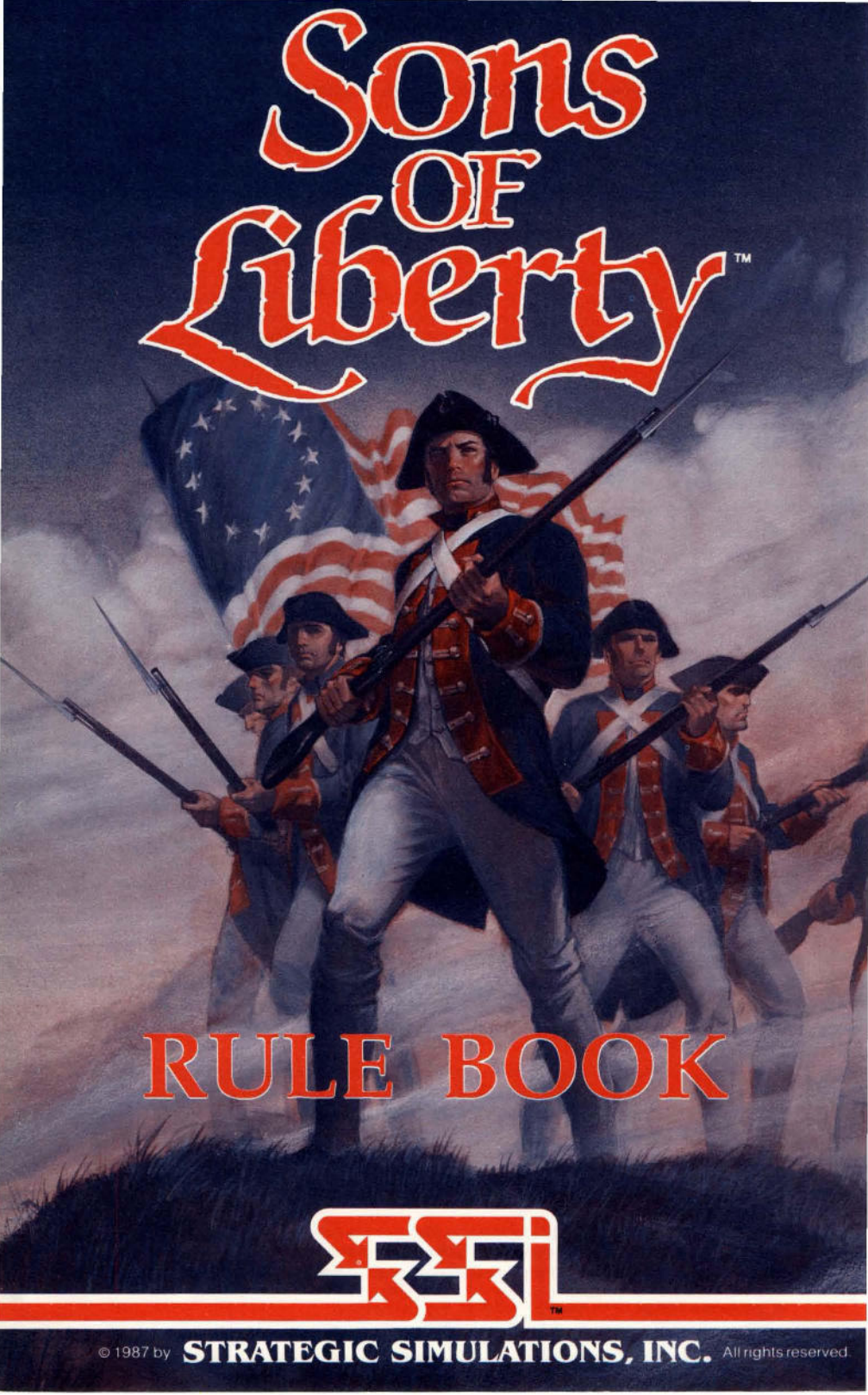


Sons OF Liberty™

An illustration of four Revolutionary War soldiers in the foreground, dressed in blue and red uniforms with white crossbelts, holding long rifles. In the background, a large American flag with stars and stripes is visible against a cloudy sky. The soldiers are standing on a grassy hill.

RULE BOOK



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Should you have a defective disk, please return the disk only (keep all other parts of the game) to our Customer Support Department, along with a note describing the problem you have encountered. A replacement disk will be provided upon our receipt of the defective disk.

Should you uncover an error in the program, return both your game disk and any "save game" disks to our Customer Support Department. Please enclose a description of what was taking place in the game when the error occurred. Upon correction of the program error, we will return an updated disk to you.

Always make sure to include your name, address, and daytime telephone number with any correspondence. We will do our best to see that any problems are corrected as soon as possible.

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Parts Inventory:

Your Sons of Liberty game should come with the following:

- One game box
- One Reference Guide
- One Monmouth/Saratoga Map Card
- One Bunker Hill Map Card/
Quick Reference Table Card
- One game disk
- This rule book

INTRODUCTION

Sons of Liberty is a historical simulation game system used to re-create the American Revolutionary War battles of Bunker Hill, Monmouth, and Saratoga. As a historical re-creation, the combat units, leaders, and battlefields are drawn from history and presented here as accurately as the computer permits.

In Sons of Liberty, the game players function as commanders who move combat units over a battlefield map and guide combat with a variety of attack and defense orders.

A game consists of moving and fighting units to cause enemy casualties and capture terrain objectives. Casualties and terrain objectives are worth points. Points determine who wins a game.

A game is played on a map which is displayed on the monitor screen. For easy reference, a copy of each map is provided on a card which shows that map overlaid with a square grid. Although these squares are not shown on the monitor screen, the game will function as though they are.

Because there are three separate battles to play, the rules are organized so that the information which is common to all the battles is presented first. Following these general rules are sections for each of the battles which explain the special situations, rules, strategy or tactics which pertain to a particular battle only.

The game is played in turns. Each turn equals one hour of real time and is broken down into a number of phases (refer to Section 21.0). Each square on the game map represents 100 yards on a side.

The player may choose from three different levels of game complexity: BASIC, INTERMEDIATE, or ADVANCED.

The most important sections of this rulebook are set off by a colored shading. Players who are interested in getting into the game quickly may want to go directly to Quick Start and refer to the shaded sections as needed. Players who want to know more about the game before they start may wish to work through the Tutorial (Section 2.0) and read the Main Menu (Section 3) and the shaded sections before beginning play and then read the other rules sections as needed.

Players familiar with "SHILOH: Grant's Trial in the West" game may read the shaded rule sections for the rules differences between that game and this one.

A joystick may be used in the BASIC GAME only. Instructions for joystick use are given in italics.

QUICK START

Boot the game using the instructions for your system as provided in rules Sections 1.1 - 1.4 (or on a separate data card).

Follow the directions as they appear on the screen. Where given an option choice, don't choose. Accept the options as they are presented (*joystick users may choose to use a joystick*).

You will be playing a BASIC GAME version of BUNKER HILL in which you will be the British Commander. American units will only appear on your screen when one of your units can "see" them.

The first thing you must do is go to combat. This is because the American side moves first and you must resolve its combat before you get to your turn.

When your turn begins, you will see a white rectangle in the center of the screen. This is the cursor. Use the number keys (or joystick) to move the cursor over the red units (British). These units are off the right side of the screen and near the top.

You may want to refer to Sections 4.1 and 4.11 (and Section 4.12 if using a joystick) of this rulebook for an explanation of cursor movement and commands.

Move the cursor over a unit and press the SPACE BAR to access it (joystick users must first press the joystick button until GET UNIT is highlighted. Then press the joystick button to access the unit).

When a unit is accessed, information about that unit appears under the game map. Once the unit is accessed, you may move it as you did the cursor (joystick users move the cursor to where they want a unit to go and then press the joystick button to move the unit. Refer to rules Section 5.31).

A unit will only move if it has sufficient OP (Operation Points) to pay for the move (refer to the Operation Cost Table Section 20.21). Watch your unit's FT (Fatigue). When the number nears 20, save some OP at the end of your turn. These will be used to reduce Fatigue.

An infantry unit which is moved within two squares of an enemy unit will fire at that unit if it is able to do so (units won't fire if they are routed or have less than 2 OP).

Artillery units may fire at enemy units up to 12 squares away. Artillery units which move won't fire in the combat phase which follows that movement.

The computer will choose the targets your units will fire at. If you want to choose your own targets, follow the instructions that appear in Section 4.211 of this rulebook (See Section 4.221 for joystick users).

You may order your units to Melee an adjacent enemy unit by pressing the "M" key (joystick users refer to Section 4.22 for instructions on how to order Melee). You may order your unit to advance into an adjacent square which an enemy unit retreats from by pressing the "A" key (joystick users refer to Section 4.22 for instructions on how to order an Advance). Artillery units cannot be ordered to Melee or Advance.

When you have finished giving orders to a unit, press the "N" key to access another unit and give it orders (joystick users refer to Section 4.22 for instructions on how to access the Next unit).

You will know you have given orders to all of your units when the "N" (NEXT) command accesses units you've already given orders to. When this occurs, press the "Q" key (joystick users refer to Section 4.22 for instructions on how to Quit). When unit information is no longer shown beneath the map, press the "C" key to start combat (joystick users refer to Section 4.12 for instructions on how to enter Combat).

Continue these procedures until the game is over.

NOTE: the American units start this game in prepared defensive positions. It is best to move around these positions, fire at them for a few turns, and then assault them from several sides at once. Trying to run them over early on will result in heavy British casualties. British reinforcements arrive during the first three game turns. It is best to wait for the reinforcements before attempting any heavy assaults.

BASIC GAME

1.0 INTRODUCTION

The BASIC GAME is a simplified version of the more sophisticated games which follow. We strongly recommend that you become comfortable with the BASIC GAME before progressing to the INTERMEDIATE or ADVANCED Games.

1.1 Starting the Game (C-64, C-128)

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

If using a joystick, connect it to port 2.

1.2 Starting the Game (Atari 8-bit)

Remove all cartridges from the computer. Boot the front disk side (XL and XE users hold down the OPTION key while booting). Select the starting play options and insert the game disk side when prompted. If using a two-drive system, make a copy of the back side of the game disk and have it ready for use as prompted by the computer.

If using a joystick, connect it to the #1 port.

1.3 Starting the Game (Apple II series)

Boot the front side of the game disk (if your system has a CAPS LOCK key, make sure this key is down throughout the game). You have the option to select the keypad movement format (where pressing the "8" key means move toward the top of the screen).

If using a joystick, move it left to move the select bar up menus and right to move the select bar down menus. You may have to move the joystick to the lower left or right to have your system read a down command.

NOTE: Older versions of the "Speed Demon" that do not contain dip switches may not work properly with this game.

1.4 Starting the Game (IBM PCs and compatible systems)

Boot with a DOS version 2.0 to 3.2 (if using an IBM PC JR, first remove the BASIC cartridge). If you intend to save the game (and this is often the case) you should have a formatted save game disk ready for this purpose.

When the system prompt appears (typically `A>`), insert the game disk, type `START`, and press the ENTER Key.

You have the option of changing the colors and selecting the keypad movement format (where pressing the "8" key means move toward the top of the screen).

1.5 Preparing to Play

When the game is booted, you first see a Title Screen and, depending on your system, a number of option screens. Once past these, you will see the Main Menu. This menu contains a number of options which affect how the game plays.

For Quick Start purposes, press the RETURN/ENTER key for the default settings (*joystick users should use the N option to exit the Main Menu*).

Note that while playing the BASIC GAME, a joystick may be used to give commands. While playing an INTERMEDIATE or ADVANCED Game, only the keyboard may be used to give commands.

Throughout this rulebook, sections which pertain to the use of the joystick are printed in italics.

1.6 Documentation Check

There is no physical copy protection in this game. This permits you to make backup copies (bit copier for the Apple) of the game and/or install it on a hard disk. There are Documentation Checks in the

When a Documentation Check appears on the screen, type in the information requested and press the RETURN/ENTER key.

2.0 TUTORIAL

The tutorial provides a hands-on example of how the BASIC GAME works. The tutorial will walk the player, who will be commanding the British forces, through one turn of the Bunker Hill scenario. While working through the tutorial, it is important to remember that it is teaching play mechanics and not tactics. In fact, the player should end the tutorial with an understanding that frontal assaults against prepared positions held by fresh infantry are very bad tactics.

The tutorial is drawn from the Apple version of the BASIC GAME. Other versions may have slight differences. Where these differences occur, follow the instructions which appear on your computer monitor.

To tell the computer you are using a joystick, highlight "YES" for joystick and press the joystick button. You may have to adjust your joystick as prompted by the screen. Follow any special joystick instructions which appear on the screen.

If given a choice, choose the standard keyboard (1).

After the Title Screen, you will be asked if you want to see a Demo Game, Press "N" (*Highlight NO and press the joystick button*). When the SONS OF LIBERTY Main Menu screen appears, accept the default setting by pressing the RETURN/ENTER key. *Move the joystick to highlight the N option (exit) and press the joystick button.*

You will be presented with a number of screens which record losses and gains and give a score. Press the RETURN/ENTER key (*joystick button*) as needed to get through these. You will see "SOUND

ON? Y/N". Unless you don't want sound, press the "Y" key (*highlight YES and press the joystick button*). The next screen instructs you to set the Delay Timer which determines how long messages remain on the screen. For now, press the RETURN/ENTER key (*joystick button*). You may want to adjust this later if you are uncomfortable with the length of time the messages are displayed in the game.

The game will first go through the COMMAND CONTROL and OPERATION POINTS phases of the game. In these phases, the computer carries out certain operations which determine how many Operation Points various units may spend in a turn. Following this you may be prompted to remove your disk, turn it over, and re-insert it. Follow whatever instructions appear on your screen at this point.

The game will begin with the message "PRESS ANY KEY TO COMMENCE COMBAT" ("PRESS EITHER BUTTON TO COMMENCE COMBAT"). This is because the American player (the computer in this case) moves first and the game begins after this first movement. Press the SPACE BAR (*joystick button*).

Messages will appear which name the different Combat Phases. Since all of the units are out of range, no combat will occur. The game will then proceed to a Recovery/Rally Phase. Following this, you will be asked "DO YOU WANT TO SAVE THE GAME? Y/N". Press the "N" key (*highlight NO and press the joystick button*).

The game next goes to the British Operation Phase. The white rectangle in the center of the monitor screen is the cursor. At this point, you are in the Cursor Menu which permits you to move the cursor over the battlefield map. Use the number keys (*the joystick*) to move the cursor around the map and examine the terrain and the position of the enemy units you can see.

Because the hidden unit option was a Main Menu default, enemy units only appear on the screen when a British unit can "see" them. Units can see for 24 squares, but they cannot see through blocking terrain. Blocking terrain can include other units, friendly or enemy.

At the bottom right of the screen, numbers are arranged in a small square pattern that looks like this:

8	1	2
7		3
6	5	4

This is your movement compass. Pressing any of the number keys for the numbers in this compass will move the cursor. It will move the cursor in the direction that number lies from the center of the compass. That is, pressing the "2" key will move the cursor up and to the right because 2 is up and to the right from the center of the compass.

At the bottom right of the screen, numbers are arranged in a small square pattern that looks like this:

8	1	2
7	0	3
6	5	4

You may move the cursor as long as the 0 in the center of the compass is blinking. This will happen while the word MOVE which appears in the text beneath the map is highlighted. The cursor may only be moved straight up (direction 1), straight down (direction 5), straight right (direction 3), and straight left (direction 7). Move the cursor four squares in direction 1, straight down (direction 5), straight right (direction 3), and straight left (direction 7). Move the cursor four squares in direction 5 and six squares in direction 3.

Press the following number keys in the order given: 5,5,5,5,3,3,3,3,3. The cursor is now over the circular redoubt on Breeds Hill next to a known enemy unit. At the

bottom right of the screen is a small portion of a town. Your units will not be permitted to enter this town during play. At the top and bottom left of the screen are blue areas. These represent water squares. Your units may not enter these squares either.

Press the "T" key. (*While the 0 in the center of the movement compass is blinking, press the joystick button. This highlights GET UNIT. Now move the joystick until CLEAR is highlighted and press the joystick button.*) This removes the enemy units from the map so that you can get a better view of the terrain. The wide white lines on the screen are roads. The smaller white lines represent redoubts, breastworks, and other terrain which give an advantage to the defender.

When you move your units, they will move more efficiently when you can move them along the roads.

Press the SPACE BAR (*joystick button*) and the units reappear on the map.

Press the "V" key. (*Move the joystick to highlight VIEW and press the joystick button.*) This highlights every square which can be seen from the square the cursor is occupying. Because units may only fire into squares they can see, you may want to use the View function to check a square before you move a unit into it. Press any key (*the joystick button*) to exit the View function.

Press the "O" key. (*Move the joystick to highlight MAP and press the joystick button.*) The map changes to the Strategic Map. This map gives you a better overall picture of the battlefield because it shows more of it. Because everything is shown smaller on the Strategic Map, many details are lost. Press the "O" key again (*the joystick button again*) and you return to the Tactical Map. You may perform any Cursor Menu function on either map.

Press these number keys as indicated: 2,2,2,2,1,1,1. (*Move the cursor seven squares*

in direction 1 and three squares in direction 3.) You will notice that information is displayed under the game map. This information gives the date, time of day, the player whose phase it is, the X,Y coordinates of the cursor, the type of terrain (and its elevation) that the cursor is over, and an abbreviated version of the commands which may be given in the Cursor Menu. The cursor is now located over a British unit. As the British commander, you want to give orders to these units. In the BASIC GAME, you may only give orders to a unit which is accessed. One way to access a unit is to move the cursor over it and press the SPACE BAR (*highlight GET UNIT and press the joystick button while the cursor is over a unit*). Press the SPACE BAR (*highlight GET UNIT and press the joystick button*).

In doing this, you have accessed the unit. This action takes you from the Cursor Menu to the Command Menu (*the Access Menu*). When you access a unit, the information that appears under the screen changes. The information for the unit you have just accessed is:

BRITISH GRENADIER INF REG	295 MEN	8	1	2
MSK EFF:90	FT:0 MORALE:90	7		3
NON RTD	OP:10 MELEE: ADVANCE: N	6	5	4
RIDGE (2)	X,Y 20,2			NO PLOT

The information identifies the unit as the British Grenadier infantry regiment. It has 295 men who are armed with muskets. The unit has an Efficiency (EFF) of 90, has no Fatigue (FT), and has a Morale of 90 (Morale is equal to Efficiency minus Fatigue). The unit is not routed (NON RTD) and has 10 Operations Points (OP). It is ordered not to Melee or Advance. It currently occupies a Ridge square which has an elevation of 2. This square is located at the X,Y coordinates 20,2 (each square on the map has its own unique coordinates). The unit is not plotted to fire.

Once a unit is accessed, it is moved in the same manner that the cursor was moved in the Cursor Menu (*to move an*

accessed unit, move the cursor to the square you want the unit to move into and press the joystick button). Press the "5" key (*move the cursor one square in direction 5 and press the joystick button*). This moves the unit one square onto the road. You will notice that this move costs the unit 2 OP. It also had a Fatigue cost which is shown in the changes to the FT and MORALE numbers for the movement. Continue moving the unit as follows: 5, 5, 5, 3, 5, 5, 7. Move the cursor to square X,Y:20,6 and press the joystick button. Now move the cursor one square in direction 3 and press the joystick button. Now move the cursor to X,Y:21,19 and press the joystick button. Now move the cursor one square in direction 7 and press the joystick button. The X,Y address for each square is shown on the bottom line of text under the map

If you make a mistake while moving the unit you may "take back" the move by pressing the joystick button while the 0 in the center of the Cursor Compass is blinking. This will take you to the Command Menu. Here you may highlight the option ABORT and press the joystick button. You will be returned to the Access Menu where you will see your unit retrace its move and recover its Operations Points. Remember how to enter the Command Menu and select options from it. You will be instructed to do this several more times in this tutorial.

You will notice that while you are moving the unit along the road, it costs only 1 OP per move instead of the 2 required for off-road movement. You will also notice that there is less Fatigue cost for moving a unit along a road.

Press the "Q" key to "put down" the Grenadier unit and return to the Cursor Menu. While the 0 in the middle of the movement compass is blinking, press the joystick button. This takes you to the Command Menu. Move the joystick to highlight QUIT and press the joystick button. This returns you to the Cursor Menu.

Now press the "G" key. When you press this key in the Cursor Menu, you are telling the computer to access a particular

unit for you. The message "ENTER UNIT #?" appears on the screen. The computer is asking you to identify the unit by its unit number. These unit numbers are listed as part of the Order of Battle information that is provided under the special rules for each of the three scenarios. Enter the number "20" and press the RETURN/ENTER key.

Highlight GO TO UNIT and press the joystick button. (Remember you will have to first exit from MOVE by pressing the joystick button while the 0 is blinking before you will be able to choose a different command.) GO TO UNIT # 0 appears on the bottom of the screen. Move the joystick until the number 20 appears in place of the 0. Press the joystick button.

The BRITISH 43rd Foot Infantry Regiment is now accessed. You have left the Cursor Menu and returned to the Command Menu (the Access Menu). Move this unit as follows: 5,7,5,5,5,3,5,5,5. Use the joystick to move the unit to square X,Y:21,9. You will not be able to merely move the cursor to this square and press the button or the unit will follow a path that will use all its OP before it gets to the destination square. You will have to move it to a number of intermediate squares along the way. The best approach is pause the cursor before it changes movement direction and move the unit to that square before moving the cursor in a new direction.

Now press the "N" Key. Press the joystick button to enter the Command Menu. Highlight the word NEXT and press the joystick button.

When you press the "N" key (select the NEXT option), you are telling the computer to access the next unit in the Order of Battle (the one with the next highest number). In this case, you have gone to the BRITISH 52nd Foot Infantry Regiment. Notice you were able to access the unit directly from the Command Menu.

Move this unit as follows: 5,6 (notice the increased OP cost for a diagonal move) 5,5,5,3,5. Move the unit to X,Y:21,7 using the movement route given in the preceding sentence for keyboard movement. You will notice

that even though the joystick cannot be used to move the cursor diagonally, units can be made to move diagonally. To get the unit to move in direction 6, move the cursor so that it is in the square diagonally down and to the left from the unit and press the joystick button. The unit will make a diagonal move to enter this square.

Press "N" and access the BRITISH Light Infantry Regiment (Go into the Command Menu and select the NEXT option). Move this unit: 5,5,5,5,5,3,5 (Move the unit into square X,Y:21,7 using the route given for keyboard movement). Notice that when this unit moved over the unit already on the road, it paid 2 OP for the move instead of the normal 1 for road movement.

This is because the less expensive road movement is only available when the road square being entered does not already contain another unit.

Press the "N" key (Go into the Command Menu and select the NEXT option).

This accesses the Grenadier Regiment again because it is the next unit in the Order of Battle (OB). Notice that the unit shape shown for the square that contains two units (X,Y:21,7) is different from the shapes for the squares which contain 1 unit. Press "N" (Go into the Command Menu and select NEXT).

The BRITISH 5th Foot Infantry Regiment is accessed. Move it: 6,6,6 (move the unit to X,Y:19,4).

Notice how diagonal moves from one road square to another do not qualify for the road movement rate.

Press "N" (enter the Command Menu and select NEXT) to access the BRITISH 38th Foot Infantry Regiment. Move it: 5,7,7,5,7 (move it to X,Y:19,4). Now press the "Z" key (enter the Command Menu and select ABORT). Pressing the "Z" key (selecting ABORT) permits you to abort the orders you have just given (as long as you have

not "put down" that unit). In this case, the orders were aborted because the unit moved on top of the 5th Foot but there is a more efficient way to get it where it is going.

Move the 38th Foot as follows: 5,7,7,5,5,7,7,5 (*move the unit to X,Y:17,6*). Notice that it paid 1 OP for the third "5" move even though this movement was not along a road.

The road movement rate applies while making a horizontal or vertical move from one road square to another (even if the squares are not directly connected by a road).

All units have been given orders for this phase. It is time to return to the Cursor Menu and exit to the Combat Phase so the game can continue. Press "Q" (*enter the Command Menu and select QUIT*) to return to the Cursor Menu and press "C" (*select the COMBAT option from the Cursor Menu*) to go to Combat. When the question "DO YOU WISH TO HAVE COMBAT? Y/N" appears, press "Y" (*press the joystick button while "DO YOU WISH TO HAVE COMBAT? YES" is on the screen*).

The computer first plots Opportunity Fire. This is where the computer gives fire orders to all of its units and to any of your units which have a NO PLOT fire designation and which have an enemy unit they can fire at. Press any key (*press the joystick button*) to go to Combat.

Notice that the American unit Nixon fired at the 38th Foot. The 38th Foot did not return the fire even though it was in fire range. This is because the unit did not have any OP remaining and it costs OP to fire. Units which do not have sufficient OP to fire may only fire in Melee Defensive Fire.

You are asked if you want to save the game. Answer "N" (*highlight NO and press the joystick button*).

The game now goes into the next American Phase. You may watch the computer move its units. Again, you will

only be able to see those American units which British units can "see". This means you will see some American units disappear as they move out of the Line Of Sight of your units. You may also see some American units appear on your screen. Press a key to start combat (*press the joystick button*).

This time, the 38th Foot fires. This is because it recovered its OP during its RECOVERY/RALLY Phase which followed the previous Combat. You will also notice, when you access this unit in the coming phase, that it will have less OP than most other British units. This is because it "spent" 2 points by delivering defensive fire. Do not save the game and proceed to the next British Operation Phase.

Press the "G" Key and enter "16" when prompted (*select GET UNIT, move the joystick to bring up the number 16, and press the joystick button*). This will take you to the Light Regiment. Move this unit: 6,7,7,7 (*move this unit to X,Y:17,8*). This move cost 14 OP because the last move placed the unit next to an enemy unit. The cost to move next to an enemy unit is 3 OP in addition to normal movement costs. This move also revealed that two enemy units are occupying the redoubt. If you were to "take back" this move (by pressing the "Z" key) (*selecting ABORT in the Command Menu*), you would find that you would still be charged 4 OP for revealing a hidden unit. (If you don't have the OP to make the move as indicated, come as close as you can. OP vary from turn to turn).

Press the "N" key (*enter the Command Menu and select NEXT*) to access the Grenadiers. Move this unit: 7,5,7,5,7 (*move the unit to X,Y:17,11*). With this last move, an enemy unit in 16,10 is revealed. To give the Grenadiers Fire orders, press the "F" key (*enter the Command Menu and select the FIRE option*).

When the "F" key is pressed (*the FIRE option selected*), the Fire Menu appears at the bottom of the screen. You may see all the squares you can fire into by pressing

the "V" key (*selecting VIEW LOS*). This will highlight all squares in that unit's Line Of Fire (those squares it can see into and which are within the range of its weapon).

When firing artillery units, which have a very long range, you may want to check LineOfFire (LOF) from the Strategic Map. To switch from Strategic to Tactical map (and back again) from the Command Menu, press the O key (*select OTHER MAP*). Press the SPACE BAR (*the joystick button*) to return to the Fire Menu.

To order fire on a particular enemy unit, move the cursor over that unit and press "T" for target (*while TARGET SQUARE is highlighted, press the joystick button so the 0 in the middle of the Movement Compass is blinking, move the cursor over the target square, and press the joystick button*). To fire at the unit in 16,12, press the "6" key to move the cursor over that square and then press the "T" key (*select target square, move the cursor over X,Y:16,12 and press the joystick button*). This returns you to the normal Command Menu. Notice that the NO PLOT command has been replaced with FIRE: 16,12 (*when you return to the Access Menu*). This shows that the unit has been ordered to fire into that square.

A unit may melee into an adjacent square if it is so ordered and has sufficient points to melee. In our example, we have 6 points remaining (you may have a different number). When the Grenadiers fire, they will pay 2 OP for that fire. Melee costs 4 OP. To order melee, press the "M" key (*select MELEE while in the Command Menu*).

When the "M" key is pressed (*MELEE is selected*), you will notice that the N next to MELEE at the bottom of the screen is changed to a Y. Pressing the M key again (*selecting MELEE again*) will change this back to a N. Pressing it again will change it to a Y again. There is no OP cost to order Melee. The OP cost is only paid when the melee is actually executed. Make sure that your MELEE command is Y.

When a unit's attack forces an adjacent enemy unit to retreat, the attacking unit may advance into the just vacated square if it has been ordered to advance. The Grenadiers are not now ordered to advance. This is shown by the N next to ADVANCE. Order the Grenadiers to advance by pressing the "A" key (*select ADVANCE while in the Command Menu*). This places a Y next to ADVANCE. As with melee, you may toggle between advance orders. There is no OP cost to advance. It is a free move (NOTE: units receive an Efficiency bonus when they advance).

Press the "N" key (*select NEXT from the Command Menu*) and access the 5th Foot. Move the unit: 5,7,7,7,7 (*move the unit to X,Y:15,5*). This places the unit next to the American units along the fence line. Leave the NO PLOT Command so that the computer will pick a target for this unit. You may order the unit to melee or advance as you wish. It really won't matter. You will see why later.

Press the "N" key (*enter the Command Menu and select the NEXT option*). This accesses the 38th Foot. As earlier indicated, this unit spent 2 OP in defensive fire. Like all other British units, it has a high Fatigue. We will permit this unit to rest this phase. Press the "F" key (*enter the Command Menu and select FIRE*) to bring up the Fire Menu. Press the "N" key (*move the joystick to highlight NO FIRE and press the joystick button*). This orders the unit not to fire. The words NO FIRE appear at the bottom right of the screen (*return to the Access Menu by selecting the RETURN option*). Units with a NO FIRE order will not fire either offensively or defensively UNLESS they are adjacent to an enemy unit.

Press the "N" key (*select NEXT from the Command Menu*) to access the 43rd Foot. Move this unit: 7,7,7,7 (*move the unit to X,Y:17,9*). This places it next to the redoubt. Press the "F" key (*select the FIRE option from the Command Menu*). Target the redoubt by pressing the "7" key and then the "T" key (*while TARGET SQUARE is*

highlighted, press the joystick button so the 0 in the middle of the Movement Compass is blinking. Move the cursor over the redoubt and press the joystick button). When you return to the Command Menu (Access Menu), you will see that the square 16,9 (the redoubt square) has been targeted for fire. Press the "F" key again (return to the Command Menu and select FIRE). While in the Fire Menu, press the "E" key (highlight EXIT/ERASE PLOT and press the joystick button. Select RETURN to go back to the Access Menu). You are now back in the Command Menu (Access Menu), but FIRE:16,9 has been replaced by NO PLOT. Pressing the "E" key (selecting EXIT/ERASE PLOT) in the Fire menu will erase a fire plot and return you to the Command Menu.

Press the "N" key (select NEXT from the Command Menu). This accesses the 52nd Foot. Move this unit 6,7,7,7 (move the unit to X,Y:17,8). In our example, this leaves it with insufficient OP to plot fire, melee, or advance (since it doesn't have the OP to attack, it can't force a unit to retreat which would permit an advance).

Press the "N" key (select the NEXT option from the Command Menu). This returns the Light Regiment which has already been given orders. All units have been given orders. Press "Q" (select QUIT from the Command Menu) and "C" (select COMBAT from the Cursor Menu) to go to combat.

Using the "N" key (NEXT option) to access units is a good idea because it makes it less likely you will skip a unit and forget to give it orders. Many players use the "N" key (NEXT option) to check all of their units after they think that they are through giving orders.

Go to Combat. Since the results of Combat vary somewhat with each game, it is impossible to state exactly what will happen. Generally, your units should suffer heavy casualties from the tactics that have been used in this tutorial. Units which fire from breastworks and similar prepared positions have their firepower

tripled. There is a reasonable chance your Grenadier unit will be able to force its opponent to retreat so that it can advance. Notice that attacking units only retreat one square. Defending units retreat three squares. Routed units retreat five squares and change their shape to show that they are routed.

(A word on tactics. This type of assault on prepared positions is what the British tried when they first attacked historically. Learn from it. When you play the British in this scenario, you want to move around the prepared American positions and force the American player to spread himself thin and leave his prepared positions to protect his line of retreat.)

When asked, "DO YOU WANT TO SAVE THE GAME? Y/N" press "Y" (press the joystick button when the message "DO YOU WANT TO SAVE THE GAME? YES" is on the screen). You are instructed to place your save-game disk in the disk drive. You need to have a separate disk to use for this and if you are playing on an IBM or compatible system, you need to have already formatted the save game disk.

After you insert the disk and press the RETURN/ENTER key (the joystick button), you are taken to the Save Game Menu. In this menu you have the options to: Save the Game, Delete a File (eliminate a previously saved game), List the Directory (see a list of the games you have saved), and Exit (leave the Save Game Menu). Some systems also provide an Init Disk option. Where the Init option is given, players need to use it to initialize their save game disk before they can save a game on it for the FIRST time only. Do not Init your disk after you have saved a game on it as this will eliminate the saved game(s).

When you go to save a game, you have to name the file under which the game will be saved. Since three separate battles are provided with the game, we recommend

that you select a name that identifies that battle. Since it is normal to save a game at different stages of play, we recommend that you also provide a number in the name. Since this is the first Bunker Hill Battle you will be saving, you might name it BUNK1. You do need to limit your save game file names to 8 characters or less. *Joystick users will have to use the keyboard to type in the name of their saved games.*

After you save a game, it is a good idea to check and see that it was in fact saved by choosing the List Directory option (*highlight the LIST DIRECTORY option and press the joystick button*) when you are returned to the Save Game Menu. If you don't see the file for the game you have just saved, you will want to save it again on either the same or a different save game disk.

You recall saved games by booting the game, and selecting the Save Game Option (A) in the Main Menu. We recommend you "throw away" this particular saved game and start Bunker Hill again with a better strategy. You may want to Exit the Save Game Menu and return to the regular game long enough to go through the Victory Determination Phase where your casualties will be listed and you can see how the first battle affected your victory points.

When it comes time to play a real game, we recommend that you start with a BASIC GAME. You may want to start by reading only the Main Menu section, the special Bunker Hill (or whatever battle you choose) Section, and the shaded sections of the BASIC RULES. The most important sections of this rulebook have been shaded. You may want to read them and only refer to the other rule sections to answer a particular question.

3.0 THE MAIN MENU

The Main Menu presents a number of options which affect how the game will play. The Default Settings are shown underlined. This menu appears as follows:

```

A) NEW GAME   SAVED GAME
B) AMERICAN  HUMAN  COMPUTER
C) BRITISH   HUMAN  COMPUTER
D) BASIC    INTERMEDIATE  ADVANCED
E) HIDDEN UNITS  NON-HIDDEN UNITS
F) COLOR    BLACK&WHITE/MONOCROME
G) ICONS    SYMBOLS
H) LEVEL OF PLAY  1 2 3 4 5
I) AMERICAN ARRIVAL  1 2 3 4 5
J) BRITISH ARRIVAL  1 2 3 4 5
K) AMERICAN AMMO  1 2 3 4 5
L) BRITISH AMMO  1 2 3 4 5
M) SCENARIO      BUNKER HILL
                  MONMOUTH
                  SARATOGA
N) EXIT
  
```

The menu options are identified by the option letter on the left of each line. To select an option, press the option letter until your choice is highlighted. When all option choices are as you want them, press the RETURN/ENTER key to exit the menu.

To select an option, use the joystick to highlight its option letter. While the option letter is highlighted, press the joystick button until the option choice you desire is highlighted. When all options have been selected, exit the menu by highlighting option letter N and pressing the joystick button.

3.1 Main Menu Options

- The "A" option allows the player to select a new game or to continue playing a saved game. When a saved game is selected, the option menus are as saved. When you select to resume a saved game, you will be prompted to insert your save game disk and press RETURN/ENTER. You must then enter the file name of the saved game you want to resume (you may view the save game disk directory for a list of the file names). You may not change Main Menu options when you boot up a saved game.
- The "B" and "C" options allow the player(s) to choose if the American and British forces will be controlled by a

human player or by the computer.

- The "D" option permits you to select from three games of varying complexity.
- The "E" option provides a game where each player is only shown the location of his opponent's units when they can be seen by some of his own units. Hidden units will also be revealed if an enemy unit moves adjacent to them during the Operation Phase. It is recommended that beginning players not use this option. To re-create the "fog of war", it is strongly recommended that intermediate and advanced players do use this option.
- The "F" option may be used to provide the unit shapes best suited for color monitor/TV users and monochrome monitor/black & white TV users. Atari owners are given the option of a one- or two-drive system here. C-64 owners are allowed to choose between light blue or dark blue for American units.
- The "G" option allows you to play with icons (figure profiles) or symbols (bars). Icons are automatically used for the BASIC GAME. Symbols (which show facing and formation changes) are recommended for the INTERMEDIATE and ADVANCED games.
- The "H" option selects the difficulty level. Level 3 is historical and makes no modification to either side. Levels 1 and 2 favor the American player (level 1 more so than level 2). Levels 4 and 5 favor the British (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 "I" and "J" options allow for variable reinforcement arrival. Units may appear up to one to two turns earlier or later than their historical arrival time. Level 3 is historical with no changes. Level 1 allows units to arrive up to two turns earlier. Level 2 allows units to arrive up to two turns later. Level 4 allows units

to arrive from up to one turn earlier to one turn later. Level 5 allows units to arrive from up to two turns earlier to two turns later. The authors and playtesters recommend that once players are acquainted with the system, they should play with Option Level 5. This truly re-creates the uncertainty of a battle where opposing commanders did not know the size of an enemy force or how quickly it would be reinforced.

- The "K" and "L" options allow for variable ammunition supply. Ammunition supply only affects the ADVANCED Game. Level 3 is historical. Levels 1 and 2 give progressively less ammunition. Levels 4 and 5 give progressively more ammunition.
- The "M" option permits the player to select which of the 3 American Revolutionary War battles he wants to play.
- *The "N" option only appears when a joystick is used in the BASIC GAME. It permits the player to exit the Main Menu.*

3.2 Other Screens and Options

After exiting the Main Menu, you will see a series of screens which list the casualties sustained or ground objectives taken. At the start of the game, losses are typically set to 0. These screens are also shown at the end of each turn during the Victory Determination Phase. They may be used to gauge who is winning or losing as play progresses.

Before play starts, you may turn the sound off or on and select a delay loop. The delay loop determines how long messages remain on the screen. The larger the delay number, the longer messages remain (if using an Apple, we recommend you start with a delay loop of 6 if you have an accelerator board and a delay loop of 4 if you do not).

4.0 MENUS

When using the keyboard to control the game, there are two main menus, the Cursor Menu and the Command Menu. The Command Menu has a subordinate menu (the Fire Menu) that is used to give fire commands.

When using the joystick to control the game, there are two main menus, the Cursor Menu and the Command Menu, and two menus which are subordinate to the Command Menu, the Access Menu and the Fire Menu.

4.1 The Cursor Menu

The Cursor Menu is automatically entered at the beginning of each Operation Phase. It is also entered when the Command Menu is exited. The Cursor Menu is exited whenever a unit is accessed or when the game player chooses to go to Combat. The main purposes of the Cursor Menu are to permit the gamer to access combat units, to view different parts of the map, and to enter Combat.

The cursor appears as a white square or rectangle which is in the middle of the game map at the beginning of each Operation Phase.

4.11 Keyboard Cursor Menu

When in the Keyboard Cursor Menu, an abbreviated version of the menu is displayed below the map (along with the date, time of day, and phase number). To give a command while in this menu, press the key which appears in parenthesis () for that command. The commands that can be given while in the Cursor Menu are:

(0) = Centers the map at the cursor ("5" for the optional key pad).

(1-8) = Moves the cursor in the desired directions according to the compass on the lower right hand side of the display. ("1-9" for the optional key pad)

(C)ombat = Starts the Combat Phase. Give this command when you have finished moving and giving orders to all units.

(G)o To Unit = When this command is given, you will be prompted to type in the number of the unit you want to access. Unit numbers are provided in the Orders of Battle that appear in the special rules section for each battle. After the unit number is entered, that unit will be accessed (with this, the Cursor Menu is exited and the Command Menu is entered).

(J)oystick = Switches control from the keyboard to the joystick by entering the Joystick Cursor Menu.

(O)ther Map = Toggles between the Tactical Map (which shows more detail) and the Strategic Map (which shows a larger section of the battlefield).

(SPACE BAR) = Accesses the unit under the cursor. If two or more units are in the square, the top unit is the one accessed (with this, the Cursor Menu is exited and the Command Menu is entered).

(T)errain = Removes the unit shapes from the map to reveal the terrain underneath.

(V)iew = Highlights all the squares that a unit in the cursor's square could see.

(W) = Highlights all American Objective squares on the screen. Pressing a key will then highlight British Objective squares on the screen. Pressing a key will then return to the Cursor Menu.

(Z) = Moves the cursor back to the last square where a unit was accessed.

4.12 Joystick Cursor Menu

When in the Joystick Cursor Menu, an abbreviated version of the menu is displayed below the map (along with the date, time of day, and phase number). To select a command in this menu, move the joystick to highlight that command and then press the joystick button.

When the MOVE command is selected, this command must first be exited by pressing the joystick button before another command can be selected. The commands that can be given while in the Joystick Cursor Menu are:

ABORT = Returns the cursor to the last square where a unit was accessed.

CLEAR = Removes the unit shapes from the map to reveal the terrain beneath.

COMBAT = Starts the Combat Phase. Give this command when you have finished moving and giving orders to all units.

EXIT = Switches control to the keyboard by entering the Keyboard Cursor Menu.

GET UNIT = Accesses the unit under the cursor. When two or more units are in a square, the top unit is accessed (with this, the Cursor Menu is exited and the Access Menu is entered).

GO TOUNIT = When this command is given, you are prompted to enter the number of the unit you want to access. Unit numbers are provided in the Orders of Battle that appear in the special rules section for each battle. Use the joystick to change the number that appears on the screen to match the number of the unit you wished accessed and then press the joystick button. The cursor will then move to that unit and access it (with this, the Cursor Menu is exited and the Access Menu is entered).

MAP = Toggles between the Tactical Map (which shows more detail) and the Strategic Map (which shows a larger section of the battlefield).

MOVE = Moves the cursor in the direction the joystick is moved. This direction is highlighted on the compass on the lower right hand side of the screen.

OBJ = Highlights all American Objective squares currently on the screen. Pressing the joystick button will then highlight all British Objective squares on the screen. Pressing the joystick button again returns the Cursor Menu.

VIEW = Highlights all squares that could be seen by a unit in the square the cursor is in.

4.2 Command Menu

The Command Menu is entered when a unit is accessed (the Command Menu is entered from the Access Menu when the joystick button is pressed). The Command Menu is exited when the Quit command is given. The Command Menu is used to move and give combat orders to units (the Command Menu is used to give combat orders. Movement is done through the Access Menu).

4.21 Keyboard Command Menu

Commands are given to the accessed unit. The name of this unit is shown beneath the map along with other information about that unit. To give a command to a unit, press the key that is shown in parenthesis () for that command as follows:

(0) = Centers map on the unit ("5" for the optional key pad).

(1-8) = Moves the unit in the desired direction as indicated by the Movement Compass at the bottom right of the screen ("1-9" for the optional key pad).

(A)dvance = Sets the unit to advance into a square vacated by the retreat of an adjacent enemy unit(s). To be eligible to advance, that friendly unit's attack must have caused the enemy unit to retreat.

(F)ire = Calls up the Fire Menu which permits the giving of fire commands.

(H)elp = Displays a list of the commands available in this menu.

(M)elee = Plots the unit to MELEE combat the adjacent unit at which it is firing.

(N)ext = Accesses the next friendly unit in the Order of Battle.

(O)ther Map = Toggles between the Tactical and Strategic Maps.

(Q)uit = Exits to the Cursor Menu.

(T)errain = Removes unit shapes on the map to reveal the terrain beneath.

(U)nder = Accesses the next unit in the square.

(V)iew = Highlights all squares the currently accessed unit can fire into.

(Z) = Aborts the orders you have given to the currently accessed unit since its most recent access. The unit is returned to the square it occupied at the time it was accessed and any combat orders given it are reset.

4.211 Keyboard Fire Menu

This menu is entered from the Command Menu when "F" is pressed. It is exited back to the Command Menu when either a fire option or the exit option is chosen. To select an option, press the key that is shown in parenthesis () for that option as follows:

(1-8) = Moves the cursor in the desired direction as indicated by the Movement Compass ("1-9" for the optional key pad).

(T)arget Square = Orders the unit to fire into the square currently occupied by the cursor. This order will only be accepted if that square can be seen by the unit and is in its

weapon's range. (NOTE: the computer will sometimes override plots due to a random factor.)

(V)iew Line Of Fire = Highlights all squares which the unit can fire into.

(N)o Fire = Orders the unit not to fire. The unit will only fire if an enemy unit is adjacent to it.

(E)xit/Erase Plot = Returns to the Command Menu without giving a fire command. If a fire command had been previously given, this command is eliminated.

Fire will be resolved as plotted if certain conditions are met. Some of these are: the firing unit's Line Of Fire to that square is not blocked, that square is occupied by an enemy unit, and (where the plotted square is not adjacent to the firing unit) no enemy units are adjacent to the firing unit.

When fire is not plotted, the computer will choose a target for the unit to fire at. NO FIRE orders notwithstanding, a unit which is capable of fire will ALWAYS fire at an adjacent enemy occupied square during the Combat Phase.

4.22 Joystick Command Menu

The Command Menu is entered from the Access Menu when the joystick button is pressed at any time while the O in the middle of the Movement Compass is blinking. While in the Command Menu, you may select any of the following options by moving the joystick to highlight the option and then pressing the joystick button:

ABORT = Aborts or cancels the orders given the unit since its most recent access. The unit will be returned to the square it occupied at the time it was accessed and any combat orders will be reset. OP points are recovered for cancelled orders. (Exception: There is a four

OP penalty if an aborted move reveals a hidden unit.)

ADVANCE = Pressing the button when an "N" appears next to this option will order the unit to advance into an adjacent square. The unit will only advance where its attack forces the retreat of an adjacent enemy unit. Pressing the button while a "Y" appears next to the option will set the unit to NOT advance.

CLEAR = Removes the unit symbols from the map to reveal the terrain beneath.

FIRE = Calls up the Fire Menu to permit the giving of fire commands.

MELEE = Selecting this option while a N appears next to MELEE in the Access Menu, sets the unit to Melee combat an adjacent enemy unit it fires at. Selecting the option while a Y appears next to MELEE, orders the unit to NOT Melee.

NEXT = Goes to the next friendly unit in the Order of Battle.

OTHER MAP = Toggles between the Tactical and Strategic Maps.

QUIT = Exits to the Cursor Menu.

RETURN = Exits to the Access Menu.

VIEW = Highlights all squares the unit can see which are within its weapon range.

4.221 Joystick Fire Menu

The Fire Menu is entered from the Command Menu when the FIRE Option is selected. This menu is exited to the Command Menu when either a fire option or the exit option is selected. Options in this menu may be selected by moving the joystick to highlight them and then pressing the joystick button. The following options are available from this menu:

EXIT/ERASE PLOT = Selecting this option will set the unit for a NO PLOT fire command. A NO PLOT means that the computer will select a target for the unit.

NO FIRE = Orders the unit not to fire. This order will be over ridden to permit the unit to

fire at adjacent enemy units.

TARGET SQUARE = Permits the selection of a square for the unit to fire into. After this option is selected, press the joystick button, use the joystick to move the cursor into the square you wish to target, and press the joystick button again. This sets your unit to fire into the selected square and returns you to the Command Menu. The computer will not accept a command to fire into a square which a unit cannot see or which is out of its weapon range. The computer will sometimes override plots due to a random factor.

(NOTE: Your unit will only fire into this selected square if certain requirements are met. These include: your unit being able to fire, a clear Line Of Sight to the target square, and the absence of adjacent enemy units when the target square is not adjacent).

VIEW Line Of Fire = Highlights those squares which the unit can see and are within the range of its weapon.

4.222 Joystick Access Menu

This menu is entered from the Cursor Menu when a unit is accessed. It is entered from the Command Menu when the RETURN or NEXT options are selected. This menu is exited to the Command Menu when the joystick button is pressed at any time when the O in the middle of the Movement Compass is blinking.

While in the Access Menu, information about the unit (Name, Morale, etc.) will be displayed beneath the map.

The Access Menu permits a unit to be moved to a square by first using the joystick to move the cursor to the desired square and then pressing the joystick button. The unit will then move to the selected square (assuming it is a legal move).

5.0 MOVEMENT

Movement commands are given using the keyboard or, for the Basic Game only, a joystick. The game player may move either the cursor (a white square or rectangle) or a combat unit.

5.1 Direction of Movement

There are eight directions for movement. These are: up (north); diagonally up and to the right (northeast); right (east); diagonally down and to the right (southeast); down (south); diagonally down and to the left (southwest); left (west); and diagonally up and to the left (northwest).

Using a compass to represent these directions, they appear as follows:

NW	N	NE
W	(C)	E
SW	S	SE

Diagram 1

When moving, it is important to remember that you are moving the cursor or accessed unit from one square to another. In the compass above, the square the cursor or accessed unit is moving from is represented by the center of the compass (C). The square the cursor or accessed unit is to move into is represented by the direction (NW, N, NE, etc.) that square lies from the square exited.

In many instances, a Movement Compass will be shown at the bottom right of the screen. Numbers are arranged around the center of this compass in the same manner as the directions in Diagram 1. Pressing a number key will cause movement in the direction that number lies from the center of the compass. Pressing the number that lies in the center of the compass will center the screen on the square the cursor or accessed unit currently occupies.

The movement compass will appear as either:

	8 1 2		7 8 9	
(Standard)	7 0 3	or	4 5 6	(Optional)
	6 5 4		1 2 3	

Diagram 2

The joystick can be used to move the cursor in four directions: up (north), right (east), down (south), and left (west). To move a unit with the joystick, point the joystick in the desired direction until the cursor moves as directed.

Although the joystick has only four movement directions, it may be used to move units in any of eight directions. An explanation of this is provided in section 5.3 which follows. In many instances, a Movement Compass will be shown at the bottom right of the screen. Numbers are arranged around the center of the compass which correspond to the direction they lie from the center of the movement compass as shown in Diagram 2.

When the joystick is being used for movement, the direction number for that movement will appear highlighted in the Movement Compass.

5.2 Movement of Cursor

At the beginning of each Operation Phase, a white square or rectangle is shown in the exact center of the game map. This is the cursor.

The cursor has several major functions in the game. They are:

1. Accessing units. In order to command a unit, that unit must be accessed. One way to access a unit is to move the cursor over the square that contains the unit and give the appropriate access command.
2. Plotting fire. Once a unit is accessed, fire from that unit may be plotted into a particular square by going into the Fire Menu, moving the cursor over the square you want to fire into, and giving the appropriate command.
3. Viewing the battlefield. During those times when a unit is not accessed, the cursor may be moved to permit the game player to see different portions of the game map. This is helpful because, for most of the battles, only a portion of the map can be fit on the screen at a time.

4. Unit movement. *When using the joystick, the cursor is moved to select the square a unit is to move into.*

To move the cursor, you must be in either the Cursor Menu or the Fire Menu. You start each Operation Phase in the Cursor Menu. You return to the Cursor Menu whenever you exit the Command Menu.

The Fire Menu is a subset of the Command Menu.

When you are in a menu which permits cursor movement, you move the cursor by pressing the number key that corresponds to the direction in which you want the cursor to move (See section 5.1 above).

When in the Cursor Menu, you may move the cursor when the MOVE command is selected. The MOVE command appears as one of your options in the menu at the bottom of the screen. To select the MOVE command, move the joystick until MOVE is highlighted and then press the joystick button.

While the MOVE command is highlighted, moving the joystick will cause corresponding cursor movement. When the computer is reading a movement command, it will highlight the number in the Movement Compass for that movement direction. While the MOVE command is highlighted and no movement is being read by the computer, the O in the center of the movement compass is highlighted.

While in the Access Menu, you may move the cursor. The cursor will move in the same manner as when in the Cursor Menu with MOVE highlighted.

While in the Fire Menu, you may move the cursor when the TARGET SQUARE command is selected. To select this command, use the joystick to move the select bar to highlight it and then press the joystick button. While TARGET SQUARE is selected, the cursor may be moved in the same manner as in the Cursor Menu.

5.3 Movement of Units

Units may be moved once they have been accessed. Unlike cursor movement, unit

movement is restricted by a number of factors which include:

1. Terrain.
2. The presence of enemy units.
3. Available operation points.

The mechanics of moving a unit are the same as those to move the cursor.

Once a unit is accessed, it will move as indicated by the numbers around the Movement Compass (See section 5.1 above).

Unlike cursor movement, unit movement has a cost in Operations Points and Fatigue.

For each square a unit moves, it must pay an Operation Points (OP) cost (Section 20.21) and may have to pay a Fatigue cost (Section 20.3). A unit's current Operation Points are shown next to the OP designation that appears as part of the information displayed under the map when a unit is accessed.

The Operation Costs for movement vary with the type of terrain being entered. These costs are given in the Operation Costs Tables (Section 20.21). In addition to the basic cost for entering a square, there are additional OP costs to enter or leave a square that is next to an enemy unit.

Moving along a road will generally reduce OP movement costs as long as the movement is from one road square to another and is not a diagonal move.

Certain types of terrain are impassable and unit movement into them is not permitted. Units may not move into squares which are occupied by enemy units (although they may advance into them after forcing an enemy retreat).

Units may not move from one square that is next to an enemy unit directly into another square which is also next to an enemy unit unless the square being entered is already occupied by a friendly unit.

Units may not enter a square if they lack sufficient OP to pay the movement costs (EXCEPTION: units normally may move one square as their only movement regardless of the OP costs).

Artillery units which move cannot fire in the following combat phase.

5.31 Joystick Unit Movement

The joystick may be used to move units when the Access Menu is on the screen. The Access Menu appears when a unit is accessed and shows information about that unit which includes its current OP.

While the Access Menu is on the screen, moving the joystick will cause corresponding cursor movement. To move a unit, move the cursor to the square you want the unit to move into and press the joystick button. The unit will then move into that square provided that square can be legally entered and the unit has sufficient OP to pay for the move.

There are several things to keep in mind when moving units.

When you order a unit to move into a square it is not adjacent to, it is up to the computer to choose the path it will take to get there. The computer will attempt to move units along roads whenever possible. This is not always the most efficient path into the desired square. Whether or not road movement is involved, the computer may choose a movement path that you do not like.

When problems such as these arise, the best solution is to abort the move and then move the unit along a path of your choosing by giving movement orders a square at a time.

While the cursor cannot be moved diagonally, units can and will move diagonally. For example, if you want a unit to enter the square that is diagonally above and to the right of it,

move the cursor into that square and press the joystick button. The unit will then make the desired diagonal move.

6.0 STACKING

There are a maximum number of units which may occupy a square at any given time. This maximum is typically two infantry and/or cavalry units plus one artillery unit.

Cavalry units may overstack while moving but may not end their movement overstacked. Reinforcements may exceed stacking limits when they enter the map. They may remain overstacked until the reinforcing units move.

Artillery may never enter a square which contains another artillery unit (although they may be overstacked when they enter as reinforcement).

7.0 ZONES OF CONTROL (ZOC)

The eight adjacent squares which surround a unit are in that unit's Zone Of Control (ZOC).

Units pay extra OP to enter or leave an enemy ZOC. In addition, units which must retreat into an enemy ZOC will suffer additional losses. Units which rout while in an enemy ZOC lose additional men.

Movement is not permitted directly from one enemy ZOC to another unless the square being entered already contains at least one friendly unit.

8.0 UNIT INFORMATION

When a unit is accessed, important information about that unit will be displayed beneath the game map (while in the Access Menu).

This information includes the unit's nationality, its name, the type of unit it is,

the number of men it contains, the type of weapons it has, its Efficiency, its Fatigue, its Morale, its status, the number of Operations Points it has, if it is set to melee, if it is set to advance, the type of terrain it occupies, the coordinates of the square it occupies, and its fire orders.

A sample of this information is:

```
AMERICAN WAYNE C INF BRIG 350 MEN
MSK EFF: 60 FT: 0 MORALE: 60      8 1 2
NON RTD OP: 13 MELEEN ADVANCE Y 7 3
ROAD (3) X,Y: 45,19 NO FIRE      6 5 4
```

8.1 Nationality

A unit will be controlled by either the American or British Commander. A unit's nationality is given as the first item on the top line of its information display.

8.2 Name

A unit's name will follow its nationality. British units are identified by their unit organization. The BRITISH 1/1 LT INF BATT, for example, is the first battalion of the first light infantry regiment.

American units are identified either by the state or area they are from, by the name of their unit commander, or by some combination of these. In the example, the unit is the C section of Wayne's Brigade.

8.3 Type

A unit will either be Infantry (INF), Cavalry (CAV), or Artillery (ART). The unit type determines a unit's OP movement costs and its melee modifiers.

8.3.1 Organization

A unit will be further identified by its organization. A unit will be either a Battalion (BATT), a Regiment (REG), or a Brigade (BRIG). Some artillery units are identified as a battalion of a particular Division (DIV). Wayne C INF is a Brigade. The typical organization of units changes with the different scenarios. Refer to the Orders of Battle in the various special rules sections.

American		British
	"One" Infantry	
	"Two" Infantry	
	Artillery	
	Artillery plus "One" Infantry	
	Artillery plus "Two" Infantry	
	Routed	
	Cavalry	

Figure 8.3 Unit Icons

8.4 Number of Men

A unit's base strength is determined by the number of men it has for Infantry and Cavalry units. Wayne C contains 350 men. A unit's base artillery strength is determined by the number of guns it has. The number of men determines, in part, how effective an artillery unit is.

An artillery unit requires 16 men per gun to fire the guns at full strength.

When less men are available, the unit's fire is reduced accordingly. A unit with only eight men per gun would fire at only half strength.

8.5 Weapon Type

Different units were armed with different types of weapons. Weapon type determines a unit's maximum fire range and how powerful its fire is at any square within that range. Wayne C is armed with muskets.

The Weapon Range/Casualty Table (Section 20.5) shows the firepower of each weapon through its range.

8.6 Efficiency

Efficiency (EFF) means current Efficiency. This number will change as a result of combat.

For every two points a unit's current Efficiency is below 100, that unit's combat strength is decreased by one percentage point.

A unit may "buy up" its current Efficiency by having unused Operations Points (OP) remaining at the end of its combat phases.

This buy up costs 3 OP per Efficiency point if the unit is in an enemy ZOC and 1 OP if it is not. The buy up is done immediately after combat in the Recovery/Rally Phase.

A unit's current Efficiency will increase by 3 when it advances after combat.

A unit's current Efficiency drops when it takes losses, is forced to retreat, when it is stacked with a unit which routs, and when a routed or retreating unit retreats into or through the square it occupies.

8.7 Fatigue

A unit's Fatigue (FT) is an indication of how tired it is. For every two points of Fatigue, a unit's combat strength decreases by one percent.

A unit gains Fatigue through movement and engaging in combat (refer to Section 20.3).

A unit loses Fatigue by having unused Operation Points remaining at the end of its combat phases (NOTE: these are the same OP that are used to buy up Efficiency).

A unit loses 1 Fatigue point for every 3 OP remaining if in an enemy ZOC and 1 Fatigue point for every 1 OP remaining if outside of an enemy ZOC.

WARNING: A common mistake of novice players is to let their units get too tired. Units with a high fatigue are a liability. They are useless in combat and are likely to rout which pulls down their Efficiency and the Efficiency of friendly units near them. When units get tired it is imperative to pull them out of the line and permit them to rest.

8.8 Morale

A unit's Morale is equal to its Efficiency minus its Fatigue. Morale determines whether or not a unit will rout when it is attacked. Units with a morale of 14 or less rout automatically. Units with a morale of 15 to 24 have a chance of routing.

The higher a unit's Morale, the greater the chance that it will Rally (recover from a rout). As a general rule, units with a high morale receive more Operations Points than units with a low morale.

Since Morale is equal to Efficiency minus Fatigue, permitting units to rest with OP remaining after their Combat

Phase will raise their Efficiency, lower their Fatigue and, consequently, raise their Morale.

8.9 Status

A unit's status is either Routed (ROUTED) or Nonrouted (NON RTD).

Routed units automatically rout again (with subsequent Efficiency losses) each time they are attacked. Routed units may not attack enemy units and defend against enemy attacks with a greatly reduced strength.

Units may recover from the effects of Rout during their Recovery/Rally Phase.

A unit's Morale must be at least 25 for it to have a chance to Rally.

8.10 Operation Points

The following require an expenditure of Operation Points (OP): moving, attacking, defending, and recovering from the effects of combat (see Sections 20.21 and 20.22).

Operation Points are expended in Operations Phases when they are used to pay for movement and combat. Each player receives two Operation Phases per turn. Each unit receives from 8 to 15 Operation Points in its Operation Phase.

Operations Points are supplied to units during their Recovery/Rally Phase after any remaining Operation Points are used to reduce Fatigue and increase Efficiency. Because Operation Points are awarded during the Recovery/Rally Phase, the Operation Points used by units during their first Operation Phase were determined in the Command Control Phase of the previous turn.

Operation Points are automatically spent when a unit fires. Since units will always fire if adjacent to an enemy unit or

to defend themselves in melee, players do not have total control over the expenditure of Operations Points.

8.11 Melee

Melee represents a close assault type of combat when a unit closes with the enemy, engages in a fire fight at very close range, and engages in actual hand-to-hand combat in some instances.

In order to melee, the unit must be adjacent to the enemy it intends to melee, ordered to melee it, and have sufficient OP to pay for fire and the melee.

A unit has been ordered to Melee when the letter "Y" appears next to the word MELEE. A unit has been ordered not to melee when the letter "N" appears next to the word MELEE.

8.12 Advance

A unit whose attacks have forced enemy retreats which leave an adjacent square vacant may advance into that square.

There is no OP cost for this advance.

A unit is set to advance when the letter "Y" appears next to the word ADVANCE. A unit is not set to advance if the letter "N" appears next to the word ADVANCE. Units which advance receive an Efficiency bonus.

(NOTE: A unit whose melee attack forces an enemy retreat will not advance into the enemy-vacated square unless it has been ordered to Advance.)

8.13 Terrain

Each square contains an identifiable terrain type. The terrain type is shown on the left side of the bottom line of the information that appears beneath the map when a unit is accessed.

In addition to the terrain type, its

elevation (height) is shown in parenthesis () next to it.

Units which occupy higher ground than that occupied by the enemy they are opposing enjoy a distinct advantage in combat.

Terrain may have other affects on combat. Refer to Sections 20.6 and 20.61.

8.14 Unit Location

Each square on the map has an "address" which is shown as its X,Y location. The X coordinate shows how many squares a square is from the left edge of the map.

The Y coordinate shows how many squares a square is from the top of the map.

The coordinates (or address) of the square a unit occupies is given on the bottom row of information that appears beneath the map when a unit is accessed.

8.15 Fire Plot

If a unit has orders to fire into a square, the coordinates of that square are shown on the right side of the bottom row of information that appears beneath the map when a unit is accessed.

If a unit has been ordered to not fire, the words NO FIRE will appear here. In this case, the unit will only fire if adjacent to an enemy unit during a fire phase.

If it has been left to the computer to select a target square, the words NO PLOT will appear here until after the unit has actually fired at a computer selected target. When this occurs, the coordinates of the square it fired into will appear here until the computer or player give it a different fire command.

Artillery units which move cannot fire in the following combat phase.

9.0 OPERATION PHASE

Each turn begins with an Operation Phase. During the Operation Phase, players move units and give combat orders.

These actions cost Operation Points. Each player receives two Operations Phases per turn.

The side which initiates combat from its Operations Phase is considered the attacker for that Combat Phase. The other side is considered the defender.

10.0 COMBAT PHASE

Each Operation Phase is followed by a Combat Phase in which Fire and Melee combat are resolved.

10.1 Offensive and Defensive Fire

The player whose Operations Phase preceded the Combat Phase (the phasing player) is known as the Offensive Player. All fire by his units is termed attacker's fire. Fire by the other player's units (the non-phasing player) is termed defender's fire.

10.2 Fire Effects

Units will only fire if they have sufficient Operation Points to do so. It costs two Operation Points to fire (four operation points for artillery to fire). After paying this cost, if the firing unit has two or fewer OP remaining, it will fire at only three-quarters of its normal strength.

Units which are fired on may retreat or rout as a result. The more casualties a unit sustains and the lower its morale, the more likely it is to retreat or rout (NOTE: A routed unit which is fired on will rout again, even if that fire failed to inflict any casualties on the routed unit. Artillery never routs.).

A defending unit in a woods square may have its fire power cut in half if it is outmaneuvered. Outmaneuvering can occur in the Combat Phase which follows an enemy unit entering an adjacent woods square.

An attacking unit may have its fire

power increased by 50 percent in the Combat Phase which follows its moving adjacent to an enemy unit.

10.3 Melee Effects

Units may only initiate Melee if they have sufficient Operation Points to do so. Melee costs four OP. The attacker must have four OP remaining after paying the OP cost to fire into the target square. The computer will accept a Melee order for a unit which lacks sufficient OP to Melee, but that unit will not be permitted to initiate a Melee until it has sufficient OP to do so. (NOTE: Artillery units may never initiate Melee. That is, they may never be the attacker in Melee.)

Melee is a short range combat that is conducted between adjacent units. In Melee, the attacker advances toward the enemy, engages in a fire fight, and may engage in hand-to-hand fighting.

The defending units always deliver a special Melee Defensive Fire into the attacker. This fire costs OP, but Defending units without sufficient OP to pay for the fire are permitted to deliver it anyway.

Because of the extra defensive fire and the intensity of combat, melees typically cause a large number of casualties.

Melees may result in either the attacker or the defender retreating or routing. If results call for both the attacker and defender to retreat, American units retreat first. British units then retreat only if some of the American units remain unretreated.

10.4 Retreat

When a defending unit retreats, it moves three squares in a direction generally away from the enemy. When an attacking unit retreats, it moves one square in a direction generally away from the enemy. A unit which retreats will lose Efficiency.

A unit which causes an enemy unit to retreat and advances into the square vacated by the retreat will gain Efficiency. If a unit causes an enemy retreat so that an adjacent square becomes vacant, that unit may advance into that square (if it has been ordered to advance).

A unit which retreats into an enemy Zone of Control suffers additional casualties. When a retreating unit retreats into a square which contains other units, those units suffer an Efficiency loss.

10.5 Rout

When a unit suffers casualties, its Morale level is lowered due to the Efficiency loss. When Morale drops to 24 or lower, there is a chance the unit will Rout. When Morale drops below 14, the unit will always rout if attacked. Units with 40 or less men will always rout when attacked. (EXCEPTION: Artillery never routs).

A unit which routs retreats 5 squares. It suffers an Efficiency loss. It causes an Efficiency loss to all units which were stacked with it at the time it routed, all units whose square it retreated through, and all units whose square it retreated into.

Units which Rout will not Fire or Melee Offensively. They will Fire and Melee Defensively at a greatly reduced strength.

Any routed unit which is attacked will Rout again.

Units remain routed until rallied in their Recovery/Rally Phase. The higher a unit's morale, the greater its chance to rally.

A unit which routs while in an enemy Zone of Control loses men to casualties and capture.

10.6 Combat Sequence

Combat occurs in the following order:

- Defender's Artillery Fire Phase
- Attacker's Artillery Fire Phase
- Defender's Fire Phase
- Attacker's Fire Phase
- Retreat Phase
- Advance Phase
- Melee Defender's Fire Phase
- Melee Phase
- Retreat Phase
- Advance Phase

11.0 SAVING A GAME

At the end of each Combat Phase, the computer will allow the player(s) to save a game in progress. A separate save game disk will be required to store the save game data.

Players must initialize their disk from within the save game menu (IBM users must format this disk in advance). Saved games may be restarted from the point where they were left off. Main Menu options may not be changed for a saved game.

12.0 REINFORCEMENTS

Reinforcements arrive on the map in accordance with the schedule shown on the Order of Battle (and as modified by Main Menu Options "I" and "J").

Reinforcements may enter the game

overstacked. These units may remain overstacked until they are moved.

13.0 HOW TO WIN

Each player receives a number of Victory Points which are determined by the type and number of enemy casualties he has inflicted and the Victory Squares he holds.

At the end of the game, the American Victory Points are subtracted from the British Victory Points. The resulting number determines which side has what level of victory (draws are possible).

13.1 Victory Points for Losses

Players receive victory points for the casualties they inflict on their opponent as follows:

- 1 point per infantryman/
artilleryman
- 1.5 points per infantryman
captured
- 2 points per cavalryman lost
- 3 points per cavalryman
captured
- 50 points per gun lost
- 75 points per gun captured

13.2 Victory Points for Terrain Objectives

Victory points are awarded for terrain objectives when a player has a unit occupying the square and at least 400 men in or adjacent to that Victory Square during the Victory Determination Phase. Points are only awarded if there are no enemy units in or adjacent to that square.

Refer to the special rules section for each battle for the exact victory conditions for that battle.

INTERMEDIATE GAME RULES

14.0 DIFFERENCES FROM THE BASIC GAME

The INTERMEDIATE GAME is similar to the BASIC GAME with the following additions:

Unit Facing and Formation, Double Time, Melee and Advance, Disruption, Unit Information, Reconnaissance, and Cursor and Command Menus.

14.1 Ammunition

The effects of ammunition supply are abstracted in the INTERMEDIATE GAME. For this reason, no information on ammunition supply appears for an accessed unit (see section 14.6). This information is included for the ADVANCED GAME only.

14.2 Unit Facing and Formation

Unlike the BASIC GAME, units in the INTERMEDIATE and ADVANCED Games have facings and formations.

14.21 Unit Facing

A unit may face in one of eight different directions. These directions correspond to the eight directions on the Movement Compass.

When unit symbols are chosen the represent units, these symbols change to indicate unit facing.

Facing may be changed at any time during the Operation Phase. A unit's facing will automatically change during movement as it faces the square it is moving into. All units in a square assume the facing of the last unit to enter that square. Changing the facing of one unit in a square will change the facing of all units in that square. All units in a square have the same facing.

Some units must pay one OP to change facing. If one unit in a square changes facing, the other units' facing is changed with no OP cost.

14.211 Line Of Sight

Facing determines a unit's Line Of Sight (LOS). A unit has a LOS only in the direction it is facing. The LOS extends in a 90 degree angle from the center of the unit's square in the direction it is facing.

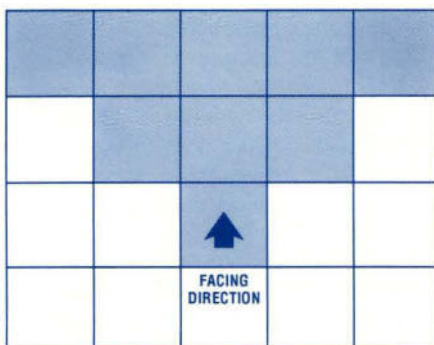


Figure 14.211 Line of Sight

14.212 Combat Effects

When a unit is attacked from a square that is not in its LOS, it is said to be attacked on a flank. Defenders suffer additional casualties when subjected to a flank attack.

A unit may deliver Melee Defensive Fire through its flanks, but at a greatly reduced rate. A unit may not conduct normal fire through its flanks.

An attacking unit has its attack strength increased when it attacks a defender's flank.

14.22 Unit Formations

Each unit has two normal formations. For Infantry, these are line and column. For Cavalry, these are dismounted and mounted. For Artillery, these are unlimbered and limbered. Routed infantry and cavalry are considered to be in a special formation.

There is an OP and Efficiency cost to change a unit's formation. Formation changes may only be voluntarily made during the Operations Phase. Certain formation changes are made automatically as a result of combat (EXAMPLE: When artillery is forced to retreat, it automatically limbers).

Infantry has more fire power in line formation and more melee strength and mobility in column formation. Cavalry has more fire power in dismounted formation and more mobility in mounted formation. Mounted Cavalry receives melee bonuses. Artillery may only engage in normal fire if Unlimbered and may only move if Limbered. Limbered artillery may engage in Melee Defensive Fire and defend in melee, but at a greatly reduced strength.

14.221 Unit Shapes

When symbols are used, the symbol shapes will change to show a unit's formation. There is a special shape for routed units.

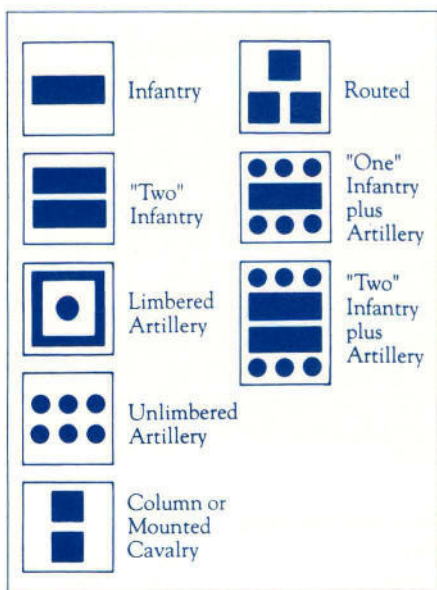


Figure 14.221 Unit Symbols

14.222 Movement

In order for units to receive the road movement bonus, they must be in Column, Mounted, or Limbered formation.

A unit in Column, Mounted, or Limbered formation may not enter a road square through road movement if that square is occupied by another unit.

A Mounted Cavalry or a unit in Column formation may overstack during movement, but it may not end its movement overstacked.

14.223 Effects on Combat

Units in Column formation may only fire in Melee Defensive Fire.

Units in Mounted formation will not fire offensively if ordered to melee.

Units in Dismounted formation have only three-quarters of their men available for combat. The other one-quarter is considered to be holding horses.

Units in Column, Mounted, or Limbered formations suffer additional casualties when fired on by enemy units.

A unit in Limbered formation defends in melee with a reduced strength (Artillery may never initiate melee).

Artillery may move, unlimber, and fire in the same turn as long as it has sufficient OP to do so. Note that this is a difference from the BASIC GAME.

14.3 Double Time

A unit may purchase extra Operations Points at a cost of 6 Fatigue Points Each. Pressing the "X" key while in the Command Menu will increase fatigue by 6 points and increase OP by 1 point. Routed units, units with 15 OP, and units with 40 or more Fatigue points may not use Double Time.

14.4 Melee and Advance

When a unit is ordered to melee, it automatically receives orders to advance into the target square.

If you do not wish a unit to advance after melee, you must set ADVANCE to N after ordering melee.

A unit will only melee in the direction it is facing. Note that this is not the same as its LOS. A unit's LOS extends into three adjacent squares. A unit may only Melee the adjacent square it is directly facing.

A previous melee plot is erased when a unit moves or changes its facing.

14.5 Disruption

Every time a unit suffers losses, there is a chance that it will become disrupted (refer to section 20.8). A defending unit which retreats as a result of melee is automatically disrupted.

The less men a unit has and the more casualties it suffers, the greater the chance

that it will be disrupted.

Disrupted units may not fire or melee offensively.

Units may recover from disruption during a Recovery/Rally Phase (refer to Section 20.81).

14.6 Unit Information

When a unit is accessed, information for that unit is presented below the map in a slightly different format than given in the BASIC GAME.

Some samples of this format are:

BRITISH IROQUOIS INF BATT 200 MEN	8 1 2
DS:N MEL:N FT:30 EFF:60/70	7 3
LINE OP:14 DIR:6 ADV:Y	6 5 4
RIDGE (6) X,Y:2,1 FIRE:2,2	

BRITISH LEFT ART BATT 96 MEN	8 1 2
DS:N FT:0 EFF:75/75	7 3
UNLIMBER OP:14 DIR:5 6 GUNS	6 5 4
ROAD (3) X,Y:4,5 NO PLOT	

The top unit is the British Iroquois Infantry Battalion. It has 200 men. The unit is not disrupted (DS). The unit is not set to MELEE. It has a Fatigue of 10. Its current Efficiency is 60 and its maximum Efficiency is 70. The unit is in line formation. It has 14 Operation Points. It is facing in direction 6 (this is the direction as shown in the Movement Compass to the right). It is set to Advance. The unit is in a ridge square which has an elevation of 6. The coordinates of this square are X:2 and Y:1. The unit has been ordered to fire into square X:2, Y:2.

The bottom unit is the British Left Artillery Battalion. You will notice the information is different than that for infantry. Artillery cannot be ordered to Melee so there is no MEL. Artillery cannot advance after combat so there is no ADV. In addition to the number of men, it is important to know the number of guns an artillery unit has. This information is given at the right of the third line — 6 guns.

Because there is more unit information than in the BASIC GAME, a second unit information screen may be called up by pressing the "P" key (for page).

Samples of this other format are:

BRITISH IROQUOIS INF BATT 200 MEN	8 1 2
FORT:0 NON RTD CC:1.1	7 3
MSK MRL:50 LEADER: BURGOYNE	6 5 4
RIDGE (6) X,Y:2,1 FIRE:2,2	

BRITISH LEFT ART BAT 96 MEN	8 1 2
FORT:0 NON RTD CC:1.2	7 3
6PD MRL:75	6 5 4
ROAD (3) X,Y:44,5 NO PLOT	

The above again identifies the unit as the British Iroquois Infantry Battalion which has 200 men. It shows the unit's fortification level (0). It shows that the unit is not routed. It shows that the unit has a Command Control (CC) rating of 1.1 (assigned randomly in the INTERMEDIATE GAME). The unit is armed with muskets (MSK). The unit has a morale (MRL) of 50. The unit's leader is BURGOYNE. Again the unit is in a sixth level woods square with coordinates X: 2, Y:1 and is plotted to fire into square X:2, Y:2.

The information for the other unit again identifies it as the British Left Artillery Battalion. Because Artillery units are not affected by leaders, no leader is listed for the unit. Artillery Command Control is randomly determined in the INTERMEDIATE GAME (always 1.0 in the ADVANCED GAME) and this is shown by its CC number. The unit has 6 pound guns which is shown by the 6PD at the left of the third line.

While a unit is accessed, pressing the "P" key will toggle between these two screens.

14.7 Reconnaissance

Players are permitted a limited number of reconnaissance attempts during each Operations Phase. To conduct a reconnaissance, move the cursor over an enemy occupied square and press the "R" key. You will receive a number that indicates the approximate number of enemy in the square.

14.8 Cursor and Command Menus

The Cursor and Command Menus are substantially the same as in the BASIC GAME. These menus as they appear for the INTERMEDIATE and ADVANCED

Games are given below.

14.81 Cursor Menu

(0) = Centers the map at the cursor ("5" for the optional key pad).

(1-8) = Moves the cursor in the desired directions according to the compass on the lower right hand side of the display. ("1-9" for the optional key pad)

(C)ombat = Starts the Combat Phase. Give this command when you have finished moving and giving orders to all units.

(G)o To Unit = When this command is given, you will be prompted to type in the number of the unit you want to access. Unit numbers are provided in the Orders of Battle that appear in the special rules for each battle. After the unit number is entered, that unit will be accessed (with this, the Cursor Menu is exited and the Command Menu is entered).

(O)ther Map = Toggles between the Tactical Map (which shows more detail) and the Strategic Map (which shows a larger section of the battlefield).

(P)age = Second Menu. On this menu will be displayed the number of recons you are allowed to conduct, along with other commands. If in this menu, "P" will return you to the first menu.

(R)econ = Pressing this key when the cursor is over an enemy occupied square will display an approximate strength of the units in that square.

(SPACE BAR) = Accesses the unit under the cursor. If two or more units are in the square, the top unit is the one accessed (with this, the Cursor Menu is exited and the Command Menu is entered).

(T)errain = Removes the unit shapes from the map to reveal the terrain underneath.

(V)iew = Highlights all the squares that a unit in the cursor's square could see.

(W) = Highlights all American Objective squares on the screen. Pressing a key will then highlight British Objective squares on the screen. Pressing a key will then return to the Cursor Menu.

(Z) = Moves the cursor back to the last square where a unit was accessed.

14.82 Command Menu

(0) = Centers map on the unit ("5" for the optional key pad).

(1-8) = Move the unit in the desired direction as indicated by the Movement Compass at the bottom right of the screen ("1-9" for the optional key pad).

(A)dvance = Sets the unit to advance into a square vacated by the retreat of an adjacent enemy unit(s). To be eligible to advance, that friendly unit's fire must have caused the enemy unit to retreat.

(B)uild = (ADVANCED GAME only)
Builds one level of fortification.

(D)irection = Permits the player to change the facing of the accessed unit. The computer will ask the player to enter the new facing 1-8 ("1-9" for optional keypad) as indicated by the Movement Compass.

(F)ire = Calls up the Fire Menu which permits the giving of fire commands.

(H)elp = Displays a list of the commands available in this menu.

(I)nverse Division = All units which belong to the same division as the accessed unit will be inversed. The square containing the divisional leader will be blinking as well. (ADVANCED GAME only: pressing this key permits "NO PLOT" or "NO FIRE" orders to be given to the entire division).

(L)eaders = (ADVANCED GAME only)
Displays a menu which shows the di-

visional or corps commander. This menu permits the transfer of that leader to another unit under its command. Permits the unit to which the leader is attached to be accessed.

(M)elee = Plots the unit to MELEE combat the adjacent unit it is facing.

(N)ext = Accesses the next friendly unit in the Order of Battle.

(O)ther Map = Toggles between the Tactical and Strategic Maps.

(P)age = Toggles between the two screens of unit statistics.

(Q)uit = Exits to the Cursor Menu.

(S)tatus = Changes the formation of the accessed unit.

(T)errain = Removes unit shapes on the map to reveal the terrain beneath.

(U)nder = Accesses the next unit in the square.

(V)iew = Highlights all squares the currently accessed unit can fire into.

(W) = Objective Squares. Pressing this key will highlight all American Victory Squares visible on the map. Pressing any key will then highlight all British Victory Squares visible on the map. Pressing any key will then return the Command Menu.

(X) = Double Time. Increases operation points by increasing Fatigue by 6 for each OP gained.

(Z) = Aborts the orders you have given to the currently accessed unit since its most recent access. The unit is returned to the square it occupied at the time it was accessed and any combat orders given it are reset. OP points are recovered for cancelled orders (Exception: There is a 4 OP penalty if a cancelled move reveals a hidden unit).

ADVANCED GAME

15.0 ADVANCED GAME RULES

The ADVANCED GAME is the same as the INTERMEDIATE GAME with the addition of voluntary fortifications, leaders, Command Control and ammunition supply.

15.1 Voluntary Fortifications

A unit may have a fortification level of 0 to 5. Fortifications may be built by a unit. Such fortifications apply only to that unit and are erased as soon as that unit exits that square.

Fortifications are built one level at a time by pressing the "B" key while in the Command Menu. It costs Operation and Fatigue points to build fortifications (refer to the Operation Points and Fatigue Cost tables).

Fortifications may not be built by: units in mounted, column, or limbered formations; units with less than 8 OP; and units with a Fatigue of 20 or more.

15.2 Leaders

Units are under the command of leaders. Leaders represent the individuals who historically commanded the forces at the actual battles. Leaders are always attached to a unit under their command and move with that unit.

Leaders provide a combat bonus to their attached unit. This bonus is as shown in the Order of Battle for each leader. Artillery and Cavalry may never have a leader attached to them and never benefit from leader bonuses.

Leaders may be reassigned to different units under their command during the

Operation Phase (EXCEPTION: They may not be attached to units which are not on the map). Leaders are typically reassigned to give combat bonuses to units involved in key battles, to improve Command Control, and to help rally routed units.

15.21 Leader Effects

Command Control is determined by the bonus rating of the appropriate leaders and the distance from the unit to its leaders. Command Control ranges from a minimum of 0.5 to a maximum of 1.5. (EXCEPTION: The Command Control of Cavalry and Artillery units is not affected by leaders. Cavalry always has a Command Control of 1.2 and Artillery always has a Command Control of 1.0).

The closer a unit is to its leaders, the better its Command Control. The effect of this is to make units more effective when they operate under their historical organization.

Units are penalized Command Control points for each square they are away from their leaders (up to a maximum amount).

Units which are in the square which contains their corps leader or are adjacent to that square are not penalized for being away from their divisional leader.

For a more detailed explanation of leader command control (including examples and an explanation of the formula), refer to Section 20.1 in the Reference Guide.

15.3 Command Control

The Command Control rating for each unit is determined at the beginning of each turn. Command Control affects a unit's strength, the number of Operation Points it receives, its ability to recover from rout,

and its ammunition resupply chances.

The Command Control determined at the beginning of a turn is used for the second player phases of that turn and the first player phases of the following turn. A unit's base strength will be modified by its Command Control rating in arriving at its actual combat strength. Refer to the Fire and Melee Strength Modifiers tables and examples (Sections 20.6, 20.61, and 20.62).

In the ADVANCED GAME, cavalry always has a Command Control of 1.2. Artillery always has a Command Control of 1.0.

15.4 Ammunition Supply

Each unit begins the game with 4 ammunition points. Each time a unit fires, it expends 1 ammunition point. Ammunition is resupplied at the beginning of each turn. Units which are Routed or which already have 4 ammunition points (maximum permitted) will not receive any additional ammunition. There is a chance that other units will receive a partial ammunition resupply or no ammunition resupply.

When a unit is out of ammunition, it may only defend in Melee and fire in Melee Defensive Fire.

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ATTENTION

Sections 16 through 21 are located at the front of the Reference Guide that accompanies this Rule Book. These sections contain historical information, special battle rules, orders of battle, strategy and tactics hints, charts, tables, glossary and index.

QUESTIONS OR PROBLEMS?

Our main business telephone is (415) 964-1353.

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Sons OF Liberty™

Historical Reference Guide

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16.0 SPECIAL SCENARIO RULES

Sons of Liberty offers the gamer his choice of three separate scenarios (battles) to play. Each of these has its own special rules to cover conditions unique to that battle. The special rules for Bunker Hill are found in Section 17, the special rules for Monmouth are found in Section 18, and the special rules for Saratoga are found in Section 19.

16.1 Orders of Battle

The Order of Battle (force organization) is given for each side in each battle as part of that battle's special rules. In order to condense this information, certain abbreviations were used. Many of the unit names are abbreviated. Additional abbreviations are: DIV (for division), EFF (for starting Efficiency), WEAP (for weapon), SQ. (for square), BRG (for brigade), and a number of abbreviations for weapons which are explained in the Weapon/Range Casualty Table (Section 20.5).

16.2 Strategy and Tactics

While each special section contains some tips on how to play that particular battle, the following advice applies to all battles. The game is normally won by controlling Victory Squares. When a Victory Square can award points to either side, if you lose 100 men more than your opponent to take a 100 point Victory Square, you are 100 points ahead. This is because taking that square took 100 points away from your opponent and added 100 points to your score. This is a 200 point swing.

The only time in the game when Victory Squares really matter is at its end. This is where points are translated into defeat or victory. Victory points are only awarded if there are no enemy units in or adjacent to the Victory Square. If you can move one of your units adjacent to one of your opponent's Victory Squares on the last turn of the game, you can deny him those victory points.

Put your artillery on hills where the

height advantage will increase their effectiveness. If the battle is ranging near your guns, protect your artillery by keeping an infantry unit with it to absorb enemy fire.

Don't let your units get too tired. Generally, when their morale drops below 40, it is time to pull them out of the line and let them rest.

When playing an ADVANCED GAME, use your leaders. In the first Operation Phase of each turn, move your leaders to the units that are to be involved in the most important combat. This will give that unit the leader bonus (see the Order of Battle) for the upcoming combat. Leader bonuses translate directly into inflicting increased casualties on you opponent.

In the second Operation Phase, move your leader to the unit that will give you the best overall Command Control. Command Control is only determined once a turn (in the Command Control Phase). Good Command Control means more Operation Points. The more Operation Points your force has, the better it will do.

Flank attacks are advantageous in melee as well as in fire. If you have a large force on an enemy's flank, try melee. If not exposed to too much danger from the after-effects, put units into column to melee.

Pull disrupted units out of enemy Zones of Control so that they can recover. When attacking, make sure you have enough OP to fire and melee.

17.0 BUNKER HILL

The Battle of Bunker Hill is a six turn game covering the time from 2 p.m. through 8 p.m. on June 17, 1775.

17.1 Special Bunker Hill Rules

The normal losses inflicted by infantry fire (see Section 20.6) are doubled. The American units which begin the game on Bunker Hill are not permitted to move during the first game turn. British units suffer one extra fatigue point cost

for each square they enter during the first three game turns. Units in the Redoubt cannot be flanked in the INTERMEDIATE and ADVANCED Games. No units are permitted to enter the town. The American Commander Stark counts as a Division Commander for purposes of determining Command Control.

American units are penalized 2 Command Control points for each

square they are from their Corps Commander and 8 Command Control points for each square they are from their Division Commander.

All British units begin the first Operation Phase of the game with 10 OP. British reinforcements will not be permitted to enter the map if their entry square and the adjacent coastal squares are occupied by American units.

17.2 Orders of Battle

AMERICAN BUNKER HILL ORDER OF BATTLE

Unit #	NAME	DIV	Division LEADER		CORPS LEADER		MEN	EFF	WEAP	SETUP	TURN
			BONUS	CORPS	BONUS					ORENTRY SQ.	OF ENTRY
0	Prescott	PUTNAM	50	PRESCOTT	60	300	55	MSK	16,9	1	
1	Frye	PUTNAM	50	PRESCOTT	60	250	50	MSK	8,8	1	
2	Bridge	PUTNAM	50	PRESCOTT	60	250	50	MSK	14,6	1	
3	Brewer	PUTNAM	50	PRESCOTT	60	150	50	MSK	16,9	1	
4	Nixon	PUTNAM	50	PRESCOTT	60	150	50	MSK	16,8	1	
5	Woodbrde	PUTNAM	50	PRESCOTT	60	100	50	MSK	15,8	1	
6	Little	PUTNAM	50	PRESCOTT	60	100	50	MSK	15,8	1	
7	Ephraim	PUTNAM	50	PRESCOTT	60	100	50	MSK	8,6	1	
8	Dooltle	PUTNAM	50	PRESCOTT	60	100	50	MSK	14,8	1	
9	Putnam	PUTNAM	50	PRESCOTT	60	200	55	MSK	8,7	1	
10	Gerrish	PUTNAM	50	PRESCOTT	60	300	50	MSK	7,9	1	
11	Stark	PUTNAM	50	PRESCOTT	60	600	65	MSK	14,4	1	
12	Reed	PUTNAM	50	PRESCOTT	60	600	50	MSK	14,5	1	

ARTILLERY

Unit#	CORPS		EFF		#Guns	
13	Gridley	PRESCOTT	35	2 6PD	5,8	1
14	Trevett	PRESCOTT	35	2 6PD	7,8	1
15	Callnder	PRESCOTT	35	2 6PD	6,8	1

BRITISH BUNKER HILL ORDER OF BATTLE

Unit #	NAME	DIV	Division LEADER		CORPS LEADER		MEN	EFF	WEAP	SETUP	TURN
			BONUS	CORPS	BONUS					ORENTRY SQ.	OF ENTRY
16	LT INF	PIGOT	40	HOWE	60	295	90	MSK	20,1	1	
17	Grenadrs	PIGOT	40	HOWE	60	295	90	MSK	20,2	1	
18	5th FT	PIGOT	40	HOWE	60	240	75	MSK	22,1	1	
19	38th FT	PIGOT	40	HOWE	60	240	75	MSK	22,2	1	
20	43rd FT	PIGOT	40	HOWE	60	240	75	MSK	21,2	1	
21	52nd FT	PIGOT	40	HOWE	60	240	75	MSK	21,1	1	
22	47th FT	PIGOT	40	HOWE	60	240	75	MSK	23,3	2	

Unit #	NAME	DIV	Division	CORPS	CORPS	MEN	EFF	SET UP TURN		
			LEADER		LEADER			ORENTRY	OF	ENTRY
			BONUS		BONUS			WEAP	SQ.	
23	63rd L&G	PIGOT	40	HOWE	60	180	90	MSK	23,3	2
24	1/M L&G	PIGOT	40	HOWE	60	140	90	MSK	23,3	2
25	2/M L&G	PIGOT	40	HOWE	60	140	90	MSK	23,3	2
26	63rd FT	CLINTON	40	HOWE	60	200	75	MSK	21,7	3
27	2/MARINE	CLINTON	40	HOWE	60	200	75	MSK	21,7	3

ARTILLERY

Unit #			CORPS			EFF	# Guns
28	HOWE A		HOWE			75	2 6PD 21,7 3
29	HOWE B		HOWE			75	2 6PD 21,7 3
30	HOWE C		HOWE			75	2 6PD 21,7 3

17.3 Bunker Hill Victory Squares

Victory points are awarded for the following squares:

American	British
8,8 = 300 pts	0,9 = 500 pts
14,5 = 150 pts	8,8 = 300 pts
16,9 = 150 pts	14,5 = 150 pts
23,3 = 500 pts	16,9 = 150 pts

17.4 Bunker Hill Strategy and Tactics

—American

Don't move too many units out of their starting entrenchments. These are valuable defensive positions. A good strategy is to have Reed, Prescott, Brewer, and Nixon stay put while reinforcing the southern flank with Woodbridge, Doolittle, and Stark.

Don't commit Stark or Bridge until you're sure the British aren't just trying to draw you out of your entrenchments. By the end of the first turn, if at least half of the British units are south of Y row 8, the British have committed to a southern attack. You can then afford to move Stark and Bridge out.

Reed is a powerful unit and can hold the fence on his own for a turn or so, even against overwhelming odds. Don't withdraw this unit too soon.

Stark is considered a Divisional Commander who helps Putnam for Command Control purposes. Use him to keep the Redoubt area controlled (square 15,9 is a good place for him). This frees Putnam to hold the line to the south of Breed's Hill.

One final note, the British are outnumbered, but they are much more powerful than the Americans. Don't expect your units to be able to stand up to them in the open. Slowly give ground, but make the British pay for it.

—British

If the Americans are in the fence and breastworks (on Breeds Hill) in force, your only practical option is to swing to the south of Breeds Hill. If you assault the fence or breastworks while they are even moderately defended, you will take devastating losses.

Consider sending five units south on the first turn, leaving one unit on the road near the swamp to guard your reinforcement square. Unless the American player moves to stop you, you should have all five of these units south of Y row 9. If the American player does move a unit out to stop you, you have the strength to destroy that unit and move on.

Be careful not to move adjacent to Reed or Stark without a large force. They can cripple a unit with one volley. Do not move adjacent to a breastworks or the redoubt until you are ready to overrun it by attacking it from at least four sides with units ordered to melee. Push the American units back behind Breeds Hill being careful not to overtake your units. You should be ready to begin overrunning Breeds Hill about the time that your artillery arrives.

Try to attack the Redoubt through its

flanks. You won't get a flank modifier, but his fire against you will be greatly reduced. After you take the Redoubt, you should be able to clear the Americans off of Breeds Hill. At this point you have to decide whether to go after the fence, Bunker Hill, or both. This decision will largely depend on how well you have done up to this point.

Try to have at least one unit adjacent to the American Player's Victory Squares at the end of the game.

18.0 MONMOUTH

The Battle of Monmouth game is played in 9 turns. It represents the time from 11 a.m. until 8 p.m. on June 28, 1778.

18.1 Special Monmouth Rules

The following British units use American fire charts for fire into and out of the village and woods and American woods OP movement costs: 1/1 LT and 2/1 LT. Wing Commanders function as Corps Commanders for Command Control purposes. British Brigade Leaders act as Division Leaders and British Division Leaders act as Corps leaders for Command Control purposes. The American player may choose to bring on the optional Morgan unit(#0). Choosing this option will give the British player 100 Victory points.

18.2 Orders of Battle

AMERICAN MONMOUTH ORDER OF BATTLE

Unit #	NAME	DIV	Division LEADER BONUS	WING	WING LEADER BONUS	MEN	EFF	SET UP OR ENTRY WEAP SQ.	TURN OF ENTRY
0	MORGAN			Lee	40	500	75	RFL 0,10	3
1	MNTH MI	Dickinsn	10	Lee	40	400	50	MSK 47,6	1
2	MIDD MI	Dickinsn	10	Lee	40	200	50	MSK 46,6	1
3	Hunt MI	Dickinsn	10	Lee	40	200	50	MSK 46,6	1
4	Scott A	Lafayette	30	Lee	40	500	60	MSK 44,16	1
5	Scott B	Lafayette	30	Lee	40	500	60	MSK 44,17	1
6	Scott C	Lafayette	30	Lee	40	440	65	MSK 44,17	1
7	Wayne A	Lafayette	30	Lee	40	350	70	MSK 45,17	1
8	Wayne B	Lafayette	30	Lee	40	300	80	MSK 45,18	1
9	Wayne C	Lafayette	30	Lee	40	350	60	MSK 45,19	1
10	1 N.J.	Maxwell	20	Lee	40	300	60	MSK 44,14	1
11	2 N.J.	Maxwell	20	Lee	40	300	60	MSK 44,14	1
12	3-4 N.J.	Maxwell	20	Lee	40	400	60	MSK 44,15	1
13	9 PA-JKN	Wayne	40	Lee	40	400	65	MSK 46,13	1
14	Scott	Wayne	40	Lee	40	400	60	MSK 46,14	1
15	Varn	Wayne	40	Lee	40	400	60	MSK 46,15	1
16	1Penn			Stirling	60	352	60	MSK 0,10	5
17	2Penn			Stirling	60	401	60	MSK 0,10	5
18	3Penn			Stirling	60	343	65	MSK 0,10	5
19	Glover			Stirling	60	512	60	MSK 0,10	5
20	Learned			Stirling	60	294	60	MSK 0,10	5
21	Pattersn			Stirling	60	357	60	MSK 0,10	8
22	Woodford			Greene	60	385	60	MSK 0,10	6
23	N.C.			Greene	60	369	60	MSK 0,10	6
24	Poor			Greene	60	639	65	MSK 0,10	6
25	Huntngtn			Greene	60	509	60	MSK 0,10	6

Unit # NAME	DIV	Division LEADER	WING BONUS	WING LEADER	MEN	EFF	SET UP OR ENTRY		TURN OF ENTRY
		BONUS					WEAP	SQ.	
26 1 MD			Smllwood	10	657	70	MSK	0,10	8
27 2 MD			Smllwood	10	529	70	MSK	0,10	8
28 Muhlbrg			Smllwood	10	575	60	MSK	0,10	8
29 Weedon			Smllwood	10	449	60	MSK	0,10	7

Unit		ARTILLERY							
#		WING		EFF		# Guns			
30 Lee A		Lee		60		4 6PD	46,14		1
31 Lee B		Lee		60		4 6PD	45,18		1
32 Lee C		Lee		60		4 3PD	44,15		1
33 Stirl.A		Stirling		60		4 3PD	0,10		5
34 Stirl.B		Stirling		60		2 6PD	0,10		6
35 Greene A		Greene		60		4 3PD	0,10		6
36 Greene B		Greene		60		2 6PD	0,10		6

BRITISH MONMOUTH ORDER OF BATTLE

Unit # NAME	BRG	Brigade LEADER		DIV	Division LEADER		MEN	EFF	SET UP OR ENTRY		TURN OF ENTRY
		BONUS	BONUS		BONUS	BONUS			WEAP	SQ.	
37 16LT.DRG				Cornwallis	70	305	75	CRB	50,13		1
38 Q.A.RNGR				Cornwallis	70	385	65	CRB	52,10		1
39 1/1 LT				Cornwallis	70	350	85	MSK	49,16		1
40 2/1 LT				Cornwallis	70	350	85	MSK	49,16		1
41 1/1/BR.G				Cornwallis	70	290	99	MSK	49,18		1
42 2/1/BR.G				Cornwallis	70	310	99	MSK	49,18		1
43 1/2/BR.G				Cornwallis	70	300	99	MSK	49,17		1
44 2/2/BR.G				Cornwallis	70	300	99	MSK	49,17		1
45 1 Hess.G	Loos	30		Cornwallis	70	330	85	MSK	51,21		1
46 2 Hess.G	Loos	30		Cornwallis	70	400	85	MSK	52,22		1
47 3 Hess.G	Loos	30		Cornwallis	70	270	85	MSK	53,22		1
48 15/3 FT	Grey	30		Cornwallis	70	300	75	MSK	52,16		3
49 17/3 FT	Grey	30		Cornwallis	70	300	75	MSK	52,16		3
50 1/42/3FT	Grey	30		Cornwallis	70	305	75	MSK	52,16		3
51 2/42/3FT	Grey	30		Cornwallis	70	300	75	MSK	52,16		3
52 44/3 FT	Grey	30		Cornwallis	70	310	75	MSK	52,16		3
53 33/4 FT	Agnew	30		Cornwallis	70	350	85	MSK	52,16		3
54 37/4 FT	Agnew	30		Cornwallis	70	350	75	MSK	52,16		3
55 46/4 FT	Agnew	30		Cornwallis	70	300	75	MSK	52,16		3
56 64/4 FT	Agnew	30		Cornwallis	70	410	75	MSK	53,16		3
57 7/5 R.F	Leslie	30		Cornwallis	70	300	75	MSK	53,16		3
58 26/5 FT	Leslie	30		Cornwallis	70	290	75	MSK	53,16		3
59 63/5 FT	Leslie	30		Cornwallis	70	300	75	MSK	53,16		3
60 1/BR.GDS				Cornwallis	70	375	85	MSK	53,16		3
61 2/BR.GDS				Cornwallis	70	400	85	MSK	53,16		3

Unit #		ARTILLERY							
		CORPS		EFF		# Guns			
62 A/1 DIV		Cornwallis		75		2 3PD	49,19		1
63 B/1 DIV		Cornwallis		75		4 6PD	53,16		3
64 C/1 DIV		Cornwallis		75		4 6PD	53,16		3
65 D/1 DIV		Cornwallis		75		4 6PD	53,15		3
66 E/1 DIV		Cornwallis		75		2 12P	53,15		3

18.3 Monmouth Victory Squares

Victory points are awarded for the following squares:

American	British
21,10 = 100 pts	0,10 = 200 pts
21,18 = 100 pts	6,27 = 200 pts
41,11 = 200 pts	9,13 = 200 pts
47,21 = 1000 pts	12,17 = 200 pts
	15,6 = 200 pts
	21,10 = 100 pts
	21,18 = 100 pts
	33,3 = 200 pts

18.4 Monmouth Strategy and Tactics

—American

Attack immediately. Don't let your beginning advantage go to waste. Move all of your artillery to within three squares of the British line and fire. Consider concentrating an infantry assault against his artillery unit at the onset.

Be prepared to begin retreating at the end of the second turn. You will have to keep ahead of the arriving British reinforcements. Pull all the way back to the woods on the hill in front of the hedge. If losses are heavy, pull back to the hedge. You may have to sacrifice some rear guard units to slow the British advance.

Have one division north of the creek to stall his progress and use the woods. Your units have an advantage in the woods.

When your reinforcements arrive, try to push the British off at least one of the center objectives and deny him the points for both.

It is often a good idea to put a 6PD artillery unit on the hill on the southwest part of the map to take advantage of its height advantage.

—British

Be cautious for the first few turns while the Americans outnumber you, and then get your units in a position to attack on turn 3. Use your cavalry to flank the Americans and cut off their retreat.

When your reinforcements come on, charge hard after the Americans and chase him to the objective squares as fast

as you can. Your time to attack is after your reinforcements arrive and before the bulk of the American units appear.

Once the American reinforcements arrive, you need to switch to the defense. You want to have your objectives in hand by this time. Make a solid line to hold all of your objectives.

Use your light units to scout the woods for hidden American units. These Americans could get into your rear area and capture Victory Squares if you bypass them.

19.0 SARATOGA

The Battle of Saratoga is played in seven turns which represent the time from 1 p.m. until 8 p.m. on September 19, 1777.

19.1 Special Saratoga Rules

Units cannot move through creeks. The three bridges on the X coordinate 44 row can be rebuilt by a British unit which is adjacent to them at end of the turn. If British unit #55 (47th Batt) is routed, then British units will receive less ammunition in subsequent turns and the American player will receive 500 Victory points.

The following British units use the American fire charts for firing into and out of woods and pay American OP costs for woods movement: LT INF, Rangers, Q.L.Rngr, K.L.Amer, Canadian, Iroquois, and Brns Jgr.

American Division Commanders act as Corps Commanders and Brigade Commanders act as Division Commanders for Command Control purposes.

The British Army Commander acts as a Corps Commander and the Corps Commander act as Division Commanders for Command Control purposes.

At the beginning of the game, the

American player secretly chooses one of the following options:

—1. Gates' units may not move unless British move south of Y row 24. British lose 200 Victory points if this option is chosen.

—2. Gates' units may move as soon as the Victory score is -450 or

less or if the British move south of y row 24. No additional victory points are awarded to either side if this option is chosen.

—3. Gates' units are immediately available. Choosing this option costs the Americans 600 Victory Points.

19.2 Orders of Battle

AMERICAN SARATOGA ORDER OF BATTLE

Unit #	NAME	BRG	Brigade LEADER BONUS	DIV	Division LEADER BONUS	MEN	EFF	WEAP	SET UP OR ENTRY SQ.	TURN OF ENTRY
0	3rd Mass	Nixon	30	Gates	20	200	65	MSK	29,35	1
1	5th Mass	Nixon	30	Gates	20	200	60	MSK	30,35	1
2	6th Mass	Nixon	30	Gates	20	200	60	MSK	31,36	1
3	7th Mass	Nixon	30	Gates	20	200	60	MSK	32,36	1
4	10th Mass	Pattersn	30	Gates	20	200	65	MSK	33,37	1
5	11th Mass	Pattersn	30	Gates	20	200	70	MSK	34,37	1
6	12th Mass	Pattersn	30	Gates	20	200	60	MSK	35,38	1
7	14th Mass	Pattersn	30	Gates	20	200	65	MSK	36,39	1
8	1st Mass	Glover	60	Gates	20	200	60	MSK	36,40	1
9	4th Mass	Glover	60	Gates	20	200	65	MSK	37,41	1
10	13th Mass	Glover	60	Gates	20	200	65	MSK	37,42	1
11	15th Mass	Glover	60	Gates	20	200	60	MSK	37,43	1
12	2 AL MI	Glover	60	Gates	20	400	55	MSK	41,43	1
13	17 AL MI	Glover	60	Gates	20	400	55	MSK	42,43	1
14	DU&UL MI	Glover	60	Gates	20	400	55	MSK	44,44	1
15	2nd N.Y.	Poor	60	Arnold	70	200	70	MSK	11,23	1
16	4th N.Y.	Poor	60	Arnold	70	200	70	MSK	11,24	1
17	1st N.H.	Poor	60	Arnold	70	200	65	MSK	7,13	1
18	2nd N.H.	Poor	60	Arnold	70	200	60	MSK	11,20	1
19	3rd N.H.	Poor	60	Arnold	70	200	65	MSK	7,14	1
20	Cook MI	Poor	60	Arnold	70	200	65	MSK	11,21	1
21	Latmr MI	Poor	60	Arnold	70	200	55	MSK	11,22	1
22	11th VA	Morgan	70	Arnold	70	350	75	RFL	14,12	1
23	Dearbn	Morgan	70	Arnold	70	300	70	RFL	15,12	1
24	1 N.Y. MI	Broeck	10	Arnold	70	200	50	MSK	41,45	1
25	2 N.Y. MI	Broeck	10	Arnold	70	200	50	MSK	42,45	1
26	3 N.Y. MI	Broeck	10	Arnold	70	200	50	MSK	43,45	1
27	2nd Mass	Learned	30	Arnold	70	200	70	MSK	20,28	1
28	8th Mass	Learned	30	Arnold	70	200	65	MSK	20,29	1
29	9th Mass	Learned	30	Arnold	70	200	60	MSK	20,30	1
30	3rd N.Y.	Learned	30	Arnold	70	200	65	MSK	21,30	1

ARTILLERY

Unit #	CORPS	EFF	# Guns	
31	Battery A	Gates	50	4 6PD 29,35 1
32	Battery B	Gates	50	4 6PD 30,35 1
33	Battery C	Gates	50	4 6PD 31,36 1
34	Battery D	Gates	50	5 3PD 34,37 1
35	Battery E	Gates	50	5 3PD 36,39 1

BRITISH SARATOGA ORDER OF BATTLE

Unit #	NAME	CORP	Corps LEADER		Army LEADER		MEN	EFF	SET UP OR ENTRY		TURN OF ENTRY
			BONUS	ARMY	BONUS				WEAP	SQ.	
36	24th Bat	Fraser	60	Burgoyne	30	300	80	MSK	4,0		3
37	LT INF	Fraser	60	Burgoyne	30	300	80	MSK	3,0		3
38	Grenadrs	Fraser	60	Burgoyne	30	300	80	MSK	5,0		3
39	Rangers	Fraser	60	Burgoyne	30	150	85	RFL	2,0		3
40	Q.L.Rngr	Fraser	60	Burgoyne	30	200	65	MSK	3,0		1
41	K.L.AMER	Fraser	60	Burgoyne	30	200	70	MSK	2,0		1
42	Canadian	Fraser	60	Burgoyne	30	200	70	MSK	3,1		1
43	Iroquois	Fraser	60	Burgoyne	30	200	80	MSK	2,1		1
44	9th Batt	Hamilton	60	Burgoyne	30	250	75	MSK	15,7		1
45	20th Bat	Hamilton	60	Burgoyne	30	250	85	MSK	14,9		1
46	21st Bat	Hamilton	60	Burgoyne	30	250	75	MSK	16,9		1
47	62nd Bat	Hamilton	60	Burgoyne	30	350	75	MSK	15,9		1
48	Rhetz	Riedesel	60	Burgoyne	30	400	75	MSK	44,8		1
49	Specht	Riedesel	60	Burgoyne	30	350	80	MSK	44,7		1
50	Riedesel	Riedesel	60	Burgoyne	30	400	80	MSK	44,6		1
51	Brns Wick	Breyman	30	Burgoyne	30	300	75	MSK	8,0		4
52	Brns Jgr	Breyman	30	Burgoyne	30	200	75	RFL	8,0		4
53	1Brey GR	Breyman	30	Burgoyne	30	250	80	MSK	8,0		4
54	2Brey GR	Breyman	30	Burgoyne	30	250	80	MSK	8,0		4
55	47th Bat	Phillip	30	Burgoyne	30	200	70	MSK	44,0		4
56	Hesse-HA	Phillip	30	Burgoyne	30	300	70	MSK	44,0		4

ARTILLERY

Unit #	ARMY	EFF	# Guns	
57	RES A	Burgoyne	75	4 6PD 8,0 4
58	RES B	Burgoyne	75	4 6PD 8,0 4
59	Center A	Burgoyne	75	4 6PD 15,6 1
60	Center B	Burgoyne	75	4 3PD 15,5 1
61	Left	Burgoyne	75	6 6PD 44,5 1
62	PARK A	Burgoyne	75	3 24D 44,0 4
63	PARK B	Burgoyne	75	4 12D 44,0 4
64	PARK C	Burgoyne	75	4 6PD 44,0 4
65	PARK D	Burgoyne	75	4 MTR 4,0 4

19.3 Saratoga Victory Squares

Victory points are awarded for the following squares:

American	British
6,11 = 200 pts	6,11 = 200 pts
10,8 = 200 pts	10,8 = 200 pts
13,12 = 200 pts	10,16 = 300 pts
15,5 = 300 pts	13,12 = 200 pts
15,9 = 200 pts	16,39 = 500 pts
44,0 = 500 pts	29,37 = 500 pts
	42,45 = 500 pts

19.4 Saratoga Strategy and Tactics

—American

What you do depends on which of the

options you choose.

— If you choose option 1:

Try to push the British north of the ravine and into the woods centered on 7,2. The British will slowly push you back, but the longer you can keep the fight in the woods, the better your chance of holding two Victory Squares at game's end.

— If you choose option 2:

You must be aggressive at the onset. Try to take three of the four objectives around the woods in 10,10. Deny the British the 15,9 objective. This will allow Gates to move up the road on turn 2.

You should have at least two objectives by the end of the game and should have control of all four center objectives.

— If you choose option 3 :

Push the British as far north as you can early on and keep pushing until you have taken the bridge at 15,5. If you don't hold all four center objective squares, you are in danger of losing the game.

Overall, unless you need them to attack in option 2, send the 1st and 3rd N.H. into the woods at 5,5 and 5,6 to slow the progress of the British skirmishers. Keep your rifles at a range of 2 from the enemy units.

Watch out for the British artillery. He has artillery immediately and you don't so be careful how you move in open terrain. Remember that except in the BASIC GAME, he can move his artillery up to you and fire it.

If you manage to push the British across the ravine, set up a defensive line on its south side.

—British

If you are playing with hidden units, you won't know which option the American Player has chosen until you see some of Gates' units move.

Hold the hill at 15,9 if at all possible. It provides Victory points and is an excellent place to put artillery. From here, artillery can fire on the American rifle units and support attacks against two objectives.

Close with his rifle units and attack them from adjacent squares. His rifles aren't much better at one square range than they are at two square range. Your muskets are much better when they're adjacent. If you don't drive off the rifle units, they will pick your units to death throughout the game.

Don't let the American units advance too far into the woods near where your reinforcements enter or you will be trying to dig them out for the rest of the game.

Hold the hill, try to hold the road at 10,4, and hold the woods as far south as you can. Square 8,3 should be sufficient.

Remember that your artillery gives

you an advantage in the open while your opponent has an advantage in the woods.

Unless you are prepared to take a big gamble, don't move down the road by the river. This could activate Gates' units and bring them into the game at no Victory point cost to the Americans.

20.0 TABLES AND EXAMPLES

20.1 Command Control

Determining Command Control is a multi-stepped process. These steps include determining the distance from a unit to its leaders and determining its leaders' Command Control Effect.

20.11 Distance from Leader and Base Number

For every square a unit is away from its Divisional Commander, it is penalized 5 points up to a maximum penalty of 35 points (7 squares). For every square a unit is away from its Corps Commander, it is penalized 1 point up to a maximum of 10 points (10 squares).

Units which are in the same square as their Corps Commander (or adjacent to that square) are not penalized for being away from their Division Commander.

The total number of points a unit is penalized is divided into 28. The number which results from this division (the quotient) will be modified as necessary to provide a Base Command Control Number between 0.5 and 1.5. Numbers below 0.5 will be modified up to 0.5. Numbers above 1.5 will be modified down to 1.5. Numbers between 0.5 and 1.5 will be rounded down as needed to produce a number with only one decimal point (EXAMPLES: 1.27 would be rounded down to 1.2, 1.326 would be rounded down to 1.3, and 0.599999 would be rounded down to 0.5).

20.12 Leader Bonuses and Command Control Effect

Each leader has a base Bonus rating which is stated in the Order of Battle. At the beginning of each turn, a random number

from 1 to 64 is generated (this is affected by level of play, Main Menu option H) and is added to each leader's bonus (the random numbers may be different for different leaders). The results of this are announced during the Command Control Phase at the beginning of each turn when each leader is given a rating ranging from Confused!!! (worst) to Confident (best). This total of bonus plus random is used to determine each leader's Command Control Effect as follows:

Random Plus Bonus	Effect	Message Given on Screen
0-50	-0.3	Leader Confused!!!
51-71	-0.2	Leader Indecisive!!
71-90	-0.1	Leader Cautious!
91+	0	Leader Confident

20.13 Determining Final Command Control

A unit's leaders' Command Control Effects are subtracted from its Base Command Control Number to arrive at its Final Command Control rating. The following example illustrates this procedure. Note that Command Control is only determined once per turn — during the Command Control Phase.

The examples below involve the brigades of Scot, Varn, and 9 PA-JKN of Wayne's Division of Lee's Corps (Wing).

During the Command Control Phase, Lee is declared CAUTIOUS! and Wayne is declared INDECISIVE!. Wayne's brigades are situated as follows (#4 is a unit from a different division but the same corps):

#1 WAYNE			#2
#4 LEE		#3	

The #1 unit has the leader Wayne attached to it. The #4 unit belongs to a different division and has Lee attached to it.

The #1 unit is 0 squares away from its Divisional Commander and 2 Squares away from its Corps Commander. It is penalized 0 points for the distance to its Divisional Commander and 2 points for the distance to its Corps Commander. Its base number is 28 divided by 2 ($28/2$) or 14. This is rounded down to a Base Command Control Number of 1.5.

The #2 unit loses 20 points for being four squares away from its Divisional Commander and 4 points for being four squares away from its Corps Commander. Its base number is 28 divided by 24 ($28/24$) or 1.16. This is rounded down to a Base Command Control Number of 1.1.

The #3 unit loses 10 points for being two squares away from its Division Commander and 2 points for being two squares away from its Corps Commander. Its base number is 28 divided by 12 ($28/12$) or 2.333. This is rounded down to a Base Command Control Number of 1.5.

The #4 unit is not penalized for being away from its Division Commander and is in the same square as its Corps Commander. With 0 penalties, its Base Command Control Number is 1.5.

Since Lee was declared CAUTIOUS!, all units in his corps have 0.2 subtracted from their Base Command Control Number. Since Wayne was declared INDECISIVE!, all units in his division have 0.1 subtracted from their Base Command Control Number.

Units #1 and #3 then have a Command Control Rating of 1.5 (Base) minus 0.2 (Corps Leader Effect) minus 0.1 (Divisional Leader Effect) for a Final Command Control Rating of 1.2.

Unit #2 has a Command Control rating of 1.1 (Base) minus 0.2 (Corps) minus 0.1 (Division) for a Final Command Control Rating of 0.8.

Unit #4 belongs to a Division with a CONFUSED!!! commander. Its Command Control is computed as 1.5 (Base)

minus 0.2 (Corps) minus 0.3 (Division) for a Final Command Control Rating of 1.0. Note that while units stacked with the Corps Commander are not penalized for

being away from their Division Commander, they are still affected by the Division Commander's Command Control Effect Rating.

20.2 Operation Points

A unit's Operation's Points on any particular turn are determined by its Command Control Rating, its Morale, and a random number as illustrated by the following table:

Command Control	30 Morale	60 Morale	90 Morale
.5	8	8	8
.6	8	8	8-9
.7	8	8-9	9-10
.8	8-9	9-10	10-11
.9	9-10	10-11	11-12
1.0	10-11	11-12	12-13
1.1	11-12	12-13	13-14
1.2	12-13	13-14	14-15
1.3	13-14	14-15	15
1.4	14-15	15	15
1.5	15	15	15

20.21 Operation Costs Tables

MOVEMENT COSTS

Terrain Type Entered	OP Cost For:	INF.* DIS.CAV.	INF. COL	MTD CAV.	LIMB. ART.	UNLIMB.* ART
Clear, Ridge, Bridge		4(5)	2(3)	1(2)	2(3)	P*
Breastworks, Hedge, Rough, Village						
Fence		5(7)	3(5)	3(5)	4(6)	P*
Woods[1]		6(8)	4(6)	5(7)	6(8)	P*
Road[2]		NA	1	1	1	P*
Water		P	P	P	P	P*
Ravine		6(8)	4(6)	4(6)	6(8)	P*
Town		P	P	P	P	P*
Swamp		7(9)	5(7)	6(8)	[3]	P*
Creek		5(7)	3(5)	3(5)	5(7)	P*
Higher Elevation Per Level [4]		+1	+1	+1	+2	P*
Enter ZOC		+3	+3	+1	+3	P*
Leave ZOC		+1	+1	+1	+1	P*
ZOC to ZOC[5]		+2	+2	+2	+2	P*

[1] Most British units pay one additional OP to enter woods squares.

[2] To be eligible for road movement rate, a unit must be in Column, Mounted, or Limbered formation and be moving either horizontally or vertically (not diagonally) from one road square to another. Infantry in line/dismounted cavalry pay OP for the normal (non-road) terrain type in the square.

[3] Requires all of the units OP. May only be entered if the unit performs no other action that phase and has a minimum of 1 OP.

[4] Penalty is for each change in elevation. Entering a square that is one elevation higher would cost one additional OP. Entering a square which is two elevations higher will cost two additional OP and so on.

[5] To be eligible for ZOC to ZOC movement, the unit must be entering a friendly-occupied square. Movement penalties are cumulative. The moving unit must pay the cost to leave a ZOC, plus the cost to enter a ZOC, plus the ZOC to ZOC movement cost, plus the normal cost to enter that terrain type. ZOC to ZOC movement is normally permitted for units with insufficient OP to pay the movement cost, if it is the only action the unit performs in a phase and if that unit has at least 1 OP.

Numbers shown in parenthesis () are for diagonal movement.

P = Prohibited.

NA = Not Applicable.

* Not applicable in BASIC GAME.

20.22 Other Operation Costs

ACTION COSTS

Action Performed	OP Cost For:	INF.* DIS. CAV.	INF. COL	MTD CAV.	LIMB. ART.	UNLIMB.* ART
Change Facing		+1	0	0	0	+1
Change Formation to Column, Mounted, or Limbered*		2	NA	NA	N/A	2
Change Formation to Line, Dismounted, or Unlimbered*		NA	4	4	4*	N/A
Fortify[6]		+8*	P	P	P	+8*
Fire in Fire Phase		2	2	2	4	P*
Melee (attacker)		4	4	4	P	P*
Melee (defender)		4	4	4	4	4*

[6] Used in ADVANCED GAME only.

NA = Not Applicable.

P = Prohibited.

* Not applicable to BASIC GAME.

20.3 Fatigue Table

FATIGUE TABLE

Action	Cost
Fire and Melee Combat	
Infantry and Cavalry	+3
Artillery	+8
Enter Clear, Village, Bridge, Rough, or Road* square	+1
Enter Woods, Swamp, Creek, or Ravine Square	+2
Cross Fence or Hedge	+1
Enter Higher Terrain	+1 per elevation gain
Fortify	+15

*Only applies if unit is eligible for road movement rate. Units in road movement have a 50 percent chance of getting 1 Fatigue point per move. Units not using road movement are penalized Fatigue cost for the non-road terrain type of the square.

20.4 Efficiency Table

ACTION	COST
Unit moved onto by Routing unit	-8
Unit moved onto by retreating unit	-3
Unit retreats	-3
Unit stacked with unit that Routs	-15
Per casualties of 3 men*	-2
Unit changes formation	-2
Unit changes formation in ZOC	-2
Unit Advances	+2

*For units with less than 400 men. If a unit has over 400 men, the Efficiency loss is equal to: $2 / 3(\text{men lost}) \times 400 / (\# \text{ of men in unit})$.

20.5 Weapon/Range Casualty Table

WEAPON TYPE	ABBREV.	RANGE IN SQUARES					
		1	2	3-4	5-6	7-8	9-12
Rifle	RFL	3.5	3	.5	0	0	0
Musket	MSK	3	.5	0	0	0	0
Carbine	CRB	2	0	0	0	0	0
3 Pound Gun	3PD	4.5	2.5	1.5	1	0	0
6 Pound Gun	6PD	8.5	4.5	3.5	1.5	1	.5
12 Pound Gun	12P	15	7.5	5.5	3.5	1.5	1
24 Pound Gun	24P	19	9.5	7	4.5	2.5	1
Mortar	MTR	.5	.5	3	4.5	1.5	.5

The number under the range column for each weapon type is the number of casualties that weapon will inflict at that range per 100 men or per gun firing. These casualties are modified by other factors. Refer to Section 20.6.

20.6 Fire and Melee Strength Modifiers Table

TARGET LOCATION	FIRE	MELEE
Clear	1.00	1.00
British* units in woods or village	0.90	0.90
American units in woods or village	0.60	0.60
Ravine	0.80	0.80
Breastworks/Redoubt	0.70	0.40
Swamp	1.00	0.70
Hedge/Fence	0.70	0.70

*Some British units fire as American. Refer to scenario special rules.

FIRING UNIT'S LOCATION	FIRE	MELEE
Clear, Swamp, Hedge	1.00	1.00
Units in woods	0.90	0.90
Ravine	0.80	0.80
INF in Breastworks/Fence/Redoubt	3.0	1.00

FORMATION	FIRE	MELEE
Mounted Cavalry	0.85	2.50
Dismounted Cavalry	0.75	1.00
American Column [1]	0.30	1.00
American Line	1.00	0.80
British Column [1]	0.30	1.25
British Line	1.00	1.00
Limbered [1]	0.20	0.50**
Unlimbered	1.00	1.00

[1] Allowed to Melee Defensive Fire only.

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

SPECIAL CONDITIONS	FIRE	MELEE
Artillery Woods to Woods [2]	0.20	NA
Melee Defensive Fire	1.50	NA
Disrupted unit [1]	0.50	0.50**
Routed unit [1]	0.05	0.25**
Out of ammunition [1]	0.30	0.70
Per 10 points of attached leader bonus [3]	+10	+10
Command Control	As given	As given
Per 20 points of Fatigue	-10	-10
Per 20 points of Efficiency less than 100	-10	-10
Per artillery gun for each man less than 16	-06	NA
Unit attacked through its Flanks [1]	0.15	0.15
Target unit is Flanked	1.50	1.50

[1] Melee Defensive Fire only.

[2] Replaces other woods penalties.

[3] INTERMEDIATE and ADVANCED Games only.

NA = Not Applicable.

** May only defend in melee and with this modifier

20.61 Elevation Fire Modifiers

Firer 1 Elevation higher than target	1.10
Firer 2 Elevations higher than target	1.30
Firer 3 Elevations higher than target	1.60
Firer 4 Elevations higher than target	2.00
Firer 1 Elevation lower than target	0.91
Firer 2 Elevations lower than target	0.77
Firer 3 Elevations lower than target	0.63
Firer 4 Elevations lower than target	0.50

20.62 Additional Fire and Melee Strength Modifiers

Ammo Blow Up!: Artillery units which suffer an Ammo Blow Up have their ammunition reduced to 0.

Leader Bonus: A leader with a bonus of 20 would multiply casualties by 1.2.

Target Density: For every 20 men over 200 in the target square, casualties are increased by 0.01. For every 20 men less than 200 in the target square, casualties are decreased by 0.01.

Density of Firing Unit's Square: For every 20 men over 200 in the firer's square, casualties inflicted by that fire are reduced by 0.01. For every 20 men under 200 in the firer's square, casualties inflicted by that fire are reduced by 0.01. Does not apply to artillery fire.

Fortification level: The unit firing into the fortification is penalized .10 per level of fortification. Firing at a unit in a level 3 fortification would reduce casualties by 30 percent.

Efficiency: For every two points a unit's Efficiency is below 100, its fire is penalized by 0.01. A unit with an Efficiency of 60 would have its fire multiplied by 0.80. **EXAMPLE:** A 500 man unit with an Efficiency of 60 would have the same fire power as a 400 man unit with an Efficiency of 100 (excluding all other modifiers).

Fatigue: For every two points of Fatigue, a unit's fire is penalized by 0.01. A unit with a Fatigue of 10 would have its fire multiplied by 0.95. **EXAMPLE:** A 500 man unit with a Fatigue of 10 would have the same fire power as a 475 man unit with no Fatigue (excluding all other modifiers).

Command Control: A unit's fire is multiplied by its Command Control Number. Excluding all other modifiers, a 500 man unit with a Command Control of .8 would fire as a 400 man unit with a Command Control of 1.0 ($500 \times .8 = 400$). $400 \times 1.0 = 400$), and a 300 man unit with a Command Control of 1.5 would fire as a 450 man unit with a Command Control of 1.0 ($300 \times 1.5 = 450$). $450 \times 1.0 = 450$).

Artillerymen: Each gun requires 16 artillerymen to fully support it. When a gun has less than 16 artillerymen, its fire is reduced proportionately. **EXAMPLE:** a gun with 8 men would have its fire multiplied by 0.50. ($8 = 0.50$ of 16).

Unit Outmaneuvered: Units occupying a woods square may be outmaneuvered by enemy units which move into an adjacent wood square. Unit's which have been outmaneuvered have their fire power halved for that Combat Phase.

Successful Attack: A unit which moves next to an enemy unit may receive a successful fire bonus in the following Combat Phase. The bonus increases the unit's fire power by 50 percent.

Maximum and Minimum Modifiers: All modifiers are cumulative with a maximum of 2.00 and a minimum of 0.16. Exception: there is no minimum modifier for file by routed units. The 3 times modifier for fire from breastworks is applied after other modifiers. It is not subject to the normal 2.00 maximum modifier restriction.

20.63 Fire and Melee Strength Examples

A unit's fire causes a number of casualties equal to the number indicated on the WEAPON\ RANGE CASUALTY TABLE for the type and number of weapons firing multiplied by all modifiers.

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

-Target is 2 elevations higher than firer	= 0.77
-Firer Density	= 0.90
-Target Density	= 1.00
-Firer has .75 Efficiency	= 0.87
-Firer is in Breastworks	= 3.00
-Firer has leader w/bonus of 20	= 1.20
-Firer has 30 Fatigue	= 0.85
-Target is in Breastworks	= 0.40
-Firer has Command Control of 1.3	= 1.30
TOTAL	= 0.96

In this example, a 400 man unit that is armed with muskets and firing at a 200-man target 1 square away would inflict 11 casualties. The equation for this is:

Casualties per 100 men with muskets/one square

range = 3

Times number of men firing divided by 100 = 4

Times all modifiers = 0.96

(3x4x0.96 = 11.52) rounded down = 11.

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

20.7 Melee Results Table

The attacker's modified strength is di-

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

20.8 Disruption Table

A unit has a chance of being disrupted based on the number of men in the unit and its number of losses (LS). The chart below gives some examples:

MEN IN UNIT	NO CHANCE OF DISRUPTION	CHNCE WITH 10 LS	CHNCE WITH 15 LS	CHNCE WITH 20 LS	CHNCE WITH 25 LS	CHNCE WITH 30 LS	CHNCE WITH 50 LS
100	0 - 5 LOSSES	10%	20%	30%	40%	50%	90%
200	0 - 10 LOSSES	-	10%	20%	30%	40%	80%
300	0 - 15 LOSSES	-	-	10%	20%	30%	70%
400	0 - 20 LOSSES	-	-	-	10%	20%	60%

20.81 Disruption Recovery Table

Recovery from disruption is based on Command Control and whether or not a unit is in an enemy ZOC.

	Command Control	No Enemy ZOC	Enemy ZOC
.5		35%	12%
.6		40%	13%
.7		45%	15%
.8		50%	17%
.9		55%	18%
1.0		60%	20%
1.1		65%	22%
1.2		70%	23%
1.3		75%	25%
1.4		80%	26%
1.5		85%	28%

20.9 Rally Table

The higher a unit's Morale and Command Control, the greater its chance to recover from Rout (Rally). See the following chart for examples of percentage chance to Rally.

Command Control	MORALE			
	30	40	60	80
.5	41%	45%	53%	60%
.6	43%	47%	55%	62%
.7	45%	49%	57%	64%
.8	47%	51%	59%	66%
.9	49%	53%	61%	68%
1.0	51%	55%	63%	70%
1.1	53%	57%	65%	72%
1.2	55%	59%	67%	74%
1.3	57%	61%	69%	76%
1.4	59%	63%	71%	78%
1.5	61%	65%	73%	80%

21.0 TURN SEQUENCE

Each turn is subdivided into a number of phases which appear in the following order:

1. The Command Control Phase in which Command Control and Operation Points are determined. This is done randomly in the BASIC and INTERMEDIATE Games and by formula in the ADVANCED GAME.
2. The Reinforcement Phase in which reinforcing units enter the game map.
3. The American Player First Operation Phase when the American player moves units and gives them combat orders.
4. The First Combat Phase when combat is resolved.
5. The American Player First Recovery/Rally Phase in which American units recover from the effects of combat and American Operation Points are assigned.
6. The British Player First Operation Phase when the British Player moves units and

gives them combat orders.

7. The Second Combat Phase.

8. The British Player First Recovery/Rally Phase in which British units recover from the effects of combat and British Operation Points are assigned.

9. The American Player Second Operation Phase.

10. The Third Combat Phase.

11. The American Player Second Recovery/Rally Phase.

12. The British Player Second Operation Phase.

13. The Fourth Combat Phase.

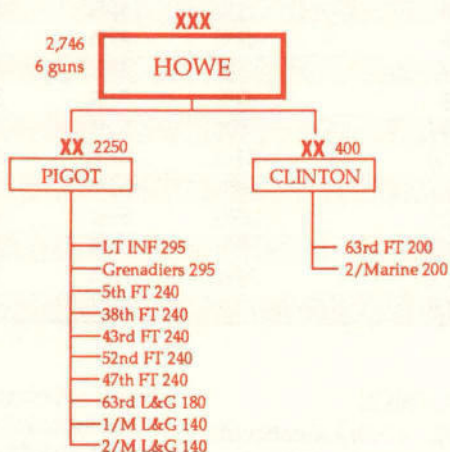
14. The British Player Second Recovery/Rally Phase.

15. The Victory Determination Phase when points for casualties and terrain objectives are totalled.

Major phases may be subdivided into minor phases (Example: 10.6 Combat Sequence).

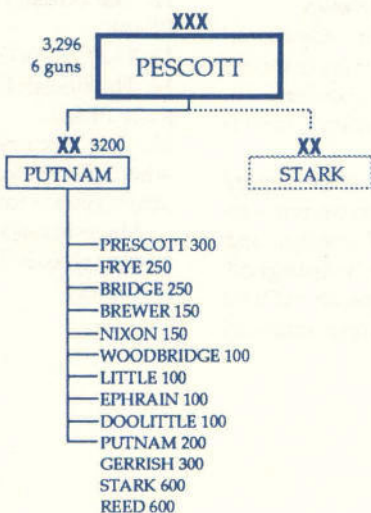
Bunker Hill British Organizational Chart

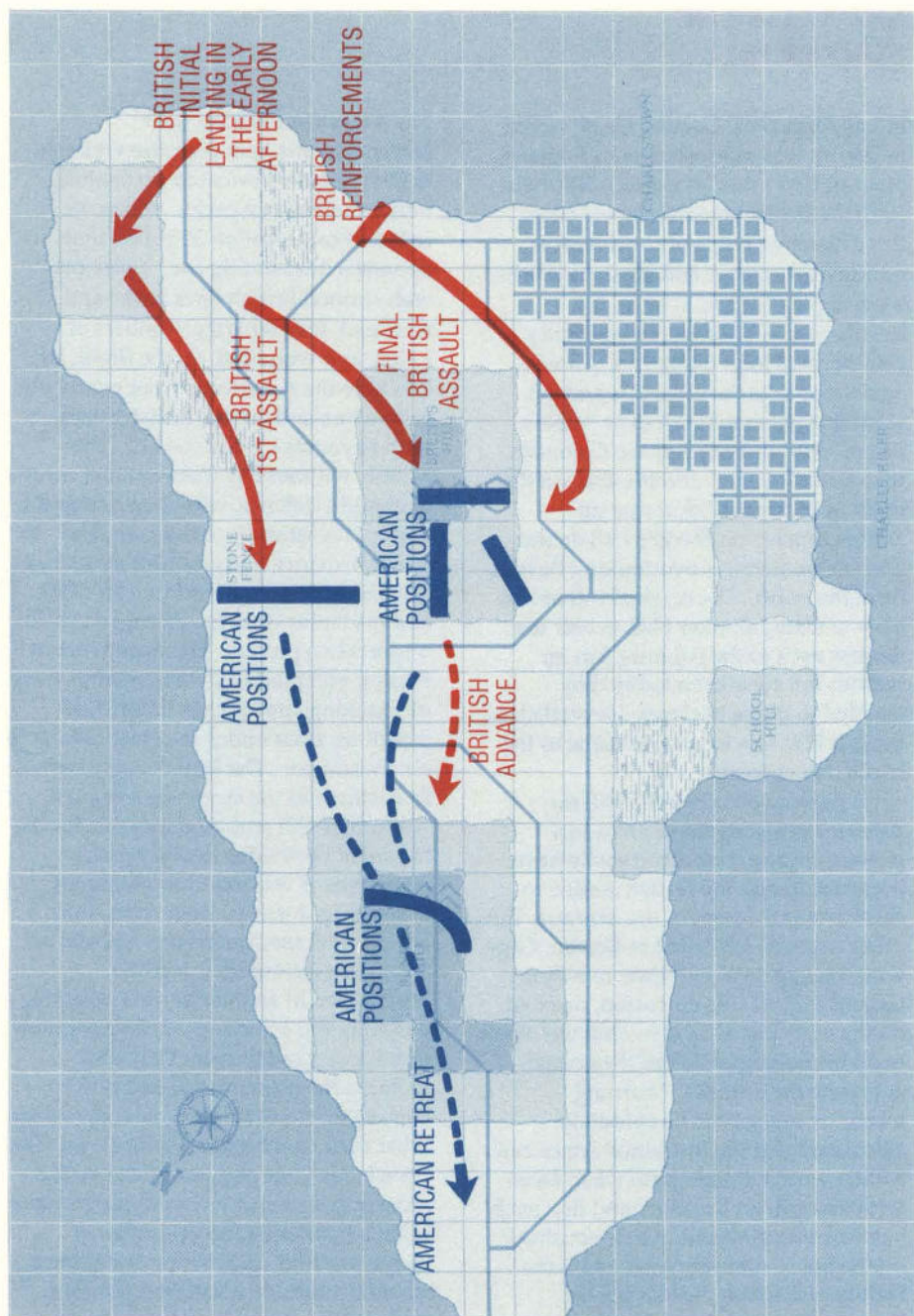
2,746 men (2,650 men, 96 artillerymen) 6 guns



Bunker Hill American Organizational Chart

3,296 men (3,200 men, 96 artillerymen) 6 guns





**HISTORICAL SITUATION MAP:
Battle of Bunker Hill**

THE BATTLE OF BUNKER HILL

In late May, 1775, General Gage's force in Boston was reinforced from England, bringing it to a total of about 6,500 men. With the British reinforcements came three major generals of considerable military experience and reputation who were to play leading roles in the Revolution — William Howe, Henry Clinton, and John Burgoyne. All were anxious to take the offensive and get what Burgoyne referred to as "elbow room." However, it was the Colonials who first took the initiative and, on the night of 16 June, 1775, threw up entrenchments on Breed's Hill on the Charlestown isthmus overlooking Boston from the north. The original intent had been to fortify Bunker Hill, nearer the narrow neck of the isthmus, but for reasons not clear even today they decided to move in closer. Nevertheless, Bunker Hill was to give its name to the battle that ensued.

In moving onto Breed's Hill the Americans placed themselves in a position where they could easily have been cut off had the British landed in their rear at the neck of the isthmus. But other councils prevailed in Boston. Gage, with the approval of Howe, to whom tactical control was entrusted, decided on the morning of 17 June that the rebels must be dislodged before they could complete their works. Scorning elaborate maneuver, he evidently calculated that the ill-trained American Militia would disintegrate when faced with disciplined Regulars and that such a defeat administered in a direct attack on the hill would show the rebels the futility of resisting British power. Howe's force of around 2,200 men was ferried from Boston to Charlestown and in midafternoon on 17 June began the attack on the American front and flanks.

The Americans behind their entrenchments held their fire while the British Regulars sweated up the hill under their heavy packs. When the redcoats came within 50 yards, they opened a devastating fire. Twice the well-formed British lines broke and retreated, leaving large numbers of killed and wounded on the field. By this time the Americans were nearly out of powder, and a third British attack with bayonets carried the hill. The Militia, without bayonets or other means of close-in defense, withdrew across the neck of the isthmus to the mainland. But Howe's victory had cost him more than 1,000 casualties to the American's 400, and his forces were too disorganized to undertake a pursuit. His experience at Bunker Hill made Howe thereafter wary of attacking Americans in fortified positions, even under the most favorable circumstances. The British again retired to Boston and the siege was resumed.

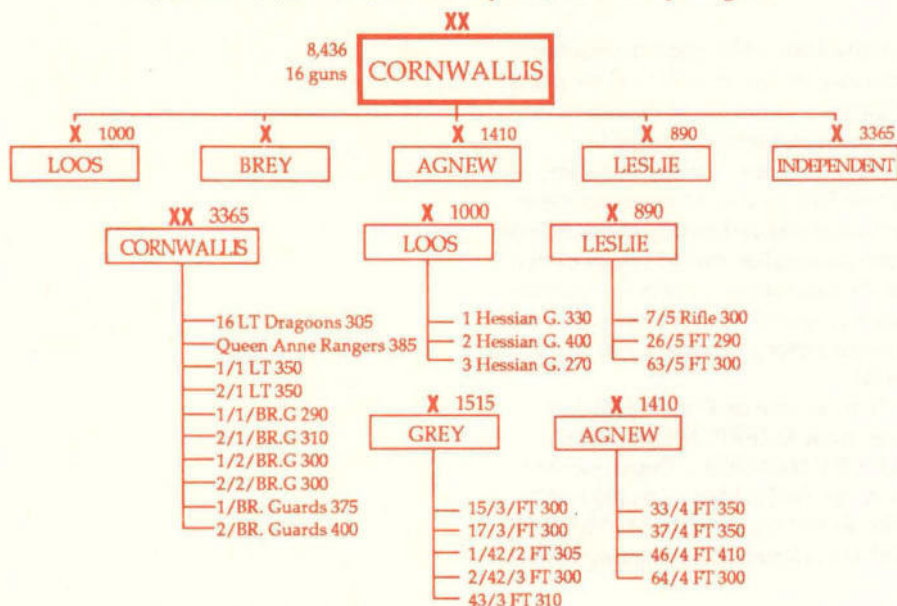
Bunker Hill was more notable for the failure of both sides to observe the principles of war than for intelligent military leadership. In moving onto Breed's Hill the Americans exposed an important part of their force to destruction in an indefensible position, violating the principles of concentration of force and maneuver. They also violated the principles of unity of command, for to this day, no one can say what their command structure was. The British, for their part, sacrificed all the advantages the American blunders gave them by violating the principles of maneuver and surprise, undertaking a suicidal attack on a fortified position rather than cutting it off from the rear. On the other hand, the untrained Militia showed surprising steadfastness in the face of attack by Regulars, and the

rapidity with which the entrenchments were dug on Breed's Hill evidenced a proficiency in the use of the spade unknown and unencouraged in European armies. On another score, Bunker Hill created a dangerous myth that untrained and hastily raised Militia were the equal of trained troops under any circumstances, a myth to which the future course of the Revolution and our national history was many times to give the lie.

(This section on Bunker Hill was taken from AMERICAN MILITARY HISTORY 1607-1958, a Department of the Army ROTC Manual published in 1959. ROTC Manual No. 145-20, July 17, 1959, U.S. Government Printing Office)

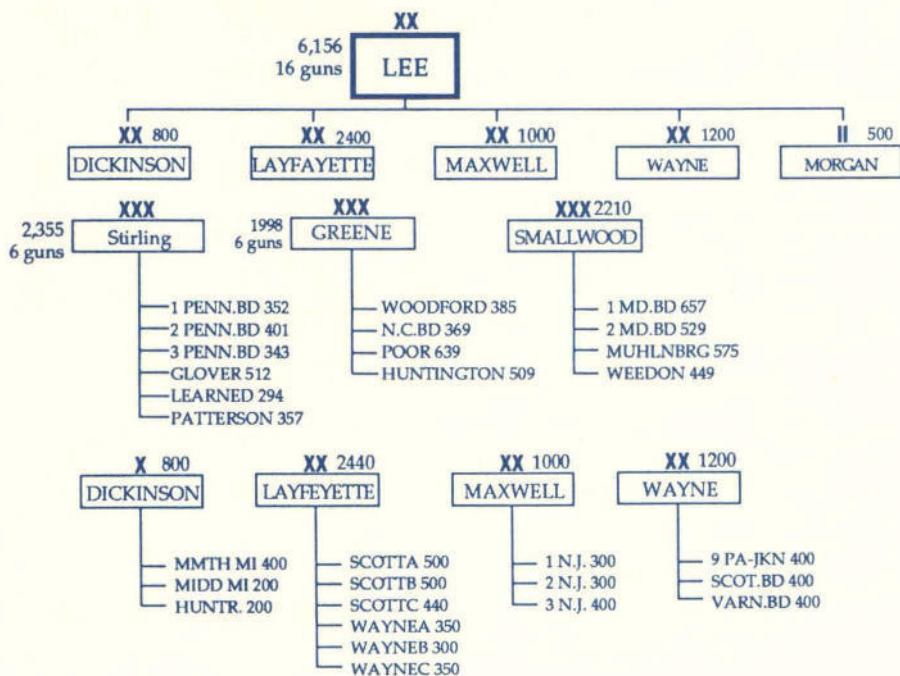
Monmouth British Organizational Chart

8,436 men (7,490 men, 256 artillerymen, 690 cavalry) 16 guns



Monmouth American Organizational Chart

12,719 men (12,271 men, 448 artillerymen) 28 guns



THE BATTLE OF MONMOUTH

One day after Lt. Gen. Henry Clinton was appointed Commander in Chief of British forces in America, he received orders to abandon his base in Philadelphia and move to New York. The entry of France into the war (prompted by the British defeat at Saratoga) had forced the British to shift their forces. Clinton was to ship out much of his army to guard more important territory.

News of the coming move caused much concern among the Tory population of Philadelphia that had remained loyal to King George. Fearful of reprisals from the rebels once the army withdrew, the Tories prevailed on Clinton to move them as well. The addition of the Tories and their baggage forced Clinton to change his plans.

Ordered to go by ship, he instead put the Tories and a small force aboard the available transport and marched the rest of his force, along with a 12-mile long wagon train, out of Philadelphia and into New Jersey.

The Americans under Lt. Gen. George Washington had been waiting for the move. Washington knew that Clinton's forces would be dispersed during the move. This could provide an opportunity to fall on the British and defeat them in detail. It was also possible that too bold a move could bring the colonials, still recovering from a winter at Valley Forge, into a major battle with the main British force. A battle they could lose.

The Americans harassed the British from all sides during the move. Marching under a sweltering June sun, Clinton rested his force for one day (June 27) at the small town of Freehold where the Monmouth County Courthouse was

located. The transport had delivered the Tories safely to New York and Clinton had decided to change his line of march to meet the transports at Sandy Point and finish the move by ship. This decision greatly reduced the risk of American attack. It also reduced the time Washington had to act.

Advance American units under Charles Lee were ordered to engage the British rearguard. Skirmishing had occurred throughout the morning of June 28 with the first significant clash coming between the British Dragoons and the American 9th Pennsylvania infantry around noon.

As contact between the two forces increased, Clinton became concerned that his wagon train, moving through a narrow ravine, might come under attack. He also saw an opportunity to turn and punish the American forces which had been dogging him throughout the move.

Many American units were fighting under new commanders. Lee, who led the force, had been opposed to going after Clinton aggressively and this caused friction between he and subordinate commander Anthony Wayne. American infantry units were fighting from the cover of forest while an accompanying artillery unit fought from clear ground. The artillery unit eventually ran out of ammunition and withdrew.

Other American units, seeing the only visible friendly unit falling back, decided to withdraw also. This left the American forces under Marquis de Lafayette (whom Washington had wanted to command the action) isolated north of Freehold. Lee found himself unable to halt this unauthorized withdrawal and it continued for

sometime until it brought him into contact with Washington at Tennent Church at about 2 p.m.

Knowing that the British were advancing, Washington formed a line along a ridge. Behind the ridge and protected from fire, he placed a reserve. The strength of these forces was increased by units that had retreated from the fight around Freehold.

While Washington was forming his line, Wayne had been positioned to blunt the British attack. His force was broken, but rallied behind a hedge row long enough to prevent the rest of Lee's men from being cut off.

Around 3:30 p.m., forces under Nathaniel Greene arrived on the American right flank. Greene occupied Comb's Hill which permitted him to place artillery to rake the British line.

Clinton launched a main attack against Washington's line at around 4 p.m. His guard and foot units moved against Washington's center, but they failed to break the Americans who were greatly aided by the flank fire provided by Greene's units.

Clinton tried to send a flanking force around the American left, but these encountered an American line and were stopped.

The heat and fatigue took their toll and the battle eventually faded into an artillery duel in which the American guns, with the advantage of height, had the advantage.

At about 5 p.m., Clinton decided to break off the action and withdraw. Wayne attacked the rear guard, but was repulsed. The Americans failed to pursue vigorously, and the British boarded the ships to New York.

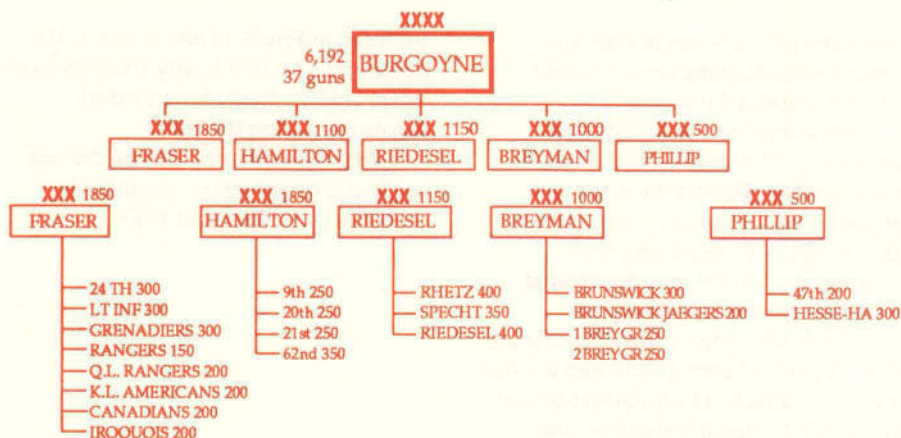
A temperature of 96 degrees was

recorded at Freehold on the day of the battle and a total of nearly 100 men (both sides) are listed as having died of sunstroke during the battle.

After Monmouth, Clinton did not conduct a major campaign until his capture of Charleston in 1780.

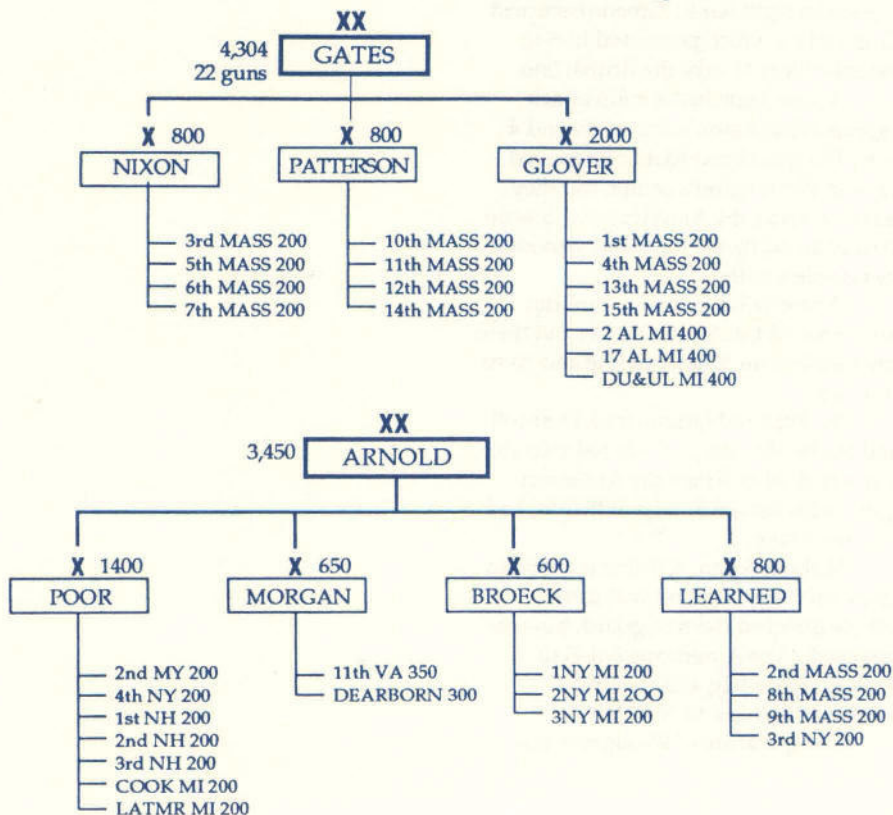
Saratoga British Organizational Chart

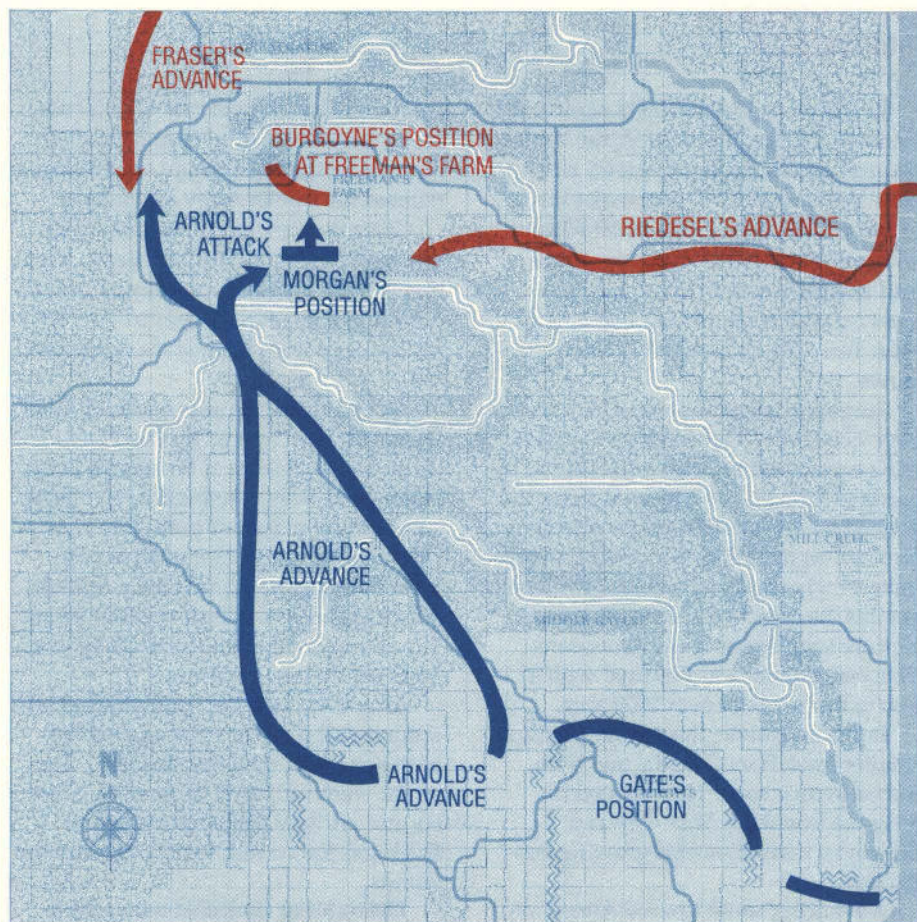
6,192 men (5,600 men, 592 artillerymen) 37 guns



Saratoga American Organizational Chart

7,402 men (7,050 men, 352 artillerymen) 22 guns





HISTORICAL SITUATION MAP: Battle of Freeman's Farm

THE BATTLE OF SARATOGA

To follow up the successes against the forces of George Washington, the British planned a three pronged assault into New England in 1777. The major thrust of this assault was to be against Albany where General John Burgoyne would lead a column south from Canada to meet up with a column led north from New York City by General William Howe.

Burgoyne began his movement with over 9,000 men. This force grew smaller as he was forced to leave units behind to garrison forts he had captured along the way. His advance delayed by American forces, Burgoyne found himself growing increasingly short of supplies. To alleviate this, he detached a strong force to capture supplies from the Americans. This detachment was defeated with a loss to Burgoyne of over 1000 men.

In the meantime, the second prong, a smaller force from Canada, had been forced to turn back. Howe failed to advance from New York City and Burgoyne's situation was growing desperate.

Advancing south toward Albany on Sept. 13, he encountered the forces of General Horatio Gates entrenched on Bemis Heights west of the Hudson River.

At 11 a.m., Sept. 17, the Battle of Freeman's Farm (part one of the Battle of Saratoga) began with a British advance on the American position.

The British intended to seize a hill on the American left flank and use it as a base for artillery to support a wheel around the American left that would result in a flank attack. This was to be accomplished by two British columns while a third attacked near the river to keep the Americans pinned there and unable to react to the British moves.

The British advance was made diffi-

cult by several days of rain which had made the ground muddy and treacherous and by the wild terrain which fragmented the British Army as it moved.

Gates was content to wait in the entrenchments for the British assault. General Benedict Arnold convinced Gates to permit him to advance against the British forces moving against the American left.

Special skirmish units under Colonel Daniel Morgan moved forward and took up positions in front of Freeman's Farm. These units were contacted by two British columns at about 1 p.m. Two New Hampshire regiments moved to reinforce Morgan and Arnold led a counter attack against the British at about 2 p.m. The counterattack failed, but Morgan's units continued to hold on.

Arnold led another counter attack at around 3:30 p.m., this one against the center of the middle British force. The attack went well until Brunswick infantry and artillery appeared on Arnold's flank and forced him to fall back into the woods.

The fighting sputtered out as darkness fell. American losses were around 320 while Burgoyne lost approximately 560. Gates had kept 4,000 men in his entrenchments who had not fired a shot during the battle.

Burgoyne fell back and entrenched to wait reinforcements and resupply. When this didn't happen, he attacked again on Oct. 7 and was again defeated.

His force reduced to only 6,000 and surrounded by 20,000 Americans, Burgoyne surrendered to Gates on Oct. 17.

This British defeat prompted France to openly assist the Americans against the British. As part of this, a treaty of alliance was signed which eventually brought France into the war against Britain.

BREED'S HILL: ENDGAME FOR PROFESSIONALS

By Robert S. Billings

Young Captain Henry Dearborn couldn't keep himself from jumping when he heard the ship's cannon fire. He knew it would be firing behind him at the narrow string of land the locals called the "Neck." The inexperienced young man was the leading company commander of Colonel John Stark's new regiment of New Hampshiremen, and he was trying hard to look equal to the role. So he didn't turn when he heard the large cannonball strike the ground and splash off into the sea. He prayed it hadn't hit one of the men marching gamely along behind him.

Directly ahead he saw the slight, erect back of Colonel Stark. The man must be made of steel, he thought. Here they were, marching almost the entire regiment across that skinny stretch of land right under the guns of what seemed to Lieutenant Dearborn to be most of the British navy—and Colonel Stark was plodding along as casually as if he were bringing the cows home for milking.

Of course, a couple of decades ago Colonel Stark had been second-in-command to Major Robert Rogers' in the Rangers; he'd been captured by Indians and gained their respect while living with them. He was one of the few old professionals in that band of rank amateurs that had gathered to hem the British inside their Boston base.

They were a noisy, quarrelsome lot, these Johnny-come-lately soldiers, and Captain Dearborn knew how contemptuously those professional British soldiers, quartered in Boston just a few hundred yard away, must look down their noses at them. It was true these gawky, untrained bumpkins had given the British professionals a bit of a scare for just a short time there, coming back

from the raid on Lexington and Concord. Those know-nothing soldiers were swarming over the countryside like bees in honey-making time, sniping from every tree and stone wall, and for just a few minutes the proud professionals had broken into a wild retreat. In fact for a moment there it looked like the redcoats might be done for, that they had chewed off a little too much to chew and they were about to gag on it. But then the wildly retreating redcoats had met the reinforcements coming up with artillery and fresh infantry, the situation had been stabilized, and the retreat had resumed in a more orderly fashion.

Neither Captain Dearborn nor his colonel had been there—they were too far away up in New Hampshire to make it in time. But they'd all heard about it. And for a moment they had really felt they might be the equal of those military professionals after all.

That had been many weeks ago, and since then a lot of people had been having second thoughts. Captain Dearborn had heard some of the old soldiers talking—veterans of the fighting in the French and Indian wars. They knew the score. They knew in an open-field, stand-up battle, ragged bands of civilian soldiers tended to evaporate very quickly when confronted by old pros with wickedly glinting bayonets and earth-shaking artillery. But those old veterans, many of whom had fought alongside the professionals in the successful Canadian campaign in the sixties, were still here, many like John Stark leading regiments of these clumsy farmboys and awkward mechanics. Captain Dearborn figured that they wouldn't be here if there wasn't some chance for these hay-foot-straw-foot neophytes in their attempt to challenge His Majesty's mighty military machine.

Only Captain Dearborn hadn't thought it would come so soon. This unruly mob of civilians had scarcely had a

chance to learn to execute those simple close-order drill patterns the old pros could do in their sleep—and without the ability to execute those commands a mob of men could't even be lined up to fight a battle, to say nothing of maneuvering under fire during one.

Still, here was Colonel Stark, plodding along in front of him, apparently undisturbed by the blasting guns, the frightening rush of cannonballs—and just over there a few hundred yards away, thousands of redcoats were probably even now preparing to cross the strip of water and take their revenge for that harried march back from Concord. Colonel Stark had fought alongside those redcoats once. He knew them well—and he also knew what the New England farmboy could and couldn't do. Colonel Stark was a practical, hard-headed man. He wouldn't go charging off on a fool's errand. And he didn't look scared or intimidated by all that British firepower.

Captain Dearborn envied him his calm, sure presence. Back there coming across the Neck the captain had suggested perhaps they should hurry across this highly exposed spot. But Colonel Stark had not increased his pace, had calmly told his subordinate that he wanted his men fresh for the battle they were going into, for one fresh man was worth ten exhausted ones. And he'd kept on at the same determined, unhurried pace he had been setting.

Captain Dearborn felt his face muscles twitch instinctively as another cannon bellowed behind him. Maybe Colonel Stark knew something he didn't, maybe there was a chance for them after all.

It was now nearing mid-afternoon, and the men Stark's regiment were marching up to support had been up there on the hill all day and had lost any feelings of military glory they may have started out with. When they had been

formed up and marched out in the middle of the previous night there had been a certain grand sense of moving up to a rendezvous with history. But the heroics had evaporated pretty fast when they had arrived, hardly knowing where they were, and had been handed picks and shovels and told to dig. They knew the British were there not far off across the water, and before many hours it would be dawn. Then the British would see their clumsy efforts at fortification—and on they would come to teach the farmboys turned soldiers a lesson. With all those cannon-bearing ships lying just off shore, the amateur soldiers had damn well better be ready. It was going to be no time for amateurs then. So they had pitched in and dug with a will.

Many myths about the Battle of Bunker Hill have been carried down the years. One of them is that the Yankees had suddenly decided, just sort of for the hell of it, to tweak the king's beard—to go out and build a fortification on Charlestown Heights. The decision had actually been made only after careful consideration—and for a very specific military purpose.

The situation at Boston was this: After the Concord raid the British had had to fight their way back to Boston. They had made it—but now they were trapped there. New England militia had poured in by the thousands, and they were now in hastily built fortifications surrounding the city. The British had the city and access to the outer world through the ships of the Royal Navy. And there they sat, all five thousand of them, hemmed in by a cloud of contemptible rabble, poorly armed and with insufficient ammunition—but still outnumbering the British perhaps three to one.

The British leadership couldn't accept this stalemate for long. One thing the British did have was experienced generals. There was Thomas Gage in overall

command. His second-in-command was Sir William Howe, and next in line was General Henry Clinton. Both men were destined to have a later try at the overall command role. Finally there was General John Burgoyne, due for an all-important role in a later campaign. Together they had agreed on a plan to bring this ridiculous rebellion to an end.

They would launch a sudden attack on the end of the American lines, then roll the panicked amateurs up toward their center in Cambridge. The date had already been chosen: June 18.

But one thing the Colonials had was a good intelligence-gathering system. They had lots of friends still inside Boston, and important military information had a way of leaking across the short span of water that surrounded much of Boston. And the system hadn't failed to leak a prompt warning of the coming attack.

At first glance the Colonials would seem to have little to worry about. They would outnumber the attacking British by 3 to 1 or better. And the redcoats would have to attack them in their fortifications. That was favorable odds for the defense, even in those days.

But all the Colonials weren't amateurs; there were some professional military minds among them—men who had fought alongside the British against the French and who knew how quickly untrained militia can dissolve when confronted by an army of hard-bitten professionals, their discipline enforced with the lash by officers unconcerned with the "liberties" of their subordinates. So far not much training had been going on among many of the American regiments. The privates seemed too busy electing and unelecting their officers as it struck their fancy, and getting into fights with "foreign" militia—any who lived more than a few miles from their own home town. How would this rabble behave when confronted with ranks of hard-

eyed professionals with bayonets?

Obviously some of the more experienced American officers thought they had a chance or they wouldn't be there. But few had any illusions this was going to be the joyous picnic a grade-school textbook today can make it appear. They knew they were not leading men who could face odds a professional army could face and still stand and fight undisturbed. Those who had been in on the "rout" of the British retreat from Concord knew how fast the sniping Colonials had scattered when British reinforcements with cannon had appeared on the scene.

Old Artemus Ward, commanding the Americans, was no dashing, heroic leader—but he was nobody's fool either. He knew if his untrained, poorly armed forces ever had to face the redcoats in a stand-up, open-field battle, even a 3-to-1 advantage wouldn't help much. It was quite probable that a good part of the Colonial soldiers couldn't even get themselves into a proper formation and faced in the right direction to fire one volley at the enemy.

No—something would have to be done to try to preempt that British attack. If it wasn't stopped before it got started, considering how many miles of fortifications the Americans had to man, any reasonably competent British officer should be able to get enough local superiority to make the panicking novices take to their heels. And with such a mob of an army, let panic start anywhere on the field and you'd never get it stopped.

But what could be done? To use these raw recruits to actually attack any part of the British in their bastion would be outright insanity.

Two officers with considerable experience in the French and Indian wars had been trying to get the leadership council to consider their plan. General Israel Putnam—"Old Put," Indian fighter, hot-head, and a leader of Connecticut

troops—and a fellow veteran of the Indian wars, Colonel William Prescott, had suggested that the Americans should send a force to construct a fortification on Charlestown Heights. This position, on the northern flank and staring straight across the water into the streets of Boston, would be bound to put snarls into any British attack plan. The whole venture initially had struck the Colonial leadership as too risky—too much like what they might expect for Old Put. But that was before this new intelligence of an imminent British attack had reached them. Now they would have to rethink the whole thing.

After much deliberation Old Put was told to go ahead. Colonel Prescott was ordered to take his own regiment and a few other troops, march them to Charlestown the night of June 16-17, and dig a fortification there. The whole operation would be under the command of General Putnam.

And so they had set out, marching at midnight, accompanied by an engineer and former member of the British army, Colonel Richard Gridley, who would lay out the fortification for them.

The place they were marching to was a strange location for a battlefield. Charlestown was on a peninsula that jutted out like a triangular bottle with a narrow neck connecting it to the mainland. It was barely one and a quarter miles long, and its breadth at the base of the triangle was about same distance. The town of Charlestown (now evacuated by most of the citizens) was at the southern end of this broadest part. The peninsula at its closest point was only separated from Boston by 600 yards of water. Except for the town and a few farmhouses, most of the land was open fields separated by many fences and stone walls. It was used to pasture cows. Some of the tall grass had been cut but had not yet been carried away.

The little triangle actually contained

three hills: Bunker Hill, the tallest, barely a half-mile from the Neck; Breeds Hill, the next tallest, a little more than a half mile further on toward the base; and finally a small mound called Morton's Hill near the eastern shore—only 34 feet high.

When the three officers (the engineer Gridley, Old Put, and Colonel Prescott) arrived at Bunker Hill there was a hurried conference. There was a difference of opinion about which hill the men should begin fortifying. The original orders had specified Bunker Hill. Prescott wanted to follow the orders directly. Putnam felt both Bunker and Breeds Hill should be fortified. But time was slipping by while they talked, and Gridley said they must start the work immediately to have work on the redoubt far enough along by daylight for defensive use. It was finally decided to start the work on Breeds Hill immediately, while Putnam would try to get reinforcements arriving later to complete the works on Bunker Hill. The decision made, the men were set to work.

The pattern drawn out on the ground by Gridley was of a typical earthwork of the day, a redoubt about 180 feet across at its longest, with certain portions jutting outward on the front and sides. There was a sally port toward the northeast corner, and a narrow entrance toward the rear. Earth was simply dug out from the inside and piled up on the perimeter. Then a ditch was dug just outside the perimeter and that dirt too added to the "walls." Any attackers would have to first cross the open space leading up to the redoubt, go down into the ditch and then up and over the walls—all this under a fire that could begin as soon as the defenders cared to trust their aim and their muskets.

The side of the fortress toward Charlestown faced a steeper slope which would be difficult to attack. But the slope on the other side of the hill was

more gradual, and here Gridley drew a breastwork extending about a hundred yards from the fort to a swampy area below it. Men would be required to man this line in order to protect the flank of the redoubt. Below this breastwork was at least two hundred yards of open field which led down to a steep drop-off and a strip of beach. There was no time now to worry about this space—and no men to station there anyway.

Throughout the night the men worked—part with the picks and shovels, the rest standing guard. As streaks of light began to spread over the eastern sky, the anxious officers wondered if they would be ready in time. Once it was really light, once the British saw them digging away there....they had no idea what to expect—but they were sure it wouldn't be pleasant.

Suddenly there came to the digging men the boom of a cannon, then the tearing sound of a cannonball flying through the air. The men ducked, dropped tools, dove for cover inside the half-constructed fortress.

They could have saved themselves the trouble. It was a wild shot in no danger of striking anyone. But they knew there would be more to come. There were a number of British warships offshore where they could train their guns on this new insult to British rule of the Colonies. Throughout most of the morning the guns had kept up their harassing fire. Though an irritant, it still had done little damage—except for blowing one man's head off and a leg off a second. The navy was under separate control—combined operations under a single command was far in the future. And this British admiral didn't want to get his larger ships in too close. He had no accurate soundings of the area—especially of that section of water inside the peninsula—and he didn't want to run the risk of having a ship go aground at low tide. Furthermore, much of the coastline of

the peninsula was a vast mudflat, especially at the Neck. This factor would not only make ships stand off, but it would also be important in limiting the choice of the British landing spots.

Across the few hundred yards of water the higher-ranking British officers were quickly called together to discuss what should be done. General Gage wanted the views of his ranking generals. General Howe, next in line of command, suggested transporting a good-sized body of troops to the peninsula, landing them on the clear space near Morton's Hill, and then attacking and driving out the troublesome diggers. General Clinton, next in line of command, didn't like that long stretch of open ground the redcoats would have to cover before hitting the redoubt in its front. Much better, he thought, to land nearer the Neck and then take the structure from behind.

General Clinton had a point—but there were arguments against landing near the Neck. The mudflats there were one problem. Would the redcoats be any better off landing where they had to wallow through many weary yards of mud—almost surely against a waiting enemy?

Howe's proposal was chosen, and he was placed in command of the operation. He hastened to select the units he would need.

But there was no reason for a hurried embarkation—they would have to wait for the tide to be high enough to let the boats float over the mud and up close to hard ground before making their landing. It would be mid-afternoon before the attack could be made. Plenty of time to prepare those who were chosen to go.

The troops chosen for the operation were the 5th, 38th, 43rd, 47th, and 52nd regiments, together with a battalion of Marines. Ten companies of light infantry and ten companies of grenadiers would go as separate formations. All men

would prepare three days' rations to carry with them. The orders went out to the chosen men.

Why load the men for an attack with so many rations? The answer was simple. General Howe didn't like giving up that marvelous attack against the entire American line that had been planned for the following day. So if these rebels could be driven off their hill in panic—why not just keep going, right into the larger plan? And if they did, the soldiers would have their rations for the whole operation with them.

The troops had been assembled at 11:30. Then came the tedious task of loading them into the fleet's row boats for the short trip across the water. At one o'clock the boats were pushed off from the wharves and set out for the Charlestown peninsula—twenty-eight boats, two abreast, making stately progress past the booming guns of His Majesty's ships. These guns now increased the intensity of their fire. It was all a grand sight to the watching British still in Boston—and a heart-stopping one to those amateur soldiers waiting on the hill by their newly dug redoubt. They had tweaked the giant's beard—and the giant was now coming out to show them what happened to men who thought they could do that and live to tell the tale.

While all these British preparations had been proceeding, the men on the hill hadn't been idle. They had continued to dig through the growing heat of the day. Once the redoubt was finished their work wasn't through. Next they had to prepare the breastwork which was to jut out from the side of the redoubt to cover the left flank. The right flank, where the land sloped more steeply two hundred yards down to the closest point of the Charlestown buildings, was to be left unfortified. Some small bodies of men were dispatched to conceal themselves in the buildings on the near edge of the

town. There they should be able to snipe at any troops attacking the redoubt's right. A large barn, about two hundred yards behind and to the right of the redoubt, was chosen as a post for additional men to harass any unit attacking on the Charlestown side.

There had been a feeble attempt to match some of the heavy British cannon fire. The Americans had managed to drag four small cannon up to the redoubt. There they found no platforms had been prepared for the guns. After considerable delay, firing platforms were finally prepared for two cannon. The men hoisted two cannon onto the platforms and, after more delay, finally got off a few ineffective rounds—with little damage to the British, but with enough force to cause a firing platform to collapse. Prescott wearily told Captain Gridley, the artillery commander, to take the cannon outside and fire them. The Americans managed to fire a few more ineffectual rounds—stirring up a hornets' nest of British return fire that sent the gunners scrambling for safety. Gridley promptly decided to withdraw to Bunker Hill—though he said Captain Callender, who commanded the other two guns, could stay if he wished. This was clearly not a glorious day in the annals of American artillery.

There were other events which did not bode well for the Americans. A short time before, the other two regimental commanders in the redoubt, Colonel Bridge and Colonel Bricket, had announced that they were too exhausted to stay any longer—intended to retreat to some of the houses in the right rear. As soon as they had left, most of their men began to drift away.

Even Old Put turned out to be a negative factor at one point. Shuttling back and forth from the redoubt to Bunker Hill to the American command post at Cambridge, alternately roaring and begging for reinforcements, water and sup-

plies for the men on the hill, the fiery little man at one point insisted that Prescott have all the entrenching tools carried back to Bunker Hill, so the men there could dig in. Prescott wearily warned him that if he did so, he would never get the men back again to fight the British when they finally appeared. Still General Putnam insisted. Prescott complied—and just as he had predicted, his little band was further depleted as the tool carriers, on reaching Bunker Hill, promptly refused to return to the redoubt. Colonel Prescott, still up there on the hill trying to inspire his remaining troops, all of them now desperate for water after their continuous exertions on one of the year's hottest days, must have often wondered what he was doing there and why he stayed. If he did, he kept those wonderings to himself, for he and his much depleted force grimly prepared to do what they could when the British unloosed their attack.

There were, however, a few positive events in the morning's dreary march toward disaster. One seems hardly worth mentioning—but in this strange war of inspired but ineffectual amateurs against indifferent but disciplined professionals, no one could tell what might suddenly make a difference. A civilian doctor, so stylishly, indeed almost foppishly dressed he must have looked out of place among the sweat-stained, exhausted men in the redoubt, appeared suddenly on the scene.

Hearts beat a little faster and spirits rose as the men learned it was Dr. Joseph Warren, spiritual and political leader of the rebels in the Boston area. Although just made a general in the army, he as yet had no command and had come out to serve as a "volunteer" in the forces fighting for freedom. A handsome, high-spirited leader, dedicated to the American cause but possessed of a dynamic forcefulness that made even hard work and sacrifice a kind of joy, Dr. Warren raised

the spirits of all who came in contact with him. He had made the decision to come so suddenly he hadn't even had time to say goodbye to the young woman he was engaged to marry.

But perhaps the biggest positive factor, at the very moment the British troops were being rowed to their landing spots, was plodding along the road leading from the Neck up to the redoubt. It was Colonel John Stark and his New Hampshiremen.

General Artemus Ward, commander of the American forces in the Boston area, had been resisting Old Put's clamor for reinforcements all morning. He had to keep his main defenses manned, he reminded the fiery little hothead. He could not strip any part of them to help Prescott, because the moment he did, the British might send a sudden attacking force straight at the weakened point, burst through, and leave the untrained civilians with a determined, professional enemy in their midst. And once the line had been broken, there was no telling what these amateur soldiers might do.

Still General Putnam implored someone to send support to the men who had marched bravely up onto that hill, confident in the belief they would not be left there unsupported.

Finally the Committee of Safety, civilians and amateurs as they were, took a hand in the game. Send them support, they ordered Ward. Perhaps this was the beginning of a treasured American tradition—the subordination of the military to civilian leadership. At any rate, it was obviously the right decision—and none too soon.

Ward, willing enough to follow the orders of his civilian leadership, sent word to the two regiments closest to the Charlestown location to move up in support. He could not have made a better choice. They were Colonel Reed's and Colonel Stark's regiments. Tough, no-frills New Hampshiremen, they had

come to fight and wouldn't hang back. Furthermore, since Colonel Reed was absent, the New Hampshireman in command would be one they all looked up to with awe and admiration—Indian-fighter, Ranger, and single-minded democrat, Colonel John Stark.

Now he was approaching the top of the hill where the redoubt perched. He had arrived not a moment too soon.

One glance of those sharp eyes, long accustomed to the dangers of warfare on the frontier, told him what must be done.

The hilltop was well protected by the redoubt. The right flank had the steep slope and the parties Prescott had sent out into the Charlestown buildings. Although these detachments had brought the 500 men in the redoubt down to barely 150, the position was formidable. But on the left flank the position must have struck his veteran's eye as desperately weak.

From the redoubt's left side down to the water was a gradually sloping quarter-mile of largely open terrain. Only a hundred yards of it were defended by the breastwork, which ended in a swampy area near a road running the length of the perimeter. So there were over two hundred yards of open terrain, crossed by occasional fences, for the British to use as a route to get around the redoubt and cut it off from the rear.

About a hundred yards to the rear of the redoubt, running from the road down to the beach, was a rail fence. Here a small force, perhaps 200 men, under Captain Knowlton had been posted—but it was clearly too small to man the position against a disciplined British attack. In a moment Stark had made his decision and had his men in motion toward the crucial area.

First he told his men to take cut hay from the field and stuff it between the rails of the fence. Stuffed hay wouldn't stop much—but it might create an illusion of a strong defense in the eyes of the British.

Stark's regiment was the biggest in the army—800 men. And he also had Colonel Reed's regiment, of New Hampshiremen. These tough frontier hunters and farmers would give a good account of themselves in a fight.

But his experienced eye had picked up another disturbing detail. The fence ended at a sharp drop-off over a beach a dozen feet wide at high-tide. It was a small passage way—but a protected one, and just the kind he suspected the British might use to get into the American rear. Again, he made his decision quickly.

He personally led 200 men down onto the beach and told them to extend the fence line with a stone wall, using stones removed from nearby fences.

Meanwhile, Colonel Gridley had returned and set men to work on three V-shaped "fleches"—built from fence rails and placed to cover the exposed area between the end of the breastwork and the start of the rail fence (which was a hundred yards to the rear of the breastwork). General Putnam had even found two cannon, abandoned by the American artillerymen near Bunker Hill, and had ordered some infantrymen to drag the pieces back and place them near the "fleches."

Suddenly they were ready. What had been a hopelessly undermanned and spotty defense was suddenly a nearly solid line, bristling with men, guns at the ready, waiting for the great test of amateur soldier against the professionals.

It was about two-thirty now. The British troops had landed at Morton's Point and were forming up for their attack. General Howe had made his own decisions. He would not, as popular myth has it, send his men stupidly across open terrain in a routine frontal assault. Frontal assaults were too suicidal, too prone to heavy casualties for an intelligent, well-trained general to rely on when any alternative was available. And General

Howe's eye had also picked out that passageway down the beach.

It was as Colonel Stark had thought. General Howe ordered his ten companies of light infantry to form in a tight column and go racing down that narrow strip of beach. The first few ranks would probably be shot, but if the charge was made with speed, courage, and determination, surely over 300 men were bound to overrun a stubby stone wall manned by a few amateur soldiers with inaccurate, slow-loading muskets.

Meanwhile General Pigot would mount a diversionary attack on the other flank, sending the Marines and the 47th regiment into the space between Charlestown and the redoubt—threatening to break into the fortified position from this direction. Pigot would also direct the 38th and 43rd regiments in a gradual advance on the redoubt itself.

General Howe would lead the main British assault, with the 5th and 52nd regiments in an attack against the rail fence and the breastwork. They would let the light infantry go in first—and then shove home their attack while the light infantry was disrupting the entire American position.

With drums rolling and fifes playing merrily away, the lines started their inexorable movement ahead. The Americans could do little but watch them approach. The defenders were woefully short of ammunition—and they dared waste no shot until their targets were well within range.

General Howe didn't want to push his regulars. He was content that their advance should appear a steady, invincible procession. Let the amateurs sweat a little. But most of all, Howe wanted to delay until his massed column of light infantry struck with lightning rapidity, overwhelmed the few defenders at the improvised stone wall, and broke through to cut the enemy off from the rear.

Though they could not see what was happening down on the beach, a wild shout let Howe and his troops know that the light infantry column had closed and were in the last few yards of their attack. There was a roar of musket fire. It would be bad—but in a moment they would be through. Then a second and third roar of gunfire followed the first. What was happening there? Were they through? Were the Americans scrambling with empty muskets to escape those bayonets flashing in the sun?

Not with Colonel Stark running the show. As the light infantry had poured down that narrow strip of beach, he had kept tight control of his men, not letting them fire until the British were almost on them. Then when they fired there was a tremendous volley and the leading ranks were cut down as if by a giant scythe.

But they were professional soldiers. They wavered but did not break. Thinking they were now charging into empty muskets, they rushed on.

But Colonel Stark had been way ahead of them. On the narrow strand of beach it wasn't necessary for all of his men to fire in each volley to cut down the leaders. As soon as the first rank of Americans had fired they were replaced by a second, and then a third rank. There was no respite. Experienced troops or not, no one could withstand such a storm of lead. The British light infantry wavered, broke, and ran—some of them all the way back to their boats. They left ninety-six of their number dead or dying on the beach.

When General Howe learned of the failure of his light infantry, he knew he was in for it. He could not stop now, could not give these amateurs such an easy victory. There was no other choice. He had to ram home his own frontal attack. High casualties or not, these rebels must be made to see what they were up against.

The long lines of redcoats continued their advance. On the British left, where Pigot was mounting the feint against the Charlestown side of the redoubt, the troops advanced slowly, harassed by fire from those Americans concealed in buildings or behind walls. No matter. The real attack would be thrown in by Howe's troops on the right—led by the grenadier companies, their ranks filled with the tallest of the soldiers, made more frightful by the grenadier hats that towered above them.

Stark had warned his men not to shoot until the advancing ranks were close enough for the ammunition-short Americans to make every shot tell. They were told to shoot low—and to aim first of all for the men with the shoulder straps. Eliminate the officers first, he told them, and the men will have trouble reforming.

Closer the awesome redcoated ranks came, clambering over the last stone wall in their way. Then again there was a blast from hundreds of rifles. The British lines were thinned. They stopped and fired, loaded and fired again. But great blasts of musket fire were tearing at them as they stood in the open. The Americans, most of their bodies concealed behind their hay-stuffed fence rails, suffered few casualties and continued to load and fire. First the grenadiers and then the regulars behind them were falling in great masses, leaving huge gaps in their line. Many officers were down—though Howe himself seemed to lead a charmed life, there in the midst of the fire.

Finding the attack on the beach routed and the grenadiers and regulars decimated and stopped, Pigot halted his feint on the right flank. The entire line had to fall back to reform.

The Americans were ecstatic. Some leaped over the rail fence to pursue—but cooler-headed officers called them back. The amateurs had stopped the awesome

assault of the British regulars. But the few veterans among the Americans knew it wasn't over. Those regulars would be back.

Indeed they would. In a few short minutes Howe had his lines reformed and once again ready to assault. No more troops would be wasted on the beach this time. All available troops would be in line, from the grenadiers, the remaining light infantry, and the regulars of the 5th on the right to the Marines on the left. General Pigot's troops would advance to take the redoubt; the troops under Howe would attack the rail fence and the breastwork.

This time the regulars knew it would be no easy rout of frightened amateurs. But they advanced gamely toward those muskets waiting behind the rail fence, the breastwork, and the walls of the redoubt. Once again the Americans held their fire, waited until their enemies were perfect targets a few feet away. Then again the blasts ripped up and down the line, tearing gaping holes in the British formation. Howe stood among dead and wounded officers, urging the men on. It was heroic but it did no good. His men once again stood and tried to match the American fire, tried to send those damned rebels scurrying to the rear. But the British formations were dissolving more every second they stood there.

Pigot's men were having no more success against the redoubt. Prescott's defenders met the attacking regulars with a steady fire. Still they came on. Then Prescott had his men hold their fire this time while the redcoats advanced to within thirty feet. Suddenly a sheet of flame erupted from the redoubt. The British lines, staggered, then slowly fell back.

The Americans had held on every side. Could it be that such rank amateurs would be able to hold their position against the best the British regulars

could throw against them?

But there were a few hints of trouble to come. Ammunition, for one thing. It was getting very low, and promised resupply was nowhere in sight. American casualties had again been few, and their leadership was intact. But where were the reinforcements that had been promised—had indeed actually been ordered forward?

Many were milling about on the mainland side of the Neck, afraid to run the gauntlet of cannon fire. And those who did get across rarely got beyond Bunker Hill, where hundreds of men milled about or clung to the ground. Almost all work on the fortification of the hill position had ceased. The gallantry of the forward troops had been almost past belief—but it couldn't get those hundreds in the rear area forward to lend a hand in writing a noble finish to the action.

Many British officers were hoping Howe would now give the attack up. Losses had been far greater, in relation to the number of troops involved, than in any battle in recent British history. But Howe felt he must try at least once more. So he sent word to General Clinton to forward reinforcements. Clinton not only did so (sending the 63rd Regiment and a second marine battalion) but came himself.

The next attack was a longer time getting ready. Howe waited for the reinforcements, meanwhile getting as many of the wounded as possible started back to Boston. And there were plenty of those.

Howe this time decided to change his tactics—the attack would still have to be a frontal one; there was no other way open now. But the weight of the blow would be shifted to the left. It was hoped Pigot would be able to break into the redoubt on the Charlestown side. Howe, meanwhile, would only feint at the rail fence and then turn in toward the

redoubt at the spot where the fence and the breastwork were separated by an area of over a hundred yards—the fence being that far to the rear of the breastwork.

So once again they were in motion, Pigot's men pushing ahead while the town of Charlestown, set afire some time before, blazed away on their left and rear. Scattered Americans who had been in the town still clung to cover of any sort and sniped at the attackers. But these defenders now were few and had to retreat as the British lines approached them. It wasn't long before these small parties had ceased to hold back the flow. The British lines were now closing on the redoubt.

On the other flank, part of Howe's men feinted at the rail fence, keeping the attention of the defenders, while others turned in toward the flank of the breastwork.

Still Prescott's men held on in the redoubt. But their ammunition was now not merely in short supply—many defenders had already fired their last round. Still they held on, while those who had any ammunition left fired away. Others resorted to breaking open a few leftover artillery charges for the powder.

But the British were now at the ditch, where the defenders who did have a loaded musket could not easily fire at them. Still the defenders of the redoubt did not retreat, even as the redcoated soldiers were climbing the walls and jumping down into the crowded inner space.

There followed a brief but vicious struggle of bayonet against slugging musket butt. The inside of the redoubt was so filled with smoke and dust that it was hard to tell friend from enemy.

Prescott knew it was now hopeless to stay. Redcoated soldiers were entering from all sides, were pouring around the redoubt to get behind it. There was only

one thing to do—let those who could get out save themselves while they could.

It is surprising how many did make it to the narrow exit. They poured out in a disorganized mob and most of the men started back toward Bunker Hill. They had one piece of good luck. As they exited, British soldiers were closing up on the rear from both sides and the Americans fled between them. The British could not fire for fear of hitting their own men only a few feet away, coming up from the other direction.

Another act of courage helped. Dr. Warren, fighting like a demon, inspired a few men to stay behind with him and fight on. Amazed at this foolhardy obstinacy, the redcoats had to stop and fire a full-scale volley to blast away this little group. Dr. Warren and others were killed—but the delay had given the retreating Americans time to get out of effective range.

The escape of the defenders of the redoubt was also aided by those men who had stayed at the rail fence. Colonel Stark, when he saw the redoubt had fallen, coolly kept his men in hand, ordering them to retreat slowly, firing as they went. It was a retreat, but it was no rout. Other pieces of regiments, arriving too late to save the redoubt, helped form a rear guard. They were a welcome addition, for unlike many of the men who had fought so long and hard at the rail fence, these new arrivals were well supplied with ammunition. All the way back to Bunker Hill, this rear guard kept the semblance of a formation, holding back the attacking British and making possible an orderly retreat.

But there was no stopping at Bunker Hill. The hundreds of soldiers who had been watching from there scampered back across the Neck to relative safety. Then came the men from the redoubt, and finally the gallant defenders of the rail fence. Colonel Stark's men held together until they were back across the

Neck, while the British regulars swarmed up and over Bunker Hill.

It was a victory, of a kind. But it was the kind of victory the British leaders would hope never again to see.

The Americans at first were despondent at their apparent failure. It was only later, as they learned more of what havoc they had created in the orderly formations of the British regulars, that they could begin to see how positive were the results of their desperate ninety-minute struggle.

For they had accomplished their purpose: the carefully planned full-scale assault of the British on the entire American position, scheduled for the very next day, had to be abandoned. Then there were the tremendous casualties suffered by the British. Of a little over two thousand men committed to battle, the British lost 1,054 killed and wounded. An expected rate of battle casualties for the British army at the time was one in eight. They had here lost almost fifty percent of their force.

The Americans had not come off scott free. They had lost 441 men killed, wounded, and captured. But the amateur soldiers had withstood the mighty charge of the British regulars twice—and might have withstood it again if their ammunition had not run low.

The British professionals had the hill—for what it was worth. But never again would a British commander throw his men against prepared and well dug-in American troops with reckless abandon. It was now a hard and bloody business, and neither General Howe nor General Clinton, when each in turn had succeeded to the top command post in the colonies, could ever put that bloody ninety minutes out of his mind. It would haunt them, make them cautious when boldness might have served them better. These amateurs, they had taken on the professional soldiery of the British

Empire—and somehow had stayed and fought until the professionals had been taught a lesson they would never forget.

And as dusk closed around the Charlestown peninsula that evening, young Captain Dearborn, novice soldier and Johnny-come-lately battle leader, knew that he had passed his first test of fire. What he could not know then was that many years later, when John Stark had become the last living general of the Revolution, the young amateur captain would have himself risen to command, under the President, the entire military force of the fledgling nation.

Sources

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GLOSSARY

ABORT: The cancellation of orders so that OP costs for movement caused by those orders are recovered. The only orders which may be cancelled are those which have been given to the currently accessed unit since its most recent access. Where a game is played with hidden units and where the currently accessed unit has moved to uncover a hidden unit, there is a 4 OP cost for this uncovering that is not recovered by aborting the orders.

ACCESS: To take control of a unit so that it may be given orders.

ACTIVATED: Units which may be accessed and moved. Units which are not activated may be given Fire orders and may have their Facings and Formations changed. Units which are not activated may not be moved. Appears in the Bunker Hill and Saratoga Battles.

ADV: Advance.

ADVANCE: The movement of a unit into an adjacent square which that unit's fire/melee attacks have forced an enemy unit to retreat from during the preceding fire or melee phase. This movement occurs during the Advance Phase. Units receive an Efficiency bonus when they advance and there is no OP cost for this movement.

ADVANCE PHASE: Combat sub-phase which follows the Retreat Phase and precedes the Melee Defender's Fire sub-phase and the Recovery/Rally Phase. The sub-phase when advances are conducted.

AMMO: Ammunition.

AMMUNITION: An abstract measure of the supplies needed for a unit to fire its weapons. Each time a unit fires in offensive, defensive, or melee fire, it spends one point of this supply. Ammunition is only a factor in the ADVANCED GAME.

ARMY: The highest level of organization for combat units. An army is made

up of corps. Also a term used to refer to all combat forces of a side.

ATTACKER: The player (or his units) whose Operation Phase preceded the current combat phase. The phasing player or that player's units.

ATTACKER'S ARTILLERY FIRE PHASE: The combat sub-phase in which the phasing player's artillery units deliver their normal fire.

ATTACKER'S FIRE PHASE: The combat sub-phase in which the phasing player's infantry and cavalry units deliver their normal fire.

BATTALION: The lowest level of organization for combat units. Two or more battalions make up a regiment.

BREASTWORKS: Prepared defensive positions which give a combat advantage to any units which occupy them. Similar to fortifications except that they are not constructed by a unit during the game, give offensive and defensive benefits to all units in the square, and may be occupied by different units during the course of a game.

BRIGADE: A level of unit organization between a regiment and a division. Brigades are made up of two or more regiments.

CARBINE: A short, smoothbored firearm carried by cavalry units.

CC: Command Control.

COLUMN: An infantry formation that gives better mobility and melee strength, but more vulnerability to fire attacks. Used in the INTERMEDIATE and ADVANCED Games only.

COMBAT: The process of resolving fire and melee orders that results in casualties, retreat, disruption, and rout. Occurs during the combat phase.

COMBAT PHASE: A phase which follows every Operation Phase and precedes each Recovery/Rally Phase.

COMMAND CONTROL: An abstract measure of the amount of influence commanders have over their subordinate units. Partially determines how far a unit

will be able to move and its ability to engage in combat.

COORDINATES: The X,Y address of each square on a game map.

CORPS: A high level of unit organization between a division and an army. Corps consist of two or more divisions.

CRB: Carbine.

CURSOR: The white rectangle that may be moved about the screen by the player.

DEFENDER: The player (or his units) whose Operation Phase did not precede the current Combat Phase. The non-phasing player and his units.

DEFENSIVE FIRE: Any fire by the non-phasing player's units delivered during a Combat Phase.

DEFENDER'S FIRE PHASE: The combat sub-phase when the non-phasing player's infantry and cavalry units deliver their normal fire.

DEFENDER'S ARTILLERY FIRE PHASE: The combat sub-phase when the non-phasing player's artillery units deliver their normal fire.

DIR: Direction.

DIRECTION: Generally refers to the facing of a unit in the INTERMEDIATE and ADVANCED Games. There are 8 directions in the game which correspond to the North, Northeast, East, Southeast, South, Southwest, West, and Northwest directions on the map. These are represented by the numbers 1-8 (or 1-4/6-9) on the player's keyboard. Direction is stated as a number. Each number's direction depends on its position on the Movement Compass in relation to the center of the compass.

DISMOUNTED: A cavalry formation in which the unit has less mobility but more fire power. Used in the INTERMEDIATE and ADVANCED Games only.

DISRUPTED: A condition which leaves a unit unable to function offensively and with reduced defensive abilities. Units may become disrupted as the result of combat in the INTERMEDIATE and ADVANCED Games.

DIVISION: A level of unit organization between a brigade and a corps. Divisions are made up of two or more brigades.

DOUBLE TIME: An option which permits a player to increase a unit's Operation Points by also increasing its Fatigue. Available in the INTERMEDIATE and ADVANCED Games only.

DS: Disrupted.

EFFICIENCY: An abstract measure of a unit's ability to carry out its operations. Efficiency is decreased by casualties and increased by resting away from enemy units. Efficiency affects morale and combat.

EFF: Efficiency.

ELEVATION: A measure of a square's height in relation to other squares. Units which occupy a square with a higher elevation than that occupied by enemy units they are engaging in combat have an advantage.

FACING: The direction in which the front of a unit is pointed. INTERMEDIATE and ADVANCED Games only.

FATIGUE: An abstract measure of how tired a unit is. Units acquire Fatigue when they carry out most orders. Fatigue is lost when units are rested away from the enemy. Fatigue affects Morale.

FIRE: Non-melee combat which results from shooting a unit's weapons into an enemy-occupied square. Also used to indicate the X,Y coordinates of a square a unit has been ordered to fire into.

FORMATION: The physical arrangement of the men or guns in a unit. Typically units have one formation which gives them greater mobility and another formation which gives them greater fire power. The mobility formations are column for infantry, mounted for cavalry, and limbered for artillery. The fire power formations are line for infantry, dismounted for cavalry, and unlimbered for artillery. Routed may also be considered a formation. Applies in the INTERMEDIATE and ADVANCED Games.

FORTIFICATION: The defensive im-

provement of a terrain square by a unit in that square. The defensive advantages of a fortification apply only to the unit which built it and only until that unit exits that square.

FT: Fatigue

GUNS: Artillery pieces. The type and number is a measure of the combat strength of an artillery unit.

HIDDEN UNITS: Units which are not visible to the opposing player. Occurs only when the Hidden Units Option (E) is selected in the Main Menu. Units are hidden when not in the Line of Sight of an opposing unit or when in concealing terrain (such as woods) as long as they have not fired or do not have an opposing unit adjacent to them.

ICONS: Graphic shapes which look like the units they are intended to represent. Used automatically to represent units in the BASIC GAME. Not recommended for use in the INTERMEDIATE and ADVANCED Games because they do not show facing or formation.

LEADER: ADVANCED GAME only. A semi-abstract unit that represents an individual commander who was present at a battle. There is no separate symbol for a leader. Leaders are always attached to a unit and move with the unit to which they are attached. Leaders impart combat bonuses to the units they are attached to. The Command Control of units in the ADVANCED GAME is largely dependent on leader bonuses and the distance units are from their leaders during the Command Control Phase.

LIMBERED: The artillery formation which permits it to move. When artillery is retreated, it is automatically put into limbered status. INTERMEDIATE and ADVANCED Games only.

LINE: An infantry formation which gives it greater fire power but less mobility. INTERMEDIATE and ADVANCED Games only. Also refers to the placement of units to present a contiguous or near

contiguous front (a defensive line, a line of battle, etc.).

LINE OF FIRE: The ability to fire into a square. A unit may only fire at enemy units that it can see and which are within its weapon's maximum range. Intervening enemy or friendly units may block the Line of Fire.

LINE OF SIGHT: The ability to see into a square.

LOF: Line of Fire.

LOS: Line of Sight.

MEL: Melee.

MELEE: A type of close quarters combat that occurs during the melee sub-phase of the Combat Phase and which may include hand-to-hand fighting. Melee can only occur between adjacent units. Partially due to Melee Defender's Fire, melee typically results in more casualties than regular fire combat.

MELEE DEFENDER'S FIRE: A special fire phase delivered by the defending units just prior to receiving a melee attack. This fire is in addition to normal Defensive Fire. This fire is 50 percent more effective than normal defensive fire. This fire may be delivered by units which may not ordinarily fire: out of ammunition, routed, disrupted, in column or limbered formation, out of OP, flanked, etc.

MELEE PHASE: The combat sub-phase in which melee attacks are resolved.

MEN: The number of combatants in a unit. A measure of the combat strength of infantry and cavalry units. A modifier of the combat strength for artillery units. The defensive strength of artillery units in melee (not Melee Defensive Fire).

MENU: A list of two or more options a player may execute at a given time. Players are said to be in a menu when they can choose to select that menu's options.

MORALE: An abstract measure of the fighting spirit of a unit. Morale is equal to Efficiency minus Fatigue. Influences the OP a unit receives and its ability to suffer losses without routing.

MORTAR: An extremely stubby, short barreled, smoothbore artillery piece with a very high fire trajectory. Used for lobbing explosive shells over walls, breastworks, and other defensive obstacles. Difficult to move.

MOUNTED: The cavalry formation that provides melee bonuses and greater mobility at a cost in fire power. Used in the INTERMEDIATE and ADVANCED Games only.

MOVEMENT COMPASS: The square made up of 8 numbers that appears in the bottom right corner of many screens. The numbers are arranged so that pressing a number key will cause the cursor or accessed unit to move in the direction that number lies from the center of the compass. The number which appears after the DIR: designation for an accessed unit in the INTERMEDIATE and ADVANCED Games is that unit's facing as shown by the direction that number lies from the center of the Movement Compass.

MRL: Morale.

MSK: Musket.

MTR: Mortar.

MUSKET: A shoulder fired, smooth-bored firearm. The main armament of infantry units in the game.

NO FIRE: Shows that the accessed unit has been ordered to not fire. Units with this order will only fire if adjacent to an enemy unit during a fire phase.

NO PLOT: Shows that the selection of fire target for the accessed unit has been left up to the computer.

OB: Order of Battle.

OFFENSIVE FIRE: Any fire delivered by units whose Operation Phase preceded the current Combat Phase. Any fire by the phasing player's units.

OP: Operation Points.

OPERATION PHASE: The phase in which a player may move his units and give them orders. Precedes the Combat Phase.

OPERATION POINTS: The points which are required for a unit to carry out

most activities in the game. Points are spent in the execution of various orders and procedures. Units are generally not permitted to do things unless they can pay the Operation Points costs for them. Operation Points are determined during each turn's Command Control Phase and awarded to units during their Recovery/Rally Phases.

ORDER OF BATTLE: The organization of units for a battle. Includes chain of command, unit numbers, and starting Efficiency. Provided in the special rules section for each battle.

OVERSTACK: A condition where the normal stacking limits for a square are temporarily exceeded. May be caused by the movement of Mounted Cavalry and of infantry in column formation. May occur during the Retreat/Advance Phase by retreating/routing units. Reinforcement units which enter the game overstacked may remain overstacked until they move.

PHASE: A sub-division of a turn in which different actions are carried out by the players or by the computer. Some phases apply to both players equally (Command Control, Reinforcement, and Victory Determination), some apply to only one player (Operation and Recovery/Rally) and some apply to both but with emphasis on the player whose phase it is (Combat).

PHASING PLAYER: The player whose Operation Phase it is, whose Operation Phase preceded the current Combat Phase, or whose Recovery/Rally Phase it is.

PLAYER: A person who gives orders to units in the game.

RALLY: Recover from Rout. Can occur only to the routed units of the phasing player during his Recovery/Rally Phase. Only those units which have a Morale of 25 or more have a chance to Rally.

RECONNAISSANCE: A function available in the Cursor Menu of the INTERMEDIATE and ADVANCED Games only. Permits the phasing player to receive an

estimate of the number of enemy men in a square.

RECOVERY/RALLY PHASE: Follows every Combat Phase. The phasing player's units receive their Operation Points and recover from the effects of combat, lower their Fatigue, and increase their Efficiency during this phase.

REDOUBT: A special type of breastwork that appears in the Bunker Hill scenario only.

INTERMEDIATE and ADVANCED Games only: The Redoubt protects the units which occupy it from suffering added casualties from fire delivered into their flanks (eliminates attacker bonus). Occupying units may not deliver normal fire through their flanks and incur normal Melee Defensive Fire penalties for being flanked.

REINFORCEMENT: A unit or units which are not on the game map at the start of the game but which arrive during a subsequent Reinforcement Phase.

REINFORCEMENT PHASE: The second phase of each turn when reinforcing units arrive on the game map.

RETREAT: An involuntary movement away from the enemy that comes as the result of combat. Attacking units retreat one square. Defending units retreat three squares. There is an Efficiency loss, but no OP cost, for retreating.

RETREAT PHASE: The combat sub-phase in which retreats are conducted. There are two per Combat Phase: one following the Offensive Fire Phase and one following the Melee Phase.

RFL: Rifle.

RIFLE: A shoulder fired, rifle-barreled firearm, carried by certain select infantry units. Much more accurate than a musket but with a slower rate of fire.

ROUT: The collapse of the will to fight of a combat unit. Characterized by wild retreat, refusal to fight offensively, and a lowering of the combat Efficiency of surrounding friendly units.

SAVE: Storing a game in progress so that it may be played at a future time. Games

are frequently saved at different times during play to permit the player to go back and try different gaming strategies.

SIDE: In SOL, there are two sides: the British and the Americans. There may be more than one player per side. Players who command forces of the same nationality are on the same side. Players who command forces of different sides are opposing players.

SIX POUND GUN: A smoothbored field artillery piece which fired a solid iron projectile weighing approximately six pounds. Also capable of firing explosive shells and canister/grape shot-type ammunition. Considered sufficiently mobile for use on a field of battle.

STACKING: The placing of more than one unit in a square. Normal stacking units may be temporarily exceeded (overstack) during movement and the Retreat Phase. Reinforcement units may exceed normal stacking limits when they enter the map. They do not have to meet normal stacking limits until they move.

STRATEGIC MAP: One of two game map modes which may be shown on the monitor screen. The Strategic Map shows a larger portion of the playing area, but in less detail. The game may be played entirely on the Strategic Map.

STRATEGY: The over-all plan for a battle.

SYMBOLS: Abstract, visual representations of the playing units. The shape of the symbols change to show a unit's facing and formation. Recommended for use in the INTERMEDIATE and ADVANCED GAMES.

TACTICAL MAP: One of two game map modes which may be shown on the monitor screen. The Tactical Map shows a smaller section of the overall playing area, but in greater detail. The game is normally played on the Tactical Map. The game may be played entirely on the Tactical Map.

TACTICS: The plans and maneuvers used to execute strategy. The plans for obtaining limited goals which are part of

the overall game goals.

TERRAIN: The type of "ground" which exists in a square. May include woods, villages, roads, ravines, etc.

THREE POUND GUN: A small, smooth-bored field artillery piece. Small and highly mobile, the gun fired a solid iron ball that weighed approximately three pounds. Also capable of firing explosive shell and canister/grape shot-type ammunition.

TURN: The major subdivisions of a game. Made up of phases, each turn represents one hour of real time in the game. Each turn consists of four player phases (two for each side consisting of the Operation, Combat and Recovery/Rally Phases) and three phases common to both sides (the Command Control, Reinforcement, and Victory Determination Phases).

TWENTY-FOUR POUND GUN: A smoothbored siege gun which fired a solid iron ball weighing approximately twenty-four pounds. Not considered sufficiently mobile for use in a fluid battle situation, designed for use in sieges against fixed fortifications where its heavy fire could be used to batter down walls, redoubts, etc. Also fired explosive shells and canister/grape shot-type ammunition.

TWELVE POUND GUN: A heavy, smoothbored field artillery piece which fired a solid iron ball that weighed approximately twelve pounds. Somewhat difficult to move, it had a longer effective range and more firepower than the smaller field artillery pieces. It fired explosive shell and canister/grape shot-type ammunition as well.

UNIT: A "playing piece". Either a battalion, regiment, brigade, or battery depending on the unit type and battle. The command organizations a player moves and gives orders to.

UNLIMBERED: The artillery formation which permits guns to fire, but leaves them immobile.

VICTORY DETERMINATION PHASE:

The game phase in which victory points are totalled and displayed. The final Victory Determination Phase determines which side wins a game (assuming there is a winner).

VICTORY POINT: The unit of measure that is totalled to determine which side wins a game. Victory points are awarded for inflicting casualties on the enemy and for the control of Victory Squares.

VICTORY SQUARE: Squares which award victory points to the side which controls them. Victory Squares are different for each scenario. To control a Victory Square, a side must occupy the square and have 400 men in or adjacent to it with no enemy men in or adjacent to it. Some Victory Squares can give points to either side in a scenario and some can give points to one side only.

WEAPON: The armament of a unit. For infantry, the main armament was the musket with some units carrying rifles. For cavalry, the main armament was the carbine. For artillery, the armament was the gun (artillery piece or cannon).

WING: The temporary organization of two or more divisions under a commander for a battle. Similar to a corps, but not a permanent organization.

ZONE OF CONTROL: The influence exerted by a unit into the squares around it. Zones of Control act to impede enemy movement and increase the casualties suffered by retreating and routing units. A unit exerts a Zone of Control into all adjacent squares.

ZOC: Zone of Control.

3PD: Three Pound Gun.

6PD: Six Pound Gun.

12P: Twelve Pound Gun.

24P: Twenty-four Pound Gun.

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