WELLINGTON AT WATERLOO

By Ken Wright
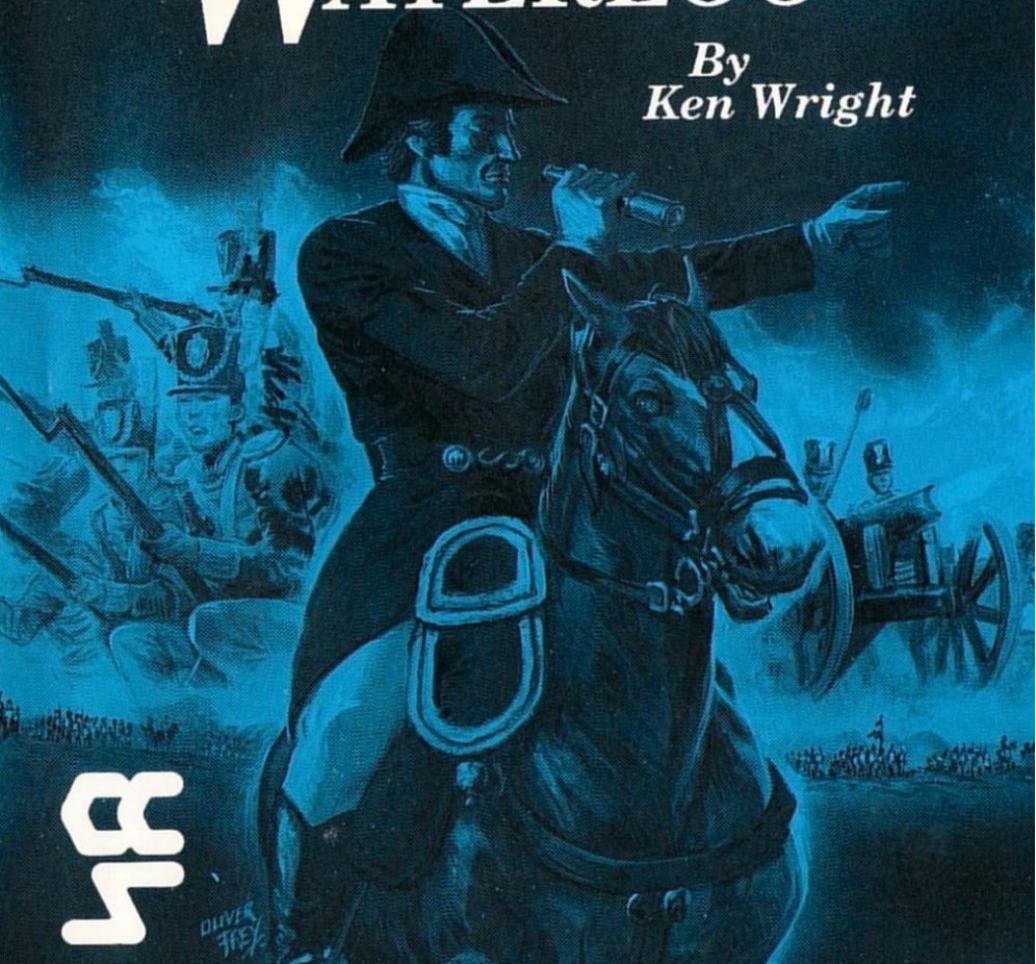
Wellington at Waterloo
TABLE OF CONTENTS

Section

1. Introduction

In Wellington at Waterloo the player commands the Duke of Wellington's Anglo-Dutch army and the 4th corps of Blucher's Prussian army.

The computer commands the army of Napoleon which, on 18th June 1815, attempted to defeat the allied armies on the field of Waterloo.

2. Getting Started

The game is controlled via a set of menus from which the appropriate actions may be selected. A section of the battlefield will be displayed at all times. The area displayed may be scrolled by using the arrow keys.

2.1 Loading

To load the game, follow the instructions in the Spectrum manual. The game will load in three sections.

2.2 Game Levels

Once the game has loaded the option is provided to select the game level. Level 1 is for beginners, level 3 for 'experts'.

2.3 Loading Saved Game

Having selected the game level the option to load a previously saved game is given. To select this option press "L" when requested and follow the on-screen prompts. If starting a new game then press any other key to continue to the save game prompt.

3. Saving a Game

The player is given the option of saving the game by pressing the "S" key.

This option is available at the start of each game turn allowing the battle to be saved for another session. If save is not required press any other key.

3.1 Ending a Game Turn

If there are orders still to be issued, press 'A' to access the **Army Orders** menu. To signify that the player has issued all required orders press the "0" (zero) key, the computer will then instigate the **End Turn** phase.

4. Army Orders

On selecting the **Army Orders** option access is gained to the player's main menu. From this menu it is possible to issue orders to armies under the player's command, obtain details of corp's effectiveness, examine the terrain on which each unit is located, re-organise individual units or exit to the previous menu.

4.1 Orders (press key O)

On selecting the 'orders' option a list of Wellington's forces will be displayed. Each corps may be selected by pressing the number key associated with it as prompted on the display.

The Prussian 4th corps arrive as reinforcements at some time after game turn ten. When they arrive they will be on the right hand side of the map. If you are not allowed access when you press its number key, then the corps has not yet arrived.

Pressing "E" will return control to the **Army Orders** menu.

4.2 Unit Order

After access to a corps the 'I' cursor will appear on that corps' HQ symbol. At the same time a I, II and III will appear on three units of that corps.

Use the arrow keys to move the cursor to the position you want the corresponding unit to move to. Press the T key to set this unit's target

position. The unit will move towards this target position during the following movement phase. It will continue to do so during subsequent movement phases until the movement order for that unit is changed or it is subject to certain rules of movement or combat. See 6.3 **Command Radius**, and 7.5 **Advance and Retreat During Combat**. Should you wish to retain a previously issued order to a unit then press the E key, not the T key. This allows a player to change one unit order without the need to reset all the others.

If a unit is currently covering the HQ symbol, then the first cursor will obscure this unit. Move the cursor before setting or exiting, as the obscured unit may be one that will correspond to a later cursor symbol.

If an infantry unit is being issued with a movement order, the computer will request the formation required.

The possible formations for infantry are:-

       LINE   (press L)

       COLUMN   (press C)

       SQUARE   (press S)

To leave the current formation press "E". If the infantry unit is adjacent to an enemy unit then this menu is skipped. You cannot change formation when adjacent to the enemy.

For details of infantry formation see 7. **Rules of Combat**. Repeat this procedure for all units in the corps. Control returns to the **Army Orders** menu.

4.3 Details Access (press D)

If the **Details** option is selected the arrow keys control the position of an on-screen cursor. When this cursor is positioned over a friendly unit its current status will be displayed:-

NAME   STRENGTH   MORAL

When positioned over an opposing unit the details given are name and
strength only. Pressing "E" returns control to the **Army Orders** menu.

4.4 Terrain Access (press T)

On selecting the terrain option the computer asks whether it is required to
view the terrain beneath the Allied (press A) or French (press F) units. The
computer will then request the corps number required from the displayed list.

The selected units will now be temporarily removed from the display allowing
the player to view the terrain beneath them. Pressing "E" returns to the
select Allied/French option, pressing "E" a second time returns to the **Army
Orders** menu.

4.5 Reorganisation (press R)

During the battle any unit may become weakened or moral lost to such an
extent that they are no longer an efficient fighting force. At this stage it is
possible to re-organise the corps provided that:-

(a) The corps HQ is more than 3 positions from the enemy.

(b) All units of the corps are within 4 positions of the corps HQ.

(c) No unit of the corps is adjacent to an enemy unit.

Providing these conditions are met then the player may Amalgamate or
Disband a selected unit. Pressing "R" will produce a list of the available
corps. The required corps must be selected by pressing the appropriate
number key from the list provided. Having selected the corps then the player
may opt to Amalgamate (press A) or Disband (press D). Pressing "E" will
return to the **Army Orders** menu.

4.6 Unit Amalgamation

If two units of the same type each have a strength of 2,000 or less, then they
may be amalgamated into one unit. The unit formed will have the combined

strength and average moral of both units. If the average moral is less than good it will be set at good.

To amalgamate two units, move the pointer to the first unit using the arrow keys and select by pressing "U". Next move the pointer to the second unit and press "U" again. Providing the conditions allow, the units will be amalgamated. Pressing "E" will return to the **Reorganisation** menu.

4.7 Unit Disbandment

If there is more than one unit of the same type within the corps and an individual unit has a strength of 2,500 or less then its strength may be shared between the other units of the same type, provided that no individual unit has a resultant strength greater than 4,000. This has the effect of evenly distributing the disbanded unit's strength.

To disband a unit move the pointer to the required unit using the arrow keys and then press the "U" key to select.

5. End Turn

When all orders have been issued pressing "E" from the **Army Orders** menu will return to **End Turn Selection** menu. By pressing the "0" (zero) key the computer will begin the allied movement phase. Each unit will be moved a distance determined by its type, formation and terrain (see Rules of Movement for details).

Once movement has been completed the computer moves into the allied combat phase (see Rules of Combat for details). Where combat is possible the computer acts as referee, deducting strength and modifying moral for both attacking and defending units. The player has no direct control over combat. If opposing units are within range then local commanders take over. Thus if two or more enemy units are in range of an artillery unit, the local commander will select the target.

During combat the strength lost by each unit will be displayed on the map.

The map will automatically scroll to display the current combat area.

5.1 French Phase

When all allied combat is complete the computer will make the move orders and combat decisions for the French units. During this phase the map will again scroll automatically to display the actions carried out Combat will be judged on the same basis as allied combat.

5.2 New Turn

When Allied and French turns are complete the computer returns to the **Save Game** option. The whole cycle is then repeated until one at the armies is reduced to less than 30,000 men. When this occurs the victory sequence is initiated.

5.3 Victory

Victory is determined by comparing losses between the two armies. There are no geographical objectives. This means that if the game is terminated before the arrival of the Prussians then the result will be increased in favour of the French.

It is possible to continue play after victory has been declared by pressing the "Y" key. To play again the game must be reloaded from cassette since the initial unit data will have been lost.

If you inadvertently press a key other than the 'Y' key, and you wish to continue the game, press **BREAK** and **ENTER/RETURN**.

6. Rules of Movement

During the movement phases each unit (Allied and French) obeys the following rules:

6.1 Movement Points

Each unit has a specific number of movement points allotted to it depending

on its type. These points are used to determine the distance moved on each game turn. The basic number of points allotted for each unit type is:-

Infantry	6 points	Cavalry	10 points
Artillery	4 points		

The number of movement points required to move one map block (distance covered by one icon) depends on the terrain over which the unit is moving. The following table gives the details.

Artillery cannot move adjacent to an enemy unit. Movement is restricted to a maximum of four positions per turn. Each unit exerts a degree of control over adjacent positions. As a result, no unit next to an enemy unit can move directly to a position that is also adjacent to an enemy unit.

MOVEMENT COST

INFANTRY

| TERRAIN	LINE	COLUMN	CAVALRY	ARTILLERY
Clear	3	2	2	2
Stream	4	3	3	4
Woods	N/A	3	4	4
Village	4	3	3	4
Ridge	4	3	3	4
Hamlet	3	2	2	2
Chateau	4	3	3	4

(Hougomont & La Haye Sainte)

Note: Infantry are not permitted to travel through woods in line formation and that infantry in square formation are not permitted to move at all.

6.2 Movement Rule

When a unit is required to move along a straight line, column or diagonal then movement will take place along that straight line. If not then a unit will move diagonally until it reaches one line or column from its destination. It will then move left/right or up/down with the last move along the diagonal.

The same method is used to determine "line of sight" for combat purposes.
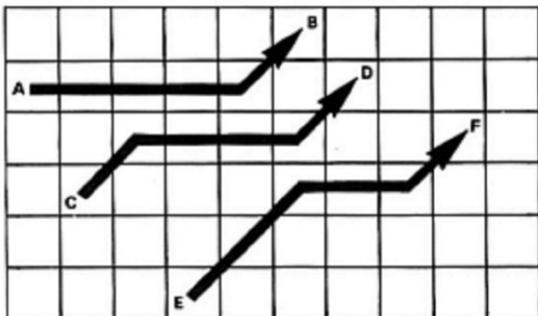
6.3 Command Radius

A unit more than **four positions** from its HQ at the start of a movement phase will move towards its HQ. The position of an HQ is the centre of each corps, calculated on the average line and column numbers of all units in

each corps,

6.4 Corps HQ

The player's HQ's are for the purposes of access and control. It must be stressed that an HQ is not a physical unit. Units may move freely through an HQ without effect.

7. Rules of Combat

After each army's movement the units of that army are considered attacking units during the following combat phase and the opposing units as the defenders.

There are two kinds of combat -firing, followed by adjacent combat.

7.1 Firing

Infantry in line formation and artillery will indulge in ranged fire against the enemy provided that the enemy is in line of sight and in range. **Line of sight is blocked by woods, villages, ridges, chateaux, hamlets and friendly units.**

Infantry units have a range of two unit positions, artillery have a range of five unit positions.

The effectiveness of the fire will depend on the formation of the opposition and its type according to the following tables.

Artillery unit strengths are in numbers of men not cannon in order to allow for easier comparisons of strengths with other types of unit.

Line Infantry Attacking

Infantry in column losses +20%

Infantry In square losses +20%

Cavalry losses +30%

Artillery Attacking

Range in Unit Squares

	2	3	4	5
Infantry in fine	+10%	+5%	-	-
Infantry in column	+15%	+10%	+5%	-
Infantry in square	+25%	+20%	+15%	+10%
Cavalry	+20%	+15%	+10%	+5%
Artillery	+25%	+20%	+15%	+ 10%

Where firing is possible each local commander will determine the target. The player has no direct control unless units are positioned in such a way that only one target is within range and line of sight.

7.2 Adjacent Combat

All adjacent opposing units will engage in combat. The losses resulting from combat are determined by each units strength, morale, unit type, the terrain on which the unit stands and a random factor. Additional losses will be incurred depending on attacking versus defending unit type. Both the attacking and defending units will suffer additional losses as shown on the following tables.

The following tables show the extra losses suffered by the unit type in the left hand column when fighting a unit of the type along the top of the table.

Defending Unit

Attacking Unit	Infantry			Cavalry	Artillery
	Line	Column	Square		
Infantry in line	---	100	---	100	150
Infantry in column	---	---	---	100	200
Infantry in square	100	100	---	---	---
Cavalry	---	---	150	---	250
Artillery	150	250	---	250	---

Attacking Unit

Defending Unit	Infantry			Cavalry	Artillery
	Line	Column	Square		
Infantry in line	---	100	---	100	200
Infantry in column	---	---	---	50	200
Infantry in square	50	100	---	---	---
Cavalry	---	---	150	---	250
Artillery	200	250	---	300	---

In reading these tables remember that the figures refer to extra losses suffered by the unit types in the left hand column.

For example, infantry in column attacking a cavalry unit will suffer 100 extra losses, but when defending against a cavalry attack will suffer 50 extra losses.

This does not mean that the Infantry unit will suffer 100 or 50 losses more than the cavalry unit but more than it otherwise would have done if it had been fighting another column of infantry, for example.

The losses are further modified by the effects or terrain as shown on the following table.

Terrain Effect Table

Terrain Type	Additional Attacking Losses	Reduced Defending Losses
Stream	100	---
Woods	---	100
Village	---	100
Ridge	---	100
Hamlet	---	50
Chateau (Infantry)	---	200

Finally, each unit involved in more than one attack/defence during a single combat phase will have its strength reduced by one quarter for the second and subsequent combat in that phase. Normal strength will be restored at the end of the combat phase.

7.3 Morale

The morale level of a unit adds to its effectiveness in combat. This effectiveness may be measured in the equivalent number of extra men produced by the moral level.

Morale Level	Equivalent Extra Men
Excellent	600
Very good	500
Good	400
Fair	300
Low	200
Poor	100
Abysmal	0

Morale is affected by the results of combat. If a unit suffers losses of 400 or more as a result of ranged combat, its morale is reduced by one level. If a unit suffers losses equivalent to its morale level during adjacent combat, then its morale is reduced by one level.

7.4 Domino Effect

A unit with abysmal morale will rout during the course of the game turn. All other units of the same corps will suffer a morale loss of one level. Any unit whose morale is so reduced to abysmal will rout on the same game turn. Under the right circumstances this can produce a domino effect in which all the units of a corps rout on the same game turn.

7.5 Advance and Retreat During Combat

Defending units may retreat and attacking units may advance, depending on the results of combat. A retreating unit will move in a direction determined by

the relative positions of the two units.

An advancing unit will move towards the position set by its current movement order.

A unit of the player's army subject to retreat will move to, and remain at the retreat position until another order is issued to that unit. A retreat move may take place in the following movement phase if the unit did not possess enough movement points in the combat phase.

An attacking unit advancing after combat will still resolve combat with all enemy units it was adjacent to before the advance took place.

7.6 Artillery Rout

If an artillery unit suffers 1,000 or more losses in a complete game turn (two combat phases), then it will rout at the end of that game turn.

8. Limited Intelligence

Computer units whose exact positions are known are displayed on screen. Units whose position but not type are known are displayed by an HQ symbol. Corps whose general whereabouts are known have their HQ displayed.

9. Abbreviations

DIV Division	**GD** Guard	
CAV Cavalry	**IIIC** 3rd Cavalry Corps etc	
ART Artillery	**I** 1st Corp etc	**UX** Uxbridge
BDE Brigade	**RES** Reserve	**LT** Light
BR British	**B** Brunswick	**KGL** King's German Legion
NETH Netherlands	**AP** Artillery Park	**HAN** Hanoverians

10. Beginner's Notes

Players new to battle simulations of this type may appreciate a few tips on how to get to know the game and improve their skills.

Having selected Level 1, scroll around the map. Examine your own army. All your units (except for your hoped for Prussians) can be made visible on one screen display.

You will see:

1st corps (William of Orange) - 4 infantry and 1 cavalry unit

2nd corps (Hill) - 2 infantry and 1 artillery unit

Reserve corps (Picton) - 2 infantry and 1 artillery unit

Brunswick's corps - 2 infantry units (1 light inf)

Uxbridge's cavalry - 4 cavalry units

Artillery Park - 2 artillery units

Scroll down and look at the French in the same way.

You will see:

1st and 2nd corps, looking very formidable with 4 infantry and 2 artillery units each.

The Guard, the French elite troops with 3 infantry and 1 cavalry unit.

3rd and 4th cavalry corps with 3 units each.

6th corps with 3 infantry units.

Remember that once the game starts you will lose sight of all the units not close to your own, but the HQ flags will give you an idea as to where they are.

Scroll the map to the right and left and see how much room you have for

THE BATTLE OF WATERLOO
18 JUNE, 7–9 PM.

To Brussels

Mont St. Jean

WELLINGTON

La Haye Sainte

BLUCHER
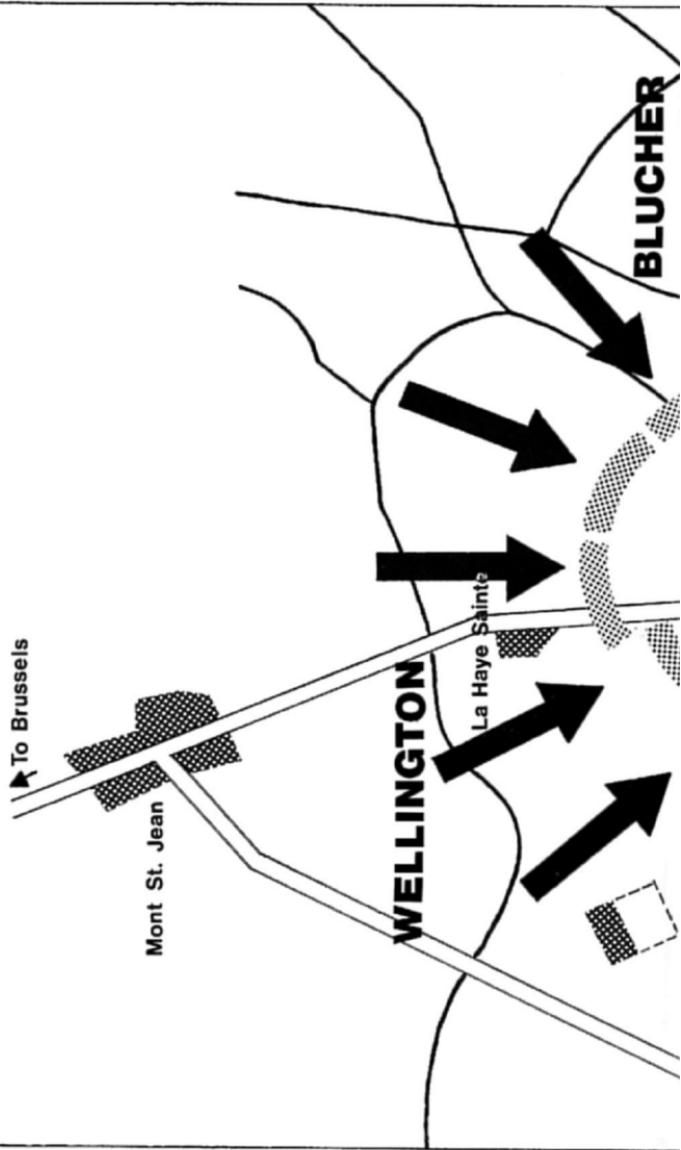
Hougoumont
To Nivelles

To Charleroi
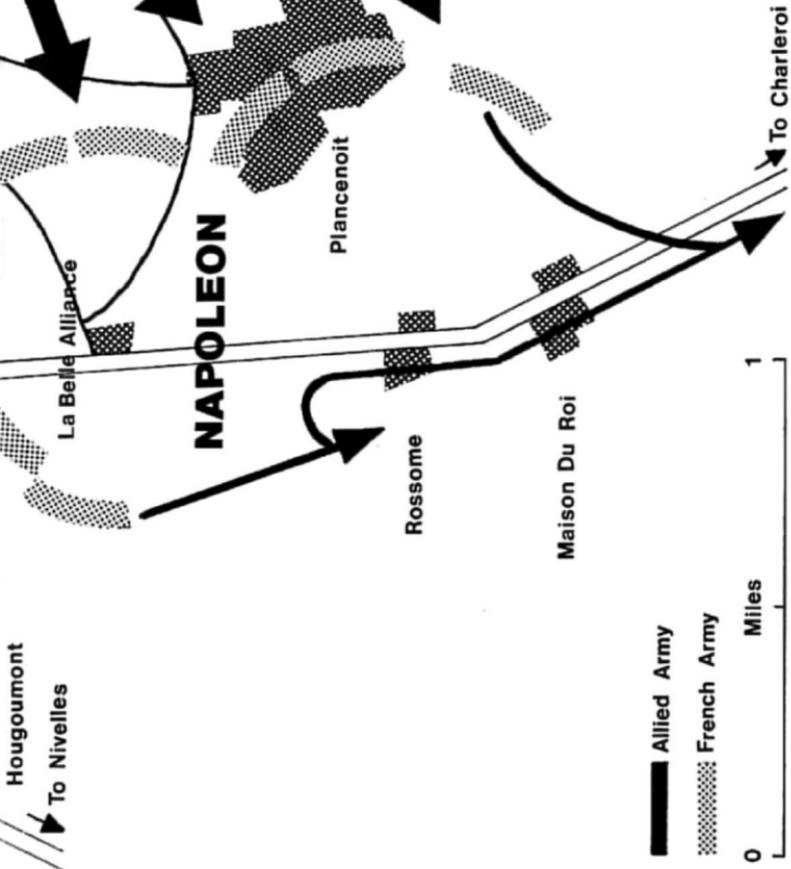
La Belle Alliance

NAPOLEON

Plancenoit

Rossome

Maison Du Roi

Miles

0   1

Allied Army

French Army

manoeuvre. Note, the ridges and the woods provide good defensive terrain and cover from artillery, as do the chateaux Hougomont and La Haye Sainte.

Decide on a simple, basic plan and see how the computer reacts to it. When giving orders remember that unts can get in each others way. A good commander will give orders that avoid this.

Try not to pack the different corps close together. This is likely to produce confusion in your own units, and provides the computer with a simple target Stretching out your front-line will give you room to manoeuvre and create more problems for the computer to solve. It may produce weaknesses which you can then exploit.

Keep part of your army in reserve so that it can be used later when and where reinforcements are needed.

Cavalry is most effective against units already weakened by combat. Do not launch them early in dashing attacks (See the Historical Notes for details of Ney's ghastly mistake).

Make sure artillery units have an unobstructed field of fire. To keep them protected from attack, you will need to deploy infantry units slightly forward and to the side.

Have definite objectives for each corps. If far-sighted, sensible orders have been given, you will not need to give new orders to every corps each turn, and the game can move quickly, especially early on.

Don't get bogged down in tactical complexities until you know the game. Use the column formation if you want to get somewhere fast, otherwise use the line formation. Ignore the square formation at first. Withdraw badly battered corps for re-organisation while they are still of some use.

As you become more skilled, you can learn to exploit the various infantry formations more expertly and to use re-organisation to maximum effect. This will be needed at Levels 2 and 3, but at Level 1 an effective game is possible without these complexities.

Avoid creating a static front-line, locked in combat. Maintain manoeuvrebility, retreating if necessary, to give the computer maximum problems. You will have the chance to creating confusion and weak targets for attack.

Important: Your units will try to go where you direct them, but if other units are in their way, they will try to find a way round, which may not always produce sensible results. This may be annoying, but it is also realistic. If they have to retreat after combat their movement is likely to be unpredictable.
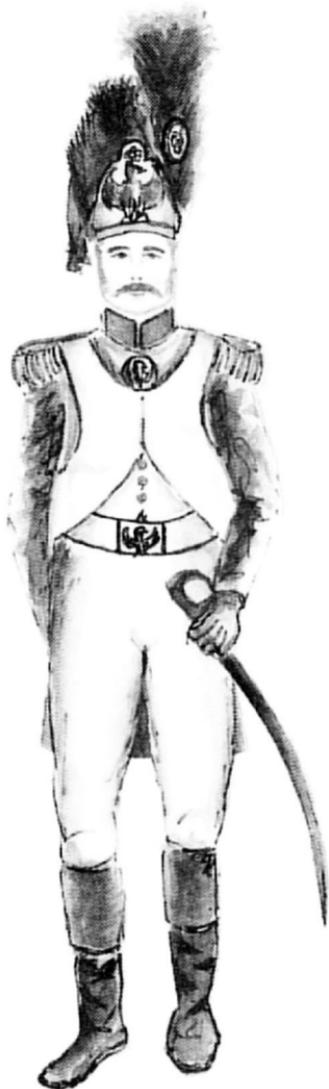
A Grenadier Officer of the French
Imperial Guard in ceremonial
dress, 1814.
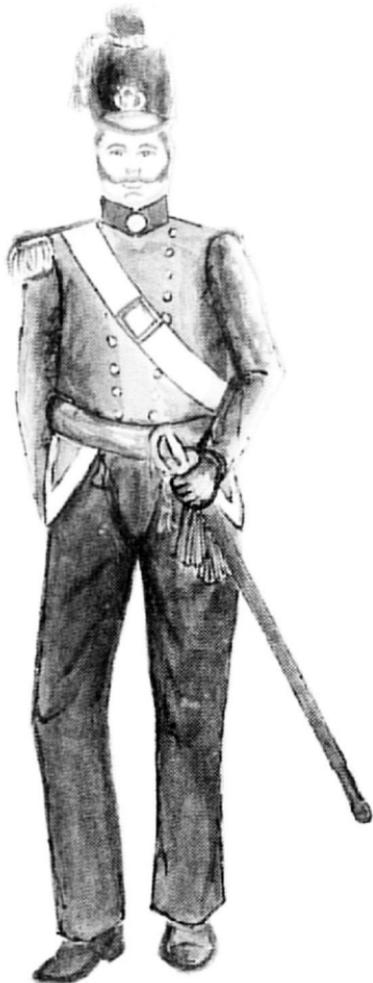
An Officer of the Northumberland
Fusiliers in ceremonial dress,
1814.

11. Historical Notes

On his return from Elba, Napoleon was faced with an enormous organisational problem.

Out of the 224,000 men the Emperor found on the French army's muster rolls, hardly 50,000 were actually ready for field service. Morale was low, discipline shattered and command structure virtually non-existent.

Of the marshals, Marmont and Victor had joined the Bourbons. Augereau, Oudinot, St. Cyr, Perignon, Kellerman, Moncey, Lefebvre, Serurier and Murat were considered unsuitable for various reasons. Macdonald and Massena dodged duty on the pretence of ill-health. Ney displayed symptoms of severe emotional disturbance, and was initially only trusted with minor assignments. Sickness crippled Mortier jusl as the campaign opened.

Fortunately for Napoleon many experienced generals were available to replace these marshals, though much personal initiative was to be missing in the forthcoming battles.

Marshal Davout was made Minister of War, which was undoubtedly a waste of his military skill, but a post for which his loyally, zeal and great administrative talent particularly filled him.

The major problem was the lack of a competent Chief of Staff. Berthier had died mysteriously trying to return to France after escorting Louis to safety. He was never effectively replaced. Napoleon eventually made Marshal Soult his chief of staff, but Soult was unfamiliar with staff work, was widely disliked and handicapped by a lack of trained assistants. Despite these shortcomings, the assembly and re-organisation of the French army was a remarkable achievement in so short a time.

Napoleon had one other slight problem - over 600,000 Prussian, British, Austrian, Russian and other allied troops were marching against him.

He had two courses of action open to him. He could stand on the defensive

as in 1814, or he could take the offensive as soon as possible against Blucher and Wellington, confident that after their defeat he could cope with the Austrian and Russian armies. He chose to take the offensive, and the campaign that was to culminate in the Battle of Waterloo had begun.

Napoleon's objective was to drive a wedge between Wellington's Anglo-Dutch army and the Prussian army under Blucher, and to defeat them in separate battles. Wellington, unprepared for a French offensive, allowed Napoleon to catch and defeat Blucher's Prussians at Ligny on the 16th of June.

While Ligny was a significant defeat, Blucher dismissed all advice to retreat eastwards towards Liege and instead maintained faith in Wellington and retreated northwards to Wavre - just 12 miles due east of Waterloo.

This was undoubtedly the most crucial decision of the whole campaign. Leaving Marshal Grouchy in command of two corps under Vandamme and Gerard, to shepherd the Prussian army in what he was firmly convinced would be an easterly retreat, Napoleon turned his attention to Wellington's Anglo-Dutch army.

Wellington's position south of Waterloo was deceptively strong. Its backbone was a low narrow plateau running roughly east/west. The plateau's south slope was relatively steep, and this, combined with the fortuitous bogging of the low ground at its foot, would take much of the shock out of the French attacks. Wellington had also heavily defended the two chateaux, Hougomont and La Haye-Sainte, immediately in front of the centre of his line. With their huge walls they would prove to be a formidable obstacle for the French army.

Napoleon's dispositions were such as to permit him to manoeuvre in any direction, yet gave no preliminary hint as to the probable direction of his main effort. Preceded by a massive artillery bombardment, Napoleon decided to assault Wellington's left centre and left flank using d'Erlons corps with support from Ney.

Reille was ordered to merely mask Hougomont by occupying the woods to

the south in order to distract the enemy and keep them guessing as to where the main blow would fall.

Jerome led a brigade into the woods, clearing them quickly by 1215pm. Then, wild with success, he rushed the six foot thick park walls of the chateau but was bloodily repulsed. More than a division was poured into the assault on Hougomont. Severe losses were suffered - all for an objective that Napoleon had never wanted, and which was never taken.

Shortly before 1300 the great battery was ready to fire, and Ney requested permission to launch the main attack. At the same time Napoleon's attention was called to an odd change in the appearance at the ridge around St-Lambert away to his right. The whole area was darkening and some of his staff dismissed it as merely the shadow of a cloud.

The riddle was solved when hussars brought in some Prussian prisoners and an intercepted message from Bulow to Wellington. Bulow's corps was at St-Lambert with Bluchers other three corps at Wavre. Grouchy, the prisoners said, was not in contact with the Prussians.

The prudent course was to withdraw and fight another day. With enemies marching on France from all directions Napoleon did not have the time and moving Mouton's corps to cover his right flank, committed himself to battle.

After half an hours pounding by the artillery battery on the Anglo-Dutch left centre and the left flank, d'Erion advanced. The French quickly cleared the enclosures around La Haye-Sainte but could not break into the main buildings. Papelotte was taken and the Allied line started to break. At this point Uxbridge charged, his cavalry sweeping the French infantry before them. The infantry broke and ran - some of them never stopping. Unfortunately, neither did the pursuers who entered the heart of the French army around La Belle Alliance and were cut down. This resulted in some of Wellington's cavalry refusing to charge later in the day.

With one of his front line corps shattered, another committed to the totally wasteful effort around Hougomont and Moulon's corps withdrawn ready to

face the slowly advancing Prussians, there seemed little left for Napoleon to do.

Meanwhile the French gunners had once again taken up their positions on the central ridge and re-opened their fire. The bombardment that followed surpassed even that of Wagram, and Wellington moved his line behind the crest of the plateau.

Suddenly the battle look a novel and spectacular form. Mistaking the partial withdrawal of Wellington's infantry for the start of a general retreat, Marshal Ney decided to take a short cut to victory by sweeping the ridge with heavy cavalry. He assembled some 5,000 of them, including 8 regiments of cuirassiers, on the plain in front of the allied centre between Hougomont and La Hays-Sainte.

Wellington watched the splendid spectacle with amazement. It seemed unbelievable that the French would dare to assail a line of unbroken British infantry with cavalry alone, but this was plainly their intention.

On reaching the crest of the plateau this cavalry met a chequer board pattern of infantry squares determined to hold their ground. Throughout the whole of the Napoleonic War cavalry had never broken infantry squares determined enough to stand their ground, and Waterloo was no exception. Short of impaling their horses on hedges of bayonets they could do little but mill around the squares presenting themselves as targets to be shot down.

Both Reille and d'Erlon were ordered forward again with whatever infantry they could muster and fighting took place along most of the line. Both armies were determined to be the victor, and the result was carnage.

During this time, Mouton's corps supported by the Young Guard had engaged and held the Prussians around Plancenoit, although Blucher eventually gained this village. Napoleon sent two battalions of the Old Guard. They chased the Prussians out of Plancenoit and thus secured his flank. Keeping two battalions as reserve, Napoleon turned the rest of the Old Guard over to Ney with orders to once again assault the depleted centre of

Wellington's army.

Ney, forgetting that he was in command of an army, led the charge of the Old Guard, thus reducing himself to the level of the common soldier and totally losing control of his army. Meeting the same resistance that the French army had met all day, the Old Guard hesitated, faltered, turned and fled.

The Guards' repulse staggered the French. Wellington ordered his whole army forward. Whilst the Guard at Plancenoit and La Belle Alliance shrugged off all attacks and retired slowly in perfect order, the reaction of the rest of the French army was one of discouragement, indiscipline and growing panic. As veterans they understood the danger of being trapped between Wellington's and Blucher's armies, and saw no sense in lingering.

Napoleon's army retreated towards Paris, pursued by Blucher's Prussians, with the shattered remnants of Wellington's Anglo-Dutch army incapable of anything other than tending its wounds.

Blucher approached the outskirts of Paris 11 days later on the 29th of June and with 400,000 Austrians and Russians swarming through eastern France, Napoleon abdicated for the second time.

Casualties at Walerloo were approximately 15,000 Anglo-Dutch, 7,000 Prussian, and 26,000 French dead and wounded.

The armies that met at Waterloo were equally keen on victory and led by men unwilling to accept defeat. Indeed Blucher was seemingly incapable of ever accepting a defeat!

The result was slaughter on a scale rarely seen even in the great battles of the previous 20 years. Due to conditions prevalent at the time, many of the wounded who had survived the battle itself did not survive the hospitals. The claim that Brussels stank of gangrene for three weeks was probably only a slight exaggeration.
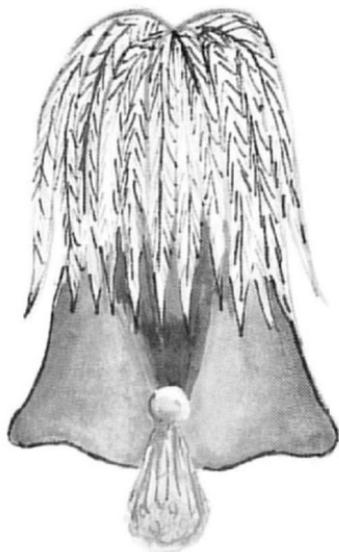
Ceremonial hat worn by the Duke of Wellington, Commander-in-Chief 1827.
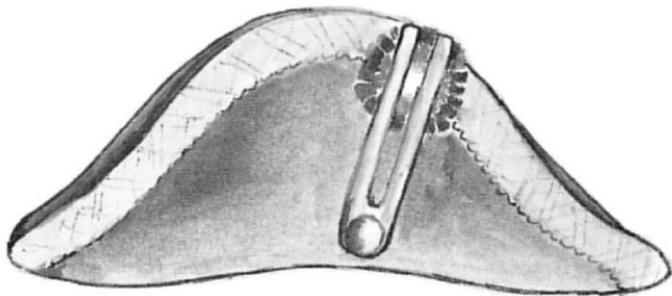
Bicorn hat worn by Napoleon, First Consul, at Marengo 1800.

12. Designer's Notes

The game is designed to enable the player to simulate the many varied battles that could have taken place on the field of Waterloo on the 18th of June 1815. It is an historical simulation, not an historical duplication. Historical duplication serves no purpose, as we already know what actually happened. The object is to allow the player to choose and explore the many strategic and tactical options available.

The army strengths are biased slightly in favour of the French to balance the difference in intelligence between the player and the computer. It also ensures a greater challenge for those who enjoy facing obstacles and overcoming them - the type of player for whom this simulation was designed.

The computer opponent is capable of complex decision making and will challenge the most experienced wargamer. Newcomers to wargaming should start at level 1 (see Beginner's Notes), and more experienced players at level 2 or 3.

My objective is to set the player thinking at every stage. As the player's ability to command an army increases, so the game will give greater reward. The game is designed to create as many critical considerations as possible on each turn and to avoid any sense of 'waiting for something to happen'.

The computer is not pre-programmed. It will respond to the player's moves in an intelligent and varied manner. There is no particular method of winning which, once identified, wins every game. Throughout the game identify the opportunities available to you and equally as important, those available to your opponent and guard against them.

There are no geographical objectives in the simulation. The result is determined purely on a calculation or losses. If the game is terminated before the arrival of the Prussians, then it is assumed that the Prussians routed at the Battle of Wavre, and this will affect the result significantly in favour of the computer.

This means that the player can fight the battle anywhere on the map and fully explore the possibilities afforded by the different terrain. It also means that whatever strategy is chosen it must allow time for the arrival of the Prussian 4th corps. This corps will arrive some time after 10 game turns on a random basis.

There are many different strategies that can be employed. Some of the more obvious ones are as follows:-

(1) Maintain a concentrated and co-ordinated army, fighting the battle on a relatively short front line. This affords greater opportunity for replacing a corps in the frontline that requires re-organisation.

(2) Split the army into two and effectively create two separate battles. Try to create such superiority in one of the battles that it is won so decisively as to override the result of the other battle.

(3) The battle of manoeuvre. Constantly try to out-manoeuvre the enemy to create situations advantageous to local and short-term attacks.

Tactically there are varied options open tp the player. Probably of greatest importance is the effective use of artillery. Correctly used it can dominate sectors of the battlefield. Its ability to inflict considerable losses, even at long range, means the player should be looking to use it in areas where the terrain presents a wide field of fire.

When artillery is subject to adjacent combat then losses on both sides will be high. The scale of the game does not allow for the number of times that artillery would be able to fire at advancing infantry or cavalry, so each combat involving artillery is adjusted accordingly.

If an artillery unit suffers 1,000 or more losses in a complete game turn then it will rout at the end of that game turn. In adjacent combat this represents an overrun of the artillery.

This means that the player should beware of charging artillery, particularly with cavalry. If the artillery unit is weak and likely to rout, then the choice to

take out an artillery unit in this way should probably be taken. Otherwise use at least two units and take advantage of the rule of combat which reduces unit effectiveness on second and subsequent combats. This rule of combat means that it is always beneficial to achieve odds of two to one or greater in adjacent combat between units of all types.

Decisions regarding infantry formations are very much subject to circumstances. Study the tables regarding adjacent combat both for terrain effects and the varying adjustments of losses between units of different types.

The infantry square, whilst effective against cavalry, does have some distinct disadvantages. If subject to fire from artillery or line infantry, its losses are high. The fact that an infantry square cannot move and that units cannot change formation when adjacent to an enemy unit, means that an infantry square can be tied down by a determined attack on the part of the computer. On the other hand line infantry are vulnerable to cavalry attack. Detailed tactical decisions regarding infantry formations are largely a case of trial and error.

Re-organisation is probably the single most important aspect of the game. Maintaining individually strong units with as high a morale as possible is critical. The player must always bear in mind the need for each corps to disengage and reach a position that complies with the conditions of re-organisation.

At all costs avoid the domino effect produced by abysmal morale. Remember that amalgamation of two units with very low morale will produce a resultant unit with good morale. Disbandment is better than amalgamation if all remaining units have a high morale.

Example of Re-Organisation

1st CORPS ORANGE

1st BR DIV	1,700 EXEL
3rd BR DIV	3,500 EXEL
3rd NETH DIV	1,100 POOR
2nd NETH DIV	2,100 FAIR
NETH CAV	2,800 GOOD

In this case both unit amalgamation and unit disbandment are possible. Amalgamation of 1st British and 3rd Netherlands divisions would produce the following result:-

1st BR DIV	2,800 GOOD
3rd BR DIV	3,500 EXEL
2nd NETH DIV	2,100 FAIR
NETH CAV	2,800 GOOD

In this case amalgamation has not produced a particularly strong unit and has also destroyed the excellent morale of the 1st British division.

If instead of amalgamation, disbandment of 3rd Netherlands division was chosen, then the results would be as follows:

1st BR DIV	2,100 EXEL
3rd BR DIV	3,900 EXEL
2nd NETH DIV	2,400 FAIR
Neth CAV	2,800 GOOD

This still leaves two relatively weak units but has maintained the excellent morale of the 1st British division. It has also produced a very strong unit with

excellent morale.

A careful corps commander would realise at this stage that the 2nd Netherlands division should be kept out of the front line and its strength preserved. When 1st and 3rd divisions have lost a further 400 men between them, then 2nd Netherlands division can be disbanded producing two very strong units with excellent morale. This represents the kind of tactical thinking required at levels 2 and 3. A less tactical, more strategic game can be played at level 1.

With regard to the sequence of access, I would suggest that on each game turn you access re-organisation to acquire a summary of the current state of your forces. Follow this by access to Details, which allows for direct comparisons of unit strengths to opposing units close to one another. You can then switch between Details and Orders identifying and issuing new orders to your corps in turn.

Remember, you are playing against a computer opponent that has access to information only on the same basis as yourself and therefore has no hidden advantages. It is important to bear in mind that the computer has the same problems as you have. It will play a game on a par with the player, but like the player, will not always make the best moves. This means it will present opportunities that you should always be prepared to take advantage of.

The difference in the three game levels is achieved by an increase in morale of the French army and a reduced chance of early Prussian reinforcement. At level 3 there is a good chance that the Prussians may not arrive before the battle is won, or more probably, lost. Morale only marginally affects the results of combat. However, because of the domino effect, it is a critical feature of the game overall. It means that strategies at level 1 can produce interesting games which at Levels 2 or 3 would only produce disaster. The ability to induce the rout of an entire French corps is greatest at level 1 and progressively more difficult at levels 2 and 3 (domino effect).

Ken Wright

Bibliography

The Military History & Atlas of the Napoleonic Wars by Esposito and Elting

Acknowledgements

Program written by Ken Wright. Cover graphics by Oliver Frey

Copyright Warning

Guarantee

This software is guaranteed against being faulty. If it is found to be so, return the tape only to CCS at the address above for an immediate replacement. This guarantee is in addition to any statutory rights.

The following games by Ken Wright are available mail order from CCS at the above address.

Blitzkreig	Spec.	48/128K	£9.95
Napoleon at War	Spec.	48/128K	£8.95
Overlord	Spec.	48/128K	£9.95
	+3 Disc		£12.95
	Atari ST		£19.95
Stalingrad	Spec. 48/128K		£9.95
	+3 Disc		£12.95
Yankee	Spec. 48/128K		£9.95