

BLITZKRIEG

BATTLE AT THE ARDENNES



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INTRODUCTION

Blitzkrieg at the Ardennes simulates one of the most decisive battles of WW11. On December 16th, 1944, to coincide with several days of bad weather, Hitler ordered directive "Wacht am Rhine." The German plan was to quickly strike weakened Allied lines in Belgium and Luxemburg and to break through and push quickly to the Meuse River to capture Liege and finally the port city of Antwerp. The capture of Antwerp was essential to postpone the invasion of Germany, and give the Fuhrer a chance to honour his promises of secret weapons that would win the war. But the chances of success were remote. The Germans were desperately low on fuel and the Allies had firm control of the air, and strategic superiority in Europe.

OVERVIEW

Blitzkrieg at the Ardennes is an interactive computer simulation composed of a set of rules, a terrain map and set of units representing the opposing forces. The map or battlefield is an area composed of 1700 hexagonal cells (hexes). Each cell is assigned a terrain type of mountain, plain, forest, city or Siegfried. The normal display is a sub area or "window" into this battlefield eight cells wide by six cells high. Positioning the pointer at any edge of the screen causes the display to move in that direction one hex. At this resolution the strengths and status of all units is visible. The next level of resolution can display about one half of the battlefield. Individual units and nationality are visible with artillery and infiltrator units a different shade. A large scale display of the entire area is also available. It is possible to use these maps to move the display rapidly from one area of the battlefield to another (see NAVIGATION).

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The attacker moves his units around the map encountering and engaging units of the enemy. The various types of units have combat strengths and movement abilities associated with them. These are modified by the terrain. A tank for example moves more rapidly down a road than through a forest.

All interaction with the simulation can be handled with the mouse, although there are command key alternatives provided for all items on the menu. Moving a unit or units for example would involve selecting "collect" from the menu (or pressing the right Amiga key and the letter "c" simultaneously) positioning the pointer over the unit to be moved and pressing the left mouse button. The selected unit would then disappear from the map and move to a special area of the screen called the raster. Up to 27 additional units can be "collected" in the same manner. logically these units would then be either moved to some strategic objective if it were unguarded, or to an area where it could engage the enemy at favourable odds. This would be done by selecting "deposit" from the menu, positioning the pointer over the desired destination and clicking the left mouse button. Assuming the move is legal, the unit will disappear from the raster and reappear at the desired location. Whenever a unit is adjacent to an enemy unit it can engage in combat. The units participating in the engagement are indicated with the mouse. When details of all the engagements are defined the battle resolution phase can begin.

The battle is resolved one engagement at a time, in the order that they are selected by the attacker. Selection is made by clicking on any unit in that engagement. The outcome of the battle is determined by the relative strengths of the units involved (modified by their position in terrain) and a

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random factor (die roll). All calculations are completed automatically. The "odds" or relative strengths of the units were calculated and shown to the player as he defined the engagement. The roll of the die commenced with the selection of the engagement. The result of the engagement is then announced with a message at the bottom of the screen. Adjustments related to battle damage are made automatically. Any advance or retreat of units must then be completed by the player owning those units. When all units are serviced the next engagement may be resolved. When the last engagement in the battle is resolved the next turn begins.

The preceding explanation consists of only the bare essentials. There are many other details involved. These details are, we think, exactly what one would expect when one considers the implications of the situation. This is after all a simulation. The object of a simulation is realism. There are also a great number of player aids incorporated. It is impossible to violate the rules. Informational messages are displayed whenever this is attempted. The following section details the Menu Picks or modes.

MENU

The menu is activated by moving the pointer to the upper right hand corner of the display screen and holding down the right mouse key. When the menu appears, slide the pointer over the menu entry you wish to activate and release the right mouse button. All menu picks have command key alternatives which are displayed next to the text in the menu. Pressing the right Amiga key and the indicated letter will select the menu function. The current menu mode will be displayed at the top of the screen.

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Not all menu picks result in an explicit action. Some define the context within which mousebutton activities will be interpreted. There are basically only three things you can do with the mouse: position the pointer on the screen, press the left button or the right button. In order to perform the command functions of the simulation there must be different contexts under which this action occurs. For example if the pointer is positioned over a unit and the left mousebutton is pressed what can that mean? In a general sense we will say that the unit has been "selected". What happens then will be the function of the "mode". With a few exceptions the mode is what is selected from the menu. Most of the menu picks establish modes. They are:

VIEW: If there is more than one unit in a hex some part of the other units will be obscured from view. In this mode positioning the pointer over the visible part of the unit and pressing the left mousebutton will rearrange the positions of the units so that the selected unit is entirely visible. If the unit happens to be in an engagement, the odds for that engagement will be displayed.

COLLECT: Selection of a unit while in this mode will cause the unit to be removed from the map and placed in a special area of the screen called the raster. If the selected unit is part of an engagement, the selected unit will be removed from the engagement and the odds for that engagement recalculated and displayed. Up to 27 units can be "collected"

DEPOSIT: The last unit in the raster is deposited into the hex which is under the pointer, provided that this is a legal move. If the hex contains other units which are engaged and the pointer is positioned over the visible part of one of

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these, the unit in the raster will be added to the engagement and the recalculated odds displayed.

ARTILLERY: In this mode selections will be interpreted as associating artillery pieces and their targets. The first selection will be interpreted as a firing unit selection. The hex containing the unit will turn black. The next selection will be interpreted as the target. After the target is selected the hexes containing artillery and target will return to their previous appearance. The artillery unit will contain a square in the upper right hand corner indicating that it has been assigned a target and the target will contain a square about one third of the way down the right edge of the unit marker indicating that it is a target. If the target is in an engagement the square on the artillery marker will have the colour of the engagement (see ENGAGE). One artillery unit cannot target multiple units but any unit can be targeted by as many artillery units as are in range (three hexes in any direction). Artillery can be targeted during any time after reinforcements (if any) have been deployed and before battle resolution has begun. In addition, the Allies, after battle resolution has been finished may elect to give protective fire to any of their units in range. The mechanics of this process is the same as offensive fire except friendly units are selected as targets. Then at the beginning of the German resolve turn, the selected artillery will automatically fire on the largest German unit in range that was attacking the selected Allied unit.

ENGAGE: Unit selections will define engagements. The sequence of selection is of some importance. An attacking unit can engage the units in any adjacent hex. All defending units in any hex enter the engagement as one group i.e. the defending units in any hex can belong but to a single

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engagement. Attacking units occupying the same hex can engage different defending units in the same or different hexes. One attacker could have combat with several defending units on separate hexes but the strength of the defending units remain one number. This restriction preventing the construction of a "chain" of engagements extending across the board. As a result every engagement will consist of units from at most seven hexes - the "central" hex and the six adjacent hexes. The central hex will be attacking the rest defending, or the central hex defending and the rest attacking. the hex containing the first unit selected will be interpreted to be the central hex. That hex will turn black and the selected unit will show a border in one of twelve colours. All other units that are selected for this engagement will have the same colour border until battle resolution for that unit is finished. After the unit in the central hex is complete, units may be selected in the adjacent hexes. Once a unit in an adjacent hex has been selected the computer will interpret any subsequent selection in the central hex as ending the engagement definition. The central hex will revert to its former appearance and the program will wait for the next engagement definition.

UNDO ENGAGE: Selection of any unit that is in an engagement while in this mode will cause that engagement to be dissolved. All units will revert to their unengaged status and appearance.

DEMOLISH: In this mode selections will be interpreted as orders to the selected unit to demolish a bridge or a fuel dump. The selected unit will have had to have started the turn in the hex it is to demolish. If the hex is both a bridge and a dump, the dump will be demolished. Only one

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attempt at demolition per hex per turn is permitted. The unit attempting demolition is immobilized for the rest of the turn regardless of the success or failure of the attempt.

BRIDGE: This works like demolish (same rules apply to the selected unit) except it causes a demolished bridge to be rebuilt. A fuel dump cannot be reconstructed. If the enemy has destroyed both sides of the river, each side must be reconstructed separately.

JOIN UNITS: This works like deposit except the unit in the raster will merge with the selected unit. The resulting unit will have the sum of the strength of both. Both units must be the same type. A unit cannot be built up beyond its original strength. Any surplus strength remains with the unit in the raster. The unit being built up is immobilized. The unit building up the selected unit must have been able to reach the selected hex. If an unsupplied unit and a supplied unit are joined, both are considered supplied.

RESOLVE: This menu pick indicates that the movement/engagement phase is over. Offensive firing of all target artillery is done automatically and the results calculated and displayed. The Germans have the option to launch their V2 rockets against Liege or Antwerp. After this is done, the attacker is asked to select an engagement to resolve. The engagement containing the unit which is then selected is resolved. If the results indicate any movement, each of the remaining units in the engagement must be advanced/retreated. Retreat is obligatory. Advance is optional, but two selections must be made for each unit in the engagement (Exception: a unit that must retreat but cannot is eliminated immediately upon its selection). The first selection is a unit selection and indicates the unit to be

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moved. The hex containing the unit turns black. The second selection is a selection of the destination hex. The unit disappears from the hex where it originated and reappears at its destination. The coloured border disappears from the unit marker. The hex of origin returns to its previous appearance. If the owner of a unit wishes to decline an advance, this is indicated by selecting the unit twice (i.e destination is the same as origin). After a unit has been selected for advance/retreat but before it has been assigned a destination, a representation of permissible destinations can be seen by a menu pick of **WHERE**.

NAVIGATION

BIG PICTURE: The normal display of the battlefield is an area eight hexes wide by six hexes high. This can be thought of as a "window" into the battlefield. The Big Picture causes a large scale map of the entire battlefield to be displayed. A blue square is displayed on the map and represents the current "window". This square can be moved with the pointer. A click of the left mousebutton will cause a redefinition of the window to coincide with the location of the blue square at the time of the click.

ZONES: This is similar to the Big Picture except that the scale is approximately one half. All hexes adjacent to German units (except infiltrators) are outlined in red, those adjacent to Allies in blue, and those adjacent to both, in yellow. The blue square works as in the Big Picture. This is helpful in visualizing the lines of the respective forces.

WHERE: This displays the same type of map as zones but the hexes outlined in blue represent the permissible moves for the last unit in the raster, or in the case of movement during battle resolution, the permissible moves of the

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selected unit (see **RESOLVE**). The hex where the unit was at the start of the turn is outlined in yellow.

HOME HEX: Will position the window over an area containing hexes which are legitimate destinations for the last unit in the raster.

RASTER OPERATIONS

NEXT: Causes every unit in the raster to move up one position. The last unit moves to the first position.

HOLD: Causes reinforcement units currently in the raster to be deferred. They will be offered again on next turn.

QUITTING

QUIT: Ends the simulation. Nothing is saved.

SAVE: Causes the current state of the simulation to be saved to disk where at a later time the file may be used to restart the simulation at the point it was saved. "Save" can only be used after reinforcements have been deployed and before battle resolution has started. Does not cause the simulation to terminate.

DISPLAY: At the top of the screen, game information is displayed - date, time, turn indicator, menu mode, weather.

MESSAGES: At the bottom of the screen information will be given during course of the game.

MOVEMENT

After a player decides which unit(s) to move, he may move these units their full number of movement points for that unit or until it becomes adjacent to an enemy unit (except infiltrators). Each hex traversed by a unit during a turn

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requires an expenditure of a certain number of movement points. The point requirement will be different for each type of unit and for each kind of terrain being traversed (see table 9). Any unit may be picked up and put down as many times as you wish. The computer never forgets where a unit starts.

COMBAT

After the attacker has moved all of his unit(s) next to enemy units he wishes to attack, he may select the ENGAGE function on the menu. All units next to enemy units must be engaged for attack during the resolution phase. Up to three units, including infiltrators may be placed in any hex. Allied units may not occupy a Siegfried hex. Each unit displays a number indicating its combat strength. If a unit is attacking this number represents its attack strength, if defending, its defence strength. The defender may be doubled or tripled in strength according to what unit(s) are in a particular type of terrain (see table 8). This modification is not displayed on the unit but will be reflected in the odds. The attacker is never modified. When the strength points of the attacker and the defender are added up, the ratio of attack to defence is formed. Example: 30 combat points attacking 10 combat points would be a 3 to 1 ratio. Or, if 10 points were attacking 30, the ratio would be 1 to 3. Odds are scaled to values 1 (or less) - 4 to 6 (or greater) - 1 where the first number represents the attacker's odds and the second the defender's (see table 2). Odds are rounded to the defender's advantage. After the engagements are defined, the artillery may be engaged and targets chosen.

You are now ready to Resolve (see menu). If, at this time there are still enemy units adjacent that have not been

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engaged, the computer will take you there so you can either engage that unit or move it away. Note: You may have to unengage and re-engage as desired. Press Resolve again. The artillery phase will then start by systematically reducing units that the artillery had been set on during the engagement phase. Note: These reductions will affect engagement odds during Combat Resolution. After each battle, damage is calculated and deducted from each unit(s) in a hex involved in that battle. If there are more than one attacker or defender in a hex, all units receive damage. This damage is deducted in fractions of the unit's attack strength at the time of the damage. Losses are rounded to the nearest whole number. eg. A loss of 1.5 becomes a loss of 2, and a loss of 1.3 becomes a loss of 1.

RESULTS

DEFENDER LOSE:— Points deducted from all defenders.

DEFENDER BACK:— All defending units are retreated the exact number of hexes on the results table. If a unit cannot move because:

- a) Movement would take it at any time next to an enemy or off the board.
- b) Armour would have to cross an unbridged river or
- c) More than 3 units would be stacked together on the same hex or
- d) In the case of an ally it would have to move in or through a Siegfried hex

IT IS ELIMINATED

DEFENDER ADVANCE:— All units are given the

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indicated number of movement points and may advance as in regular movement. A unit is always allowed to enter the defender's hex even if such movement would exceed the movement point requirement to enter that hex. No hex to be entered twice.

DEFENDER ELIMINATED:— All defending units are eliminated.

EXCHANGE:— Both attacker and defender lose one unit of their choice if the defender only had one unit, the attacker may move into vacated hex.

NO MOVEMENT:— No movement on either side.

ATTACKER LOSE:—Points deducted from all attackers in engagement.

ATTACKER BACK:— Same as defender back.

ATTACKER ADVANCE:— Same as defender advance.

SUPPLY:— All units except air, V2 and infiltrators must be supplied by fuel dumps. If a unit is not supplied, it may affect its attack and/or movement. Defensive strength is never affected. Units are considered out of supply if at the beginning of their turn they are out of range of all fuel dumps in friendly hands. The reduction of isolated units will be different for each type of unit and calculated at the time of isolation (see table 7). Note: If a unit's combat strength falls below one during isolation it is eliminated. In order to be supplied, a unit must be at least 4 hexes from a road that leads to a friendly supply source. This may change however, due to V2 rocket attack, German or Allied bombing, demolition or enemy zone of control. The supply line back may not travel through or adjacent to enemy units,

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or through unbridged rivers or in the case of the Allies through Siegfried hexes.

At the beginning of the game, Allies are supplied from Liege, Antwerp and two other fuel dumps, near Stavlot and Bastogne. The Germans have two other fuel dumps both behind the Siegfried line on the bottom corners of the mapboard.

The number of hexes a friendly unit(s) may be from a supply road and still be supplied is displayed in the top corner of the supply hex, and is reduced by one for each hit from air units or V2 rocket attack. If the supply source number falls below 1, it is destroyed. A dump may also be destroyed by any ground unit provided the unit has been there one turn before its demolition and an enemy unit (not infiltrators) are at least 4 hexes away. Any unit that is resupplied is restored to its combat level at the time of isolation unless it was damaged during isolation. Note: Any isolated unit can be combat supplied if built up by supply unit of that type (see menu).

UNIT IDENTIFICATION

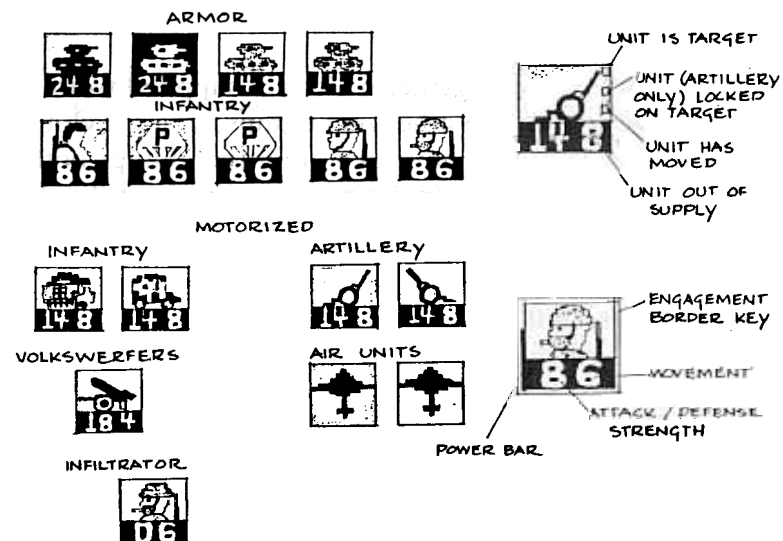
Strength Bar: Vertical line on left side of marker shows what percent of original strength remains.

Combat Points: First of two numbers displayed at lower left of marker shows the strength of a unit at the time of combat. This number indicates attacking or defending strength but does not reflect terrain bonuses.

Movement: Indicates movement points available to the unit.

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UNITS

Armour: Contain some of the highest combat factors but cannot advance or retreat across unbridged rivers.

Infantry: Receives no road bonuses but defends well in wooded areas.

Motorized Infantry: Nice to have on defence anywhere, very mobile.

Artillery: These are very valuable and fire directly on individual units up to 3 hexes away. But may never fire if engaged by an enemy. In this case artillery units participate in battle like ordinary units but defend at half their attack strength. At the end of their turn, the Allies may target units for defensive fire support (see menu).

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Volkswerkers: German only. These units may be positioned during the German movement phase. They may be placed adjacent to or in the same hex with enemy units. If movement is made into enemy hex, the die will be rolled to see if Germans have recognised and rolled again at the end of each succeeding turn they remain there. Any time the Allies attempt to collect one of their units from a hex containing an infiltrator the die is again rolled. If recognised by Allies, infiltrator is destroyed. If not recognised, the Allied unit is diverted at random into an area of three hex radius from the infiltrator and immobilized for the remainder of the Allied turn. Infiltrators may also divert "passing" Allied units. If an Allied unit wants to move from point 'A' to point 'B', and the only way to get there would be to pass by an infiltrator, the recognition table must be consulted.

Infiltrators may be placed on roads or anywhere they can divert the Allies and prevent them from reorganising. Also, having an infiltrator in a dump or bridge hex, will make it more difficult for the Allies to reach and demolish it. Infiltrators have no attack or defensive strength and may not participate in engagements.

Air Units: When air units are in Raster, simply position the pointer over any unit or dump and the unit may sustain damages. Air may only be used in A.M. clear weather only.

TERRAIN

Affects all units in terms of movement and combat. Specific effect may differ for different types of units (see table 8).

River Movements: Units attempting to cross a river must wait one turn in the hex adjacent to the river at the point of

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intended crossing. Immediate movement across unbridged rivers is permitted for units advancing or retreating as a result of battle resolution. Armoured units may *never* cross an unbridged river. In terms of combat, a unit's defence strength is doubled in an engagement where all of the attacking units are across a river from all the defending units. This is lost however, if only one of the attackers was not.

Siegfried Line: No Ally may enter - ever! Allied supply may never pass through these hexes. All Germans in Siegfried Line are tripled on defence.

Fuel Dumps: Automatically supplies friendly unit at beginning of game. By default Germans own the two dumps behind the Siegfried line unless an Allied unit is occupying this hex. The Allies own the other fuel dump areas unless a German occupies the hex. If a unit occupies a hex containing any enemy dump, that dump will function as a supply source for friendly units as long as it is occupied by at least one friendly unit. Unoccupied dumps supply their default owners. Demolition of dump is also possible. See menu.

Customisation:— Before the simulation starts, you will be given a choice of features to adjust for balance. If default conditions are desired, simply select OK. Simulation will commence upon selection.

Beginning: The Allied units are already deployed. The German units are placed on the hexes in their starting zones (use "where" on menu function to see these). Once the units are placed, the computer will calculate its movement as though the unit moved in normal way. Other units have been placed, you are to start.

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SEQUENCE

Air Bombardment Phase: If weather is clear and A.M., air attack is used.

Movement Phase: All units may be moved.

Combat Engagement Phase: All units including artillery may be set up for combat (see menu engage).

Combat Resolution Phase:— After all units have been set up for combat, select "Resolve" from menu. Battles are resolved as follows:

- 1) Reinforcements are displayed in the raster. Units must be placed in permitted areas (displayed by "where"). If units are unable to be deployed in indicated areas may be deferred by selecting "hold" from menu.
 - 2) Artillery resolution phase.
 - 3) V2 rocket (German only).
 - 4) Battle Resolution Selected in order by the attacker.
- Note: The computer will position the window on an engagement of its own selection if there are no engagements visible at the time of selection. If you wish to start the battle with another engagement simply reposition the window with "the big picture".
- 5) Defensive Artillery Support (Allied only). After this phase is complete, supply line will be calculated and isolated units will have factors adjusted.

COMPUTER OPPONENT: Although it may require a few minutes, the computer will do everything a human player would do except much faster. It will however, allow

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you to see the engagements it has made before they are resolved. When you are ready to proceed, simply select "resolve" from the menu.

VICTORY CONDITIONS: The German side has several ways to win.

- 1) The capture of Antwerp before January 1st 1945. All three hexes must be occupied by German units one full turn. This is the highest level of victory the German may receive.
- 2) Capture of Liege and three of the six major cities, being defined as: Bastogne, Maastricht, Givet, Dinnant, Namur and Huy.
- 3) To score a tactical victory, all of these major cities.

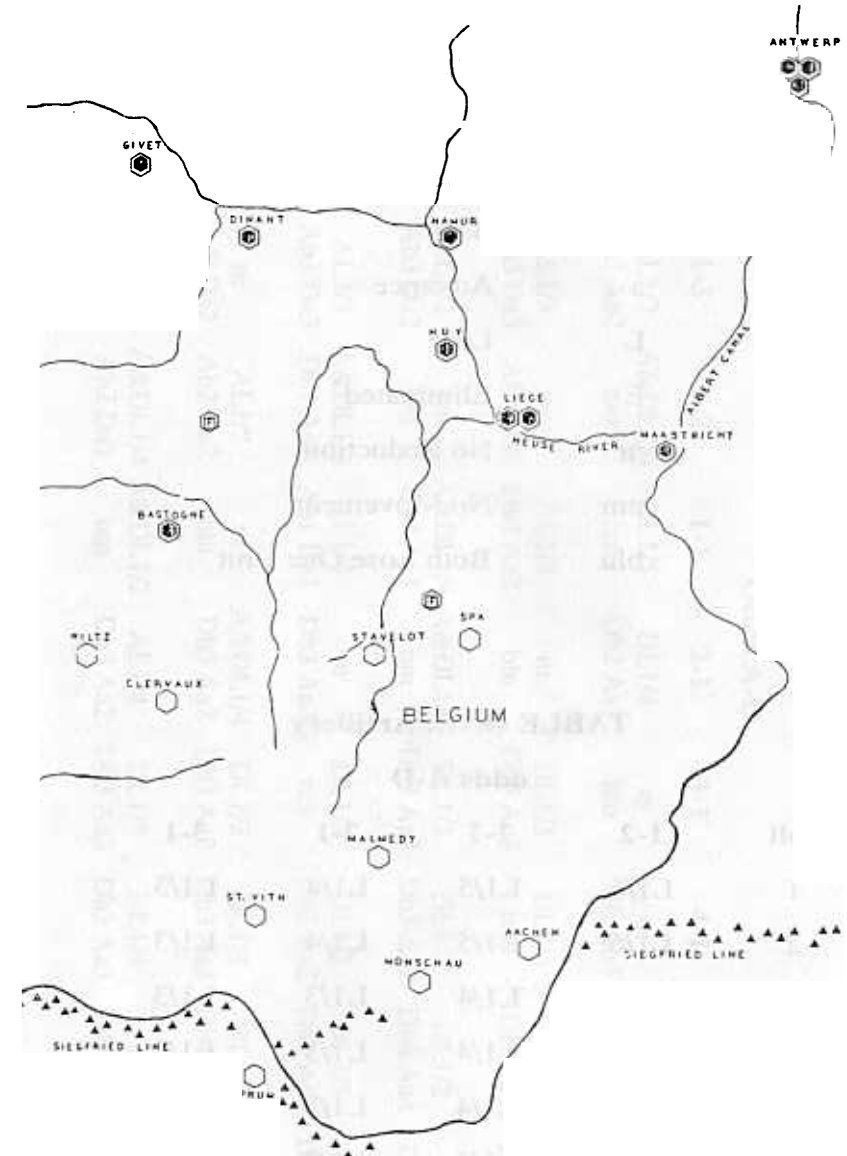
All of the above victory cities must be held for one turn.

The Allied player wins by simply not allowing the German player to achieve his objectives before January 1st. Although a player may decide to quit they will receive a rating based upon their performance to that point.

HINTS: The Allied player should fall back somewhat and try to prevent the German from gaining control of bridges and fuel dumps. They should also stall for time awaiting reinforcements and clear weather for bombing German positions and supply. The German player must move forward, quickly seizing bridges, cities and hopefully, fuel dumps. Infiltrators may be used to help gain these objectives. Supply roads must be kept open.

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GERMANY



KEY TO TABLES

A	Attacker
D	Defender
b	Back
a	Advance
L	Lose
E	Eliminated
nr	No Reduction
nm	No Movement
blu	Both Lose One Unit

TABLE ONE: Artillery

roll	odds A-D			
	1-2	1-1	2-1	3-1
1	L1/6	L1/5	L1/4	L1/3
2	L1/6	L1/5	L1/4	L1/3
3	L1/5	L1/4	L1/3	L1/3
4	L1/5	L1/4	L1/3	L1/3
5	L1/4	L1/4	L1/3	L1/2
6	L1/6	L1/3	L1/2	L1/2

TABLE TWO

Odds A-D

roll	1-4	1-3	1-2	1-1	2-1	3-1	4-1	5-1	6-1
1	nr AE Da3	AL1/2 Da2 Ab2	A&DL1/4 nm	DL1/5 nm	DL1/4 Db2 Aa1	nr blu	nr DE Aa4	DL2/3 Db3 Aa3	DL4/5 Db4 Aa4
2	AL2/3 Ab2 Da2	AL1/3 Ab3 Da3	nr AE Da2	AL1/3 Db3 Aa2	nr blu	DL1/3 Db3 Aa3	DL2/3 nm	nr DE Aa4	nr DE Aa4
3	AL1/2 Ab3 Da3	AL1/2 Ab3 Da2	nr blu	A&DL1/4 Db2 Aa1	A&DL1/4 nm	DL1/3 Db3 Aa3	DL1/2 Db3 Aa2	DL1/2 Db4 Aa4	nr DE Aa5
4	nr AE Da3	AL2/3 Ab3 Da3	A&DL1/4 Db1 Aa1	AL1/4 Ab1 Da1	nr Db3 Aa2	DL1/2 nm	DL1/2 Db2 Aa2	DL4/5 Db1 Aa1	DL4/5 Db4 Aa4
5	nr AE Da3	nr AE Da2	AL1/2 Ab2 Da2	nr blu	A&DL1/4 Db3 Aa2	DL1/2 Db3 Aa2	DL1/3 Db3 Aa3	DL1/2 Db4 Aa4	nr DE Aa6
6	nr AE Da4	nr AE Da2	A&DL1/4 Ab2 Da1	A&DL1/2 nm	AL1/4 Db3 Aa2	DL1/3 Db3 Aa3	DL1/4 Db3 Aa3	nr DE Aa3	DL2/3 Db4 Aa4

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TABLE THREE: Infiltrator Elimination

roll	1	2	3	4	5	6
turn 1-2	E	nr	nr	nr	nr	nr
turn 3-on	E	E	E	nr	nr	nr

TABLE FOUR: Bombardment

roll	1	2	3	4	5	6
	L1/4	L1/4	L1/3	nr	L1/4	L1/3

TABLE FIVE: Bridge Demolition

	ok	infiltrator in hex	enemy adjacent with Allies	enemy adjacent and infiltrator in hex
roll				
1	✓	✓	✓	✗
2	✗	✗	✗	✗
3	✓	✓	✓	✓
4	✓	✗	✗	✓
5	✓	✓	✓	✗
6	✓	✗	✓	✗

TABLE SIX: Bridge Construction

roll	ok	enemy adjacent
1	✓	✓
2	✗	✗
3	✓	✓
4	✓	✗
5	✓	✓
6	✓	✓

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TABLE SEVEN: Effect of isolation on unit strength/movement

	number of turns isolated		
class	1	2	3+
Armour	L1/4-L1/3	L1/2-L2/3	L2/3-L all
Motor Infantry			
Artillery	L1/4-L1/4	L1/3-L1/2	L1/2-L1/2
Infantry, v.w.			
Paratrooper	nr - nr	L1/4- nr	L1/2- nr

TABLE EIGHT: Effect of terrain on unit defence strength

	terrain			
class	forest	mountain	city	siegfried
Armour	1x	2x	2x	3x
Motor Infantry	2x	2x	2x	3x
Artillery	2x	2x	2x	3x
Infantry	3x	2x	2x	3x
v.w.	2x	2x	2x	3x
Paratrooper	3x	2x	2x	3x

**TABLE NINE: Effect of terrain on unit defence mobility
(Movement points expended per hex)**

	terrain			
class	forest	mountain	clear	road
Armour	5	3	1	1/2
Motor Infantry	3	2	1	1/2
Artillery	3	2	1	1/2
Infantry	2	2	1	1/2
v.w.	2	3	1	1/2
Paratrooper	2	2	1	1

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REVISED RULES FOR THE AMIGA 1 MEG VERSION

HIDDEN UNITS - Units in forests and mountains are invisible unless blocking a supply road or next to an enemy unit. If an advancing unit encounters a hidden enemy, he must stop there. If encountered while retreating, unit is eliminated.

AIR RECONNAISSANCE - During clear weather you may search for hidden units (except infiltrators.)

MODIFIED ATTACK RULE - Units in forests, mountains, cities, dumps and forts do not have to attack out from, unless desired. The change in the mandatory engagement rules means that many times there will be adjacent units that are not required to attack. To prevent the user from overlooking an engagement that he wished to make and entering the combat resolution phase prematurely we have included an option by which player can review positions where it is possible but not mandatory to engage. A requester will ask if you wish to do this. If after servicing the requester you elect to review these positions, press the letter 'r' (no control keys) repeatedly until the message at the bottom of the screen informs you that there are no more positions to review. You may then proceed to battle resolution.

MOVEMENT - Units may move as usual and must stop when encountering hidden units and may not move. (That unit, if on a clear hex, would have to attack. If not clear hex, unit may stay without attacking.)

SCROLLING - Screen will scroll in the direction of the arrow keys. Pressing the F keys controls the scrolling

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increment F1 - one pixel, F10 - ten pixels.

OTHER RULE AMENDMENTS - Infantry bonus in forests is now x 2.5; units in Leige and Antwerp are x 3.

UNCERTAINTY OF INTELLIGENCE - A level of uncertainty regarding the strength of enemy units has been introduced. For example: An Allied player, on his attack turn, viewing the strength of a German unit in a forest, would not see the actual strength of the German unit. Instead, the strength value on the German unit would reflect an uncertainty based on the type of terrain in which the German unit was deployed. These uncertainties can be set in a screen presented for this purpose.

INFILTRATORS - Are always invisible to the enemy.

ARTILLERY - To be more historic, German artillery was far less motorized than Allied, also combat factors were reduced slightly.

ALLIED INFANTRY - Now receives road bonuses because of the availability of petrol and transportation.

PROBLEMS?

PROBLEM

SOLUTION

Can't place units at beginning of game.

Units coming on the board for the first time must be placed at certain areas. The window moves automatically to this area when raster is filled. Use WHERE (see page 8) to see which hexes are OK. Make sure you are in DEPOSIT mode (page 4). Don't press the mouse button too quickly... A time delay is built in to allow user to read error message at bottom of screen.

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Won't accept password.

Password must be entered as they appear in instructions.
Upper and lower case letters must be entered as such.

Tried to save the game and got requester saying that disk was full.

Service the requester, press the left Amiga key and the 'M' key at the same time. This will return you to the game screen. you can then either quit and delete some saved games, or try to save the game again using an existing filename (in this case the contents of the old file will be lost and replaced with the new game).

Can't resolve battles because of "Unengaged Unit".

Move or engage offending unit. It might be necessary to redefine some engagements. See page 5 ENGAGE and page 6 UNDO ENGAGE.

WHERE function shows no legal hexes.

The legal hexes are not visible. You have probably scrolled out of the area. Return to high resolution. If you have a unit in the raster select home hex from the menu. If you are resolving a battle click the mouse on any nearby unit - this should bet you back to the right area.

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AMIGA GAME INFORMATION

LOADING

On first loading of BLITZKRIEG you will be reminded to make a backup copy if you have not already made one. It is recommended you produce a copy using workbench, rather than a commercial or other type of copier.

Having made a copy you can now follow the instructions on screen to produce a data disk. This allows you to tell the program whether you have one drive or two, prior to initializing the blank disk.

After initialization you are asked to re-boot your Amiga with the BLITZKRIEG disk in the drive. From now on you will bypass the above screen and go straight to workbench. Click on BLITZKRIEG disk icon, then WARGAMES folder, then BLITZKRIEG program icon. Program will now load. You should now be using your backup disk and data disk. Place the original disk in a safe place.

The program will ask you to type a word in from the manual as a form of protection. We are sorry for any inconvenience this causes, but we have to protect the right of the owner of the software from piracy. Many years have been spent producing this product in order to supply a profit for the writer so that he may write further, better product. We thank you for not supplying copies to anyone.

NB: THIS PROGRAM USES ALL OF THE MEMORY REQUIRED AS PER DISK LABEL, DO NOT HAVE ANY BACKGROUND UTILITIES IN MEMORY WHEN LOADING IF YOU ONLY HAVE THE MINIMUM AMOUNT REQUIRED.

IBM GAME INFORMATION

BEFORE YOU DO ANYTHING MAKE A BACKUP OF THE GAME DISKS

THESE INSTRUCTIONS ASSUME YOU ARE USING BACKUPS

To start the game, type Blitz at the prompt. Do not write protect your disks.

MOUSE: A mouse is highly recommended. Make sure your mouse driver is installed before loading the game.

NO MOUSE: If you do not use a mouse, functions can be replicated with the keyboard.

Making sure that CAPSLOCK and NUMLOCK are off, hold down the SHIFT key while pressing the arrow keys on the number pad, to move the pointer. Pressing the "+" key will simulate the press of the left mouse button. Pressing the "-" key will simulate the right mouse button.

The MENU is activated by pressing the "m" key. Items in the menu are selected by pressing the space bar to highlight the desired item, and then pressing the RETURN key to select it. Keyboard alternatives are provided but do not operate when the menu is visible. they are used INSTEAD of invoking the menu.

THE POINTER AND USER INPUT: No use input will be processed while the pointer is not visible. However the computer has an internal buffer that will store a limited number of keystrokes, and these will be processed when the computer has finished "thinking" and the pointer becomes visible again.

The computer opponent will take some time to make it's move. This can vary from 1 to 20 minutes, depending of the speed of your computer and the sophistication of the computers next move! During this time the pointer will dissappear. Do not conclude the game has 'frozen' until you have become familiar with it's operation. Like Chess, the movement possibilites in our simulations are astronomical. While the importance of a single move is typically much less than in Chess, bear in mind that scores of units are being moved over thousands of hexes. This takes time, particularly on older, slower computers.

PROPORTIONAL SLIDERS: Proportional sliders are not adjusted by dragging as described in the manual, but by positioning the pointer proportionately in the slider and pressing the left mouse button.

HARD DISK INSTALLATION: Hard disk installation is straightforward.

- 1) Create a directory on your hard disk and copy all files into this directory.
- 2) Create a subdirectory named "wgames" in the directory you created in step 1.
- 3) Locate the directory named "wgames" on disk 2 and copy it's contents into the subdirectory "wgames" on your hard disk. "wgames" is the place where saved games and scenarios are stored. Loading of the game cannot proceed until the computer has located this directory. You may name the parent directory (created in step 1) anything you wish, but the subdirectory must be named "wgames".

Good Luck and Enjoy!

STORM COMPUTERS LTD