

GETTYSBURG

THE TURNING POINT™



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QUICK START RULES

1.0 START-UP

These rules allow the player to quickly get into a simple and straightforward game with a minimum of rules reading. Those of you who wish more complexity and realism are invited to play the INTERMEDIATE and ADVANCED games.

1.1 Starting the Game (C-64)

To begin the game, insert the game disk and type LOAD "*",8 and press RETURN. When READY appears, type RUN and press RETURN.

1.2 Starting the Game (Atari)

Remove all cartridges from your computer. Boot-up the front side of the disk (800XL owners will have to hold down the OPTION key when they turn on their computer to boot). After selecting the starting values for your game, you will be instructed to insert the Game Side of your disk.

1.3 Starting the Game (Apple)

To begin the game, boot your game disk with the front side up and the game will start automatically. If you are using the Apple IIc or IIe, keep the CAPS LOCK key depressed throughout the game.

1.4 Starting the Game (IBM)

To begin the game, remove the BASIC cartridge (if using the IBM JR) and insert your 2.0 to 3.2 DOS disk in the drive. Turn on the computer system. Press RETURN until you see the ready "A>". Insert your game diskette. Type START, press ENTER, and the game will boot. The IBM version has additional menus that allow you to choose the 10-key option (movement compass using "8" for moving North instead of standard "1") and also allow you to adjust the screen to the right or left and change the colors. On these menus simply press the key that corresponds to the desired option.

1.5 Main Menu

The first menu you see prompts you to indicate if you are using a "speed-up" board. If so, press the appropriate key. Press (3) if you are not using a "speed-up" board. Older versions of the "Speed Demon" that do not contain the dip switches may not work properly with this game.

When the game is booted and past the title page, you will see a menu with a list of options. At a later time you may wish to use these menu options. (See 2.1 of the INTERMEDIATE and ADVANCED Game rules.) For Quick Start purposes, leave the default selections and press the RETURN key.

A series of displays showing casualties for men and guns will be presented on the screen one by one. Press RETURN to continue. You will then be asked to set the delay loop for displayed messages for this turn. Set this at 6 if you have a speed board and 4 if you do not.

1.6 Getting Started: A Tutorial

After setting the time for the delay loop, the program will go through the beginning phases of the first game turn until it reaches the Union Operation Phase #1.

You should see the map on the screen now with a white square exactly in the middle. At the bottom of the screen you see lines of text, which indicate the phase, time, and day among other things. You are now in what is called the Cursor Menu (you may wish to read section 2.1).

Move the white square on the map which we will now call the cursor by pressing the keys "1"-"8". You will notice in the lower right-hand corner of the screen the numbers 1-8 arranged in a box. This serves as a compass for cursor movement. Pressing "1" moves the cursor one square directly up (north). Pressing "2" moves it one northeast and so on.

Looking at the text on the bottom you will notice on the last line "X,Y:20,25". This indicates the column and row where the cursor is currently situated. Move the cursor and these numbers will change.

Move the cursor to location 7, 8 and press the "V" key. Every square that can be seen from this location is inversed. Press any key to return.

Press the "T" key. You will notice that the figures or units on the map will disappear revealing the nature of the map they were sitting on. Press any key to continue.

Move the cursor to 10,11 and press the "O" key. You will notice that the map centers itself on the cursor location.

Move the cursor to 13,8 and press the SPACE BAR. The Union unit there will be accessed. You are now in the Command Menu (section 2.2) with the unit information for DEVIN A on the screen (you may wish to read section 2.3).

Press "7" twice (with a pause in between the two 7's) and you will see the unit move two squares to the left. Press "F" and the target menu will appear. This menu allows you to target enemy units. Press "V" and you will see all the squares you may fire at inversed. Press any key to return to the target menu. Move the cursor by pressing "6" and then "7". You are now over a Confederate unit. Press "T" to target it. You will now return to the Command Menu for the unit DEVIN A. Notice that the FIRE display shows 9,9; the square of the target unit. Press the "N" key and you will notice that the next unit in order of battle sequence (the order that units are listed in the back of the rules booklet) is accessed and in the Command Menu. Move that unit, DEVIN B, by pressing "7" twice. Press "Q" to exit that unit and to return to the cursor menu.

Move the cursor to 13,13 and press the SPACE BAR to access the unit. Move the unit one up by pressing "1". Press the "U" key and you will notice that the other unit in the square is accessed. Press "8" to move the unit one square northwest. Press "Q" to return to the cursor menu.

Move the cursor to 11,39 and press the SPACE BAR. Move MEREDITH A north along the road by pressing "1,1,1,3,1,3,1,1,1, and 1". Press the "N" key and move MEREDITH B likewise up the road. Press "N" and do the same for CUTLER A. Instead of pressing "N" at the end of the CUTLER A's move press "Q" to return to the cursor menu.

Press "Z" and you will see the cursor go to the last square you accessed a unit with the SPACE BAR. Move the cursor to 11,42 and press the SPACE BAR to access CUTLER B. Move the unit up the road where the other units have moved. At the end of the move press "Z". You will see the unit move itself back to its original square. This is handy when you wish to move a unit somewhere else. Move CUTLER B back up the road again. Press "Q" to return to the cursor menu.

You are now ready to enter the Combat Phase. During the combat phase you should see the Artillery fire first and then the infantry. Please note that even those units you didn't target for will fire on their own if they can.

— THE BASIC GAME

You may fight hand to hand (melee):

- if you are next to the enemy
- have targeted that enemy for fire
- have pressed "M" in the command menu for that unit
- and have enough operation points to do so (see section 2.4 and 2.8 and also look at the Operation Costs table).

Press "C" and then "Y" and you will enter the combat phase.

2.0 OPERATION PHASE

During this phase you are allowed to move and plot melee combat for all your troops. Most actions require you to spend operation points (see Operation Costs Table).

2.1 Cursor Menu

When you first enter the Operation Phase, you will see the following menu below the map.

- (V) = Highlights all the squares that a unit could see from that square.
- (Ø) = Centers the map at the cursor.
- (1-8) = Moves the cursor in the desired direction according to the compass on the lower right hand side of the display.
- (T) = Removes unit shapes from the map so you can see the terrain underneath.
- (C) = Takes you to the Combat Phase. Press this key when you are finished moving all your units.
- (SPACE = Picks up the unit under the cursor to allow you to give it commands. If two or more units are in the square, you will pick up the first unit. You are now in the Command Menu for that unit. The day, phase number, and time of day are also displayed.
- (Z) = Takes you back to the last square where you accessed a unit.

2.2 Command Menu

As soon as you pick up a unit the Command Menu for that unit is ready for any commands. The commands you may select are listed below:

- (Ø) = Centers map on the unit.
- (1-8) = Moves unit in desired direction as indicated by the compass.

- (M) = Plots the unit to MELEE combat the unit it fires at.
- (F) = Takes you to the Target Menu which allows you to set a priority fire square.
- (V) = Allows you to view all squares that you can fire into. You see in a 360 degree arc.
- (T) = Removes units on the map to view terrain underneath.
- (H) = Displays list of commands available in this menu.
- (U) = Picks up the next unit in the square.
- (N) = Goes to the next unit on the map in promotion order (this is the order of units present in the Order of Battle).
- (Z) = Aborts or cancels the actions of the unit you have currently picked up. The unit is returned to its original square.
- (Q) = Puts down the unit and takes you back to the Cursor Menu.

2.3 Unit Information

When you pick up a unit, the unit statistics are displayed below the map such as the example below:

CONFED DAVIS – A INF 501 MEN
RFL EFF:60 FT:0 MORALE:60
OP:7 MELEE:N FIRE:17,34
CLEAR(1) X,Y:16,34

The above display shows that the Confederate unit, DAVIS A is INFANTRY with 501 men. Its men are armed with RIFLES, have an EFFICIENCY of 60, a FATIGUE of 0, and a MORALE of 60. It has 7 OPERATION POINTS left, does not wish to MELEE and has plotted FIRE into square 17,34. The unit is on a CLEAR square with an elevation of (1). It is located on square 16,34. The direction compass is located on the right hand side. Units have different shapes on the map according to the type of unit (Infantry, Cavalry, or Artillery) and the stacking. See Figure 2.3 in the column to the right.

2.4 Moving A Unit

When you have picked up a unit you may move it in the desired direction according to the compass displayed:

8 1 2
7 3
6 5 4

Moving costs you operation points and fatigue, according to the Operation and Fatigue Costs Chart. Your units receive 8-10 operation points each OPERATION PHASE. If you don't use up all your operation points, left over operation points will decrease fatigue on a 1 to 2 basis. If you don't have enough operation points, you won't be allowed to move into the square unless the unit hasn't moved even one square for the whole phase. You can't stop in a square that would cause it to have too many units (see Stacking 2.5). If you move an artillery unit, it may not fire until the next phase. You may not move an artillery unit from a woods square directly into another unless on a road.

2.5 Stacking

A square may have one or two infantry or

UNION		CONFEDERATE
	"One" Infantry	
	"Two" Infantry	
	Artillery	
	Artillery plus "One" Infantry	
	Artillery plus "Two" Infantry	
	Routed	
	Cavalry	

Figure 2.3 Unit Icons

cavalry units. In addition, it may have one artillery unit. You may overstack while moving a unit, but you may not stop moving and be overstacked.

2.6 Zones of Control

The eight squares that a unit is next to is defined as its Zone of Control (ZOC). This Zone of Control costs enemy units 2 extra operation points to move into. Retreating units during combat lose more men if forced to retreat into an enemy Zone of Control or out of an enemy ZOC if routing. Units may only move ZOC to ZOC if the square moved into is occupied by a friendly unit.

2.7 Fire Plots

A unit will fire at the closest enemy unit it can see unless you have set a priority fire square it can fire into. To plot the square, press "F" in the Command Menu. It will take you to the Target Menu that allows you to move the cursor over a square and press "T" to set it as the priority target. In the Target Menu you may also press "V" to view your line of fire or "E" to exit the menu (in which case the computer will find a target for you just before combat). Or press "N" to exit and plot "No Fire" in which case the unit will only fire at an enemy unit next to it.

2.8 Melee Plot

If you wish to plot a unit to engage in melee (hand-to-hand) combat, press "M" in the Command Menu. The unit will melee the enemy unit it fired at if it is adjacent to the enemy unit and has enough operation points. If it isn't, it will not melee.

3.0 COMBAT PHASES

During this phase, all fire phases and melees are resolved. Casualties are taken.

3.1 Fire and Melee Phases

There are a total of five fire phases and one melee phase during a combat phase as outlined below:

- Defensive Artillery Fire Phase
- Offensive Artillery Fire Phase
- Defensive Fire Phase
- Offensive Fire Phase
- Defensive Melee Fire Phase
- Melee Phase

Units will fire if they have a line of sight and are within range of the target unit. When visibility is at 60%, there is about a 60% chance that a unit will not fire. Ranges of weapons are found in the Weapon Range/Casualty Table. All fire phases are automatically resolved by the computer.

You will see the names of the firing units and their targets on the screen along with their casualties. Numbers in parentheses refer to artillery guns lost.

3.2 Rout and Rally

Units will change to the rout shape and retreat when their morale breaks (good chance of breaking when morale is less than 15). After they have rested they may rally and return to the normal shape. Every time a unit routs it loses 10 points from its effectiveness.

4.0 FATIGUE

A unit's fatigue rating is a measure of how tired it is. It gains fatigue when it moves and takes losses. See the Fatigue Gain Table for details. Fatigue also affects morale.

Effectiveness minus fatigue equals morale. Since gaining fatigue lowers morale, you may raise morale by losing fatigue. You lose fatigue by having left over operation points in the middle and at the end of a turn. One operation point wipes out two fatigue points unless located next to an enemy unit, in which case one operation point wipes out one fatigue point. A unit will recover 5 effectiveness points during the End of the Day Phase if it has a morale below 50. Also during this phase, units lose all their fatigue.

5.0 REINFORCEMENTS

Each side receives reinforcements according to the Order of Battle (see Appendix).

6.0 END OF THE DAY PHASE

At the end of the 7 PM turn, each side will have the option of ending the battle and withdrawing from the field. All points for objectives are lost. The remaining player does not accrue victory points for objective squares he doesn't already own. In addition, a player will lose 100 points per friendly unit next to an enemy unit. The Confederate suffers a penalty of 2000 points if he withdraws after the very first day of battle.

During this phase, units lose all fatigue. In addition, units with a morale of less than 50 gain 5 effectiveness points. Units will also automatically fortify during this phase from 0 to 5 fortification points based on fatigue, efficiency, and being adjacent to the enemy. Units in column or mounted mode or units with a fatigue of 50 or more will not fortify.

7.0 HOW TO WIN

Players receive victory points. A score is calculated by subtracting the Confederate points from the Union. You may examine the map and look at the units of both sides when the game has ended.

7.1 Victory Points

Players receive points based on enemy casualties according to the schedule below:

- 1 pt per Infantryman lost
- 2 pts per Cavalryman lost
- 100 pts per Artillery Gun lost

Multiply the above values by 1.5 for captured.

FOR CONFEDERATE IN POSSESSION OF SQUARE	FOR UNION IN POSSESSION OF SQUARE
21,15	21,15
19,36	12,11
18,39	12,17
24,21	15,13
20,21	15,16
30,23	34,3
24,28	30,1
34,18	26,1
34,35	21,1
34,41	10,1
21,50	10,1
	1,5
	1,23

Each objective square is worth 1000 points to that side. Each objective square occupied during a reinforcement phase changes hands to the side occupying it. It stays with that side until an enemy unit occupies it during a reinforcement phase. When a side withdraws from battle all his points for objective squares are lost. The enemy retains points only for objectives already occupied. In addition, the withdrawing player loses 100 points per friendly unit remaining next to enemy units. The Confederate suffers a penalty of 2000 points if he withdraws after the very first day of battle.

7.2 Victory Levels

At the beginning of each turn, a display will appear on the screen showing victory levels and the scores needed to attain those levels.



INTERMEDIATE AND ADVANCED GAME RULES

1.0 INTRODUCTION

GETTYSBURG: The Turning Point is a grand-tactical level game of the most famous and well known battle of the Civil War. The outcome of those three days in July 1863 sealed the fate of the Confederacy.

1.1 Description of Action

Each game turn represents an hour of real time. The execution of a game turn includes rally, movement, mode changes, facing changes, and resolution of artillery fire, offensive fire, defensive fire, and melee.

1.2 Talking to the Computer

To select a routine from a menu or answer a YES/NO question, just press the desired key.

1.3 Starting the Game (Commodore 64)

To begin the game, insert the game disk and type LOAD "*",8 and press RETURN. When READY appears, type RUN and press RETURN.



Ridge (orange)



Road-Ridge (white/orange)



River (blue)



Stream (blue)



Road (white)



Bridge (white/blue)



Ford (white/blue)



Town (white)



Cornfield (orange)



Woods (green)

1.4 Starting the Game (Atari)

Remove all cartridges from your computer. Boot-up the front side of the disk (800XL owners will have to hold down the OPTION key when they turn on their computer to boot). After selecting the starting values for your game, you will be instructed to insert the Game Side of your disk.

1.5 Starting the Game (Apple)

To begin the game, boot your game disk with the front side up and the game will start automatically. If you are using the Apple IIc or IIe, keep the CAPS LOCK key depressed throughout the game.

1.6 Starting the Game (IBM)

To begin the game, remove the BASIC cartridge (if using the IBM JR) and insert your 2.0 to 3.2 DOS disk in the drive. Turn on the computer system. Press RETURN until you see the ready ">". Insert your game diskette. Type START, press ENTER, and the game will boot. The IBM version has additional menus that allow you to choose the 10-key option (movement compass using "8" for moving North instead of standard "1") and also allow you to adjust the screen to the right or left and change the colors. On these menus simply press the key that corresponds to the desired option.



Infantry



"Two" Infantry



"One" Infantry plus Artillery



"Two" Infantry plus Artillery



Unlimbered Artillery



Column or Mounted Cavalry



Routed



Limbered Artillery

1.7 Game Scale and Map

There are 38 turns in the game, each representing one hour from 7:00 a.m. to 7:00 p.m. of July 1 (8:00 on July 1) to July 3, 1863. The map is situated on a 36 x 52 square grid. Each square represents 200 yards from side to side. The various terrain depicted includes clear, town, woods, hills, ridges, roads, streams, and bridges. Three elevations are represented by contour lines. See Figure 1.7 below for terrain symbols.

1.8 Saving a Game

At the end of each combat phase, the computer will allow the player(s) to save the game in progress. You will need a blank disk to store the saved game data. Players must initialize their blank disk from within the program as offered by the Save Game Menu. Once a game is saved, you may restart it at the point where you left off. You may not change selected options when you restart a game in progress.

1.9 Units

There are three unit types in the game: Infantry, Cavalry, and Artillery. Each unit is rated for manpower (and guns for artillery), effectiveness, fatigue, morale, weapon type, mode, facing, operation points, command control, rout status, and disruption status. Units are represented by specific graphic shapes depending on unit type and stacking. See Figure 1.9 below. On your screen, Union symbols are blue and Confederate symbols are white. Note that the symbols will change shape to reflect different facings and stacking combinations.

Each unit represents about two to three regiments or one half of a brigade. A unit is named after its brigade commander with an "A" or "B" designation attached. Attached to units are divisional and corps commanders. The brigade commander is assumed to be present at both A and B units of its brigade.

1.10 Changes from Antietam Game System

If you have played BATTLE OF ANTIETAM you will find this game very similar. There are some important differences. Below are listed the most significant with the sections mentioned where you may read about them in detail.

- No Activation limits
- Command control has been completely changed (section 4.0)
- Units rally with no minimum strength requirements (section 8.6)
- Stacking limits are void for reinforcing units and units moving in columns (may not end movement overstacked) See section 7.7
- New options available on cursor menu (see section 7.1)
- New option available (reorganization) on Command Menu (see section 7.14)
- Operation points costs and fatigue costs have changed (see Costs Table)
- ZOC to ZOC movement allowed only into a friendly occupied square. Limbered artillery may move ZOC to ZOC and retreating units don't stop in a ZOC (see section 7.6)

Figure 1.7 Terrain Symbols

Figure 1.9 Unit Symbols

- Each unit carries ammo and expends it and may be resupplied (see section 5.3) Units may have a "NO FIRE" plot so they won't waste ammo (see section 7.13) There are overall ammo pools.

- Artillery has men and guns. They may retreat in fire or melee phases (see section 8.2). They may not move from one woods square to another.

- No range limits based on elevation exist
- Routed units retreat 3 squares, not 4
- Routed units may be moved like normal units.
- An End of Day Phase is included (see section 10.0)

- Units recover fatigue based on the number of operation points remaining at the end of a phase on a 1 to 2 basis (see section 8.10), 1 to 1 if in an enemy ZOC.

- When using Hidden Option, a unit that uses the "Z" key option in an enemy ZOC that has exposed a hidden unit will lose 4 operation points.

- Streams in Gettysburg are fordable at any point for slightly higher cost than clear terrain.

- In combat, the cursor first appears over the firing unit and then it appears over the target unit when casualties are taken.

- Routed units lose a significant amount of men due to capture.

- Units can plot fire into an empty square.

1.11 Parts Inventory

Your game should contain the following parts:

- Game box
- Rule book
- One 5¼" game disk
- One map card

2.0 SET UP

GETTYSBURG: The Turning Point is a two-sided game — Union vs. Confederate. Both sides may be played by either a human player or the computer opponent.

2.1 Determining Conditions of Play

The first menu you see prompts you to indicate if you are using a "speed-up" board. If so, press the appropriate key. Press (3) if you are not using a "speed-up" board. Older versions of the "Speed Demon" that do not contain the dip switches may not work properly with this game.

At the screen display the player(s) must determine the conditions under which the game will be played from the menu to the right.

Press A–O to make your choices. Press RETURN when your choices are made and you are ready to continue. A series of displays showing casualties for men, guns, and leaders will be presented on the screen one by one. Press RETURN to continue. You will then be asked to set the delay loop for displayed messages for this turn.

- The "A" option allows you to select a new game or continue with a game in progress. When you select a saved game, the options on the menu are defaulted to the options selected in your saved game. When you select the "SAVED GAME" option and press RETURN, you will be prompted to insert your saved game diskette and type in the name of the file (you will be allowed to catalog the save game disk if you wish). You may not change game options when you boot up a saved game.

- Options B and C allow you to set the Confederate or Union player to be controlled by a human or the computer. Please note that you may have the computer play against itself for a demo game.

- Option D gives you a choice of three games of varying complexity. The differences are explained under the appropriate headings of this rulebook. The INTERMEDIATE Game is exactly the same as the ADVANCED Game except for the deletion of leaders and command control and the addition of the automatic fortification rule.

- Option E allows you to play a game where only sighted enemy units of both sides will appear on the map during the combat phase. Hidden units will also become visible when moved adjacent to during the operation phases.

- Option F gives you the ability to set a limit to how much time a player has to complete his operations phase.

- Option G gives the black-and-white or monochrome user better-suited unit shapes. Atari owners are given the option of a one- or two-drive system here.

- Option H allows you to play with icons (figure profiles) or symbols (bars). Symbols are recommended for INTERMEDIATE and ADVANCED play since they show facing and mode charges. Icons are automatically used for the BASIC game.

- The "I" option allows you to play with additional cavalry reinforcements that were not historically engaged. These are marked on the Order of Battle. Optional CAV which would have been present in one of the later scenarios will come as reinforcements the first turn of the scenario.

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A) NEW GAME   SAVED GAME
B) UNION   HUMAN   COMPUTER
C) CONFEDERATE
   HUMAN   COMPUTER
D) BASIC   INTERMEDIATE
   ADVANCED
E) HIDDEN UNITS   NON-HIDDEN
F) TIME LIMIT   NO TIME LIMIT
G) COLOR TV   BLACK/WHITE
H) ICONS   SYMBOLS
J) LEVEL OF PLAY   1 2 3 4 5
K) UNION ARRIVAL   1 2 3 4 5
L) CONFED ARRIVAL  1 2 3 4 5
M) UNION AMMO      1 2 3 4 5
N) CONFED AMMO     1 2 3 4 5
O) CAMPAIGN GAME   JULY 1-3
   FIRST DAY SCENARIO   JULY 1
   SECOND DAY SCENARIO  JULY 2
   THIRD DAY SCENARIO  JULY 3
  
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- The J option selects the difficulty level. Level 3 is historical and makes no modification to either side. Levels 1 and 2 favor the Confederate player (level 1 more so than level 2). Levels 4 and 5 favor the Union (5 more so than 4). Levels affect the casualties inflicted in fire and melee combat. Please note that you should play an easy level of difficulty the first few times you play the game. Level 3 is a challenge.

- The "K" and "L" options allows for variable reinforcement arrivals. Units may appear up to one to four hours earlier or later. Level 3 is historical with no changes. Levels 1 and 2 allow for earlier times and later times respectively by a random of 0 to 2 turns (level 1 earlier and 2 later). Level 4 allows for a random of 0 to 2 turns earlier to later arrival, and level 5 allows for 0 to 4 turns earlier to later arrival. The authors and playtesters recommend that once players are acquainted with the system, they should play with option level 5. Just as in the real Battle of Gettysburg, this truly recreates the uncertainty of a meeting engagement where commanders did not know the size of the opposing force or how quickly they would be reinforced.

- The "M" and "N" options allow for variable amount of ammo received in the general infantry and artillery ammo pools. Level 3 is historical with levels 1 and 2 give progressively less ammo and levels 4 and 5 giving progressively more ammo.

- Option O allows you to choose one of the four scenarios available to play.

2.2 Historical Set-Up

At the start of the game, the computer will assign all combat forces to their locations the early morning of July 1st, 2nd, or 3rd depending on the scenario being played. All units have been historically placed.

3.0 SEQUENCE OF PLAY FOR A GAME TURN

- Command Control Phase
- Recovery/Rally Phase
- Reinforcement Phase
- Union 1st Operations Phase
- Union 1st Combat Phase
- Confederate 1st Operations Phase
- Confederate 1st Combat Phase
- Mid-Turn Recovery Phase
- Union 2nd Operations Phase
- Union 2nd Combat Phase
- Confederate 2nd Operations Phase
- Confederate 2nd Combat Phase
- End of Day Phase
- Victory Determination Phase

4.0 COMMAND CONTROL

During this phase all units make a range check to their appropriate leaders and receive a command control rating of 0.5 to 1.5 based on this range, a random, and the proficiency ratings of the leaders. The command control rating affects strength, operation points received, and ammo resupply. Please note that command control is checked only once per

hour or game turn. In the Intermediate game units are randomly assigned a command control of 0.9 to 1.2. Reinforcing units receive an automatic 1.2 rating for the first turn on the map.

4.1 Range of Leaders

The chart below shows the cost in command points per square the leader is from the unit making the range check.

	OTHER HALF OF BRIGADE	DIV. CMDR.	CORPS CMDR.
Conf.	10	5	1
Union	10	10	1 (10)

There is a maximum of 4 squares range for the "other half brigade", 7 squares for a divisional leader and 10 squares for a corps leader. Beginning the second day the Union value for corps commanders is raised to 10 (cautious Meade arrives) for infantry and cavalry.

A Confederate unit that was next to the other half of his brigade (i.e. Davis A next to Davis B), two squares from his division commander, would suffer a loss of 10 (brig) + 10 (div) + 4 (corps) = 24 command points. Cavalry and artillery units do not make a range check to all leaders. Cavalry receives an automatic 14 command point loss (20 for Union) for the division and corps commander regardless of range to those commanders. A check is still made for the other half of the brigade. A Confederate cavalry that is two squares away from the other half of the brigade would incur a 14 (constant) + 20 (other ½ brigade) = 34 command point loss. Artillery receives an automatic 20 command point loss for brigade and division commanders regardless of range. A Union artillery unit four squares from his corps would lose 20 (constant) + 8 (corps) = 28 command points.

The base command control rating is determined by dividing the loss of command points into the constant 28. (Base command = 28 / loss of command points). The number derived is rounded up or down to fit between the range of 0.5 to 1.5.

4.2 Leader Proficiency and Command Control

The proficiency ratings of leaders subtract from the base command control number of units. A leader's rating is added to a random number 0 to 25 and compared to the chart below for its effect:

RANDOM AND RATING EFFECT	MESSAGE GIVEN ON SCREEN
5-15 = -0.3	Leader confused!!!
16-25 = -0.2	Leader indecisive!!
25-35 = -0.1	Leader cautious!
36+ = 0	Leader confident.

Each leader affects every unit in its formation (i.e. AP Hill affects every unit in its corps. Heth affects every unit in its division). Each unit will be affected by both its division and corps commanders. A unit will lose 0 to 0.3 for each leader from its base command control. Thus a unit with a base command of 1.3 may end up with a command control number from 0.7 to 1.3 after receiving the effects of its divisional and corps leaders. A unit will receive no less than a 0.5 rating. Artillery and Cavalry units are not affected by leader proficiencies.

4.3 Command Control Effects

A unit's rating determines the number of operation points it receives according to the chart below:

CC	OP
1.2 to 1.5	= 12
1.1	= 11
1.0	= 10
0.9	= 9
0.8	= 8
0.7	= 7
0.5 to 0.6	= 6

Units may vary slightly from the above chart due to a random that is also included. Also note that regardless of command control, a unit in column on a road receives 10 operation points. Dusk and early morning turns (7AM and 5PM - 7PM) have a maximum of 9 operation points allowed.

A unit's strength is modified proportionately by its command control with a minimum modifier of 0.5 (i.e. a unit with a strength of 500 men would be treated as 450 men before any other modifiers if it had a command control of 0.9).

A unit's ability to rally and resupply with ammo is also affected by its command control. A unit with 1.0 command control will receive about two ammo points less than it would with a command control of 1.5 (see section 5.3). A unit with 1.5 command control has about 10% better chance of rallying than a unit with 1.0 command control (see section 5.2). Command control has a proportionate effect with ratings other than 1.0 and 1.5 in the two cases above.

A unit's command control also serves to reduce its random chance of failure to fire when the visibility is 60% (see section 8.3).

5.0 RECOVERY/RALLY PHASE

Units in this phase recover disruption and attempt to rally. They also receive ammo every odd hour. Units are automatically rallied during the night (Rally Phase of the 7 A.M. turn).

5.1 Disruption Recovery

Units will recover from disrupted status based on their command control, a random, and whether or not they are next to an enemy unit. A unit with a command control rating of 1.0 next to an enemy unit has about a 37% chance of recovery. It has a 75% chance if not next to an enemy unit. A command control rating of 1.5 gives you chances of 49% and 98% respectively. Any other command control rating is proportionate to the two ratings above.

5.2 Rally

Units that are routed will attempt to rally based on morale, command control rating, and a random. Units with a morale of less than 30 will not rally. All routed units on the 7 AM turn will automatically rally (their fatigue is reduced to 0 during the night). Other than the two cases above, a unit with a morale of 40 and command control of 1.0 has about a 75% chance to rally. A unit with a rating 1.5 in the above case would have an 80% chance to rally.

Units with different morale and command control ratings than those above will have proportionate effects.

5.3 Ammo Replenishment

Each side has ammunition pools for infantry fire and artillery fire. Replenishment comes from these pools. When the pools reach 0, units will not be replenished with ammo. Each odd numbered hour both sides receive a constant ammo reinforcement to their pools. You may view the pool levels by pressing "P" in the Cursor Menu.

Each unit has a maximum carrying capacity of 9 ammo points. If a unit is at its maximum, is routed, or is "toggled off" for resupply, it will not be resupplied. You may toggle a division or artillery unit on or off in the leader menu when you have accessed that leader. You may do the same when you access an artillery unit. There is a 3% chance that even if "toggled-on" a unit will not be resupplied (wagon train breakdown). A unit with a command control rating of 1.0 has about a 13% chance of being resupplied to its maximum amount. A rating of 1.5 would give it a 30% chance in the case above. If a unit fails, maximum resupply it receives at least one ammo point plus up to five more based on how many it needs, its command control rating, and a random. A unit with an average random, a command control of 0.9 and six ammo points to reach maximum would receive about 2 ammo points. A unit with a 1.5 command control in the above case would receive about 4 ammo points.

6.0 REINFORCEMENT PHASE

Reinforcements are automatically put on the map at designated entry squares. Units already on the map may not enter any road square on the edge of the map. Only reinforcing units may do so. In addition, units on the map may not target fire or melee into those squares, even though reinforcing units may fire or melee out of them. The result of this rule will in effect prevent an opposing force from blocking the arrival of enemy units. Stacking limits do not apply to reinforcements. Reinforcing units automatically receive a command control rating of 1.2 for the first turn (both phases) they are on the map. See Order of Battle for the order of appearance.

7.0 OPERATION PHASE

During this phase players may perform a variety of actions including movement, force marches, fire and melee plots, leader transfers, mode changes, and facing changes.

7.1 Cursor Menu

In this menu the player may do the actions listed below:

- (V) = Prompts you to indicate a direction and then displays the line of sight.
- (Ø) = Centers map at cursor

- (1-8) = Moves cursor in desired directions
- (T) = Removes units from map to see terrain
- (S) = Stops time clock
- (C) = Exits to Combat Phase (Press this key when you are finished moving)
- (SPACE BAR) = Accesses first unit in square if friendly. Command Menu for that unit is now active.
- (P)age = Second menu. On this menu will be displayed ammo pools for infantry and artillery. Also displayed are the commands accessed from the Cursor Menu.
- (Z) Abort = The cursor will return to the last square that a unit was accessed.
- (R)econ = Pressing this key when the cursor is over an enemy unit will display an approximate strength of the units in the square.
- (S)top = When playing with time limits, this command stops the time clock.
- (L)ow = This command cycles through units with low men, morale, ammo, or who are disrupted, giving you the option to access those units to move them.

Also displayed is the terrain type, elevation, and X,Y coordinates of the square. The time, date, and phase number is also shown.

7.2 Unit Statistics

When you access the first unit in a square, you will see the following display (example):

```
CONFED DAVIS - A INF 501 MEN
DS:N AMMO:6 MEL:Y MRL:60 FIRE 17,34
NORMAL OP:7 DIR:5 ADV:N
CLEAR (1) X,Y:16,34
```

The display above shows that the Confederate unit, DAVIS - A, is INFANTRY with 501 men. It is not DISRUPTED, has 6 AMMO points, is plotted for MELEE, and has a MORALE of 60. The unit is plotted for priority FIRE at square 17,34. It is in NORMAL mode, has seven remaining operation points, is facing DIRECTION five, and is not plotted for ADVANCE. It is on a clear square with an elevation of 1. The unit occupies square with X,Y coordinates 16,34. There is a compass showing directions of movement and facing.

A second page of unit statistics may be accessed by typing "P".

```
CONFED DAVIS - A INF 501 MEN
FORT:0 NORMAL CC:1.0
RFL EFF:60 FT:0
CLEAR (1) X,Y:16,34 CORPS:A.P. HILL
```

The second display above shows that the Confederate unit, DAVIS - A is INFANTRY with 501 men. The unit has a FORT value of 0, is in NORMAL mode, and has COMMAND CONTROL of 1.0. Its weapon type is RIFLE, EFFECTIVENESS is 60, and FATIGUE 0. It is on a clear square with an elevation of 1 on X,Y coordinates 16,34 and belongs to A.P. Hill's corps.

7.3 Command Menu

When a unit is accessed a number of commands are available. The commands listed below can be enacted by pressing the appropriate key in either page of the unit statistics.

- (Y) = Plots ammo on/off for artillery units only
- (Ø) = Centers map on unit
- (1-8) = Moves unit in desired direction as indicated by the compass, changing its facing automatically.
- (X) = Double Time (adds to the unit more operation points at a cost of fatigue).
- (D) = Prompts you to input a new facing (1-8) for the unit.
- (L) = (Advanced Game Only) Displays a menu with the name of the divisional or corps commander attached and allows you to transfer that leader if you desire. The menu also allows you to go to the divisional or corps commanders. In this menu you may also toggle a division commanded by that leader on or off for ammo resupply.
- (I) = All units that belong to the same division as the accessed unit will be inversed. The square with the divisional leader will be inversed and blinking (Advanced Game). When you press this key you will also be able to set the fire plots of all units in that division or artillery to "No Fire" or "No Plot."
- (A) = Plots the unit to advance if given the opportunity in fire phases or melee
- (M) = Plots the unit to melee in the direction of facing
- (F) = Takes you to the Target Menu which allows you to set a priority fire square.
- (S) = Changes the mode of the unit
- (B) = (Advanced Game Only) Builds one level of fortification
- (V) = Allows you to view all squares in the LOS of the accessed unit (squares are inversed)
- (T) = Removes units on map to view terrain underneath
- (P) = Displays the other page of unit statistics
- (H) = Displays Help Menus
- (U) = Accesses next unit in the same square
- (N) = Accesses next unit in the unit order (the unit orders are listed in the Order of Battle).
- (Z) = Abort move. The unit you have accessed will return to its original square, facing, and mode with its original operation points and fatigue.
- (Q) = Exits Command menu and goes to Cursor Menu

You should study carefully the commands above. Proper use of the commands greatly facilitates the playability of the game. Note that the "Z" key in the Command Menu allows you to take back a unit's move or action. Notice how it differs from the "Z" key in the Cursor Menu, which returns the Cursor to the last square where a unit was accessed with the SPACE BAR. The "N" and "U" keys are very handy when moving groups and stacks of units. Since reinforcements enter in unit order it's best to use "N" when moving reinforcement columns. Note that the artillery at the end of a reinforcement column isn't in unit order so you should use the "Z" key from the cursor menu to get back to them. The "U" key is essential to examine stacks of units. The "F" key takes you to a target menu where you may scroll over the map, target units, and even view what you can see to fire at. It is useful to move the cursor and view those areas that were not on the screen when you first accessed the firing unit.

7.4 Operation Points

Units receive operation points at the beginning of the turn and at the Mid-Turn Recovery Phase. A unit receives operation points according to its command control (see section 4.3). Regardless of command control, a unit in column and on a road receives at least 10 operation points. Most actions and movement in the operation and combat phases cost operations points (refer to Operation Costs Table at the back of the rule book). Please note that operation points are expended to fire and melee. Unused operation points are expended to recover fatigue on a 1 for 2 basis during the Mid-Turn Recover Phase and the end of the turn (1 to 1 if in enemy ZOC). During the first five game turns all Confederate forces are given a maximum of 7 operation points. Units that fire with less than 6 operation points remaining (before cost of firing) receive a 0.75 strength modifier. A maximum of 9 operation points is given to units during the dusk and early morning turns (7AM and 5PM - 7PM).

7.5 Moving a Unit

Once a unit is accessed, it may be moved by pressing keys "1-8" in the desired direction. Operation points expended to move depend on unit type, unit mode, terrain of the square, and other factors (see Operation Costs Table). Units may always move one square at the cost of all remaining operation points (see ZOC rules, section 7.6). Artillery units may not move from one woods square directly into another unless on a road. Units may move as part of an advance during the combat phase without expending operation points. The advance is allowed if plotted and the unit is otherwise eligible. Artillery may not move unless limbered. Press "Z" to abort if you have made a mistake with the unit you are moving to put it back to its original place. If using the hidden option, a unit will lose 4 operation points when it is using the "Z" key if it has caused hidden units to appear on the map by moving next to them. Routed units may move the same as other units.

Since they may not change mode to column they never use the road rate.

7.6 Zones of Control

The eight squares next to a unit constitute its zone of control. Zones of control affect movement costs per the Operation Costs Table. Movement from an enemy ZOC to another will cost extra operation points in addition to normal costs and will only be allowed if no other movement has been made by that unit and the unit is entering a square occupied by a friendly unit. (See Costs Table). ZOC to ZOC movement is also allowed during advances in the combat phase. Units forced to retreat during combat through or out of an enemy ZOC suffer losses. Changing mode in an enemy ZOC costs two additional operation points.

7.7 Stacking

No more than two non-artillery units may stack together. No more than one artillery unit may be in a single square regardless of the presence of other units. You may have a maximum of two non-artillery units and one artillery unit in a square.

A unit in the operation phase may overstack while moving if in column or limbered mode. It may not quit its move overstacked. Routing units may also overstack during their retreat and the operation phase.

Stacking shapes are dependent on what is in the square. All units in a square assume the direction of facing of the last unit to end its turn on the square. When a square is fired upon by non-artillery units or artillery at greater than one range, casualties are distributed among the defenders with one of the defending units receiving 3 times the casualties of the others. A square fired upon by artillery at a range of one will affect only one unit in the square.

Units in column receive the road rate only if the road square being moved onto does not contain another unit. When routed units stack onto friendly units during retreat, each unit gains five fatigue points.

7.8 Unit Modes

Units may be in one of two modes which affect movement and combat. Infantry units may be in column or normal. Cavalry may be mounted or dismounted. Artillery may be limbered or unlimbered. When a unit changes mode its graphic shape on the map also changes. Changing modes requires the expenditure of operation points as listed on the Costs Table.

Unlimbered artillery may not move. Changing mode in an enemy ZOC costs two extra operation points. Dismounted cavalry has a 0.75 modifier applied against its strength (horseholders). Infantry in column, limbered artillery, and mounted cavalry are considered to be flanked when fired upon from any direction. In addition, they suffer 0.5 fire modifiers and have special modifiers in melee (see table at back).

7.9 Facing

A unit may have eight different facings from 1 to 8. Facing may be changed at any time during the operations phase at no cost. Facing automatically changes during movement as a unit faces the square it is moving into. In addition, all units in a square will assume the facing of the last unit accessed in the square. All units in a square have the same facing. This way you may change the facing of an entire stack by changing the facing of just one unit. Units and stacks of units will assume appropriate shapes on the map to reflect their facing.

Facing determines a unit's line of sight. A unit has a line of sight equal to a 90 degree angle radiating in a V shape from the unit. See 8.3 for further details on line of sight. A unit fired at through a direction not in its line of sight is considered to be flanked.

7.10 Double Time

A unit may receive extra operation points by double time marching at a cost of fatigue points on a one to six basis. Pressing the "X" command will increase the fatigue level by six and increment the operation points remaining by one. Units with fatigue levels of 40 or higher may not force march.

7.11 Fortification

A unit may have a fortification value of 0 to 5 that modifies combat results (See Modifier Table). Fortifications are built one level at a time by pressing the "B" key at a cost of operation and fatigue points (see Costs Table). A unit with a fatigue of 20 or more may not fortify. Units automatically fortify themselves when they have remaining operation points at the end of the combat phase of the Confederate turn in the INTERMEDIATE game (if fatigue less than 20). Units will also automatically fortify in either game during the End of Day Phase (Section 10.0).

7.12 Leaders and Leader Movement (Advanced Game Only)

Leaders are assigned to specific units. Each leader commands a formation. Formations are brigades, divisions, and corps. Leaders are organized into a chain of command that must be updated when a leader is wounded. A corps commander that is wounded will be replaced by one of the divisional commanders in his corps. That divisional commander will be replaced by a brigade leader of his division. Brigade leaders are assumed to be present at both units of their brigade. They are not attached to a particular unit as long as they are a brigade commander. Brigade commanders promoted to command a division act as divisional commanders.

Divisional and Corps commanders may be transferred to any unit within their formation. Pressing "L" when a unit is accessed will list any leader present and prompt you to transfer it. If you wish to transfer, the cursor will cycle through eligible units. At this time you may also press "B" or "C" which will take you to the Divisional or Corps commanders. You may also press "E" to exit. If you go to the Divisional or Corps commanders you will see displayed the leader's name, its rating in

parentheses, and the range from the current unit. You may access the leader by pressing "A". At this point you may choose any of the displayed options including "A" which toggles a divisional command's ammo supply off or on.

Pressing "I" for a unit in the Command Menu will inverse all units that belong to the same division as the accessed unit. The location with the divisional leader will blink. At this point you may plot all units of the division for "No Fire" or "No Plot" or exit by pressing the appropriate key displayed on the screen.

Every time a unit with a leader takes casualties, there is a check to see if a leader is wounded. Each leader has a combat bonus or proficiency rating. A unit with a rating of 20 will increase casualties inflicted by the unit it is with by 20%. See the Order of Battle for each leader's rating. Corps and divisional leaders are important to command control. Divisional leaders affect the resupply of ammo. Brigade leaders affect rally. When a leader dies, the unit it is attached to gains five fatigue points.

The unit receives a new leader rating. All leaders affect command control in a direct way that greatly affects the play of the game. Please refer to section 4.0.

7.13 Fire and Melee Plots

During the operations phase units may plot priority fire, melee, and advances if they wish to perform those actions during combat.

To plot melee, press "M". To plot advance, press "A". For both these plots you may toggle between Y for yes and N for no by pressing the appropriate command key. Note also that plotting melee will automatically plot advance, as a convenience to the player, since advances are usually desired in melee attacks. You may toggle it back to N for no by pressing "A".

An important note is that a unit will melee only if it has also fired at the square it intends to melee. Plotting melee automatically plots fire into the melee square. Consequently, do not plot melee until after you have moved your unit. A unit will only melee in the direction it is facing. A previous melee plot is erased when a unit moves or changes direction.

To plot fire press "F", which will display a menu that will allow you to move the cursor to the target square and press "T" to plot it. Pressing "V" will inverse all squares eligible to be target squares and pressing "E" will return you to the command menu, inserting a "No Plot" into the fire plot. Press "N" to put a "No Fire" plot into the units. The unit will not fire at a target greater than one square away, thus conserving ammo. A fire plot will only be accepted if the targeted square is within range and in line of sight (see 8.3, Line of Sight). A unit that plots a melee will automatically plot the square directly in front for fire.

Units that are unable to execute their priority fire plot or units with no plot will fire at the nearest enemy unit in range and in line of sight.

7.14 Reorganization

A unit that contains less than 300 men and is stacked with the other half of its brigade may merge into the other unit by pressing "R" in the Command Menu during the Operations

Phase. For example, if Archer A contained 250 men and was stacked with Archer B which contained 350 men, Archer A could merge into Archer B. Archer A would be taken off the map and Archer B would contain 600 men. When units merge, fatigue and ammo supply are proportionately averaged and given to the surviving unit. Facing, plots, disruption, and mode are all defaulted to what the surviving unit had before the merger. Note that a routed unit may merge into a unit in normal mode and the surviving unit will be in normal mode (its morale may be low since the routed unit probably had a lot of fatigue). A brigade with only one unit on the map has its brigade command control modifier defaulted to 0 (it is treated as if the other unit was stacked with it).

8.0 COMBAT PHASES

During this phase, all fire phases and melees are resolved. Casualties are taken. Routs, retreats, and advances are all executed.

8.1 Fire Phases

There are a total of five fire phases and one melee phase during a combat phase as outlined below:

- Defensive Artillery Fire Phase
- Offensive Artillery Fire Phase
- Defensive Fire Phase
- Offensive Fire Phase
- Defensive Melee Fire Phase
- Melee Phase

Defensive fire phases are executed by the non-phasing player and offensive fire phases by the phasing player. There is a chance that any given unit will fail to fire if the visibility is 60% (see section 8.3). Messages will appear on the screen and the map will scroll to fired upon units. Casualties and other combat results will be printed on the screen. Numbers in parentheses refer to artillery guns lost.

8.2 Casualties

A unit inflicts casualties with its fire based upon a number of factors. See the strength/casualties modifier tables to give you an idea of what the factors are and what effects they have.

Artillery units lose guns and artillery men. They are eliminated when their gun count reaches 0. Artillery guns are lost due to combat only when enemy artillery is firing upon them or in melee. Artillery takes losses in men only from infantry fire. An artillery unit will take gun losses and retreat in melee or fire combat if it loses about 30% of its original strength in men and is limbered or engaged in melee combat. Artillery units recover 25% of their lost artillery men per phase.

8.3 Line of Sight, Range, and Visibility

In order for a unit to plot or even to execute its priority fire plot it must have a line of sight and be in range of the target. Ranges of weapon types are listed on the Weapons/Range Casualty Table. You may view the line of fire of any unit by pressing "V" when the unit is accessed in the command menu or target menu. Pressing "V" in the cursor menu displays the line of sight from that square.

There are three elevation levels on the map representing 40–50 feet of elevation per level. Woods represent a 30 foot elevation obstacle, towns 20 feet, and units 5 feet.

Each turn visibility is determined for the battlefield in terms of smoke, mist, and light due to fire combat, morning fog, and failing light (dusk and dawn). Visibility is expressed as a percentage and is a direct modifier on all units' strength. The 7 AM, 5 PM, 6 PM, and 7 PM turns are automatically assigned a value of 60%. During the day the number of fire combats are counted and 10% visibility is subtracted for the next turn per 60 combats. When visibility reaches 60%, each unit has a random chance of failing to fire. The percent chance of failure is determined by the following formula: $120 - (\text{command control} \times 20) - (\text{morale}/3)$. A unit with a morale of 70 and a command control of 1.0 would have a 77% chance of not firing. Melee combat is not affected by this random chance of firing.

8.4 Melee

To melee, a unit must be plotted for melee and be undisrupted. It will melee into the square it faces and it fired into if the square is adjacent. All units plotted against the same square are added together as a group. Defending units in a melee have an extra defensive fire before melee is resolved. Units expend operation points to melee (see Costs Table). Units must have enough operation points to fire and melee the same square, otherwise their melee is cancelled. See the modifier tables and the Melee Combat Results Table for details.

8.5 Retreats

As a result of rout or melee, units may be forced to retreat up to three squares. Retreated units will generally retreat away from enemy units towards the rear of their lines. The rear of the Confederate lines is considered to be the upper left corner of the map, and the lower right corner for the Union. A unit that routs during melee loses about 20% of its strength in captured men. It loses significantly more if its morale is less than -39. Retreating units also suffer casualties in captured men if they have to enter an enemy ZOC. A routed unit that retreats into or out of an enemy ZOC will lose captured men and effectiveness. Friendly units retreated onto gain five fatigue points. A unit that retreats faces the same direction as in the original square when it ends the retreat. A defending unit that retreats is automatically disrupted. An artillery unit will retreat in melee or fire combat if it loses about 30% of its original strength in men and is limbered or engaged in melee combat.

8.6 Morale, Rout, and Rally

A unit's morale is equal to its effectiveness minus its fatigue. A morale check is made for possible rout whenever a unit takes losses. A unit with a morale of 4 to 15 has a 40% chance of routing. A unit with morale less than 4 routs automatically. Units with less than 80 men will automatically rout when they take losses. When a unit routs, it retreats three squares. If it will end its retreat overstacked, the unit continues to retreat until it finds an eligible square. A unit

that routs loses 10 effectiveness points. During the End of Day Phase, units with a morale of less than 50 recover 5 points of effectiveness. Artillery never routs; it may retreat.

8.7 Advances

Units plotted to advance will advance in the combat phase if defending units are retreated. Advancing ZOC to ZOC is allowed.

8.8 Disruption

Every time a unit suffers losses, there is a chance it will become disrupted. A unit has about a 40% chance of becoming disrupted per 100 casualties (50 for artillery). A defending unit which retreats as a result of melee is automatically disrupted. A disrupted unit loses its priority fire plot. It may not fire except for defensive melee fire nor may it execute melee plots. A unit has a chance of becoming undisrupted at the beginning of the turn and at the Mid-Turn Recovery Phase. Its chances and conditions for recovery are outlined in Section 5.1.

8.9 Ammo

Each unit carries with it a supply of ammo up to nine shots. Every time a unit fires, an ammo point is expended. When a unit runs out of ammo it may only defend in melee and final defensive fire. Units are resupplied on every odd numbered hour. The 5 AM turns provide a doubled resupply for units. See Section 5.4 for details on ammo resupply.

8.10 Fatigue

A unit starts the game with zero fatigue points. As it moves and suffers casualties, it will gain fatigue (see Fatigue Table). It also gains five fatigue points when a routed unit stacks onto the same square or a leader attached to the unit dies. Fatigue has a proportional effect on fire strength. Fatigue is subtracted from effectiveness to yield a unit's morale which affects routs. A unit will recover fatigue at the end of the turn and the Mid-Turn Recovery Phase.

9.0 MID-TURN RECOVERY PHASE

During this phase units will check to recover disruption and fatigue.

10.0 END OF DAY PHASE

At the end of the 7 PM turn, each side will have the option of ending the battle and withdrawing from the field. All points for objective are lost for the player withdrawing. The remaining player does not accrue victory points for objective squares he doesn't already own. In addition, the side withdrawing will lose 100 points per friendly unit next to an enemy unit. The Confederate suffers a penalty of 2000 points if he withdraws after the very first day of battle.

During this phase, units lose all fatigue. In addition, units with a morale of less than 50 gain 5 effectiveness points. Units will also automatically fortify during this phase from 0 to 5 fortification points based on fatigue and being adjacent to the enemy. Units in column

or mounted mode and units with a fatigue of 50 or more will not fortify. A unit with a fatigue of 10, an efficiency of 60, and not in an enemy ZOC would raise its fortification level by 5. If that unit was in an enemy ZOC, its level would be raised by 3. A unit with a fatigue of 30, an efficiency of 60, and not in a ZOC would be raised by 3 (in a ZOC, by 1). An efficiency of 99 in the previous example would raise it by 4 instead of 3.

11.0 VICTORY DETERMINATION PHASE

During this phase, players are awarded points for casualties and territorial objectives. After the appropriate turn is completed, the game ends and the score is compared to the victory levels. You may examine the map and access units of both sides after the game has ended.

11.1 Victory Points

Players receive victory points according to the chart below:

- 1 pt per infantryman lost
- 2 pts per cavalryman lost
- 100 pts per brigade leader lost
- 300 pts per division leader lost
- 500 pts per corps leader lost
- 100 pts per artillery gun lost

Multiply the above numbers by 1.5 for infantry and cavalry if captured. Multiply by 2 for captured leaders.

Ignore Leader points for the Intermediate Game.

FOR CONFEDERATE IN POSSESSION OF SQUARE	FOR UNION IN POSSESSION OF SQUARE
21,15	21,15
19,36	12,11
18,39	12,17
24,21	15,13
20,21	15,16
30,23	34,3
24,28	30,1
34,18	26,1
34,35	21,1
34,41	10,1
21,50	10,1
	1,5
	1,23

When a side withdraws from battle all his points for objective squares are lost. The enemy retains points only for objectives already occupied. In addition, the withdrawing player loses 100 points per friendly unit remaining next to enemy units. The Confederate suffers a penalty of 2000 points if he withdraws after the very first day of battle.

Each objective square occupied during a reinforcement phase changes hands to the side occupying it. It stays with that side until an enemy unit occupies it during a reinforcement phase. Each objective is worth 1000 points.

11.2 Victory Levels

At the beginning of each turn, a display will appear on the screen showing victory levels and the scores needed to attain those levels.

12.0 STRATEGY AND TACTICS

Union Strategy:

On the first day your challenge is to stem the rising tide of the incoming Confederate Army. The cavalry and the Iron Brigade (Meredith A and B) are potent forces. Howard's XI corps will be found wanting, however. Look carefully at the objective squares on the map provided since each is worth 1000 points to one side or the other.

Your main objective the first day should be to delay the Confederates and hold on to the high ground at Cemetery and Culp's Hills. There are two strategies to accomplish this. One is to send out about three divisions to screen the Confederate advance and leave three divisions fortifying the Cemetery and Culp's Hill. Another two divisions will arrive at 5 PM and can reach the hills by mid-turn of 6 PM. The other strategy is to send out all six divisions to fight a delaying action. Whatever strategy the Union uses he will be hard pressed the first day.

During the evening of the first day and the morning of the second day the bulk of the Union army comes in and the initiative on the battlefield should swing over to the Union. Deploying corps in compact groups, the Union should stretch the outnumbered Confederate line and attempt to outflank and push the Confederate to the north. The Union should hang in the battle for the full three days since he outnumbers the Confederate and can afford a battle of attrition.

Confederate Strategy:

The Confederate will basically win or lose the battle on the first day. He must sweep the Union Army in front of him and occupy the Cemetery and Culp's Hill by the end of the day. At the beginning of the day, however, it is wise to proceed with caution with Heth's and Pender's divisions. A major attack should not be launched until Rode's division appears on the Union flank. The Confederate should then conduct an all-out attack on the Union line from all directions and press steadily to Cemetery Hill. If he takes the hills he should be in a good position to fight off the Union on the next day. The Confederate should withdraw at the end of the second day if the Union is ahead by 2000 to 3000 points.

Tactics:

Below are listed a number of suggestions and hints to sharpen the tactical edge of the deployed armies. Well conceived and thought-out plans can be foiled and defeated with poorly executed maneuvers.

1. Artillery is a potent weapon. Its weakness is the exposed crew. Players will find that extended artillery bombardments will result in units low in ammo and morale. Rest your artillery. There are times when you shouldn't fire until you see "the whites of their eyes". Before you assault an artillery position be sure that the opposing artillery has weakened morale.
2. Flank shots not only give a bonus in fire combat, but give a significant bonus in melee.
3. Watch for disrupted units. They can't fire most of the time and are reduced in melee on the defense (they can't even attack on the offense).
4. Carbines are lethal weapons. The Union cavalry have them. They are deadly at close range and give the firer a defensive bonus.
5. Watch your command control. It has a tremendous effect in the game. Keep your brigades, divisions, and corps together.
6. Be careful where you place leaders. Their loss can be catastrophic to your command control.
7. Melee is a powerful tool in hacking up enemy units. They lose 20 to 60% in captured men when they rout in your ZOC.
8. Cavalry in this game is truly a mobile force that shouldn't be squandered needlessly. They can screen your flanks quite nicely.
9. Be aware that the game will significantly slow down during the early morning and late evening hours due to visibility and the reduction of operation points.
10. Watch the various modifiers on a unit's strength. A unit can very quickly be reduced to practically nothing given enough modifiers applied against it. Be careful to rest fatigued units. Fatigue directly affects strength and brings a unit closer to the breaking point.
11. Study the terrain and elevation of the ground you are fighting over. Clear lines of sight especially for artillery will make a difference.
12. Make sure you will have enough operation points to fire and/or melee.
13. Use double-time marching judiciously.
14. Fortify whenever you are not in contact with the enemy. Give yourself enough time to recover from the fatigue.
15. Remember that the "NO FIRE" plot will allow a unit to fire at units next to him, but not any further. A handy way to conserve ammo until it's really needed.
16. Units can plot fire into an empty square in anticipation of enemy units moving into that square the next phase. This option allows you to control your fire on an advancing enemy line.

If you have any questions or problems regarding the program or game, please send a self-addressed, stamped envelope with your question to: STRATEGIC SIMULATIONS, INC., 1046 N. Rengstorff Ave., Mountain View, CA 94043. Or call our Hotline Number: (415) 964-1200 every weekday, 9 to 5 (P.S.T.).

UNION ORDER OF BATTLE

TURN OF ENTRY	ENTRY SQUARE	UNIT	BRIG. LEADER BONUS	MEN	WEAPON	EFF.	DIVISIONAL LEADER	DIV. LEADER BONUS	CORPS LEADER	CORPS LEADER BONUS
1-3pm	6,51	Stannard-A	(7)	636	RFL	70	Doubledy	(7)	Reynolds	(30)
1-3pm	6,51	Stannard-B	(7)	1308	RFL	65	Doubledy	(7)	Reynolds	(30)
1-11am	0,23	Stone-A	(6)	465	RFL	75	Doubledy	(7)	Reynolds	(30)
1-11am	0,23	Stone-B	(6)	950	RFL	70	Doubledy	(7)	Reynolds	(30)
1-11am	0,23	Rowley-A	(6)	550	RFL	75	Doubledy	(7)	Reynolds	(30)
1-11am	0,23	Rowley-B	(6)	811	RFL	70	Doubledy	(7)	Reynolds	(30)
1-8am	11,37	Meredith-A	(8)	804	RFL	99	Wadsworth	(9)	Reynolds	(30)
1-8am	11,40	Meredith-B	(8)	1025	RFL	99	Wadsworth	(9)	Reynolds	(30)
1-8am	11,41	Cutler-A	(7)	1127	RFL	85	Wadsworth	(9)	Reynolds	(30)
1-8am	11,42	Cutler-B	(7)	890	RFL	80	Wadsworth	(9)	Reynolds	(30)
1-10am	6,51	Paul-A	(7)	582	RFL	80	Robinson	(9)	Reynolds	(30)
1-10am	6,51	Paul-B	(7)	955	RFL	75	Robinson	(9)	Reynolds	(30)
1-10am	6,51	Baxter-A	(7)	696	RFL	65	Robinson	(9)	Reynolds	(30)
1-10am	6,51	Baxter-B	(7)	756	RFL	70	Robinson	(9)	Reynolds	(30)

2-7am	21,51	Zook-A	(8)	309	RFL	70	Caldwell	(13)	Hancock	(30)
2-7am	21,51	Zook-B	(8)	662	RFL	70	Caldwell	(13)	Hancock	(30)
1-7pm	21,51	Cross-A	(6)	283	RFL	60	Caldwell	(13)	Hancock	(30)
1-7pm	21,51	Cross-B	(6)	567	RFL	60	Caldwell	(13)	Hancock	(30)
1-7pm	21,51	Kelly-A	(6)	299	MSK	70	Caldwell	(13)	Hancock	(30)
1-7pm	21,51	Kelly-B	(6)	231	MSK	70	Caldwell	(13)	Hancock	(30)
1-7pm	21,51	Brooke-A	(6)	309	RFL	65	Caldwell	(13)	Hancock	(30)
1-7pm	21,51	Brooke-B	(6)	541	RFL	65	Caldwell	(13)	Hancock	(30)
1-7pm	21,51	Harrow-A	(6)	678	RFL	75	Gibbon	(9)	Hancock	(30)
1-7pm	21,51	Harrow-B	(6)	685	RFL	75	Gibbon	(9)	Hancock	(30)
1-7pm	21,51	Webb-A	(7)	545	RFL	75	Gibbon	(9)	Hancock	(30)
1-7pm	21,51	Webb-B	(7)	660	RFL	75	Gibbon	(9)	Hancock	(30)
2-7am	21,51	Hall-A	(6)	406	RFL	70	Gibbon	(9)	Hancock	(30)
2-7am	21,51	Hall-B	(6)	514	RFL	70	Gibbon	(9)	Hancock	(30)
2-7am	21,51	Carroll-A	(6)	490	RFL	75	Hays	(10)	Hancock	(30)
2-7am	21,51	Carroll-B	(6)	444	RFL	75	Hays	(10)	Hancock	(30)
2-7am	21,51	Smyth-A	(6)	423	RFL	55	Hays	(10)	Hancock	(30)
2-7am	21,51	Smyth-B	(6)	644	RFL	55	Hays	(10)	Hancock	(30)
2-7am	21,51	Willard-A	(6)	659	RFL	65	Hays	(10)	Hancock	(30)
2-7am	21,51	Willard-B	(6)	847	RFL	65	Hays	(10)	Hancock	(30)

1-6pm	6,51	Graham-A	(8)	773	RFL	65	Birney	(11)	Sickles	(10)
1-6pm	6,51	Graham-B	(8)	743	RFL	65	Birney	(11)	Sickles	(10)
1-6pm	6,51	Ward-A	(9)	1136	RFL	75	Birney	(11)	Sickles	(10)
1-6pm	6,51	Ward-B	(9)	1052	RFL	75	Birney	(11)	Sickles	(10)
2-8am	21,51	De Trob-A	(6)	587	RFL	65	Birney	(11)	Sickles	(10)
2-8am	21,51	De Trob-B	(6)	799	RFL	65	Birney	(11)	Sickles	(10)
2-7am	6,51	Carr-A	(8)	852	R/M	65	Humphrys	(11)	Sickles	(10)
2-7am	6,51	Carr-B	(8)	864	RFL	65	Humphrys	(11)	Sickles	(10)
2-7am	6,51	Brewster-A	(6)	836	RFL	60	Humphrys	(11)	Sickles	(10)
2-7am	6,51	Brewster-B	(6)	1001	RFL	60	Humphrys	(11)	Sickles	(10)
2-8am	21,51	Burling-A	(6)	767	RFL	75	Humphrys	(11)	Sickles	(10)
2-8am	21,51	Burling-B	(6)	598	RFL	75	Humphrys	(11)	Sickles	(10)

2-7am	35,35	Weed-A	(9)	901	RFL	75	Ayres	(12)	Sykes	(6)
2-7am	35,35	Weed-B	(9)	579	R/M	75	Ayres	(12)	Sykes	(6)
2-7am	35,35	Burbank-A	(6)	317	RFL	70	Ayres	(12)	Sykes	(6)
2-7am	35,35	Burbank-B	(6)	641	RFL	70	Ayres	(12)	Sykes	(6)
2-7am	35,35	Day-A	(6)	473	RFL	70	Ayres	(12)	Sykes	(6)
2-7am	35,35	Day-B	(6)	1101	RFL	70	Ayres	(12)	Sykes	(6)
2-7am	35,35	Tilton-A	(6)	276	RFL	65	Barnes	(9)	Sykes	(6)
2-7am	35,35	Tilton-B	(6)	379	RFL	65	Barnes	(9)	Sykes	(6)
2-7am	35,35	Sweitzer-A	(6)	653	RFL	55	Barnes	(9)	Sykes	(6)
2-7am	35,35	Sweitzer-B	(6)	768	RFL	55	Barnes	(9)	Sykes	(6)
2-7am	35,35	Vincent-A	(6)	649	RFL	80	Barnes	(9)	Sykes	(6)
2-7am	35,35	Vincent-B	(6)	687	RFL	80	Barnes	(9)	Sykes	(6)
2-11am	35,35	McCandle-A	(6)	609	RFL	60	Crawford	(8)	Sykes	(6)
2-11am	35,35	McCandle-B	(6)	634	RFL	60	Crawford	(8)	Sykes	(6)
2-11am	35,35	Fisher-A	(6)	604	MSK	55	Crawford	(8)	Sykes	(6)
2-11am	35,35	Fisher-B	(6)	1100	RFL	55	Crawford	(8)	Sykes	(6)

*Considered as optional CAV units.

**Begins with 6 guns and receives 18 more on turn 2-5 PM.

TURN OF ENTRY	ENTRY SQUARE	UNIT	BRIG. LEADER BONUS	MEN	WEAPON	EFF.	DIVISIONAL LEADER	DIV. LEADER BONUS	CORPS LEADER	CORPS LEADER BONUS
2-3pm	35,35	Shaler-A	(7)	625	RFL	65	Newton	(9)	Sedgwick	(21)
2-3pm	35,35	Shaler-B	(7)	1141	RFL	65	Newton	(9)	Sedgwick	(21)
2-3pm	35,35	Wheaton-A	(8)	471	RFL	65	Newton	(9)	Sedgwick	(21)
2-3pm	35,35	Wheaton-B	(8)	897	RFL	65	Newton	(9)	Sedgwick	(21)
2-3pm	35,35	Eustis-A	(6)	679	RFL	65	Newton	(9)	Sedgwick	(21)
2-3pm	35,35	Eustis-B	(6)	912	RFL	65	Newton	(9)	Sedgwick	(21)
2-3pm	35,35	Torbert-A	(7)	610	RFL	75	Wright	(11)	Sedgwick	(21)
2-3pm	35,35	Torbert-B	(7)	709	RFL	75	Wright	(11)	Sedgwick	(21)
2-3pm	35,35	Barlett-A	(7)	702	RFL	75	Wright	(11)	Sedgwick	(21)
2-3pm	35,35	Barlett-B	(7)	620	RFL	75	Wright	(11)	Sedgwick	(21)
2-3pm	35,35	Russell-A	(8)	652	RFL	75	Wright	(11)	Sedgwick	(21)
2-3pm	35,35	Russell-B	(8)	828	RFL	75	Wright	(11)	Sedgwick	(21)
2-3pm	35,35	Neill-A	(6)	586	RFL	75	Howe	(8)	Sedgwick	(21)
2-3pm	35,35	Neill-B	(6)	1187	RFL	75	Howe	(8)	Sedgwick	(21)
2-3pm	35,35	Grant-A	(6)	807	RFL	70	Howe	(8)	Sedgwick	(21)
2-3pm	35,35	Grant-B	(6)	1020	RFL	70	Howe	(8)	Sedgwick	(21)

1-11am	21,51	Schimmel-A	(6)	685	RFL	55	Schurz	(8)	Howard	(10)
1-11am	21,51	Schimmel-B	(6)	985	RFL	55	Schurz	(8)	Howard	(10)
1-11am	21,51	Krzyzan-A	(6)	447	RFL	55	Schurz	(8)	Howard	(10)
1-11am	21,51	Krzyzan-B	(6)	956	RFL	60	Schurz	(8)	Howard	(10)
1-11am	6,51	Ames-A	(6)	606	RFL	55	Barlow	(8)	Howard	(10)
1-11am	6,51	Ames-B	(6)	731	RFL	60	Barlow	(8)	Howard	(10)
1-11am	6,51	Gilsa-A	(6)	403	RFL	65	Barlow	(8)	Howard	(10)
1-11am	6,51	Gilsa-B	(6)	715	RFL	70	Barlow	(8)	Howard	(10)
1-12pm	21,51	Coster-A	(6)	590	RFL	60	Steinwhr	(7)	Howard	(10)
1-12pm	21,51	Coster-B	(6)	566	RFL	65	Steinwhr	(7)	Howard	(10)
1-12pm	21,51	Smith-A	(6)	954	RFL	60	Steinwhr	(7)	Howard	(10)
1-12pm	21,51	Smith-B	(6)	660	RFL	65	Steinwhr	(7)	Howard	(10)

2-7am	35,35	Lockwood-A	(7)	532	RFL	75	Williams	(9)	Slocum	(10)
2-7am	35,35	Lockwood-B	(7)	1283	RFL	75	Williams	(9)	Slocum	(10)
1-5pm	35,35	Ruger-A	(9)	708	RFL	65	Williams	(9)	Slocum	(10)
1-5pm	35,35	Ruger-B	(9)	890	RFL	65	Williams	(9)	Slocum	(10)
1-5pm	35,35	McDougal-A	(6)	832	RFL	65	Williams	(9)	Slocum	(10)
1-5pm	35,35	McDougal-B	(6)	1003	RFL	65	Williams	(9)	Slocum	(10)
1-5pm	35,35	Greene-A	(7)	471	RFL	75	Geary	(8)	Slocum	(10)
1-5pm	35,35	Greene-B	(7)	953	RFL	75	Geary	(8)	Slocum	(10)
1-5pm	35,35	Candy-A	(6)	892	RFL	65	Geary	(8)	Slocum	(10)
1-5pm	35,35	Candy-B	(6)	906	RFL	65	Geary	(8)	Slocum	(10)
1-5pm	35,35	Cobham-A	(6)	357	RFL	75	Geary	(8)	Slocum	(10)
1-5pm	35,35	Cobham-B	(6)	340	RFL	75	Geary	(8)	Slocum	(10)

*3-1pm	6,51	Merritt-A	(9)	604	CRB	90	Buford	(29)	Pleasantn	(11)
*3-1pm	6,51	Merritt-B	(9)	713	CRB	90	Buford	(29)	Pleasantn	(11)
1-8am	13,12	Gamble-A	(7)	703	CRB	80	Buford	(29)	Pleasantn	(11)
1-8am	13,13	Gamble-B	(7)	897	CRB	75	Buford	(29)	Pleasantn	(11)
1-8am	13,8	Devin-A	(6)	550	CRB	80	Buford	(29)	Pleasantn	(11)
1-8am	13,9	Devin-B	(6)	761	CRB	75	Buford	(29)	Pleasantn	(11)
*2-12pm	35,19	McIntosh-A	(8)	550	CRB	75	Gregg	(21)	Pleasantn	(11)
*2-12pm	35,19	McIntosh-B	(8)	761	CRB	75	Gregg	(21)	Pleasantn	(11)
*2-12pm	35,19	Huey-A	(7)	562	CRB	75	Gregg	(21)	Pleasantn	(11)
*2-12pm	35,19	Huey-B	(7)	873	CRB	75	Gregg	(21)	Pleasantn	(11)
*2-12pm	35,19	J. Gregg-A	(6)	648	CRB	75	Gregg	(21)	Pleasantn	(11)
*2-12pm	35,19	J. Gregg-B	(6)	615	CRB	75	Gregg	(21)	Pleasantn	(11)
3-2pm	35,35	Farnsworth-A	(6)	420	CRB	75	Kilpatr	(11)	Pleasantn	(11)
3-2pm	35,35	Farnsworth-B	(6)	1109	CRB	75	Kilpatr	(11)	Pleasantn	(11)
*3-2pm	35,19	Custer-A	(7)	1073	CRB	75	Kilpatr	(11)	Pleasantn	(11)
*3-2pm	35,19	Custer-B	(7)	861	CRB	75	Kilpatr	(11)	Pleasantn	(11)

TURN OF ENTRY	ENTRY SQUARE	UNIT	# GUNS	MEN	WEAPON	EFF.	CORPS LEADER
1-9am	6,51	I Corps-A	18	288	RG3	75	Reynolds
1-9am	6,51	I Corps-B	10	160	N12	75	Reynolds
2-7am	21,51	II Corps	28	448	R/N	75	Hancock
1-6pm	6,51	III Corps-A	11	176	N12	75	Sickles
2-7am	21,51	III Corps-B	10	160	N12	75	Sickles
1-6pm	6,51	III Corps-C	9	144	P10	75	Sickles
2-7am	35,35	V Corps-A	16	256	R/N	75	Sykes
2-7am	35,35	V Corps-B	10	160	R/P	75	Sykes
2-3pm	35,35	VI Corps-A	17	272	N12	75	Sedgwick
2-3pm	35,35	VI Corps-B	12	192	RG3	75	Sedgwick
2-3pm	35,35	VI Corps-C	17	272	P10	75	Sedgwick
1-11am	6,51	XI Corps	26	416	R/N	75	Howard
1-5pm	35,35	XII Corps-A	10	160	N12	75	Slocum
1-5pm	35,35	XII Corps-B	10	160	P10	75	Slocum
2-7am	21,51	Res-A	30	480	N12	75	
2-9am	21,51	Res-B	30	480	RG3	75	
2-9am	21,51	Res-C	30	480	N12	75	
2-7am	21,51	Res-D	20	320	P10	75	
2-5pm	13,10	Cav-A	**24	96	RG3	75	
3-12pm	35,19	Cav-B	20	384	R/N	75	

CONFEDERATE ORDER OF BATTLE

TURN OF ENTRY	ENTRY SQUARE	UNIT	BRIG LEADER BONUS	MEN	WEAPON	EFF.	DIVISIONAL LEADER	DIV. LEADER BONUS	CORPS LEADER	CORPS LEADER BONUS
2-7am	0,5	Kershaw-A	(7)	818	RFL	75	McLaws	(21)	Longstr	(30)
2-7am	0,5	Kershaw-B	(7)	951	RFL	75	McLaws	(21)	Longstr	(30)
2-7am	0,5	Semmes-A	(5)	605	RFL	70	McLaws	(21)	Longstr	(30)
2-7am	0,5	Semmes-B	(5)	725	RFL	70	McLaws	(21)	Longstr	(30)
2-7am	0,5	Barksdile-A	(5)	818	RFL	75	McLaws	(21)	Longstr	(30)
2-7am	0,5	Barksdile-B	(5)	666	RFL	75	McLaws	(21)	Longstr	(30)
2-7am	0,5	Wofford-A	(5)	605	RFL	70	McLaws	(21)	Longstr	(30)
2-7am	0,5	Wofford-B	(5)	789	RFL	70	McLaws	(21)	Longstr	(30)
2-12pm	0,5	Law-A	(7)	845	RFL	70	Hood	(21)	Longstr	(30)
2-12pm	0,5	Law-B	(7)	1084	RFL	70	Hood	(21)	Longstr	(30)
2-7am	0,5	Robertsn-A	(5)	905	RFL	90	Hood	(21)	Longstr	(30)
2-7am	0,5	Robertsn-B	(5)	824	RFL	90	Hood	(21)	Longstr	(30)
2-7am	0,5	Anderson-A	(5)	905	RFL	90	Hood	(21)	Longstr	(30)
2-7am	0,5	Anderson-B	(5)	1175	RFL	70	Hood	(21)	Longstr	(30)
2-7am	0,5	Benning-A	(5)	716	RFL	75	Hood	(21)	Longstr	(30)
2-7am	0,5	Benning-B	(5)	700	RFL	75	Hood	(21)	Longstr	(30)
2-3pm	0,5	Garnett-A	(5)	505	RFL	75	Pickett	(20)	Longstr	(30)
2-3pm	0,5	Garnett-B	(5)	950	RFL	75	Pickett	(20)	Longstr	(30)
2-3pm	0,5	Kemper-A	(5)	876	RFL	75	Pickett	(20)	Longstr	(30)
2-3pm	0,5	Kemper-B	(5)	754	RFL	75	Pickett	(20)	Longstr	(30)
2-3pm	0,5	Armisted-A	(6)	740	RFL	75	Pickett	(20)	Longstr	(30)
2-3pm	0,5	Armisted-B	(6)	1311	RFL	75	Pickett	(20)	Longstr	(30)

1-2pm	26,0	Hays-A	(5)	414	RFL	70	Early	(30)	Ewell	(10)
1-2pm	26,0	Hays-B	(5)	878	RFL	70	Early	(30)	Ewell	(10)
1-2pm	26,0	Smith-A	(5)	267	RFL	60	Early	(30)	Ewell	(10)
1-2pm	26,0	Smith-B	(5)	535	RFL	60	Early	(30)	Ewell	(10)
1-2pm	26,0	Gordon-A	(8)	879	RFL	85	Early	(30)	Ewell	(10)
1-2pm	26,0	Gordon-B	(8)	934	RFL	85	Early	(30)	Ewell	(10)
1-2pm	26,0	Avery-A	(5)	509	RFL	70	Early	(30)	Ewell	(10)
1-2pm	26,0	Avery-B	(5)	733	RFL	70	Early	(30)	Ewell	(10)
1-1pm	21,0	Daniel-A	(5)	1026	RFL	70	Rodes	(20)	Ewell	(10)
1-1pm	21,0	Daniel-B	(5)	1132	RFL	70	Rodes	(20)	Ewell	(10)
1-1pm	21,0	Iverson-A	(5)	692	RFL	60	Rodes	(20)	Ewell	(10)
1-1pm	21,0	Iverson-B	(5)	688	RFL	60	Rodes	(20)	Ewell	(10)
1-1pm	21,0	Doles-A	(5)	668	RFL	70	Rodes	(20)	Ewell	(10)
1-1pm	21,0	Doles-B	(5)	651	RFL	70	Rodes	(20)	Ewell	(10)
1-1pm	21,0	Ramseur-A	(6)	439	RFL	80	Rodes	(20)	Ewell	(10)
1-1pm	21,0	Ramseur-B	(6)	584	RFL	80	Rodes	(20)	Ewell	(10)
1-1pm	21,0	O'Neal-A	(5)	667	RFL	60	Rodes	(20)	Ewell	(10)
1-1pm	21,0	O'Neal-B	(5)	1018	RFL	60	Rodes	(20)	Ewell	(10)
1-6pm	0,5	Steuart-A	(7)	1325	RFL	70	Johnson	(22)	Ewell	(10)
1-6pm	0,5	Steuart-B	(7)	791	RFL	70	Johnson	(22)	Ewell	(10)
1-6pm	0,5	Walker-A	(6)	590	RFL	90	Johnson	(22)	Ewell	(10)
1-6pm	0,5	Walker-B	(6)	729	RFL	90	Johnson	(22)	Ewell	(10)
1-6pm	0,5	Jones-A	(6)	781	RFL	65	Johnson	(22)	Ewell	(10)
1-6pm	0,5	Jones-B	(6)	739	RFL	65	Johnson	(22)	Ewell	(10)
1-6pm	0,5	Williams-A	(5)	408	RFL	75	Johnson	(22)	Ewell	(10)
1-6pm	0,5	Williams-B	(5)	693	RFL	75	Johnson	(22)	Ewell	(10)

TURN OF ENTRY	ENTRY SQUARE	UNIT	BRIG LEADER BONUS	MEN	WEAPON	EFF.	DIVISIONAL LEADER	DIV. LEADER BONUS	CORPS LEADER	CORPS LEADER BONUS
1-4pm	0,5	Wilcox-A	(5)	783	RFL	70	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Wilcox-B	(5)	943	RFL	70	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Wright-A	(5)	841	RFL	70	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Wright-B	(5)	568	RFL	70	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Mahone-A	(7)	636	RFL	65	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Mahone-B	(7)	906	RFL	65	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Posey-A	(5)	690	RFL	65	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Posey-B	(5)	632	RFL	65	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Lang-A	(5)	242	RFL	70	R.Andrsn	(20)	A.P. Hill	(10)
1-4pm	0,5	Lang-B	(5)	500	RFL	70	R.Andrsn	(20)	A.P. Hill	(10)
1-8am	6,11	Pettigrow-A	(5)	1460	RFL	65	Heth	(10)	A.P. Hill	(10)
1-8am	6,11	Pettigrow-B	(5)	1120	RFL	65	Heth	(10)	A.P. Hill	(10)
1-8am	9,9	Davis-A	(5)	1084	RFL	60	Heth	(10)	A.P. Hill	(10)
1-8am	9,10	Davis-B	(5)	1215	RFL	60	Heth	(10)	A.P. Hill	(10)
1-8am	9,12	Archer-A	(5)	443	RFL	50	Heth	(10)	A.P. Hill	(10)
1-8am	9,13	Archer-B	(5)	750	RFL	50	Heth	(10)	A.P. Hill	(10)
1-8am	5,12	Brknbrgh-A	(5)	462	RFL	65	Heth	(10)	A.P. Hill	(10)
1-8am	5,12	Brknbrgh-B	(5)	505	RFL	65	Heth	(10)	A.P. Hill	(10)
1-10am	0,5	Lane-A	(5)	637	RFL	60	Pender	(21)	A.P. Hill	(10)
1-10am	0,5	Lane-B	(5)	1097	RFL	60	Pender	(21)	A.P. Hill	(10)
1-10am	0,5	Scales-A	(5)	553	RFL	70	Pender	(21)	A.P. Hill	(10)
1-10am	0,5	Scales-B	(5)	848	RFL	70	Pender	(21)	A.P. Hill	(10)
1-10am	0,5	Thomas-A	(5)	662	RFL	50	Pender	(21)	A.P. Hill	(10)
1-10am	0,5	Thomas-B	(5)	660	RFL	50	Pender	(21)	A.P. Hill	(10)
1-10am	0,5	Perrin-A	(5)	694	RFL	80	Pender	(21)	A.P. Hill	(10)
1-10am	0,5	Perrin-B	(5)	1188	R/M	80	Pender	(21)	A.P. Hill	(10)

2-2pm	35,3	Hampton-A	(8)	932	RFL	90	Stuart	(31)	(18)
2-2pm	35,3	Hampton-B	(8)	819	RFL	90	Stuart	(31)	(18)
2-4pm	35,3	F. Lee-A	(7)	1005	PST	90	Stuart	(31)	(18)
2-4pm	35,3	F. Lee-B	(7)	908	RFL	90	Stuart	(31)	(18)
1-3pm	26,0	Jenkins-A	(6)	530	PST	75	Stuart	(31)	(18)
1-3pm	26,0	Jenkins-B	(6)	596	RFL	75	Stuart	(31)	(18)
* 2-10am	0,5	Jones-A	(6)	1054	RFL	75	Stuart	(31)	(18)
* 2-10am	0,5	Jones-B	(6)	686	RFL	75	Stuart	(31)	(18)
* 2-10am	0,5	Robertsn-A	(5)	504	RFL	65	Stuart	(31)	(18)
* 2-10am	0,5	Robertsn-B	(5)	458	RFL	65	Stuart	(31)	(18)
* 2-4pm	35,3	Chamblis-A	(5)	535	PST	75	Stuart	(31)	(18)
* 2-4pm	35,3	Chamblis-B	(5)	638	RFL	75	Stuart	(31)	(18)

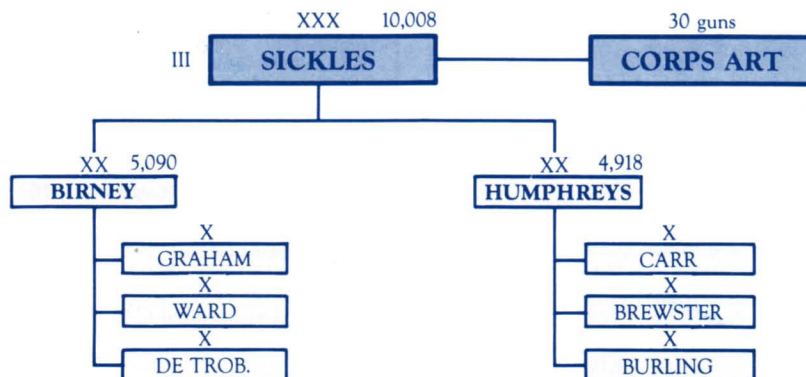
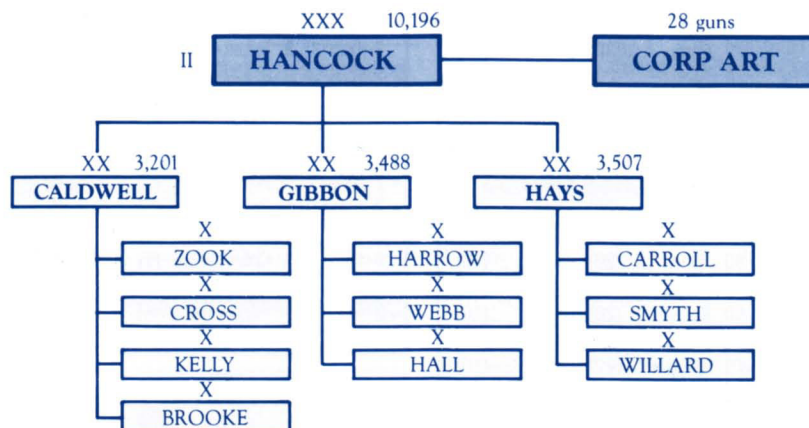
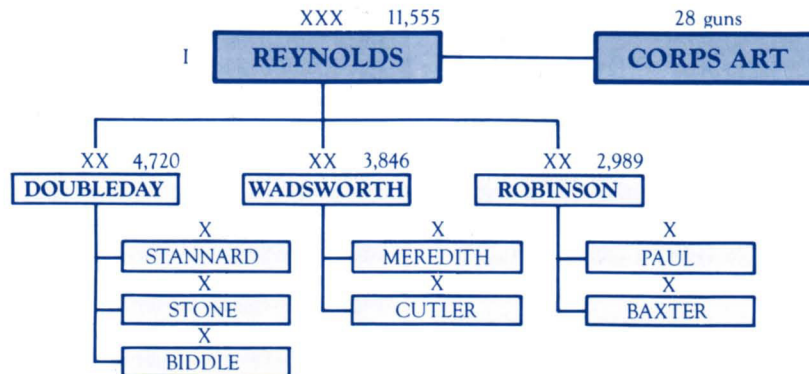
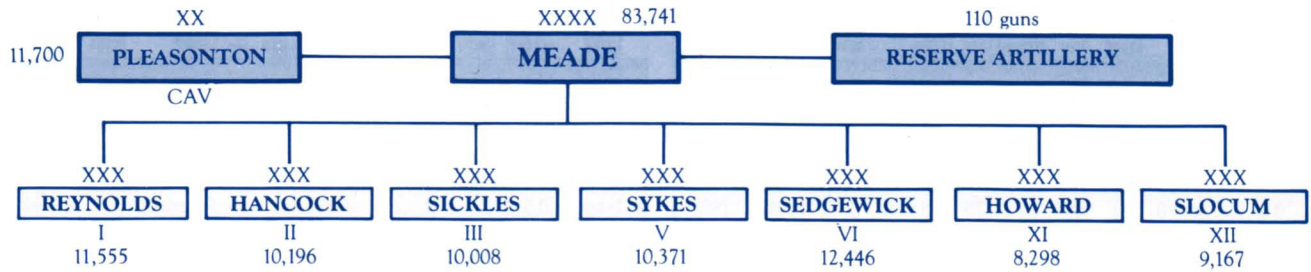
* 3-10am	0,5	Imboden-A	(6)	1004	PST	90	Imboden	(6)	Imboden	(6)
* 3-10am	0,5	Imboden-B	(6)	1095	PST	90	Imboden	(6)	Imboden	(6)

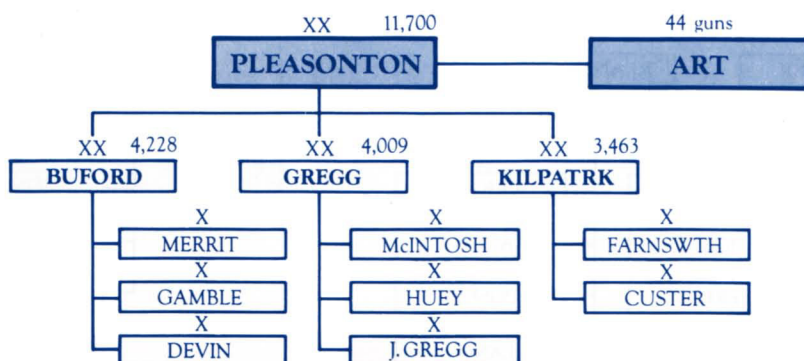
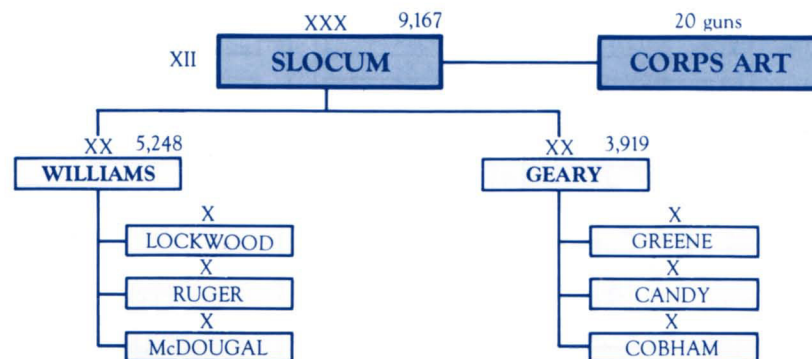
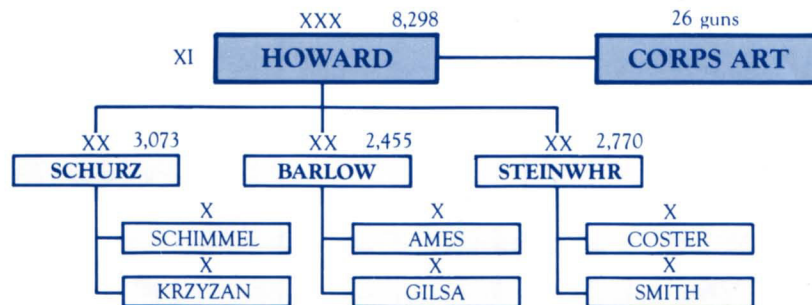
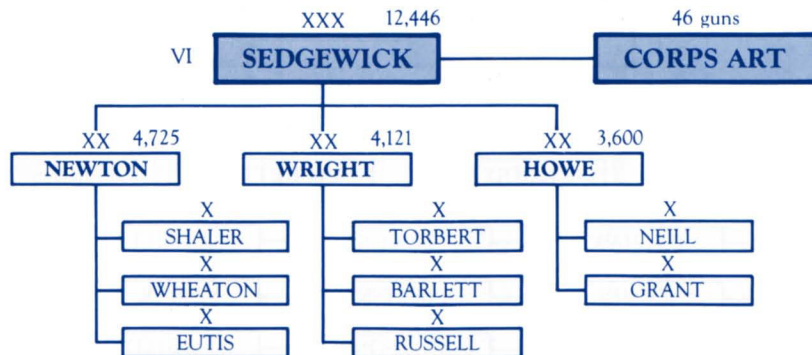
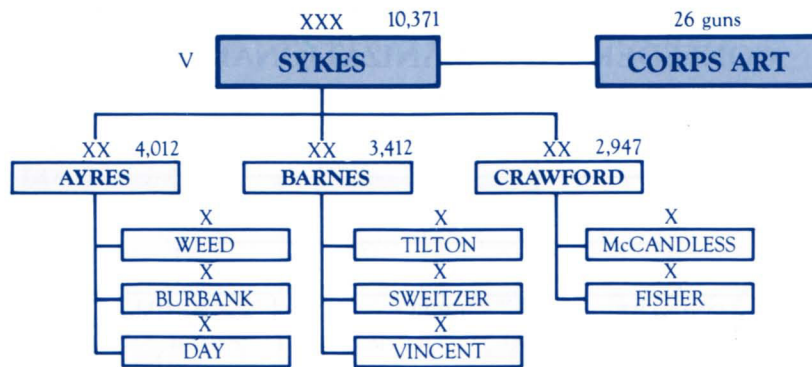
TURN OF ENTRY	ENTRY SQUARE	UNIT	# GUNS	MEN	WEAPON	EFF.	CORPS LEADER
2-7am	0,5	Cabell	16	256	P/N	75	Lonstr
2-4pm	0,5	Dearing	18	288	P/N	75	Longstr
2-7am	0,5	Henry	19	304	P/N	75	Longstr
2-7am	0,5	Eshleman	10	160	N12	75	Longstr
2-7am	0,5	Alexandr	24	384	R/N	75	Longstr
1-2pm	26,0	Jones	16	256	R/N	75	Ewell
1-6pm	0,5	Latimer	16	256	P/N	75	Ewell
1-1pm	21,0	Carter	16	256	R/N	75	Ewell
1-6pm	0,5	Dance	20	320	R/P	75	Ewell
1-6pm	0,5	Nelson	10	160	R/N	75	Ewell
1-3pm	0,5	Lane	17	272	P/N	75	A.P. Hill
1-11am	0,5	Garnett	15	240	R/N	75	A.P. Hill
1-11am	0,5	Poague	16	256	R/N	75	A.P. Hill
1-10am	0,5	McIntosh	16	256	R/N	75	A.P. Hill
1-8am	7,11	Pegram	20	320	R/N	75	A.P. Hill
* 2-4pm	35,3	Beckham	15	240	R/N	75	

*Considered as optional CAV units.

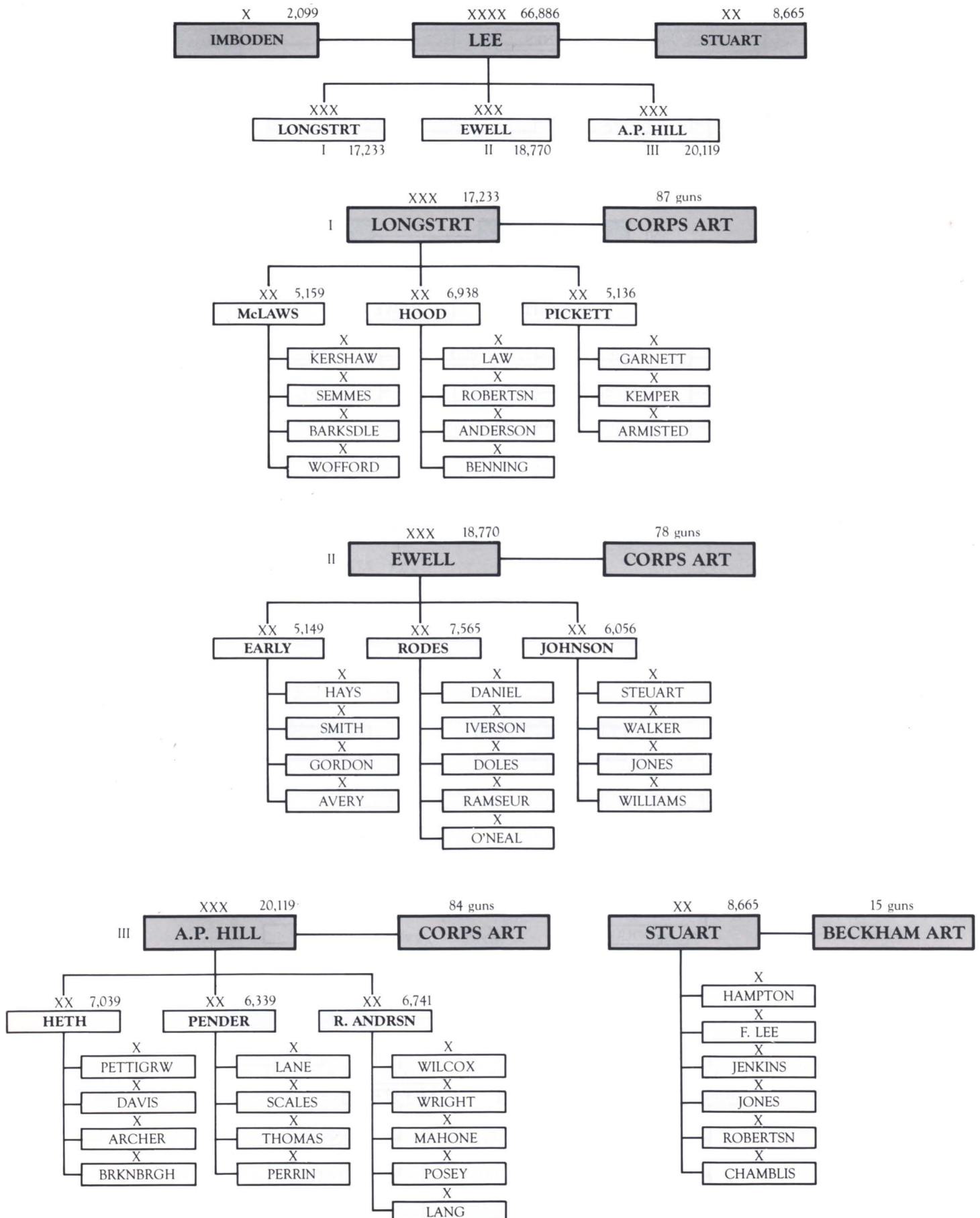
Above numbers for men and types of weapons compiled by Daniel J. Beattie, Ph.D. Based on *Regimental Strengths at Gettysburg* by Bussey and Martin.

UNION ORGANIZATIONAL CHART



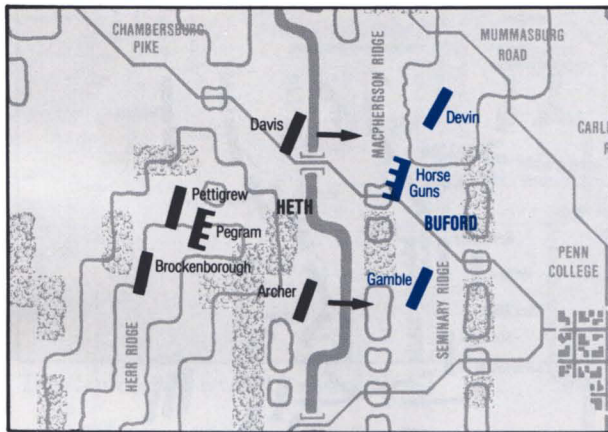


CONFEDERATE ORGANIZATIONAL CHART



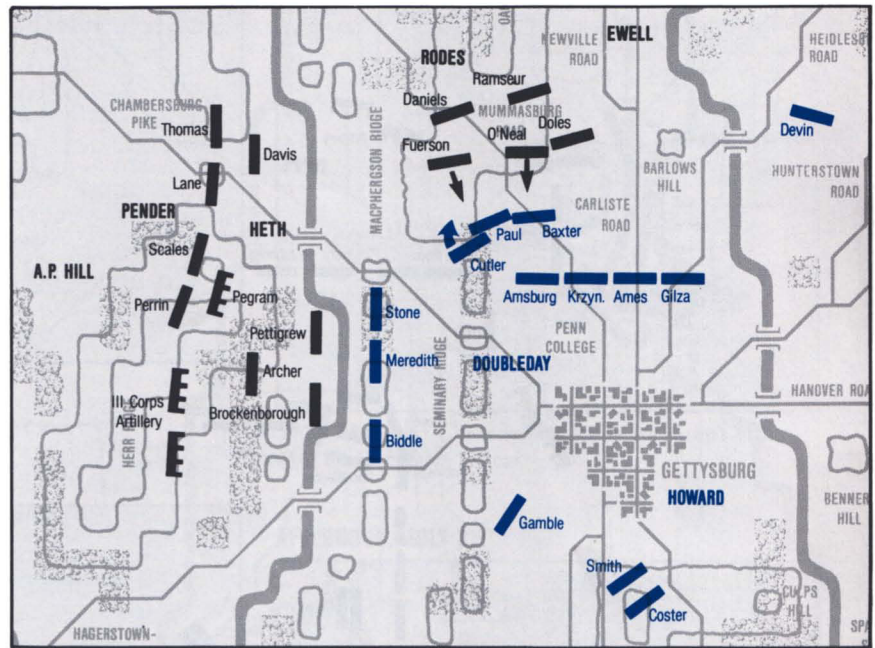
HISTORICAL SITUATION MAPS

8:00 AM – 10:00 AM, JULY 1



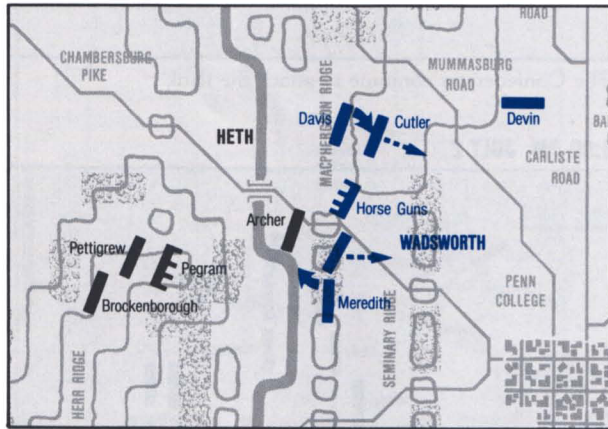
Heth approaches Buford's cavalry at MacPherson Ridge.

2:00 PM – 4:00 PM, JULY 1



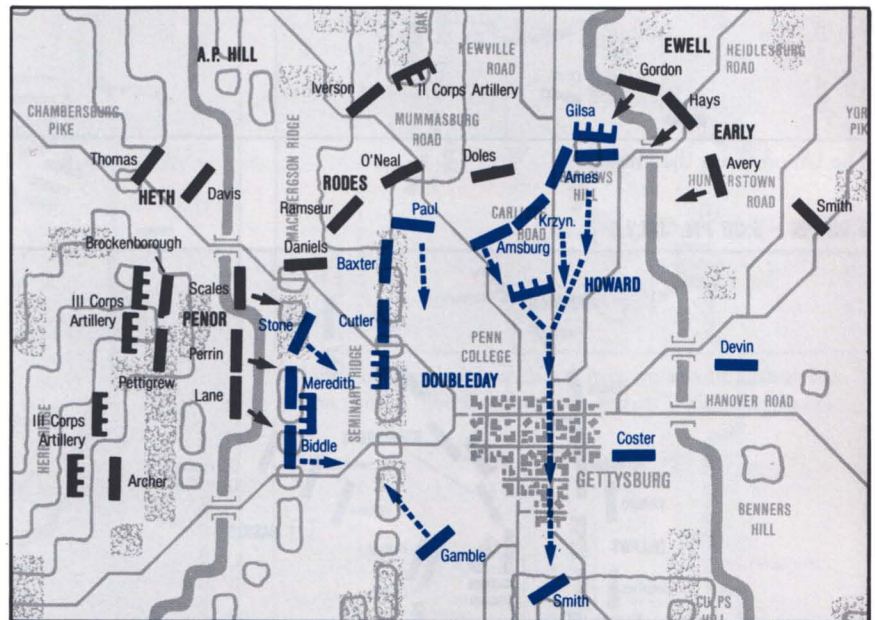
Rodes attacks the I Corps.

10:00 AM – 12:00 AM, JULY 1



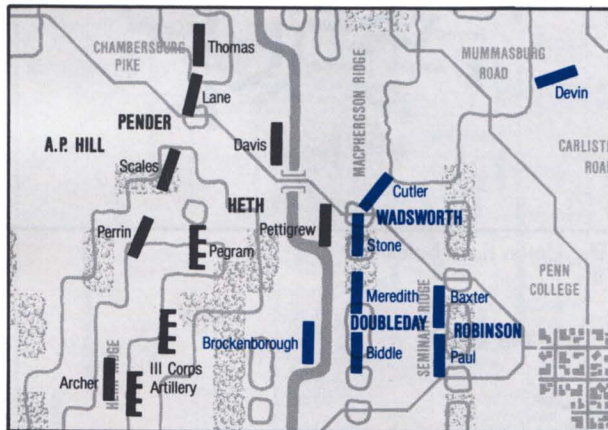
Meredith counterattacks. I Corps takes over the ridge from the cavalry.

4:00 PM – 6:00 PM, JULY 1



Early and Pender attack the two flanks. The Union line collapses.

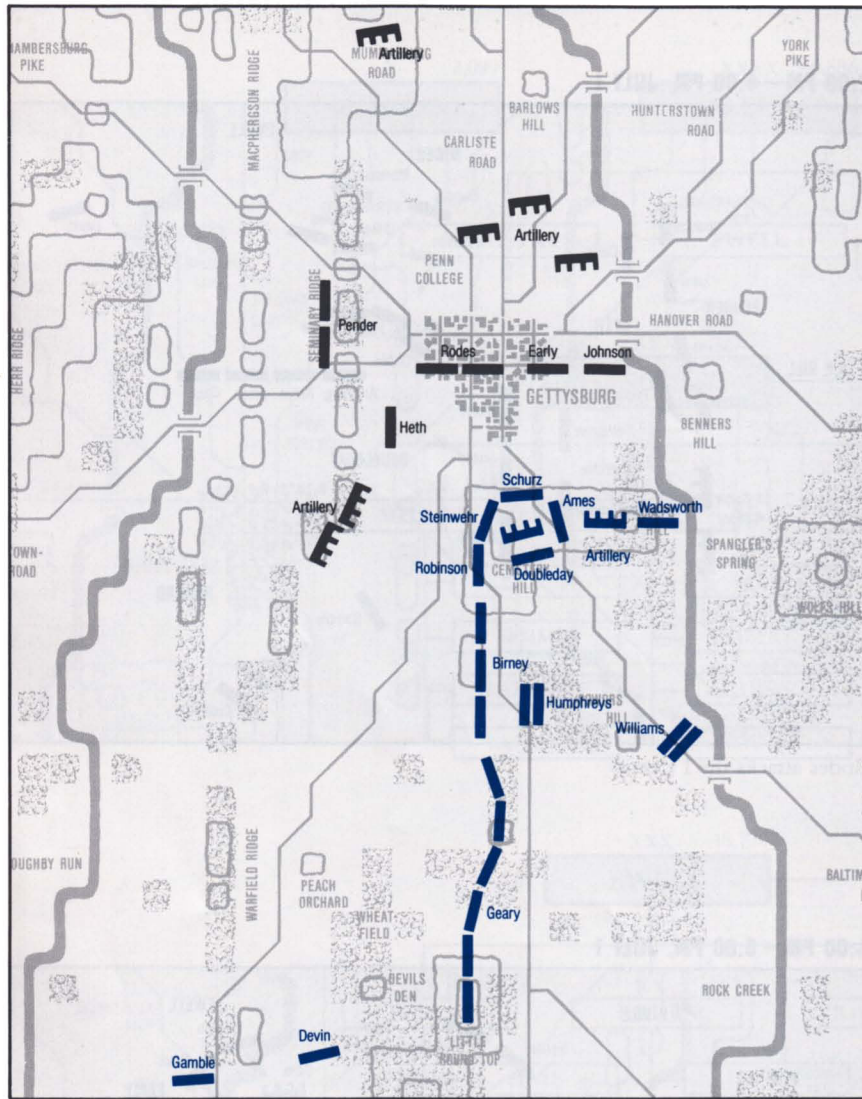
12 NOON – 2:00 PM, JULY 1



Pettigrew and Brockenborough attack the I Corps at MacPherson's Ridge.

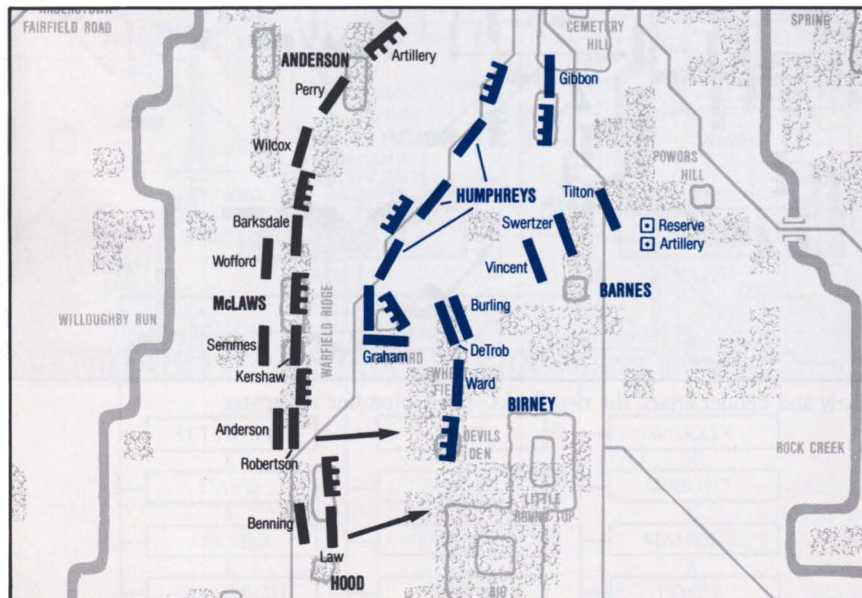
HISTORICAL SITUATION MAPS

MIDNIGHT, JULY 1



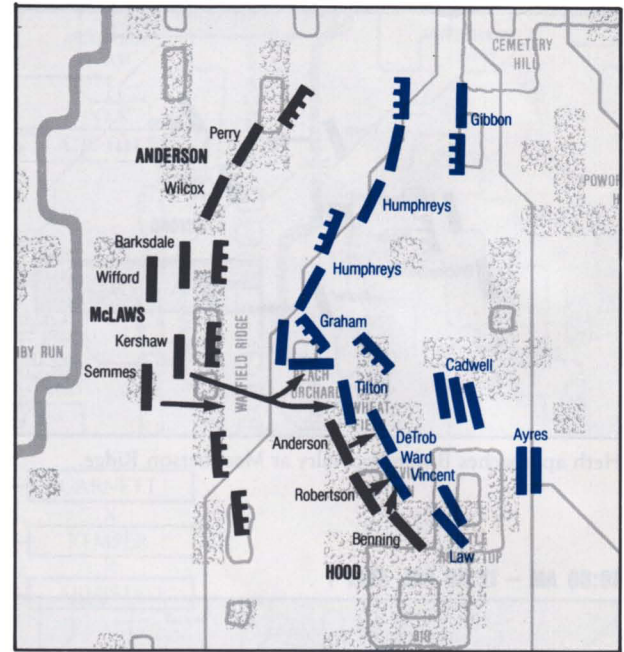
The Union forms the "hook".

4:00 PM – 5:00 PM, JULY 2



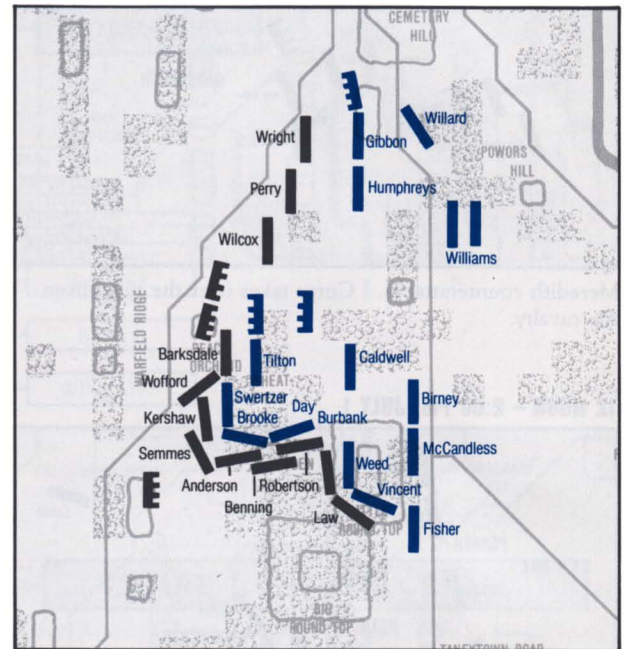
Hood attacks the Union flank.

5:00 PM – 6:00 PM, JULY 2



The Confederates continue to attack the flank.

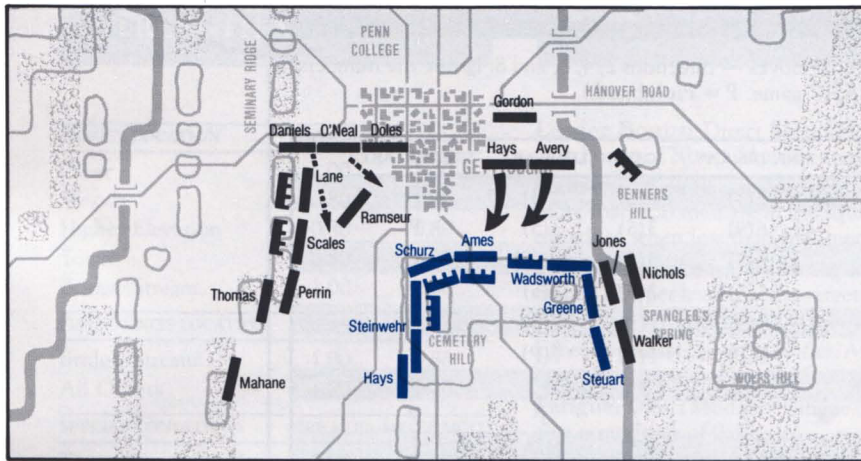
6:00 PM, JULY 2



The Union flank holds.

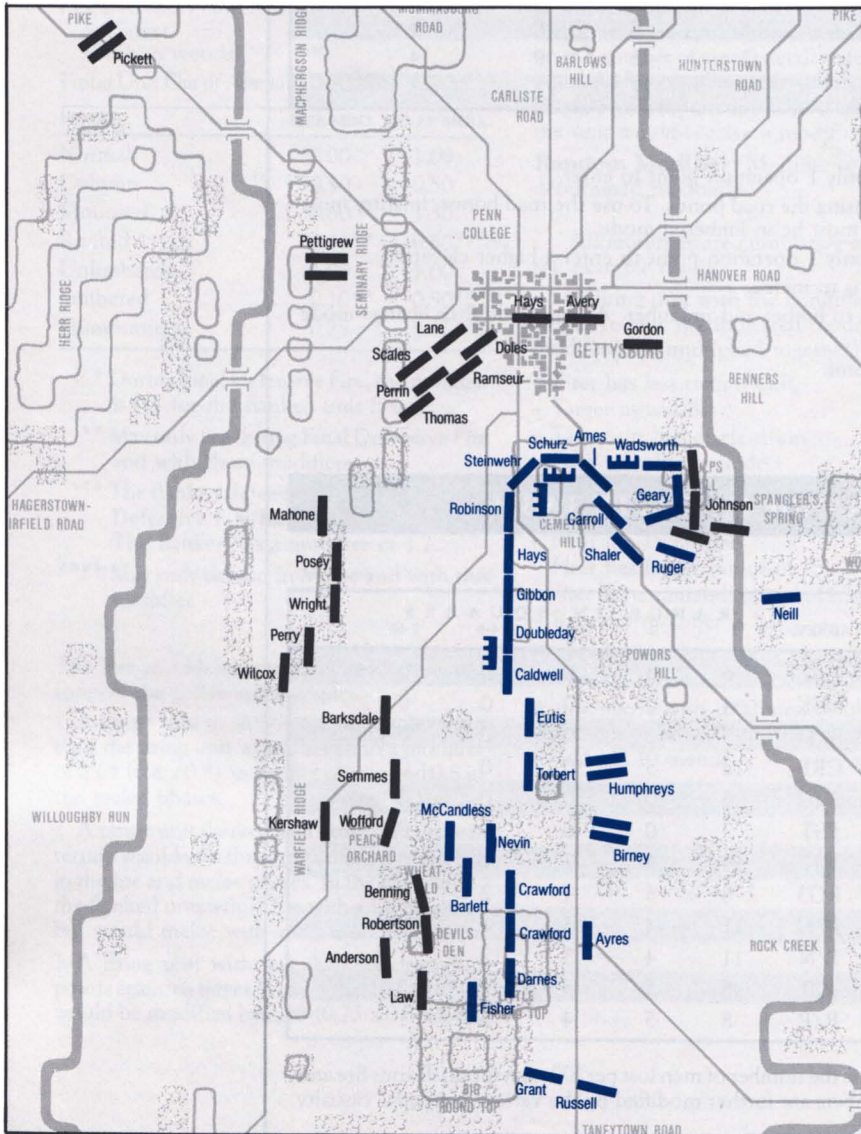
HISTORICAL SITUATION MAPS

EVENING, JULY 2



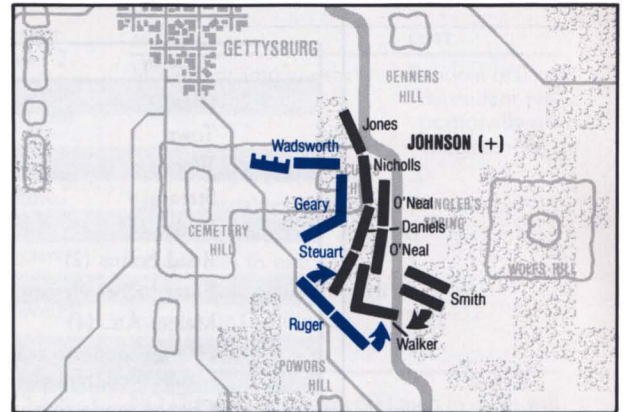
The Confederates attack Cemetery Ridge.

MIDNIGHT, JULY 2



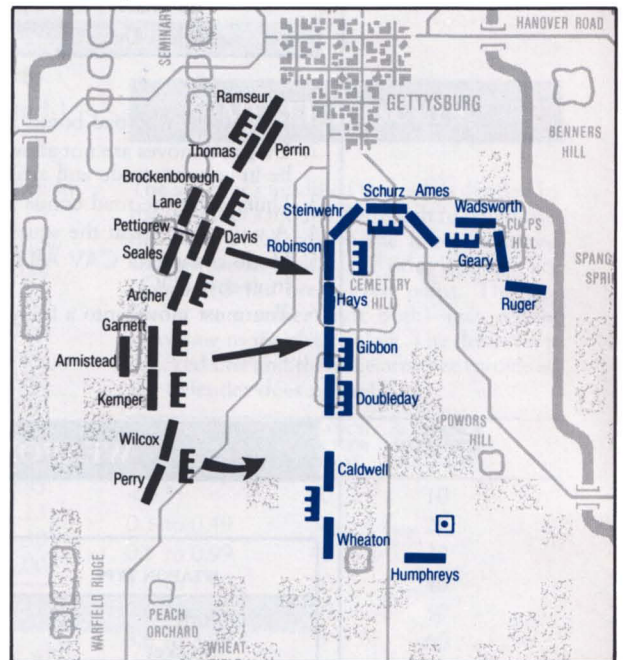
The two great armies pause.

MORNING, JULY 3



The Union and Confederates battle for Culp's Hill. The Confederates retreat.

AFTERNOON, JULY 3



Pickett's charge. Lee launches a massive assault against the Union center. The Confederates retreat with heavy losses.

OPERATION COSTS TABLE

(Numbers in parentheses refer to diagonal moves — directions 2, 4, 6, and 8. Ignore the numbers and letters printed in blue for the BASIC game. P = Prohibited.)

TERRAIN	INF/DIS. CAV.	CAV.	LIMB. ART.	UNLIMB. ART.
Clear	2(3)	1(2)	2(3)	P
Town	6(9)	3(5)	3(5)	P
Woods	5(7)	3(5)	10(15)	P
Stream	3(5)	2(3)	3(5)	P
Bridge (1)	2(3)	1(2)	2(3)	P
Road bonus (2)	1(P)	1(P)	1(P)	P
Enter higher elevation (3)	+2	+1	+3	P
Melee: Att. (4)	2	2	P	P
Change mode to column/ mounted/limbered (5)	2	2	N/A	2
Change mode to normal/ dismounted/unlimbered (5)	4	4	4	N/A
Move ZOC to ZOC (6)	+8	+5	+8	P
Enter or leave enemy ZOC	+2	+1	+3	P
Fortify	8	8	P	8
Fire phase	2	2	P	4
Melee: Def.	1	1	2	2

Notes:

- Units using the road bonus pay only 1 operation point to enter.
- Diagonal moves are not allowed using the road bonus. To use the road bonus, infantry must be in column mode and artillery must be in limbered mode.
- Units using the road bonus pay only 1 operation point to enter a higher elevation.
- A unit must fire at the square it is to melee.
- Mode change for CAV ART is 2 to limber and unlimber. All units add 2 to change mode in enemy ZOC.
- You must move onto a friendly unit.

WEAPON/RANGE CASUALTY TABLE

WEAPON TYPE	ABREV.	RANGE IN SQUARES				
		1	2	3	4-6	7-10
Rifle	RFL	6	3	0	0	0
Musket	MSK	4	0	0	0	0
Rifle/Musket	R/M	5	2	0	0	0
Carbine	CRB	12	3	0	0	0
Shotgun	SHG	6	0	0	0	0
Pistol	PST	2	0	0	0	0
12 lb. Napoleon	N12	14	4	2	1	0
3" Rifled Gun	RG3	8	5	4	2	1
3" RG/12# N	R/N	11	4	3	1	0
10 lb. Parrott/12# N	P/N	11	4	3	2	1
10 lb. Parrott	P10	8	5	5	2	2
3" RG/10 lb. Parrott	R/P	8	5	4	2	1

The number under the range column is the number of men lost per 100 men for small arms fire and per one gun for artillery. These numbers are further modified by the various strength/ casualty modifiers.

FIRE AND MELEE STRENGTH MODIFIERS

TARGET LOCATION	FIRE MOD.	MELEE MOD.
Clear	1.00	1.00
Woods	0.80	1.00
Higher Elevation	0.80	0.80
Town	0.80	0.80
Bridge/Stream	1.00	1.00
FIRING UNITS LOCATION	FIRE MOD.	MELEE MOD.
Bridge/Stream	1.00	0.80
All Others	1.00	1.00
SPECIAL CONDITIONS	FIRE MOD.	MELEE MOD.
Target Dismounted with Carbines	0.80	1.00
Firing Unit Has <6 O.P.	0.75	1.00
Target Unit is Flanked	1.20*	1.20***
Firing Unit is Disrupted	0.30**	0.30
Firing Artillery Adjacent to Target (both in woods)	0.10	1.00
Firing Unit Out of Ammo	0.30**	0.70
MODES	FIRE MOD.	MELEE MOD.
Normal	1.00	1.00
Column	0.50	0.50
Mounted	0.60	1.50
Routed	0.50**	0.50****
Unlimbered	1.00	1.00
Limbered	0.10**	0.50****
Dismounted	0.75	1.00

* During Final Defensive Fire, the modifier is 0.5 for the flanked unit firing.

** May only fire during Final Defensive Fire and with these modifiers.

*** The flanked defender in Melee and Final Defensive Fire has a modifier of 0.5. The flanker has a modifier of 1.2.

**** May only defend in Melee and with this modifier.

The Fire and Melee strength modifiers would support the following examples:

1. A target unit in woods on higher elevation than the firing unit would result in a modifier of 0.64 (0.8 x 0.8) in the fire phases and 0.8 in the melee phases.

2. A target unit flanked by a firing unit in clear terrain would give the firing unit a 1.2 modifier in the fire and melee phases. In the fire phases, the flanked unit would fire with a 1.0 modifier but would melee with a 0.5 modifier.

3. A firing unit with less than six operation points against a target in town that has carbines would be modified by 0.48 (0.75 x 0.8 x 0.8).

ADDITIONAL MODIFIERS FOR FIRE AND MELEE

Leader Bonus: Direct Modifier. A leader with bonus of 20 would give a modifier of 1.2.

Density: 1% more casualties per 12 men when more than 650 men are in the square. 1% less casualties when less than 650 men.

Fortification Level: The firing unit is modified by 10% per level that the target is fortified. A level of 5 would give a modifier of 0.5.

Effectiveness: Direct Modifier. An effectiveness of 55 would give a 0.55 modifier.

Fatigue: Direct Modifier. Fatigue of 20 would give a modifier of 0.8.

Command Control: Direct Modifier. A rating of 1.1 would give a modifier of 1.1.

Visibility: Direct Modifier. Visibility of 60% would give a modifier of 0.6.

Artillery Men: Each gun is assumed to have 16 artillery men to support it. When artillery fires, it receives a proportionate modifier based on the number of men it needs to fully support a gun. A Union artillery unit with six guns would need 96 men to function fully. If it lost 19 men, the unit would receive a modifier of 0.8.

Random Modifier: Modifier of 0.9 to 1.1 determined randomly.

All modifiers are cumulative as shown in the example below:

A firing unit with the conditions below would receive the indicated modifiers (all modifiers are multiplied together):

- Firer has less than 6 O.P.	= 0.75
- Target in woods	= 0.80
- Target on higher elevation	= 0.80
- Firer in column mode	= 0.50
- Target has carbines	= 0.80
- Firer has 75 effectiveness	= 0.75
- Firer has 15 fatigue	= 0.85
- Firer has leader bonus of 15	= 1.15
- Firer has command control of 1.3	= 1.30
- Random modifier is 1.0	= 1.00
TOTAL	0.18

A unit above with 1000 men would fire with a strength of 180. (With rifles at range one, it would kill 10 men.)

FATIGUE TABLE

ACTION	COST
Movement into another square	Random of 0 or 1 dependent proportionally on effectiveness
Fortify one level	20
Lose 2 casualties	1
Per Force March	6
Leader dies in unit	5
Routed unit passes through	5
Infantry or Cavalry fire	2
Artillery fire	4

NOTE: units with over 600 men in them will gain proportionately less fatigue up to 1000 men. For example, a 600-man unit gains 1 fatigue point per 2 losses (50% of casualties turn into fatigue). A 900-man unit would gain 1 fatigue per 3 men lost (33%).

MELEE RESULTS

The attacker's modified strength is divided by the defender's modified strength to determine the odds which govern the losses sustained and retreats in melee. The odds of 2 to 1 are considered the break-even point. The defender or attacker (not both) may retreat according to the chart below. The defender is checked first and then the attacker (provided the defender does not retreat).

ODDS	% CHANCE ATTACKER RETREAT	% CHANCE DEFENDER RETREAT
<0.3	60	10
0.3 to 0.49	50	20
0.5 to 0.99	40	30
1.0 to 1.99	30	40
2.0 to 2.99	20	50
3.0 to 3.99	0	60
4.0 to 4.99	0	70
5+	0	80

CHAOS IN COMMAND: Gettysburg's Second Day on the Left

by Robert S. Billings

General Dan Sickles stared out at the peach orchard to his front and wondered what he should do. He could see the little swell of land where the trees grew was clearly higher than his own position, perhaps three-quarters of a mile to the east. Yet he was positioned right where General Meade had ordered him to place his corps. He was holding the whole left flank of the Union's "line" along Cemetery Ridge. Only here where his men were stationed, it looked as though they ran out of ridge. Hancock and the II Corps on his right had a fine defensive position where the ridge rose up to commanding heights. To dislodge them the Confederates would need to attack across a long valley under massed artillery fire. It was easy to see why Hancock yesterday had sent back word to Meade advising him to bring up the Army of the Potomac—Lee's army was here, and there was an excellent defensive position to fight a battle from.

So the army had come struggling through the heat of the July sun along the Pennsylvania roads, hurried forward by their commanders, who could sense that this was no false alarm—this could be the battle that would win or lose the war. All through the night the soldiers had dragged themselves forward. When dawn came they were still coming in—and would continue to during the morning. They were tired, many of them exhausted by their forced march—but they were there.

This Army of the Potomac that had suffered so many galling defeats under so many different generals had arrived to find themselves under command of another new general. Meade, they were told his name was. "Who's Meade?" they asked. They didn't bother to listen to the answer. Ask for their opinion and they'd tell you right out McClellan was the man for the job. The nearest thing to a real victory they'd had had been fought almost a year ago under McClellan—just a few miles south at Antietam. But the Washington know-it-alls had taken McClellan from them, and it was out of the frying pan into the fire. First Fredericksburg under Burnside. He didn't want the job—told his superiors he didn't feel competent to command a whole army.

They should have believed him. The soldiers still remembered crossing the river and going up that hill, a brigade at a time, while the Rebels potted them from a sunken road. Great sport it must have been for somebody—but not for those soldiers marching helplessly up that hill, each brigade ploughing through the bodies of the brigade ahead.

So down with Burnside and up with Hooker. He was really going to do the job. Going down the river and comin' in ahint 'em, they said. So the Army of the Potomac marched all over creation looking for Lee's "hint end," and all they found was Jackson coming up theirs. When they (except for a considerable number who couldn't make it back) got on the other side of the river again they counted themselves lucky and decided they could do with a little less fancy strategy and a little more plain fighting. They didn't brood too much about what this fellow Meade had in store for them. Whatever it was, they figured they'd get the bill, sooner or later—and have to pay it again with more thousands of crumpled-up bodies lying out turning black in the sun. What's the difference. Nobody lives forever.

The first day of the Battle of Gettysburg (July 1, 1863) had been merely a prelude—but it had also been a near-disaster for the Yankees. There was only the Union cavalry supported by Reynolds' I Corps at first, and they had done pretty well for awhile. But the Rebel army was concentrated and coming in to Gettysburg from three directions. Howard's XI Corps (scapegoats of Chancellorsville) had reinforced Reynolds, extending his line at right angles to the north of the town. Then the loose right flank was hit, Rebels poured in from east, north, and west—and Howard's poor Germans headed the only direction they could. The trouble was, all roads led straight into the town of Gettysburg. Soon the streets were crammed full of men and horses, soldiers were running down dead-end streets looking for a way out, and then the Rebels got in too and it was like a Saturday night raid on a whorehouse, with the distraught clientele, pants at half-mast, scattering in all directions. By the time darkness had fallen several thousand Union troops had been

taken prisoner—most of them from the unlucky XI Corps. But the remnant was lodged just south of town on that beautiful defensive terrain that had caught General Hancock's eye. And they had held off the few feeble attempts to dislodge them, so the Union corps rushing up would have a superb position to file into as they arrived.

The first day of battle was thus a small-scale cliff-hanger. The third day would be a (militarily speaking) beautiful and tragic spectacle—no fancy footwork, just onward into a hailstorm of shot and shell, and whoever wants this ridge the most has got to pay for it with dead bodies—their own and the enemy's. It would be high drama, glorious spectacle, and a script begging for a D. W. Griffith or a Cecil B. DeMille—but if enough Yankees were ready to die for it, it probably was nearly a foregone conclusion they could keep their ridge and send Lee and his unconquerables trudging southward for two more years of indiscriminate slaughter.

But between these two days falls the day on which, in the view of many observers, the fate of the Union was most clearly decided. And there was certainly nothing foregone here. The second day at Gettysburg was probably one of the most confusing in the annals of warfare. The generals seemed as confused as all the privates certainly were. It is nearly impossible to show the battle on the Union left as a series of orderly stages. Corps, divisions, brigades—even regiments were interspersed in a god-awful mix-up more like a drunken brawl on the night after payday. More than once soldiers, short of ammunition and caught up in the desperate drama of it all, resorted to flailing rifle butts and throwing stones like some prehistoric army of cavemen. Time and again isolated units would hold, waver and break, reform, charge to retake their lost ground, and finally crumble after a new onslaught. Then another unit would come in from a different direction and renew the fight all over again.

General Robert E. Lee, fresh from his masterpiece at Chancellorsville and utterly confident of his army's ability to defeat any foe, had looked over the situation at the end of the first day and arrived at his decision. Hit the Union left flank hard, he told his veteran corps commander General Longstreet. Move quickly and finish them off before they get all their troops in position. But Longstreet was unhappy. He felt it was necessary for the Confederate army, invading hostile country, to get between the Union army and Washington. If they chose a good defensive position, the Yankees would be forced to attack them. Then it would be Fredericksburg all over again. Longstreet wanted to move to the Yankee left all right—but on past it and into a good defensive position.

From hindsight that sounds like good advice. But it ignored the problem of supplies when operating in the land of the enemy. The Southern army was forced to live off the land—which didn't seem that much of a problem when you looked around and saw those rich Pennsylvania farms. The trouble was, as Lee knew, if you were forced to stay in one spot long you would quickly exhaust the local supplies—and if you couldn't move about freely, waiting to be attacked, what would the army live on?

No, he told Longstreet—the Yankee army was out there in front of them, and it was there they would have to be attacked.

But Lee had some other problems too. Stuart's cavalry had been out gallivanting again—riding around the whole Union army. That was great for the newspapers back home, but Lee needed cavalry for reliable information about the Yankee position—especially the exact location of its flanks. Stuart was coming fast—but for now Lee would have to make do with skirmishers and good guesswork.

But in warfare even military genius can't afford to leave too much to instinct and guesswork. Sure enough, Lee had guessed wrong about the Union left flank. He thought it ended somewhere back there where Cemetery Ridge ran out of elevation. Just get on the Emmitsburg Road, which leads obliquely into the Union position, he told Longstreet, and you can roll up their whole line from its dangling left end.

Longstreet would lead the attack with his corps. As he moved perpendicular to the established line and came even with A. P. Hill's corps, now Lee's center, that corps too would join in the attack. Meanwhile Ewell, commanding the other Confederate corps opposite the Yankee right wing, where it hooked around Cemetery Hill and ran eastward to Culp's Hill, had been ordered to be ready at the sound of Longstreet's guns to attempt an attack against the Union right—and follow it up quickly if the situation looked

favorable. Once again, Lee thought, the Union line would crack, first probably on the left—and then crumble all along its length. At that point the way would be open to take Washington—or any other large city in the area.

There was one other problem that would have its effect on the outcome. The Rebels had the outside of the semicircular position, the Yankees the inside. That meant the South had the initiative—but the North, closer to the center, had the shorter front and the ability to shift troops within their position with greater speed. So for Longstreet to get his men way out past the Union left flank and in position to attack—and to do it without being observed by the enemy—he would have to march them for hours in a lengthy circuit. Critics of Longstreet's "slowness" often neglect this technical problem of troop movement: move openly and the enemy will just shift troops to meet your attack; keep your move hidden and you'll spend most of the day marching by a lengthy and circuitous route. The orders called for an attack as early as possible—but they also called for a covered route of approach. So an early morning attack became a late afternoon one.

On the Union side there were equally severe problems of generalship. But perhaps the most significant one was being initiated when General Sickles, politician turned general, now commander of the Union III Corps, stared out enviously at that high ground around the Peach Orchard to his front.

He had asked General Meade to come down and look over the terrain of the long and vulnerable left flank. But Meade had been too busy and had sent General Hunt instead. Hunt had seen the advantages of the high ground—but he said he had no authority to tell Sickles to move his troops up there. So the handsome politician-general was back where he had started—with no real authority to move his troops forward to the better terrain, yet with the feeling he had been dumped into an untenable position and told to arrange his troops to suit himself, so long as he obeyed his general orders. And he felt those orders were setting him up to play the scapegoat role Howard's Germans had been cursed by the whole army for playing at Chancellorsville. There they had been stuck out on a flank in the midst of country so rough there was no chance to spot an approaching enemy. And they had been blindsided by the maneuvering Rebels, routed, demolished, made the laughing stock of the army. And now Sickles had been shoved into the same kind of position.

He had a long front to cover—yet toward his open left flank everything was a question mark. The ground from the Round Tops on his left to the Peach Orchard out in front was a perfect spot for the Rebels to mass for a rolling attack which would hit him practically without warning. The Devil's Den was a maze of trees, ledges, and chunks of rock, and from there to the Peach Orchard was a swell of land to cut his observation. And the trees and high ground of the Peach Orchard would cut out his observation in that direction. He felt trapped, hemmed in, cooked and left to simmer.

If only he could move his troops out to take advantage of that high ground—put some artillery in the Peach Orchard, run an infantry line at an angle out to the Peach Orchard, then put the rest of his infantry along the Emmitsburg Road, which slanted from the Peach Orchard back toward the main Cemetery Ridge position of the Union army. Then he would have good observation and a fine field of fire for both his infantry and artillery. By God, he would do it! Dan Sickles wasn't a man to be left holding the bag. It's true he wasn't a West Pointer, an old army man. Lots of people were suspicious of politician-generals. There'd been plenty of bad ones. But he'd shown his worth. He'd risen to corps command on the strength of his abilities and he knew a good position from a bad one—and he recognized when he was being made a patsy.

And so, as the day stretched into mid-afternoon, he set his troops in motion. Birney's Division would move forward in a giant arc and take up position in a line that jutted out toward the Peach Orchard. Then Humphreys, his other division commander, would move his men up to the Emmitsburg Road.

Longstreet's men, meanwhile, had been moving slowly but deliberately into position for the Rebel attack. By three-thirty they were beginning to get set—Hood's Division on the right, McLaws' on the left. And as soon as they engulfed the Union left flank, A. P. Hill's corps was ready to join in and roll up the Union line. Things looked rather auspicious for the Confederates, for although Lee had a faulty idea of where the Union flank actually was, his troops had advanced into position largely unobserved. While Sickles' decision had developed a Union line facing in the right direction to receive this attack, the position he had gambled on had some major negative elements which a trained observer would spot immediately.

For while the III Corps would be in better position to receive an attack from the left flank, the move would make Sickles' corps one big salient sticking out of the main Union line. Furthermore, Sickles had far too few men to cover his new extended front. He had Graham's brigade

and a few guns in the Peach Orchard, and Ward's brigade back in the Devil's Den. They would be in hot spots but could put up a good fight. The only trouble was, there was more than a half-mile gap between them—and only De Trobriand's lonely brigade to fill it with. And when Humphrey got his men out on the Emmitsburg Road, they would have no contact with the main Union position to their right rear. So Sickles had moved his thinly extended corps into a position requiring them to cover an even greater expanse of front—and even worse, there were no men at all to cover either of the Round Tops, from which artillery could enfilade the entire position of the Army of the Potomac. All in all, once again that army would have to do some hard fighting to make up for some serious leadership problems.

Sickles had earlier sent Berdan's Sharpshooters, supported by the 2nd Maine infantry regiment, out to reconnoiter beyond the Peach Orchard. They met Rebel skirmishes, chased them back—and suddenly came upon rows of Rebels readying an attack. The Union men decided to move back while they could and warn General Sickles what was on the way.

By 4:00 P.M. the dam broke and the flood of Rebel troops poured over the intervening terrain and dashed against Sickles' new positions from the Devil's Den to the Peach Orchard. But there was no immediate engulfing of the Union troops. The generals might be having their tactical problems on this July day—but the privates, once in position, were there to fight, and fight they did. Even though the three brigades of Birney's division had no solid front (their lines waggled back and forth with the terrain, and rarely did a regiment align with the one beside it), the troops fought hard—firing fast and accurately, being forced back, countercharging and retaking their ground. Supported well by their artillery, these regiments took a heavy toll of the attackers.

But Hood was attacking with a support brigade behind each attacking brigade, and thus he was able to make good use of gaps in Sickles' position.

Very quickly the troops on the Rebel right sensed that they had a great opportunity to extend beyond the Union left—perhaps even get in the Union rear and cause havoc among the supply trains there. Since Sickles' line stopped at the Devil's Den, with only a couple of guns and a few infantrymen in the little creek bottom running between the Den and the Round Tops, Confederates quickly hit here. Others, sweeping more widely up over Big Round Top, realized they might have a clear path to the Taneytown Road and the Union rear. Only a few Sharpshooters impeded their advance up Big Round Top—and those soon disappeared before the Confederate tide.

Now Little Round Top was the only barrier stopping them from breaking into the Union rear. And while they didn't know it, Little Round Top had no defenses at all. Only a few signalmen were there. Here was victory waiting for the Rebels, and total disaster for the Union army.

In this day of bungled command decisions, however, the gods must have decided it was time to even the score and deal the North a strong card. The card was General G. K. Warren—engineering officer and trusted friend of General Meade. Knowing that he couldn't keep a grip on all parts of the lengthy Union line, Meade had sent Warren to act for him on this over-extended, precarious flank. Warren did not hesitate to act—going through corps and division commanders when he could, even grabbing regiments on no authority but his own when the need was too pressing and the commanders too distant.

He had been with the signalmen on Little Round Top when the Rebels had first been observed—and he immediately sent word to Meade to send a division. Meade knew his man well enough to act without delay. He sent a whole corps—Sykes' V Corps. So far so good, except that it would take time to get Sykes' men to this part of the field—and then more time to reconnoiter and get them into position. And time was one thing Warren knew he didn't have.

But he had some luck—in the person of Colonel Strong Vincent. This officer had a brigade of four regiments in Sykes' corps, and when he found a messenger looking for Vincent's division commander, General Barnes, he insisted that he be allowed to look at the message. The message urgently directed Barnes to put a brigade on Little Round Top. Getting the message to Barnes and getting an order down to a brigade would take precious minutes. And Vincent could sense they couldn't afford those minutes. The army doesn't take lightly to a subordinate officer's reading his commander's messages without authorization—and then making the commanders' decision about what should be done. But Colonel Vincent thought winning the battle was more important than protecting his army career. Without hesitation he pointed toward Little Round Top and galloped toward it at the head of his brigade.

Up the hill, a quick glance around, and he saw what must be done. Put the brigade (four regiments strong) in a semicircle part way down the hill. The Rebels were coming over Big Round Top already and would be there in a few moments. But his lead regiment, the 20th Maine, was just double-timing up, its leader, former college professor and parson Colonel Josh Chamberlain, anxiously awaiting his orders.

Vincent pointed out the position the 20th Maine would have to defend. They would be the anchor to the entire Union left flank—they must hold it at all costs. Though the former college teacher was new to the game, he was being dealt the hand that could win or lose the entire battle, the war itself. Then Vincent turned and raced back to get his other three regiments into position. The schoolteacher would have to play the hand on his own.

But Josh Chamberlain had somehow developed a feeling for command, a sense of what mattered most in a military tight spot. He managed to get his men into line just in time to take the charge of an overwhelming force of Rebels coming up the hill.

If there is some celestial roll of honor for "small unit actions" by men long gone heavenward, the men of the 20th Maine certainly qualify. And their leader deserves special mention. They fought like demons, firing, reloading and firing again. Colonel Chamberlain saw he was being outflanked (no use to call for support, he was on his own here). Maneuvering his men under fire, he extended his line to the left, bent it back in the middle—somehow he would guard that flank. His men responded, managed to carry out in the midst of savage battle maneuvers they could hardly do on a level parade ground.

On the other side of the hill thousands of men and scores of cannon were locked in a struggle all the way out to the Peach Orchard. But here on their dark little segment of the wooded hill the 20th Maine might have been fighting in splendid isolation. They had been told it all depended on them. So they fought as if it did. Hundreds of Confederates attacked and attacked again—still the little band held out. But ammunition was getting low. They cannibalized what they could from the dead and wounded, held on a little longer. In desperation men took to swinging their rifle butts at the attacking figures, even seizing and throwing stones. Somehow they held out one more time. How many hours (or was it only minutes) they had been fighting their desperate action they had no idea. All they knew was that they had to hold one more time—and then another.

Colonel Chamberlain had done everything his slight military training had told him to do—and the Rebels were getting ready to come at him again from only thirty yards away. His men now were almost without ammunition. What could he order now?

Well, they still had their bayonets. All he could think of to do was to order a bayonet charge. It was hardly the approved solution. But when you run out of approved solutions, you try to make do with whatever comes to mind. The order went out: fix bayonets! His men reached forward, slipped the bayonets on the rifles and looked at him for the command.

They were ready—come hell, high water, or the legions of the devil himself. The 20th Maine was holding the flank of the entire army, and they weren't about to give up their little hill.

"Charge!"

The men rushed forward with a ready will—and empty rifles.

No one will know for sure why it worked. Perhaps it was partly because the Rebels had had to attack without getting back the canteens they had sent for water and had been fighting all this time in the heat while ravaged by thirst. Perhaps this mad little band of men had convinced their Rebel opponents that they simply refused to be beaten. Perhaps it was because of the shock at seeing soldiers do something so stupidly against reason. Whatever the reason, the worn-out Rebels wavered—then many began to throw down their rifles in surrender, while the remaining grudgingly drew back.

The 20th Maine took a very large number of prisoners. They held their flank and later advanced to include Big Round Top within their lines. It had been one of the most crucial small-unit actions of the war. Their casualties had been heavy. They had just happened to be at the crucial point at the right time—but because they and their novice leader played their hand well, they may have changed the course of history.

While this separate struggle was being played out, two of the other regiments of the brigade were holding their line also. But the regiment on the right wavered and began to fall back. Here was disaster again. Colonel Vincent saw the right starting to go, leaped forward to rally the men—and fell, dropped by a bullet.

Somehow General Warren was nearby again. He saw if something wasn't done quickly the whole line could go. His eye spied Colonel Patrick O'Rourke's 140th New York regiment, headed to reinforce General Sickles' Peach Orchard position. Warren had known O'Rourke—perhaps that was the key factor. At any rate, when General Warren told the Colonel to forget the other assignment and get up on Little Round Top, the latter took his men up and over the hill without losing time in discussion. The men came panting to the top of the hill in time to see the Rebels starting their attack on the hole in the Union line. There was no time for loading rifles, fixing bayonets, or getting out of column and into a proper attack formation.

O'Rourke yelled for his men to follow him and set out at a run down the hill. The men came pounding after—rifles not yet loaded, still in column formation. Once again, for some reason it worked. By sheer weight of bodies the column, striking the attacking Rebels, forced them back—then managed to get themselves deployed, their rifles loaded, and once again the line was firm.

While the Little Round Top fight was in progress the entire line out to the Peach Orchard was ablaze. The three brigades of Birney's division could not hold the long front by themselves for long. Meade knew this when he saw what Sickles had done. Sickles had offered to withdraw to his old position, but Meade had told him it was too late—the Rebels were already attacking. He said he would send help. The big question was—could it arrive soon enough?

Sickles would have to improvise for the time being. The hastiness of the improvisation is seen in the intermixing of regiments in III Corps. Ward, in the Devil's Den, got two regiments from De Trobriand's brigade to his right. Graham, in the Peach Orchard, got another from the same source. That left Birney's entire center to De Trobriand—with only two regiments to cover it. Sickles had ordered forward his second division, under Humphreys, only after Birney's division was up. Before they had reached their assigned position along the Emmitsburg Road west of the Peach Orchard, however, it looked as though the Devil's Den-Peach Orchard line might tear loose before supports could arrive. Thus Humphreys was ordered to swing his entire division around to support Birney. That's one sight Union troops watching back on Cemetery Ridge remembered—a whole division, flags flying, marching forward, then changing direction, all the while under artillery fire, and proceeding in good order toward a new front.

But that was going to leave an awful hole in the Union line along the Emmitsburg Road. So when it was learned that supports from Sykes and Hancock were close, Humphreys was ordered to reverse direction again and get up to the Emmitsburg Road. So once again the division responded as if on parade. The big hole to the right of the Peach Orchard was at least temporarily filled.

But things were getting badly mixed up. Command structure was badly confused. For example, Sickles decided to send Birney Humphrey's smallest brigade under Colonel Burling. It didn't stay under Burling long. Of his six regiments, two were sent to Graham in the Peach Orchard and three to Ward in the Devil's Den. The only remaining one was then ordered back to Humphreys—leaving Burling with no troops to command.

Now Sykes' V Corps was coming up. Meade had told him to cooperate with Sickles on the left. Sickles assumed this gave him the right to call on these troops to reinforce his own. Sykes had a different idea—he felt his troops should stay unified under his command. Then he got a look at the widely spread troops of the III Corps, fighting for their lives from the Den to the Peach Orchard, and realized there was no way to make an organized battle of it. So his brigades began to be fed in where they seemed to be most needed. Two brigades of Barnes's division (Tilton's and Sweitzer's) went to fill De Trobriand's weakened center. Thus Sykes, most of whose troops were going in around Little Round Top, had a major part of his command a half-mile to his right—with Sickles' troops in between. And even with the reinforcements, there was nothing like a solid line. Brigades on this line were often out of sight of any supporting troops to their left or right. And to make command matters worse, casualties among battle group leaders were especially heavy.

But while the commanders struggled to make some sense of an apparently senseless situation, the troops had to forget who was at fault and concentrate on the fighting. And fight they did. Both infantry and artillery (there were a number of close support batteries that had to hold parts of the line by themselves) put up a fight that Confederate officers later said they were amazed to see. And it was to these countless private soldiers, struggling in the close July heat, that any victory won this day would be due.

Things were beginning to collapse. Ward's and De Trobriand's men were about through. Still, more help was on the way. Meade had told General Hancock (whose II Corps was to the right of Sickles) to send Caldwell's division to report to General Sykes. Caldwell's men came marching up, couldn't find Sykes, were seized by Sickles' staff and directed into the positions Ward and De Trobriand had been filling. Once again the command structure was in shreds. Caldwell decided he had better take charge of his own troops in the sector they were in, regardless of who was commanding what. He found men of Sweitzer's brigade on his right and Ayres' division on his left. So he got them to charge alongside his men into Hood's attacking Confederates—pushing them back beyond the initial Union position.

Lack of proper command coordination was to prove their undoing. Consider the situation. Graham's brigade (Sickles' Corps) and some artillery were hanging on in the Peach Orchard, though under heavy fire from two directions. To their left was a lot of vacant space and then Tilton's and

Sweitzer's brigades (Sykes' Corps). Then came Caldwell's brigades (Hancock's Corps—technically under Sykes, whom they couldn't find, and ordered into position by Sickles). Finally, close to the Round Tops, came Ayres' division (Sykes Corps). Consequently, when Caldwell's brigades swept forward, carrying Sweitzer on the right and Ayres on the left with him, it was a marvelous victory leading straight to disaster.

While there were all sorts of delays and confusion in the Confederate command also, some of their mistakes cancelled each other out, and thus with apparent perfect timing brigades of McLaws' division struck the Peach Orchard from two directions, overran it—just as Caldwell and adjoining units charged forward in their successful attack. This put the Rebels on the right flank and even in the rear of the Union attackers—and the more the blue troops advanced, the worse their situation became.

When the onslaught finally fell on the Union men from their right and rear, some brigades held together better than others—but it was soon clear to them all that disaster time had come and the only way left for them was any way out they could find. With the intermixing of regiments, brigades, and even corps, it is doubtful that anyone could have found a way to pull things together. To make matters worse, after severe casualty losses among battlefield commanders, Sickles himself had to be carried from the field with one leg shattered. (He went in style, a cigar clenched jauntily between his teeth—and before long was attending Washington parties, one leg missing but the idol of every lady clinging breathlessly to his description of the action.) The Union soldiers left on what had been Sickles' front had to come out any way they could—those who were not already killed, captured, or rendered immobile from their wounds.

The Confederates came surging forward again, a giant wave lapping now at the western slopes of Little Round Top. An observer looking down from the hill at that point in the action might well have thought it was going to be Chancellorsville all over again—with the flank collapsing and Union troops scurrying wildly to escape from an invincible hordes of victorious Rebels.

Meanwhile, things were not going well for Humphreys, commander of Sickles' other division. About six o'clock McLaws' brigades struck into Humphreys' men, positioned along the Emmitsburg Road north of the Peach Orchard. (Ewell, way around at the left end of the Confederate line, still held his corps in check, though Meade had for some time been taking troops from opposite Ewell to reinforce his threatened left.) Humphreys' men did well at first—but as the Rebel sweep through the Peach Orchard unhinged the right of the men led by Caldwell, it was now also leaving Humphreys with an open left flank. Birney, taking over command of III Corps when Sickles was carried off the field, tried to establish some kind of temporary line to hold back the flood. But though Humphreys' men would stop and stand briefly—they would soon find themselves being cut down again from their open left flank. So back further they would have to go—all the while trying to keep panic from taking hold and driving them into a complete rout. Some order was maintained in a few units—but as they approached Cemetery Ridge it was clear they could not be put into position until they had been rested and reorganized. And there were no other troops left in this part of Cemetery Ridge—for this was the position that Sickles' men had vacated when they were moved forward earlier in the afternoon. So here again was disaster preparing to strike, as the victorious Rebel troops surged forward into the now unoccupied center of the main Union line on Cemetery Ridge.

Once again a subordinate commander had to forget chains of command and act on his own. This time, there being no infantry near, everything hung on the actions of an artillery officer—Colonel Freeman McGilvery. He had had four batteries (twenty-two guns) stationed near the Peach Orchard when it had collapsed. They had been putting up a tremendous battle for nearly two hours against massed Confederate artillery. One battery had run out of ammunition and had to be withdrawn. Confederate infantry drew near and now the guns began to receive rifle fire. McGilvery decided to move his guns back about 250 yards and form another line of artillery. Two of his batteries, Captain John Bigelow's and Captain Charles A. Phillips', managed to get most of their guns back, though Phillips' men had to haul one by hand and Bigelow's guns made it only by stopping and firing cannister at attacking infantry as they went. Briefly they formed a line near the Trostle farm, where their fire delayed the Confederates a little longer.

At this point Colonel McGilvery, riding toward Cemetery Ridge to figure out where to put his guns when they made it back to support the infantry in the Cemetery Ridge position, was shocked to see there were no infantry on Cemetery Ridge. What were not still out in front of it in scattered and fast unraveling pieces had kept on going over the ridge and now were resting and slowly trying to reorganize behind it.

He was horrified at what would happen if the Rebel brigades, rushing forward and sensing complete victory, should reach the empty ridge position and find themselves unopposed, right above the undefended Union rear area. With nowhere else to turn for help, he raced back to where Captain Bigelow was preparing to withdraw his guns from near the Trostle farm while he could still get them out. Galloping up (his horse riddled with bullets but somehow still running), McGilvery shouted to Bigelow that he must not withdraw—he must stay and hold a little longer to give McGilvery time to fashion some kind of defensive line before the Rebels reached Cemetery Ridge. Gammely Bigelow and his Massachusetts men stayed where they were, with no friendly infantry in sight, desperately loading and firing cannister to keep the enemy infantry at bay.

McGilvery, meanwhile, rushed back toward the ridge, collecting every gun he could find on the way, to establish another "artillery line" about a quarter-mile behind where Bigelow's cannoneers worked their guns furiously, anxiously watching their small pile of cannister rapidly shrink. McGilvery managed to get about twenty guns together in a line. Then Bigelow, his cannister almost gone and infantry now getting all around his flanks, extricated two of his guns and most of his men, even though almost all of his horses were down.

Now it was up to McGilvery's slender line of unsupported guns. Keeping up a steady stream of fire, perhaps convincing the Rebels by the very boldness with which they had served their guns that they had a mass of support waiting behind the ridge, they poured cannister into the attacking Confederates.

Alone and the target of all Confederate artillery and infantry nearby, they fought on. Guns were knocked out one by one—but still the blazing metal spewed from those remaining was too awesome to be attacked head-on.

It was a little after seven; the sun would set in a few minutes. Still McGilvery and his surviving cannons persisted. Would help never come?

It was at this point that General Hancock appeared with a brigade of his Third Division. Quickly it was deployed and attacked down the hill—driving Barksdale's Rebel brigade before them. The position was held for the moment.

More support had to arrive quickly, for other Confederate brigades were nearing Cemetery Ridge. (General A. R. Wright even claimed his brigade occupied the ridge for a time—though supporting evidence is hard to come by.)

Help was on the way. General Meade had ordered General Slocum, commanding XII Corps, to send most of his troops, then positioned on the extreme right flank of the Union line near Culp's Hill, to support the tottering left. At this moment, with his line of guns being smashed one by one, their cannister nearly gone, McGilvery turned to see a welcome sight—General Alpheus Williams, in temporary command of XII Corps, riding up with the advance elements of his whole First Division. The lonely fight of McGilvery's guns had kept the gap closed just long enough. This section of the Union left was secure.

But farther to the left, it will be remembered, the Rebels were chasing the fleeing remnants of Caldwell's division

(along with that hybrid collection of troops from II, III, and V Corps) back across Plum Run toward Little Round Top. The 20th Maine had held their extreme position on the left, and the other regiments of Vincent's brigade were still in place around the imposing hill. To their right, however, there was now nothing but fleeing troops fleeing without order or organization out of the Peach Orchard-Devil's Den salient. The onrushing Rebels, following close behind their defeated foe, could break through the Union line here, find themselves loose in the rear area and free to wheel to the left and start rolling up the defenses just beginning to reform. From Little Round Top, the situation truly looked bleak.

But there, in Little Round Top's right rear, came a mass of blue-clad troops. General Samuel W. Crawford, at the head of Sykes' other division of two brigades, marched his men forward, up the eastern slopes of Little Round Top, seized the colors and personally led the long Union line in a smashing charge down the slope. The exhausted Confederate troops reluctantly gave ground. And there were more Union troops just coming in. Sedgwick's VI Corps had arrived on the field and had added troops to Crawford's charge.

As darkness fell, the Confederates had to admit there would be no Rebel triumph on this flank, no replay of Chancellorsville on this second day of the Battle of Gettysburg. And while high school students years later might thrill to the colorful charge and determined repulse of Pickett's troops on the third day of the battle, old men in little Maine villages on Memorial Day could think back with quiet satisfaction to those mad moments among the dark trees of Little Round Top when the 20th Maine, along with that confused collection of brigades from five separate Union corps, had stemmed the tide. It had been a close thing, as the aging cannons of McGilvery's guns would agree. But it may have been there, in the confused struggle on the left flank of the Union line, in four wildly chaotic hours on the second day of the Battle of Gettysburg, that the nation had its "new birth in freedom."

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CREDITS

Game Design

Chuck Kroegel

Game Programming

David Landrey

Game Development

Chuck Kroegel, David Landrey, and Joel Billings

Computer Graphics

Keith Brors and Chuck Kroegel

Customized Disk Operating System (Apple version)

Roland Gustafsson

Playtesters

**Mike Musser, Bill Thompson, Arlon Harris,
Steve Weinberg, Jim McPherson, Jeff Guy,
Tom Cheche, and Daniel Beattie**

Art & Graphic Design

**Louis Hsu Saekow, Kathryn Lee,
David Boudreau, and Ben Willemsen**

Typesetting

Abra Type

Printing

A&a Printers and Lithographers

COMMAND MENU

- (Y) = Plots ammo on/off for artillery units only.
- (Ø) = Centers map on unit.
- (1-8) = Moves unit in desired direction as indicated by the compass, changing its facing automatically.
- (X) = Double Time (adds to the unit more operation points at a cost of fatigue).
- (D) = Prompts you to input a new facing (1-8) for the unit.
- (L) = (Advanced Game Only) Displays a menu with the name of the divisional or corps commander attached and allows you to transfer that leader if you desire. The menu also allows you to go to the divisional or corps commanders. In this menu, you may also toggle a division commanded by that leader on or off for ammo resupply.
- (I) = All units that belong to the same division as the accessed unit will be inversed. The square with the divisional leader will be inversed and blinking (Advanced Game). When you press this key you will also be able to set the fire plots of all units in that division or artillery to "No Fire" or "No Plot."
- (A) = Plots the unit to advance if given the opportunity in fire phases or melee.
- (M) = Plots the unit to melee in the direction of facing.
- (F) = Takes you to the Target Menu which allows you to set a priority fire square.
- (S) = Changes the mode of the unit.
- (B) = (Advanced Game Only) Builds one level of fortification.
- (V) = Allows you to view all squares in the LOS of the accessed unit (squares are inversed).
- (T) = Removes units on map to view terrain underneath.
- (P) = Displays the other page of unit statistics.
- (H) = Displays Help Menus.
- (U) = Accesses next unit in the same square.
- (N) = Accesses next unit in the unit order (the unit orders are listed in the Order of Battle).
- (Z) = Abort move. The unit you have accessed will return to its original square, facing, and mode with its original operation points and fatigue.
- (Q) = Exits Command menu and goes to Cursor Menu.

CURSOR MENU

- (V) = Prompts you to indicate a direction and then displays the line of sight.
- (Ø) = Centers map at cursor.
- (1-8) = Moves cursor in desired directions.
- (T) = Removes units from map to see terrain.
- (S) = Stops time clock.
- (C) = Exits to Combat Phase (Press this key when you are finished moving.)
- (SPACE BAR) = Accesses first unit in square if friendly. Command Menu for that unit is now active.
- (P)age = Second menu. On this menu will be displayed ammo pools for infantry and artillery. Also displayed are the commands accessed from the Cursor Menu.
- (Z) Abort = The cursor will return to the last square that a unit was accessed.
- (R)econ = Pressing this key when the cursor is over an enemy unit will display an approximate strength of the units in the square.
- (S)top = When playing with time limits, this command stops the time clock.
- (L)ow = This command cycles through units with low men, morale, ammo, or who are disrupted, giving you the option to access those units to move them.

COMMAND CONTROL EFFECTS

CC	OP
1.2 to 1.5	= 12
1.1	= 11
1.0	= 10
0.9	= 9
0.8	= 8
0.7	= 7
0.5 to 0.6	= 6



STRATEGIC SIMULATIONS, INC.
1046 N. Rengstorff Ave.
Mountain View, CA 94043-1716

UNIT STATISTICS

When you access the first unit in a square, you will see the following display (example):

CONFED DAVIS - A INF 501 MEN
DS:N AMMO:6 MEL:Y MRL:60 FIRE 17,34
NORMAL OP:7 DIR:5 ADV:N
CLEAR (1) X,Y:16,34

The display above shows that the Confederate unit, DAVIS - A, is INFANTRY with 501 men. It is not DISRUPTED, has 6 AMMO points, is plotted for MELEE, and has a MORALE of 60. The unit is plotted for priority FIRE at square 17,34. It is in NORMAL mode, has seven remaining operation points, is facing DIRECTION five, and is not plotted for ADVANCE. It is on a clear square with an elevation of 1. The unit occupies square with X,Y coordinates 16,34. There is a compass showing directions of movement and facing.

A second page of unit statistics may be accessed by typing "P".

CONFED DAVIS - A INF 501 MEN
FORT:0 NORMAL CC:1.0
RFL EFF:60 FT:0
CLEAR (1) X,Y:16,34 CORPS:A.P. HILL

The second display above shows that the Confederate unit, DAVIS - A is INFANTRY with 501 men. The unit has a FORT value of 0, is in NORMAL mode, and has COMMAND CONTROL of 1.0. Its weapon type is RIFLE, EFFECTIVENESS is 60, and FATIGUE 0. It is on a clear square with an elevation of 1 on X,Y coordinates 16,34 and belongs to A.P. Hill's corps.

LEADER PROFICIENCY & COMMAND CONTROL

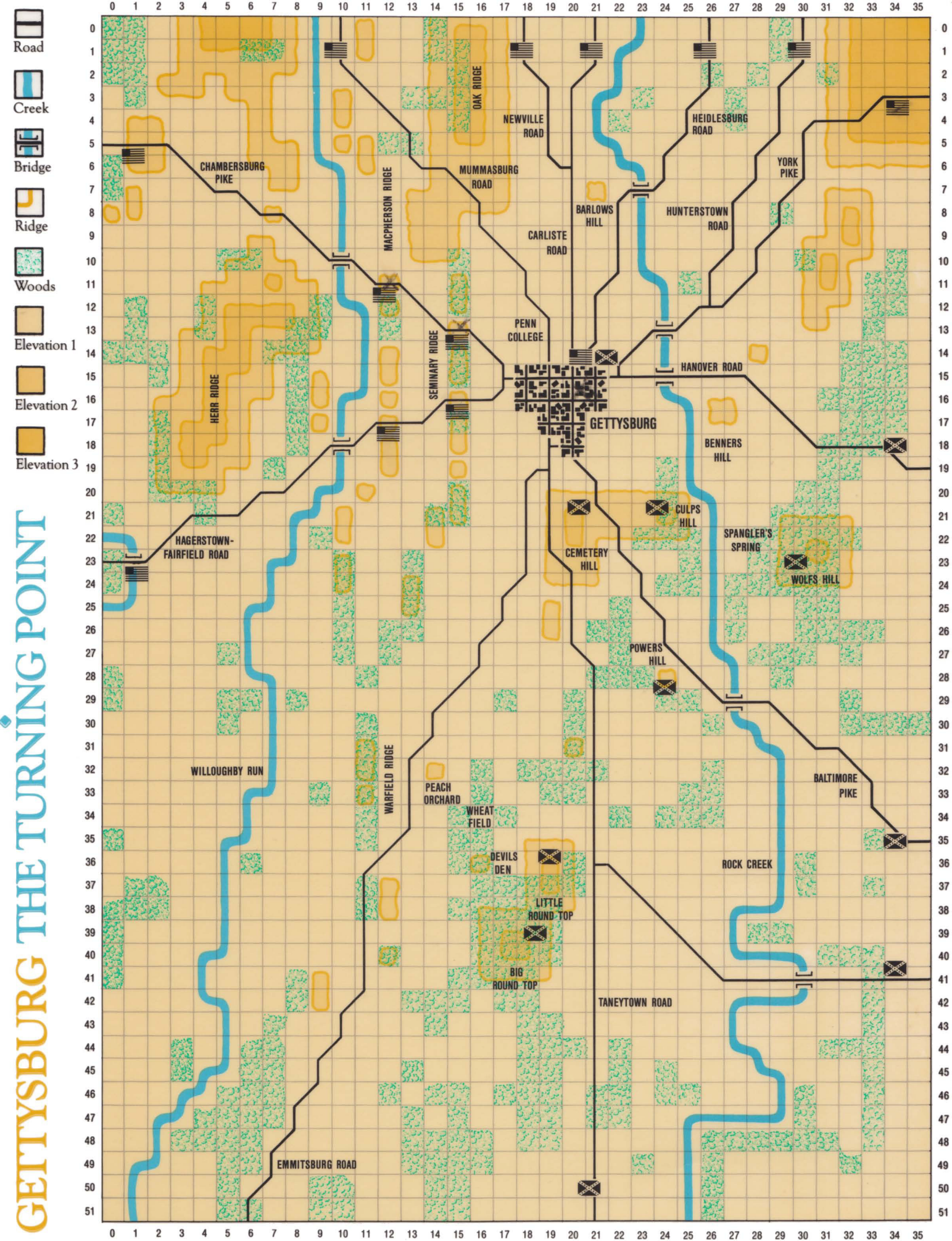
RANDOM AND RATING EFFECT	MESSAGE GIVEN ON SCREEN
5-15 = -0.3	Leader confused!!!
16-25 = -0.2	Leader indecisive!!
25-35 = -0.1	Leader cautious!
36+ = 0	Leader confident.

RANGE OF LEADERS

The chart below shows the cost in command points per square the leader is from the unit making the range check.

	OTHER HALF OF BRIGADE	DIV. CMDR.	CORPS CMDR.
Conf.	10	5	1
Union	10	10	1 (10)

GETTYSBURG THE TURNING POINT



OPERATION COSTS TABLE

(Numbers in parentheses refer to diagonal moves — directions 2, 4, 6, and 8. Ignore the numbers and letters printed in green for the BASIC game. P = Prohibited.)

TERRAIN	INF./ DIS. CAV.	CAV.	LIMB. ART.	UNLIMB. ART.
Clear	2(3)	1(2)	2(3)	P
Town	6(9)	3(5)	3(5)	P
Woods	5(7)	3(5)	10(15)	P
Stream	3(5)	2(3)	3(5)	P
Bridge (1)	2(3)	1(2)	2(3)	P
Road bonus (2)	1(P)	1(P)	1(P)	P
Enter higher elevation (3)	+2	+1	+3	P
Melee: Att. (4)	2	2	P	P
Change mode to column/mounted/limbered (5)	2	2	N/A	2
Change mode to normal/dismounted/unlimbered (5)	4	4	4	N/A
Move ZOC to ZOC (6)	+8	+5	+8	P
Enter or leave enemy ZOC	+2	+1	+3	P
Fortify	8	8	P	8
Fire phase	2	2	P	4
Melee: Def.	1	1	2	2

Notes:

- Units using the road bonus pay only 1 operation point to enter.
- Diagonal moves are not allowed using the road bonus. *To use the road bonus, infantry must be in column mode and artillery must be in limbered mode.*
- Units using the road bonus pay only 1 operation point to enter a higher elevation.
- A unit must fire at the square it is to melee.
- Mode change for CAV ART is 2 to limber and unlimber. All units add 2 to change mode in enemy ZOC.*
- You must move onto a friendly unit.

FATIGUE TABLE

ACTION	COST
Movement into another square	Random of 0 or 1 dependent proportionally on effectiveness
Fortify one level	20
Lose 2 casualties	1
Per Force March	6
Leader dies in unit	5
Routed unit passes through	5
Infantry or Cavalry fire	2
Artillery fire	4

NOTE: units with over 600 men in them will gain proportionately less fatigue up to 1000 men. For example, a 600-man unit gains 1 fatigue point per 2 losses (50% of casualties turn into fatigue). A 900-man unit would gain 1 fatigue per 3 men lost (33%).

FIRE AND MELEE STRENGTH MODIFIERS

TARGET LOCATION	FIRE MOD.	MELEE MOD.
Clear	1.00	1.00
Woods	0.80	1.00
Higher Elevation	0.80	0.80
Town	0.80	0.80
Bridge/Stream	1.00	1.00
FIRING UNITS LOCATION	FIRE MOD.	MELEE MOD.
Bridge/Stream	1.00	0.80
All Others	1.00	1.00
SPECIAL CONDITIONS	FIRE MOD.	MELEE MOD.
Target Dismounted with Carbines	0.80	1.00
Firing Unit Has <6 O.P.	0.75	1.00
Target Unit is Flanked	1.20*	1.20***
Firing Unit is Disrupted	0.30**	0.30
Firing Artillery Adjacent to Target (both in woods)	0.10	1.00
Firing Unit Out of Ammo	0.30**	0.70
MODES	FIRE MOD.	MELEE MOD.
Normal	1.00	1.00
Column	0.50	0.50
Mounted	0.60	1.50
Routed	0.50**	0.50****
Unlimbered	1.00	1.00
Limbered	0.10**	0.50****
Dismounted	0.75	1.00

* During Final Defensive Fire, the modifier is 0.5 for the flanked unit firing.

** May only fire during Final Defensive Fire and with these modifiers.

*** The flanked defender in Melee and Final Defensive Fire has a modifier of 0.5. The flanker has a modifier of 1.2.

**** May only defend in Melee and with this modifier.

WEAPON/RANGE CASUALTY TABLE

WEAPON TYPE	ABREV.	RANGE IN SQUARES					
		1	2	3	4-6	7-10	
Rifle	RFL	6	3	0	0	0	
Musket	MSK	4	0	0	0	0	
Rifle/Musket	R/M	5	2	0	0	0	
Carbine	CRB	12	3	0	0	0	
Shotgun	SHG	6	0	0	0	0	
Pistol	PST	2	0	0	0	0	
12 lb. Napoleon	N12	14	4	2	1	0	
3" Rifled Gun	RG3	8	5	4	2	1	
3" RG/12# N	R/N	11	4	3	1	0	
10 lb. Parrott/12# N	P/N	11	4	3	2	1	
10 lb. Parrott	P10	8	5	5	2	2	
3" RG/10 lb. Parrott	R/P	8	5	4	2	1	

The number under the range column is the number of men lost per 100 men for small arms fire and per one gun for artillery. These numbers are further modified by the various strength/casualty modifiers.

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ADDITIONAL MODIFIERS FOR FIRE AND MELEE

Leader Bonus: Direct Modifier. A leader with bonus of 20 would give a modifier of 1.2.

Density: 1% more casualties per 12 men when more than 650 men are in the square. 1% less casualties when less than 650 men.

Fortification Level: The firing unit is modified by 10% per level that the target is fortified. A level of 5 would give a modifier of 0.5.

Effectiveness: Direct Modifier. An effectiveness of 55 would give a 0.55 modifier.

Fatigue: Direct Modifier. Fatigue of 20 would give a modifier of 0.8.

Command Control: Direct Modifier. A rating of 1.1 would give a modifier of 1.1.

Visibility: Direct Modifier. Visibility of 60% would give a modifier of 0.6.

Artillery Men: Each gun is assumed to have 16 artillery men to support it. When artillery fires, it receives a proportionate modifier based on the number of men it needs to fully support a gun. A Union artillery unit with six guns would need 96 men to function fully. If it lost 19 men, the unit would receive a modifier of 0.8.

Random Modifier: Modifier of 0.9 to 1.1 determined randomly.

All modifiers are cumulative as shown in the example below:

A firing unit with the conditions below would receive the indicated modifiers (all modifiers are multiplied together):

– Firer has less than 6 O.P.	= 0.75
– Target in woods	= 0.80
– Target on higher elevation	= 0.80
– Firer in column mode	= 0.50
– Target has carbines	= 0.80
– Firer has 75 effectiveness	= 0.75
– Firer has 15 fatigue	= 0.85
– Firer has leader bonus of 15	= 1.15
– Firer has command control of 1.3	= 1.30
– Random modifier is 1.0	= 1.00
TOTAL	0.18

A unit above with 1000 men would fire with a strength of 180. (With rifles at range one, it would kill 10 men.)

MELEE RESULTS

The attacker's modified strength is divided by the defender's modified strength to determine the odds which govern the losses sustained and retreats in melee. The odds of 2 to 1 are considered the break-even point. The defender or attacker (not both) may retreat according to the chart below. The defender is checked first and then the attacker (provided the defender does not retreat).

ODDS	% CHANCE ATTACKER RETREAT	% CHANCE DEFENDER RETREAT
<0.3	60	10
0.3 to 0.49	50	20
0.5 to 0.99	40	30
1.0 to 1.99	30	40
2.0 to 2.99	20	50
3.0 to 3.99	0	60
4.0 to 4.99	0	70
5+	0	80