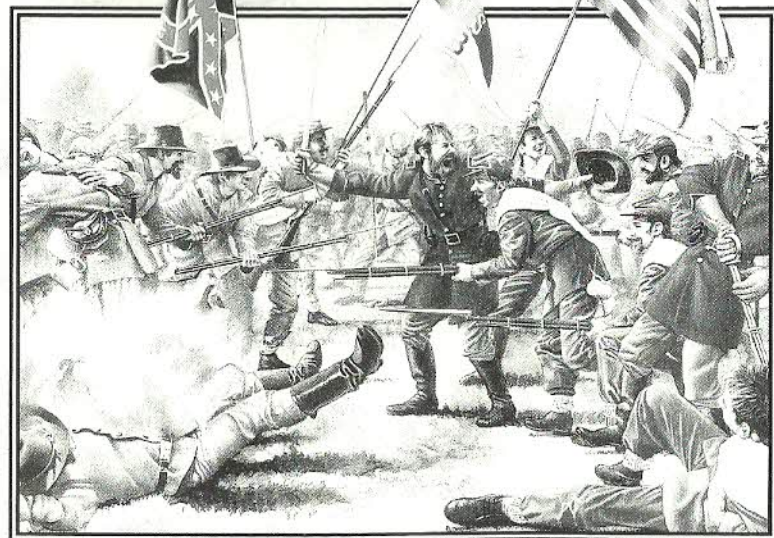


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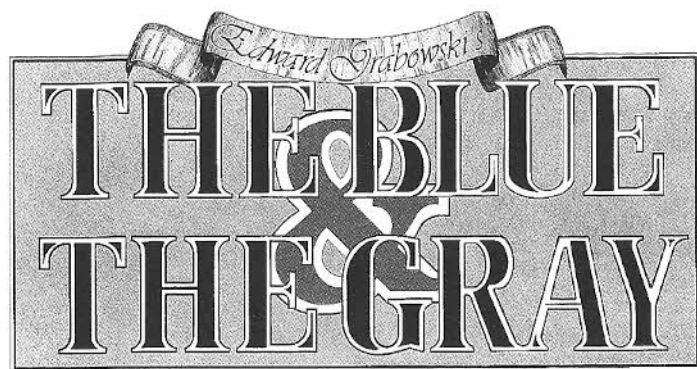
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Edward Grabowski's
**THE BLUE
&
THE GRAY**



**Micro Miniatures
Battle Manual**





Micro Miniatures Battle Manual

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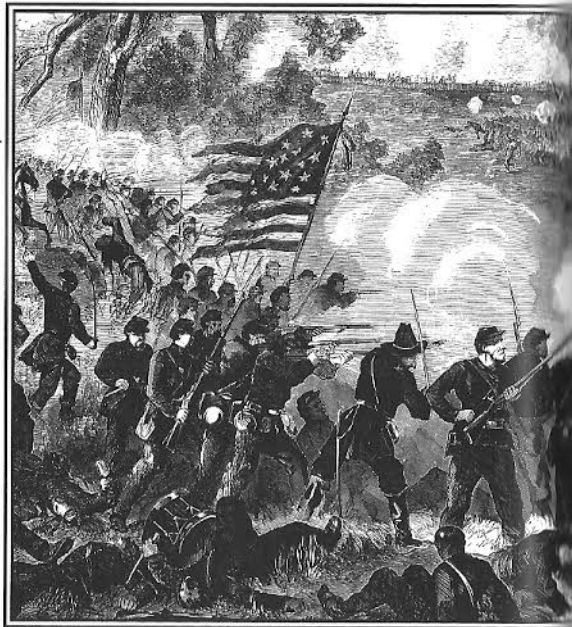
WAIT!!

This booklet contains instructions for working **only** the Micro Miniatures battle section of this game. If you are looking for instructions or an overview of the campaign level of this game (where you guide the course of the entire Civil War), then you are looking in the wrong book. Turn to the booklet titled **Campaign Manual** for information.

If you are looking for a quick start for the entire game, or for instructions on how to install the game, then take a look at the booklet titled **Technical Supplement and Tutorial**.

If you plan to try the **historical battle** which is included with the game, which is **First Bull Run**, you will find information about it in a chapter at the end of this book. However, you should still review the rest of the manual before playing.

So, if you're ready for a battle, read on.



MICRO MINIATURES OVERVIEW

What follows is a brief **overview** of using the Micro Miniatures battle system.:

Goal of the Game — In this battle system, you issue orders to a miniatures-

style army on a scrolling battlefield. Each of your "pieces" can be controlled individually, or in groups; they also have intelligence of their own and sometimes counter your orders to respond to more immediate dangers. When playing a Micro Miniatures battle, your **goal** is to reduce the enemy's army to **less than 50% of its original strength**. When this has happened, the winner will be declared.

Additionally, the computer player may decide to **retreat** when its losses become too great. The likelihood of this increases once you

eliminate **more than 25%** of its original strength.

Sequence of Play — Here is a brief outline of how you fight a Micro Miniatures battle. If you have not played a Micro Miniatures game before, you may be unfamiliar with some of the concepts mentioned here; however, you can learn about them quickly by skimming the later chapters of this manual.



- 1) The game starts with the battle **paused**, and in **Setup** mode; while in this mode you can set the locations of your troops **only** at your end of the battlefield. **Scroll** over the battlefield to see the locations of your units and those of the enemy, or use the **Overview** map to do the same; review the Statistics for each unit or for the entire army using the **Stats** icons.
- 2) Select a piece to control by clicking on its **head**; depending on the **control mode** you have selected, you are now prepared to set up either that piece, its **group** or the entire **army**.
- 3a) Change the piece's location (and any others being selected by control mode) by **clicking** on a location on the battlefield *or*
- 3b) Change the piece's orders (and any others being commanded by control mode) for firing at or engaging the enemy, by selecting the two **Orders** displays *or*
- 3c) If in **group** mode, change the group's **formation** (how it is arranged on the battlefield) by clicking on the three **formation controls** *or*
- 3d) Use the **change group number** (if in Single Mode), **copy group number** (if in single or group modes) or the **list groups** screen to switch units between groups (so that you can create new formations and movement as fit your plans).
- 4) Repeat steps 2 through 3d as many times as you like. At any time during this process, you can press the **Move Pieces** button and all of the setup orders you have given will occur **immediately**.
- 5) When you have finished setting up your troops, press **End Setup** to begin play. The game will remain paused, but now the orders you give will be carried out in real-time (instead of all at once), and you have access to the rest of the battlefield (not just your end of it).
- 6) Repeat steps 2 through 3d as many times as you like. When you have finished giving orders, press **Play** to unpaue the battle; your orders will be carried out in **real-time**. Move the mouse (though there is no point er) to shift your view while you move, and click the left mouse button when you want to pause the game and/or give new commands.
- 7) Continue playing until either side loses 50% of its original strength, or until one side chooses to retreat. At this point the computer will declare a winner. At any time when the game is paused you can also select **Autoplay** to let the computer resolve the conflict for you, or **Retreat** to concede the battle and escape.

Setup — As described above, a Micro Miniatures battle begins in **Setup** mode. This mode allows you to set up your troops on the terrain **only** at your end of the battlefield, creating the formations, orders and group assignments that will let you prepare the best tactics for facing the enemy.

In setup mode, you use the same commands that you do when actually fighting the battle; the only difference is that the results take place **immediately** (when you press the appropriate button), instead of being acted out over time.

Time — The Micro Miniatures System is a pseudo "real-time" battle system. After setup mode the battle starts **paused**, allowing you to issue commands. You then press the **PLAY** button to unpaue the game and see the army act out your orders in real-time. When you wish to issue fresh commands you can click the left mouse button to "freeze" the battle again.

Pieces and Scale — In this system, your troops are represented with small graphic images of soldiers called **pieces**. Each side has up to 125 pieces in a given battle; each piece represents **several** men on the battlefield.

The number of men in each piece depends on the number of men fighting in a given battle; men are divided so that all the infantry and cavalry soldiers on the **larger** side fit into 115 pieces, and their artillery cannon fit into 10 pieces. The side with fewer will then have fewer pieces; but all pieces of a given type will start with the same number of men.

Piece Types — There are three basic types of pieces: infantry, cavalry and artillery. **Infantry** are footsoldiers that carry one of a variety of weapon types. **Cavalry** are soldiers on horseback that can fight using sabres or guns. **Artillery** are soldiers manning one of a variety of cannon types. (For more information on the strengths and weaknesses of each type, see the **Tips and Tactics** chapter at the end of this booklet.)

Army Control — To help you move your pieces more quickly, you can give movement commands at **three** levels: single, group and all. These levels will allow you to make major changes to the entire army, or "tweak" a single piece into position — both with the same movement commands.

USING THE INTERFACE

Here are some notes on the interface used in this game:

- Whenever this manual instructs you to "click," "left-click," "press" or "select" an item from the game screen, it means that you should move the mouse pointer to that item and press the **left** mouse button.
- Additionally, you can repeatedly select an item without having to click repeatedly by pointing to it, then clicking the **right** mouse button and **holding** the button down.
- In some parts of the game, you will need to enter **text** (usually for a name) using the keyboard. Whenever this occurs, a small area of the screen will be blanked out and a small black **cursor** will appear; you can then type. The **Backspace**, **Delete** and **Insert** keys can be used to edit the text; press the **Enter** key or **click** the left mouse button when you are done.
- Some menu options can be toggled between two different settings; these are marked with an **arrow** graphic. When one of these options is displayed in a menu, the setting shown is its **current** setting; if you click on the option the menu will disappear and the option will switch to its **other** setting.
- Some parts of the game will call up a **query panel**, which is a small gray rectangle which lets you quickly answer yes/no questions. This panel will generally appear directly under your mouse pointer, with the pointer centered on the "default" answer. To respond to this panel, simply click on the "Yes" or "No" option.



ABOUT PIECES

The soldiers on your battlefield are called **pieces**; each one actually represents several **men**, fighting as one unit. You control the battle by giving orders to these pieces, either individually or in groups.

Each piece has several characteristics that controls the way it moves, fights, and responds to orders. They are listed below, in the order in which they appear on the Micro Miniatures Control Panel:

Piece	Each piece on both sides is assigned a number. In Number general, the Union troops have numbers from 1 to around 125, and the Confederate pieces have numbers from 126 to about 250.
Piece Type	This identifies the piece as infantry , cavalry or artillery . For information on these types, see the Overview , Tips and Tactics and How the System Works chapters.
Weapon	<p>Each piece is assigned at least one weapon. For infantry, this is a type of gun. Cavalry pieces have both a gun (for regular distance fighting) and a sabre (i.e. sword, for fierce hand-to-hand combat); however they can only use one at a time. For artillery, this is a type of cannon.</p> <p>Each weapon type causes its own amount of damage, based on its destructive power and the time it takes to reload.</p> <p>In a campaign battle, weapons will be based on the gun types and cannon types available to your forces at the time of the battle. In a historical battle, they will be based on historical records.</p>
Quality	Each piece has a quality rating that measures its experience and training; this determines a piece's ability in hand-to-hand combat and firing weapons. This can be one of five levels: poor, average, good, very good, and elite. Naturally pieces of higher quality will perform better on the battlefield.

Morale	Each piece has a morale rating, that measures its desire to fight. It affects a piece's willingness to engage in hand-to-hand combat, and its success when fighting hand-to-hand. There are five levels of morale: very low, low, fine, high, very high.
Number of	Each piece represents several men. A piece takes Men "damage" from attacks by depleting some of its men; when all the men are killed, the piece "dies." (Note: For artillery, this number actually refers to the number of cannons, even though each cannon actually uses more than one operator to fire it. When a artillery "man" is lost, the cannon and all its operators are lost.)
Group	Each piece is assigned to one of fifty available Number groups; these groups allow you to move several pieces with one command.
Attack	This rates the damage caused by a piece when it attacks in hand-to-hand combat.
Defense	This measures the ability of a piece to defend itself in hand-to-hand combat.
Firepower	This rates the damage caused by a piece when it fires a long-range weapon, be it a gun or a cannon. However the amount of damage caused by the gun is additionally affected by the type of weapon fired and other factors.
Order: Fire	This defines where and when a piece should fire its gun or cannon.
Order: Engage	This defines when a piece should engage in hand-to-hand combat.

Special Characteristics: Cavalry

The following two characteristics only apply to cavalry pieces:

- Mounted** Cavalry pieces can either mount or dismount their horses; dismounted pieces move at regular infantry speed, but are better at firing their guns.
- Weapon Choice** Cavalry pieces can switch between using their guns (for distance fighting) and their sabres (for fierce hand-to-hand battles).

Special Characteristics: Artillery

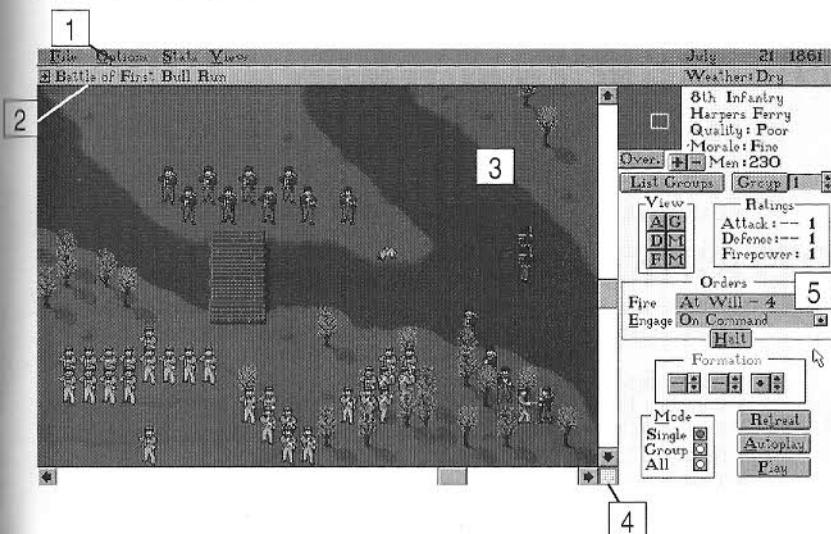
The following characteristic only applies to artillery pieces:

- Set Target** Each artillery piece can be assigned a specific target location; a piece will bombard that area, destroying bridges, barricades and soldiers that appear in that area.

MAIN SCREEN LAYOUT: COMMAND MODE

When you are fighting a Micro Miniatures battle, the main screen can be in one of two modes: **command** mode, where you give orders while the fighting is paused; and **battle** mode, where you scroll over the battlefield and watch your forces fight. Almost all of the controls in the game are accessed from command mode.

The main screen in command mode can be broken down into four sections: **Menu Bar**, **Information Bar**, **Display Window** and **Control Panel**. These are each described below.



1. Menu Bar, 2. Information Bar, 3. Display Window, 4. Grid Button, 5. Micro Miniatures Control Panel



Menu Bar

This is the higher of the two bars running along the top of the screen; it allows you to access many of the game's features from four **pull-down** menus. The names of these menus are **printed** along the menu bar; to access one of them, simply click on its name on the bar and the menu will appear below.

(**Keyboard Note:** You can also access a menu by typing the **underlined** letter in its name.)

You can select an option from any menu simply by **clicking** on it, or by **typing** the first letter in the name of the option.

For reference, the four menus and their options are listed below. See the following chapters for information on each option.

FILE Menu

- **Save** — Saves the current game.
- **Load** — Loads a previously saved game.
- **Restart Game** — Starts the battle over.
- **Exit to DOS** — Shuts down the program.

OPTIONS Menu

- **Map Scroll** — Changes the scrolling speed when displaying the battlefield.
- **Game Speed** — Changes the speed at which battles occur.
- **Display Detail** — Toggles high and low graphic detail.
- **Fog of War** — Toggles the optional visibility rules.
- **Sound FX** — Toggles sound effects.
- **Tunes** — Toggles music.
- **Uniforms** — Toggles the use of different uniform types for infantry pieces.

STATS Menu

- This menu has no options, but selecting this menu automatically accesses the STATS screen.

VIEW Menu

- **Attack** — Displays Attack statistics for every piece on screen.
- **Defense** — Displays Defense statistics for every piece on screen.
- **Firepower** — Displays Firepower statistics for every piece on screen.
- **Group Number** — Displays Group Numbers for every piece on screen.
- **Morale** — Displays Morale statistics for every piece on screen.
- **Men in Piece** — Displays the number of men each piece represents for every piece on the screen.
- **Overview** — Accesses the Overview map.

Finally, the **date** of the battle is displayed at the right end of the Menu Bar.

Information Bar

The bar below the Menu Bar displays two pieces of information on the current battle: the **name** of the battle is listed to the left, and the **weather** on the battlefield is listed to the right.

Note: You can change the name of the current battle by **clicking** on it, then typing a new name and pressing the ENTER key.

Display Window

The left hand side of the screen contains a Display Window which can be scrolled to view any area of the battlefield. The **terrain** of the battlefield (including hills, trees, rivers and structures) are displayed here, and each **piece** is displayed as a small soldier.



If the **currently selected piece** (the one you to which you give orders) is located within the Display Window, it will be surrounded with a **white rectangle**. If that piece currently has movement instructions, and its current **destination** is located within the Display Window, then it will be marked with a **white "X"**.

If you are in **group** mode (where you give orders to a group of pieces instead of one), all of the other members the selected piece's group will be surrounded with **gray rectangles**. And if any of those pieces currently have movement instructions, their destinations (if they appear in the Display window) will be marked with a **gray "X"**.

You can use the scroll bars along the **right** and **bottom** sides of the window to change its view. Scroll bars change the location shown in the display window when you move the white **scroll box** inside of each bar. To use a scroll bar, do one of three things:

- 1) Click on the **scroll box** inside the scroll bar, move the mouse in either direction, and click again to release the box.
- 2) Click in the **gray spaces** to either side of the scroll box to move it towards where you clicked.
- 3) Click on the **arrow** buttons on either end of the bar, to move the scroll box towards them.

There are other ways to shift the Display Window — see the chapter titled **Viewing the Battlefield** for details.

One final option on the Display Window is the **Grid** button, located at the corner where the two **scroll bars** meet. Press this button to display a grid across the display window; this lets you measure the distances between pieces and other items on the battlefield.

Control Panel

The Micro Miniatures Control Panel on the right side of the screen displays **information** about the currently selected piece, and contains **icons** for accessing most of the controls of the game. (It is completely different from the Control Panel used in the campaign level of this game.)

The Blue and The Gray

NOTE: Some icons are only available for use in particular control modes and with particular types of pieces; in these cases, the icons will **disappear** or their names will be **grayed out** to signal that they do not work.

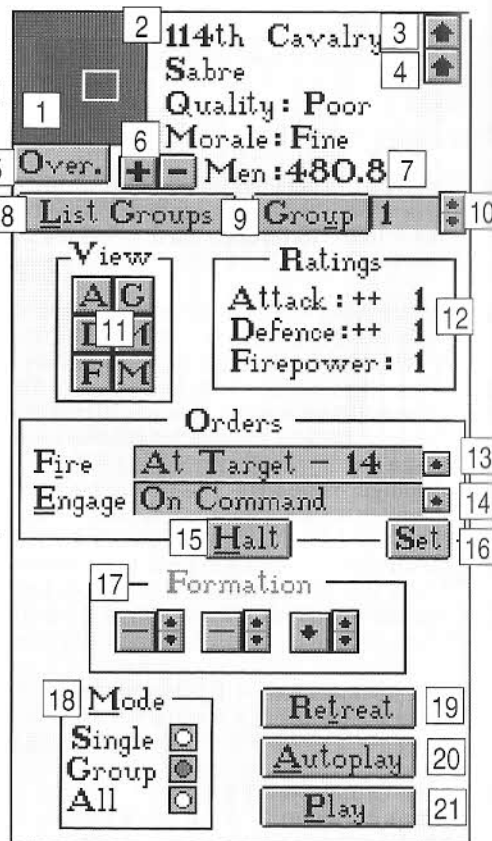
The function of each icon and data display are described below:

NOTE: The numbers on this diagram are used throughout this manual when these commands are mentioned, for reference. They are also duplicated in the **Reference Card** included in your game package.

- 1) **Micro-Map** — The white rectangle in this green rectangle shows what area of the battlefield is shown in the Display Window. Clicking on a location on this map will shift the Display Window to it.
- 2) **Piece Statistics** — Lists four statistics for the selected piece.
- 3) **Mount/Dismount** — This special button mounts and dismounts cavalry pieces. It affects the selected piece in single and all modes; it affects the piece's entire group in group mode.
- 4) **Change Weapon** — This special button switches cavalry pieces between wielding guns and sabres. It affects the selected piece in single and all modes; it affects the piece's entire group in group mode.
- 5) **Overview** — Displays one of two maps of the whole battlefield. The battle can be viewed in real-time from the larger map.
- 6) **Select Next/Previous** — If in single or all mode, these buttons jump from piece to piece in your army; if in group mode, they jump from group to group.
- 7) **Number of Men** — In group mode, this displays the number of men, and the number of pieces, in the selected group separated by a dot. In single and all modes, this displays the number of men in the selected piece.
- 8) **List Groups** — Allows you to Transfer one group into another one.
- 9) **Change Group** — When this is turned on, clicking on pieces adds them to the selected piece's group. Works only in single and group modes.
- 10) **Group Number** — In Single Mode, the up and down buttons allow you to change the group to which the currently selected piece is assigned.
- 11) **View Buttons** — Display stats for each piece located in the **Display Window**. Buttons in order: Attack, Group Number, Defense, Morale, Firepower, Men in Piece.
- 12) **Ratings** — Displays the battle ratings for the selected piece. If in single mode, "+" and "-" will show ratings positively and negatively affected by terrain.



- 13) **Order: Fire** — Displays the firing orders for the selected piece. If in single mode, a number will show the range of the selected piece's weapon. The arrow button changes the order for the piece and, depending on which **mode** you are in, its group or the entire army.
- 14) **Order: Engage** — Displays the engagement orders for the selected piece. The arrow button changes the order for the piece and, depending on which **mode** you are in, its group or the entire army.
- 15) **Halt** — Stops the movement of the selected piece and, depending on which **mode** you are in, of the group or the entire army.
- 16) **Set** — In single mode, this special button sets the artillery target for a selected artillery piece.
- 17) **Formation** — In group mode, the arrow buttons next to the three gray boxes order a group to make a formation with a certain **direction**, **thickness** and **facing** (respectively).
- 18) **Mode** — Select one of three buttons (Single, Group, All) to control which mode you are in; affects who receives your movement (and Order) commands.

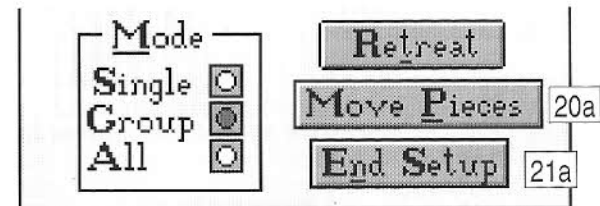


- 19) **Retreat** — Concede defeat and escape the battle.
- 20) **Autoplay** — Calculate the rest of the battle automatically and give the result.
- 21) **Play** — Enter battle mode and unpause the game.

In Setup Mode

At the start of a battle, the Control Panel is configured slightly differently for Setup Mode. Buttons 20 (Autoplay) and 21 (Play) are replaced with the following two buttons:

- 20A) **Move Pieces** — This button immediately acts out all setup orders given thus far.



- 21A) **End Setup** — This button begins the game (where all orders are now acted in real-time).

About the Following Chapters

The next ten chapters cover the different controls available in command mode:



SETUP MODE

The chapters that follow describe how you use the controls after a battle has begun; however when a battle starts these instructions do not completely apply. When you engage in battle as part of a campaign game, you must go through **Setup Mode** before the battle begins, to place your troops into tactically worthwhile positions and prepare them for the fight.

NOTE: This is unnecessary when you play a **Historical Battle** (such as "First Bull Run," which is included with this game). In these battles your pieces are already set up for you in historically authentic formations.

Before a battle actually starts, the Main Screen appears in Setup mode; this is indicated by a small display on the information bar. Additionally, the Autoplay (20) and Play (21) buttons are replaced with two new buttons: **Move Pieces** (20A) and **End Setup** (21A).

When in setup mode, you can do some or all of the following things to improve your tactical situation:

- Move pieces, groups or the entire army into new locations on the map.
- Put groups into new formations.
- Mount or dismount cavalry for their first assaults.
- Select weapons for cavalry.
- Change firing and engagement orders.
- Aim individual artillery at specific locations.
- Combine or rearrange groups to best suit your tactical plans.

In short, you can do anything that you can do during a battle.

You accomplish these things through the same commands and features that you use during a battle. These commands work in the same ways that they do during a battle, with one key difference: time does not pass while your orders are carried out. This allows you to maneuver troops into their setup positions quickly; they simply "jump" to their destinations when you tell them.

NOTE: Naturally, if you were a devious commander, you might try to use this to instantly flank the enemy. Therefore, when you are in setup mode you can only place pieces in locations on **your end** of the battlefield.

Whenever you give orders to **move** pieces or assign them to new **formations**, these orders are remembered but not acted upon. When you want to actually move these pieces into their new positions, just press the **Move Pieces** (20A) button at the bottom of the Control Panel; this immediately acts out all pending movement and formation orders. You can press this at any time during setup mode.

When you have finished setting up for a battle, you start it by pressing the **End Setup** (21A) at the bottom of the Control Panel.

NOTE: Remember that you do not **have** to do any setting up at all; if you want, you can leave your troops the way they are. And if the battle seems inadvisable, you can also press the **Retreat** (19) button at the bottom of the Control Panel from within setup mode.

To use Setup Mode, you naturally need to be familiar with how the many features of the Control Panel works. We recommend you skim the following chapters of this booklet before you set up your first battle; additionally you can use the tutorial included in the **Technical Supplement and Tutorial** booklet to become familiar with some features and commands.



VIEWING THE BATTLEFIELD

The game screen only shows a small portion of the entire battlefield. Naturally, you will need to see more of the battlefield than this to keep track of your forces and those of the enemy. There are two ways of viewing the rest of the battlefield: one is moving the display window, and the other is using the Overview maps.

Moving the Display Window — There are several ways to move the display window. The first is the **keyboard**:

- arrow keys — moves one map-square in the direction of the arrow
- page up — moves up half a screen
- page down — moves down half a screen
- home — moves left half a screen
- end — moves right half a screen

Secondly, you can click on the green **Micro-Map** (1) in the top-left corner of the Control Panel to move the display; for reference, the white rectangle shows the area that is currently displayed in the battle window. If you want to scroll smoothly over the battlefield, you can hold down the **right** mouse button and “drag” the mouse over the Micro-Map.

Thirdly, you can also use the **scroll bars** as described in the **Main Screen Layout** chapter.

Overview Maps — Clicking on the **Overview** (5) button below the Micro-Map displays one of two maps showing the entire battlefield. Both maps are controlled through a set of buttons below them; these buttons are noted in italics in the following paragraphs. The two maps are:

Small: This is a small map about twice the size of the Micro-Map. Buttons allow the map to switch between showing *Armies* or *Terrain* on the map. The *Magnify* button switches your view to the large map.

Large: This large map fills the right half of the screen, and shows both terrain features and army pieces. A special option here, *Play*, allows you to watch the battle in real-time; press this button to unpause the game, then press the “S” key on the keyboard to stop play. The *Shrink* button switches your view to the small map.

When you are done, press *Done* to shut down either Overview map.



CONTROL MODES

When you give an order to your forces, it can be received by one, some or all of your forces. You can choose the level at which you control your soldiers by selecting one of three **control modes**: all, group and single. The three modes apply mainly to movement commands and the orders "Fire" and "Engage":

- The highest level is **ALL**: in this mode any movement commands or orders you give will apply to every piece in your army.
- The middle level is **GROUP**: in this mode any movement commands or orders applied to a group member will also be carried out by its fellow group members. Any number of pieces (of any type) can be placed in the same group, and each battle starts with your army divided into groups for you.
- The lowest level is **SINGLE**: in this mode you control each piece individually.

In addition to movement and orders, there are some other commands which work differently in different modes, or only work in one or two particular modes. These circumstances are outlined when the commands arise in the manual.

Selecting which control mode you want to use is simple; click either on **Single**, **Group** or **All** in the **Mode(18)** box at the bottom of the Control Panel. (**Keyboard Note:** Pressing the "m" key cycles through these choices).

SELECTING PIECES

When giving orders to your troops, you must first **select** a particular piece who will receive those orders. If you are in **single** mode (see above), this piece will be the only one to carry out the next order you give. If you are in group or all mode, other pieces will move or respond **with** the selected piece. Once a piece is selected, all future orders are sent through it until you select another.

There are two ways to select a piece: by right-clicking on a piece in the Display Window, or by pressing the Select Next/Previous buttons. Both are explained below:

Right-clicking on a Piece — The easiest way to select a piece is to locate it in the display window, point to it with the mouse and press the **right** mouse button. Don't use the left button as that controls movement (and is covered later).

To select a piece with the mouse, you must right-click on the **correct** part of a piece. This differs for different types of pieces, as explained below:

Infantry: Click on the piece's **head**.

Cavalry: Click on the **top-left corner** of the piece. This will be just to the **left** of the piece's **head**.

Artillery: Click on the **top-left corner** of the piece. Depending on which way the piece is facing, there may or may not be a **head** there.

If you want help figuring out where to click, you can activate the **Grid** button (located where the **scroll bars** meet, at the bottom-right corner of the display window) to display a grid over the battlefield. Cavalry and Artillery are two map-squares across and two map-squares down, so it is easy to see where to click to select them.

Select Next/Previous (6) — These buttons, located near the top of the Control Panel, will cycle through your forces in one of two ways. If you are **single** or **all** mode, the buttons will jump you from piece to piece on the battlefield, in order of their **Piece Numbers** (see the **About Pieces** chapter). If you are in **group** mode, the buttons jump you from group to group; this is a convenient way of quickly scanning what each group is doing on the battlefield. When a piece is selected, it will become highlighted by a **white rectangle**. If it



is currently moving to a new location, its destination will be marked with a **white "X"**. Also, the Control Panel will display a variety of statistics on this piece (see the **Statistics** chapter for details).

If you are **group** mode, the other pieces in its group will be highlighted with **gray rectangles**, and the destinations for those pieces will be marked with **gray "X's"**. This allows you to see, at a glance, exactly which pieces your group commands will affect.

Finally, if you shift your view to another part of the battlefield and want to quickly move to the area surrounding the selected piece, you can do so by pressing the "C" key on the keyboard.

MOVING TROOPS

Commanding a piece to move in **simple**; simply point to the desired destination (i.e. where the piece's **feet** should be) in the display window and click the **left** mouse button. This location will be marked by a **white "X"**.

If you are **single** mode, only the selected piece will be ordered to move. If you are in **group** mode his fellow group members will also move the same relative amount, and their destinations will be marked with **gray "X's"**. If you are in **all** mode, everyone will move (but only the selected piece's destination will be marked).

Movement Rules

Here are some rules that affect movement:

- Cavalry pieces move twice as fast as infantry.
- Artillery pieces move half as fast as infantry.
(**Note:** Because of these two rules, groups made up of multiple piece types will move unevenly.)
- Pieces are slowed by **rivers** (not bridges), **trees**, **hill crests** and **barricades**.
- If a piece is standing on terrain that affects its Attack and Defense ratings, and you are in **single** mode, then those effects will be shown by "++" or "--" markers next to those ratings (12) on the Control Panel. A "++" means the rating is improved by the terrain; -- means the rating is lowered. You can use this to make sure that your men are properly located to get benefits (and avoid drawbacks) from barricades and other terrain features.
- Each map-square on the map can hold only one piece at a time; so when allied pieces collide with each other, or are ordered to move into the same map-square, the pieces will try to avoid each other, while remaining as close to their destination as possible. This also occurs when pieces try to create **formations** (see a later chapter for details).



Stopping Troop Movement

If you want to stop a piece, group or the entire army from moving, press the **Halt** (15) button above the three Formation icons on the Control Panel. The "X" markers for all of the pieces involved will disappear to signal that they have stopped. This command is affected by **control mode** just like the movement command.

Additionally, a piece will stop in any of the following situations:

- When it reaches its chosen destination.
- If it gets involved in hand to hand combat (but in most cases, they will continue to their destination after a fight).
- If another piece in its group gets involved in hand-to-hand combat, and its current destination would take it too far away from the fighting piece.

One final note: Troops do not leave the battlefield.

Troop Facing

Depending on the **orders** you give to a piece (see below), the direction in which it is facing will control at whom it shoots. If you want to change the facing of a piece, you can use the **Formation** (17) icons described in a later chapter. Alternatively, you can move the piece at least one square in the direction you want it to face.

GIVING ORDERS

In addition to commanding pieces to move, you must also give them **orders** which define when and where they shoot at the enemy and engage in hand-to-hand combat. Additionally, there are special orders that apply specifically to cavalry and artillery pieces. All of these are noted below.

General Orders: Fire and Engage

The two Orders buttons, **Fire** (13) and **Engage** (14) allow you to tell your pieces when and where to fire at the enemy, and when to engage the enemy in hand-to-hand combat. These orders affect the selected piece, its group or the entire army, depending on what control mode is active.

These two orders are located halfway down the Control Panel. The currently selected orders are displayed in gray boxes; to change them click on the **arrow** button to the right of the display.





The options for **Fire** are:

- Hold** Do not fire. This improves the chances of pieces engaging in hand-to-hand combat.
- At Target** Fire **only** in the direction that the piece is currently facing. This enables controlled fire, but you will need to control the **facing** of your pieces (see the **Moving Troops** chapter).
- At Will** Fire in any direction, at anything within range.

When you are in **single mode**, the display for Fire will contain a number; this is the **range** of the currently selected piece's weapon (if he is using a gun or manning a cannon).

The options for **Engage** are:

- On** Do not engage in hand-to-hand combat unless an enemy piece is very close (**two** map-squares away or closer).
- At Will** Engage any enemy pieces located five map-squares away or closer.

NOTE: In certain situations, your pieces may appear inactive or unwilling to fight a nearby foe, even though they have been ordered to do so. This occurs when a piece has **poor** morale, causing it to disregard its engagement orders. This is covered in detail in the **How the System Works** chapter.

NOTE: **Artillery** pieces avoid hand-to-hand combat at all costs, due to their small size. Therefore they will **ignore** any orders to engage the enemy, unless they are directly attacked first.

Special Cavalry Orders

When a Cavalry piece is selected, two additional commands are available at the top-right edge of the Control Panel: **Mount/Dismount** (3) and **Change Weapon** (4). They appear as **arrow** buttons and work as follows:

Mount/Dismount — This button switches cavalry pieces between mounting and dismounting their horses. Dismounted cavalry move at regular Infantry speed, but are more successful when firing a gun.

Change Weapon — This button toggles cavalry pieces between using their guns and their sabres. Cavalry pieces are particularly effective with their sabres when on horseback; similarly they are better "shots" when they are dismounted.

If you are in **single** or **all** mode when you use these buttons, they will affect only the selected piece. If you are in **group** mode, they will affect every cavalry piece in the selected piece's group.

Special Artillery Order

If you have selected an artillery piece and are in **single** mode, a button called **Set** (16) will appear below the Fire and Engage order displays. It is explained below:

Set (Target) — Use this command to order an individual artillery piece to **bombard** a particular location with cannon-fire. The piece will then bombard that square, hitting any or all of the pieces within **one** to **two** squares of the target. The bombardment will also destroy any barricades or bridges that it hits.

If **no** target is set, the artillery piece will choose its own targets like any other piece wielding a gun. If a piece **moves**, it loses its target setting.

If you want to clear an artillery piece's target setting, you can change its **firing** orders, or **move** the target.



FORMATIONS

Since you control several pieces at once that are collected into one group, the Formation commands allow you to move your groups into easily controlled and arranged patterns (like lines and squares). These formations can then be arranged in tactically useful positions on the field, for a variety of purposes: to create traditional defensive "lines" for blocking admittance to an area, to attack said lines, to flank the enemy, or even to cross bridges in the quickest way possible. Basically, formations should be the building blocks of your tactical plans.

The three **Formation** (17) icons appear below the Orders displays on the Control Panel. They only function in **group** mode; in other modes the word "Formation" is grayed out and the buttons do not respond. Each icon represents a different characteristic of a formation: **direction**, **thickness** and **facing**. Use the two arrow buttons next to each icon to change the settings for each aspect.

Each of the three characteristics of a formation are explained below:

Direction: This determines how pieces will line up over the battlefield: as a horizontal **row**, vertical **column** or **diagonal**.

Thickness: This determines how closely pieces are arranged in the formation. It has five settings:

- | | |
|---|-------------------------------------|
| single tight (one solid line) — | shoulder-to-shoulder, single row |
| double tight (two solid lines) — | shoulder-to-shoulder, two rows deep |
| single skirmish (one dotted line) — | spread out, single row |
| double skirmish (two dotted lines) — | spread out, two rows deep |
| square — | form a perimeter square. |

Facing: This determines in which direction the pieces face. Generally this icon is only useful *after* the pieces have reached their locations in the formation; changing this icon then rotates the pieces in the group to the proper facing.

If you change either the **direction** or **thickness** icons, the group will assume a new formation. If you change only the **facing** icons, you will change the direction of every piece in the group, but they will not assume the formation. This is useful when you want to direct your pieces to fire in a specific direction.

After you change a formation, you can review the new facings and destinations that were assigned to your pieces by **left-clicking** on any inactive part of the screen (i.e. the area surrounding the Formation icons).

When you order a group to assume a formation, it chooses the location of the currently selected piece for the **top-leftmost** corner of the formation. The exceptions to this are diagonal formations which run from bottom-left to top-right; in these cases that location becomes the **bottom-leftmost** corner of the formation. The selected piece will not necessarily fill that location, since the pieces line up in order based on their piece numbers.

Specific Uses for Formations

Tight Lines These are good for keeping the enemy from "piercing" through to the back rows of your army. One tight line in front allows you to prepare flanking maneuvers, artillery and other plans behind it, without worrying about enemy encroachment.

Skirmish Lines These are good for scouting large areas of unseen terrain, and therefore particularly well-suited for **Fog of War** (see a later chapter of this manual).

Double Thickness These decrease the chances of enemy pieces breaking through a defensive line, but also force the line to be shorter.

Vertical Lines These are good for sending flanking groups along the sides of the battlefield, for "punching" through a defensive line, or for crossing bridges.

Squares These are good for defending against a Cavalry charge, since it limits the number of sides a piece on which your pieces can be attacked. However, they are particularly bad against Artillery, since neighboring pieces are likely to be hit when a cannon "misses."



CHANGING GROUPS

At the start of a battle, your pieces might not be arranged in groups which best suit your tactical plans. Likewise, you may lose pieces during a battle and want to consolidate the survivors into fewer groups. To handle these situations, there are three ways to move pieces between groups: **changing** individual group **numbers**, **copying** group numbers and **transferring** groups. Each of them is explained below.

NOTE: For each of these methods, you can use up to **fifty** group numbers. Union players use group numbers from **0** to **49**; Confederates use group numbers from **50** to **99**. In most battles, there will be plenty of unused group numbers available.

Changing Group Numbers — This changes the group number of an individual piece; to do this, you must be in **single mode**. The process is simple: select a piece, and then press the **Group Number** (10) arrow buttons near the top of the Control Panel to select the appropriate group number.

Copying Group Numbers — This copies the group number of the selected piece onto any other piece you choose; it can be done in either **single** or **group** mode. First, select the piece or group whose group number you wish to copy. Then, press the **Change Group** (9) button (named "Group") on the Control Panel to turn on **Change Group** mode; this will be indicated by a text panel and a display on the information bar. Now, simply **left-click** or **right-click** on any of your pieces on the battlefield, and they will be added to desired group. (**Note:** If you are in **group mode**, you can see them join the group as they become highlighted with gray rectangles.)

When you use this method, make sure to press the **Change Group** button to turn it off before you try to issue other orders.

Transferring Groups — This allows you to merge an entire group into another; it works in any control mode. You start by pressing the **List Groups** (8) button near the top of the Control Panel. This accesses the List Groups screen, which allows transfers and also displays group information. From the List Groups Screen:

- 1) Press **NEXT** and **PREVIOUS** to move through the groups until the one you want to disband appears. The selected group's location is always displayed on the small Overview map near the center of the screen.
- 2) Press **TRANSFER**.
- 3a) Use **NEXT** and **PREVIOUS** to select the group to which you want to transfer; click on **YES** to transfer the group.
- 3b) If you change your mind, click on **CANCEL** at any time to exit the **TRANSFER** procedure.

You can repeat these steps as many times as you like. Click on **FINISHED** when you are done.



STATISTICS

There are three ways you can view statistics on your forces: by looking on the **Control Panel**; by using the six **View Statistics** commands; and by accessing the **Stats** screen. Each method is explained below:

NOTE: Definitions for the statistics mentioned below are located in the chapter titled **About Pieces**.

Control Panel — The control panel shows the following statistics for the currently selected piece, listed from top to bottom:

Piece Statistics (2)	Piece Number and Type Weapon Carried Quality Morale
Number of Men (7)	If in single or all mode, this shows the number of men in the selected piece. If in group mode, this shows the number of men and pieces in the selected group, separated by a dot.
Group Number (10) Ratings (12)	Attack (including terrain effects) Defense (including terrain effects) Firepower
Orders: Fire (13) Orders: Engage (14)	If in single mode, also Weapon Range Engagement (hand-to-hand) Orders

View Stats Commands — If you wish to see information on all of the pieces (both yours and the enemy's) displayed in the battle window, you can access the following six commands from the **View** menu (on the Menu Bar), or by pressing the appropriate **View Button** (11) near the top of the **Control Panel**:

Column 1, Row 1

Attack

Column 1, Row 2
Column 1, Row 3
Column 2, Row 1
Column 2, Row 2
Column 2, Row 3

Defense
Firepower
Group Number
Morale
Men In Piece

Each of these options displays the appropriate statistics in **arrowheads** floating above each piece. Attack, Defense and Firepower ratings run from 0 to 99. Group Numbers run from 0 to 49 for Federal players, 50 to 99 for Confederates. Morale runs from 0 (very low) to 4 (very high).

Stats Screen — Selecting this option from the **Menu Bar** displays a screen that shows the course of the battle. This screen lists the number of men and pieces currently **active** and **lost** during battle, sorted by piece **type**, for both sides.

NOTE: The statistics for the enemy will only include those Active men that you can currently see; if **Fog of War** is active (see a later chapter of this manual), then these numbers will not necessarily represent all of the enemy forces.

Viewing Enemy Statistics

If an enemy piece is visible on the map, then you can view its statistics by **right-clicking** on it. This displays a gray panel of statistics over the control panel. When you are done, click either mouse button to close the panel and continue.

This feature lets you know exactly what kind of troops you are facing, and can be crucial when making tactical plans. For example, if you know what rifles the enemies are using, you can look up their range in the back of this manual and try to stay out of it.

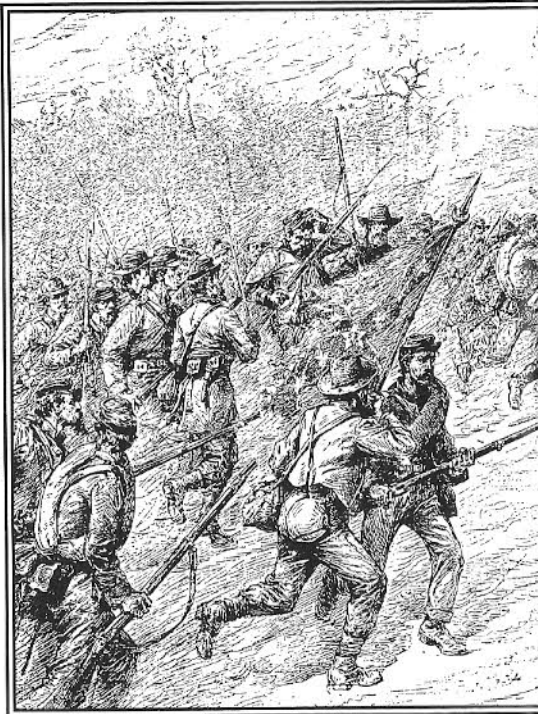


GETTING THE BATTLE MOVING

Whenever you are in command mode, the game is **paused** so you can give orders. The following commands allow you to see your orders carried out, or simply have the computer complete the battle for you:

Play — Pressing the **Play** (21) button at the bottom of the Control Panel enters **battle mode**. In this mode, you can scroll over the battlefield and watch your troops carry out your orders in **real-time**. This mode is explained in the following chapter.

Real-Time Overview — If you wish, you can use the **Large Overview** map to view the action over the entire battlefield in real-time. To access this map, press the **Overview** (5) button near the top of the Control Panel; if the Small map is displayed, click on *Magnify*. When the large map is displayed, press the *Play* button to unpause the game; pieces (represented as gray and blue squares) will begin to carry out their orders. To pause the game again, press the "S" key on the keyboard.

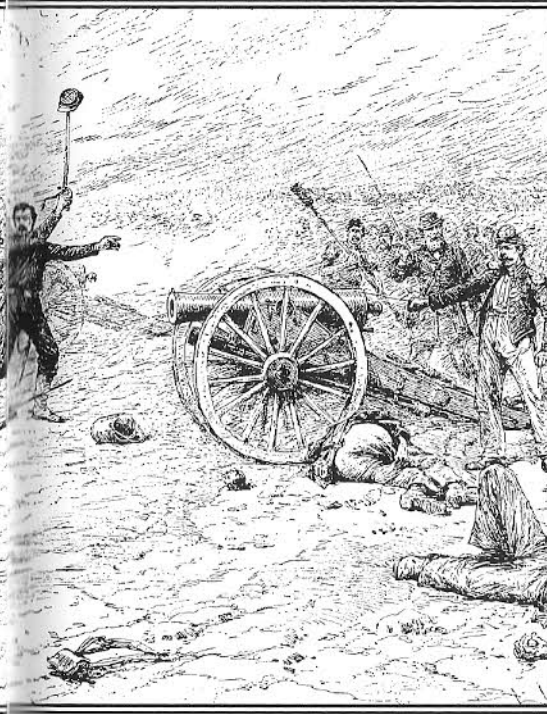


Autoplay — Pressing the **Autoplay** (20) button at the bottom of the Control Panel lets the computer calculate the results of a battle without actually fighting it out, based on the compositions of the two sides. It will quickly resolve the battle for you and give you the result. This feature is useful in long campaign games, where you may not want to fight every skirmish that arises.

NOTE: Remember that a battle will end automatically when either side has lost more than **50 percent** of their original starting force. Alternatively either side may **retreat** before this happens (see below).

Retreat — Pressing the **Retreat** (19) button at the bottom of the Control Panel lets you withdraw your forces from the battle at any time; you may use this when a starting or continuing a battle seems inadvisable or hopeless.

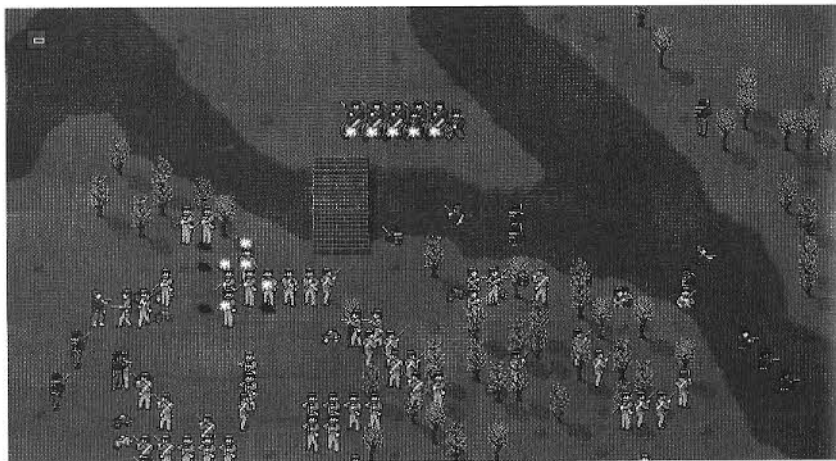
The computer may call for a retreat when it loses too many men; this becomes more likely after it loses **25 percent** of its original strength.





BATTLE MODE

When you enter battle mode (by pressing the **Play** (21) button at the bottom of the Control Panel), the screen is filled with a scrolling view of the battlefield. Both your pieces and those of the enemy begin to carry out their orders in real-time. In this mode, all you can do is scroll the display and pause the game. The features of Battle Mode are explained below:



Scrolling the Display — You scroll the display with either the keyboard or the mouse. The **keyboard** commands are identical to those in command mode:

- arrow keys — moves one map-square in the direction of the arrow
- page up — moves up half a screen
- page down — moves down half a screen
- home — moves left half a screen
- end — moves right half a screen

To scroll using the **mouse**, simply move the mouse in the direction you wish to scroll. To stop scrolling, move the mouse back to its original position.

In either case, a small, green square called a **View Indicator** is displayed in the top-left corner of the screen. The white rectangle inside it indicates what part of the battlefield is currently displayed.

Key Locations — If you like you can have the computer remember up to nine special locations on the battlefield, so that you can “jump” to any one of them by pressing a key on the keyboard. To do this, scroll to a location and press a number key from 1 to 9. Then, when you want to view one of these special locations, press the appropriate **function key** from **F1** to **F9**. When a battle begins, these locations are set to form a three-by-three grid spread across the battlefield.

Battle Animations — As a battle progresses, you will see some or all of the following animations:

- Walking Pieces** Pieces will be animated as they move from map-square to map-square. Additionally, if they are in water, they will be shown **submerged** in water up to their waist.
- Clashing Arms** When two pieces are engaged in hand-to-hand combat, you will see them hitting and flailing at each other. While this is occurring, they are damaging each other — depleting the number of men in each piece.
- Gunsmoke** Pieces equipped with guns fire at regular intervals, indicated by puffs of gunsmoke at the ends of their rifles. However, this does not indicate whether or not the hit was successful.

NOTE: Cavalry pieces are the exception to this; they do not show smoke, but still fire at their targets.

- Cannon Fire** Artillery pieces fire at regular intervals, just like gunmen; and similarly they are indicated with gunsmoke at the mouth of the cannon. However, the **impact** of the



blast is also marked by smoke, followed by a black **crater**. Cannon fire misses are just as deadly to their unfortunate victims as a straight-on hit. Artillery is much more powerful than regular guns.

Corpses

When a piece is "killed" (when all of the men it represents are killed), a corpse will appear on the battlefield to mark its passing.

Pausing the Game — To pause the game, simply click the **left** mouse button, or type the "E" key on the keyboard. This freezes time on the battlefield and returns you to Command Mode.

GAME OPTIONS

The following game options are available from the **FILE Menu** on the **Menu Bar**.

Save	Saves the current game using the Directory Window (see below).
Load	Loads a previously saved game using the Directory Window (see below). Saved game may be in either campaign or battle mode.
Restart Game	Starts the battle over.
Exit to DOS	Shuts down the program.

Directory Window

This window appears when you **save** or **load** files. Its features are:

AutoSave	See below.
File Window	Click on a file in this window to select it for loading or saving.
Up/Down Arrows	If there are more files than can be shown in the File Window, press these arrow buttons to view the rest.
Filename	Click here to edit the current selection for saving or loading.
Save/Load	Press this button to save or load the selected file name. You may be asked to confirm this action.
Cancel	Exit without saving or loading.
AutoSave —	As a battle progresses, the game will be silently saved at regular intervals as AUTOSAVE.SAV. This can be switched off from the Directory Window by clicking on its arrow button.



CONFIGURATION OPTIONS

The following configuration options are available from the **Options** menu on the **Menu Bar**:

Map Scroll	The speed at which the map will scroll; 10 is fastest.
Game Speed	The speed at which a battle progresses; 10 is fastest. On fast machines (particularly with local-bus graphics), lowering this speed will give you time to react to the enemy's actions.
Display Detail	Controls the level of detail shown for battlefield scenery. At Low level, game-time and scrolling are faster. This only applies to Micro Miniatures battles.
Fog of War	See the chapter titled Fog of War .
Sound FX	Toggles sound effects on and off.
Tunes	Toggles music on and off.
Uniforms	Controls the use of multiple uniform types on the battlefield. See below.

Uniforms

The human player can have up to three types of uniforms on the battlefield; this option lets you choose that the second and third uniform types are. (Uniform 1 is always the same standard traditional uniform). When you select this option, a panel appears showing the three uniform types; click on the arrows next to types 2 and 3 to change them. You are allowed to choose uniforms of other colors, as well as African-American soldiers.

Each piece is assigned a uniform based on which weapon it has: a piece with the first weapon assigned to infantry gets uniform type 1; a piece with the second weapon gets uniform type 2, and the third weapon gets uniform type 3. (The order in which these weapons are assigned is determined on the **campaign** level.)

NOTE: Uniform types only affect infantry.

FOG OF WAR

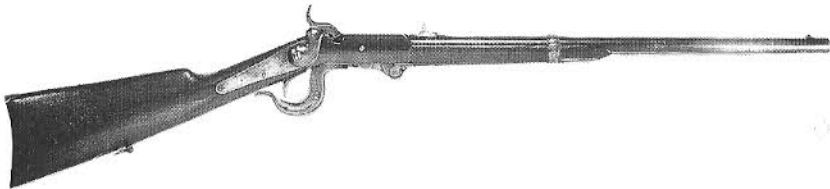
This game option adds the challenge of **visibility** to the game. It makes the Micro Miniatures system even more tactically challenging and exciting, and greatly increases the **difficulty** of the game.

When this option is turned on, the following effects occur:

- **Enemy pieces** will only appear on the battlefield if they are **in sight** of your pieces. The distance you will be able to see will vary with the **weather**. See the **How the System Works** chapter for details on visibility ranges.
- Enemy unit data will not appear on the **Overview** map or **View Stats** commands.
- The **Stats** screen will only include the enemy troops that you can see as **Active**.
- The **campaign** level of the game is also affected by Fog of War; see its manual for details.



TIPS AND TACTICS



Before setting up your army, as yourself these questions about the upcoming battle scenario:

- What is the enemy's size, quality and location? (Some of these can be only found out as the battle unfolds.)
- What is the battlefield terrain like?
- Is the weather going to effect the battle?
- What is my realistic intention — to hold this ground or to push the enemy away?
- Do I have the men to carry out my intentions?
- Is the cost of my plan too great, either in lives or in other strategic concerns?
- What do I believe the enemy will do?
- Considering those plans, where should I place my men to gain maximum advantage out of the terrain before me?
- Should I reorganize the organization of groups to better fulfill my plans?
- Should I attack first, and if so, where?
- If my initial plan fails, will I be prepared? Have I got sufficient reserves to cover any gaps that may appear?
- Have I got the right troops in the right locations?

These questions can provide you with many different answers, depending on the scenario at hand. Here are some general points for using your troops to fulfill your plans:

The Three Types of Soldier

Infantry are your average gunmen, with average ability in hand-to-hand. If your infantry are going into a gun battle (or "fire-fight"), make sure your enemy isn't better armed than you; otherwise they will have the advantage and the fight might be a bit one sided. A hand-to-hand assault would be better.

Cavalry were generally under-used in the War, where terrain permits they are excellent at out-flanking the enemy. Use their speed advantage; don't be afraid to dismount them and use them as sharp-shooters (since they are better shots when on foot), re-mounting and retreating if attacked. In hand-to-hand combat they are most effective when "charging" — attacking on horseback gives them increased Attack ratings and speed. So charge in and let the fights occur; but don't be afraid to pull your horsemen back, regroup and then go again.

Artillery should be held back and used to pound the enemy lines; an ideal plan is to use them to weaken an area, so that you can follow through with your infantry. It is worth guarding them with some men. They are poor at hand-to-hand combat due to their small size (only a handful of men per piece), and therefore avoid it unless attacked.

Attack Sequences

It is helpful to think your battle plans in terms of the **sequence** of attacks that you will initiate. For example, a typical sequence of attack might be:

- Begin Artillery and Infantry fire until your **numerical superiority** is achieved.
- Begin a **feint** attack on part of the enemy line (attack one part of the enemy line, to divert the enemy's forces).
- Begin the main advance and **charge** (start a hand-to-hand attack) on the enemy.
- If **successful**, the first line should hold its ground while a fresh **second line** pushes towards the enemy.
- If **unsuccessful**, the first line should enter a close-range fire-fight and wait for the second line to run past and hand-to-hand attack the enemy.

There are many variations in attack sequences. You might like to try the one Upton did at Spotsylvania; when the front line enters the enemy position, it



breaks **left** and **right** allowing fresh **second** and **third** lines to come through. Another sequence is known as the "Indian Rush," where the front line is split in the **middle**. One half advances a short distance while the other half stands and fires. When the advancing half is in position, they start firing while the other side advances to join them and reform the line. This "left-right" progression continues until hand-to-hand combat takes place. This method allows constant firing at the enemy.

Maintaining a Battle

Having worked out your plan, start by using **setup mode** to get your pieces into position. Alter their **group organization** if necessary, so that when the battle begins you only have to issue commands to one or two groups at a time.

When making an assault, feed your men into the fracas **gradually**; as the battle progresses you'll get a better feel for strengths and weaknesses on the field, so you can then shift the emphasis of attack using the men you've held back.

We therefore recommend having your main attack force in a **series of lines** rather than one great bunch! In particular, you should try to keep a strong front line; by keeping the enemy in front of this line, you have the freedom to position and prepare men behind it for new maneuvers. Make tactical use of square and column formations, as described in the **Formations** chapter.

Make good use of your reserves in the following ways:

- attack the enemy if a weakness in his tactics appears
- counter-attack the enemy when he exploits a weakness in your tactics
- reinforce your line(s)
- move round the flank (side) of your enemy, to catch him undefended (this is called "flanking")
- provide cover in the event of a tactical retreat (where you lose ground to regroup, but still continue the battle).

Finally, remember to "**reinforce success**" by exploiting your strengths and the enemy's weaknesses. When doing this, **timing** is all-important.

MICRO MINIATURES: HOW THE SYSTEM WORKS

Here are some insights into how the Micro Miniatures System calculates its battles, which will help you plan your battle tactics:

Morale — Each piece's rating in morale is based directly on its experiences in the battlefield. When a piece is successful in hand-to-hand combat, its Morale **increases**; if unsuccessful it **decreases**. Not only that, but this success or failure affects pieces **surrounding** that one as well. In this way, each individual's morale and actions affect (and are affected by) the morale and actions of the other. Additionally, the **death** of a nearby enemy piece raises the morale of your own pieces.

Morale affects the willingness of a piece to engage in hand-to-hand battle, and affects the abilities of a piece in hand-to-hand battle and when firing a weapon.

Attack Initiative (or "Why won't my pieces engage?") — If a piece has Poor morale, it will not engage a nearby enemy even if ordered to. At this low morale level, the piece would rather be insubordinate than risk its life (or lives). If such a piece's morale is raised by nearby events, then it will return to the fight.

NOTE: This does not apply to artillery pieces, who will never engage in hand-to-hand combat unless directly attacked.

Hand to Hand Battles — When two opposing pieces meet a hand-to-hand fight ensues. There is one calculation, based on the following factors:

- the advancing unit's **attack** strength
- Cavalry only: how the piece is **mounted** and **armed** (sabre-wielding pieces on horseback have increased **attack** ratings)
- the defending unit's **defense** strength



- the **number of men** in each piece
- the **terrain** the two pieces are on
- the **quality** of the two troops
- the **morale** of the two troops
- the **number** of other enemy/friendly troops immediately **nearby**
- whether the piece has **orders** to fire, as this hampers hand to hand combat (not applicable to Cavalry carrying sabres)

The results will generally cause the loss of **men** in both fighting pieces. The side with fewer losses will experience a **gain in morale**, while the losing side's morale will **drop**. The losing side will **pull back** from the assault to regroup, and if it suffers sufficient damage, it will keep on going into retreat.

Choosing Gunfire Targets — Each piece armed with a gun must decide whether to shoot at an enemy piece, and which target to select. Each of these is controlled by a different set of rules.

The rules for determining **whether or not a piece should fire** are:

- A piece ordered to **hold** cannot fire.
- A piece cannot fire while **moving**.
- A piece cannot fire while engaged in **hand-to-hand combat**.
- A piece in **water** cannot fire.

The rules for determining **which target to select** are:

- If the piece's order is to fire **at will**, it will fire at the closest target it can find in any direction.
- If the piece's order is to fire **at target**, it will fire at the closest person **in front of them**, looking forty-five degrees to either side.
- If the piece is **Artillery**, and it is ordered to fire at will, and you have **Set** a target for it, then it will aim for that target location.

Gunfire — At regular intervals, each piece that decides to fire its gun will select a target and attempt to hit it (see above for details). Calculating the success of the attack is broken down into two areas: **hitting the target** and **causing damage**. Each is modified by different factors:

The **chance to hit** a target is based on several factors:

- **distance** to the target
- **quality** of firing piece
- **morale** of firing piece
- **formation** ordered for the target's group; note that even when a formation of pieces is dispersed, the men within a piece remain in formation. Skirmish formations are harder to hit, while square formations are easier.
- **terrain obstructions** between shooter and target, including hills, barricades and especially trees
- **weather** on the battlefield. **Dry** weather is best and has no effect; as weather gets worse through **rain** and **snow** to **fog**, the chances to hit are decreased.

If the target is successfully hit, then **damage** is calculated based on these factors:

- **firepower** rating of the shooter
- the **number of men** firing
- **weapon** type. Each type of weapon causes its own amount of damage, based on its destructive power, and the time it takes to reload.

Artillery Fire — Basically, artillery operates identically to other pieces that fire guns, except for the following changes:

- Artillery can be set to fire at a particular location (see **Choosing Gunfire Targets** for rules).
- When an artillery piece **misses**, it actually hits in another location near the intended target. If another piece is in that location, it suffers the full damage from the attack.
- The aforementioned misses happen in a small circle-like area around the intended target, assaulting everything within it. This is therefore known as **bombardment**.
- Cannon fire can destroy bridges and barricades, as well as men. Bombardment can punch a sizable hole in a barricade, or level the walkway of a bridge.
- Since you do not control exactly when your cannons fire, their operators are sure to only fire when they have a clear shot. Therefore, this simulation does not allow "friendly fire".



Death — When a piece loses all of its men, it is **destroyed** and it changes to a corpse.

Effects of Weather — Weather has two effects: on accuracy when firing a gun or cannon (see above), and on visibility when **Fog of War** is activated (see below).

Basic Ratings — The attack, defense and firepower ratings for each type of piece are as follows:

	Attack	Defense	Firepower
Infantry	1	1	1
Cavalry (mounted w/Sabre)	3	1	0
Cavalry (dismounted w/Sabre)	1	1	0
Cavalry (w/Gun)	1	1	1
Artillery	1	1	3

Range of Weapons — Each weapon has its own effective range, measured in map-squares. They are listed below (and also appear in the **Orders: Fire** (13) display when you are in **single** mode):

Weapon	Range in Map-Squares
Sabre	0 (hand-to-hand)

Guns	Range in Map-Squares
Flintlock	1
Musket	2
Harpers Ferry	4
Springfield	5
Remington	6
Enfield	5
Lorenz	5
Sharps	7
Henry	6
Spencer	6
Colt	5
Enfield Car.	4
Sharps Car.	5
Spencer Car.	4

Cannons	Range in Map-Squares
12p Howitzer	11
24p Howitzer	13
6p Smoothbore	15
12p Smoothbore	17
Rodman	27
10p Parrott	29
12p James	17
12p Blakely	17
12p Whitworth	88
20p Parrott	44

Terrain — The terrain your pieces encounter on the battlefield will affect how they move and fight, according to the rules below:



Type	Move Effect	Combat Effect
Grass	None	None
River	Slows	Decreases defense/attack
Trees	Slows	Increases defense
Hill Crests	Slows	Increases defense/attack
Barricades	Slows	Increases defense

Weather and Visibility — When Fog of War is on, the range at which you can see enemy pieces is determined by the weather, as indicated below:

Weather	Range of Visibility
Dry	16 map-squares
Wet	12 map-squares
Snow	8 map-squares
Fog	4 map-squares

Type of HISTORICAL BATTLES: FIRST BULL RUN

This game includes the First Battle of Bull Run as the first in our line of **Historical Battles**. Impressions plan to release data disks containing other famous battles from the Civil War. Each historical battle is "hand-crafted" according to records of terrain, troop composition and position. Each is a stand-alone battle and is not part of a campaign.

To play a historical battle, simply select **Historical Battle** from the startup options (either when starting a new game or restarting). Then select the battle from the directory by clicking on it, and press **Load**. The statistics for the start of the battle will appear, and the battle will begin.

There is no setup mode when a battle begins. All of the forces have been placed in historically authentic positions. The battle will therefore start the way it did in real life — what happens from there is up to you.

For your reference, below is a brief description of the First Battle of Bull Run.

July 21, 1861.

The first major battle of the war takes place at Bull Run between a Union Army of around 35,000 men, led by Brigadier-General Irvin McDowell, against a Confederate Army of around 32,500, led by General Joseph E. Johnston.

The battle ended with a Union retreat and victory for the South. With Bull Run the North recognized that the war would not end quickly, and Congress soon agreed to raise an army of 500,000 long-term volunteers.

At this battle, the Southern Brigadier-General Thomas J. Jackson acquired by his deeds the nickname of Stonewall. During a particularly hard part of the battle a fellow commander, Bee, reported to Jackson that 'they are beating us back'. Jackson, with inspirational courage, replied, 'Sir, we will give them the bayonet!'. Bee rode back to his troops and pointed at Jackson saying 'Form! Form! There stands Jackson like a stone wall! Rally behind the Virginians!' The troops did rally and the nickname stuck.