

SCENARIOS AND VARIANTS

ENHANCED NAPOLEON AT WATERLOO

A Revised Order of Battle and Play System

by John Scarbeck

There's always the temptation to take a simple game that works well and pile on chrome to make it more "realistic." I don't think John has done that here. He has added to the complexities of a very clean game, but the payoff in play value should more than adequately compensate all but the newest of gamers...plus the order of battle refinements should please (or start debates amongst) the historian-gamers.

—RAS

Napoleon at Waterloo is an enjoyable game. Its fault lies in its accuracy, or rather, lack of it. Not only do the French normally win (notwithstanding aggressive British play) but also the opposing armies frequently change positions, maneuvering constantly (Waterloo was a static battle); and sometimes the British are almost annihilated! Simple, exciting, but a *game* — not a simulation. Therefore I undertook to revise *NAW*, installing new orders of battle, and making it as realistic as possible.

I realize that *NAW* is an introductory game; my revision at least doubles its complexity. Similarly, it enhances historicity, while keeping playing time under three hours.

[1.0] INTRODUCTION

My game is an operational simulation of the Battle of Waterloo. The rules include those of *NAW*, with several amendments. The major change is a new order of battle for each side, which follows. Also, units take losses in terms of strength points, instead of suffering elimination; and a strength-differential Combat Results Table is used. **Note:** Current strengths of individual units can be maintained by using numerical chits (from games such as *Wellington's Victory* or *Terrible Swift Sword*); however, in order to avoid large stacks, I suggest keeping a record of each unit's current strength on a sheet of paper. Done this way, a more realistic flavor is obtained, as each player may keep his own tally, and need not reveal a unit's strength until it is attacked. When using a combat differential system, even an error of one strength point in estimation could lower the expected attack by one column.

[2.0] PLAYING PIECES

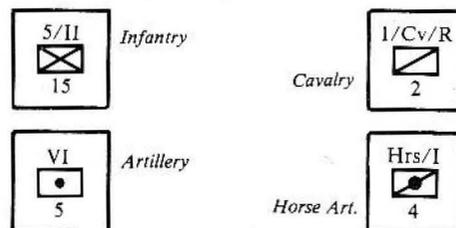
GENERAL DESCRIPTION:

There are three armies: French, Anglo-Allied, and Prussian. The latter two are friendly, and are

known as the Allies. The French are represented by blue counters, the Anglo-Allies by red, and the Prussians by green. These counters may be secured through cannibalizing existing blank counters (e.g., those of *War in the West*) or by purchasing blank counter sheets, in Napoleonic colors, from Simulations Publications.

CASES:

[2.1] Summary of Unit Types



[2.2] The Armies' Strengths

Each infantry and cavalry Strength Point (SP) equals 500 men; each artillery and horse artillery SP equals 5 guns.

[2.21] The French Army

Infantry (div./corps): 1/I(8); 2/I(10); 3/I(8); 4/I(4); 5/II(8); 6/II(11); 9/II(7); 19/VI(8); 20/VI(8); 1/IG(8); 2/IG(9); 3/IG(9)

Cavalry (div./corps): 1/I(3); 2/II(2); LC/IG(8); HC/IG(3); 11/IIIc(3); 12/IIIc(3); 13/IVc(2); 14/IVc(3); 3/III(2); 5/Ic(2)

Artillery (corps): I(9); II(8); III/Hrs(3); IV(2); VI(5); IG(16); IG/Hrs(6)

[2.22] The Anglo-Allied Army

Infantry (div./corps): 1/I(7); 3/I(12); 2DB/I(12); 3DB/I(13); 2/II(10); 4/II(4); 5/R(11); 6/R(10); Bw/R(8); Nas/R(6); Hou(7)

Cavalry (brig./div./corps): 1/Cv/R(2); 2/Cv/R(2); 3/Cv/R(3); 4/Cv/R(2); 5/Cv/R(3); 6/Cv/R(3); 7/Cv/R(2); 1/DBCv/R(2); 2/DBCv/R(2); 3/DBCv/R(2); Cv/Bw/R(2)

Artillery (corps): I(5); I/Hrs(4); II(4); R(5); R/Hrs(13)

[2.23] The Prussian Army

Infantry (div./corps): 1/I(16); 5/II(15); 6/II(14); 13/IV(14); 14/IV(13); 15/IV(12); 16/IV(12);

Cavalry (brig./div./corps): 1/Cv/I(3); 1/Cv/II(3); 2/Cv/II(2); 1/Cv/IV(3); 2/Cv/IV(1); 3/Cv/IV(2)

Artillery (corps): I(2); II(2); IV(13); Hrs(11)

[3.0] SETTING UP THE GAME

GENERAL RULE:

Only the French and Anglo-Allies begin the game on the map (see Section 7.0 for Prussians). Units

are placed on map according to the following schedule:

CASES:

[3.1] French Set-Up

Infantry: 1/I: hex 1513; 2/I: 1612; 3/I: 1712; 4/I: 1812; 5/II: 1314; 6/II: 0813; 9/II: 1013; 19/VI: 1315; 20/VI: 1316; 1/IG: 1517; 2/IG: 1317; 3/IG: 1416.

Cavalry: 1/I: hex 2011; 2/II: 0514; LC/IG: 1814; HC/IG: 1016; 11/IIIc: 1015; 12/IIIc: 0916; 13/IVc: 1714; 14/IVc: 1813; 3/III: 1414; 5/Ic: 1515.

Artillery: I: hex 0914; II: 1511; III/Hrs: 1713; IV: 1613; VI: 1415; IG: 1411; IG/Hrs: 1411.

[3.2] Anglo-Allied Set-Up

Infantry: 1/I: hex 1010; 3/I: 1209; 2DB/I: 1608; 3DB/I: 0310; 2/II: 0810; 4/II: 0509; 5/R: 1708; 6/R: 1509; Bw/R: 0807; Nas/R: 1408; Hou: 0913.

Cavalry: 1/Cv/R: hex 1208; 2/Cv/R: 1407; 3/Cv/R: 0910; 4/Cv/R: 1607; 5/Cv/R: 0711; 6/Cv/R: 1707; 7/Cv/R: 1108; 1/DBCv/R: 1107; 2/DBCv/R: 1207; 3/DBCv/R: 1307; Cv/Bw/R: 0707.

Artillery: I: hex 1409; 1/Hrs: 1409; II: 1110; R: 1310; R/Hrs: 1508.

[4.0] MOVEMENT

GENERAL RULE:

As in *NAW*, the French player moves and attacks first. Movement rates are standardized; cavalry and horse artillery units have an allowance of five, infantry units four, and non-horse artillery units have an allowance of three.

CASES:

[4.1] Zones of Control

[4.11] All units must pay an additional movement point to enter an enemy ZOC.

[4.12] Only cavalry units may leave an enemy ZOC (**Exception:** See 8.22); to do so they must pay an additional movement point.

[4.2] Terrain Effects Chart

HEX TYPE:	COST:	EFFECT ON COMBAT:
Clear/Road	1MP/hex	None
Building	1MP/hex	Doubles defender's strength*
Woods	3MP/hex	Attacks shifted one column left

* Exception: see 6.71.

[4.3] Optional Retreat

Because of small mapspace (unfortunately part of Plancenoit is missing), French units may retreat off the southern edge, at no credit or penalty.

They may never return. Other nationalities' units may follow, albeit futilely.

[5.0] STACKING

GENERAL RULE:

One division or division-equivalent may be stacked per hex. (French cavalry divisions are considered brigades for stacking purposes.) Up to three cavalry and/or artillery units may be stacked in a hex (i.e., cavalry and artillery units are allowed to intermix).

[6.0] COMBAT

GENERAL RULE:

NAW artillery rules apply, as do other combat rules, with the following exceptions:

CASES:

[6.1] Strength Differential

The attacker may not lower the strength differential. If 19 SP's attack 9 SP's the attacker *must* use the 9-11 column on the combat results table (see Case 6.8).

[6.2] Allied Combat

[6.21] Whenever a Dutch-Belgian (DB) infantry or cavalry unit participates in an attack, the differential column is shifted one to the *left* on the Combat Results Table.

[6.22] Whenever a Prussian unit (including bombarding artillery) participates in an attack with an Anglo-Allied unit, the differential column is shifted one to the *left* on the CRT. (This holds true for a bombarding Anglo-Allied artillery unit helping one or more Prussian units in an attack.)

[6.3] Prussian Combat

[6.31] When attacking a Prussian unit, the strengths of French infantry, cavalry, and attacking (non-bombarding) artillery are *doubled*.

[6.32] Whenever a Prussian unit suffers a **Dr** result, it *must also lose one strength point*. Hence, for the affected Prussian unit, a **Dr** result may be read as **Dr1**. All other results remain unchanged.

[6.4] Artillery

When an artillery unit is attacking (or bombarding) with one or more friendly non-artillery units, and a friendly loss results, one of the non-artillery units *must* take the loss. Attacking or bombarding artillery units may *never* take a loss in such a case.

[6.5] Cavalry

When defending in (or attacking an enemy unit defending in) a woods or building hex, a cavalry unit may *not* use a combat capability die-roll bonus. Cavalry should be considered infantry in such cases.

[6.6] Isolation

A unit defending in a hex surrounded by enemy units and/or ZOC is isolated. It may then suffer a more adverse combat result than otherwise.

[6.61] An isolated unit defending in a building hex loses the defense multiplier for that hex (three for Hougomont, two for the others). **Example:** an infantry division in Plancenoit, with a strength of eight and surrounded by enemy units/ZOC, defends with a strength of eight.

[6.62] An isolated unit defending in a clear or woods hex may have its combat result changed. In such a case, **Dr** becomes **D1**, and **D1** becomes **D2** (note that this is the only instance that a unit may

lose more than one SP in a single combat). A result of **Ex** remains **Ex**.

[6.7] Hougomont

[6.71] The Hougomont hex *triples* a unit's strength for *defense only*. All other town hexes merely double their defenders' strength.

[6.72] As long as the Hougomont unit exists, no other Allied unit may occupy Hougomont. Other Allied units may move through, but not occupy, the hex. If the unit is eliminated, this restriction is rescinded.

[6.73] The Hougomont unit may not move, retreat, or attack (even if adjacent to a French unit). However, an Allied unit adjacent to the Hougomont unit, and also adjacent to a French unit (which is adjacent to both the Hougomont and other Allied unit), *must attack* that French unit. In other words, the Hougomont unit does not act as bombarding artillery, obviating the necessity of attacking an enemy (French) unit for another Allied unit.

[6.74] If the Hougomont unit is destroyed, and another unit (French or Allied) occupies Hougomont, then the new occupant *must* make all required attacks. Consequently, the non-attack rule (6.73) applies only to the Hougomont unit.

[6.75] The Hougomont unit ignores a **Dr** result. Only **D1** and **Ex** results affect it.

[6.8] Other Factors

[6.81] Units may advance after combat only if not in an enemy ZOC (excluding the vacating unit's) at start of advance.

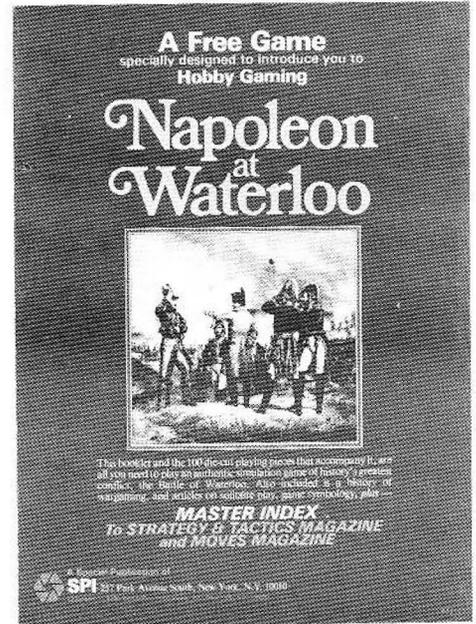
[6.82] Attacks made upon units in woods hexes are shifted one column left on the CRT.

[6.83] Because of differences in relative combat potential of different branches of Napoleonic armies, the die roll may be modified in resolving attacks as follows:

COMBAT UNIT CAPABILITY CHART DEFENDER

ATTACKER	Inf	Cav	Art
Inf	0	-1	-1
Cav	+2	+1	-1
Art*	0/-2	0/-1	0/-1

*Values are for 1-hex/2-hex distances. **Note:** When more than one combat arm is used on attack and/or defense, the player in question selects preferable arm. **Exception:** If both attacker and defender involve infantry and cavalry in a combat, neither may select the cavalry arm.



[7.0] REINFORCEMENTS

The Prussians arrive per the Reinforcement Schedule, and appear at a specified area. They are treated according to *NAW* rules (see section 7.0).

Prussian Reinforcement Schedule

G/T:	CORPS:	AREA:
4	IV	Hexes 2314, 2315, 2316, 2317
5	II (plus Hrs)	Hexes 2307, 2308, 2309
6	I	Hexes 2307, 2308, 2309

[8.0] DEMORALIZATION

CASES:

[8.1] The French

Only the French army may become demoralized. Demoralization occurs when an Imperial Guard (IG) infantry unit receives an **Ar** result *against the Anglo-Allies*. Therefore, the French army may never become demoralized if the three Guard infantry units do not attack the Anglo-Allies.

[8.2] Effects of Demoralization

[8.21] If the French become demoralized, all of their units attack at half-strength (rounding up),

[6.9] Combat Results Table

DIE	-7-	-6-4	-3-1	0/2	3/5	6/8	9/11	12/14	15+
-1	A1	A1	A1	A1	A1	Ar	Dr	Dr	Ex
0	A1	A1	A1	A1	Ar	Ar	Dr	Ex	Ex
1	A1	A1	A1	Ar	Ar	Dr	Dr	Ex	D1
2	A1	A1	Ar	Ar	Dr	Dr	Ex	D1	D1
3	A1	A1	Ar	Ar	Dr	Dr	Ex	D1	D1
4	A1	A1	Ar	Dr	Dr	Dr	Ex	D1	D1
5	A1	A1	Ar	Dr	Dr	Ex	D1	D1	D1
6	A1	Dr	Dr	Dr	Ex	D1	D1	D1	D1
7	A1	Ar	Dr	Dr	Ex	D1	D1	D1	D1
8	Ar	Ar	Dr	Ex	D1	D1	D1	D1	D1

A1: attacker loses one SP. **D1:** defender loses one SP. **Ar, Dr, and Ex:** see Case 6.3, *NAW* rules. **Displacement:** may occur when unit retreats; see Case 6.5, *NAW* rules. **Isolation:** see Case 6.62.

but defend normally. French units attacking Prussians attack at face-value.

[8.22] When the French become demoralized, all Enemy units may exit French ZOC by paying an additional Movement Point.

[9.0] VICTORY CONDITIONS

GENERAL RULE:

After the tenth game-turn, each player totals his losses in terms of strength points. He then converts his loss into manpower (each SP = 500 men). For victory purposes, artillery losses are considered in terms of men, not guns. To convert artillery strength points to men, see Case 9.1. After totaling losses, a ratio is obtained by dividing French losses by Allied (including Prussian) losses. The resulting quotient is compared to the Victory Scale, and a winner (for game, not battle, purposes) is then determined.

CASES:

[9.1] Artillery Conversion Table

Anglo-Allied army: One artillery SP = 180 men

Prussian army: One Artillery SP = 150 men

French army: One artillery SP = 150 men

[9.2] Victory Scale

Stated as a quotient of French losses divided by Allied losses:

	CLASS OF VICTORY	VICTOR
0.90 and less	1st	French player
0.91 — 1.03	2nd	French player
1.04 — 1.16	3rd	French player
1.17 — 1.29	4th	French player
1.30 — 1.42	DRAW	NONE
1.43 — 1.55	4th	Allied player
1.56 — 1.68	3rd	Allied player
1.69 — 1.81	2nd	Allied player
1.82 and up	1st	Allied player

If, at the end of the game, the French player's units were the last to occupy Hougomont, La Haye Sainte, or Plancenoit (all hexes), the class of victory is shifted one row upward for each position occupied. **Example:** At the end of a game, the casualty quotient is 1.50, indicating an Allied 4th class victory; however, a French unit was the last to occupy La Haye Sainte. Therefore the class of victory is shifted upward one level, and the game results in a draw.

Notes

[2.2] The order of battle is as accurate as possible. All sources agreed that Wellington had approximately 68,000 men and Napoleon 72,000; that Wellington had 156 guns and Napoleon 246. But what of the Prussians? References to them were vague (the *West Point Atlas* said that between 40 and 50,000 Prussians actually fought at Waterloo¹); moreover, Weller's OB listed the Prussian strengths (at the start of the campaign) by corps, not division. Luckily I possess *MOVES* #34, which contains John E. Koontz' superb article, "True Victory," as well as his revised *Wellington's Victory* order of battle. It was this source that solved most of the Prussian problem. From other sources

I verified the Prussian OB: Weller listed the total Prussian strength (before the Battle of Ligny) as 99,715.² After the battle, in which the Prussian ranks were reduced by 16,000 casualties and 8,000 desertions,³ the total was 75,715. After the detachment of Thielmann's III Corps (ordered to distract Grouchy's force at Wavre from the Prussians supporting Wellington) the total drops to 58,715, an approximation which tallies closely with the actual total (see following). Even better, Bulow's large IV Corps' exact total is known (from Weller) because it did not fight at Ligny.

I drew the French total mainly from Koontz, with some corroboration from Weller (who listed the French also by corps only). D'Erlon's I Corps had not fought at either Quatre Bras or Ligny, and consequently its exact strength is recorded.

I enumerated the Anglo-Allied army mainly from Weller (who listed battalion strengths) with help from Koontz, who recorded each battalion that participated at Waterloo (e.g., many from the II Corps were at Hal-Tubize). Since only five Anglo-Allied divisions fought at Quatre Bras, most of the army's strength was easily obtained. The other five divisions were difficult, but Weller provided the answer. He listed the losses for each Allied nationality (2,275 British; 819 Brunswickers; 369 Hanoverians; 1,058 Dutch-Belgians⁴) at Quatre Bras; because I knew the approximate strengths of the five divisions (1/I, 3/I, 2DB/I, 5/R, Bw/R) at Waterloo from Koontz, along with the nationalities in each, and based upon knowledge of which divisions suffered heaviest at Quatre Bras, I made satisfactory estimations that jibe closely with the actual totals.

The Hougomont garrison remained, however; though complex, this puzzle yielded an adequate solution. I knew, from both Weller and Holmes, that 3500 Allies had held

off 14,000 Frenchmen.⁵ The problem was that those 3500 hadn't been present at once, but rather were a total of the men who had fought there all day (Wellington constantly pulled out bloodied and sent in fresh battalions). Nonetheless, Weller mentioned all units that had defended Hougomont, and those that had fought the longest. So once I compiled the composite garrison, I simply subtracted each participating unit's strength from its parent division.

Composition

Composition of Hougomont Garrison	Men
2 companies of 2nd Gd reg., of 2/1/1:	200
Nassau Lt. btn., of 1/2DB/1:	900
2nd Line btn., of 1/2/II:	500
Misc. Hnvrn. troops, of 3/2/II:	1200
Adv. Gd. btn., of 1/Bw/R:	700
(Info. from Weller, pgs. 79, 88-92)	3500

[3.0] The Hou. unit starts in Hougomont, with the three adjacent French units likewise starting one hex northeast of their pictures on the map, for two reasons. First, with the Hou. unit starting in the woods hex, Hougomont itself can easily be occupied by the French, while the Hou. unit is surrounded and within a few turns destroyed — an ahistorical result. Second, by one o'clock (when the game begins) in the actual battle, the French had already advanced into Hougomont wood, while the Allies had retreated into the buildings.⁶

[4.0] The French LC division has a movement allowance of five, not six as in *NAW*. Hourly game-turns tend to equalize movement rates (e.g., all combat units have an allowance of six in *Blue & Gray*).

[6.21] Historically, the Dutch-Belgians performed poorly at Waterloo. Many of the Belgians' sympathies lay with Napoleon, and consequently they fought less effectively than the other Allies. In fact, many deserted

Comparison of the Armies

French	SP's:	Representing:	Actual:*
Inf	98	49,000	48,950
Cav	31	15,500	15,765
Art	49	7,350 (245g.)	7,232 (246g.)
	178	71,850	71,947†
Anglo-Allied	SP's:	Representing:	Actual:
Inf	100	50,000	49,608
Cav	25	12,500	12,408
Art	31	5,580 (155g.)	5,645 (156g.)
	156	68,080	67,661
Prussian	SP's:	Representing:	Actual:
Inf	96	48,000	47,881
Cav	14	7,000	7,081
Art	28	4,200 (140g.)	4,080 (136g.)
	138	59,200	59,042‡

* Figures from Holmes, p.88, for both French & Anglo-Allies. † Includes I Corps exact total. ‡ Estimate includes IV Corps exact total.

during the battle; furthermore, the Dutch-Belgian cavalry also performed egregiously, even refusing to charge!⁷

[6.3] In play-testing without these rules, Prussian casualties fell far short of the historical amount (7,000); the large size of Prussian infantry divisions caused the discrepancy, because the grossly outnumbered French attacked with poor differentials: hence, the doubled French strength (which *does* have historical basis). The Prussians, conservative after several defeats by Napoleon, held ground lightly, retreating at the slightest inclination. At Waterloo, in a few minutes, two battalions of the Imperial Guard expelled 25,000 Prussians from Plancenoit!⁸

[6.4] Since the victory conditions are based on casualties, it obviously would be an advantage to occasionally lose 150 or 180 rather than 500 men. Also, infantry and cavalry took a much higher percentage of losses than did artillery in terms of men; rather than become casualties, many artillerymen fled.⁹

[6.5] Why should cavalry benefit when attacking a woods or building hex? Logic dictates otherwise. When defending in such hexes, the cavalrymen should be considered dismounted.

[6.6] Except for the Hou. unit, few units ever experience isolation; nevertheless these rules reflect the disadvantage of units being cut off.

[6.7] These rules make the Hou. unit's destruction unlikely. Conceivably, the French may still capture Hougomont, but they must concentrate on that sector, weakening themselves elsewhere. Historically, 10,000 men fell in or near Hougomont: 7500 of them were French.¹⁰ The tripling effect recreates the Gibraltar-like characteristic of the semi-fortified, thick-walled (impenetrable to artillery fire¹¹) structure. Finally, the Hou. unit may not move because, being otherwise occupied, it didn't at Waterloo.¹²

[6.8] The *NAW* CRT was changed from an odds to a differential CRT because of the "bloodier" results (i.e., fewer attacking SP's are needed to inflict losses). In play-testing, each side's casualties constantly fell short of the actual total. The only solution was to alter the CRT.

[7.0] The reinforcement schedule is founded on thorough research, and is historically accurate. It is also radically different from the *NAW* schedule, in that the Prussians arrive on three consecutive turns, and descend in size of each new body of reinforcements. Holmes pictorially (p.95) and Weller verbally (pp.126, 130-131, 139) indicate the disposition of the Prussians, as well as each corps' time of arrival. But the best source for Prussian deployment is undoubtedly *The Battle of Waterloo* ("... and a plan of the position and movements, with those of the Prussians, traced by a near observer."¹³) The frontispiece of this classic 1815 edition shows each corps' entry point on the map, its path to the French lines, and the spot where it attacked.

It is this diagram which insures the schedule's accuracy.

[8.0] Most of my play-test games contained the demoralization scale; each game the French level changed. Whenever the French did become demoralized, the game became an Allied rout, and the Allied casualties remained too low. Of course, the Allies never reached their level. Finally the levels were abolished, thereby facilitating play. However, the French *had* been demoralized during the battle. (Sometime after 7:30, the Imperial Guard infantry, having previously been in reserve, attacked the Anglo-Allies between La Haye Sainte and Hougomont, supported on either flank by elements of the I and II Corps. After absorbing a pounding, the Guard retreated — the first time it had ever been defeated. Unsurprisingly, the remainder of the battered French stopped fighting and hastily retreated.¹⁴) Therefore a limited but accurate demoralization rule was instituted. This rule simulates Napoleon's method of withholding the Guard until the critical, decisive moment, and forces the French player to place the Guard infantry in reserve. Later in the game, he has the option of sending the Guard to fight the Prussians, or to gamble like Napoleon by attacking the Anglo-Allies.

[9.0] There is no provision for exiting French units to the north because it is impossible. In weeks of play-testing, even in games with a French morale bonus, the Allied line was never broken; no French unit infiltrated past the Allies, let alone exited off the map. But this too is historically accurate. Hougomont, La Haye Sainte, and Plancenoit were chosen as hexes whose possession raises the French (or lowers the Allied) player's victory level because of their obvious strategic importance, in the center and on the flanks of the fighting. But the French will rarely hold one of these positions at game's end (historically they held none), and probably never more than one.

An interesting hypothetical scenario (for those tired of seeing the French lose Waterloo) is a battle between the French and the Anglo-Allies, assuming that Grouchy's force had managed to prevent the Prussians from supporting Wellington, or that Gneisenau, Blucher's chief of staff (temporarily in command until Blucher had recovered from his fall at Ligny), had had his way (Gneisenau disliked Wellington, and thought he wouldn't fight at Waterloo; therefore, he didn't want to send his army, alone, to battle Napoleon). Theoretically the stronger French would win — and possibly be able to exit enough units (48 + SP's, based on the *NAW* victory conditions) to guarantee capture of Brussels, Ghent, and all Belgium.

The End of an Era (title of my *NAW* variant) may not be as playable as *NAW*, but it certainly is a more realistic simulation. If players want to have fun, or have little time, they may play *The End of an Era* with the *NAW* advanced CRT and no SP step-losses, but with my OB. This game would be as simple (but more accurate) than *NAW*.

Footnotes

¹Map #168

²p. 243

³Brett-James, 69.

⁴pp. 69-70

⁵Weller, 94; and Holmes, 90.

⁶Weller, p. 89, states that the fight for Hougomont began at 11:50, and that the Allies, within an hour, had retreated from the woods into Hougomont. Brett-James, p.106, substantiates this report.

⁷Weller, 142 and 163

⁸Weller, 146 and 203

⁹Weller, 155

¹⁰Weller, 94; and Holmes, 90

¹¹Weller, 86-87

¹²Weller, 94; and Holmes, 90

¹³Thus ends the long title, the first part of which is recorded in the bibliography.

¹⁴Weller, 144-150

Bibliography

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- Brett-James, Anthony. *The Hundred Days* (New York: St. Martin's Press, 1964).
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- Holmes, Richard. "Waterloo," pp. 82-105; from *Two Centuries of Warfare*, by Christopher Chant, Richard Holmes, and William Koenig (London: Octopus Books, Ltd., 1978).
- Koontz, John E. "True Victory". *MOVES*, August/September, 1977, pp. 4-10.
- Weller, Jac. *Wellington at Waterloo* (New York: Thomas J. Crowell, 1967). ■ ■

SPIBUS [continued from page 13]

- Either tape or disk is acceptable, but I would prefer disk;
- Virtually any Disk Operating System is acceptable, but if you have modified your version of the DOS, please advise, or better yet, place the program on a data disk;
- Disks can be accepted only in 35 track format;
- Cassette tape's can be accepted only in standard Radio Shack format;
- Remember to package your disk/tape appropriately (i.e., protect the hell out of it) and include return postage;
- If possible, review past issues of either *Computing 80* or *Kilobaud*; both have had good articles on documentation and program description.

Any questions or suggestions are appreciated; please send them to me:

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