GRAND TACTICIAN'S

EVOLUTIONS OF A BRIGADE AND CORPS D'ARMEE,

FOR THE
INSTRUCTION, EXERCISE
AND MANOEUVRES FOR PLAYING

THE STRATEGY GAME CIVIL WAR (1861-1865)

INCLUDING
SCHOOL OF THE GRAND CAMPAIGN
SCHOOL OF THE BATTLE-FIELD TACTICS

VERSION 1.13

BY LIEUT. COL. ELIAS A. WARHALL,

CAPT. B.C. MILLIGAN,

PROF. OLIVER A.A. MARPOLE.

————◆————

TABLE OF CONTENTS.

Preface

The following system of Infantry, Cavalry and Artillery tactics, as well as of Naval operations, based upon the latest improvements in technology, and adapted to the peculiar wants of our customers, has been prepared by order of the War Department, and is now, after the most satisfactory evidence of its efficiency, and following many months of testing, authorized and adopted by the Secretary of War for the instruction of the players.

Readers are advised that, in order to take full advantage of the various armies, corps, divisions and fleets they will command during the course of the game, a close and thorough study of this work is highly recommended.

The system now presented in this manual gives a complete course of instruction for all kinds of infantry, cavalry, artillery, and warships. It does not neglect the disciplines of engineering and logistics that are always essential elements of every good campaign, and which should be known to every competent commander. And neither does this manual overlook the importance of diplomacy, politics, finance, or national morale, among other factors, to the eventual success of the Nation in a war of this nature and scope.

It is believed that, with those elements outlined beforehand and clearly presented in this manual, this system will render its users with a better understanding of the tactics, strategy, and overall operations of the armies and navies of the American Civil War than does any other. But we will leave a definitive decision as to the verity of this statement to the reader.

Washington, D.C. September 24, 1861

Amendments

1.03 - General Manual update.
1.06 - Major Manual update, incl. all Economy Lessons updated, Projects added, Projects appendix added.
1.07 - Minor corrections, additional weapons and projects.
1.08 - Custom commander creation added.
1.11 - Updated with latest features.
1.12 - Updated with latest features.
1.13 - Updated Credits.

INTRODUCTION.

Gen'l,

Welcome to Grand Tactician: The Civil War (1861-1865)!

Grand Tactician is a real-time strategy game, in which you can choose your side in the American Civil War and fight to win the war as either the Union or the southern Confederacy. The game has a strategic level offering several grand campaigns, where you will take the role of the nation's military leadership under the President, and a tactical level, where you can choose to fight any of the selected historical battles.

The game runs in real time, which can be accelerated or paused at will, thus ensuring the game pace will not be overwhelming or too slow. You will be in charge of the military operations, both on land and at sea, and also have a wide range of options to influence the strategy of your nation, from government financing to chosen policies in a wide range of areas. You will also have diplomatic options that can influence the European nations to stay neutral, or perhaps to intervene in the war. You will manage, support and manoeuvre armies, corps and navy squadrons on the campaign map. When the armies clash, you can command them in tactical real-time field battles that can last for multiple days.

There are a number of campaign scenarios, starting on different dates during the war, with the historical military situation of that said moment. Even if the initial setting is historical, the game is a sandbox, where you, the player, will make your own choices on how to defeat your opponent and win.

We, the developers of the game, wanted to create something new in the strategy game genre, as we thought such a game had not yet been published. Our idea of the game is that you can dive into it for a long time, managing your nation and military without any hurry, maybe with a cup of coffee in hand - or perhaps even a canteen of that popular drink the soldiers made themselves, O Be Joyful. It's designed for the *grognard* wargamers such as ourselves, who love to study the American Civil War and face some of the challenges the real commanding generals of the time faced: from never being quite sure when, or even if, your order will be carried out; to the constant struggle to keep the armies supplied and the soldiers fighting, and to doing your best to keep your citizens supporting the war effort.

We hope you enjoy the game as much as we have enjoyed developing it, and that the game will inspire you to find more about the conflict, its origins and outcomes, as well as about the people who fought in it. At the same time, we would like to offer our thanks to all the players who participated in the game's Early Access development from August 2020 to September 2021.

We are, sir/ma'am, Your very ob't se'v'ts,

The Grand Tactician Team.

TITLE THIRD – SCHOOL OF THE BATTLE-FIELD TACTICS.

General rules and instructions for winning battles.

———◆———

Posts of the brigadier-general in line and in column.

5. If a brigade be acting by itself, its brigadier-general will, when it is in line of battle, take such position as he may judge necessary; and if it be in column, he will hold himself habitually at its head.

6. The brigadier-general will look to the exact and regular execution of all signals, notifications or commands coming from the major-general of the division to which he may belong; accordingly, he may repair, whenever he may judge his presence necessary, within the extent of his brigade.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

Silas Casey *(July 12, 1807 - January 22, 1882)*

Graduated from the United States Military Academy in 1826 (39th out of 41 students). Fought in the Second Seminole War 1837 to 1842. Fought in the Mexican-American War, being appointed brevet major on August 20, 1847 for gallant conduct. Was severely wounded during the Battle of Chapultepec on September 13, 1847.

Performed frontier duties after the Mexican War. Commanded at Camp Picket during the Pig War on San Juan Island in late 1859.

Promoted to brigadier general of volunteers on August 31, 1861 and colonel in the regular army on October 9. Became a division commander in the IV Corps under General Erasmus Keyes. The division fought, and was routed, in the Battle of Seven Pines, when Confederate general D.H. Hill's forces attacked. Casey was blamed for the disaster by General George B. McClellan, was replaced by General John J. Peck and along with his division was sent to Harrison's Landing, away from the front lines. He was promoted to major general of volunteers on July 27, 1862 (to rank from July 4) when all corps and division commanders were promoted to said rank.

General Casey wrote the three-volume *System of Infantry Tactics*, including *Infantry Tactics* volumes I and II that were published by the army on August 11, 1862, and *Infantry Tactics for Colored Troops*, published on March 9, 1863. The manuals were used by both sides during the war.

At the end of the war, Casey received a brevet promotion to the rank of major general dated March 15, 1865. He was mustered out of volunteer service and reverted to his regular army rank of colonel on August 24, 1865. Casey retired from the army on July 8, 1868, at the age of 61, having served over 40 years on active duty.

———————◆———————

William Joseph Hardee *(October 12, 1815 - November 6, 1873)*

Graduated from the United States Military Academy in 1838 (26th out of 45 students). Fought in the Second Seminole War, where he was hospitalized due to illness. He was sent to France to study military tactics in 1840.

Served in the Mexican-American War and won brevet promotions to lieutenant colonel. He was captured, exchanged and wounded during the war. After the war he led units of Texas Rangers and soldiers in Texas.

In 1853 he returned to West Point as a tactics instructor and served as commandant of cadets from 1856 to 1860 and served as the senior major in the 2nd U.S. Cavalry, and as the lieutenant colonel of the 1st U.S. Cavalry.

In 1855 at the behest of then Secretary of War, later the President of the Confederate States, Jefferson Davis, Hardee published *Rifle and Light Infantry Tactics for the Exercise and*

Manoeuvres of Troops When Acting as Light Infantry or Riflemen. This manual, which became known as the *"Hardee's Tactics,"* became the best-known drill manual of the Civil War.

Hardee resigned his U.S. Army commission on January 31, 1861, after his home state of Georgia seceded from the Union. He joined the C.S. Army as a colonel on March 7 and commanded Forts Morgan and Gaines in Alabama. Promoted to brigadier general on June 17, major general on October 7 and later lieutenant general by October 10, 1862.

Hardee operated in Arkansas, receiving his nickname, "Old Reliable," until he was called to join General Albert S. Johnston's Army of Central Kentucky as a corps commander. With the army, later renamed Army of Mississippi, Hardee fought in the Battle of Shiloh, where he was wounded on the first day, April 6, 1862. Johnston was killed, and Hardee's corps joined general Braxton Bragg's Army of Tennessee. Hardee commanded the Left Wing of Bragg's army on his Confederate Heartland Offensive into Kentucky, and fought in the Battle of Perryville on October 8, 1862.

At the Battle of Stones River, December 31, 1862 - January 2, 1863, Hardee's corps launched a surprise assault upon the right flank of General William Rosecrans' army. Hardee lost patience with Bragg, with whom he did not get along, and he commanded the Department of Mississippi and East Louisiana under general Joseph E. Johnston briefly.

Hardee returned to Bragg's army, taking over General Leonidas Polk's corps. Hardee's corps was defeated in November 1863 at the Battle of Missionary Ridge, where George H. Thomas, "the Rock of Chickamauga," assaulted his seemingly impregnable defensive lines successfully. After this debacle, Hardee and other officers convinced President Davis to relieve Bragg. Hardee commanded the Army of Tennessee briefly, before returning to corps commander when Joseph E. Johnston took over.

Hardee fought in the Atlanta Campaign against General William T. Sherman's armies under Johnston and later General John Bell Hood. After the Battle of Jonesboro in August - September, 1864, Hardee requested a transfer and was sent to command the Department of South Carolina, Georgia, and Florida. He opposed Sherman's March to the Sea, eventually evacuating Savannah, Georgia on December 20. Hardee took part in the Battle of Bentonville, North Carolina, in March 1865. He surrendered along with Johnston to Sherman on April 26 at Durham Station.

LESSON FIFTH.

ARTICLE I. -*To break into column by platoon, either at a halt or in march.*

171. The company being at a halt, in line of battle, the instructor, wishing, to break it into column, by platoon to the right, will command:

1. *By platoon, right wheel.* 2. MARCH.
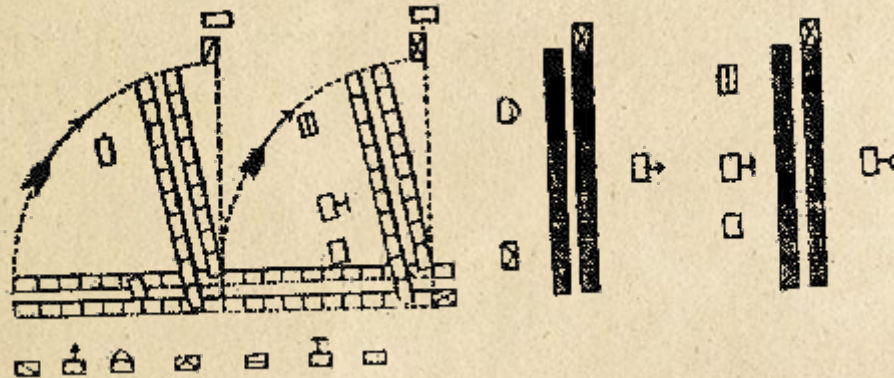
172. At the first command, the chiefs of platoon will place themselves rapidly two paces before the centres of their respective platoons, the lieutenant passing around the left of the company. They need not occupy themselves with dressing, one upon the other. The covering sergeant will replace the captain in the front rank.

173. At the command march, the right front rank man of each platoon will face to the right, the covering sergeant standing fast; the chief of each platoon will move quickly by the shortest line, a little beyond the point at which the marching flank will rest when the wheel shall be completed, face to the late rear, and place himself so that the line which he forms with the man on the. right (who had faced,) shall be perpendicular to that occupied by the company in line of battle; each platoon will wheel according to the principles prescribed for the wheel on a fixed pivot, and when the man who conducts the marching flank shall approach near to the perpendicular, its chief will command:

1. *By platoon.* 2. HALT.

From "Hardee's Tactics," 1862 edition.

TITLE THIRD-SCHOOL OF THE COMPANY.

TITLE FIRST – GETTING STARTED.

ARTICLE I.

Getting started, the main menu; Tutorials and information.

When starting the game, you will be presented with the main menu, where you have the following options:

CONTINUE SCENARIO.

Whenever you quit to the main menu, the game is automatically saved. Use this quick selection to continue from where you left off. To load a specific save, select the scenario in question and click "*Saved Games.*"

START CAMPAIGN.

Choose a campaign scenario. Allows continuing old saves or starting new games. See Article III about Starting a Campaign below.

START HISTORICAL BATTLE.

Choose a historical, stand-alone battle scenario. See Article IV about Historical Battle below.

LOAD A SAVED GAME.

Opens the library of saved games. The panel allows filtering, managing saves, and loading a saved game.

TUTORIALS.

Open the Field Book, which is a quick guide to playing the game. Under the heading "Index" of the Field Book scroll the available topics using the mouse wheel, and select them using left mouse button (LMB). More information will be shown on the right. Scroll the text using the mouse wheel.

AVATARS.

Opens a panel, where you can create and manage custom commanders, that you may activate in new campaign games. These commanders can then be managed like any of the historical commanders.

GAME OPTIONS.

Allows changing game settings. These include graphics, user interface, media (including sound and video), game options (such as whether or not to allow European intervention in the war), and hot keys. See Article II about Game Options below.

CREDITS.

The information about the development team of the game.

QUIT.

Exit to Windows.

INFORMATION.

Grand Tactician provides the players information directly in the User Interface (UI) in two- level tooltips. Whenever you place the mouse cursor over any active UI element, the tooltip appears. The first level shows general information, and the second level, which is shown after a delay, shows further details. The delay can be adjusted in the Game Options, see Article II below.
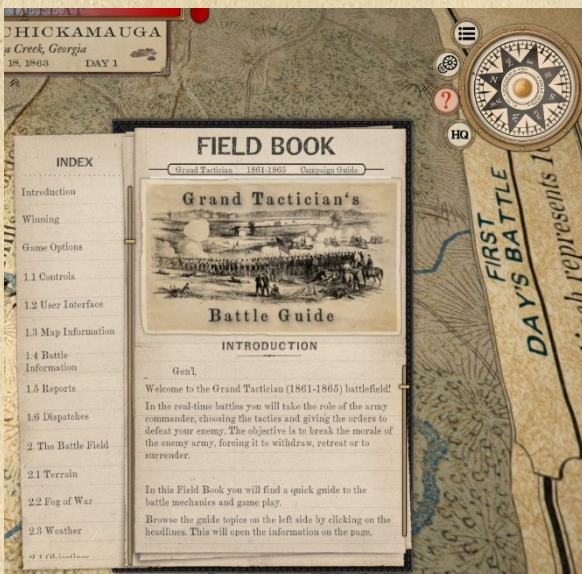
The Field Book is a quick guide within the game, explaining the main game mechanics in a quick overview. You can find the Field Book in both, campaign and battle, using the <?> -button found in the top right corner tools, next to the compass.

Under the heading "Index" of the Field Book scroll the available topics using the mouse wheel and select them using left mouse button (LMB). More information will be shown on the right. Scroll the text using the mouse wheel.

ARTICLE II.

Game Options; Interventions; Fog of War; Order Delays; Feuds; Victory Points; Readiness.

GAME OPTIONS.

You may enter game options in the main menu, and during a campaign or battle game play, to change the game settings.

GRAPHICS & USER INTERFACE

Screen Resolution	1920 x 1080 x 60hz
Fullscreen	☑
Graphics Quality	Low ———————————⬤ High
V Sync	☑
Uniform Variations	☑
Downsizing of Units in Large Battles	☑
Number of Models in Battle	Low ——————⬤———— High
Historical Fonts	☐
UI Scale	Small ————⬤———— Large
Tooltips Time Appearance	Short ⬤—————————— Long off ☐
Battlefield Map Scroll Speed	Slow ————⬤———— Fast
Battlefield Zoom Speed	Slow ————⬤———— Fast
Lock Battle Map Rotation	☐
Campaign Map Scroll Speed	Slow ————⬤———— Fast
Campaign Map Zoom Speed	Slow ————⬤———— Fast
Lock Campaign Map Rotation	☑
Movement Panel Delay	Short ————⬤———— Long off ☐
Show Quick Info in Battles	☐
Deactivate Newspaper	☐
Game remains paused if panels are closed	☐
Pause Autoresolve panel after battle has ended	☑

Graphics & UI:
Resolution: Select the resolution you wish to use. HD (1920x1080) resolution or higher is recommended. While lower resolutions are supported, some of the in-game elements may become difficult to read.

Fullscreen: If disabled, the game will run windowed.

Graphics Quality: Changes the general visual quality settings, including draw distances, level of detail, &c. Lower setting will result in improved performance.

VSync: or vertical sync, is a graphics technology that synchronizes the frame rate of a game with a gaming monitor's refresh rate. Enabling it may cost some performance.

Uniform Variations: The game allows color variations within units, which is set for Confederate troops by default. Disabling the variations will result every unit having only 1 color of uniform, which will result in slightly better performance.

Note: this setting will be applied only when starting or loading a campaign or a battle.

Downsizing of Units in Large Battles: When fighting large battles, the number of troops involved may result in slower performance. With this option enabled, the game will reduce the number of 3D soldier models shown per unit, in very large battles.

Number of Models in Battle: The slider allows controlling how many models per (infantry/cavalry) unit are shown. Reducing this value may improve performance. This option only applies to visualization, the number of men in units will not change.

Historical Fonts: Changes the in-game font for paper documents, such as dispatches, reports, briefings. Change between a cursive or print style.

UI Scaling: Option allows you to change how large most of the user interface (UI) elements within the game are shown. Notice that in a few cases, with certain uncommon resolutions, it's possible that with some selected settings some of the UI elements will overlap. In this case, you will need to readjust the size accordingly.

Use Black & White Cursor: changes the normal brass color cursor into black and white versions, when selected. Note: the change will happen next time a game is loaded.

The game has a wide range of **Tooltips** available. These are intended help the you with both game mechanics and also explaining some of the actions with extra information. The tooltips use two levels of information that appear with small delay. Here you can control that delay or even deactivate tooltips - but this is not recommended.

Map Scroll and Zoom speed (Battle, Campaign): Determines how fast your view of the map moves or zooms, when using hotkeys, pushing the mouse cursor to the screen boundaries, or zooming using the mouse wheel. You can set these separately for campaigns and battles.

Lock Battle / Campaign Map Rotation: If you want to prevent the map from rotating while playing a battle or a campaign, check this box. When checked, rotating the map is disabled using mouse, but the hotkeys will still function.

Movement Panel Delay: When giving movement orders during the game, you can issue further instructions, or cancel the order, via a pop-up Movement Panel. By default, this panel will pop up

only when hovering the mouse cursor over the icon (left) that appears near the waypoint you gave. The icon will be shown for a few seconds, the time can be changed using the slider (short/long).

The game continues to run in real time, and you may issue further orders to other units, for as long as the movement panel is not opened. When the panel is opened, the game is paused until you have given the needed instructions and confirmed the orders.

If you want the movement panel to always appear, tick the "Off" -box. In this case after each movement order the game is paused, until you confirm or cancel the order via the panel.

Show Quick Info in Battles: When checked, during battles information about available hotkeys, &c. are shown in the top part of your screen. This may be helpful especially when learning the basics of the game.

Deactivate Newspaper: You will receive news about recent and historical events during the campaign. Disabling the newspaper will end your subscription of The Grand Herald newspaper.

Game remains paused if panels are closed: By default, when opening panels, the game is paused, and when closing panels, the game time continues to run using the previous selected time setting. Check this setting, if you wish the game to remain paused after closing a panel.

Pause Autoresolve panel after battle has ended: If you follow an autoresolved battle using the autoresolve panel, if you wish the game to pause when the battle ends, check this option. The game will not pause, if the panel is not open and a battle ends.

MEDIA

Music Volume	*Low* ——————————— *High*	*off* ☐
Sound Volume	*Low* ——————————— *High*	*off* ☐
Video Volume	*Low* ——————————— *High*	*off* ☐
Deactivate chapter videos	☐		

Media:
The volume settings for sounds and music plus the option to mute sounds/music or deactivate in-game videos.

Deactivate Chapter Videos: The game has video cutscenes, that are played at the start and end of a campaign, as well as when campaign chapter changes. Deactivate the videos using this control.

GAME OPTIONS

European Interventions	☑
Commander Initiative by Default	☑
Continuous VP from Objectives	☑
Autosave Campaign	*Every* 11.7 *days* *off* ☐
Autosave Battles	*Every* 24.0 *hours* *off* ☐

Game options:

European Interventions: The campaign allows the European powers, Great Britain, France and Spain, to intervene in the American Civil War. If you wish to force the Europeans to remain neutral, untick this box. For more information about Interventions, see Title Second, Lesson III.

Commander Initiative by Default: When checked, commanders in battles will start with the initiative setting on by default. If unchecked, the opposite is true. The initiative setting allows the commanders some autonomy during combat situations, such as deploying, rotating the unit, laying down if under artillery fire and unable to return fire, &c.

Continuous Victory Points (VP) from Objectives: During battles, the map is dotted with terrain objectives that can be captured. When this setting is on, victory points will be generated for the side controlling more objectives. This makes holding good ground important and will force one side to attack to dislodge the opponent. For more information, see Title Third, Lesson II.

Autosave Campaign & Battles: Here you can control how often the game autosaves your progress, in game time. The game automatically saves whenever you quit a game or switch between the battle and campaign layers during a campaign. For more information about saved games, see Article V below.

HOTKEYS

Scroll Map left	A
Scroll Map right	D
Scroll Map forward	W
Scroll Map backward	S
Map rotate left	Q
Map rotate right	E
Map zoom in	Y
Map zoom out	X
Show Menu/Hide Panels	ESCAPE
Pause game	P
Increase speed	KEYPADPLUS
Decrease speed	KEYPADMINUS
Speed Step Pause:	ALPHA1
Speed Step 1:	ALPHA2
Speed Step 2:	ALPHA3
Speed Step 3:	ALPHA4

Hotkeys:
Here you can define the hotkeys you want to use in the game. To change a hotkey, click on it and then press the desired key on your keyboard.

To march in column at full distance.

95. The general wishing to put the column in march, will indicate to the colonel of the leading battalion the direction to be taken by the headmost guide, and the colonel will immediately prescribe to this guide the means to be employed to assure the direction of the march, according to the principles established in the *S. B.,* Nos. 216-218.

96. These dispositions being made, the general will command:

1. *Column forward.*

97. The colonels having repeated this command, will immediately add: *guide left,* if the right be in front, or *guide right,* if the left be in front.

98. The general will then add:

2. MARCH (or *double quick*—MARCH).

99. At this, repeated with the greatest rapidity, the column will put itself in march.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

ARTICLE III.

Campaigns & Starting a New Campaign.

Scenarios:

The game contains a number of different starting dates for the grand campaign, which are shown as a list on the left side of the screen. Each campaign begins with a historical setting, including the armies, navies, and commanders present at the time. After the scenario is started, events will be dynamic, and will not follow a historic script.

The Spring 1861 campaign scenario starts in late February 1861, before the start of hostilities. This scenario has unique pre-war rules that do not apply in other scenarios. See Title Second, Part First for more detailed information.

Choosing your side & difficulty:

You can choose which side you wish to command, by clicking the appropriate flag. Choose the Difficulty and AI Aggressiveness below the opposing nation's flag. Note, that once you have begun a campaign or battle, it is not possible to change the AI difficulty.

Pre-War policies:

You can influence the scenario starting situation by choosing what kinds of main policies your side has followed before the Civil War started. There are ten policies available to each side, but only three of these can be chosen by each side at a time. Place the cursor on top of the policy icons and the tooltip will display the effects of said policy. Below the military balance information, you can choose between historic pre-war policies, or random ones, for the AI opponent.

You can choose your own policies by left-clicking on them to select/deselect. When the campaign game is running, you can see the pre-war policies picked by each side in the Policies Panel.

For more information about policies, refer to Title Second, Part First, Lesson III. Find the list of all pre-war policies in APPENDIX A.

Scenario information:
The map shows the political and military situation at the chosen campaign start date. At the top you see the military balance between the sides. The text description gives you information about the situation you will face, when starting the scenario.

Realism options & Automanage Default Setting:
Choose which realism options will apply during the campaign. Notice, that the settings will be saved, and cannot be changed during the campaign.

Order delays: When on, all orders the player or AI gives need first to be composed by the commanders, then distributed to their various sub-units. Also, after orders come in, the recipients will need time to prepare their troops for action. Transmission of orders happens automatically, and the times of their arrival depends on the distance between sender and receipt. In campaigns, order delays are greatly reduced if the units are connected by telegraph to the capital city and the War Department. On the field during battles certain orders can be distributed using the bugle, which reduces the delays. And be aware that even once orders have been received, some less efficient leaders may take longer to get their troops on the march. For more details about order delays in campaign and battles, see Title Second, Part Second, Lesson IV and Title Third, Lesson V.

Fog of War: If the setting is on, your information about the enemy will be greatly reduced. In battles your vision is limited to what your units can observe. In campaigns, the intelligence gathered about the enemy will determine how detailed and accurate will be the information you will receive of the enemy's movements. Estimates of enemy strength will be provided by your staff, but be advised - these estimates could be much less, or far greater, than the actual numbers. For more detailed description of Fog of War in campaign and battles, see Title Second, Part Second, Lesson II and Title Third, Lesson II.

Readiness System: In the campaign, all armies and fleets have a readiness rating, that affects the kind of operations and orders they can carry out. When readiness is reduced due to actions taken, casualties, attrition, lack of supplies, or any other reason, the armies and fleets can no longer perform offensive actions or move into enemy held territory. If you do not want readiness to affecting your game play, tick this box. For more information about Readiness, see Title Second, Part Second, Lesson III.

Feuds: Some personalities simply do not match. Some officers will clash with their superiors, and in the game, this is called a feud. Feuds may lead to officers delaying carrying out orders by commanders with whom they don't agree. Feuds can take place during battles, and are explained in further detail in Title Third, Lesson III.

Automanage: This setting is used to determine whether all automanage options are set to ON or OFF by default. When automanage is ON, the AI will take manage following tasks for you when the scenario is loaded:
- Taxes,
- Subsidies,
- Policies,
- Projects,
- Construction (buildings, railroads),
- Weapon procurement.

You can change the automanage settings also during the game.

<u>Starting a campaign or continuing a saved game:</u>
When clicking *Start New,* a new scenario will begin.

If you wish to continue your old save of the currently selected scenario, you may click *Saved Games* and then choose a save.

For further information about game saves, see Article V below.

ARTICLE IV.

Historical Battles & Starting a New Historical Battle.

Scenario:

Choose a battle to play from the list on the left side of the screen. Each battle will offer you a historic starting situation that duplicates that of the actual battle, including the order of battle, the commanders, and the initial deployment of the opposing armies. Once the scenario begins, the action will not follow history accurately, even if the enemy AI is be set to follow a historical course of action. Instead, the events of the battle will be fully dynamic depending on actions taken by you and your AI opponent.

So, in short, you will begin facing the situation confronting the real commander of the Union or Confederate forces, and then fight the battle as you choose. You will not be forced to follow any specific path with objective placement or any other way. Victory will come to the side that first breaks the morale of the enemy. army's morale.

Choosing your side & Difficulty:

Clicking on the flags will select the side you wish to play. Next to the flag you will see the names of commanders of the armies involved, and below these, the names of their most important subordinates. Choose a difficulty setting for the AI opponent. You may also choose whether the AI will start the battle by following a historical course of action, or will it make its own decisions. The historical course of action includes the main troop movements, but these will, of course, only be followed as long as the units in question are not engaged. Once engaged, the AI will take over and make its own decisions.

Scenario information:

The map shows the military situation at the start of the scenario. On top of the display, you see the approximate strength of each side, the historical casualties and the historical result of the battle. The scenario description offers information about the situation you will face, when starting the scenario.

Realism options:

Choose which realism options will apply during the campaign. Notice, that the settings will be saved, and cannot be changed during the campaign.

Order delays: When on, all orders the player or AI gives need first to be composed by the commanders, then distributed to their various sub-units. Also, after orders come in, the recipients will need time to prepare their troops for action. Transmission of orders happens automatically, and the times of their arrival depends on the distance between sender and receipt. On the field during battles certain orders can be distributed using the bugle, which reduces the delays. And be aware that even once orders have been received, some less efficient leaders may take longer to get their troops on the march. For more details about order delays in battles, see Title Third, Lesson V.

Fog of War: If the setting is on, your information about the enemy is limited to what your units can observe. Estimates of enemy strength will be provided by your staff, but be advised - these estimates could be much less, or far greater, than the actual numbers. For more detailed description of Fog of War in battles, see Title Third, Lesson II.

Feuds: Some personalities simply do not match. Some officers will clash with their superiors, and in the game, this is called a feud. Feuds may lead to officers delaying carrying out orders by commanders with whom they don't agree. Feuds can take place during battles, and are explained in further detail in Title Third, Lesson III.

Start a new battle or load a previously saved battle the same way as with campaigns. See Article V below.

Saved Games

Saving the Game in Progress:

In the menu, or any time during the game, campaign or battle, you may open the load/save panel. During a game this is done by clicking on the menu button at the top right of the screen, next to the compass, or using hotkey *Esc* and save the game.
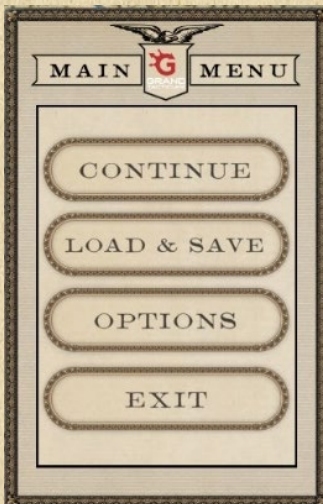
Click *Load & Save* in the main menu, and a panel will appear. This panel allows loading older saved, and saving current progress.

Select any save in the list by clicking it. You may then load the save, or overwrite it.

You may create a new save, or overwrite an old one by selecting it. When selecting an existing save, you may also delete it using the trash can button in the bottom right. Clicking *Save* in the bottom creates a new save.

MAIN MENU

CONTINUE

LOAD & SAVE

OPTIONS

EXIT

LOAD

FILTERS

Autosave
March 28, 1861   12:11 AM December 2, 2011

Autosave
March 7, 1861   12:00 AM December 2, 2011

Autosave
May 1, 1864   10:51 AM December 2, 2011

Autosave
May 10, 1863   10:30 AM December 2, 2011

Autosave
July 1, 1863   09:17 AM December 2, 2011

Autosave
August 10, 1861   08:55 AM December 2, 2011

Autosave
March 19, 1865   08:48 AM December 2, 2011

Autosave
April 6, 1862   08:48 AM December 2, 2011

Autosave
October 8, 1861   08:22 PM December 1, 2011

SAVE NAME:

LOAD   SAVE

☑ Campaigns

☑ Historical Battles

☑ Manual Saves

☑ Autosaves

☑ Union

☑ Confederacy

☑ All

☑ Tutorial

☑ Spring 1861

☑ Summer 1861

☑ Spring 1862

☑ Spring 1863

☑ Spring 1864

☑ Tutorial

☑ 1st Manassas

☑ 1st Manassas (Regt.)

On the right side you have a list of filters, that can be used to show/hide saves on the list depending on the settings of your choosing.

If you click *Saved Games* in the scenario selection panel (campaign or historical battle), all other saves, except selected scenario's, are filtered out automatically.

Autosaves are marked with this "gears" icon to make them stand out from your own saves.

Battle saves are marked with "sabers" icon.

ARTICLE VI.

Custom Commanders

Creating New Custom Commanders for Campaigns:

You may create new commanders, that can be activated in the campaign scenarios, in the main menu by clicking *Avatars* button. This opens the custom commander creation/management panel.

On the top-right of the panel is a list of all created commanders. If none are created, this list is empty. Below the list are filter controls to control which commander types are shown in the list. When selecting one of the commanders in the list, the commander's information is shown on the left side. If you make any changes to a selected commander, you can click *Overwrite* to update the commander's information. Click *Delete* to remove the selected commander from the list.

On the left side are the controls for creating a new commander:
- Choose the commander's **Nationality** by *clicking the appropriate flag*.
- Use the *left/right arrows* to select a **Portrait** for the commander. There are a number of default portraits per nation in the game, but you can also use your own images for both nations. Adding your own images to this list is explained below.
- Use the *left/right arrows* to select a portrait **Frame** for the commander image.

- Choose between **Professional (West Point graduate) or Volunteer** commander type by *clicking* the appropriate button.
- *Click on* the **Commander's Name** to type a new name. Use format first name, second name, last name, for example: "Elias A. Warhall".
- Select **commander options** by *clicking the icons* below the name. The shown icons are determined by the commander type selection:
    - Professional and Volunteer commanders can be **Veterans of the Mexican War** of 1846-1848, the previous conventional war the U.S. Military fought. This setting gives the commander some combat experience and fame, but reduces the available attribute points. *Note: if you set the commander's age low enough, this setting is unavailable.*
    - **Volunteer**: the commander is non-professional soldier with no political influence.
    - **Politically Assigned:** the commander is non-professional soldier, but has political influence. This setting increases the commander's fame, but reduces the available attribute points.
    - **West Point Graduate**: the commander is a professional soldier, having completed four-year studies in the U.S. Military Academy at West Point. Professional commander gains some fame, and is **specialized in one of the Branches of the army** (infantry, cavalry, artillery, engineer), but this reduces the available attribute points.
- Select the commander's current **Home State** using the *up/down arrows*. Volunteer commanders can command brigades from their home state, and politically assigned commanders will increase support in their home state when in command, the influence increasing with level of command and fame.
- Set the commander's **Date of Birth** using the *up/down arrows*.
- You have a number of **Attribute Points** available to set the commander's personal attributes, by *clicking the stars* (initiative, leadership, administration, cunning). *Click and hold down the left mouse button*, and you can fine tune the number of attribute points spent on each attribute. You may assign the points as you will, not all need to be assigned.

Once you are happy with the commander's settings, *click Create* in the bottom of the panel. The created commander will be added to the list.

For more information about the commander options and attributes, including effects, see

Adding Commanders to a Campaign:

In the commander list, each commander has a check-box to activate the said commander in the next campaign game you start. *Click the check-box* to activate/deactivate commanders. All activated commanders will appear in the campaign, and can be managed just like any other commander.

Custom commanders cannot be activated afterwards, mid-campaign. When a new campaign scenario is loaded, the game checks for activated custom commanders, and writes the commanders' data to the campaign scenario's save files. Once this commander data set is compiled, it is used throughout the campaign game.
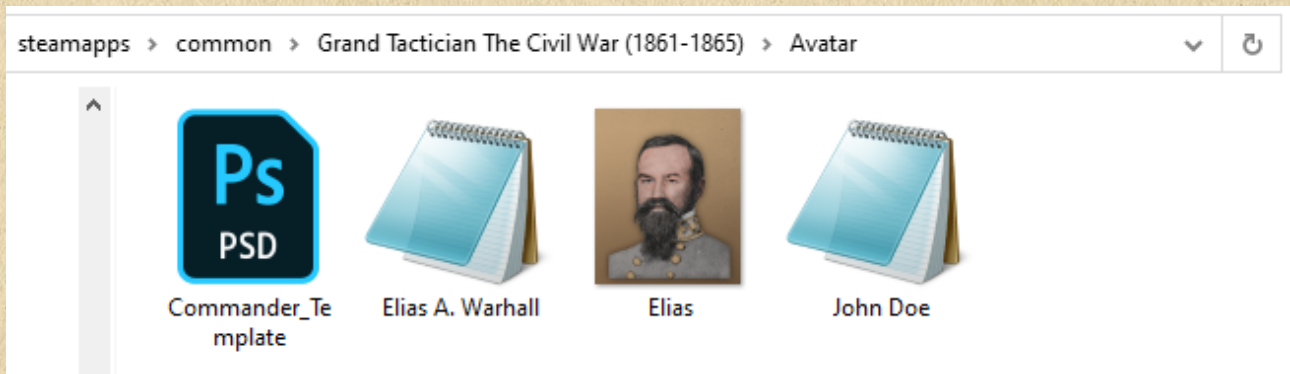
Adding Your Custom Commander Photos:

To have your custom commander portraits appear in the Avatars panel during the game, the image files need to be added in the "\Avatar\" -sub-folder in the game's install folder, which is by default:

\Steam\steamapps\common\Grand Tactician The Civil War (1861-1865)\

The images must be in .PNG -format for the game to recognize them. For best result, use image size of 200x240 pixels.

In the said \Avatar\" -sub-folder is a file called "Commander_Template.PSD". This is a Photoshop file that can be used to create commander images with the game's default image background.

When the images are added to this folder, start the game. When creating new commanders, cycle through the available portraits, and you will see your own custom images in the list.

Sharing Commanders:

Each created custom commander's data is saved in a .DAT -file within the \Avatar\" -sub-folder. The files are named the same way as the commanders.

To share your commanders with other players, simply send the appropriate commander data (.DAT) files and required custom images (.PNG) for others to add to their game files.

Additional Options for Advanced Users:

The created custom commanders will appear in the game with the rank of Captain, with no other information than the settings that were used when creating the commanders.

To further edit the custom commander, you may edit the commanders' .DAT -files by opening them using Notepad, for example. The data that can be edited is similar to that used in the game's Modding Tool's Commanders -tab. This includes, among other things, historical rank progression (determines starting rank depending on scenario start date) and historical information ("Service History"). *Note: if you edit a .DAT -file and there is any error in the way the data is displayed, the file will fail to load properly, and can even crash the game.*

Gen.ʰ Hunt and Major Duane chief of Art.y and Chief Engineer aff.ª maid

General rules for commands.

13. In *corps d'armée*, the evolutions and movements will be executed by means of signals, bugle sounds, and commands.

14. When the general shall wish a movement to be executed, he will send staff officers to notify the generals of division of the nature of the movement, or, he may make use of telegraphic signals to the same end. Each major-general will, then, by staff officers, immediately notify the brigadier-generals of his command of the movement to be made.

15. The general will then cause the *attention* to be sounded, which will be briskly repeated by the buglers of the major-generals, and, at which the generals of brigade will each immediately give by word of mouth the general commands relating to the manœuvre, and applicable to his brigade.

16. The final command, or that which determines the *execution* of the general movement, will always be given by the general, who to that end will cause the signal of *execution* to be sounded, which signal will be briskly repeated by the bugles of the major-generals.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

TITLE SECOND – SCHOOL OF THE GRAND CAMPAIGN.

PART FIRST.

General rules and instructions for winning the campaign; Objectives; Pre-War Rules.

In the campaign game you take the role of an important figure in the Cabinet, influencing the leadership in your nation with decisions about government funding, important policies and the organization of the armies and the navy. Your other role is that of the Commanding General, or General-in-Chief, in charge of the military operations, ordering the armies and fleets to engage those of the enemy.

The campaign is divided into four Chapters. Each Chapter has its own objectives. Chapter I has unique rules (pre-war rules for Spring 1861 scenario, described below). The Europeans will be more willing to intervene during the early Chapters. When a new Chapter is reached, a video will be shown (if not disabled via game options).

The campaign map covers the eastern part of the United States, and as well as the Confederate States, spanning from the Rio Grande to Maine, and from the Bahamas to Dakota Territory. The western states are also part of the campaign, and can be influenced via policies, recruitment and trade, though direct troop movement and fighting battles in these areas is impossible.

To win the campaign, you must break the National Morale of your enemy. "National Morale" describes the willingness of the nation's people to stand behind their leadership and keep fighting. Once this morale gets too low, the side in question will lose.

There are many ways to influence the National Morale of your own nation, and that of the enemy:
-   Completing campaign objectives,
-   Using certain Policies and Acts,
-   Winning battles,
-   Capturing cities,
-   Influencing support within the States,
-   Through economy.

These are all described in more detail in the following Parts.

To see the progress of the campaign, click on the Strategy button in the Main Panel Buttons row:

In this panel you can see the campaign Balance, Objectives and Official Records.

Objectives: Here are the objectives as set by your government. See tooltips for more information on each objective. Completing these objectives is not mandatory, but they will offer you bonuses during the campaign, that could help you in winning.

Commanding General & General in Chief: Here you can see the most senior officer in each nation's army. They are appointed by the President, which means you, the player, have no control over it. These officers have an influence on all armies in their military. See Lesson IV for more information.

The Balance in the middle shows which side has the advantage in each category listed. See the tooltip for more information about the current effects in each category.

- o **National Morale:** As described earlier, controls the victory or loss of the campaign.
- o **National Support:** The average support of all the loyal states under the control of each side. The lower the average support, the slower the policy making in said nation. For more information about effects of support, see Lesson I.
- o **Morale of Armies:** The average morale of all the armies of each nation.
- o **Loyal States:** The number of states that have pledged loyalty to each side. Some states can be neutral.
- o **Men Fielded:** The number of soldiers in each sides' military.
- o **Navy Tonnage:** The size of the navies, as calculated in total tonnage.
- o **Military Experience:** The combined experience of your officer corps and troops. The higher the experience, the more effective your armies will be in entrenching, training, and keeping their morale high in battles, and the more experienced your commanders are, on the average.

- Battles Won: The number of battles won to date by the armies of each nation, during the campaign.
- Total Casualties: The number of dead and wounded soldiers per side, before and during the campaign.
- European Relations: Shows the balance of who the European nations currently favor. If either nation reaches a relations level of 100, there is a chance the Europeans will intervene, sending armies and fleets to support the said side. As a clarification to this subject, the European nations can intervene individually. The British can intervene in any case, the French only if the CSA supports their Mexican Intervention, and Spain will only side with the Union, if the Confederacy has captured Cuba.
- Trade Warfare: The amount of money lost to each nation due to enemy military actions. This number includes the effects of blockades, privateering and raiding.
- Economy: Shows the economic strength of each nation. A strong economy is needed to support the war effort.

The Official Records shows a listing of all the most important campaign events by date. Scroll the list using the mouse wheel. *Click on any of the lines* to move the camera to said location, for example battle sites.
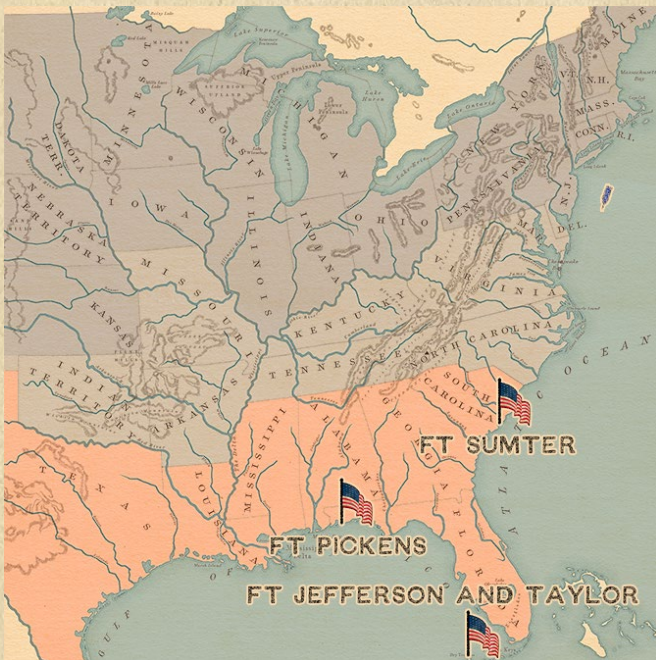
The Spring 1861 Grand Campaign:

In the Spring 1861 campaign scenario, the game begins before hostilities have started, in February, 1861.

There are the following special rules for this scenario:

1. At the start of the scenario, only the initial Deep South slave states have seceded, forming the Confederate States of America. Further territories may have joined the Confederacy depending on chosen pre-war policies.
2. As the war has not yet begun neither side can attack the other.
3. Very limited recruitment is possible, in the form of small state militias. These militias can be used to form the skeleton of your future provisional army, and you may create and recruit them only within the loyal states. The militias are considered to be under the states' control until the war begins.
4. Before the war starts, neither side can move their units, nor can they transfer the state-controlled militia units to forts. As the situation is extremely tense, any troop movements by either side could be considered acts of aggression, and the political leadership does not allow it.
5. Readiness of armies and fleets will remain low, and will not increase until the war begins.

War will start if:
1) the Confederacy attacks Fort Sumter, on the historical date on April 12, 1861, which will happen automatically, on the said date, or…
2) if the Union player calls for militia before the bombardment of Fort Sumter.

The Union player can call out the militia, using Militia Act I (see Lesson III - Policies), once Abraham Lincoln is inaugurated on March 4, 1861. If the Union calls the militia before hostilities have begun, the Confederacy and all the southern slave states will see this as an act of war, increasing southern support in all slave states. This could lead to further states seceding.

When the war starts, additional states will secede. The number depends on pre-war policies and the Union's stance with regard to calling out the militia.

Also, when the war begins, first army units will be recruited and deployed immediately to defend the new border. These units, which do not appear on the map at start, represent state and local militias that were already in existence prior to the war.

After hostilities begin, the campaign will continue just like any of the other scenarios.

Kearney at Battle of Williamsburg

General principles for the evolutions of a corps d'armée.

     1. THE evolutions of a brigade comprehending all the principles and details of the movements which should be made by a single brigade, it only remains to apply these principles to a *corps d'armée*.

     2. In this instruction, a *division of the line* will be supposed to consist of three brigades, and in every line of battle composed of more than one of these divisions, they will be posted from right to left in the order of their numbers.

     3. For the illustration of this instruction, a *corps d'armée*, consisting of nine brigades, will be supposed, but the rules herein prescribed are equally applicable to a *division of the line*, or to two or more brigades.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

GAME CONTROLS AND HOTKEYS.

Camera Controls:

You can move the camera using either the hotkeys or the mouse. When you push the cursor to top or bottom of the screen, the camera will move forward/backward. To move the camera left/right, push the cursor to left/right lower edge of the screen. To rotate the camera, push the cursor to left/right upper edge of the screen. If camera rotation is disabled via game options, the hotkeys will still function. To zoom in and out, use the mouse wheel. Remember, you can control the speed of the camera in the Game Options and, if you wish, do this separately for campaigns and battles.

When you are zooming your view in and out, the map will change from the strategic Atlas to the Operational level paper map to 3-D. The paper maps will give you a good overview of the strategic and military situations, and in the 3-D zoomed in view you can find and see further details. Both views can be used to issue orders to units.

Mouse Buttons:

The game uses mouse controls for selecting units, opening/closing user interface panels, and giving orders to units:

Left Mouse Button (LMB):	Select units, activate buttons, open panels, build
Double-Click (LMB):	Move camera to...
Right Mouse Button (RMB):	Move units, attack, remove dispatch icons

Hold and Rotate (RMB):   When giving orders, hold and rotate to determine facing

Scroll Map Left	A
Scroll Map Right	D
Scroll Map Forward	W
Scroll Map Backward	S
Map Rotate Left	Q
Map Rotate Right	E
Map Zoom In	Y
Map Zoom Out	X
Show Menu/Hide Panel	ESC
Pause Game	P
Increase Speed	Num +
Decrease Speed	Num -
Speed Step Pause	1
Speed Step 1 (play)	2
Speed Step 2 (accel)	3
Speed Step 3 (accel)	4
Speed Step 4 (accel)	5
Stop Units	DEL
Show All Paths	SPACEBAR

Other hotkeys and key combinations are:

Combination:	Common Use:	Cursor:	Function:
Left CTRL+RMB:	Add Waypoints		The selected unit will move via all given waypoints to the final destination.
Left ALT+RMB:	Link Units	∞	A linked unit will follow the unit it is linked to automatically.

Mouse cursor will also indicate following controls:

Unlink the units: **LMB** to break an established link.

Construct Selected Building (campaign) using **LMB**.

User Interface (UI) functionality:

The campaign UI is spread around the screen edges to take up minimum visibility from the actual campaign map.

- Most UI parts can be **minimized / maximized** by clicking the small double-arrow button next to it.
- All active elements have built-in **tooltip** functionality in two layers. First layer is shown when the cursor is on top of the element, showing the main information, or function. Hold the cursor on the element for a short time, and a second layer is shown, with more detailed information and instructions.

UI options are found in the options menu.

User Interface main parts:

1. Main Panel Buttons:

At the top of the campaign screen, you will see the main campaign controls and a balance bar, showing the power balance. The power balance is calculated from the information that is available in the *strategy panel*, as described below.

2. Alarm Information:

On this row you will receive information about alarming events during the campaign. These events are described with small icons, and further information is provided in the tooltip. Click the icon to move to the location where the alarm is coming from. In case of multiple alarms, further clicks will cycle through each location.

3. Campaign Tools:

Next to the compass, pointing at map north, are four Campaign Tools buttons:

Main Menu:
Opens the main menu, allowing saving, changing game options and exiting. Main Menu can also be opened with Hotkey ESC.

Map Information Settings:
Click this button to open a row of ON/OFF visual information options that you can use to control the amount of information shown on the campaign map.

Field Book:
Opens the Campaign Field Book, which offers you a quick guide that describes the main game features and mechanics.

Quick Map Overview:
Clicking this button will zoom out the map all the way, and orient it. In this view you can use the map filters for further information about the campaign situation. Click the button again to release the map, returning camera to the previous location.

Map Information Settings:

The amount of visual information on the campaign map can be controlled using the Map Information Settings, which will filter in/out following information:

Show Supply Lines: shows selected units' supply routes and IIPs' level and transportation capacity of military supplies. If an IIP (Important Infrastructure Points) is selected, clicking on a goods icon on the panel shows trading of said goods if this setting is ON.

Map Borders: shows the colored state borders.

Map Text: shows the text layer on the paper map(s).

Command and Control: shows the combat and command ranges of the selected unit and its higher headquarters (if one exists).

Movement Arrows: if ON, all movement arrows of all units within the selected army are shown on the map. If OFF, only the movement arrow of the selected unit is shown.

Telegraph Lines: If ON, shows telegraph connections of all units. If OFF, shows them only for the selected unit.

Military Icons: shows the NATO icons.

Map Icons: shows the icons for cities, industries, IIPs, etc. Note: To reduce map clutter, the IIP and industry icons are shown only, if mouse cursor is placed close.

Battle Monuments: After battles, a monument is shown on the map, indicating a location of a battle. Monuments from major battles will remain on the map, while monuments of smaller engagements will fade with time. This setting shows/hides all such monuments on the map.

4. Cursor Information Panel:

Here you are given quick information about the location over which you are currently hovering your mouse cursor. This information includes:

- State name,
- State allegiance,
- Support for your nation in the state, see Strategy Panel below,
- Temperature & Weather: the temperature is dynamic and not universal on the campaign map. Poor weather will affect your armies negatively, increasing sickness and desertion.

5. Quick Selection and Filters Panel:

Here you have all your campaign units, garrisons and fleets listed, as well as campaign map filters.

Click on the buttons to change the shown list:

- In the unit/garrisons/fleet lists, click on the unit to move the camera view to that unit,
- Selecting a filter will show the stated information drawn on top of the map itself,
- Deselecting the shown list will hide the panel.

Filters:
- o **Front Lines:** each unit, fort and city, controls the surrounding countryside regardless of allegiance of the state. When armies move, and forts/cities are captured, the front lines will move dynamically. All infrastructure and industries within the controlled area are now under the control of the capturing army, at least for the time being.
- o **Intelligence Gathering:** Each unit will gather intelligence about the surrounding area by scouting, receiving reports from the local population, reading news, and from other sources. The intelligence level is shown as a heatmap, where the redder the color, the better the intelligence from the designated area will be. See Campaign Fog of War for further information.
- o **Workforce, Slavery, Trade:** Shows the relevant information as a heatmap.
- o **Support:** Shows the allegiance and support level of each state on the map. The darker the color, the stronger the support you currently have from that state. Support will allow recruitment and the higher the support, the more volunteers will be available from that state. On the other hand, your armies will move more slowly in states with low support, as the population is considered hostile and armies will need to take measures to cover their movement with less help from the local inhabitants. Support is different for each side in each state, and the total does not have to be 100 between the two sides. A state can have, for example, a support level of 20 for Union cause and 30 for Confederate cause, or even 40 and eighty.
- o **Supply:** A heatmap that shows the availability of military supplies for your armies.
- o **Available Capital:** A heatmap showing where national banks are providing cheaper funding for local corporations, which increases wealth and profitability.

o **Transport Bottlenecks:** A heatmap showing where the infrastructure cannot support the local trade flows.
o **Market Influences:** A heatmap showing where markets are providing increased transport capacity for the local infrastructure.
o **Medical Treatment:** Shows the areas where local military hospitals provide a boost to medical treatment of wounded soldiers, decreasing mortality rates.
o **Precipitation:** Shows any rain or snow that reduces movement and resupply speed and increases sickness.
o **Shortages & Oversupply / Production & Demand:** These filters show information about production. The map will be populated with goods icons, with the color and tooltip providing further information.
o **Fertility maps:** These heatmaps provide information about fertility of the land. This information is useful when constructing new farms, plantations and lumber mills.

6. Time panel:

The time panel shows the current time, and allows pause and time acceleration functions up to 50x speed.

The game will automatically pause, if there's an engagement between armies, news is received, or you open any of the Main Panels or the Main Menu.

7. Orders Panel:

When an army, corps or a fleet is selected, this panel allows you to give orders to the selected unit. See Part Second, Lesson IV.

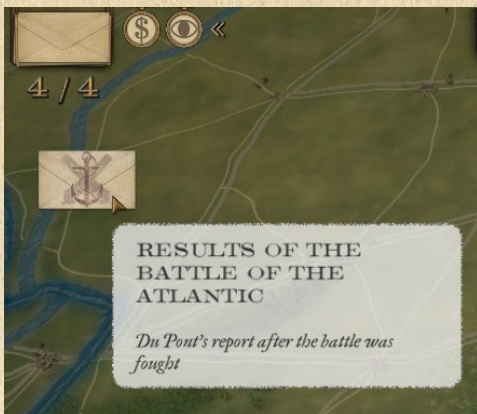

When a unit is not selected, this panel shows campaign construction buttons instead. These buttons allow construction of buildings and railroads.

8. Unit Panel:

Shows detailed information about the selected unit. See Part Second, Lesson III.

9. Dispatch Log:

During the campaign you will receive telegrams from your commanders and cabinet members. Whenever a new telegram arrives, a letter icon is shown below. The brass numbers indicate unread telegrams and the total amount of telegrams.

Click on the letter icons to open the telegram and read the message. Double-click to move your camera to the location. Right-click to hide the letter from screen. Once you have opened a telegram, you can close it by right-clicking it.

When you open the Dispatch Log, you will see all the most recent of your received telegrams in a list. Use the mouse wheel to scroll the list up/down. Unread telegrams are shown red. Click to open a

telegram. Use the log's black buttons to mark all telegrams read, or to remove all read telegrams from the log:

10. Monthly Reports:

The cabinet will release Economy and Intelligence reports during the campaign, at the end of each month. Clicking on these two buttons will open the latest report. If the buttons are gray, a report has not yet been published, and you need to wait till the end of month.

11. Top Panel:
The top panel has following information in addition to current date:

National Morale of your nation. If national morale falls below 25, the campaign will be lost.

Your Credit Rating: If the rating goes below B, the government will not approve any further recruitment of troops or construction of ships. In this case, you'll need to take steps to improve the rating. See Lesson II.

Total number of **men fielded** in your armies (see the tooltip for detailed information).

Shipyard utilization. Constructing and repairing ships will require free shipyard capacity. With insufficient capacity ship production will slow down.

Available and used **transport capacity** for sea, rivers and railroads. See Part Second, Lesson IV for more information about transporting your armies.

On-Map Scrolling Text:

Some information is provided to you directly on the map with a rolling text This can be seen when zooming in on the map. This information includes movement speed notification, and auto-resolved combat progress, including casualty reports.

In this example, the First Corps is moving, but more slowly than expected. Their information shown via rolling white text. The troops of the Corps are poorly trained, which results in lack of marching discipline, thus slowing down the unit.

Lesson II. - Economy, Finances, Debt, Production, Trade, Construction Options

The Economy in a Nutshell:
The economy in Grand Tactician is created to simulate real economy in order to present the player with plausible dilemmas that have long-term effects in the nation's capacity to wage war. The economy and civil society, presented on the campaign map, provide resources and limitations to the government in running the war effort.

The main components are:
- Population,
- Infrastructure,
- Production,
- Trade.

Population:
The citizens in Grand Tactician create the pool of manpower for the economy and the military. The number of citizens in the game is derived from 1860 and 1870 census data, per state (or territory).

The population is presented via cities in the game, taking into account the whole region, including the countryside, around the city. Cities are shown on the campaign map with following icon:

- The number presents the size of the city.
- The color under the number shows the owner.
- The coin icons under the city name shows relative importance of the city to the nation. If the rating is high, the city and its surrounding area is attracting more people to move there.
- When a city is being attacked by the enemy, a colored bar presenting capturing progress is shown on this icon.

Place the mouse cursor over the city icon for tooltip, that contains further information:

- Available workforce shows how many of the available jobs in this city's region can be filled with workers. If this value is low, there is a shortage of workers in the region.
- Notice, that recruitment from the state this city is in, reduces available workforce.
- Private wealth is generated by lucrative trade in the region. If the citizens are wealthy, they are happy, and will support the government. Low wealth will reduce support.
- Income tax can be collected after enacting Revenue Acts. The amount of tax collected in the region around this city is shown here.
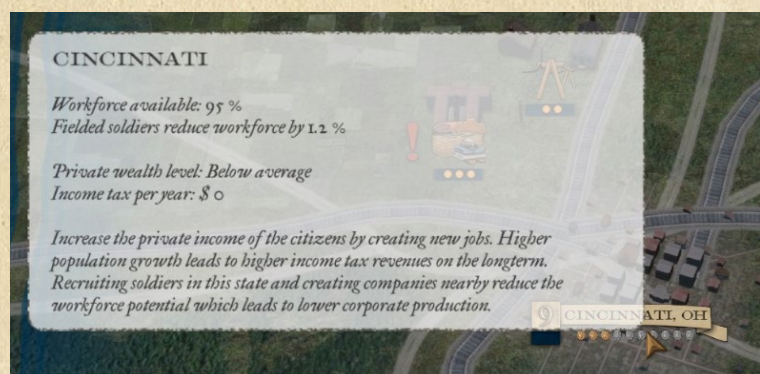
The citizen will move from region to another, in search for jobs or higher standards of living. For example, a region with many available jobs will attract workforce from regions with higher rate of unemployment and lower private wealth. This migration is slow.

Certain choices during the game will directly affect the population in your (or your enemy's) nation.
- Some Acts to improve government funding will result in lower private wealth due to money directed from the citizens to the government, or due to rising inflation.
- Recruitment will reduce the available workforce. Casualties and drafting reduce support.
- Building new industries and infrastructure improvements can increase private wealth, which in turn increases support.

Infrastructure:

The basic principle of trade is demand and supply, and logistics. Demand creates the incentive to produce goods, as the produced goods, when sold, will create profits for the supplier, making the business lucrative, increasing wealth. Let's look at an example:
- A large city requires a lot of food. In this case, the source of demand is the city on the campaign map, and the demand is for food. The higher the demand, the higher the price the citizens are willing to pay for the food.
- Food is produced in factories. Factories also produce other goods, like clothing or machine parts. The privately owned factories will try to maximize their profits in American free market economy.
- Factories require pre-goods to be able to produce food (and clothing or machine parts). For example, one item of Food requires 4x Flour or 4x Rice or 2x Livestock or 4x Fish, and the production is increased if salt (as a preservative) is available. An item of Machine Parts requires 2x iron or steel. An item of clothing requires 3x textiles and 2x leather. All the before mentioned pre-goods are produced somewhere, for example in a farm or an iron works, which also require their own pre-goods for production.

It gets more complicated, when logistics is added into the equation. For example, flour is produced in mills, and require crops, that are grown in farms. Farms are in areas where fertility of the soil is good for growing crops, and there is sufficient availability of free workforce to work in the farms. The grown crops need to be transported to the mill. The produced flour needs to be transported to the factory, and the produced food needs to be transported to the city.

The logistics to carry these goods from a point of supply (like the farm) to a point of demand (like the mill) in Grand Tactician are represented on the campaign map as **Important Infrastructure Points, IIPs**, that are the towns, ports, bridges, etc., connected to one another via roads, railroads, canals, rivers or sea lines, creating lines of communications (LOCs). These create a complex logistical infrastructure system on the campaign map.

The IIPs buy and sell goods to other linked IIPs and linked industries or trade nodes, depending on the price and transport capacity. Goods that are in higher demand, meaning a higher profit margin, are bought and sold with priority. As the infrastructure matrix has many bottlenecks and transport capacity is limited, all the produced goods are not flowing from A to B with equal speed.

All this combined means, the economy in the game, like in the real world, is fluctuating. But the changes are not instant, but the economy will take some time to adjust to changes in demand and supply.

In the above example, let's assume the flow of crops from the farm to the mill and on to the factory and the city is profitable business. Everyone is making a good profit: the farm, the mill, the factory as well as the transporting companies along the logistical lines. Business is good and will remain stable.

Now, let's assume that, due to some change in the economic system, the city in question starts receiving food for cheaper price from another source:
- Our factory will now make less profit from selling food. To compensate this, and to keep the business profitable, the factory will buy flour only if the price is low enough.
- The mill and the farm will be in trouble, as transportation costs are unaffected, but their products are no longer reaping earlier rewards.
- As selling crops is now less profitable to the farm, it may switch production from crops to livestock, if the latter has higher demand and more lucrative business opportunities. This will take time, of course.
- The factory may also switch production to something more profitable.
- The mill can no longer buy cheap crops, so they probably reduce personnel and production numbers to maintain some profitability.
- As demand for flour and crops in the IIPs that move the goods is reduced, the flow of these goods will become slower, as other, more profitable goods take the priority.

This is but an example of one situation. On the campaign map there are hundreds of IIPs, industries, cities, trade nodes. The resulting matrix is complex.

What can be done to affect the markets and to steer the economy in a direction which is more favorable to your war effort? The following lessons will describe the economy piece by piece, including the tools available.

But remember, changes in economy can be slow. If you do not want to manage the economy yourself, it's a good idea to use the automanage option during the game!

Important Infrastructure Points (IIPs):
Some of the IIPs are visible on the map, like towns, bridges, ports, and so on. Others are invisible, such as river, canal or sea line nodes. The speed of the flow of goods depends on the transport capacity of each IIP. Default transport capacity depends on IIP type and the terrain around it. Market buildings will increase transport capacity of all IIPs around them, increasing trade flow.

Normal roads, in maximum, provide a capacity of one. Ferries are choke points with capacity of one-half. Canals provide three, and rivers five capacity. If an IIP is connected to a railroad, its capacity is multiplied by ten. Capacity of ports depends upon their upgrade level. As a rule of thumb, goods flow the fastest along railroads, rivers and canals, making them great lines of trade and supplies. Mountainous or swampy terrain provide worst supply LOCs.

Moving the mouse cursor close to an IIP on the campaign map will show an IIP icon with following information:
- Type of the IIP, in the image (in this example, a town).
- Below the image from left local military supply capacity (shown only if supply lines are active in the Map Information Settings). The color of the image shows the transport capacity, and the bars the level of supplies this IIP can provide to any nearby military unit.
- A colored box shows the level of military blockade the IIP is affected by.
- The longer color bar shows the ownership of the IIP.
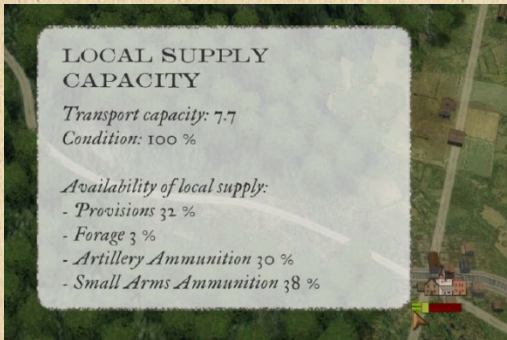
Placing the cursor over the icon elements provides a more detailed information about the local supply capacity or blockade information.

You can click on any of the IIPs to see its name, transport capacity, revenues, supply and demand as well as the most traded goods and prices. If supply lines are active in the Map Information Settings, clicking any of the goods' icons under Trades (last week) within the IIP panel will show the flow of the said goods to and from the selected IIP.

IIPs can be blockaded or raided, which will slow down the flow of goods as only part of the goods can make through the blockading fleet or raiding army. When an IIP is captured, transport capacity will be reduced momentarily to zero.

After being captured, or when the IIP is no longer raided or blockaded, it will start to recover slowly. During the recovery, certain goods are needed, which increases the cost. IIPs with a railroad connection will consume locomotives, and ports will consume transport ships.

If there is a lack of said goods in your inventory, the flow of goods throughout your nation may suffer. You can use industry subsidies to increase transport capacity in your nation, via each level of the Infrastructure Reform -project.

Trade Nodes:

The Trade nodes are located on the edges of the campaign map. On the paper map you can see them as flags and the name of the trade destination. When zooming in, you can click the trade node and see the information, just as with any other IIP.

The sea trade nodes, especially ones to Europe, will provide plentiful opportunities for import and export. All sea ports are connected to the nearest trade nodes. The ports' transport capacity creates a bottleneck for trade.

Trade nodes cannot be captured, but they can be raided with fleets that have the Sea Raiders -perk.

The Monthly Economy Report:

GRAND TELEGRAPH COMPANY.

The following Telegram received ¼ A.M. Apr 1 1861.

From:

To: The President .... No. 5.

His excellency, The Presdt,

The current rating of our nation is BBB+, which is Good. Our debt increased by $10,000K. Currently our liabilities amount to $74,000K.

The current economy cycle is Expansion, the wealth of our population is Developing and increasing. Our tax revenues increased by $73,468K during the last month.

Last month 15 companies were founded. Hereof 3 Farms2 Foundries7 IronWorks3 Factories.

Total export volume ttm last month was $3,030K while $1,082K worth of goods was imported.

Our economy lacks Textiles, Livestock. No overproduction of products is noticed.

I am, sir, Your very ob't se'v't,

Secretary of the Treasury

Each month, you will receive a report from the Secretary of Treasury, describing the status of your economy. Open the dispatch log to find the reports.

In the report you will see your nation's credit rating, current debt and interest rate, economy cycle, tax returns, establishment of new industries, imports and exports and production information.

## The Military Significance:

Even if the game is focused on military action and battles, you should not ignore your economy. The economy is what carries and pays for your military, so understanding the fundamentals at the least is useful.

For example, you may recruit as many volunteers as you want - until the credit rating goes down and crashing the economy becomes possible. In this case the government will not allow further recruitment!

Also, each unit requires weapons, and other military equipment, as well as supplies. When you are recruiting, the demand for these goods will increase, and sometimes even skyrocket, and if this happens, the costs of their recruitment will increase dramatically. Keeping your armies supplied is important, as otherwise the men will run out of food, and the horses out of forage. In this case, the condition of your men and horses will start to suffer, increasing sickness and desertion. The infrastructure (roads, railroads, and water routes) along which you move your armies, will also form the supply lines, which will keep the supplies flowing to the units.

To learn more about supplies, refer to .
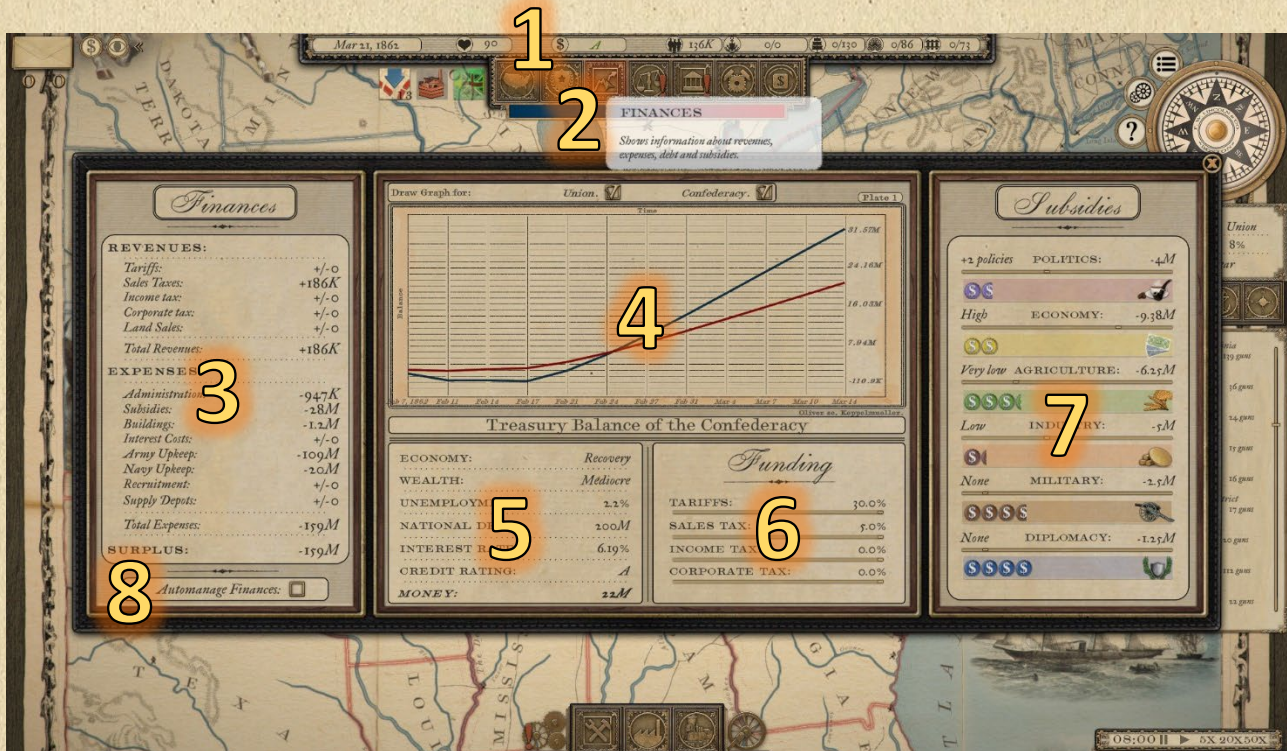
Finances:

Your credit rating is shown in the top bar (1), from **AAA** (best) to **D**. Whenever the credit rating drops below **B**, the Congress will not allow further construction or recruitment.

For detailed information and controls, open the Finances-panel (see 2 above).

Finances-panel:

The war effort is run by the government, and it needs funding. In this panel you can inspect and control how the money is collected and spent.

The most important thing to look at, is your **Credit Rating**, which is also shown in the top bar. You should do your best to keep it above **B** in order to continue expanding your military. If the rating drops below **B**, the government will not allow you to conduct further recruitment or construct new ships or buildings. To improve your credit rating, either cut expenses, increase funding, or activate acts or projects that will increase credit rating, from the finances branch. See Lesson III. - Policies and Projects.

In the left part of the panel (3), you see all the revenues and expenses of your nation. *Clicking on each line* will open the said information in the graph (4), with information shown for both the Union and Confederacy. You can also filter the other nation from the graph, *clicking the checkboxes* above the graph. Note, that many of these values are annual estimates.

Below the graph is the economic information for your nation (5). *Clicking on each line* will open the said information in the graph (4). Here you see the overall economic situation, the average wealth of your citizens, the unemployment rate, debt, interest rate and credit rating, plus the available money:

- **Wealth** increases when the private companies are profitable. When wealth is high, domestic consumption will keep the wheels of the economy rolling. When wealth goes down, consumption will decrease, and this will hurt both the economy and the credit rating. Certain policies will decrease wealth due to inflation. High private wealth will help improving national morale, while poverty will lower it.
- **Unemployment** increases if the private companies cannot employ enough citizens.
- **Debt** is issued automatically, if the government runs out of money. Depending on the credit rating, the **interest rate** will change. Debt as such is not an issue, but growing interest rates in the long run will eat up profits, and the economy could crash.
- **Credit rating** dictates the cost of debt. With a healthy economy and by choosing certain policies, players can improve the rating.

Next to the economy information are the player controls for collecting money (6):
- **Tariffs** are collected from trade partners. When importing goods, the supplier will need to pay a tariff. High tariffs will make imports more expensive, protecting domestic industry. At the same time, the trade partners will not be too happy about it. Certain policies change the maximum tariff level.
- **Sales tax** is collected when goods are sold. In the game's economy model goods will move along trade routes: roads, rivers, canals, rail lines, and sea. Each infrastructure point on the map (town, harbor, ferry, etc.) will buy and sell goods according to supply and demand. This makes the goods move from the source of supply to the consumer. Each time the goods are sold to another infrastructure point, sales tax is collected. High sales tax makes the movement of goods more expensive, pushing up prices. Sales tax includes excise tax as well.
- **Income tax** is collected from private citizens. Before the war, this was not possible, and requires Revenue Acts to be activated. The amount of tax that can be collected depends on the policies. Income tax will hurt support, but will offer a vast base for income.
- **Corporate taxes** are collected from private companies' profits. In the land of free enterprise this will hurt support of the Government, but allows further income sources. Collecting corporate tax requires Revenue Act III. Historically, corporate taxes were not collected during the Civil War.
- **Land sales**: The fifth source of income is the sale of land. Player has no direct control over it. Every time a private company is established, or existing one upgrades, the government receives a payment.

Players can set the tax rate by moving the sliders *(click and drag)*. The maximum amount of each tax that can be collected depends upon active policies.

On the right side in the panel, you see the controls for further government spending (7). By paying subsidies, the government can finance certain sectors in your nation:
- **Politics**: Allows more active policies (up to 12 in total) and projects.
- **Economy**: Allows projects that increase wealth and improve the nation's credit rating. *Further subsidies are unlocked via Funding Policies.*
- **Agriculture**: Fund the agriculture in your nation. Allows projects that increase agricultural output and profitability, improve relations with the Europeans, and construction of new agricultural buildings. *Unlocked via Bread Basket (Union) and King Cotton (CSA) Policies.*
- **Industry**: Fund industrial growth in your nation. Allows projects that increase industrial output and profitability, and construction of new industries and railroads. *Unlocked via Industrialization Policies.*

- **Military**: Fund the military of your nation. Allows many different kinds of projects improve the war effort, including recruitment and available weapons and ship types. *Unlocked via Military Policies.*
- **Diplomacy**: Allows projects that improve relations or trade deals with Europeans, or introduce new weapon import options. *Unlocked via Diplomacy Policies.*

Without any active policies, only limited subsidies can be paid annually. To be able to issue further subsidies, you will need to activate the required policies. Each policy level increases the maximum number of subsidies available considerably, up to a hundred million dollars per year (except for politics subsidy type).

If you do not want to manage the finances of your nation, you may give the task to your always trustworthy politicians (AI), by clicking the ***Automanage Finances*** box (8), at the bottom left. The AI will then take care of taxes and subsidies.

Debt:
Whenever your treasury cannot cover the expenses, new Debt needs to be issued. Debt is issued automatically as bonds or loans. You can see the total of outstanding Debt and the Interest Rate in the economic data of the Finances -panel. When new Debt is issued, or old Debt is paid off, you will receive telegram informing you about the transaction. Find the telegrams in the Dispatch log. Information about current Debt and interest rate is given in the monthly economy report as well.

When the amount of Debt increases, more money is required to pay the interest, and this will hurt your Credit Rating in the long run. If the economy deteriorates, the citizens' wealth will decrease and unemployment will increase, leading to loss of support.

When considering the financial information provided to you in the panel, remember that only the funds currently in treasury can be used to pay for Government expenses. If you have $2 million in treasury, and projected surplus of 5 million dollars for the coming year, you will only have the $2 million to use. Any further expenses will need to be covered with Debt, even if by the end of the year the surplus would cover the expenses.

Production:
In the land of free enterprise, the industries dotted around the map are private, and not owned by the government. But the government can pay subsidies to encourage expansion. This can be through upgrading existing industries or attracting new companies.

All industries in the game are considered to be large concentrations, or complexes. So, the factories shown in the list are actually multiple companies producing a range of goods. The industries produce the goods that are in demand. If production is profitable, the industries will upgrade to provide higher output, and new industries can be established.
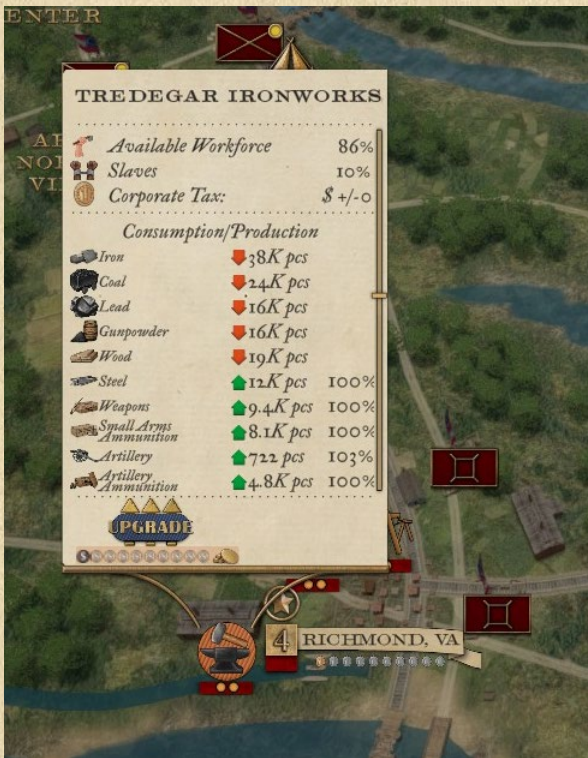
You can find the industries on the map. Selecting them you can see more detailed information, as is the case when selecting an IIP.

The industry panel shows the consumed pre-goods, with the red arrows and produced goods with green arrow. The percentage next to the product indicates the efficiency in producing said product. If the industry concentrates on the production of only a few products, the efficiency may increase, which will improve output.

Your industries will need a workforce. The more workforce there is available, the more effective the production. Slave states will use forced labor, i.e., slaves, depending on the complexity of the production. Plantations, farms and mines will have the highest use of slave workforce, while heavy industry the lowest. Number of available slave workforce depends on CSA support in the state.

Industries can be upgraded by paying subsidies. Depending on industry type, agriculture or industry subsidies are required. In case sufficient subsidies of previous types is not available, the government can also pay extraordinary subsidies directly from the treasury, but this is much more expensive. See the cost in the tooltip.

The goods in the game's economy, required pre-goods, producing industries and consumers are:

	Product	Pre-goods	Producing Industry	Consumed by
	Artillery*	2x Wood and 6x Bronze or 5x Iron or 4x Steel	Iron Works	Artillery units, Ship & Fort Construction
	Artillery Ammunition*	Iron and Gunpowder	Iron Works	Units and Ships in combat
	Bricks	-	Brickworks	Construction Sites, Citizens
	Bronze	2x Copper Ore, (Coal)**	Mines	Iron Works, Citizens
	Clothing	3x Textiles and 2x Leather	Factories	Citizens
	Coal	-	Mines	Foundries, Iron Works, Trains, Steam Ships, Citizens
	Coffee	-	Import Only	Factories, Soldiers, Citizens
	Copper Ore	-	Mines	Foundries

	Cotton	-	Plantations	Factories, Citizens, Ship Construction
	Crops	-	Farms	Mills, Citizens
	Fish	-	Harbors	Citizens
	Flour	4x Crops	Mills	Factories, Citizens
	Food	4x Flour or 4x Rice or 2x Livestock or 4x Fish, (Salt)**	Factories	Citizens
	Forage*	-	Farms	Cavalry and Artillery units, Citizens
	Gold	-	Mines	Citizens
	Gunpowder	Niter, (Coal)**	Factories	Armies, Ships
	Horses*	Forage	Farms	Cavalry and Artillery units, Citizens
	Iron	Iron Ore, (Coal)**	Foundries	Iron Works, Factories, Ship Construction, Construction Sites, Harbors, Citizens
	Iron Ore	-	Mines	Foundries
	Lead	-	Mines	Iron Works
	Leather	Livestock and Salt	Factories	Factories, Citizens
	Livestock	4x Forage	Farms	Factories, Citizens
	Locomotives	4x Iron and Steel and Machine Parts	Factories	Railroad IIPs
	Machine Parts	2x Iron or Steel	Factories	Factories, Ship Construction, Harbors, Construction Sites
	Niter	-	Mines	Factories
	Provisions*	2x Food, Salt and Coffee	Factories	Soldiers, Ships
	Rice	-	Plantations	Factories, Citizens
	Salt	-	Mines, Salt Works	Factories, Citizens
	Small Arms Ammunition*	2x Lead and 2x Gunpowder	Iron Works	Armies, Ships
	Steel	2x Iron and Coal	Iron Works	Iron Works, Factories, Citizens
	Sugar	-	Plantations	Citizens
	Tobacco	-	Plantations	Soldiers, Citizens

	Textiles	3x Cotton or 4x Wool	Factories	Factories, Citizens
	Transport Ships	80x Wood and 2x Machine Parts	Harbors	Troop Transportation, Sea/River IIPs
	Uniforms*	2x Textiles and Leather	Factories	Soldiers
	Weapons*	2x Iron and Wood	Iron Works	Soldiers
	Wood	-	Lumber Mills	Construction Sites, Ship Construction, Iron Works, Harbors, Citizens
	Wool	Forage	Farms	Factories, Citizens
	*Stored in Depots	**Increases the speed of production		

As multiple goods are produced by same industries, whichever goods those industries will focus upon more depends upon demand. For example, when recruiting large armies, the demand for military supplies such as artillery, weapons, uniforms, and ammunition will increase, and iron works and factories will meet the increased demand automatically by shifting production in favor of these goods.

Farms' and plantations' output goods also depend on fertility, which can be seen in the map filters.

Industries can be captured by armies and razed by raiding units. Damaged industries will start to repair themselves when they are no longer within combat distance of the raiding army. Construction of new industries, repairs and upgrades all cost resources, depending upon the industry type and level.

Buildings & Production panel:
Via this panel you can inspect all the buildings and industries in each nation to see where they are located, and what they are producing. Clicking on an industry in the list zooms the map to the

location of said industry, and opens extra information on the left-hand side with a graph that provides useful information. The information shown in the graph can be selected by clicking on the individual lines beneath it. The graph will show the current trends in the value of production, efficiency (for specialized production), available workforce, profits and paid corporate tax.

You may filter and sort the industries by using the controls on the right-hand side.

With this panel you can also see what the enemy is producing, and where that production is taking place. You may choose to target these areas militarily, either by raiding the infrastructure and trade routes, or by cutting lines of supply to the areas. During the war, the Union conducted many such operations to destroy Southern production of salt, for example. With domestic production limited, the nation will need to rely on imports, and with trade routes blockaded the prices will skyrocket, hurting the economy severely.

Trade:

As described earlier, goods are traded automatically according to supply and demand. Nations and territories outside the campaign map are represented by Trade Nodes around the edges of the map. Trade is possible as long as you are not at war with the trading partner. Limited amount of trade can still cross the frontlines between the Union and the Confederacy.

Like the production panel, the Trade panel is also for overview only. Here you will see the supply and demand for produced goods, as well as for imports and exports. You can also see the trends in goods prices, demand, production and stock in the left side graph, and use it to compare statistics between the economies of the North and the South. The results of military operations intended to hurt the enemy economy should be seen here (with some delay), if successful.

If you see there is great demand for some goods in your nation, you can construct new industries, or try to influence the long-term production of those goods by appointing appropriate projects. If you do not produce said goods, you will need to import them. Some examples of goods that are not

produced in the North or the South, or are produced only in limited numbers, are coffee, lead and niter -- all very important to support your war effort.

Construction Options:

When no unit or fleet is selected, the bottom panel shows the available construction options for federal buildings, industries and railroads.

Whenever there are sufficient subsidies to attract new companies without the need for extraordinary subsidies, a red exclamation mark is shown, like in the above image. See the tooltip for further information.

Each construction option allows an **Automanage** option. If ON, the AI will take care of construction. **Auto-Placement** option (not available for railroads) allows the AI to place the constructed building on the map automatically. When OFF, the player is required to place the building on the map, using Left Mouse Button.

To construct a new building or a railroad line, press the **Construct** -button in the panel. In the button's tooltip you can see the construction costs. The black dots next to the button indicate priority of said building: low (1 dot), medium (2 dots), high (3 dots).

Federal Buildings:

Following buildings are funded from the treasury, offering certain local or nationwide effects:

- **National Banks** increase available funding locally, increasing private wealth and reducing costs for private corporations, increasing their profitability. Bank Act is required to construct new national banks. *See Available Capital map filter.*

- **Hospitals** increase quality of medical treatment locally, decreasing mortality rate of wounded soldiers. With less men dying from their wounds, support in states takes a smaller hit from casualties sustained in battles. An army or a corps needs to be within range of a hospital to receive treatment. *See Medical Treatment map filter.*
- **Markets** increase transport capacity of local IIPs, increasing trade flows for goods and military supplies alike. *See Market Influences map filter.*

- **News Agencies** increase the flow of information within your nation, increasing military intelligence gathering in the process. *See Intelligence map filter.*
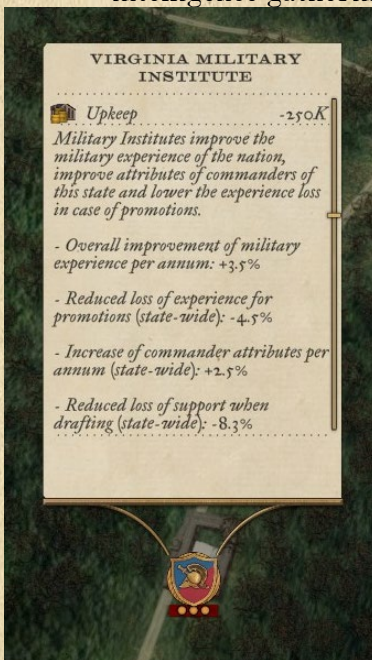
- **Prison Camps** allow enemy prisoners of war (P.O.W) to be held captive. Captured enemies are sent to any prison camps with free capacity. If there is no capacity to hold further captured enemies, the field commanders will parole the captives. It's quite common that some of the paroled soldiers will not respect the order to return home and may return to their unit instead to continue fighting. Prisoners of any prison can also be manually paroled to free up capacity.
- **Military Academies** train cadets within the state they are built in, increasing competence of the officers from the said state, and reducing experience loss from promotions and loss of support from drafting. A Military Education -project is required for each new Military Academy.

All the Federal Buildings are quite expensive to construct and require upkeep.

Company Applications:

Here you can attract new industries (private companies, or corporations) to be established in your nation.

To attract new companies, agriculture or industry subsidies can be used. The required and available subsidies are shown below the industry name. See the tooltip for more details.

If required subsidies are not available, extraordinary subsidies can be paid from the treasury, but this is very expensive.

Use the map filters to locate areas with shortages or demand, which could be solved by new companies. Remember also to consider the surrounding logistics infrastructure and its bottlenecks.

Railroads:

When the game starts several railroad lines are already built on the map. Depending on the pre-war policies you selected when starting the campaign, further rail lines may be ready when the game starts. There are also rail lines not yet built, that can be constructed during the campaign.

Each railroad line in the list shows a name, connected IIP ownership as small colored dots (green are owned, red ones are not) and in case of unbuilt railroads, a construction button. See the tooltip for further information about the rail lines.

Click any of the railroads to show it on your map. Connected IIPs will be shown on the map with color indicating ownership, and the selected railroad is flashing.

To construct unbuilt railroads, click the construction button next to the name. You will need to be in control of all the infrastructure points of the planned railroad line to be able to build it. When the button is clicked, a prompt will confirm whether to start the construction. Construction will take time, and the progress is shown in the construction symbol. Appointing Railroad Construction projects will speed up the construction considerably. Constructing more than one railroad at a time will slow down construction of all railroads.

Once built, all the connected IIPs will have their transport capacity multiplied by 10, which makes flow of goods and supplies considerably faster, increasing Government profits from sales taxes in the process. When raided, infrastructure points will have their transport capacity reduced, this affects rail lines too.

Lesson III. - Policies, Projects, Diplomacy, Interventions

Policies panel:

In this panel you can choose the political guidelines your nation will follow. There are five main political branches, each giving different benefits. You can have only a limited number of policies active at one time. This number is shown in the top left corner. You may increase the maximum amount by issuing subsidies to politics.

In case you see an exclamation mark flashing on top of the Policies button, your politicians are currently not working on a new policy or an act. In this case it's advisable to inspect the Policies panel and assign a new policy or act.

To see the description and effects of each policy or act in the game, including the pre-war policies, look at the tooltip.

The pre-war policies each side has chosen are shown on top of the panel. Some higher-level policies will require certain pre-war policies, such as pre-war Industrialization, which is required for level III-IV industrialization policies during the campaign.

Policies are the main branches, connected by a red line. Each branch has multiple levels that increase the benefits from said policy branch:

- **Funding** policies allow tax and financial reform (Acts) and economy projects.
- **Agriculture** branch allows higher agriculture subsidies and acts and projects that improve production and relations with European nations.
- **Industry** branch allows higher industry subsidies as well as new Acts and projects that improve production.
- **Military** policies allow higher military subsidies to fund military projects, as well as unlocking Acts that allow new forms of recruitment.
- **Diplomacy** policies allow higher diplomacy subsidies to fund diplomatic projects, as well as unlocking diplomatic Acts.

Acts are one-time decisions that can result in both benefits and negative effects. Some acts require certain policies to be active.

To activate policies takes time and a lot of political debate in the Congress. Left-click on a policy, when available (i.e., it is not greyed out), and the process to activate it begins. When ready, the effects will be activated and the icon will be displayed as highlighted. When you select a policy to activate, this will reserve one available policy slot.

To remove a policy from use, right click on it. If a policy requires previous policies to be active, the higher level one cannot remain active if the lower-level policy is removed. For example: deactivating Industrialization II will also deactivate Industrialization III and IV.

Acts will remain in effect even if the required policies are deactivated. Acts can be cancelled before they are activated. Once activated, they will remain so for the duration of the campaign.

See APPENDIX A for all the Policies and Acts in the game.

Lincoln's War Cabinet

Projects:

The Government can undertake a number of different Projects by using the paid subsidies. The Projects are divided to Civil and Military ones, each providing certain benefits for your nation.

Open the Projects panel from the top panel button (1). The button will show a red exclamation mark, whenever projects are available to appoint. See the tooltip for further details.

Use the filters and sorting options (2) to manage the shown project lists in the middle part of the panel (3). The list shows names and costs for all projects. The costs are indicated with appropriate subsidy icons (coins), each color indicating a different subsidy type. Selecting a project will open further information on the left side (4).

The projects come in two types: one-time and repeating. Repeating type projects can be appointed multiple times. Each level of the project further increases the effect, but will also be slightly more expensive.

If required funding is available, a project can be appointed by clicking the red *magnifying glass* button in the list. The effects of all appointed projects are seen in the bottom right of the panel (5).

You can leave the management of your projects to the AI by setting **Automanage Projects** -option (6) ON.

See **APPENDIX B** for all the Projects in the game.

Diplomacy and Interventions:

Diplomacy with Europe in the game is shown as a balance of relations between European powers and the Union and Confederacy. The balance can be seen in the Strategy panel. Each side can influence the balance. This can be done via certain Policies and Acts, as well as via Diplomacy - subsidies:

- Some Acts increase/decrease relations with Europe instantly, as per description.
- The Diplomacy -subsidies, which become available with the Diplomacy branch Policies, will allow Send Envoys -diplomatic projects, which improve relations. Trade Deals -projects improve import and export prices, making trade more lucrative.

Example:
CSA King Cotton pre-war Policy increases relations with Europe by 20 points. During the game CSA activates Restrict Cotton Trade -act, which increases relations by a further 10 points. The Union player activates the Tariff Act, which decreases Union relations by 10 points. This results in relations balance of 40 in favor of the Confederacy.

If interventions are allowed in the Game Options, the European powers may intervene in the American Civil War. The British and French may join the Confederacy in its fight against the United States and the Spanish may retaliate if prior to the war the southern states invade their colonies.

The intervention chance is shown in the alarm information as an icon. If the intervention is possible, a major victory is required to encourage an invasion.

If the Europeans intervene, they will operate independently. They will draw supplies from the friendly host nation if in their territory. If the European intervention force is defeated with unsustainable casualties inflicted, they are forced to sue for peace and will withdraw.

The British may intervene if the Confederacy is successful in its politics and in battle. The French may only intervene if the Confederate player chooses to support the French Mexican intervention via policies. The Spanish may intervene only if the Confederate player starts the game with Filibustering pre-war policy.

Military panel:

This panel has four tabs: Armies, fleets, officers and weapons. You can use these tabs to manage your armies and fleets; to recruit new units and construct new ships; to transfer units between headquarters, to change and manage commanders, and to procure new weapons.

The panel is divided into three segments. On the left segment you have information about the selected unit, including commander information and any historical data available. The middle segment allows you to managing your armies, from recruitment to unit transfers. On the right side, in each one of the military panels, there have filters and sorting for the content.

In the bottom right section of the panel, you can type a name to find all units/commanders with the typed text in their name. When managing armies/fleets you may find armies/fleets by name. When managing officers, you may find officers by name. For example, typing LEE will filter out all commanders whose names do not contain "lee." "Naglee" on the other hand is shown, as his name contains "lee." Click on the small cross to remove the text you have typed.

The filters and sorting options on the right of the screen can be used to show/hide or sort armies, fleets or commanders. If you, for some reason, cannot find some commanders or units, check the filter settings first!

The Armies tab:

This tab allows you to manage your armies, and to recruit new units. The panel is divided into 3 parts, with the middle part showing an Order of Battle (OOB) view, the left side showing details of the selected HQ or unit, and the right-side offering filter and sorting options.

The Order of Battle (OOB) view:

In the OOB view you can inspect and edit the order of battle, and recruit new headquarters and units.

The OOB can be edited by dragging and dropping units. To navigate the OOB (in case it does not fit the screen at one go), left click and drag the view. To select a headquarters or a unit, left click a NATO symbol. Left click and hold a headquarters or a unit (NATO symbol) allows dragging and dropping it under a new headquarters.

In the same way, units can be merged (amalgamated), if under-strength. The unit type must be the same (infantry, cavalry, artillery, horse artillery) for this to work. The statistics are averaged between the units that are merged, and the unit with more troops will control which commander remains in charge, as well as determine the weapon of the unit.

The bottom part of the OOB panel shows following controls:

Quick recruitment tool, explained later.

Allows transferring units between different armies or large single armies, by splitting the OOB view into 2 separate views. Each view can be used to show the same or a different army, and dragging and dropping can be done from one OOB to the other.

Upgrades weapons of the selected unit, or all units under selected HQ. This is done automatically, with best available weapon types used. The old weapons are returned to pool. Weapons can be upgraded manually too, more of this later.

Detach the selected unit into an independent unit, that can be operated on the campaign map. This works for single units (brigades), divisions, and corps alike. The detached unit will always be of corps (or early army) level.

Create a new independent corps. Allows creation of an independent corps, equivalent of the early war armies, after Organization Reform project has been activated.

Promote corps to an army. This can only be done with an independent corps, or an early war army with no corps organization. When promoted, the HQ is updated to army HQ and it can be organized into multiple corps, each operatable on the campaign map.

Create a new army. When clicked, you must select the State in which the army will appear in. It will appear in one of the cities controlled by your nation within the state. Before Organization Reform project is activated, the created armies can only have divisions and brigades in them, and are moved as one piece on the map. After Organization Reform, the armies can include multiple corps, that are moved on the map independently from the army HQ.

Delete the selected unit. It will be removed from the OOB, the recruits will return to their homes, with some willing to re-enlist, and the weapons are returned to armories.

Clicking the *Transfer* button at the bottom of the window will split the screen into two OOB views.

Notice that when units are transferred this way, they will need to move out and reach the other army - such transfers are not instantaneous. The delay can be shown in the tooltip for the, now transparent, unit icon, as ETA (estimated time of arrival) in days.

The longer the distance, the longer the delay. If an army, a corps or a fleet has units or ships that have not yet arrived, readiness will recover more slowly. Units in being transferred cannot take part in battles and will not appear on the campaign map until the transfer is complete.

You can also view your whole military in a list, by clicking the *Units* button:

Recruitment - General Information:

To recruit new units, or to create new headquarters, click on the *plus* (+) icons in the unit symbols. The ++ will create a new headquarters directly under the selected headquarters, while + will recruit a new unit.

When creating new headquarters, armies, corps, or divisions, if for some reason you change your mind, they can be removed, as long as they do not contain any units.

All headquarters without units in them will be deleted and the commanders returned to pool, when the management panel is closed.

Recruitment - Recruiting New Units:

When recruiting a new unit, first you need to choose the state of recruitment. To be allowed to recruit the selected state must have sufficient support and available recruits. The number and type of recruits is also dependent upon selected policies. When no more volunteers are available, players can increase the recruitment base with policies such as offering recruitment bounties, introducing conscription, or introducing recruitment of Colored troops.

If you have begun the recruitment process, and then decide you do not want to recruit the unit after all, click *Cancel*.

When the state is selected, on the left you have the options for the recruitment:

The unit type can be selected clicking the appropriate unit symbol. Below the unit type you can see the number of recruits needed. Next to this is an arrow which you can use to change the initial size of the recruited unit. Unit sizes are following:

	Infantry	Cavalry	Artillery
Large	3,000	2,500	240
Medium	2,250	1,875	180
Small	1,500	1,250	120

Horse artillery units in the game are slightly smaller than normal artillery units. The smaller size, or smaller number of batteries in the battalions, is balanced out by faster movement, as all the gunners have their own mounts.

The actual recruitment is done by the states, and units are usually raised as regiments. A regiment consists of 1,000 men, divided into 10 companies of 100 men. During the war, brigades usually comprised 3-5 regiments. This would mean a brigade in full strength would number some 5,000 men. But often even recently recruited regiments were already well under strength by the time they reached their armies. Due to desertion and high attrition, the average regimental strength was, depending upon the period of the war, somewhere between 370 and 450 men. For this reason, the brigades in the game have a maximum strength as mentioned above.

You can also choose the recruitment type: **volunteer or draft**. Volunteers are offering their service freely, while draftees are taken, usually against their will. While drafting has a much larger recruitment base, drafting also hurts the support in the recruiting state. Drafts and bounties also introduce disciplinary problems in the ranks, lowering the maximum morale in the armies, and increasing desertion.

You can change the appearance of a unit by selecting the **uniform and colors**.

Clicking *Recruit* will add the unit to the OOB, but again, depending on distance from the state to the army, the units will arrive after some delay. Recruiting multiple units simultaneously from same state will increase the delay for the later units. The **recruitment cost**, which depends upon unit size, pay and equipment, is reduced from the government treasury.

Fast Recruitment:
You can recruit multiple units faster by using the Unit Auto Generator found at the bottom of the OOB panel. To do this, first select the headquarters to which you wish to recruit the new units.

Use the up/down arrows for each unit type to select the number of units to be recruited. You can control the size of the recruited units per type by clicking the points on the left side of each unit type.

In the example, Hunter's Division under Army of the Southwest (Curtis) is selected, and three medium-sized infantry brigades and one large size artillery battalion are selected. To recruit the units, click on the auto-generate button.

The auto-generated units will be recruited from the nearest states with having a sufficient number of recruits, to so as to keep the recruitment times as low as possible. If the number of recruits is insufficient, not all, or possibly none, of the selected units will be recruited.

Unit management controls:

When you select a HQ or a unit in the OOB view, the unit's information is shown on the left side of the panel. Here you have following controls, from top to bottom:

MEN: 2429
DISABLED: 260
GUNS: 0

BG. EDWARD O.C. ORD

UNIT   COMMANDER   HISTORY

3RD BRIGADE
Infantry Brigade

(2nd Division / 1st Corps / Army of the Potomac)

State: *Pennsylvania*
Support: 90
Recruits: *Volunteers*
Contract: 36 months
Remaining: 26 Months
Recruitment Cost: +414K

SPRINGFIELD RIFLE-MUSKET

Replace the current commander.

Promote the current commander.

Show unit (or ship) information
Show commander information and service history.
Show unit service history.
Reinforcement priority for the unit. Green is high, yellow low, red none.

Accepted reinforcements: volunteers (V), drafts (D), or both (DV).

Replenish unit: the unit will return to home state to recruit and recuperate.

Change uniform type and/or colors.

Upgrade the unit's weapons.

You may also change the name of the selected Headquarters / unit by clicking the unit's name (in this example "3rd Brigade"), and then typing a new name and confirming it by pressing Enter.

Assigning Commanders:

When recruiting and creating a new headquarters, the commanding officer will be appointed by the state, or the high command. The assigned officer is shown with his rank [in brackets]. **This means he is not yet promoted to this rank.**

You may replace the commander of a unit at will by clicking the *replace* button next to the commander's portrait. After clicking, a list of all available commanders is opened and you may choose the new commander. Click *assign* in the bottom of the panel to change the commander.

Commanders will be promoted automatically to a suitable rank when their appointments are confirmed **by closing the management panel.**

You may also manually promote your commanders to a higher rank. Promotions will increase fame of the commanders, but will also decrease their experience.

The commanders' displayed experience is in regard to their currently held position and rank. If promoted and assigned to higher command, some of the experience will be lost: a captain,

experienced in commanding a battery, will not automatically be experienced when in command of a division or a corps, when promoted to major general.

Reinforcements:

When units suffer casualties or attrition, the number of men ready for duty will fall. Any fielded units will receive reinforcements, or replacements, if available, to fill the ranks. This is slow, though, as the states are keener on recruiting new regiments instead of replenishing existing ones.

You may change the reinforcement priority by clicking the small colored dot. When the color is green, the unit will receive as many reinforcements as possible. If set to yellow, the number is halved. When set to red, the unit will not receive any reinforcements. You may want to prioritize certain armies or units above others, especially if the states are running low on available recruits.

Controlling the recruit type happens by clicking the button. This becomes topical after drafting has been introduced. Volunteers have higher morale, but drafts are more numerous.

Replenishing a unit will put the unit on furlough, sending the men to rest and recuperate in their home state. The units will use the time to recruit new soldiers to fill the ranks. While replenishing, the speed of reinforcements will greatly increase. The drawback is that the unit will not be available for battles during the furlough. The unit will return to service once replenished, or a month has passed. The unit will have to move to and from the home state, which will also increase to time off from service.

Upgrading Weapons:

You can change the weapons a unit is using, by clicking **Upgrade**. A list of all available weapon types for this unit will open, and another weapon can be assigned.

See [APPENDIX D](#) for the full list of available weapons in the game.

POSTS OF THE GENERAL-IN-CHIEF, OF THE MAJOR-GENERALS AND BRIGADIER-GENERALS IN LINE AND IN COLUMN.

4. In line of battle *the general* (that is the particular general-in-chief) will have no fixed position; he will go wherever he may judge his presence necessary.

5. In column, he will hold himself habitually at its head, in order to direct it according to his views.

6. In the evolutions, he will place himself at the point whence he can best direct the general execution of the movement.

7. In all cases the general may repair wherever he may judge his presence necessary, taking care to leave in his habitual position the next in command, or the chief of his staff, charged with the execution of his orders.

8. In line of battle, major-generals (generals of division) will place themselves at about one hundred and ten paces in rear of the centres of their divisions.

9. In column they will hold themselves on the directing flank, abreast with the centres of their divisions, and at sixty paces from the guides.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

Fleets tab:

In this panel you can manage all the fleets, or squadrons, in your navy. The functionality is similar to that of the armies tab, but in addition to the ships in the fleets that are at sea, some can be waiting in harbor. The *ships in harbor* are not considered anchored in a specific harbor in the game map, but rather are placed in a safe location the has the required facilities to repair and maintain the ships.

On the left side of this panel, you will see, again, commander info and information about single ships. You will receive more details from the tooltips, on the ship image.

The **maximum number of ships a fleet can have** depends on the appointed **commander,** his rank and administration skill:

Rank*:	USN:	CSN:	Ship Limit, minimum:	Ship Limit, maximum (administration 100):
Lieutenant			1	2
Commander			5	10
Captain			10	20
Flag Officer			25	50

*The game uses pre-war USN (United States Navy) ranks for the Union to keep them in line with CSN (Confederate States Navy) ranks. For this reason, the rank of Lieutenant Commander, introduced in 1862, is missing. "Flag Officer" title contains ranks of Commodore, Rear Admiral (USN, 1862), Vice Admiral (USN, 1865) and Admiral (CSN).

In the middle of the panel, the screen is divided. On the left you have the selected fleet and its ships listed. On the right side are the ships that are currently in harbor. You can click, drag and drop ships from harbor to fleet, or vice versa. As with armies, the ships will take time to get to harbor or to the fleet, and during this time the ship will not be available for combat.

You can transfer only ships of an appropriate type to each fleet. If the fleet is in river terrain, it is considered a river fleet, and ships that cannot navigate rivers cannot be transferred to the fleet, and are shown in red in the list of ships in harbor. River- only ships cannot be added to fleets in the open sea.

To transfer ships from one fleet to another, first move them from the fleet to harbor, then from harbor to the desired fleet.

Ship Construction:

You can build new ships either directly to the fleet or to harbor, using the + symbols in the top of the panel. The quick construction panel in the bottom is used only for the selected fleet.

Buildable ship types depend on set policies and level of industry, plus available shipyards. Each port in the game has a level (1-4) and for the modern ship types a higher level is required.

Some ship types can be imported, and this requires diplomacy policies and money. Imported ship types become available over a longer period of time, and not immediately after activating the diplomacy policy in question. Importing ships is done using the same interface as constructing.

Ship construction requires shipyard capacity. All ports provide this capacity, depending on their level. When ports are blockaded, their shipyards will not be able to work on full capacity. For this reason, blockades will also slow down ship construction of the blockaded nation.
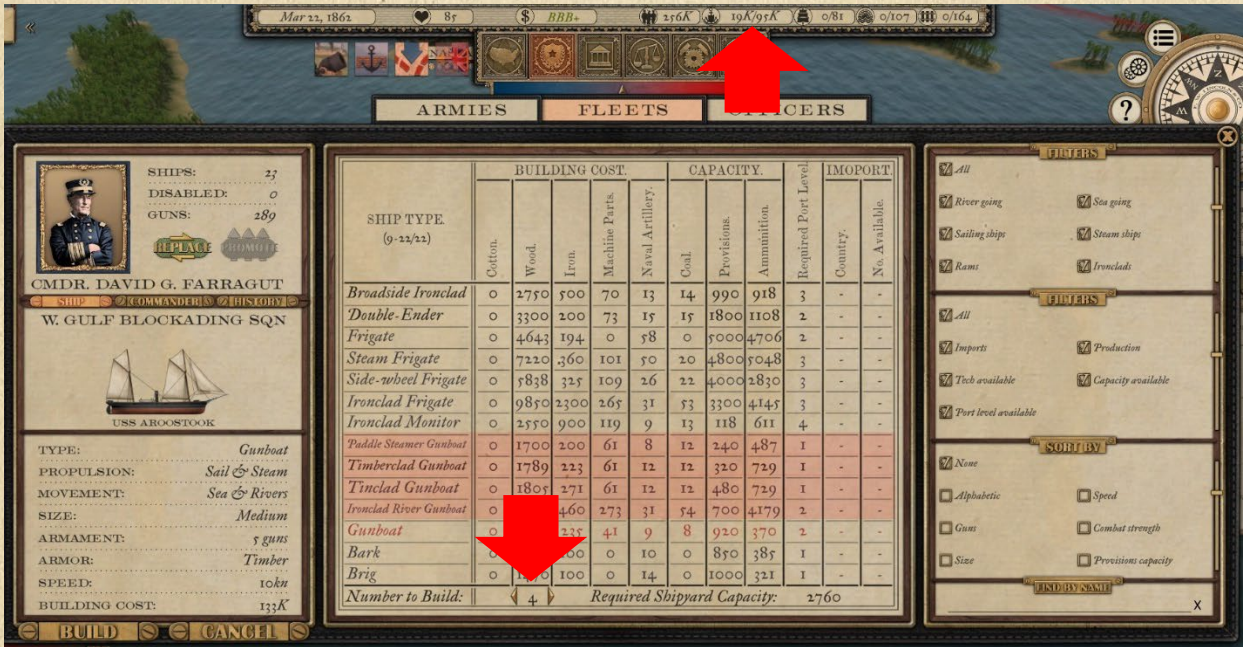
Ordering the New Ships:

When you have clicked **Construct New Ship** button, a list of all available ship types is opened. Select the ship type from the list. Unavailable ship types are shown red.
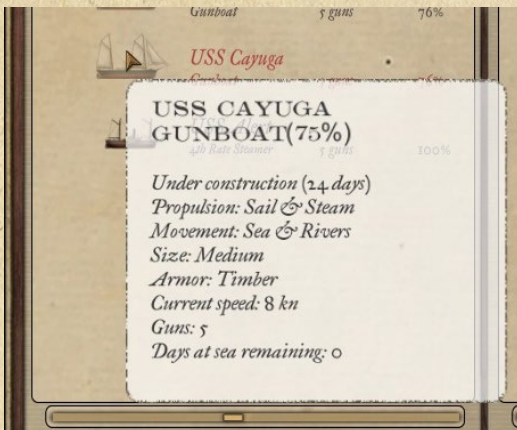
In the bottom, you can change the number of ships to order, between 1 to 9. You can see the required shipyard capacity next to the selection arrows. Your used and available shipyard capacity (shipyard utilization) is shown in the top bar. If shipyard capacity runs out, construction will become slower.

Click **Build** to order the ships. (This option is unavailable, if the commander of the fleet has reached his ship limit.)

Building ships will take time, which is shown in the ship icon tooltip.

Quick Construction of Ships:

If you're not too interested about the ship types and simply want a quick way to add ships to fleets, use the quick construction panel in the bottom.

Use the up/down arrows to choose how many ships of each type, armed civilian ships, warships, ironclads, you want to order, and click **Auto Construct Ships for the Chose Fleet** button. Required shipyard capacity is shown next to the order button.

Ship types & differences:

Each ship type has different statistics and characteristics:
- Sailing ships require no coal and will be able to remain at sea for a longer time.
- Steam ships require coal to operate. If the steam ship also has large sails, the need for coal is lower.
- Depending on ship type, it can move in large rivers, like Mississippi or the Potomac, in sea, or both.
- Ship size, armor and armament influence naval combat calculation. The larger the ship, the easier it is to hit. The stronger the armor, the less damage it will suffer when hit, and armor can even deflect shots without damage. The number and type of guns of course makes the ship more deadly. If armed with turrets, the ship can fire at enemy ships with less maneuvering and more accuracy when the ship is moving. Ram ships can use their hull as a weapon, by steaming into enemy ship in close combat.
- Speed in knots restricts the fleet's movement speed, with the slowest ship dictating the maximum.

See the full list of ships available for each side in APPENDIX E.

Disabled ships will not continue fighting and can be captured during combat. The fleets will rotate the ships in harbor, depending on the status of single ships, with the fleet itself remaining out. This means that a fleet of 10 ships on paper could mean only 3 available, with the other 7 in repairs or sailing to get supplies.
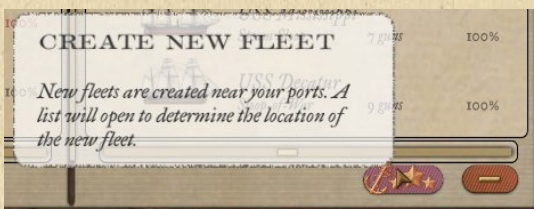
To scuttle ships or to create a new fleet, use the minus button when the said ship is selected and **New Fleet** in the bottom.

When forming a new fleet, a list of all available ports will open. Choose the port where you want the fleet to appear in. Blockaded ports cannot be used to creating new fleets.

As with army headquarters, if a fleet is empty without any ships in it, the fleet will be removed and commander returned to pool when the management panel is closed.

THE "GALENA" AFTER THE FIGHT IN MOBILE BAY. FROM A WAR-TIME SKETCH.

Officers tab:

In this panel you can browse and filter/sort/find all the commanders currently available to your nation. Each commander has following information in addition to their name, age and state of origin (the state he was living in when the war started, or where he first mustered into service):

Veteran of the Mexican War 1846-1848. This was the last large-scale war fought by the United States, and lessons learned in this war will increase starting experience for the commander -- though warfare, tactics and technology have changed greatly since the 1840s!

Formal military training (West Point or the U.S. Naval Academy). If the commander is a professional soldier, with formal training in the United States, he will be experienced in the branch where he spent his happy lieutenant years. This gives him benefits when commanding relevant unit types. West Pointers will also be better suited for higher command, than their rank suggests, than politicians or volunteers. Graduates of the Naval Academy who are given command of a squadron will receive similar benefits.

Infantry officer:
Infantry under his command will fight more effectively, and he will know what is needed to keep the men fighting, decreasing the loss of effectiveness (due to fatigue or other reasons) often experienced by troops in difficult situations.

Cavalry officer:
Cavalry under his command will be more professional, and the horses will be better-treated. This reduces the loss of condition of horses in the field.

Artillery officer:
An experienced artillerist will make sure his gunners know their ballistics and drill plus maintenance. Artillery under his command will be more effective.

Engineer officer:

Engineer officers specialize in fortifications and entrenchments. This officer knows to appreciate well-chosen and fortified positions, and will make sure his men will know how to employ the spade. Engineering points increased in battles.

Naval officer:

If he has a Naval Academy education, the officer will be more effective in combat, with his knowledge of tactics and advanced theory in gunnery.

Politician:

This officer has friends in high places, and that is one of the reasons he is placed in command. While probably not as effective as another officer could be, his status increases support in his home State. Political officers will have a much higher tendency to become embroiled in personal feuds.

Volunteer:

This officer is chosen or elected to command. Volunteers, like politicians, are not experienced in warfare, but the size of the armies requires non-professionals to be placed in command. Volunteers will be less quarrelsome than the professional, and especially the political officers.

Famous:

This officer has become very famous for one reason or another. Famous officers in high places will keep the national morale high, and will boost the morale of their troops. They will also make an enemy commander they are facing doubt, if the latter is inexperienced. Commanders who experience doubt will be less decisive in their actions, and rather than attack when ordered, they may just revert to a relatively passive defensive posture instead.

Defamed:

This commander has seen his reputation suffer because of his poor performance in battle, or because he has been removed from a position of high responsibility. The men under him will question his abilities, and so will the citizens. Even the best general should be replaced, if he loses trust.

A commander can redeem himself and lose the defamed status. This can be done via heroic deeds in a battle, or by simply through passed time. When a commander is redeemed, you will receive information via telegram for the Secretary of War.

Rank:

Each commander will have a rank as per his historical progression. After the game starts, the game events and commissions will change his rank, and this will happen automatically. A lower-ranking officer put in a higher role without sufficient experience, even if he has the required personality, will need time to adapt to his new position and learn the things his new role requires.

When recruiting units and creating new headquarters, commanders are automatically proposed to command them, using the following rules, that also limit player's appointments:
- Volunteers will command brigades from their home state,
- Political officers will command brigades from their home states, or headquarters,
- West Pointers can be used in any command.

Note, that the officers' overall competency is considered when they are automatically proposed for command. This means their branch is only one detail. It was quite common that officers with background and experience in a different branch were placed in command of units of other branch (for example many artillery officers commanded infantry brigades).

Personal attributes:

Each commander has the following attributes, which can be seen either in the commander information panel or as a tooltip on the commander's portrait:
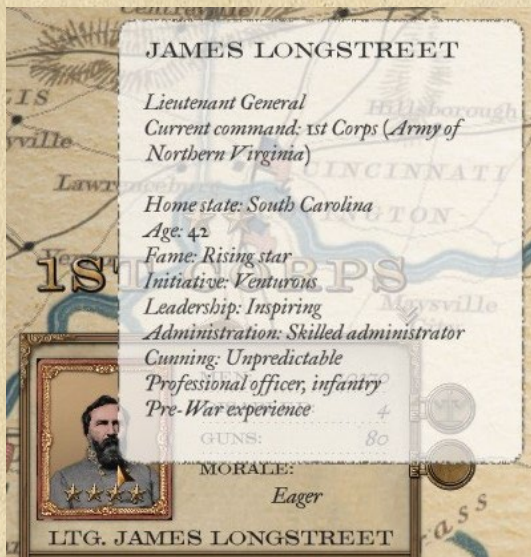
Fame:

How well-known is this commander? This influences his ability to rally his troops. Famous officers have a higher probability to have feuds with other officers, if their personalities differ too much. The fame of the army commander also affects how the power balance between armies are interpreted by the opposing army commander: if the enemy is very famous, it may dishearten the army commander, causing him to use more caution than would otherwise be needed.

Some commanders have become celebrities among the public, while others have dishonored themselves, by performing poorly in battle or otherwise. Dishonored commanders will have a hard time leading their men, with those among the ranks whispering "traitor" and the like.

Loss of a very famous commander in battle will be more devastating for the troops than losing one of the lesser-known officers.

Veteran soldiers especially will not be content with unknown commanders. If they also have low leadership, the veterans will be unhappy and will lose morale.

Other stats:

Experience (stars under the portrait):
Experience affects everything. With zero experience, any positive effects of a commander's personal attributes are halved. Experience under fire makes the commander more able in using his skills for the benefit of his men.

Experience is gained in combat, when men under his command are fighting successfully. Veterans of the Mexican War will start with higher initial experience.

NOTE:

The commanders' shown experience is in regard to their currently held position and rank. If promoted and assigned to higher command, some of the experience will be lost: a captain, experienced in commanding a battery, will not automatically be experienced when in command of a division or a corps, when promoted to major general.

Professional soldiers (West Pointers) will lose only half the experience when promoted to higher command, compared to non-professional ones.

Personal attributes:

These attributes are personal to each commander, and they are evaluated for each commander, according to military history. The values will not change much even during a campaign, but commanders will influence the officers working for them. For example, if a commander has very high administrative skill, he will direct his lieutenants to be more organized. But this works both ways: a cautious officer will induce caution in his subordinates, by giving orders that prevent them from being as aggressive as they would like.

Initiative:

Initiative defines how aggressive the commander is, and how quickly he will make decisions and how hard he will drive his men. In battles it affects order delays and uses tactics depending on force balance, but also causes feuds between generals if personalities don't match. Initiative affects the chosen tactics. As noted above, the force balance calculation uses many values, and commander initiative is one of those. As an example, a commander with low initiative may decide to defend in same situation where a more aggressive officer would attack.

Leadership:

How well the officer leads his men. High leadership will inspire the men to accept casualties, and maintain higher morale when in fierce combat, than they otherwise would. High leadership makes rallying more effective. Also, if the men are in their first battle ever, a commander with good leadership skills is able to better keep them in line, as recruits ("fresh fish") are very fragile under fire. Veterans will be unhappy, if placed under command of an unknown officer with poor leadership abilities.

The loss of a well-liked commander is felt more heavily among the rank and file than the loss of one of who is hated.

Administration:

The organizational skills of the officer, from managing supplies to maintaining discipline. During long battles this attribute is mainly needed in the lulls between days, when the armies are resupplied. With good administration skills the supply trains are better handled and directed, and in the end more supplies will actually reach the men.

Cunning:

During battles cunning commanders are better able to mask the movement of their men in terrain, and also more skilled in flanking maneuvers.

Commander attribute effects:

Attribute	Campaign	Battle	Fleets
Experience	-Modifies maximum effect of personality	-Modifies maximum effect of personality	-Modifies maximum effect of personality
Fame	-Officer fame in high positions affects national morale -Chance of feuds	-Enemy will be more cautious vs. a very famous commander -Chance of feuds	-Officer fame in high positions affects national morale
Initiative	-Readiness consumption during operations -Auto-resolved battles -Chance of feuds -Information accuracy about enemy forces (over-estimation)	-Order delays -Power balance calculation -Information accuracy about enemy forces -Chance of feuds	-Fleet combat range -Ramming during close combat
Leadership	-Fighting spirit of troops (reduces desertion)	-Morale of troops -Rallying -Desertion	-Morale
Administration	-Readiness recovery speed -Managing supplies, effectiveness -Drilling effect -Reduces desertion	-Resupplying between days, effectiveness	-Number of ships he can command -Resupplying speed -Repairing speed
Cunning	-Intelligence gathering -Skirmishing and rear-guard action effectiveness -Raiding effectiveness -Siege effectiveness -Auto-resolved battles	-Flanking tactics used vs. direct attacks -Unit concealment	-Ability to avoid being spotted -Moving close to enemy fleet before enemy can engage (combat calculation)

Number of Officers:

The game contains well over 1,500 historical commanders with stats and portraits. While this is a lot, there will be times during the game when appropriate historical commanders are not available.

In these cases, new random commanders are created by the game. These random commanders will have random names and stats and will not have a portrait. Default garrisons in forts will automatically have randomly generated commanders.

Weapons tab:

This panel shows all the weapons available for the nation and allows procurement of new weapons.

Filter and sort the weapons list (1) using the filter options on the right-hand side (2). The number of each weapon type available is shown in the top left corner (3) of each weapon in the list. Selecting a weapon shows further info on the left (4).

New weapons can be procured by ordering them from the industry, or by importing them from Europe. The method available depends on the weapon type. Projects allow new weapon types to be procured. If a weapon type is available for procurement, the controls in the bottom left (5-6) are active.

Choose the number of weapons to be procured using the small arrows. The initially estimated cost and delivery delay are shown below.* Place the order by clicking *Order* button. Each weapon type can have only one active order. Once the order is delivered, the weapons become available in stock. Large orders are delivered in smaller batches, as weapons become available over time.

These may change during the order's lifetime, see Standardization below.

If you wish to let the AI handle all the weapon orders, set Automanage Weapon Purchase (7) ON.

See APPENDIX D for the full list of available weapons in the game.

Weapon Standardization, Production and Imports:

Standardization value for weapons in Grand Tactician portrays how well prepared the weapon industry is to produce each weapon type. The value is influenced by the number of said weapon type in use within your nation's army.

With increased production numbers the industry will adapt to produce larger volumes of said weapon type, as required machinery is made more widely available and the workers become more familiar with its production.

With higher standardization, weapons are cheaper and faster to produce. For this reason, it may be a good idea to focus on only a few weapon types at a time, increasing their standardization. **Production complexity** is another variable to consider. More complex weapons, like repeating rifles or latest rifled artillery pieces, will be more expensive and time consuming to produce.

Especially early in the war, when weapon standardization is low, importing weapons will be faster. Importing weapons will cost more, but the weapons are readily available. Once the nation's weapon industry is in full speed, domestic production could be both faster and cheaper than importing.

As weapons are produced within the game's economy system, lack of required materials or issues in the logistics may mean poor production capacity and higher costs even with highly standardized weapons. On the other hand, imports can be severely hampered by blockades, making weapon deliveries more expensive and slower.

BATTLE OF GETTYSBURG—CHARGE OF THE CONFEDERATES ON CEMETERY HILL, THURSDAY EVENING, JULY 2D, 1863.

INSTRUCTION OF OFFICERS.

60. The instruction of officers can be perfected only by joining theory to practice. The colonel will often practise them in marching and in estimating distances, and he will carefully endeavor to cause them to take steps equal in length and swiftness. They will also be exercised in the double quick step.

61. The instruction of officers will include all the Titles in this system of drill, as well as a perfect knowledge of the system of firing as proscribed by the War Department.

62. Every officer will make himself perfectly acquainted with the bugle signals; and should, by practice, be enabled, if necessary, to sound them. This knowledge, so necessary in general instruction, becomes of vital importance on actual service in the field.

From Casey's Infantry Tactics:

Vol. I. FORMATION OF INFANTRY IN LINE OF BATTLE

General rules and army operations.

In this section we focus on commanding your military in the field, from information about your deployed military to issuing orders for the movement of troops, including maneuvers and engaging in battles and sieges across the continent.

Lesson I. - Command & Control, Military Experience

To find your armies and fleets, you can use the army and fleet lists in the top right corner of the screen, under the compass; the military management view from the top panel, or by looking at the map itself.

On the paper map army units and garrisons are shown as small national flags. Zooming into the terrain view, the armies are represented by standard **NATO** symbols (see below) indicating the unit type: infantry, cavalry, artillery, fort, and size: army or corps. Fleets are shown as a boat symbol on the paper map, and by a **NATO** symbol when zooming in. The symbols offer tooltips about the said units. When fog of war is turned on, information about enemy units will be limited.

The game uses commonly recognized **NATO** symbols to describe the units:

Unit types: Unit size, shown above the unit icon:

Infantry, or mixed unit with infantry in it.

Army. Can consist of multiple corps, divisions and single units (brigades and smaller). Usually commanded by major generals in the Union army, and full generals in the Confederate army.

Cavalry. Can consist of cavalry and horse-artillery units.

Corps. Can be infantry, mixed, cavalry or artillery reserve. The corps is the smallest unit you can move on the campaign map. Union corps are usually commanded by major generals, and Confederate corps by lieutenant generals.

Before activating Military Policy II, all armies appear as corps size.

Artillery.

Division. Can consist of multiple brigades and lower-level units. Usually commanded by a major general or a brigadier general.

Horse-artillery.

Brigade. Usually consists of 3-5 regiments. In the game the smallest infantry/cavalry unit. Only pure brigades (consisting of one unit type) are used in the game.

Sea fleet.

Regiment. Usually 1,000 men strong, commanded by a colonel, and consisting of ten companies. Over time, many regiments will decrease in size, due to the rigors of campaigning and combat.

River fleet.

Battalion. In case of artillery, it usually consists of 2-5 artillery batteries (8-20 guns), commanded by a captain or a major.

Fort garrison.

Company/battery. Companies (inf/cav) have 100 men under a captain, and artillery batteries usually contain 4-6 guns. Federal batteries tended to have more guns than Confederate batteries.

A spotted, but unknown unit type.

Skirmishers/scouts. When detaching skirmishers in battle, one of the regiments is detached and fights in loose formation, covering the movement of the main body and harassing enemy units with accurate fire. Scouts are a small party of cavalry men, who will move ahead of the main body.

Detachment. Used for example to capture enemy artillery. A unit can only detach one detachment/skirmishers at a time.

Command and Control:

Units are shown on the campaign map as national flags (1)/NATO symbols or as fleet symbols (2). Selecting a unit by clicking it will open up the unit panel on the bottom left of the screen, order buttons at the bottom of the screen, and depending upon Map Information Settings, information will be shown directly on the map.

The selected unit will show following visual information, depending on Map Information Settings (8) from the tools panel:

(3) Unit Combat Range: the unit can engage enemies within this range.

(4) Unit Command Range: all other units within this range are considered to be in position to support this unit, if engaged.

(5) If a corps attached to an army is selected, the **army Headquarters' command range** is shown as well. If this corps is engaged and within its army HQ command range, the HQ can direct all its corps within its command range to reinforce in the battle.

(6) Command line: this indicates which corps are attached to which armies.

(7) Telegraph line: this unit is connected via telegraph to the War Department, and as a consequence, order delays will be shorter.

Supply lines: if Show Supply Lines is activated in the Map Information Settings, arrow lines show where the selected unit is receiving its supplies. If close to a supply depot, the unit can receive supplies directly from the depot as well.

Readiness: the NATO symbol of the unit shows a small colored dot indicating the unit's readiness (green to red). See Readiness below.

Command and combat ranges will change depending upon commander attributes and the readiness of the unit.

Armies with Corps organization are more flexible: if the engaging Corps is within the Army HQ's Command Range, also all other attached Corps within the Army HQ's Command Range can reinforce the battle.

In case of ongoing sieges, reinforcing units must move within Combat Range of the siege to participate.

Armies and unattached Corps are considered to be operating according to the commander's initiative, under the direction of the War Department. Order delays are short, and even shorter if a telegraph connection exists. Corps attached to an Army HQ will receive their orders from the Army HQ. Order delays increase depending on distance between the HQs. Fleets are always operating independently and are not subject to order delays. Note: Order delays apply only if selected in the Game Options.

Military Experience:
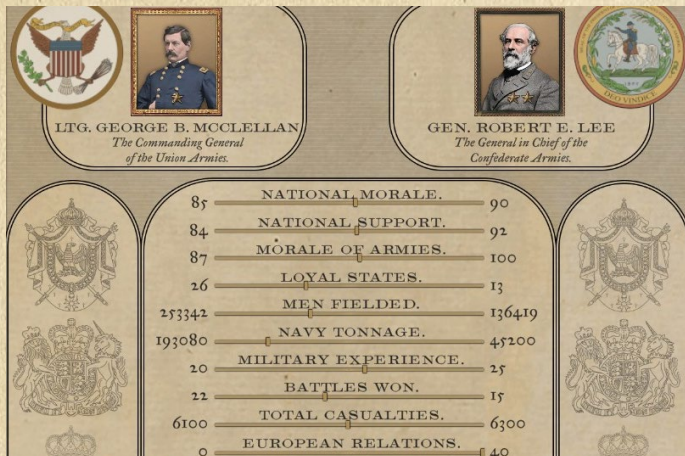
Military Experience value describes the experience of the whole military of each side. This value can be seen in the Strategy Panel center part.

Both sides start the war with very low overall military experience. While there are still many veterans of the Mexican War (1846-1848), the continuous Indian Wars and other conflicts available for both sides, vast majority of the fighting men have no experience. Also, even the officers do not have any experience in commanding the large volunteer armies of the Civil War, as the size of the U.S. Regular Army was only some 16,000 in total prior to the Civil War.

As the Civil War drags on and the armies grow in size and fight, the whole military will gain experience about this new kind of warfare. This experience will benefit the whole military. Military Experience grows when fighting battles, and affects:
-   Starting experience of officers,
-   Maximum level of training the troops can receive by drilling,
-   Maximum level of experience commanders can obtain through service, without combat experience,
-   Ability to entrench,
-   Maximum morale when fighting in enemy territory,
-   Speed of readiness consumption and recovery.

In short, the higher the military experience value, the more effective the military can be in general.

Fog of War and Intelligence Gathering:

When Fog of War is enabled in the Game Options, information about the enemy is imperfect. Depending on the intelligence gathering value of your units, the enemy units are shown on the campaign map.

The larger the enemy unit, the further away intelligence about its actions can be received. Smaller armies, especially with cunning commanders, are more difficult to detect.

When an army is detected, but sufficient intelligence is lacking, its location and composition are estimated. These estimates are shown on the map as NATO symbols, or on the paper map as flags. These are placed in the approximate location the intelligence indicates, but be aware that this information could be erroneous. The NATO symbol will display "?" if the unit's composition is not yet determined. Below the NATO symbol is text providing you with the date of the most recent information about the enemy unit.

If the enemy armies move, information about their movement, including their estimated route of march, is shown on the map in the form of a line of arrows, pointing in the direction of that movement.

Once the enemy unit is actually spotted by your scouts, and can be kept under constant surveillance, it will be shown on the map in the same manner as are your own units, displaying the soldiers or camps in the terrain.

Cunning commanders are best at gathering intelligence. Units that are scouting, especially if they contain cavalry, will increase intelligence considerably. Certain perks will increase intelligence gathering. Cautious commanders will usually overestimate the enemy strength more often than will other commanders. News Agencies (buildings) increase intelligence gathering nationwide as well as the Recruit Agents project.

You can see all of your intelligence gathering in the map filters, displayed as a heatmap. The brighter red the area, the more effective the intelligence network in that area.

Monthly Intelligence Report:
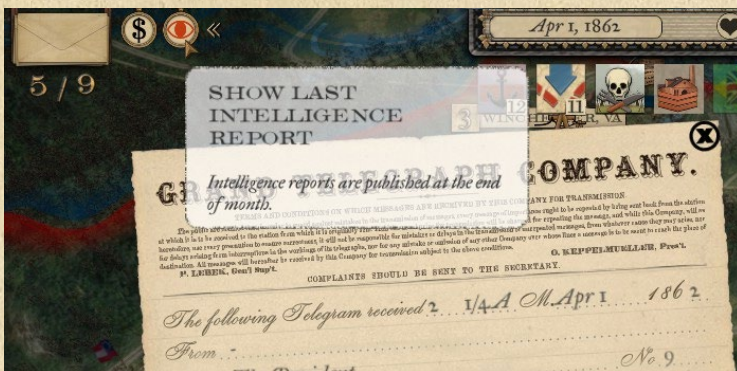
At the end of each month the Secretary of War will provide you an intelligence report. This report can be accessed from the button shown in the image, next to the Dispatch Log.

In the report you can find the most important information about your enemy's political and military actions.

Lesson III. - Army Information, Garrisons, Army Status, Fleet Information, Fleet Status, Readiness, Morale, Attrition, Casualties, Perks

Army Information - Unit Panel:

Selecting a unit, an army or a corps will open the unit panel on the bottom left of the user interface.

Here you can see the main information for this unit. Most of the information in the panel also show more details in the tooltips. The panel contains following information:
-   **Unit experience**, as stars (0-5) above the name.
-   **Number of men and guns**. If two numbers are shown, the one in [brackets] shows full strength, and the other one shows the actual, current strength. For example, units recruited into an army, but not yet arrived, are shown in the value in brackets.
-   **Casualties** suffered by the unit, including wounded, sick, and missing.
-   **Morale**, including morale effects in the tooltip.
-   **Commander** information.
-   **Readiness** of the unit.
-   **Supply status:**
o   **Supplies:** The number indicates the flow of supplies to this unit. The lower it is, the slower the unit will be replenished. Lack of supplies will lead to attrition and loss of condition for men and horses, making them less efficient in battle and on the march. See the tooltip for a more detailed information.

o   **Connected depots info**: the button offers tooltips about the depots this unit is connected to, clicking the button will cycle the depots and show supply information on map.

o   **The supply icons** offer tooltips and the percentage of supplies per type carried by the unit.

-   **Situation:** Here you will see alert symbols indicating whether the unit is affected positively or negatively by some events, such as bad weather, lack of supplies, or lack of trust in their commander. The colors indicate severity: green is good effect, yellow is alert, red is alarm and could be a problem. See the tooltip for more information on each symbol. Morale tooltip will show the current morale effect values combined.

-   **Status:** What the unit is currently doing.

-   **Intelligence:** Indicates how well the unit is gathering intelligence concerning enemies in its vicinity. The higher the value, the more exact and timelier the information will be available, and information will also be available from further distances.

- **Condition:** The average condition of men, horses and guns in this unit. The lower the condition, the less effective the unit will be in combat, and the more it will suffer from sickness and desertion.
- **Training:** The average training of the men in this unit. The higher the training, the more effective they will be in battle, and the more hardship they will endure before becoming fatigued. Whenever the unit is stationary and encamped, the officers will drill the units. This will slowly increase that unit's training value. Commanders with high administration value will be most effective in training their armies. The training value is capped by the military experience value of your nation.
- **Perk Information:** on the right side of the panel, the round button allows specialization of the unit (assigning a perk), once sufficient amount of experience is gained. An army can have up to three perks. Once a third level of perk is achieved, the unit can be given a special flag, indicating the unit is considered "elite."

The up/down and left/right arrows around the panel can be clicked to move to next/previous unit (left/right), to the subordinate unit (down) or higher HQ (up).

Garrisons:

Forts are used to defend important terrain against enemy attacks. They are equipped with heavy guns and manned by Garrisons operating them. When a fort is within combat range of an army or a fleet, the Garrison will engage the enemy and a siege or naval bombardment will commence.

The Garrisons are shown on map with a fort NATO symbol (1). The condition of the fort is shown in brackets behind the fort name on map.

The NATO symbol tooltip shows information (2) about the fort and its Garrison. Clicking the fort icon above the garrison's NATO symbol opens up a panel (3) with further info about the fort and its garrison, as well as the option to upgrade the fort.

You can see a list of all your garrisons (4) under the compass by selecting *Show Garrisons* button (5).

When constructed, forts will automatically get a small Garrison. The Garrisons can be reinforced by positioning additional units in the fort. The larger the garrison, the longer the fort will fight when besieged. See the maximum garrison size in the fort's tooltip.

To transfer units into the fort, either use the military management panel, or move close to the fort with an army and click the transfer button to open the management screen. Drag and drop units to the Garrison, or recruit new units using the + button. You may also appoint a different officer to command the garrison. Besieged Garrisons will not receive a full number of supplies and can be starved out.

Army Status:

ARMY STATUS:

Tranportation:

🚂 By Railroad

⚓ River Transports

⚓ Sea Transports

«🚶» Forced Marching

⛺ Encamped

🏚 In Winter Quarters

🎒 Scouting

🔥 Raiding

🛡 Guarding

⚔ Engaged

☠ High Attrition

〰 Entrenched

The status of the armies can also be seen on the map in the units' NATO symbols. The additional indicators show what the unit is currently doing. In addition to the arrow on left (offensive, defensive), following indicators are used:

- If unit is transported, the transportation method is shown. Also, the unit will show a model of a train or a steamer on map. When transported, units don't suffer from fatigue.
- If a unit is forced marching, it will move faster, but will suffer from extra fatigue and deterioration of condition of men, which can lead to increased straggling and desertion.
- When encamped, the unit receives supplies more effectively and suffers less from poor weather. The commanders will drill their men, which slowly increases the training value, depending on commanders' administration attribute. The maximum training level achievable depends on your military experience.
- In winter quarters the unit suffers less from cold weather. Commanders will drill the men, but not as effectively as when encamped during summer. Order delays are longer and readiness lower. The units will automatically enter winter quarters during winter, if stationary. Entrenched (defensive) units will also receive the benefits of winter quarters.
- Army orders (scouting, raiding, guarding) are shown in the symbol, when the unit is moving.
- The crossed swords indicate the unit is engaged in combat, and will be unresponsive to orders. An additional gears icon indicates autoresolved battle.
- When entrenched, units will be more effective in defense and more engineering points are received during a battle. The number in the symbol indicates the level of entrenchment (1-3).
- The skull icon indicates high attrition, usually due to low supplies.

Fleet Information:

JAMES RIVER SQUADRON

SHIPS: 4/18
DISABLED: 0
GUNS: 22
FIREPOWER: 19

CAPT. FRENCH FORREST

READINESS

AMMUNITION:
PROVISIONS:
FUEL:

1/4

CSS Jamestown

STATUS: Awaiting Orders
CONDITION: Intact
MAXIMUM SPEED: 8kn

Selecting a fleet will open the unit panel on the bottom left of the user interface.

Here you can see the main information for this fleet. Most of the information in the panel also show more details in the tooltips. The panel contains following information:

-**Fleet experience**, as stars (0-5) above the name.

-**Number of ships**. The second number shows the maximum number of ships this fleet can have under its current commander.

-**Disabled ships**. This number includes all the ships that are not with the fleet at that moment due to repairs, or still being built. The disabled ships do not participate in operations undertaken by the fleet.

-**Number of Guns**, with the tooltip giving number per type.

-**Firepower:** This value indicates how effectively the fleet will fight and how much damage it can deal to an opponent.

-**Commander** information.

-**Readiness** of the unit.

-**Supply status:** Fleets consume ammunition in combat, the crews consume provisions while at sea and the steam engines require coal. The supply status shown here is the average of all the ships in the fleet. Notice, that when a ship is low on supplies, it will autonomously sail to nearest port for resupplies. During this time the ship is not with the fleet and will not take part in any combat.

- **Ships:** The list shows all individual ships within the fleet, with tooltips offering further details about the shown ship.

- **Status:** What the unit is currently doing. If the fleet is blockading, a tooltip will show detailed information about the effect of the fleet's operations.

- **Condition:** The average condition of ships within the fleet.

- **Maximum speed (knots):** The fleet can travel only as fast as its slowest ship.

- **Perk Information:** on the right side of the panel, the round button allows specialization of the fleet (assigning a perk), once sufficient amount of experience is gained. A fleet can have two perks.

The left/right arrows around the panel can be clicked to move to next/previous fleet.

FLEETS:

River Squadron   Ocean-Going Squadron

Defensive

Offensive   Patrolling   Raiding   Blockading

Engaged

The status of the fleets can be seen on the map in the unit's NATO symbol. The additional indicators show what the unit is currently doing. Following indicators are used for fleets:

- Defensive fleets will not engage enemy fleets or forts, except if engaged themselves.
- Offensive fleets will engage enemies within their combat radius, but will also reinforce fleets in naval battles within their command radius.
- Engaged fleets are fighting and are unresponsive to orders, except in case of fort bombardments, during which the fleet will follow orders, but its speed is greatly limited (except if the fleet has Battery Runner - perk).
- When a fleet is patrolling, it will either be stationary in ordered location or move continuously between assigned waypoints. The combat radius of the fleet is increased and it will reinforce other naval battles.
- If a fleet is blockading, all enemy ports within the command radius are considered blocked. You can see the effectiveness of the blockade in the port tooltip. If enemy fleets are present, they will reduce the effect of the blockade. Blockading fleets can be moved, but they are slower.
- When raiding a shark symbol is shown. Raiding fleets will have slightly shorter command radius.

Readiness:

All armies, corps and fleets have a readiness rating, shown on the unit panel as well as the unit's NATO symbol on the map. Readiness is indicated using a color from high to low: green, yellow, orange, red. The rating indicates how prepared the unit is to carry out your orders, taking into account the commander's judgment. Placing the mouse cursor on the color bar in the unit panel will show further information about the effects of current readiness and estimated time it takes to reach full readiness.

Readiness is consumed when the unit is operating, and recovered when the unit is resting. Each step of readiness (color code) below green introduces following restrictions:

Yellow: Unit cannot use forced march.
Orange: In addition, the unit cannot be ordered to carry out offensives in enemy territory. Army/fleet orders are unavailable.
Red: In addition to all above, the unit cannot use offensive stance or construct anything.

Additionally, depending on readiness of the unit, movement speed is reduced and order and reinforcing delays are increased. Units with high readiness will have a greater command and combat range, allowing them to intercept enemies or reinforce battles from a longer distance. In short, units with low readiness will react and move slower, and cannot be used to carry out offensives in enemy territory. It's very important to rest your armies before major operations.

If you try to give a new movement order into enemy territory when readiness is low (orange, red), you will receive information about the commander not carrying the order out due to low readiness of his unit. You may give movement orders to any unit in friendly territory. If the unit is engaged

when readiness is low (red), a field battle will be initiated only if the enemy attacks. In other cases, a siege will ensue, as the low readiness unit cannot attack. Units with low readiness cannot assault during sieges, they can only retreat. To lift such siege by attacking requires recovering sufficient readiness, which will happen very slowly during sieges, or by moving in further units with higher readiness.

Readiness consumption:
Readiness is consumed when the unit is moving. The rate of consumption depends on support of the state the unit is moving through. If state support is low, the unit will need to use further effort to scout, cover its movement, setting up garrisons and managing the lack of support from local citizens.

Readiness consumption also depends also largely on the commanding officer. A cautious officer will consume readiness much faster than an aggressive one (initiative attribute). Transporting the unit using railroads or ships will cost additional readiness, as will bad weather and winter.

When recruiting or transferring new brigades to the unit, readiness will decrease slightly, as further reorganization is required. with the same is true when changing the commanding officer. The new commander will need to organize his staff and get to know his troops and officers before he will consider the unit ready for offensives. Combat and casualties will also consume readiness.

Readiness recovery:
Readiness is recovered whenever the unit is not moving or engaged. When recovering, the organization skills of the commanding officer are needed. For this reason, units with a commander skilled in administration will recover from low readiness faster. Smaller units will also recover faster than large ones. The size is calculated from the number of brigades or ships.

Following conditions will influence the speed of recovery negatively:
- Poor supply rating,
- Number of units/ships that have not yet arrived,
- Low morale,
- Bad weather,
- Poor intelligence gathering,
- Low training of the troops,
- Winter quarters,
- Siege combat.

Morale:

> **MORALE: 86.5 %**
>
> *Weekly influence on morale:*
>
> Morale recovery: +19.2 %
> *Morale recovers faster if the unit is encamped and rallying on friendly territory, next to commander abilities.*
>
> Telegraph: +3.8 %
> Unhappy: -0.2 %
>
> *The following units are unhappy with their commanders:*
>
> 3rd Brigade is unhappy with Col. Sherman (defamed)
>
> *Morale is capped by the fighting spirit: 97.3 %*
> *The fighting spirit is reduced if operating on enemy territory. This effect is reduced by higher military experience of the nation.*

> MEN:
> DISABLE
> GUNS:
> **MORALE**
> *Determined*
>
> **MG. IRVIN MCDOWELL**
> READINESS
>
> SUPPLIES: 98%
> AMMUNITION:
> PROVISIONS:
> FORAGE:
>
> **US**
>
> SITUATION:
> STATUS: *Encamped*
> INTELLIGENCE: *Poor*
> CONDITION: *Good*
> TRAINING: *Good*

Morale of your troops is important when executing military operations, especially offensives. If Morale goes low, discipline will suffer. This results in desertion, lower fighting spirit during battles and even a full rout of the whole unit.

Army morale is average of the fighting spirits of the units within the army. Fighting spirit is affected by state support, the commander, and whether the unit has seen combat or not. You can see the unit's current Morale in the unit panel. See the tooltip for further details.

Morale improves or deteriorates depending on active morale effects and other conditions. The effects, positive or negative, will influence the morale value over time. If the value is positive,

morale is improving. The higher the value, the faster the rallying, and vice versa. If morale is low, the commander may choose to withdraw on his own in face of the enemy, even if the enemy does not outnumber him.

Active Morale effects are shown in the unit's situation information as small icons as well. The color of the icon indicates positive and negative effects. See the tooltip for further information.

Units will recover morale best when stationary in friendly territory, well supplies and under a commander with high leadership attribute. Morale will be higher when fighting in own territory. Especially early in the war morale will be lower when invading enemy territory. Units fighting in their home state will always have a high morale, while units recruited from low support states will have low morale. Draftees will have lower morale than volunteers and bounty men within the ranks will lower morale in the whole army.

When a unit is routed after a major defeat, it will suffer high attrition due to morale having collapsed.

Attrition:

Your armies will suffer attrition during the campaign, which will decrease the number of men available to fight in battles. Primary causes of attrition are sickness and desertion. Desertion becomes serious especially in combat, and poorly disciplined units where morale has collapsed. Sickness increases when condition of men deteriorates. This usually happens due to forced marches, lack of supplies and operations during poor weather or winter.

The unit panel shows the average condition in the unit (1). If condition remains good, sickness can be held in check. When the unit's situation (2) becomes worse due to lack of supplies (3) and/or poor weather, the number of sick men will start to increase. The number of men currently sick can be seen in the disabled information (4). Some sick men will die, some will need to be sent home, but many will recover. See the tooltip for details.

If situation continues without improving, condition will start to deteriorate. In this case sickness will increase considerably. It will take some time for condition to improve again, once the unit's situation has improved.

A unit with high attrition will show a skull icon in its NATO symbol (5). Total loss of manpower due to attrition can be seen in the Fielded Manpower tooltip in the Top Bar (6). When you have units suffering from high attrition, you will receive an Alarm in the Top Panel (7). See the tooltip for details. Click the Alarm icon to scroll between all affected units.

Casualties:

Casualties are suffered in combat. When armies fight on the campaign map (1), suffered casualties can be seen in a rolling text information (2) next to the unit. When you fight battles manually, you will see the number of casualties in the reports, and the total casualties suffered after the battle.

Casualties are either Killed in Action (KIA), Wounded in Action (WIA) or Missing in Action (MIA). The KIA will be removed from the unit's strength (3) and WIA and MIA will be listed as disabled along with deserters and the sick. Most lightly wounded men will recover from their wounds and return to active duty. Some will be sent home to recover and some of the most heavily wounded will eventually die. The Ambulance Corps perk will increase chances of recovering from wounds.

The wounded will be carried in ambulances with the unit, and they will slow down the unit, increasing order delays and lowering readiness as well. The wounded will be moved from the unit to hospitals, but it will take some time.

You can see the total amount of casualties suffered recently in the Fielded Manpower (4) tooltip in the Top Bar. Total casualties during the whole war can be seen in the Strategy panel.

Remember, that casualties among troops recruited from any state will decrease support in the said state. This may lower the average support of loyal states, which in turn, if lower than national morale, will slowly also affect national morale and hence the victory balance during the campaign.

When an army or corps with wounded men is stationed near a Hospital building, the recovery rate of the wounded will improve, and the wounded men will return to their units faster. As mortality rate is lower, loss of state support due to casualties will also decrease.

Special training ("perk"):

On the right-hand side of the unit panel, or below the unit information in management panel, you will see a round icon. This is reserved for the unit perk(s), or specialization. Each army unit can have up to three specializations in the game, and fleets and army corps can have two. Single units can have one, which is only effective during battles.

A certain level of experience and/or drilling (training) is required to be able to assign a unit a perk. The gaining of this experience can be seen with the orange color circle that fills around the icon. When it's possible, the icon changes color to brass. *Clicking on the icon* allows you to choose the perk. There are different perks available for different unit types (army, fleet). The tooltips will provide more information.

After a perk is assigned, it cannot be changed. A perk has three levels, with each perk requiring a different kind of action from the unit, to increase the "perk experience." For example, an army will

increase Siege Train perk experience by laying a siege, and so on. The tooltip shows the required action. Perk level is indicated by the small dots on top of the icon.

Perk icon example: Perk is not available (left), perk can be assigned (middle), perk is assigned (Siege Train I-- right).

After the first perk is assigned, further experience will allow a second perk. When a unit has a level three perk, it is considered "elite" and it will display a battle flag that will make it stand out in the battle-field.

See **APPENDIX C** for all the Perks in the game.

General Rules and Division of the School of the Soldier.

      77. THE object of this school being the individual and progressive instruction of the recruits, the instructor never requires a movement to be executed until he has given an exact explanation of it; and he executes, himself, the movement which he commands, so as to join example to precept. He accustoms the recruit to take, by himself, the position which is explained - teaches him to rectify it only when required by his want of intelligence - and sees that all the movements are performed without precipitation.

      78. Each movement should be understood before passing to another. After they have been properly executed in the order laid down in each lesson the instructor no longer confines himself to that order; on the contrary, he should change it, that he may judge of the intelligence of the men.

From Casey's Infantry Tactics:

Vol. II. SCHOOL OF THE SOLDIER

Lesson IV. - Army Orders, Order Delays, Transportation, Construction, Fleet Orders, Supplies

Army orders panel:

This panel is shown whenever an army is selected. The four leftmost buttons will open up a list of order, that are described below. The last button will open up the army management panel, with the said unit selected.

Stance: **Offensive**.
When a unit's stance is set to offensive, the unit will engage enemies within its combat range. When halted, it will encamp, but will not entrench, so as to maintain better readiness to move out. Offensive stance is not available if readiness is low (red).

Stance: **Defensive**.
When a unit's stance is set to defensive, the unit will not engage enemies within its combat range. If in contact with an enemy that moves close to it, the unit will entrench. This may lead to a siege or trench warfare, if neither side is willing to engage in open battle. If halted, the unit will start entrenching. Units with low readiness (red) may only use defensive stance and may not assault during a siege.

Army orders:

On this menu you can order a unit to scout, raid or defend its position. All of these orders are carried out more effectively, when the unit contains cavalry.

Scouting:
The cavalry within this unit has orders to scout ahead of the main body. This improves intelligence gathering and increases the recovery of readiness of the unit. Commanders with a good cunning attribute have the best scouts in their units.

Raiding:
Units given this order will raid enemy infrastructure. The unit will skirmish with enemy units within its command range and burn down infrastructure within its combat range. Raiding will hurt support in the target state of the raiders. Raiding armies will forage the countryside effectively, living off the land if necessary. Raiding armies will not capture terrain or move frontlines, and they will be slower to reinforce other units during battles, as the unit is spread out. Commanders with a good cunning attribute make the best raiders, especially when accompanied by plenty of cavalry.

Guard:
A unit given this order will guard its current position, its trains and lines of communications. Guarding units will counter enemy raiding units, decreasing their effectiveness. Guarding units will be slower to reinforce other units in battles, as they are spread out. Commanders with good administration skills make the best guards.

Construction orders menu:

An army can construct fortifications, supply depots and telegraph stations. When constructing, *move the cursor to the location where you wish to construct the building in and left click.* The new construction must be placed inside the unit's combat range. If the building model is shown in normal color, building is possible; red means impossible due to terrain or too long range. The unit will need to remain nearby to finish the construction. If no unit is nearby, the construction progress is halted, and eventually cancelled. If any friendly unit - even if it is not the unit that originally began the construction - is nearby, construction will continue.

Construct a fort:
A small field fortification with earthworks and redoubts is built, and a garrison is assigned to defend it. Forts can hold terrain, and fire at enemy fleets. Forts need to be besieged to be captured.

Construct a supply depot:
Supply depots will store military supplies and distribute them to nearby armies directly, without having to use the infrastructure with its limited transport capacity. Once built, depots can be upgraded to support more and larger armies (requires Supply Reform -project.)

Construct a telegraph station:
Telegraph stations, when within range of one another, will deliver orders from the War Department in the capital city to the units in the field. If telegraph lines are intact, order delays are reduced immensely.

A telegraph station must be within range of another station to allow construction.

Movement orders:

In this menu you find commands for forced march and halting the unit. In case of halting, there will be delays in orders being carried out.

Forced marching:
Normally a unit would march at a reasonable pace, taking breaks and encamping to rest during nights. A forced march orders the unit to move as quickly as possible, without the benefit of resting. The troops will be fatigued quickly and the condition of men will decrease, causing attrition. The unit will receive less supplies while forced marching.

Halt:
Order the unit to stop the current movement order. Once stopped it will await new orders acting according to the set stance (offensive/defensive).

Open management panel:
Clicking this button opens up the military panel with the unit currently selected.

Giving movement orders to units:

To give a movement order, *select the unit by left-clicking it*, then *right-click on the location* where you would like the unit to move.

1) When you give an order to a unit on the campaign map, you will be presented with an on-map set of buttons, depending on game options settings (either by default, or by hovering cursor over the waypoint -icon, shown left)

With these buttons you can control when the order should be carried out, and whether the unit commander is authorized to use transportation (such as the railroad) instead of marching. According to these orders, the commander will plan the fastest route to the destination given by the player.

Timed movement:
When choosing this option, you can choose the day you want the unit to move out. This allows coordinated movements by multiple armies, as otherwise they would move out as soon as ready. If the date set is reached before the unit is ready to move, it will continue preparations and move out as soon as ready.

Forced March:
Orders the unit to use forced march. The unit will not stop at night and will not rest. Men will be fatigued and the unit's condition may drop, resulting in higher attrition. Resupplying is limited.

Retreat:
The unit will retreat toward the selected destination. The unit will not engage in field battles, but will conduct rear-guard actions if enemies are near or pursuing.

Allow transportation by rail:
If permitted, the unit will utilize rail lines to move. This is faster than marching, and will not tire the men. The speed depends on available transports (i.e., trains). See below.

Allow transportation by sea:
If permitted, and the fastest way to reach the destination is moving by sea, the unit will load onto transports and move amphibiously. The speed depends on available transports. See below.

Allow transportation by rivers:
If permitted, and the fastest way to reach the destination is moving along a river, the unit will load onto transports and move amphibiously. The speed depends on available transports. See below.

Confirm the movement order, or cancel it.

Note, that the route will be recalculated accordingly, when you change the transportation settings.

You may give a unit multiple waypoints to follow through by using the hotkey combination *Left CTRL+RMB*.

2) When the order is planned and given, an arrow is marked on the map. This indicates the route the unit will take to reach the given objective. When the line is dotted, the unit is not yet moving (the route is a plan). When the line is solid, the unit is moving.

3) When an order is given, it will take some time for it to reach the unit, and also for the unit to make the required preparations, before it will follow the orders, in this case by moving

out. The order delay is shown for the selected unit in the unit panel. The timer will count down, and when zero is reached, this means that the unit is carrying out the given order.

4) Units that have active order delay also show it on the map itself, with a clock icon and the countdown next to the unit NATO symbol.

Order Delays:

When enabled in Game Options, all orders will need to be prepared and delivered before they are carried out. In the campaign the delays are shown as a timer for given orders in the unit panel (1) and unit's NATO symbol (2). If the unit is within range of a telegraph station that is connected via other stations to the capital city, order delays will be considerably shorter. The readiness of the unit and the commanders' initiative may shorten delays.

When an Army HQ gives orders to subordinate Corps, the delivery of the order is shown on the command line from headquarters to the unit as a moving arrow animation. The shorter the distance from the Army HQ to the Corps, the faster the orders are delivered and carried out.

Transportation:

In addition to marching, the armies in the game can be transported. The means of transport available are railroad transportation (trains), river (river steamers) and sea transportation (steamers).

The amount of each type of transport available for you is shown in the top panel. In the image above, current available transportation is 96 for sea, 124 for rivers and 165 for railroads.

The first number shows the amount of used transportation capacity. Currently a corps is being transported via rail, and due to the size of the corps the railroad capacity is over-extended, showing 117 used out of 90 available.

The number of available transports per type depends upon your infrastructure. IIPs connected to railroad lines will increase the number of available railroad trains. Harbors along the coast will increase the number of sea transports and harbors along the major rivers will increase the number of river transports.

Using the Transports:

When giving units a movement order, you allow or deny the commander the use of these transportation methods. He will then use them, if allowed, when calculating the fastest method for getting to the given objective. Notice, that all railroads are always not available if they are in enemy territory or due to nearby enemy units. Unavailable railroads are shown on the campaign map with red color.

When using sea or river transports, embarking and disembarking will have a delay, depending on the distance to nearest port and size of the unit. The delay is shown above the unit's NATO symbol.

Once an army utilizes any of these transport types, the required number will be reserved from the total number available. If the unit in question requires more transports than are readily available, it will still be able to move, but its speed will be reduced.

Carrying capacity per each available transport is 200 soldiers. This means a unit of 10,000 men will require 50 transports.

If no transports are available when giving the movement order, these types will be unavailable.

Whenever transports are employed, the government will pay for their use. This sum is added to upkeep costs. Using the transports will also consume locomotives and transport ships, which will need to be replaced by your industry. To reduce the cost of military movements, including supplies, using transports, use the Logistics Reforms project.

When a unit is using a transport, the unit's NATO icon will display additional visual information beneath it, and the soldiers will be replaced with the appropriate transport in the zoomed in map view.

Military Railroad project allows better organization of railroad transportation, which will increase movement speed along railroads considerably.

Hint: using waypoints (hotkey: *Left CTRL+RMB*) allows you to determine the route more accurately, for example to use amphibious movement along waterways. Remember to give the instruction to utilize transports when planning the first waypoint (using the movement panel).

Combat Effects:
Units on transports can engage in limited combat. If an army embarked upon river or sea transports engages a coastal fort, the embarked unit will fight, but with greatly reduced efficiency. If an enemy fleet intercepts the transported army, it will suffer casualties and be forced to retreat.

Construction:

When constructing telegraph stations, depots or forts with the armies, the building must be placed within the constructing army's combat range.

In the left image, the building model is shown red, because the fort cannot be constructed here, as it is outside the army's combat range.

In the below image construction is possible, as the terrain is flat, and site is within the army's combat range. The fort is no longer shown red.

When construction begins successfully, an icon is shown next to the construction site, with construction progress shown around it as an orange circle, filling up as time passes. When the circle is full, the building is ready.

A friendly army must be within range of the construction site for the building progress to proceed. This does not have to be the army that originally permitted the construction to begin.

You may see detailed information and estimated duration of the construction process in the tooltip of the construction icon, like shown left.

You may upgrade depots and telegraph stations by opening the panel when the construction has completed, and clicking on *Upgrade,* as shown in the image. This will, again, take time and require resources.

When a depot is no longer needed, or you don't want it to fall in to enemy hands, you may burn it down clicking on *Abandon.* Doing so will remove the depot from the map, with some of the stored supplies being saved.

Retreating armies will automatically try to burn down nearby depots to deny the enemy the supplies.

Fleet orders panel:

This panel is shown whenever a fleet is selected. The three leftmost buttons will open up a list of order, that are described below. The last button will open up the fleet management panel, with the said fleet selected.

Stance: **Offensive.**
The fleet will engage enemy forts and fleets within its combat radius and reinforce battles within its command radius. Offensive stance is not available if readiness is low (red).

Stance: **Defensive**.
The fleet will stop before its combat range overlaps with an enemy fleet, preventing engaging enemy fleets. It will also not reinforce battles within its command radius.

Fleet orders:
In this menu you can order the fleet to raid, patrol or to blockade. It will continue to do so as long as the button is active.

Raiding:
This order will send your fleet to engage enemy blockading fleets within its command range. The fleet will try to use the element of surprise, engaging only a small portion of the enemy fleet at any one time, withdrawing after sufficient damage has been dealt. Cunning commanders are the best raiders.

Patrolling:
Give the fleet a route and it will patrol moving constantly between the selected waypoints. Patrolling fleets move more slowly to save fuel and to allow better observation, and they have longer combat (interception) range. You can give multiple waypoints by clicking *CTRL* and left clicking. Commanders with high initiative are the best at patrolling.

Blockade:
Order the fleet to blockade enemy ports and stop any commerce going in and out. All ports within the command range of the fleet are considered blockaded, and the effectiveness is shown in the ports' tooltip. The blockade percentage will determine the amount of commerce stopped. Commanders with good administration skills make better blockaders.

Movement orders.

Return to Harbor:
The fleet will sail to the nearest friendly harbor, where it will be faster to repair and resupply the ships. Normally, while out to sea, the fleet will rotate the single ships back to port individually. This allows the fleet to remain on station, but the rotated ships will not participate in combat.
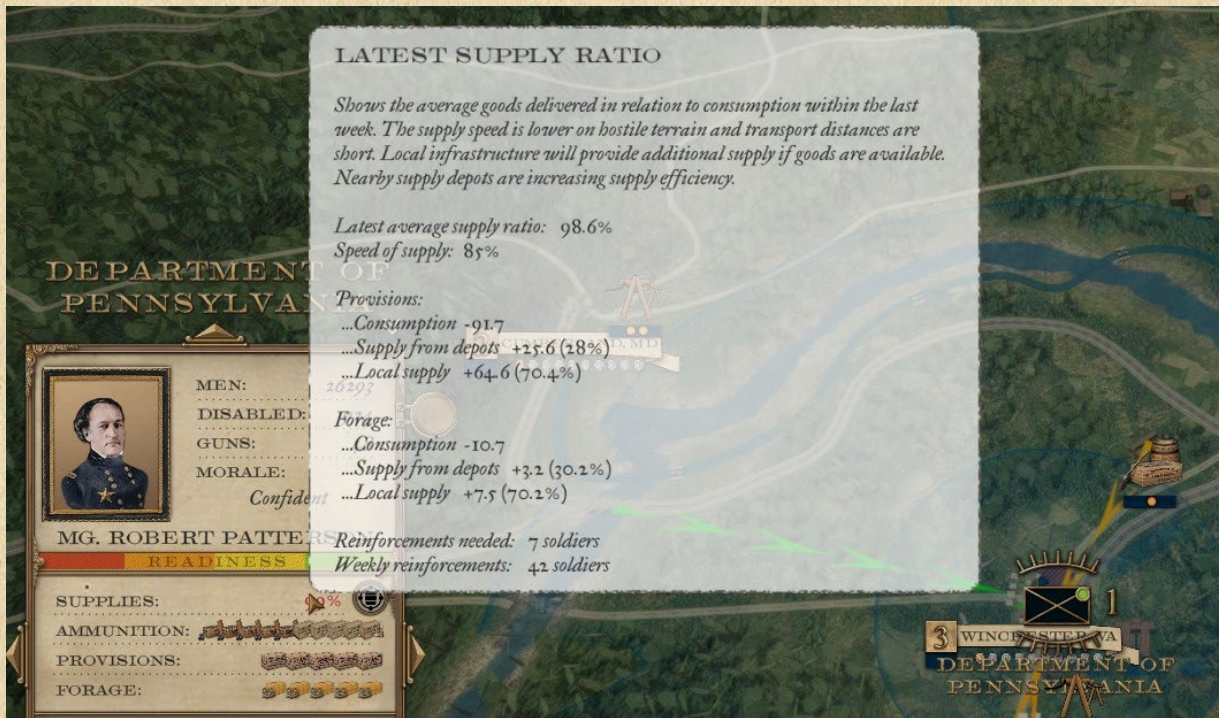
Drop anchor:
Orders the fleet to stop immediately.

Open management panel:
Clicking this button opens up the military panel with this unit selected.

Fleet orders do not have order delays. It is assumed that at sea the commander in charge has the complete authority to do as best he sees fit.

Supplies:

All armies, garrisons and fleets consume military supplies, and as such, they require a constant flow of supplies to feed the men and the horses, and to keep the engines running and the guns loaded and firing.

Supplies are produced by the game's economy, and the government will purchase them to increase stock in depots and for the armies. Armies will have lines of supply, while fleets will send single ships to port to resupply, when needed.

Supplying Armies:

Armies require the following military supplies:
- Provisions to feed the soldiers,
- Forage to feed the horses,
- Small arms and artillery ammunition,
- Fresh horses, new weapons and artillery to replace losses,
- Uniforms.

You can see the supply state of your armies in the unit panel. The supplies percentage shows how many of the required supplies, as per current consumption, the unit is receiving. See the tooltip for further breakdown:
- **Consumption** determines the number of supplies consumed from the stores.
- **Supply from depot** determines how many of the required supplies are coming from nearby supply depots. Supplies from depots arrive much faster, without restrictions of the IIP transport capacity.
- **Local supply** means units are foraging the surrounding area. The supplies are in this case collected from the nearest IIPs to which the unit will automatically attach. This rate of supply is dependent on the transport capacity of the IIPs and will create local demand,

which the economy will then try to fulfill. As a rule of thumb, smaller armies may live off the land, but larger armies cannot be sufficiently supplied with local supply only.

- **Reinforcements needed** indicates how many men are absent from the units' full strength in total.
- **Weekly reinforcements** indicate how many men the unit is receiving each week to reinforce depleted units. During the early war, number of reinforcements will remain low as the States prefer raising new regiments instead of reinforcing already formed ones.

When raiding, units will forage with great efficiency, and at times can live off the land. When conquering enemy territory, it takes some time to get the captured infrastructure working for the new owner's military effort. For this reason, deep thrusts into enemy territory may result in severe supply shortages and attrition.

Remember, appointing Infrastructure Reform projects will increase the transport capacity of IIPs, which will also make resupplying your units more effective.

The supply stores of the unit are shown as icons for ammunition, provisions and forage. When stores are consumed, the number of icons will decrease to indicate shortages. If the unit runs low on ammunition, morale will suffer, and the troops will have less ammunition available during battles. If food runs out, condition starts to suffer, increasing sickness and desertion. If there are supply-related alerts, these will be shown, along with a tooltip, in the situation-line of the panel as red icons.

In case the armies are having issues with keeping supplied, moving them near better infrastructure and depots will help. Remember, where a normal road has transport capacity of one, a railroad will increase this by a factor of ten! This means that railroad IIPs will be ten times more efficient in supplying the demand created by the armies and their consumption of supplies.

Depots:

Depots will store military supplies and then distribute them to any nearby armies automatically, if within the army's command range.

New depots can be built by armies, and then upgraded to allow more supplies being stored. Depots can also be captured and raided by the enemy or abandoned by the owner.

The depots, like industries and armies, connect to the economy via IIPs, and will acquire the supplies from the IIPs. If nearby IIPs have low transport capacity, the depots will struggle to keep in stock if supplying large armies.

If you check any of your depots and finding them empty, this means that nearby armies have such high consumption of supplies that none are left to be stored in the depot, and the depot cannot refill the stocks fast enough.

You can see further details about connected depots and their capacity in the tooltip provided in the connected depots info in unit panel:
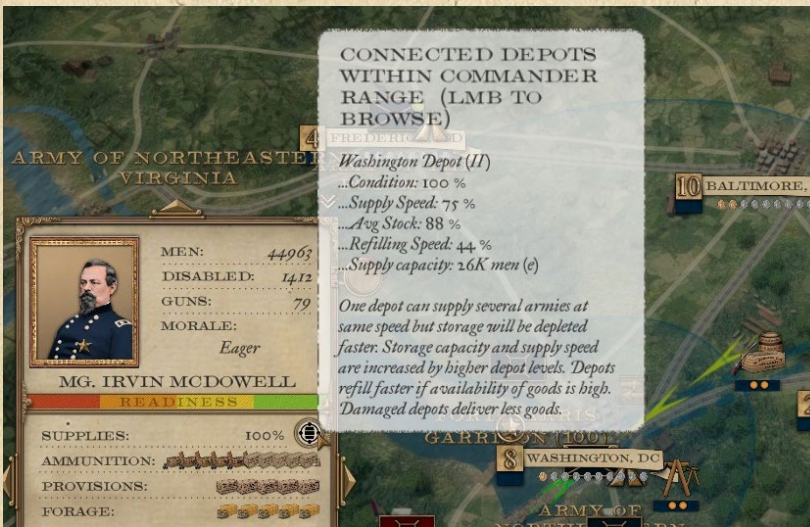
Raiding and Guarding:

Raiding units will attack any surrounding enemy-held infrastructure, reducing transport capacity, while capturing and burning goods. This will greatly reduce the infrastructure's ability to keep armies supplied. Setting armies to **guard** mode will help countering the raiding units, reducing their effectiveness considerably.

To cause supply shortages to the enemy armies, it is a good idea to raid and capture their supply lines, as well as their depots. And likewise, it's advisable to guard your own supply lines to prevent long-term damage from enemy raids.

Lesson V. - Land Battles, Fighting Battles, Naval Battles, Conquest, Battle Results

The game allows the following combat types:
- **Field army vs. field army** open engagement: These battles can be resolved in the battle gameplay, as described in [Title Third](#) of this manual, or automatically resolved. If the armies in question are very small, only auto-resolving is possible.
- **Field army vs. field army siege combat**: If two defensive units meet, they will both dig in, skirmishing with one another. Combat can be resolved by either side assaulting. Siege combat causes attrition, but slowly over time. Remember that units with low readiness (red) can only perform defensive operations and may not assault during sieges. Readiness will not recover effectively during combat, including sieges. You may move in further units to participate in the siege. The reinforcing units will need to be placed close to the siege so that the enemy is within their combat range.
- **Field army vs. field army skirmishing**: If an army is raiding, it will skirmish with all enemy units within its command range. Retreating or withdrawing armies will not engage in field battles, but if pursued by an enemy army, they will conduct a rear-guard action, while the other army may pursue. Casualties from skirmishing are usually low, but can increase if morale deteriorates.
- **Field army vs. fort siege combat**: On-map forts must be besieged, and can be captured if the defender surrenders. The siege will also end if either side mounts a successful assault. If the defender launches a successful assault, just to clarify, the besieger will be forced to retreat, and the siege is lifted.
- **Fleet vs. fort bombardment**: When a fort is within a fleet's combat radius, the fleet will engage the fort, and the fort will fire back. While the bombardment is ongoing, the fleet can move with reduced speed, except if it has the Battery Runner perk, which allows quickly bypassing a fortification while engaging it.
- **Fleet vs. fleet naval engagement**: If an offensive fleet has an enemy fleet within combat radius, the fleets will engage. Naval combat is always automatically resolved.

All engagements that cause casualties will increase national military experience and the losing side will suffer loss of national morale. Casualties will reduce support in the unit's recruitment state.

Land Battles:

Army units will engage enemies that are within their combat range, if their stance is offensive. Once an engagement is initiated, a panel will open, informing the player about the forces engaged, and available reinforcements. Player can then decide which reinforcements to call in to take part in the battle, by ticking the units in the reinforcement panel.

💔 If a unit shows a broken heart icon next to the NATO symbol, part of the unit has low morale. See the tooltip for detailed information.

Available reinforcements are determined by command range:
1) All non-retreating units within the engaging unit's command radius can march to the sound of guns to join the battle.
2) If a corps attached to an army HQ engages an enemy, and that corps is within command range of its army HQ, then the army HQ can coordinate all attached corps within the army HQ's command range to reinforce the battle. As the army HQs have much larger command radius, this makes the army organization more flexible in engagements.

In the engagement panel you will also see the estimated time it takes for the reinforcements to reach the battle, as well as number of men, cavalry and guns per side. Remember, if Fog of War is enabled, the enemy information is only an estimate.

To move to the location where the engagement is taking place, click on the arrow button on the top right corner of the panel.

Note, that units will automatically withdraw, if facing a vastly superior enemy, or if either side has insufficient numbers (a minimum of 3,000 men are required to participate in a field battle).

Fighting Battles:

Auto-resolved battles will take place on the campaign map, with rolling text informing player about the progress. Selecting the unit in battle will open a more detailed information about the ongoing battle. Once the battle is over, you will receive a short report from the commander, describing the battle, casualties and current situation.

If you play the battle manually in the battle game play mode, the disposition and situation of units is carried over from the campaign map to the tactical battle map, and the battle scenario is created:

- The nearest historical battle-field will be used. If there are no nearby historical battle fields, a non-historical map is randomly chosen from a set of many.
- The stance and readiness of the engaging units will determine the battle type: meeting-engagement, defensive battle, offensive battle.
- Readiness of armies will determine how deep on the map they can deploy at start, and how many engineering points each side will have. A defending army will receive more engineering points.
- The arrival direction of reinforcements is determined from the campaign map, and reinforcements are assigned to arrive from the nearest entry point available on the battle map.
- Once the battle starts, the reinforcements will arrive via the entry points after a delay, as calculated from the campaign map.

Play battle:
The battle is played out in the battle gameplay mode.

Auto-resolve battle:
The results will be calculated without player involvement.

Entrench:
Changes stance to defensive, and the unit will stop and entrench instead of moving in to engage the enemy. A field battle may still occur, if the enemy is offensive and moves in to engage.

Withdraw:
Deploy a rear guard and start falling back in good order. The unit will fall back a short distance, away from the enemy combat range. A skirmish with the enemy army occurs. Skirmishing causes light casualties while the units maneuver. It is possible that the withdrawal will prove unsuccessful, which can lead to a field battle, or to a less organized retreat.

Retreat:
Quickly escape engagement to a safe location (another unit, a fort, a city or a town). A rearguard will try to keep the enemy at bay and skirmish. An unsuccessful retreat may turn into a rout, which will disorganize the army and cause straggling and desertion, plus loss of morale.

During a battle, all the units taking part in it (including reinforcements) will be tied to that engagement until concluded and cannot reinforce in other battles.

In case you personally take command in a battle, once the fighting is concluded, you will return from the battle level back to the campaign, in the exact same time as the battle started. The units involved will then be locked in the combat for as long as the battle lasts, which can be multiple days. **This mechanism allows multiple player-controlled battles to take place concurrently.** A cunning commander may try to lure enemy reinforcements away with a feint attack, while the main body engages with some delay simultaneously.

Auto-resolved combat considers a vast variety of data from the opposing armies, including the personalities of the commanders, and these battles can last multiple days as well.

An ongoing battle is depicted on the campaign map by the units firing at one another. The engaged units are shown with crossed sabers on the **NATO** symbol, indicating the units are locked in this battle and unavailable in others.

Selecting any unit or fleet engaged in autoresolved battle will show a detailed description of battle evens, as shown in the above image. The shown icons and symbols will provide you with further tooltips.

The buttons in the bottom of the panel allow assaulting in a siege battle, or ordering a retreat.

Monuments depicting major engagements will be left on the map to remind players of these great battles. Monuments of insignificant battles will eventually be removed from cluttering the map. Same is true with naval engagements. You may show/hide the monuments using the appropriate Map Information Setting.

General rules for commands.

7. The general (by which term, in these evolutions, will be understood the brigadier-general in command) will always give orders to his brigade by word of command.

8. When the general shall wish to cause a movement to be executed, he will give the general commands relative thereto. Each colonel will always successively repeat, with the greatest rapidity, on their reaching him, those general commands, unless the general has given, or sent to him, an order to the contrary.

9. The colonels having repeated the general commands, as just prescribed, will immediately command, and cause to be executed, without waiting for each other, the preparatory movements which, in their battalions, ought to precede the execution of the general movement.

10. The general will look to the prompt execution of these preparatory movements in his brigade, and rectify any error that may be committed by the colonels.

11. The final command, or that which determines the execution of the general movement, will always be given by the general.

12. The lieutenant-colonels and majors will repeat the general commands, whether of caution or of execution, as often as the wind or the noise of arms may prevent those commands from being easily heard from one battalion to another.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

Siege combat:

When a siege begins, the units in question will be locked in the engagement. All units that are within combat radius of the siege are participating. This means the player can strengthen ongoing sieges with reinforcements.

During a siege, following controls are available to player:

Assault:
The unit will try to break the siege by assaulting the enemy works. In case of **army vs. army** siege, the battle can be played in battle gameplay mode, with the defender being able to build a vast number of entrenchments. Either side can start the assault as long as readiness is not too low (red).

Auto-resolved assault:
The outcome will be calculated without player involvement.

Retreat:
Slip away from the siege and retreat towards safety. An unsuccessful retreat can turn into a rout. If the defender succeeds in retreating from a siege, the garrison will not maintain order. Instead, those men who successfully escape will later be available in their nation's pool of recruits.

Naval Battles:

Combat involving ships is always automatically resolved. When engaged, the ships will fire to indicate they are in combat. Information about casualties is shown in the rolling text. A more detailed description of any naval engagement or fort bombardment is shown in the autoresolve panel, if an involved fleet is selected.

In cases of **fort bombardment**, the fort condition will be reduced in the engagement, and the garrison will suffer casualties. The number of guns the defender has depends upon the strength of the garrison. By default, the forts are manned by heavy artillery batteries, with several guns depending on the fort level.

With casualties, the ability to man the guns is reduced, which reduces the effectiveness of any returned fire.

Fort condition is shown under the name in (brackets), and is updated as intelligence is gathered. If the fort condition is low, it will also be easier to capture in an assault.

The return fire from the forts can damage and sink ships in the fleet, which is indicated after the battle in the report.

When two opposing fleets engage, nearby fleets within command radius and offensive stance will move in to reinforce.

In a **fleet vs. fleet engagement** the combat is resolved in phases:
- During the movement to contact phase, the fleets close in. Depending upon armament type, firing is commenced from long range, which makes it inaccurate. Due to range and movement the rate of fire is low. Ships with turrets will be more effective during this phase.
- During the close combat phase, the fleets have closed in and can use their armament to the fullest, delivering broadsides and firing with maximum rates of fire. Ships with ramming capability may be able to ram enemy ships, causing massive damage.
- In river combat the battle starts directly from close combat.

The number of ships that simultaneously fight is limited during an engagement, due to required space and the need to maneuver. This allows smaller fleets to be effective, if only for a time, against larger ones. Fleets with raiding orders will engage blockading fleets only and will try to engage only a small number of ships, dealing maximum damage, before withdrawing to regroup.

During a naval engagement the effectiveness of fire depends on the weapons and armor of the ships. In the combat model a wide variety of different weapon types are simulated, including firepower ratings for shells and realistic penetration values for shot and bolt. The armor of the ships is also modelled, which is especially important with ironclads. Large ships are more likely to be fired at than smaller ones, especially during movement to contact phase.

Damage to the ships lowers their condition, which also reduces their fighting effectiveness. If it suffers high enough damage a ship will become disabled. Disabled ships will no longer fight back, and can be sunk or captured by the enemy, or scuttled by the crew. Damage will also reduce movement speed, which also makes a fleet with damaged ships slower. Ships can suffer catastrophic damage if their magazines are hit.

Naval officers with high initiative have longer combat and command radius, and cunning commanders can maneuver their fleets to avoid the enemy's superior range and firepower, and to

reduce enemy effectiveness during the movement phase of the combat resolution. Administration value makes resupplying and repairs faster in harbors.

Conquest:

All armies, garrisons and cities control territory around them. All infrastructure and industries within this zone of control change ownership accordingly. The zones of control are called Frontlines in the game. To see the dynamically changing frontlines, select the Map Filters (1) and *tick Frontlines (2)*. The Frontlines are drawn on the map (3) and do not follow any political lines like borders, except when the nations in question are in peace. When armies move, frontlines are updated accordingly.

Cities can be captured by armies. When an army (4) is near an enemy city without any defenders nearby, the army will start capturing the city. The time it takes depends on the size of the city and the capturing army, and the progress is shown in a bar (5) above the city. When the bar is full, the city changes hands and the new owner will receive all the terrain controlled by the city. States with low support will not change loyalty even if they are completely controlled by the enemy. In this case the state is considered occupied. Losing cities to the enemy will lower support in the states, as well as lower National Morale when the news reaches the public.

When IIPs are captured, their transport capacity will decrease to zero for a short time, as the logistical infrastructure there is destroyed by the retreating previous owner. The condition will recover shortly, but before this happens, the infrastructure will not be able to carry supplies effectively, which can lead to supply shortages if advancing deep into enemy territory without consolidating and constructing depots. The IIPs' condition can be seen in the tooltips.
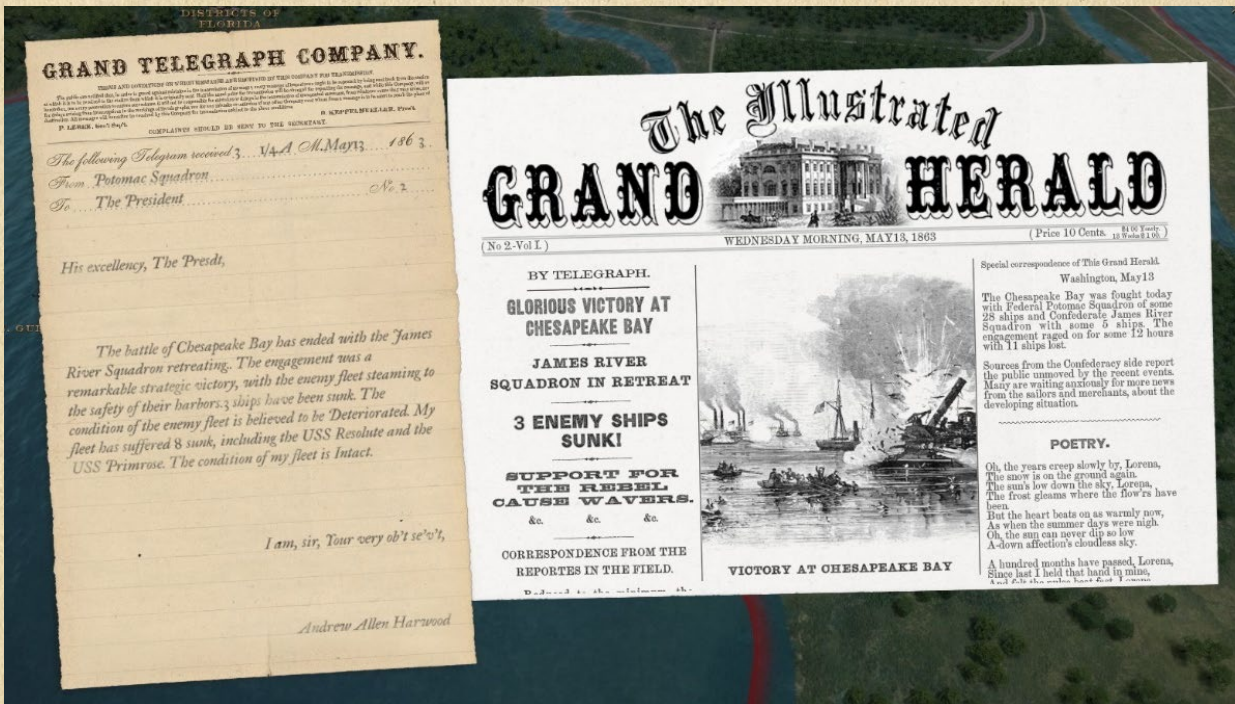
Battle Results:

Once a battle is fought to a conclusion, on the campaign map (auto-resolved) or manually, both sides will have their military experience increase; the losing side will suffer loss of national morale, and both sides will suffer a loss of support depending upon the number of casualties in the home states of the units that took part in the battle.

Commanders may become casualties, and become famous or lose reputation, depending upon their performance.

The side that is forced to give ground will have its participating armies withdraw or retreat depending on the result. Reinforcing units that did not arrive before the conclusion of the battle will not be affected. Units that are unable to withdraw or retreat may disintegrate. If either side surrenders, the surrendered side will lose the forces on map, with the soldiers and officers either becoming Prisoners of War (POW) or paroled. Captured officers may return to duty later, some of the paroled soldiers may return to the pool of manpower.

To clarify the difference between "withdrawing" and "retreating" in the game, Withdrawing is organized, retreat usually not so much. The losing side will organize a read-guard that will fight against the winning side's pursuit on the campaign map until able to completely disengage and move to safety. In game terms if a unit is withdrawing, the rear-guard action will be more effective and the unit will not lose morale. If retreating, the pursuer can inflict more severe losses and morale will suffer. Also, withdrawal is usually shorter in distance. Results of the rear-guard fighting will be shown in rolling text on the map.

Disintegrated units may be fully disbanded, or they may be able to reorganize in nearby friendly territory. If disbanded, all units are lost, or ships scuttled. If the unit can reorganize, it will suffer heavy attrition and complete loss of readiness.

Depending on casualties and battle result, Readiness will suffer, and the losing side will also suffer loss of supplies. The winning side may capture left behind weapons from the battle-field and these are added to goods inventory.

The results will show in the battle report telegram from the commander as well as in the news. The effects of battles to national morale and support can be seen in Strategy panel tooltips for the appropriate lines.

Lesson VI. - Fighting the Economy

An effective means to attack the enemy is to attack his economy. This will have longstanding effects, as demand cannot be met, and prices will increase considerably. When prices rise and severe inflation kicks in, the enemy's nation will struggle to cover the costs. New debt is required, and this will increase interest costs and lower the enemy nation's credit rating in the long run. With prices high, their citizens' quality of life will deteriorate with the reduced personal wealth. Low private wealth will also lower national morale in the long run.

The same holds true for the military economy. If the enemy economy struggles to support even the basic needs of their population, there will be issues with military supplies. Attacking enemy production facilities will in the long run create shortages, especially if the enemy cannot effectively import needed goods, or if their ports are captured or blockaded.

At any time, you can see the effect on each side's economy by opening the Strategy panel, and checking the Trade Warfare line. Here, all losses to enemy military actions are listed.

There are two main means of attacking the enemy economy directly: **blockades and raids**.

Blockades:

Your fleets can be used to blockade enemy harbors. Harbors are the links to transatlantic trade to Europe, and the main channel for imports and exports. Sea trade in general has the highest trade volumes by far, and without attacking the enemy's trade lines, it can keep a nation running quite easily with imported goods.

All harbors within the command range of a blockading fleet will be considered blockaded. The effectiveness of the blockade depends upon number of ships in the blockading fleet, range from the fleet to the harbor, blockading fleet's commander (administration), any defending fleets near the

harbor, and trade warfare subsidies. If the harbor is within combat range of the blockading fleet, the blockade will be very effective.
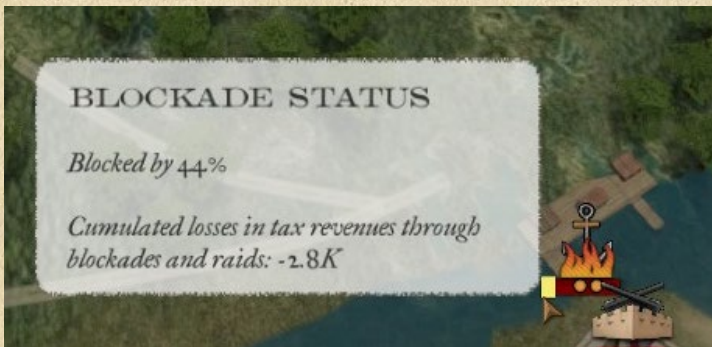
The blockade efficiency of single ports is shown in the harbor icon's left side as a colored box. The tooltip will provide further details. The number shown indicates the amount of trade that is reduced by the presence of the blockading fleet. In this example, only 56% of the trade is getting through the blockade.

Privateering:

Both sides can use issue Letters of Marque (an Act in the Policies panel), which will allow private contractors to privateer against the enemy of the government. This is in effect piracy, and not well-received by the European nations. With the Letters of Marque Act, the enemy will need to increase security measures, to regulate trade and to escort trading fleets, which will lower trade efficiency in a similar manner as any blockade would. This affects all harbors of the enemy nation.
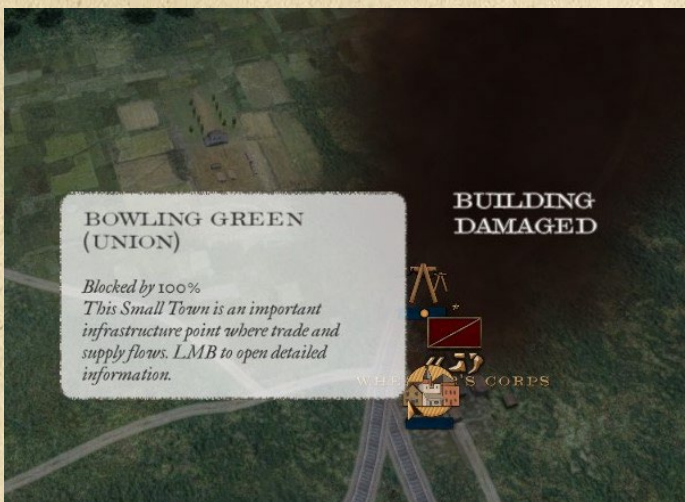
Another way of privateering is to use a fleet with Sea Raiders perk. Such fleet can blockade trade nodes directly, attacking trade along all the way to the European shores.

Raids:

Raiding with army units is another option to attack the enemy economy. Raiding units will block trade and supplies along the land routes, in a similar manner to blockading fleets. In addition, the raiding unit will attack and damage any industries within its combat range. After the raid, those industries will need time and building materials to repair and continue production.

Targeting a certain production could be beneficial, if a weak point in the enemy's economy is recognized. By denying the enemy domestic production, it will need to import the goods that would have been otherwise produced, and in case of blockade, the victim nations' economy could be greatly damaged.

Trade Warfare Projects and Blockade Running:

If a port is blockaded, the blockaded nation's vessels will automatically do their best to run the blockade. Using trade warfare projects will make both blockades and blockade running more effective. This means that the blockading level can be increased or decreased depending upon which side is issuing the subsidies and in what quantity.

TITLE THIRD – SCHOOL OF THE BATTLE-FIELD TACTICS.

General rules and instructions for winning battles.

Field battles are fought whenever opposing armies engage one another on the campaign map, and at least one of the armies has an offensive stance. When a battle is initiated, available reinforcements for each side are determined and selected, and then the battle loads.

When the battle loads, all relevant data from the campaign side is transferred to the battle. This includes morale, the supply situation, reinforcements that are arriving, and all the other data required in the battle. Once the battle is over, all the data is transferred back to the campaign side, including spent supplies, casualties, morale, and all the other data required in the campaign.

Battles can last for several days. Each day, when darkness falls, the fighting will cease. Units can then redeploy, be resupplied and prepare defensive works. Reinforcements can arrive during the night, and an army can also retreat from the battle under cover of darkness. If both armies remain on the field, fighting will continue again the next day.

MINOR VICTORY

BATTLE OF GETTYSBURG
Gettysburg, Pennsylvania
July 1, 1863   DAY 1

Own casualties: 4902 of 27468 (17.8 %)
Enemy casualties: 8000 of 28000 (28.5 %)

To gain a major victory you need to inflict more than 28% casualties on the enemy, while your own losses may not surpass 15 %, military experience increases these triggers. A major victory reduces the enemy's readiness and supplies dramatically.

The public would be pleased hearing about a victory like this, preserving unanimous support. The names of the commanders involved would surely be on lips of every-one on the home front.

Federal victory points:
...objectives: 22.0
...morale: 38.8
...routs: -6.5
...losses: -9.1

Confederate victory points:
...objectives: 1.0
...morale: 70.9
...routs: 0.0
...losses: -5.7

*The Union suffers severe losses! Further casualties can break its morale quickly!*

To win a battle, the enemy army must be forced to withdraw or to retreat. Withdrawal or retreat is triggered by tipping the force balance heavily in favor of one side. In the balance calculation morale, casualties, the number of routed units and terrain objectives held are weighed.

The victory type (minor/major) depends on casualties inflicted on both sides. The required casualty levels can be seen in the battle balance bar tooltip, and the percentages will need to be higher with higher military experience.

Once the battle is fought to a conclusion, both sides will have their military experience increase; the losing side will suffer loss of national morale, and both sides will suffer a loss of support depending upon the number of casualties in the home states of the units that took part in the battle. Commanders may become famous or lose reputation, depending on their performance.

The side that is forced to give ground will have its participating armies withdraw or retreat depending on the result. In case of defeat, an army will lose part of its supplies. In case of major defeat, most supplies are lost. To clarify the difference between "withdrawing" and "retreating" in the game, Withdrawing is organized, retreat usually not so much. In game terms if a unit is withdrawing, the rear-guard action will be more effective and the unit will not lose morale. If retreating, the pursuer can inflict more severe losses and morale will suffer. Also, withdrawal is usually shorter in distance.

The historical battles will function the same way as campaign battles, except that in campaign battles you can deploy your forces before the battle begins.
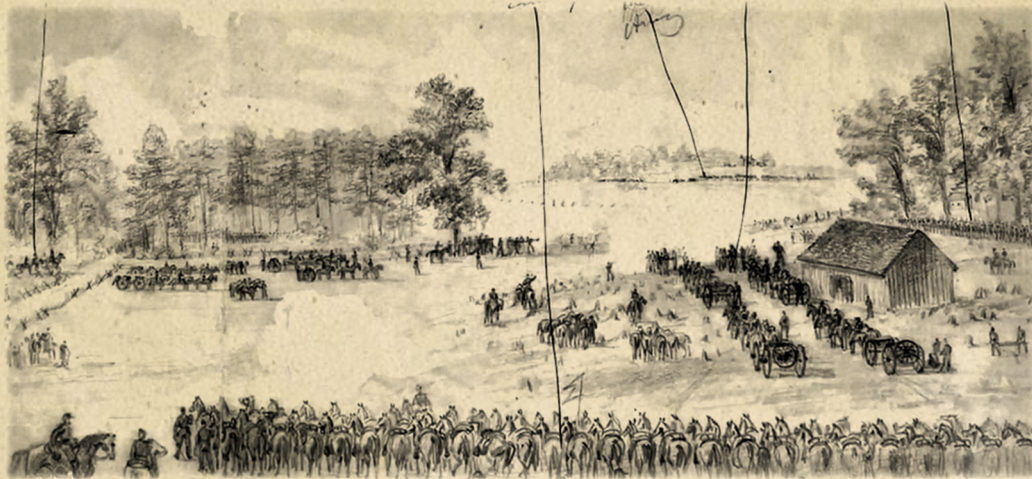
Constitution of the reserve.

69. In a *corps d'armée*, the artillery of the reserve should be equal to one half the artillery of the line of battle.

70. The infantry of the reserve will be such part of the whole body as the general may think expedient, generally, however, it will be one-third.

71. The reserve will be under the especial direction of the general-in-chief.

72. The *special corps* including sappers, miners, pontoniers, &c., will be attached to the reserves, unless their services are otherwise needed.

73. The general may mass the whole or a portion of the brigade batteries, and cavalry forces, at one or several points on the field, as the state of the action, or his own judgment may suggest.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

Lesson I. - Controls, User Interface, Map Information, Battle Information, Reports, Dispatches

GAME CONTROLS AND HOTKEYS.

Camera Controls:

You can move the camera using either the hotkeys or the mouse. When you push the cursor to top or bottom of the screen, the camera will move forward/backward. To move the camera left/right, push the cursor to left/right lower edge of the screen. To rotate the camera, push the cursor to left/right upper edge of the screen. To zoom in and out, use the mouse wheel. Remember, you can control the speed of the camera in the Game Options and, if you wish, do this separately for campaigns and battles.

When you are zooming your view in and out, the map will change from the Tactical level paper map to 3-D terrain. The paper map will give you a good overview of the tactical situation, and in the 3-D zoomed in view you can find and see further details. Both views can be used to issue orders to units.

Mouse Buttons:

The game uses mouse controls for selecting units, opening/closing user interface panels, and giving orders to units:

Left Mouse Button (LMB):	Select units, activate buttons, open panels, build entrenchments
Double-Click (LMB):	Move camera to...
Right Mouse Button (RMB):	Move units, attack, remove dispatch icons
Hold and Rotate (RMB):	When giving orders, hold and rotate to determine facing

Hotkeys:

Camera control hotkeys, found in the Game Options, are, by default:

Scroll Map Left	A
Scroll Map Right	D
Scroll Map Forward	W
Scroll Map Backward	S
Map Rotate Left	Q
Map Rotate Right	E
Map Zoom In	Y
Map Zoom Out	X
Show Menu/Hide Panel	ESC
Pause Game	P
Increase Speed	Num +
Decrease Speed	Num -
Speed Step Pause	1
Speed Step 1 (play)	2
Speed Step 2 (accel)	3
Speed Step 3 (accel)	4
Speed Step 4 (accel)	5

Stop Units   DEL
Show All Paths   SPACEBAR

Other hotkeys and key combinations are:

Combination:	Common Use:	Cursor:	Function:
Left CTRL+RMB:	Add Waypoints		Give multiple waypoints to order a specific route. Without waypoints, the fastest route will always be used.
Left ALT+RMB:	1. Link Units		Order a unit to coordinate movement with another unit. Once linked, the unit will move independently, trying to keep the given position in formation.
	2. Charge the target unit		The unit will charge into melee using best speed and most direct route.
	3 Retreat (via marked entry points)		The unit will exit map and will no longer participate in the battle.
	4. Move HQ only		
Left SHIFT+RMB:	Ignore cover at destination		If you don't want the unit to "snap" into cover or high ground automatically. Instead, the unit will move exactly where you ordered it, without taking the terrain into consideration.

Mouse cursor will also indicate following controls:

Unlink the units   Fire at Target Unit

Build a pontoon bridge (engineer   Enter/Exit Building(s)
units only)

Build entrenchments   Capture Abandoned Guns

Upgrade Entrenchment   Re-Attach Detachment to Parent
                                              Unit

Cancel Building Entrenchment

User Interface:

The battle UI is spread around the screen edges so as to take up minimum visibility from the actual battle-field itself.

- Most UI parts can be minimized / maximized by clicking the *small double-arrow button* next to it.
- All active elements have built-in tooltip functionality in two layers. The first layer is shown when the cursor is on top of the element, showing the main information, or function. Hold the cursor on the element for a short time, and a second layer is displayed, with more detailed information and instructions.

UI options are found in the Game Options menu.

User Interface Main Parts:
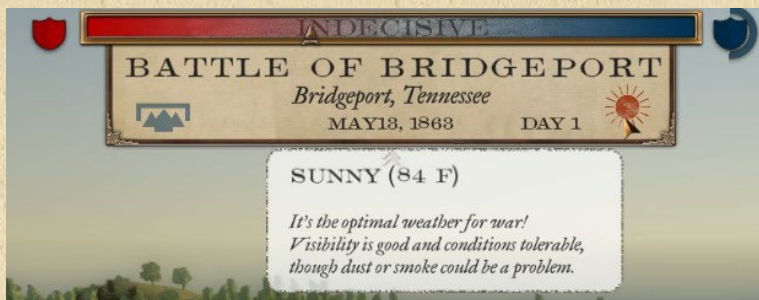
1. Battle Information:

This panel gives you the main battle information, including location, date, weather, battle type (phase) and victory balance.

Weather effects can be seen in the tooltip. When temperatures are below freezing, rivers can freeze and units can cross the ice. In rainy weather dust and smoke don't linger on the battle-field and obscure visibility, as they do when the weather is clear.

The battle phase is shown on the left side. This can be meeting engagement, attack or defend. This phase depends upon holding terrain (objectives) and can change during the battle as objectives change ownership.

Victory balance is shown in the top bar. The indicator arrow will move toward the color of the army which is currently winning the battle. It will reach the end of the bar when the opponent is forced to retreat, thus ending the battle. Both sides can withdraw before this happens by exiting the map via entry points, or by ordering a retreat.

Victory balance takes into account objective ownership, morale, casualties and the number of routed units. See the current situation in the tooltip shown, when your cursor is placed over the balance bar. If *Continuous Victory Points (VP) from Objectives* is enabled from Game Options, holding objectives will generate more victory points over time during the battle. This will make holding terrain more important, allowing a weaker side to force a strong army to withdraw if it cannot take the objectives within reasonable time.

2. Tools & Map Information:

The compass shows the direction in which you are currently viewing the map. Beneath it are the following buttons:
- **Main menu**: Allows saving and changing options, except game play options.
- **Headquarters**: Opens the HQ view (reports, briefing, objectives list.
- **Map Information Settings (1)**: Filters (2) to show information on the map. They work as show/hide (on/off).

Open/close the Map Information Settings -buttons.

Ranges: Shows the weapon range cones in bright orange for all selected units. The cone is dark orange when the unit in question is reloading.

Icons: Shows the NATO symbols of the units. Clicking the symbol selects said unit or headquarters, and the symbol offers a tooltip.

Routes: When this button is selected, all selected units will show routes as arrows on the map. If deselected, only the selected unit's route is shown. In other words, if you select a division, also the routes of the brigades can be shown. If you set to OFF, only the route of the division HQ is shown.

Command Info: Shows the command and bugle ranges, as well as command lines from headquarters to their subordinate units.

Show Fog of War Visualization: Shows the lines of sight of all your units in the paper map view. Areas which units cannot observe are shown darkened. Note that enemy units could still be concealed within the area observed by your units.

Reports:

When a battle has loaded, you will start with the game paused and in the Headquarters view. Battle information is shown on top (1). The HQ view can be entered and closed by clicking the flashing HQ icon (2) in the top right corner.

In Headquarters view you cannot zoom or rotate the map. You have three different documents available for you to read, which can be shown/hidden by clicking on the folded documents sticking out from the right-hand side of the screen (3):

- **Briefing (4):** The orders are open when you start the battle. Here you see information about the battle that is about to begin. In historical battles the information is, as you might expect, historical. In campaign battles you will see general information about the opposing armies.

- **Objectives (5):** This document shows a list of the battle-field objectives, and their ownership. Objectives are strategically important locations of on the battle-field. When your troops are holding such terrain, this will give boost confidence to the general and to the troops under his command who are holding it. This influences the decisions made by the commander, regarding his stance and actions. These include the commander making decisions such as whether or not he will attack, defend, or perhaps withdraw from the field. Whatever the outcome, it is influenced by the commanding general's personality. Even if you in overall command, if your army is under command of an inexperienced or overly

cautious general, it could be forced to give ground, even if in good condition, if the general in question considers his situation dire.

- **Statistics (below):** In these documents you will see the detailed situation of the armies, including an overview, where you will see reinforcement information among other things, condition, strength, combat and commander information. Clicking on the *unit names* will show you information about the units under the pertinent command level which includes that unit itself. Clicking on *the name of the selected unit* (top left) will move your view to the next highest level in the organization.

Navigating the Reports:

1) You must be in the HQ view to browse the reports.
2) You can open and close different documents by clicking on the folded papers sticking out at the right of the screen.
3) The report shows information as per selected report (4).
4) Reports: *Click on the folded reports (tabs)* to choose the one you wish to view.
5) *Click on the unit names* to go down to a lower level in the order of battle, all the way to single brigades.
6) *Click on the headquarters name* to go to a higher level in the order of battle, all the way up to which side you choose to command.

All reports are kept up-to-date by your staff during battles, and you may look at them at any time, by entering the Headquarters view. Remember, that if Fog of War is enabled, information about the enemy is based on best estimates, and is not likely to be accurate.

3. Time Panel:

The Time Panel allows pausing and accelerating time during the battle. Note that orders can still be issued if the game is paused. Normally the actual time is shown on the Time Panel, but should either army order a retreat, a red countdown timer is displayed instead. When the countdown reaches zero, the battle will end.

Depending on the time of year, the battle will end when darkness falls. In case both armies are determined to continue the battle, it will continue the next morning, after resupplying and redeploying has taken place.

4. Orders Panel, Army Orders & Order of Battle:

Here you can give orders to selected units. See Lesson V.

5. Unit Panel:

Shows detailed information about the selected unit or a headquarters.
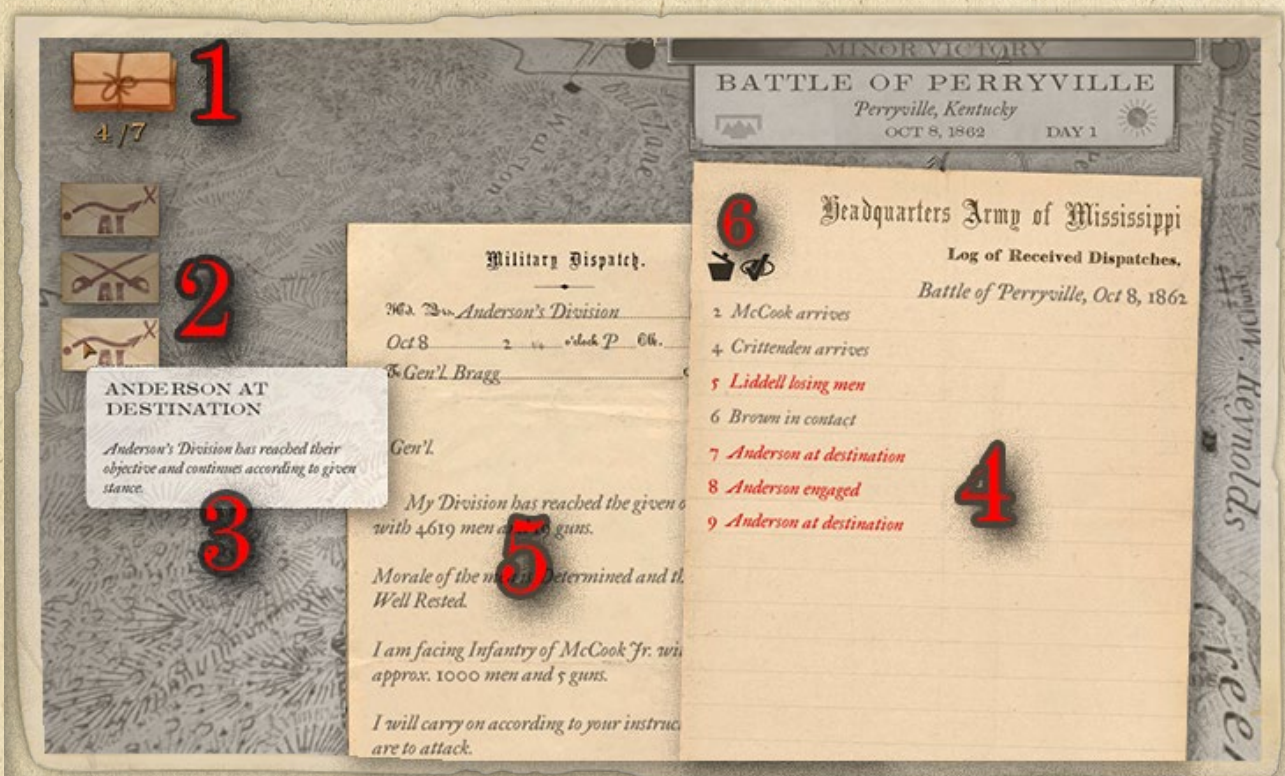
6. Dispatch Log:

During the battle you will receive information from your subordinate commanders and staff, regarding recent important events. The Dispatches you receive are stored in the Dispatch Log (1). Under the log you can see the number of unread/total Dispatches.

When a Dispatch is received, it is shown under the log (2) as a letter with associated icon. Tooltip (3) shows the basic information. *Left clicking the letter* will open the Dispatch (5). *Double clicking the letter* will move camera to the location of the event on map. *Right clicking the letter* will remove it from the screen, but the Dispatch will still be found in the Dispatch Log (1).

Clicking the Dispatch Log (1) opens the Log (4). Here you can see all the Dispatches received during the battle. Scroll the list using mouse wheel. Unread Dispatches are shown red. *Click on a Dispatch to read it* (5). You can mark all Dispatches read, or remove all read Dispatches using the small buttons in the bottom (6).

Remember, that you can also choose between a historical cursive font or the easier to read font from the Game Options.

Lesson II. - The Battle-Field, Terrain, Battle Fog of War, Weather, Objectives, Entry Points, Cover & Concealment, High Ground, Buildings

Grand Tactician's Battles take place on many of the historical, and a number of non-historical Battle Fields that may be randomly chosen when starting a campaign battle. The Battle Fields (with a few exceptions) are 8x8 miles (12,9x12,9 km) in size, and the size and scale of units and ranges of weapons, in relation to the terrain, are accurate.

The Battle Fields are made up from Terrain that connects with the units and is used for pathfinding, Entry Points that allow movement in and out of the Battles, and Objectives that are placed on key terrain, awarding Victory Points to the side controlling them. A dynamically changing Weather affects the battles and the Terrain. Lighting conditions will change due to day/night cycle, and the armies will disengage during night to continue the next day.

You have two views available: a traditional 3-D view and a paper map, drawn in period style. You can use both of these views to play the game, there are no limitations on either one. To see what the different elements on the paper map indicate, see the map's legend in the bottom left corner.

When fighting on the maps, any built entrenchments or destroyed infrastructure are not carried over to the next instance you fight on the same map.

The 3-D terrain consists of different terrain types and terrain objects that are used for pathfinding, movement and cover. Each terrain type and object affect movement speed, cohesion and fatigue of the units, and has a concealment value. Terrain objects also have a cover value.

The terrain objects connect the units to the terrain and are used for pathfinding. Roads offer the fastest movement and are preferred by units if not otherwise instructed. Sunken roads will also provide good cover to units that are deployed in them. Water is an obstacle for the units, and can be crossed only via bridges, fords or built pontoon bridges. If frozen, water can be crossed freely. Small creeks can be identified by their looks (narrow and snaking), and can be waded by units,

though it tires the men quickly. Any fences and stone walls can be used for cover by the units. Some buildings or groups of buildings can also be occupied to provide better cover.

Forest and cultivated fields block visibility. While fields may hide the men among or behind high crops, forest will also block line-of-fire effectively.

The armies can enhance the cover provided by the terrain by constructing entrenchments.

Fog of War:

In battles the Fog of War reduces both visibility on the map, and accuracy of information about the enemy. Fog of War is enabled or disabled in the Game Options menu, and the setting cannot be changed during a battle.

Your units (1) have limited visibility range and line of sight. Cavalry, especially scouting parties, can observe enemy movements from the longest distance. Enemy units that are within the visual range are shown on the map (2) given that they are not covered in terrain which provides them concealment. Enemy units outside the visual range of your units are not shown on the map.

The visual range is shown on the paper map. A gray shroud (3) is drawn over the areas your units cannot see. You can also hide the shroud using the appropriate filter (4) Map Information Settings in the Tools Panel. Information about enemy units is shown as estimates, with rounded figures. This means you will have a general idea about the enemy, but not an accurate picture. This inaccuracy is extended to all the reports and battle results as well.
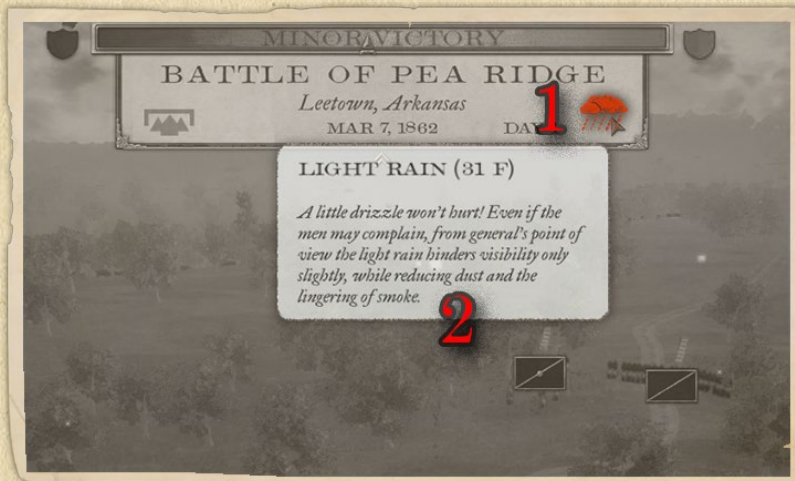
Weather:

Weather and temperature affect the battle-field and the troops. Current weather is shown in the Top Panel (1), with the tooltip (2) providing additional information about the effects. Weather can change dynamically during the battle.

During winter and freezing temperatures, the terrain will be covered in frost or snow and water will freeze into ice. Troops can cross the ice, so water is no longer an obstacle.

Visibility will be hindered in foggy or rainy weather. Rain softens the terrain, making troop movements slower and increasing fatigue. Smoke will not linger blocking visibility and weapons will suffer more misfires, reducing firepower. Artillery fire will not be as effective as during dry weather, as the damp ground may cause round shots to sink in the ground instead of bouncing and skipping along the field, and explosive shells may also sink in the mud, reducing effectiveness of fragments.

During extremely hot days troops will suffer fatigue.

Objectives:

Capturing key terrain will increase victory points and thus affect the Victory Balance. The key terrain, Objectives (1), can be found on the map, and browsed in the Objective List document in Headquarters -view.

Objectives show the amount of Victory Points they award to the owner in the number inside the shield symbol. Color indicates current owner. Troops (2) will capture Objectives when near them. The Objectives will take some time to be captured, which is shown with a timer around the symbol (1). The number of soldiers nearby will dictate the time required to fully control the Objective. If there are soldiers from both sides near the Objective, the side with more men will gain the upper hand. When capturing an enemy held Objective, it takes twice as long.

Depending on set Game Options, Objectives award Victory Points only once, or continuously if held. This can be changed using the Continuous VP from Objectives setting. Continuous VP will allow smaller armies to fare better in a battle, if they can hold on to key terrain long enough. Continuous VP can also force the other side to take the offensive.

With Continuous VP on, awarded Victory Points are accumulated over time. The progress is shown for each side in the shield symbol (3) next to the Victory Balance Bar (4). The timer around the shield shows the delay until more points are awarded. The more Objectives are held, the faster the cycle. You can see the Victory Points in the Victory Balance Bar tooltip.

Entry Points:

Entry Points are distributed around the map edges, along major routes in and out of the battle-field. These Points are shown as small arrows on the map. Their ownership is shown with the nation's color. They can be captured like Objectives by placing own troops nearby.

Entry Points allow three functions:
- Reinforcements
- Withdrawing units
- Resupplying between battle days.

Reinforcements need an Entry Point that is not held by the enemy. The direction reinforcements are arriving from is determined by the disposition of forces on the campaign map. In historical battles the reinforcements arrive along historical routes. If the Entry Point the troops are marching toward outside the map is captured by the enemy, the reinforcing unit will need to re-route to another Entry Point, and this increased delays.

Withdrawing units can be done by selecting the unit or HQ to withdraw, and then *clicking ALT+LMB* on the entry point. The mouse cursor will then change into a retreat flag to indicate withdrawal.

When the day ends, supplies are brought forward via held Entry Points. If no Entry Points are held, the army is considered cut off from its base of supplies, and it cannot resupply.

Cover & Concealment:

Different terrain types and battle-field objects provide Cover and/or Concealment to your troops. Forests provide cover against fire in addition to concealment, which is also provided in swamp and field terrain, depending on height of the crops. If Fog of War is enabled, units can remain hidden, even if the enemy is close enough to observe the terrain. The smaller the unit, the more likely it is to remain unseen. Skirmishers are best at using terrain to hide their movement. When units lay down, they will be harder to spot.

Many battle-field objects, like fences (1), walls, and embankments provide cover to your units. When you give a movement order to your unit, it will automatically search for nearby cover and move there, if not instructed otherwise by using hotkey *SHIFT* or a setting in the Commander Orders Menu.

When a unit is in cover, the information is shown in the Unit Panel (2) as used cover type, and in the morale effects (3) under Situation, as well as in the unit's NATO symbol on the map (4). Cover reduces casualties, results in increased accuracy of fire, increases morale, and counters morale shocks from incoming fire. If your units are facing an enemy in good cover, it will also affect their morale.

The best cover is provided by trenches and stone walls, and the next best by breastworks, railroad embankments and sunken roads. Wooden fences provide some cover, like creek beds:

COVER ELEMENT	COVER*	CONCEALMENT**
Fence	0.1	25
Stone Wall	0.35	35
Forest	0.1	45
Embankment (railroad)	0.20	25
Unfinished Railroad	0.27	15
Creek	0.08	20
Earth Parapet	0.4	45
Reinforced Parapet	0.45	60
Parapet & Abatis	0.5	60
Parapet & Obstacles	0.55	65
Breastworks	0.15	35
Building (when inside)	0.7	60
Destroyed Building (when inside)	0.6	55
Wrecked Building (collapsed)	0.25	50
Sunken Road	0.3	35

*The percentage of the incoming fire the cover stops from being lethal to the unit.
**Percentage.

High Ground:

Troops in elevated terrain, or on high ground, will be able to see longer distances (when Fog of War is enabled). It's a good idea to deploy your artillery on high ground, as they will be able to fire at longer ranges, and if the slope is steep enough, over the heads of friendly infantry lines (though, the gunners will not fire if there is not a sufficient safety angle to the friendly troops, as especially faulty fuses can -- and did, during the Civil War -- cause casualties among the friendly units). High ground is all-around good defensive ground also, because climbing the slopes will slow down and tire enemy units before they can reach your lines.

When you give movement order to your unit, it will automatically search for nearby high ground and take positions there, if not instructed otherwise using the appropriate setting in Commander Orders Menu.

Buildings:

Infantry units can take cover in groups of buildings or large buildings. The men can fire out from Buildings from a relative safety against enemy small-arms fire. If targeted by enemy artillery fire, the buildings will suffer damage, and may eventually catch fire and collapse. In such cases, the soldiers inside will suffer heavy casualties.

When a building, or group of buildings, can be occupied, an Enter Building cursor (1) is shown. Order the men to go inside with a *right click*. In case of groups with smaller buildings in them, the unit will split up and companies will take positions in different Buildings. All occupied buildings are marked with a flag (2).

Units inside Buildings have good cover, and the information is shown in the Unit Panel (3) as well as under the unit's NATO symbol (4). Units in cover will have a morale boost, and in case of multi-story Buildings, the men can observe and fire farther away than normally.

Order the unit out by selecting it, and giving a movement order outside the building, in which case an Exit Building cursor is shown.

Command & Control:

Command & Control (C&C) in Grand Tactician is handled via Chain of Command. This means orders are distributed from higher Headquarters to be carried out by subordinate HQs and units. For this reason, you cannot simply drag and select a random set of units and order them to move out. Instead, you need to utilize the Chain of Command for distribution of orders and coordination.

Selecting a Unit or a Headquarters (1) will show C&C information on the map (if not disabled via Map Information Settings in the Tools Panel). Following C&C information is shown:

- **(2) Bugle Range**: this is how far bugle signals can be heard during a battle. If orders are given while inside bugle range, if the order is of simple type, it will have very short order delay.
- **(3) Command Range**: units within this range are considered within reach of the commander, can be given Quick Orders. In case of Headquarters, all their subordinate units that are outside this range are considered cut off from their commander, and they will suffer longer order delays and morale malus.
- When any unit is selected, the higher Headquarters (4) Command Range (5) is also shown.
- **(6) Command Lines**: these lines show the Chain of Command. One will be shown from the selected unit to its higher HQ, and in case of Headquarters, lines are shown to subordinate HQs and units. When the line is shown dashed (7) the unit in question is Detached. If the line is ghosted, the unit is out of range and considered cut off from the HQ. The line turns into animated arrows when orders are being delivered, and the arrow line is shown static when orders have reached the unit, but the unit is still preparing to carry them out.

Order of Battle (OOB) Window:

Open the panel using the OOB-button (1). The panel shows the order of battle for your currently selected army (2). Change the shown army, using the left/right arrows (3). If no army is selected, it will open the OOB for the most senior army (the most senior commander's army).

The hierarchy (4) is always built so that the army commander is on top, and his immediate subordinates are on the next level. Individual units (usually brigades or artillery battalions) are shown stacked on top of one another under the commander.

Units that are not on the map (reinforcements or troops that have been withdrawn) are shown faded (5). Each NATO symbol will give you further information about the unit in the tooltip.

Functions:
- *Left -click* and drag or scroll to move the organization tree.
- You can select a unit by clicking on the *LMB*, to open the unit panel.
- *Double-clicking* zooms the camera to the selected unit and closes the OOB window.
- The selected unit/part of the organization (for example a division), icon(s) flashes.

Unit Information:

When you select any unit or a headquarters, information about it is shown in the bottom left corner. For units you will see detailed information, and for the headquarters averages of all the units under the HQ are displayed.

The stars on top of the unit's name indicate its battle **experience**. In general, the lower the level of experience, the more likely the unit is to suffer severe morale hits and the less effective it will be in battle.

The **commander's information** is shown below, with his battle experience displayed as stars in the bottom of the portrait. The more experienced the commander, the better will be his leadership attributes. If you hover your cursor over the commander's portrait, you will see more detailed information about him, including his fame, his leadership abilities, his initiative, his experience, and other qualities that could influence his performance on the field and during a campaign.

On the top quarter of the panel the **number of men, losses, and (artillery) guns** are shown, along with the unit's current **morale** level and **loss resilience**.

See the morale tooltip for detailed information about current morale and any active effects. The morale effects, positive or negative, will be compared and if combined the morale effects return a positive value, the unit's morale is improving and it is rallying. If the value is negative, the unit is losing morale. The values given affect the unit over time. When morale drops too low, the unit may fall back, retreat or rout. If the unit suffers too high casualties to bear (loss resilience), the unit can no longer be rallied and it cannot return to battle. Morale can also be capped during a battle due to no previous combat experience, fighting in enemy territory, support in home state, and so on.

For additional information about the **weapons** with which a unit is equipped, hover your cursor over the picture of that weapon. Here you will see about the weapon's range, accuracy, reloading rate, as well as some historical background. If a unit (such as a cavalry brigade) has more than one primary weapon, you will see information about all weapons with which they are equipped.

Infantry and cavalry units' default **ammunition** load is 60 rounds per man. For artillery the default numbers are 48 solid rounds (shot or bolt); 64 explosive rounds (shell or case shot), and 16 rounds for close combat (canister or grape). When most of its ammunition has been expended, the unit will start conserving rounds, which lowers its rate of fire. When low on ammunition, a unit's

morale will suffer. Units will not run completely out of ammunition in the game, but will scavenge for more rounds, etc. and in this case ammunition value is shown as "low."

The **melee value** indicates the unit's current strength in melee combat. This change depending upon the unit's cohesion, status, morale and weapon.

When a unit is in **cover**, the type of cover is shown in the panel. When in cover, a unit will have better cover and concealment, depending on the terrain type, and its morale will improve.

Status indicates what the unit is currently doing. If it is idle, it is waiting for orders. If routed, the unit will not respond to orders, but needs to be rallied.

Situation indicates the morale effects the unit is under at any given time. Situation effects are color coded: green stands for positive effects, yellow as warning and red as an alert. These effects are:

Icon: Effects:

This unit is facing combat for the first time. The men are unsteady and morale is fragile (capped). Training and a good commander can improve the situation somewhat.

Supported. The unit is not facing the enemy by itself, as friendly units are nearby. This improves morale. A friendly unit on each flank and in the rear for support each increase the effect.

If the star is **green**, a high-ranking commander is nearby, motivating and rallying the men. If the star is **red**, the men are shocked by the recent loss of a commander who is in their chain of command.

Cover. If this icon is **green** or **yellow**, the unit itself is in good or adequate cover. If the icon is **red**, this means that the men are disheartened because the enemy they are facing appears to be in good cover.

Low ammunition makes the men unsteady, as they cannot return fire with full effect.

Under artillery fire. The heavier and more accurate the fire, the greater the effect. Fire from a weapon classified as a "machinegun" (Williams, Gatling, Coffee Mill guns) increases the morale hit considerably.

High casualties. The unit has suffered high casualties in a short period of time and the men are shaken.

Broken units nearby. This icon will be **green**, if the unit sees routed enemies, and this will raise their spirits. If it is **red**, however, this is because they can see troops from friendly units running from the battle, which will lower their morale.

Cavalry nearby. If **green**, friendly cavalry is near, which improves morale, as usually the cavalry would stop any stragglers. If **red** the unit is facing enemy cavalry, which will worry the men.

Charged by a determined foe. If the unit is in melee and the enemy is gaining the upper hand, morale will quickly start to collapse.

Cohesion. When the unit's cohesion suffers, its formation is broken and morale will be more fragile.

Cut off. The unit is either detached or too far from its higher headquarters, and morale is slightly lowered.

Winded. The men are very tired -- so much so, that morale suffers.

Flanked. The troops see enemies are moving around an unsupported flank. The unit may then fall back on its own.

Flanking fire. The unit is receiving fire from a flank or the rear, which lowers morale considerably. The unit may fall back on its own to avoid this fire.

Falling back under fire. An orderly movement to disengage is difficult enough in combat, but under fire the unit could crack and rout.

Some of these icons may also appear on the **NATO** symbols on map, informing you of the morale status of one or more of your units, or indicating what the soldiers see, in case of enemy symbols.

Functions:
- *Left click on the commander portrait* to move the camera view close to a unit.
- *Click on the special training "perk" icon*, to assign a perk, when sufficient experience and training level is reached.
- *Click on the arrows (up, down, left, right)* next to the weapon icon on the display to navigate the order of battle. The up arrow takes you to this unit's commander, the down arrow to his subordinates, and sideways will take you to the next (right) or previous (left) unit of this level in hierarchy, within the said unit (for example it will browse all divisions within a corps)
- Minimize / maximize to show / hide information, by *clicking the small double arrow icon*.

Special Training ("perk"):
Each unit can have one specialization in the game. This "perk" is shown on the right side of the panel.

A certain level of experience and/or drilling ("training") is required to be able to assign a unit a perk. The gaining of this experience can be seen with the orange color circle that fills around the icon. When it is possible, the icon changes color to brass. *Clicking on the icon* allows you to choose the perk. There are different perks available for the different unit types (infantry, cavalry, and artillery). The tooltips will provide more information.

After the perk is assigned, it cannot be changed. A perk has three levels, with each perk requiring a different kind of action from the unit, to increase the "perk experience." For example, engineers will become better only by building pontoons and entrenchments. The perk level is indicated by the small dots on top of the icon.

Perk icon examples: Not available (left), can be assigned (middle), assigned (Zouave I, right).

When a unit has a level 3 perk, it is considered "elite" and it can be assigned a battle flag that will make it stand out in the battle-field.

Refer to APPENDIX C to see all the perks and their effects.

Officers and Headquarters:

All units in the game are commanded by an Officer, whose skills and attributes have an impact on the unit's fighting abilities. You can see the commander's attribute information in the portrait (3) tooltip, or in the Commanders -report in Headquarters view.

Units are organized under Headquarters. These are displayed on the map by a HQ NATO symbol (1). Selecting a HQ selects all units under it, and opens the HQ Panel (2) with detailed information

about said unit. The information shown in the Panel is Commander information (3), Strength and morale information (4), and combat-related information (5). Notice that all these values are totals or averages from all the single units under the command of selected Headquarters.

Feuds:

If two commanders disagreed, it usually meant trouble during the Civil War. This was one of the many reasons for disasters on the battle-field, the other ones being incompetence, bad luck and sometimes whiskey. In the game, this feuding will introduce an element of unpredictability, which many serious wargamers enjoy.

If there is a feud, it is shown as a symbol next to the unit icon. See the tooltip for more information about the effects the feud has at that moment.

When the icon is gray, this means that the subordinate either does not understand, or does not *want* to understand orders he received; he disagrees with them, and maybe does his best to delay execution. In this case, there will be a substantial delay, and the order may be carried out differently than intended.

When the icon is red, the commander in question is acting on his own initiative, disregarding any orders he has received. An aggressive commander may choose to assault the enemy, a more cautious one may deploy to defend, even if he is given an order to attack.

Feuds usually take place between commanders that are famous enough to feel they have every right to do as they please, and especially when the initiative rating of the commanders is far apart.
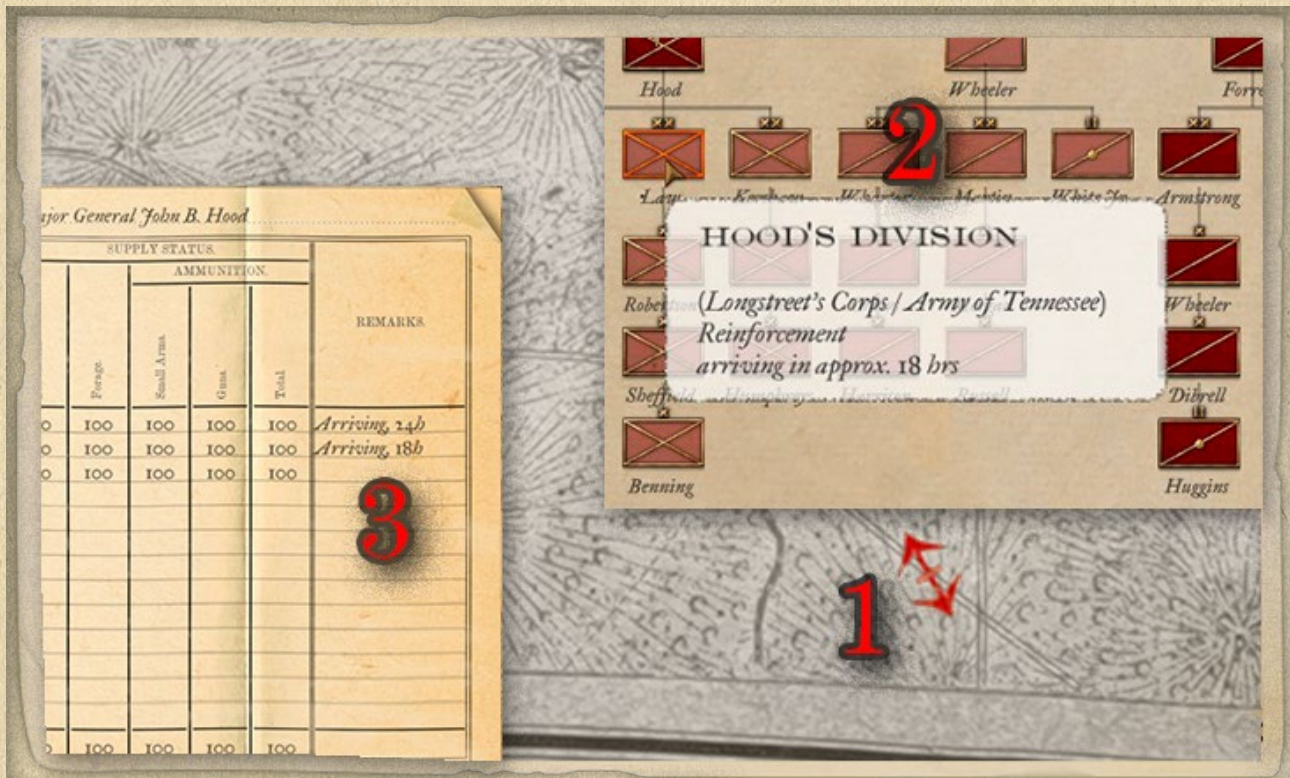
Reinforcements:

Reinforcements can arrive for both sides during the battle. Reinforcements are determined by the campaign situation in campaign battles. In historical battles Reinforcements arrive according to the historical situation.

Reinforcements arrive via Entry Points (1) that are the main routes in/out of the battle-field. If the enemy captures the Entry Point your Reinforcements were trying to reach, they will need to re-route to another Entry Point, which will increase delay. You will be notified via Dispatch when Reinforcements arrive.

To see when Reinforcements are estimated to reach the field, see the Order of Battle panel, where unarrived units are shown ghosted, and the tooltip gives more information. The Reinforcement delay can also be seen in the Condition Report (3).

Reinforcements, when near the battle-field, are counted in the Victory Balance and affect the army commander's decision to continue fighting or to retreat. If the battle ends before a Reinforcing unit has arrived, said unit will not suffer the morale and other penalties suffered by the rest of the army, and in case of defeat, is not forced to retreat.

Deployment Phase:

When a campaign battle starts, or the day ends and a new one starts, you will enter Deployment phase. During this phase you can deploy your army without order delays and prepare for the day's battle.

You will be notified (1) about the Deployment phase, along with instructions how to continue. In case of a battle starting, your units will have captured Entry Points (2) and Objectives depending on the campaign situation. When armies engage, their Stance (defensive/offensive) and Readiness affect the size of the initial Deployment zone, and number of Objectives captured.

The Deployment zone (3) is shown on the map, and you can freely move your units inside the zone without order delay penalties. *Select a unit, or a headquarters, with LMB* and move it using *RMB. Determine facing by holding RMB and rotating.*

Depending on Stance and Readiness, you will receive a number of Engineering Points (4), which can be consumed Building entrenchments (5). Clicking the Supply button (6) you can show/hide the supply information of your units. Resupplying becomes important during multi-day battles.

End the Deployment phase and start/continue the battle by clicking Play (7) in the Time Panel.
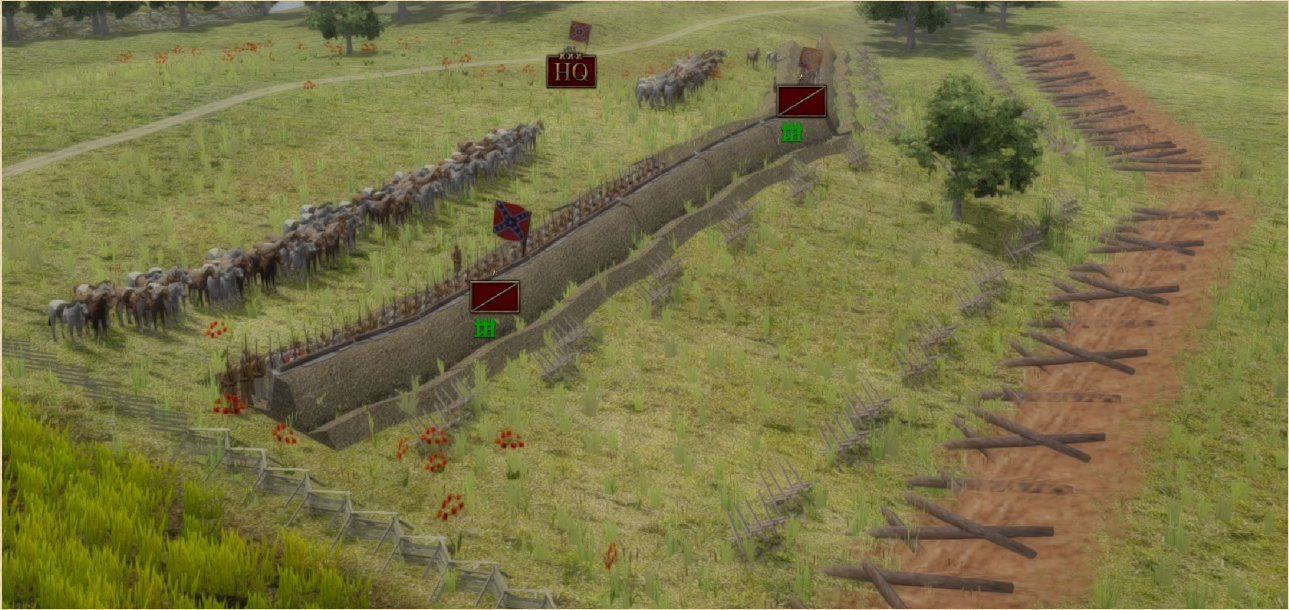
Engineering:

During the Deployment Phase you can use the given Engineering Points (4) to build Pontoon bridges, or Parapets (trenches) or Breastworks (barricades) using the Build (5) menu. You may build only within your army's deployment zone.

The amount of Engineering points depends on the Stance and Readiness of your army, as well as the amount and experience of any units with the Engineer Perk and officers with Engineer branch.

Build a barricade:
Barricades are erected from material found on the battle-field. This can include anything from rocks to fallen trees, to fence rails. A barricade can also be built during battle. It provides some protection against enemy fire, and some concealment, but not nearly as much as a proper trench would.

Build a trench:
This option is only available during the deployment phase (pre-battle, or between days). Trenches provide very good cover to your men, and good concealment. There are four levels of trenches:

-**Level 1**: Simple trench line, hastily dug.
-**Level 2**: Trench with support for weapons, firing slits and cover from observation and weather. Offers better protection and concealment than Level 1.
-**Level 3**: As with Level 2, but with abattis added in front, at effective weapon range, to slow down an attacking enemy, and to break their cohesion.
-**Level 4**: As Level 3, but with the addition of *chevaux de frise*, which are spiked obstacles originally used to counter enemy cavalry charges. This level offers the best possible cover and concealment the troops could wish for and is nearly impossible to break with a frontal assault.

To build a line of entrenchments, select the type from the building menu (5) and then with **LMB** determine the left edge of the line. Using **LMB** you can determine angles to the entrenchment line. If the ghosted line is shown red, it means it cannot be built. Use the small buttons that appear on the line of entrenchment to:

Finish the line. During deployment phase the entrenchment will be ready to use instantly. During the battle, the line of breastworks needs to be constructed first by any infantry unit.

Remove the previously added angle, i.e. go back one step.

Cancel the line. The line will be removed.

Parapets (trenches) can be upgraded with the Engineering points by pointing at a built line, using **LMB** when the Upgrade cursor is shown.

If there are suitable pontoon bridge sites inside your Deployment Zone, they are shown ghosted on your map. **LMB** on the pontoon site when Build Pontoon cursor is shown to build it. Note, that a unit with Engineer-perk is required.

End of Day & Supplies:

When night falls, fighting will end and you will enter Deployment Phase. The time this happens is determined by the time of the year and lighting conditions. The first thing you will see is the Resupply situation of your units. The information can be enabled/disabled using the button (1) in bottom right. All brigades under same HQ will level their ammunition automatically during the lull in combat. This means, that even without supplies reaching the units, Brigades can distribute their carried ammunition between them.

The supply units of each Army and Corps (2) will enter the battle-field via Entry Points, if one is available. Units under Armies and Corps are resupplied as long as they are within their command range. The Resupply situation and level for each HQ and unit can be seen as a barrel icon (2), which offers details in the tooltip (3). The lines (4) indicate where the supplies are delivered to the units. Resupplying effectiveness depends on the distance from Entry Points to HQs and to units (4), as well as the Administration attribute of commanders.

Army and Corps HQs' Resupply information shows the number of supplies left in the supply trains. For example, 400% means full supplies for four days full consumption. If the supply trains run empty, and units are not resupplying, condition of men and horses will start to deteriorate, which makes the units fight less effectively, and lowers their morale.

After the day's battle you will receive engineering points (5) with which you can construct new entrenchments (6). You may also redeploy your units within the calculated Deployment Zone. Note, that the deployment zone is calculated from the HQ units of each army. In the Army Orders (7) you can choose to use the cover of the dark to retreat (or to surrender). Press Play (8) in the Time Panel to end the Deployment Phase and continue fighting the next day.

160

REMARKS ON FIRING.

45. In the presence of the enemy, the kind of fire will be determined by the character of the ground, and the state of the action.

46. A battalion, having in its front a height, or other obstacle to its fire, will advance as far as necessary, in order that its fire may be effectual.

47. Artillery having in general a greater range their infantry, should open its fire previous to the infantry battalions. The battery should protect the infantry while moving forward to attack with its fire a position in front; it should fire when the infantry advances, and withdraw when the latter commences the fire. The battery, in general, will not be moved in front of the troops, and without urgent necessity, it will not remain exposed to well sustained fire of the enemy's infantry. If so exposed, its fire will be rapid, so as to inflict as much loss as possible or the enemy.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

Lesson V. - Orders, Order Delays, Stances, Movement, Coordination

Orders in the game are given by selecting a unit or a HQ, and then issuing the order. When giving orders to HQs, the order will be carried out by all units attached to it. If you issue a movement order to a Corps, all Divisions and Brigades under it will receive the same order. If you have given earlier orders to subordinate units within the Corps, the new order will cancel the previous ones. Detached units are the only exception.

When giving an order to any unit or HQ, the order will be issued by the next highest HQ: in case of Corps, the order will be issued by the Army HQ. This will have a great impact in the way the battle game play works, when Order Delays are activated, and the orders need to be delivered to the subordinates from the HQs.

When units are engaged in combat, they may be unable to carry out all orders. Routed units cannot be given orders. This Lesson describes all the orders you can give to your units in Grand Tactician's battles.
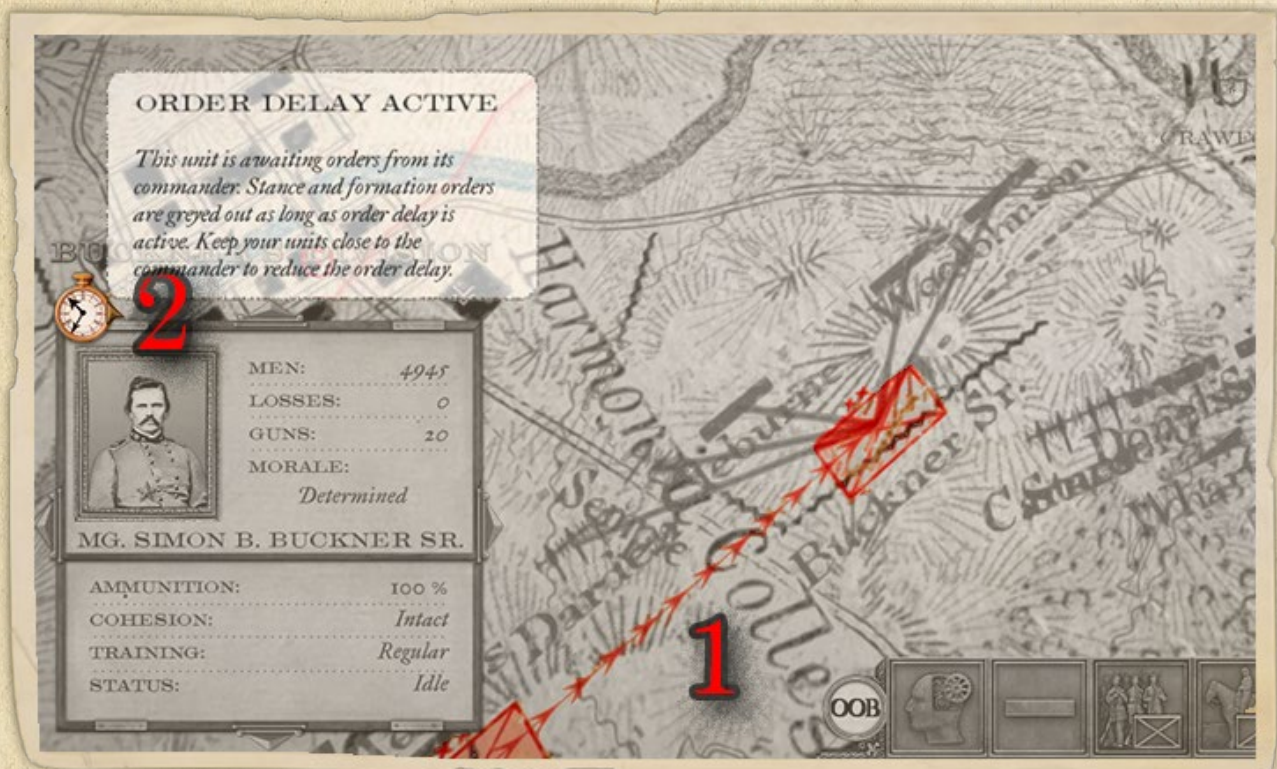
Order Delays:

In Grand Tactician, orders need to be prepared by HQs, then delivered to the subordinate units, who will then prepare themselves and carry out the orders. All this takes time, which is called Order Delay.

The Delay depends on used communication method, distance, commanders' Initiative rating, order type and the number of units the order is given to. For example, when you order a Corps to move as a unit to a new position, the movement order is first prepared by the Army HQ. Once the written order is ready, it is carried by a courier (a messenger or a staff officer on a fast horse) to the Corps HQ. Upon receiving the order, the order is read, and orders to Division commanders are written. Then these orders are delivered to Division HQs, that in turn prepare and distribute orders to the Brigades. Once the order has flown through the Chain of Command, the Corps is ready and will start moving out.

You can see and hear the ordering progress. In the Command-and-Control information, the Command lines (1) turn into animated arrows when an order is on the way. The arrows stop moving when the order has been received, but not yet executed. You can see the couriers riding and hear bugles playing the signals. When a unit is selected, if Order Delay is active, it's shown in the Panel (2). The HQs prepare one order at a time. In the previous example, if instead of ordering the whole Corps to move, you order each of the individual Divisions to move independently, the orders are prepared in the Corps HQ to each Division separately, and sent one after the other. This will result in further Delays.

When units are close to one another, Order Delays will be shorter. Also, many orders can be delivered using Bugle Signals, and these will be carried out even faster. It's a good idea to keep your forces and organizations concentrated.

Couriers in the game cannot be killed or intercepted. Feuds may cause very long Order Delays, as an unhappy officer may intentionally delay carrying out orders, he received from a commander he does not agree with.

Order Delays are enabled in the Game Options, and the setting cannot be changed during a battle.

The Orders Panel:
Except for movement, orders are given via the orders panel in the bottom of the screen. Each button opens a sub-set of buttons. Just as is true with any other orders, most of these orders are also subject to order delays. The buttons will display as grey when case orders are being delivered, or if the selected organization has no units of the type of unit for which those orders can be given (infantry, cavalry, or artillery).

1. AI stance:

Give an AI stance:
Place a group of units (division or corps) under AI command. Under AI command the group's commander gives orders to his units during a battle. You can order which route the unit will follow. Giving orders to individual units is still possible, but the AI commander may overrule these orders later.

The AI commander can detach skirmishers if he thinks they are needed to cover his group's battle line.

Assault:
The group will try to break the enemy line by moving aggressively to close range, and then charging the enemy. If possible, artillery will first be used to soften the enemy line by bombarding it, before the attacking units of infantry or cavalry are ordered to charge.

Attack:
The group will try to break the enemy line in a firefight. If enemy flanks are perceived, the AI commander will try to turn them with some of his units, depending upon his cunning rating. Skirmishers can be used to pursue retreating enemies.

Defend:
The group will hold its ground. If a movement command is given, and the group makes contact with the enemy, it will deploy to defend instead of pushing forward. Once the defensive line is deployed, a skirmish line is thrown out to harass any attacking enemies.

Screen:
The group will engage the enemy. If the enemy attacks, units assigned to screen will fall back if they are attacked. Cavalry may deploy vedettes (the cavalry version of skirmishers) ahead of the moving friendly units, and infantry will deploy a skirmish line. Screening is a good order for feint attacks and demonstrations, or for engaging in a delaying action against a stronger enemy.

In both assault and attack stances, once the enemy is defeated, the group will continue to the original objective, as ordered by the you. In both, defend and screen stances, the original movement order that you have given is cancelled when contact is made with the enemy.

To remove a group from the AI command, click on the *active stance button*.

For more information about the AI, see the commander orders section and AI interruption below.

Using the AI Stances and Interruption:

When the commander's initiative is on, or the group has been given a stance, the unit will move according to orders it has received, but will interrupt its movement if the unit comes into contact with enemy troops.

Without a stance the unit will stop and deploy to face the enemy, but after this, will only inform you of the situation, and otherwise, will not take any further action.

If the group has a stance, once deployed, the AI commander will start acting according to his orders, i.e., assault, attack, defend, or screen.
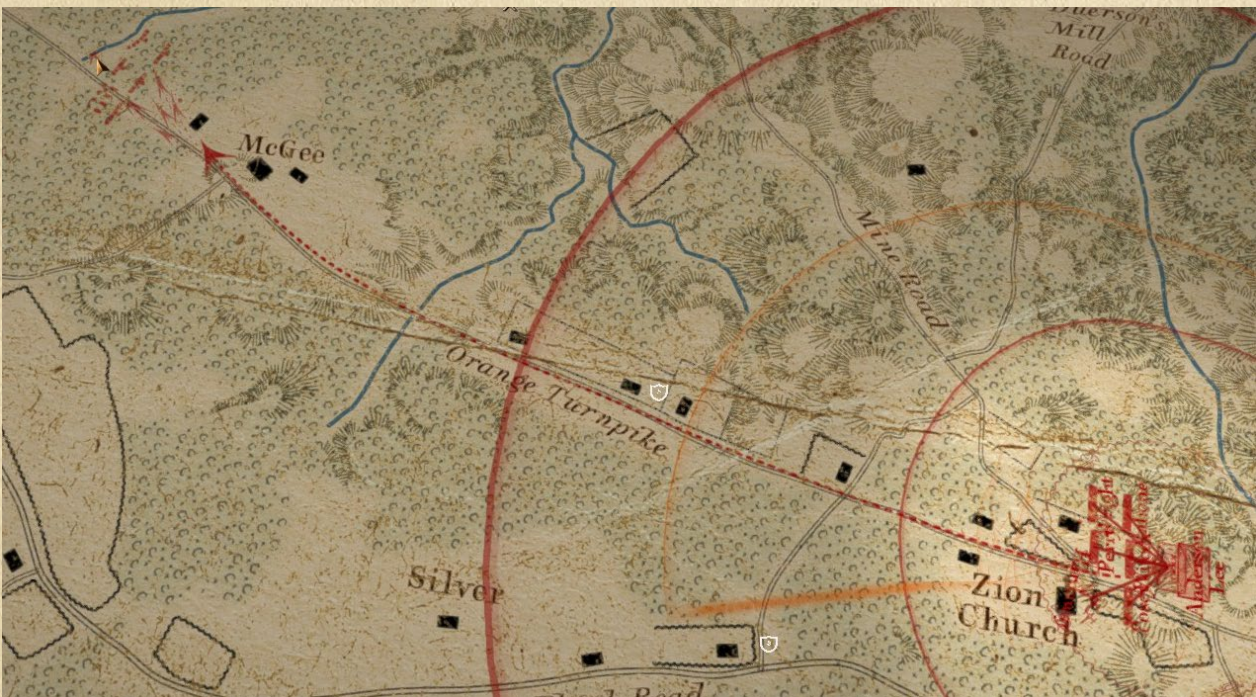
In the example above, a division with attack stance is ordered to move all the way beyond McGee's farm. The unit starts movement in column along the road.
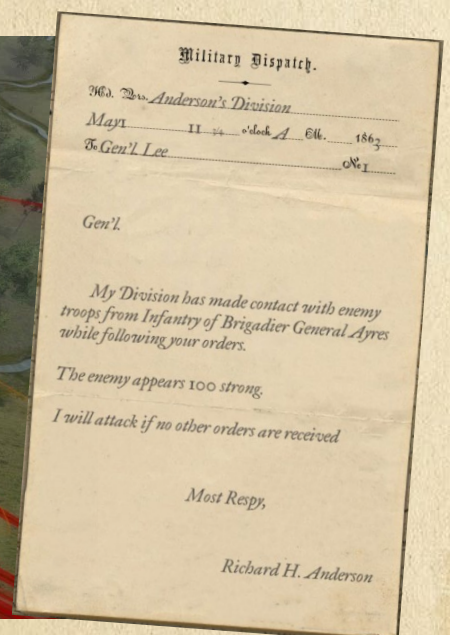
While on the move, well before reaching McGee's (the houses shown in the above image), the division's lead unit spots an enemy unit moving toward it and deploys into line. Note that deploying into line does not mean deploying into a single line, which, in the game, is a different formation. The division commander, in this case General Richard H. Anderson, interrupts the movement order and begins to deploy his command for battle, informing you, his commander, via a dispatch about his intentions.

Once the division is ready, the AI, General Anderson will give orders to his brigades to attack the enemy in front of him.

In the above image you see Anderson's brigades moving to engage the enemy, preceded by a screen of skirmishers. The AI will continue to dispatch orders to its units, even if you attempt to intervene and give overriding commands to individual brigades. Your orders will also be carried out, but this may cause some confusion with the AI's battle plan.

The AI commander will continue to fight for a long as its unit is engaged. If the unit loses contact with the enemy, it will continue movement according to your original orders - in this case to march past McGee's farm.

The AI used with stances is the exact same as that of the opposing army. By this we mean that, in essence, your AI will behave in the same way as will enemy AI (though this may not always seem to be the case).

2. Formations:

Formations available for single units:

Line formation:
The unit forms a line, two ranks deep. This was the basic combat formation for infantry during the Civil War. It provides the best firepower to the front, and a unit in line can stand charges reasonably well. If you order a long movement, the unit will automatically deploy into marching column formation, and then deploy back into line, when close to the enemy, or before reaching the objective.

Assault column:
The unit will form a deep assault column of multiple ranks, depending upon the size of the unit. Firepower in this formation is limited, as only the front ranks can use their weapons, but the mass of the formation should break the enemy line in a charge, especially if the defending enemy's cohesion or morale has suffered.

Square:
Square formation is only available to infantry units. The hollow square formation is designed to be used against enemy cavalry charges. It was no longer commonly used during the Civil War, as infantry firepower was usually sufficient to break enemy cavalry attacks when the infantry was in line. The square provides firepower to all sides, but cannot move, making it vulnerable to enemy artillery fire.

The unit commander gives orders to change the formation, so there is no delay order involved.

Group formations:

Single line:
The whole group is deployed in a single line of battle. Artillery and cavalry are placed on the flanks. This formation provides the best firepower, but there is no reserve should an enemy break the line. In the case of larger formations, such as corps, the individual divisions are deployed side by side, also in single line.

Double line:
This formation places the group into two lines of battle, separated from one another by roughly 150 feet. Artillery is placed in the front line and cavalry on the flanks. The double line formation offers good firepower to the front, but the second line is kept back as a reserve, in case the first line is broken. Note: the two lines are formed within divisions. If case divisional organization does not exist; the single units will form a single line.

Successive lines:
Napoleonic theory at the time of the Civil War emphasized breaking the enemy line with a numerically superior force, using the bayonet. Successive lines formation is intended to offer maximum weight of numbers against a small segment of the enemy battle line. The first line would be used to break the

enemy line, and the succeeding lines would widen the breach, or push through it. During the Civil War, most assaults in this formation ended up in chaos, with lines getting mixed up with one another, and enemy firepower mowing the attackers down before they could break the line. But maybe in some situations...?

Assault column:

The group is formed into a single line, with infantry and cavalry units forming a deep assault column of multiple lines. As with the successive lines, this formation can be used to concentrate a superior force against a segment of the enemy battle line, with a focus on the push of the bayonet.

Refuse flank (left or right):

Giving this order causes the group to skew the battle line left or right, to counter a possible enemy flanking move. This will reduce the overall firepower available to the front, but will secure the flanks, especially if the line is anchored to high ground or to a water obstacle like a river.

March columns:

This formation orders the group to deploy to in ready marching columns. The benefit of this formation is mostly in the small physical area it requires for a large body of troops, but troops in march columns are vulnerable to artillery fire, and they are useless in combat.

When ordering a group to move long distances, that group's units will automatically form into march columns, as maneuvering a line of battle over terrain, especially if it is rough or broken, is a very slow and tiring business.

If a road leads to the selected destination, the group will form a marching column on the road, or multiple roads, for the best speed. Cavalry will form in the front of the column and artillery will usually take its place in the rear.

3. Infantry Orders:

Infantry was the main branch of service during the Civil War. Battles were decided by infantry, and the other branches were there to help them make it happen.

Usually infantry fought in line formation, two ranks deep, and the main fighting unit was a brigade, generally consisting of 3-5 regiments. The effectiveness of a brigade came from the weight of numbers, as the weapons were usually muzzle-

loading muskets, with a limited rate of fire. Usually, the battle line was screened by skirmishers, who would fight in open order, while the main body itself fought shoulder to shoulder.

Engagement Orders:

Engagement orders allow you to control how you wish your infantry to engage the enemy. The units will behave accordingly, if their actions are not interrupted by strong enemy fire, casualties, or loss of morale. When a unit is under AI command, the commander will use engagement orders according to his own judgement.

When moving, this order will define at what distance from the enemy to the unit will stop to engage, and on defense the unit will wait until the enemy is within set range before engaging in combat

Long range:

Open fire at enemies as soon as they are within range of the weapons. At long range, a unit's fire will most likely be inaccurate, resulting in more ammunition wasted than casualties caused, but it may intimidate the enemy to return fire and interrupt their original plans. For infantry, long range is usually some 300-400 yards, the maximum effective range in combat conditions.

Skirmishers, infantry in buildings and cavalry will always engage enemies starting from long range.

Medium range:

Wait till the enemy is within effective range of the unit's weapons, before opening fire. At this range volleys will cause more casualties, as it takes less skill in aiming to hit a target. Usually some 150-200 yards.

Short range:

"Wait till you see the whites in their eyes!" Waiting for the distance to enemy close takes good discipline and nerves, but at close range the fire is most effective, as it takes really no skill to hit the enemy, even by accident. During the Civil War short-range engagements, even with the relatively modern long range rifled weapons, were very common, with distances between the lines being as low as 30 yards.

Charge:

With this order, the troops will move close to the enemy (short range), let loose a devastating volley, and then charge the enemy line using the bayonet. If the charge succeeds, the volley will break the enemy cohesion, and the charge will break the line. But it's as likely that their own formation will be swept badly by enemy fire, and the men are compelled to stand their ground and return fire. Note: If you don't want your men to halt and deliver a volley, use the **ALT-RMB** command. If you issue this order, they will charge using the bayonet only.

Deploy / Recall skirmishers:

This order causes the unit to detach a skirmish line. Usually from a brigade, one regiment would skirmish, while the rest remained in line formation. The skirmish line is by default deployed to the front of the unit, and will hold this position if ordered otherwise. Small units don't have enough men to spare to detach skirmishers. When deployed, using the same button, the skirmishers can be ordered to re-attach to their parent unit. The skirmishers will join the parent unit on their own, if they are swept aside by the enemy, or if they run out of ammunition.

Lie down / rise up:

Having the men lie down will help under fire, as the number of casualties will be reduced. When lying down, the unit cannot move, and the effect of their firing is reduced, because of limited visibility from the ground level, and due to the difficulty of reloading weapons, especially the muzzle-loaders. Skirmishers and units with Zouave (light infantry) training will fight reasonably effectively even if lying down.

Units may also lie down on their own, especially if under artillery fire or strong enemy fire that they cannot match with their own.

4. Cavalry Orders:

Cavalry during the Civil War were not the dashing and charging shock troops of Napoleonic times. Instead of charging to break infantry lines, their primary functions were reconnaissance; raiding; screening the movements of large armies; protection of supply trains, preventing straggling and delivering dispatches. The Confederates were first to use their cavalry as an effective force in combat, under the legendary General J.E.B. Stuart, but later in the war the Union troopers began to catch on, helped by reorganization and training. A few large cavalry battles were fought, such as at Brandy Station and Winchester, and sometimes the cavalry also engaged fighting dismounted, like Buford's division at Gettysburg, or Wilder's troopers at Chickamauga.

What makes the cavalry useful in your armies is their speed and flexibility. In battle, you can use them to harass enemy movements, forcing the foe to deploy into lines of battle, and then slipping away. You can also use your cavalry to engage enemy cavalry, or even hold their ground against enemy infantry if the ground is good. The troopers are usually armed with smaller carbines, which have a shorter range, but often a much quicker rate of fire, or even (in the case of Confederate cavalry) simple shotguns.

Loose formation:

Loose formation orders the dismounted cavalry to deploy into an open formation, similar to that of a skirmish line of infantry. The troopers will then fight more independently, and accuracy is improved, as each man has more space to handle his weapon. Melee in loose formation is less effective, as the men cannot support

one another properly, and are not well-trained in fighting this way while dismounted.

Cold steel:
If you order your cavalry to use cold steel, they will prefer charging the enemy, instead of peppering them with carbine fire from the saddle. When this order is not given, they will prefer firearms, but firing from the saddle is not nearly as effective as if dismounted - though it could still be a nuisance to the enemy.

Evade:
If ordered to evade, the unit will keep its distance from enemy units, and move back if under small arms fire. If the enemy presents its flank, and no fire is received, though, the cavalry will keep on firing.

Lie down:
Ordering your men to lie down will help under fire, as the number of casualties will be reduced. When lying down, the unit cannot move, and the effect of their firing is reduced, because of limited visibility from the ground level, and due to the difficulty of reloading weapons, especially the muzzle-loaders.

Units may also lie down on their own, especially if under artillery fire or strong enemy fire that they cannot match with their own. Lying down requires dismounting, of course.

Mounting / dismounting:
Issue a cavalry unit this order to have them mount or dismount. When dismounted, the horses will be moved to the rear.

The unit may mount or dismount also on its own, depending on the situation and initiative setting (see commander orders below). For example, the troopers will move long distances mounted, and routed cavalry will also mount up. Dismounting may occur when the enemy is near, and cold steel orders are not given.

Deploy / recall scouts:
A small scouting party is detached from the main body. This scouting party will ride ahead of the main body to see if the selected route is clear of enemies. As a small mounted party, they are very fast. The scouts will not try to engage enemies, with their small numbers. Scouts can only be detached if there are enough troopers in the parent unit.

5. Artillery Orders:

During the American Civil War, artillery was the main supporting branch to the infantry. During the course of the war, artillery organization and number of guns in an artillery unit changed, as single batteries were formed into artillery battalions and brigades, and artillery reserves were formed.

Artillery gun technology advanced in leaps and bounds just before, and during the Civil War, with the early war seeing more brass smoothbores, while later more rifled guns (made from cast or wrought iron) were introduced.

Artillery units are equipped with three basic ammunition types: solid shot, explosive shot, and canister. The different types of ammunition are effective in different situations, with the explosive shell and case rounds being the most commonly used. While smoothbores (such as the Napoleon) fire round shot that is less accurate, but can bounce along the ground, the rifled guns use more accurate bolts that usually dig in upon impact. Your artillerymen know to use the best ammunition types in each target situation, for example a mix of solid and explosive rounds against targets in the open, or canister against enemies within canister range.

When an artillery unit is firing, it takes a few rounds to zero in on the target. Explosive rounds (shell and case) were usually used to zero on the target, as the fall of shot was easier to observe, thanks to the burning fuse, and the eventual explosion. Depending on range and crew skill, it takes some time to make the fire accurate, and to reach optimal rate of fire, which at the time of Civil War was considered only one shot per gun every few minutes, even if faster firing was possible. This allowed sighting of the guns between shots, and prevented the field pieces from overheating or otherwise getting into bad condition.

Bombardment:

This order causes your artillery to fire using best possible rate of fire against targets in a certain area. When you click this button, you must next define the target area by *RMC on the terrain*. Hold the mouse button down and drag to change the size of the target zone. When the target zone is defined, the bombardment start time is given. If you want to start right away, just click on the "tick" button, and the gunners will start loading their pieces. You can also order a specific time for the bombardment to begin, so as to synchronize the fire with movement of your troops.

Clicking on the button again will cancel the bombardment order.

Counter-battery fire:

Counter-battery fire orders the gunners to concentrate their fire on the nearest enemy artillery units. Rifled guns are more accurate in this role. If no enemy artillery can be engaged, then the gunners will keep firing at other enemy units.

Fire at will:

When fire at will is on (highlighted), the gunners will open fire at any enemies within range. If it is off, they will wait for your order to fire, except in cases where the enemy is very close, and the situation calls for self-defense.

Limbering / unlimbering:
Click to manually limber/unlimber the guns. You may want to do this at times, even if the gunners do limber/unlimber automatically when moving long distances or deploying the guns in firing position.

6. Commander orders:

Each unit and group in the game has a named commander, who will give the order to his subordinates. In the case of groups, the commander has his own unit, which will move on the battle-field according to his own decisions (AI). From this menu, you can influence the decisions made by your AI commanders, when directing the troops under their direct command.

Allow initiative:
This is an on/off button that will allow an AI commander to take charge of minor details. By default, "allow initiative" is turned on. For group commanders, this means deploying combat ready to meet an enemy that has been encountered. If your AI commander does so, he will also report this contact via dispatch. Movement of his troops are halted, and his units are placed in a combat-ready formation. Note that if this AI stance is not set, the group will simply wait for yours orders. For individual units this control will be for the relatively minor details, such as mounting/dismounting, lying down to find cover, etc.

Use roads:
This is an on/off button that tells your commander to take into account, or to ignore, roads when planning the movement of his unit or group. By default, "use roads" is on. Sometimes, even if taking the road would be faster, it will be better to tell the troops to move cross-country. This helps in maintaining formation, and in keeping combat readiness.

Use cover:
Use the on/off button to order your unit to deploy to nearby cover in the terrain. By default, this option is always on. When on, units will find cover automatically at the end of their movement routes, depending upon facing. Such covers include fences, railroad embankments, entrenchments, and on the like. At times, you may want to have your troops ignore cover, as this will help maintain formation.

Units in cover will receive a morale boost, and units facing an enemy that is behind cover will be disheartened by this fact, and their morale will suffer.

Use high ground:
Click on this *on/off -button* to order your troops to deploy on the highest point of terrain near the ordered deployment area. By default, this option is turned on. high ground offers better observation and longer range for artillery. Sometimes you may wish to deactivate this setting to deploy the troops exactly where you want them.

Detach / Reattach:

By default, if you give orders to a group, all units in the group, according to their order of battle, will receive the orders and act accordingly. If you detach a unit, or a group, it will no longer be a part of the higher organization, when you are giving orders.

There are ups and downs to this. First, it allows you to detach a part of your forces for independent tasks, such as being used to cover flanks or to be used as a reserve later. The downside is that the unit will no longer receive any bonus from its higher-level commander's leadership and guidance. The unit will instead need to cope on its own, lowering the morale a bit, and the higher commander will (among other things) not be able rally the men, if morale is broken.

Click to detach a unit. Once detached (i.e., when orders have arrived), the command line to this unit will appear as dotted. The unit will still receive movement orders from his commander. Click again to re-attach.

Rally:

This is another on/off button for group commanders, and by default starts off. When the troops are losing morale, or routing, the rally order will send the commander to whichever of his units that has the lowest morale, and he will then attempt to inspire and motivate them to pick up their arms and return to battle. AI commanders in this stance will rally automatically. Detachments (skirmishers, scouts, and artillery capture detachments) will not be rallied. When they break, they will automatically return to their parent unit.

When rallying, the commander takes a personal risk by moving to a unit with low morale. This may mean he goes to the front line, where he is likely to be under fire, which increases the risk of his being hit tremendously.

7. Entrenchment:

Constructing field works became increasingly popular during the Civil War, not the least because of the improved firepower of the weapons used. While during the early war entrenchments were simple, hastily constructed breastworks, by the end of the war, especially during the siege of Petersburg, the battle-field was covered with reinforced trenches and obstacles, making a head-on attack a very dangerous affair for the attackers, if the field works were fully manned.

You can build entrenchments for your troops during a battle. During the pre-battle deployment (which is the time they have at hand before battle is joined), depending upon the readiness of your men, you can build breastworks (barricades) and trenches, as well as upgrade existing trenches. Pontoons can also be laid in suitable locations if within the deployment zone.
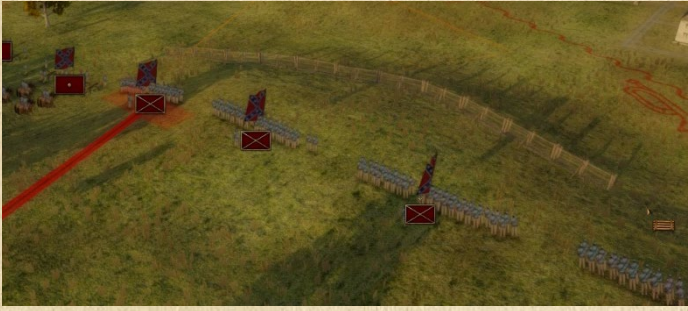
To build an entrenchment, click on the appropriate button. *With LMB you can place the left edge of the entrenchment*, and then moving the mouse, you will see a faint line, indicating where the entrenchment would be placed, and the direction it will be facing. If the segments are shown as red, this means the terrain is not suitable; the area is out of reach, or you have no more engineering points available.
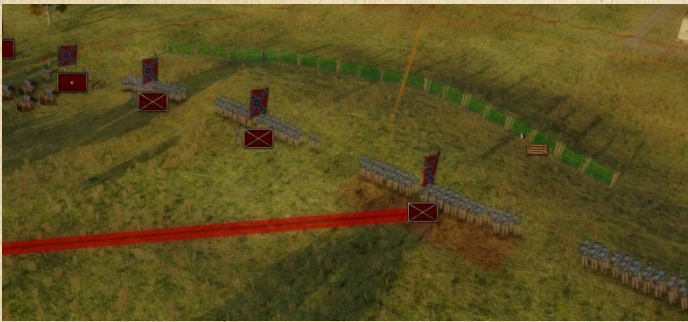
Each click of the LMB creates a new point in the line. Use the buttons that appear above the entrenchment line to Finish or Cancel construction of the line, or to remove the previous point in the line.

As described in Lesson IV, during the pre-battle deployment phase, entrenchments are built up instantly. You can also spend engineering points to upgrade trenches that have already been built. There are four levels of entrenchment, each of which will improve the defensive value of the

trenches. Move the cursor over the finished trench and the cursor will change into "upgrade trench": *click on the LMB to make the upgrade*.

During combat, you can only hastily erect breastworks (barricades). These are planned according to the above description, but need to be built by your infantry.

If an infantry unit is selected when planning the line of breastworks, upon finishing the line the unit will move up and build the line, then take cover behind it. Building the line takes some time, and cannot be done under fire.

If the line was planned with no unit selected, it will remain planned (transparent) on the terrain. Select an infantry unit and move the mouse over the planned entrenchment. The cursor turns into "build" and *using RMB will order the men to move and build the barricade*, and then take position behind it.

Suitable pontoon locations are shown in the terrain as transparent pontoons. You need an engineering-capable unit to build pontoons. Select the engineers*, move the cursor over the pontoon and click on the RMB to order the men to move and build the pontoon*, when you see the "pontoon" cursor.

8. Movement:

Here you can order your men to halt or to move faster. Orders to move faster are carried out without delay, but halt movement will require orders from the commander.

During the Civil War American troops used French marching cadence, which is slightly faster than the old one from the times of the British Army. Normal marching cadence is 110 steps per minute, called the quick time (regular time of 90 steps was used only for drilling raw recruits). Regular cadence helped keep the cohesion of formations, as well as made it possible, along with a regular step length, to estimate the time it would take to march troops around the battle field.

There were a number of manuals used to drill troops during the Civil War, especially at the beginning. Confederate troops were drilled, most commonly, according to Hardee's manual (named after the writer, William J. Hardee, who would become a lieutenant general in the Confederate Army). The most common Federal manual was written by General Silas Casey, but it was, in reality, essentially a rewrite of Hardee's, as it did not seem appropriate to the U.S. Army to be using a manual written by a rebel. Whichever manual was used, each soldier was required to carry out the instructions, but of course the level of training received by the soldiers would decide how well it actually worked.

Halt:
Orders the unit to halt. It will cancel any movement order given to the unit, or group, removing the route they were taking as well.

Double quick time:
A unit given this order will move faster. Infantry will use the double-quick time cadence of some 165 steps a minute. Cavalry will move at gallop. This will be more tiring to the men and horses, especially if they are not properly drilled, and fatigue combined with rough terrain can easily break the cohesion of a unit.

Run:
This order can be given to skirmishers, who operate in open formation, and to Zouaves, who were drilled in moving rapidly in the heat of the battle, even when under fire.

Instant orders:
There are instant orders that can be issued to individual units without any order delay, as the order is considered to have been given by the unit's own commander, on his own initiative:

Attack: Place your cursor over an enemy unit, and it will show a "target" symbol or "crossed swords." If you see a target, the unit will engage the selected enemy. If the enemy unit is outside weapon range, your own unit will first move closer. If you see crossed swords, a bayonet charge (without your troops halting to fire) will take place. *Right click to attack*. To activate "charge," you may need to *press ALT* on your keyboard.

Enter building(s): Larger groups of buildings can be occupied by infantry. Your cursor will turn into the "enter building" symbol, and *right clicking* on the building itself orders the men to enter. When your troops are in buildings, *right clicking on terrain* will cause the men to come exit the buildings.

Build a pontoon: If you place your cursor over a suitable pontoon site, you can order the pontoon bridge to be constructed. This requires engineer training from the unit in question.

Capture cannon: if a gun crew leaves their guns behind, because of being killed or routed, the artillery can be captured by infantry or cavalry units (if they have no skirmishers/scouts detached). When a unit is selected, moving the cursor over an abandoned gun will change the cursor to "hitch artillery." *Right clicking* will detach a party of soldiers that will man the captured guns and turn them against their previous orders.

Orders to skirmishers and scouts: As skirmishers and scouts are independently operating formations, they can be given movement orders without order delays. This makes them quite flexible, but remember their capability and fighting power is limited.

Some of the orders within the bottom panel are also carried out without delay:
- Detach/recall skirmisher/scouts (infantry, cavalry)
- Lie down/rise up (infantry, cavalry)
- Dismount/mount up (cavalry)
- Loose formation (cavalry)
- Unlimber/limber (artillery)
- Change single unit formation (infantry, cavalry)
- Take initiative, use cover, use high-ground, use roads, rally (commanders)
- Double quick time, run, stop running (all)

Army orders:

Click the *star button* to open army orders:

Order a retreat. Your army will try to retreat from the field in good order. When clicked, the battle timer will turn into a red countdown timer. After the countdown reaches zero, battle will end. Units that are in contact with the enemy, or low on morale at the end of the battle can suffer higher attrition in desertion and stragglers.

Surrender: Stop the bloodshed of your boys by surrendering your army to the enemy. All the soldiers in your army will be captured by the enemy. Some will be paroled and will return to the pool of recruits.

Movement Orders to Units:

The chosen unit is ordered to move by selecting it, then *right-clicking on the position to which you want the unit to move*. Holding down the RMB allows you to determine facing at the destination. When the RMB is released, the order is ready.

When you give an order to a unit on the battle map, you will be presented with an on-map set of buttons, depending on game options settings (either by default, or by hovering cursor over the waypoint icon, shown left).

The game will be paused for as long as this panel is shown. The panel offers following controls:

To issue a movement order, or to cancel it, use following buttons:

Issue orders: The order is to be followed as soon as received.

Cancel orders: The order is to be ignored, and the routes are deleted.

The order can be determined to be carried out either on command, or at a certain time:

On my command: The selected units will make preparations to carry out the order, but will not move out, yet. Once ready, a bugle icon will appear on the units on map, and clicking this button will cause the order to be executed. In case of groups, you can order a single unit at a time, or the whole group to start the execution.

Move at time: Lets you specify the hour and minute when the order should be carried out. Once issued, a clock symbol will be placed on the map, with the ordered time visible. If the ordered time is reached before all orders are distributed, the units will move as soon as everything is ready.

Quick orders can also be issued via this panel:

These quick orders can only be carried out within the commander's command range. If outside of that distance, they are greyed out and unavailable!

Charge:
The troops will move at their best speed, and charge any enemies along the way. The charging works the same way as with engagement setting "charge" from infantry settings (move close, fire a volley, and charge into melee).

Advance:
The unit(s) will move forward and engage any enemies they meet. They will move forward slowly while firing, instead of the normal halting to firing.

Charge and advance orders can only be given if the destination is in the front sector of the unit(s) in question.

Fall back:
The unit(s) will start moving to the rear, facing front and firing if enemies are within range. Units may also fall back if their morale starts to drop. Falling back under fire is always difficult, resulting in morale loss, and doing so can lead to a rout.

Retreat:
The unit(s) will turn and move to their destination as quickly as possible, without stopping to engage. This is the fastest way for a unit to get away from danger, but also it is also risky, as taking fire from the rear will easily rout a unit.

Fall back and retreat orders can only be given if the destination is in the rear sector of the unit(s) in question.

Movement of the units:

When giving movement orders to your units (usually brigades or artillery battalions), the units will plot the fastest route. This usually means following roads. If you want the units to use the most direct route instead, disable the use of roads from the Commander orders in Bottom panel, see below.

When a large number of units is using the same road, they will be arranged in a marching order by their own commanders. Cavalry units will move first, then infantry, with artillery and the HQ following. Depending on the number of units, it may take some time to get into the marching order.

Units on the road will slow down if a unit more to the front in the marching order is near them. Once the road is clear, the unit will resume with normal marching speed.

Units will switch between marching column and line (or other ordered) formation automatically depending on distance to objective and vicinity of enemy troops. When near the ordered destination, the units will form line.

If enemy units appear within weapon range during movement, the unit will stop, form line and engage. In case of groups with stance set, the whole group will interrupt their march and deploy to battle.

Headquarters and couriers:

In the game the Headquarters of units (division, corps, army) move autonomously among the brigades of their unit. You may also manually move them using hotkey *ALT*. When giving orders, couriers are detached to carry the orders to units under the HQ. These couriers will also move autonomously, and cannot be given orders by the player.

Couriers and HQs in the game cannot be engaged or killed directly. Couriers merely visualize the order delay. Headquarters and commanders are taken into account in casualty calculation when their unit is engaged, depending on the distance of the HQ to the front-line brigades. A commander is in higher risk of getting hit when rallying his men.

The HQs will try to avoid enemy units and place themselves in safety, behind own units. If moved with hotkey *ALT*, the HQ will return to autonomous movement if another group movement is issued.

Group Orders and Detaching:

You can give order to entire divisions, corps or armies by selecting the pertinent headquarters and then giving the order. The unit will use the ordered formation and all attached units will receive the same order. Detached units will not receive these group orders, but will require individual orders.

Order delays will be shorter when giving group orders versus issuing orders to each attached unit individually. The group orders will be prepared by the HQ for all units simultaneously, and the couriers will be sent out once ready. The group order will be carried out by the units once all units

have received the order and are ready. In case the order has been delivered to one unit, but that unit is waiting for others, the command line to this unit is shown as a static arrow line.

In this image, a division has been ordered to move to its front and right. Each unit attached to the division HQ will receive the order, and they will move into the ordered formation (a double line). The division's cavalry unit is not receiving this order as it is detached, which is indicated by a faint dotted command line. The order for the division comes from the higher HQ first. Then the division commander will distribute the order to the individual brigades.

If you want to move just the Headquarters, and not the whole group, use hotkey *Left ALT* while giving the order.

Multiple orders:

Each order needs to be prepared individually: first conceived, and then written down or transmitted by the bugle. For this reason, it is faster to issue orders to large groups as one entity, rather than to each unit individually. The reason for this is simple: all units will receive the same orders, so only one set of orders needs to be prepared.

Example 1:
You give an order for an entire corps of three divisions to move. The corps will receive the order from the army headquarters. The corps commander and his staff then prepare one set of orders, and the couriers carrying these orders are then dispatched to all divisions simultaneously. All three divisions will move out at the same time, when the last unit is ready to move.

Example 2:
You give orders individually for the three divisions within the same corps. The commander first prepares orders for the one of those divisions. When this has been done, the first courier moves out carrying the orders. The corps then commander starts writing new orders for his next division, and so on... In the end it takes a much longer for the third division to receive its orders, as shown in Example 1, and the divisions will not move synchronized with one another.

This sequence of commands being issued, and reaction to those orders, takes place every time you issue orders, and is usually the reason for longer delays from your subordinate units.

REMARKS ON THE POSITION OF THE BATTERY IN THE COLUMN.

215. In marching in advance in the cadenced step, the battery of the brigade will take post directly in rear of its leading battalion. Marching in retreat, the battery will be posted directly in advance of its rearmost battalion. The pieces, in these cases, will in column, be formed four abreast.

216. Before putting a column, either by division, or company closed in mass, or at half distance, in march, the general, after giving the command: *Column, forward,* will cause the leading, or three leading battalions, as the march is in advance, or retreat, to move forward, the distance of sixty, or one hundred paces, as the column may be by division, or company, in order that the battery may take its position in the column. The interval thus formed for the battery will be one hundred and forty paces.

217. In *marching,* in the route step, the battery will take post in rear of the column.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

Coordination:

Nineteenth Century warfare requires good coordination. Especially with the realistic order delays, it's easy to end up moving and fighting in an uncoordinated fashion, suffering unnecessary casualties in the process. Following orders help you coordinate movements of large units:

- **Linking:** You can coordinate movements of two units by ordering one follow the lead of the other. Select a unit, *press hotkey ALT* and move your cursor over the unit you wish it to follow. A Link -cursor (1) is shown. *Press RMB* and the unit is linked. A pop-up panel (2) is shown, where you can determine how you want the unit to position itself in relation to the followed unit. When positioning is selected, a Link (3) appears between the units. When you give the followed unit (4) a movement order (5), the Linked unit (6) will also move, trying to maintain its position in relation to the other unit.

  Break the link by selecting the Linked unit and placing cursor over followed unit. The cursor will change into Broken Chain (7), and RMB will remove the link.

- The second method to Coordinate Movement is to issue orders that are carried out exactly when you want. Using Timed Movement (8) you can determine the exact time the order will be carried out. Using On my Command order (9) the unit will prepare to move out when the order is received, but it will wait for your signal to start the movement. The signal is given by clicking the Bugler button, that appears over the unit(s) that are ready to move out.

Lesson VI. - Combat, Morale, Ranged Combat, Skirmishers, Close Combat, Capturing Guns, Casualties, Routs & Rallying, Withdrawal & Retreat

This Lesson discusses the basics of Combat in Grand Tactician. The Combat Model in Grand Tactician emphasizes morale, experience and the integrity of formations. Like the best commanders did historically during the Civil War, you should try to maneuver your units to threaten enemy flanks or to overpower and break weak points in his line instead of exposing your armies to wearing exchanges of fire between two opposing lines.

Skilled use of your units, infantry, cavalry and artillery, can cause severe morale shocks to the enemy units, which can lead to routs. In the thick of battle panic can spread, which can lead into whole lines breaking. When this happens, it's important to have reserves at hand to seize and hold the initiative, to exploit the success and drive the enemy, giving him no opportunity to reform and hold a new line.

Morale:

Each unit has a Morale rating (1) and Loss Resilience (2) that will determine how hard the unit will fight and when it will break. See the tooltip (3) for detailed morale information.

Morale effects affect a unit's morale positively or negatively over time. When negative effects overweigh positive ones, the unit will start losing morale. Units low on morale may start falling back on their own. If morale drops too low, the unit will break and rout. All the active morale effects are shown also under Situation (4) in the unit panel.

Loss Resilience (2) determines how many casualties the men can bear before panicking. Resilience to losses will be higher when unit is experienced, well trained and the commander (5) has good leadership rating. Once too many losses are suffered, the unit will instantly break even if morale otherwise seems intact. Units with too high casualties cannot be rallied.

In campaign battles, starting morale is derived from the campaign: if your army is low on morale when entering the battle in campaign, it will remain to be so during the battle, making it more fragile. You should watch the starting morale carefully, as it may determine how you can fight.

To boost your units' morale, be sure to have them supported with secured flanks. Presence and rallying of good commanders will hold morale high, as will good use of terrain cover. When your units suffer from morale shocks, the effects accumulate with time. The longer the effects are in place, the more likely the unit will eventually break. This is especially true with incoming artillery fire, flanking fire and fast mounting casualties. Experienced units (6) are more resistant to negative morale effects and shocks.

Ranged Combat:
Ranged Combat refers to firefights with small arms and artillery. Order your units (1) to engage enemy in Ranged Combat with *clicking RMB when the Target cursor (2) is shown*. The order is carried out without order delay. Depending on the ordered engagement range (3) as per Infantry orders and weapon characteristics (4), the unit will immediately move out (5) to engage.

When a unit that is firing is selected, the target unit will show a red target symbol next to its NATO symbol.

In ranged combat the weapon and skill of its user are important. Untrained and inexperienced troops' fire is very inaccurate with little casualties inflicted. Accuracy is greatly reduced at longer ranges, and whenever possible, long-range firefights should be avoided as it will burn ammunition fast without much effect. The best effect is achieved by opening fire at close range. Usually, the opening volley is the deadliest. After that, the enemy will react, smoke will make aiming difficult, and received fire will make further fire less accurate. This is especially true in case of tired troops and when the unit's cohesion starts deteriorating due to casualties. Enfilading fire from the flanks is most devastating both to morale, and when inflicted casualties are considered.

While artillery fire may seem ineffective at long range, as casualties mount only slowly, the effect of prolonged artillery barrage from multiple battalions will be devastating to morale, which may allow breaking the softened-up line with a timely infantry attack

AIM.

One time and one motion.

174. Raise the piece with both hands, and support the butt against the right shoulder; the left elbow down, the right as high as the shoulder; incline the head upon the butt, so that the right eye may perceive quickly the notch of the hausse, the front sight, and the object aimed at; the left eye closed, the right thumb extended along the stock, the fore-finger on the trigger.

175. When recruits are formed in two ranks to execute the firings, the front rank men will raise a little less the right elbow, in order to facilitate the aim of the rear rank men.

176. The rear rank men, in aiming, will each carry the right foot about ten inches to the right, and towards the left heel of the man next on the right, inclining the upper part of the body forward.

FIRE.

One time and one motion.

177. Press the fore-finger against the trigger, fire, without lowering or turning the head, and remain in this position.

178. Instructors will be careful to observe when the men fire, that they aim at some distinct object, and that the barrel be so directed that the line of fire and the line of sight be in the same vertical plane. They will often cause the firing to be executed on ground of different inclinations, in order to accustom the men to fire at objects either above or below them.

From "Hardee's Tactics", 1862 edition.

TITLE SECOND-SCHOOL OF THE SOLDIER, PART SECOND, Lesson II.-Manual of arms.

Skirmishers:

Infantry units with sufficient manpower can detach a small unit of Skirmishers. Skirmishers can be deployed as a vanguard, or a screen, to engage and harass enemy units before they can engage the main body of friendly troops.

Detach skirmishers by selecting Infantry Orders (1) in the orders panel, then click Skirmishers (2). A small unit (3) fighting in loose formation is moved forward. By default, skirmishers are linked to front of the detaching unit. You may give them independent orders, which will break the link automatically.

Skirmisher Detachments (4) do not suffer from order delays. They use their primary weapon (usually a musket or rifle musket) to engage enemy units from a distance (5), and will automatically fall back if strong enemy units approach them. The Skirmishers suffer less casualties due to being spread out, and individual soldiers will fire more accurately, as they are not cramped shoulder to shoulder in a large formation.

While flexible, Skirmishers are not resilient to many losses (6) and will break sooner than full units. They do not carry reserve ammunition and are not suited for melees (7).

If a Skirmisher detachment breaks, it will automatically re-attach itself to its parent unit. You can also manually reattach skirmishers by pressing the same button (2) that was used to detach the Skirmishers.

If you give your HQ a stance, the commander under AI control may deploy Skirmishers on his own and use them to screen his formation.

DEPLOYMENTS.

15. A company may be deployed as skirmishers in two ways; forward, and by the flank.

16. The deployment forward will be adopted when the company is behind the line on which it is to be established as skirmishers: it will be deployed by the flank, when it finds itself already on that line.

17. Whenever a company is to be deployed as skirmishers, it will be divided into two platoons, and each platoon will be subdivided into two sections; the comrades in battle, forming groups of four men, will be careful to know and to sustain each other. The captain will assure himself that the files in the centre of each platoon and section are designated.

18. A company may be deployed as skirmishers on its right, left, or centre file, or on any other named file whatsoever. In this manner, skirmishers may be thrown forward with the greatest possible rapidity on any ground they may be required to occupy.

19. A chain of skirmishers ought generally to preserve their alignment, but no advantages which the ground may present should be sacrificed to attain this regularity.

From Casey's Infantry Tactics:

Vol. III. EVOLUTIONS OF A BRIGADE AND CORPS D'ARMÉE

Close Combat:

For decades earlier the fire of the slow and inaccurate smoothbore musket was subordinate to the might of the bayonet. But, as infantry weapons have evolved, with rifled weapons increasing accuracy and new repeater weapons multiplying firepower, the role of hand-to-hand combat, or Close Combat, has changed. The role of heavy cavalry, specialized in close formation charges, has also been in decline since the Charge of the Light Brigade in Crimean War. But still, a well-placed charge with superior numbers can be used to break an enemy line.

To order a unit (1) into Close Combat, or melee, *use hotkey ALT+RMB* on an enemy unit. A Crossed sabers cursor (2) is shown. Your unit will, without order delay, move in and charge into Close Combat.

Used weapon (3) and the melee weapon will have a great impact on melee efficiency, as well as the used formation. Long rifles with bayonets are much more effective than short carbines and knives. Training, fatigue and cohesion are taken into account in the unit's Melee value (5) which is updated dynamically.

When ordering charges, it is important to observe morale (4), as it should remain high up until the point of impact. During the charge the unit may be under fire, tire itself and the unit's formation may break. All this information is shown in the Unit Panel. Observe the Melee rating (5), Situation, Cohesion and Fatigue (6) before making the decision to send in the unit, as if it faces a well-prepared defender, the charging men may break immediately and rout. Prolonged melees will be very rare due to an accumulating morale shock in Close Combat, especially to the losing side.

Another way of ordering your units to prefer Close Combat is to use the Charge Infantry Order (7). With this order the unit will prefer close range engagements and charging into melee. When this order is given, before the charge the unit must first pass a morale check. If it fails, the unit will continue exchanging fire and will not charge. When giving the order manually (2), this morale check is ignored.

Capturing Guns:

When artillery units suffer casualties or rout, they will leave guns behind. These artillery pieces can be captured using your infantry. Select a unit that has not detached another detachment, like skirmishers, and right click on an abandoned gun when the cursor shows a hitching cursor (1). A small detachment (2) will be deployed from the unit, and it will move to the guns to capture them.

If successful, the detachment will man the guns and will act as a small artillery unit (3) using the captured weapons and ammunition (4) against their previous owners.

After the battle the detachment will hand over the captured guns to the ordnance officer of their unit, and the captured guns are added to your nation's pool of weapons. If you capture weapon types you previously did not have access to, you may use them to equip your units, if sufficient amount of said guns are available.

Casualties:

Units will suffer casualties in combat. The number of casualties is shown in the Unit Panel under Losses (1), with the value including all casualty types: killed, wounded, missing. As long as casualties keep mounting up slowly and the unit is not exposed to morale shocks, morale should remain intact.

Each unit has a certain Resilience for losses (2), which depends on experience, training and commander's leadership. The number of hearts symbolized level of resilience and hearts change color when casualties are suffered.

Commanders can also become casualties (3) in combat. Whenever a unit is under fire, its commander has a small chance of being hit. Commanders in Headquarters units may also get hit, but the probability is much lower than for Brigade commanders, except when rallying in the front line. When a commander becomes a casualty, his Second in Command or staff will take command for the duration of the battle. The commander will be replaced after the battle is over. Wounded commanders may recover and return to duty, but their attributes will be affected by the injury.

Captured commanders may return to duty if exchanged (this happens automatically without player input), but their fame will be tarnished.

The effect of casualties becomes much more severe, when high casualties keep mounting in short period of time. This morale shock is shown under situation (4) and may cause the unit to waver and break, even if casualties otherwise remain reasonable.

The effect of casualties is not restricted to the battle at hand. Remember, that casualties in the units' home states will lower support, which in turn will lower national morale.

Routs and Rallying:

When a unit's morale breaks (1), this is usually due to high casualties or many concurrent morale shocks (2) it has suffered. The unit will rout, which is shown in the unit's morale (1) and status (2) information, as well as in the unit's NATO symbol (3), which turns red. Routed units will flee in panic, and will not receive or follow any orders.

Once routed, the unit will try to move away from danger and to a friendly commander (HQ) to rally. If the unit can reach relative safety near a friendly HQ, it will stop and morale will start to recover. If the unit has suffered too high casualties, it will not be able to rally, and will exit the map via an entry point.

Commanders (4) with good leadership attribute and rallying higher commanders will hasten the recovery. Once morale is recovered, the unit will once again receive and follow orders, but keep an eye on its morale, as it may remain shaky for a long time.

To order a HQ to rally, open the Commander Orders (5) and Rally (6). The commander will move to rally the nearest stationary unit under his command, which has the lowest morale.

If a routed unit cannot flee to safety, or the army in question is suffering from extremely low morale, the routed unit may disintegrate. Some men and units (companies, regiments) will surrender, the rest escape to safety to join their unit later, or to desert and never to be seen again. The commander may become a Prisoner of War (POW).

Whenever a unit routs, it affects the Victory Balance of the battle. Routing many enemy units may convince the commander to go from offensive to defensive, or even to disengage.

Withdrawal and Retreat:

When the battle is not going your way, it may be ideal to withdraw or retreat, before your army is devastated. The army commander will also initiate a retreat, if the Victory Balance becomes unbearable.

Withdrawing is done via entry points, ordering the units to exit the battle. In this case the units will not suffer extra losses. If you wish to order a general retreat, open the Army Orders (1) and select Retreat (2). You may also order a surrender (3), in which case the whole army is lost, but at least you will save the men from further casualties, which may prevent further loss of support in their home state.

When clicking the Retreat button, a prompt (4) will ask you to confirm the decision. If you confirm it, the Time Panel (5) will show a red retreat timer. The battle will be over, once the countdown reaches zero. The timer will have more time in it, if large portion of your army is still engaged when retreat is ordered. During the retreat, especially if any of your units are still engaged, your army may suffer further casualties, mostly in men gone missing (deserted or captured) during the disorganized retreat. If you retreat from the battle, your army will continue to retreat on the campaign map as well, where you may suffer further casualties due to enemy pursuit.

Lesson VII. - Battle Results
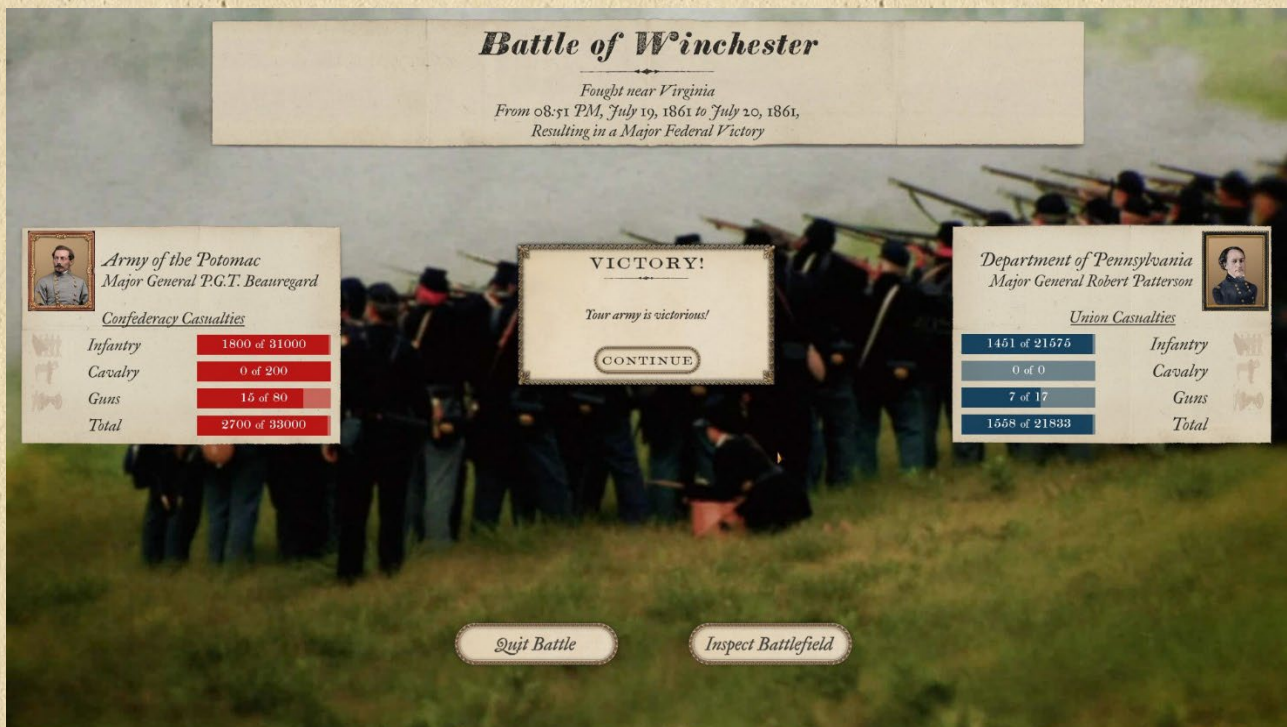
After the battle is over, you will be presented with the results. With Fog of War on, enemy casualties are an estimate, and can be inaccurate. In the result screen you may Inspect the Battle field, but this will not lift the Fog of War. Clicking Quit Battle will return you to the main menu in case of Historical Battles, or move you back to Campaign.

Once a campaign battle is fought to a conclusion, both sides will have their military experience increase; the losing side will suffer loss of national morale, and both sides will suffer a loss of support depending upon the number of casualties in the home states of the units that took part in the battle.

Commanders may become casualties, famous or lose reputation, depending on their performance.

The side that is forced to give ground will have its participating armies withdraw or retreat depending on the result. Reinforcing units that did not arrive before the conclusion of the battle will not be affected. Units that are unable to withdraw or retreat may disintegrate. If either side surrenders, the surrendered side will lose the forces on map, with the soldiers and officers either becoming Prisoners of War (POW) or paroled. Captured officers may return to duty later, paroled soldiers will return to the pool of manpower.

Depending on casualties and battle result, Readiness will suffer, and the losing side will also suffer loss of supplies. The winning side may capture left behind weapons from the battle field and these are added to goods inventory.

TABLE I - Union Pre-War Policies.

UNDERGROUND RAILRAID

Offer substantial support for an abolitionist underground organization that helps fugitive slaves from the South escape to the North and avoid recapture. Initial slave workforce for CSA -10%, with annual reduction of further -5%, increasing production costs and reducing available recruits in the South.

KANSAS A FREE STATE

Encourage the anti-slavery movement in Kansas. Northern support in Kansas +25 and +5 in all free states.

GO WEST!

Encourage people to move to the West coast of the United States. Northern support in California and Oregon +25, population +20%, and recruitment becomes possible in these states. The trade capacity of the Santa Fe and Oregon Trails is doubled.

SUPPORT ABOLITIONISM

Official support for hard-line abolitionists will ensure that any southern sympathies within the Union will be kept in check, discouraging secession. Southern support in all states within the Union -10.

ENFORCE NEUTRALITY ACT

Enforce the 1794 Neutrality Act. This will prevent adventurers and filibusters from freely pursuing their endeavours in Latin America. Relations with European nations greatly improved, with the chance of intervention against the Union -10.

This policy is required for level IV-V Diplomacy policies during the campaign.

BREAD BASKET

A Policy for America to feed the world. All farms will start the campaign with a higher upgrade level. Relations with Europe +10.

This policy is required for the level III-IV Agriculture policies.

INDUSTRIALIZATION
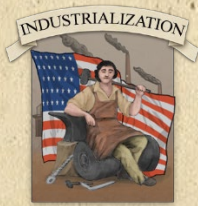
All heavy industries will begin the campaign with a higher upgrade level. The Union will begin with more railroad lines built. Immigration from Europe increases the population within the Union by 20%, but lowers the unity due to religious unrest, reducing national morale by -5.

This policy is required for level III-IV Industrialization policies during the campaign.
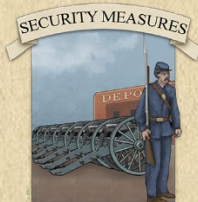
SECURITY MEASURES

With increased security measures, the flow of weapons from the United States armories to southern states is reduced, and the Confederacy will start with 50% less available ships and weapons. CSA national morale -5.

INDIAN WARS

Continue the policy of relocating the indigenous tribes, with force, when necessary, to allow American settlers to expand their territories. This requires the U.S. Regular Army to increase in size to cover the vast frontier, and will keep the army fighting in the ensuing Indian wars. Military Experience in Union and CSA +5 and Union morale +5.

UNION PACIFIC RAILROAD

Support the construction of the Union Pacific Railroad. Connecting the Atlantic and Pacific coasts will increase trade with the Western states. The game will start with the Union Pacific Railroad built and the Union controlling trade to the Pacific coast. Union credit rating +2, railroad transport capacity and construction speed +25%.

ILLUSTRATION I - Union Policy Tree.
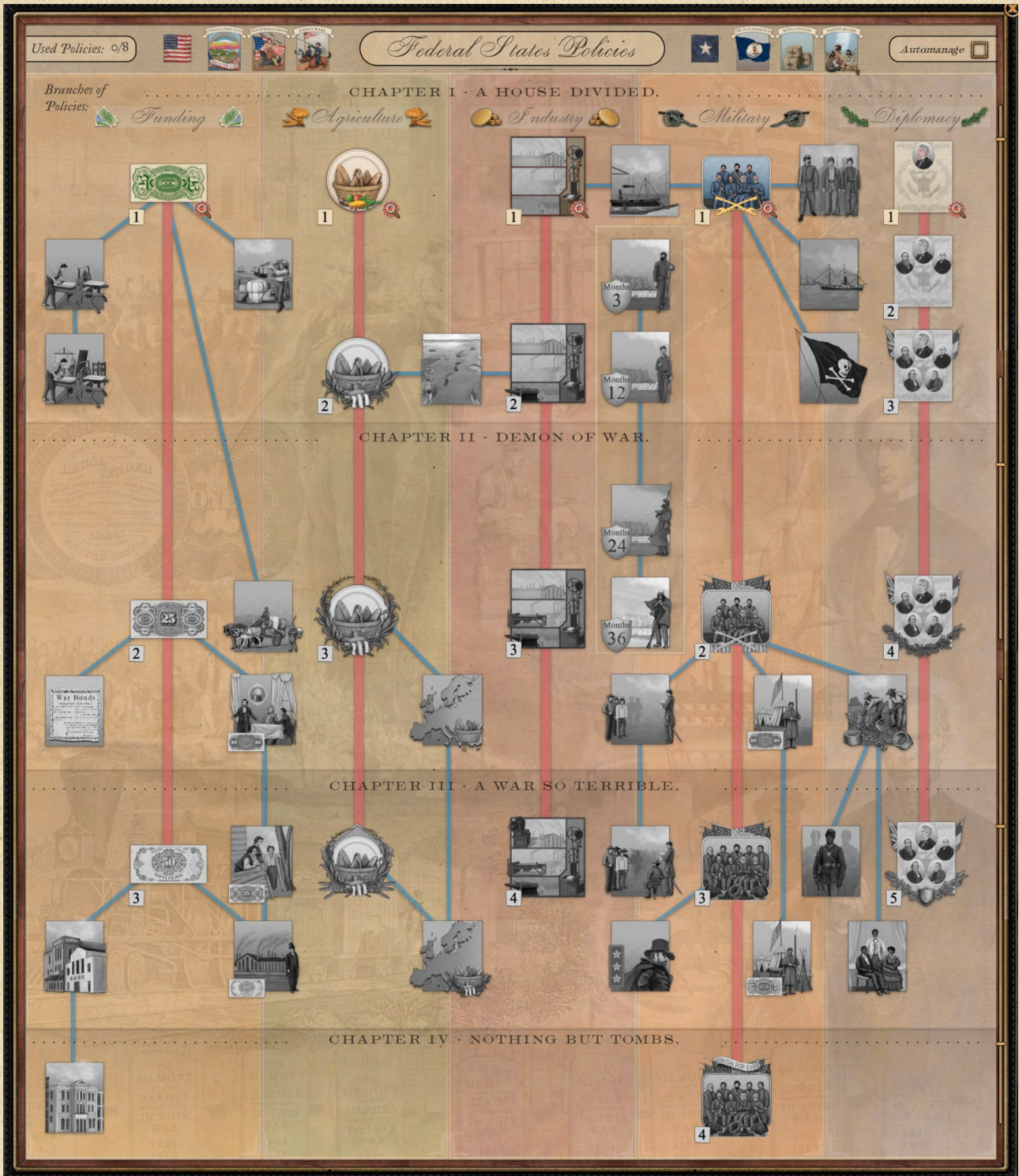
TABLE II - Union Policies.

GOVERNMENT FUNDING I

Funding policies permit legislation that can result in new sources of income to finance the war effort. The maximum amount of annual economy subsidies is increased per policy level, allowing the financing of further projects to improve the nation's economy and credit rating.

1

GOVERNMENT FUNDING II

Funding policies permit legislation that can result in new sources of income to finance the war effort. The maximum amount of annual economy subsidies is increased per policy level, allowing the financing of further projects to improve the nation's economy and credit rating.

2

GOVERNMENT FUNDING III

Funding policies permit legislation that can result in new sources of income to finance the war effort. The maximum amount of annual economy subsidies is increased per policy level, allowing the financing of further projects to improve the nation's economy and credit rating.

3

BREAD BASKET I

Agriculture policies allow new legislation that can increase crop exports to Europe. The maximum amount of annual agricultural subsidies is increased per each new policy level. This permits the financing of further agricultural projects and the development of new farms and plantations.

1

BREAD BASKET II

Agriculture policies allow new legislation that can increase crop exports to Europe. The maximum amount of annual agricultural subsidies is increased per each new policy level. This permits the financing of further agricultural projects and the development of new farms and plantations.

2

BREAD BASKET III

Agriculture policies allow new legislation that can increase crop exports to Europe. The maximum amount of annual agricultural subsidies is increased per each new policy level. This permits the financing of further agricultural projects and the development of new farms and plantations.

3

REQUIRES BREAD BASKET PRE-WAR POLICY.

BREAD BASKET IV

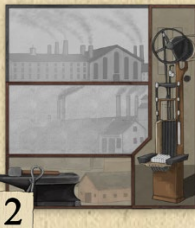Agriculture policies allow new legislation that can increase crop exports to Europe. The maximum amount of annual agricultural subsidies is increased per each new policy level. This permits the financing of further agricultural projects and the development of new farms and plantations.

INDUSTRIALIZATION I

Industrialization policies allow new acts to support the nation's war effort. The maximum amount of annual industry subsidies is increased per policy level, allowing financing further industrial projects and constructing further industrial complexes and railroads.

INDUSTRIALIZATION II

Industrialization policies allow new acts to support the nation's war effort. The maximum amount of annual industry subsidies is increased per policy level, allowing financing further industrial projects and constructing further industrial complexes and railroads.

INDUSTRIALIZATION III

Industrialization policies allow new acts to support the nation's war effort. The maximum amount of annual industry subsidies is increased per policy level, allowing financing further industrial projects and constructing further industrial complexes and railroads.

REQUIRES INDUSTRIALIZATION PRE-WAR POLICY.

INDUSTRIALIZATION IV

Industrialization policies allow new legislation that will support the nation's war effort. The maximum amount of annual industrial subsidies is increased per each new policy level, permitting the financing of additional industrial projects and the construction of new industrial complexes and railroads.

MILITARY I

Military policies allow new legislation to strengthen the nation's military and introduce new means of recruitment. The maximum amount of annual military subsidies is increased with each new policy level, permitting the financing of further military projects, including introduction of new weapon and ship types, as well as military reforms.

MILITARY II

Military policies allow new legislation to strengthen the nation's military and introduce new means of recruitment. The maximum amount of annual military subsidies is increased with each new policy level, permitting the financing of further military projects, including introduction of new weapon and ship types, as well as military reforms.

MILITARY III

Military policies allow new legislation to strengthen the nation's military and introduce new means of recruitment. The maximum amount of annual military subsidies is increased with each new policy level, permitting the financing of further military projects, including introduction of new weapon and ship types, as well as military reforms.

MILITARY IV

Military policies allow new legislation to strengthen the nation's military and introduce new means of recruitment. The maximum amount of annual military subsidies is increased with each new policy level, permitting the financing of further military projects, including introduction of new weapon and ship types, as well as military reforms.

DIPLOMACY I

Diplomatic policies increase the maximum amount of annual diplomacy subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with European governments, and weapons import deals.

DIPLOMACY II

Diplomatic policies increase the maximum amount of annual diplomacy subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with European governments, and weapons import deals.

DIPLOMACY III

Diplomatic policies increase the maximum amount of annual diplomacy subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with European governments, and weapons import deals.

DIPLOMACY IV

Diplomatic policies increase the maximum amount of annual diplomacy subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with European governments, and weapons import deals.

REQUIRES ENFORCE NEUTRALITY ACT PRE-WAR POLICY.

DIPLOMACY V

Diplomatic policies increase the maximum amount of annual diplomacy subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with European governments, and weapons import deals.

TABLE III - Union Acts.

PRINT NOTES I

Printing new money will bring short term relief, but will result in inflation, lowering public wealth by 10%. Once the act is passed, the government will receive $50 million in newly printed money each year.

Requires Government Funding I Policy.

PRINT NOTES II

Printing new money will bring short term relief, but will result in inflation, lowering public wealth by a further 10 percent. Once the act is passed, the government will receive an additional $50 million in newly printed money each year.

Requires Print Notes I Act.

WAR BONDS

Issue government guaranteed bonds to fund the war effort. Union credit rating will rise by +2, but public wealth drops by -10% in return.

Requires Government Funding II Policy.

TARIFF ACT

This act will allow higher tariffs of up to 50% to be imposed on foreign imports. This will make imports more lucrative for the government and at the same time will protect the nation's own industries, because there will be fewer competing products on the markets. Relations with Europeans -10.

Requires Government Funding I Policy.
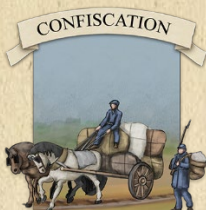
CONFISCATION ACT

With this act, Union armies are allowed to confiscate southern property that is needed for the war effort. Supply efficiency of armies operating in enemy states +15%. Also, captured slaves will be considered contraband and will no longer be required to be returned to their owners. This increases Confederate support in slave states by +3 annually.

Requires Government Funding I Policy.

REVENUE ACT I

To fund the war effort, impose a new kind of tax, on the incomes of citizens. Initially the maximum tax level will be 5% and will only affect citizens with the highest revenues. Whilst more funds will become available, citizens will not be happy about losing their hard-earned money. Support -1.

Requires Government Funding II Policy.

REVENUE ACT II

A further Revenue Act will allow the level of income tax to be increased up to 15% and it will lower the floor on the level of incomes to be taxed. Government funding will be increased. Support -2.

Requires Government Funding II Policy and Revenue Act I.

REVENUE ACT III

Impose a new kind of tax on corporations' profits. With the corporate tax, government funding will be increased considerably as all private businesses will be obliged to hand over up to 10% of their profits. Such a harsh measure will meet strong resistance from citizens. Support -3.

Requires Government Funding III Policy and Revenue Act II.

BANK ACT I

The National Banking Act imposes a system of free banking at the national level. A portion of the national banks' capital has to be government bonds. The national credit rating improves by +2 and the treasury increases by $120 million per year, but support in states fall by -3, as state banks and greenbacks will lose status.

ALLOWS CONSTRUCTION OF NATIONAL BANK BUILDING.

Requires Government Funding III Policy.

BANK ACT II

With the national banking system in place, a further National Banking Act will impose a new tax on state bank notes, to drive them out of existence. Credit rating +2 and treasury increased by $150 million per year. The states will not be happy to oblige. Support -3.

Requires Government Funding III Policy and Bank Act I.

NORTHERN ROUTES
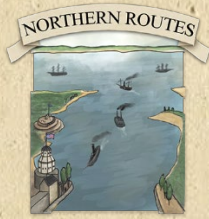
This Act will invest in transportation infrastructure along the northern trade routes, canals, and the Great Lakes, mainly to hasten the flow of crops grown in the Midwest states to Atlantic ports, to then be sold to Europe. Transport capacity of canals and along the Great Lakes +50%, production and demand of crops +25%. Number of volunteers in Midwest states -10 percent.

Requires Bread Basket II and Industrialization II Policies.

FEED EUROPE I

An act to allow the sale of crops to Europe at cheaper prices. This will greatly assist with European food shortages, increasing relations and reducing any eagerness on their part to intervene in the war on the side of the Confederacy. Relations with Europe +10, trade potential with Europe +25%. Land sales income -50 percent.

Requires Bread Basket III Policy.

FEED EUROPE I

A further act to allow the sale of crops to Europe at even cheaper prices. This will greatly assist with European food shortages, increasing relations and reducing any eagerness on their part to intervene in the war on the side of the Confederacy. Relations with Europe +20, trade potential with Europe +25%. Credit rating -1.

Requires Bread Basket IV Policy and Feed Europe I Act.

MILITIA ACT I

AVAILABLE AFTER LINCOLN'S INAUGURATION.

The President has the authority to call in the militia to form the provisional army, but only if the nation is under attack. This Act will allow the recruitment of volunteer units under a three-month contract. It will be considered an act of war by the CSA and will increase their morale.

If not activated before Fort Sumter is attacked, this Act will be activated without a delay, automatically, and in that case the boost in CSA morale will be lower than if activated before attacked.

MILITIA ACT II

An Act that changes the contract length of new volunteer units to 12 months. These contracts allow units to remain in the army long enough to be more effective in battle. Recruitment quotas are also increased.

Requires Militia Act I.

MILITIA ACT III

An Act that changes the contract length of new volunteer units to 24 months. These contracts allow units to remain in the army long enough to be more effective in battle. Recruitment quotas are also increased.

Requires Militia Act II.

MILITIA ACT IV

An Act that changes the contract length of new volunteer units to 36 months or the end of the war, i.e., contracts will be nullified if the war ends. These contracts allow units to remain in the army long enough to be effective in battle. Recruitment quotas are also increased.

Requires Militia Act III.

REGULARS ACT

Instead of distributing the U.S. Regulars among the provisional army volunteer units to set an example, independent units will be formed from the Regulars. Six small Regular units with good training and experience are added to your armies. Military experience -5.

Requires Military I Policy.
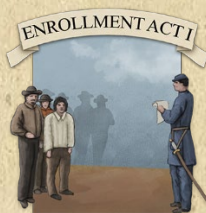
ENROLLMENT ACT I

Enforce conscription, all male citizens and immigrants that have filed for citizenship, will be eligible for mandatory military service. This will increase the recruitment base significantly and will allow draft units to be formed. However, unwilling soldiers will have lower morale and the imposition of the draft will spark protests from citizens. National morale -2, but the speed of replacements +50 percent.

Requires Military II Policy.
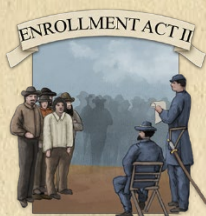
ENROLLMENT ACT II

The Enrollment Act had a number of issues. Substitution arrangements allowed a drafted man to buy himself a substitute to take his place in the military forces. The initial legislation required an amendment to the Enrollment Act to close these loopholes. The amendment set in place strict penalties for those trying to avoid the draft, even the loss of citizenship. The recruitment base is increased. National morale -2, but the speed of replacements doubled.

Requires Military II Policy and Enrollment Act I.
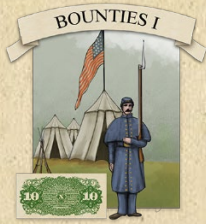
RECRUITMENT BOUNTIES I

This Act will allow government funding to states, so that recruitment bounties can be offered to volunteers. These payments will attract more volunteers to the ranks, at an increased cost. The morale of serving veterans will be damaged and desertions will increase. Volunteer units' morale -5, number of volunteers +25 percent.

Requires Military II Policy.
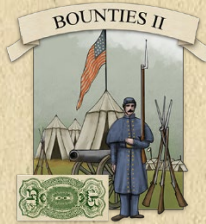
RECRUITMENT BOUNTIES II

An additional Act to attract more volunteers. Bounties are increased considerably, but will be paid in instalments. This is to counteract "bounty jumpers," men who enlist , and then desert as soon as they are able to, only to start the cycle again by enlisting in a different regiment to collect a further bounty. Volunteer units' morale drops further by -5, number of volunteers +25 percent.

Requires Military II Policy and Recruitment Bounties I Act.

LIEUTENANT GENERAL ACT

The Commanding General of the Union armies is promoted to Lieutenant General and given the full authority to coordinate the Union war effort. The Commanding General will be known throughout the nation which will raise the spirits of the citizens. He will remain in command for the duration of the war, any major losses under his command will reduce national morale. The Commanding General receives maximum fame.

Requires Military III Policy.
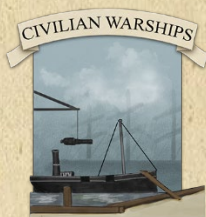
ARMING OF CIVILIAN SHIPS

An Act allowing the Federal Government to purchase civilian ships to bolster the navy. The steamers will be armed and put into service. Whilst more ships will be available to the navy sooner, the trading fleet will suffer and the transport capacity of ports will be reduced by 7 percent. This allows unarmored 4th, 3rd and 2nd Rates, as well as Paddle Steamers, to be produced at 25% of the full cost in material and time.

Requires Industrialization I and Military I Policies.

LETTERS OF MARQUE

A letter of marque and reprisal from the government, gives permission for private citizens to attack or capture vessels of any nation at war with the government. These authorized privateers and corsairs will harass enemy naval trade. Confederate sea trade -2,5%, maximum trade war subsidies +20%, and relations with Europe -10.

Requires Military I Policy.

LEGAL BLOCKADE
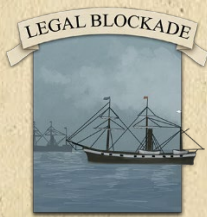
Pass an Act proclaiming that the Union blockade of the South is legal and that any attempts to breach the blockade will be considered hostile acts subject to retaliation. This will discourage European trade fleets from helping the Confederate blockade runners. It will also infuriate the European leaders as it threatens their neutral status. 20% of additional Trade War subsidies are allowed. Chance of intervention -20. Trade with Europe -25 percent.

Requires Military I Policy.

EMANCIPATION PROCLAMATION

Issuing this Proclamation will declare all slaves in the Confederate States free. The South will see this as a drastic act, increasing their morale by +5. As such, this act should be carefully considered. Once in effect, it will prove the Union cause is just, increasing support in the Union by +5 and discouraging the European nations from intervening in the war. Relations with Europe +20.

Requires Military II Policy.

UNITED STATES COLORED TROOPS

An act that allows the recruitment of Black volunteers and the formation of African American regiments. The number of available volunteer recruits +10%. Three USCT brigades will be added to Union armies immediately. Recruitment of Black soldiers from slave states made possible, as long as the Union controls at least one city. The use of Black soldiers against southerners will infuriate them, increasing CSA national morale by +2.

Requires Military Policy II and Emancipation Proclamation Act.

ABOLITION OF SLAVERY
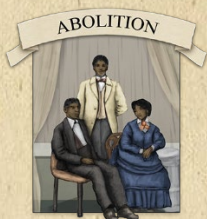
The proclamation to free all slaves in America, even those of the slave states within the Union. This will be well-received in Europe. It will also be well-received among the population of the North, bolstering their resolve to keep fighting for such a just cause. It will however enrage the southerners. European relations +10, Union national morale +5, CSA national morale +10.

Requires Military Policy II and Emancipation Proclamation Act.

TABLE IV - Confederate Pre-War Policies.

THE OLD DOMINION

Virginia votes to secede from the Union and will join the Confederacy. The Confederate Capital City is moved from Montgomery, Alabama to Richmond, Virginia. Confederate support in Virginia +10. Virginia's secession and Richmond's close proximity to Washington D.C. comes as a shock to the Union citizens. Union morale -5.

KANSAS A SLAVE STATE

Organize pro-slavery immigration and cross border intrusions into the Kansas territory. Southern support in Kansas +25, and it will become a slave state. Southern support in all slave states +5.

SLAVERY TO THE WEST

Encourage pro-slavery pioneers to settle in the Arizona and New Mexico territories. Southern support in these territories +25, population +25% and recruitment allowed. Trade capacity from Texas to the western states and territories doubled, and due to the increased trade volumes, all ports in Texas start with a higher upgrade level.
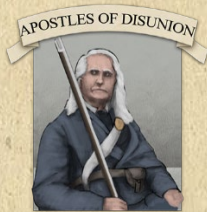
APOSTLES OF DISUNION

Official support for the pro-slavery "Fire-Eaters" will increase southern support in all slave states by +20, but will also increase northern support in all free states by +10.

FILIBUSTERING

Provide support to large-scale southern incursions into Latin America. Southern military experience is increased by +5. Cuba will be under southern control, increasing trade and allowing recruitment.

KING COTTON

All plantations will start the campaign with a higher upgrade level. Support in all slave states +5. European intervention level +20.

This policy is required for level III-IV Agriculture policies during the campaign.

INDUSTRIALIZATION
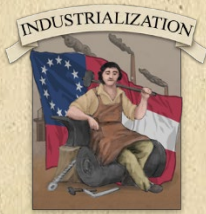
All heavy industries will start the campaign with a higher upgrade level. The Confederacy will start the campaign with more railroad lines built, and immigration from Europe increases population within the Confederacy by 25%, but lowers unity due to religious unrest and resentment towards slavery within the immigrant population, reducing national morale by -5.

This policy is required for level III-IV Industrialization policies and the abolition of slavery later in the campaign.

ARMS AGENTS

Organize the movement of weapons to southern armories and forts. The number of weapons available to the Confederacy is increased by 50% and Springfield weapon types can be made available for production in the South's industry. Union morale -5.

NATIVE ALLIES

Approach the Native Americans to ally with them against the northern oppressors. Confederate support in Indian Territory +25. Recruitment from many of the Indian tribes living there made possible, and the number of volunteers is doubled.

SOUTHERN PACIFIC RAILROAD

Support the construction of the Southern Pacific Railroad, connecting the Atlantic and Pacific coasts and increasing trade with the western states. The game will start with the Southern Pacific Railroad built and the Confederacy controlling some of the trade to the Pacific coast. CSA credit rating +2, railroad transport capacity and construction speed +25%.

ILLUSTRATION II - Confederate Policy Tree.
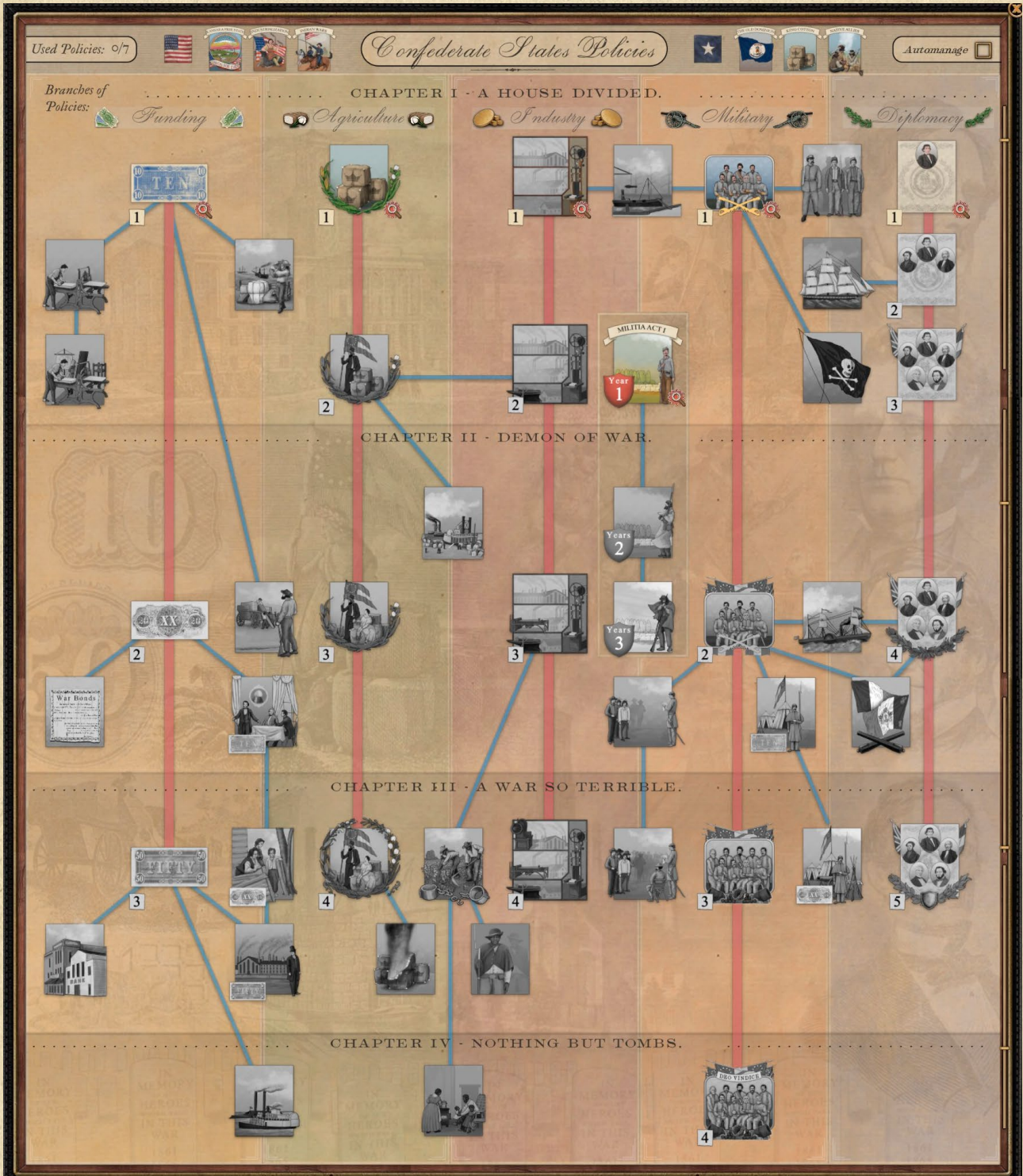
TABLE V - Confederate Policies.

GOVERNMENT FUNDING I

Funding policies allow new acts to introduce new sources of income to finance the war effort. The maximum amount of annual economy subsidies is increased per policy level, allowing the financing of further projects to improve the nation's economy and credit rating.

GOVERNMENT FUNDING II

Funding policies allow new acts to introduce new sources of income to finance the war effort. The maximum amount of annual economy subsidies is increased per policy level, allowing the financing of further projects to improve the nation's economy and credit rating.

GOVERNMENT FUNDING III

Funding policies allow new acts to introduce new sources of income to finance the war effort. The maximum amount of annual economy subsidies is increased per policy level, allowing the financing of further projects to improve the nation's economy and credit rating.

KING COTTON I

Agricultural policies allow new Acts that will improve crop exports to Europe. The maximum amount of annual agricultural subsidies is increased per policy level, allowing financing of further agricultural projects and construction of new farms and plantations.

KING COTTON II

Agricultural policies allow new Acts that will improve crop exports to Europe. The maximum amount of annual agricultural subsidies is increased per policy level, allowing financing of further agricultural projects and construction of new farms and plantations.

KING COTTON III

Agricultural policies allow new Acts that will improve crop exports to Europe. The maximum amount of annual agricultural subsidies is increased per policy level, allowing financing of further agricultural projects and construction of new farms and plantations.

REQUIRES KING COTTON PRE-WAR POLICY.

KING COTTON IV

Agricultural policies allow new Acts that will improve crop exports to Europe. The maximum amount of annual agricultural subsidies is increased per policy level, allowing financing of further agricultural projects and construction of new farms and plantations.

INDUSTRIALIZATION I

Industrialization policies allow new Acts that will support the nation's war effort. The maximum amount of annual industrial subsidies is increased per policy level, allowing financing of further industrial projects and construction of further industrial complexes and railroads.

INDUSTRIALIZATION II

Industrialization policies allow new Acts that will support the nation's war effort. The maximum amount of annual industrial subsidies is increased per policy level, allowing financing of further industrial projects and construction of further industrial complexes and railroads.

INDUSTRIALIZATION III

Industrialization policies allow new Acts that will support the nation's war effort. The maximum amount of annual industrial subsidies is increased per policy level, allowing financing of further industrial projects and construction of further industrial complexes and railroads.

REQUIRES INDUSTRIALIZATION PRE-WAR POLICY.

INDUSTRIALIZATION IV

Industrialization policies allow new Acts that will support the nation's war effort. The maximum amount of annual industrial subsidies is increased per policy level, allowing financing of further industrial projects and construction of further industrial complexes and railroads.

MILITARY I

Military policies allow new Acts to strenghten the nation's military and introduce new means of recruitment. The maximum amount of annual military subsidies is increased per policy level, allowing financing of further military projects, including the introduction of new weapon and ship types, and military reforms.

MILITARY II

Military policies allow new Acts to strenghten the nation's military and introduce new means of recruitment. The maximum amount of annual military subsidies is increased per policy level, allowing financing of further military projects, including the introduction of new weapon and ship types, and military reforms.

MILITARY III

Military policies allow new Acts to strenghten the nation's military and introduce new means of recruitment. The maximum amount of annual military subsidies is increased per policy level, allowing financing of further military projects, including the introduction of new weapon and ship types, and military reforms.

MILITARY IV

Military policies allow new Acts to strenghten the nation's military and introduce new means of recruitment. The maximum amount of annual military subsidies is increased per policy level, allowing financing of further military projects, including the introduction of new weapon and ship types, and military reforms.

DIPLOMACY I

Diplomatic policies increase the maximum amount of annual diplomatic subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with the Europeans, as well as weapons import deals.

DIPLOMACY II

Diplomatic policies increase the maximum amount of annual diplomatic subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with the Europeans, as well as weapons import deals.

DIPLOMACY III

Diplomatic policies increase the maximum amount of annual diplomatic subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with the Europeans, as well as weapons import deals.

DIPLOMACY IV

Diplomatic policies increase the maximum amount of annual diplomatic subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with the Europeans, as well as weapons import deals.

DIPLOMACY V

Diplomatic policies increase the maximum amount of annual diplomatic subsidies per policy level, allowing further diplomatic endeavors and projects, including trade deals, improved relations with the Europeans, as well as weapons import deals.

TABLE VI - Confederate Acts.
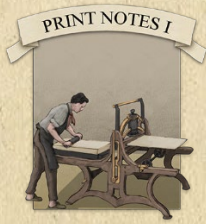
PRINT NOTES I

Printing new money will bring short term relief, but will result in inflation, lowering public wealth by 10%. Once the act is passed, the government will receive $50 million in newly printed money each year.

Requires Government Funding I Policy.

PRINT NOTES II

Printing new money will bring short term relief, but will result in inflation, lowering public wealth by a further 10 percent. Once the act is passed, the government will receive an additional $50 million in newly printed money each year.

Requires Print Notes I Act.
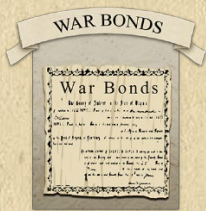
WAR BONDS

Issue government guaranteed bonds to fund the war effort. Confederate credit rating +2, but public wealth drops by -10% in return.

Requires Government Funding II Policy.

TARIFF ACT

This act will allow higher tariffs of up to 50% to be imposed on foreign imports. This will make imports more lucrative for the government and at the same time will protect the nation's own industries, because there will be fewer competing products on the markets. Relations with Europeans -10.

Requires Government Funding I Policy.
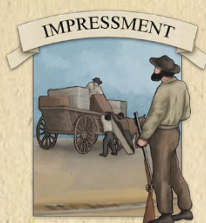
IMPRESSMENT ACT

Authorize the War Department to seize slaves and supplies from producers for the building of fortifications. While only surplus slaves and supplies are to be taken, at fair prices, it will lower support for the government in the states. It also frees up manpower, increasing the number of available recruits and makes the resupply of armies easier within the Confederacy. Number of recruits +10%, cost of supplies within CSA -20%, support -3.

Requires Government Funding I Policy.

REVENUE ACT I

To fund the war effort, impose a new kind of tax, on the incomes of citizens. Initially the maximum tax level will be 5% and will only affect citizens with the highest revenues. Whilst more funds will become available, citizens will not be happy about losing their hard-earned money. Support -1.

Requires Government Funding II Policy.

REVENUE ACT II

A further Revenue Act will allow the level of income tax to be increased up to 15% and it will lower the floor on the level of incomes to be taxed. Government funding will be increased. Support -2.

Requires Government Funding II Policy and Revenue Act I.

REVENUE ACT III

Impose a new kind of tax on corporations' profits. With the corporate tax, government funding will be increased considerably as all private businesses will be obliged to hand over up to 10% of their profits. Such a harsh measure will meet strong resistance from citizens. Support -3.

Requires Government Funding III Policy and Revenue Act II.

BANK ACT

The National Banking Act imposes a system of free banking at the national level. A portion of the national banks' capital has to be government bonds. Credit rating improved by +2 and treasury increased by $120 million per year, but support in states -3, as state banks and greenbacks will lose status.

ALLOWS CONSTRUCTION OF NATIONAL BANK BUILDING.

Requires Government Funding III Policy.

NATIONALIZE TRADE ACT

Introduce government controls on trade. This Act allows the military to control all of the cotton trade, with more effective control the cotton trade will reap higher profits. Demand of cotton in Europe +35%. Support -3.

Requires Government Funding III Policy.
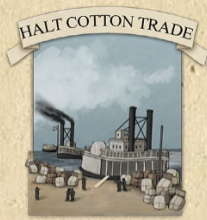
RESTRICT COTTON TRADE

Impose regulations on cotton exports to make the demand felt in Europe. When European textile mills begin to suffer a shortage of cotton, the politicians will have to become more interested in the Confederate struggle. Cotton demand in Europe +10%, European relations +10. Public wealth -5 percent.

Requires King Cotton II Policy.

BURN COTTON

Create an artificial shortage of cotton worldwide, by ordering Confederate cotton supplies in storage to be burned. The shortage will be felt in Europe where the demand for cotton is soaring. Since the Europeans rely on southern cotton, it's believed that this action will increase the chances of them intervening in the war alongside the Confederacy! Cotton stock reduced by -50%. European relations +15.

Requires King Cotton IV Policy.

SLAVERY RESTRICTION ACT

Impose regulations on the number of slaves an individual can own. While these restrictions will be met with anger in the slave states, Europe will look at the Confederacy more favorably. The maximum number of slaves is reduced by 25% increasing production costs. European relations +20. Support in slave states -5.

Requires Industrialization III Policy.

CONFEDERATE STATES COLORED TROOPS

An act that allows the formation of African American regiments in the Confederate army. The recruits are offered freedom for their service. This Act will be controversial with government support among slave owners decreasing. Three CSCT brigades are added to the army. Support in slave states -2.

Requires Industrialization III Policy and Slavery Restriction Act.
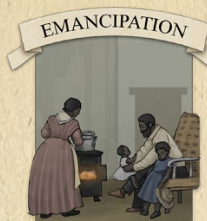
EMANCIPATION PROCLAMATION

A proclamation to free all slaves in the Confederacy. All states will be forced to ban slavery, this will increase production costs immensely and lower government support. On the other hand, northern citizens will start questioning their reasons for fighting and Europeans will applaud. Number of available drafts +35%, European relations +25, Union national morale -5, CSA support in slave states -10.

Requires Industrialization IV Policy and Slavery Restriction Act.

MILITIA ACT I

The President of the Confederate States has the authority to call in the militia and form a provisional army. This Act will allow the recruitment of volunteer units on one-year contracts.

MILITIA ACT II

An Act lengthening the contracts of new volunteer units to two years. Longer contracts allow units to remain in the army enough time to become more effective in battle. Recruitment quotas are increased.

Requires Militia Act I.

MILITIA ACT III

An Act lengthening the contract of new volunteer units to 36 months or the end of the war, meaning if the war ends the contracts will be nullified. Longer contracts allow units to remain in the army long enough to become effective in battle. Recruitment quotas are increased.

Requires Militia Act II.

REGULARS ACT

Forming the Army of the Confederate States, or the regular army, has not reached its target. Only a few small units have been recruited, and these are operating within the volunteer brigades. This order forms dedicated regular brigades by recruiting all possible former U.S. regulars and veterans within the ranks. 6 small regular units with good training and experience are added to your armies. Military experience -5.

Requires Military I Policy.
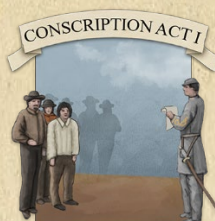
CONSCRIPTION ACT I

Enforce a conscription act, making all male citizens between the ages of 18 and 35 liable to three years of military service. Also, all existing volunteer contracts are lengthened to three years. While the recruitment base will be greatly increased, allowing recruitment of draft units, unwilling soldiers will have lower morale and the idea of drafting will spark protests among the citizens. National morale -2, speed of replacements +50 percent.

Requires Military II Policy.

CONSCRIPTION ACT II
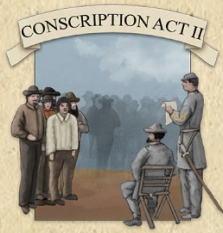
Increase the recruitment base by expanding the age limits for eligible males, to include men from 17 up to 50 years of age. Also restricts the exempted classes further, basically mobilizing the whole country. The recruitment base is increased while national morale suffers. All contracts are extended for an unlimited period. National morale -2, speed of replacements doubled.

Requires Military II Policy and Conscription Act I.

RECRUITMENT BOUNTIES I
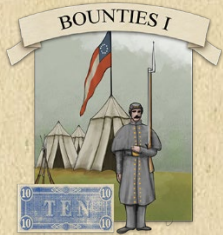
This Act will allow government funding to states, so that recruitment bounties can be offered to volunteers. These payments will attract more volunteers to the ranks, at an increased cost. The morale of serving veterans will be damaged and desertions will increase. Volunteer units' morale -5, number of volunteers +25 percent.

Requires Military II Policy.

RECRUITMENT BOUNTIES II

An additional Act to attract more volunteers. Bounties are increased considerably, but will be paid in instalments. This is to counteract "bounty jumpers," men who enlist, then desert as soon as they are able to, only to start the cycle again by enlisting in a different regiment to collect a further bounty. Volunteer units' morale drops further by -5, number of volunteers +25%.

Requires Military II Policy and Recruitment Bounties I Act.

SUPPORT MEXICAN INTERVENTION

The European intervention in Mexico is underway, as the Union is distracted by the Civil War. To strengthen relations with the Europeans, the C.S. Government offers official support to the French fighting in Mexico. French intervention to support the CSA is made possible. Number of recruits in Texas -50%, European relations +15, Union national morale +3, further French arms imports become available.

Requires Military II and Diplomacy IV Policies.

ARMING OF CIVILIAN SHIPS

An Act allowing the Confederate Government to purchase civilian ships to bolster the navy. The steamers will be armed and put into service. Whilst more ships will be available to the navy sooner, the trading fleet will suffer and the transport capacity of ports will be reduced by 7%. This allows unarmored 4th, 3rd and 2nd Rates, as well as Paddle Steamers to be produced at 25% of the full cost in material and time.

Requires Industrialization I and Military I Policies.

LETTERS OF MARQUE

A letter of marque and reprisal is government permission for a private person to attack and capture vessels, that belong to a nation the government is at war with. These authorized privateers and corsairs will harass enemy naval trade. Union sea trade -2.5%, maximum trade war subsidies +20%, and relations with Europe -10.

Requires Military I Policy.

FREE TRADE ACT

An Act that halves the maximum tariffs the Government will impose on imports. This action will be met with approval in Europe, where they are dependent on southern cotton to run their textile mills. European relations +10, maximum tariff rate 15percent.

Requires Diplomacy II Policy.

ORGANIZED BLOCKADE RUNNING

Organize blockade running at a national level and use increased subsidies to support the trade war. The Government imposes regulations on imports and controls, at least partially, what products are to be carried by the blockade runners. Such actions strengthen the Union's resolve. National morale in Union +2, maximum trade war subsidies +40 percent.

Requires Military II and Diplomacy IV Policies.

APPENDIX B. – LIST OF PROJECTS

TABLE I - PROJECTS REQUIRING POLITICS SUBSIDIES

HALL'S CARBINES

"Hall's Carbines" are considered obsolete surplus weapons of no use. A private arms dealer has negotiated a deal with the head of the U.S. Ordnance Bureau to purchase these weapons with a very cheap price, and to sell them to another dealer, who would modernize them after loaning the required money from private investors and bankers, and then sell them with a much higher price back to the Government for military use, making a few inverstors and arms dealers rather rich in the process.

Nothing suspicious about that.

Requirements: Only available for the Union.

PROPAGANDA

Finance national communication that is primarily used to influence and persuade an audience to further the nation's agenda, which may not be objective and may be selectively presenting facts to encourage a particular synthesis or perception, or using loaded language to produce an emotional rather than a rational response to the information that is being presented. Some say propaganda, but we'll call it patriotic reporting of the facts, our loyal citizens being the target audience.

Each level of this project will further increase support in loyal states.

COUNTER-PROPAGANDA

Finance national communication that is primarily used to discredit any opposing views of the nation's agenda, and further a perception of those disagreeing with the official narrative as evil and even unholy people. This kind of fact reporting, countering enemy propaganda, is aimed at opposition within our nation, and will eventually make the citizens question any views that are not amplified by the nation's propaganda machine, making the passive, decreasing support to the enemy's cause.

Each level of this project will further reduce enemy support in loyal states.

OCCUPATION ADMINISTRATION

Finance more effective occupation administration in conquered states and territories. While the local population may not be happy with the new administration, appointing the right people in right places, and using the right tools, will allow more leeway for the nation's military effort in conquered states.

Each level of this project will further increase support of our nation in conquered states and territories.

SUPPRESS POPULATION

Finance measures to suppress any hostile population in conquered states and territories, reducing active opposition of the nation's war effort. This will reduce enemy support in conquered states that have not changed sides.

Each level of this project will further reduce enemy support in conquered states and territories.

ADMINISTRATION REFORM

Finance political reforms that will allow more efficient policy making in the long run. Whether this means structural changes in the political system, or simply using money in a way that makes individuals reach a consensus faster, does not matter. The end result, which is faster processing of political decisions, counts.

Each level of this project will further shorten the time required to activate new policies and acts.

RAILROAD CONSTRUCTION

Construction of new railroads requires a lot of resources and labor. Finance the railroad engineers and increase immigration of cheap manpower for labor, especially from China and Ireland.

Each level of this project further increases the speed of constructing new railroad lines.

TABLE II - PROJECTS REQUIRING ECONOMY SUBSIDIES

SUBSIDIZE BANKS

Subsidize national banks to increase their efficiency. National banks can further increase the available capital in the region, increasing private wealth and lowering construction costs of companies, as the banks can operate with decreased risk.

Each level of this project will further increase efficiency of national banks.

Requirements: Bank Act I (Union), Bank Act (CSA).

IMPROVE CREDIT RATING

Finance economic reforms that will directly influence the nation's credit rating. A credit rating is an evaluation of the credit risk of a prospective debtor, predicting their ability to pay back the debt, and an implicit forecast of the likelihood of the debtor defaulting. When the credit rating is high, cheaper loans are offered and the interest rate remains manageable.

Each level of this project will further increase the national credit rating with one step.

MARKET REFORM

Finance improvement of the nation's domestic markets to boost the economy in the long term. This will increase the efficiency of all Market buildings, which will stimulate local economy.

Each level of this project will further increase efficiency of the nation's markets.

TABLE III - PROJECTS REQUIRING AGRICULTURE SUBSIDIES

SUBSIDIZE AGRICULTURE

Subsidize the nation's agriculture, increasing profits for the farmers and making their business more lucrative. This will boost output of the farms and encourage further expansion.

Each level of this project will further increase agricultural productivity.

FARM MECHANIZATION
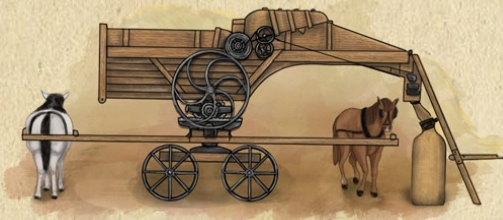
Subsidize farming by financing large scale mechanization of agriculture. This mechanization includes the introduction of innovations such as horse-drawn reapers, and raking, binding and threshing machines. With machines taking the place of humans in many areas, output is greatly increased, while at the same time freeing previously required workforce to join the volunteer armies.

Each level of this project further increases farm output and available volunteers.

PLANTATION MECHANIZATION

Subsidize cotton production by financing mechanization of plantations. While slave labor is cheap, boosting production can be achieved with the use of modern machines.

Each level of this project further increases cotton production.

Requirements: Only available for the CSA.

COTTON IS KING

Implement a policy of using cotton as a tool to maintain good relations with the European great powers. The very large European textile industry needs a steady flow of southern cotton. So much so, it is believed, that Europe will support an independent Confederate States of America in order to protect the supply of cotton.

Each level of this project further improves relations with the European nations.

Requirements: Only available for the CSA.

CORN IS KING

Finance the logistical effort of selling crops to Europe, increasing relations with the European powers. Western Europe has suffered continuous crop failures, and the Northern farmers provide nearly half of England's grain imports. As British ships carry grain home to England, they can return with exported war material for the United States - a very beneficial trading arrangement. It seems that King Corn is more powerful than King Cotton.

Each level of this project further improves relations with the European nations.

Requirements: Only available for the Union.

IMPROVIZED SHIPYARDS
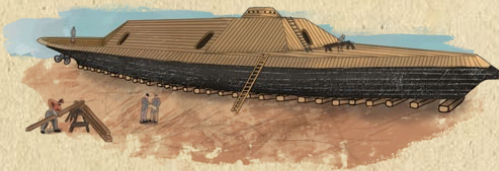
Finance resourceful southern ship builders and local plantation owners to allow construction of small Ironclad Gunboat Rams in primitive, improvised shipyards. These shipyards are situated along shallow waterways, which are unreachable by Union gunboats. This allows construction of the gunboats without the need for dedicated shipyard facilities, and free shipyards capacity.

Requirements: Only available for the CSA.

TABLE III - PROJECTS REQUIRING INDUSTRIALIZATION SUBSIDIES

INFRASTRUCTURE REFORM

Finance improvement of the nation's infrastructure to allow faster movement of goods. Infrastructure improvements, such as macadamizing roads or building new corduroy roads, construction of modern bridges or improving the canal network, are expensive projects, but will also greatly benefit the nation's war effort. When the infrastructure can support more traffic, it means larger armies can also be more successfully supplied.

Each level of this project will further increase transport capacity of all the nation's Important Infrastructure Points (IIPs).

WEAPON PRODUCTION

Subsidize domestic weapons production. This will make production of weapons more profitable to manufacturers, boosting production volume.

Each level of this project will further increase weapon production efficiency.

SUBSIDIZE INDUSTRY

Subsidize the nation's heavy industry, increasing profits for the private companies and making their business more lucrative. This will boost production and encourage further expansion.

Each level of this project will further increase industrial productivity.

TABLE IV - PROJECTS REQUIRING MILITARY SUBSIDIES

CAST ARTILLERY

Finance the weapon industry to mass produce simple cast artillery weapons, that do not require sophisticated metallurgy and machinery. Cast bronze weapons that can be produced are the M1857 12-pounder "Napoleon," based on the French modele 1853 Canon Obusier de 12, or "Canon de l'Empereur," and the James Rifle, which can also be produced by adding rifling to old M1841 6-pounder brass guns.

RIFLED ARTILLERY

Finance the weapons industry to allow production of more advanced rifled artillery. These weapon types, 3-inch Ordnance Rifle and 6-pounder Wiard Rifle, are made from wrought iron, which requires more advanced machinery, resulting in more durable and accurate guns when compared to cast artillery. To mass produce these weapons, a good level of national industrialization is required.

PARROTT RIFLES

Finance the weapon industry to allow production of modern Parrott Rifles. The Parrott Rifle was invented by Captain Robert P. Parrott. First of these weapons was created in 1860 and the weapon type was patented in 1861. The Parrott is manufactured with a combination of cast and wrought iron, making it accurate, but a bit unreliable. The field armies can utilize 10-, 20- and 30-pounder versions of the gun.

MACHINEGUNS (USA)

Finance a one-time purchase of novel rapid-fire weapons.

The Gatling gun is designed by Dr. Richard J. Gatling. The gun is operated by a hand-crank mechanism, with six barrels revolving around a central shaft. Each barrel fires once per revolution at about the same position. This allows an unusually high rate-of-fire.

The Coffee Mill Gun, or Agar gun, after the inventor Wilson Agar, too, uses a hand crank, feeding rounds into the weapon from a hopper, and firing them one by one.

While both weapons fire like "an army in six feet square", the weapons are condemned by the Ordnance Department for using too much ammunition to be practical on the battlefield. For that reason, the weapons will not be financed into mass production.

Requirements: Only available for the Union.

CONFEDERATE GUNS (CSA)

Finance the Confederate weapon industry to produce southern artillery.

The 1-pounder Williams Gun is designed by Captain D.R. Williams, of Covington, Kentucky. It's a breech-loading, rapid-fire cannon that is operated by a hand-crank, firing up to 40 rounds a minute.

The 12-pounder Napoleon smoothbore is much liked by the southern gunners. Due to brass shortage, cast iron can be used to produce a cheaper, but less durable and reliable, version of the weapon.

As the 1-pdr Williams Gun is of peculiar design, only a one-time purchase of less than 50 pieces is made, and the weapon will not enter mass production.

Requirements: Only available for the CSA.

REBORE MUSKETS

In America in 1860, there's no lack of weapons. But many of the weapons are already old and obsolete, including a hodgepodge of smoothbore muskets, aging hunting weapons, and the like. A quick option to acquire a number of rifles to arm the volunteers is to modify the existing smoothbores into rifled muskets. The modified, rebored muskets are cheap to produce, but of questionable quality. But they are still better than nothing.

LEGACY RIFLES

Finance the reintroduction of legacy rifles back into mass production.

Earlier rifle models, such as the M1841 Mississippi Rifle, and the Hawken, or "Plains Rifle," have already ceased production in favor of the more modern and standard service small-arms made by Springfield Armory. While these weapon types are considered obsolete, they are still effective and accurate weapons in hands of skilled soldiers.

SPRINGFIELD RIFLES (CSA)

Finance mass production of Springfield Rifle-Muskets in the south.

Due to the numerous arms agents deployed before and during the secession of the southern states, Confederate armories are filled with the most recent U.S. service rifle, the Minie ball firing Springfield Rifle-Musket, along with the machinery to begin mass production of this weapon type in Confederate iron works.

Requirements: Arms Agents pre-war policy, only available for the CSA.

SPRINGFIELD RIFLES (USA)

Finance mass production of Springfield Armory's modified and cheaper to produce Springfield Rifle-Muskets.

Before the war, some 75,000 Springfield rifles of Model 1855 were produced for the regular army. When the secession crisis started, many armories were left in Confederate hands.

The urgent need for large numbers of weapons saw Springfield Armory simplify the Model 1855 by the removal of the Maynard tape primer and a few other minor alterations.

Requirements: Only available for the Union.

CONFEDERATE RIFLES

Finance Confederate weapons production, providing captured machinery, to produce domestic versions of the U.S. service rifles, mainly copies of the Springfield model 1855. The produced weapons, Fayetteville Rifle-Muskets and Richmond Rifles, are of sufficient quality to arm the Confederate infantry, and the shorter Richmond Carbine is also suited for mounted troops.

Requirements: Only available for the CSA.

CAVALRY CARBINES

Finance mass production of rapid-firing, short-range cavalry carbines of different types. All of these weapons have been in production already in the 1850s, but as their use and hence demand has remained low, the number of these weapons has remained limited.

MEDIUM RANGE CARBINES

Finance mass production of rapid-firing, medium range carbines, that can be used to arm infantry and cavalry units alike. While the range cannot match that of modern rifle-muskets, the rate of fire is higher, allowing inflicting heavy casualties in a short period of time, while in close combat. The rate of fire also means that units will burn through their ammunition more rapidly, which can could result in logistical problems on the field.

SHARPS RIFLES

Finance mass production of breech-loading Sharps Rifles and Carbines. Designed by Christian Sharps in 1848, these very accurate weapons saw use during the Bleeding Kansas crisis of 1855-1859. The Sharps Carbine, in particular, is preferred by many cavalry troopers, and it has the potential of becoming the standard cavalry carbine for the U.S. Army. But arming infantry units with such rapid-firing weapons has been rejected as impractical due to ammo consumption and hence logistical challenges.

REPEATING RIFLES

Finance the introduction and mass production of very rapid-firing lever-action repeating rifles in the military. These weapons, Henry and Spencer Rifles, have been designed as recently as 1860. Their main advantage, the rapid rate of fire, is also the reason generals have their suspicions about these weapons. As the soldiers can consume their load of ammunition very rapidly, there are worries that the men would simply burn through the ammunition and then fall back, or some other similar folly.

IRONCLAD MONITORS (USA)

Finance John Ericson's Monitor ironclad warship design. Ericson's ship has a cylindrical gun turret mounted amidships above the low-freeboard upper hull, giving it an unusual look, sometimes leading it to be described as a "cheesebox on a raft." The vessel and especially its turret are heavily armored, and able to withstand heavy fire.

Construction of these ship types requires advanced (level 3) shipyards.

Requirements: Only available for the Union.

IRONCLAD GUNBOATS (USA)

Finance construction of heavily armed and armored ironclad gunboats. These vessels can be operated along major navigable rivers to engage enemy fortifications, which could easily obliterate the common wooden or lightly armored gunboats. The ironclad gunboats can also navigate open seas, making them versatile in naval operations.

The designs are quite simple, allowing construction even in mid-level (2) shipyards.

Requirements: Only available for the Union.

REBUILT IRONCLADS (USA)

Finance warship designers and shipyards to allow construction of ironclad warship types, upgraded from traditional wooden sloops and frigates. With heavy armor plating, the Broadside Ironclads and Ironclad Frigates can withstand enemy fire much better than traditional wooden warships. Being more traditional in design, the ships have gun decks and no turrets, which requires more maneuvering during naval engagements.

Construction of these ship types requires advanced (level 3) shipyards.

Requirements: Only available for the Union.

REBUILT IRONCLADS (CSA)

Finance lieutenant John M. Brooke's ironclad warship design, upgrading a wooden steam frigate into a Casemate Ironclad Ram. A casemate is built atop of a new, iron-plated main deck, with a V-shaped bulwark added to the ship's bow, attaching the casemate. The casemate is built of oak and pine in several layers, topped with iron plating and angled to deflect enemy shells. While the ship is difficult to maneuver and suffers from propulsion issues, it should be able to successfully engage and ram wooden warships, withstanding enemy fire.

Construction of these ship types requires advanced (level 3) shipyards.

Requirements: Only available for the CSA.

IRONCLAD GUNBOATS (CSA)

Finance ship designers and shipyards to allow construction of small Ironclad Gunboat Rams, that can be operated along the coasts and major navigable rivers. While the ship is small and lightly armed, the Ironclad Gunboat Ram's iron-plated and sloped casemates can withstand enemy fire, while the ship moves close to engage and ram the enemy ships. This makes it especially deadly against wooden warships.

Construction of these ship types requires mid-level (2) shipyards.

Requirements: Only available for the CSA.

MODERN WARSHIPS

Finance ship designers and shipyards to allow construction of the most modern and deadly ironclad warship types, able to navigate the oceans. These ship types, the Ocean-going Casemate Ironclad and Ironclad Warship, utilize the latest innovations in American naval technology, making them more than a match for any foreign ships seen so far.

Construction of these ship types requires very advanced (level 4) ship yards.

CONFEDERATE GUNBOATS
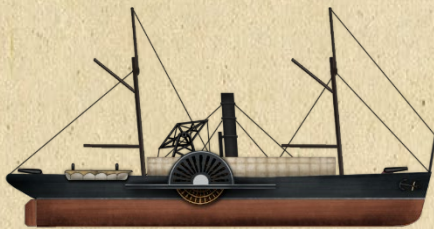
Finance ship designers and shipyards to allow construction of simple warships, that can be quickly constructed at low cost, and can be operated both on open seas and along major navigable rivers. When resources and heavy industry are scarce, some ingenuity is needed. One example is the use of cotton bales to "uparmor" Confederate ships to withstand enemy fire, allowing closing in and ramming the enemy.

Construction of Confederate Gunboats and Cottonclad Rams requires only simple (level 1) shipyards.

ARMORED GUNBOATS
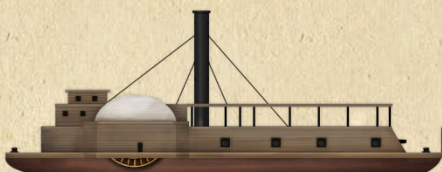
Finance ship designers and shipyards to allow construction of lightly armored river gunboats. These gunboats, usually paddle-steamers, are fitted with a heavy wooden plank armor, or light iron plating, which makes them less vulnerable to enemy small arms fire. The gunboat types, called Timberclads and Tinclads, are also fitted with 8-inch cannon for increased firepower.

Simple (level 1) shipyards are sufficient to construct these ship types.

ORGANIZATION REFORM

Finance a major military organization reform, that will introduce the corps system to our armies, and will more rigidly standardize rank requirements for all command levels.

The corps organization will allow more flexible command of much larger armies, with each corps being able to operate independently, thanks to having its own organic logistical support and headquarters. With the new efficiency in management and staff work within the newly organized armies, general consumption of military supplies is also reduced, making supplying the armies easier and less costly.

Armies of multiple corps will allow much improved command and control in the field, as well as offer important corps commander positions to ambitious generals.

All existing armies will be reorganized into corps and can be attached to an army HQ, or remain independent.

LOGISTICS REFORM

Finance logistics reforms in the nation's military. With improved laws, organization, coordination and training, the nation's logistical capacity can be better utilized. This reduces costs of troop movement using sea, river and rail transportation, as well as costs of supplies.

Each level of this project will further reduce transportation upkeep and supply costs.

MILITARY RAILROAD

Finance establishing a separate agency, run not only by the military, but also experienced railroad men from the private sector, to operate any rail lines seized by the government. As railroads have become a significant factor in transporting troops and supplies, this agency will coordinate this new capability for our nation's military, instead of individual field commanders with little to no experience in such massive logistical efforts. Once the military railroad organization is formed, troop movements speed along railroads is greatly increased.

TRADE WARFARE

Finance the nation's trade warfare effort. This allows the military, along with private contractors, to make arrangements that allow waging a more effective trade war against the enemy.

Each level of this project further increases effectiveness of blockades and blockade running by the nation's navy.

CIVIL ORDER

Finance the internal security effort of the nation. The citizens will react to news from the front lines, as well as decisions made by the government. When support for the war effort starts to waver, negative effects like riots, looting and draft dodging will increase among the common people. When the police and military are ready to step in and suppress any unwanted behavior, this is less likely to happen in the first place.

Each level of this project further decreases negative impact on support from military actions.

RECRUIT AGENTS

Finance recruitment of agents to spy on the enemy and to report their troop movements, increasing intelligence gathering. With improved intelligence gathering, delays in receiving information about enemy troop movements are reduced and the accuracy of the information received is improved.

Each level of this project further improves intelligence gathering.

RECRUITMENT OFFICES

Finance the establishment and management of recruitment offices across the nation. With local and effective recruiters managing the nation's recruitment effort, more volunteers are likely to offer their services for the nation's cause.

Each level of this project further increases number of available volunteers.

CAVALRY REFORM

Cavalry regiments are traditionally used by the army commanders for scouting, as messengers to relay orders, or to perform guard duties in the rear, in small detachments. Progressive cavalry officers are against this kind of dispersed use, and in favor of more independent cavalry use. This requires reforming organization, introducing cavalry brigades. Brigaded, the cavalry could support the army commander's operations more effectively, and even be able to stand their ground against infantry, if needed.

This project updates all existing cavalry units to brigades, and allows recruitment of cavalry brigades with up to 2500 troopers.

CAVALRY REFORM II

Normally in an artillery battery, the gunners are moving on foot. This reduces their mobility to that of infantry. To be able to support the fast-moving cavalry, an artillery battery needs better mobility. This is achieved by adding sufficient number of horses for all the gunners to be able to ride. Only lighter artillery pieces are available for the horse-artillery batteries.

This project allows recruitment of horse-artillery unit type.

ARTILLERY REFORM

Traditionally artillery batteries are distributed within an army, and attached to infantry brigades, or even regiments. The infantry commander is then in command of the attached gunners, usually detaching a few guns' sections to operate in different parts of their line of battle. This limits the tactical use of artillery in battle. Organizing multiple batteries into battalions (or even brigades) allows an artillery commander, a specialist in the use of his guns, to manage his batteries to better support his commander.

This project updates all existing artillery units to battalions, and allows recruitment of artillery battalions with up to 16 guns.

SUPPLY REFORM

As the armies grow, so does the need for military supplies. Current logistical system is designed to support only small armies. The depots, their personnel and commanding officers cannot manage larger supply volumes without reforming the whole logistical system.

This project allows upgrading existing supply depots to levels 2-3, greatly increasing the efficiency of the depots, allowing them to support more and larger armies.

TRAINING MANUALS

Warfare and tactics are constantly evolving. To improve training of the large volunteer armies, new and up to date drill and training manuals need to be written, printed and distributed to the officers.

Each level of this project further increases the effectiveness of training, meaning the troops' training level increases faster when they are encamped.

MILITARY EDUCATION

Finance the nation's military education by constructing a new military academy in one of the loyal states. A military academy improves commander attributes of all officers from the state and prepares them for wartime command.

Each level of this project allows one more military academy to be constructed.

TABLE V - PROJECTS REQUIRING DIPLOMACY SUBSIDIES

AUSTRIAN RIFLES

Austria is willing to export its service small arms in large numbers. The import deal consists of cheap, older Augustin muskets that can be converted to rifles, which are now available in numbers after the Central European revolution and independence wars in late 1840s. Austria can also offer its newer Lorenz rifled muskets.

BRITISH RIFLES

Make a deal with the British to import their latest service small arms. The deal consists of the reliable Enfield Rifle Muskets for infantry, the very accurate Enfield Musketoons for cavalry, as well as the Whitworth Rifle, which offers excellent long-range accuracy, and can be considered the world's first proper sniper rifle.

BRITISH ARTILLERY

Make a deal with the British to import their latest rifled artillery types. The British weapons in general are known for their high accuracy. The deal consists of 12-pounder Blakely Rifles, 6- and 12-pounder breech-loading, fast and accurate Whitworth Rifles, as well as a rapid-firing, breech-loading 3-inch Armstrong Rifle.

FRENCH WEAPONS

With the Confederacy having provided military assistance to France in its invasion of Mexico, the French are now willing to strike an export deal of their weapons for the use of the Confederacy. The French Minie Rifle is a good all-around service rifle, while Canon Obusier de 12 is the gun-howitzer, known as the 12-pounder "Napoleon" in America. This import deal will come in handy, especially if the Confederate weapons industry continues to struggle to produce the needed number of guns.

Requirements: Only available for the CSA with Support Mexican Intervention -Act.

PRUSSIAN WEAPONS

Make a deal with the Prussians to import their advanced weapons, considered the best in Europe by many. The Dreyse Needle Gun is a new kind of breech-loading rifle, the first one to use bolt action to open and close the chamber. Krupp's C/61 6-pounder field guns are rapid-firing breech-loaders. Both weapons offer high manufacturing standards and long-range accuracy.

BRITISH WARSHIPS

Make a deal with the British to import their modern Ironclad Turret Ships. As the ships are constructed in Great Britain, any issues with lack of domestic shipyard capacity can be avoided.

FRENCH WARSHIPS

Make a deal with the French to import their modern ocean-going Ironclad Rams. As the ships are constructed in France, any issues with lack of domestic shipyard capacity can be avoided.

GLOIRE CLASS

Following the Confederate support of the French invasion of Mexico, the French are willing to further increase their military support of the Confederacy for a reasonable price. If so requested, the French will allow the construction and purchase of their navy's most powerful ship type, the Gloire-class ironclad ship of the line. The ships would be constructed in French shipyards.

Requirements: Only available for the CSA with Support Mexican Intervention -Act.

WARRIOR CLASS

Negotiate a deal with the British to allow construction and import of their most powerful ship type, the over 9,000 ton Warrior-class ironclad, armed with 40 heavy guns. The British are not willing to settle for a cheap deal, but if the required sum is provided, they would construct the ordered ships in British shipyards, which means any lack of domestic shipyard capacity can be avoided.

SEND ENVOYS

Finance diplomatic envoys who will be sent to Europe to advance our nation's cause abroad, increasing foreign support, and positively influencing any decisions to intervene in the conflict.

Each level of this project will further improve relations with the European great powers.

TRADE DEALS

Finance the nation's diplomats to negotiate more lucrative trade deals with foreign nations. The trade deals will allow better prices when importing and exporting goods, giving a boost to the nation's economy.

Each level of this project further increases the profits from foreign trade deals.

TABLE I - Unit Perks.

Infantry:

ENGINEERING

One company in this unit is specially trained for engineering duties, allowing them to assemble pontoons during battles, while also increasing speed of digging in. Engineering points +25% in a battle. Level up by constructing entrenchments and pontoons.

One battalion of this unit is specially trained for engineering duties, allowing faster assembly of pontoons and digging in. Engineering points +50% in a battle. Level up by constructing entrenchments and pontoons.

This unit is specialized in engineering, making them very effective in building pontoons over bodies of water, or digging entrenchments. Engineering points are doubled in a battle. This is an elite engineer unit.

SHARPSHOOTERS

A company of men in this unit are hand-picked marksmen. Accuracy +10%. Level up by engaging enemies at long range.

This unit has experienced marksmen, trained in art of sniping, and practices regularly using live ammunition. Accuracy +25%. Level up by engaging enemies at long range.

Experienced marksmen with specialized armament like sniper scopes make this unit extremely deadly in a firefight. Accuracy +50% and range +25%. This is an elite sharpshooter unit.

ZOUAVE

Trained to fight according to French *chasseur a pied* s, this unit is drilled in fast movement on the battlefield, allowing running. Level up by fighting prone.

Experienced in Zouave tactics and drilled in quick movement under fire, the men are fit and used to running long distances. Allows running. Fatigue effects -25%. Level up by fighting prone.

The men in this unit are expert light infantry soldiers, drilled according to *chasseur a pied* theories of the *pas gymnastique*. Allows running. Fatigue effects -50%. This is an elite Zouave unit.

EXPERT SKIRMISHERS

The men are specially trained for skirmishing and picket duties, skilled in using the terrain for concealment. Concealment +10%. Level up by skirmishing.

Drilled in skirmishing, the men fight effectively in open order, and use terrain well to cover their movement. Concealment +25% and skirmisher reloading speed +5%. Level up by skirmishing.

Experienced skirmishers, the men fight exceptionally well in open order and use terrain cover to mask their movement. Concealment +50% and skirmisher reloading speed +10%. This is an elite skirmisher unit.

SPIRITED CHARGE

Trained especially in the use of bayonet and close combat, the men in this unit are confident in their charge. Melee strength +10%. Level up in close combat.

Drilled hard with the bayonet, the men know that a determined charge will break the enemy more likely than prolonged exchange of volleys. Melee strength +20%. Level up in close combat.

The men in this unit are said to "always move them." Their terrifying charge backed with fearsome cheering makes even enemy veterans tremble. Melee strength +50%. This is an elite melee unit.

DEADLY VOLLEY

The unit is trained vigorously in maintaining fire discipline, releasing their volley only when the effect is assured. Resistance to high momentary casualties +50%, volley strength +5%. Level up in short range engagements.

"Ready, aim, fire!" These words are instilled in the men, and they are well drilled in delivering lethal volleys. Resistance to high momentary casualties +50%, volley strength +10%. Level up in short-range engagements.

The men stand like a stone wall under enemy fire, delivering their deadly volleys to break even the strongest enemy lines. Resistance to high momentary casualties +50%, volley strength +25%. This is an elite close combat unit.

ACE OF SPADE

The men are trained to always improve the cover provided, using spades, or whatever they have at hand. Cover +10%. Level up fighting from behind cover.

The men will fight fiercely not to be displaced from good cover, as they well know the meaning of protection against modern weapons. Cover +20%, morale behind cover doubled. Level up fighting from behind cover.

The men are experts in improving their cover, and will fight like devils from behind their earthworks, rotating turns in reloading weapons, while the front rank keeps firing. Cover +50%, morale behind cover doubled, reloading speed behind cover +25%. This is an elite defensive unit.

IRON DISCIPLINE

The men are trained to high standards of discipline and they understand the meaning of keeping their ranks together under fire. Cohesion increases 25% faster. Level up in ranged combat.

With very high morale and discipline, these men will keep their formation tight and their heads down, even if other units nearby falter. Cohesion increases 50% faster. Level up in ranged combat.

These men fight as if they were made of iron, one could think. Their discipline will hold under harsh conditions, even when fighting superior foes. Cohesion increases speed doubled. This is an elite line unit.

Cavalry:

EXPERT SCOUTS

The unit has hand-picked troopers who can be used for scouting ahead of the main force, without revealing the unit right away. Concealment +10%. Level up by scouting.

The scouts in this unit are equipped with binoculars, and their training makes them competent in tracking the enemy. Concealment and visibility range +25%. Level up by scouting.

The troopers in this unit are trusty scouts, more often than not spotting enemy movement before being seen themselves. Concealment and visibility range +50%. This is an elite scout unit.

COLD STEEL

Spirited in their charge, the troopers are happy to give their foes the saber whenever possible. Melee strength +10%. Level up in melees.

The troopers in this unit are drilled hard in conducting a powerful charge in a tight formation against their foe. Melee strength +20%, morale hit on charge target doubled. Level up in melees.

This unit is legendary for their saber charges and strike fear even in the bravest hearts of their enemies. Melee strength +50%, morale hit on charge target doubled. This is an elite cavalry unit.

MOUNTED RIFLES

The unit has hand-picked troopers, who are used to firing their weapons while mounted. Reload slowdown while mounted -25%. Level up firing mounted.

Drilled especially in firing while mounted, the troopers can deliver accurate fire from the saddle. Reload slowdown while mounted -50%. Level up firing mounted.

These elite troopers reload and fire their weapons from horseback as effectively as if dismounted, making them a very versatile force. No reload slowdown while mounted. This is an elite mounted rifles unit.

STORMERS

These troopers prefer fighting dismounted, using a loose formation similar to skirmishers, and moving fast like the light infantry. Allows running. Level up by fighting in loose order.

These troopers are drilled hard in fighting dismounted and in loose order, making them as effective as small specially trained infantry units. Allows running. Accuracy in loose formation +10%. Level up by fighting in loose order.

Fighting like elite skirmishers on foot, these troopers are fearsome in their attack against even strong enemy positions, especially if armed with repeating rifles. Allows running. Accuracy in loose formation +25%. This is an elite light cavalry unit.

VANGUARD

Trained to move in front of the main columns, these troopers will not be alarmed if they find enemies on their flanks or rear. No morale hit if detached. Level up by fighting detached.

This unit is manned with hand-picked troopers who are trained in trailblazing and will not lose their wits when running into enemies. No morale hit if detached, flanked or falling back under fire. Level up by fighting detached.

Experts in trailblazing, these troopers are used to running into enemies and slipping away without breaking ranks. No morale hit if detached, flanked, falling back or retreating under fire. This is an elite vanguard unit.

LIGHTNING BRIGADE

This unit is trained to fight according to infantry tactics, moving fast with the horse, but fighting dismounted. Cover +10%. Level up fighting from behind cover.

Well-drilled in infantry tactics, these troopers can hold their own against more numerous enemy infantry, when in cover. Cover +20%, morale behind cover doubled. Level up fighting from behind cover.

Experts in using and improving cover, these fast-moving troopers can be used to block enemy advances as effectively as infantry. Cover +50%, morale behind cover doubled, reloading speed behind cover +25%. This is an elite defensive cavalry unit.

Artillery:

CLOSE SUPPORT

When enemy lines are closing in, the gunners are trained to load two canister rounds to maximum effect at point-blank range. Canister effect doubled. Level up by firing canister.

The gunners are experienced in close combat against enemy infantry and will keep fighting calmly with great effect in support of their unit. Canister effect doubled, canister reloading speed +10%, melee strength +25%. Level up by firing canister.

The unit is manned with crack gunners, who will not tremble when enemy lines are closing in, but instead will pour deadly fire into them, they will also defend their guns vigorously. Canister effect doubled, canister reloading speed +20%, melee strength +50%. This is an elite close support unit.

SKILLED LAYING

The gunners in this unit are specially trained in gun laying, in order to silence enemy guns at distance. Counter-battery accuracy +10%. Level up by firing counter-battery fire.

Experts in gun laying, the gunners can keep enemy artillery under accurate fire even when taking fire themselves. Counter-battery accuracy +20% and morale hit from enemy artillery fire -50%. Level up by firing counter-battery fire.

The gunners are specialized in counter-battery missions, keeping calm under artillery fire and firing back with deadly accuracy. Counter-battery accuracy +50% and no morale hit from enemy artillery fire. This is an elite counter-battery unit.

GRAND BATTERY

The gunners are trained to keep their aim when firing their guns rapidly. Bombardment accuracy +10%. Level up by bombarding.

The gunners are experts at gun laying and cutting fuses and their performance is sustained when firing rapidly. Bombardment accuracy +20%, enemy morale hit from artillery fire +50%. Level up by bombarding.

With trained eyes in gun laying, fuse cutting and counting trajectories, these gunners are able to bombard their enemies with fearful accuracy at a high rate of fire. Bombardment accuracy +30%, enemy morale hit from artillery doubled. This is an elite artillery unit.

FLYING BATTERY

Trained in quickly limbering and changing positions, this unit can be used to harass enemy movements with improved effectiveness. Unit speed +15%. Level up by successfully falling back within enemy rifle range.

Quickly limbering and unlimbering their pieces, the gunners in this unit can move in fast, deliver a deadly barrage and fall back before overrun by the enemy. Unit speed +30%. No falling back under fire morale hit. Level up by successfully falling back within enemy rifle range.

The gunners are experts in moving their pieces on the battlefield and even under fire. With such speed, the enemy can think that they are facing a much larger concentration of guns. Unit speed +50%. No falling back or retreating under fire morale hit. This is an elite fast artillery unit.

SAPPER GUNNERS

The gunners are trained to always improve the cover provided, using spades, or whatever they have at hand. Cover +10%. Level up fighting from behind cover.

The gunners will fight fiercely not to be displaced from good cover, as they know well the meaning of protection against modern weapons. Cover +20%, morale behind cover doubled. Level up fighting from behind cover.

The gunners are experts in improving their cover, and will fight like devils from behind their earthworks. Cover +50%, morale behind cover doubled, reloading speed behind cover +25%. This is an elite defensive artillery unit.

TABLE II - Army Perks.

SIEGE TRAIN

The heavy siege artillery is assembled into what is called a siege train and transported to take part in sieges only. The siege train consists of heavy rifled artillery and mortars. Siege firepower +25%. Level up by laying siege.

With heavier 10-inch mortars and heavy howitzers with high trajectory, this siege train is more effective against fieldworks and entrenched troops. Siege firepower +50%. Level up by laying siege.

With a wide array of heavy and super heavy artillery, up to 100-pounder rifles, this siege train has formidable firepower against any fortified enemy positions. Siege firepower doubled. This is an elite siege unit.

FIELD TELEGRAPH

Orders are sent via wire faster than couriers can ride, decreasing order delays. Order delays -10%. Level up by executing movement orders.

With experience, the signal troops are faster in erecting the wires. With cipher codes, outsiders will not be able to tap in and read the orders. Order delays -20%, information delays -25%. Level up by executing movement orders.

With experience, trial and error and proper equipment, the signal troops of the telegraph corps have perfected the use of the field telegraph. Order delays -30%, information delays -50%. This unit has elite signal corps personnel.

BALLOON CORPS

A hot air balloon and someone crazy enough to take it up under enemy fire, to report enemy movements. Order delays +25%, intelligence gathering +25%. Level up by executing movement orders.

With experience, hydrogen gas generators and different kinds of balloons for different weather conditions, the hot air balloon is faster to put up and take down. Order delays +10%, intelligence gathering +25%. Level up by executing movement orders.

With telegraph equipment and flag signals, the aeronauts are able to direct the fire of hidden batteries against enemy targets, converting the balloon into the artillery forward observer of its time. Order delays +10%, intelligence gathering +50%, siege effectiveness +5%. This unit has elite aeronauts.

BUREAU OF MILITARY INTELLIGENCE

Using civilians as detectives and spies and gathering the information in an organized fashion improves the situational awareness of this unit. Intelligence gathering +10%. Level up by scouting.

Using the field agents for infiltrating enemy units and the interrogation of prisoners of war provides valuable information about enemy movements. Intelligence gathering +25%, information delay -25%. Level up by scouting.

Collecting enemy newspapers and discarded documents, interrogating prisoners and civilians and using experienced field agents means information about the enemy is as good as it can get. Intelligence gathering +50%, information delay -50%. This unit has elite intelligence personnel.

SKILLED CARTOGRAPHERS

Drawing maps is an art. Drawing accurate maps that actually benefit their military users is rare. Intelligence gathering and movement speed +5%. Level up by scouting.

With increasingly accurate maps, the commander is able to use the terrain and roads, making it harder to surprise him. Intelligence gathering and movement speed +10%. Level up by scouting.

The skilled engineers provide maps, that make it feel like this commander never takes a wrong turn or loses himself in the countryside. Intelligence gathering and movement speed +20%. This unit has elite map makers.

FLYING COLUMN

Copying the French invention, it's possible to break free from the heavy logistical chain. Its simplicity is to carry more rations and less clothing and tents to allow longer and faster marches. Movement speed +10%, maximum supplies +50%. Level up by marching.

Utilizing mules to carry extra ammunition and rations means the marching columns can be even lighter and self-sufficient for longer. Movement speed +10%, maximum supplies +100 percent. Level up by marching.

With experience on what is really needed during the campaigns, the flying columns are even lighter and more independent, matching the French example, or even surpassing it? Movement speed +25%, maximum supplies +150 percent. This is an elite maneuver unit.

FOOT CAVALRY

With inspiring leadership and familiarization with the hardships of forced marches, the men will keep on going longer than you thought possible. Forced march speed +10%, attrition during forced marches -10%. Level up by using forced marches.

To hell with cadence and formation! And if a man cannot keep up with the rest, he joins them later, following the sound of the guns. Forced march speed +20%, attrition during forced marches -20%. Level up by using forced marches.

"Colonel, I yield to no man in sympathy, but I am obliged to sweat these men tonight so I may save their blood tomorrow." Forced march speed +30%, attrition during forced marches -30%. This is an elite infantry unit.

ENGINEERS & MECHANICS

Organizing the civil engineers and construction experts from all units into a single unit, to be used at a time of need, will allow quicker construction progress. Construction speed +25%. Level up by constructing forts, depots and telegraph stations.

With specialized equipment and experts, this unit will be able to build anything from a fort to a depot in formidable speed. Construction speed +50%. Level up by constructing forts, depots and telegraph stations.

The engineers and mechanics in this unit are the best known in America, with their skill and tenacity unsurpassed. Construction speed doubled. This is an elite construction unit.

AMBULANCE CORPS

Proper organization of the ambulance system, rooting out corruption and unwillingness to gather wounded soldiers is the first step towards proper medical care to wounded soldiers. Speed reduction due to wounded soldiers -25%, mortality rate of wounded -10%. Level up by attending the wounded.

Standardizing the ambulance equipment with medical supplies, stretchers, water, removable benches and seats allows more efficient evacuation of the wounded from the field. Speed reduction due to wounded soldiers -50%, mortality rate of wounded -25%. Level up by attending the wounded.

A proper ambulance corps, with standards to train the ambulance crew, routine inspections and strategic evacuation plans for battles. Speed reduction due to wounded soldiers -75%, mortality rate of wounded -50%. This unit has elite ambulance corps personnel.

PONTOON TRAIN

Pontoon bridges are used to quickly cross rivers with all the equipment the army carries. These bridges are made of wood or India rubber, which are better than nothing. Movement speed across small rivers +25%, supply efficiency +10%. Level up by crossing small rivers.

Equipped with cotton-canvas covered pontoons, these are lightweight, easy to work with and to transport, but require more maintenance. Movement speed across small rivers +50%, supply efficiency +20%. Level up by crossing small rivers.

A standardized lightweight pontoon equipment combined with experienced troops to operate them, helps this unit overcome any water obstacles with speed. Movement speed across small rivers +75%, supply efficiency +30%. This unit has elite pontoon train engineers.

SAPPERS AND MINERS

The soldiers in the armies include many with mining background. Organizing these men to sap towards enemy fieldworks would make assaults a lot less costly? Siege assault efficiency +25%. Level up in siege assaults.

The sappers have learned to utilize a sap roller, by forming a parapet on the engaged side of the trench for cover against enemy fire. This reduces losses in the trenches. Siege assault efficiency +50%. Level up in siege assaults.

Utilizing expert miners to dig a proper mine shaft under enemy fieldworks to plant large powder charges would not only kill the defenders, but also open a wide hole to charge through? Siege assault efficiency doubled. This is an elite siege assault unit.

LAND TORPEDOES

A land torpedo is an anti-personnel explosive, a "barbarous" subterranean booby trap to hinder enemy movement, especially to cover withdrawal. Skirmishing efficiency +5%, enemy movement speed within range -10%. Level up by skirmishing.

With a sufficient amount of land torpedoes used, the enemy will tread lightly and their morale is hurt. Combined with clever use of terrain, ambushes are more effective. Skirmishing efficiency +10%, enemy movement speed within range -20%. Level up by skirmishing.

While massed use of land torpedoes can be described as "not warfare, but murder", it can slow down the enemy considerably. Skirmishing efficiency +20%, enemy movement speed within range -30%. This is an elite delaying unit.

PARTISAN BRIGADES

Using conventional cavalry forces for deep raids will harass enemy movements in their rear, making this unit good at distracting the enemy. Skirmishing efficiency +25%, raiding morale hit on enemies +10%. Level up by raiding.

With experienced cavalry under cunning leadership, enemy forces can be kept on their toes by launching violent charges out of the blue and vanishing before the enemy can react. Skirmishing efficiency +50%, raiding morale hit on enemies +25%. Level up by raiding.

With elite cavalrymen and legendary partisan commanders, the raiding parties can wreak havoc and bring the fight to the enemy where they thought they were safe. Skirmishing efficiency doubled, raiding morale hit on enemies +50%. This is an elite raiding unit.

BUSHWHACKERS

A form of guerrilla warfare, bushwhacking aims to attrit the enemy using ambushes against military forces and civilian targets alike, with non-uniformed irregular cavalry. Skirmishing efficiency +25%, raiding support hit +10%. Level up by raiding.

The guerrilla warfare is taking a life of its own, with civilian targets being hit often and the irregular forces acting more and more independently from the military organization. Skirmishing efficiency +20%, raiding support hit +25%. Level up by raiding.

With the bushwhackers being viewed as outlaws, or terrorists, the raids against civilian targets cause uproar. The fear instilled in enemy soldiers before has turned into pure hatred. Skirmishing efficiency +10%, raiding support hit +50%. This is an elite irregular unit.

EMBEDDED REPORTERS

In this time of fast traveling news, allowing newspaper reporters to follow the unit in battle will make the deeds of the leaders better known to the public. Speed of fame development +25 percent. Level up by fighting battles.

With increased access to military matters within the army, the stories written by the embedded reporters are followed daily by the increasingly interested public. Speed of fame development +50 percent. Level up by fighting battles.

A good story can make or break a military career, as things are as they appear in the news. The stories travel far and fast, creating heroes and villains that even the administration cannot ignore. Speed of fame development doubled. This unit is accompanied by the best reporters in the nation.

LIMELIGHTS

Chemical lamps using superheated balls of lime, or calcium oxide, create a glow known from lighthouses and theaters, but now also adapted for combat, allowing the illumination of enemy targets for night time bombardment. Siege and skirmishing efficiency during night time +25%. Level up fighting sieges.

Illuminating targets for the gunners is one use for the calcium lights, but the lights can also be used to blind enemy gunners, decreasing counter-battery fire accuracy. Siege and skirmishing efficiency during night time +50 percent. Level up fighting sieges.

With the effective use of powerful calcium lights, enemy movements at night are as easy to detect as during daylight. Siege and skirmishing efficiency during night time doubled. This is an elite night combat unit.

EXPERT SCOUTS

This unit has organized a band of hand-picked cavalrymen that have the skills to avoid detection by enemy pickets and the bravery to move behind enemy lines in small groups. Intelligence gathering +25 percent. Level up by scouting.

While normally scouts would fall back in front of enemy advance, this unit has a small number of troopers that allow the enemy to bypass them, to provide intel from behind the enemy lines. Intelligence gathering +50 percent. Level up by scouting.

A highly experienced band of scouts operating independently behind enemy lines to provide intelligence of enemy movements and avoiding capture. "Iron scouts" as even the enemy would put it. Intelligence gathering doubled. This unit has elite cavalry scouts.

RIVER EXPEDITION

Operating closely with the brown-water navy, this unit is used to navigating the rivers and opening new fronts against enemy fortifications guarding the waterways. River movement speed +25% and siege assault efficiency +10%. Level up by using river transports.

This unit is skilled in river warfare operations in close coordination with the river gunboat flotilla and capturing enemy fortifications by storm. River movement speed +50% and siege assault efficiency +25%. Level up by using river transports.

This unit is highly skilled in navigating and operating along the rivers and bayous, taking enemy strongpoints and fieldworks by surprise, in joint operations with the supporting river gunboats. River movement speed doubled and siege assault efficiency +50 percent. This is an elite amphibious unit.

TABLE III - Fleet Perks.

TORPEDOES

Spar torpedoes are bombs placed at the end of a long pole, which is attached to a boat. The torpedo is placed on enemy hull by ramming, and then detonated. This allows smaller ships to take on larger ones. Ramming efficiency +25 percent. Level up by ramming during naval battles.

Using torpedoes has proven effective, especially against the ironclads that are virtually invulnerable to cannon fire, but weak below the waterline. Ramming efficiency +50 percent. Level up by ramming during naval battles.

With multiple types of torpedoes used, from spar torpedoes under the waterline to towed torpedoes, ramming warfare with even smaller ships or boats has become deadly. Ramming efficiency doubled. This is an elite ram fleet.

MORTAR BOATS

Mortar boats and towed river barges allow blue and brown-water navies to engage enemy fortifications using the high-trajectory mortar. Bombardment efficiency +5 percent. Level up by bombarding.

With more sophisticated boats and firing techniques used, many of the mortar rounds fired from the boats or barges actually manage to land inside the enemy fort! Bombardment efficiency +10 percent. Level up by bombarding.

While the mortar boats lack accuracy, now, with sufficient numbers available, they do provide proper support, especially when support cannot be provided from land. Bombardment efficiency +25 percent. This is an elite fort attack fleet.

SUPPLY COLLIERS

To allow vessels to operate longer without the need to return to port for supplies, barges and colliers of supplies can be towed by the fleet. This allows longer engagements, but makes the fleet slower. Movement speed -30%, supply consumption -15 percent. Level up by bombarding and blockading.

With experience, the sailors make good use of the supply barges or colliers, allowing the fleet to remain on station for a considerably longer time than before. Movement speed -20%, supply consumption -30 percent. Level up by bombarding and blockading.

With proper equipment and tactics employed, the fleet can carry double the number of supplies, but with little effect to its traveling speed. Especially useful for blockades. Movement speed -10%, supply consumption -50 percent. This fleet has superior supply stores.

BALLOON BARGE

A coal barge fitted with gas-generating apparatus and modified into a balloon barge. The first ever aircraft carriers allow the spying of enemy defenses using a hot air balloon. Intelligence gathering +25%, fort bombardment efficiency +5 percent. Level up by bombarding.

With experience, hydrogen gas generators and different kinds of balls for different weather conditions, the hot air balloon is faster to put up and take down. Intelligence gathering +35%, fort bombardment efficiency +10 precent. Level up by bombarding.

With telegraph equipment and flag signals, the aeronauts are able to direct the fire of the ships against enemy targets, converting the balloon into the artillery forward observer of its time. Intelligence gathering +50%, fort bombardment efficiency +15%. This fleet has elite aeronauts.

LIMELIGHTS

Chemical lamps using superheated balls of lime, or calcium oxide create a glow, known from lighthouses and theaters, but now also adapted for combat, allowing the illumination of enemy targets for night time bombardment. Combat efficiency in the dark +25 percent. Level up by bombarding.

Illuminating targets for the gunners is one use for the calcium lights, but the lights can also be used to blind enemy gunners, decreasing counter-battery fire accuracy. Combat efficiency in the dark +50 precent. Level up by bombarding.

With effective use of the powerful calcium light, enemy movement at night is as easy to detect as during daylight. Combat efficiency in the dark doubled. This is an elite night fighting fleet.

BLOCKADING SQUADRON

Blockade service may be dull, but being a safer job than that in the infantry for a soldier, there's never lack of volunteers in a blockading squadron. Blockading efficiency +10 percent. Level up by blockading.

Even more volunteers flock to blockade service after captured ships and their cargoes are auctioned and the earnings split among the sailors. Blockading efficiency +25 percent. Level up by blockading.

Having learned all the tricks of the blockade runners, not many can escape capture when heading out to sea past this fleet's blockade. Blockading efficiency +50 percent. This is an elite blockading fleet.

SEA RAIDERS

Sea raiding, or sometimes privateering, targets merchant shipping, capturing them as prizes, it also hits marine insurance rates. Allows blockading trade nodes, import prices +10 percent. Level up by blockading trade nodes.

Effective tactics and sponsorship allow more lucrative raiding by this fleet, and enemy marine insurance rates soar. Allows blockading trade nodes, import prices +25 percent. Level up by blockading trade nodes.

Famous sea raiders strike fear into hearts of the merchant sailors, and men willing to take the risk are harder to find. Allows blockading trade nodes, import prices +50 percent. This is an elite corsair fleet.

AMPHIBIOUS ATTACK

New tactics and Marines allow this fleet to attack and capture enemy fortifications for the army to hold. This requires good coordination between the services. Allows the fleet to capture forts. Level up by attacking forts.

This fleet is known for reducing forts and ports in daring amphibious attacks, even in torpedo infested waters, thanks to good intelligence and ferocious marines. Allows the fleet to capture forts, capture probability +10 percent. Level up by attacking forts.

With success comes fame. This fleet and the attached marines have raided and captured enemy fortifications and earned a reputation as an amphibious shock force, always faithful. Allows the fleet to capture forts, capture probability +50 percent. This fleet has elite Marines.

BLOCKADE BUSTERS

Guarding against a blockade and supporting blockade runners with attacks helps to keep the trade lifelines open. Fighting efficiency against blockading fleets +10%, blockade efficiency within ports in this fleet's radius -10 percent. Level up by attacking blockading fleets.

Keeping the blockading fleet concerned about quick attacks from the cover of coastal batteries helps more commerce slip past the blockade. Fighting efficiency against blockading fleets +20%, blockade efficiency within ports in this fleet's radius -20 percent. Level up by attacking blockading fleets.

Having perfected raiding tactics against a blockading squadron, this fleet is a true thorn in the side of the enemy navy, allowing blockade runners make a run for it. Fighting efficiency against blockading fleets +30%, blockade efficiency within ports in this fleet's radius -30 percent. This is an elite blockade busting fleet.

BATTERY RUNNER

A surprise attack, moving past enemy batteries in a tight formation, firing rapidly. This "running the batteries" can be effective especially along rivers, to open a new front. Fighting efficiency vs. forts +25 percent. Level up by attacking forts with ironclads on the move.

Making use of the night's darkness to run the enemy batteries are tactics used by this fleet to bypass and disable enemy defenses. Fighting efficiency vs. forts +50 percent. Level up by attacking forts with ironclads on the move.

This fleet has perfected the tactics of running enemy batteries, using surprise, furious vigor, the cover of darkness and even flooding. Fighting efficiency vs. forts doubled. This is an elite ironclad fleet.

PORT DEFENDER

This fleet uses floating batteries and torpedoes to protect its home port against attacking enemy fleets. Fighting efficiency when within port radius +25 percent. Level up by fighting naval battles.

Combining the fleet's mobility, firepower from coastal defenses, floating batteries and torpedoes, makes the removal of this fleet protecting the port very difficult. Fighting efficiency when within port radius +50 percent. Level up by fighting naval battles.

This fleet uses all means possible to keep its port open and has perfected the tactics and coordination between land and water-based assets into an explosive maze for the attacker. Fighting efficiency when within port radius doubled. This is an elite defensive fleet.

---◆---

Range: The maximum effective range of the weapon in combat. The accuracy will be greatly reduced when the engagement range is long.

Rate of Fire: How many rounds per minute a well-drilled soldier is expected to be able to fire in combat conditions. Experience, Training and Fatigue affect the actual Rate of Fire.

Firepower: The theoretical lethality when a unit fires one round at another unit. Takes into account reliability and ease of use.

Accuracy: The higher the accuracy, the more likely the unit will be to inflict casualties.

Bayonet: If the weapon is not equipped with a bayonet, melee effectiveness will be lower.

Production Cost: How much production of this weapon type costs. Complex weapons, or those requiring higher quality materials, will cost more money and time to produce or import. The actual cost in dollars depends on potential weapon industry output or foreign relations.

Required Project: Which project is needed to be activated for this weapon to become available for production or import. Unavailable weapon types can still be captured from the battle field, if the enemy army was using them.

Availability: Is the weapon available to Union and/or Confederacy to produce in the game, or to import for both sides?

TABLE I - Infantry Weapons.

MIXED MUSKETS

Range:	250 yards
Rate of Fire:	2,5 rds/min
Firepower:	0.9
Accuracy:	Very Poor
Bayonet:	No
Production Cost:	Always Available
Required Project:	-
Availability:	Both Sides

A collection of old and obsolete smoothbore muskets, including flintlocks, widely available. Inaccurate, slow and prone to misfires, though still lethal when firing buck and ball. Includes all the obsolete imported weapons as well as old weapons stored around the county.

All newly recruited units in the game come with this default weapon type. Upgrading to a better weapon type is always recommended, but requires available weapons. The low firepower rating comes from the poor reliability of the weapons in general.

SPRINGFIELD MUSKET

Range:	250 yards
Rate of Fire:	2,5 rds/min
Firepower:	1,2
Accuracy:	Very Poor
Bayonet:	Yes
Production Cost:	Not in production
Required Project:	-
Availability:	Both Sides

The standard American smoothbore percussion lock musket, originally produced by the Springfield Armory, MA. Inaccurate, but deadly with buck & ball, and widely available.

A number of these weapons are available for both sides from the start of the war.

REBORED MUSKETS

Range:	400 yards
Rate of Fire:	2,5 rds/min
Firepower:	1
Accuracy:	Very Poor
Bayonet:	Yes
Production Cost:	Low
Required Project:	Rebore Muskets
Availability:	Both Sides

Smoothbore muskets of all types, converted to rifles for increased range and accuracy. Cheap and simple to produce, but of questionable quality. Some even come without proper sights.

Allows better reach early in the war for a low cost, when more modern and better weapon types are not yet available in sufficient numbers.

AUGUSTIN RIFLE-MUSKET

Range:	350 yards
Rate of Fire:	3 rds/min
Firepower:	1
Accuracy:	Poor
Bayonet:	No
Production Cost:	Low
Required Project:	Austrian Rifles
Availability:	Import

Austrian model 1842 Augustin tube-lock smoothbore musket, later rifled, sighted, and converted to percussion using the cone-in-barrel technique.

MODEL 1817 RIFLE

Range:	400 yards
Rate of Fire:	2,5 rds/min
Firepower:	1
Accuracy:	Poor
Bayonet:	Yes
Production Cost:	Not in production
Required Project:	-
Availability:	Union

Originally a flintlock muzzle-loading rifle-musket, a number have been converted to percussion cap ignition, but considered obsolete.

Some of these weapons are still in U.S. armories at the beginning of the Civil War, allowing at least a small number of soldiers to be armed with rifles, before mass production of more modern rifles can begin.

HALL RIFLE

Range:	400 yards
Rate of Fire:	8 rds/min
Firepower:	1
Accuracy:	Good
Bayonet:	Yes
Production Cost:	Not in production
Required Project:	Hall's Carbines
Availability:	Union

The old model 1819 hybrid of breech and muzzle-loading rifle, with a number modified to percussion cap ignition and rifled to fire the Minie ball.

During the Civil War, some of these obsolete rifles were found in the U.S. armories. With Hall's Carbines -project the Union can pay for modification of these weapons to be used by their infantry. The project adds 3,000 available weapons. Procurement of these weapons is historically known as the "Hall Carbine Affair", and the incident became renowned as a scandalous example of wartime profiteering.

HALL CARBINE

Range:	350 yards
Rate of Fire:	7 rds/min
Firepower:	1
Accuracy:	Good
Bayonet:	Yes
Production Cost:	Not in production
Required Project:	Hall's Carbines
Availability:	Union

An older breech-loading Hall Carbine "improved 1840 model", later rebored to 0,58 caliber.

During the Civil War, some of these obsolete rifles were found in the U.S. armories. With Hall's Carbines -project the Union can pay for modification of these weapons to be used by their cavalry. The project adds 2,500 available weapons. Procurement of these weapons is historically known as the "Hall Carbine Affair", and the incident became renowned as a scandalous example of wartime profiteering.

MISSISSIPPI RIFLE

Range:	500 yards
Rate of Fire:	2,5 rds/min
Firepower:	1
Accuracy:	Good
Bayonet:	Sword Bayonet
Production Cost:	Fairly Low
Required Project:	Legacy Rifles
Availability:	Both Sides

The first standard U.S. military rifle to use percussion lock. Changed to .58 caliber to fire Minie ball. Very accurate.

PLAINS RIFLE

Range:	400 yards
Rate of Fire:	2,5 rds/min
Firepower:	1
Accuracy:	Good
Bayonet:	No
Production Cost:	Fairly High
Required Project:	Legacy Rifles
Availability:	Both Sides

The Hawken or Plains rifle is accurate double-trigger, muzzle-loading rifle with an octagonal barrel, popular with mountain men and fur traders.

SPRINGFIELD RIFLE-MUSKET

Range:	400 yards
Rate of Fire:	3 rds/min
Firepower:	1
Accuracy:	Mediocre
Bayonet:	Yes
Production Cost:	Low
Required Project:	Sringfield Rifles
Availability:	Both Sides

The American Minie-type muzzle-loading rifle-musket, with good accuracy, range and reliability. The standard rifle of the U.S. Army. As many as a million of these weapons were produced before and during the American Civil War.

The Confederacy can mass produce this weapon only if the pre-war policy Arms Agents was selected at the start of the campaign.

ENFIELD RIFLE-MUSKET

Range:	400 yards
Rate of Fire:	3 rds/min
Firepower:	1
Accuracy:	Mediocre
Bayonet:	Yes
Production Cost:	Low
Required Project:	British Rifles
Availability:	Import

A Minie-type muzzle-loading rifled musket produced in Britain since 1853. Robust, accurate and widely available to import, but requires proper training to adjust the sights. Up to nearly a million of these weapons were imported during the American Civil War and the weapon was widely used on both sides.

LORENZ RIFLE

Range:	400 yards
Rate of Fire:	3 rds/min
Firepower:	1
Accuracy:	Good
Bayonet:	Yes
Production Cost:	Low
Required Project:	Austrian Rifles
Availability:	Import

An Austrian muzzle-loading rifle-musket available for import. Reliable and accurate, but without translated manuals, difficult for the Americans to use effectively. Over 300,000 were imported and used over the course of the Civil War. A lot of soldiers hated them, because of their recoil and general unreliability.

FAYETTEVILLE RIFLE-MUSKET

Range:	500 yards
Rate of Fire:	3 rds/min
Firepower:	1
Accuracy:	Mediocre
Bayonet:	Yes
Production Cost:	Low
Required Project:	Confederate Rifles
Availability:	CSA

A copy of the U.S. model 1855 rifle-musket produced in the Confederacy. Similar to Springfield rifle, but has Maynard primer and a sword bayonet. Some 30,000 were produced during the war.

RICHMOND RIFLE

Range:	450 yards
Rate of Fire:	2,5 rds/min
Firepower:	1
Accuracy:	Mediocre
Bayonet:	Yes
Production Cost:	Low
Required Project:	Confederate Rifles
Availability:	CSA

A Confederate version of the Springfield rifle-musket with Maynard primer and patch box. Accurate, reliable and simple to manufacture. Some 40,000 were produced during the war.

WHITWORTH RIFLE

Range:	600 yards
Rate of Fire:	2 rds/min
Firepower:	1
Accuracy:	Very Good
Bayonet:	Sword Bayonet
Production Cost:	High
Required Project:	British Rifles
Availability:	Import

A British muzzle-loading rifle-musket with exceptionally good long-range accuracy. Widely regarded as world's first sniper rifle.

SHARPS RIFLE

Range:	500 yards
Rate of Fire:	9 rds/min
Firepower:	0,7
Accuracy:	Good
Bayonet:	Yes
Production Cost:	Mediocre
Required Project:	Sharps Rifles
Availability:	Both Sides

A large-bore falling block rifle with an unusual pellet primer feed. Very accurate and fast firing. Some 20,000 units were produced prior to and during the Civil War.

HENRY RIFLE

Range:	300 yards
Rate of Fire:	16 rds/min
Firepower:	1
Accuracy:	Mediocre
Bayonet:	NO
Production Cost:	Fairly High
Required Project:	Repeating Rifles
Availability:	Both Sides

A lever-action rifle with tubular magazine for 16 rounds. Extremely rapid rate of fire and fairly good accuracy. Some 7,000 were produced during the war. Used by infantry and cavalry alike.

SPENCER REPEATING RIFLE

Range:	350 yards
Rate of Fire:	16 rds/min
Firepower:	0,7
Accuracy:	Mediocre
Bayonet:	Yes
Production Cost:	High
Required Project:	Repeating Rifles
Availability:	Both Sides

World's first military metallic cartridge repeating rifle, designed in 1860 by Christopher Spencer. Accurate and rapid-firing, with a magazine in the butt. Some 10,000 were produced during the war. Used by infantry and cavalry alike.

MINIE P1851 RIFLE

Range:	400 yards
Rate of Fire:	3 rds/min
Firepower:	1
Accuracy:	Mediocre
Bayonet:	Yes
Production Cost:	Low
Required Project:	French Weapons
Availability:	Import, CSA

French model 1851 rapid-firing, muzzle-loading rifle-musket, designed after the invention of the Minie ball in 1847. Accurate and simple to use.

This weapon becomes available for the CSA if supporting the French-Mexican War by activating Support French Intervention Act in the policies during a campaign.

DREYSE NEEDLE GUN

Range:	400 yards
Rate of Fire:	6 rds/min
Firepower:	1
Accuracy:	Mediocre
Bayonet:	Yes
Production Cost:	High
Required Project:	Prussian Weapons
Availability:	Import

The Prussian model 1841 breech-loading and world's first bolt-action rifle is accurate and rapid firing, but maybe too complicated and delicate for service use?

TABLE II - Cavalry Weapons.

MIXED CAVALRY WEAPONS

Range:	200 yards
Rate of Fire:	3 rds/min
Firepower:	1
Accuracy:	Very Poor
Bayonet:	No
Production Cost:	Always Available
Required Project:	-
Availability:	Both Sides

Anything a volunteer brings with him, from muzzle-loading carbines to shotguns. Poor accuracy, usually slow to reload, but deadly at close range. Includes all the obsolete imported weapons as well as old weapons stored around the county.

All newly recruited units in the game come with this default weapon type. Upgrading to a better weapon type is always recommended, but requires available weapons.

SPRINGFIELD MUSKETOON

Range:	250 yards
Rate of Fire:	2,5 rds/min
Firepower:	1,1
Accuracy:	Very Poor
Bayonet:	No
Production Cost:	Not in production
Required Project:	-
Availability:	Both Sides

Shortened version of the Springfield smoothbore percussion lock musket, designed for cavalry use, but impractical, inaccurate and unreliable.

A number of these weapons are available for both sides from the start of the war.

ENFIELD MUSKETOON

Range:	400 yards
Rate of Fire:	3,5 rds/min
Firepower:	1
Accuracy:	Good
Bayonet:	No
Production Cost:	Fairly Low
Required Project:	British Rifles
Availability:	Import

A short barrel version of the P53 Enfield rifle-musket. Easier to carry and reload, and with faster rifling twist rate and more grooves, more accurate than the original.

RICHMOND CARBINE

Range:	375 yards
Rate of Fire:	3 rds/min
Firepower:	1
Accuracy:	Good
Bayonet:	Yes
Production Cost:	Fairly Low
Required Project:	Confederate Rifles
Availability:	CSA

A shorter Confederate carbine version of the Springfield rifle-musket with Maynard primer and patch box. Accurate, reliable and simple to manufacture.

SHARPS CARBINE

Range:	350 yards
Rate of Fire:	9 rds/min
Firepower:	0,7
Accuracy:	Good
Bayonet:	No
Production Cost:	Mediocre
Required Project:	Sharps Rifles
Availability:	Both Sides

The shorter and lighter version of the Sharps rifle, popular among both sides' cavalry. Accurate and fast firing. Some 90,000 were produced for the Union cavalry during the Civil War, making it the most common cavalry carbine.

FRANK WESSON CARBINE

Range:	200 yards
Rate of Fire:	9 rds/min
Firepower:	0,6
Accuracy:	Mediocre
Bayonet:	No
Production Cost:	Fairly High
Required Project:	Cavalry Carbines
Availability:	Both Sides

The first breech-loading rifle to fire metallic cartridges. Fairly accurate and fast firing, but unreliable. Less than 5,000 units used during the Civil War.

COLT REVOLVING RIFLE

Range:	200 yards
Rate of Fire:	12 rds/min
Firepower:	0,6
Accuracy:	Mediocre
Bayonet:	Yes
Production Cost:	High
Required Project:	Cavalry Carbines
Availability:	Both Sides

A rapid-firing rifle similar to revolver-type pistols. After the cylinder is fired empty, it takes longer time to reload. Unreliable. Less than 5,000 units used during the Civil War.

JOSLYN RIFLED CARBINE

Range:	300 yards
Rate of Fire:	10 rds/min
Firepower:	0,7
Accuracy:	Mediocre
Bayonet:	No
Production Cost:	Fairly High
Required Project:	Medium Range Carbines
Availability:	Both Sides

A rapid-firing breech-loading carbine chambered for .56 rimfire cartridge. Considered too complicated for massed use. Less than 5,000 units used during the Civil War.

MAYNARD CARBINE

Range:	300 yards
Rate of Fire:	12 rds/min
Firepower:	0,6
Accuracy:	Good
Bayonet:	No
Production Cost:	Fairly High
Required Project:	Medium Range Carbines
Availability:	Both Sides

A lever-action breech-loading rifled carbine. Accurate, rapid-firing and easy to use, with reloadable cartridge. Some 20,000 units were used during the Civil War.

MERRILL CARBINE

Range:	300 yards
Rate of Fire:	9 rds/min
Firepower:	0,7
Accuracy:	Mediocre
Bayonet:	No
Production Cost:	Fairly High
Required Project:	Medium Range Carbines
Availability:	Both Sides

A tilting-block action percussion breech-loading rifled carbine firing Minie ball with paper cartridge. Some 15,000 units were used during the Civil War. This weapon is also available for infantry units.

BURNSIDE CARBINE

Range:	200 yards
Rate of Fire:	9 rds/min
Firepower:	0,7
Accuracy:	Mediocre
Bayonet:	No
Production Cost:	Fairly Low
Required Project:	Cavalry Carbines
Availability:	Both Sides

A breech-loading carbine with a special brass cartridge. Easy and safe to use, while accurate. Designed by Ambrose E. Burnside, the Union commander who become infamous for leading Army of the Potomac in the Battle of Fredericksburg. His carbine was more popular than him, with some 55,000 units produced.

SMITH CARBINE

Range:	200 yards
Rate of Fire:	7 rds/min
Firepower:	0,7
Accuracy:	Mediocre
Bayonet:	No
Production Cost:	Mediocre
Required Project:	Cavalry Carbines
Availability:	Both Sides

A breech-loading rifled carbine that breaks apart for loading and uses rubber cartridges, that can be slow to remove. Some 30,000 units were used during the Civil War.

TABLE III - Artillery Weapons.

Range: The maximum effective range of the weapon in combat. The accuracy and rate of fire will be greatly reduced when engagement range is long. Range of canister rounds is approximately ¼ of this range.

Rate of Fire: Standard / Theoretical. How many rounds per minute a well drilled crew is expected to be able to fire in combat conditions. Experience, Training and Fatigue affect the actual Rate of Fire. The maximum ROF is only used in case of bombardment or self-defense, as ammunition consumption and barrel wear will be high.

Firepower: The theoretical lethality of one round, when fired at a unit. Solid shot (/bolt) / Explosive rounds (shell, case, shrapnel) / Canister (/grape).

Accuracy: Higher the accuracy, the more likely the unit will inflict casualties.

Horse Artillery: If the weapon can be used by horse artillery units as well.

Production Cost: How much production of this weapon type costs. Complex weapons, or those requiring higher quality materials, will cost more money and time to produce or import. The actual cost in dollars depends on potential weapon industry output or foreign relations.

Required Project: Which project is needed to be activated for this weapon to become available for production or import. Unavailable weapon types can still be captured from the battle field, if the enemy army was using them.

Availability: Is the weapon available to Union and/or Confederacy to produce in the game, or to import for both sides?

6-POUNDER FIELD GUN

Range:	1523 yards
Rate of Fire:	0,2 / 3 rds/min
Firepower:	5 / 7,6 / 9,2
Accuracy:	Poor
Horse Artillery:	Yes
Production Cost:	Always Available
Required Project:	-
Availability:	Both Sides

The smoothbore cast bronze gun was the workhorse of the Mexican War. Of simple construction and widely available, but regarded obsolete. Includes also all the imported, widely available and obsolete guns of same caliber.

All newly recruited units in the game come with this default weapon type. Upgrading to a better weapon type is always recommended, but requires available weapons.

12-POUNDER FIELD GUN

Range:	1523 yards
Rate of Fire:	0,15 / 2,75 rds/min
Firepower:	8,3 / 15,4 / 18,5
Accuracy:	Very Poor
Horse Artillery:	No
Production Cost:	Not in production
Required Project:	-
Availability:	Both Sides

Old, heavy and obsolete smoothbore cast bronze gun. A few remained available after the War of 1812 and Mexican War.

12-POUNDER HOWITZER

Range:	1072 yards
Rate of Fire:	0,2 / 3 rds/min
Firepower:	5,2 / 11,2 / 13,4
Accuracy:	Mediocre
Horse Artillery:	Yes
Production Cost:	Low
Required Project:	-
Availability:	Both Sides

The cast brass light and mountain howitzers fire shells in a high trajectory. Effective against enemy field works.

24-POUNDER HOWITZER

Range:	1322 yards
Rate of Fire:	0,2 / 2,5 rds/min
Firepower:	8,7 / 23 / 27,6
Accuracy:	Mediocre
Horse Artillery:	No
Production Cost:	Low
Required Project:	-
Availability:	Both Sides

The cast brass heavy field howitzers fire shells in a high trajectory. Effective against enemy field works.

12-POUNDER "NAPOLEON"

Range:	1619 yards
Rate of Fire:	0,2 / 3 rds/min
Firepower:	8,1 / 15,4 / 18,5
Accuracy:	Mediocre
Horse Artillery:	Yes
Production Cost:	Fairly Low
Required Project:	Cast Artillery, French Weapons (CSA)
Availability:	Both Sides, Import (CSA)

Reliable and effective smoothbore cast bronze gun of French origin, imported or built under license since 1857. Some 1,800 were produced during the Civil War.

Importing this weapon becomes available for the CSA if supporting the French-Mexican War by activating Support French Intervention Act in the policies during a campaign.

12-POUNDER IRON "NAPOLEON"

Range:	1619 yards
Rate of Fire:	0,2 / 3 rds/min
Firepower:	8,1 / 15,4 / 18,5
Accuracy:	Poor
Horse Artillery:	Yes
Production Cost:	Fairly Low
Required Project:	Cast Artillery
Availability:	CSA

A poor quality, but cheaper to produce, cast iron version of the brass 12-pdr. Napoleon, historically built only by the Confederacy. A bit over a hundred pieces were produced by the CSA during the war.

14-POUNDER JAMES RIFLE

Range:	1530 yards
Rate of Fire:	0,2 / 2,5 rds/min
Firepower:	6,8 / 17,5 / 21
Accuracy:	Good
Horse Artillery:	Yes
Production Cost:	Fairly Low
Required Project:	Cast Artillery
Availability:	Both Sides

A 3.8-inch cast bronze rifle. First Types 1 are converted M1841 6-pdr smoothbores, while types 2 are new models. Accurate, but the bronze rifling quickly wears out. Some 400 units were in use during the war.

3-INCH ORDANANCE RIFLE

Range:	1830 yards
Rate of Fire:	0,2 / 2,5 rds/min
Firepower:	6 / 11,9 / 14,3
Accuracy:	Excellent
Horse Artillery:	Yes
Production Cost:	High
Required Project:	Rifled Artillery
Availability:	Both Sides

A wrought iron rifled gun that is durable, reliable and very accurate. Almost a thousand were in use during the Civil War.

10-POUNDER PARROTT RIFLE

Range:	1850 yards
Rate of Fire:	0,2 / 2,5 rds/min
Firepower:	6 / 11,9 / 14,3
Accuracy:	Good
Horse Artillery:	Yes
Production Cost:	Very High
Required Project:	Parrott Rifles
Availability:	Both Sides

Manufactured with combination of cast and wrought iron, the Parrott rifle is accurate but somewhat unreliable. Over 600 were produced during the war.

20-POUNDER PARROTT RIFLE

Range:	1900 yards
Rate of Fire:	0,15 / 2 rds/min
Firepower:	10,6 / 25 / 30
Accuracy:	Good
Horse Artillery:	No
Production Cost:	Very High
Required Project:	Parrott Rifles
Availability:	Both Sides

The heavier Parrott rifle is very accurate, but both the weapon and the long-range shells are somewhat unreliable. Some 350 were produced during the early war.

30-POUNDER PARROTT RIFLE

Range:	3000 yards
Rate of Fire:	0,1 / 1 rds/min
Firepower:	14 / 36,3 / 43,5
Accuracy:	Good
Horse Artillery:	No
Production Cost:	Very High
Required Project:	Parrott Rifles
Availability:	Both Sides

The largest caliber Parrott rifle for field use. Unreliable, heavy, but accurate. Some 100 were in use during the war.

6-POUNDER WIARD RIFLE

Range:	1800 yards
Rate of Fire:	0,2 / 2,5 rds/min
Firepower:	4,7 / 7,5 / 9
Accuracy:	Good
Horse Artillery:	Yes
Production Cost:	High
Required Project:	Rifled Artillery
Availability:	Both Sides

A muzzle-loading rifle cast in puddled wrought iron and mounted on an innovative carriage allowing higher than normal elevation. Only some 60 pieces were in use during the war.

6-POUNDER WHITWORTH RIFLE

Range:	2750 yards
Rate of Fire:	0,2 / 5 rds/min
Firepower:	5,2 / 7,5 / 9
Accuracy:	Very Good
Horse Artillery:	Yes
Production Cost:	Very High
Required Project:	British Artillery
Availability:	Import

Exceptionally accurate light breech-loading rifle constructed in Britain. Very well suited for counter-battery fire.

12-POUNDER WHITWORTH RIFLE

Range:	2800 yards
Rate of Fire:	0,2 / 4,5 rds/min
Firepower:	8,2 / 15 / 18
Accuracy:	Very Good
Horse Artillery:	No
Production Cost:	Very High
Required Project:	British Artillery
Availability:	Import

Exceptionally accurate breech-loading rifle constructed in Britain. Very well suited for counter-battery fire.

12-POUNDER BLAKELY RIFLE

Range:	1850 yards
Rate of Fire:	0,2 / 2,5 rds/min
Firepower:	7,2 / 15 / 18
Accuracy:	Good
Horse Artillery:	Yes
Production Cost:	High
Required Project:	British Artillery
Availability:	Import

A British muzzle-loading iron rifle, with many variations available for export to America.

3-INCH ARMSTRONG RIFLE

Range:	2100 yards
Rate of Fire:	0,2 / 5 rds/min
Firepower:	7,4 / 15 / 18
Accuracy:	Very Good
Horse Artillery:	No
Production Cost:	Very High
Required Project:	British Artillery
Availability:	Import

A British breech-loading rifle manufactured from wrought iron since 1855. Accurate and rapid firing.

6-POUNDER KRUPP RIFLE

Range:	2050 yards
Rate of Fire:	0,2 / 5 rds/min
Firepower:	7,7 / 17,1 / 15,4
Accuracy:	Very Good
Horse Artillery:	True
Production Cost:	Very High
Required Project:	Prussian Weapons
Availability:	Import

The Prussian 6-Pfunder-Feldkanone C/61 is a breech-loading rifled gun and the world's first cannon made of cast steel.

1-POUNDER WILLIAMS GUN

Range:	1000 yards
Rate of Fire:	Up to 40 rds/min
Firepower:	6 (burst)
Accuracy:	Good
Horse Artillery:	True
Production Cost:	Not in production
Required Project:	Confederate Guns
Availability:	CSA

A breech-loading, rapid-firing small calibre gun, fired using a hand-crank. Invented by captain D.R. Williams, the weapon was called a nail gun by some Union soldiers due to the noise the projectile made as it tumbled.

GATLING GUN

Range:	700 yards
Rate of Fire:	200 rds/min
Firepower:	20 (burst)
Accuracy:	Poor
Horse Artillery:	True
Production Cost:	Not in production
Required Project:	Machineguns
Availability:	USA

A rapid-firing multiple-barrel firearm invented by R.J.Gatling, firing from a magazine using a hand-crank.

COFFEE MILL GUN

Range:	800 yards
Rate of Fire:	120 rds/min
Firepower:	15 (burst)
Accuracy:	Poor
Horse Artillery:	True
Production Cost:	Not in production
Required Project:	Machineguns
Availability:	USA

A single-barrel hand-crank machinegun with rate of fire of 120 rounds a minute. Also called the Agar or Ager gun, after the inventor Wilson Agar.

The above three rapid-fire weapons are classified as "machineguns" in the game. Although considered artillery, they have only one type of ammunition, and each "round of ammunition" represents a burst fired with the weapon (from 3 rapidly fired shots with the Williams gun to a 20-round magazine with the Gatling gun.) These weapons scare the enemy under their fire, adding considerably to the inflicted morale hit. They cannot be mass produced during the war, but a number can be bought with Machineguns (Union) or Confederate Guns (CSA) projects.

APPENDIX E. – LIST OF SHIPS

The ship types in the game represent the main types used during the American Civil War. In the game the ships can move on sea or on major navigable rivers, like the Mississippi. Ships that can only move on rivers cannot be assigned to sea fleets, and vice versa.

Ship types unavailable to a nation can end up into use, if captured during combat from an enemy fleet.

SHIP'S TENDER GUNBOAT

A ship's tender, usually referred to as a tender, is a boat, used to service or support other boats or ships. This is generally done by transporting people or supplies to and from shore or another ship.

With Arming of Civilian Ships Act the Government can put civilian ships into Navy service, with minimal construction changes required, including installing light armament. In this case construction cost and time is reduced to 25 per cent of normal.

Armament:

Number of Guns:	2
32-pounder Cannon	1
12-pounder Howitzer	1

Movement:	River and Sea
Propulsion:	Steam
Speed:	10 Knots

Length:	24 m
Beam:	5,5 m
Displacement:	60 long tons
Armor:	None
Complement:	25
Port Level Required:	1
Required Project:	None

4TH RATE STEAMER

Small civilian steamers with light armament. The rate is given depending on ship's displacement.

With Arming of Civilian Ships Act the Government can put civilian ships into Navy service, with minimal construction changes required, including installing light armament. In this case construction cost and time is reduced to 25 per cent of normal.

Armament:

Number of Guns:	5
32-pounder Cannon	4
20-pounder Rifle	1

Movement:	River and Sea
Propulsion:	Steam and Sail
Speed:	8 Knots

Length:	27 m
Beam:	7 m
Displacement:	200 long tons
Armor:	None
Complement:	50
Port Level Required:	1
Required Project:	None
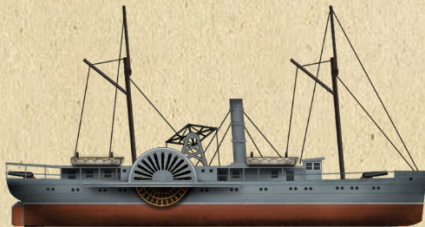
3RD RATE STEAMER

Medium sized civilian steamers with light armament. The rate is given depending on ship's displacement.

With Arming of Civilian Ships Act the Government can put civilian ships into Navy service, with minimal construction changes required, including installing light armament. In this case construction cost and time is reduced to 25 per cent of normal.

Armament:

Number of Guns:	6
32-pounder Cannon	6

Movement:	River and Sea
Propulsion:	Steam and Sail
Speed:	10 Knots

Length:	64 m
Beam:	6 m
Displacement:	1000 long tons
Armor:	None
Complement:	65
Port Level Required:	2
Required Project:	None

2ND RATE STEAMER

Large civilian steamers with light armament. The rate is given depending on ship's displacement.

With Arming of Civilian Ships Act the Government can put civilian ships into Navy service, with minimal construction changes required, including installing light armament. In this case construction cost and time is reduced to 25 per cent of normal.

Armament:

Number of Guns:	9
32-pounder Cannon	8
30-pounder Rifle	1

Movement:	River and Sea
Propulsion:	Steam and Sail
Speed:	12 Knots

Length:	77 m
Beam:	12 m
Displacement:	1600 long tons
Armor:	None
Complement:	130
Port Level Required:	2
Required Project:	None

SCHOONER

A schooner is a type of sailing vessel defined by its rig: fore-and-aft rigged on all of 2 or more masts and, in the case of a 2 masted schooner, the foremast generally being shorter than the mainmast.

On a fast hull, good ability to windward is useful for privateers, blockade runners, slave ships and smaller naval craft. During the Civil War many schooners were armed with mortars, capable of firing heavy shells inside coastal fortifications.

Armament:

Number of Guns:	3
13-inch Mortar	1
32-pounder Cannon	2

Movement:	River and Sea
Propulsion:	Sail
Speed:	10 Knots

Length:	33 m
Beam:	9 m
Displacement:	200 long tons
Armor:	None
Complement:	35
Port Level Required:	1
Required Project:	None

MOTOR SCHOONER

A schooner is a type of sailing vessel defined by its rig: fore-and-aft rigged on all of 2 or more masts and, in the case of a 2 masted schooner, the foremast generally being shorter than the mainmast. Equipped with a steam engine.

On a fast hull, good ability to windward is useful for privateers, blockade runners, slave ships and smaller naval craft. During the Civil War many schooners were armed with mortars, capable of firing heavy shells inside coastal fortifications.

Armament:

Number of Guns:	3
13-inch Mortar	1
32-pounder Cannon	2

Movement:	River and Sea
Propulsion:	Steam and Sail
Speed:	10 Knots

Length:	33 m
Beam:	9 m
Displacement:	220 long tons
Armor:	None
Complement:	35
Port Level Required:	1
Required Project:	None

BRIG

A brig is a sailing vessel with two square-rigged masts. During the Age of Sail, brigs were seen as fast and maneuverable and were used as both naval warships and merchant vessels. They were especially popular in the 18th and early 19th centuries.

Brigs fell out of use with the arrival of the steam ship because they required a relatively large crew for their small size and were difficult to sail into the wind.

Armament:

Number of Guns:	12
32-pounder Cannon	12

Movement:	Sea
Propulsion:	Sail
Speed:	11 Knots

Length:	30 m
Beam:	7,5 m
Displacement:	260 long tons
Armor:	None
Complement:	100
Port Level Required:	1
Required Project:	None

BARK

A Bark (barque, barc) is a type of sailing vessel with three or more masts having the fore- and mainmasts rigged square and only the mizzen (the aftmost mast) rigged fore and aft. Sometimes, the mizzen is only partly fore-and-aft rigged, bearing a square-rigged sail above.

Armament:

Number of Guns:	6
32-pounder Cannon	6
Movement:	Sea
Propulsion:	Sail
Speed:	10 Knots
Length:	41 m
Beam:	9,5 m
Displacement:	550 long tons
Armor:	None
Complement:	85
Port Level Required:	1
Required Project:	None
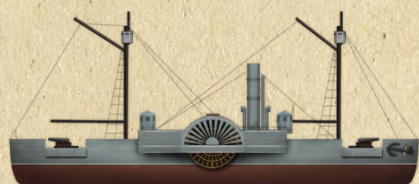
DOUBLE-ENDER

A paddle-propelled steam ship with bow and stern of similar shape, allowing good maneuverability along navigable rivers.

Armament:

Number of Guns:	8
100-punder Rifle	2
9-inch Cannon	2
20-pounder Rifle	2
24-pounder Howitzer	2
Movement:	River and Sea
Propulsion:	Steam and Sail
Speed:	10 Knots
Length:	66 m
Beam:	11 m
Displacement:	1200 long tons
Armor:	None
Complement:	300
Port Level Required:	2
Required Project:	None

SLOOP-OF-WAR

The United States Navy used "sloop-of-war" to designate a flush-deck ship-rigged warship with all armament on the gun deck.

During the War of 1812 sloops of war in the service of the United States Navy performed well against their Royal Navy equivalents, having better maneuverability and armament.

Armament:

Number of Guns:	9
32-pounder Cannon	4
20-pounder Rifle	1
30-pounder Rifle	1
12-pounder Howitzer	3

Movement:	Sea
Propulsion:	Sail
Speed:	12 Knots

Length:	61 m
Beam:	10 m
Displacement:	1400 long tons
Armor:	Timber
Complement:	285
Port Level Required:	2
Required Project:	None

STEAM SLOOP

The United States Navy used "sloop-of-war" to designate a flush-deck ship-rigged warship with all armament on the gun deck. Steam sloops are fitted with a steam engine, with screw propulsion.

Armament:

Number of Guns:	7
11-inch Cannon	2
32-pounder Cannon	4
30-pounder Rifle	1

Movement:	Sea
Propulsion:	Steam and Sail
Speed:	11 Knots

Length:	61 m
Beam:	10 m
Displacement:	1500 long tons
Armor:	Timber
Complement:	335
Port Level Required:	2
Required Project:	None

FRIGATE

Frigates were any warships built for speed and maneuverability. These could be warships carrying their principal batteries of carriage-mounted guns on a single deck or on two decks. The term was generally used for ships too small to stand in the line of battle, although early line-of-battle ships were frequently referred to as frigates when they were built for speed.

Armament:

Number of Guns:	50
32-pounder Cannon	42
8-inch Cannon	8
Movement:	Sea
Propulsion:	Sail
Speed:	12 Knots
Length:	54 m
Beam:	15 m
Displacement:	1870 long tons
Armor:	Timber
Complement:	500
Port Level Required:	2
Required Project:	None

SIDE-WHEEL FRIGATE

Vessels classed as frigates continued to play a great role in navies with the adoption of steam power in the 19th century. In the 1830s, navies experimented with large paddle steamers equipped with large guns mounted on one deck.

Armament:

Number of Guns:	15
150-pounder Rifle	2
9-inch Cannon	12
20-pounder Rifle	1
Movement:	Sea
Propulsion:	Steam and Sail
Speed:	10 Knots
Length:	78 m
Beam:	14 m
Displacement:	2500 long tons
Armor:	Timber
Complement:	500
Port Level Required:	3
Required Project:	None

STEAM FRIGATE

From the mid-1840s on, frigates which more closely resembled the traditional sailing frigate were built with steam engines and screw propellers. These "screw frigates" continued to perform the traditional role of the frigate until late in the 19th century.

Armament:

Number of Guns:	40
8-inch Cannon	14
9-inch Cannon	24
10-inch Cannon	2

Movement:	Sea
Propulsion:	Steam and Sail
Speed:	9 Knots

Length:	84 m
Beam:	12 m
Displacement:	3200 long tons
Armor:	Timber
Complement:	600
Port Level Required:	3
Required Project:	None

SHIP-OF-THE-LINE

A type of naval warship constructed during the Age of Sail from the 17th century to the mid-19th century. The ship of the line was designed for the naval tactic known as the line of battle, which depended on the two columns of opposing warships maneuvering to volley fire with the cannons along their broadsides.

The United States Congress authorized construction of nine ships in 1816, but these were considered out of date at the time of the Civil War, and they saw service only as an ordnance, hospital, receiving, and store ships. The ships are available when the game starts in 1861, but more cannot be built.

Armament:

Number of Guns:	74
32-pounder Cannon	74

Movement:	Sea
Propulsion:	Steam and Sail
Speed:	12 Knots

Length:	60 m
Beam:	16 m
Displacement:	2600 long tons
Armor:	Timber
Complement:	800
Port Level Required:	Not buildable
Required Project:	None
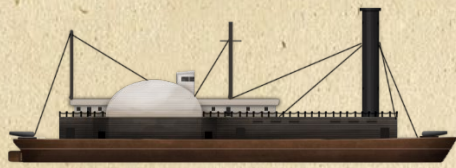
PADDLE STEAMER GUNBOAT

In the early 19th century, paddle wheels were the predominant way of propulsion for steam-powered boats. In 1812, the first U.S. Mississippi River paddle steamer began operating out of New Orleans. When armed, these steamers can patrol the major navigable rivers.

With Arming of Civilian Ships Act the Government can put civilian ships into Navy service, with minimal construction changes required, including installing light armament. In this case construction cost and time is reduced to 25 per cent of normal.

Armament:	
Number of Guns:	2
32-pounder Cannon	2
Movement:	River
Propulsion:	Steam
Speed:	8 Knots
Length:	55 m
Beam:	11 m
Displacement:	400 long tons
Armor:	None
Complement:	60
Port Level Required:	1
Required Project:	None
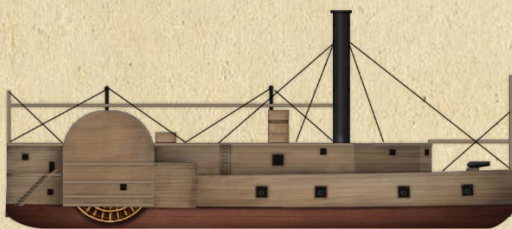
TIMBERCLAD GUNBOAT

The unarmored paddle steamer gunboats navigating major rivers were vulnerable to all kind of enemy fire. When no iron is available, a wooden planking can provide at least some protection.

"Gone were the white paint, glass pilot-house, and decorative railing. Now, five-inch-thick bulwarks provided protection against small arms fire, and oak planking covered the paddle wheel."

Armament:	
Number of Guns:	6
8-inch Cannon	4
32-pounder Cannon	2
Movement:	River
Propulsion:	Steam
Speed:	7 Knots
Length:	55 m
Beam:	11 m
Displacement:	450 long tons
Armor:	Timber
Complement:	80
Port Level Required:	1
Required Project:	Armored Gunboats
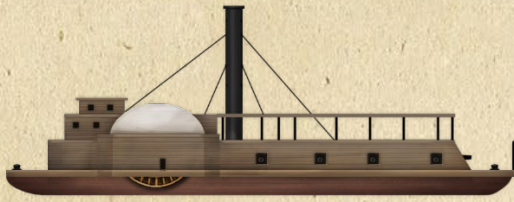
TINCLAD GUNBOAT

The tinclads were shallow-draft vessels and ideal for rivers. But they were not heavily armored enough to withstand the fire of field guns from the shore. The tinclads got their name from the iron plating, 1/2-inch to 3/4 -inch thick, that protected the power plant and pilot house from small-arms fire. Their shallow draft enabled them to prowl waterways inaccessible to heavier war vessels.

Armament:

Number of Guns:	6
8-inch Cannon	4

Movement:	River
Propulsion:	Steam
Speed:	5 Knots

Length:	55 m
Beam:	11 m
Displacement:	470 long tons
Armor:	0,5-inch iron plating
Complement:	120
Port Level Required:	1
Required Project:	Armored Gunboats

BROADSIDE IRONCLAD

A wooden-hulled, screw-propelled ironclad with an unconventional horizontally-laid interlocking iron side armor plating arrangement.

The first ironclads, in a logical development of warship design from the long preceding era of wooden ships of the line, carried their weapons in a single line along their sides and so were called "broadside ironclads".

The advantages of mounting guns on both broadsides was that the ship could engage more than one adversary at a time, and the rigging did not impede the field of fire.

Armament:

Number of Guns:	6
9-inch Cannon	4
100-pounder Rifle	2
Ram	

Movement:	Sea
Propulsion:	Steam
Speed:	7 Knots

Length:	61 m
Beam:	10 m
Displacement:	1000 long tons
Armor:	3-inch iron plating
Complement:	165
Port Level Required:	3
Required Project:	Rebuilt Ironclads (Union)

IRONCLAD FRIGATE

Armor was added to ships based on existing frigate and ship of the line designs. The additional weight of the armor on these first ironclad warships meant that they could have only one gun deck, and they were technically frigates, even though they were more powerful than existing ships-of-the-line and occupied the same strategic role.

Armament:	
Number of Guns:	18
11-inch Cannon	14
150-pounder Rifle	2
50-pounder Rifle	2
Movement:	Sea
Propulsion:	Steam and Sail
Speed:	7 Knots
Length:	78 m
Beam:	17 m
Displacement:	5000 long tons
Armor:	4-inch iron plating
Complement:	550
Port Level Required:	3
Required Project:	Rebuilt Ironclads (Union)

OCEAN CASEMATE IRONCLAD

A formidable vessel, the largest, staunchest, and most easily-handled engine in the history of naval warfare so far, which has yet been built in any other country. Her motive power is ample, her sea-going qualities admirable, and her speed is such that she can be managed with equal facility in an ordinary harbor and upon the broad ocean.

Historically USS Dundenberg was ordered in 1862 by the U.S. Navy, but it was finished only after the Civil War. With no use, it was sold to France and renamed Rochambeau.

Armament:	
Number of Guns:	12
15-inch Cannon	4 in 2 turrets
11-inch Cannon	8
Ram	
Movement:	Sea
Propulsion:	Steam and Sail
Speed:	14,5 Knots
Length:	115 m
Beam:	22 m
Displacement:	7000 long tons
Armor:	4-inch iron plating
Complement:	600
Port Level Required:	4
Required Project:	Modern Warships

IRONCLAD WARSHIP

A steam frigate converted into ironclad warship, the first in the world to have three turrets. With formidable armor and armament, it can be seen as a predecessor to more modern warship designs emerging after the American Civil War.

Armament:

Number of Guns:	6
15-inch Cannon	2 in a turret
11-inch Cannon	2 in a turret
150-pounder Rifle	2 in a turret

Movement:	Sea
Propulsion:	Steam
Speed:	8,5 Knots

Length:	80,3 m
Beam:	15,5 m
Displacement:	6400 long tons
Armor:	8-inch iron plating
Complement:	350
Port Level Required:	4
Required Project:	Modern Warships

IRONCLAD TURRET SHIP

The Scorpion-class ships have two horizontal direct-acting steam engines, and two turrets for its armament. This ship type can be imported from Britain.

Historically the CSA ordered 2 such ships from Birkenhead, England. They were intended, together with other warships, to break the Federal blockade of Confederate coastal cities and to hold some Northern cities for ransom. In October 1863, a few months after their launch and before they could be completed, the UK Government seized the two ironclads.

Armament:

Number of Guns:	4
9-inch Cannon	4 in 2 turrets
Ram	

Movement:	Sea
Propulsion:	Steam and Sail
Speed:	10 Knots

Length:	68 m
Beam:	13 m
Displacement:	2800 long tons
Armor:	4,5-inch iron plating
Complement:	150
Port Level Required:	4 (Import)
Required Project:	British Warships

OCEAN IRONCLAD RAM

An armored ram for service in shallow waters, but also carries three guns. This ship type can be imported from France.

Historically the CSA bought one such ship from France, naming it CSS Stonewall. The ship did not reach Confederate waters before the end of the American Civil War in April and was turned over to the United States. The Tokugawa shogunate of Japan bought her from the United States in 1867 and renamed her Kōtetsu.

Armament:

Number of Guns:	3
10-inch Cannon	1 in a turret
42-pounder Rifle	2 in a turret
Ram	

Movement:	Sea
Propulsion:	Steam and Sail
Speed:	10,5 Knots

Length:	59 m
Beam:	10 m
Displacement:	1350 long tons
Armor:	4-inch iron plating
Complement:	130
Port Level Required:	4 (Import)
Required Project:	French Warships

GUNBOAT

A type of gunboat built for the Union Navy at the outbreak of the American Civil War. Also known as "90-day gunboats" due to their rapid construction.

The class was designed to be fully oceangoing while having a light enough draft to be able to operate close inshore, for blockade duty or other operations in shallow waters.

The CSA also built their own gunboats with comparable features, such as the Macon-class steam gunboat.

Armament:

Number of Guns:	5
11-inch Cannon	1
24-pounder Howitzer	2
20-pounder Rifle	2

Movement:	River and Sea
Propulsion:	Steam and Sail
Speed:	10 Knots

Length:	48 m
Beam:	8,5 m
Displacement:	690 long tons
Armor:	Timber
Complement:	115
Port Level Required:	2
Required Project:	None (Union) Confederate Gunboats (CSA)

IRONCLAD MONITOR

Designed by John Ericson, the Monitor was an unusual vessel in almost every respect and was sometimes sarcastically described by the press and other critics as "Ericsson's folly", "cheesebox on a raft" and the "Yankee cheesebox". The most prominent feature on the vessel was a large cylindrical gun turret mounted amidships above the low-freeboard upper hull.

The first ship in its class, the USS Monitor, fought a duel with the first Confederate ironclad CSS Virginia in the Battle of Hampton Roads in early 1862, the first battle in history between two ironclad ships.

Armament:

Number of Guns:	2
11-inch Cannon	2 in 1 turret
Movement:	River and Sea
Propulsion:	Steam
Speed:	6 Knots
Length:	54,6 m
Beam:	12,6 m
Displacement:	1000 long tons
Armor:	7-inch iron plate
Complement:	59
Port Level Required:	4
Required Project:	Ironclad Monitors (Union)

IRONCLAD RIVER GUNBOAT

On Rivers, ironclads function in almost every conceivable capacity: against fixed fortifications, against other ships and in support of army operations.

Historically, for heavy combat, the Union's Western Flotilla squadron relied upon its ironclads. Their firepower and armor protection allowed them to trade blows with any enemy, ashore or afloat.

Armament:

Number of Guns:	17
9-inch Cannon	2
50-pounder Rifle	2
42-pounder Rifle	4
32-pounder Rifle	8
12-pounder Howitzer	1
Movement:	River
Propulsion:	Steam
Speed:	5,5 Knots
Length:	62 m
Beam:	22 m
Displacement:	640 long tons
Armor:	2,5-inch iron plating
Complement:	175
Port Level Required:	2
Required Project:	Ironclad Gunboats (Union)

IRONCLAD GUNBOAT

Ironclad gunboats function in almost every conceivable capacity: against fixed fortifications, against other ships and in support of army operations.

Armament:

Number of Guns:	13
32-pounder Cannon	6
8-inch Cannon	3
42-pounder Rifle	3
12-pounder Howitzer	1

Movement:	River and Sea
Propulsion:	Steam
Speed:	4 Knots

Length:	53 m
Beam:	16 m
Displacement:	500 long tons
Armor:	2,5-inch iron plating
Complement:	250
Port Level Required:	2
Required Project:	Ironclad Gunboats (Union)

RIVER MONITOR

River monitors are heavily armored and armed to patrol the major rivers. Using similar design as the original USS Monitor, the ships have flat deck and rotating turrets with thick armor, making it a difficult opponent to hit and to penetrate.

Armament:

Number of Guns:	4
15-inch Cannon	4 in 2 turrets

Movement:	River
Propulsion:	Steam
Speed:	7 Knots

Length:	78 m
Beam:	16 m
Displacement:	3500 long tons
Armor:	6-inch iron plating
Complement:	150
Port Level Required:	3
Required Project:	Ironclad Monitors (Union)

COTTONCLAD RAM

Cottonclads are a classification of steam-powered warships where a wooden ship is protected from enemy fire by bales of cotton lining its sides.

Historically, Confederate tactics generally had cottonclads, which were outgunned by Union warships, steam at full speed towards enemy vessels, relying on the cotton to absorb fire. Once they were within firing range, they would open fire, and, if possible, ram or board the enemy.

Armament:	
Number of Guns:	3
32-pounder Cannon	2
20-pounder Rifle	1
Ram	

Movement:	River and Sea
Propulsion:	Steam
Speed:	8 Knots

Length:	55 m
Beam:	11 m
Displacement:	500 long tons
Armor:	Cotton Bales
Complement:	90
Port Level Required:	1
Required Project:	Confederate Gunboats (CSA)

CASEMATE IRONCLAD RAM

To fight the more numerous United States Navy, with only wooden ships available, the Confederates designed an ironclad, modified from a frigate.

The ship's iron armor makes it virtually invulnerable to contemporary gunfire. Affixed to the bow is an iron ram, allowing the ship herself to be employed as a deadly weapon.

The first ship in its class, the CSS Virginia, converted from captured frigate USS Merrimack, fought a duel with the first Union ironclad USS Monitor in the Battle of Hampton Roads in early 1862, the first battle in history between two ironclad ships.

Armament:	
Number of Guns:	10
42-pounder Rifle	2
32-pounder Rifle	2
9-inch Cannon	6
Ram	

Movement:	Sea
Propulsion:	Steam
Speed:	5 Knots

Length:	84 m
Beam:	15,5 m
Displacement:	4100 long tons
Armor:	3-inch iron plating
Complement:	300
Port Level Required:	3
Required Project:	Rebuilt Ironclads (CSA)

IRONCLAD GUNBOAT RAM

Smaller than the casemate ironclad ram, the river gunboat rams can also navigate rivers, and require less sophisticated facilities to build.

With the Improvised Shipyards -project, construction of this ship type does not require available shipyard capacity.

Armament:

Number of Guns:	10
8-inch Cannon	4
32-pounder Rifle	4
32-pounder Cannon	2
Ram	

Movement:	River and Sea
Propulsion:	Steam
Speed:	7 Knots

Length:	50 m
Beam:	11 m
Displacement:	800 long tons
Armor:	2-inch iron plating
Complement:	230
Port Level Required:	2
Required Project:	Ironclad Gunboats (CSA)

WARRIOR CLASS

HMS Warrior and her sister ship HMS Black Prince were the first armour-plated, iron-hulled warships, and were built in response to France's launching in 1859 of the first ocean-going ironclad warship, the wooden-hulled Gloire.

Armament:

Number of Guns:	40
68-pounder Cannon	26
100-pounder Rifle	10
42-pounder Rifle	4

Movement:	Sea
Propulsion:	Steam & Sail
Speed:	14 Knots

Length:	128 m
Beam:	18 m
Displacement:	9150 long tons
Armor:	4,5-inch iron plating
Complement:	700
Port Level Required:	4 (Import)
Required Project:	Warrior Class

GLOIRE CLASS

The French ironclad Gloire ("Glory") was the first ocean-going ironclad, launched in 1859. It was developed after the Crimean War, in response to new developments of naval gun technology, especially the Paixhans guns and rifled guns, which used explosive shells with increased destructive power against wooden ships, and after the development of the ironclad floating batteries built by the British and French for the bombardment of Russian forts during the Crimean War.

The French could offer to export this ship type to the CSA, for not cheap, but still reasonable price, if they in turn support the French Mexican Intervention (Support Mexican Intervention -Act in the policies).

Armament:

Number of Guns:	36
6,5-inch Cannon	36

Movement:	Sea
Propulsion:	Steam & Sail
Speed:	13 Knots

Length:	78 m
Beam:	17 m
Displacement:	5600 long tons
Armor:	4,7-inch iron plating
Complement:	570
Port Level Required:	4 (Import)
Required Project:	Gloire Class (CSA)

TABLE IV - European Intervention Fleet Ship Types.

During the game, if the Europeans carry out a military intervention, they will have following ship types that are not available for the American nations to build or import. They can be captured in a naval engagement.

SAIL SPARDECK CORVETTE

Nation: France
Guns: 30 6,5-inch Cannons
Armor: Timber

For example, La Bayonnaise

CONVERTED SCREW FRIGATE

Nation: France
Guns: 34 6,5-inch Cannons
Armor: Timber

For example, Pallas

SCREW SPARDECK CORVETTE

Nation: France
Guns: 14 30-pounder Rifles, 2 9-inch Cannons
Armor: Timber

For example, D'Assas

FAST SCREW SHIP-OF-THE-LINE

Nation: France
Guns: 58 30-pounder Rifles, 8 9-inch Cannons, 14 6,5-inch Cannons
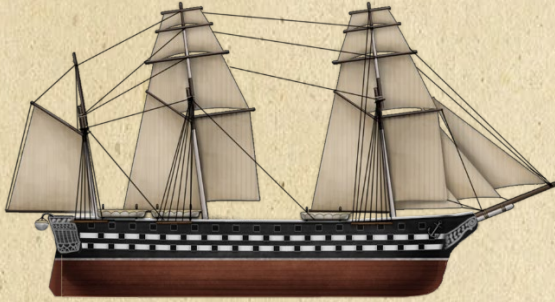Armor: Timber

For example, Algesiras -class, Imperial

SCREW SCHOONER

Nation: Spain
Guns: 2 80-pounder Rifles
Armor: None

For example, Covandonga

SCREW SHIP-OF-THE-LINE

Nation: Great Britain
Guns: 90 32-pounder Cannons, 2 68-pounder Cannons
Armor: Timber

For example, HMS Conqueror

STEAM CORVETTE

Nation: Great Britain
Guns: 20 8-inch Cannons, 1 68-pounder Cannon
Armor: Timber

For example, Pearl-class

TABLE V - Ship Weapons.

WEAPON	RANGE (YARDS)	RATE OF FIRE (RND PER MIN)	PENETRATION (INCHES)*	FIREPOWER
13-inch Navy Mortar	2150	1	1,65	49,7
12-pounder Navy Howitzer	1085	2,5	1,22	6,4
24-pounder Navy Howitzer	1270	2,5	1,54	10,8
8-inch Navy Cannon	2600	1,5	2,17	24,9
9-inch Navy Cannon	3450	1,5	2,52	34,7
10-inch Navy Cannon	3000	1	2,60	44,4
11-inch Navy Cannon	3650	0,75	3,07	61,6
15-inch Navy Cannon	2100	0,5	5,67	189,1
32-pounder Navy Cannon	1750	1	2,40	16,3
68-pounder Navy Cannon	3000	1	4,13	39,1
20-pounder Navy Rifle	2200	2	2,52	10,2
30-pounder Navy Rifle	3350	1	3,07	14,0
32-pounder Navy Rifle	3400	1	2,09	15,3
42-pounder Navy Rifle	3500	1	2,32	19,4
50-pounder Navy Rifle	3600	1	3,66	22,7
80-pounder Navy Rifle	3800	1	4,33	35,2
100-pounder Navy Rifle	3900	0,75	4,72	43,5
150-pounder Navy Rifle	4000	0,75	5,31	64,2
6,5-inch Navy Cannon	2800	1,5	1,97	23,8

*The values given here are from point blank range. The penetration power is reduced when range increases. The values are calculated using DeMarre & Krupp equations.

APPENDIX F. – LOCAL FILES FOR ADVANCED USERS

You can find your local campaign save files in the game's install folder, by following this path:

\Grand Tactician The Civil War (1861-1865)\Campaigns\001\X\

Where the X is the campaign scenario A-E. A = Spring 1861, B = Summer 1861, C = Spring 1862, D = Spring 1863, E = Spring 1864.

The save files are found in their own folders:

Save = automatically saved progress, the autosave. The game automatically saves progress as per setting in options menu. The automatically saved game is always in the folder "save".

Save DD_MM_YYYY_HH_MM_SS = manually saved progress, with the folder name formed using time of saving: Day_Month_Year_Hours_Minutes_Seconds.

You can find your local historical battle save files in the game's install folder, by following this path:

\Grand Tactician The Civil War (1861-1865)\Battlefields\XXX\Y\

XXX is the scenario (battle field) number, and Y is the sub-battle:

000\A = First Manassas	013\A = Chickamauga
000\B = Second Manassas	014\A = Wilson's Creek
001\A = Shiloh	015\A = Pea Ridge
003\A = Chancellorsville	019\A = Perryville
004\A = Wilderness	021\A = Appomattox
005\A = Gettysburg	022\A = Glorieta Pass
007\A = Antietam	024\A = Bentonville
009\A = New Market	027\A = Olustee

The individual saves are found in folders named, that are named using same convention as the campaign saves above.

The game also records game events and player's input in a log. This can be found at:

C:\%USERPROFILE%\AppData\LocalLow\Grand Tactician\The Civil War (1861-1865)\Player.log

In case you encounter crashes or bugs with the game, please don't hesitate to contact the development team. It will be helpful if you can describe the issue you are having, and accompany the report with a save (for example zip compress the whole save folder in question) where the issue can be seen, a screenshot, if relevant, and the player log.

Send your report and the accompanying files via e-mail to: info@grandtactician.com.

Tools for Advanced Users.

For anyone wishing to customize the game for their own liking, the game files offer possibilities to change how the game plays. The files that can be edited are found in the game's install folder, which is by default:

> \Grand Tactician The Civil War (1861-1865)\Config\

The *.DAT and *.TXT files can be edited by you using, for example, Notepad -app. But be advised that the code is looking for certain headers and lines in these files, so the file structure and line positions must remain intact.

If any of the game files are in the wrong format, game loading will be interrupted and errors will occur. Remember to back up your files before making any changes. If you have bought the game via Steam, you may also restore the old files by making local files' integrity check via Steam, and the game's properties\local files. To do this, first right-click on the game title, Grand Tactician, in your Library. Scroll down and left-click on *Properties*. Left-click on *Local Files* to the left of your screen, and then click on *Verify integrity of game files*

The most important files are:

Debug.txt
This file has many debug features and other controls, including optional visual layers. Players wishing to get a better understanding of how the game works can change the settings here.

Battleprefs.txt
This file controls -related data, such as map, time and weather, fog of war, terrain specifics, cover values, entrenchments, buildings, deployment settings, AI, victory conditions, sound preferences, messages and stats and performance.

Campaignprefs.txt
This file controls the campaign game play mechanics: map, time and weather, campaign map, campaign units, states, nations, buildings, fog of war, terrain, battle calculation, AI, morale, commander attributes, UI, economy, fleets, supplies and transportation, army orders and occupation, campaign perks, policies and subsidies effects and performance.

Unitprefs.txt
This file controls units and their interaction, including: unit data, structure, formations, order delays, cohesion prefs, unit symbols and icons, battle calculation like casualties and morale, commander attributes, battle perks, supplies during battle, end of day and performance.
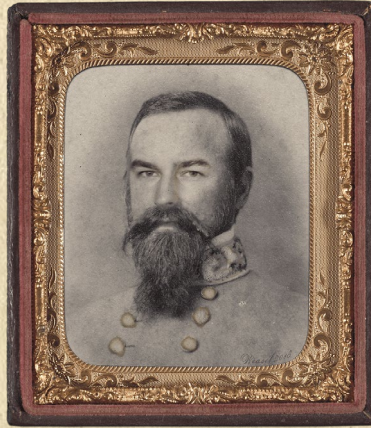
APPENDIX G. – ENGINEER CORPS ORGANIZATION

Grand Tactician: The Civil War (1861-1865) is a game by:
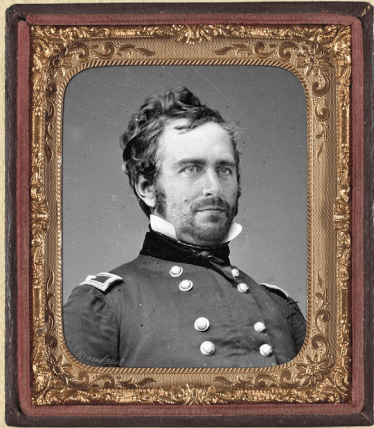
OLIVER KEPPELMUELLER

Chief of Engineers,
Chief Decipherer (Code),
Assistant Chief Designer,
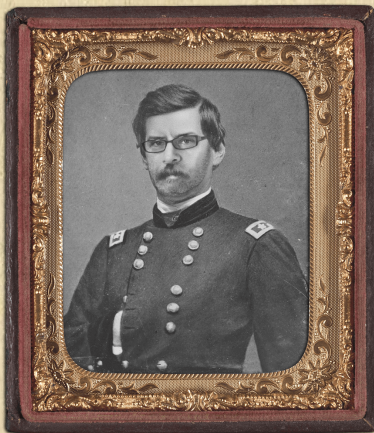*Engineer Corps Paymaster.*

ILJA VARHA

Chief Designer,
Inspector General (Testing Lead),
Chief Topographer (Maps),
Chief Communications Liaison
(Website), &c.

PETER LEBEK

Chief War Artist,
Chief of the Bureau of Yards and
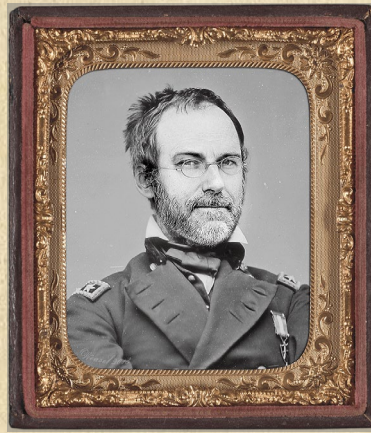*Docks (3D graphics),*
Provost Marshal General (Units).

In association with:

KEVIN R. HERSHBERGER

LionHeart FilmWorks, LLC.

www.lionheart-filmworks.com
www.reenactmentstockfootage.com

WASEL ARAR

Chief Cartographer (Map graphics)
Chief Communications Designer
(Website Design)
Tintype Coloring Artist (photos)
Chief of Musicians
Drum Major, &c.

WASEL AND THE WEASELS

Soundtrack performance.

www.weasels.fi

Volunteer Engineer Brigade:

Videos:	**Matti Veekamo** - Directing
	Mike Paine - Narration
Additional Music:	**Alan Tolbert** - Bugle Signals & Tunes
	Decatur Fife and Drum - European Drum & Fife Tunes
	Lauri Gadd - Fife
	Don Heminitz, *National Field Music School* - Music Advice
Voice Acting (Battles):	**Eric Braa, Chris Rich** - Union Soldiers
	Billy Brads, Brian Watts - Confederate Soldiers
Additional Art:	**Casper Talvio, Eliel Martti, Rafal Borowski** - 3D Models
Additional Map Design:	**Shannon Crapps**
Additional Research:	**Kurt & Kyle Braunsroth** - Commanders, Navies
	Patrick Hoehne, William Rosenbury - Armies
Language Assistance:	**B.C. Milligan, Gary Wilson, Oliver A.A. Marpole**
Commander Quotes:	**Jonathan R. Allen** - *501 Civil War Quotes and Notes* (author)
	B.C. Milligan
PR Marketing Manager:	**Davide Pessach** - Take the Potion