

THE BATTLE OF THE BULGE

CONTENTS

1.	Loading Instructions	1
2.	Introduction	1
3.	Game Controls	1
4.	Game Structure	1
5.	Set Up Options	2
6.	Historical 'What If' Menu	2
7.	Start Location Phase	2
8.	Air Phase	3
9.	Order Phase	3
10.	Find Unit	5
11.	Movement	5
12.	Combat	5
13.	Victory Conditions	6
14.	Status Report	6
15.	Supply	7
16.	Supply Dumps	7
17.	Units	8
18.	Re-inforcements	8
19.	Terrain	9
20.	Weather/Visibility	9
21.	Re-inforcement Arrival Schedule	12
22.	Historical Notes	14
23.	Designer's Notes	19
24.	Chains of Command	20
	<i>(Map – Centre Pages)</i>	10/11

1. LOADING INSTRUCTIONS

48K SPECTRUM: Type Load " " and ENTER to load the 48K version of the Bulge.

128K SPECTRUM: Insert the 128K version of the Bulge and load the program using the LOADER option in the opening menu.

+3 SPECTRUM: Select 48K mode on the opening menu, insert the 128K version of the Bulge, then type LOAD " " and press ENTER.

AMSTRAD CPC Tape: Type !TAPE then ENTER to select cassette and then press SHIFT CONTROL keys together and then ENTER.

AMSTRAD CPC Disc: Type RUN "bulge".

2. INTRODUCTION

The Battle of the Bulge is a one or two player wargame that reconstructs the last major offensive made by the German forces in the west. The player can choose between commanding German armies or the combined Anglo-American forces. The game lasts 36 turns from the 16th December 1944 to 2nd January 1945 and covers the period from the initial breakout to the erasing of the bulge.

3. GAME CONTROLS

The game is controlled by using the cursor keys. The Amstrad versions can also use a joystick. Orders are given by moving the cursor over a unit or by pressing the F (Find) key, followed by pressing the key for the order required.

4. GAME STRUCTURE

The Game structure is as follows:

There are 36 game turns in the battle with victory checks made after each turn.

- | | | | |
|---|---------------------------------|----|-----------------------|
| 1 | Set up options. | 7 | Artillery units fire. |
| 2 | Set start locations (optional). | 8 | All units move. |
| 3 | German air phase. | 9 | Bridging activities. |
| 4 | German order phase. | 10 | Combat. |
| 5 | Allied air phase. | 11 | Retreats. |
| 6 | Allied order phase. | 12 | Goto 3. |

When playing the two player game, the player not ordering his units should look away from the screen as movement is hidden.

5. SET UP OPTIONS

5.1 Load Game

When the game has loaded you are asked if you want to load a saved game. If you do, the game play will continue from where you finished. Games can be saved to either tape or disc.

5.2 Computer Player

Selecting 'None' initiates the two player game.

5.3 Deployment

If historical deployment is not selected, the player can re-deploy his units in the set up phase. The computer player will also vary the deployment of its forces if required.

5.4 Introductory Level

When playing the computer an easier game level can be selected. This option will lower the amount of supply available to the computer.

6. HISTORICAL 'WHAT IF' MENU

Three historical variations have been included:

6.1 Poor Weather

This assumes the weather remained misty until the very end of the battle.

6.2 Command Crisis

This assumes that Eisenhower bowed to pressure and did not appoint Montgomery as Commander of the northern shoulder. In a fit of pique Montgomery does not allow British troops to be deployed in the American sector and therefore no British units become available.

6.3 Patton Delayed

Patton achieved a magnificent feat by swinging his army north in such a short time. This option assumes that Patton was not as efficient and all 3rd Army units arrived later.

7. START LOCATION PHASE

This phase occurs when deployment is selected for a human player. The units are shown in their historical locations. To change these move the cursor over the required unit and press ENTER. Move to where you wish to place the unit and press ENTER again.

There are restrictions on where you can place your units and if the location is

illegal, then the border will turn red and you will not be allowed to place the unit. When all repositioning has been made, exit the routine by pressing X.

8. AIR PHASE

If there is fog the player will not be able to do anything in this phase. If the weather is clear, then the player will receive air points. There are three options open to the player in this phase, each costing one air point. To select an option move the cursor to the desired location and press the appropriate key.

8.1 Recce (R key)

This orders your planes to search for enemy units and is always successful, but enemy units in trees will not be visible.

8.2 Straff (S key)

This option orders your planes to attack a unit and is normally successful. Air attacks reduce enemy strength but more importantly, reduce enemy morale, supply and movement points.

8.3 Bomb (B key)

This option orders your planes to bomb a bridge but is often unsuccessful as bridges are difficult to hit. However, it may be worth a try in order to slow down an enemy advance or to cut enemy supply lines.

To exit from air phase, press key X.

Note: Use key T to examine the terrain under a unit.

9. ORDER PHASE

The screen layout during the order phase is shown below:

To give a unit an order the player must move the cursor over the required unit which will then show the unit status and a list of commands available to it for the current turn. To give the command press the key indicated. The possible commands are given below.

MAP
Unit Identification
Unit Status
Unit Orders

9.1 Hold (H key)

Tells a unit to stay where it is. The unit uses no supply when holding and will receive less damage when attacked. If no enemy units are next to it, then the morale of the unit may gradually increase.

9.2 Move (M key)

When this command is selected the player must specify a destination by moving the cursor to a new location and pressing the ENTER key. During the movement phase the unit will attempt to move directly towards the destination across country. Any enemy units encountered will be engaged.

9.3 Road (R key)

This order is the same as the MOVE order except that the unit will follow the road to the required destination. The start location and the final destination must both be on a road, town or bridge. Movement will normally be quicker on a road. There is no combat penalty for using this command and once the command is issued, it need not be repeated every turn. If a specific route is required it is best to issue a series of short moves.

9.4 Bomb (B key)

Artillery and nebelwerfer units can use indirect fire on an enemy unit. The range for indirect fire is 4 for an artillery unit and 3 for a nebelwerfer unit. As with air strikes, unit strength, morale, supply and movement will be affected. When a unit's supply is reduced it cannot use this order. The location to be fired at is selected by moving the cursor and pressing ENTER. The targeted unit need not be visible.

9.5 Construct (C key)

This order re-builds a blown bridge. To be effective the unit must be on the road next to the blown bridge and must have plenty of supply. To select the bridge to be re-built, move the cursor to the desired location and press ENTER. The bridges are constructed after movement. If an enemy unit is next to the building unit before construction occurs, then construction will not be allowed.

Note: Artillery and nebelwerfer units cannot be given bridging orders.

9.6 Demolish (D key)

This order has the same limitations as the construct command but less supply is required.

9.7 Sabotage (S key)

This is a special command for the two American supply depots. They can be destroyed to prevent them from being captured by the Germans, in which case all Allied units in play will have their morale reduced. Again there must be no enemy units next to the dump before it is blown. The effects of German capture of the dumps can be found in the SUPPLY section.

9.8 Space Bar

Pressing the space bar cancels the current command and leaves the previous order in place.

Note: When a unit is given an order it will change colour. You can re-order a unit at any time within the Order Phase.

The T key will display the terrain under any unit.

It is not necessary to give orders to each unit every turn. If a MOVE or ROAD order is given, then the unit will continue to carry out this order until its destination is reached.

To exit from the Order Phase, press key X.

10. FIND UNIT

Pressing the F key will move the cursor to the next unit that has not been given an order during the current turn; that is, a unit which has not changed colour.

11. MOVEMENT

When all orders have been issued, artillery fire commences followed by the Movement phase. Units move simultaneously and hold when they reach their destination.

Movement rates depend on movement points for the unit and the terrain crossed. Movement points are reduced if supply is low or if the unit has suffered artillery fire.

Units cannot pass through each other, so avoid traffic jams. Each unit has a zone of control. When a unit moves adjacent to an enemy unit then movement will cease for that turn.

Note: Armoured, artillery and nebelwerfer units can only cross rivers by using bridges.

12. COMBAT

Any unit moving into an enemy zone of control will become engaged. Enemy units next to each other, both holding, will not fight.

The outcome of the fight depends on the defending and attacking unit's armour and infantry strength, type, morale, supply, tactical rating, terrain and a little luck!

The firepower of a unit is calculated and divided between the number of units adjacent to it. It is advisable to try attacking a unit with as many units as possible in an attempt to minimize damage.

After the movement phase each unit involved in combat is displayed. The firing unit is shaded and the receiving unit flashes. The length of the sound output is proportional to the firepower being used.

If a unit suffers heavy damage morale may be reduced, or if light losses are taken, morale may increase. After combat units may retreat. If a unit is destroyed, it is removed from the map.

Although each side takes it in turn to fire, combat takes place simultaneously as casualties are deducted at the end of the combat round and, therefore, there is no advantage in firing first.

13. VICTORY CONDITIONS

The Germans can end the game prematurely by reaching the two road entry points at the top left hand corner of the map near Namur. This represents a breakthrough to Antwerp. Alternatively, they can attempt to capture and hold as many towns as possible. To capture a town your unit must be the last unit to have passed through it.

The Americans must attempt to stop a breakthrough and then erase the bulge, inflicting as many casualties as possible.

The game will finish either on 2nd January 1945 if the Germans manage the break-through conditions, or if either side loses all their units.

A result is given based on casualties and how well the German advance has gone. This is only an opinion and the player should judge the price of victory for himself.

14. STATUS REPORT

When the cursor is placed over one of your units the following information is shown:

Name	:	Identifies unit
Order	:	Current order
Armour	:	Number of tanks
Infantry	:	Number of troops (in 100's)
Movement	:	Number of movement points
Morale	:	Morale level of troops
Tactical	:	Experience/training of troops
Supply	:	Level of supply

Morale, tactical rating and supply vary as follows – EXCELLENT, V.GOOD, GOOD, Q.GOOD, MEDIUM, Q.POOR, POOR, V.POOR, ABYSMAL, NONE.

If a unit can trace a line of supply to a supply source, then the supply level will be white. If not, it will be red.

15. SUPPLY

Supply is very important as it influences both movement and combat. Supply is used up by any order other than HOLD during combat and also when on the receiving end of artillery fire or air strikes. It may become necessary to wait for supply to increase before attacking.

To replenish supply, the unit must be next to a road location which is able to trace a line of supply from itself to a supply source which does not run through enemy zones of control.

Supply sources for the German side are any entry road on the right hand side of the map and also the furthest right entry point at the top of the map. Allied supply sources are any other road entry point on the top, bottom, or left side of the map.

The Germans only had limited resources and to reflect this there is an increasing possibility as the game proceeds, that the German player will receive no supply for that turn even though his units are in supply. Allied units always receive supply when they can trace a supply route.

16. SUPPLY DUMPS

The Allies have two supply dumps which are special units and cannot move. They represent the petrol dumps around Stavelot which were not used during the battle and therefore have no influence on Allied supply.

If the German player destroys these dumps using adjacent combat, then he is assumed to have captured them. This may be a desirable objective because if a dump is captured, then all German units receive an increase in morale, those in supply receive additional supply and Allied units in play have their morale reduced.

If the Allied player chooses to blow his dumps, then only Allied morale suffers.

17. UNITS

Most of the units are divisional size and cannot stack. German units are black, American units blue and British units red. Allied units face to the right and German units to the left. The unit types are:



ARMOURED UNIT – Mobile and powerful. Cannot cross water and at a disadvantage in trees.



CAVALRY UNIT – Very mobile but weak. Good for scouting or fast intervention.



PANZER GRENADIER – Fairly strong and very mobile. Good combat values in all terrain.



INFANTRY UNIT – Strength varies. American divisions normally beefed up with a tank battalion. Allied units have better mobility than the Germans. Good for combat except in the open and can cross water.



AIRBORNE UNIT – Same as infantry.



ARTILLERY UNIT – Weak in adjacent combat and cannot build/destroy bridges or cross water. Has indirect fire capability. German units are not very mobile but all Allied units are motorized.



NEBELWERFER – Same as artillery but even slower moving and weaker in direct combat but stronger at indirect fire.



FUEL DUMP – Very weak unit.

18. RE-INFORCEMENTS

During the game each side receives re-inforcements. You are informed at the beginning of each game turn that they have arrived. Re-inforcements normally enter on a friendly map edge and are easily found using the F (FIND) key. The arrival schedule is detailed in Section 21.

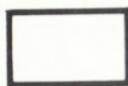
19. TERRAIN

The terrain has an effect on combat and movement. The terrain types are:

 **ROAD (black)** – This is easiest to move along and carries supply lines.

 **BRIDGE (black)** – The only way for mechanised units to cross a river. Attackers over bridges suffer combat penalties.

 **TOWN (black)** – Passing through towns scores victory points. Good for defence.

 **CLEAR (light green)** – This is open country and movement is reasonable. Good attacking ground for armour. Note that all names on the map should be considered as clear.

 **WOODS (yellow)** – Restricts movement and tanks are at a disadvantage. Good for defence. Units in trees cannot be spotted by air searches.

 **HILLS (brown)** – Very restrictive on movement but the best defensive terrain.

 **RIVER (blue)** – Difficult to cross. Armoured and artillery units cannot cross. Heavy combat reduction especially for tanks organic to infantry units.

20. WEATHER/VISIBILITY

The weather affects the game. During fog turns no air options are available and only enemy units adjacent to a friendly unit are visible. During clear turns, friendly units can see enemy units up to a distance of three squares.

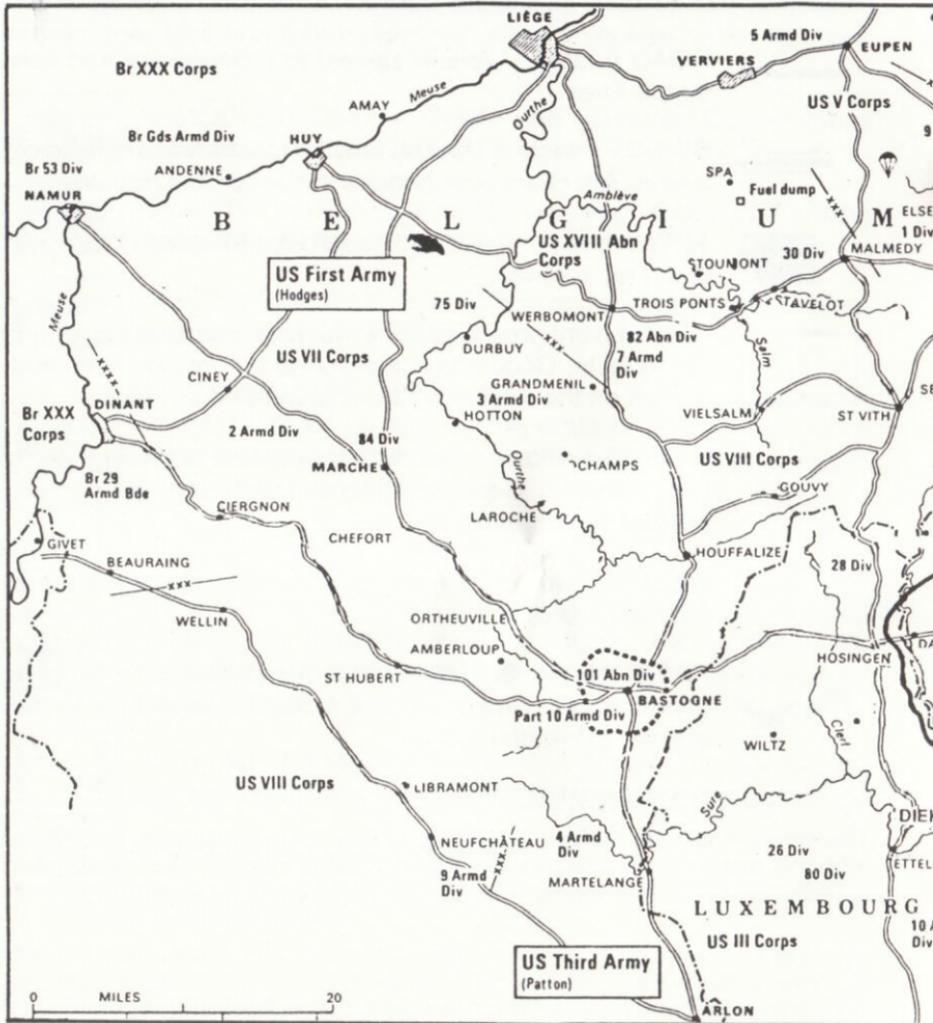
NAMUR

HUY

LIÈGE

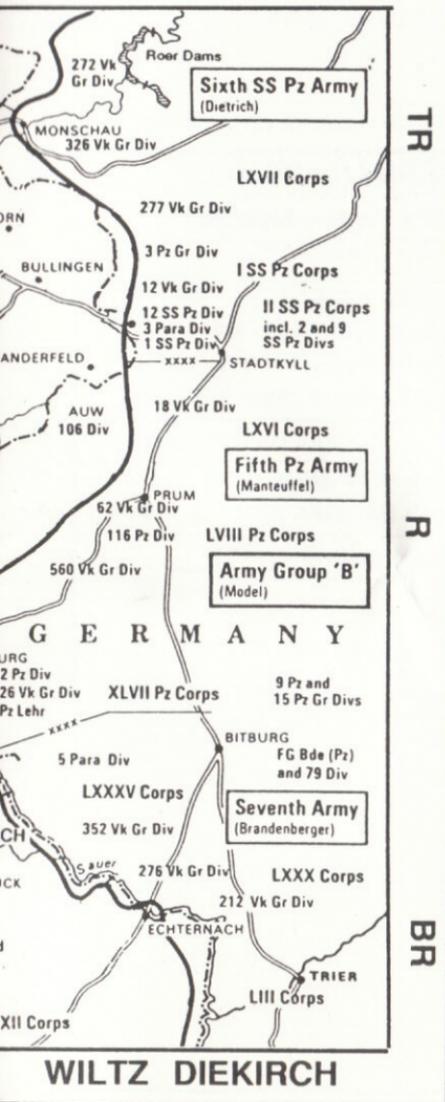
EU

GIVET



ARLON BASTOGNE

EN



TR

R

BR

BATTLE OF THE BULGE

16th Dec 1944-23rd Jan 1945

The names round the side of the map show the arrival points for the reinforcements (see page 12 for schedule).

Allied forces arrive at Namur, Huy, Liège, Eupen, Givet, Arlon, Bastogne, Wiltz and Diekirch.

Axis forces arrive at sectors TR, R, BR.

21. RE-INFORCEMENT ARRIVAL SCHEDULE

TR = Top right edge

R = Right hand edge

BR = Bottom right edge

DATE	ALLIED ARRIVALS	GERMAN ARRIVALS
17th am	7th Armoured – Eupen	VDH Paras – Malmedy
17th pm	10th Armoured – Wiltz	
18th am	30th Infantry – Liège 82nd Airborne – Givet 101st Airborne – Arlon	Fuhrer Begleit – R 2nd SS Panzer – TR 9th SS Panzer – TR 3rd Panzer Gdnr – TR
19th am	9th Infantry – Liège	
20th am	3rd Armoured – Liège	10th SS Panzer – TR 11th Panzer – R
20th pm		9th Nebelwerfer – TR
21st am	84th Infantry – Huy 18th Artillery – Liège	
21st pm	29th Armoured – Namur	
22nd am	43rd Infantry – Huy 34th Tank – Huy 30th Artillery – Huy 53rd Infantry – Namur Guards Brigade – Namur 4th Armoured – Arlon 80th Infantry – Arlon 6th Cavalry – Arlon 3rd Artillery – Arlon 26th Infantry – Bastogne	Fuhrer Guard – R
22nd pm	75th Infantry – Givet	

DATE	ALLIED ARRIVALS	GERMAN ARRIVALS
23rd am	2nd Armoured – Liège	9th Panzer – R 15th Panzer Gdnr – R 79th Volks Gdnr – R
24th am	5th Armoured – Huy 7th Artillery – Liège 2nd Cavalry – Wiltz 5th Infantry – Wiltz 12th Artillery – Wiltz	
25th am	33rd Tank – Liège 51st Infantry – Huy 11th Armoured – Givet	167th Volks Gdnr – BR 246th Volks Gdnr – TR
26th am	35th Infantry – Bastogne	
26th pm	83rd Infantry – Liège 6th Armoured – Diekirch	
27th pm	17th Airborne – Namur 6th Airborne – Namur	
28th am		9th Volks Gdnr – BR 410th Artillery – TR
30th am	87th Infantry – Givet	
31st am	50th Infantry – Namur	

Note: Refer to map (centre pages) for arrival points.

22. HISTORICAL NOTES

The Plan

On 16th September 1944 Hitler summoned his senior officers and announced that he had decided to take the offensive.

In Italy and Russia the Allied armies had paused to recuperate. A German strike in Russia could not hope to destroy more than 30 enemy divisions which was a drop in the ocean to the Red Army. Italy was a country suited to defence and so the Fuhrer looked to the West, especially to the Americans, whom he considered to be 'soft'.

The Allies were in difficulties in the West. After the race across France and Montgomery's failure to cross the Rhine at Arnhem, they were pausing in preparation for a thrust into Germany. Supply was still being carried across Europe from the Normandy beaches because the Germans continued to hold the Channel ports or the waterways leading to them.

Hitler therefore decided to take the supreme gamble and launch an all-out attack through the Ardennes to capture Antwerp, thus isolating 30 Allied divisions in the Aachen salient. He believed that such a strike would cause Britain and America to sue for peace and then he could concentrate on Russia.

Many of Hitler's generals, including von Rundstedt, were appalled by the plan and felt that a less ambitious objective of taking Liege and destroying a number of American divisions, was more appropriate. The Fuhrer, however, would not be deterred from his plan and Operation WACHT AM RHEIN (Watch on the Rhine) was born.

All other fronts, hospitals and even schools, were stripped of men to equip three armies which would smash through the Allied line from Monschau to Diekirch. The northern assault comprised of Dietrich's 6th SS Panzer army with the objective of breaking through Monschau and racing for the Meuse. In the centre Manteuffel's 5th Panzer army was to take the key communication towns of St. Vith and Bastogne, while in the south Brandenberger's 7th Army would cover the assault's flanks from attack by Patton.

The attack was to take place during a period of bad weather in order to prevent Allied air superiority from being effective. Two special forces were also to be used, Von der Heydte's parachutists and Skorzeny's commandos. They were to infiltrate Allied lines dressed in American uniforms in order to capture vital bridges.

All these preparations were carried out in supreme secrecy, with all troops movements made at night with straw laid on the roads, whilst aircraft flew across the lines to muffle the sound of the panzers. The Americans had no idea what was to come.

The Assault

The Ardennes was considered a quiet front where the Allies sent fresh troops to gain combat experience and veterans to recuperate. The weather was appalling and everyone thought the Germans were a spent force.

At 4.00 am on 16th December, the German assault broke on the astonished heads of the American soldiers, taking the entire Allied command by surprise. Hitler's deception plan had been a complete success and the German artillery roared into action along the 80 mile front of what was to become the largest single battle fought on the Western front.

However, events did not go according to plan. In the north, the 6th Panzer Army, expecting to meet only the US 99th, also found the 2nd Division. Using only infantry and holding the panzers in reserve ready to exploit a breakthrough, Dietrich spent the morning piling the bodies of his men in front of the US positions. Although suffering heavy casualties, these two US divisions held their ground even when the 12th SS Panzer was committed to the assault. These two units held up the assault for a valuable two days.

The southern part of Dietrich's attack fared better with the 1st SS Panzer smashing a way through the 14th Cavalry and penetrating over 20 miles in the first day.

It was von Manteuffel's 5th Army in the centre which had the greatest success. Opposing them were the US 106th who were a new division sent to the 'Ghost Front' to gain experience. The 106th surrendered on masse after being completely surrounded.

Sensing the danger, the Allied command started to pump every division available into the Ardennes to halt the offensive. The US 9th Armoured was sent to aid the 106th but their progress was slow because of the closed roads. They eventually arrived at St. Vith and fought a superb defensive action at this focal point of Manteuffel's advance.

In the south the German 7th Army, lacking armour, was less aggressive and here the Americans held their ground. The two special forces failed in their primary objectives as the paratroops were hopelessly scattered and the commandos proved ineffectual. However, these two units did cause much suspicion and fear behind the lines.

The opening phase of the battle had seen the largest surrender of US troops in the Western Theatre. However, the Germans had been denied their quick advance at nearly every section of the front and the entire plan relied on a lightning advance.

The Race for the Meuse

The initial assaults left two holes in the US lines. The first saw the 1st SS Panzer racing for the Meuse and the second allowed Manteuffel's troops to pour towards Houffalize and Bastogne.

The 1st SS had been driving hard and led by Kampfgruppe Peiper, it had headed for the Ambleve river. On the 17th, Peiper's tanks bumped into a US field gun battery at a crossroads near Malmedy. The Americans surrendered after a quick firefight. As Peiper roared away the prisoners were lined up in an open field and on the orders of a junior officer, they were butchered. Later in the day the Allies found survivors of the massacre and once their story had been told, the propaganda machine was quickly put into operation. It suddenly became a risky business to surrender to the enemy and resistance stiffened.

Unaware of all this Peiper raced on ahead and attempted to find a river crossing but the bridges were all blown in his face. By now he was becoming short of fuel and decided to spend the night camped at Stavelot. Unknown to Peiper, there was a weakly guarded allied petrol dump located only a few miles from his halt. During the night the US 30th Division managed to force the gap between Malmedy and St. Vith, thus cutting Peiper's supply line. The 82nd Airborne was also rushed up to stop Peiper and the Kampfgruppe was isolated. Efforts to break through and relieve Peiper by Skorzeny's Bridgade were foiled and increasing Allied forces made Peiper abandon his vehicles on the 23rd and make his way back to the German lines on foot. Of the 5,800 men of his Kampfgrupe, Peiper led only 800 out of the encirclement.

Von der Heydte had managed to collect some 300 of his men. Having waited for the 1st SS to break through to him and being desperately short of food, he disbanded his force before surrendering to the Allies.

Meanwhile on the 18th, Hitler had added the 2nd SS Panzer Corps to Manteuffel's central army. These units were to strike through the gap made by the 5th Army and then swing north behind the defences stalling Peiper. The 2nd and 9th SS Panzer hit St. Vith and the town finally fell on the 21st, six precious days behind schedule.

During this delay the US lines had re-organized. Re-inforcements had arrived and British forces had also linked up with the Americans. Eisenhower put the northern shoulder of the Bulge under Montgomery's command on the 20th. This was the only time that US troops had been under foreign command and Eisenhower was later rebuked for that decision.

On 2th December, the 2nd Panzer Division was turned back by the US 2nd Armoured at the town of Celles, just four miles short of the Meuse. This was the high point of the German advance. Having failed to cross the Meuse, von Rundstedt asked the Fuhrer to break off the offensive. The Fuhrer immediately

dismissed the suggestion and continued to pour the remnants of his reserves into the battle.

Meanwhile in the southern sector of the battle, Bastogne had become the heart of the Allied defense. McAuliffe's 101st Airborne had turned Bastogne into a fortress by the 20th when Panzer Lehr and the 26th Volksgrenadier tried to take it. By the 21st the town was surrounded and German units raced onwards. At this time the garrison was asked to surrender and McAuliffe's response of 'NUTS' to this demand became legendary.

Whilst hard fighting was continuing in the north, Patton refused to throw his forces piecemeal into the battle. Fighting around Bastogne reached a new peak as the Germans recognised the threat from the south. In just seven days the Third Army swung north, assembled two Corps and drove a wedge through the 7th Army and into Bastogne with the 4th Armoured relieving the town on the 26th. This was indeed a remarkable achievement.

The advance was aided by the improved weather conditions on the 22nd which allowed Allied aircraft to carry out intense bombing raids. The Germans fought to stabilize their southern flank and maintain a line of supply open to their forces but more and more units were sucked into the fighting. Parts of four Panzer, two infantry, a paratroop and even the Fuhrer's escort brigade, were thrown into the struggle. Casualties were incredibly high on both sides but still Bastogne could not be taken.

The End

With the failure to take Bastogne or cross the Meuse, increasing supply problems and the ever increasing strength of the Allied armies, the German attack ground to a halt. On 3rd January Hitler finally accepted defeat and gave permission for his forces to withdraw.

The 1st Army under Montgomery and the 3rd under Patton met at Houffalize and the complete tip of the Bulge was eliminated. From then on the battle became a mopping up operation as the remnants of the German forces streamed east to Germany.

On the 23rd January the US 7th Armoured Division found itself back at St. Vith from whence it had driven a month before. The greatest battle on the Western Front was over.

Conclusions

Adolf Hitler's desperate gamble had failed. Casualties on both sides were heavy. Of 600,000 Americans involved there were 81,000 casualties (19,000 killed). Of the 55,000 British troops there were 1,400 casualties and of the 500,000 Germans, at least 100,000 were killed, wounded or captured.

The American soldier proved he could fight and the spirit of the German army was finally crushed.

There can be no doubt that the battle shortened the war since the Germans could not replace their men and equipment. In addition Germany's eastern defences had been stripped to provide troops for the assault. The rest of the European war was simply a formality of mopping up die-hard units.

Hitler's great gamble had become his great folly.



"Leading elements of Kampfgruppe Peiper, at a crossroads on their westward advance, riding in a versatile amphibious Volkswagen 166 Schwimmwagen, 17 December 1944"

23. DESIGNER'S NOTES

This game has been designed to let the player experience some of the difficulties faced by both sides during the Battle of the Bulge, whilst at the same time, being simple and entertaining to play.

The German player has two main options if he is to achieve a victory. He must either drive all out for the Meuse or he should go for the small solution to a limited attack followed by a holding action.

Although the German player initially has a vast superiority in numbers, the ground is well-suited to defence and the Allied player only has to fight a delaying action until re-inforcements and air cover become available.

The German player must rely on speed since the lack of supply as the game progresses will become critical. Taking the fuel depots can give the German advance sufficient power to gain a victory.

A problem faced by both sides is the terrain in the Ardennes which was rough and often had a deep covering of snow. This means that movement off roads is slow and you will get into supply difficulties. The roads were not designed for mechanical warfare and many traffic jams occurred. To simulate this problem it was decided that no stacking would be allowed. Therefore, the player must organise his columns carefully.

You should be wary of blowing and building bridges. Beware of the large amounts of supply required and also consider the effect on supply routes. The rules for blowing and building bridges are simple in order to make the game more playable.

Always try to attack with more than one unit and with artillery support when possible. Do not forget to use the HOLD command to increase morale and reduce casualties and try to use terrain to your benefit.

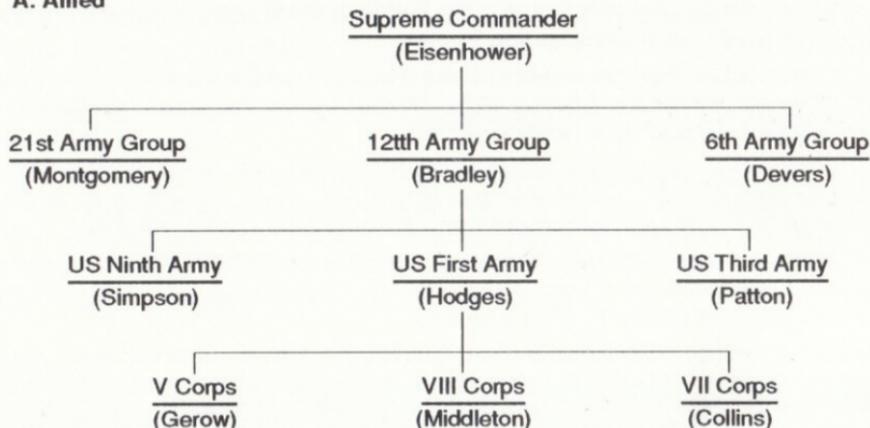
German commandos dressed in American uniforms are always mentioned in reports on the battle. After research, I decided to ignore this in the game design since the effect of their activities was negligible.

Finally, I would like to thank Chris Preece and Dave 'The Butcher' Barlow for their assistance in the historical research and testing of this game.

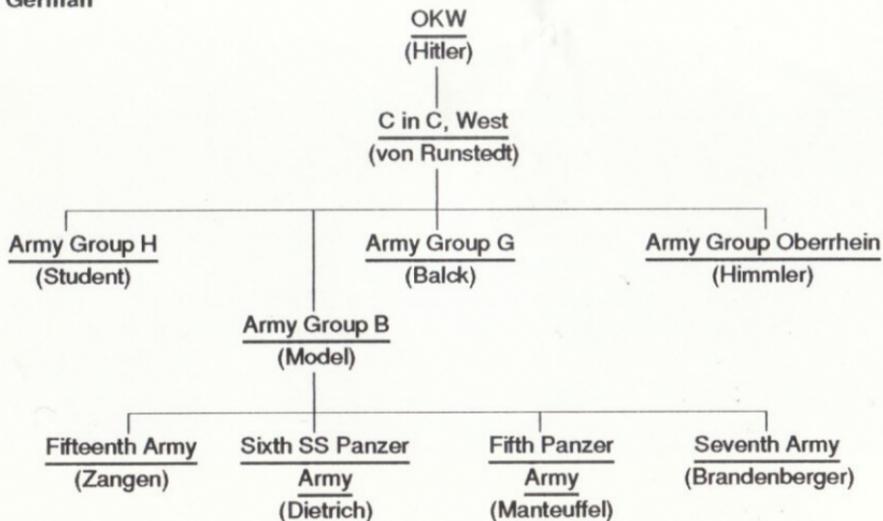
STEVE THOMAS

24. CHAINS OF COMMAND 16th DECEMBER 1944

A. Allied



B. German



BIBLIOGRAPHY

The Battle of the Bulge – Charles B. MacDonald
War Maps – Simon Goodenough
Ardennes 1944: Peiper & Skorzeny – Jean-Paul Pallud
Death of a Division – C. Whiting
Massacre at Malmedy – C. Whiting
Hitler's Last Offensive – P. Elstob
The Battle for the Ardennes – J. Stowson

ACKNOWLEDGEMENTS

Program designed and written by Steve Thomas

© 1990 S. Thomas

Photograph reproduced by permission of the Trustees of the Imperial War Museum

COPYRIGHT WARNING

All rights reserved. Unauthorised copying, lending or resale by any means strictly prohibited.

Published by **Cases Computer Simulations Ltd.**, 14 Langton Way, London SE3 7TL. Tel: 081 985 7232.

GUARANTEE

This software is guaranteed against the tape/disk being faulty. If it is found to be faulty, return the TAPE/DISK ONLY to CCS Ltd., at the above address for a replacement. This guarantee is in addition to any statutory rights.

RA

Published by
Cases Computer Simulations Ltd.
14 Langton Way
London SE3 7TL