Napoleon at Waterloo rules

1.0 How to Start

Napoleon at Waterloo consists of these rules and the components which can be found here: a separate group of playing pieces, a map and charts with terrain effects and for combat.
The map should be spread out on a table with two players sitting on either side. Each player has his own piece of paper which the Terrain Effects Table (TEC and Combat Results Table (CRT) on it. The playing pieces should be placed in their starting positions, as indicated by the four-digit numbers on their facings, left side (for French) and right side (for Allied). At this point, the Players should review the Sequence of Play and begin a trial game, referring to the details of the rules when they have a question.

2.0 Equipment

The game equipment consists of the rules, charts (TEC and CRT), map, and playing pieces.

2.1 The game map represents the terrain on which the battle was fought.
   A hexagonal grid is superimposed on the terrain of the map to regulate movement and positioning of the playing pieces. Players will note that each hexagon (hereafter called 'hex') on the map has its own four digit identity number.
2.2 The Terrain Effects Chart summarizes how the features on the map affect the movement and combat of the playing pieces.
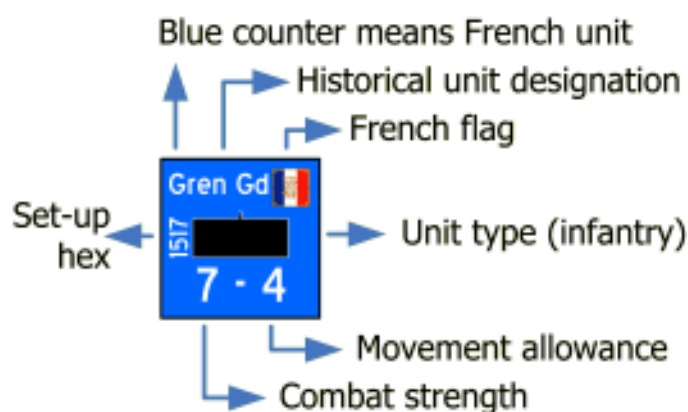2.3 The Combat Results Table is the primary means for resolving combat.
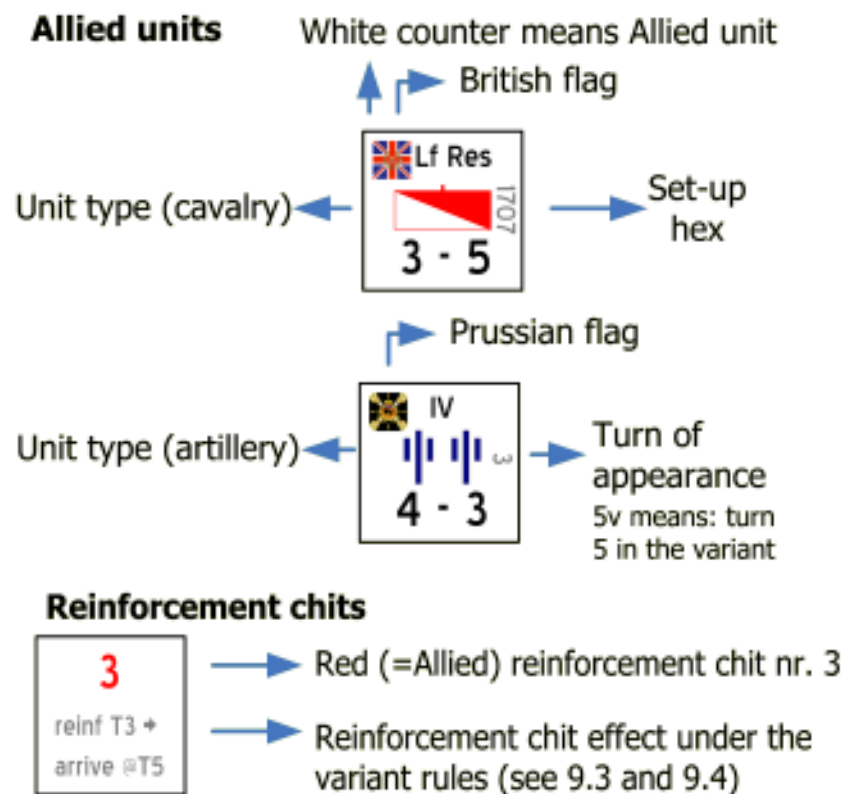   Players will need one common **six-sided die** in order to play the game.
2.4 The playing pieces represent the actual military units that took part in the historical battle.
   There are six items of information on the front face of each unit:
      1. The Player is given the Combat Strength (always the big left-hand number) and
      2. the Movement Allowance (right-hand number) of each unit.
      3. The Player is also told which hex the unit starts in or what Game Turn the unit enters the game as a reinforcement.
      4. And for historical reference, the Player is told what type of unit it is (infantry, cavalry, or artillery) and
      5. the historical identification (corps number in roman number, division in standard numbering. So 3/IV means 3rd division, 4th corps)
      6. Lastly, a small depiction of a flag as used by that country's units in that era is showed.

French units

Allied units   White counter means Allied unit

British flag

Unit type (cavalry) ← [Lf Res | 3 - 5 | 1707] → Set-up hex

Prussian flag

Unit type (artillery) ← [IV | 4 - 3 | 3] → Turn of appearance

5v means: turn 5 in the variant

Reinforcement chits

[**3** reinf T3 → arrive @T5]
→ Red (=Allied) reinforcement chit nr. 3
→ Reinforcement chit effect under the variant rules (see 9.3 and 9.4)

2.5 Combat Strength is the basic power of a unit when attacking or defending.
The Terrain Effects Chart will detail how this number is affected by combat. The Combat Strength value of a unit is deemed to consist of the printed number of Combat Strength Points.

2.6 Movement Allowance is the unit's basic ability to move in one Movement Phase.
This ability is expressed in terms of Movement Points. Each hex entered costs a unit one Movement Point.

3.0 Basic Procedure

The Players take turns moving their units and making attacks. The order in which they take these actions is described in this sequence of play outline. One completion of the sequence of play is called a Game-Turn. Each Game-Turn consists of two Player-Turns. Each Player-Turn consists of two Phases.

The Sequence of Play

THE FRENCH PLAYER-TURN

Step 1: French Player's Movement Phase
The French Player may move his units and bring in reinforcements.
He may move as many or as few as he wishes, one after another, within the limitations of the rules of movement.

Step 2: French Player's Combat Phase
The French Player must attack adjacent enemy units.
He may perform these attacks in any order he wishes, applying the results immediately as each attack is made.

THE ALLIED PLAYER-TURN

Step 3: Allied Player's Movement Phase
The Allied Player may move his units and bring in reinforcements.
He may move as many or as few as he wishes, one after another, within the limitations of the rules of movement.

Step 4: Allied Player's Combat Phase
The Allied Player must attack adjacent enemy units.
He may perform these attacks in any order he wishes, applying the results immediately as each attack is made.

These four steps are repeated ten times. The game is then over and the Players determine the victor according to the rules on How the Game is Won. Note that the game may be ended earlier if one Player achieves his victory conditions.

4.0 Movement of Units

Each unit has a Movement Allowance number printed on it which represents the basic number of hexes it may move in a single Movement Phase. Each Player moves only his own units during the Movement Phase of his Player-Turn (as outlined in the Sequence of Play).
Units move one at a time, hex-by-hex, in any direction or combination of directions that the Player desires. The Movement Phase ends when the Player announces that he has moved all of his units that he chooses to (or as of the time that he begins to make attacks).

4.1 A unit may never exceed its Movement Allowance.
> During its Movement Phase, each unit may move as far as its Movement Allowance permits. Basically, each unit spends one Movement Point of its total Allowance for each hex that it enters. Individual units may move less than their Movement Allowance. Units are never forced to move during their Movement Phase. Units may not, however, lend or accumulate unused Movement Points.

4.2 Units must spend one Movement Point to enter each hex.
> Units may only enter or leave woods hexes through hexsides crossed by roads (even when advancing or retreating due to combat).

4.3 A unit may never enter nor pass through a hex containing an Enemy unit.

4.4 A unit may never end its Movement Phase in the same hex as another Friendly unit.
> One or more units may move through a hex containing another Friendly unit, but the moving units may never end the Movement Phase in the same hex as another unit. If this should inadvertently happen, the opposing Player gets to choose which of the illegally placed units are to be destroyed (so that only one unit remains in the hex).
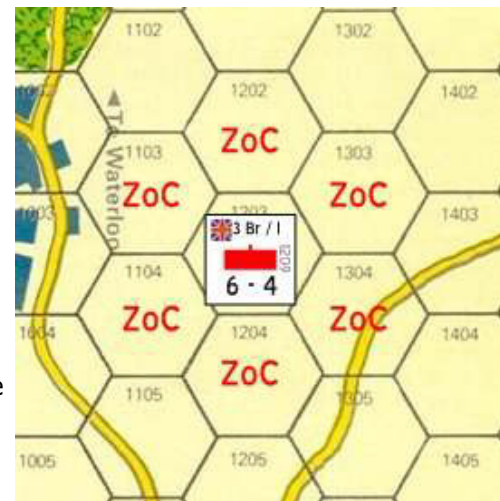
4.5 A unit must stop upon entering a hex that is in the Zone of Control of an Enemy unit.

> Whenever a unit enters a hex that is directly adjacent to any of the Enemy Player's units, the moving unit must immediately stop and move no further that Phase. Note that there are six hexes adjacent to most hexes on the map. The six hexes adjacent to an Enemy unit are called the Zone of Control of that unit.
> A unit may not move so long as it is in an Enemy controlled hex. Only by freeing itself through a combat result may a unit escape the 'freezing' effect of an Enemy Zone of Control.

4.6 Except for French Victory Requirements, units may not leave the map.
> If forced to do so by the Combat Results Table, they are eliminated instead. (see 8.3)

5.0 Combat Preconditions

Each unit has a Combat Strength number printed on it which represents its basic power to attack during its Combat Phase and to defend during the Enemy Combat Phase. Whether or not a unit can attack is strictly a matter of how it is positioned with respect to Enemy units. All units that are in Enemy Zones of Control must attack during their Combat Phase; artillery units not in Enemy Zones of Control but that have Enemy units within the range of their guns may execute a special form of attack called bombardment.
The Player examines the positions of his units, determining which are in Enemy Zones of Control and which artillery units have Enemy units within their range. Attacks are conducted using the Combat Results Table, the die, and the procedures detailed in the section on Combat Resolution (see 6.0)

5.1 A unit that is in an Enemy Zone of Control must attack and every Enemy unit that has a phasing unit in its Zone of Control must be attacked.
> If there are several possible combinations, the Player may choose which of his units will attack which Enemy unit so long as every Enemy unit that is required to be attacked is attacked.

5.2 No unit may be involved in more than one attack per Combat Phase.
> No unit may participate in more than one attack, nor may a given Enemy unit be the object of more than one attack, in a single Combat Phase.

5.3 More than one unit may participate in a given attack.
> As many units as can be brought to bear can participate in the same attack.

5.4 More than one Enemy unit can be the object of the same attack.
> So long as each participating attacking unit could have attacked every one of the defending units separately, then all may attack all the defending units in a single combined attack. (see 5.8)

5.5 A unit's Combat Strength is indivisible.
> Units may not use part of their strength in one attack and part in another, neither may they reserve or withhold part of their strength in an attack or defense.

5.6 An artillery unit not in an Enemy Zone of Control may make a bombardment attack against an Enemy

unit that is two hexes distant.

The important distinction between bombardment and regular attacking is that bombardment attacks can be made only by artillery units that are not in the Zone of Control of any Enemy unit. This bombardment attack can be used to satisfy the requirement that a given Enemy unit be attacked (because some other Friendly unit happens to be in its Zone of Control) so long as the other Friendly unit can attack another Enemy unit.

5.7 Except when making an combined attack (see 5.8), bombarding artillery units may attack only a single Enemy-occupied hex.

Even though it may have several Enemy occupied hexes in range, a given artillery unit may bombard only one of them in a single Combat Phase. Note that several artillery units may direct their bombardment at the same hex, in which case their strengths are totaled into one aggregate bombardment attack.

5.8 An attack may be made which combines the strength of adjacent units with that of bombarding artillery.

The strength of the artillery unit is simply added to that of the adjacent attacking units. Note that if the Enemy is in more than one hex, the contributing bombarding artillery need have only one of the Enemy occupied hexes in range in order to add its strength to the attack. This is the exception to Case 5.4.

6.0 Combat Resolution

An **attack** is defined as the comparison of the strength of a specific attacking force with that of a specific defending force and resolved by the throw of a die in connection with the Combat Results Table. The results may affect either or both the attacked and the defender.

The attacking Player totals the Combat Strength of all of his units that are involved in a given attack and compares the total with the total Combat Strength of the Enemy unit or units being attacked. The resulting comparison is called the Combat Ratio. The Player locates the column heading on the Combat Results Table that corresponds to the Combat Ratio. He rolls the die and cross indexes the die number with the Combat Ratio column and reads the result. The indicated result is applied immediately, before going on to any other attacks. When he has made all of his attacks, the Player announces the end of his Combat Phase.

6.1 The attacking Player must announce which of his units are involved in a given attack against a specific defending unit or group of units.

He must calculate and announce the Combat Ratio, specifying which of his units are participating in the attack, before it is resolved. He may resolve attacks in any order he chooses. Once the die is thrown, he may not change his mind.

6.2 The calculated Combat Ratio is always determined to represent a specific column of results on the Combat Results Table.

If the Combat Ratio in an attack is higher (or lower) than the highest (or lowest) shown on the table, it is simply treated as the highest (or lowest) column available. Note that the Combat Ratio is always a simplified version of the literal ratio. For example, if eleven Combat Strength Points attack four Combat Strength Points, the Combat Ratio is simplified to '2 to 1.' Ratios are always rounded off in favor of the defender.

The attacker may deliberately lower the Combat Ratio, if he so desires, simply by announcing the fact before throwing the die. This is sometimes advantageous (see the Combat Results Table).

6.3 The abbreviations on the Combat Results Table will indicate that units are either retreated or destroyed.

Ae = Attacker eliminated; all units involved in the attack are destroyed (except bombarding artillery). Defending unit has the option to advance after combat.

Ar = Attacker retreats; all units involved in the attack (except bombarding artillery) are forced to move one hex away from the defender. Defending unit has the option to advance after combat.

Ee = Equal elimination; the defending force is eliminated and the attacking force must lose a number of Combat Strength Points at least equal to the printed value of the defending force. If any attacking units survive, one of them may advance after combat. Bombarding artillery can never suffer from this result.

Dr = Defender retreats; the defending unit is forced to move one hex away from the attacking unit(s). One of the attacking units may advance after combat.

De = Defender eliminated; the defending unit is destroyed. One of the attacking units may advance after combat.

6.4 Units may be retreated (by their owners) only into **safe** hexes.

A **safe** hex is defined as a traversable hex, not in an Enemy Zone of Control. If there is no safe hex available, the unit is destroyed instead. A **traversable** hex is one that the unit could legitimately enter during a Movement Phase.

6.5 When the only **safe** hex is occupied by a Friendly unit, that unit may be displaced.

The displaced unit must itself have a hex to retreat to (if not, the original unit is destroyed instead of causing displacement). The displaced unit may itself cause a displacement in a sort of chain reaction of retreats.

Note that a retreating unit may not displace an artillery unit that has yet to perform a required bombardment attack. A **required** bombardment attack is one that is made when some other Friendly

unit is in the Zone of Control of the Enemy unit being bombarded and that Friendly unit is attacking still another Enemy unit.

6.6 When a hex is vacated as a result of combat, a single victorious participating unit may advance into that hex.

Such an advance as a result of combat is an option which must be exercised immediately before going on to resolve any further combat in that Phase. A unit is never forced to advance after combat. A unit may advance into an Enemy controlled hex (even when advancing directly from an Enemy controlled hex).

6.7 Movement during the Combat Phase does not expend Movement Points.

Retreats and advances are, technically, not considered to be movement.

6.8 An artillery unit that is not adjacent to the unit that it is attacking is not affected by adverse combat results.

When an artillery unit is bombarding or making a combination attack (as described in Case 5.8), it is totally unaffected by combat results. Even in the case of an **Ee** result, the defender is destroyed but the artillery unit is unaffected. Bombarding artillery units may voluntarily retreat after combat when they obtain an **Ae**, **Ar** or **Ee** result.

7.0 Reinforcements

In addition to the force with which he starts the game, the Allied Player receives Prussian units during the Movement Phase of Game-Turn Three.

At any time during the specified Movement Phase, newly arriving units may enter the map in non-Woods hexes of hex-column 2300 (i.e., the easternmost hex column).

7.1 When reinforcements arrive on the map, they behave identically to units already on the map.

When reinforcements are placed in an entry hex, the arriving unit must pay one Movement Point for entering that hex. When more than one unit enters in the same place, they enter singly without regard to which one entered first (i.e., it doesn't cost subsequent units more to enter the map because they are entering 'behind' the first unit). The units move (and they may participate in combat) in the Player-Turn of arrival.

7.2 Units may never be placed in an entry hex that is Enemy occupied or which is in Enemy Zones of Control.

They may never be placed in an entry hex under conditions which will force a violation of the movement rules (i.e., too many units in the hex at the end of the Movement Phase).

7.3 The entry of reinforcements may be delayed for as long as the Player wishes.

Should the Player so desire, he may hold back all or part of the reinforcements due him in any given Game-Turn. He should keep a record of any such delayed reinforcements. He need not re-schedule their appearance; they may be brought in at will in any of his subsequent Movement Phases. They must still enter by means of the proper entry hex.

8.0 How the Game Is Won

It is the object of both Players to destroy forty Enemy Strength Points before losing forty Friendly Strength Points. The French Player has the additional objective of exiting seven units off the north edge of the map (through the hexes indicated on the map).

As losses accumulate during the game, the Players should array the destroyed counters off the map in easily counted groups. Players should be especially alert to losses when the forty Strength Point limit is approached.

8.1 The Allied Player wins by destroying 40 French Combat Strength Points before losing 40 of his own.

If this happens, the game stops immediately and the Allied Player is declared the winner.

8.2 The Allied Player is demoralized immediately upon losing 40 Combat Strength Points.

When demoralized, all Allied attacks (including those made by Prussian units) are reduced by one ratio column (for example a three-to-one becomes a two-to-one).

When demoralized, all French attacks are raised by one ratio column (for example a one-to-two becomes a one-to-one).

If the Allies destroy 40 French Strength Points after losing forty of their own, this does not demoralize the French nor does it benefit the Allies in any way. The only hope for a demoralized Allied Player is to prevent the 7 French units from exiting the map (thereby drawing the game).

8.3 The French Player wins by demoralizing the Allies and exiting 7 French units from the map.

The units must exit from the indicated hexes during one or more French Movement Phases. Units may not exit the map as a result of combat (if forced to do so they are considered destroyed instead).

French units that exit the map during their Movement Phase are not considered destroyed. More than 7 French units may exit the map and they may do so before and/or after the Allies lose forty Strength Points. Once the minimum French Victory conditions have been achieved the game stops immediately and the French Player is declared the winner.

8.4 The game is a Draw if neither side fulfills its victory conditions.

If the French destroy forty Allied Strength Points but fail to exit their seven units before the end of the game or if neither Player destroys forty Strength Points, the game is a draw (which is, in historical

terms, an Allied moral victory).

If by some freak chance, both armies reach the forty or greater loss level at the same instant of combat (due to an **Ee** result), then the French Player would win if he had already exited the seven units from the map; otherwise, the Allied Player would be declared the victor.

9.0 The Grouchy Variant

For the sake of variety and historical experimentation, the Players may opt (before the start of the game) to include the possibility of the appearance of additional French forces (under the command of Marshal Grouchy) as well as a greater or lesser Prussian reinforcing group.

Before the start of the game, each Player takes a set of chits numbered 1 through 6, turns them face down, selects one at random and keeps it secret until the end of the game. This number is the key number that indicates what reinforcement variant is in effect for that player.

9.1 The additional French and Prussian forces are labeled **5v** on their faces.

This code is shorthand for 'possible entry into the game on Game-Turn Five - variant.'

9.2 Any additional French or Prussian forces arrive an the same map edge and within the same rules as the regular Prussian reinforcement contingent.

9.3 French Reinforcement Codes

1, **2** or **3** indicates no change; i.e., Grouchy does not arrive with any additional forces.

4 or **5** indicates that Grouchy arrives with one 5-4, two 4-4's, one 2-5, and one 3-3 on Game-Turn Five.

6 indicates all French reinforcements are available on Turn Five.

9.4 Prussian Reinforcement Codes

1 indicates no change from standard game.

2 indicates no Prussian reinforcements arrive at all (including the units normally received on Game-Turn Three).

3 indicates normal Prussian reinforcements are delayed until Game-turn Five. No additional units are received.

4 indicates reduced Prussian reinforcements arrive on Game-Turn Three: only one 5-4, one 4-4, one 3-5, and one 3-3. No other reinforcements available.

5 indicates regular Prussian reinforcements arrive on Game-Turn Three. One 5-4, one 4-4, one 3-5, and one 3-3 arrive on Game-Turn Five.

6 indicates all regular Prussian reinforcements arrive on Game-Turn Three plus all other available Prussian units arrive on Game-Turn Five.

9.5 Players should feel free to invent their own variations an these reinforcement options.

The forces that could have arrived on the main field of battle were highly variable and there was a great deal of confusion amongst those in command.

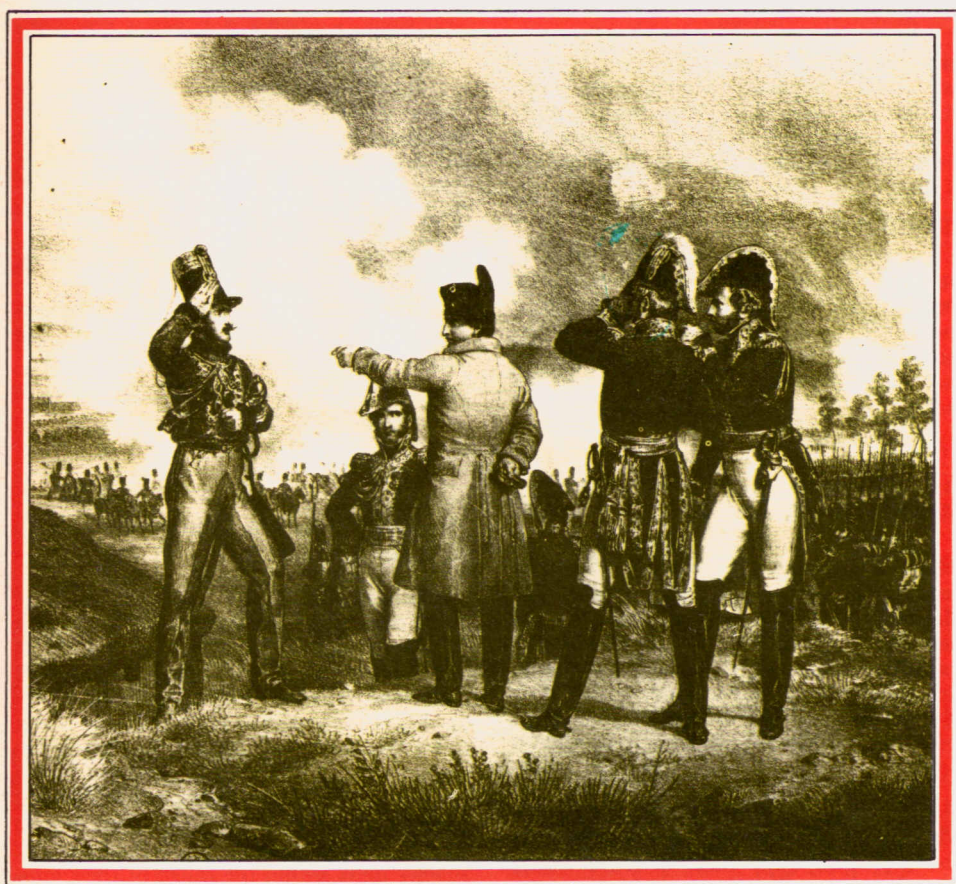## 10.0 Design Credits

Game Design:	Grouchy Variant:	Rules:	Graphics, board layout:
James F. Dunnigan	A. A. Nofi	Redmond A. Simonsen	M vd Zanden

Napoleon at Waterloo

The rules to this game are organized into a set of numbered Sections. Each Section begins with a General Rule (and sometimes a Procedure) followed by a series of specific Cases — decimally numbered paragraphs headed by a boldface sentence containing the main thought of that specific rule. Should you have any questions concerning these rules, please write SPI, enclosing a stamped, self-addressed envelope and phrasing your questions so that they may be answered by a simple sentence, word or number. Mark your query to the attention of *Napoleon at Waterloo Rules Question Editor.*

[1.0] How to Start

GENERAL RULE:

Napoleon at Waterloo consists of a body of rules, a separate group of cardboard playing pieces and a map.

PROCEDURE:

The components should be spread out on a large table with two Players sitting on either side. The die-cut counters should be carefully punched out and carefully segregated as to national group. The Players should skim through the rules by reading only the bold sentence-headlines in the various rules sections. Then the pieces should be placed in their starting positions (as indicated by the four-digit numbers on the faces of the playing pieces). At this point, the Players should review the Sequence of Play and begin a trial game, referring to the details of the rules when they have a question. Note that it is possible to play an enjoyable solitaire game against oneself simply by assuming the role of either Player in proper sequence. To remove the map from the booklet, gently pry open the staples, remove the map, and close the staples again.

COMMENT:

Napoleon at Waterloo is a simulation of the battle between the French under Napoleon and the Anglo-Allied and Prussian forces in June 1815.

[2.0] Equipment

GENERAL RULE:

The game equipment consists of the rules, charts, map, and playing pieces.

CASES:

[2.1] The game map represents the terrain on which the battle was fought.

An hexagonal grid is superimposed on the terrain of the map to regulate movement and positioning of the playing pieces. To make the mapsheet lie flat, one should back-fold it against its machine-made folds. Players will note that each hexagon (hereafter called "hex") on the map has its own four digit identity number.

[2.2] The Terrain Effects Chart summarizes how the features on the map affect the movement and combat of the playing pieces.

### [2.3] The Combat Results Table is the primary means for resolving combat.

Players will need one die from a set of common six-sided dice in order to play the game, or they may use the six numbered chits to provide random numbers.

[2.4] The playing pieces represent the actual military units that took part in the historical battle.

There are five items of information on the front face of each unit. The Player is told what *type* of unit it is (infantry, cavalry, or artillery), and what its 'name' or military designation is. Additionally, the Player is

given the *Combat Strength* and the *Movement Allowance* of each unit. The Player is also told which hex the unit starts in or what Game-Turn the unit enters the game as a reinforcement.

SAMPLE INFANTRY UNIT (French)

Unit Designation → **Yng Gd** ← Set-Up Hex

1416

Combat Strength → **5-4** ← Movement Allowance
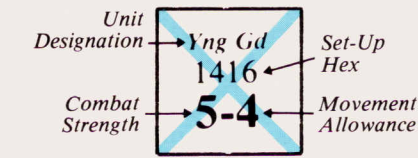
SAMPLE CAVALRY UNIT (Anglo-Allied)

DBC/I
1207
1-5
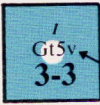
SAMPLE ARTILLERY UNIT (Prussian)

I
Gt5v
3-3

Game-Turn of Entry in Variant Game

[2.5] Combat Strength is the basic power of a unit when attacking or defending.

The Terrain Effects Chart will detail how this number is affected by combat. The Combat Strength value of a unit is deemed to consist of the printed number of Combat Strength Points.

[2.6] Movement Allowance is the unit's basic ability to move in one Movement Phase.

This ability is expressed in terms of Movement Points. Each hex entered costs a unit one Movement Point.

[3.0] Basic Procedure

The Sequence of Play

The Players take turns moving their units and making attacks. The order in which they take these actions is described in this sequence of play outline. One completion of the sequence of play is called a *Game-Turn*. Each Game-Turn consists of two *Player-Turns*. Each Player-Turn consists of two *Phases*.

THE FRENCH PLAYER-TURN:

Step 1. French Player's Movement Phase.

The French Player may move his units and bring in reinforcements.
He may move as many or as few as he wishes, one after another, within the limitations of the rules of movement.

Step 2. French Player's Combat Phase.

The French Player must attack adjacent Enemy units.
He may perform these attacks in any order he wishes, applying the results immediately as each attack is made.

THE ALLIED PLAYER-TURN:

Step 3. Allied Player's Movement Phase.

The Allied Player may move his units and bring in reinforcements.
He may move as many or as few as he wishes, one after another, within the limitations of the rules of movement.

Step 4. Allied Player's Combat Phase.

The Allied Player must attack adjacent Enemy units.
He may perform these attacks in any order he wishes, applying the results immediately as each attack is made.

These four steps are repeated ten times. The game is then over and the Players determine the victor according to the rules on How the Game is Won. Note that the game may be ended earlier if one Player achieves his victory conditions.

[4.0] Movement of Units

GENERAL RULE:

Each unit has a Movement Allowance number printed on it which represents the basic number of hexes it may move in a single Movement Phase. Each Player moves only his own units during the Movement Phase of his Player-Turn (as outlined in the Sequence of Play).

PROCEDURE:

Units move one at a time, hex-by-hex, in any direction or combination of directions that the Player desires. The Movement Phase ends when the Player announces that he has moved all of his units that he chooses to (or as of the time that he begins to make attacks).

CASES:

[4.1] A unit may *never* exceed its Movement Allowance.

During its Movement Phase, each unit may move as far as its Movement Allowance permits. Basically, each unit spends one Movement Point of its total Allowance for each hex that it enters. Individual units may move less than their Movement Allowance. Units are never *forced* to move during their Movement Phase. Units may not, however, lend or accumulate unused Movement Points.
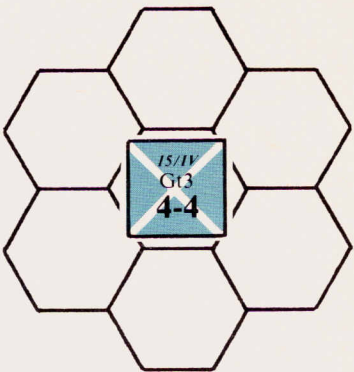
[4.2] Units must spend one Movement Point to enter each hex.

Units may only enter or leave woods hexes through hexsides crossed by roads (even when advancing or retreating due to combat).

[4.3] A unit may *never* enter nor pass through a hex containing an Enemy unit.

[4.4] A unit may *never* end its Movement Phase in the same hex as another Friendly unit.

One or more units may move *through* a hex containing another Friendly unit, but the moving units may never end the Movement Phase in the same hex as another unit. If this should inadvertently happen, the opposing Player gets to choose which of the illegally placed units are to be destroyed (so that only one unit remains in the hex).

15/IV
Gt3
4-4

[4.5] A unit must stop upon entering a hex that is in the Zone of Control of an Enemy unit.

Whenever a unit enters a hex that is directly adjacent to any of the Enemy Player's units, the moving unit must immediately stop and move no further that Phase. Note that there are six hexes adjacent to most hexes on the map. The six hexes adjacent to an Enemy unit are called the *Zone of Control* of that unit.

A unit may not move so long as it is in an Enemy controlled hex. Only by freeing itself through a combat result may a unit escape the 'freezing' effect of an Enemy Zone of Control.

[4.6] Except for French Victory Requirements, units may not leave the map.

If forced to do so by the Combat Results Table, they are eliminated instead. [See Case 8.3]

[5.0] Combat Preconditions

Eligibility Requirements for Attacking Units.

GENERAL RULE:

Each unit has a Combat Strength number printed on it which represents its basic power to attack during its Combat Phase and to defend during the Enemy Combat Phase. Whether or not a unit can attack is strictly a matter of how it is positioned with respect to Enemy units. All units that are in Enemy Zones of Control *must* attack during their Combat Phase; artillery units not in Enemy Zones of Control but that have Enemy units within the range of their guns *may* execute a special form of attack called *bombardment*.

PROCEDURE:

The Player examines the positions of his units, determining which are in Enemy Zones of Control and which artillery units have Enemy units within their range. Attacks are conducted using the Combat Results Table, the die, and the procedures detailed in the section on Combat Resolution.

CASES:

[5.1] A unit that is in an Enemy Zone of Control *must* attack — and every Enemy unit that has a phasing unit in its Zone of Control must be attacked.

[continued from page 10]

If there are several possible combinations, the Player may choose which of his units will attack which Enemy unit — so long as every Enemy unit that is required to be attacked *is* attacked.

[5.2] No unit may be involved in more than one attack per Combat Phase.

No unit may participate in more than one attack, nor may a given Enemy unit be the object of more than one attack, in a single Combat Phase.

[5.3] More than one unit may participate in a given attack.

As many units as can be brought to bear can participate in the same attack.

[5.4] More than one Enemy unit can be the object of the same attack.

So long as each participating attacking unit could have attacked *every* one of the defending units separately, then all may attack *all* the defending units in a *single* combined attack. [See Case 5.8]

[5.5] A unit's Combat Strength is indivisible.

Units may not use part of their strength in one attack and part in another, neither may they reserve or withhold part of their strength in an attack or defense.

[5.6] An artillery unit not in an Enemy Zone of Control may make a bombardment attack against an Enemy unit two hexes distant.

The important distinction between bombardment and regular attacking is that bombardment attacks can be made *only* by artillery units that are *not* in the Zone of Control of *any* Enemy unit. This bombardment attack *can* be used to satisfy the requirement that a given Enemy unit be attacked (because some other Friendly unit happens to be in its Zone of Control) so long as the other Friendly unit can attack *another* Enemy unit.

[5.7] Except when making an combined attack [see 5.8] bombarding artillery units may attack only a single Enemy-occupied hex.

Even though it may have several Enemy occupied hexes in range, a given artillery unit may bombard only one of them in a single Combat Phase. Note that several artillery units may direct their bombardment at the *same* hex, in which case their strengths are totalled into *one* aggregate bombardment attack.

[5.8] An attack may be made which combines the strength of adjacent units with that of bombarding artillery.

The strength of the artillery unit is simply added to that of the adjacent attacking units. Note that if the Enemy is in more than one hex, the contributing bombarding artillery need have only *one* of the Enemy occupied hexes in range in order to add its strength to the attack. This is the exception to Case 5.4.

[6.0] Combat Resolution

How Attacks are Evaluated and Resolved

GENERAL RULE:

An 'attack' is defined as the comparison of the strength of a specific attacking force with that of a specific defending force resolved by the throw of a die in connection with the Combat Results Table. The results may affect either or both the attacked and the defender.

PROCEDURE:

The attacking Player totals the Combat Strength of all of his units that are involved in a given attack and compares the total with the total Combat Strength of the Enemy unit or units being attacked. The resulting comparison is called the Combat Ratio. The Player locates the column heading on the Combat Results Table that corresponds to the Combat Ratio. He rolls the die and cross indexes the die number with the Combat Ratio column and reads the result. The indicated result is applied immediately, before going on to any other attacks. When he has made all of his attacks, the Player announces the end of his Combat Phase.

CASES:

[6.1] The attacking Player must announce which of his units are involved in a given attack against a specific defending unit or group of units.

He must calculate and announce the Combat Ratio, specifying which of his units are participating in the attack, before it is resolved. He may resolve attacks in any order he chooses. Once the die is thrown, he may not change his mind.

[6.2] The calculated Combat Ratio is always determined to represent a specific column of results on the Combat Results Table.

If the Combat Ratio in an attack is higher (or lower) than the highest (or lowest) shown on the table, it is simply treated as the highest (or lowest) column available. Note that the Combat Ratio is always a simplified version of the literal ratio. For example, if *eleven* Combat Strength Points attack *four* Combat Strength Points, the Combat Ratio is simplified to '2 to 1.' Rations are always rounded off in favor of the defender.

The attacker may deliberately *lower* the Combat Ratio, if he so desires, simply by announcing the fact before throwing the die. This is sometimes advantageous (see the Combat Results Table).

[6.3] The abbreviations on the Combat Results Table will indicate that units are either retreated or destroyed.

Ae = Attacker eliminated; all units involved in the attack are destroyed (except bombarding artillery). Defending unit has the option to advance after combat.

Ar = Attacker retreats; all units involved in the attack (except bombarding artillery) are forced to move one hex away from the defender. Defending unit has the option to advance after combat.

Ee = Equal elimination; the defending force is eliminated and the attacking force must lose a number of Combat Strength Points at least equal to the printed value of the defending force. If any attacking units survive, one of them may advance after combat. Bombarding artillery can never suffer from this result.

Dr = Defender retreats; the defending unit is forced to move one hex away from the attacking unit(s). One of the attacking units may advance after combat.

De = Defender eliminated; the defending unit is destroyed. One of the attacking units may advance after combat.

[6.4] Units may be retreated (by their owners) only into 'safe' hexes.

A 'safe' hex is defined as a traversable hex, not in an Enemy Zone of Control. If there is no safe hex available, the unit is destroyed instead. A 'traversable' hex is one that the unit could legitimately enter during a Movement Phase.

[6.5] When the only 'safe' hex is occupied by a Friendly unit, that unit may be *displaced*.

The displaced unit must itself have a hex to retreat to (if not, the original unit is destroyed instead of causing displacement). The displaced unit may itself cause a displacement in a sort of chain reaction of retreats.

Note that a retreating unit may *not* displace an artillery unit that has yet to perform a *required* bombardment attack. A 'required' bombardment attack is one that is made when some other Friendly unit is in the Zone of Control of the Enemy unit being bombarded and that Friendly unit is attacking still another Enemy unit.

[6.6] When a hex is vacated as a result of combat, a single victorious participating unit may advance into that hex.

Such an advance as a result of combat is an option which must be exercised immediately before going on to resolve any further combat in that Phase. A unit is never forced to advance after combat. A unit *may* advance into an Enemy controlled hex (even when advancing directly from an Enemy controlled hex).

[6.7] Movement during the Combat Phase does not expend Movement Points.

Retreats and advances are, technically, not considered to be movement.

[6.8] An artillery unit that is not adjacent to the unit that it is attacking is not affected by adverse combat results.

When an artillery unit is bombarding or making a combination attack (as described in Case 5.8), it is totally unaffected by combat results. Even in the case of an 'Ee' result, the defender is destroyed but the artillery unit is unaffected. Bombarding artillery units may *voluntarily* retreat after combat when they obtain an 'Ae,' 'Ar,,' or 'Ee' result.

[7.0] Reinforcement

How Additional Units Enter the Game

GENERAL RULE:

In addition to the force with which he starts the game, the Allied Player receives Prussian units during the Movement Phase of Game-Turn Three.

PROCEDURE:

At any time during the specified Movement Phase, newly arriving units may enter the map in non-Woods hexes of hex-column 2300 (i.e., the easternmost hex column).

CASES:

[7.1] When reinforcements arrive on the map, they behave identically to units already on the map.

When reinforcements are placed in an entry hex, the arriving unit must pay one Movement Point for entering that hex. When more than one unit enters in the same place, they enter singly without regard to which one entered first (i.e., it *doesn't* cost subsequent units more to enter the map because they are entering ''behind'' the first unit). The units move (and they may participate in combat) in the Player-Turn of arrival.

[7.2] Units may never be placed in an entry hex that is Enemy occupied or which is in Enemy Zones of Control.

They may never be placed in an entry hex under conditions which will force a violation of the movement rules (i.e., too many units in the hex at the end of the Movement Phase).

[7.3] The entry of reinforcements may be delayed for as long as the Player wishes.

Should the Player so desire, he may hold back all or part of the reinforcements due him in any given Game-Turn. He should keep a record of any such delayed reinforcements. He need not re-schedule their appearance; they may be brought in at will in any of his subsequent Movement Phases. They must still enter by means of the proper entry hex.

[8.0] How the Game Is Won

Demoralization and the Conditions of Victory

GENERAL RULE:

It is the object of both Players to destroy forty Enemy Strength Points before losing forty Friendly Strength Points. The French Player has the additional objective of exiting seven units off the north edge of the map (through the hexes indicated on the map).

PROCEDURE:

As losses accumulate during the game, the Players should array the destroyed counters off the map in easily counted groups. Players should be especially alert to losses when the forty Strength Point limit is approached.

CASES:

[8.1] The Allied Player wins by destroying forty French Combat Strength Points before losing forty of his own.

If this happens, the game stops *immediately* and the Allied Player is declared the winner.

[8.2] The Allied Player is demoralized *immediately* upon losing forty Combat Strength Points.

When demoralized, all Allied attacks (including those made by Prussian units) are *reduced* by one ratio column (for example a three-to-one becomes a two-to-one).

When demoralized, all French attacks are *raised* by one ratio column (for example a one-to-two becomes a one-to-one).

If the Allies destroy forty French Strength Points *after* losing forty of their own, this does *not* demoralize the French nor does it benefit the Allies in any way. The only hope for a demoralized Allied Player is to prevent the seven French units from exiting the map (thereby drawing the game).

[8.3] The French Player wins by demoralizing the Allies *and* exiting seven French units from the map.

The units must exit from the indicated hexes during one or more French Movement Phases. Units may not exit the map as a result of combat (if forced to do so they are considered destroyed instead). French units that exit the map during their Movement Phase are *not* considered destroyed. More than seven French units may exit the map and they may do so before and/or after the Allies lose forty Strength Points. Once the minimum French Victory conditions have been achieved the game stops immediately and the French Player is declared the winner.

[8.4] The game is a Draw if neither side fulfills its victory conditions.

If the French destroy forty Allied Strength Points but fail to exit their seven units before the end of the game or if neither Player destroys forty Strength Points, the game is a draw (which is, in historical terms, an Allied moral victory).

If by some freak chance, *both* armies reach the forty or greater loss level at the *same instant* of combat (due to an ''Ee'' result) then the French Player would win if he had already exited the seven units from the map; otherwise, the Allied Player would be declared the victor.

[9.0] The Grouchy Variant

GENERAL RULE:

For the sake of variety and historical experimentation, the Players may opt (before the start of the game) to include the possibility of the appearance of additional French forces (under the command of Marshal Grouchy) as well as a greater or lesser Prussian reinforcing group.

PROCEDURE:

Before the start of the game, each Player takes a set of chits numbered 1 through 6, turns them face down, selects one at random and keeps it secret until the end of the game. This number is the key number that indicates what reinforcement variant is in effect for that game.

CASES:

[9.1] The additional French and Prussian forces are labelled ''Gt5v'' on their faces.

This code is shorthand for ''possible entry into the game on Game-Turn Five — variant.''

[9.2] Any additional French or Prussian forces arrive on the same mapedge and within the same rules as the regular Prussian reinforcement contingent.

[9.3] French Reinforcement Codes

1, 2, or 3 indicates no change; i.e., Grouchy does not arrive with any additional forces.

4 or 5 indicates that Grouchy arrives with one 5-4, two 4-4's, one 2-5, and one 3-3 on Game-Turn Five.

6 indicates all French reinforcements are available on Game-Turn Five.

[9.4] Prussian Reinforcement Codes

1 indicates no change from standard game.

2 indicates no Prussian reinforcements arrive at all (including the units normally received on Game-Turn Three).

3 indicates normal Prussian reinforcements are delayed until Game-turn Five. No additional units are received.

4 indicates reduced Prussian reinforcements arrive on Game-Turn Three — only one 5-4, one 4-4, one 3-5, and one 3-3. No other units available.

5 indicates regular Prussian reinforcements arrive on Game-Turn Three. One 5-4, one 4-4, one 3-5, and one 3-3 arrive on Game-Turn Five.

6 indicates all regular Prussian reinforcements arrive on Game-Turn Three plus all other available Prussian units arrive on Game-Turn Five.

[9.5] Players should feel free to invent their own variations on these reinforcement options.

The forces that could have arrived on the main field of battle were highly variable and there was a great deal of confusion amongst those in command.

Examples of Attacks

In the following examples, the Blue units are the Attackers and the Red units are the Defenders. A circle is drawn around those units (Attacker and Defender) which are involved in combat with each other. Each circled *battle situation* constitutes an attack and would require the rolling of the die. Note that when several attacking and defending units are adjacent to each other, the attacks may be constituted in more than one way. Artillery attacks are indicated with an arrow when the defending unit being bombarded is not directly adjacent. The odds of each attack are given next to each situation. Anything which can logically be inferred from these examples is tantamount to a rule unless explicitly covered in the written rules.

3 to 1 attack

3 to 1 bombardment

1 to 1

1 to 2, doubled due to Building hex

2 to 1

2 to 1

1 to 1

2 to 1

3 to 1

1 to 1

1 to 2

3 to 1

1 to 2

4 to 1 combined attack

2 to 1

3 to 1 bombardment

2 to 1

1 to 4

1 to 2

1 to 1

1 to 2

3 to 1

1 to 1

1 to 1

4 to 1

1 to 1

1 to 1

2 to 1
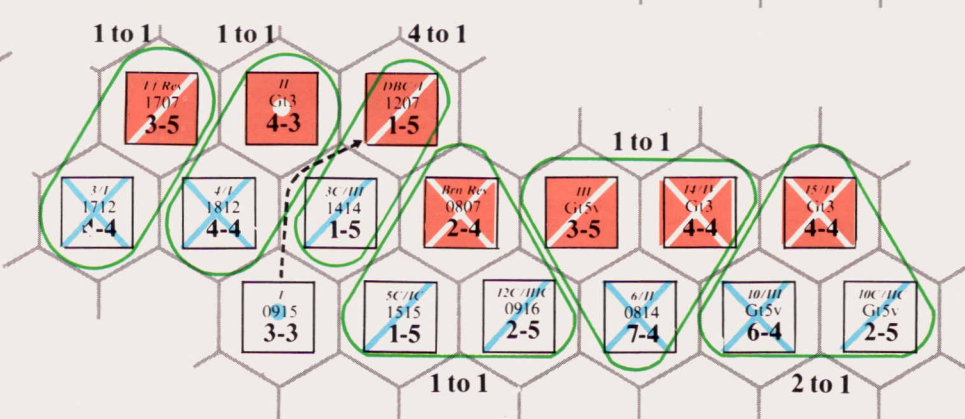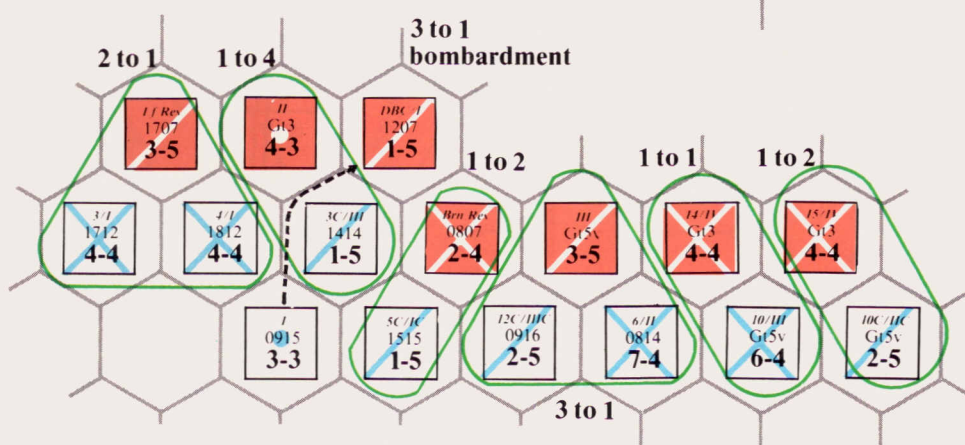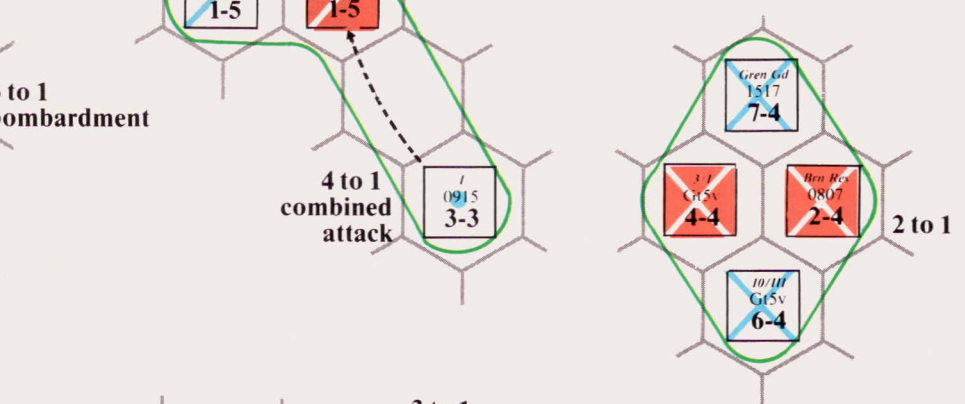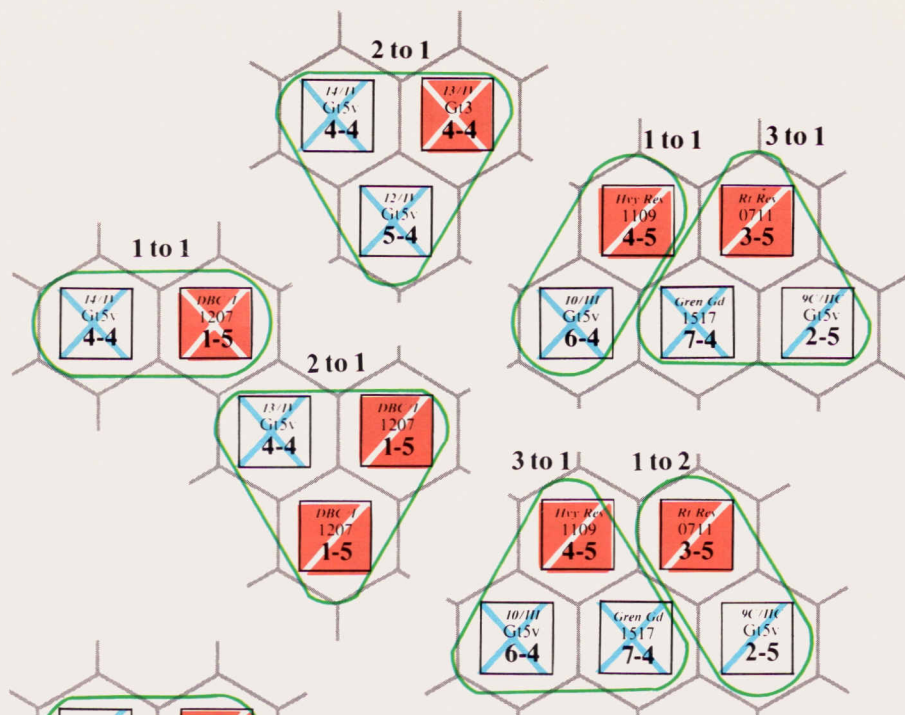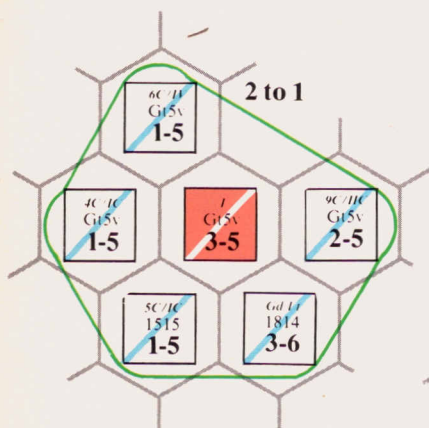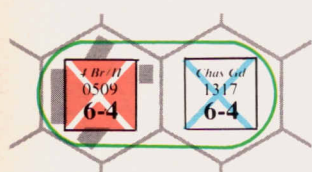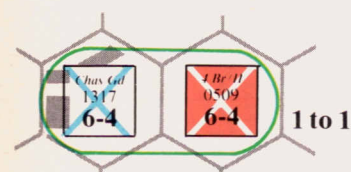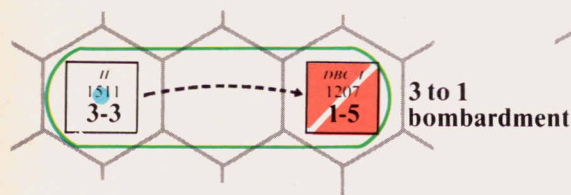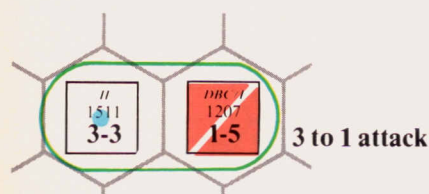
THE BATTLE OF WATERLOO, 18 June 1815

Dawn of 18 June 1815 found the French Army of the Emperor Napoleon Bonaparte seemingly on the verge of its greatest victory. After a mere twelve days of marching and fighting, the French had succeeded in splitting the Prussian Army under Blucher from Wellington's Army for what looked to be the decisive battle of the campaign. Along a frontage of 15,000 yards, some 72,000 French troops (many of them veterans of long service) supported by 246 guns faced a motley collection of 68,000 British recruits, Hanoverian and Brunswicker levies, and barely-serviceable Netherlander militia feebly supported by a mere 156 guns. In appraising the possibilities of the situation, Napoleon dismissed the coming battle as "an affair of a morning." He was never more wrong.

Despite the brittleness of his army, Wellington had a number of factors working in his favor that day in Belgium. One was the strength of his position on the reverse slope of a slight ridge. Another was the weather. The rains of the previous day and night had left the fields and pastures separating the two armies sodden and slippery, putting the French (who would be advancing) at a disadvantage and delaying the start of the battle for some hours. Most importantly, Wellington had arranged with Blucher for the Prussians (whom Napoleon believed to be retreating eastward after their mauling at Ligny two days previous) to advance in support of the soon-to-be-beleagured Anglo-Allied Army.

The battle opened at 1150 with a cannonade and one-division assault on Hougomont, a walled manor constituting a sort of natural redoubt guarding the approach to the Allied right. Designed as a diversion to draw Wellington's reserves away from the real point of attack, this assault miscarried and had to be supported. As the day wore on, more and more of the French II corps was fed into the assault on this almost impregnable position, and gradually the battle for Hougomont came to take on a life of its own, separate from the rest of the battle. In any event, Wellington fed troops into this isolated battle piecemeal, a company at a time, and it thus failed in its purpose.

By 1334, Napoleon was ready to launch his main effort, an attack by D'Erlon's corps on the Allied center. Four divisions advanced, overrunning the Allied advanced positions. An entire Allied division broke in the face of the onslaught. All seemed to be going as planned. With the commitment of Pic-

ton's 5th division, however, the line was stabilized. After an hour long firefight, the French admitted defeat in the assault and withdrew.

Meanwhile, the Prussians had been sighted advancing on the French right and Napoleon was forced both to hurry his attack on Wellington and to detach forces to fight a holding action against the new threat. During the next several hours, the French fought a fierce action against the Prussians around Plancenoit while vainly trying to break the Anglo-Allied line with cavalry alone. Both actions ultimately failed and the emperor on a gambler's throw committed his last reserve, the Imperial Guard, against Wellington's sererely stressed line in an effort to break the Allied center before the Prussians could organize to crush his right. At 1930 the Guard advanced to be met by the massed fire of the British Guards. After a brief firefight, it was the French who broke, engendering cries of *"Le Guard recule!"* from the shocked rankers who promptly fled themselves. Seeing the effect of the repulse on French morale, Wellington ordered a general advance which swept the demoralized enemy from the field. The day which had begun with the promise of Napoleon's greatest victory ended in his most decisive defeat. — *David Ritchie*

Images of the counters for this game are provided here as an aid to players in reproducing damaged or misplaced playing pieces.

Napoleon at Waterloo Counter Section Nr. 1 (100 pieces)
Quantity of Sections of this identical type: 1. Total quantity of Sections (all types) in game: 1.

1 Br/I	5 Br/Res	3 Br/I	2 Br/II	4 Br/II	6 Br/Res	2 DB/I	3 DB/I	Brn Res	Det/I
1010	1708	1209	0810	0509	1509	1608	0310	0807	0914
7-4	7-4	6-4	6-4	6-4	6-4	5-4	4-4	2-4	1-4

Hvy Res	Gen Res	Rt Res	Lf Res	DBC/I	I	Reserve	II		
1109	1407	0711	1707	1207	1409	1310	1110		
4-5	4-5	3-5	3-5	1-5	3-3	3-3	2-3		

5/II	13/IV	14/IV	15/IV	16/IV	II	IV	II	IV	
Gt3	Gt3	Gt3	Gt3	Gt3	Gt3	Gt3	Gt3	Gt3	
5-4	4-4	4-4	4-4	4-4	3-5	3-5	4-3	3-3	

6/II	1/I	7/II	3/I	I	III	I			
Gt5v	Gt5v	Gt5v	Gt5v	Gt5v	Gt5v	Gt5v			
5-4	5-4	4-4	4-4	3-5	3-5	3-3			

Gren Gd	6/II	Chas Gd	Yng Gd	2/I	9/II	1/I	3/I	4/I	5/II
1517	0814	1317	1416	1612	1014	1513	1712	1812	1314
7-4	7-4	6-4	5-4	5-4	5-4	4-4	4-4	4-4	4-4

19/IV	20/IV	Gd Hvy	Gd Lt	1C/I	2C/II	11C/IIIC	12C/IIIC	13C/IVC	14C/IVC
1315	1316	1016	1814	2011	0514	1015	0916	1714	1813
4-4	2-4	4-5	3-6	2-5	2-5	2-5	2-5	1-5	1-5

FRENCH

5C/IC	3C/III	Guard	I	II	VI	III	IV	6C/IV
1515	1414	1411	0915	1511	1415	Gt5v	Gt5v	Gt5v
1-5	1-5	5-3	3-3	3-3	2-3	3-3	3-3	1-5

10/III	8/III	11/III	12/IV	13/IV	14/IV	21/VI	9C/IIC	10C/IIC	4C/IC
Gt5v	Gt5v	Gt5v	Gt5v	Gt5v	Gt5v	Gt5v	Gt5v	Gt5v	Gt5v
6-4	5-4	5-4	5-4	4-4	4-4	2-4	2-5	2-5	1-5

Simple Rules Tweaks for
NAPOLEON AT WATERLOO
by Philip Sabin, April 2020

Jim Dunnigan's *Napoleon at Waterloo* is a classic of the wargame hobby, and its pioneering systems were used in many subsequent games. The 1971 original had an uncoloured map with a 27x22 hex grid, but later editions up to the present day slimmed the map down to the 23x17 hex grid shown below by cutting out areas in the south and east which saw little action. The game was used as a free introduction to wargaming on various occasions, and it is easy to find the rules and components online. The following suggestions are based on the 1979 SPI edition shown here, which has remained substantially unchanged ever since.

There have been many attempts to improve the realism of *Napoleon at Waterloo* without detracting from its classic simplicity. Dunnigan himself quickly produced an Advanced Game Expansion kit with revised rules and twice as many counters, and others have made similar more or less drastic changes to the rules and components, but none of these have really caught on. I have tried instead to improve the game's historicity by leaving the map, counters and unit deployments almost entirely unchanged while making a variety of simple tweaks to the existing rules. I detail these suggested tweaks here, with reference to the affected case numbers in the 1979 rules, and with explanatory design notes in *blue*.

EQUIPMENT

[2.4] There is just one small but critical change to the initial British deployment. The 2-4 *Brn Res* infantry unit now starts in the Hougoumont building hex, where it represents the garrison of the chateau itself. Also, all British infantry and artillery units are rotated 90 degrees to indicate that they begin Shielded. A unit remains Shielded until it moves, advances, retreats or is displaced, at which point its counter is turned back upright and it becomes permanently Unshielded even if it returns to its original hex. *The shift of the 2-4 unit remedies the strange initial openness of the chateau to unopposed French occupation, and is key to allowing Hougoumont to hold out as it did historically. Shielded status simply and abstractly reflects Wellington's use of reverse slope positions and fortified farmhouses to shelter his men from view and attack. Shielded units receive a defence bonus as long as they remain in their carefully chosen initial positions, but once they move, they suffer an attack penalty to reflect the British preference for the tactical defensive. This creates fascinating dilemmas for both players. Staying put gives the British added resilience to withstand French attacks while they await Prussian deliverance, but it also inhibits effective counterattacks and exposes the static British line to defeat in detail. Judging when and where to commit flexible but fragile and impetuous British cavalry reserves and when individual infantry and artillery units may safely be released for counter-manouevre (such as to reinforce the hard-pressed defenders of Hougoumont) is crucial to Allied victory. The French face challenging dilemmas of their own. An immediate all-out attack to break the British before the Prussians can turn the tide now risks breaking French morale instead, but unduly limited and focused attacks will take too long. The French must risk some initial losses to erode British combat effectiveness by causing retreats in one part of the line, thereby opening up the battle and prompting yet more British units to give up their Shielded status to reinforce the threatened point. Shielded status may never be regained because the French eventually learned (at heavy cost) what lay 'on the other side of the hill'.*

MOVEMENT OF UNITS

[4.5] A cavalry unit which begins its Movement Phase in the Zone of Control only of enemy infantry or artillery units may move a single hex into a vacant or vacated adjacent hex not in an enemy Zone of Control. No other unit may move into the hex it vacates. *This allows cavalry units to disengage from slower enemies rather than being forced into suicidal attacks. Together with the tweaks in 6.2 and 6.3 below, this lets cavalry screen and delay enemy infantry unless countered by enemy horsemen. The game is still likely to see brave but sacrificial cavalry charges like those which occurred in the real battle, since the impact of losing cavalry units in exposed positions or to satisfy Exchange results is less than if stronger infantry units were sacrificed instead.*

[4.6] French units may no longer leave the map, nor may they move, advance, retreat or be displaced into hexes adjacent to the west map edge or within 2 hexes of the east map edge. They may freely attack Allied units in these hexes. *The cutting down of the original game*

map made it unrealistically easy for weak French units such as the 1-5 cavalry divisions to block the historical Prussian entry routes. This restriction removes that option and also makes it harder for the French to outflank Wellington's position rather than trying for a frontal breakthrough as they did historically. The French no longer need to exit units towards Brussels to achieve game victory, since breaking Allied morale without their own morale collapsing first is now achievement enough (as discussed under 8.0 below).

COMBAT PRECONDITIONS

[5.1] Zones of Control extend into and out of Woods-Road hexes in all directions, and units must attack as normal, though advances and retreats are allowed only through hexsides crossed by roads. Shielded units in Woods-Road or Building hexes may choose not to attack, even if in a French Zone of Control. If they do attack, normal combat rules apply. French units which are also adjacent to other Allied units still need to be attacked regardless. *The Woods-Road clarification confirms the standard interpretation and is crucial for the situation south of Hougoumont, with Reille's three strong units locked in combat at first with the tiny British detachment in the Woods. The battle for the Hougoumont complex actually started before the game begins, but having the British still occupying the Woods as well as the chateau helps to prolong the fighting realistically. Allowing the Shielded defenders of Hougoumont and La Haye Sainte to refrain from attacking is obviously vital to prevent their rapid defeat, given the adverse odds they face.*

[5.6] Artillery units may not make bombardment attacks from a Woods-Road hex or through an intervening Woods, Woods-Road or Building hex. They may bombard along the side of such hexes unless both adjacent hexes contain blocking terrain. *It is strange that Buildings do not block artillery fire in* Napoleon at Waterloo *(unlike in the various quadrigames based on this system), so I have made them blocking terrain to offset their powerful defensive bonus.*

COMBAT RESOLUTION

[6.2] Defending infantry or artillery units in Woods-Road or Building hexes double their strength when calculating the Combat Ratio, but cavalry units do not. Combat Ratios must be reduced to 3-1 or less if the defenders include Shielded units in a Building hex, or to 4-1 or less if the defenders include Shielded units in a Woods-Road hex or if all the defenders and none of the attackers are cavalry. The combat die roll is increased by 1 (to a maximum of 6) if the defenders include a Shielded unit or if the attackers include Unshielded British infantry or artillery. *The Combat Ratio caps reflect the difficulty of bringing superior numbers to bear against faster enemies or a small defensive perimeter. Cavalry units now realistically obtain protection not from terrain but from their superior speed. The die roll modification in combats involving British infantry or artillery has a more nuanced effect than a column shift on this game's unforgiving Combat Results Table, and encourages Wellington's men to stick to their defensive positions if possible until Napoleon's army has been fatally weakened by its own attacks and by the Prussian advance.*

[6.3] As long as no defenders will be eliminated through inability to retreat, Exchange results are converted into Defender Retreat results if all defenders and no attackers are cavalry, or if all attackers are bombarding artillery and there are no adjacent attackers (however weak) to be eliminated along with the defending unit. Shielded units defending in Woods-Road or Building hexes may choose to ignore Defender Retreat results if desired. *It is more realistic for cavalry to give ground and retreat from enemy infantry if possible than to engage in the desperate and bloody resistance implied by an Exchange result. Allowing bombarding artillery to achieve all the gain from Exchange results with none of the pain is also unrealistic, since defenders can seek shelter from bombardment unless they are placed on the horns of a dilemma by nearby attacking units, as in the classic Napoleonic situation of an infantry unit forced to form square by cavalry attack, making it far more vulnerable to enemy cannon fire. Using bombardment alone to inflict pain-free Exchanges has become an all too common feature of simple wargames (including those using the 'Fire & Movement' system by Decision Games), so my suggested tweak has much wider potential application, just like the advance after combat tweak discussed under 6.6 below. Exempting the small Allied units defending Hougoumont and La Haye Sainte from Retreat results makes the chance per turn of a farm falling at most 1 in 3 and often only 1 in 6, so one of the farms may well remain in British hands throughout the battle, as happened historically. The French will pay a heavy price through the Exchange result now needed to take a farm, but this is worthwhile because of the impact on Allied morale as discussed under 8.0 below.*

[6.5] Retreating units may not displace a unit in a Woods-Road hex, or one which retreated in the same combat. *This clarification means that two units retreating together may not both squeeze through a single hex gap.*

[6.6] Artillery units may never advance after combat, even if adjacent to the enemy. However, any or all victorious attacking infantry or cavalry units may choose to advance one hex if desired, either into a hex vacated by the defenders in that combat or into a vacant hex adjacent both to the attacking unit itself and to a hex vacated by the defenders in that combat. Attacking units may not advance into a hex vacated by another attacker in that combat. Only one victorious defending unit per combat may advance (into a hex vacated by one of its attackers), but as many victorious attacking units may advance as there are eligible vacated or vacant hexes to advance into. British cavalry *must* advance after combat if possible. Advances do not affect which units must attack or be attacked later that Phase, nor do they prevent bombardments by enemy artillery. *Prohibiting artillery from advancing serves to counterbalance its bombardment ability and means that players will need to use infantry or cavalry to seize hexes and cut off enemy retreats, thereby enhancing the game's portrayal of realistic combined arms tactics. The expansion of the attackers' ability to advance after combat is a key generic change which I now apply to all games using a combat system similar to* Napoleon at Waterloo. *It is designed to remedy what I see as the most glaring flaw in these systems, namely that units are positively encouraged to spread out in*

an 'alternate hex defence' to reduce their vulnerability to encirclement, whereas in reality, thinning a defensive line in this way would make it more rather than less susceptible to catastrophic penetration. The wholly artificial security which the alternate hex deployment gives in many wargames stems purely from the prohibition of advances into the vacant hexes between units, even though these hexes were abstractly being defended by the retreated or eliminated defending units by virtue of their Zones of Control. My change means that every single hex in a defending line may now be occupied by a victorious attacker, whether it contained a defending unit or not. It also means that if a strong unit holding a very extended line is driven back by three attacking units, all three attackers may now follow the retreating unit instead of just one as in the existing rules, making it far less likely that the strong unit will drive back its pursuers and re-establish its original position during its compulsory counterattack in its own player turn. I urge you to apply this more liberal provision for attacker advances in all games based on rigid Zones of Control. The defenders do not need a similar change, since they are about to have their own player turn in any case. Forcing British cavalry to advance reflects their poor discipline once unleashed, and exposes them to counterattacks like that which destroyed the Scots Greys.

[6.8] Bombarding artillery may not retreat voluntarily, whatever the combat result. *This seems much fairer than the existing rule, since the guns are already allowed to make a full move before unlimbering and bombarding – letting them opt to move a further hex afterwards in their chosen direction (since they are outside enemy Zones of Control) is unduly generous. The change parallels my prohibition on adjacent artillery advancing after combat.*

REINFORCEMENT

[7.0] The real battle is best simulated by having all Prussian units arrive on turn 3 as in the existing rules. However, if players feel that this now gives too much chance of the historical Allied victory, then command of the Allied army may be given to the player willing to have more Prussian units delay their entry from turn 3 to turn 4. If the players' bids reach an equal number, dice for who commands which side. Unless all 9 units or none are delayed, the Allied player chooses on turn 3 which units to enter, as long as at least 20% are cavalry and no more than 20% are artillery. *I use competitive bidding for sides as a simple balancing and handicapping device in most of my game designs. Playtesting suggests that both sides have a good chance of winning the tweaked game, but the timing of Prussian arrival offers an obvious variable to exploit if players feel that further balancing is needed. Some editions of Napoleon at Waterloo include rules and counters for a 'Grouchy Variant' designed by Al Nofi which introduces great uncertainty regarding the timing, strength and even affiliation of arriving reinforcements, but this obviously plays havoc with game balance and rather exaggerates the uncertainty of the historical leaders about what was on its way. To explore this issue properly, it is better to play one of the several alternative games which explicitly model the parallel action at Wavre alongside that at Waterloo itself.*

HOW THE GAME IS WON

[8.0] The rules for Allied Demoralisation and the exiting of French units no longer apply. Instead, the game is won immediately by whichever side first destroys 40 enemy Strength Points. The French 7-4 *Gren Gd* unit counts double towards French Strength Point losses if eliminated. Plancenoit counts as 6 Strength Points towards the French loss total if its two Building hexes contain at least one Allied unit and no French unit. The Hougomont and La Haye Sainte Building hexes each count as 6 Strength Points towards the Allied loss total while occupied by a French unit. If a combat (including any advance) leaves both armies with 40 or more Strength Point losses, or if neither army loses 40 Strength Points by the end of turn 7, the game is a draw. *The existing rules clearly consider it more likely that the French will destroy 40 enemy Strength Points first, since doing so gives them only a draw unless they go on to exit 7 units by nightfall. This expectation of French success is rather at odds with the fact that Waterloo was actually a decisive Allied victory. Many have claimed that Napoleon should in principle have won, and Wellington famously described the battle as 'the nearest run thing you ever saw in your life', but other commentators have suggested that the Allies had decisive tactical advantages which made Napoleon's defeat entirely unsurprising. My tweaks to British resilience (especially at Hougoumont and La Haye Sainte) amply offset any French advantage in the standard game, and so justify giving the French player game victory if he or she breaks Allied morale before suffering the same fate. The penalties for losing control of the key strongpoints of Hougoumont, La Haye Sainte and Plancenoit encourage bitter fights for these locations, as happened historically. The area north of Hougoumont becomes especially hotly contested just as in reality, as Wellington shifts forces across from his increasingly secure left wing and as the French strive to break the Anglo-Allies before their own right wing and reserve are overwhelmed by the inexorable Prussian onslaught. I also double the penalty for France losing the Old Guard, thereby encouraging realistic circumspection in its use until the time comes for an all or nothing gamble like that which Napoleon made and lost at the climax of the battle. These adjustments have the further benefit that the break point of 40 is likely to be reached before so many units on both sides have been removed that any semblance of fighting fronts is lost. It could be argued that the overall strategic situation means that the French should lose the game if they fail to break the Allies, but I have classed this as a draw instead to dissuade the British from pulling back and using the significant space and defensible buildings in the north of the mapboard to play for time. Had they done so, Prussian paranoia about being left in the lurch between Napoleon and Grouchy would have prompted them to fall back to the north east, leaving the Allies divided once more, so it was in both sides' interest to seek a decision on the existing battlefield. The bloody Combat Results Table means that such a decision comes quickly, and in playtesting one army usually broke on turn 5 if not sooner. This suggests that each turn is better thought of as representing 90 minutes of action rather than 60, so I have nightfall ending the fighting after 7 turns instead of 10. This still gives ample time for the contest to be decided one way or the other.*

CONCLUSION

Dunnigan described board wargames as 'glorified Chess'. As with the earlier Avalon Hill 'classics', what gives his Napoleon at Waterloo system such enduring appeal despite the game's patchy modelling of the real battle is its simplicity and the scope it gives for skilful players to prevail through superior exploitation of hex geometry, careful defensive positioning and judicious setting up and sequencing of attacks and advances so that enemy units are encircled and destroyed wherever possible without too many valuable friendly units suffering a similar fate. Although the luck of the combat die plays a significant role, the Napoleon at Waterloo Combat Results Table is much bloodier and less forgiving than that in SPI's later Napoleon at War quadrigame, making it vital to secure favourable odds in each combat by making every Strength Point count rather than just throwing forces in and hoping for good fortune. My tweaks aim to retain this crucial element of player skill while remedying the most artificial and unrealistic aspects of the game system (such as pain-free Exchanges and the magical benefits of 'alternate hex defence') and emphasising instead more historically-based tactical factors (such as the distinct and complementary attributes of infantry, cavalry and artillery and the British reliance on reverse slope deployments, fortified farmhouses and the tactical defensive, their impetuous cavalry apart). Encirclement still plays an ahistorically significant role compared to more realistic tactical considerations of line, column and square formations as modelled in more detailed and complex Waterloo games, but my tweaked version of Dunnigan's classic offers at least as good a balance of historicity and player challenge as do other simple models of this battle such as Hanno Uusitalo's radically abstract W1815.

My suggested modifications to Napoleon at Waterloo are the latest product of my current wargame design focus, which is on exploiting existing game components by amending or replacing the rules governing their use. There is such a glut of new board wargames being published today that I prefer where possible to avoid adding to the flood, and instead to maximise the utility of games which already exist by offering their owners different and novel ways of playing them so that even old classics can enjoy a new lease of life. The great advantage of board wargames compared to the mass market alternative of computer games is that even non-programmers can easily tweak the rules as I have suggested here, to create what they consider to be a more accurate and worthwhile representation of reality. My 2012 book Simulating War is full of design advice and illustrative simple games to help with your own similar efforts, and I have posted my more recent total conversions of published games such as Wing Leader and Admiral's Order on the Boardgame Geek pages for those games and also in the files section of the Simulating War io group which has hosted many years of discussions prompted by my work. Please read the book and browse the websites for many more ideas like those above.