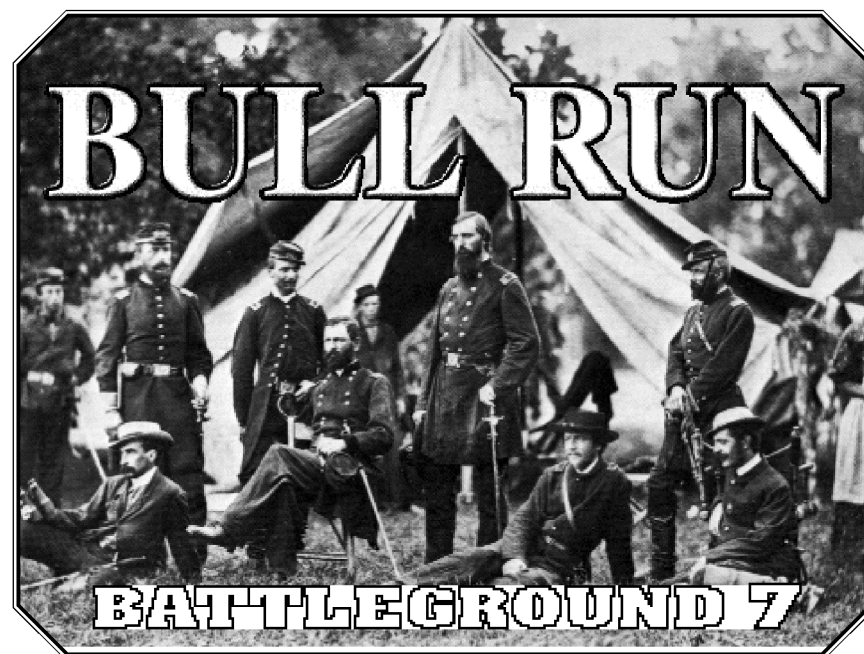


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1.0 INTRODUCTION

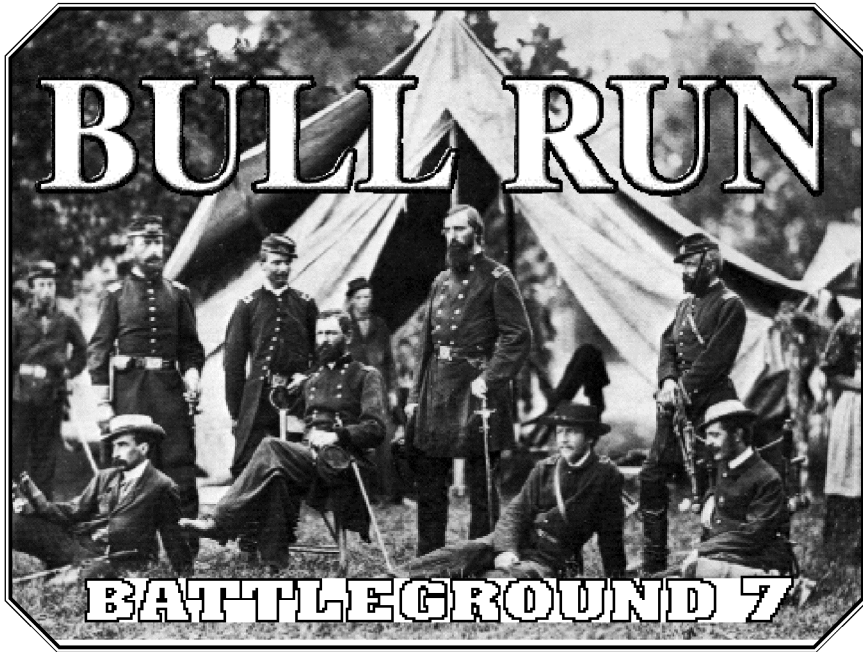
BATTLEGROUND: BULL RUN is an historical strategy game dealing with both epic Civil War battles at Bull Run. These momentous battles were fought outside the Virginia town of Manassas in July, 1861 and again in August, 1862. The battlefield is represented by a "hand-drawn" maps, taken from some of the most detailed sources available. A series of battles, called scenarios, is presented for play on these maps.

As an added feature, scenarios and a map for the Battle of Blackburn's Ford (fought three days prior to the first battle of Bull Run,) and Brawners Farm (fought the evening before the second battle,) have also been included.

Game Scale. Each hexagon (hex) on the map represents an area 125 yards wide (a mile equals 14 hexes), and each Game Turn represents twenty minutes in a dawn, daytime or dusk turn or one hour in a night turn.

ATTENTION!! VETERAN BATTLEGROUND GAMERS

BATTLEGROUND: BULL RUN is, in many ways, similar to the first six games in TalonSoft's Battleground™ series. The interface (the toolbar, menu options, 2D and 3D displays, etc.) all conform to the standard Battleground™ style. More specifically, for veteran gamers of Battleground: Gettysburg, Shiloh, or Antietam you'll be able to move right into this game with little or no problem. However, there are some new game play features which were introduced in Battleground: Bull Run, we recommend you review these guidelines again.



1.0 INTRODUCTION

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2.0 THE BASICS OF PLAY

After picking a scenario to play (see 3.0 CHOOSING A SCENARIO), you and your computer or human opponent maneuver, attack and defend with units representing regiments of infantry and cavalry (the "S#" in the Unit List represents total number of soldiers) plus artillery batteries (each "S#" in the Unit List represents one gun) and individual leaders. Your goal in each scenario is to either capture or hold specific objectives, while trying to eliminate as many of the opponent's units as possible. However, you must also husband your own forces, for the casualties suffered by each side are added to the other side's victory-point total. For more details see 6.2 VICTORY CONDITIONS. For illustrations of all the unit icons, see 5.1.

The visibility in a daytime turn is limited only by the presence of LOS (line of sight) obstacles. In a dawn or dusk turn, visibility is limited to four hexes. In a night turn, each turn is one hour long and visibility is restricted to one hex. To find out when each type of turn starts and ends, check the scenario's Parameter Data file (Select Scenario Notes from the Help pop-down menu).

Each Player Turn consists of four phases: *Movement*, *Defensive Fire*, *Offensive Fire*, and *Melee*. Two consecutive Player Turns (one for each side) having the same turn number comprise a Game Turn. When the specified number of Game Turns has been played, the scenario ends and the victor is announced.



Each time you Select the "find next stack" Toolbox button, the program will move the Hot Spot to a hex that has a unit which has not yet conducted an action in the current phase. This lets you check for units you might have forgotten to move or fire before going on to the next phase.

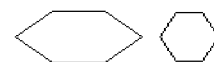


To advance the game to the next phase, Select the "advance to next phase" Toolbox button.



The **Phase Box**. At the start of each new phase, the **Phase Box** appears to announce the phase and give the current turn number. Left-click with the mouse on the Box to begin the phase—or right-click on it to begin the phase and make it disappear automatically after a few seconds each time it appears afterwards.

HEX OUTLINES



The concept of "hexes" is very important to successfully grasping the fundamentals of movement and attack ranges. Since the hex outlines are "off" by default at start, it is strongly recommended that you make them visible by Selecting the **Hex Outlines** command in the **Options** menu when you begin your first game.

THE HOT SPOT

The red square- or rectangle-shaped indicator that appears on the map is known as the Hot Spot. The hex currently containing the Hot Spot is called as the Hot Spot hex.

THE TOOLBOX

The Toolbox enables you to conduct certain actions without having to use the pop-down menus. Selecting a Toolbox button initiates the command associated with it. Some are explained here, but for a full listing of its buttons and commands see 4.5 on p.30.



SELECTING UNITS

You must Select a unit before you can have it conduct an action. To do so,

1. Select the hex the unit occupies by left-clicking with the mouse in that hex. *Doing this will make the selected hex the Hot Spot hex.*
2. Left-click with the mouse in that unit's data area in the Unit List at the bottom of the screen. (For an alternative method, see *The Pop-Up Selection Dialog* on p.28)

You can opt to Select more than one unit in a hex, which will enable you to move (or attack with) all of them at the same time. *All* the units in a hex can be Selected at once by double-clicking with the left mouse button in that hex.

If you *right-click* in a unit's data area in the Unit List, you will see its organizational information.

FORMATIONS & UNIT TYPES

The units in *BATTLEGROUND: BULL RUN* move and attack in several different "Formations" that were used during the Civil War. Below are the unit types and their formation options.



Infantry is always in either *line* or *column* Formation. Line represents the men lined up "shoulder-to-shoulder" for attacking or defending. Column represents their being either in marching order or in "column of companies" attack formation.

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 Cavalry and leaders are always in either *mounted* or *dismounted* Formation.

 Artillery is always in either *limbered* (i.e., hooked up to its horses and ammunition caissons) or *unlimbered* (ready to fire) Formation.

Note: Infantry in column, mounted cavalry/leaders and limbered artillery have an increased movement allowance but cannot attack [Exception: infantry in column and mounted cavalry can engage in Melee] and are more vulnerable to enemy attacks. *Unlimbered* artillery cannot move except to change Facing within its hex.

 Supply wagons are always in *column* Formation.

When can I Change a Unit's Formation?

You can change a unit's Formation only during its Movement Phase. (IMPORTANT: Infantry and dismounted cavalry can change Formation only before it begins to move. Once such a unit has moved, you must wait until the next Movement Phase to change its Formation.)

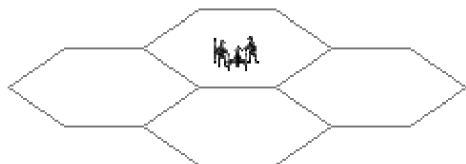
To change a unit's Formation,

1. Select the unit
2.  Then, Select the "Change Formation" button in the Toolbox. To find how to tell what a unit's current Formation is, see Unit-List Icons on p27.

FACING



All units, regardless of their present Formation, have a *Facing*—i.e., always face towards one of their hex's hexsides. A "hexside" is the line between two adjacent hexes (see illustration below).



A unit faces the **hexside** of a hex.

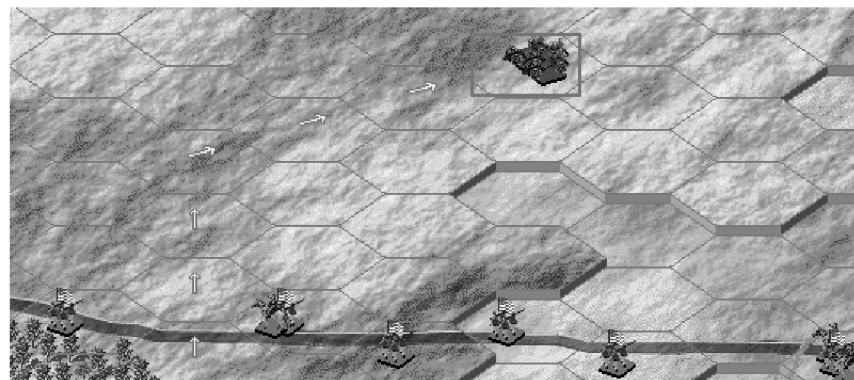
IMPORTANT: The current Facing of each regiment *in line formation* and *unlimbered* battery determines its *Field of Fire* (i.e., its directional ability to attack and defend); see 6.7 COMBAT. You do not have to change a unit's Facing to move it.



You can change a unit's Facing only during its Movement Phase. To change its Facing, Select the unit, then Select one of the "change Facing" buttons in the Toolbox. One button changes the Facing clockwise, one hexside at a time; the button next to it does likewise but in a counter-clockwise direction; and the third button makes the unit do an "about face".



MOVEMENT



There are basically three ways to move units:

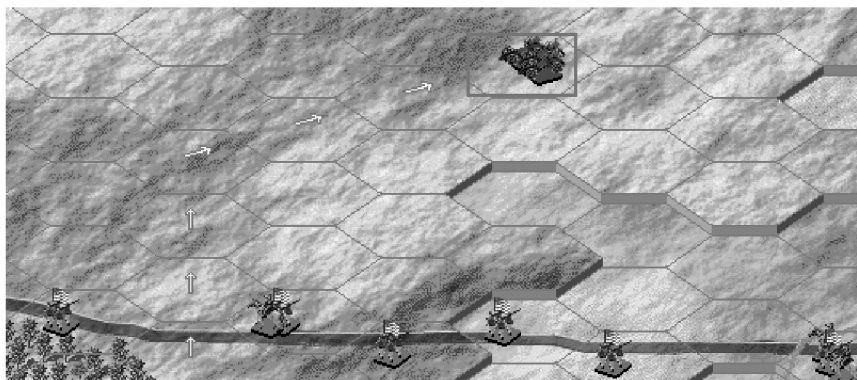
Hex-by-Hex. One way to move a unit is to Select it, then right-click in a hex adjacent to it. You can continue right-clicking in adjacent hexes until the unit either is where you wish it to stop or it can move no further due to lack of sufficient movement points to enter another hex.

Drag-and-Drop. Another way is to use "drag-and-drop". Select the unit, place the cursor on that unit's hex, press and hold down the left mouse button, move the cursor to the hex you wish to move the unit to, and then release the mouse button. The program will move the unit from hex to hex for you, using the path that costs it the least to take.

Auto Movement. A third way to move a unit is by Auto Movement. To use this method, Select the unit, then hold down the **Alt** key and right-click in the hex you wish that unit to move to. The program will move the unit from hex to hex for you, using the path that costs it the least to take.



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Each hex a unit moves into, each Formation change a unit makes (Exception: leaders do not pay to mount or dismount), and each Facing change made by infantry in line or dismounted cavalry, costs it a portion of its movement allowance; these costs are listed under Change Costs in Parameter Data, which can be found by Selecting **Scenario Notes** in the **Help** menu. See also 6.1 **TERRAIN** for the effects of terrain (including roads, etc.) on movement.

Unless Fog of War is in effect for the opposing side, the most recent movement (or Facing/Formation change) made by a unit can be undone by holding down the **Ctrl** key and pressing **U**, provided that unit is *still* Selected.



Selecting either the “highlight moved units” Toolbox button or the Moved Units command in the Display menu will highlight all units that have moved thus far in the Movement Phase.

Column Movement

You can use *column movement* to move, as a single entity, a group of units that are stacked together and/or in a string of adjacent hexes. There are two types of column movement: *organization* and *chain*.

Organization. To conduct *organization* column movement,

1. Select the hex occupied by the “leading” unit.
2. Then Select a unit in that hex, hold down the **Ctrl** key and *right-click* in the adjacent hex you wish that unit to move to.

As it moves, all units in the group that belong to the Selected unit's organization (*brigade, division, etc.*) will follow it. (To see a unit's organizational information, right-click in its data area in the Unit List.)

Chain. To conduct *chain* column movement,

1. Select the hex occupied by the “leading” unit.
2. After making sure no unit in that hex is Selected, hold down the **Ctrl** key and *right-click* in the adjacent hex you wish that unit to move to.

As it moves, the entire group will follow, with each unit in turn entering the hex just vacated by the one in front of it. Note, however, that chain column movement will not work in a hex that has two or more friendly units adjacent to it *if* those units are in different hexes and are adjacent to each other, or if the “leading” unit is adjacent to two or more units in different hexes.

Column movement can also be conducted using *Auto Movement* (see above). To do so, hold down both the **Ctrl** and **Alt** keys when you right-click in the hex you wish the “leading” unit to move to.

COMBAT

There are two basic types of combat in the game: *Ranged Fire* and *Melee*. A regiment or battery that takes casualties due to combat has its manpower (“S#” in the Unit List) lowered by 25 men or more; an artillery unit may lose one or more guns (each S# = one gun). If a unit's S# is reduced to zero in this manner the unit is eliminated. See below for more details. The combat results tables for both types of combat appear in the Parameter Data, which can be found by Selecting Scenario Notes in the Help menu. **IMPORTANT:** Each regiment and battery has a *Field of Fire* that it cannot attack outside of, see 6.7.

Ranged Fire

Ranged Fire is simply one regiment or battery shooting at another at a range of one or more hexes. You can conduct Ranged Fire during the Offensive Fire Phase of your Player Turn

and the Defensive Fire Phase of your opponent's Player Turn. During that fire phase, each of your units able to fire can make one Ranged-Fire attack, and that attack can be made vs. only one enemy unit. Routed units, and those that are out of ammunition and/or facing “away from” (see 6.7) the enemy cannot attack. Artillery that unlimbered or moved (even just to change Facing) in the Movement Phase cannot fire in the ensuing Offensive Fire Phase. See also 6.7 **COMBAT**, Ranged Fire and Resolving Ranged-Fire on p.48.

You can perform a Ranged Fire attack in three different ways:

Right-click Target Hex. To use Ranged Fire, Select the regiment or battery that will fire, then right-click in the *target* hex.

Drag-and-Drop. Another way to conduct Ranged Fire is to use “drag-and-drop”. Select the unit that will fire, then place the cursor on that unit's hex, press and hold down the left mouse button, move the cursor to the target hex, and then release the mouse button.

Auto Fire. A third method is *Auto Fire*. Hold down the **Alt** key and right-click in the target hex. A dialog box will appear, listing the name and location of one your units that is eligible to fire at that hex. If you Select OK in the box, that unit will fire.



Melee

A *Melee* occurs when one side attempts to advance one or more of its infantry or cavalry regiments into an adjacent, enemy-occupied hex during the Melee Phase. Routed/Disrupted units, artillery, supply wagons, and regiments facing “away from” (see 6.7) the adjacent enemy cannot advance into a Melee. Only mounted cavalry (and one or more accompanying mounted leaders) can advance into a hex that contains mounted cavalry. The exception

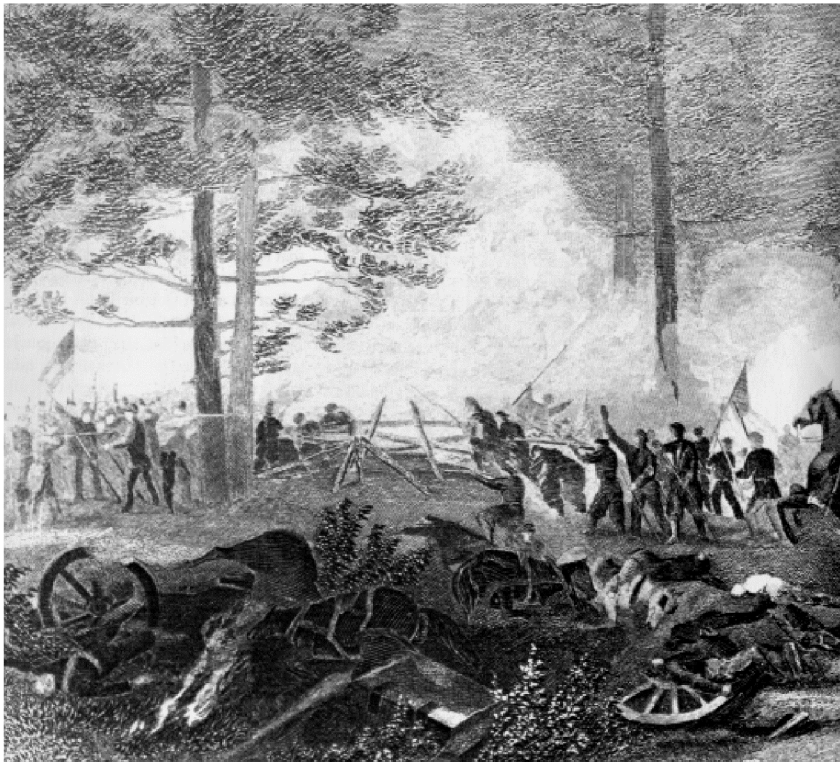
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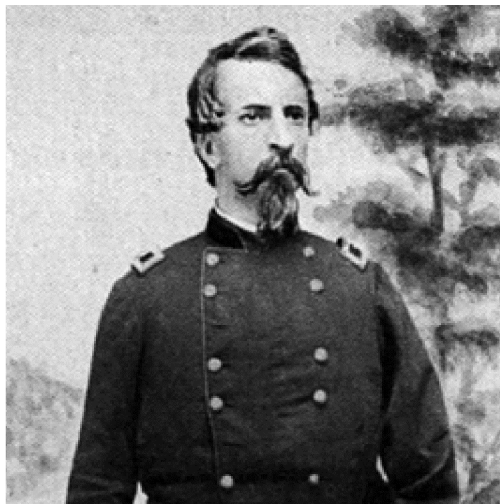
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being that when a cavalry unit is *Isolated* it can be meleed by non-mounted units. A *unit* can attack in Melee, and a *hex* can be assaulted, only *once* per Melee Phase. If all defending units are eliminated or forced to retreat, the attacking unit(s) will automatically occupy the defending hex.

Drag-and-Drop. One easy way to conduct Melees is to use “drag-and-drop”. To do this,

1. Select all the units in a hex which you wish to attack with.
2. Then place the cursor on that hex, press and hold down the left mouse button, move the cursor to the adjacent hex you wish to attack, and then release the mouse button.
3.  Repeat this for each hex that contains one or more units you wish to add to that Melee, then resolve the attack by Selecting the “resolve Melee” Toolbox button.

For more details, see 6.7 COMBAT, Melee and Resolving Melee on p.50.



LEADERS



Each brigade, division, corps and army has its own historical leader. A leader provides no benefit to movement or Ranged-Fire attacks, but can aid in Melee attack/defense and lower the chance that a unit he is stacked with will Rout. Most importantly, a leader can use his Command and Leadership ratings to aid Disrupted and Routed units *under his command* in their attempts to Rally and Reform. The proper positioning of brigade and division leaders is vital to maintaining the cohesion of one's forces. For more details see 4.4 THE UNIT LIST, 5.2 LEADERS and 6.8 RALLY.

QUALITY

Each regiment and battery has a *Quality* rating (“Q” in the Unit List) of “A” (best), “B”, “C”, “D”, “E” or “F” (worst). The program uses these rating at various times to make die rolls (“A” = “6”, “F” = “1”) to determine if the unit will Disrupt, Rout or Rally. See Morale Checks on p.51 and Disruption & Rout on p.52.

DISRUPTION

D A regiment or battery can become *Disrupted* when it takes casualties, and *automatically* becomes Disrupted whenever it is involved in a Melee (some units will also become Disrupted upon entering certain types of terrain; see 6.1 TERRAIN). Units moving in line formation at night automatically become Disrupted. Disrupted status is indicated by a “D” icon in the Unit List. For more details see Disruption & Rout on p.52.

ROUT



A regiment or battery can become *Routed* when it takes casualties, loses a Melee, or another friendly unit in a nearby hex Routs. Routed status is indicated by an “R” icon in the Unit List and by a unit icon containing one or more running figures. Various conditions can affect the chance that a unit will become Routed; see Disruption & Rout on p.52.

RALLY

At the beginning of each Player Turn, the program attempts to *Rally* (i.e., bring back to Good Order) each of that side's Disrupted/Routed units. The results are displayed in the Command Report dialog. For more details see 6.8 RALLY.

FATIGUE

Each regiment and battery has a *Fatigue* level (“FA” in the Unit List) of between “0” and “9”. Fatigue can occur/increase due to combat. The higher a unit's Fatigue, the weaker it is in Melee, the less effective it conducts Ranged Fire, and the more likely it will be to Rout when it suffers casualties. For more details see 4.4 THE UNIT LIST and 6.9 FATIGUE.



SUPPLY



Whenever a regiment makes a Ranged-Fire attack, the program checks to see if it has depleted its ammunition supply. (The probability is 1-in-24.) If it has, a “hollow bullet” (indicating no ammo) or “half-hollow bullet” (indicating low ammo) icon appears in its icon section in the Unit List. A regiment suffering from low/no ammo has certain restrictions placed on its Ranged-Fire capabilities, but can be resupplied by a friendly supply wagon; see 5.4 AMMO & SUPPLY WAGONS.

Artillery Ammo. There is a separate ammo supply limit for artillery; see Artillery Ammo on p.35.

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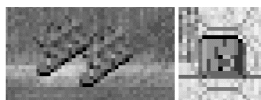
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Artillery Ammo. There is a separate ammo supply limit for artillery; see Artillery Ammo on p.35.

STACKING



Stacking is limited to a total of eight regiment, battery and/or supply wagon units per hex. No more than 1000 men, or 20 cannons, may occupy a hex (displayed as "S#" in the Unit List). Stacking limits apply per side in Melee. Regardless of other

stacking rules, only one supply wagon may occupy a hex.

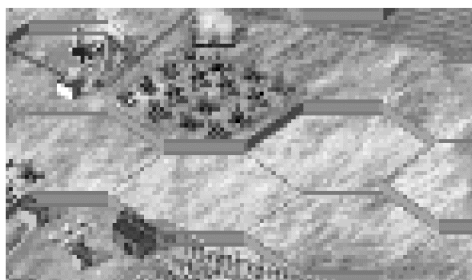
Infantry, Cavalry & Artillery: 1,000 (S# total) in no more than 8 units. For *stacking* purposes, one gun equals 50 men.

Leaders: No stacking limit.

Supply Wagons: Regardless of other stacking rules, only one supply wagon may occupy a hex.

You can move a unit from the bottom to the top of a stack in the Hot Spot hex by Selecting **To Top of Stack** in the **Units** menu (if playing on the 2D map, this can sometimes be helpful as you can bring a specific unit to the top of a stack so it is displayed). That menu also contains a **To Bottom of Stack** command. When using either the 2D Normal View or Zoom-Out map you can display all leaders on the top of their stacks by Selecting **Leaders on Top** in the **Display** menu.

TERRAIN



Terrain can affect movement, LOS and Ranged-Fire combat. Breastworks and embankments can also affect Melee and Ranged-Fire combat. These effects are listed in 6.1 TERRAIN, and in Parameter Data (which can be found by Selecting **Scenario Notes** in the **Help** menu).



3.0 CHOOSING A SCENARIO



3.1 THE MENU SCREEN

When you launch *BATTLEGROUND: BULL RUN*, the Menu Screen appears after the introduction. This screen presents you with five choices:

- **Start New Scenario:** Select this to proceed to the Scenario Selection Screen to start a new scenario.
- **Resume Saved Game:** Select this if you wish to resume playing a non-modem game you had saved and quit previously.
- **Start Game as Modem Host:** Select this to become (or resume being) the Host for a modem-play or an Internet game.
- **Start Game as Modem Caller:** Select this to become (or resume being) the Caller for a modem-play or an Internet game.
- **Special Options:** Select this to start (or resume) a *Play-By-E-Mail* (PBEM) game or a *Two-Player Hot-Seat* game.



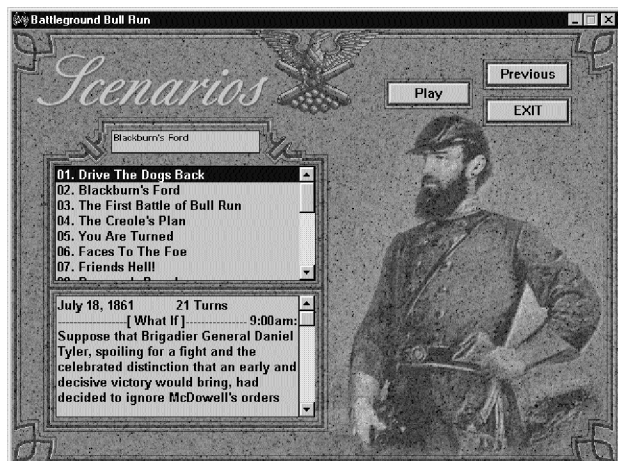
3.0 CHOOSING A SCENARIO



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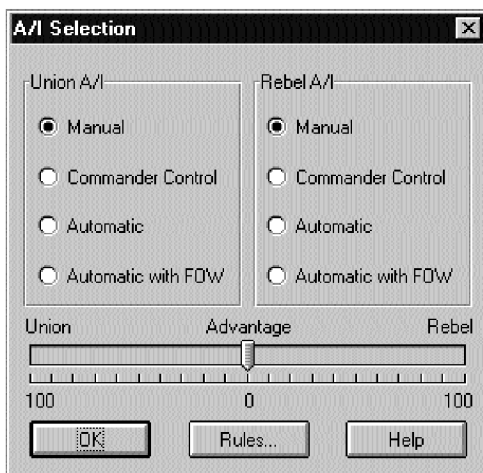
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- **Special Options:** Select this to start (or resume) a *Play-By-E-Mail* (PBEM) game or a *Two-Player Hot-Seat* game.



3.2 THE SCENARIO SELECTION SCREEN

This screen lets you pick a new scenario to play. First, Select the name of a scenario. Once you've decided on a scenario, make sure its name is highlighted, and Select the **Play** button. A dialog box will then appear, giving you the choice of what type of AI you wish to use for each side. (For your choices, see 3.3 THE TYPES OF AI.) When you Select OK, the scenario will begin.

The **Previous** button takes you back to the Menu Screen, and the **Exit** button takes you back to Windows®.



3.3 THE TYPES OF AI

The type of AI you choose will determine the amount of control the game's "Artificial Intelligence" exerts on play. When AI is being used, the program will make some or all of the decisions for a particular side and automatically conduct all appropriate actions, such as firing and moving. The AI can be used in four modes: Manual, Commander Control, Automatic, and Automatic with Fog-of-War. Any one mode can be applied to each side.

Manual equals "no AI". Select this for a side if you want to make *all* the decisions for that side, including conducting all moves and attacks for it. This is the default mode for both sides.

If you Select **Commander Control** for a side, you'll be able to give *orders* (attack, de-

fend, etc.) to the various *leaders* you choose to command on that side, while letting the program automatically handle all other actions for the side, such as moving and firing.

If you Select **Automatic** for a side, the *program* will handle *all* the decisions and actions for that side.

If you Select **Automatic with FOW** (Fog-of-War) for a side, the program will handle all the decisions and actions for that side, *and* Fog of War will be in effect. This mode is most appropriate when you want to control one side and have the program control the other.

The **Set Advantage** bar at the bottom of the AI Selection screen allows you to balance play between two players of unequal skill or to balance play against the AI. To set an Advantage, hold down the left mouse button over the needle and move it to the left or right (the keyboard's arrow keys can also be used to adjust the advantage). Advantage values can range from 0 to 100 for either side. Depending on the value you set, the side with the advantage will inflict higher than normal combat losses on the other side, and suffer lower than normal combat losses themselves. Advantage must be set before play begins in E-Mail or Modem Play games. Otherwise, the Advantage can be adjusted at any time during the game.

If you Select **Rules** you will see a menu of rules that can be enabled or disabled to enhance gameplay for advanced players. See 6.11 OPTIONAL RULES for more details.

To use the AI during play, see 6.3 USING THE AI.

3.4 RESUMING A SAVED GAME

To open a previously saved (non-Modem, non-Play-By-E-mail, non-Two-Player-Hot-Seat) game, Select **Resume Saved Game** in the Menu Screen. A dialog box will appear, in which you must Select the saved-game file you want. At this point, select the module your game is saved in. All the games currently saved within that module will appear in the "Select a Battle" window. Highlight the name of the saved game you wish to resume, then Select **OK**.

For resuming a saved Modem-play game see page 59; for resuming a saved Play-By-E-mail game see page 60.

If the game had been saved and exited during a phase that was controlled by the AI, you may have to Select the **Activate AI** menu command (or its corresponding Toolbox button) to restart it.

fend, etc.) to the various *leaders* you choose to command on that side, while letting the program automatically handle all other actions for the side, such as moving and firing.

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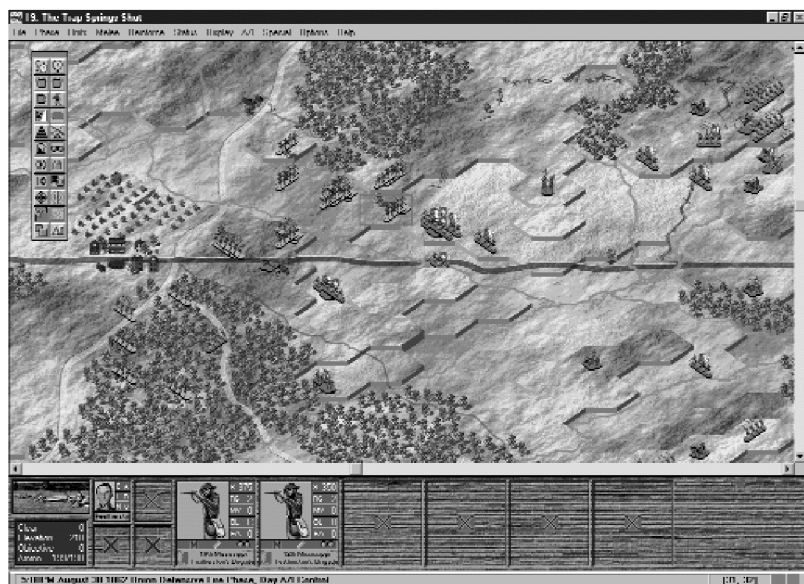
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For resuming a saved Modem-play game see page 59; for resuming a saved Play-By-E-mail game see page 60.

If the game had been saved and exited during a phase that was controlled by the AI, you may have to Select the **Activate AI** menu command (or its corresponding Toolbox button) to restart it.



4.0 THE GAME INTERFACE

4.1 THE TITLE BAR

This appears at the very top of the screen, and displays the name of the scenario currently being played.

4.2 THE MENU BAR

This appears directly below the Title Bar, and displays the names of the various pop-down menus. These menus and their commands are explained below.



File Menu: Use this menu to load a previously saved game, or to save and/or exit a game.

Select **New** to start a new scenario. (Do not change directories in the dialog box that appears.) A new scenario has the extension *.scr*.

Select **Open** to resume a previously saved game. A previously saved game file has the extension *.bt*.

Select **Save** to save the game you are playing.

Select **Save As** to save a game under a file name other than the one currently being used for it.

Select **Snapshot** to save a copy of the portion of the map (including the position of all unhidden units) that is currently in memory as a bitmap (*.bmp*) file. (See 4.8 SNAPSHOTS.)

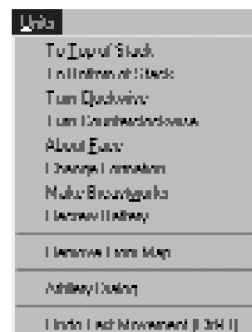
Select **Replay** to view a recorded battle. To halt the replay, press the **Esc** key.

Select **Exit** to quit the scenario and return to the Menu Screen. If the current game has changed since the last time it was saved, a dialog will appear giving the option to save it before exiting.



Phase Menu: Use this menu when you want to proceed from one phase to the next.

Select **Next** to advance the game to the next phase.



Units Menu: Use this menu to change the position of friendly units, and to initiate artillery attacks. Most changes can occur only during the Movement Phase, and are subject to limitations as a result of the program rules and movement allowances.

Select **To Top Of Stack** to move a Selected unit to the top of its stack.

Select **To Bottom of Stack** to move a Selected unit to the bottom of its stack.

Select **Turn Clockwise** to change the Facing of a Selected unit one hexside in a clockwise direction.

Select **Turn Counterclockwise** to change the Facing of a Selected unit one hexside in a counterclockwise direction.

Select **About Face** to change the Facing of a Selected unit 180°.

Select **Change Formation** to change the Formation of a Selected unit.

Select **Recrew Battery** to provide a new crew for an abandoned friendly artillery battery; see 5.3 ARTILLERY.

Select **Remove From Map** to voluntarily remove a unit from the map. Removal can occur only during a friendly Movement Phase, and the unit must be in a map-edge hex.

To remove a unit from the map,

1. Select the unit.
2. Select the Remove from Map command. Removed units do not count towards victory conditions.

Select **Artillery Dialog** to make attacks with artillery units during the Offensive or Defensive Fire Phase.

Select **Undo Last Movement** to cancel the entire movement of the most-recently-moved *still-Selected* friendly unit, so you can instead move it in a different way (or not at all). This command is disabled during Modem play, Play By E-mail, and *whenever* Fog of War is in effect. This command cannot be used to cancel the move of a unit that has just captured a battery or leader by entering its hex in the Movement Phase.



Melee Menu: Use this menu to conduct Melees.

Select **Clear Melee** to cancel a melee without resolving it.

Select **Add to Melee** (after right-clicking in a hex to mark it as a Melee hex) to designate the currently Selected unit(s) as participating in the Melee.

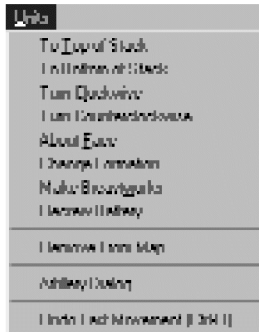
Select **Resolve Melee** to resolve a Melee in the Hot Spot hex.

Select **Show Differential** to review the current Strength difference between the two sides in the Melee in the Hot Spot hex.



Phase Menu: Use this menu when you want to proceed from one phase to the next.

Select **Next** to advance the game to the next phase.



Units Menu: Use this menu to change the position of friendly units, and to initiate artillery attacks. Most changes can occur only during the Movement Phase, and are subject to limitations as a result of the program rules and movement allowances.

Select **To Top Of Stack** to move a Selected unit to the top of its stack.

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Select **Turn Counterclockwise** to change the Facing of a Selected unit one hexside in a counterclockwise direction.

Select **About Face** to change the Facing of a Selected unit 180°.

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Melee Menu: Use this menu to conduct Melees.

Select **Clear Melee** to cancel a melee without resolving it.

Select **Add to Melee** (after right-clicking in a hex to mark it as a Melee hex) to designate the currently Selected unit(s) as participating in the Melee.

Select **Resolve Melee** to resolve a Melee in the Hot Spot hex.

Select **Show Differential** to review the current Strength difference between the two sides in the Melee in the Hot Spot hex.

Reinforce Menu: Use this menu to check on the availability of reinforcements.

Select **Scheduled** to display the reinforcements that are scheduled to arrive during the current scenario, as well as the per-turn arrival probability for each unit. Double clicking on the selection will bring up a Dialog Box listing the individual units in the reinforcement. If *Fog of War* is in effect for one or both sides, only the reinforcements for the side currently having its Player Turn will be displayed; otherwise, all reinforcements will appear.

Select **Arrived** during a friendly Movement Phase to display the reinforcements that are currently available to be placed on the map.

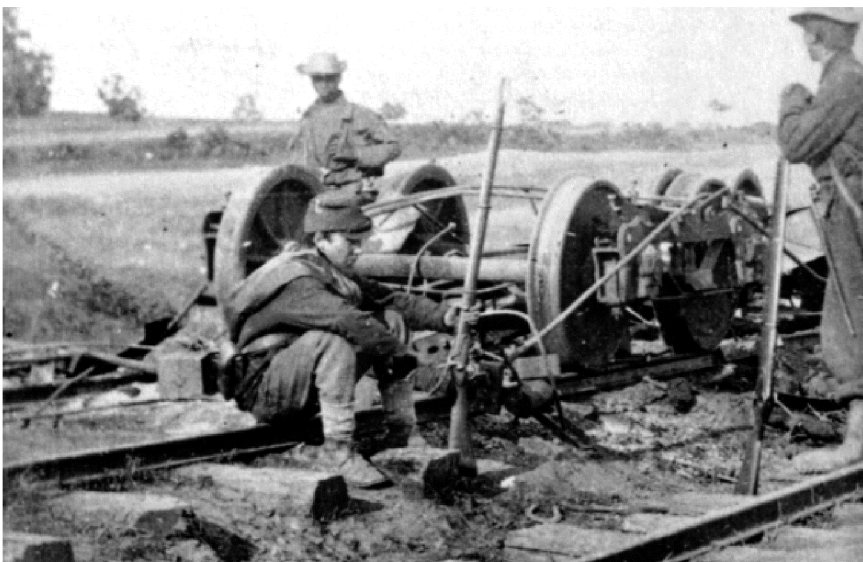
Select **Releases** for a display listing the release times of Fixed units; Choosing an entry in the Release Dialog causes that organization to become highlighted on the screen. Double clicking or selecting OK causes the release dialog to be dismissed and the organization to remain highlighted. Selecting Cancel causes the organization to become unhighlighted.

Status Menu: Use this menu to display current strength, objective, and victory information.

Select **Strength** to see the current “manpower” strength of each regiment and higher organization. If an organization is not all in Good Order, the percentage shown is the percentage of the organization that is in Good Order (a “Good Order” unit is neither Disrupted nor Routed). If *Fog of War* is in effect for a side, its strengths will appear only during its own Player Turn.

Select **Objectives** to see the number, value and hex location of each Objective. Selecting the Objective-hex lines in the dialog box will put the Hot Spot in (and scroll the map to) that hex.

Select **Leader Casualties** for a listing of leaders killed (K), captured (C) or wounded (W) during the currently played scenario. Selecting the leader will scroll the map to the hex where



the leader became a casualty.

Select **Victory** to see the current level of victory and related items.

Display Menu: Use this menu to control how information is displayed on the map.

Select **Units Off** to toggle (off or on) the on-map display of all units and markers. This option is provided to hide them in order to see the underlying map terrain better.

Select **Unit Bases Off** to toggle (off or on) the bases of the unit icons on the 3D (Battleview™) map.

Select **Leaders on Top** to control the on-map display of leaders on the 2D maps. When this command has a check mark next to it, leaders appear above all other units in their hex.

Select **Objectives** to toggle (off or on) the display of Objectives on the map. When this command has a check mark next to it, each Objective hex will be marked with the flag of the side that controls it.

Select **Locations** to help you find a *named* location on the map. When you Select one of those listed, the map will scroll to that hex and put the Hot Spot in it.

Select **Visible Hexes** to toggle (off or on) a display of which hexes are in the LOS of the current Hot Spot hex. A red “X” in a hex indicates *no* LOS. When on, this command has a check mark next to it.

Select **Full Screen Map** to toggle (off or on) the Unit List and Terrain Info Box. When this command has a check mark next to it, these items are hidden. Units can still be Selected when the Unit List is hidden; see THE POP-UP SELECTION DIALOG on p.27.

Select **Show Organization** to see which units belong to which organizations. When you Select an organization name in the Organization Dialog, each of that organization's component units becomes highlighted on the map. If *Fog of War* is in effect for one or both sides, only the organizations for the side currently having its Player Turn will be displayed. An organization name printed in light gray indicates that all of its units are currently off-map (i.e., are reinforcements yet to arrive).

Select **Find Leader or Units** to display a dialog box that will let you find a specific unit or leader on the map. After Selecting this command,

1. A cursor will appear in the white box labeled “Enter search”.
2. Type in the name of the leader or unit (*being sure to spell and capitalize it the same way it appears in the game*).
3. Select Search.

All occurrences of that name in the Order of Battle will appear in the larger white box. Select the one you're looking for, then Select OK or double click on the unit and the map will scroll to that unit's position.

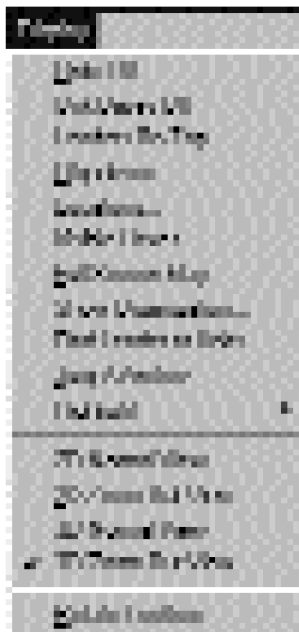
Select **Jump Window** to display a miniature of the map. When you Select any spot in the miniature version, the game map will automatically scroll to the corresponding spot.

Select **Highlight** to get submenu of the following options:

Fixed Units toggles (off or on) a highlight around all Fixed units.

the leader became a casualty.

Select **Victory** to see the current level of victory and related items.



Display Menu: Use this menu to control how information is displayed on the map.

Select **Units Off** to toggle (off or on) the on-map display of all units and markers. This option is provided to hide them in order to see the underlying map terrain better.

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Select **Locations** to help you find a *named* location on the map. When you Select one of those listed, the map will scroll to that hex and put the Hot Spot in it.

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1. A cursor will appear in the white box labeled "Enter search".
2. Type in the name of the leader or unit (*being sure to spell and capitalize it the same way it appears in the game*).
3. Select Search.

All occurrences of that name in the Order of Battle will appear in the larger white box. Select the one you're looking for, then Select OK or double click on the unit and the map will scroll to that unit's position.

Select **Jump Window** to display a miniature of the map. When you Select any spot in the miniature version, the game map will automatically scroll to the corresponding spot.

Select **Highlight** to get submenu of the following options:

Fixed Units toggles (off or on) a highlight around all Fixed units.

Spotted Units toggles (off or on) a highlight around all units that have a LOS to (and thus are in the LOS of) at least one enemy unit.

Low on or Out of Ammo, or Uncrewed toggles (off or on) a highlight around all units low on or out of ammunition and/or have no crew (the latter applies only to artillery batteries).

Fired/Fought Units toggles (off or on) a highlight around all units that have either fired at an enemy unit or fought in a Melee during the current phase.

Moved Units toggles (off or on) a highlight around all units that have moved during the current phase.

Disrupted Units toggles (off or on) a highlight around all units that are Disrupted. Leaders that are highlighted when this option is on (or when the "D" toolbox button is pressed) are the ones that failed their last command check (see Command Radius/Rating, p.53).

Detached Units toggles (off or on) a highlight around all units that are Detached.

High Fatigue Units toggles (off or on) a highlight around all units that have a Fatigue Level of 7 or higher.

Isolated Units toggles (off or on) a highlight around all units that are Isolated.

Non Full Strength Units toggles (off or on) a highlight around all units that are not at Full Strength.

Supply Wagons toggles (off or on) a highlight around all Supply Wagons.

Organization toggles (off or on) a highlight around all units that are part of the same organization as the first Selected unit, or are subordinate to the Selected leader, in the Unit List.

Note: The menu options beginning with Fixed Units and ending with Organization are mutually exclusive; i.e., Selecting any one of them will toggle-off any of the others that had been previously Selected. During the Melee Phase, each unit that is designated to engage in Melee becomes highlighted *if* no other highlight is currently Selected.

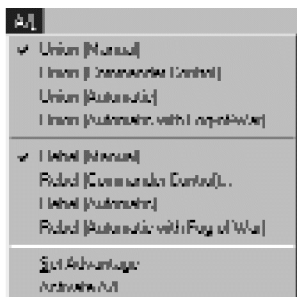
Select **2D Normal View** to change the map to its 2D version.

Select **2D Zoom-Out View** to change the map to a smaller, low resolution 2D version that enables more of it to be seen.

Select **3D Normal View** to change the map to its full-size 3D (Battleview™) mode.

Select **3D Zoom-Out View** to change the map to Battleview™ mode but with the hexes at half their normal size.

Select **Rotate Toolbox** to toggle the Toolbox between its vertical and horizontal orientation.



AI Menu: Use this menu to control the "Artificial Intelligence" capabilities of the program.

Select **[Manual]** (i.e., no AI) for a side if you want to make all the decisions for that side, including conducting all moves and attacks for it. This is the default mode for both sides.

Select **[Commander Control]** for a side if you'd like to choose certain leaders to command yourself (i.e., to give orders to), while letting the program automatically take care of all other decisions and actions for that side.

Select **[Automatic]** for a side if you want the *program* to handle *all* the decisions and actions for that side.

Select **[Automatic with Fog-of-War]** for a side if you want the program to handle all the decisions and actions, *and* have Fog of War in effect, for that side.

Select **Set Advantage** to balance play between two players of unequal skill or to balance AI play. Advantage values can range from 0 to 100 for either side. Depending on the value, the side with the advantage will inflict higher than normal combat losses on the other side, and suffer lower than normal combat losses themselves. Advantage must be set before play begins in E-Mail or Modem Play games. Otherwise, the Advantage can be adjusted at anytime during the game.

Select **Activate AI** to restart the AI after you have canceled it, or if you started the phase not using AI but wish to activate it for the remainder of the phase.



Special Menu: This menu provides the special options necessary to play a scenario via modem, null-modem, PBEM, Two-Player Hot-Seat, or even to record a game in progress.

Select **Modem Host** before you start a modem game if you wish to be in charge of opening and saving the scenario, and to configure your modem for play. The Host player can also use this command to close the playing session.

Select **Modem Caller** before starting a modem game if you wish to let the other player be responsible for opening and saving the scenario, and to configure your modem for play. As the Caller, you have the option of specifying an encryption key. The Caller can also use this command to close the playing session.

Select **Play by E-Mail** to begin an E-Mail game. (See 7.3 PLAY BY E-MAIL for more information.)

Select **Two-Player Hot-Seat** to play a scenario with another human opponent on your computer *with Fog of War automatically in effect*. After this is invoked from the Special menu, you must then select New (or Open to resume a saved game) from the File menu. The extension *.btt* is used to denote a Two-Player Hot-Seat saved-game file.

Select **Record Battle** to toggle (on or off) the option that allows you to save a record of the game you are currently playing.

Select **Null Modem** if you wish to start a game using a null-modem cable.

Select **Internet Connection** if you wish to start a game using a TCP/IP Connection.

Select **New Encryption Key** in a modem game if you are the Caller and wish to specify a new encryption key. As the Caller you must ensure that the same encryption key is used when re-opening a saved-game file as was used when the file was saved previously. The extension *.btx* is used to denote an *encrypted* saved-game file. For more on encryption keys, see p.56.

Select **Resync With Remote** in a modem game if the two sides get out of sync (e.g., due to a bad data transmission). Using this command re-transmits the entire scenario to the other player's computer. The Resync option should rarely be needed, as error checking is incorporated into the modem protocol used by the program. Before using it, check with the other player to ensure that he agrees a scenario resync is necessary. Alternatively, the Host can save the current scenario and open it again.

Select **[Automatic]** for a side if you want the *program* to handle *all* the decisions and actions for that side.

Select **[Automatic with Fog-of-War]** for a side if you want the program to handle all the decisions and actions, *and* have Fog of War in effect, for that side.

Select **Set Advantage** to balance play between two players of unequal skill or to balance AI play. Advantage values can range from 0 to 100 for either side. Depending on the value, the side with the advantage will inflict higher than normal combat losses on the other side, and suffer lower than normal combat losses themselves. Advantage must be set before play begins in E-Mail or Modem Play games. Otherwise, the Advantage can be adjusted at anytime during the game.

Select **Activate AI** to restart the AI after you have canceled it, or if you started the phase not using AI but wish to activate it for the remainder of the phase.



Special Menu: This menu provides the special options necessary to play a scenario via modem, null-modem, PBEM, Two-Player Hot-Seat, or even to record a game in progress.

Select **Modem Host** before you start a modem game if you wish to be in charge of opening and saving the scenario, and to configure your modem for play. The Host player can also use this command to close the playing session.

Select **Modem Caller** before starting a modem game if you wish to let the other player be responsible for opening and saving the scenario, and to configure your modem for play. As the Caller, you have the option of specifying an encryption key. The Caller can also use this command to close the playing session.

Select **Play by E-Mail** to begin an E-Mail game. (See 7.3 PLAY BY E-MAIL for more information.)

Select **Two-Player Hot-Seat** to play a scenario with another human opponent on your computer *with Fog of War automatically in effect*. After this is invoked from the Special menu, you must then select New (or Open to resume a saved game) from the File menu. The extension *.btt* is used to denote a Two-Player Hot-Seat saved-game file.

Select **Record Battle** to toggle (on or off) the option that allows you to save a record of the game you are currently playing.

Select **Null Modem** if you wish to start a game using a null-modem cable.

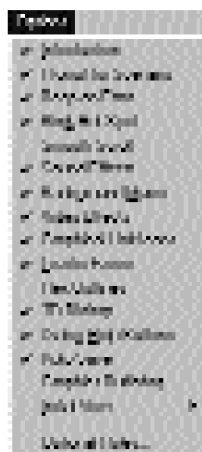
Select **Internet Connection** if you wish to start a game using a TCP/IP Connection.

Select **New Encryption Key** in a modem game if you are the Caller and wish to specify a new encryption key. As the Caller you must ensure that the same encryption key is used when re-opening a saved-game file as was used when the file was saved previously. The extension *.btx* is used to denote an *encrypted* saved-game file. For more on encryption keys, see p.56.

Select **Resync With Remote** in a modem game if the two sides get out of sync (e.g., due to a bad data transmission). Using this command re-transmits the entire scenario to the other player's computer. The Resync option should rarely be needed, as error checking is incorporated into the modem protocol used by the program. Before using it, check with the other player to ensure that he agrees a scenario resync is necessary. Alternatively, the Host can save the current scenario and open it again.

Select **Restart Replay** to restart the replay of a previously halted recorded battle file.

Select **Communication Dialog** in a modem game to display the “chat window” if you had closed it previously.



Options Menu: Use this menu to set the *default* for certain options associated with the main program. A check mark next to a command in this menu means that it is “on.”

Select **Introduction** to toggle (off or on) the introductory material that plays when you launch the game.

The **Prompt For Scenario** feature is only usable if you selected a “Custom” Install during set-up *and* chose the “Map Icon” option. With this feature toggled on (i.e., with a check next to it), you will be prompted for a new scenario when you enter the game directly via a “map icon” (instead of using the “Battleground Bull Run” icon).

Select **Beep on Error** to toggle (off or on) the option that causes a beep when you make an error.

Select **Blink Hot Spot** to toggle (off or on) the option that causes the Hot Spot to blink. [Exception: the Hot Spot never blinks on the 3D maps.]

Select **Smooth Scroll** to toggle (off or on) the option that causes the map to scroll incrementally to a new Hot Spot. When this command has no check mark next to it, the map redraws directly at the new Hot Spot hex without scrolling through the intervening hexes.

Select **Sound Effects** to toggle (off or on) the playing of sound effects.

Select **Background Music** to toggle (off or on) background music.

Select **Video Effects** to toggle (off or on) the playing of video clips.

Select **Graphical Unit Icons** to toggle the display of unit icons between graphical and military-type schematic versions.

Select **Leader Faces** to toggle between a portrait-type and a graphical icon for each leader when using the *2D Normal View* map (only). **Note:** Graphical Unit Icons (from the Options menu) must be “on” for the leaders’ faces to show up.

Select **Hex Outlines** to hide or display the map’s hex outlines. When the hex outlines are visible, this command has a check mark next to it.

Select **3D Dialogs** to toggle the appearance of the program dialogs between an enhanced 3D version and the standard Windows® version.

Select **Dialog Help Buttons** to hide or display the Help buttons in the program dialogs.

Select **Auto Save** to have the program save the game automatically at the end of each phase [Exception: it will not save a phase that was conducted under *Automatic AI* (with or without *Fog of War*) control].

Select **Graphics Buffering** to enable a graphics mode which will reduce flicker in the 3D views. However, may cause the game to run slower on certain systems.

Select **Initial View** to define the initial view of the map when the main program is started. The views may be set to any of the standard views, or to default to the last one used while playing the game.

Select **Optional Rules** to display a menu of game options that in effect for the current sce-

nario. These rules must be set at the start of a scenario and cannot be changed during gameplay. The game will default to use the options marked upon the start of a new scenario.



Help Menu: Use this menu to get information about how to use the *BATTLGROUNDS: BULL RUN* program, about the battle being fought, and about the program itself.

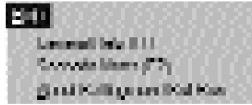
Select **General Help** to open the *BATTLGROUNDS: BULL*

RUN General Help file.

Select **Scenario Notes** to find miscellaneous information on the two armies, their orders of battle, and the data used internally in the game (such as the various combat tables, the height of obstacles, the movement costs and defensive modifiers of the various terrain types, etc.).

Select **About Battleground Bull Run** to display a dialog containing version and copyright information about *BATTLGROUNDS: BULL RUN*.

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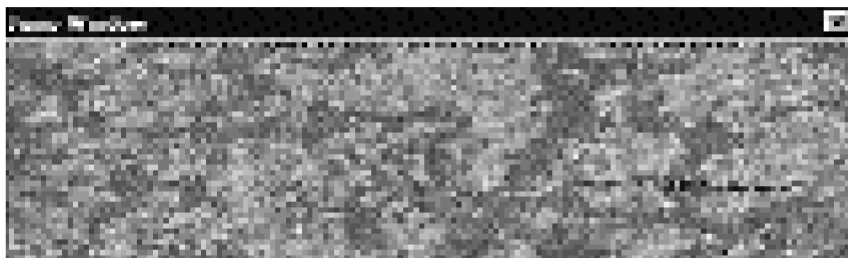


Help Menu: Use this menu to get information about how to use the *BATTLEGROUND: BULL RUN* program, about the battle being fought, and about the program itself.

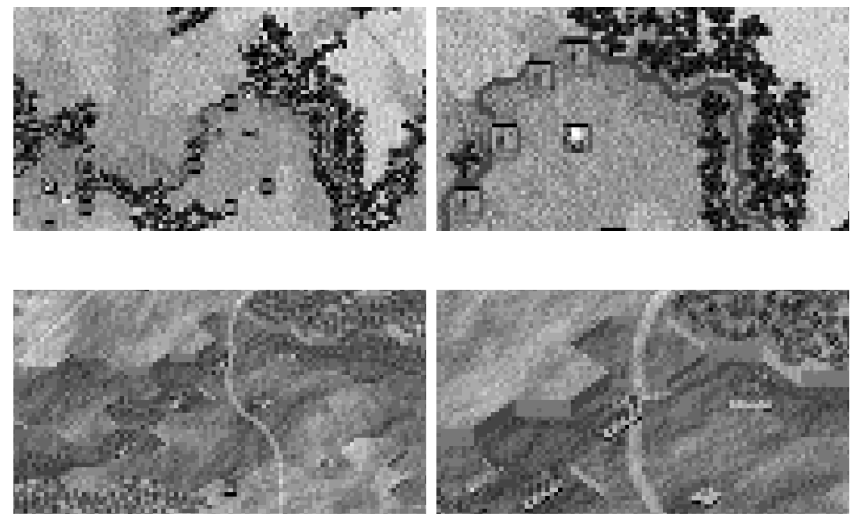
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Jump Map (3D)



4.3 THE MAP

The map can be viewed in five different scales.

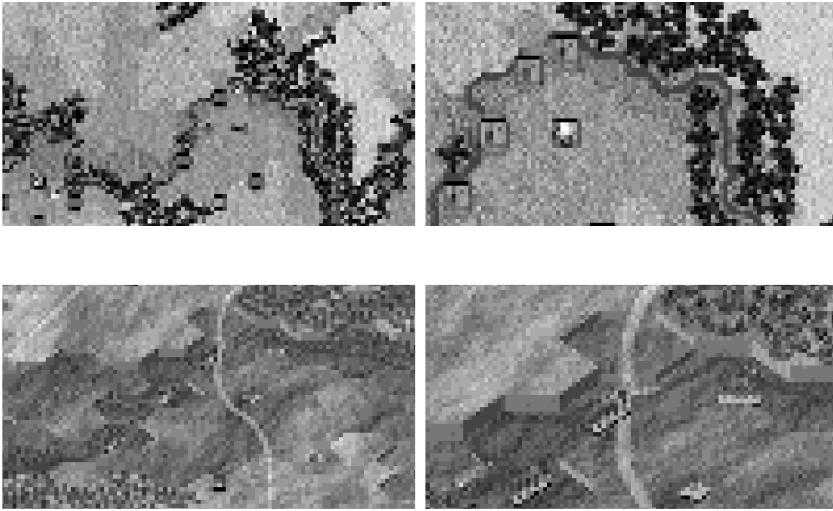
Jump Map. The smallest map is the Jump Window, which displays the entire map in play (for details on using the Jump Window, see *SCROLLING*, p.25). On this map, red and blue dots indicate the positions of Confederate and Union units (respectively). The jump map allows you to see, at a glance, the entire disposition of your forces, as well as all *known* enemy units. Clicking anywhere on the jump map will take you to that location.

2D Zoom-Out View. The smallest *playable* size is the 2D Zoom-Out map, which is displayed by Selecting 2D Zoom-Out View in the Display menu. This is best used for a quick, overall view. Units on this map view cannot be distinguished from each other as easily as on the other maps, but their positions relative to the opponent's units are readily apparent over a wider area.

2D Normal View. The next scale is called the 2D Normal View, and is displayed by Selecting 2D Normal View in the Display menu (or, if the map is currently in the 2D Zoom-Out mode, by Selecting the "Zoom Map" button in the Toolbox). This presents the terrain in more detail than the 2D Zoom-Out map while showing a larger area than the 3D maps. You can choose to display units on the 2D Normal View map with either graphical icons or military symbols (see 5.0 THE UNIT TYPES).

3D Zoom-Out. The 3D Zoom-Out view displays the Battleview™ map at half of its normal size, thus allowing twice as much of it to be seen at a time. This is the default map when you start the game.

3D Normal View. The ultimate map view is the 3D Normal View mode, which is displayed by Selecting 3D Normal View in the Display menu (or, if the map is currently in the 3D Zoom-Out mode, by Selecting the "Zoom Map" button in the Toolbox). This presents the Battleview™—a high-resolution map in 3D-type isometric perspective, presenting much more detail on the screen. In this view, units are shown as "miniatures" with individual positions within their hex.



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Scrolling

In most cases the map is too large to fit completely onto the screen, even in those scenarios where only a portion of the overall map is used. Therefore, several different ways to scroll it are provided. You can use the standard Windows® scroll bars, the arrow keys on your keyboard, or the *Jump Window*.



To use the Jump Window, Select its button in the Toolbox or the **Jump Window** command in the **Display** menu. This will display a miniature of the map being used (along with an indication of where each side's units are). Then Select the desired spot in the jump map, and the game map will automatically scroll to the corresponding point.

Place Names



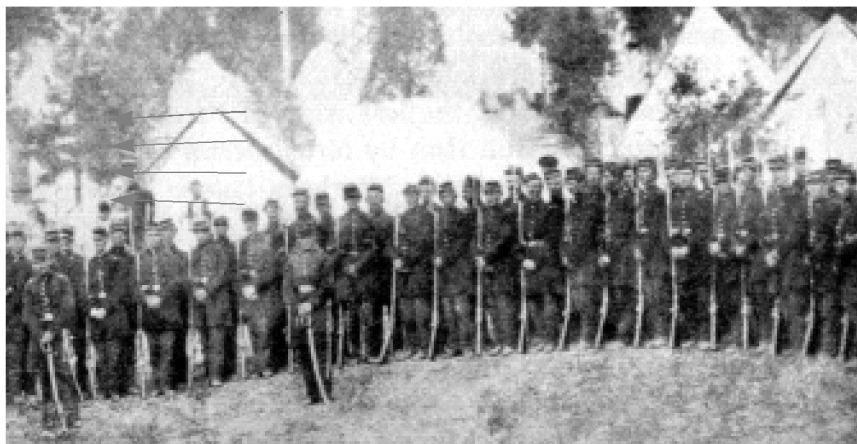
Press the **Shift** key to display the names of various roads, farms and other geographical features. These names are given for historical reference only.

Hex Coordinates



Each hex on the map has a unique set of coordinates, given in the form "#, #". The number on the left represents the vertical row of hexes (beginning with "0" for the left-most column of hexes on the map), while the number on the right represents the horizontal row (beginning with "0" for the topmost row).

The coordinates of the Hot Spot hex are displayed at the far right end of the Status Bar (see 4.6).



4.4 THE UNIT LIST

The Unit List is the portion of the screen display immediately below the map. It contains a representative drawing of each unit that occupies the current Hot Spot hex, plus that unit's name and pertinent game data. A horse-head icon in the upper right-hand corner of a *battery's* Unit List picture signifies that battery as horse artillery.

To Select a unit in the Unit List, *left-click* anywhere in its data area. To view the organizational information for a unit, *right-click* on its name in the Unit List and hold down the mouse button.



When there are more non-leader units in a hex than can be displayed in the Unit List, the arrow buttons in the lower right corner of the screen turn bright red (become highlighted) and can be used to scroll the Unit List.



The Unit List can be hidden by Selecting either **Full Screen Map** in the **Display** menu or its equivalent Toolbox button.

Leaders in the Unit List

The following explains the abbreviations and numbers displayed for leaders in the Unit List.



Command Rating
Leadership Rating
Movement Allowance

C (Command): The leader's Command Rating, given in the form "A" (best), "B", "C", "D", "E" or "F" (worst). This rating is used by the program to determine the leader's ability to stay "in command", thereby aiding the Rally of his *Disrupted* units. When the leaders command rating is displayed in red, it indicates that the leader has failed the command test for that current turn. See **COMMAND RADIUS/RATING** on p.54.

An icon  "behind" the number when the Leader is Selected indicates that he is currently Detached.

In addition, a leader's Command Rating is reduced by 1 during night turns.

L (Leadership): The leader's Leadership Rating, given in the form "A" (best), "B", "C", "D", "E" or "F" (worst). This rating is used by the program to let the leader aid in the Rally of a *Routed* unit he is stacked with; see 6.8 **RALLY**.

M (Movement): The leader's current Movement Allowance. This number will decrease as he moves.

An  icon "behind" the number when the Leader is **Selected** indicates that he is currently *mounted*.

★ A star appearing in the lower right-hand corner of a leader's Unit-List portrait means that he has been "promoted" to the command of a higher organization due to the elimination or promotion of that organization's original leader.

Combat Units & Supply Wagons in the Unit List

The following explains the abbreviations and numbers displayed for combat units and supply wagons in the Unit List.

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Weapon Types

B: Breech-loading rifles	N: 12-pounder Napoleon cannons
C: Carbines	P: Pistols
H: 12-pounder howitzers	R: Rifled muskets
L: 6-pounder smoothbore cannons	S: Spencer repeating rifles
M: Smoothbore muskets	T: 10-pounder Parrott or 3-inch Rodman cannons

*S (Strength)**RG (Range)**MV (Movement)**QL (Quality rating)**FA (Fatigue level)**Unit List Icons**Unit Name (right-click for organization info)*

S (Strength): The unit's current basic attack (and, if a regiment, defense during Melee) strength. This number represents the *actual number of men* in the unit (rounded to the nearest 25). This number is also used to determine stacking limits; see **STACKING** on p.11. If the **S#** appears on a *red* background the unit is Isolated; refer to the Appendix (p.63) for more details on being Isolated. To display a unit's original strength, right click on the unit in the Unit List.

RG (Range): The maximum range at which the unit can make a Ranged-Fire attack. A unit with a range of "—" cannot attack in any way.

MV (Movement): The unit's current Movement Allowance. This number will decrease as the unit moves or changes Facing/Formation.

QL (Quality): The unit's Quality, given in the form "A" (best), "B", "C", "D", "E" or "F" (worst). This number does not change during play.

FA (Fatigue): The unit's current Fatigue level: "0"-"3" cause no adverse effect (these numbers appear in green); "4"-"6" represent Low Fatigue (and appear in red-orange); "7"-"9" are High Fatigue (and appear in dark red). See also 6.9 **FATIGUE**.

Unit List Icons

One or more of the following icons will appear from time to time in the lower-center compartment of a non-leader unit's data area. These icons, as they appear from left to right on the screen, represent the following:



Infantry/Cavalry Regiment. When the full-color bullet appears, the regiment is eligible to attack. Once it has attacked, the bullet turns brown. A unit's **S#** that is printed in yellow indicates that the unit is not at full strength (Right click on the Unit List picture to view the full strength value. If the unit becomes low on ammo, the bullet will change to "half hollow" (i.e., half color and half outline). If the unit becomes out of ammo, the bullet will change to completely hollow (i.e., outline only).



Artillery Battery. When the full-color cannonball appears, the battery is eligible to attack. Once it has attacked, the cannonball turns brown. If the battery is low on ammo due to Isolation the cannonball will change to "half hollow" (i.e.,

half color and half outline). If the battery is out of ammo, the cannonball is hollow (i.e., an outline). If the battery is uncrewed, a red "X" is drawn through the cannonball, and an **UNCREWED** banner will appear in the unit list.

M The letter indicates the type of weapon the unit is equipped with:



When the wheel appears, the unit is eligible to move. Once it begins to move, the wheel turns brown. When it has used all of its movement allowance, the wheel disappears.

F When the "F" on a red background appears, the unit is Fixed, meaning that it cannot leave its hex. For more information, see p.46.



These icons show the unit's present Facing (as indicated by the direction the red arrow is pointing) and Formation. Depending on the unit type, the two parallel yellow lines indicate that it is either in line, dismounted or unlimbered (as shown by the icon illustration on the left) or in column, mounted or limbered (as shown by the illustration on the right).



When the pick-and-shovel appears, the unit is constructing breastworks.



When the "D" appears, the unit is Disrupted.



When the "R" appears, the unit is Routed.



When the full-color binoculars appear, the unit is currently in the LOS of (and thus also has a LOS to) at least one enemy unit. If the *only* enemy unit having a LOS to the unit when Fog of War is in effect is an enemy supply wagon, the binoculars are brown, indicating that the identity of your unit is not known to the enemy.



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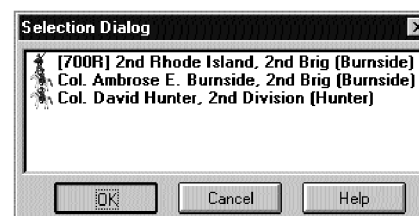
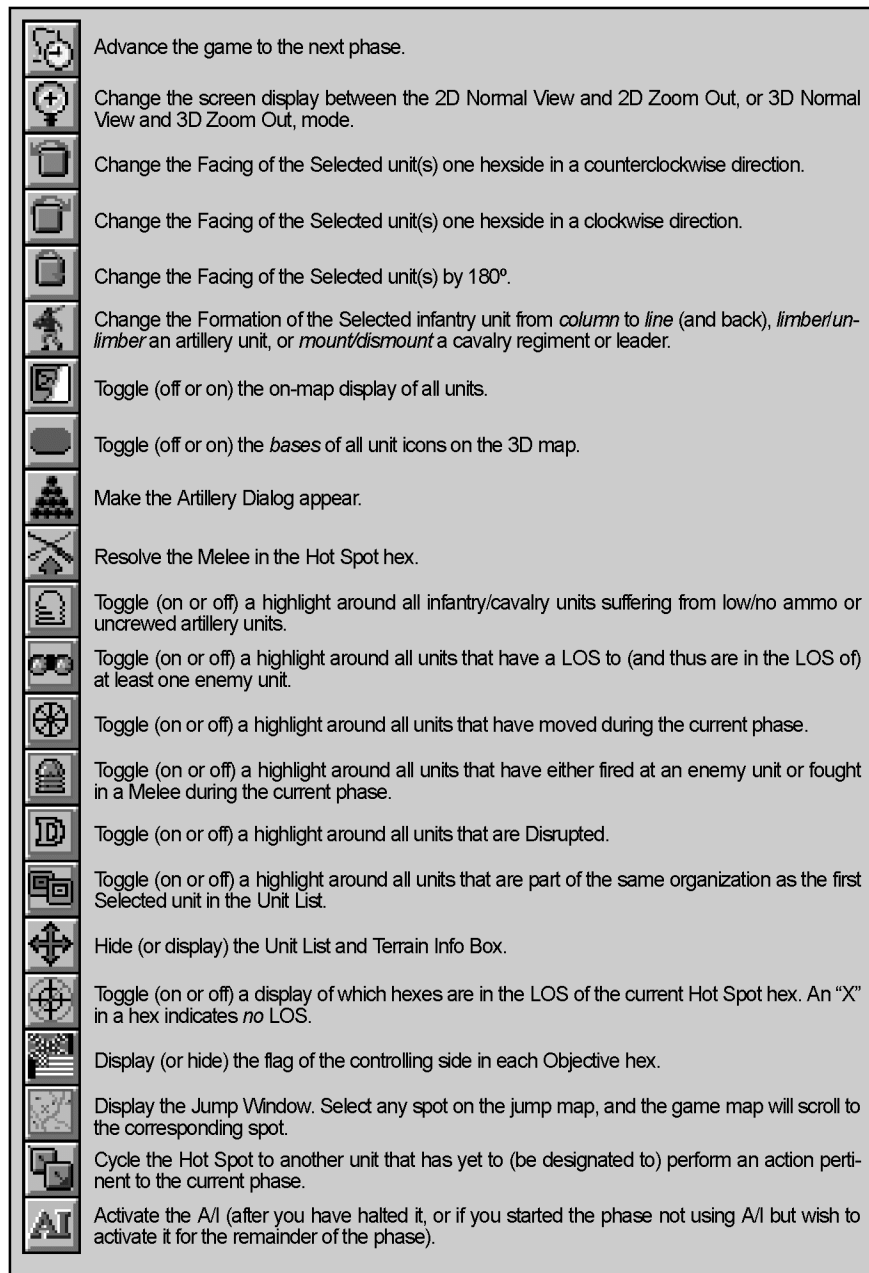
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The Pop-Up Selection Dialog

The Pop-Up Selection Dialog allows you to Select any unit(s) in the Hot Spot hex even if the Unit List is hidden. To display this dialog, left-click on a map hex with a unit you wish to Select, then simply *press the spacebar*. You can then Select a single unit by left-clicking on its name in the dialog, or Select multiple units by holding down the **Shift** or **Ctrl** key when you left-click. Double-clicking on a name is the same as pressing Enter, which is the same as Selecting **OK**. The information at the beginning of each unit name is that unit's *S#* and weapon type. Disrupted and Routed units will have an icon to indicate their current state.

The Terrain Info Box



The Terrain Info Box appears in the lower-left-hand corner of the screen, presenting information about the current Hot Spot hex. It displays a digitized photo (most of which were taken from actual sites around the Bull Run battlefield) of the type of terrain in the hex (clear, orchard, forest, etc.), then lists that terrain type by name and gives its Ranged-Fire combat modifier, its elevation in feet, and its Objective value.

The bottom line of the Terrain Info Box shows the current *artillery* ammunition supply for each side (in the form "###", with the Union total on the left and the Confederate total on the right). See Artillery Ammo on p.35.

Finding Hexside Terrain Features Using the Terrain Info Box

In *BATTLEGROUND: BULL RUN*, there are a number of terrain features which exist along or through hexsides (e.g., roads and streams). To learn which of these features are present in or alongside the current Hot Spot hex, click anywhere on the Terrain Info Box. The information in the Terrain Info Box will disappear and the name(s) of the extra terrain feature(s) will appear.



Right or left click anywhere in the Terrain Info Box for a display of the hexside terrain features. These terrain features are arranged (roughly) in the locations pertaining to the hexsides they run along or through.

For example, in the illustration at left, a stream runs along the "lower" hexside of the Selected hex, and a road runs through the hex, crossing the lower left and upper right hexsides.

Selecting a Unit

To Select a unit in the Unit List, left-click anywhere on its area in the List. You can quickly Select *all* the units shown in the Unit List by *double-clicking* with the left mouse button in the Hot Spot hex.



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Selecting a Unit

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5.0 THE UNIT TYPES

Infantry and cavalry regiments, artillery batteries, individual leaders and supply wagons are represented in the game. All, aside from *unlimbered* artillery, have an inherent movement capability; and all, aside from leaders, *limbered* artillery and supply wagons, can make attacks. (Infantry in column and mounted cavalry can only engage in Melee.) Most of their characteristics are covered in 2.0 THE BASICS OF PLAY, but more details on the special capabilities of leaders, artillery units and supply wagons are given in 5.2-5.4 below. To see the attributes of a specific unit during play, Select its hex to put it in the Hot Spot and check its data in the Unit List.

5.1 UNIT ICONS

Many different icons are used to represent the units in the game. Refer to the chart on page 33 for a sample illustration of each type of unit.

Military Symbol Icon Colors

The color of each “military symbol” icon indicates a general category of unit types, as explained below (note that these colors appear *only* on the 2D Normal View map):

Light Green: Infantry

Yellow: Cavalry

Red: Artillery

Gold (Star): Leader

Map Type:				Unit Type:
2D zoom out	2D zoom-in graphical	2D zoom-in mil. sym.	3D zoom-in & zoom out	
				Infantry regiment in line
				Infantry regiment in column
				Routed Inf/Cav/Art unit
				Cavalry regiment in line
				Cavalry regiment in column
				Unlimbered artillery battery
				Limbered artillery battery
				Dismounted leader
				Mounted leader
				Supply wagon

Map Type:				Unit Type:
2D zoom out	2D zoom-in graphical	2D zoom-in mil. sym.	3D zoom-in & zoom out	
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				Infantry regiment in column
				Routed Inf/Cav/Art unit
				Cavalry regiment in line
				Cavalry regiment in column
				Unlimbered artillery battery
				Limbered artillery battery
				Dismounted leader
				Mounted leader
				Supply wagon



5.2 LEADERS

For the basics, see **LEADERS** on p.10. One leader per side can aid in Melee (when stacked with a unit) by increasing his side's differential by one. A leader lowers the chance that a unit he is stacked with will Rout by adding a -1 modifier to that unit's Morale Check die roll, and can aid units under his command in their attempts to Rally. See also 4.4 **THE UNIT LIST** and 6.8 **RALLY**.

A dismounted leader is treated as infantry in column, and a mounted leader is treated as mounted cavalry, for movement-cost purposes. Leaders can mount and dismount their horses by simply Selecting a leader during the Movement Phase and clicking the Change Formation button in the Toolbox.

A leader can be attacked as an individual target only if no other unit (aside from one or more other friendly leaders) is in his hex. Leaders do not become Disrupted or Routed.

A leader can be killed, wounded or captured. In each case he is eliminated and another leader is promoted at the start of the next friendly Player Turn to take over his command. (A leader so "promoted" has a gold star in the lower right-hand corner of his portrait in the Unit List.) A mounted leader is more likely to be eliminated in this manner as one who is dismounted. A defending leader is automatically captured if all other friendly units in his hex are eliminated during Melee.

Night Turns. A leader's Command Rating (C) is reduced by 1 during night turns.

Command & Leadership

Each leader has both a Command and a Leadership rating, which affect his ability to influence certain actions of other units under his command; Army and Corps leaders have an unlimited Command Radius. see 4.4 **THE UNIT LIST**. In addition, *brigade* and *division* leaders have a limited Command Radius;

5.3 ARTILLERY

○ An artillery battery can have its "crew" killed in combat, leaving the guns abandoned and unusable. An uncrewed battery has a red X in the Unit List. To provide an uncrewed battery with a new crew, a friendly Good Order regiment that has not moved during the current Player Turn must be in the hex with it during a friendly Movement Phase, and both must be Selected; then Select **Recrew Battery** in the **Units** menu during that same phase. Note that only a cavalry regiment can recrew a horse-artillery battery.

When you Select **Recrew Battery**, the **S#** of the recreding unit is reduced by 25 *per gun of the battery to be recrewed*, and the battery's uncrewed status is removed. Furthermore, in order to recrew, the infantry unit must have at least 25 men remaining *after* recreding. The battery's Fatigue level becomes the same as the recreding units. Neither unit can move (the recreding unit could advance into Melee), and the battery cannot fire, until the next friendly Player Turn.

For artillery ammo supply rules, see **Artillery Ammo**, below. For artillery in Melee, see **Melee** and **Resolving Melee** on p.49.



5.4 AMMO & SUPPLY WAGONS

When a regiment incurs a depletion of its ammo, it becomes "low on ammo" and thereafter cannot fire in its Offensive Fire Phase until resupplied. If a regiment that is already low on ammo incurs another ammo depletion, it "runs out of ammo" and can make no *Ranged-Fire* attack at all until it is resupplied.

For a unit to be resupplied, it must be non-Routed *and* within five hexes of a friendly supply wagon. The path of hexes traced to the supply wagon may

not cross an impassable creek hexside or pass through an enemy unit or its ZOC. If it does, the unit cannot be resupplied.

Each time a supply wagon resupplies a regiment, that wagon's supply strength ("**S#**" in the Unit List) is reduced by one. When its **S#** becomes zero, it is eliminated. Wagons themselves cannot be resupplied.

A supply wagon that incurs a loss due to an attack does not have its **S#** decreased, nor does it become Disrupted or Routed. Instead, its "crew" is considered killed and the wagon becomes immobile (i.e., its movement allowance becomes—and will remain—zero). An immobile supply wagon cannot be "recrewed", but can continue to resupply friendly regiments. A supply wagon captured in Melee becomes a supply wagon of the captor's side.

Artillery Ammo

The artillery ammo supply of both sides is displayed in the bottom line of the Terrain Info Box (see p.28). Each time an artillery battery makes a *Ranged-Fire* attack, its side's artillery ammo supply is reduced by one. When a battery is eliminated in Melee, the artillery ammo level of the side that lost the battery is reduced. *When a side's artillery ammo supply reaches zero, none of its artillery units can fire.* A side's artillery ammo supply can only be increased through the arrival of artillery reinforcements. Neither captured artillery nor its ammo can be used by the captor side.

When you Select Recrew Battery, the S# of the recreding unit is reduced by 25 per gun of the battery to be recreded, and the battery's uncreded status is removed. Furthermore, in order to recred, the infantry unit must have at least 25 men remaining after recreding. The battery's Fatigue level becomes the same as the recreding units. Neither unit can move (the recreding unit could advance into Melee), and the battery cannot fire, until the next friendly Player Turn.

For artillery ammo supply rules, see Artillery Ammo, below. For artillery in Melee, see Melee and Resolving Melee on p.49.



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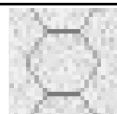
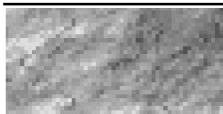
6.0 PLAYING A SCENARIO

6.1 TERRAIN

The *BATTLEGROUND: BULL RUN* maps contain numerous types of terrain, each with an associated effect on movement, LOS, and combat. If you wish to inspect the terrain in a hex obscured by the presence of units, Select that hex to put the Hot Spot there; then consult the Terrain Info Box, or Select the "toggle units" Toolbox button (or the Units Off command in the Display menu). If using the 3D map, you also have the option to Select the "toggle unit bases" Toolbox button or the Unit Bases Off command in the Display menu.

A terrain key summarizing the effects of the various terrain types follows. The +/- number in the Combat Effect column alters the Ranged Fire dice roll if the Target is in that terrain type; see Resolving Ranged-Fire on p.48. Terrain Combat Effects are cumulative for Ranged-Fire purposes, but the only Terrain Combat Effect that can apply to Melee are those for breastwork, stone wall or embankment. For Movement Cost purposes, cavalry in line formation (i.e., dismounted) are considered "infantry"; in the chart that follows "cavalry" refers to *mounted* cavalry.

TERRAIN KEY



CLEAR

Movement Cost: 2 (supply wagons: 3)

LOS/Combat Effects: none



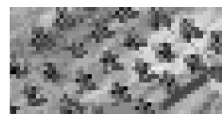
FOREST

Movement Cost: 4 (infantry in line or column);

6 (cavalry); 8 (artillery and supply wagons)

LOS Effect: Based on elevation; forest hexes have a height of 50 feet on all maps.

Combat Effect: -1



ORCHARD

Movement Cost: 3 (infantry);

4 (cavalry); 6 (artillery and supply wagons)

LOS Effect: Based on elevation; orchard hexes have a height of 15 feet.

Combat Effect: none



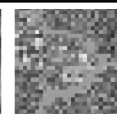
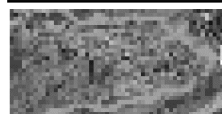
TOWN

Movement Cost: 4/1 (infantry line/column);

2 (cavalry, artillery, supply wagons); non-column units become disrupted

LOS Effect: Based on elevation; town hexes have a height of 30 feet.

Combat Effect: -1



MARSH

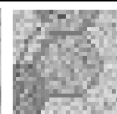
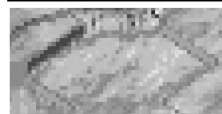
Movement Cost: 4 (infantry); 8 (cavalry);

causes automatic disruption when entering; Artillery and supply wagons cannot enter

LOS/Combat Effects: none

Hexside Terrain Features

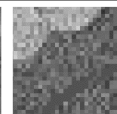
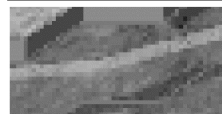
In *BATTLEGROUND: BULL RUN*, certain terrain features appear along hexsides. These features can be viewed by clicking in the Terrain Info Box. Below is a list of the hexside terrain features.



STREAMS

Additional Movement Cost: +1 (Infantry); +2 (all other units)

Special: The extra movement cost to cross a stream is ignored if the unit crossing it qualifies for the pike/road/trail movement benefit (see below).

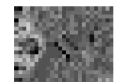


CREEKS

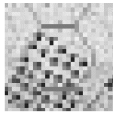
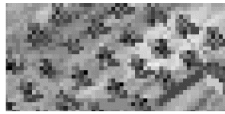
Additional Movement Cost: none; crossable *only* at bridges or fords (ford = stream hexside)

Special: Creeks are a darker blue than streams, and can be crossed *only* at a bridge or ford (where the hexside art becomes stream art to allow units to ford it).

BRIDGES



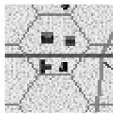
All units can use a bridge; however, *infantry in line and dismounted cavalry must change Formation to column or mounted respectively before such a unit can use a bridge to cross a creek.*

**ORCHARD**

Movement Cost: 3 (infantry);
4 (cavalry); 6 (artillery and supply wagons)

LOS Effect: Based on elevation; orchard hexes have a height of 15 feet.

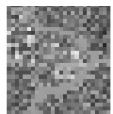
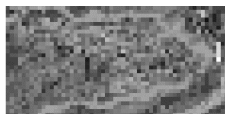
Combat Effect: none

**TOWN**

Movement Cost: 4/1 (infantry line/column);
2 (cavalry, artillery, supply wagons); non-column units
become disrupted

LOS Effect: Based on elevation; town hexes have a height of 30 feet.

Combat Effect: -1

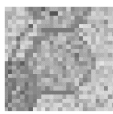
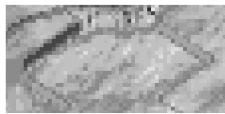
**MARSH**

Movement Cost: 4 (infantry); 8 (cavalry);
causes automatic disruption when entering;
Artillery and supply wagons cannot enter

LOS/Combat Effects: none

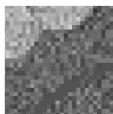
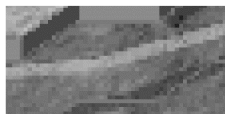
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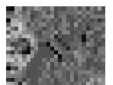
Additional Movement Cost: +1 (Infantry); +2 (all
other units)

Special: The extra movement cost to cross a stream is ignored if the unit crossing it qualifies for the pike/road/trail movement benefit (see below).

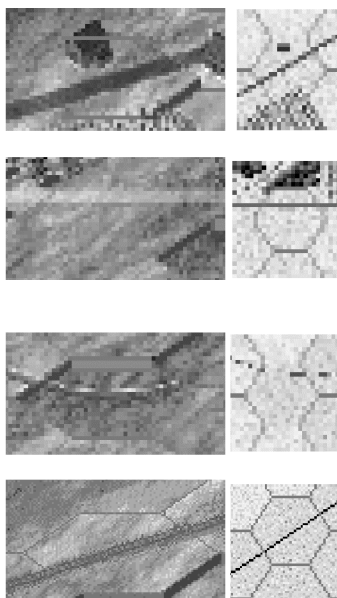
**CREEKS**

Additional Movement Cost: none; crossable *only* at
bridges or fords (ford = stream hexside)

Special: Creeks are a darker blue than streams, and can be crossed *only* at a bridge or ford (where the hexside art becomes stream art to allow units to ford it).

BRIDGES

All units can use a bridge; however, *infantry in line and dismounted cavalry must change Formation to column or mounted respectively* before such a unit can use a bridge to cross a creek.



PIKES, ROADS RAILS & TRAILS

There are a number of pikes, roads, rails and trails that wind their way across the scenario maps. Below is a listing of their movement effects: Most units (except infantry in line and dismounted cavalry; see below) moving along a *road* or *pike* pay one movement point per hex (regardless of terrain). Supply wagons pay two movement points per *road* hex. Infantry in *line* and *dismounted* cavalry pay the normal terrain movement cost of the hex. *All* units (except infantry in line and dismounted cavalry) pay two movement points to move along a *rail* or *trail*. Infantry in *line* and *dismounted* cavalry pay the normal terrain movement cost of the hex.

IMPORTANT: Only *one non-leader* unit can receive a trail or road movement bonus at a time.

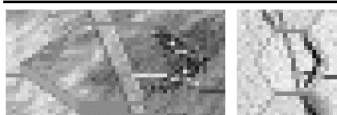


EMBANKMENT ("The Unfinished Railroad")

Movement Cost: +1 (infantry); +3 cavalry; +6 (artillery and supply wagons)

Combat Effect -2 (ranged fire, and Melee if attacker crossed embankment hexside)

IMPORTANT: Only units *in* the embankment hex receive the embankment modifier.



BREASTWORKS

Movement Cost: 1

Combat Effect -1 (ranged fire, and Melee if any attacker crossed breastwork hexside)

Breastworks can be constructed by infantry regiments and dismounted cavalry regiments during play. To start construction, during a friendly Movement Phase Select the unit and then Select **Make Breastworks** from the **Units** pop-down menu. To *stop* construction, follow the same procedure again during a friendly Movement Phase.

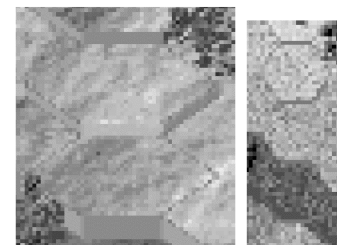
At the start of each Player Turn, the program checks to see if each friendly unit meets the construction qualifications, which are:

- The unit must be infantry or dismounted cavalry;
- It cannot have moved (including Facing/Formation change), attacked or been attacked in any way, or been in non-Good-Order status, at any time during the two preceding Player Turns.

If these conditions are met, the program makes a die roll based on an inherent probability. If

the die roll is successful, a breastwork appears along the hexside the unit directly faces (unless one already exists there or the unit is facing a wall hexside).

A unit constructing breastworks has a "pick-and-shovel" icon displayed in the icon area of the Unit List. While this icon is visible, the unit cannot recover from Fatigue, and if it fires it does so at half strength (and loses its "constructing" status).



ELEVATION LEVEL

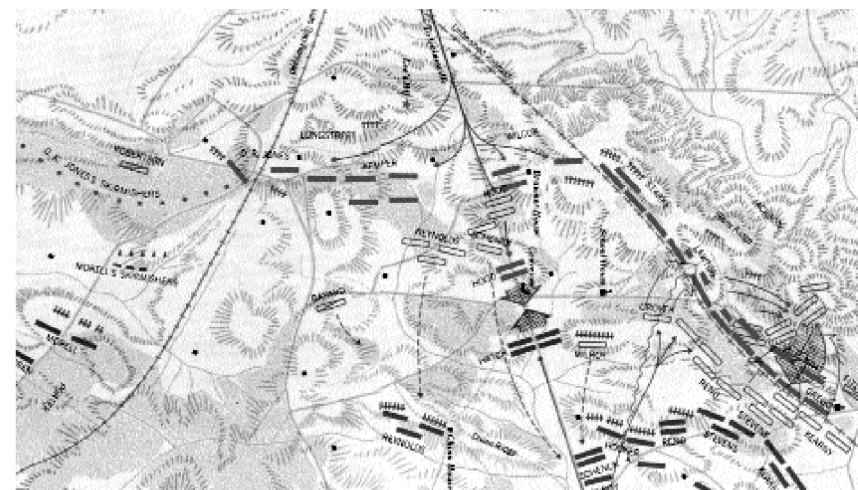
Each elevation change represents 30 feet

Additional Movement Cost:*

(From lower to higher: +1 (infantry); +2 (all *non-infantry* units)

(From higher to lower: +1 (all *non-infantry* units moving down slope).

Combat Effect -1 for Ranged Fire if target is *one* level higher than firer, or -2 if target is *two or more* levels higher than firer. In melee, the modifier is equal to the *most* levels ascended by any attacking unit.



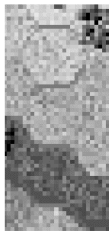
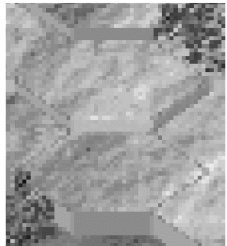
6.2 VICTORY CONDITIONS

Each scenario has its own set of Victory Values, which are point values that determine victory. They can be viewed via the Victory command in the Status menu. Using this command causes the Victory Dialog to appear, which lists a variety of data. It shows the number of men/cannons each side has lost so far and their point value. It also names the side the victory conditions apply to (calling it the *First Side*), the total point value of all Objective hexes that side currently controls, and that side's current overall point total (which the program calculates by subtracting the value of its unit losses from the sum total of its controlled Objectives plus the enemy's losses).

Any of five levels of victory are possible for the First Side: *Major Defeat*, *Minor Defeat*, *Draw*, *Minor Victory* and *Major Victory*. Each has an associated number of points which that side must equal or exceed at the end of play in order to achieve the next-higher level of vic-

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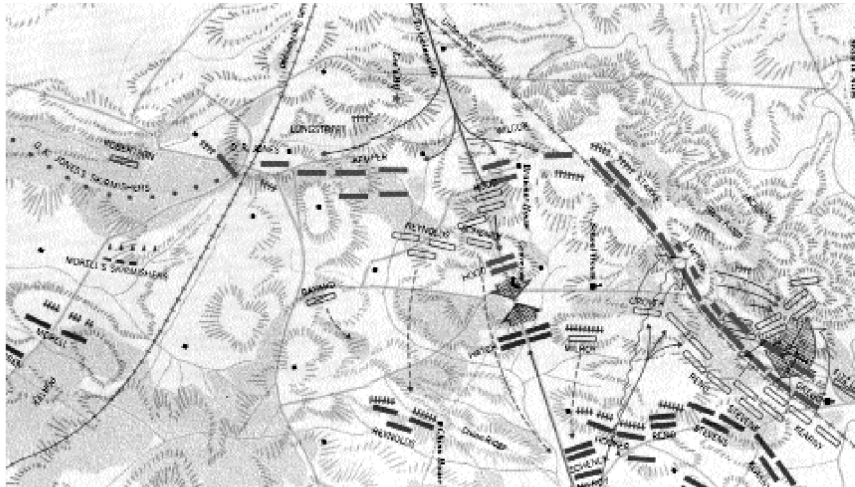
Each elevation change represents 30 feet

Additional Movement Cost:*

(From lower to higher: +1 (infantry); +2 (all *non-infantry* units)

(From higher to lower: +1 (all *non-infantry* units moving down slope).

Combat Effect –1 for Ranged Fire if target is *one* level higher than firer, or –2 if target is *two or more* levels higher than firer. In melee, the modifier is equal to the *most* levels ascended by any attacking unit.



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Any of five levels of victory are possible for the First Side: *Major Defeat*, *Minor Defeat*, *Draw*, *Minor Victory* and *Major Victory*. Each has an associated number of points which that side must equal or exceed at the end of play in order to achieve the next-higher level of vic-

tory. Specifically:

- The First Side suffers a **Major Defeat** if its point total is less than or equal to the total listed for "Major Defeat" in the Victory Dialog.
- The First Side suffers a **Minor Defeat** if its point total is greater than the total listed for "Major Defeat", but is less than or equal to the total listed for "Minor Defeat", in the Victory Dialog.
- The First Side achieves a **Draw** if its point total is greater than the total listed for "Minor Defeat", but is also less than the total listed for "Minor Victory", in the Victory Dialog.
- The First Side wins a **Minor Victory** if its point total is greater than or equal to the total listed for "Minor Victory", but is less than the total listed for "Major Victory", in the Victory Dialog.
- The First Side wins a **Major Victory** if its point total is greater than or equal to the total listed for "Major Victory" in the Victory Dialog.

The program takes the First Side's current overall point total, finds which level that total equates to, and displays that level's name as the side's current level of victory.

A scenario does not automatically end when one side achieves a Major Victory (or suffers a Major Defeat); the level of victory may change during the course of play as casualties occur and Objectives change hands. Only the level that exists at the *end* of the scenario applies for determining the winner. However, the scenario will end if all units from one side have been eliminated and the opponent has all the objectives.

Objectives

As the name implies, an Objective is a vital hex to control in a scenario due to its victory-point value. All Objectives are controlled by one side or the other at scenario

start. To gain control of an enemy-controlled Objective, you must occupy it with one of your own units. By themselves, leaders, supply wagons, and routed units can't be used for this purpose.

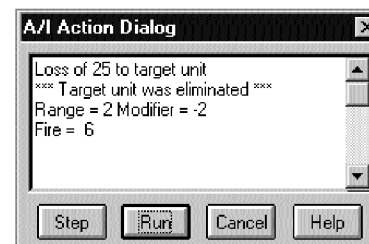


To display all Objectives on the map, Select **Objectives** in the **Display** menu. When this command has a check mark next to it, each Objective hex is marked with a flag icon to denote its location and ownership.

To find the point value of a specific Objective hex, Select **Objectives** in the Status menu. Selecting one of the Objective-hex lines in the dialog box that appears will move the Hot Spot to that Objective hex.

6.3 USING THE A/I

When the A/I is conducting an action, the A/I Action Dialog appears to tell you what the A/I is doing, and the map will scroll to bring the corresponding action.



The A/I Action Dialog has four buttons: *Step*, *Run/Pause*, *Cancel* and *Help*. The Step button is initially the default. The current default button is outlined in black, meaning that it can be chosen by pressing **Enter** while the dialog is on-screen.

The **Step** button runs the A/I for one action, after which A/I processing halts.

The **Run** button makes the A/I run continuously until there are no more A/I actions for the current phase. When you Select **Run**, it changes to **Pause** (which becomes the default).



Note: When the A/I for the side conducting the actions in the current phase is set to Manual, you can Select the **Activate A/I** menu command (or its corresponding Toolbox button) at any time to have the A/I complete that phase for you. Also, the type of A/I being used (Commander Control, Automatic, or Automatic with Fog-of-War) can be changed via the A/I menu at any time for either or both sides [Exception: if playing a modem-to-modem, internet or PBEM game, Fog of War cannot be turned off once the game has begun].

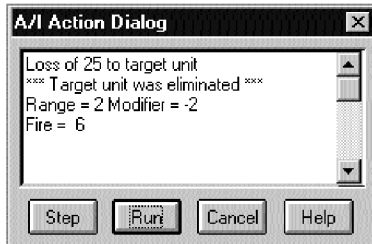
The **Pause** button halts the A/I temporarily. (While the game is halted, you cannot Select anything from the Menu Bar or Unit List—but the Toolbox and other A/I Dialog buttons remain active.) When you Select **Pause**, it changes back to **Run** (which becomes the default).

The **Cancel** button cancels A/I processing. (When you Select **Cancel**, it becomes the default.) To re-activate the A/I, Select the "Activate A/I" button in the Toolbox or the **Activate A/I** command in the A/I menu. While the A/I is activated and the A/I Action Dialog is on-screen, the **Esc** (Escape) key acts as a Cancel button.

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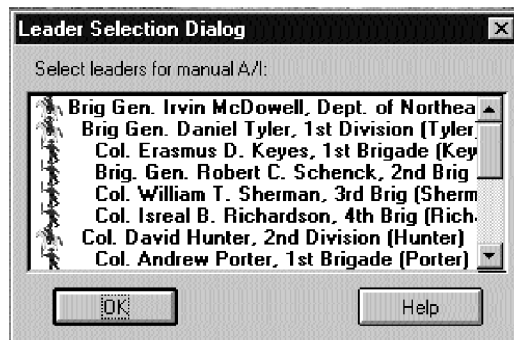
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The **Cancel** button cancels A/I processing. (When you Select **Cancel**, it becomes the default.) To re-activate the A/I, Select the "Activate A/I" button in the Toolbox or the **Activate A/I** command in the **A/I** menu. While the A/I is activated and the A/I Action Dialog is on-screen, the **Esc** (Escape) key acts as a Cancel button.



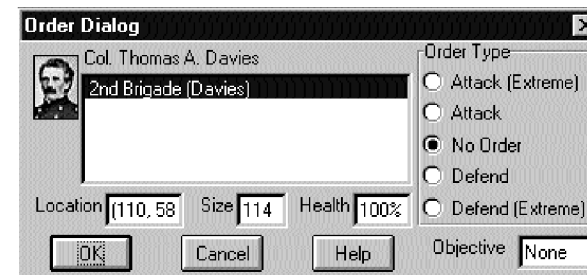
Commander Control & Organizations

Selecting the **Commander Control** command in the **AI** menu at the start of the scenario lets you issue orders to one or more leaders (and thus to the units under their command). If you choose this, the Leader Selection Dialog will appear, from which you must Select the leader(s) you wish to control. (To choose more than one, hold down the **Ctrl** or **Shift** key as you Select each name.)



Afterwards, an Order Dialog for each of your leaders will appear at the start of his friendly Player Turn. This dialog shows the order his superior has issued to him (unless he is the army leader)—which you can change if you wish—and allows you to issue orders to his subordinate leaders (and thus to their regiments and/or batteries). “Location” shows the coordinates of the hex the named leader presently occupies. “Size” indicates the highlighted organization’s current strength. “Health” indicates the percentage of units in that organization that are in Good Order, crewed if artillery, and not suffering from High Fatigue.

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To give an organization an order, Select its name and then Select one of the orders from the list in the dialog. Then choose the organization’s “objective” for the turn by right-clicking on the appropriate hex. Once you’ve given orders to all your organizations, Select the OK button and play will proceed.

If you click the Cancel button in the Order Dialog, AI processing is canceled at that point. Processing can be resumed by Selecting the “Activate AI” button in the Toolbox or the Activate AI command in the AI menu.

Summary of Commander Control AI Order Types

Attack (Extreme). An “extreme” attack order will cause units to attack in a more concentrated formation with maximum stacking in each hex. Also, extreme order will cause units not to fall back until all units of that organization are no longer in Good Order.

Attack Order. A regular attack order causes units to move so as to take the specified objective. For division or higher organizations, flank units will be deployed in an advanced position.

No Order. If you don’t want to give an order to a formation, select “No Order”. While a unit will still fire at a close range target, it will not normally move.

Defend Order. Units will move so as to hold specified objective. For division or higher organizations, flank units will be deployed in a “refused” formation.

Defend (Extreme). An “extreme” defend order will cause units not to fall back until all of the units of that organization are no longer in Good Order.

Unknown-Unit Markers



When *Fog of War* is in effect for a side, its units are partially revealed—in the form of Unknown-Unit markers—whenever an enemy unit becomes adjacent to them. An Unknown-Unit marker indicates only the presence of a hidden unit; the actual type(s) and number of units are not revealed until the start of the next phase. A unit’s move automatically ends when it reveals an adjacent Unknown-Unit marker.

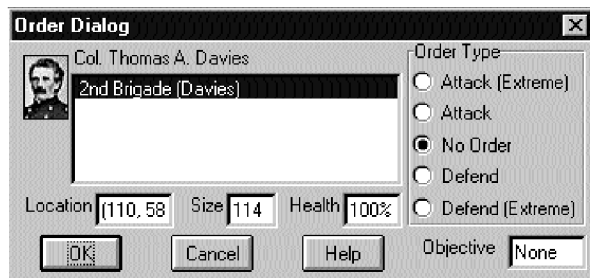
6.4 GAME TURNS

Each scenario has a maximum number of playable Game Turns. When that number has been played to completion, the game is over. The number of Game Turns is displayed in the Phase Box (see p.4).

6.5 THE SEQUENCE OF PLAY

Each Game Turn comprises two Player Turns—one Rebel and one Union. Furthermore, each Player Turn is made up of four phases, which occur in the order listed below.

For simplicity, the player whose side is “active” in each of these phases (aside from the Defensive Fire Phase) is referred to as the *Phasing Player*. Except in the last Player Turn of the game, the completion of each Melee Phase is followed by the Movement Phase of the



To give an organization an order, Select its name and then Select one of the orders from the list in the dialog. Then choose the organization's "objective" for the turn by right-clicking on the appropriate hex. Once you've given orders to all your organizations, Select the OK button and play will proceed.

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No Order. If you don't want to give an order to a formation, select "No Order". While a unit will still fire at a close range target, it will not normally move.

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next Player Turn, in which the opponent becomes the Phasing Player. To advance the game to the next phase, Select either the “advance to next phase” Toolbox button or the **Next** command in the **Phase** menu.

1. Movement Phase

In the Movement Phase, the Phasing Player may move some, all or none of his units that are capable of movement. However, as the first action of this phase, the program finds all of the Phasing Player's units that are Fatigued, Disrupted, Routed, low on ammo and/or out of ammo, and checks to see if each loses any Fatigue, is resupplied and/or Rallied. The program also checks to see if any units that are building breastworks have finished constructed them. It then announces on-screen, in the form of the “Command Report”, the results of these checks.

2. Defensive Fire Phase

In the Defensive Fire Phase, the Phasing Player's *opponent* may fire some, all or none of his units that are capable of making a Ranged-Fire attack.

3. Offensive Fire Phase

In the Offensive Fire Phase, the Phasing Player may fire some, all or none of his units that are capable of making a Ranged-Fire attack.

4. Melee Phase

In the Melee Phase, the Phasing Player may conduct Melees with some, all or none of his Melee-capable units that are adjacent to an enemy unit, or are adjacent to a Vacant Hex (see MELEE, p.49).



6.6 MOVEMENT

The Phasing Player can move his units only during their Movement Phase, at which time he may move all, some or none of them that are *capable* of movement (e.g., unlimbered artillery cannot move from one hex to another, nor can an uncrewed supply wagon or fixed units). For a basic explanation of how to use the mouse to move units, see MOVEMENT on p.7.

If more than one unit in a hex is currently Selected, you can move all of them using any movement method just as if they were a single unit (within stacking limitations; see STACKING on p.11). Note, however, that moving any *stack* of units, or entering a hex that contains *even one* other non-leader unit, negates the benefits of moving along a pike, road or trail. For instance, if you try to move two or more line-formation regiments simultaneously along a road, they must pay the *non-road* cost of the hex they are entering. Likewise, if a unit already occupies a road hex and you attempt to move another unit into it, the non-road cost will be charged.

Each *Formation* change a (non-leader) unit makes, and each *Facing* change you invoke, costs that unit a portion of its movement allowance; these costs are listed under Change Costs in Parameter Data, which can be found by Selecting Scenario Notes in the Help menu.

If you move a unit but want to start its move over again, you can Select **Undo Last Movement** in the **Units** menu or hold down the **Ctrl** key and press **U** on the keyboard, *provided that unit is still Selected* [Exception: A move cannot be undone if Fog of War is in effect for the opposing side, if playing via modem, internet or in a PBEM scenario].

If you move a unit but use only part of its movement allowance, you can move one or more other units and still go back and finish moving the first unit. A unit can become the “leading” unit in column movement even if it has already expended part of its movement allowance.

A unit's movement allowance drops to “0” whenever it moves adjacent an Unknown-Unit marker, or moves adjacent to a non-Routed enemy unit *and* is within that unit's Field of Fire.

All the various types of terrain in the game have an associated movement cost, or provide some kind of benefit or restriction to movement. See 6.1 TERRAIN for details.



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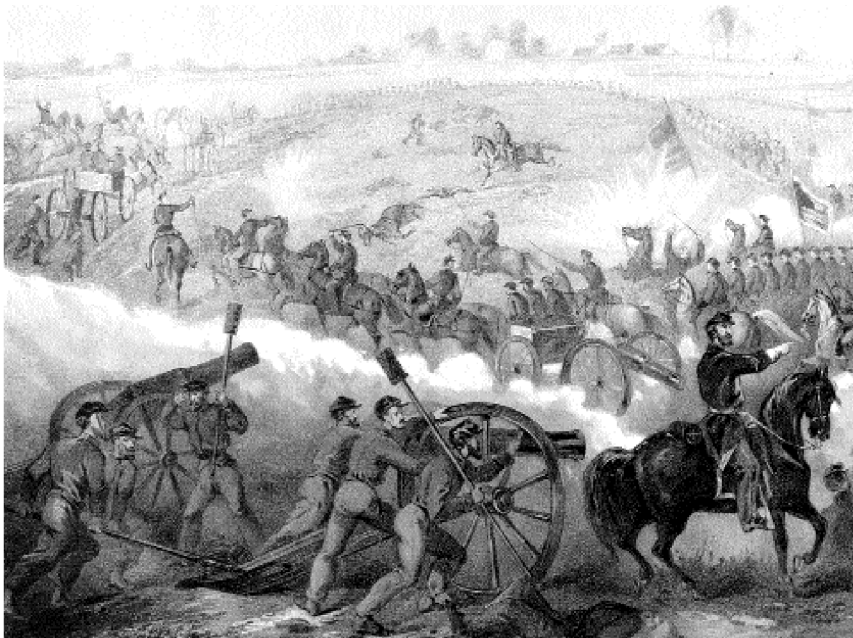
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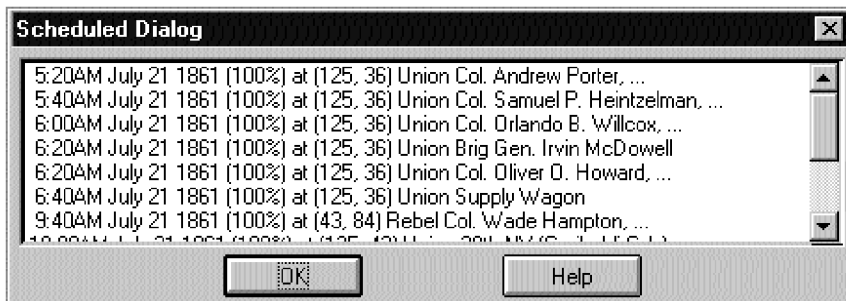
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All the various types of terrain in the game have an associated movement cost, or provide some kind of benefit or restriction to movement. See 6.1 *TERRAIN* for details.



Reinforcements

Many of the scenarios have reinforcements, which are units that enter from off-map during play. You can display the Scheduled Dialog to see when, where and how many reinforcement groups are available by Selecting **Scheduled** in the **Reinforce** menu. (However, you cannot see the opponent's reinforcement groups if Fog of War is in effect.) Selecting any line in this dialog automatically scrolls the map to the arrival hex of that reinforcement group and makes that hex the current Hot Spot. The percentage chance that the reinforcement group will arrive on the listed turn (or any turn thereafter if it does not arrive on the first turn) is listed in the Scheduled Dialog. An asterisk ("*") displayed before the listing for a reinforcement group indicates that the group has been delayed (but is still in the queue to enter).



At the start of a Movement Phase in which reinforcements have arrived, a message will appear in the Command Report to alert you to their arrival. Double Clicking on the name of the Unit in the Scheduled Dialog lets you view a list of each unit of the reinforcement group. The arriving units may be brought onto the map at any time during the Movement Phase, or they may be ignored and brought on in a subsequent Movement Phase (i.e., they will remain available indefinitely until entered).

To bring on reinforcements,

1. Select **Arrived** in the **Reinforce** menu to display the Arrived Dialog, which will show a list of the available units.
2. Double-click with the left mouse button on the name of a unit in the list. When you do so, the dialog will disappear, the map will scroll to the entry hex and that unit(s) will appear there.
3. If more reinforcements are available, select **Arrived** again, and repeat the procedure until you're done bringing on your reinforcements.

Protected Entry Hexes:

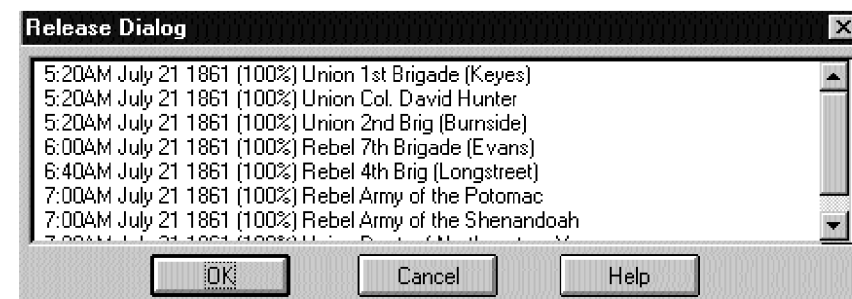
Most reinforcement entry hexes are "protected" such that enemy units within a particular range of them will be automatically routed (or eliminated if *in* the hex!) when certain enemy reinforcements appear there. More details on this can be found by Selecting **Scenario Notes** in the game's **Help** menu, then Selecting **8.0 Arrival Schedule**.

Fixed Units

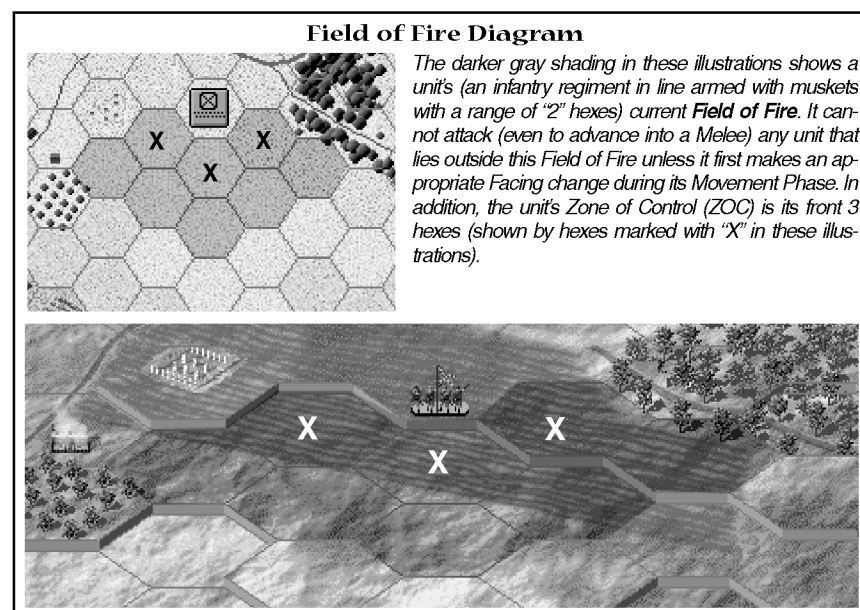
F Many of the scenarios of *BATTLEGROUNDS: BULL RUN* have Fixed units. Fixed units are shown in the Unit List with a red "F" icon. Such units are frequently "released" automatically during the scenario. The Release Dialog displays the turn the unit(s) is first eligible for being released is shown, followed by the percentage chance of it being released. If not released on the first turn it is eligible, a dice roll is performed at the start of each turn for that

unit(s) until it is released. The Command Report at the start of a player's turn will list units that have just been released. Fixed units are released immediately if fired on by an enemy unit or if they become routed. Units cannot be fixed during play. When playing with Fog of War, the Fixed status of enemy units and their release schedule is not known.

To view the Release Dialog, Select **Released** from the **Reinforce** menu and a dialog box similar to the one shown below will appear.

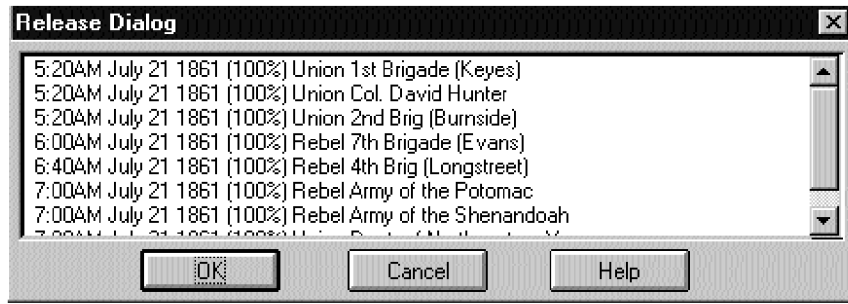


By clicking on a listing in the Release Dialogue box, all units of that organization will be highlighted on the map.



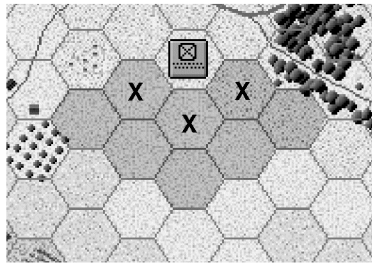
unit(s) until it is released. The Command Report at the start of a player's turn will list units that have just been released. Fixed units are released immediately if fired on by an enemy unit or if they become routed. Units cannot be fixed during play. When playing with Fog of War, the Fixed status of enemy units and their release schedule is not known.

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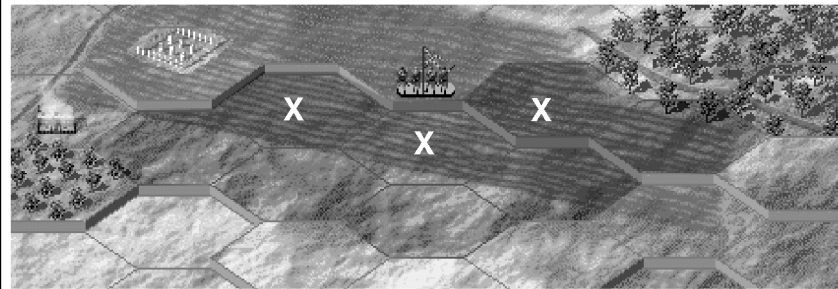


By clicking on a listing in the Release Dialogue box, all units of that organization will be highlighted on the map.

Field of Fire Diagram



The darker gray shading in these illustrations shows a unit's (an infantry regiment in line armed with muskets with a range of "2" hexes) current **Field of Fire**. It cannot attack (even to advance into a Melee) any unit that lies outside this Field of Fire unless it first makes an appropriate Facing change during its Movement Phase. In addition, the unit's Zone of Control (ZOC) is its front 3 hexes (shown by hexes marked with "X" in these illustrations).





67 COMBAT

For the basics, see COMBAT on p.8. A supply wagon cannot attack; its S# is used only to show how many units it can resupply (see 5.4 AMMO & SUPPLY WAGONS). The same unit can be attacked more than once in the same phase [Exception: not in the Melee Phase]. However, a unit may make a Ranged- Fire attack or advance into Melee only vs. a target that lies within that attacker's *Field of Fire*.

Ranged Fire

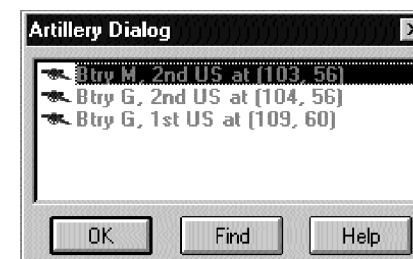
Ranged Fire uses a combination of the attacker's strength (S#), weapon type, and the range (in hexes) to the target to determine the actual strength of the attack. All Disrupted units, and units firing in the Offensive Fire Phase that moved in the preceding Movement Phase, have their strength factor halved before any other modification (quartered if both apply). Infantry in column, mounted cavalry, Routed units, and those that are out of ammunition and/or have no valid target within their Field of Fire cannot use Ranged Fire.

Restrictions on Ranged Fire

Ranged Fire can be conducted against only one target unit at a time. If the target hex contains only one unit the attack will be resolved automatically. If the target hex contains more than one potential target, a Target Dialog will be displayed to let you Select one of those units as the target. A unit name appearing in gray in the Target Dialog indicates the unit is suffering from low/no ammo if Fog of War is not in effect.

LOS and terrain can affect the attack. Ranged Fire cannot be used vs. a target the firer has no LOS to. Selecting either the "show LOS" Toolbox button or the Spotted Units command in the Display menu will highlight all units that have a LOS to at least one enemy unit.

No unit may conduct more than one Ranged-Fire attack per friendly fire phase. Selecting either the "highlight fired units" Toolbox button or the **Fired/Fought** command in the **Display** menu will highlight all units on the map that have attacked thus far in the current phase.



An easy way to fire *artillery* is via the "display Artillery Dialog" Toolbox button (or the **Artillery Dialog** command in the **Units** menu). Selecting either of these makes the Artillery Dialog appear, which lists all friendly artillery units that are capable of firing. To fire a unit using the Artillery Dialog, first Select the unit's name in the list, then right-click on the target hex. (Note that when a unit in the Artillery Dialog is Selected, all of its potential targets are highlighted on the map.) Once the unit fires, it disappears from the list and the next unit is automatically Selected, so all you have to do to fire this next unit is to right-click again on a target hex. A unit name printed in light gray in the dialog means that particular unit currently has no eligible target.

Resolving Ranged-Fire

When a unit makes a Ranged-Fire attack, the program multiplies the attacker's strength points (25 men = 1 strength point) by a number derived from the attacker's weapon type and the range to the target. This value is then divided by four. That firepower value is then halved if the firer is Disrupted or if the fire is taking place during the Offensive Fire Phase and the firer expended any movement points in the preceding Movement Phase (quartered if both apply). A die roll is then made which is modified according to the following conditions (as applicable):

- 1 If attacker's fatigue level is 4, 5 or 6
- 2 If attacker's fatigue level is 7 or greater
- x As per the defender's terrain modifier
- 1 If the quality of the firer is E or F (does not apply to artillery)*
- +1 If the quality of the firer is A or B (does not apply to artillery)*
- +2 If the target is an infantry unit in column formation or limbered artillery
- +2 If target unit is being Enfiladed
- +4 If the target is a mounted cavalry unit

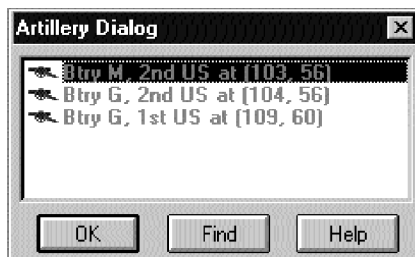
*Optional Rules "Quality Fire Modifiers" enabled

The program uses the modified dice roll to determine the amount of casualties (strength point losses) inflicted on the defender, and adjusts the latter's S# accordingly. (See the Weapon Effectiveness Table and the Fire Results Table in Parameter Data under **Scenario Notes** in the **Help** menu.) Each attack is resolved before the next one is made.

The possible results of Ranged-Fire depend on the type of target unit:

Regiment: no effect; or a one-level increase in Fatigue; or a reduction in its S# (if reduced to "0", the unit is eliminated; see also Morale Checks on p.51).

Battery: no effect; or a one-level increase in Fatigue; or a reduction in its S# (if reduced to "0", the unit is eliminated; see also Morale Checks on p.51); or the destruction of the battery's



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- 1 If attacker's fatigue level is 4, 5 or 6
- 2 If attacker's fatigue level is 7 or greater
- x As per the defender's terrain modifier
- 1 If the quality of the firer is E or F (does not apply to artillery)*
- +1 If the quality of the firer is A or B (does not apply to artillery)*
- +2 If the target is an infantry unit in column formation or limbered artillery
- +2 If target unit is being Enfiladed
- +4 If the target is a mounted cavalry unit

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The possible results of Ranged-Fire depend on the type of target unit:

Regiment: no effect; or a one-level increase in Fatigue; or a reduction in its S# (if reduced to “0”, the unit is eliminated; see also Morale Checks on p.51).

Battery: no effect; or a one-level increase in Fatigue; or a reduction in its S# (if reduced to “0”, the unit is eliminated; see also Morale Checks on p.51); or the destruction of the battery's

"crew" (which leaves the guns abandoned). For casualty (and stacking) purposes, each gun = 50 men.

Leader: no effect, or a capture/wound/elimination. (See 5.2 LEADERS.)

Supply Wagon: no effect, or the destruction of the wagon's "crew" from small arms fire; or reduction in S# from artillery fire (see 5.4 AMMO & SUPPLY WAGONS).



Melee

Each gun of an artillery battery is equal to 12.5 men when defending in Melee. A leader stacked with a unit under his command increases the strength (i.e., differential) of his side by one in Melee, but any additional friendly leader present in the Melee provides no further benefit. A leader can advance into Melee *only* if accompanying a friendly regiment. Units cannot advance into Melee in excess of stacking limits, nor if they are Disrupted or Routed.

To initiate a Melee,

1. First choose—using the *right* mouse button—an enemy-occupied hex adjacent to the unit(s) that will conduct the Melee.
2. Then Select each friendly unit (or stack of units) that will participate in the Melee and Select Add to Melee in the Melee menu. (Selecting Show Differential in that menu will display the attacker's current strength advantage ["+#"] or disadvantage ["-#"] in the Melee.)
3.  Once you've added the desired attacking unit(s) to the Melee, resolve it by Selecting the "resolve Melee" Toolbox button or the **Resolve Melee** command in the Melee menu. A dialog will be displayed to give the results. Each Melee must be resolved before the next one can be initiated. Lone leaders cannot Melee each other.

Semi-Auto Melee

You can also use "drag-and-drop" to conduct Melees; see Melee on p.9. Select an eligible friendly unit, and "drag and drop" it onto the adjacent enemy-occupied hex you wish to Melee.

Each time a new unit(s) is added in this manner the Melee differential is updated and displayed.

Auto-Melee

You can have the program conduct Melee for you even if not using the AI. To do this, hold down the **Alt** key and right-click on an enemy-occupied hex adjacent to at least one friendly, Melee-eligible unit. The program will find all units eligible to attack that hex, and will give their names, their locations and the attack differential. If you click OK, they will automatically attack the hex.

AI Melee

Another option for conducting Melee is simply to Select the "activate AI" Toolbox button. The program will then conduct all Melees in that phase automatically.

Resolving Melee

To resolve a Melee, the program computes a Melee "*differential*" based on the attacking and defending strengths. The differential is the attacker's S# minus the defender's S# divided by 100

Versus Gun Battery: Each gun of a battery defending in Melee is equal to 12.5 men.

Versus Routed Unit: As part of the differential calculation, the strength of each *Routed* defender in the hex is quartered.

 **Versus Vacant Hex:** If all defending units in a hex are eliminated *during the Offensive Fire Phase*, a red triangle icon will appear in that hex to mark it as a Vacant Hex. Such a hex may be attacked in the next Melee Phase, and the meleeing unit(s) will automatically occupy that Vacant Hex *without* gaining any fatigue or becoming Disrupted.

Even though the advancing side is termed the attacker, both sides engage in Melee simultaneously; hence the attacker will also suffer casualties. To resolve a Melee, the program:

- Adds two to the differential if any attacking unit that advanced into the melee hex from a hex that was not in *any* defending unit's Field of Fire;
- Adds one to the differential if *no* attacking unit involved in the Melee fired during the preceding Offensive Fire Phase;
- Subtracts one from the differential if *any* attacker involved in the Melee advanced into the hex across a breastwork hexside;
- Subtracts two from the differential if any attacking unit involved in the Melee advanced into the hex across a wall or embankment hexside (such that the defending unit would receive the embankment modifier if fired on by the attacker);
- Subtracts from the differential a number equal to the greatest number of elevation levels ascended by any one regiment as it advanced into the Melee;
- Subtracts one from the differential if any attacking unit is suffering from Low Fatigue (fatigue of 4-6), or two if any suffers from High Fatigue (fatigue of 7-9);
- Adds one to the differential if at least one leader is with the attacking unit(s), or subtracts one if at least one leader is with the defending unit(s).

The program then "rolls" two six-sided dice and sums the result, and cross-indexes it on the Melee Table with the final differential to determine the losses each side will suffer. A neg-

Each time a new unit(s) is added in this manner the Melee differential is updated and displayed.

Auto-Melee

You can have the program conduct Melee for you even if not using the AI. To do this, hold down the **Alt** key and right-click on an enemy-occupied hex adjacent to at least one friendly, Melee-eligible unit. The program will find all units eligible to attack that hex, and will give their names, their locations and the attack differential. If you click OK, they will automatically attack the hex.

AI Melee

Another option for conducting Melee is simply to Select the “activate AI” Toolbox button. The program will then conduct all Melees in that phase automatically.

Resolving Melee

To resolve a Melee, the program computes a Melee “*differential*” based on the attacking and defending strengths. The differential is the attacker’s S# minus the defender’s S# divided by 100

Versus Gun Battery: Each gun of a battery defending in Melee is equal to 12.5 men.

Versus Routed Unit: As part of the differential calculation, the strength of each *Routed* defender in the hex is quartered.

 **Versus Vacant Hex:** If all defending units in a hex are eliminated *during the Offensive Fire Phase*, a red triangle icon will appear in that hex to mark it as a Vacant Hex. Such a hex may be attacked in the next Melee Phase, and the meleeing unit(s) will automatically occupy that Vacant Hex *without* gaining any fatigue or becoming Disrupted.

Even though the advancing side is termed the attacker, both sides engage in Melee simultaneously; hence the attacker will also suffer casualties. To resolve a Melee, the program:

- Adds two to the differential if any attacking unit that advanced into the melee hex from a hex that was not in *any* defending unit’s Field of Fire;
- Adds one to the differential if *no* attacking unit involved in the Melee fired during the preceding Offensive Fire Phase;
- Subtracts one from the differential if *any* attacker involved in the Melee advanced into the hex across a breastwork hexside;
- Subtracts two from the differential if any attacking unit involved in the Melee advanced into the hex across a wall or embankment hexside (such that the defending unit would receive the embankment modifier if fired on by the attacker);
- Subtracts from the differential a number equal to the greatest number of elevation levels ascended by any one regiment as it advanced into the Melee;
- Subtracts one from the differential if any attacking unit is suffering from Low Fatigue (fatigue of 4-6), or two if any suffers from High Fatigue (fatigue of 7-9);
- Adds one to the differential if at least one leader is with the attacking unit(s), or subtracts one if at least one leader is with the defending unit(s).

The program then “rolls” two six-sided dice and sums the result, and cross-indexes it on the Melee Table with the final differential to determine the losses each side will suffer. A neg-

ative-number result in the Melee Table for a side indicates that side is the “loser” in the Melee. (You can view the Melee Table by Selecting the **Help** menu, **Scenario Notes** and then **Parameter Data**.)

Example 1: 225 attackers against 75 defenders = a differential of +1. If none of the attackers fired in the preceding Offensive Fire Phase, the differential would be +2. If the attacking unit was accompanied by a leader (and the defender has no leader present), there would be another +1 to the differential, making it +3.

Example 2: A 6-gun battery has a defensive strength equivalent to 75 men.

Melee—unlike Ranged Fire—can affect all units in the hex. In-hex terrain modifiers (such as forest) do not apply in Melee.

All regiments and batteries (of both sides) participating in a Melee automatically become Disrupted and have their Fatigue level increased by two, unless meleeing into a Vacant Hex. Additionally, each non-leader unit of the *losing* side has its Fatigue level increased by one more. If the defending side loses a Melee, its survivors are automatically retreated one hex by the program (and will have to undergo a Morale Check; see Morale Checks below). If a unit must retreat but has no legal hex to retreat to, is an unlimbered battery or its inherent movement allowance is “0”, it is eliminated instead. If a regiment advances into a hex containing only one or more enemy leaders, *uncrewed* supply wagons and/or *uncrewed* batteries, it captures them automatically (captured leaders and batteries are eliminated; supply wagons are taken over by their captor.)

If the attacking side wins the melee, all surviving attacking unit(s) will occupy the contested hex; all surviving defending units (if any) will be forced to fall back (assuming a retreat route is available and the unit is eligible to retreat from melee).

Morale Checks

When a regiment or battery suffers casualties (i.e., has its S# reduced) due to combat but is not eliminated or have its crew killed, the program rolls a six-sided die to make a Morale Check for it. If the casualties were incurred during the Defensive Fire Phase, the Morale Check occurs at the end of that phase. If the casualties were incurred during the Offensive



Fire or Melee Phase, the Morale Check occurs at the start of the next Player Turn.

In addition, each time a regiment or battery becomes Routed due to failing a Morale Check, every friendly regiment and battery in its hex and those adjacent to it must take a Morale Check.

Also, when a unit is eliminated by fire, one unit in the same hex is randomly determined to make a Morale Check.

The Quality of a unit is used as its “morale” for rout purposes. A Routed unit has a morale of zero. The following cumulative modifiers can apply to the Morale:

- +1 If the unit is stacked with any friendly leader
- 1 If the unit is suffering from low/no ammo
- 1 If the unit was already Disrupted
- 1 If the unit was already suffering from Low Fatigue (4-6)
- 2 If the unit was already suffering from High Fatigue (7-9)
- 2 If the unit was fired on Enfilade
- 2 If it is a night turn

The possible results of a Morale Check depend on whether the combat that caused it occurred in the Defensive Fire Phase, the Offensive Fire Phase or the Melee Phase (the results of Morale Checks made at the start of a Player Turn are displayed in the Command Report dialog):

Defensive Fire Phase: If the die roll is less than or equal to the unit’s Morale, it “passes” the Morale Check and there is no effect. If the die roll is greater than its Morale, it “fails” and becomes Disrupted.

Offensive Fire Phase: If the die roll is less than or equal to the unit’s Morale, it “passes” the Morale Check and becomes Disrupted. If the die roll is greater than its Morale, it “fails” and becomes Routed.

Melee Phase: If the die roll is less than or equal to the unit’s Morale, it “passes” the Morale Check and there is no effect (though the unit is automatically Disrupted anyway, due to having engaged in Melee; see p.50). If the die roll is greater than its Morale, it “fails” and becomes Routed.

Important: The Morale check conducted by the computer at the end of the Offensive Fire Phase is not handled immediately after the phase. Instead, the computer keeps a record of all the Morale check results of the Offensive Fire Phase and applies them after the Melee

Fire or Melee Phase, the Morale Check occurs at the start of the next Player Turn.

In addition, each time a regiment or battery becomes Routed due to failing a Morale Check, every friendly regiment and battery in its hex and those adjacent to it must take a Morale Check.

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Offensive Fire Phase: If the die roll is less than or equal to the unit's Morale, it "passes" the Morale Check and becomes Disrupted. If the die roll is greater than its Morale, it "fails" and becomes Routed.

Melee Phase: If the die roll is less than or equal to the unit's Morale, it "passes" the Morale Check and there is no effect (though the unit is automatically Disrupted anyway, due to having engaged in Melee; see p.50). If the die roll is greater than its Morale, it "fails" and becomes Routed.

Important: The Morale check conducted by the computer at the end of the Offensive Fire Phase is not handled immediately after the phase. Instead, the computer keeps a record of all the Morale check results of the Offensive Fire Phase and applies them after the Melee



Disruption & Rout

When a unit is moving in line formation at night, it automatically become disrupted.

When a unit becomes *Disrupted*, a "D" icon appears in its area of the Unit List. A Disrupted unit has its attack strength and movement allowance halved, and receives a -1 modifier for Morale Check purposes.

When a unit becomes *Routed*, an "R" icon appears in its area of the Unit List, it cannot attack, it defends at one fourth strength in Melee, and it has a morale of "0" when conducting morale checks. Infantry in line change to column Formation, and dismounted cavalry change to mounted, when they Rout. Mounted cavalry and limbered artillery do not change Formation when they Rout, but their icon still changes to the standard "running-man" icon to make them stand out better on the map.

If a Routed unit suffers another Routed result, it loses strength; such units are termed "lost stragglers" in the Command Report that appears at the start of the next Player Turn.

Fatigue Rout. If a unit is already suffering from the maximum fatigue level of 9 incurs a combat effect that would normally cause a unit to gain further fatigue it must take a morale check. If it fails the Morale Check, the unit will Rout.

Auto-Rout Movement. If a unit has Routed, the computer will automatically move that unit away from the closest known enemy unit. This move will be indicated on the screen by arrows on most map views (dots on zoom-out 2D map). After getting a handle on where your Routed units have been moved to, you may click anywhere on the map and the arrows/dots will disappear. Afterwards, a Routed unit cannot move closer to the closest known enemy unit and cannot initiate any type of attack.

Leaders and Supply Wagons. Leaders and supply wagons neither Disrupt nor Rout. A Routed unit cannot become Disrupted (except when it Rallies; see 6.8), and loses any Dis-

rupted status it might have had.



6.8 RALLY

In a Rally attempt, the program makes a six-sided die roll for each of the Phasing Player's friendly Disrupted/Routed units.

The Quality of a unit is used as its "morale" for rally purposes. If a unit is stacked with a leader of the same or higher organization, the Leadership Rating of that leader modifies that unit's morale. In addition, the Leadership rating of a Corp, Wing, or Army Commander will modify the morale of units under their command in adjacent hexes, except at night. If the leader's Leadership rating (with A=6, B=5, etc.) is higher than the unit's Quality, his Leadership Rating is used as the unit's morale. If his Leadership Rating is the same or lower than the unit's Quality, a +1 is added. At night, the morale of unit for rally purposes is halved, with fractions rounded up. The possible results of a Rally attempt are:

- If a *Routed* unit's die roll is less than or equal to its morale, it Rallies (i.e., loses its Routed status and becomes Disrupted—but cannot be returned to Good Order in the same turn).
- If a *Disrupted* unit's die roll is less than or equal to the applicable command value, it Rallies (i.e., loses its Disrupted status and returns to Good Order). Each Disrupted unit has a nominal Command Rating of "1" for Rally purposes. If it is not Detached and its brigade leader is "in command", its Rally die roll will be successful if less than or equal to "1 plus the applicable Command Rating modifier". If its brigade leader is "not in command", it will Rally only on a die roll of "1". See Command Radius/Rating below for further clarification.

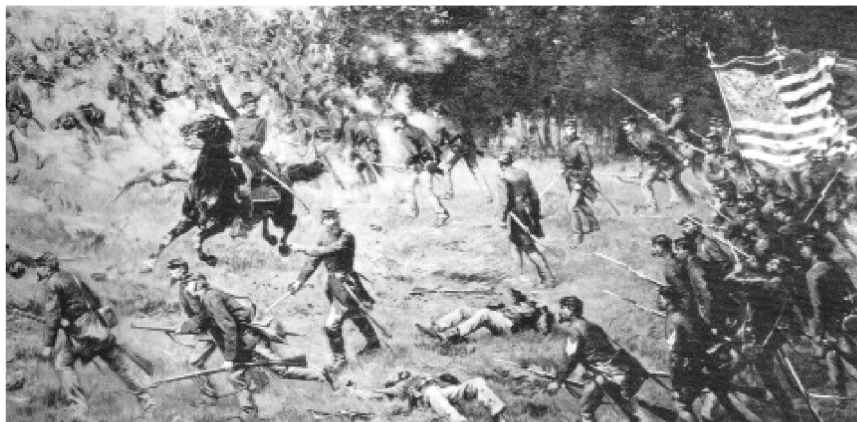
Command Radius/Rating

The Command Radius of a *brigade* leader is the maximum distance in hexes he can be from one of his regiments and still be able to provide it with his Command Rating modifier. The Command Radius of a *division* leader is the maximum distance in hexes he can be from his *brigade* leaders and still be able to pass a Command Rating modifier to the latter. *Army* and *Corps* leaders have an *unlimited* Command Radius.

Any unit (including brigade leader) outside the pertinent Command Radius of its/his superior officer is considered Detached, meaning that it/he can neither receive nor pass down a Command Rating modifier.

All Command Ratings, of a higher leader, are treated as being one lower than normal in a night turn.

rupted status it might have had.



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All Command Ratings, of a higher leader, are treated as being one lower than normal in a night turn.

Rally Procedure. At the beginning of each Player Turn, the program determines each friendly leader's Command State (i.e., whether he is "in command" or "out of command"). To highlight the leaders that failed their last command check, click the "D" button on the toolbar.

When a subordinate leader is determined to be "in command", his Command Rating changes in the Unit List for the current turn to reflect the Command Rating modifier he received.

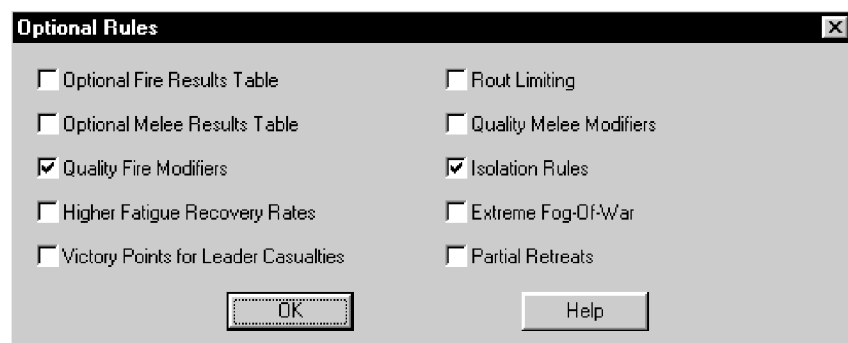
- Starting with the highest (the army) leader, a six-sided die roll is made. If the die roll is less than or equal to his Command Rating (his "C#" in the Unit List), he is "in command".
- If the army leader is found to be "in command", he automatically passes down to each of his corps commanders a +1 Command Rating modifier to their Command Rating.
- In turn, each corps commander found to be "in command" passes down a +2 Command Rating modifier for each of his division commanders (because each time a subordinate is found to be "in command", the Command Rating modifier he passes down to his subordinates increases by one).
- In turn, each division leader found to be "in command" will in turn pass down a +3 Command Rating modifier to each of his non-Detached brigade leaders.
- In turn, each brigade leader who is found to be "in command" will pass down a +4 Command Rating modifier to each of his Disrupted but non-Detached units. Whenever a leader is found to be "out of command" (or is Detached), the modifier he passes down becomes "0".

6.9 FATIGUE

Fatigue has an adverse effect on a unit's strength in Melee, when conducting Ranged Fire, and on its ability to avoid Routing when it takes a Morale Check.

Fatigue occurs in a regiment or battery in the following ways:

- If it suffers a Fatigue result ("F" result in the Fire Results Table) when attacked by Ranged Fire, its Fatigue is increased by one (this can apply only once per phase);
- If it suffers casualties, its Fatigue is increased by one (this fatigue increase can apply only once per phase regardless of the number of times the unit suffers casualties in that phase);



- If it engages (or is engaged) in Melee, its Fatigue is increased by two. The Fatigue is increased by three if it loses the Melee. (Exception: vs. Vacant Hex or vs. Isolated unit; see p.50)

A unit whose Fatigue level ("FA" in the Unit List) is 0-3 suffers no adverse effects. A unit suffering from Low Fatigue ("FA" of 4-6) receives a +1 die roll modifier to each Morale Check it takes. One suffering from High Fatigue ("FA" of 7-9) receives a +2 modifier to its Morale Checks. In addition, all Melee/ranged-fire attacks by units suffering from Low Fatigue receive a -1 modifier; all Melee/ranged-fire attacks by units suffering from High Fatigue receive a -2 modifier. If a unit with a Fatigue level of 9 receives any increase in Fatigue, it must undergo a Morale Check.

At the beginning of each friendly Player Turn, each Fatigued unit has a chance of reducing its Fatigue by one if on the two preceding *Player Turns* it has not moved (including a Facing/Formation change), fired, fired upon, or participated in a Melee. *This chance is increased at night.*

When a unit is eliminated by fire, the fatigue loss is applied randomly to one unit in the same hex.

If Fog of War is in effect for a side, the opponent cannot see the Fatigue level of that side's units.

6.10 COMMAND REPORT FEATURES

At the beginning of each turn, the computer displays a Command Report dialog box. This command report lists units that have been released, units undisrupted, units that have recovered from Fatigue, units that have Routed, etc. Below is an example of such a command report.



At the end of each Offensive Fire Phase, a Command Report is displayed indicating all units that have been Disrupted due to defensive fire.

Once you have reviewed the information in the Command Report, you may continue the game by clicking OK.

6.11 OPTIONAL RULES

At the beginning of the game, in the AI Selection dialog, the player is given the option to enable or disable Optional Rules. To access the **Optional Rules** dialog box, select the **Rules**

- If it engages (or is engaged) in Melee, its Fatigue is increased by two. The Fatigue is increased by three if it *loses* the Melee. (Exception: vs. Vacant Hex or vs. Isolated unit; see p.50)

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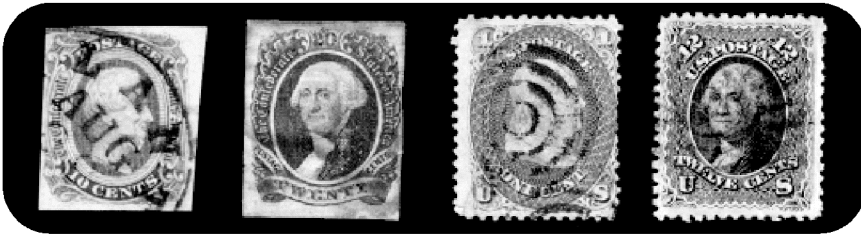


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7.0 MODEM, PLAY BY E-MAIL &

7.1 MODEM PLAY

Modem play allows two people to play the opposing sides in a scenario without having to be together in the same place. All each player needs is an installed copy of the game, and a modem hooked up to his computer and phone line.

To start a new scenario and play it by modem, first call your opponent on the phone, pick a scenario to play, and agree on who will be the Caller and who will be the Host. The Host will be responsible for opening and saving the scenario on his computer. The Caller has the option of providing an encryption key at the start of the scenario to ensure that, when the scenario is saved, no one but the Caller will be able to open the saved-game file later.

Each player should launch *BATTLEGROUND: BULL RUN* and, when the Menu Screen appears, Select Start Game as Modem Host or Start Game as Modem Caller as agreed on beforehand. (If you're presently viewing the Scenario Selection Screen, Select Previous to go to the Menu Screen.)

For the Caller, a dialog box will appear, offering a choice of which game map to open. Be sure to Select the correct one for the scenario.

For the Host, a dialog box will appear, asking him to Select whether a new or a saved game will be played. Select a new game, and then the Scenario Selection Screen will appear. Then, Select the appropriate scenario and the Play button.

Once the map and Modem Settings dialog box appear on-screen, the Host should configure his modem port. The most important setting is Baud Rate. If you're not sure what your modem's baud rate is, choose something conservative like 2400. If you have a 28.8 modem, select the baud rate 38400. The next most important setting is Port. A typical configuration is for the modem to be on COM2 (if the mouse is on COM1), but you may have to consult your hardware documentation (or use trial-and-error) to find your correct setting.

Once the map and Modem Settings dialog box appear on his screen, the Caller should configure his own modem port. The baud rates need not be the same. The modems will negotiate the highest rate both can handle.

Both sides now hang up the phone.

The Host clicks OK in the Modem Settings dialog box, and should see the Answer Dialog showing that it is waiting for a call. He then waits.

The Caller clicks OK in his Modem Settings dialog box, and should see the Dial Dialog. He then left-clicks in the phone entry line and types in the phone number of the Host system (i.e., the phone number of the line connected to his opponent's modem). He may also type in an encryption key now (see 7.2). Lastly he Selects the Dial button or presses the Enter key,

and the modem will call the Host. The Host system should answer after the first or second ring.

Momentarily both players should see the Communications Dialog (a "chat window"). This may be used by both players to type messages to each other. One or both players may close his Communications Dialog at any time during modem play. It will automatically reappear if the other side types a message or, if due to a data transmission backlog, the number of messages waiting to be sent reaches 20. It can also be re-opened at any time by Selecting Communication Dialog in the Modem menu.

Immediately after the Communication Dialog appears, so will a dialog box enabling him to Select the side he has chosen to play and, if both players have agreed, Fog of War. Once he does this and clicks OK, the scenario will be transmitted to the Caller. Only the player who goes first will see the Phase Box that denotes the first Movement Phase of the game. He should left-click with the mouse on the Phase Box to make it disappear, and he may then begin playing in the normal manner.

As the game proceeds, both players will see their own and enemy units fire and move in turn. As each player completes a phase and advances the game to the next phase, the player who will be in control for that phase will see the Phase Box appear. He should left-click on the Phase Box and proceed with his actions for that phase. The Status Bar at the bottom of the screen will show whether the current phase is under Local (your) or Remote (your opponent's) Control. During a phase that's under Remote Control you should not attempt to move or fire any units, but rather wait until you see the Phase Box appear, indicating that you are now in control (i.e., it's your phase to move or attack). When the scenario is over, the Victory Dialog will be displayed for both sides to see.

If the game must be halted prematurely but the players wish to resume it later, the Host should choose Save or Save As in the File menu and save the scenario. Both sides then simply exit the program. Alternatively, after the Host saves the scenario he can Select Host and the Caller can Select Caller again in the Modem menu; doing this will close the scenario without exiting the program.

ENCRYPTION KEY

While the Caller has the Dial Dialog on-screen prior to the start of play, he should enter an encryption key (i.e., a password) in the appropriate spot in order to encrypt the saved-game file so that once it is saved the Host cannot open it. (If no encryption key is entered at this time, the file can still be saved later but it won't be encrypted.) The Caller should pick an encryption key that will be easy for him to remember but difficult for the Host to guess. It can be a word or a phrase, and numerals and/or punctuation marks can be used.

The extension *.btx* indicates a saved-game file that has been encrypted using the Caller's encryption key. Encrypted scenario files are stored in a binary format, and the user should not attempt to view or print them directly without using the *BATTLEGROUND: BULL RUN* program.

When re-opening a saved game, the Caller must specify the same exact encryption key that was in use when the scenario was last saved.

RESUMING A SAVED MODEM-PLAY GAME

The procedure for doing this is the same as starting a new modem-play scenario, except that when the Host is prompted to Select a new or saved game he must pick the latter. He then picks the agreed-upon scenario in the ensuing dialog box.

If the scenario doesn't open, the Host should check to make sure he Selected the right one. If that's not the problem, the Caller should Select New Encryption Key in the Modem

and the modem will call the Host. The Host system should answer after the first or second ring.

Momentarily both players should see the Communications Dialog (a "chat window"). This may be used by both players to type messages to each other. One or both players may close his Communications Dialog at any time during modem play. It will automatically reappear if the other side types a message or, if due to a data transmission backlog, the number of messages waiting to be sent reaches 20. It can also be re-opened at any time by Selecting Communication Dialog in the Modem menu.

Immediately after the Communication Dialog appears, so will a dialog box enabling him to Select the side he has chosen to play and, if both players have agreed, Fog of War. Once he does this and clicks OK, the scenario will be transmitted to the Caller. Only the player who goes first will see the Phase Box that denotes the first Movement Phase of the game. He should left-click with the mouse on the Phase Box to make it disappear, and he may then begin playing in the normal manner.

As the game proceeds, both players will see their own and enemy units fire and move in turn. As each player completes a phase and advances the game to the next phase, the player who will be in control for that phase will see the Phase Box appear. He should left-click on the Phase Box and proceed with his actions for that phase. The Status Bar at the bottom of the screen will show whether the current phase is under Local (your) or Remote (your opponent's) Control. During a phase that's under Remote Control you should not attempt to move or fire any units, but rather wait until you see the Phase Box appear, indicating that you are now in control (i.e., it's your phase to move or attack). When the scenario is over, the Victory Dialog will be displayed for both sides to see.

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When re-opening a saved game, the Caller must specify the same exact encryption key that was in use when the scenario was last saved.

RESUMING A SAVED MODEM-PLAY GAME

The procedure for doing this is the same as starting a new modem-play scenario, except that when the Host is prompted to Select a new or saved game he must pick the latter. He then picks the agreed-upon scenario in the ensuing dialog box.

If the scenario doesn't open, the Host should check to make sure he Selected the right one. If that's not the problem, the Caller should Select New Encryption Key in the Modem

menu and type in the key again, for he probably entered it incorrectly the first time.

7.2 NULL-MODEM PLAY

Null-modem play requires a direct cable connection between the two computers. Users should obtain a suitable serial communication cable and a null-modem connector (available at computer supply stores). Select Null Modem before Selecting Host or Client; that way, when Host or Client is Selected, you will still be prompted for the correct port and baud rate, but no modem dialing will be done. Note that under null modem, the exact baud rate for both machines needs to be Selected. Note also that some older machines may not have serial ports that can handle speeds at or above 9600 baud, so a lower rate may have to be used.

7.3 PLAY BY E-MAIL

1. Select the **Special Options** button from the Menu Screen.
2. Then Select "Play By E-Mail" from the Special Options window.
3. You will then be asked "Do you want to start a new battle?" Select "Yes" if you are starting a new game.

Battleground: Bull Run Modules & Subdirectories

Module Name	Corresponding Subdirectory
Blackburn's Ford	bbf
Brawner's Farm	bnf
First Bull Run	fbr
Henry House Hill	hhh
Second Bull Run	sbr
Stoney Ridge	sr

IMPORTANT!

The player starting a PBEM game must note which "module" the selected scenario is from and convey this information to his opponent. After being transferred via E-mail and downloaded, the PBEM game file *must* be kept in the corresponding BGR subdirectory on *each* player's computer.

Please refer to your Windows® Tutorial Guide (supplied with your computer or packaged with your original Windows® installation software) if you need instructions on transferring files.

4. When the map appears, choose the local side (i.e., the side *you* will play) and whether or not Fog of War will be used. You can also set the Advantage and any Optional Rules that will be in effect, at this time. Then Select **OK**, and proceed with play.
5. When the first phase under the control of the other side begins, you will see a message that local control is over. You will be prompted to save the game (note that it must retain a

"*.bte*" extension) and E-mail the saved-game file to your opponent.

To Resume a PBEM Game...

1. To resume a Play By E-mail game, *you must download the file into the subdirectory that contains the map used by that scenario.*
2. Then double-click on the **BATTLEGROUNDS: BULL RUN** main program icon and select the PBEM option from the Menu Screen.
3. You will then be asked "Do you want to start a new battle?". Select No if you are resuming a PBEM game.
4. When the "Battle Selection Dialog" window appears, Select the appropriate Module. All PBEM games saved in that module (subdirectory) will be displayed in the bottom window. Select the proper PBEM battle file and click the OK button.
5. After the map and scenario are loaded, you will be given an option to see a "Replay" of your opponent's most recent moves/attacks. After the Replay is finished (or if you choose not to view it), the next phase begins and play resumes. At the end of local control, a prompt to E-mail the file will appear.

The same procedure is followed to play the remainder of the game, with each player alternately playing and E-mailing the game to his opponent.

NOTE: If you would like to view the Replay in other than the default "3D Zoom-Out" mode, you can select "Cancel" when initially asked to view the Replay, then change the view mode to the desired setting, then reopen the same file again.

7.4 TCP/IP INTERNET PLAY

To start an Internet Game...

Prior to beginning TCP/IP Internet Play, both players should ensure that they have a valid TCP/IP connection established on their computers. Typically, this is a service of your Internet Service Provider.

1. Select **Modem Host** or **Modem Caller** from the **Menu** Screen.
2. Then Select **Internet Connection**.
3. The Modem Host should select a new scenario or resume a previously saved game. The Modem Caller should select the corresponding module for the chosen scenario or battle.
4. A Dialog will appear for the Modem Host listing the network address for their connection. **Note:** Typically this address is changed by your Internet Service Provider each time an Internet connection is established.
5. The Modem Host should then provide the Caller with this address. This can be done by calling the Caller on a separate line, sending the address by E-Mail, or by using an Internet "Chat" program. The Modem Caller will then type this address into the network connection dialog. The caller can also specify an encryption key at this time. The caller should then choose Connect on the Connection dialog.
6. At this point, both players will have a Communication Dialog and play will start or continue similar to standard Dial Up Modem Play. See Section 7.1.

“.bte” extension) and E-mail the saved-game file to your opponent.

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7.5 RECORDING BATTLES

The **Record Battle** feature of the Special pop-down menu allows you to record a scenario as you play it. You can then “replay” this saved battle later by selecting **Replay** from the **File** pop-down menu (see below).

Why would you record a battle? During a hotly contested scenario, you might anticipate that the next few turns will decide the winner. You may want to keep a record of this and show it to someone later, or (for your own satisfaction) review the moves you made to help improve your strategy for future scenarios.

You can record just a few turns of a battle, or an entire scenario. To record a battle,

1. Select Record Battle from the Special pop-down menu. Doing so places a check mark (✓) next to the feature. Immediately, a file window will appear allowing you to name this file (or accept the default file name).
2. After naming the file, select OK to return to the game. From this point forward, all scenario turns you play will be saved into this file.

You cannot record modem play or PBEM battles.

Note: The Record Battle feature is a toggle. At anytime during play, you can select the feature again to turn it off. Anytime you start recording, it will overwrite any existing file of the same name.

Replaying a Recorded Battle

When you want to view the turns of a recorded battle, simply select **Replay** from the **File** pop-down menu and the recorded turns will automatically replay.

To halt the replay, press the **Esc** key. To resume the replay again, select **Restart Replay** from the **Special** menu, and the recorded battle will resume where it left off.

Note: When you replay a battle that has been recorded with Fog of War in effect, the replay is from the perspective of the *other* side.

EX: If you replay a battle that you played vs the computer, the replay will be from the perspective of the computer (not your perspective). This means you'll see what the computer



8.0 APPENDIX

8.1 TERMS & DEFINITIONS

[Terms and abbreviations used in this manual are defined here for your convenience]

Adjacent: Two units or hexes that are directly next to each other on the map, with no intervening hex between them.

AI: Artificial Intelligence; the capability of the program to make decisions and conduct actions for a given side.

Command Radius: The maximum hex distance at which a brigade or division leader can pass down a Command Rating modifier.

Command Rating: A rating (“C#” in the Unit List) given to a leader, and used by him in his attempts to Rally Disrupted units under his command. See also the definition of “Command Radius”.

Detached: A unit (usually a regiment) that is outside the Command Radius of its brigade leader, or a brigade leader who is outside the Command Radius of his division leader.

Disrupted: A regiment or battery that is not in Good Order but is not Routed. A Disrupted unit fires at half strength, and cannot advance into Melee.

Encryption Key: A “password” specified by the Caller in a modem-play game to keep the Host (the Caller’s opponent) from opening the saved-game file.

Enfilade: A Ranged-Fire attack made from outside the defender’s Field of Fire, or made vs. infantry in column.

Fatigue: A rating (“FA#” in the Unit List) given to a regiment or battery, and used by it for Morale Check and Melee purposes.

Fatigue Rout: If a unit with a fatigue of 9 suffers a combat result that would subsequently require it to gain another point of fatigue it must undergo a Morale Check.

Field of Fire: The 120° arc through which a regiment or battery can fire. See also the definition of “Enfilade”.

Fixed Unit: A unit that begins a scenario unable to move (usually for historical purposes). A Fixed Unit is marked with an “F” in a red circle in the Unit List. For more information, see p.46.

Fog of War: A game option that lets a player who chooses Fog of War for the opposing



8.0 APPENDIX

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Fixed Unit: A unit that begins a scenario unable to move (usually for historical purposes). A Fixed Unit is marked with an "F" in a red circle in the Unit List. For more information, see p.46.

Fog of War: A game option that lets a player who chooses Fog of War for the opposing

side see all of his own (i.e., friendly) units, but only those enemy units that have moved/attacked while currently in the LOS of a friendly unit. When playing with this option in effect, the Fatigue level and Fixed status of opposing units is also hidden.

Game Turn: Two consecutive Player Turns having the same turn number.

Good Order: A regiment or battery that is neither Disrupted nor Routed.

Hex: Each hexagon on the map. Hexes are used for movement, range and LOS calculations. The hexes are displayed/hidden via the Hex Outlines command in the Options menu.

Hot Seat Fog of War: A game option that allows two players to play a game on the same computer without seeing the other player's units. After a player has finished making his moves and/or attacks, the program then draws a blank map and informs the player that it's time for the opposing player to take his turn (and occupy the "hot seat").

Hot Spot: The red square- or rectangular-shaped indicator that appears on the map. The hex currently containing the Hot Spot is known as the Hot Spot hex.

Isolated: A unit which begins its turn surrounded by enemy units, enemy ZOC, and/or impassible hexes or hexsides will be listed as "Isolated" in the Command Report dialog box. Such a unit is indicated by having its S# in the Unit List printed on a red background. While Isolated, a unit may still conduct ranged fire and Melee normally. If attacked in the Melee Phase it defends at 1/4 of its strength.

Leadership Rating: A rating ("L#" in the Unit List) given to a leader, and used by him in his attempts to Rally Routed units under his command.

LOS: Line of Sight; an imaginary line between units that the program uses to determine if they can "see" each other. If the LOS is blocked (see the definition of "Obstacle"), they cannot see (and hence have no LOS to) each other. The existing LOS to/from the Hot Spot hex can be viewed via the **Visible Hexes** command in the **Display** menu.

Melee: An attack made from a hex adjacent to the defender during the Melee Phase, in which the attacker can advance into that hex if the Melee eliminates all defenders in the hex or forces them to retreat.

Menu Bar: The line in the screen display immediately above the map, which contains the titles of the various pop-down menus.

Morale Check: A die roll made by the program for a unit that has taken casualties due to an attack, or that is in the same hex as (or is adjacent to) another friendly unit that becomes Routed. The possible results are No Effect, Disruption or Rout; see Morale Checks on p.51.

Objective: A scenario-specific hex with an assigned point value used to help determine victory and defeat in a given scenario.

Obstacle: Terrain that can block LOS through its hex. Forest, Hill, Marsh and Orchard hexes can block LOS, depending on the relative heights of the firer, the obstacle and the target.

Phase: Any of the four main segments of a Player Turn: Movement Phase, Defensive Fire Phase, Offensive Fire Phase, and Melee Phase.

Player Turn: Each turn in which one side or the other is the "moving" side. See also the definition of "Game Turn".

Protected Entry Hex: Most reinforcing (non-leader, non-artillery) units have their entry hex "protected" in the sense that enemy units that are within a set range (usually from 3 to 5 hexes) of their entry hex when the units enter will be routed, or *eliminated* if in the hex. See also "Protected Entry Hexes", p.46.

Quality: A rating ("QL#" in the Unit List) given to a regiment or battery, and used by it when it takes a Morale Check or tries to Rally.

Rally: A die roll made by the program for each of the Phasing Player's Disrupted and/or Routed units at the start of each friendly Player Turn. If successful, a Routed unit becomes Disrupted, and a Disrupted unit is returned to Good Order.

Ranged Fire: Any non-Melee attack made by a unit.

Rout: A unit becomes Routed whenever it fails a Morale Check caused by either an attack or by the Routing of another friendly unit in a nearby hex.

Scenario: Each of the specific battles that are listed in the Scenario Selection Screen.

Select: To click on an item using the *left* mouse button.

S#: For a regiment or battery, the basic strength (which equals the total number of men or guns) used when it makes an attack. For a supply wagon, the number of units it can resupply. The S# is displayed in the Unit List, and can change during play (i.e., it decreases whenever the regiment/battery takes casualties or when the supply wagon resupplies a unit. If the S# is displayed in yellow it indicates a unit that is no longer at full strength.

Stack: The collective name for two or more units in the same hex.

Status Bar: The line at the very bottom of the screen display, which contains the current time of day, phase, and hex coordinates of the Hot Spot.

Stragglers: A Routed unit that suffers another Routed result loses one or more strength factors (as determined by a die roll made by the program); such units are termed "lost stragglers" in the Command Report that appears at the start of the next Player Turn.

Strength Factor: See the definition of "S#".

Unit List: The portion of the screen display immediately below the map, listing the data pertaining to each unit in the current Hot Spot hex plus a representative drawing/portrait of the unit.

Vacant Hex: A hex in which all occupying units were eliminated by Offensive Fire. Such a hex can be "meleed" by adjacent units in the following Melee Phase without gaining fatigue or becoming disrupted.

Zone of Control (ZOC): Each land combat unit exerts a ZOC into the front three hexes it is facing.

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Ranged Fire: Any non-Melee attack made by a unit.

Route: A unit becomes Routed whenever it fails a Morale Check caused by either an attack or by the Routing of another friendly unit in a nearby hex.

Scenario: Each of the specific battles that are listed in the Scenario Selection Screen.

Select: To click on an item using the *left* mouse button.

S#: For a regiment or battery, the basic strength (which equals the total number of men or guns) used when it makes an attack. For a supply wagon, the number of units it can resupply. The S# is displayed in the Unit List, and can change during play (i.e., it decreases whenever the regiment/battery takes casualties or when the supply wagon resupplies a unit. If the S# is displayed in yellow it indicates a unit that is no longer at full strength.

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8.2 HOT KEYS

Ctrl-N: Advance to next phase

Ctrl-U: Undo last movement

Ctrl-X: Advance to next stack

Shift: Displays on the map the names of various geographical features

Esc: Cancels A/I processing while the A/I is activated and the A/I Action Dialog is on-screen

Left Arrow: Scroll map to the left

Right Arrow: Scroll map to the right

Up Arrow: Scroll map up

Down Arrow: Scroll map down

F1: Invoke general Help

F2: Invoke Scenario Notes Help

F5: Slow down the scrolling of the AI action dialog

F6: Return to normal scrolling of the AI action dialog

F7: Speed up the scrolling of the AI action dialog

The following hot keys can be used to move units from one hex to another:

Keypad 1: Move Selected unit(s) down and left to next hex

Keypad 2: Move Selected unit(s) down to next hex

Keypad 3: Move Selected unit(s) down and right to next hex

Keypad 7: Move Selected unit(s) up and left to next hex

Keypad 8: Move Selected unit(s) up to next hex

Keypad 9: Move Selected unit(s) up and right to next hex

The following hot keys can be used to move units *within* their hex:

Keypad 0: Change Formation of Selected unit(s)

Ctrl-B or **End:** Move Selected unit(s) backward in hex

Ctrl-F or **Home:** Move Selected unit(s) forward in hex

Ctrl-L or **Delete:** Change Facing of Selected unit(s) one hexside counter-clockwise in hex

Ctrl-R or **Page Down:** Change Facing of Selected unit(s) one hexside clockwise in hex



CREDITS

Executive Producer: Jim Rose

Producer: Bob McNamara

Game Design & Concepts: John Tiller, Jim Rose & Charles Kibler

Programming: John Tiller

Technical Director: Shawn Franklin

Art Director: Charles Kibler

Game Graphics: Stephen Langmead, J. Amoral & Tim Kipp

Video & Sound: Jim Rose

Scenarios: Charles Kibler & Rick de la Parra

Playtest Coordination: Charles Kibler & Shawn Franklin

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Bobby Horton

3430 Sagebrook Lane Birmingham, AL 35243
 Phone: (205) 967-6426 Fax: (205) 967-6426 *51

AUTHENTIC MUSIC OF THE CIVIL WAR by Bobby Horton

Most of the really fine music you'll hear while playing *BATTLEGROUND: BULL RUN* are tunes by the talented Bobby Horton. But these are just a small sampler of the authentic tunes he has recorded, most of which are available on CD and audio cassette. Some of his recordings were even used in the now-famous Civil War series by Ken Burns that aired on PBS.

Each CD and audio cassette (with the exception of the "Homespun Songs of the Christmas Season") comes complete with historical liner notes about the songs. Most of the songs were recorded with "period" 19th century instruments (or authentic reproductions), and recorded in "period" style arrangements. His songs are truly a "labor of love" (one reason, perhaps, why they go so well with this TalonSoft game!).

If you're interested in hearing more of his songs, *TalonSoft* encourages you to contact Mr. Horton (see under picture).

CURRENTLY AVAILABLE

Homespun Songs of the CSA	CD	Cassette
Volume 1	yes	yes
Volume 2	yes	yes
Volume 3	yes	yes
Volume 4	yes	yes
Volume 5	no	yes
Homespun Songs of the Union Army		
Volume 1	yes	yes
Volume 2	yes	yes
Volume 3	no	yes
Homespun Songs of the Christmas Season	no	yes
Homespun Songs of Faith, 1861-1865	no	yes

Each CD is \$15; each audio cassette sells for \$10.

Also available is "Music & Memories of the Civil War" on video cassette. Produced by PBS and Bobby Horton, this sells for \$25 plus \$3 shipping and handling.

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TECHNICAL SUPPORT

If you have a technical problem concerning the operation of our software, please contact our technical support staff. When you call, be at your computer if possible and have the following information ready: computer type, Windows^a version, available hard drive space, total RAM, type of video card, and a list of options you choose when you installed the game.

TECHNICAL SUPPORT: 1-410-933-9191, M-F 9-5pm, EST

If you have a modem and would like to contact us on-line, you will find us:

Internet: <http://www.talonsoft.com> (TalonSoft's Homepage)

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America Online: AOL introductory subscriptions can be obtained free by calling 1-800-827-6364. Once on-line, E-mail us at Talonsoft1

GEnie: E-mail us at TalonSoft

INTERNET: E-mail us at 75162.373@compuserve.com

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