

PEGASUS BRIDGE



CBM 64, Spectrum,
Amstrad CPC.

WARGAMERS
SERIES

INDEX

1. INTRODUCTION	1
2. LOADING	1
3. CBM 64 VERSION —	
(i) Getting Started	1
(ii) Playing the Game	1
(iiia) Reinforcement Allocation Phase	2
(iiib) Support Allocation Phase	3
(iiic) Orders Phase	4
(iiid) Reinforcement Arrival Phase	6
(iiie) Support Phase	7
(iii) The Map	7
(iv) Combat	8
(v) Stacking	9
(vi) Tactics and Level of Play	10
4. SPECTRUM & AMSTRAD/SCHNEIDER VERSION —	
(i) Getting Started	11
(ii) Playing the Game	11
(iii) Reinforcement Phase	12
(iv) Movement Phase	12
(v) Support Phase	13
(vi) Combat Phase	13
5. VICTORY CONDITIONS	14
6. REINFORCEMENT ARRIVAL SCHEDULE	14
7. HISTORICAL BACKGROUND	16
8. UNIT LISTS	18
9. AUTHORS NOTES	20

1. INTRODUCTION

On the fifth of June 1944 the Allied Forces stood poised for the invasion of France in what was to be the largest operation of its kind in the history of human warfare.

This simulation covers the actions of the British 6th Airborne Division, the first allied troops to land on French soil. Their objective was to secure the left hand (east) flank of the D-Day beach-heads to protect the sea landings from counter attacks across the river Dives. This was to be achieved by capturing and holding (intact) two bridges over the Caen canal and river Orne, and destroying the 5 bridges over the river Dives, thus cutting a large area off from possible German reinforcements. A further objective was to capture a coastal defence battery at the mouth of the Orne, which was in a position to fire on the main sea landing forces.

The first troops to land, known as the coup-de-main party, were detailed to take the bridge over the Caen canal, and this bridge was later renamed Pegasus Bridge, after the winged horse emblem of the airbourne troops.

Pegasus Bridge, the game, covers the period from that first landing of the coup-de-main party to the arrival on the scene of troops from the beach-heads. The plan was daring, and many things could have gone seriously wrong as the player will find out.

2. LOADING

The loading instructions are marked on the label of your Pegasus Bridge cassette or disc.

3. CBM 64 VERSION

(i) Getting Started

After the game has loaded there are a number of options which need to be set up before starting the game. These are presented to the player one after another, and can be selected by pressing the indicated key, or by using the joystick to change the option, and fire to select it. The options are:

1. Start a new game/load a previously saved game.
2. One player vs computer/2 players/demonstration mode.
3. British or German side.
4. Level of difficulty 1-3.

The game then begins.

Restoring a saved game can only be done at the start of a game. However, any non-demonstration game can be saved at the start of any British turn, after turn 1, and this option will be offered by the computer. Remember to use a fresh tape or diskette if you do not wish to overwrite previously saved games.

(ii) Playing the Game

The game is divided into turns, each representing 30 minutes. The British and German sides play alternate turns. Each turn is divided into 5 phases:

1. Reinforcement allocation phase.
2. Support allocation phase.
3. Orders phase.
4. Reinforcement arrival phase.
5. Support phase.

Each of these phases is described in detail in the following sections.

(ii) Reinforcement Allocation Phase:

The player will find it useful to refer to the map whilst playing through this phase.

In this phase the player selects the intended arrival area of any reinforcements scheduled to arrive at the end of the ORDERS phase. Each unit will be offered in turn, with its historical arrival point displayed, and the player will be offered one of the range of alternative arrival points available to his units. The alternative points may be paged through, by use of the joystick or cursor keys, and the final selection will be actioned when 'FIRE' or 'SPACE' is depressed. The computer will check the order and reject it if it is not permitted for the unit to arrive at that particular site.

A typical selection would look like this:

A/1 CON	ARRIVES AT	Y	?	X
Unit Identity		Historic Arrival Point		Reselected Arrival Point

When selecting points of arrival, a rough map of the playing area, with the arrival points identified, may be viewed by selecting '?' and pressing 'FIRE' or 'SPACE'.

The airborne British Forces may only arrive at landing or dropping zone locations, lettered K, N, V, W, X and Y, and later in the game commandos and tanks arrive at locations A and B as they move up from the beaches. Glider borne troops can only arrive at N, W, X and Y.

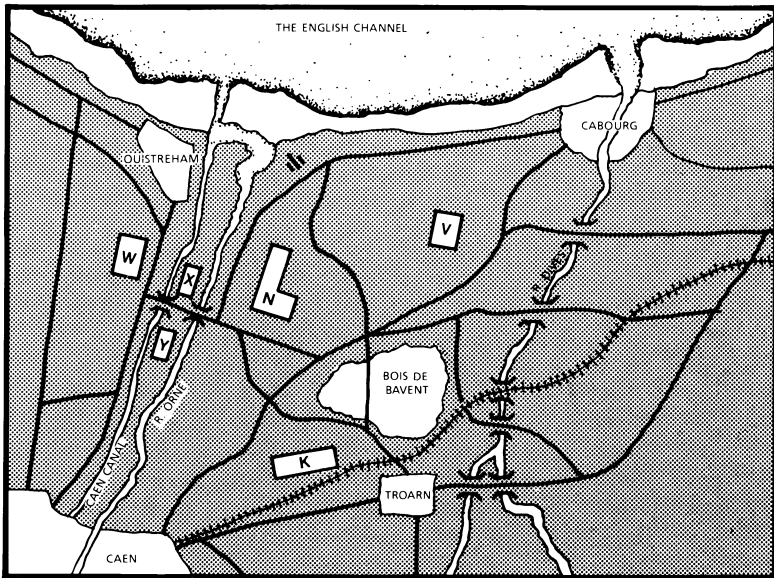
German anti-aircraft fire destroyed or damaged many of the tugs (towing aircraft) and troop transports, causing paratroopers to jump at the wrong time and gliders to cast off at the wrong point. This together with high winds, an element of poor navigation, and a certain amount of bad luck, caused a great deal of confusion, so that units went astray and failed to land at their designated site; some failed to arrive at all.

This is reflected in the game and whilst most units land where ordered, they cannot be relied upon to arrive exactly where expected. Their actual arrival points will only be disclosed as they arrive on the map following the British ORDERS phase.

The first 12 German units are already on the map at the start of the game, but are dormant and only reveal themselves after the British arrival. On turn 1 the first 3 appear and, on turn 2 the remaining 3 units become active. The latter are all in the town of Troarn, the cluster of buildings at the crossroads in the lower right of the map. These 12 units always set up in the same position and the German player is not given the option of changing these.

All subsequent arrivals may have their historic arrival points changed, but in odd cases units may arrive at an alternative start point to reflect routes onto the map being made impassable by strafing, bombing and/or heavy gunfire. Like the British, the actual arrival point will only be revealed when the unit appears on the map after the German ORDERS phase.

The historical arrival points for the British are accurate according to the intentions for the day, but the German units are, in several cases, only approximate, since the available records relating to D-Day from the German viewpoint are often vague or conflicting in detail, as is precise information regarding the units involved.



PEGASUS BRIDGE

- Landing Zones X & Y — D Coy 2 Ox & Bucks
- Landing Zone W — Glider Reinforcements
- Landing Zone N — 6 Air-landing Brigade
- Dropping Zone N — 7, 12 & 13 Para
- Dropping Zone K — 8 Para
- Dropping Zone V — 1st Canadian Para & 9 Para

(iib) Support Allocation Phase:

At the start of the game each side will have a number of support factors, in the shape of fighter and bomber sorties, and naval gunfire (British side only).

The British start with 6 naval gunfire attacks available from turn 1, and from turn 11, 8 fighter and 4 bomber sorties become available.

From turn 11 the German forces have 9 fighter and 7 bomber sorties available.

When available these are offered to the player to select whichever attacks he or she may wish to make. Each type of attack selected will need the input of X (East/West) and Y (North/South) co-ordinates, and the separate scale map enclosed with the game can be used to accurately determine these. Whilst gunfire, bombing and strafing can be selected against different targets, only one set of co-ordinates can be specified for any given type of attack, and the co-ordinates are selected by use of the joystick or cursor keys.

Fighters have an alternative option to strafing, which is flying interception. In this mode they will try to intercept any enemy air attacks ordered for that turn.

Over the actual period covered by the game (18 hours), the only British gunfire support in this area was scheduled to be directed against the Merville Battery but, because the attack on the Battery was successful, did not need to be employed.

There was little significant in the way of co-ordinated air support from either side during this period, except for an attempt by the Germans to bomb the Caen canal bridge.

In consequence the computer, as an opponent, will not select any support options, except when controlling the German side, when it will fly a bombing sortie against the Caen canal bridge.

Any support attacks are likely to be badly aimed or poorly navigated and, whilst there are possibilities of causing casualties and inflicting damage, the chances of these being other than marginally successful are quite low.

Support attacks are always applied at the end of the enemy turn, after the reinforcements arrival phase.

(iic) Orders Phase:

This is the main game turn per se, where units can be moved, ordered to attack, dig in and, in the case of certain units, demolish bridges.

The Screen Display.

The screen will reproduce a portion of the playing map, over the lower two thirds of display. In a box at the top left of the screen, unit statistics and general information messages are displayed. There are two boxes to the top right of the screen, the uppermost of which displays a green oblong which represents the entire playing area of the game map. Superimposed on this is a black box which indicates the actual portion of the map currently being displayed, to assist the player in identifying the position of the unit in play (Phasing Unit). The lower box displays the current game turn.

Select Option.

The first options offered are SELECT UNIT REVIEW MAP .

If the 'SPACE' key or the 'FIRE' button is depressed when either selection is highlighted (white), that option will be actioned.

To change a highlighted selection, move the joystick left or right, or use the cursor keys, and the alternative selection(s) will be highlighted in turn. ('UP/DOWN' moves left, 'LEFT/RIGHT' moves right.)

If 'SELECT UNIT' is ordered the game will continue to the actual ordering of the units under the player's command.

If 'REVIEW MAP' is selected then the player will be able to look around the game map by using the keys Q, W, E, A, D, Z, X and C as described in the MOVE section, or by using the joystick.

When the player has seen all that is desired, and has made a note of any locations of particular interest, then 'SPACE' or 'FIRE' will move to the actual ordering of units under the player's command.

Unit Selection.

There are three possible orders that can be given, and these are selected and highlighted as previously described.

These options are STACK UNIT NEXT .

STACK:

If the unit being considered is currently stacked (see STACKING) this option will be offered and if selected means that all of the units in that stack will receive and attempt to action the same command together. If the unit is not currently stacked, this option will not be offered.

UNIT:

If a unit is not stacked, this option will ready it to receive orders. If the unit is stacked, then this option will unstack it and ready it to receive orders, without affecting the remainder of the stack.

NEXT:

If the player does not yet wish to order the unit under consideration, then this option will move to the next possible unit still available to receive orders.

This option will also allow the player to select a specific unit out of a stack. Units in a stack are always displayed in the sequence that they will be offered to the player, but the unit currently offered will be displayed in blue. Thus by selecting 'NEXT' the player can skip an earlier unit in the stack, and when the stack is next displayed will know the selectable unit by its colour.

This can be particularly useful if units with different ranges are stacked together and the player wishes to make use of a unit with a longer range, currently in the stack, or when the player wishes to move a unit out of the stack.

Ordering Units.

Having selected a stack or a unit, it must then be given orders. Only one order can be selected for a unit per turn, and once ordered the command cannot be revoked. Each order takes a full turn to execute. There are five possible options and these are as follows:

DEMOLITION:

Only a unit capable of blowing up a bridge will be offered this option, provided that the unit commences the turn sited on a bridge. When selected the bridge that the unit is sited on is destroyed and becomes impassable once the destroying unit exits the square.

This option is particularly important in the light of the victory conditions (see VICTORY CONDITIONS), and units capable of using this option should be noted and used carefully (see UNIT LIST).

ATTACK:

When this is selected, any units within the range of the attacking unit will be indicated by a square selection box being superimposed over the possible targets in turn, with the possible targets' statistics displayed in the general information area.

The prompt 'YES NO' will be offered and if 'YES' is selected the unit will be attacked, with the results of the combat being displayed on the combat screen.

If 'NO' is selected the box will move to the next possible target, finally returning to the first target offered, if none have been selected. By this means it is possible to review all of the possible enemy targets before committing the phasing unit to an attack.

If there are no enemy units in range the computer will inform the player accordingly, and this will complete the turn for the phasing unit/stack.

MOVE:

When this is selected the computer will prompt the player with 'DIRECTION?' and the direction is selected by moving the joystick in the appropriate direction, or by using the keys indicated below, with the key indicating the direction from the centre, assuming that the '*' is the unit's current position.

Q	W	E
A	*	D
Z	X	C

If the player elects to finish moving without having expended all movement factors (see UNIT FACTORS), press 'SPACE' or 'FIRE' to 'PASS' and end that unit's turn.

DIG-IN:

If this is selected the unit spends the turn 'digging in' which will increase its defence factor. Once dug in, a unit need not select this option again, unless it has moved, when it will have lost any previous benefit of having been dug in. Digging in on consecutive turns will not improve this benefit, but will do no harm should the player have forgotten whether the unit has dug in since last moving.

PASS:

If the player has no special action for a unit to take this turn, then selecting 'PASS' will skip that unit's turn.

(iid) Reinforcement Arrival Phase:

During this phase units arrive on the map.

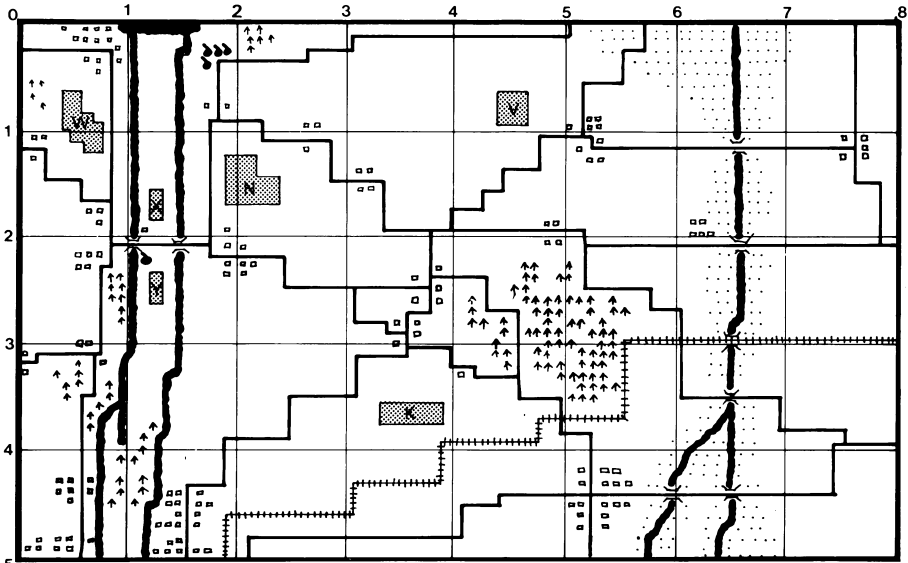
In the case of the British, the arrival point can differ wildly from the point selected, and this represents the difficulties experienced in dropping troops in the correct area, due to navigational errors, gusting winds, and transports and

tugs being shot down or damaged causing units to jump or cast off earlier or later than intended.

In the German case, only a few units may arrive at unexpected entry points. Arrival on the map ends that unit's actions for that turn, and the player will again be given the option of reviewing the map.

(iie) Support Phase:

In this phase support attacks ordered by the enemy are carried out. Fighters will attempt to strafe, bombers to bomb and naval gunfire to shell the co-ordinates designated. These attacks may miss because the enemy has moved from the target area, the co-ordinates were wrong, or there are navigational or ranging errors, and aircraft may be intercepted by friendly planes designated for this duty.



SCALE MAP

KEY:			
ROADS	—	RIVER/CANAL	
BUILDINGS	□	RAILWAYS	
TREES	↑	DZ/ILZ	
		FLOODED AREA	
		ARMOURED GUN	
		BRIDGES	

The Map

On the map the player will see symbols which are interpreted as follows:

Terrain	Description/Shape	Movement	
		Cost	Notes
BRIDGE	black 'bow-tie' shape	1 point	The main objectives
ROAD	brown/mottled squares	1 point	
LZ/DZ	grey/mottled squares	1 point	Airborne troops arrival zones
RAILWAYS	black ladder shapes	2 points	
OPEN	yellow squares	3 points	Rough country, open fields
TREES	green trees	4 points	Bois de Bavent
BUILDINGS	black houses	4 points	Each is a cluster of buildings
EMPLACEMENT	black gun shape	5 points	The Merville Battery objective
SWAMP	green tufts	6 points	Flooded areas around the Dives
WATER	blue shapes	9 points	Rivers, canals, estuary – only negotiable by Frogmen/Gunboats

Terrain has two main effects on the game, the first being to regulate the 'speed' of movement. When a unit crosses terrain it must expend movement points for every square entered, and, if it has insufficient points left to exit a particular square, the unit halts after entering it.

The second effect is that of influencing the defence factor of the unit occupying the square. Units in the open or on roads are obviously more vulnerable than units concealed in trees or buildings, so that, generally, the higher the movement cost of the terrain, the better the unit's defence.

The German frogmen unit is always displayed in its true position on the map, but to reflect the fact that it can move 'submerged' and unnoticed, the unit will often not be available as a target when an attack is ordered.

(iv) Combat

The results of combat are determined by the computer, using the attack factor of the attacking unit(s) and the defence factor, or armour, of the defending unit(s).

The range factor of the attacking unit represents the maximum range at which the unit will attack, for the purposes of the game.

Paratroopers and glider troops tended to be armed with sub machine guns, such as Sten and Thompson machine guns, which were generally at their most effective over relatively short ranges, but some units had a higher than average proportion of longer range weapons such as Bren-guns, and this is reflected in the attack factors.

The German infantry and grenadiers were mostly armed with a mixture of machine pistols and rifles, but some units were poor quality troops and due to their training were only really effective at close ranges.

Tanks and artillery throughout the battle tended to fight at relatively short ranges, and even over open sights, and this too is reflected in the range factors of the units.

The attack factor of the attacking unit is modified by the range over which it

is attacking, so that a tank with an attack factor of 24 and a range factor of 12 squares would in fact have a reduced attack factor of 18 over 3 squares, 12 over 6 squares, and 6 over 3 squares. It would not be permitted to attack a unit that was more than 12 squares away from it.

If an attack is successful then the number of attacking units (men, tanks or artillery pieces) is used to determine the casualties taken by the defending unit(s). In turn, if the attacker is within the defender's range, the defending unit(s) will return fire, and the results of this will be applied to the attacking unit(s).

For the purpose of this simulation, units which can no longer fight, because all of the members of the unit are either dead, wounded or too demoralised to fight on, are considered eliminated and are removed from the map to take no further part in the battle.

A unit may only attack once during its turn, but it can return fire every time that it is attacked, provided only that the enemy is within the defender's range, and this return fire is automatically taken into account by the computer.

(v) Stacking

Stacking is the ability to put more than one unit in the same square, and then move or order the STACK of units as though it were one combined unit formed from the units constituting the stack. For the purpose of the simulation no more than 3 units can stack together at any one time, regardless of the number of 'men' in each unit, and it is not possible for a unit to move through a stack.

In order to stack it is only necessary to enter a square occupied by a friendly unit or stack. On entry to the square all movement ceases and no further action is permitted of the moving unit or of the unit(s) with which it has stacked. It is important, therefore, to ensure that any units about to be joined in a stack, have already completed any required action for the turn.

To unstack a unit, note its position in the stack, and select 'UNIT', when its statistics are displayed in blue, and the unit will be unstacked and readied to receive orders.

Being part of a stack has certain advantages and certain limitations, and these need to be considered when STACKING or ordering units.

The Advantages are:

- 1) Units attack in co-ordination, potentially inflicting greater damage.
- 2) Units defend in co-ordination, and damage is usually, but not always, shared proportionately between the units forming the STACK.
- 3) Only one order suffices for all the units in the STACK, provided that the player wants them all to perform the same act.

The Limitations are:

- 1) The maximum attacking range of all units in a STACK is limited to that of the unit with the least range. The computer assumes that if a STACK is ordered to attack, all of the units in the STACK are expected to take part, so care must be taken to ensure that there is a target in range if the order

is not to be wasted.

For this reason, the computer as an opponent will rarely stack its longer ranged units, such as tanks and artillery, with infantry units.

- 2) In a similar manner, the maximum movement allowance for the STACK is that of the unit with the least movement allowance. (If a STACK is to move it must travel 'slowly' enough for the slowest unit to keep up.)

NOTE

Just south of the Caen canal bridge is a gun emplacement, and the first unit of either side to enter the square will convert this to a 20mm anti-tank gun, with a movement factor of zero, for use by their forces. This can only be achieved by STACKING with the emplacement, and is the only time in the game when equipment can be 'picked up'.

Historically, the gun emplacement existed and was captured by the coup-de-main party, it being unmanned at the time of their arrival.

(vi) Tactics and Level of Play

When the computer is playing one of the forces against a human player, the player is asked to select a level of difficulty on a scale of 1 to 3.

The level of difficulty determines the TACTICS used by the computer, and these are as follows:

Level 1

The enemy will not always attack at the most advantageous range and when moving units will rarely bother to check to see if they are moving into dangerous positions. Effectively, the units are both brave and foolhardy, and will often risk all to achieve what they see to be their most obvious objectives.

Level 2

At this level the computer's units are more careful, but will still from time-to-time behave with less caution, and move without regard to the proximity of enemy units. This is arguably the most realistic level, both sides being quite committed to achieving their objectives, but not necessarily at any costs.

Level 3

Here the computer's units are extremely cautious and will usually cease movement as soon as an enemy target is within their range. They represent troops who are committed to achieving their objectives, but with as little risk as possible, so that the urgency of the time scales becomes less important to them. They are not likely to close with the enemy if they can just sit back and pick him off from a distance, however long it may take.

In some ways this can reflect the German actions on D-Day in this sector, for whilst many of the elite troops were anxious to close with the invaders, to try to destroy them where they landed, their commanders were not convinced that this was the real invasion. Many thought that this was just a diversionary tactic, or a feint, and orders to advance and/or attack were frequently countermanded within an hour of being given. In consequence the German troops, which were in some cases quite low quality units, did not always press home their attacks

or simply stood off from their opponents, firing from long range.

It must not be assumed that the Germans were lacking in bravery, and indeed many instances occurred to refute such a suggestion. A particular instance was when a Fallschirmjaeger (paratroop) sergeant named Hickman was returning to his barracks near Caen with a jeep containing four recruits that he had collected near Ouistreham, at around midnight. Hearing gunfire from the Caen/Orne bridges area, the sergeant drove into the vicinity to investigate. Although he and his men were only armed with machine pistols, they exchanged fire with the coup-de-main party, until their ammunition was exhausted, before driving south to report the situation.

4. SPECTRUM & AMSTRAD/SCHNEIDER VERSION

(i) Getting Started

After the game has loaded there are a number of options which need to be set up before starting the game. These are presented to the player one after another, and can be selected by pressing the indicated key.

1. One player vs computer/2 players.
2. British or German side.

The game then starts by bringing up the turn start screen, which consists of a flag showing the player whose turn it is, and the options LOAD, SAVE and CONTINUE. These allow you to save game positions at the start of any turn, and restore them at a later date. Select CONTINUE to get on with the game.

The controls for the game consist of a mixture of the joystick and keyboard. The spectrum gives the player a list of joystick options to choose from. If no joystick is available, select the cursor joystick and use the cursor keys. The E key ends each phase. The joystick is used to move the cursor. On the Amstrad the cursor keys can be used, the COPY corresponding to the fire button.

(ii) Playing the Game

The main map screen is divided into 4 areas. The scrolling map area on the right is a window onto the play area, showing units and terrain. A cursor can be moved around this area, and when it reaches the edge, the map scrolls. The top left map covers the whole play area, showing the position of the main map window as a rectangular box, and units as individual dots. Flashing dots show units which have yet to act in that phase.

Below this is the unit display area. This shows the time and data for the unit(s) under the cursor on the main map. The square icon boxes show the unit symbols for the unit(s) under the cursor or "picked up" for movement. Under this is the unit data:

MOVE	—	shows the speed of the unit.
M. LEFT	—	shows the number of movement points left.
RANGE	—	the maximum firing range of the unit.
A/F	—	the attack strength factor of the unit.
EFFECT	—	the percentage effectiveness of the unit.
STR	—	the number of men/vehicles in the unit.

When two or more units move into the same square, they are said to be stacked. The status information flashes between the different units in the stack.

At the bottom of the screen is a one line text area for prompts and messages.

The game is divided into turns, each representing 30 minutes. The British and German sides play alternate turns. Each turn is divided into 4 phases:

1. Reinforcement phase.
2. Movement phase.
3. Support phase.
4. Combat phase.

Each of these phases is described in detail in the following sections.

(iii) Reinforcement Phase:

The British players reinforcements mostly arrive by air, and the landing site is chosen for each unit as it arrives by moving the cursor to the desired position and pressing fire. The cursor is initially positioned in the historically correct landing site for each unit. The recommended landing sites are the large open areas, since landing on rough ground, woods, towns and roads will result in varying degrees of loss of effectiveness of the unit. Note also that the unit will not necessarily land exactly where it is intended to, but may be scattered by high winds. This can add to loss of effectiveness. Effectiveness is recovered slowly over a period of time, as stragglers rejoin the unit.

German and British ground units appear on the map at predetermined times according to the reinforcement schedule. These start positions cannot be altered.

(iv) Movement Phase:

During the movement phase all the players units can be moved by moving the cursor over the units and pressing fire to pick them up. Up to three units can be picked up together and moved as a stack. Pressing fire again drops the units. Movement through different terrain types costs different numbers of movement points as detailed below:

Terrain	Symbol	Cost	Note
BRIDGE	Unit symbol	1	The main objectives
ROAD	Solid black	1	
OPEN	Blank	1	Landing zones
RAILWAY	Cross-hatch	2	
ROUGH	Sparse dots	3	Rough open fields
TREES	Tree shapes	4	Bois de Bavent
BUILDINGS	Box shapes	4	Each is a cluster
EMPLACEMENT	Unit symbol	5	Merville Battery
SWAMP	Black mottled	6	Flooded areas
WATER	Black mottled	9	Certain units only

The terrain has two main effects on the game, the first being to regulate the 'speed' of movement. The second effect is that of influencing the defence factor of the unit occupying the square. Units in the open or on roads are obviously

more vulnerable than units concealed in trees or buildings, so that, generally, the higher the movement cost of the terrain, the better the unit's defence.

NOTE

Just south of the Caen canal bridge is a gun emplacement, and the first unit of either side to enter the square will convert this to a 20mm anti-tank gun, with a movement factor of zero, for use by their forces. This can only be achieved by stacking with emplacement, and is the only time in the game when equipment can be "picked up".

(v) Support Phase:

At the end of the movement phase, the player is given the opportunity to call up bomber strikes, fighter strikes and naval gunfire on enemy positions. The number of strikes available to each player during the rest of the game is shown at the start of each turn. If any strikes are left, the option to use them is offered during the support phase. Press fire to launch a strike or the space bar to skip it and hold it in reserve. If a strike is selected, the cursor appears on the map and can be moved over the target. Press fire to confirm.

A maximum of 1 attack each time can be performed in each turn. Fighter attacks held in reserve can help to reduce the severity of enemy air attacks.

(vi) Combat Phase:

Each unit can be ordered to attack one enemy unit. The procedure for this is similar to that for movement. The attacking unit(s) are selected by placing the cursor and pressing fire. Up to three units can combine their attack strengths by stacking together. The cursor is then moved over the target and fire is pressed to launch the attack. An out of range message is generated if the cursor is moved further away than the maximum range of the attacking unit.

At the end of the turn, if any troops equipped for demolition are on a bridge, the option to blow up the bridge is offered. Press FIRE to blow the bridge, or any other key not to. The bridge will blow up during the following turn, so remember to move the unit off the bridge.

The length of the firing sound effect gives a rough indication of the effectiveness of the attack. For more precise information, inspect the units involved. Both sides may take casualties when an attack is made since defending units are assumed to return fire.

The type of the unit should be taken into account when launching attacks. Paratroopers and glider troops tended to be armed with sub machine guns, such as Sten and Thompson machine guns, which were generally at their most effective over relatively short ranges, but some units had a higher than average proportion of longer range weapons such as Bren guns, and this is reflected in the attack factors. The German infantry and Panzer grenadiers were mostly armed with a mixture of machine pistols and rifles, but some units were poor quality troops and due to their training were only really effective at close ranges.

Tanks and artillery throughout the battle tended to fight at relatively short ranges, and even over open sights, and this too is reflected in the range factors of the units.

The combat system also takes into account the types of units involved. Sten guns are not as good as artillery against tanks etc.

5. VICTORY CONDITIONS

Each side has a certain set of objectives which must be achieved. That of the British side is to preserve intact the bridges over the Caen canal and the Orne river, to destroy, or at the end of the game be in occupation of, the 5 river Dives crossings, to be the sole occupants of the area of the Merville Battery, indicated by the cluster of four gun emplacement symbols, and to maintain this position up to turn 36, the end of the game (the arrival of the remainder of 6th Air-landing Brigade).

The objective of the German side is to prevent the British side from achieving their objectives, and the degree of success will depend upon the number of objectives that the German forces have permitted the British side to achieve.

The position at the end of turn 36 is used to determine the percentage of success. Should the game be terminated earlier, the number of turns played will also be used to determine the percentage of success.

In order to achieve objectives it will sometimes be necessary to eliminate enemy units, but care should be taken to remember the actual objectives of the game, as the elimination of the entire enemy force will not win the game if these objectives have not been met. Remember, this is only day one of the invasion and the enemy has many more forces to throw into the line tomorrow, so the objectives are critical.

6. REINFORCEMENT ARRIVAL SCHEDULE

Throughout the game, units will reinforce the British and German sides. They will always arrive on the turn specified and neither side can hold any in abeyance until a later turn.

Units will never STACK with other units on the turn of arrival.

German units, except for those on the map at the start of the game, are likely to arrive in depleted strength. This reflects casualties from shelling and strafing, and stragglers, some or all of whom will rejoin their unit as the game progresses, but the units are unlikely to be heavily depleted.

The British, however, suffer casualties from poor landings, made in high winds and darkness, aggravated by landings in inhospitable terrain, such as buildings, trees, water and swamps. The landings are likely to be heavily scattered, so that there can be many stragglers but, like the Germans, these too will attempt to rejoin their units throughout the game.

If a unit is eliminated, its stragglers may rejoin other units still fighting, but in no case will a unit ever exceed the strength (numbers) shown in the UNIT LIST. Units are never reconstituted during the game once they have been eliminated.

The game is played over 36 turns and the Reinforcement Arrival Schedule is as follows:

TURN	BRITISH UNIT	GERMAN UNIT
1	A PLT O/B B PLT O/B C PLT O/B D PLT O/B E PLT O/B F PLT O/B	SENTRY BRIDGE GAR GAR 736 GR HQ 642 GR RC 125 PGR BTY 155 ARTY HQ 125 PGR RC 125 PGR RC 744 GR
2	PATHFNDRS	1/125 PGR HWC 125 PGR 21 PZ RCN BTN HICKMAN
3		RC 2PGR 1716 SPG
4	A/7 BTN B/7 BTN C/7 BTN A/9 BTN B/9 BTN C/9 BTN	
5	A/12 BTN B/12 BTN 12 ARTY C/12 BTN A/1 CDN B/1 CDN RE 3 BDE C/1 CDN	RC 192 PGR
6	A/13 BTN B/13 BTN C/13 BTN A/8 BTN RE 3 BDE B/8 BTN C/8 BTN	HWC 125 PGR
7		HWC 192 PGR 3/736 GR RC 744 GR
8	COY 6 ALB COY 6 ALB 6 DIV HQ COY 6 ALB 4 BTTY RA	1/731 GR

9	1 SAG 2 SAG SAG ARTY	HWC 744 GR
10		PLT 22 PZ
11		1/857 GR
13		HWC 744 GR RC 744 GR
14		PLT 22 PZ 2/875 GR HWC 192 PGR
15		GUNBOAT
16		FROGMEN
20		RC 192 PGR PLT 22 PZ
24	6 CMDO	COY 22 PZ
25		GUNBOAT 711 SIG 711 PI
26	3 CMDO	1/651 ARTY 2/651 ARTY COY 22 PZ
27	TANK	2/731 GR
28	45 CMDO	3/651 ARTY 200 PZ ENG
29	TANK	RC 192 GR RC 192 PGR
30	4 CMDO	

7. HISTORICAL BACKGROUND

On the 5th June 1944 the Allied forces stood poised for the invasion of France, by land, sea and air, in what was to be the largest operation of its kind in the history of warfare. Almost 3 million men would be involved in an invasion front covering 60 miles of Normandy coastline from Les Dunes de Varreville in the west to Ouistreham in the east.

The British 6th Airborne Division, consisting of the 3rd and 5th Parachute Brigades, and the 6th Air-landing Division, was given a key role in the operation. Its orders were to secure the left (east) flank of the beach-heads by seizing vital bridges, neutralizing enemy gun emplacements, and denying the enemy access to the beach-heads by holding or destroying 5 of the bridges over the river Dives.

Since the number of available aircraft was insufficient to lift the entire division at the same time, it was necessary to land parachute troops first to clear selected sites, whilst the majority of the 6th Air-landing Brigade would arrive by the second airlift.

A coup-de-main party consisting of a reinforced company of six platoons drawn from the 2nd Battalion of the Oxfordshire and Buckinghamshire Light Infantry ('D' Coy 2nd Ox & Bucks) and a detachment of engineers, carried in six gliders, left base shortly before midnight, with the Caen and Orne bridges as their objectives. Five of the six gliders landed almost exactly on time, with considerable accuracy, close to the two vital bridges which crossed the river Orne and the Caen canal, whilst the sixth landed close to a bridge over the river Dives, some 8 miles away.

The Orne and Caen bridges were successfully captured, and a bridgehead established.

Thirty minutes later the 7th Parachute Battalion dropped, but the landing was widely scattered. Within a couple of hours about half of the force had reached the bridges, and stragglers continued to arrive throughout the day.

Enemy counter attacks, from infantry and tanks, began at dawn and continued through the day, and it was whilst holding the bridges that 7 Para had a naval battle with German coastal craft moving up the canal. German aircraft tried to bomb the bridges and, indeed, succeeded in hitting the canal bridge with a 1000lb bomb, which dented the structure, but bounced off into the canal without exploding.

At one point the Germans despatched two frogmen to try to blow up the bridges, but this, together with other attempts, was to no avail and the bridges were held until seaborne forces arrived to help secure the area.

In the meantime 9 Para landed with the intent of eliminating the battery of guns at Merville. The drop was so widely scattered, that at the scheduled time of attack, only 150 men, out of more than 600 that jumped, were grouped for the assault. This attack was to be supported by a special assault group carried in three gliders, the aim of which was to land on top of the battery at the exact time that the attack went in. The gliders failed to land in the right place, but the assault group troops fought where they landed, so preventing reinforcements from reaching the battery. In the meantime the main party successfully neutralised the battery, but at the loss of about half of their small force.

The bulk of the 3rd and 5th Brigades also jumped, but again the landings were widely scattered, some units dropping on zones designated for other groups, and a considerable number of men were killed or injured landing in or around the area of the river Dives, which had been made to flood its banks, by the Germans as part of their defence strategy, to present several square miles of marshland.

These units, supported by elements of the 6th Air-landing Brigade, destroyed the Varaville, Robehomme, Bures and Troarn bridges, in the face of a surprised enemy. In the case of the Troarn bridge, engineers in a jeep raced through a gauntlet of enemy gunfire onto the bridge, crashing through the battle, enemy troops and a roadblock, in order to demolish the bridge.

All units then continued to hold positions against repeated enemy attacks, and at a critical moment were reinforced by commando forces from the 1st Special

Service Brigade, under Lord Lovatt, which had fought their way up from the beaches around Ouistreham.

During the evening of D-Day the remainder of the 6th Air-landing Brigade arrived, linking up with those who had landed in the earlier lifts, plus the commandos, and together they made the bridgehead secure.

The bridge over the Caen canal was subsequently to be named Pegasus Bridge, (after the winged horse shoulder flash worn by the airborne troops), to commemorate the battle, and the fact that the coup-de-main party was the first British unit to land on French soil on D-Day.

8. UNIT LISTS

In the following lists:

NO. is the number of men, tanks, artillery pieces, etc., initially available to the unit, and this can be modified as described in the ARRIVAL section of the instructions. As the unit takes casualties this number is depleted and, if it should reach zero, the unit is eliminated, and removed from the map.

A/F is the attack factor — the unit's firepower and assault strength.

RNG is the maximum range in squares, over which the unit can attack.

MOV is the movement factor which is the maximum number of points which can be expended by the unit as it moves across terrain, and represents its speed of movement — units with a high movement factor can move further in the same turn than units with lower factors.

NOTE

When the computer is the opponent the attack factor of each of its units will be increased by 2, with a proportionate increase in the unit's range.

THE BRITISH FORCES

UNIT	NO.	A/F	RNG	MOV	DESCRIPTION	ARRIVES
A PLT O/B	* 25	12	6	7	A Platoon 2nd Ox & Bucks	Y
B PLT O/B	* 25	12	6	7	B Platoon 2nd Ox & Bucks	Y
C PLT O/B	* 25	12	6	7	C Platoon 2nd Ox & Bucks	Y
D PLT O/B	* 25	12	6	7	D Platoon 2nd Ox & Bucks	X
E PLT O/B	* 25	12	6	7	E Platoon 2nd Ox & Bucks	X
F PLT O/B	* 25	12	6	7	F Platoon 2nd Ox & Bucks	X
PATHFNDRS	100	10	5	7	Pathfinders (22nd Ind Parachute Coy)	N
A/7 BTN	200	8	4	6	A Coy 7th Parachute Battalion 5 Brigade	N
B/7 BTN	200	8	4	6	B Coy 7th Parachute Battalion 5 Brigade	N
C/7 BTN	200	8	4	6	C Coy 7th Parachute Battalion 5 Brigade	N
A/9 BTN	200	8	4	6	A Coy 9th Parachute Battalion 3 Brigade	V
B/9 BTN	200	8	4	6	B Coy 9th Parachute Battalion 3 Brigade	V
C/9 BTN	200	8	4	6	C Coy 9th Parachute Battalion 3 Brigade	V
A/12 BTN	200	8	4	6	A Coy 12th Parachute Battalion 5 Brigade	N

B/12 BTN	200	8	4	6	B Coy 12th Parachute Battalion 5 Brigade	N
12 ARTY	4	20	10	5	4 guns of 53 Air-landing A/T Regt	N
C/12 BTN	200	8	4	6	C Coy 12th Parachute Battalion 5 Brigade	N
A/1 CDN	200	8	4	6	A Coy 1st Canadian Parachute Btn 3 Bde	V
B/1 CDN	200	8	4	6	B Coy 1st Canadian Parachute Btn 3 Bde	V
RE 3 BDE	* 50	10	5	8	Unit of Engineers attached to 3 Brigade	V
C/1 CDN	200	8	4	6	C Coy 1st Canadian Parachute Btn 3 Bde	V
A/13 BTN	200	8	4	6	A Coy 13th Parachute Battalion 5 Brigade	N
B/13 BTN	200	8	4	6	B Coy 13th Parachute Battalion 5 Brigade	N
C/13 BTN	200	8	4	6	C Coy 13th Parachute Battalion 5 Brigade	N
A/8 BTN	200	8	4	6	A Coy 8th Parachute Battalion 3 Brigade	K
RE 3 BDE	* 50	10	5	8	Unit of Engineers attached to 3 Brigade	K
B/8 BTN	200	8	4	6	B Coy 8th Parachute Battalion 3 Brigade	K
C/8 BTN	200	8	4	6	C Coy 8th Parachute Battalion 3 Brigade	K
COY 6 ALB	250	8	4	6	Coy of 6th Air-landing Brigade	N
COY 6 ALB	250	8	4	6	Coy of 6th Air-landing Brigade	N
6 DIV HQ	100	12	6	6	Gen Gale & 6th Airborne Division HQ	N
COY 6 ALB	250	8	4	6	Coy of 6th Air-landing Brigade	N
4 BTTY RA	10	24	12	5	4th Air-landing A/T Battery RA	N
1 SAG	* 30	10	5	8	Special Assault Group 6th A/L Brigade	V
2 SAG	* 30	10	5	8	Special Assault Group 6th A/L Brigade	V
SAG ARTY	10	20	10	5	6 pdr. Guns Special Assault Group 6th ALB	V
6 CMDO	250	8	4	6	6 Commando Btn 1st Special Service Bde	A
3 CMDO	250	8	4	6	3 Commando Btn 1st Special Service Bde	B
TANK	2	24	12	12	2 Churchill Tanks	B
45 CMDO	250	8	4	6	45 Commando Btn 1st Special Service Bde	A
TANK	5	24	12	12	5 Sherman Tanks	A
4 CMDO	250	8	4	6	4 Commando Btn 1st Special Service Bde	B

THE GERMAN FORCES

SENTRY	2	8	4	6	Bridge Sentries from Bridge Garrison	BRIDGE
BRIDGE GAR	50	8	4	6	Bridge Garrison	BRIDGE
GAR 736 GR	150	8	4	6	Garrison 736 Grenadier Regt	MERVILLE
HQ 642 GR	250	8	4	6	HQ 642 Grenadier Regt	SALLENELLES
RC 125 PGR	90	8	4	10	Rifle Coy 125 Pzr Grenadier Regt	RANVILLE
BTY 155 ARTY	4	28	14	4	88mm Guns 155 Artillery Regt	RANVILLE
HQ 125 PGR	250	10	5	6	HQ 125 Panzer Gdr Regt	COLOMBELLES
RC 125 PGR	130	8	4	6	Rifle Coy 125 Pzr Gdr Regt	COLOMBELLES
RC 744 GR	100	8	4	5	Rifle Coy 744 Grenadier Regt	BAVENT
RC 125 PGR	150	8	4	6	Rifle Coy 125 Pzr Grenadier Regt	TROARN
HWC 125 PGR	90	10	5	10	Heavy Weapon Coy 125 Pzr Gdr Regt	TROARN
21 PZ RCN	5	16	8	12	5 light tanks 21 Pzr Recce Battalion	TROARN
HICKMAN	5	7	4	13	5 Paratroopers 2nd Parachute Regt	B
RC 2 PGR	100	8	4	10	Rifle Coy 2 Pzr Grenadier Regt	B
1716 SPG	2	24	12	8	2 self propelled guns 1716 Regt	C
RC 192 PGR	100	8	4	10	Rifle Coy 192 Pzr Grenadier Regt	D
HWC 125 PGR	90	10	5	10	Heavy Weapon Coy 125 Pzr Gdr Regt	F

HWC 192 PGR	90	10	5	10	Heavy Weapon Coy 192 Pzr Gdr Regt	D
3/736 GR	250	8	4	5	3 Btn 736 Grenadier Regt	C
RC 744 GR	100	8	4	5	Rifle Coy 744 Grenadier Regt	I
1/731 GR	250	8	4	5	1 Btn 731 Grenadier Regt	H
HWC 744 GR	100	10	5	5	Heavy Weapon Coy 744 Grenadier Regt	G
PLT 22 PZ	5	24	12	10	Platoon 22 Panzer Regt	G
1/857 GR	250	8	4	5	1 Btn 857 Grenadier Regt	I
HWC 744 GR	90	10	5	5	Heavy Weapon Coy 744 Grenadier Regt	E
RC 744 GR	110	8	4	5	Rifle Coy 744 Grenadier Regt	H
PLT 22 PZ	7	24	12	10	Platoon 22 Panzer Regt (reinforced)	H
2/857 GR	250	8	4	5	2 Btn 857 Grenadier Regt	I
HWC 192 GR	100	10	5	10	Heavy Weapon Coy 192 Pzr Gdr Regt	G
GUNBOAT	2	16	8	27	2 lightly armed coastal vessels	J
FROGMEN	* 2	7	3	18	2 frogmen	L
RC 192 PGR	90	8	4	10	Rifle Coy 192 Pzr Grenadier Regt	C
PLT 22 PZ	7	24	12	8	Plt 22 Panzer Regt (reinforced)	D
COY 22 PZ	10	24	12	10	Coy 22 Panzer Regt	D
GUNBOAT	1	16	8	27	1 lightly armed coastal vessel	L
711 SIG	250	8	4	10	Signals Battalion 711 Infantry Div	H
711 PI	*250	8	4	5	Pioneer Battalion 711 Infantry Div	H
1/651 ARTY	8	28	14	4	1st Battalion 651 Artillery Regt	H
2/651 ARTY	8	28	14	4	2nd Battalion 651 Artillery Regt	I
COY 22 PZ	10	24	12	10	Coy 22 Panzer Regt	F
2/731 GR	250	8	4	5	2 Btn 731 Grenadier Regt	I
3/651 ARTY	8	28	14	4	3rd Battalion 651 Artillery Regt	H
200 PZ ENG	*250	9	4	10	Engineers attached to 200 Panzer Div	E
RC 192 PGR	120	8	4	10	Rifle Coy 192 Pzr Grenadier Regt	C
RC 192 PGR	130	8	4	10	Rifle Coy 192 Pzr Grenadier Regt	D

NOTE: All units marked with an asterisk (*) are equipped to carry out DEMOLITION work on bridges.

9. AUTHORS NOTES

The actions and achievements of the 6th Airborne Division on 6th June 1944 read like the script for a major film and, indeed, some of the incidents and events have featured in several films. However, there were so many unexpected and almost unbelievable events that a film producer would probably decide to tone down, or even eliminate some of these, just to retain credibility.

I have attempted to include many of these events in the game, to try to give a flavour of the day.

Some things cannot be simulated, such as the incident when there was a sudden lull in the fighting, and one of the coup-de-main party, manning the captured 20mm anti-tank gun, could be heard shouting out gun commands, the range, the elevation, "Number one gun, ready!", etc.

His target was a water tower, on top of which a sniper or observer was thought to be hiding. In the silence that had fallen, his shouted commands rang out

loud and clear, followed by the report of the weapon.

The aim was perfect, but the shell was armour piercing, so instead of the tower being reduced to rubble, the shell went straight through, leaving great spouts of water squirting from the holes in the opposite sides.

An enormous cheer went up from both the British and German sides, with berets and helmets being tossed in the air, applause for a neatly executed shot!

There are many accounts available of the actions on D-Day, but most are from the British viewpoint, and the information regarding the British units, and even individuals involved, is usually well detailed, with only opinions differing as to when, where or how a specific event took place. This is quite understandable, the confusion of battle, the 'fog of war', easily accounts for this, and the schedule used in the simulation is reasonably accurate within 30 or 40 minutes.

The German schedule is much more difficult to obtain. Most of the reports cover the entire Normandy campaign, and details of individual units' involvements on particular days is frequently lacking.

British accounts frequently refer to encounters with the enemy in terms of "in company strength", but only in a few cases are the units precisely identified.

The German units detailed in the game were all in the area at the time, and over the first few days of the invasion were in conflict with the 6th Airborne. Where actual units are known, they have been used, but several of the units are "informed guesses" on behalf of the author, as are their arrival points, when precise information is lacking.

Since this is a simulation, designed to allow the player to try the 'what if?' possibilities, combat results will frequently differ from the actual casualties suffered by the units involved. This reflects the daring and dangerous nature of the operation.

That the coup-de-main survived the assault on the two bridges with virtually no casualties is a fact. There is no doubt that they were expected to have a far higher rate of casualties. That they could have been wiped out entirely, or taken prisoner, without succeeding in their task, was a definite possibility, and all of these results are possible in the simulation.

Units in the simulation do not normally retreat. Instead they will usually fight until they cease, for whatever reason, to be an effective fighting force.

The computer, as an opponent, is neither particularly clever, nor stupid. However, it takes note of the tactics that the player has told it to adopt, and will play out its moves accordingly.

It is difficult to achieve a 100% victory in the British role, and even more so in the German role.

That the 6th Airborne did achieve every one of their objectives is no small measure of the courage, determination and training of the paratroopers, glider pilots and men of the 6th Air-landing Brigade, who fought so well to secure the beach-head and protect the east flank of the invasion.

The following sources were referred to for information used in the program.

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Red Berets into Normandy by Sir Hugh Wheldon.

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History of World War II by Lt-Col. E. Bauer.

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