is a defending target can conduct indirect defensive fire if, and only if, the restrictions of Step 3 are met.

- A defending unit may fire even if it is not the target of an attack.
- The terrain restrictions on direct offensive fire detailed beside 8.2 also apply to direct defensive fire conducted by units other than the defending target.
- No terrain prevents indirect fire.

- The defending target may spot if eligible (see 10.1).

- Defending artillery must be within range of the defending target, not the attacking target.

EXCEPTION: An artillery unit that is adjacent to an attacking target unit and is stacked with a non-artillery unit can conduct indirect fire on that attacking target unit only.

4. Declare use of any headquarters engineer or anti-tank support for the defense. An HQ may give anti-tank support to any unit conducting direct defensive fire that is from the HQ's formation and is within range of the HQ. An HQ may give engineer support to the defending target (only), if from the same formation and within range.

Each unit conducting defensive fire must fire at a different attacking target unit, if there is one available. Two or more inactive units may fire at the same attacking target unit only if there is no other target unit each can fire upon. A unit is not required to conduct defensive fire, even if under attack. A unit that conducts defensive fire when not under attack may not then fire if attacked later in the same Combat Phase.

8.4 Resolving Defensive Fire

After the defending player has declared all his defensive fires in an attack, each is resolved, *one fire at a time*.

1. Add up the Fire Strengths of all the inactive units assigned to fire at a single attacking target unit. This sum is the Fire Strength Total.

2. If at least half of the units are conducting direct fire at the attacking target unit, consider the fire a direct defensive fire. If more than half the units are conducting indirect fire at the attacking target unit, consider the fire an indirect defensive fire.

3. Consult the Fire Modifiers to determine how the die roll will be modified.

4. Roll the die and add the Fire Modifier Total to the result. Cross-reference the Fire Strength Total with the modified die result on the Fire Table to find the fire result. The attacker applies this result to the attacking target unit immediately.

Repeat these steps for each attacking target unit that is being fired upon. A single attacking target unit may be fired upon only once.

8.5 Resolving Offensive Fire

After all defensive fire in an attack is conducted, the attacking player resolves the offensive fire of his surviving units. All attacking units together conduct one fire at the defending target.

1. Total the Fire Strengths of all attacking units conducting any type of fire at the defending target. Attacking units that were disrupted or eliminated by defensive fire are not included in the attack.

2. Determine whether the fire will be considered direct or indirect. If all remaining attacking units are conducting indirect fire, consider the fire indirect offensive fire. If an attack is declared a direct fire during Step 4 of offensive fire declaration (8.2), it would be resolved as a direct fire as long as at least one direct fire unit is now able to fire. An attack that was termed an indirect fire during Step 4 of 8.2 is now considered an indirect offensive fire, even if direct fire units remain.

3. Consult the Fire Modifiers to determine how the die roll will be modified.

4. Roll the die, adding the Fire Modifier Total to the result. Cross-reference the Fire Strength Total with the modified die result on the Fire Table to find the fire result. The defender applies this result to the defending target unit(s) immediately.

- Use of HQ engineer support costs one Supply Point at the moment of declaration (see 11.2).

- HQ engineer support cannot be given to any unit other than the defending target.

- A unit able to conduct defensive fire can hold its fire so that it can fire during a later attack in the same Phase.

- Usually, no more than one inactive unit will be firing at a single attacking target. Thus, Step 2 is rarely conducted; the type of fire conducted by the firing unit has already been declared.

- See 8.6 and the Terrain Effects Chart on the map.

- If the die result is an unmodified 6, the defending player must spend Supply Points (see 12.3) and may be able to reduce an enemy headquarters unit (see 11.6).

- If no attacking units can now fire, the attack does not occur. However, any attacking units declared for fire must fire if able.

EXAMPLES: An attack including 2 direct fire units and 3 indirect fire units is declared an indirect fire before the defensive fire. Even if the defensive fire has no effect, the attack will be resolved as an indirect fire.

An attack including 2 direct fire and 2 indirect fire units is declared a direct fire. If defensive fire prevents one direct fire unit from firing, the attack is still resolved as direct fire. However, if both direct fire units are prevented from firing, the attack will be resolved as indirect fire.

- On an unmodified die roll of 6, the attacking player must spend Supply Points and may be able to reduce an enemy headquarters unit.

8.6 Fire Modifiers

Each time the die is rolled to resolve a fire in a combat, a number of modifiers will affect the die result.

Consult the Terrain Effects Chart to find the basic fire modifier. The chart is self-explanatory, with the following special notes:

- When the defending target consists of two units of different unit types, the defender declares which type will be used with the chart. However, any step losses incurred by the defending target must be taken by the declared unit first.
- A unit conducting direct offensive fire across a bridge or stream hexside is considered in clear terrain if it is the target of any type of defensive fire.
- An attacking target in a city hex has a less advantageous modifier than a defending unit in a city hex, as noted on the chart.
- The entrenched line of the chart is used if the defending target is entrenched, regardless of the defending unit type.

Once the basic fire modifier is derived from the chart, add to it any modifiers from the following list that apply to the fire. This sum is called the Fire Modifier Total and is added to the die result. When conducting direct fire, a Fire Modifier Total of less than zero is ignored. When conducting indirect fire, a negative Fire Modifier Total may be applied.

When conducting offensive or defensive fire:

+1 One or more units conducting direct fire are anti-tank types, have anti-tank capability, or are receiving anti-tank support from an HQ, and the target is any armored type.

+1 One or more units are conducting direct fire from a hilltop hex.

When conducting offensive fire only:

-1 The defending target is in a hex with a town, in any mode. This modifier is not applied if the defending target is entrenched.

-1 The defending target is in a hex with a hilltop, in Combat Mode. This modifier is not applied if the defending target is in Travel Mode.

-1 The defending target is in prepared positions. This modifier is not applied if the attacker has engineer support from an HQ (see 11.2).

-1 The attacking units come from more than one Command.

+1 Indirect fire is conducted against a defending target in Travel Mode from any hex or, direct fire is conducted against a defending target in Travel Mode from a hex not connected to the target hex by road. This modifier is not applied if the defending target is in a city hex.

+1 Direct fire is conducted with engineer support against a defending target that does not have engineer support (see 11.2). This modifier is not applied if the defending target occupies prepared or entrenched positions; instead, the positions are ignored.

+2 Allied direct fire is conducted against a German unit that is isolated at the moment of fire (see 12). This modifier is not applied if the isolated unit is an SS (noted by an SS in its designation, not by Command) unit that is north of the Neder Rijn river, and is never applied to isolated Allied units.

A single modifier from the preceding list may only be applied to a single fire once.

• *The fire modifier information on this chart takes into account the type of fire being conducted (direct or indirect), the type of target being fired upon, the mode of the target unit, and the terrain the target unit occupies. The Fire Strength and unit type of the firing units are not considered in the Chart.*

• Defending Target Choice

EXCEPTION: *If one unit is disrupted, the other unit type must be used to determine the modifier.*

• *This rule also applies when one of two units in a hex occupies a prepared or entrenched position.*

• River Assault Penalty

• City Defense

• Entrenchments

EXCEPTION: *If the attacker has engineer support from an HQ, the entrenchments are ignored and the appropriate unit type line is used instead.*

• Anti-Tank Support

• Hilltop Fire Advantage

• Town Defense

• Hilltop Defense

• Prepared Positions

• Command Communication Penalty

• Flanking Fire

• Combat Engineers

• German Collapse

• *Thus, if two units are conducting fire from a hilltop hex, only one is added to the die roll for hilltops.*

9. Combat Results

Each time offensive or defensive fire is conducted, the target unit(s) will incur one of the following results from the Fire Table:

(-): The target is unaffected by the fire.

D: The target must lose one step or become disrupted.

1: The target must become disrupted and...

- Lose one step, or...
- Retreat one hex (an attacking target may not retreat; it must lose a step).

2 or more: The target must become disrupted and...

- Lose the indicated number of steps, or...
- Retreat one hex and lose the indicated number of steps less one.

If a result can be fulfilled in more than one way, the player owning the target unit chooses how to fulfill the result.

9.1 Disruption

When a defending unit becomes disrupted, place a Defender Disrupted marker on it. When an attacking unit becomes disrupted, place an Attacker Disrupted marker on it. The marker remains on the unit until it is removed in the appropriate Phase.

A disrupted unit...

- May not move.
- May not conduct any type of fire.
- Exerts no control.
- May not spot for ranged fire or perform any other game function.

9.2 Step Loss

When a unit loses one or more steps, invert or replace its counter so that the number of steps indicated on the counter reflects the step loss.

If a unit is required to lose a number of steps equal to or greater than the number of steps it possesses, the unit is eliminated from play.

If a defending target that consists of two units must lose steps, the losses may be assigned as the defending player sees fit; it is not a per unit loss.

9.3. Retreat

The defending target may choose to retreat one hex (only) if it incurs a numerical combat result.

The following units may not retreat:

- A static unit.
- A unit that was disrupted prior to this combat.
- A unit in Travel Mode.
- An artillery or flak unit.
- An attacking unit.
- A garrison unit.

A retreat is not considered movement, but a unit may retreat only into a hex that it could enter if it were moving in Combat Mode, regardless of the Movement Point cost. A unit may retreat into any adjacent hex, as long as the following restrictions are adhered to (in order):

1. A unit may not retreat into an enemy-occupied hex or off the game map.
2. A unit may not retreat into an enemy-controlled hex, unless the hex is occupied by a friendly unit and stacking restrictions are not violated by the move.

- A static unit is eliminated when it incurs a D or any numerical combat result. A garrison unit is eliminated when it incurs any numerical combat result.

AD	DD
Att Dis	Def Dis

- A player removes all AD markers from his units during his own Command Phase and removes all DD markers from his units during his own Communication Phase.

- A unit that is already disrupted when fired upon suffers no additional effects due to its disruption. However, such a unit may not retreat. If the unit becomes disrupted again as a result of fire, replace its Disruption marker with an "updated" one. For example, a unit with an Attacker Disrupted marker that is disrupted again during the enemy Combat Phase receives a Defender Disrupted marker.

EXAMPLE: If a full-strength unit with 3 steps loses one step, invert its counter. If it had lost 2 steps instead, its counter would be replaced by the one-step counter showing the exact same designation and unit type.

- However, see Defending Target Choice, 8.6.

- If a defending unit is unable to retreat, the entire numerical result must be fulfilled by step loss.
- A unit can retreat only one hex.

- If the defending target consists of two units, both must be retreated, or neither can retreat.

EXCEPTION: A unit cannot retreat into a hex occupied by a friendly unit that has already been fired upon in the current Combat Phase and incurred a disruption or numerical result.

- A unit that retreats into a hex occupied by another unit is eliminated if that unit is attacked in the same Combat Phase and incurs any numerical combat result.

3. A unit must retreat into a vacant hex, if possible.
4. A unit must retreat into a hex that does not cause the unit to be cut off from its HQ and/or supply source, if possible.
5. A unit must retreat into a hex that is not adjacent to any enemy unit, if possible.
6. If the defending target consists of two units, each must retreat into a different hex, if possible.
7. A unit must retreat into the hex that would cost the fewest Movement Points to enter.

9.4 Advance After Combat

When a hex is vacated by a defending target that retreats or is eliminated, one or two attacking units that conducted direct fire in the attack may immediately advance into the hex. This advance may be made regardless of enemy control, but stacking restrictions must be observed. A unit is not required to advance after combat, but the option to advance must be taken immediately after the attack is resolved, before conducting another attack.

A unit in Travel Mode that is adjacent to an enemy defending target that retreats or is eliminated may be allowed an exploitation move.

10. Artillery

An artillery unit differs from other units in the following major ways:

- It exerts no control.
- It may not move in Combat Mode and may never retreat.
- It may not conduct direct fire.
- It may conduct ranged fire.
- It becomes disrupted each time it fires.

10.1 Artillery Fire Requirements

An artillery unit may fire if *any one* of the following requirements is met at the moment of fire:

- The artillery unit itself can spot the target.
- The artillery unit can spot an eligible unit in the same Command that, in turn, can spot the target unit.
- The artillery unit is in communication with an eligible HQ unit that is, in turn, in fire communication with a friendly unit that can spot the target.
- The artillery unit is independent and is in communication with an independent unit in the same Command that can spot the target.

10.2 Spotting

A unit that is not disrupted nor in Travel Mode can spot another unit if it is adjacent to the unit it wishes to spot or occupies a hilltop hex within two hexes of the unit it wishes to spot.

A unit that is in a formation may only spot a target for an artillery unit in the same formation or an independent artillery unit in the same Command. An independent unit may spot for any artillery unit in the same Command.

An attacking unit that becomes disrupted by defensive fire may not spot for artillery during the ensuing offensive fire.

10.3 Artillery Communication

Independent units in the same Command may trace artillery communication directly to each other. If either the artillery or the spotting unit is in a formation, an HQ must

- *Restrictions 3 through 6 are not absolute restrictions, but are priorities that must be satisfied if possible.*

- *The effects of enemy control are ignored during advance after combat, but are in force during exploitation movement.*

- *A unit conducting indirect fire cannot advance after combat. Defending units can never advance after combat.*

- *A number of travelling units can be allowed such a move if in an exploitation column (see 6.5).*



- *The requirements of 8.2, Step 2, or 8.3, Step 3 must also be met in order to fire. In summary, these requirements are:*
 1. The defending target must be in range. Remember that the range of an artillery unit on a hilltop is increased by one.
 2. The firing unit cannot be in an enemy-controlled hex.*Exception: If the firing unit is stacked with a friendly unit, fire may be allowed; see the notes appending 8.2 and 8.3.*

- *A unit that is spotting is not required to participate in combat.*

- *Even though range is counted to the defending target during defensive fire, the attacking target must be spotted.*

- *An artillery unit that is prevented from firing because of this lack of spotting does not become disrupted.*

Artillery Communication. A communication path of any length traced between an artillery unit and a unit that is spotting the artillery's target. An artillery unit that is unable to spot its target and cannot spot an eligible unit that can spot its target must be in artillery communication with a unit that can spot the target in order to fire.

be used to trace communication. An HQ may be used for artillery communication if the following requirements are met:

- The HQ is not disrupted or suppressed.
- Neither the spotting unit nor the artillery unit is in a formation different from the HQ's.
- The spotting unit and the artillery unit are in the same Command as the HQ.

10.4 Artillery Disruption

Each time an artillery unit fires, it becomes disrupted. An artillery unit that conducts indirect defensive fire receives a Defender Disrupted marker. An artillery unit that conducts indirect offensive fire receives an Attacker Disrupted marker. The unit suffers all disruption effects in 9.1 and the marker is removed when listed in the Sequence of Play.

10.5 Self-Propelled Artillery

SP artillery has the attributes of regular artillery when it conducts indirect fire from a hex not adjacent to its target. That is, its target must be spotted and the SP artillery unit becomes disrupted upon firing. For all other purposes, SP artillery is treated as armor. It may fire directly or indirectly when adjacent to its target (without becoming disrupted) and may move in Combat Mode.

11. Headquarters Units

An HQ unit represents the communication center of its formation. Any HQ capabilities it may have are assumed to be operating among the units of its formation. These capabilities may be reduced or rendered inoperative during play, but an HQ cannot be eliminated altogether unless its formation suffers catastrophic loss.

An HQ unit may aid the units in its formation with its HQ capabilities and may co-ordinate fire communication for artillery spotting (see 10.3). Other than the loss of these functions, the absence of an HQ does not adversely affect the units of its formation.

An HQ differs from other units in five major ways:

- It exerts no control.
- An enemy unit may enter a hex occupied solely by an HQ unit.
- It is considered to have one step for stacking purposes, regardless of how many steps it actually has.
- It may never be the target of enemy fire and may not conduct fire.
- It may be depleted or suppressed.

11.1 HQ Capabilities

An HQ unit may have one or more capabilities listed on its counter. Some capabilities may be used by the HQ itself, while others are "lent" to units in the HQ's formation (only). Most capabilities are assigned a range from 1 to 3.

An HQ's capabilities (including the ability to co-ordinate artillery communication) may not be used at all if the HQ is disrupted, in Travel Mode, or in an enemy-occupied or enemy-controlled hex (unless the HQ is stacked with a friendly unit that exerts control). Range for a capability may not be traced through an enemy-occupied or enemy-controlled hex (unless the hex is friendly-occupied).

The uses of the various HQ capabilities are described in 11.2 through 11.5. Unless specified otherwise, an HQ may use or lend its capabilities any number of times during a Game-Turn.

- That is, both units must be in the HQ's formation, or one unit must be in the formation and the other unit must be independent (but in the same Command).

- Artillery can also be disrupted by enemy fire or airlanding, exactly as other units are.



- There are 13 formations, each with an HQ:
 German: 10SS Panzer (10SS) Division; Ninth SS Panzer (9SS) Division; 59th Infantry (59) Division; 84th Infantry (84) Division; 85th Infantry (85) Division; 180th Infantry (180) Division; Seventh Parachute (7F) Division.
 Allied: Guards Armoured (G) Division; 43rd Infantry (43) Division; First Airborne (1) Division; 82nd Airborne (82) Division; 101st Airborne (101) Division; Polish First Airborne (P1) Brigade.
 The Allied player also has a special XXX Corps HQ with bridge engineers. This HQ may not be used for artillery communication.

- An HQ unit in Combat Mode can move like a non-motorized artillery unit in Travel Mode, as noted on the Terrain Effects Chart. A non-motorized HQ cannot enter Travel Mode. Allied HQ units in XXX Corps Command are motorized, and each may enter Travel Mode and move as a motorized unit.

- An HQ capability with no range indicated can be used only in the HQ's hex or by a friendly unit in the hex. A capability with a range of one can be used in the HQ unit's hex or any adjacent hex, or by a friendly unit in any such hex. A capability with a range of 2 (or 3) can be used in any hex within 2 (or 3) hexes of the HQ unit or by a friendly unit with 2 (or 3) hexes of the HQ unit.

11.2 Combat Engineers

Combat engineers perform a variety of functions, all of which are assigned to units in the HQ's formation. Some uses of combat engineers require the expenditure of a Supply Point, as noted in each description. If a Supply Point is spent and then, for some reason, the engineer function cannot be completed, the Supply Point is still lost.

Negate Prepared or Entrenched Position During Direct Offensive Fire

Cost: 1 Supply Point, expended during offensive fire declaration. When an attack on a defending target in a prepared or entrenched position is conducted with this support, the position is ignored. Use of combat engineers by the defender will not prevent this effect.

Direct Offensive Fire Bonus

Cost: 1 Supply Point, expended during offensive fire declaration. May only be used against a defending target that does not occupy prepared or entrenched positions. If at least one attacking unit in the HQ's formation within range of the combat engineers actually conducts direct fire, a fire modifier of +1 is applied to the die roll.

Defensive Combat Bonus

Cost: 1 Supply Point, expended during defensive fire declaration. May only be used if the attacker has declared use of combat engineers for the Direct Offensive Fire Bonus. If the defending target is in the HQ's formation, within range of the friendly combat engineers, and is able to conduct defensive fire, the attacker's bonus is negated.

Aid Prepared Position Construction

Cost: None. Declared during the friendly Command Phase. An HQ that does not move at all during the friendly Movement Phase may aid prepared position construction by any number of units in its formation that are within range of its engineers.

Construct Entrenchment

Cost: 1 Supply Point, expended during the friendly Command Phase in which construction begins. An HQ that does not move at all during the friendly Movement Phase may build an entrenchment in one hex occupied by a unit in the HQ's formation within range of its engineers.

Repair a Stream Bridge (Allied player only)

Cost: 1 Supply Point, expended during the Allied Command Phase. An HQ that does not move during one Allied Movement Phase may repair one destroyed stream bridge within range of its engineers.

Rewire a Bridge for Demolition (German player only)

Cost: None. Declared during the German Command Phase. An HQ that does not move during one German Movement Phase may rewire any number of intact bridges for demolition within range of its combat engineers.

11.3 Bridge Engineers

All three Allied HQ's in XXX Corps Command contain bridge engineers. These are used to repair bridges and to allow certain units to cross an unbridged river or canal. Use of a bridge engineer does not cost any Supply Points, but the HQ unit being used must be in supply throughout the bridge engineer use. A single HQ may have its bridge engineers perform only one of the following functions at a time.

Repair a Stream or Canal Bridge

Declared during the Allied Command Phase. An HQ that does not move during one Allied Movement Phase may repair one destroyed stream or canal bridge within range of its bridge engineers.

EXCEPTION: Bridge repair and rewiring are performed directly by the HQ.

- If this support is declared and then no attacking unit of the HQ's formation within range of the combat engineers actually conducts direct fire, the engineers have no effect and the defensive positions are taken into account.

- This bonus is not received if the attacker is already receiving the anti-tank bonus from any other participating unit.

- For details, see 13.1.

- An HQ unit cannot use its combat engineers to repair a stream bridge or build an entrenchment during the turn it performs this function.

- For details, see 13.2.

- An HQ unit cannot undertake any other combat engineer function during the turn it performs this function.

- For details, see 14.2.

- An HQ unit cannot use its combat engineers to construct prepared or entrenched positions during the turn it performs this function.

- For details, see 14.3.

- For details, see 14.2.

Allow Allied Non-Motorized Infantry to Cross Unbridged River or Canal

Declared during the Allied Command Phase. One HQ that does not move during the Allied Movement Phase may allow one or two Allied airborne infantry units in Combat Mode to cross one river or canal hexside at a cost of three additional Movement Points each. Only one HQ unit may perform this function per Game-Turn, and it must be in a hex that has the river or canal to be crossed as one of its hexsides, regardless of the range of its bridge engineers. Use of this function does not allow a unit to trace supply across the river or canal hexside it crosses; unless the unit can trace supply normally, it will be isolated at the end of the Allied Player-Turn.

Cross-River or Cross-Canal Evacuation

Declared during the Command Phase. An HQ that does not move during the Allied Movement Phase may allow the Allied player to trace communication across an unbridged river or canal hexside within range of the HQ's bridge engineers for purposes of evacuating units.

11.4 Anti-Tank Weapons

During offensive or defensive fire declaration, an HQ may assign its anti-tank capability to any units in the HQ's formation that are conducting direct fire within range. Direct offensive or defensive fire conducted by a unit with this support is resolved as if the unit had anti-tank capability itself (+1 fire modifier if target is armored). HQ anti-tank support does not require the expenditure of a Supply Point, but the HQ must be in supply in order to use it.

11.5 HQ Flak

Two German HQ units possess flak, which may be used to hamper the use of Allied Tactical Air Points, Airlandings, and air resupply. The flak capability is not assigned to other units. The HQ "projects" a number of Flak Points equal to its flak range into every hex within its range, regardless of the presence of enemy units. An Allied airstrike or airlanding that occurs in such a hex is affected as noted on the Airstrike Table, the Airlanding Table, or the Air Resupply Table, respectively. Use of HQ flak does not require the expenditure of a Supply Point, but the HQ must be in supply in order to use its flak.

11.6 Headquarters in Combat

An HQ that occupies a hex with a defending target unit that becomes disrupted as a result of enemy fire does not become disrupted. If the unit retreats, the HQ may retreat with it. If the unit is eliminated, the HQ remains in the hex (and enemy units may advance into the hex, suppressing the HQ).

An HQ unit may become disrupted or lose steps as a result of enemy fire if the HQ is supporting units in the combat with engineers or anti-tank weapons. If the player rolls an unmodified 6 when resolving one of his offensive or defensive fires, he may apply the result to the target and/or the supporting enemy HQ (according to the result achieved).

Any capabilities that an HQ is using or has assigned to other units are cancelled if the HQ becomes disrupted or the capability's range becomes insufficient due to step loss.

An HQ that is supporting an attack may be affected by any unmodified die roll of 6 during defensive fire, regardless of which attacking unit is the target, as long as the target is in the HQ's formation.

- This function is not restricted by formation or Command.

Special German Fire

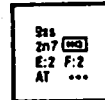
If the first unit to cross an unbridged river or canal crosses directly into a hex adjacent to a German unit that is capable of fire, the crossing unit is subject to a special German defensive fire as if it were in Travel Mode in clear terrain and flanked (Fire Modifier total of +7 if direct fire, +5 if indirect fire). This fire is conducted immediately, and is in addition to defensive fire conducted by the German unit if attacked. A second unit that crosses in the same turn must cross the same hexside, but is not subject to the special fire.

- Two units can cross a river or canal with this support the first time the function is used only. Thereafter, only one unit can cross each time this function is performed.

- This function is not restricted by formation or Command.

- For details, see 6.8.

- A given fire die roll is modified by no more than +1 for anti-tank support, no matter how many units have or receive the anti-tank capability. An attack that uses anti-tank support (from an HQ or a firing unit) may not receive the Direct Fire Attack Bonus (from combat engineers).



- Thus, the 9SS HQ at full strength (flak range of 2) projects 2 Flak Points into every hex within 2 hexes of the hex it occupies.

- An HQ can be affected by combat only if using its combat engineers or anti-tank support. Coordinating artillery communication does not make an HQ susceptible to disruption or step loss.

- Firing player's choice when enemy HQ is hit (roll of 6):
 D: HQ loses one step and target unaffected; or target affected normally.
 1: HQ disrupted and loses one step, target unaffected; or HQ loses one step and target incurs D result; or target affected normally.
 2: HQ disrupted and loses one step, target incurs D result; or HQ loses one step, target incurs 1 result; or target affected normally.
 3 or more: HQ disrupted and loses one step, target incurs indicated result less two; or HQ loses one step and target incurs indicated result less one; or target affected normally.
- When conducting more than one defensive fire in a combat, the defender can apply only the result of the first 6 he rolls to the enemy HQ; additional rolls of 6 by the defender in the combat do not affect the attacker's HQ.

An HQ may also lose a step, at the owning player's option, to help fulfill step losses required as a result of firing when out of supply. This may be done as long as at least one firing unit is in the HQ's formation.

An Allied airborne HQ may become disrupted and/or lose a step during airlanding.

An HQ may not be entirely eliminated by any of the preceding methods. Any step loss incurred by an HQ with only one step is ignored (it may still become disrupted).

11.7 Headquarters Depletion and Suppression

An HQ unit is depleted if it cannot trace communication to a valid supply source or — if it can trace to the source — that source has no Supply Points.

A depleted HQ may use none of its HQ capabilities, including those that do not require the expenditure of supply. It may still move and may still co-ordinate artillery communication.

An HQ is suppressed if...

- It occupies a hex occupied by an enemy unit, or
- It occupies a hex from which it cannot trace communication to a single unit of its formation.

A suppressed HQ may not move at all and may perform no game functions. It remains in its hex until no longer suppressed or until its formation suffers catastrophic loss (in which case the HQ is eliminated; see 11.8). A suppressed HQ is assigned no Supply Points.

11.8 Catastrophic Loss

Each formation has a different limit to the number of non-HQ steps it may lose and still function as a cohesive formation. When this limit is reached by a formation, it suffers catastrophic loss. Independent units are not subject to catastrophic loss.

EXAMPLE: During Game-Turn 14, it is found that 10SS Panzer Division has three units with three steps each eliminated, and has four other units still in play with one step loss each (other than the HQ). It has lost 13 steps and thus suffers catastrophic loss.

Catastrophic loss has the following effects on a formation:

- Its HQ is immediately eliminated from play.
- The surviving units of the formation are still part of the formation; they are not independent.
- Surviving units of the formation are eligible for evacuation.
- The opposing player receives bonus Victory Points for destroying additional steps in the formation.
- If the formation is an Allied airborne formation, any surviving units that are not part of an isolated force and cannot trace communication to a XXX Corps Command supply source immediately become an isolated force (or forces; see 12.5). After allocating available Supply Points to the new force(s), the Command Supply Point marker is removed from its track.

Note that the 9SS and 10SS formations each consist of units in 2SS Panzer Corps Command and 1st Parachute Army Command. Nonetheless, steps lost from any of these units count toward catastrophic loss.

• For details, see 12.4.

• For details, see 17.4.

• An HQ can be eliminated only by catastrophic loss (see 11.8).

• For details, see 12.1.

• When an Allied airborne HQ is serving as a supply source, it is depleted only if its formation has no Supply Points.

• Supply Points in isolated forces do not count for preventing depletion.

• An HQ may go into or out of depletion or suppression at any time, whenever the appropriate conditions are met.

• An HQ has no effect on any enemy units in the hex it occupies; two enemy units can stack in the hex.

Catastrophic Loss Limits

German

FORMATION	STEP LOSS LIMIT
10SS*	13
9SS*	10
59	9
84	5
85	4
180	4
7F	4

Allied

FORMATION	STEP LOSS LIMIT
G	16
43	11
1	15
82	14
101	14
1P	4

*In Scenario 20, 10SS and 9S have limits of 9 and 5, respectively.

• For easy tallying of step losses toward catastrophic loss, use a piece of scrap paper with all the formations noted on it.

• Especially important when spotting for artillery.

• For details, see 6.8.

• For details, see 18.4.

• Any Supply Points received by the formation through air resupply any time thereafter can be assigned to an isolated force in the formation only if that force can trace communication to the formation's supply head. If no force can do so, the Supply Points are lost.

12. Supply

A unit is in supply if it can trace communication to a valid supply source hex, and that source has at least one Supply Point. A unit that cannot trace communication to a valid supply source is isolated. A unit that can only trace communication to a valid supply source that has no Supply Points is out of supply. This status may change any time as the unit's situation changes.

A German unit or any Allied airborne unit can trace communication to a supply source through a path of connected hexes of any length. A communication path traced by any Allied unit of XXX Corps Command may be any length, as long as an imaginary unit in Combat Mode could move the path's distance by spending no more than 8 Movement Points.

The supply status of units affects play in the following ways:

- The Allied player receives a fire modifier of +2 if the German target unit is isolated at the instant of Allied direct offensive fire.
- A unit that is isolated during the friendly Communication Phase becomes an isolated force.
- A unit that is out of supply at the moment it fires risks losing steps. An isolated unit faces the same risk unless part of an isolated force that has at least one Supply Point.
- A motorized unit (except those in XXX Corps) may not enter or remain in Travel Mode if isolated during the friendly Command Phase.
- An HQ unit may not use any of its capabilities if out of supply at the moment of intended use.

12.1 Supply Sources

An Allied airborne unit may use the supply head of its Command as a supply source. If, and only if, no units in the Command can trace communication to the supply head, the Command's HQ may be used as a supply source.

An Allied unit in XXX Corps Command may use hex 0113 or any road hex directly connected to it as a supply source. A road hex is directly connected to hex 0113 if an uninterrupted path of major or minor road hexes connects the two hexes. Neither end hex nor any hex in the path may be enemy-occupied or enemy-controlled. Allied units do not negate enemy control for this purpose. The path may not be traced across a river, canal, or stream hexside, unless crossed by a bridge with an Intact Bridge marker.

A German unit may use any Access Area hex as a supply source hex as long as the hex is a valid entry hex for the unit's Command and is not enemy-occupied or enemy-controlled (a friendly unit negates enemy control in the hex it occupies for this purpose). Hex 7323 may also be used as a German supply source.

12.2 Supply Points

At the beginning of play, the seven Command Supply markers are each placed in the specially marked space of the appropriate Supply Track to indicate the number of Supply Points each Command starts the game with. During the game, each Command expends Supply Points when an HQ in the Command uses certain capabilities and when a 6 is rolled during the resolution of fire conducted by units in the Command.

Each Command gains Supply Points during the Resupply Phase of each AM Game-Turn. Each German Command receives the number of points indicated on its Supply Track. Each Allied airborne Command receives a variable number of Supply Points through air resupply (see 12.7).

Communication. A path of hexes traced between two friendly units or a unit and a specific hex. Units trace communication to determine supply, isolation and artillery spotting. A player may trace communication from one hex to another if he can show a path of connected hexes between them that does not pass over a canal or river hexside and does not contain an enemy-controlled or enemy-occupied hex. A friendly unit negates enemy control in the hex it occupies for this purpose. Communication may be traced across any stream hexside or across a river or canal hexside with an intact crossing.

- This imaginary move can be calculated as if being made by a motorized or a non-motorized unit, at the choice of the Allied player.
- Lack of supply does not prevent a unit from firing, nor does it reduce the effectiveness of its fire.
- This modifier is not applied if the unit is an SS unit (noted in the unit's counter designation) that is north of the Neder Rijn River.

• For details, see 12.5.

• For details, see 12.4.

- An Allied unit in XXX Corps Command can enter or remain in Travel Mode only if it occupies a valid XXX Corps supply source hex during the Allied Command Phase.

• The HQ is depleted (see 11.7).

- With the exception of the two minor roads in Belgium (around hex 0318), any road hex on the map could conceivably be a XXX Corps supply source.

- A bridge that the German player has not had an opportunity to destroy cannot be used.

EXCEPTIONS: Hexes in Access Areas n1, n2, w9, and w10 cannot be used as supply sources.

- XXX Corps Command has no Command Supply Track (see 12.6).

• For details, see 11.2 and 12.3.

A Command may not possess more Supply Points than the highest number shown on its Supply Track, including Supply Points in isolated forces (see 12.5). If a Command is scheduled to receive more Supply Points than this maximum, the excess points are ignored.

12.3 Spending Supply Points for Fire

Each time a player rolls an unmodified 6 when he conducts any type of fire, he must spend Supply Points from the Command to which the firing unit(s) belongs. The number of Supply Points spent is calculated by counting one for each non-artillery unit that actually fired and one for each artillery step that actually fired. The calculated total is spent by moving the appropriate Supply marker down its track that number of spaces.

Since defensive fire is conducted one unit at a time, only one Supply Point is spent when the defending player rolls a 6 (unless an artillery unit is conducting defensive fire, in which case Supply Points equal to its steps are spent).

If a Command with no Supply Points is required to spend Supply Points, the firing units must lose steps. Instead (at the rate described in 12.4).

12.4 Spending Steps for Fire

A unit may fire normally when it does not have access to any Supply Points. However, if an unmodified 6 is rolled when resolving the fire, thus requiring Supply Point expenditure, the firing unit(s) must lose steps instead. The number of steps that must be lost equals half the required Supply Point expenditure (rounding fractions down).

When units are required to lose steps as a result of Supply Point expenditure, the owning player may remove steps from any units that participated in the fire just resolved in any way he sees fit. He may remove one step from one HQ to help satisfy the required loss if a unit in its formation fired.

12.5 Isolated Forces

During his Communication Phase, the Phasing player checks all his units in play to see if any are isolated. Any unit that is isolated at this time becomes an isolated force or part of an isolated force, if not already one. When an isolated force is first found to exist, the owning player conducts the following steps:

1. Place an Isolated Force marker on one unit in the force.
2. Declare how many Supply Points the isolated force will be given. This may be any number from zero to the number of steps all the units in the force possess. However, the isolated force may not be assigned more Supply Points than are currently held by the unit's Command.

3. Place the appropriate Isolated Force Supply marker on the Supply Track of the unit's Command, in the space indicating the number of Supply Points assigned to the isolated force. Move the Command Supply marker on the same track down to indicate this transfer of Supply Points.

The units in an isolated force exert control normally, may move in Combat Mode, and may fire normally. If they must expend Supply Points, only those Points indicated by the Isolated Force Supply marker may be spent.

If an isolated unit that is not in an isolated force must spend Supply Points for firing, the points are spent from the unit's Command Supply.

EXAMPLE If First Airborne has 8 Supply Points in Command supply and 3 Supply Points in an isolated force, it can receive no more than one Supply Point in resupply (its maximum is 12).

EXAMPLE: Two motorized infantry units, one armor unit, and one artillery unit (with 2 steps) of 2nd SS Panzer Corps are conducting offensive fire and the German player rolls a 6. After the combat result is implemented (using the modified die roll), the German player must spend 5 Supply Points; he moves the Supply marker down five spaces on the 2nd SS Panzer Corps Supply Track.

- If a Command with at least one Supply Point is required to spend more Supply Points than it has available in one fire resolution, the excess expenditure must be made by spending steps.

EXCEPTION: If one Supply Point is required, one step is lost.

- Thus, if 7 Supply Points must be spent and none are available, three steps must be lost.
- Losing a step in this manner does not cause a unit to become disrupted.
- The HQ need not have used any of its capabilities in the fire.
- The units of one isolated force need not be in the same hex or in adjacent hexes. All isolated units in the same command that can trace communication to each other form one isolated force. Note also that the Isolated Force marker does not represent a supply dump in a specific hex; it is an identity marker only. The owning player may place the marker on any unit of the isolated force and, if that unit is eliminated, may move the marker to another unit in the same isolated force.

EXAMPLE: If 2 units with 3 steps each form one isolated force, they may be assigned from 0 to 6 Supply Points. However, if their Command has only 4 Supply Points, the force could be assigned no more than 4 Supply Points.

EXAMPLE: 1st Airborne Division has 8 Supply Points. An isolated force composed of units in that Command is created and assigned Isolated Force marker Nr. 4. The Allied player decides to assign 3 Supply Points to the force, so he places the Isolated Force 4 Supply marker on the 3 space of the 1st Airborne Supply Track and moves the Command Supply marker to the 5 space.

- All supply expenditure rules of 12.3 and 12.4 apply to isolated forces.
- This situation may occur if the unit becomes isolated and then fires before the next friendly Communication Phase. An isolated unit becomes an isolated force only during the owning player's Communication Phase.

The moment an isolated force is able to trace communication to a valid supply source, it ceases to be an isolated force. When this occurs, immediately remove the Isolated Force marker and the Isolated Force Supply marker, and restore any Supply Points the force had at the moment to the appropriate Command (by adjusting the Command Supply marker).

If the units of an already isolated force cannot trace communication to each other during their Communication Phase, they are split into separate isolated forces, so that all units in each force are in communication with the other units in the force.

12.6 XXX Corps Supply

British XXX Corps Command has unlimited supply; it is not assigned Supply Points and does not normally expend Supply Points. The XXX Corps Supply Track is used when units in XXX Corps Command form an isolated force; the force is assigned Supply Points (up to the number of steps it possesses) and an Isolated Force Supply marker is placed on the track, as described in 12.5.

If the Allied player rolls a 6 when conducting fire, participating units in XXX Corps do not expend Supply Points or steps.

When an HQ in XXX Corps (G, 43, or XXX Corps) uses a capability that normally costs a Supply Point, it is not expended.

12.7 Air Resupply

The Allied player determines how many Supply Points each of his airborne Commands receives during the Resupply Phase (AM Game-Turns only) by using the Air Resupply Table. For each Command, he rolls one die and adds the applicable modifiers listed with the table to the die result. The modified total is then applied to the table to determine how many Supply Points the Command receives. There are only two ways that an airborne Command will receive no Supply Points during a Resupply Phase:

- If the Allied player is moving the supply head.
- If the Command has suffered catastrophic loss and no isolated force of the Command is in communication with the supply head.

If either of these conditions applies, the Air Resupply Table is not used for that Command.

The Allied player may move any of his airborne supply heads instead of receiving Supply Points for that Command. To do so, he picks up the Supply Head marker and places it in a different hex. A supply head may only be moved during the Resupply Phase of an AM Game-Turn.

The Polish 1st Parachute Brigade does not receive any Supply Points through air resupply until after its HQ has been airlanded.

If communication can be traced from an airborne supply head to a XXX Corps supply source hex during the Resupply Phase, the Command served by the supply head automatically receives 6 Supply Points; the Air Resupply Table is not used for the Command.

- If all the units in an isolated force are eliminated, all Supply Points assigned to that force are lost.

- Any Supply Points assigned to a split-up isolated force can be divided among the newly formed forces at the owning player's discretion, as long as step limits are not exceeded and the total number of Supply Points indicated on the appropriate Supply Track does not change.

EXCEPTION XXX Corps units in isolated forces do spend Supply Points (and, if out of Supply Points, steps).

- However, the HQ must still be in supply in order to use its capabilities.



- Many of the modifiers listed on the Table depend on the proximity of German units to the airborne Command's supply head. Note that even if a German unit occupies the supply head, the Command still receives at least one Supply Point.

- An airborne Command that has suffered catastrophic loss may still receive Supply Points. However, any Points received can be assigned to an isolated force of the Command only if that force can trace communication to the supply head.

- A Supply Head marker can be placed in any clear, mixed, or broken terrain (with or without a town) that contains or is adjacent to a unit in the same Command.

- When using the Air Resupply Table for the Poles, halve the number of Supply Points received (rounding up).

- Allied Airborne-Ground Link-Up

EXCEPTION The Polish First Parachute Brigade would receive 3 Supply Points in this case.

13. Prepared and Entrenched Positions

Certain German units occupy prepared or entrenched positions at the start of play. During the game, such positions may be built by either player's motorized infantry, infantry, or anti-tank units to improve their defensive abilities.

A prepared or entrenched position may be occupied only by the unit that constructed it (or began the game in it).

A completed position remains in play until the owning player voluntarily removes it or until the unit that occupies it leaves Combat Mode, moves, retreats, is eliminated, or conducts direct offensive fire.

13.1 Building a Prepared Position

During his Command Phase, a player may have any of his units that meet all of the eligibility requirements begin to build a prepared position.

Place a Prepared Position Construction marker atop each eligible unit. During the Command Phase of the player's next turn, the marker is flipped over to show that the position is completed. However, if, during the intervening Game-Turn, any of the eligibility requirements are violated, or the unit moves or fires, the construction marker is removed.

If a unit is building a prepared position with the aid of combat engineers (see 11.2), the position is completed during the Communication Phase in the same Player-Turn construction began.

13.2 Building an Entrenched Position

During his Command Phase, a player may have one of his units in each formation that meets all the eligibility requirements begin to build an entrenched position.

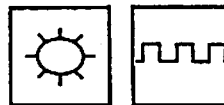
Spend one Supply Point from the formation's Command and place an Entrenched Position Construction marker atop the unit. During the Command Phase of the player's next turn, the marker is flipped over to show that the entrenchment is completed. However, the construction marker is removed during the intervening Game-Turn, before the entrenchment is completed, if...

- Any of the eligibility requirements are violated, or
- The supporting HQ moves, or
- The unit moves or fires.

13.3 Properties of Prepared and Entrenched Positions

When offensive fire is conducted against a unit in a prepared position, a fire modifier of -1 is applied to the die result.

When offensive fire is conducted against a unit in an entrenched position, refer to the Entrenched row of the Terrain Effects Chart instead of to the unit type row to find the Basic Fire Modifier. If the defender occupies an entrenched position in a town, the town is ignored.



- Any other unit occupying the hex is not in the position (unless it also builds a position).
- A unit expends no additional Movement Points to move out of a position, but that position is removed from play.
- Any of the preceding units shown is eligible to build a prepared position if:
 - ... the unit is not in an enemy-controlled hex.
 - ... the unit is in supply.
 - ... the unit is in Combat Mode.
 - ... the unit is not disrupted.
 - ... the unit does not occupy a hex containing an entrenched position, a city hex, or a hex with a town or hilltop.
- Any of the preceding units shown is eligible to build an entrenched position if:
 - ... the unit is within range of the combat engineers in its formation's HQ (see 11.2).
 - ... the unit and the supporting HQ are not adjacent to any type of enemy unit.
 - ... the unit and the HQ are in supply.
 - ... the unit and the HQ are in Combat Mode.
 - ... the unit does not occupy a city hex or a hex containing a prepared position.
 - ... the HQ is not using its combat engineers for any other function.
 - ... the unit and HQ are not disrupted.
- The effects of a prepared or entrenched position are ignored during a combat in which the attacker is conducting direct fire with the aid of combat engineers (see 11.2). The position is not eliminated by enemy engineer use.

14. Bridge Demolition and Repair

Every crossing on the map begins the game intact. During play, the German player may attempt to destroy certain crossings. The Allied player may repair certain bridges that the German player has destroyed.

14.1 Bridge Demolition

The German player may attempt to destroy any crossing on the map except for a major road bridge over a river (for example, hexside 5614-5715). The first time that an Allied unit enters a hex with a crossing as one of its hexsides, the German player must declare whether or not he wishes to destroy the crossing. If he does, he immediately rolls one die to determine whether the attempt succeeds or not. The die result needed to destroy a crossing depends on its type.

If the German player does not wish to destroy a crossing at first opportunity, or fails in his attempt, he may not attempt to do so for the rest of the game, unless he rewires the crossing for demolition (see 14.3).

The chance of demolition is not affected by the presence or absence of German units.

A destroyed crossing may not be used for any game purpose until repaired by the Allied player.

14.2 Bridge Repair

A destroyed stream bridge may be repaired by an Allied HQ's combat or bridge engineers. A destroyed canal bridge may be repaired only by an Allied HQ's bridge engineers. A destroyed river bridge or ferry may not be repaired at all.

During his Command Phase, the Allied player commences repair of a destroyed bridge by indicating which HQ's engineers are repairing the bridge. The following requirements must be met:

- The HQ's engineers must be within range of the destroyed bridge hexside.
- The HQ must be in supply.
- The HQ must not be disrupted.
- The engineers may not perform any other function (including repairing another bridge).
- The HQ's hex and both hexes bordering the bridge hexside must not be enemy-occupied or enemy-controlled.
- The HQ must be in Combat Mode.

Spend one Supply Point from the HQ's Command and replace the Bridge Destroyed marker with a Bridge Under Repair marker.

If a stream bridge is being repaired, replace the Repair marker with an Intact Bridge marker during the Communication Phase in the same Player-Turn. If a canal bridge is being repaired, replace the Repair marker with an Intact Bridge marker during the Command Phase of the Allied player's next turn. However, if any of the preceding requirements are violated or the HQ moves while the Bridge Under Repair marker is in place, the repair ceases; replace the marker with a Bridge Destroyed marker.

14.3 Rewiring a Crossing

The German player may use combat engineers to rewire an intact crossing for another demolition attempt. Any crossing that the German player failed to destroy at his first opportunity or that has been destroyed and repaired may be rewired.

Crossing. A bridge or ferry.

- *This may be during movement, retreat, advance, or Allied airlanding.*

- *Die roll required to destroy:*

- ... a bridge across a stream: 1,2.
- ... a major road bridge across a canal: 1,2.
- ... a minor road or non-road bridge across a canal: 1,2,3.
- ... a non-road bridge or ferry across a river: 1,2,3,4,5.
- ... a major road bridge across a river: Prohibited.

- *Use a Bridge Destroyed marker to indicate that a crossing has been destroyed. If a crossing is not destroyed when first eligible, use an Intact Bridge marker to indicate that the German player cannot attempt to destroy the crossing.*

- *For details, see 11.2 and 11.3.*

- *A hexside is within range if either hex it borders is within range (see 11.1).*

- *If the HQ has combat and bridge engineers, one type may repair one bridge while the other type performs another function.*

- *A repaired bridge is intact for all game purposes. The German player may not attempt to destroy a repaired bridge unless he rewires it.*

- *An HQ is eligible to rewire a crossing if it meets the following requirements:*

- ... the HQ's engineers must be within range of all the intact crossings they will rewire.
- ... the HQ must be in supply.
- ... the HQ must not be disrupted.
- ... the HQ's hex and both hexes bordering each intact crossing must not be enemy-occupied or enemy-controlled.
- ... the HQ must be in Combat Mode.

During his Command Phase the German player may rewire any number of intact crossings by indicating which eligible HQ's combat engineers are rewiring which crossings.

Remove the Intact Bridge marker from each crossing that is rewired (so the crossing has no marker).

Crossing rewiring is completed in the same Command Phase it is begun.

A rewired crossing is not automatically destroyed. It is treated as a crossing at the start of play. That is, the German player may check for demolition when an Allied unit first moves next to it.

15. Airpower

Airpower is represented by two types of Air Points: Tac Air Points and Airlanding Points. A variable number of Air Points are available to each player each daylight Game-Turn, depending on the weather. No points are available during night Game-Turns.

A player may use his Air Points during his Air Phase in the Game-Turn they are received only. Any Air Points not used during the Air Phase are lost. Tac Air Points are used to conduct airstrikes against enemy units. The Allied player may also use Tac Air Points to interdict hexes. Airlanding Points are used to bring Allied airborne reinforcements into play (see 17).

15.1 Air Strikes

During his Air Phase, a player may spend Tac Air Points to conduct airstrikes. Each Tac Air Point allows one airstrike against one enemy unit or two enemy units in the same hex.

The Allied player may airstrike any German unit that is within 10 hexes of any HQ of XXX Corps Command. If no such HQ is on the map, any German unit within 10 hexes of the south mapedge may be attacked by airstrike.

The German player may airstrike any Allied unit that is not within 10 hexes of any XXX Corps Command HQ.

A unit need not be spotted to be the target of an airstrike.

A unit may be attacked by no more than one Tac Air Point per Game-Turn. Entrenched or prepared positions occupied by the target of an airstrike are counted and may not be negated by combat engineers.

To resolve an airstrike, roll one die and modify the result as if indirect offensive fire were being conducted (see 8.6).

Locate the modified result on the Airstrike Table to find how the target unit is affected. The target may become disrupted and/or lose steps as a result of the strike. The target may not retreat. A unit that becomes disrupted by an airstrike receives an Attacker Disrupted marker.

The effects of airstrike disruption are identical to other disruption results. The marker is removed from the unit during the owning player's Command Phase.

15.2 Flak

German flak units and HQ's with flak capability may hinder Allied airstrikes, airlandings, and air resupply. Whenever the Allied player conducts one of these functions, the total number of German Flak Points exerted into the target hex modifies the die result as noted on the Airstrike Table, the Airlanding Table, or the Air Resupply Table, as appropriate.

- An HQ can use its combat engineers to rewire any number of intact crossings within range and to perform any other engineer functions. However, the HQ cannot move during a Player-Turn in which its engineers rewire crossings.

• Air Points Received

Clear: The Allied player receives 12 Airlanding Points and 6 Tac Air Points. The German player rolls one die; if the result is 1-3, he receives 1 Tac Air Point; if the result is 4-6, he receives no Points.

Cloudy: The Allied player receives 4 Airlanding Points and 3 Tac Air Points. The German player rolls one die; if the result is 1, he receives 1 Tac Air Point; otherwise, he receives no Points.

Overcast: The Allied player receives no Airlanding Points and 1 Tac Air Point. The German player receives no Points.

- The German player receives no Tac Air Points before Game-Turn 6 and no Airlanding Points at all.

- Measured by including the target hex, but not the HQ's hex.

- An HQ unit cannot be attacked by airstrike.

- In addition to the modifiers for conducting indirect offensive fire, the following modifiers may also be applied to the die roll:

–1 for each German Flak Point within range of the target hex (during Allied airstrike only).

+1 if the target unit(s) have four or more total steps.

- If two units in the same hex are the target for an airstrike, both units are affected at once and any result incurred is applied to both. Any step loss incurred is removed as the owning player sees fit.

EXCEPTION: A German unit that becomes disrupted by airstrike during Game-Turn 1 (Sept 17 PM) remains disrupted until the German Command Phase of Game-Turn 2.

Each flak unit exerts a number of Flak Points equal to its Fire Strength. Flak Points are exerted regardless of the presence of enemy units. However, a flak unit or HQ that is disrupted or in Travel Mode exerts no Flak Points. An HQ that is depleted or suppressed exerts no Flak Points. Flak has no effect on Allied interdiction.

15.3 Interdiction

During his Air Phase, the Allied player may spend Tac Air Points to conduct interdiction. Each Tac Air Point allows one hex to be interdicted. Any hex within 20 hexes of any HQ of XXX Corps Command may be interdicted. Simply place an Interdiction marker on the hex.

An Interdicted hex costs three additional Movement Points for a German unit in Combat Mode to exit. An interdicted hex may not be entered or exited by a German unit in Travel Mode at all. The German player may not trace communication through an interdicted hex.

The effects of interdiction on a hex are removed during the German Communication Phase in the same Game-Turn that the hex becomes interdicted.

16. German Reserves

All German units that are not placed on the map at the start of play are called reserves and enter the game via the German reserve network. German units on the map may exit and become reserves.

During his Command Phase, the German player inspects his units not yet in play and places all his units that become available in the current Game-Turn (listed on each counter) in the Reserve Boxes listed for each (also on the counter). A German unit must be placed in its listed TR Box or OR Box when it first becomes available.

16.1 Reserve Movement

During his Movement Phase, the German player may move any of his reserve units as follows:

From a TR Box:

- A unit in either mode may enter the map in any hex of the Access Area matching the TR Box. The unit moves normally, paying terrain cost for the first hex entered. A unit may enter the map in an enemy-controlled hex, but not an enemy-occupied hex.
- Any unit may move to the connected OR Box.

From an OR Box:

- A motorized unit in Travel Mode may enter the map in any hex containing a road leading off the map in an Access Area matching any TR Box designated in the OR Box.
- Any unit may move into a connected TR Box.
- Any unit may move into the connected CR Box.

From a CR Box:

- Any unit may move into a connected OR Box.

These rules allow a German unit to move anywhere in the reserve network of its Command over a period of Game-Turns.

The mode and type of a unit in a reserve box has no effect on its movement unless it is entering the map. The mode of a unit entering the map is assigned at the beginning of its move, not during the Command Phase.

16.2 Reserve Box Restrictions

A unit may never move from a reserve box in one Command to a reserve box in another Command.

Any number of units may occupy a reserve box. A unit in a reserve box may not attack nor be attacked in any way.

• Flak Range

A flak unit without heavy weapons exerts its Flak Points into the hex it occupies and every adjacent hex. A flak unit with heavy weapons exerts its Flak Points into every hex within two hexes of the hex it occupies. A German HQ with flak capability exerts its Flak Points as described in 11.5.



- *An interdicted hex has no effect on Allied movement or communication.*

- *Once a reserve unit enters the map, it is subject to all rules of in-play German units.*

- *A unit cannot enter the map in a hex with prohibitive terrain. A motorized unit in Travel Mode can enter the map only in a hex that has a major or minor road leading off the map.*

EXAMPLE: A travelling motorized unit in OR Box 2 can enter the map in hex 2402, 3001, or 3701.

- *A non-motorized unit cannot enter the map from an OR Box.*

- *A unit in a CR Box may not move directly into a TR Box or onto the map.*

EXAMPLE: A non-motorized unit in 15th Army that exits the map from Access Area w1 on Game-Turn 2 can re-enter play in Area w8 on Game-Turn 7.

- *A reserve unit can spend its entire Movement Point Allowance on the turn it enters play.*

TR boxes 1E through 7E, 1W, and 2W and their respective Access Areas become close during the game. No unit may enter any of these boxes during and after the Game-Turn listed in each box. A unit that is in a TR Box during the turn it closes must move to the connected OR Box. A German unit may not enter or exit the map in a closed Access Area. Hexes in a closed Access Area may not be used as a German supply source.

No more than one unit may move between OR Box 04 and the 15th Army CR Box in a single Game-Turn. The same restriction applies to OR Box 05 and the 2nd SS Panzer Corps CR Box. This restriction applies to movement in both directions. That is, if one unit moves from the OR Box to the CR Box, a unit may not move from the CR Box to the OR Box that turn. Movement between these OR Boxes and their designated TR Boxes is not restricted.

16.3 Exiting the Map

A German unit may move off the hexfield from an Access Area to a TR Box. Any German unit that begins its move in a hex that is part of a German Access area or moves into such a hex may move from that hex into the matching TR Box. In order to do so, the unit must be able to spend one Movement Point and, if in Travel Mode, must be in a hex that contains a road leading off the map. A unit's move stops when it moves off the map into a TR Box.

A German unit may exit the map from an enemy-controlled hex, as long as it can spend the additional Movement Points required.

A unit may exit the map from an Access Area that is part of a different Command. However, a unit that does so may not re-enter play at all (it is not considered eliminated for victory purposes).

17. Allied Reinforcements

With the exception of units of XXX Corps Command that the Allied player places in the XXX Corps bridgehead (see 18.2), all Allied units enter play as ground reinforcements or airborne reinforcements. All units of XXX Corps Command are considered ground reinforcements and enter the game map from the south edge. All other Allied units are considered airborne reinforcements and enter play by airlifting.

17.1 Allied Ground Reinforcements

A ground reinforcement is available on and after its listed Game-Turn once all ground reinforcements with an earlier Game-Turn of availability have entered play.

Up to 6 available ground reinforcement units may be brought into play during the Allied Movement Phase each Game-Turn. Every ground reinforcement must enter the map in hex 0113. This hex may be entered if enemy-controlled, but not if enemy-occupied. The movement of on-map units and reinforcement units may be sequenced as the Allied player sees fit (however, each unit's move must be completed before another's is begun).

17.2 Initial Allied Airlandings

During his Air Phase of Game-Turn 1, the Allied player places his three Supply Head markers (1, 82, and 101) on the map and enters 40 airborne reinforcement units into play via airlifting. Each of the 40 airborne reinforcement units to be airlifted has a hex number on its full-strength side (instead of a Game-Turn available number). This hex number is the unit's drop zone. The Allied player places each unit in its drop zone hex or any adjacent hex in accordance with the Airlifting Procedure (see 17.4).

- *Allied advances to the west and east of the game area historically restricted German movement as the battle progressed.*
- *During the campaign, the off-map areas represented by OR Boxes 04 and 05 were difficult for the German forces to traverse, due to water obstacles.*
- *This restriction is noted on the map.*
- *A unit cannot retreat off the map.*

EXCEPTION: *If every hex adjacent to a German unit is enemy-occupied or enemy-controlled, the unit cannot exit the map.*

EXAMPLE: *A unit in First Parachute Army Command that exits from hex 4103 (part of 15th Army Command) is removed from play.*

EXAMPLE: *A unit listed as available on Game-Turn 2 is not actually available until all units available on Game-Turn 1 have entered, even if Game-Turn 2 has already passed.*

- **Allied Ground Reinforcement Limit:** 6 units per turn. This does not apply to Scenario 20.
- **Allied Ground Reinforcement Mode**
A ground reinforcement may enter in Combat or Travel Mode, decided at the moment of entry. An Allied ground reinforcement in Travel Mode cannot use a minor road on the turn it enters play. A ground reinforcement in Combat Mode spends terrain cost to enter hex 0113.

- *Airlifting Points are not used on Game-Turn 1.*
- *Each supply head must be placed in the hex listed on its back.*
- *In Scenario 19 (XXX Corps Breakout), 12 airborne units of the 101st Division enter play via airlandings in Game-Turn 1. In Scenario 20 (The Besieged), 28 airborne units of the 82nd and 1st Divisions enter play via airlandings in Game-Turn 1. In the Campaign Scenarios, 40 airborne units of all three divisions enter play via airlifting in Game-Turn 1.*

17.3 Allied Airlandings During Play

Beginning with Game-Turn 3, the Allied player enters airborne reinforcements into play with his available Airlanding Points during his Air Phase. Each Point allows him to airland one available airborne reinforcement unit.

Airlandings may be conducted only once per day, during an AM turn or a PM turn in which the weather is clear or cloudy (never at night).

An airborne reinforcement is available for airlanding on and after the Game-Turn listed on its counter, once all airborne reinforcements that become available on earlier Game-Turns have entered play. The Allied player may choose which units to airland if he has more available than he has Airlanding Points.

Each airborne reinforcement has a drop zone hex, just as initially placed airborne units have.

Regardless of when an airborne reinforcement unit enters play, it must enter in or adjacent to its assigned drop zone hex.

All Polish units assigned to drop zone 7716 may airland only on a clear weather turn (even if their drop zone is changed).

Once the Allied player has chosen all the airborne reinforcement units he will enter in the current Air Phase, the Airlanding Procedure is conducted.

17.4 Airlanding Procedure

Place every unit that is airlanding this Air Phase in its drop zone hex or in an adjacent hex, within the following restrictions:

- A glider unit may be placed in any clear or mixed terrain hex.
- A non-glider unit may be placed in any clear, mixed, or broken terrain hex.
- Stacking restrictions must be adhered to during airlanding.
- A unit may be placed in an enemy-controlled hex, but not in an enemy-occupied hex.
- If a drop zone is adjacent to a river or canal, a unit assigned to that zone may not be placed across the river or canal.

Check every airlanding unit separately to see how it is affected by the drop. For each airlanding unit, roll one die and add any applicable modifiers listed on the Airlanding Table to the die roll. Locate the modified result on the Airlanding Table to find if the unit becomes disrupted and/or loses a step as a result of the airlanding. A unit that becomes disrupted by airlanding receives a Defender Disrupted marker.

Once all units airlanding in the turn have been rolled for, they are considered in play and, if not disrupted, may move and fire normally during the Player-Turn in which they airland.

17.5 Changing Drop Zones

During his Air Phase, the Allied player may change the drop zone assigned to all the units of the same Command that have not yet airlanded if all the following requirements are met:

- All the units become available on or after Game-Turn 6.
- At least three Game-Turns have passed since the units became available.
- None of the units are airlanding this Game-Turn.
- A night Game-Turn is not currently in progress.

- *If the Allied player receives Airlanding Points in an AM turn and uses any of them to enter units into play, he receives no Airlanding Points in the PM turn that day, regardless of the weather. If he receives no Airlanding Points in the AM turn or receives Points but does not use them, he may receive Airlanding Points in the PM turn, depending on the PM turn weather.*

• Drop Zones (GT 3 and after)

First Airborne Division (6 units): Hex 8006.

82nd Airborne Division (5 units): Hex 6224.

101st Airborne Division (7 units): Hex 2907.

Polish First Airborne Brigade (4 units and a supply head): 7716, except P1 artillery (1 unit): Hex 8010.

- *Historically, the Polish Airborne Brigade (except its artillery) awaited transport to Holland in an airfield further north than other Allied airfields, and more susceptible to poor weather.*

- *The presence of a town in a hex does not affect airlandings there.*

- *Remember that an HQ has only one step for stacking purposes.*

- *If two units airland in the same hex, each is rolled for separately. If the first unit rolled for is disrupted, the second unit receives a die modifier of +1 when it is rolled for. This modifier is also applied if a unit airlands in a hex occupied by a friendly disrupted unit that is not airlanding.*

EXCEPTION: An artillery or reconnaissance unit cannot enter Travel Mode during the Game-Turn in which it airlands.

EXAMPLE: The drop zone of units available on Game-Turn 6 may be changed on Game-Turn 9 at the earliest.

A drop zone may be changed to any clear, mixed, or broken hex that is within 16 hexes of the formation's supply head and that is not separated by a river from the original drop zone. Once a drop zone is changed, all units assigned to the old zone that have not yet entered play must use the new zone when they airland.

18. Playing the Scenarios

Hell's Highway has five scenarios. The XXX Corps Breakout uses only Map A. The Besieged uses only Map B. The three Operation Market-Garden Campaign scenarios use both maps. The Campaign scenarios are differentiated by the amount of freedom allowed the players in their unit deployment.

After choosing a scenario, place the Supply Point markers in the space of their Supply Tracks indicated as the start space for that scenario. Place the Game-Turn marker in the 1 space of the Game-Turn Track. The following rules apply to all scenarios, unless stated otherwise.

18.1 German Initial Set-Up

Every German unit with a hex number (instead of a Game-Turn Available and Reserve Box) is placed on the game map before starting play in its listed hex. Sixteen units are placed on Map A, and 16 units are placed on Map B. All German units begin play in Combat Mode.

18.2 Allied Initial Set-Up

In the Besieged scenario, no Allied units are placed on the map before play. In all other scenarios, the Allied Player places units of XXX Corps Command in the XXX Corps Bridgehead area before play. The six hexes surrounded by the Allied Start Line against the south mapedge form the XXX Corps bridgehead over the Meuse L'Escaut Canal. Any units of XXX Corps Command that are available on Game-Turn 1 may be placed in the bridgehead. Any number of units may be placed in the bridgehead in Travel or Combat Mode as long as stacking restrictions are not exceeded and units are not placed in prohibited terrain.

18.3 Special Game-Turn 1 Rules

The weather is clear on Game-Turn 1; the Weather Table is not consulted.

No German unit may enter Travel Mode during Game-Turn 1. A German unit that is unable to move in Combat Mode may not move at all on Game-Turn 1. German units in Reserve Boxes may enter play if able, but may not move to other Reserve Boxes on Game-Turn 1. No German unit may build prepared positions on Game-Turn 1.

Any German unit that is disrupted by an Allied airstrike on Game-Turn 1 does not become undisrupted during German Player-Turn 1. The Attacker Disrupted marker on such a unit remains until the German Command Phase of Game-Turn 2. Since there are no Allied airstrikes on Game-Turn 1 of the Besieged, this rule does not apply to that scenario.

Allied units may not become isolated nor become isolated forces throughout Game-Turn 1.

18.4 Victory Points (VP's)

When a scenario is completed, the winner is determined by the number of VP's each player has gained. As explained in the scenario instructions, the Allied player earns VP's for getting units of XXX Corps Command across various geographical objectives. Each player also earns VP's for eliminating enemy units and steps, as follows:

- *Secretly note the new drop zone by jotting the hex numbers of the old zone and the new zone on a piece of scrap paper. When the airlanding is actually performed, the noted drop zone is shown to the German player.*

• Initial Command Supply Points

Breakout Scenario: 101 (12); 15A (6); 1P (6).

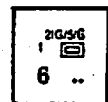
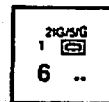
Besieged Scenario: 1 (12); 82 (12); P1 (3); 2SS (18); 1P (6).

Campaign Scenario: 101 (12); 82 (12); 1 (12); P1 (3); 15A (6); 1P (9); 2SS (18).

• Initial Prepared and Entrenched Positions

Units placed in the following hexes begin the game in entrenched positions: 0217, 0313, 0513, and 0713. The unit placed in hex 0211 begins the game in a prepared position.

- *The five units designated IGI/5IG must be placed in the XXX Corps bridgehead.*



- *Unlike the players, the Germans did not know the Allies' intentions in the first hours of Market-Garden, and thus moved slowly while gathering information.*

- *XXX Corps laid down a massive and sustained artillery bombardment throughout the first hours of their attempted breakout from the Meuse L'Escaut Canal bridgehead.*

1. Each player receives one VP for each step in every eliminated enemy unit. Steps lost in enemy units that are not eliminated at the end of play do not count for this type of VP (although they may be counted as described below).

2. The German player receives one VP for each unit of XXX Corps Command that is at replacement status at the end of the scenario. A unit that began play with 3 or 4 steps and has its replacement counter on the map at the end of the game (signifying a 2 or 3 step loss) is at replacement status. If such a unit is eliminated, the German player receives VP's for elimination *instead* (see nr. 1).

3. After the scenario is completed, count up the total number of steps lost by each formation that suffered catastrophic loss, including steps in eliminated and non-eliminated units. The player receives one VP for each step loss incurred by each such enemy formation equal to and beyond the formation's catastrophic loss limit. It is possible for a player to receive VP's for lost enemy steps twice, if the unit is eliminated and part of a formation that suffered catastrophic loss.

After each player adds up all his VP's for lost enemy steps, the Victory Conditions of the scenario are consulted to determine the winner and the level of victory he has achieved.

- Steps in eliminated German static and garrison units do not count for Allied VP's. Steps in eliminated enemy HQ units do count for VP's.

EXCEPTION: In the XXX Corps Breakout scenario, the German player receives one VP for each Allied unit of any Command at replacement status.

- A unit that begins play with one or two steps can never be at replacement status.

EXAMPLE: If British First Airborne Division (limit: 15) loses a total of 18 steps, the German player receives 4 VP's.

- Lost steps from HQ units do not count for this type of VP.

19. XXX Corps Breakout

This scenario recreates the first three days of Market-Garden in the XXX Corps and 101 Airborne sectors. The Allied Player must get his ground troops across the map as quickly as possible and off the north map edge so that they may aid the beleaguered paratroopers of the 82nd and British 1st Airborne Divisions to the north. The 101st must hold the road and bridges along the way against German counter attacks from the east and west. The German Player must delay XXX Corps as long as possible without losing too many of his valuable troops.

This scenario is 8 Game-Turns long (Game-Turns 1 through 8) and takes about four hours to play.

19.1 Set-Up

Use Map A only. Place all German units with hex numbers below 44xx on the map (see 18.1). German units with higher hex numbers are not used. Place Allied XXX Corps units in the XXX Corps bridgehead (see 18.2).

19.2 Reinforcements

The Allied player receives all XXX Corps Command reinforcements (see 17.1) and all airborne reinforcements of the 101st Airborne Division available on or before Game-Turn 8 (see 17.2 and 17.3). Units of the 82nd, 1st, and Polish Commands are not used. The Allied player receives half the number of Airlanding Points normally available to him each turn. A total of 48 units of XXX Corps and 17 units of 101 AB are available (including units placed initially).

The German player receives all the reinforcements from 15th Army that are available on or before Game-Turn 8 and all reinforcements from 1st Parachute Army available on or before turn 8 except those assigned to OR o9 or the Tactical Reserves connect to o9. No units of 2SS Command are available. A total of 21 German reinforcements are available. First Parachute Army receives only 1 Supply Point each Resupply turn.

19.3 Special German Access Areas

Tactical Reserves w7 and w8 and their Access Areas lie along the northern edge of the map in this scenario only and are treated as normal Access Areas.

19.4 XXX Corps Exit

Allied units of XXX Corps Command (only) may exit the north edge of the map from hex 4410 through 4415 (inclusive) to gain Victory Points. A unit that does so is not considered eliminated, but may not return to play. The restrictions of 16.3 apply.

19.5 Victory Conditions

Both players receive VP's as stated in 18.4. The Allied player also receives one VP for each unit of XXX Corps Command with more than one step that exits the map on or before Game-Turn 8 (including HQ units). At the end of turn 8, each player adds up his VP's. The German total is subtracted from the Allied total to determine the winner and the level of victory he has achieved:

- 41 or more: Allied Operational Victory
- 26 through 45: Allied Tactical Victory
- 15 through 25: German Tactical Victory
- 14 or less: German Operational Victory

20. The Besieged

This scenario recreates the airdrops of the US 82nd and the British 1st Airborne divisions far to the north of the front line. The Allied Player must attempt to seize and hold bridges along the main highway and in the cities of Nijmegen and Arnhem so that the oncoming forces of XXX Corps may get across the Neder Rijn. The great strength of the German forces, especially that of 2nd SS Panzer Corps will make the tasks before the 82nd Airborne difficult and those before the 1st Airborne Division near impossible.

This scenario is 26 Game-Turns long and takes about 12 hours to play.

20.1 Set-Up

Use Map B only. The partial hexrow on the south mapedge is not in play. Place all German units with hex numbers above 44xx on the map (see 18.1). German units with lower hex numbers are not used. No Allied units are placed on the map before play begins.

20.2 Reinforcements

The Allied player receives all airborne reinforcements except those of the 101st Airborne Division (see 17.2 and 17.3). He receives 8 Airlanding Points on each clear weather turn, and 3 Airlanding Points on each cloudy weather turn (instead of 12 and 4, respectively).

Allied ground reinforcements may enter play in hex 4510 through 4516. Any number of available ground reinforcements may enter play each turn. An Allied ground reinforcement may enter play in Travel Mode only if it enters in hex 4512. Ground reinforcements become available according to the following schedule (ignore the turn listed on each counter):

Game-Turn 7 (7 units)

B/2HC/G, C/2HC/G, five units designated 2CG/5/G.

Game-Turn 8 (15 units)

Guards Armoured HQ, five units designated CG/32/G, five units designated W or WG/32/G, four units designated IG/5/G. One armor unit of 2IG is not available in this scenario; also, the 3IG motorized infantry unit enters with one step loss.

Game-Turn 9 (7 units)

All remaining units of Guards Armoured Division, XXX Corps HQ.

Game-Turn 11 (6 units)

7H/130/43, 4D/130/43, 5D/130/43, three units designated 43/43.

Game-Turn 13 (3 units)

5C/214/43, 7S/214/43, 1W/214/43.

Game-Turn 14 (7 units)

All remaining units of 43rd Infantry Division.

No other XXX Corps units are available. The Allied player receives no Tac Air Points before Game-Turn 6.

The German player receives all reinforcements of 2nd SS Panzer Corps (49 units). He also receives all reinforcements of 1st Parachute Army assigned to Boxes e10, e11, and o9 (24 units) and he receives the 180th HQ on Game-Turn 19 in Box e10 (ignore the entry data on the unit). He receives no units of 15th Army. 1st Para Army Supply Points are recorded on a separate sheet of paper (the Supply Track is on the southern map). 1st Para Army receives only 2 Supply Points each Resupply Turn. The Catastrophic Loss limit for 9SS Panzer Division is 5 and for 10SS Panzer Division is 9.

20.3 XXX Corps Supply Sources

A unit of XXX Corps Command may use hex 4511, 4512, 4516, or any road hex directly connected to any of these hexes as a supply source. These hexes replace hex 0113 and are subject to the restrictions of 12.1.

20.4 Victory Conditions

Both players receive Victory Points as stated in 18.4. The Allied player also receives VP's as follows:

- 1 VP for each unit of XXX Corps Command with more than one step that is north of the Waal River and in supply at the end of the game.
- 1 VP for each step in every unit of XXX Corps Command that is north of the Neder Rijn River and in supply at the end of the game. A unit north of the Neder Rijn with more than one step may also earn a VP as noted above.

At the end of Game-Turn 26, each player adds up his VP's. The German total is subtracted from the Allied total to determine the winner and the level of victory he has achieved:

- 66 or more: Allied Strategic Victory
- 51 through 65: Allied Operational Victory
- 36 through 50: Allied Tactical Victory
- 21 through 35: German Tactical Victory
- 6 through 20: German Operational Victory
- 5 or less: German Strategic Victory

21. Operation Market-Garden Campaign Scenarios

The entire Market-Garden campaign may be played in one of three scenarios: Historical; Hidden Airborne Reinforcement; or Free Deployment. All three scenarios are 26 Game-Turns long, take about 25 hours to play, and use both maps. To place the maps together, position the partial hexrow along the south edge of Map B map over the 44xx hexrow of Map A so that the terrain patterns match.

Note that Reserve Boxes o3, w7, w8, and o10 on Map A are covered up when the maps are joined. Identical boxes on Map B are used instead. The 1P Command Reserve Box on Map B is not used when the maps are joined.

Both players receive Victory Points in all three Campaign scenarios as stated in 18.4, and the Allied player earns additional VP's as stated in 20.4. At the end of Game-Turn 26, each player adds up his VP's. The German total is subtracted from the Allied total, and this difference is compared to the Levels of Victory in the specific scenario being played to determine the winner.

21.1 Historical Scenario

This scenario closely recreates the historical appearances of forces in the battle. However, because the players generally know where airborne units must appear, the surprise of unexpected Allied airlandings is lost. The game is set up and reinforcements enter play in accordance with 16, 17, and 18.

Levels of Victory

- 76 or more: Allied Strategic Victory
- 61 through 75: Allied Operational Victory
- 46 through 60: Allied Tactical Victory
- 31 through 45: German Tactical Victory
- 16 through 30: German Operational Victory
- 15 or less: German Strategic Victory

21.2 Hidden Airborne Reinforcement Scenario

This scenario provides the best balance between historicity and playability by allowing the Allied player to vary all his airborne reinforcements while duplicating the initial situation. This compromise puts the players closer to the confusion of the campaign and is recommended over all other scenarios.

All set-up guidelines and other rules of 18 apply. All reinforcements enter play in accordance with 16 and 17. However, before beginning play, the Allied player may change the drop zones of all airborne reinforcements available on Game-Turn 3 or later. The five drop zones listed in 17.3 are changed according to 17.5, and are noted on a separate sheet of paper. These altered drop zones apply to *all* airborne reinforcements after the initial airlanding. During play, the chosen drop zones may be changed normally.

Levels of Victory

81 or more: Allied Strategic Victory
66 through 80: Allied Operational Victory
51 through 65: Allied Tactical Victory
36 through 50: German Tactical Victory
21 through 35: German Operational Victory
20 or less: German Strategic Victory

21.3 Free Deployment Scenario

This scenario is a wild one with unpredictable results. Both players may change their initial deployment and have more flexibility with their reinforcements. Unless stated otherwise, all rules of 18 apply.

SET-UP

All German static and garrison units and units in prepared and entrenched positions (see 18.1) are set up normally. All other German units with a hex number may be placed in any hex within the following restrictions:

- A unit may not be placed across a river from its listed hex.
- A unit originally assigned to the northern map may not be placed in or adjacent to a city hex.

The Allied player is not required to place units of IG/5/G in the XXX Corps bridgehead (exception to 18.2).

INITIAL ALLIED AIRLANDINGS

Before beginning play and before he sees the German set-up, the Allied player notes the deployment of his initial airlandings secretly on a separate sheet of paper, as follows:

1. Assign each Supply Head marker (82, 101, 1) to any clear or mixed hex on the map. Each marker must be separated from each other marker by at least one river and 10 hexes.

2. Choose a different drop zone hex for each of the following groups. 101 Command: 501 regiment (2 drop zones); 502 regiment; 506 regiment. 82 Command: 504 regiment (2 drop zones); 505 regiment, 508 regiment. 1st Command: 1P brigade; 1A brigade.

Each drop zone may be assigned to any clear or mixed hex within 15 hexes of its Command supply head. One drop zone of each Command must be on or adjacent to the Command supply head. Two drop zones of each Command may not be separated from the Command supply head by a river or canal. A drop zone must be closer to its Command supply head than to any other Command supply head. The two drop zones of the 501 regiment must be within five hexes of each other. The same restriction applies to the 504 regiment. A total of 10 drop zones must be noted.

3. Assign all airborne units available on Game-Turn 1 to each drop zone. Each unit with a regiment or brigade designation (the middle of three numbers in the designation) matching the drop zone must be assigned to that zone. All other units may be assigned to any drop zone of the Command. The units of the 501 and 504 regiments are assigned to either of their drop zones at this time. Make sure that all the units assigned to a drop zone can actually land on the drop zone or the adjacent hexes.

After the German player has finished setting up his units, the Allied player conducts his initial airlandings as in 17.2, using his chosen hexes.

ALLIED REINFORCEMENTS

Ground reinforcements enter play normally. Airborne reinforcements available after Game-Turn 1 enter play normally. However, the Allied player may change the drop zones of his airborne reinforcements *before play*, as in Scenario 21.2.

GERMAN RESERVES

German reserves enter play normally. However, a reserve unit that is assigned to a TR Box when available may be placed in its assigned box or the connected OR Box.

Levels of Victory

91 or more: Allied Strategic Victory
76 through 90: Allied Operational Victory
61 through 75: Allied Tactical Victory
46 through 60: German Tactical Victory
31 through 45: German Operational Victory
30 or less: German Strategic Victory

Design Credits

Design and Development: John H. Butterfield
Research Assistance: Geoff Barnard
Graphics: Ted Koller
Rules Editing: Bob Ryer
Playtesting: Justin Leites, Neil Randall, Bob Stumph, Alan Gopin, John Alsen, Eric Lee Smith
Production: Manfred F. Milkuhn, Ted Koller, Colonial Composition, Monarch Services, Inc.
Cover Art: John H. Butterfield
Project Oversight: W. Bill

Order of Battle

Every unit in *Hell's Highway* is included in the following list. The abbreviations used on each counter are explained where necessary. The number of units in each formation and the number of independent units in each Command are listed to help the players make sure they are using all their available forces. Some units have an additional numerical designation listed on their counter that is not repeated here. For example, the three artillery units in the U.S. 101st Airborne Division are designated 1, 2, and 3 on their counters. These unofficial sub-designations have been included only to differentiate units of similar types in this game.

US Forces

82nd Airborne Division (All-American)

18 units plus 1 HQ, 1 Supply Head, 12 replacement units

504th Parachute Regiment

1st and 3rd Battalions; D, E, and F Companies of 2nd Battalion.

505th Parachute Regiment

1st, 2nd, and 3rd Battalions.

508th Parachute Regiment

1st, 2nd, and 3rd Battalions.

325th Glider Regiment

1st and 2nd Battalions; 2nd Battalion of 401st Glider Regiment attached.

Division Assets

Recon platoon; artillery, 3 units.

101st Airborne Division (Screaming Eagles)

18 units plus 1 HQ, 1 Supply Head, 12 replacement units

501st Parachute Regiment

2nd and 3rd Battalions; A, B, and C Companies of 1st Battalion.

502nd Parachute Regiment

1st, 2nd, and 3rd Battalions.

506th Parachute Regiment

1st, 2nd, and 3rd Battalions.

327th Glider Regiment

1st and 2nd Battalions; 1st Battalion of 401st Glider Regiment attached.

Division Assets

Recon platoon; artillery, 3 units.

British Forces

AIRBORNE

First Airborne Division (Red Devils)

19 units plus 1 HQ, 1 Supply Head, 10 replacement units

1st Parachute Brigade (1P)

1st, 2nd, and 3rd Battalions.

1st Airlanding Brigade (1A)

1st Battalion, Borderers, 2 units (1B); 2nd Battalion, South Staffordshires, 2 units (2SS); 7th Battalion, King's Own Scottish Borderers, 2 units (Ksb).

4th Parachute Brigade (4P)

10th, 11th, and 156th Battalions.

Division Assets

Glider Pilot Regiment, 3 units (GP); 1st Airlanding Light Artillery Regiment, 2 units; recon squadron, 2 units.

XXX CORPS

Guards Armoured Division

28 units plus 1 HQ, 12 replacement units

5th Guards Armoured Brigade

2nd Battalion, Irish Guards, 3 armored units and 1

armored car unit (21G); 3rd Battalion, Irish Guards (31G); 2nd Battalion, Grenadier Guards, 3 armored units and 1 armored car unit (2GG); 1st Battalion, Grenadier Guards (1GG). Attached to Brigade: B and C Squadrons, 2nd Household Cavalry (2HC).

32nd Guards Armoured Brigade

1st Battalion, Coldstream Guards, 3 armored units and 1 armored car unit (1CG); 5th Battalion, Coldstream Guards (5CG); 1st Battalion, Welsh Guards (1WG); 2nd Battalion, Welsh Guards, 3 armored recon units and 1 armored car unit (2W).

Division Assets

B and C Squadrons, 2nd Household Cavalry (2HC); 153rd Field Artillery Regiment, Leicestershire Yeomanry, 2 units (153); 55th Field Artillery Regiment, West Somerset Yeomanry, 2 units (55).

43rd Infantry Division (Wessex)

15 units plus 1 HQ 13 replacement units

129th Infantry Brigade

4th Battalion, Somerset Light (4S); 4th and 5th Battalions, Wiltshire (4W, 5W).

130th Infantry Brigade

7th Battalion, Hampshire (7H); 4th and 5th Battalions, Dorsetshire (4D, 5D).

214th Infantry Brigade

5th Battalion, Duke of Cornwall Light (5C); 1st Battalion, Worcester Rifles (1W); 7th Battalion, Somerset Light (7S).

Division Assets

43rd Recon Regiment, 3 units; 94th Field Artillery Regiment; 112th Field Artillery Regiment; 179th Field Artillery Regiment.

Independent Units

18 units plus 1 HQ, 8 replacement units

231st Infantry Brigade of 50th Infantry Division (Northumberland)

1st Battalion, Dorsetshire (1D); 2nd Battalion, Devonshire (2D); 1st Battalion, Hampshire (1H).

15th/19th Kings Royal Hussars, 3 armor units and 1 armored car unit (15-19K). Attached: A Squadron, Royals (A/RAC); one battery of 86th Field Artillery Regiment.

44th Royal Tank Regiment, 3 armor units and 1 armored car unit (44RT). Attached: C Squadron, Royals (C/RAC); one battery of 86th Field Artillery Regiment.

Corps artillery, 2 units; independent infantry, 1 unit; bridge engineers, 1 HQ unit.

Polish Forces

Polish First Parachute Brigade

4 units plus 1 HQ, 1 Supply Head, 3 replacement units

1st, 2nd, and 3rd Battalions; artillery group.

German Forces

15th ARMY

59th Infantry Division

12 units plus 1 HQ

1034th Regiment

1st and 2nd Battalions; artillery group.

1035th Regiment

1st and 2nd Battalions.

1036th Regiment

1st and 2nd Battalions; artillery group.

Division Assets

Recon battalion; reserve infantry company; artillery, 2 units.

85th Infantry Division

4 units plus 1 HQ

1053rd and 1054th Regiments, recon company, artillery group.

Independent Units

1 unit

159th Infantry Regiment

FIRST PARACHUTE ARMY

180th Infantry Division

4 units plus 1 HQ

1221st, 1222nd, and 1223rd Regiments; artillery group.

84th Infantry Division

5 units plus 1 HQ

1051st, 1062nd, and 1063rd Regiments; recon company; artillery group.

Seventh Fallschirmjaeger (Parachute) Division (7F)

4 units plus 1 HQ

16th, 17th, and 18th Regiments; artillery group.

9th SS Panzer Division

2 units plus 1 replacement unit

2nd Battalion of 9th Panzer Regiment; 2nd Battalion of 20th Panzergrenadier Regiment

Remainder of division in 2nd SS Panzer Corps.

10th SS Panzer Division

2 units plus 1 replacement unit

2nd Battalion of 22nd Panzergrenadier Regiment; regimental tank destroyer group.

Remainder of division in 2nd SS Panzer Corps.

Independent Units

38 units plus 2 replacement units

2nd Fallschirmjaeger Regiment, 1 infantry unit and 1 anti-tank unit (2F).

6th Fallschirmjaeger Regiment (6F).

1st and 2nd Battalions; artillery, 2 units.

7th Fallschirmjaeger Regiment (7FR)

6th Penal Battalion (6P).

60th Panzergrenadier Battalion, 1 armor unit and 1 self-propelled artillery unit.

107th Panzer Brigade

2107th Panzergrenadier Battalion; 2107th Panzer Battalion, 2 units (1P, 2P); 280th Sturmgeschutz Battalion.

189th Panzer Regiment, 2 armor units and 1 infantry unit.

85th and 88th Infantry Regiments.

100th, 101st, and 105th Training Battalions.

406th Landschutzen Regiment, 3 units.

Independent flak groups, 10 units.

Garrison infantry, 3 units.

2nd SS PANZER CORPS

Only units with SS in their designation are actually SS units.

9th SS Panzer Division (Hohenstaufen)

8 units plus 1 HQ, 2 replacement units

1st Battalion of 9th Panzer Regiment.

1st Battalion of 20th Panzergrenadier Regiment.

19th Panzergrenadier Regiment

1st and 2nd Battalions.

Division Assets

Panzer Jaeger (tank destroyer) Battalion; Pioneer Battalion (motorized infantry); armored infantry battalion; recon battalion.

Remainder of division in First Parachute Army.

10th SS Panzer Division (Frunderberg)

11 units plus 1 HQ, 6 replacement units

10th Panzer Regiment

1st and 2nd Battalions.

21st Panzergrenadier Regiment

1st and 2nd Battalions.

1st Battalion of 22nd Panzergrenadier Regiment.

Division Assets

Recon group, 2 units; armored infantry battalion; artillery, 3 units.

Independent Units

33 units

Flak Brigade

102nd SS Flak Battalion; 19th Flak Battalion; SS rocket artillery battalion; artillery group, 2 units; anti-tank group, 3 units.

4th SS, 12th SS, and 16SS Training Battalions.

1st Netherlands SS Battalion (NdrSS).

42nd and 908th Sicherheits Regiments (42N, 908S).

47th Machinegun Battalion

502nd and 506th Panzer Battalions.

642nd Marine Battalion.

Kampfgruppen (Battlegroups)

Brahms; Kauer; Knaust, 3 units; Schorken.

Herman Goering Depot Battalion, 1 motorized infantry unit and 1 flak unit (HGD).

Schiffstammabteilung Battalion (Schfstm).

Fliegerhorst Battalion (Flgrhrst).

Bocholt Training Battalion.

Flottenstammreg Battalion (Fltnstm).

Security battalion.

Independent flak group.

Garrison infantry.

Designer's Notes

I have been playing with the idea of a game on Operation Market-Garden for three years, ever since designing a little game called *Red Devils* for SPI. I envisioned a game that would recreate the entire campaign in a reasonable amount of time and space. *Hell's Highway* is the result of those ideas, encompassing ten months of work. The major design themes of the game will hopefully become clear through play. The specifics of the game — that is, my tactical decisions on how individual sub-systems should work — are less apparent. In a few places in the rules, I have supported ideas with short historical notes. I would like to make some additional comments here.

German Reserves

Perhaps the most difficult problem faced was deciding on the degree of freedom the German player should be allowed in the strategic use of his forces. The German order of battle includes all the units that participated in any way in battling Market-Garden. If their appearance along the corridor is limited to those areas where they actually struck from, the Allies could easily guard the approaches. So the German player must have options. However, since the German player knows the Allied objectives, unlike his historical counterpart, he can zero in on the critical area of the map with a determination that would be psychic in 1944. This is especially true between the front line and Eindhoven, and between Veghel and Grave. Historically, in the latter area there was no German activity until after XXX Corps had reached Nijmegen. So the German player's options must be limited.

The reserve box network is a compromise solution between these extremes. It allows the German player to strike anywhere, perhaps with more flexibility than was actually available, while the Allied player receives warning of German intentions by watching the network. A warning to the Allied player: You will still find the stretch of highway between Veghel and Grave difficult to keep open.

Arnhem at All Costs

Absolutely critical to the Allied player's chances of victory is the initial airlanding and movement of the 1st Airborne Division. In the first place, there is barely enough room to land the available units. Use the drop hexes carefully to make sure you can land all the available Red Devils. Put some airborne infantry into travel mode and get them marching towards Arnhem via Doorwerth on Turn 1. Move the glider recon units to road hexes so they can enter travel mode on Turn 2. Note that as long as you also attack the 16SS battalion, no German units can possibly move to block your way into Arnhem on Turn 1 (remember, German units may not enter travel mode on Turn 1). If you don't get units into Arnhem on Turn 2, you will never be able to enter the city.

Bridge Demolition

The die roll chances and prohibitions assigned to bridge demolition are purely for game balance. If a major road bridge over a river is destroyed (say, at Nijmegen), the game would be over immediately, so such bridges may not be blown. If other ferries and non-road bridges over major rivers are not destroyed, the Allied player may use the knowledge to his advantage, so such crossings are almost always destroyed (1 through 5). The chances to destroy canal and stream crossings are also designed to aid the historical flow of the campaign.

XXX Corps Supply

An odd rule governing XXX Corps supply confuses some players: An Allied unit in a hex does *not* negate Ger-

man control exerted into that hex when tracing road hexes from a XXX Corps Supply Source Hex to hex 0113. Friendly units do negate enemy control in all other instances of tracing supply, including from a XXX Corps unit to a Supply Source Hex. This special restriction forces the Allied player to guard the highway behind the lead units of XXX Corps especially carefully. Trucks of the supply columns represented by all Supply Source Hexes emanating from 0113 are vulnerable if within weapon distance of any enemy formation, even if the Germans cannot actually occupy the road.

Victory Conditions

Some players feel that geographical objectives, such as the highway bridges, should be the *only* consideration for victory, and that if the Allies fail to get XXX Corps across the Rhine they should lose. However, the existence of the rest of the western front cannot be ignored. Historically, no German formations suffered *Catastrophic Loss* and the Germans were able to put these units to important use elsewhere. If the Allies fail to hold Arnhem in the game but destroy most of 15th Army, 1st Parachute Army, and 2nd SS Panzer Corps, the strategic situation for the Germans would be terrible, and thus an Allied victory in the long run could be achieved.

British Connection

I am indebted to Geoff Barnard of the British Isles for his tremendous assistance in researching the British order of battle in *Hell's Highway*. Were it not for his help, the game would repeat the errors of its predecessors. Among other revelations, I was surprised (and the Allied player will be quite pleased) to find that the 2nd Household Cavalry was attached to Guards Armoured Division during Market-Garden.

John H. Butterfield, January 1983

Bibliography

- Bauer, Cornelius, *The Battle of Arnhem*. Stein and Day, 1967.
- Bredin, Lt. Col. A.E.C., *Three Assault Landings*. London: Gale & Polden, 1946.
- By Air to Battle: Official Account of the British Airborne Divisions*. London: H.M. Stationary Office, 1945.
- Clay, Maj. Ewart W., M.B.E., *The Path of the 50th: The Story of the 50th (Northumbrian) Division in the Second World War 1939-1945*. Aldershot: Gale & Polden, 1950.
- The History of the 44th Royal Tank Regiment*. Ditchling: Ditchling Press, 1965.
- Dawson, W. Forrest, *Saga of the All-American*. Privately Printed.
- Gill, R., and Groves, J., *Club Route in Europe*. Hanover: British Army of the Rhine, 1945.
- Joslen, Lt. Col. H.F., *Orders of Battle, Second World War, 1939-45*. London: H.M. Stationary Office, 1960.
- MacDonald, Charles B., *The Siegfried Line Campaign*. Office of the Chief of Military History, Dept. of the Army, 1961.
- Nelson, Jay, *Highway to the Reich*. Simulations Publications, Inc., 1977.
- Rosse, Captain the Earl of, and Hill, Col. E.R., *The Story of the Guards Armoured Division*. London: Geoffrey Bles, 1956.
- Verney, Maj. Gen. G.L., *The Guards Armoured Division*. London: Hutchinson, 1955.

EXAMPLES OF COMBAT

Note that all Allied units depicted are in the 82nd Airborne formation and all German units are independent. Refer to the Fire Table and the Fire Modifiers (see Terrain Effects Chart and explanation, on map) when reading these examples. The German Fire Phase is underway.

COMBAT NR. 1

The German player announces that he is attacking hex A and declares his offensive fire:

Both units in hex B and the armored infantry unit (in F) will conduct direct fire. These units are now called attacking targets. The German player is not including the motorized infantry unit (F) in this attack, although it is eligible. The artillery unit (H) will conduct indirect fire. It is within range of the defending target and all units adjacent to the target may spot the target and are in fire communication with the artillery unit. The unit in hex G is not eligible to participate in this attack. At the moment, three units are conducting direct fire and one indirect fire, meaning the attack will be resolved as direct fire.

The Allied player declares his defensive fire:

1. The defending target (A) will direct fire at the armor unit (in B).
2. The parachute infantry unit in E, although not under attack, will direct fire at the armored infantry unit (F). Since the attacking target is armored, the HQ (in D) will lend anti-tank support to the fire. The HQ could not lend this support to A's fire, because the HQ's anti-tank weapons are out of range.
3. The artillery unit (in C) will conduct indirect fire at the infantry unit in B. Note that the artillery unit need only be in range of the defending target, not the attacking target. Artillery communication is traced from the spotting unit (A) through the HQ (D) to the artillery unit.

The Allied player will not have the reconnaissance unit in E fire, although eligible.

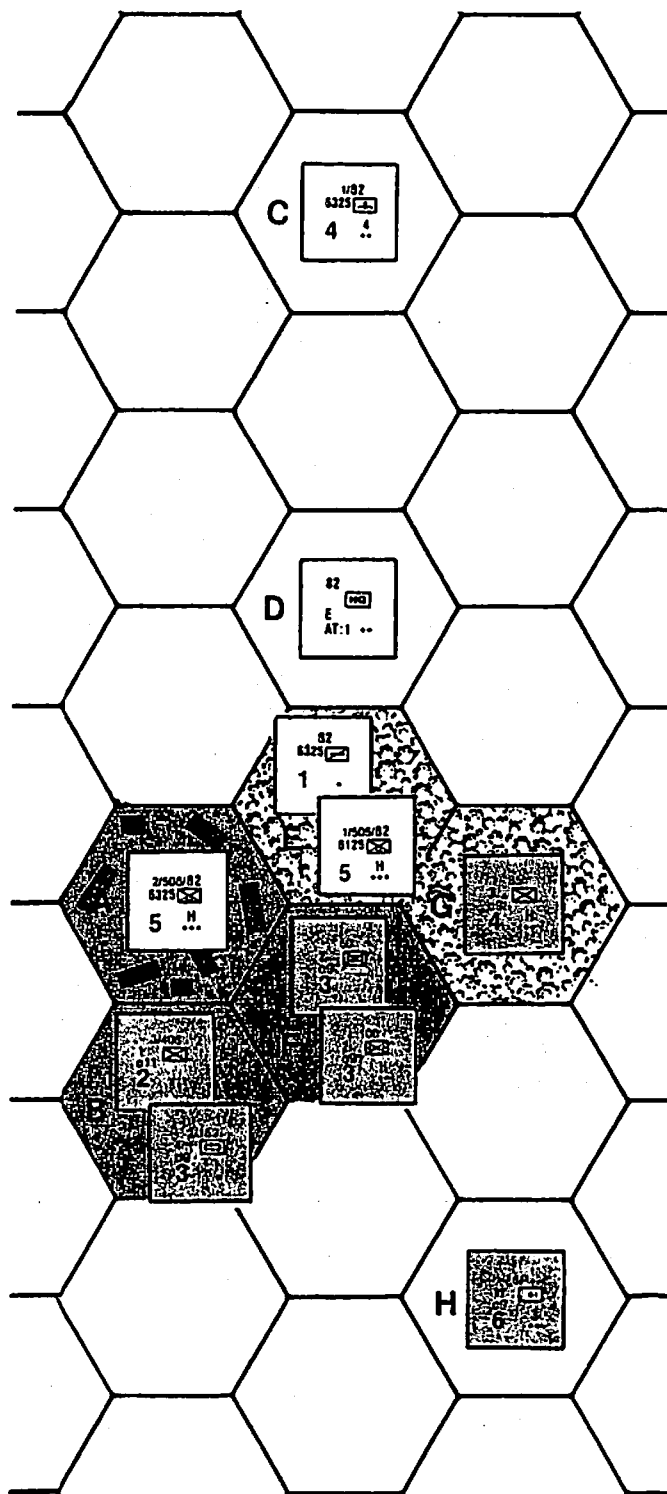
The Allied player resolves his defensive fire:

1. The defending target (A) is firing at armor in mixed terrain. The Fire Modifiers indicate a Basic Fire Modifier or +2. No other modifiers apply. The Allied player rolls the die and the result is a 3, modified to a 5. Cross-referencing a Fire Strength of 5 with a result of 5 on the Fire Table indicates that the attacking target is not affected by the fire.
2. Parachute infantry unit E fires at armored infantry in broken terrain. The basic Fire Modifier is +3. The anti-tank support adds +1 for a Fire Modifier Total of +4. The die result is a 6, modified to a 10. A 5 Fire Strength cross-referenced with a 10 die result indicates a Fire Result of 1. The attacking target must become disrupted and must lose one step; it may not retreat. In addition, 82nd Airborne command must spend one Supply Point for rolling a 6.
3. Artillery unit C conducts indirect fire at infantry in mixed terrain. The Basic Fire Modifier is +3. No other modifiers apply. The die roll of 4 is modified to a 7 and cross-referenced with a 4 Fire Strength, indicating a result of D. The attacking target must become disrupted or lose one step. The German player chooses to disrupt the unit. The firing artillery unit is also disrupted.

The German player resolves his offensive fire:

The armor unit (B) and the artillery unit (H) are the only attacking units able to fire since the infantry unit (B) and the armored infantry unit (F) were disrupted by defensive fire. There is now one unit conducting direct fire and one unit indirect fire, so the attack is resolved as direct fire. If the armor unit had also been disrupted, leaving only the artillery unit to fire, the attack would have been resolved as indirect fire.

The units are firing at infantry in mixed terrain. The basic fire modifier is +5. The town in the target hex adds a -1 for a Fire Modifier Total of +4. The German player rolls a 3 which is modified to a 7 and cross-referenced with a Fire Strength Total of 9 (3+6), indicating a result of 1. The defending target becomes disrupted and must either lose one step or retreat one hex. The firing artillery unit is also disrupted. The Allied player chooses to retreat the defending target unit. The German player chooses to advance the armor unit into hex A.

EXAMPLE NR. 1
Situation prior to Combat Nr. 1

COMBAT NR. 2

The German player announces that he is attacking hex E and declares his offensive fire:

Only two German units are eligible to participate: the infantry unit in hex G and the motorized infantry unit in hex F; all other units took part in the first combat. Note that both these units have heavy weapons and thus may conduct direct or indirect fire. The German player chooses to have unit G conduct direct fire while unit F conducts indirect fire. The attack will be resolved as direct fire.

The Allied player declares his defensive fire:

The defending target (E) is composed of two units, but only the recon unit may fire, since the parachute infantry unit fired in the first combat. The recon unit will direct fire at infantry unit G. Motorized infantry unit F may not be fired upon since it is conducting indirect fire and thus is not an attacking target. No other Allied units may conduct defensive fire.

The Allied player resolves defensive fire:

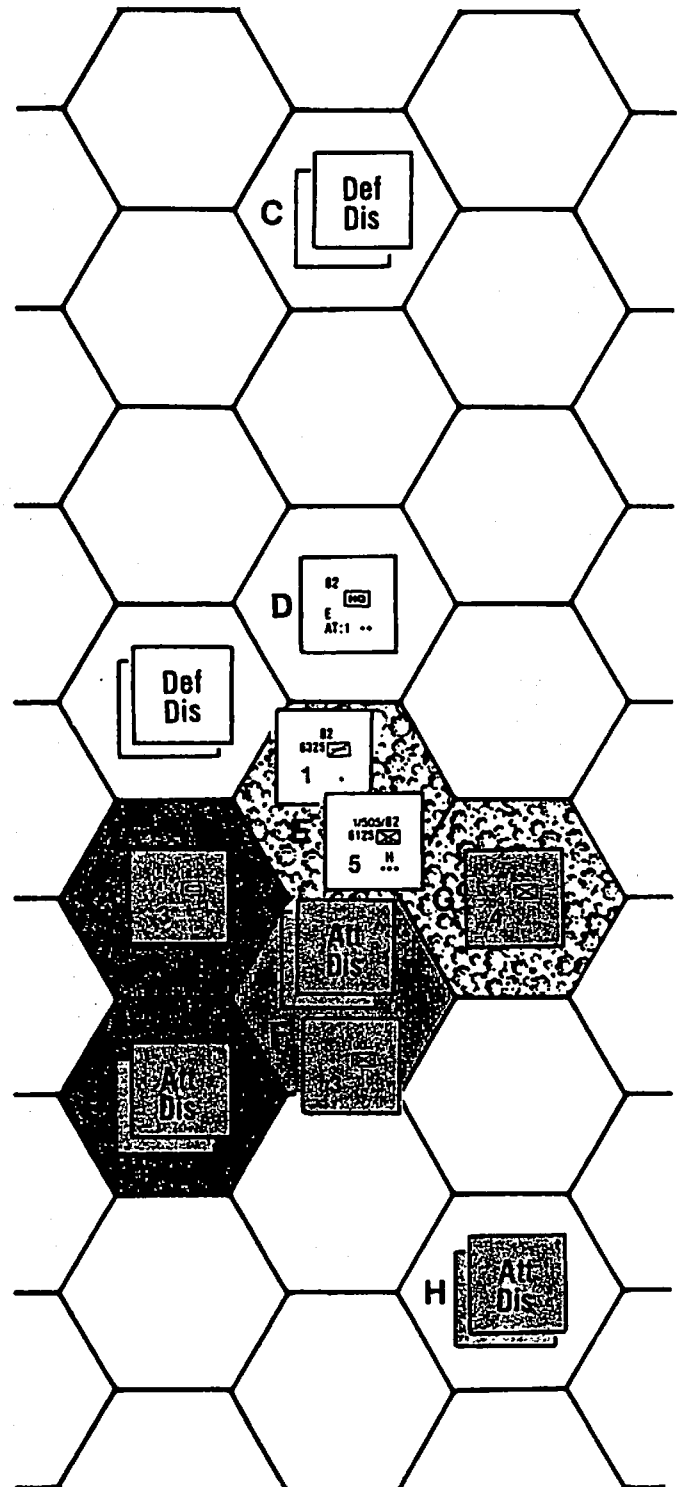
The defending target (recon unit only) fires at infantry in woods. The Basic Fire Modifier is +3. No other modifiers apply (the town in hex G does not aid the attacking target). The die roll of 2 is modified to a 5 and cross-referenced with a 1 Fire Strength, indicating that the attacking target is not affected by the fire.

The German player resolves offensive fire:












The attacking units are conducting direct offensive fire at infantry and recon in woods. The Fire Modifiers indicate the same Basic Fire Modifier (+3) for each target type, so the Allied player need not declare which type will be used. No other modifiers apply. The die roll of 3 is modified to a 6 and cross-referenced with a Fire Strength Total of 7 (4+3) indicating a D result. Both defending target units must become disrupted or one of them must lose one step. The Allied player chooses to disrupt the units.

EXAMPLE NR. 2










Situation after Combat Nr. 1, prior to Combat Nr. 2



UNIT TYPE CHART**MOTORIZED**

	Armor		
	Self-Propelled Artillery	Treated as artillery when conducting ranged fire; treated as armor for all other purposes.	
	Tank Destroyer	Armored.	
	Armored Recon		
	Armored Car		
	Armored Infantry	Moves as non-motorized infantry when in Combat Mode. Considered motorized when entering or in Travel Mode.	
	Reconnaissance		Identical once in play.
	Glider Recon		
	Motorized Infantry	Moves as non-motorized Infantry when in Combat Mode. Considered motorized when entering or in Travel Mode.	
	Motorized Artillery	Exerts no Control. Cannot move in Combat Mode. Cannot conduct direct fire.	
	Motorized Headquarters	Exerts no Control. See 11.	

NON-MOTORIZED

	Infantry	German garrison infantry (noted G in designation) cannot move nor fire and exerts no Control.	All identical once in play.
	Parachute Infantry	German parachute infantry has no airborne attributes.	
	Glider Infantry		
	Anti-Tank	May not conduct direct fire at non-armored target.	
	Artillery		Exerts no Control. Cannot conduct direct fire. Cannot move in Combat Mode. All identical once in play.
	Airborne Artillery		
	Rocket Artillery		
	Flak	Cannot move in Combat Mode. Cannot conduct offensive fire. If heavy weapons capable, exerts light Control and may conduct defensive fire only. If not heavy weapons capable, exerts no control and can conduct no fire (see 15.2).	
	Headquarters	Exerts no Control. Cannot enter Travel Mode (see 11).	

ABBREVIATED SEQUENCE OF PLAY

1. Weather Phase
2. Resupply Phase (AM Game-Turns only)

Allied Player-Turn

3. Allied Air Phase
4. Allied Command Phase
 - A. Remove Allied AD markers. B. Assign unit modes. C. Begin bridge repair and prepared and entrenched position construction. Complete last turn's bridge repair and prepared and entrenched position construction.
5. Allied Movement Phase
6. Allied Fire Phase
7. Allied Communication Phase
 - A. Remove Allied DD markers. B. Check Allied lines of communication. C. Complete this turn's stream bridge repair and this turn's prepared position construction begun with engineer aid.

German Player-Turn

8. German Air Phase
9. German Command Phase
 - A. Remove German AD markers. B. Assign unit modes. C. Rewire intact bridges. Begin prepared and entrenched position construction. Complete last turn's prepared and entrenched position construction.
10. German Movement Phase
11. German Fire Phase
12. German Communication Phase
 - A. Remove German DD markers. B. Check German lines of communication. C. Complete this turn's prepared position construction begun with engineer aid.

HEADQUARTERS' CAPABILITIES

A number appearing after an HQ capability is the range of the capability in hexes. Those functions marked with an "*" cost 1 Supply Point to perform. See 11. for details.

E: Combat Engineers. HQ may perform any of the following:

- Negate effects of enemy prepared or entrenched positions.*
- Give Direct Offensive Fire Attack Bonus (+ 1 to die roll).*
- Give Defensive Combat Bonus (negates attacker's Attack Bonus).*
- Aid prepared position construction.
- Construct Entrenchment.*
- Repair a stream bridge (Allied HQ's only).*
- Rewire a bridge for demolition (German HQ's only).

AT: Anti-Tank Weapons. HQ may lend the anti-tank capability to eligible unit.

F: Flak (German HQ's only). May hamper Allied air strikes, air resupply, and air landings.

B: Bridge Engineers (Allied HQ's only). HQ may perform any of the following:

- Repair a stream or canal bridge.
- Allow airborne infantry to cross unbridged river or canal.
- Establish communication across river or canal for evacuation.

UNIT CAPABILITIES

H: Heavy Weapons. Unit exerts heavy control and may conduct direct or indirect fire.

AT: Anti-Tank Weapons. Add 1 to the die result when firing at an armored target. All pure anti-tank units have this capability.

S: Static. Unit may not move or retreat and may not conduct offensive fire.

Hell's Highway Player Aid Card

© 1983, Victory Games, Inc., New York, NY 10001












BRIDGE DEMOLITION SUMMARY

Die roll required to destroy...










- A bridge over a stream: 1,2.
- A major road bridge over a canal: 1,2.
- A minor road or non-road bridge over a canal: 1,2,3.
- A non-road bridge or ferry over a river: 1,2,3,4,5.
- A major road bridge over a river: Prohibited.

UNIT TYPE CHART

MOTORIZED

 Armor		
 Self-Propelled Artillery	Treated as artillery when conducting ranged fire; treated as armor for all other purposes.	
 Tank Destroyer	Armored.	
 Armored Recon		
 Armored Car		
 Armored Infantry	Moves as non-motorized infantry when in Combat Mode. Considered motorized when entering or in Travel Mode.	
 Reconnaissance		Identical once in play.
 Glider Recon		
 Motorized Infantry	Moves as non-motorized infantry when in Combat Mode. Considered motorized when entering or in Travel Mode.	
 Motorized Artillery	Exerts no Control. Cannot move in Combat Mode. Cannot conduct direct fire.	
 Motorized Headquarters	Exerts no Control. See 11.	

NON-MOTORIZED

 Infantry	German garrison infantry (noted G in designation) cannot move nor fire and exerts no Control.	All identical once in play.
 Parachute Infantry	German parachute infantry has no airborne attributes.	
 Glider Infantry		
 Anti-Tank	May not conduct direct fire at non-armored target.	
 Artillery		Exerts no Control. Cannot conduct direct fire. Cannot move in Combat Mode. All identical once in play.
 Airborne Artillery		
 Rocket Artillery		
 Flak	Cannot move in Combat Mode. Cannot conduct offensive fire. If heavy weapons capable, exerts light Control and may conduct defensive fire only. If not heavy weapons capable, exerts no control and can conduct no fire (see 15.2).	
 Headquarters	Exerts no Control. Cannot enter Travel Mode (see 11).	

FIRE TABLE

DIE	FIRE STRENGTH									
	1	2	3	4,5	6,7	8-10	11-13	14-16	17-20	21+
1	-	-	-	-	-	-	-	-	-	-
2	-	-	-	-	-	-	-	-	-	D
3	-	-	-	-	-	-	-	-	D	D
4	-	-	-	-	-	-	D	D	D	D
5	-	-	-	-	D	D	D	D	D	1
6	-	-	D	D	D	D	D	1	1	1
7	-	D	D	D	D	1	1	1	2	2
8	D	D	D	D	1	1	1	2	2	2
9	D	D	D	1	1	1	2	2	3	3
10	D	D	1	1	1	2	2	3	3	4
11	D	1	1	1	2	2	3	3	4	5
12	1	1	1	2	2	3	3	4	5	5

Explanation of Results:

D: Target unit or stack must lose one step or become disrupted (owner's choice).

1: Target unit or stack must become disrupted and:
• lose one step, or
• retreat one hex.

2,3,4,5: Target unit or stack must become disrupted and:
• lose the indicated number of steps, or
• retreat one hex and lose the indicated number of steps less one.

Note that attacking units may never retreat.

Procedure:

Roll one die and add the Fire Modifier Total obtained from the Fire Modifier Summary (see the map). Cross-reference the modified result with the fire strength of the firing unit(s) to determine the result. A modified result that is less than 1 is treated as 1; a modified result that is greater than 12 is treated as 12.

WEATHER TABLE

AM Turn	DIE	PM Turn WHEN AM WEATHER WAS:		
		Clear*	Cloudy	Overcast
Clear	1	Clear	Clear	Cloudy
Cloudy	2	Clear	Cloudy	Cloudy
Cloudy	3	Clear	Cloudy	Cloudy
Overcast	4	Cloudy	Cloudy	Overcast
Overcast	5	Cloudy	Cloudy	Overcast
Overcast	6	Overcast	Overcast	Overcast

*Use this column on Game-Turn 4, regardless of the AM result.

Procedure:

During the Weather Phase of each daylight Game-Turn, roll one die and cross-reference the result with the proper column to find the weather for the duration of the Game-Turn. This table is not used on Game-Turn 1; the weather on that Game-Turn is automatically clear.

Air Points Received:

Clear: The Allied player receives 12 Airlanding Points and 6 Tac Air Points. The German player rolls one die; if the result is 1-3, he receives 1 Tac Air Point; if the result is 4-6, he receives no Points.

Cloudy: The Allied player receives 4 Airlanding Points and 3 Tac Air Points. The German player rolls one die; if the result is 1, he receives 1 Tac Air Point; otherwise, he receives no Points.

Overcast: The Allied player receives no Airlanding Points and 1 Tac Air Point. The German player receives no Points.

No Air Points are received during night turns. The Allied player receives no Airlanding Points during a PM turn following an AM turn in which he has used any Airlanding Points. The German player may not receive Tac Air Points before Game-Turn 6.

AIR RESUPPLY TABLE

DIE	SUPPLY POINTS RECEIVED
1,2	6
3,4	5
5,6	4
7,8	3
9,10	2
11+	1

The Allied player uses this table each Resupply Turn to determine how many Supply Points each of his airborne commands receives. Halve the number of Supply Points received by the Polish First Parachute Brigade (round up).

Die Modifiers:

-2 on Game-Turn 3.

+2 if the weather is cloudy.

+4 if the weather is overcast.

+1 for each German *Flak Point* within range of supply head. Spotting is not required for flak.

+1 for each *step* of non-disrupted German artillery in combat mode within range of spotted supply head.

+1 for each non-disrupted German *unit* in combat mode that exerts control adjacent to an Allied-occupied supply head or...

+1 for each German *step* meeting the preceding requirements that is adjacent to or on a non-Allied-occupied supply head.

AIRLANDING TABLE *All modifiers are cumulative.*

DIE	EFFECT ON AIRLANDING UNIT
1-3	No effect.
4-6	Disrupted; place a Defender Disrupted marker on the unit.
7+	Disrupted/1; place a Defender Disrupted marker on the unit and reduce it by one step.

Die Modifiers:

+1: If unit drops in Broken hex.

+1: If *glider* unit drops in Mixed hex.

+1: If unit drops in a hex occupied by a disrupted friendly unit (including another airlanding unit just disrupted).

+1: for each German *Flak Point* within range of hex.

+1: for each non-disrupted, non-flak, non-garrison German *step* that is adjacent to the hex.

AIR STRIKE TABLE

DIE	EFFECT ON TARGET
1-3	No effect.
4-6	Disrupted; place an Attacker Disrupted marker on unit.
7-10	Disrupted/1; place an Attacker Disrupted marker on the unit and reduce it by one step.
11+	Disrupted/2; place an Attacker Disrupted marker on the unit and reduce it by two steps.

An airstrike is resolved as indirect offensive fire. The die result is modified by all applicable modifiers from the Fire Modifier Chart (see map) and the following:

- 1 for each enemy *Flak Point* exerted into target hex.
- +1 if the target hex has four or more steps.

Hell's Highway Official Errata

September 1983

Fire & Movement #39, Jan-Feb 1984

Correction: Page 11, rule 4.3:

Artillery Leaving Travel Mode

The first paragraph of Rule 4.3 applies to all *non-artillery* units. An artillery unit in travel mode may leave travel mode in any type of hex *except* a hex containing *rough* terrain.

Remember, an artillery unit that leaves travel mode is in combat mode and may not move at all until it re-enters travel mode.

Clarification: Page 26, Rule 12.1:

Allied Airborne Supply Sources

There is confusion about supply sources and isolation for Allied airborne commands. A command's supply head represents the location where Supply Points are airdropped and, under normal circumstances, where the Points are kept. However, if the supply head is entirely cut off from the command by the enemy, previously received Supply Points are considered to be moved by the airborne command to a safe area represented by the HQ, and the HQ becomes the command's supply source. The receipt of additional Supply Points by the command will be severely curtailed until the supply head location is moved to Allied-held ground.

Airborne HQs: An airborne command HQ is depleted if its command has no Supply Points or if the HQ is unable to trace communication to its supply head while other units in the command *are* able to trace to the supply head. If *no units* in the command are able to trace communication to the supply head, then the HQ itself becomes the supply source for the command and does not become depleted until the command is out of Supply Points.

Airborne Units: An airborne unit is isolated if it cannot trace communication to its command's supply source (either the supply head or the HQ, depending on which situation described above applies). Any unit that cannot trace communication to the airborne command's current supply source is not isolated and may use the Command's Supply

Points.

Clarification: Page 27, Rule 12.5:

Isolated Forces

An isolated force consists of any number of units in one command that can trace communication to each other but cannot trace communication to the command's supply source. The units of one isolated force need not be in the same hex or in adjacent hexes. All isolated units in the same command that can trace communication to each other form *one* isolated force.

The Isolated Force marker does not represent a supply dump in a specific hex; it is an identity marker only. The owning player may place the marker on any unit of the isolated force and if that unit is later eliminated, he may move the marker to any other unit in the same isolated force. [Note: personally, I just put the marker near the isolated units. There's no need to stack it unless things are tight.]

Clarification: Page 33, Rule 17.2:












































































































































Initial Allied Airlandings




















































































In Scenario 19 (XXX Corps Breakout), 12 airborne units of the 101st Division enter play via airlandings in Game-turn 1. In Scenario 20 (The Besieged), 28 airborne units of the 82nd and 1st Divisions enter play via airlandings in Game-Turn 1. In the Campaign scenarios, 40 airborne units of all three divisions enter play via airlandings in Game-Turn 1.

Correction: Pages 42 and 43:















































































































Examples of Combat

Hex G of the example should contain a town as well as a woods.

 2/P1	 C/2HC/G	 2W/32/G	 1CG/32/G	 2IG/5/G	 2/43/43	 7H/130/43	 4S/129/43	 15-19K	 C/RAC	 XXXc	 1B/1A/1	 11/4P/1	 1
 2/P1	 D/2HC/G	 2W/32/G	 1CG/32/G	 3IG/5/G	 3/43/43	 5C/214/43	 4W/129/43	 1D/231/50	 C/RAC	 XXXc	 1B/1A/1	 11/4P/1	 1
 3/P1	 D/2HC/G	 1WG/32/G	 1CG/32/G	 3IG/5/G	 3/43/43	 5C/214/43	 4W/129/43	 1D/231/50	 86	 XXXc	 1B/1A/1	 156/4P/1	 1/1P/1
 3/P1	 55/G	 1WG/32/G	 5CG/32/G	 2IG/5/G	 94/43	 7S/214/43	 5W/129/43	 2D/231/50	 86	 44RT	 1/GP/1	 156/4P/1	 1/1P/1
 P1	 55/G	 2W/32/G	 5CG/32/G	 2GG/5/G	 112/43	 7S/214/43	 5W/129/43	 2D/231/50	 1/15-19K	 44RT	 2/GP/1	 Ksb/1A/1	 2/1P/1
 1	 153/G	 A/2HC/G	 1CG/32/G	 2GG/5/G	 179/43	 1W/214/43	 4D/130/43	 1H/231/50	 1/15-19K	 44RT	 3/GP/1	 Ksb/1A/1	 2/1P/1
 P1	 153/G	 A/2HC/G	 2W/32/G	 2GG/5/G	 179/43	 1W/214/43	 4D/130/43	 1H/231/50	 2/15-19K	 44RT	 1/1	 Ksb/1A/1	 3/1P/1
 AT 1	 153/G	 B/2HC/G	 2W/32/G	 1CG/5/G	 179/43	 1W/214/43	 5D/130/43	 1H/231/50	 2/15-19K	 44RT	 2/1	 2SS/1A/1	 3/1P/1
 1/P1	 B/2HC/G	 2W/32/G	 1CG/5/G	 2IG/5/G	 1/43/43	 5D/130/43	 9	 3/15-19K	 A/RAC	 1	 2SS/1A/1	 10/4P/1	 10/4P/1
 1/P1	 C/2HC/G	 2W/32/G	 2GG/5/G	 2IG/5/G	 2/43/43	 7H/130/43	 4S/129/43	 3/15-19K	 A/RAC	 1	 2SS/1A/1	 10/4P/1	 10/4P/1















































































































	 C/2HC/G			 2IG/5/G	 2/43/43	 7H/130/43	 4S/129/43				 2SS/1A/1	
	 1/P1	 2W/32/G	 1GG/5/G	 2IG/5/G		 5D/130/43		 3/15-19K	 A/RAC			 10/4P/1
	 P1	 B/2HC/G	 1GG/5/G		 1/43/43	 5D/130/43	 43				 2SS/1A/1	
6		 2W/32/G	 2GG/5/G	 G	 1W/214/43	 4D/130/43	 1H/231/50	 2/15-19K	 44RT	 1/1	 Ksb/1A/1	 3/1P/1
8010		 A/2HC/G	 2GG/5/G	 179/43	 1W/214/43	 4D/130/43	 1H/231/50		 44RT			
			 2GG/5/G	 112/43	 7S/214/43	 5W/129/43	 2D/231/50	 1/15-19K	 44RT	 2/GP/1	 Ksb/1A/1	 2/1P/1
			 5CG/32/G	 94/43	 7S/214/43	 5W/129/43	 2D/231/50		 XXXc			
	 3/P1	 1WG/32/G	 1CG/32/G		 5C/214/43	 4W/129/43	 1D/231/50		 XXXc	 1B/1A/1	 156/4P/1	 1/1P/1
	 D/2HC/G		 1CG/32/G	 3IG/5/G	 3/43/43	 5C/214/43	 4W/129/43	 1D/231/50	 XXXc			
	 2/P1	 2W/32/G	 1CG/32/G	 2IG/5/G		 7H/130/43	 4S/129/43	 C/RAC		 1B/1A/1	 11/4P/1	 1

Counters Copyright 2007 Chris Fawcett. All rights reserved.
Permission is hereby granted for limited reproduction and distribution for personal use only,
provided that the image is not modified and that this notice accompanies the image. Commercial use prohibited.

 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101

Counters Copyright 2007 Chris Fawcett. All rights reserved.

Permission is hereby granted for limited reproduction and distribution for personal use only, provided that the image is not modified and that this notice accompanies the image. Commercial use prohibited.

 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101
 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101	 3 101