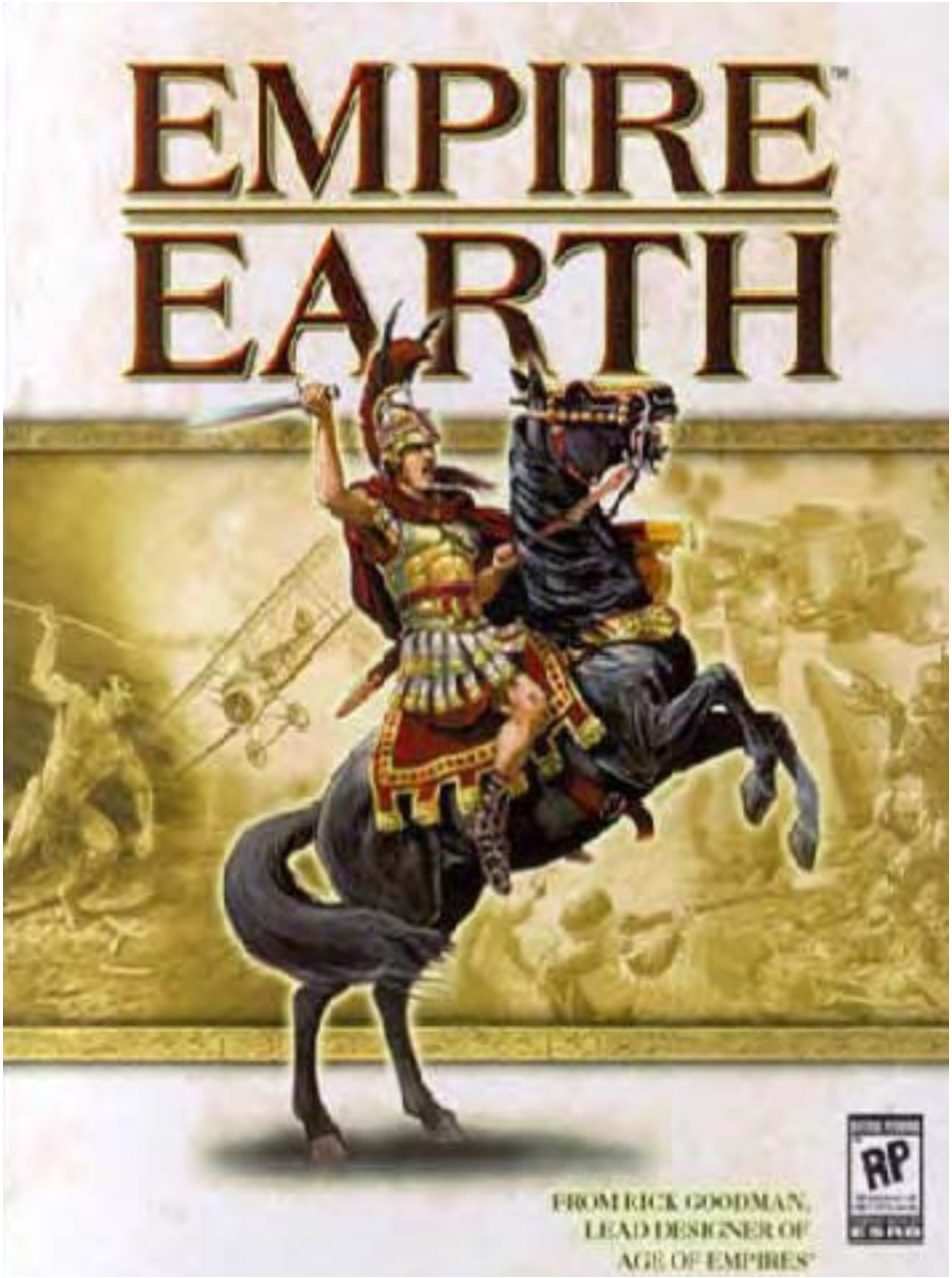
EMPIRE™ EARTH



FROM RICK GOODMAN,
LEAD DESIGNER OF
AGE OF EMPIRES®

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Chapter I

Installation

Thank you for purchasing Empire Earth! This chapter describes how to install Empire Earth on your computer. It also provides some tips on how to maximize the performance of the game on your computer system. For those who would like some hands-on instruction about the basics of the game, we recommend that you play through the Learning Scenarios, accessible on the Single Player menu, after you have installed the game.

This manual is a complete reference guide for the game. Chapters III and IV provide all the information you need to setup and play any kind of single player or multiplayer game of Empire Earth. Chapter V is a written walkthrough for starting a Standard game on a Random Map. It includes tips and suggestions to get you on your way to building a great empire, and is recommended for those who already have a little experience with real-time strategy games. The rest of the manual provides detailed information on all of the features in the game as well as tips, advanced user information, and lots of historical background.

Installing Empire Earth

To install Empire Earth, put the Empire Earth CD-ROM into your CD-ROM drive. When the installation screen appears, click the Install Empire Earth button and then follow the on-screen instructions.

NOTE: If for some reason the installation screen does not appear (if you have Autoplay disabled, for example), double-click on the My Computer icon on you desktop and then double-click the icon for the CD-ROM drive. Then double-click the Autoplay.exe file in the file list. The installation screen will then appear.

NOTE: You must have a working sound card installed in your computer to play Empire Earth. If you do not, Empire Earth may not start properly. If you have a working sound card, a speaker icon (to control sound volume) will be visible on your Windows taskbar.

When the installation is complete, click the Finish button. If you chose to view the Readme file (recommended), it will open so you can see any important last-minute information about Empire Earth. The installation screen remains open so that you can play the game. Other ways to launch the game are explained in Chapter III.

Tips to Improve Game Performance

Empire Earth has been designed to support multiple players controlling hundreds of units on large, fully-3D maps. Care has been taken to ensure the game runs well on a wide variety of computer systems, but you can always increase the performance of the game on your system by trying some or all of the options listed below.

- Close all open applications (e.g., email programs, ICQ, web browsers, etc.) before running Empire Earth.
- Close any unnecessary programs that are running in the background, including disabling your screensaver.
- Choose a lower screen resolution in the Video section on the Game Settings screen. Note that 16-bit colour is more performance-friendly than 32-bit.
- Choose Best Performance in the Video/Graphics Options section on the Game Settings screen. This turns off many graphics options that can impact performance. Note that the quality of some unit models may decrease.
- Turn off the Music in the Audio section of the Game Settings (under Music Quality). You can also set the maximum number of sounds to Best Performance.
- The level of zoom can affect performance. Try playing zoomed in a little to increase your frame rate.
- Play a Single Player game (Multiplayer games use more of your system's resources).
- In Random Map games, try the following options available on the Game Setup screen:
  - Play games with fewer total players (e.g., one-on-one).
  - Play games with no more than one computer player.
  - Choose a Map Size of Tiny or Small.
  - Select a lower Game Unit Limit to decrease the maximum number of total units in the game.
  - Play at the Slow Game Speed.
  - Play the earlier Epochs, which require that less art be stored in memory compared to the later Epochs.

Additional Recommendations

The following recommendations are general suggestions that can help improve the overall performance of you computer. They are actions that you can take on your own, if you choose to, which will also help Empire Earth run at its best. Consult the relevant documentation (e.g., the user's manual for your computer) if you aren't sure how to try a particular recommendation that is listed.

- Ensure that your device drivers are up to date. This includes drivers for your video and audio cards. Manufacturers of computer hardware usually post the latest drivers for their devices on their web sites.
- Make sure Windows is up to date by installing the critical Windows updates that are appropriate for the version of Windows you are running.
- You should have at least 300 MB of free disk space on your hard drive after installing the game. If your hard drive is getting full, try deleting files you know you do not need anymore. You can also defragment your hard drive to decrease the time it takes to access files.
- Upgrade the RAM of your computer from 64 MB to 128 MB (or more).
- Upgrade to a faster 3D Video card with more on-board RAM. If you currently have an older card, a newer card can significantly increase performance.
- For better multiplayer performance, you can upgrade to a faster dial-up modem, get a cable modem, or get a Digital Subscriber Line (DSL). (You'll likely have to pay a monthly subscription fee for Internet access.)
- Of course, upgrading to a faster computer – that is, one with a faster Central Processing Unit (CPU) – is a sure-fire way to increase performance!

TIP: During a game, press the F11 key on your keyboard. The first time you press this key it shows the current game speed and the elapsed game time (top of the screen, on the right). Press F11 again to display the current frame rate given in frames per second – this can help you see if something you've tried has improved the game's performance – a higher frame rate indicates higher performance. Press F11 again to turn off the display.

PREHISTORIC AGE
COPPER AGE
DARK AGE
500,000 BC
50,000 BC
5000 BC
2000 BC
500 BC
0AD
900 AD
STONE AGE
BRONZE AGE
MIDDLE

Prehistoric (500,000 – 50,000 BC)

Little is known for sure about the time before recorded history. Learning the secret of fire, however, was certainly a tremendous leap forward for early humans. Fire provided light and heat, cooked food, and kept predators at bay. Later, fire was used to clear land for agriculture, make pottery, and forge metal. Though dependable techniques for making fire were not available until around 7,000 BC, the unearthed remains of simple hearths provide unquestionable evidence that controlled fire was in use at least 500,000 years ago.

Primitive town centres were little more than the fire pits where members of a nomadic tribe would gather socially, perhaps to celebrate a successful hunt. Food meant survival, so when hunters returned with a kill it was cause for rejoicing.

Given the immense importance of obtaining food, tribes must have come into conflict with one another for control over fertile hunting grounds and foraging areas, especially in times of overall scarcity. These early struggles for survival were the likely precursors of the large-scale battles and wars that have dogged our species throughout recorded history.

Chapter II
What is Empire Earth?

Empire Earth is a real-time strategy game of epic scope. You control the destiny of a fledgling civilisation through as many as 500,000 years of human history. From meagre beginnings you must exploit the natural resources around you to build an empire capable of dominating the Earth. But your rise to supremacy will not go unchallenged. As was the case throughout history, rival civilisations are certain to oppose you every step of the way. If you plan wisely and execute your strategies well, you just might lead your civilisation to greatness.

The Emergence of Empires

A half-million years ago – before the dawn of civilisation, when our ancestors first gathered around their primitive fire pits – humankind took its first tentative steps down a path towards dominating the Earth. We began to surpass all the other animals, to become the planet's pre-eminent species, thanks largely to our intelligence and adaptability. Since that time, the only major rival with which people have had to contend is other people.

These rivalries undoubtedly date back to the earliest nomadic tribes – indeed, struggles for territory and resources remain common to this day. All the great civilisations of recorded history have had their share of great rivals: the Greeks had the Persians, the Romans had the Carthaginians, the English had the French, and so on. Often, individuals arose who were instrumental in guiding their civilisation and people to prominence. Legendary leaders such as Alexander the Great and Napoleon expanded their empires rapidly, dominating local and foreign populations with their charisma, diplomatic guile, and military strength. Such conquerors became heroes to many… and villains to many others.

Conquest, however, is not the only thing for which prominent civilisations and cultures are remembered. The Great Pyramids in Egypt, though nearly 5,000 years old, still fill visitors

Depiction of the Battle of Formigny, April 15, 1450 ©Archive Photos

with a sense of wonder today. Ancient Greek philosophy and mathematics became the foundations of Western science. Rome, a persecutor of early Christians, reversed its position under Emperor Constantine and eventually became known as the Holy Roman Empire. Thus, victory on the battlefield has not been the only way to achieve greatness.

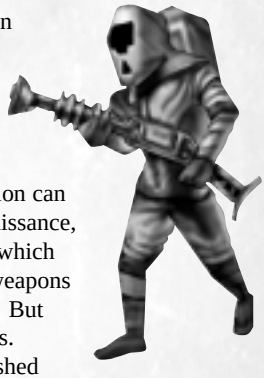
Your Role in Empire Earth

To succeed in Empire Earth, you and your civilisation must accomplish many things. You will need to explore your surroundings to find food, wood, iron, and other important natural resources. Resources are needed to increase your population, construct buildings, and research new technologies. You also need resources to progress to more advanced historical periods or "Epochs."

Food is crucial for increasing your civilisation's population. Citizens require a one-time expenditure of food when they are produced. Many military personnel require additional or different resources; for example, training a Simple Bowman requires wood and gold. Your civilisation is also capable of producing great heroes, prophets, and other specialized individuals.

The construction of buildings is vital to the growth of your civilisation as well. Buildings are where you produce your citizens, train your military, and research new technologies. Some, like Universities and Hospitals, provide valuable localized benefits to your people. Your Capital, at the heart of your civilisation, is perhaps the single most important structure you own. You may also choose to construct amazing Wonders of the World. Besides being a major accomplishment, Wonders give your civilisation special abilities.

Historically, advances in technology often gave one civilisation an immediate advantage over its rivals. Your civilisation can research many different technologies to enhance its capabilities. For instance, some technologies increase the productivity and health of your citizens, while others improve your buildings.



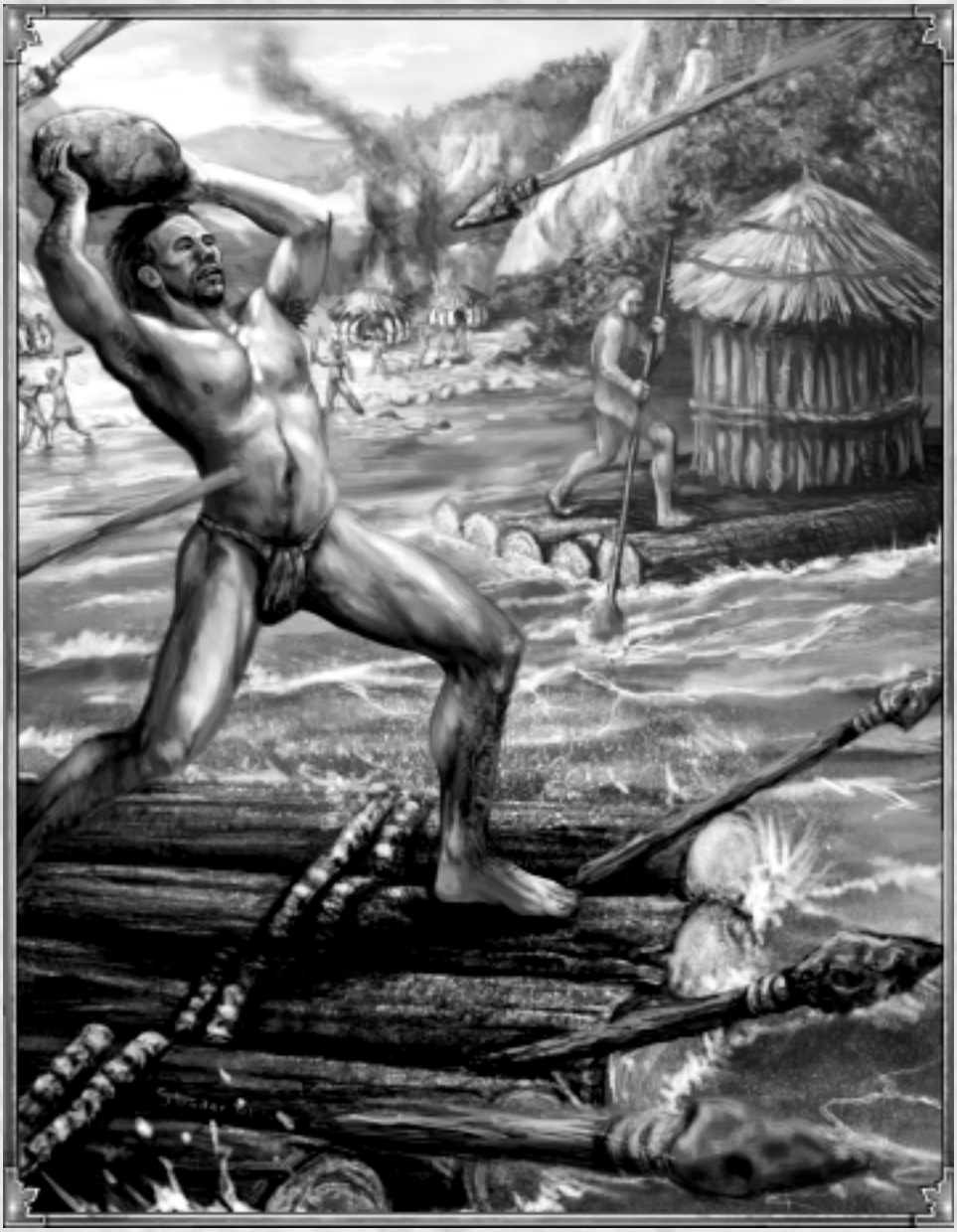
Empire Earth is divided into 14 historical Epochs. Your civilisation can progress from 500,000 BC through the Bronze Age and the Renaissance, all the way to the Nano Age of the 22nd Century (depending on which Epochs you choose to play). New technologies, buildings, and weapons become available as your civilisation progresses through history. But bear in mind that advancement does not necessarily mean success. Your civilisation might flourish during one Epoch only to be crushed in the next.

A civilisation can come to dominate its rivals in many ways. Similarly, you can choose to play Empire Earth any way you want. There is no "best strategy" or "perfect plan" in a game as dynamic and rich as history itself.

Features of Empire Earth

- Epic scope – spans over 500,000 years, from the discovery of fire to laser technology and beyond.
- 14 different Epochs – replay all of human history or just the span of time that interests you.
- Train more than 200 different kinds of units.
- Battle on land, sea, and air – in addition to armies, you can build a wide variety of ships and aircraft.
- Fight wars of the future with advanced robotic and anti-gravity units using secret weapons.
- Enlist great historical Heroes – such as William the Conqueror and Napoleon – to enhance your military abilities.
- Customize your military units by improving their strength or equipment.
- Play in Standard mode for a more-strategic empire building game or Tournament mode for faster-paced action.
- Have your Prophets devastate opponents by calling down Calamities such as volcanic eruptions, earthquakes, and deadly plagues.
- Engage in historic siege warfare – breach an enemy's walls with catapults, rams, and siege towers.
- Increase the morale of your soldiers to improve their offensive and defensive capabilities.
- Match wits with the cunning AI or co-ordinate attacks with your computer-controlled allies.
- Construct 20 types of buildings and research 150 technologies. A helpful technology tree foldout is included.
- Temples, Universities, and other buildings provide additional defensive measures beyond simple walls and towers.
- Create your own civilisation from 100 different attributes or choose from 21 predefined civilisations.
- Choose your path to victory, from military conquest to constructing Wonders Of The World.
- Six different Wonders, each with its own special power.
- Graphical effects such as a day/night cycle, weather, translucent water, smoke, and special attack effects.

- Experience expertly balanced gameplay – each unit has its own strengths and weaknesses.
- Gather 5 different resources that vary in importance depending on your strategy.
- Play four epic single-player campaigns that each follow a civilisation's extraordinary rise to power.
- Training scenarios guide you through the basics of game play.
- Highly detailed random maps of various types and sizes for the ultimate replayablity.
- Create your own original maps, scenarios, campaigns, and even movies with the in-game editors.



Stone Age (50,000 – 5,000 BC)

Many advances in stone working and tool making took place during the Stone Age. One particularly important innovation was “hafting” – the attachment of a handle to an existing tool, such as a stone blade. The first hafted implements were spears. Tipped with a fine stone point or “microlith” the resulting weapon was sharp, durable, and deadly. It was used primarily for fishing and bringing down large game, but spearmen surely employed them against human enemies as well.

Religious practices also evolved during this epoch, becoming increasingly complex and sophisticated. People’s awareness of their own mortality – humans in the Stone Age lived, on average, less than 30 years – brought about the practices of ancestor worship and ritual burial. Early holy men known as shamans were believed to have the power to commune with spirits. Rock and cave paintings from this period suggest that these religious figures may have practiced rituals akin to magic, helping to ensure a successful hunt or favorable weather.

The presence of such individuals implies that human societies were diversifying, with different people filling different roles. As societies grew in complexity, the need for organized leadership increased. By the close of the Stone Age hierarchical social structures were leading to centralized authority and the origination of government. Evidence of this trend has been inferred from ancient settlement patterns found in Greece and on the Iberian peninsula.

Chapter III
Starting Empire Earth

Empire Earth is a flexible game with many ways to play. Options for both Single and Multiplayer games are available, including different types of random maps, map sizes, resource allocations, victory conditions, Epoch choices, and more. These options allow you to modify the game to create different gaming experiences, based on your preferences. This chapter explains all the game options, game settings, and how to start both Single Player and Multiplayer games.

Launching the Game

After you have installed Empire Earth, there are several ways to launch the game. Whenever you put the Empire Earth CD in your CD-ROM drive, a window will appear on your screen once the CD has been accessed (assuming you have Autoplay enabled). To launch the game from this window, just click the Play Empire Earth button.

NOTE: You must have the Empire Earth CD in your CD-ROM drive to play Empire Earth.

You can also launch the game by simply double-clicking on the Empire Earth icon on your desktop. If you opted during the installation not to have an icon placed on your desktop, you can always launch the game via the Start menu. Click the Windows Start button and select Programs. In the Programs list, select the Sierra folder, then select the Empire Earth folder, and finally select Play Empire Earth to launch the game.

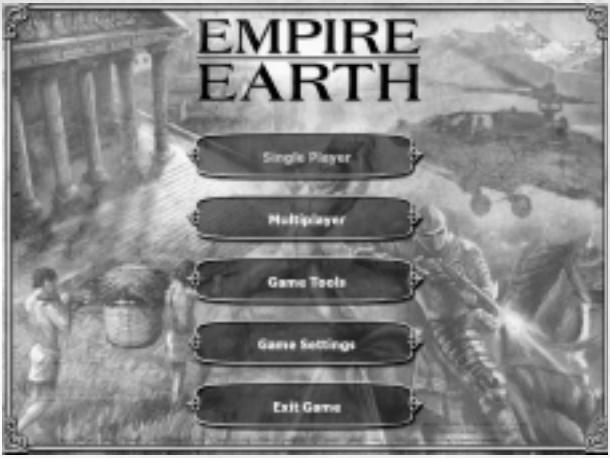
NOTE: You must have a working sound card installed in your computer to play Empire Earth. If you do not, Empire Earth may not launch properly. If you have a working sound card, a speaker icon (to control sound volume) will be visible on your Windows taskbar.

Main Menu

Once the game has loaded, the Main Menu appears. Here you have several choices.

- **Single Player** – Takes you to the Single Player menu, which provides access to all of Empire Earth's Single Player options, including the Campaigns and the Learning Scenarios.
- **Multiplayer** – Brings up the Multiplayer menu, which allows you to join or host games of Empire Earth with other players over a LAN or the Internet.

- **Game Tools** – The Game Tools menu provides access to Empire Earth's Civilisation Builder, Scenario Editor, and Campaign Editor.
- **Game Settings** – Lets you set your video/graphic, audio, and game preferences. Adjusting these settings can help increase game performance on slower computers.
- **Exit Game** – Exits Empire Earth.



Main Menu

Learning to Play

Whether you are new to computer games or a seasoned RTS veteran, it's easy to get up to speed with Empire Earth. In addition to this manual, Learning Scenarios are available to teach you how to play the game. Once you are familiar with the basics you'll be ready to explore EE's many advanced features, which provide extra levels of functionality and control.

Learning Scenarios

If you want to learn the basics of Empire Earth, we highly recommend playing through the Learning Scenarios. The Learning Scenarios provide a hands-on overview of how to play EE, from the essential elements of game play to more advanced features. The Learning Scenarios are conveniently divided into "lessons" that combine learning how to play EE with an enjoyable single player game.

To play the Learning Scenarios, click the Single Player button on the Main Menu. Then, in the Single Player menu, click the Learning Scenarios button. On the Learning Scenarios screen you can browse through the list of all the Learning Scenarios and choose which you want to play. If you are new to RTS games, it's best to start with the first Learning Scenario and work your way through them all. If you are a more experienced gamer, choose a scenario that covers an aspect or feature of the game that you want to try out. Learning Scenarios do not need to be played in order.

When you select the scenario in the list that you want to play, a brief introduction lets you know what you'll be doing in the game. Click the Start button to load the scenario. On the Intro/Briefing screen, read over your objectives and then click the Start button (with the big check mark) to begin playing. Further instructions on what you are supposed to do are provided during the game.

EE Manual

The Empire Earth manual provides detailed information on every feature and option available in Empire Earth. There are also tips, hints, and lots of historical examples to illustrate Empire Earth's extensive game play. Chapter 5 is a walkthrough tutorial of many of the game's basic elements. It is intended for players who would like to jump right into a Random Map game, but who also want a little instruction or direction.

Information on the predefined civilisations and the unit relationship charts are provided in the Appendices. Also, don't forget to consult the Technology Tree Foldout, which provides information on all the units, buildings, and technologies in the game.

Single Player Games

Empire Earth's Single Player options are accessible by clicking the Single Player button on the Main Menu. Empire Earth includes two basic kinds of Single Player games: Random Map games and Campaigns/Scenarios. Random Map games allow you to try out your strategies and skills against EE's cunning computer opponents. The 4 Campaigns shipped with Empire Earth are each divided into parts (scenarios) that collectively tell the story of a notable civilisation's rise to power.

You also have the option to load a stand-alone scenario or a previously saved Single Player game (in addition to starting a Learning Scenario). At the top of this screen is a text box where you can enter your player name.

- **Player Name** – Enter your player name.
- **Play Random Map** – Play a Random Map game against the computer. Takes you to the Game Setup screen.
- **Play Campaign** – Play the Campaigns. Choose which one via the Play Campaign screen.
- **Play Scenario** – Play a stand-alone scenario. Takes you to the Play Scenario screen.
- **Play Saved Game** – Load a previously saved single player game via the Play Saved Game screen.
- **Learning Scenarios** – Play the Learning Scenarios. Choose which one on the Play Campaign screen.
- **Main Menu** – Returns you to the Main Menu.

TIP: When playing against a computer opponent, there are four ways to affect the difficulty of the game. Each is explained more fully in the Game Setup section, later in this chapter.

1. Set the Level of Difficulty to Easy, Medium, or Hard.
2. Select the number of computer opponents. Obviously, it will be harder to defeat two opponents than just one, especially if they are allied with one another.
3. Set the Starting Citizens for yourself and the computer player(s). You can give yourself an initial advantage by starting with more Citizens than the computer player.
4. Select a Resource level. Computer players in Random Map games begin with some additional resources. Selecting higher starting Resources makes it easier for the Human player.

Playing a Random Map Game

Playing a Single Player Random Map game is very similar to playing a Multiplayer Random Map game. Both kinds of games make use of the Setup screen, which is covered in the Game Setup section, later in this chapter.

Playing the Campaigns

Four epic campaigns are included with Empire Earth. They are the Greek, English, German, and Russian Campaigns. In each of the 4 Campaigns, players must play through the scenarios in order – in other words, a scenario will become available only after all the previous scenarios in the Campaign have been completed.

TIP: While playing a scenario, you can click the Briefing button to return to the Intro screen to see your objectives. When new objectives are added, the Briefing button blinks to let you know. You can also re-read previous messages sent during the scenario (or any type of game) by clicking the Previous Messages button. See Chapter IV for more details.

Civilisations and Civ Points in the Campaigns

The civilisation that you lead in each of the Campaigns is chosen for you – Greek in the first Campaign, for example. As you complete objectives in the various scenarios that make up the Campaign, you are occasionally rewarded with "Civ Points." Civ Points can be spent in the Civilisation Builder to purchase bonuses, which enhance your civilisation in some respect. In this sense, your civilisation in the Campaign "evolves" over time in whatever directions you want to take it.

When you earn Civ Points, you receive a message to that effect and the Civilisation Selections button in the user interface starts blinking. Click on the Civilisation Selections button whenever you are ready to spend the Civ Points. In all Single Player games, the game pauses when you enter the Civ Builder. You can spend the Civ Points you have earned however you want, but try to choose bonuses that you believe will most benefit your civilisation given its current situation. Once you return to the game, you cannot change your choices. The bonuses you choose to purchase carry over to the next scenario in the Campaign. Civ Points that you decide not to spend also carry over to the next scenario so you can spend them later.

"Alexander" - Based on Art by Mark Churms ©2001

REFERENCE: For a full explanation of the Civ Builder and how to create your own civilisations, see Chapter XIV.

Starting a Campaign

To start a campaign, click the Play Campaign button in the Single Player menu and then choose the Campaign you want to play on the Play Campaign screen. You can also choose to play a custom campaign (which is a campaign created for EE after it was released) by clicking the Custom Campaign button.

When you select the Campaign you want to play, a screen for that Campaign appears, allowing you to choose which scenario you want to play from a list. If you haven't played any of the Campaign's scenarios yet, you have to select the first scenario. To continue a Campaign you have already started, select the next available scenario in the list. You can also replay any scenario that you have already finished. Once you choose a scenario, you can read the Info and then click the Start button. The Scenario's Intro/Briefing screen introduces the scenario and gives you your objectives. Click the Start button (with the check mark) to start playing.

Greek Campaign Screen

Playing a Stand-Alone Scenario

If you have downloaded any individual scenarios off of the internet, received one from a friend, or created one yourself, you can play them by clicking the Play Scenario button in the Single Player menu. On the Play Scenario screen, simply select the scenario you want to play and click the Load button. The Scenario's Intro/Briefing screen then appears and you can begin the game by clicking the Start button.

Playing a Saved Game

If you started playing a Single Player scenario (whether part of a campaign or not) or a Random Map game and saved it before you were finished, you can reload the game to continue playing from where you left off. In the Single Player menu click the Play Saved Game button. On the Play Saved Game screen, all your saved Single Player games are listed. Choose the one you want and click the Load button to start it. Clicking the Delete button will delete the highlighted saved game. You can also elect to play a saved game from the Play Campaign screen.

Multiplayer Games

Multiplayer games allow you to compete against human opponents over a Local Area Network (LAN) or the Internet. Click the Multiplayer button on Empire Earth's Main Menu to go to the Multiplayer screen, from which you can choose to join or host a game. There are several ways to join or host a multiplayer game of Empire Earth, which are described below. Only the host has control over EE's various game options, including the choice of playing a saved multiplayer game.

NOTE: You must have a network or an Internet connection in order to play Multiplayer games of Empire Earth. Also, if the host should leave a game for any reason, Empire Earth will attempt to “migrate” the host duties to a new computer so that the remaining players can continue to play if they wish.

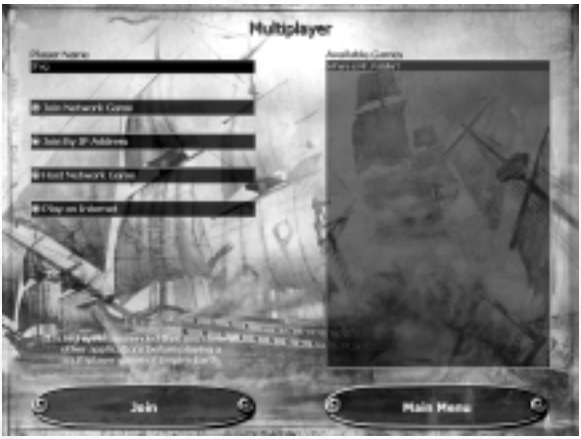
REFERENCE: Whether you are joining or hosting a game, you will eventually find yourself at the Game Setup screen. This screen is also used for Single Player Random Map games and is covered in the Game Setup section later in this chapter.

Join Network Game

To join a game over a Local Area Network (LAN), click on the Join Network Game tab and then select the game you want to join from the Available Games list. Click the Join button to go to the Game Setup screen (described later in this chapter).

Join by IP Address

Joining a game directly by using an IP (Internet Protocol) address requires that you know what the host’s IP address is. Have the host send you his or her IP address by email, instant messaging, telephone (if your phone line is not being tied up by your computer), or using some other method. When you have it, click the Join by IP Address tab and enter the IP address into the text box provided. Then click the Join button to go to the Game Setup screen.



Multiplayer Screen

Host Network Game

If you want to host a multiplayer game over a LAN or by providing your IP address to other players, click the Host Network Game tab. New controls appear on the right side of the Multiplayer screen. Type a name for your game in the text box provided. If you need to know your IP address, you can click the Show My IP Address button. When you're ready, click the Host button to go to the Game Setup screen, where you'll wait for the other players to join your game. On the Setup screen you, as the host, can choose the number of players, set the Game Options, and then start the game. The Game Setup screen is explained later in this chapter.

Play on Internet

Sierra.com's free matchmaking service gives you another way to join or host a Multiplayer game of Empire Earth. The matchmaking service provides an online meeting place where you can find other players to play with. Click the Play on Internet tab and enter your Sierra.com User ID and Password in the spaces provided. Then click the Login button (or press the Enter key). You'll be asked to select a server and then you will go to the Available Rooms screen.

If you need to create a Sierra.com account, click the Create Account button. A new window will open in which you can enter the information necessary to create a new account. When you're finished, click the Create Account button.

If you already have an account but forgot your password, you can click the Email me my Password button. As the button says, your password will be emailed to the address you specified for your Sierra account.

Available Rooms

Once you are logged in, the Available Rooms screen appears. The matchmaking service maintained by Sierra is organized into "rooms." Each room has its own set of games for you to choose from (or you can host your own). The Available Rooms screen displays all the rooms available. Select the room you want and click the Join button to enter it.

You can also click the Update Account button if you want to change your password or email address. A separate window appears to allow you to make your changes.

Available Games

When you enter a room, you have the choice of joining an existing game or hosting a new game. Each room can handle many games at once. If a room happens to be full and you want to host a new game, you have to choose a different room. You can also chat with other players in the room. Double-clicking on a player's name in the Players list allows you to "whisper" to just that player rather than every player in the room.

The checkboxes under the list of available games allow you to show or hide games of the types listed. Private games are games being hosted behind a "firewall" and only other player behind the same firewall can join.

Available Games Screen

Joining a Sierra.com Game

To join a game, simply click the List Available Games tab (if it isn't already selected) and then select the game you want from the Available Games list. You cannot join games that are already full (that is, where all the player slots are full). Games that are password protected by the host require that you enter the password before you can join. After you select a game to join, click the Join button and you'll be taken to the Game Setup screen. The host will start the game once all the players have joined and indicated that they are ready to begin.

Hosting a Sierra.com Game

To host a game, click the Host a New Game tab. In the controls that appear, enter a name for your game and then click the Host button to go to the Game Setup screen. You can also choose to password protect your game, if you want to. If players want to join a password-protected game, they have to enter the same password that the host of that game entered.

Playing a Saved Multiplayer Game

Empire Earth lets you restore and play saved multiplayer games so players can continue a game at a later time. Only the host can choose to load a previously saved game. The choice to play a saved game is made on the Game Setup screen by selecting the appropriate Game Type in the Game Options.

When restoring a saved game, each player's name appears in one of four colors:

- **White** – The player has joined the game.
- **Red** – The player has not yet joined the game. The game cannot start until all players (except observers) join.
- **Yellow** – The player has not yet joined the game, but the player was an observer so the game can start without him or her.
- **Green** – The player is an observer who has joined the game.

Once all players have joined (excluding observers, who are optional) and checked Ready, the host can start the saved game by clicking the Start button. No changes can be made to the Game Options if you are restoring a saved game.

NOTE: Only players who were in the original multiplayer game can join a saved game (determined by player name). Players who need a copy of the saved game – if they disconnected before the game was saved, for example – will automatically download the file from the host.

Game Setup

Both Single Player and Multiplayer games of Empire Earth utilize the Game Setup screen, which offers a variety of options. For Multiplayer games, the Setup screen also offers a chat area so that players can chat with one another before the game starts. To chat, simply type a message into the chat text field and press Enter.

Ready

For Multiplayer games only. When checked, this box indicates that the associated player is ready to start the game. All players, including the host, must be checked in (ready) before the host can start the game. Players cannot change any options or leave the game while they are checked in.

Players

The Player column displays the state of each of the player slots and who (if anyone) is occupying those slots. The single-player or the multiplayer host can choose the status of each of the slots. The multiplayer host can allow additional human players into the game by opening slots or prevent players from joining by closing slots.

- **Open** – An open slot indicates where a human player can join the game.
- **Closed** – No one can join a closed slot. The host can eject players who have already joined by closing their slots.

- **Computer** – This means a computer player is occupying the slot. Single Player Random Map games require that there be at least one computer player.
- **Player Name** – When a human player joins the game, his or her name occupies the slot.
- **Observer** – A player can set his or her own slot to Observer (see below). Other players will see the player's name written in green text. This option is for Multiplayer games only.

NOTE: During a game, you can check out each player's status (e.g., disconnected, defeated, observer, etc.) by clicking the button and looking at the icons on the far left of the Alliances & Tributes screen. These icons are explained in Chapter IV.

Observer Mode

You can join a Multiplayer game of Empire Earth as an observer to watch the game as it is being played. Hosts can also be observers. Observers cannot participate in the game, but they can watch all the action and chat with one another (but not with the active players). Observers have full map visibility and no fog of war.

Each observer takes up one player slot. For the observer, the word "observer" appears on the Multiplayer Setup screen instead of his or her name. For all other players, the observer's player name appears in green text.

NOTE: Observers cannot save games unless they were observing the original game (before it was saved).

Teams and Player Colour

The Team control allows each player to pick his or her team. Players with the same team number start the game on the same team, meaning they are allies and they share Line Of Sight (LOS). A hyphen "-" indicates that no team is selected. (Also see the Lock Teams Game Option, below.)

Next to each Team control is a Colour indicator that shows what colour each player will have during the game. Your player colour marks all your units and buildings in the game so that they can be identified as belonging to you. Player colour also shows up on the Mini-map.

Citizens

In Random Map games, players start the game with a Capital building and some Citizens. The Citizens drop down list is used to control the number of starting Citizens for each player. The default number is 5. In Multiplayer games, only the host can change how many Citizens a player starts with.

This control can be used to give less-experienced players a handicap against more-experienced players (or the computer player). By giving a novice player more starting Citizens (or experienced players fewer), the novice player starts the game with an advantage. How large an advantage is ultimately up to the host.

Game Setup Screen

Ping

The Ping display is a measure of how good your network or Internet connection is relative to the host of the game. As a basic rule, the more green squares that are displayed, the better that player's connection. Bad connections can sometimes result in "choppy" play.

Game Options

Empire Earth's many Game Options allow you to configure the game in a variety of ways. In Multiplayer games, only the host has the power to change the Game Options.

Game Type

There are different Game Types available for Multiplayer games: Random Map and Saved Game. Empire Earth features an exceptional random map generator, which provides you with a virtually unlimited supply of unique and beautiful maps. Choosing Saved Game brings up a separate screen that allows the host to pick the particular saved game. For Single Player, only the Random Map Game Type is available because loading a saved gamed is accomplished from the Single Player menu.

- **Random Map** – Play a game on a randomly generated map (Single or Multiplayer).
- **Saved Game** – Load and play a previously saved game (Multiplayer only). All players from the original game, except observers, must be present to play.

Map Type

Empire Earth offers several different kinds of random maps, each of which provides a different game experience. Conquer a continent with a Bronze Age army, rule the seas with a majestic Imperial fleet, or send a column of tanks rolling across the plains. There are an almost endless number of gorgeous maps at your disposal. Occasionally, a winter version or a desert version of the chosen map type is generated.

- **Continental** – Mostly land with water around the edges of the map.
- **Mediterranean** – Lots of land with an inland sea or a bay.
- **Highlands** – Many hills and cliffs and no water.
- **Plains** – Low hills and no water. You'll have to explore to find resources.
- **Large Islands** – Large islands and lots of water. You'll need air or sea power to expand.
- **Small Islands** – Smaller, often narrower islands than Large Islands. Generally more uninhabited islands, too, depending on map size and the number of players.
- **Tournament Islands** – A version of island maps specifically designed for Tournament games. These islands always have water all the way around (except on Tiny maps).

Map Size

There are several map sizes available. Depending on the number of players, the three biggest map sizes tend to allow more build-up time – that is, players don't run into each other as quickly. Each map size was designed to be optimal for a certain number of players, but the numbers shown are only suggestions. Players with slower computers should stick with Tiny or Small maps.

- **Tiny** – An up-close and personal map. Good with just 2 players.
- **Small** – A good sized map for up to 4 players.
- **Medium** – Good for 6 to 8 players. Fewer than 6 players will find it spacious.
- **Large** – A fairly big map, best with 8 players.
- **Huge** – Eight players will generally have ample time to build up their civs regardless of the map type.
- **Gigantic** – This is a colossal map even with the maximum number of players. Expect an extended game. Recommended only for fast computers with 128 MB of RAM or more.

Resources

You can choose the amount of resources the players start the game with. The length of a game can be significantly affected by this option – lower starting resources generally makes for a longer game, while a Deathmatch game might be over relatively quickly.

Food and Wood are always provided in greater amounts than Stone, and Stone is provided in greater amounts than Gold and Iron (except in Deathmatch). Review the choices and decide what kind of game you want to play, then choose an appropriate starting resource level. Note that Deathmatch provides far more resources than any of the other choices

Starting and Ending Epoch

Choose the Epoch in which you want the game to begin and the Epoch in which you want it to end. The Ending Epoch is the last playable Epoch of the game (though a player might win before anyone reaches the ending Epoch). You can choose to play all the Epochs from the Prehistoric to the Nano Age, or as few as one Epoch.

You can also choose to have the game pick a starting Epoch at random by selecting Random Epoch. The random starting Epoch is chosen from all the Epochs up to and including the Ending Epoch you select. For example, if you set the Starting Epoch to Random Epoch and the Ending Epoch to Copper Age, your game will start either in the Prehistoric, Stone Age, or Copper Age, and the last playable Epoch will be the Copper Age.

NOTE: When you choose to start a game in an Epoch other then the first Epoch (Prehistoric), you begin with all the technologies and unit upgrades of the previous Epochs already researched. For example, if you start in the Copper Age, you have access to all units available in the Copper Age (e.g., you don't have to upgrade Clubmen into Mace Men) and all the Prehistoric and Stone Age technologies are already researched for you.

Game Unit Limit

Choose the maximum number of units, in total, that are allowed in the game. This number gets evenly divided among all the players (including computer players, but not including the world-owned or ambient units, such as animals). For example, a Game Unit Limit of 800 in an 8 player game means that each player gets a maximum of 100 units, which is called the players "pop cap."

NOTE: The Game Unit Limit is not strictly enforced in the game. There are technologies at the Hospital, for example, that can increase your civilisation's pop cap.

Game Variant

There are two game variations in Empire Earth, which provide two different ways to play.

- **Standard** – This option is for playing a normal Random Map game.
- **Tournament** – This option allows you to play quicker games of Empire Earth with less "build-up" time compared to Standard games. Tournament games differ from Standard games in a few key ways:
  - Epoch advancements in Tournament games cost less.
  - All buildings, walls, and towers have fewer hit points.
  - Capitals and Town Centres provide less maximum morale.
  - Resource gathering is faster in Tournament games.

Difficulty

The level of difficulty affects how the computer players (if any) play the game.

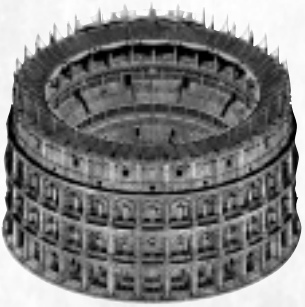
- **Easy** –This is a good setting for beginners.
- **Medium** – This is the default difficulty setting. Intermediate players may wish to use this setting.
- **Hard** – This difficulty setting provides a challenge even for more experienced players.

Game Speed

You can choose one of four different game speeds. Once the game begins, you can change the game speed using the plus (+) and minus (-) keys, unless Lock Speed was checked on the Setup screen (see below).

- **Slow** – One-third slower than the Standard speed.
- **Standard** – This is the default game speed.
- **Fast** – Twice as fast as the Slow setting.
- **Very Fast** – Recommended for experienced players only.

Wonders for Victory



Choose the number of Wonders a player or team has to construct in order to win the game with a Wonder victory. The Wonders must be kept standing for a set period of time, as indicated by the Wonder clock. Set this option to Off if you want to build Wonders without triggering a victory.

REFERENCE: Players must wait until at least the second playable Epoch of the game before they can construct Wonders. Also, Wonders can never be constructed during the Prehistoric or Stone Age, but can always be constructed during the Nano Age. See Chapter XII for details.

Reveal Map

Check this box if you want to start with the map completely revealed (fog of war remains). If unchecked, players must explore the map to reveal it. Unchecked is the default.

Use Custom Civs

When selected, players must either create a civilisation or choose a civilisation they created earlier (via the Civ Builder). If not checked, players must choose one of the predefined civs that shipped with the game. Unchecked is the default.

Lock Teams

This option keeps teams together by preventing players from changing their diplomatic stances towards one another during the game. Check this box to keep the same teams throughout the game. If unchecked, players can form or break alliances via the Alliances & Tributes screen as much as they want. Checked is the default.

Lock Speed

If this box is checked it prevents players from changing the game speed once the game has begun. If unchecked, players are allowed to speed up or slow down the game whenever they want. Checked is the default.

Cheat Codes

Check this box to enable Empire Earth's cheat codes. If unchecked, cheat codes are disabled during the game. Unchecked is the default. This is for Single Player games only.

Starting a Game

Starting a game of Empire Earth is a bit different depending on whether you are starting a Single Player Random Map game or a Multiplayer game.

Single Player

A Single Player game must have exactly one human player and at least one computer player. To start a Random Map game with the selected Game Options, click the Start Game button. A load screen appears and, when loading is complete, the game begins.

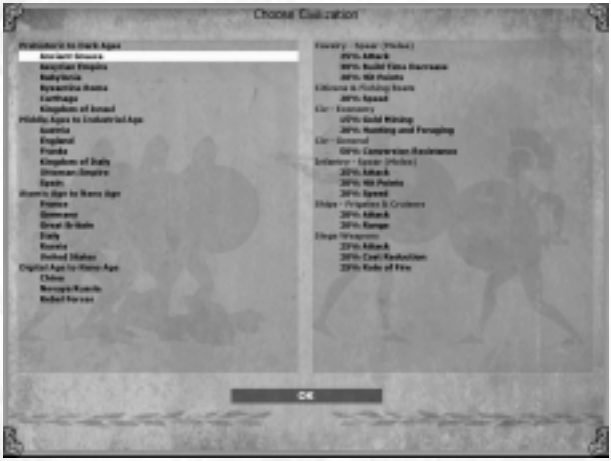
Multiplayer

A Multiplayer game must have at least two human players in it. Computer players are optional. Only the host is allowed to start the game. All players must check their Ready box before the host can start the game by clicking the Start Game button.

Selecting Your Civilisation

In Random Map games, players have 5 minutes once the game begins to select a civilisation. This gives players time to check out the map and assess the situation before committing to a particular civilisation.

At any time during the 5 minutes, you can click the blinking Civilisation Selections button – either the one over the Mini-map or the one in the upper-left corner of the screen. The Choose Civilisation screen will then appear (if the Use Custom Civs option is off) and you can choose which of the 21 predefined civilisations you want to use. The list on the left shows all predefined civs. When you click on a civilisation, its characteristics or "bonuses" appear in the right-hand list so you can see what advantages that civilisation offers. When you decide on a civ, be sure it's selected (highlighted) and then click the OK button to return to the game. The civ's bonuses take effect immediately upon re-entering the game.



Choose Civilisation Screen

You are reminded to pick a civilisation before time runs out. Once the 5 minutes are up, the Choose Civilisation screen appears automatically, giving you the chance to pick a civilisation. Players can choose any one of the civilisations available, even if another player has chosen the same civ.

NOTE: In Multiplayer games, the game does not pause when you go to select a civilisation. If you are in the process of selecting a civilisation when time runs out, you will be allowed to finish your selection.

Using Custom Civs

If the Use Custom Civs Game Option was chosen on the Game Setup screen, clicking the Civilisation Selections button brings up the Civilisation Builder screen instead of the list of predefined civs. On this screen you can either create a new civilisation from scratch or you can load a civ you created and saved earlier. You cannot select a predefined civilisation in this case and you cannot save a civilisation for later use.

REFERENCE: More information about the predefined civilisations and details about creating your own civilisation using the Civilisation Builder is provided in Chapter XIV. The bonuses for the predefined civilisations are listed in Appendix A.

Game Settings

The Game Settings let you control how Empire Earth looks and sounds. To change Empire Earth's Game Settings, click the Game Settings button on the Main Menu. You can also access the Game Settings during the game by clicking the Game Options button (see Chapter IV for more information). The Game Settings for Empire Earth are divided into three main categories or "pages": Video (graphics), Audio, and Interface. By adjusting the settings on these pages you can optimize the performance of EE on your computer and set various preferences. Clicking the Restore Defaults button resets all of the game settings to their default values.

Game Settings Screen - Video Options

Video

Video Settings

- **Video Card** – Selects the video card the game will use. In most cases this is chosen for you and you should not need to change it.
- **Rendering System** – Sets the 3D rendering system the video card should use. In most cases this is chosen for you and you won't need to change it.
- **Screen Resolution** – You can select the screen resolution of the game here. The resolutions available depend on the video card you are using. Higher-end computers can make use of higher resolutions and more colours. For slower computers, we highly recommend selecting a lower resolution (e.g., 800x600 with 16-bit colour) to increase the performance of the game.

Graphics Options

- **Allow Zoom** – You can turn the zoom feature of the game on or off with this control.
- **Show Blood** – Choose whether or not you want to show blood when units take damage.
- **Graphics Quality** – These five quality settings let you choose preset values for the options enclosed in the box. Slower computers should use Best Performance, while high-end computers can make use of the Best Graphics setting. You can fine tune the game's performance by choosing one of the middle selections. If you wish, you can Customize each of the Graphics Options in the box individually.
  - **Model Detail** – Set the level of detail of the models to Low, Medium, or High. For slower computers, set this to Low to increase performance (note that deterioration in the quality of some models may occur).
  - **Effect Detail** – The Effect Detail control allows you to turn on or off some of the game's special graphical effects. High displays all effects, Medium turns some off, and Low turns even more effects off. Slower computers should set this to Low to increase performance.
  - **Hi-Res Filter** – This option filters out the rough edges of textures to make them look "smoother." Turn this option off to increase performance on slower computers.
  - **Hi-Res Lighting** – This option enables 3D lighting effects. Turn this option off if you have a slower computer.
  - **Hi-Res Textures** – Select whether or not to use higher-quality textures. Players with slower computers can boost performance by turning this off. (Changes made to this option during a game take effect only when you exit and restart Empire Earth.)
  - **Vertical Sync** – This option controls how the screen is redrawn. Turning this option off increases performance, but can result in minor screen anomalies. Note that some older video cards do not support this feature.

- **Shadows** – Choose whether or not to draw shadows. For slower computers, turn this option off to increase performance.
- **Clouds** – Choose whether you want the sky to display clouds. For slower computers, turn this option off.
- **Fullscreen Anti-aliasing** – Antialiasing smoothes out the jagged edges of graphics. Not all video cards support this full-screen feature, so it is turned off by default.

Audio

Music Settings

- **Music Volume** – Sets how loud the music plays.
- **Music Quality** – Sets the sound quality of the music. Players with slower computers may want to set this to Low or Off to increase performance.

Sound Effects

- **Sound Volume** – Sets how loud the sound effects are played.
- **Test Sound** – Click this button to test the volume of the sound effects.
- **Max Number of Sounds** – Controls how many different sound effects can play at once. Players with slower computers may want to set this to Best Performance.
- **Ambient Sounds** – Check this box to hear the game's environmental sounds, or uncheck it to turn them off. Turning this option off will increase performance.

Interface

- **Scroll Speed** – Controls how quickly the game screen pans when you move the mouse pointer to the edge of the game screen.
- **Grab Speed** – Controls how quickly the game screen pans when you hold in the mouse wheel (or middle button) and move the mouse pointer.
- **Mouse Sensitivity** – Controls how quickly the mouse pointer moves around the screen.
- **Mouse Orientation** – Use this control to swap the assignments of the left and right mouse buttons (does not affect the mouse wheel). The default setting is for people who are right-handed.

Save Options

- **Autosave Frequency** – How often, in game minutes, to automatically save the game.
- **Autosaves to Keep** – How many saved game files to keep on your hard drive at once. The oldest autosave file is deleted first.

Game Tools

The Game Tools Screen, off of the Main Menu, provides access to Empire Earth's Civilisation Builder, Scenario Editor, and Campaign Editor. The Civilisation Builder allows you to create your own custom civilisations and is explained in Chapter XIV. The Scenario and Campaign Editors are explained in Chapter XV, and in more detail in the manual on your Empire Earth CD-ROM.

Saving and Exiting the Game

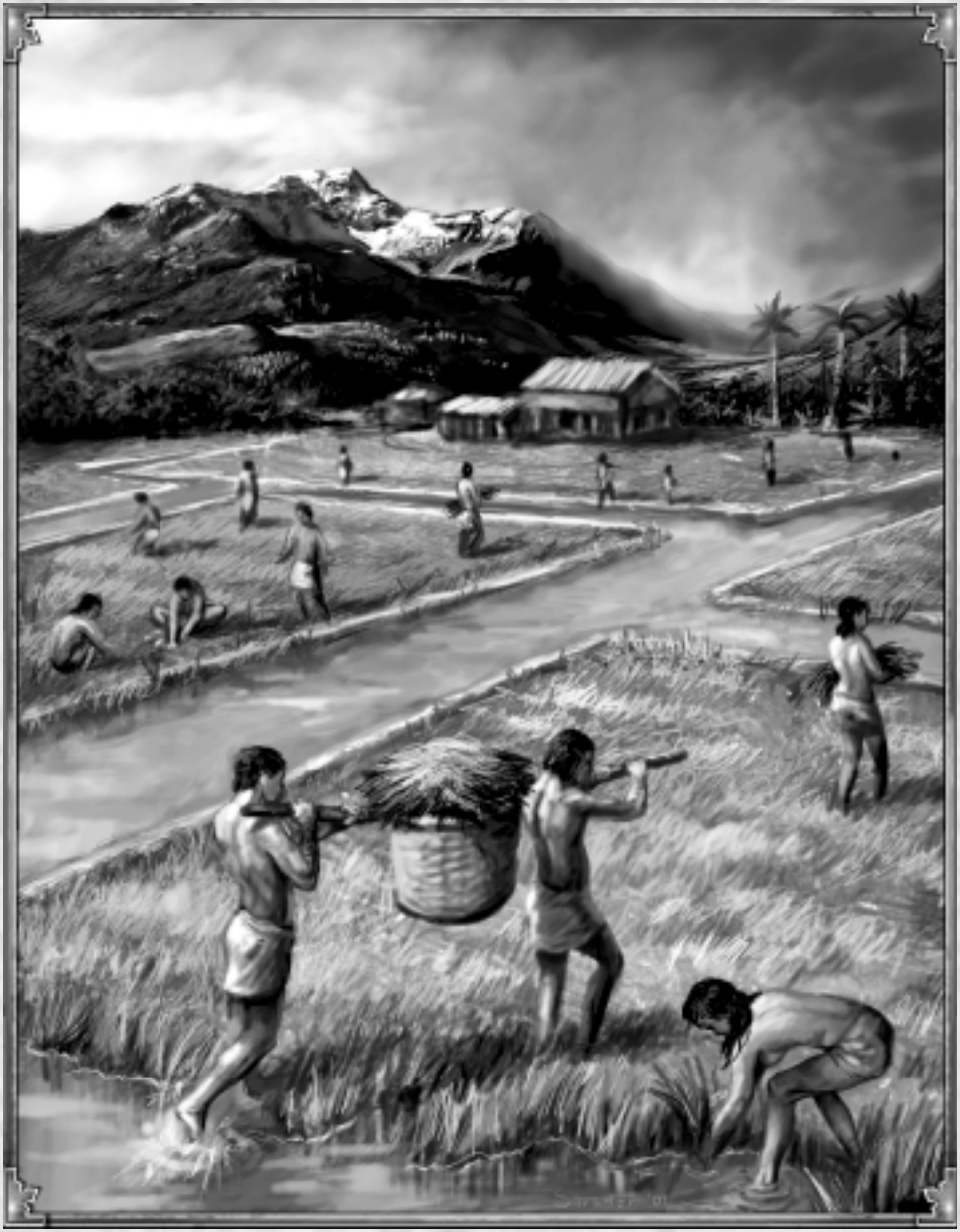
You can save a game in progress at any time so that you can continue playing it later (you can also choose to exit a game without saving it). To access these and other options, click the Game Options button at the top-left of the screen. There are also other options available on the Options menu, which are covered in Chapter IV.

Winning and Losing

In Random Map games, a player or team wins the game either by conquest or by building Wonders. A conquest victory is achieved by killing all the units and buildings of the opposing player(s). (Houses, Hospitals, Universities, Granaries, Farms, Walls, Towers, and Gates need not be destroyed to achieve victory.) If the Wonder victory option is enabled, victory can be achieved by constructing the appropriate number of Wonders and keeping them standing until the Wonder clock runs out. A conquest victory is still possible even when the Wonder victory option is enabled.

NOTE: Scenarios often have different or additional victory conditions. The scenario's instructions will describe what is required to win.

When the game is over, you are given full map visibility so you can look around if you want. **To exit the game, click the Game Options button (or press the F10 hot key) and then click the Quit This Game button.** A post-game statistics screen shows you how you did compared to the other players. The screen is organised into 7 different pages, each accessible by its own tab button along the top of the screen. A star next to an individual statistic indicates which player did the best for that particular statistic. You can exit this post-game statistics at any time by clicking the Exit button.



Copper Age (5,000 – 2,000 BC)

Copper was one of the first metals widely used by humans, owing to its malleability and durability. Like gold and silver, copper could be easily fashioned into many shapes, but it proved to have greater strength. Consequently, copper was prized by early metalworkers for making tools and weapons. Copper-headed maces were first cast in Mesopotamia in the 3rd Millennium BC. Iron also began to find limited use around this time, due mainly to its great abundance, though many centuries passed before it claimed its place as the preferred material for tools. Yet, despite the availability of these materials, not all weapons made an immediate transition from stone to metal. Bowmen, for example, continued to use stone arrowheads throughout the Copper Age because they were sufficiently lethal and much easier to produce.

By the start of the Copper Age the Egyptians were already constructing warships out of bundles of reeds. Such vessels were essentially rafts, suited for duty only on the relatively calm waters of the Nile. By 2,000 BC, both Egypt and Crete had wooden ships capable of navigating the choppy, wind-swept waters of the Mediterranean. For propulsion, these warships used a combination of a square sail (for speed) and oars (for maneuverability).

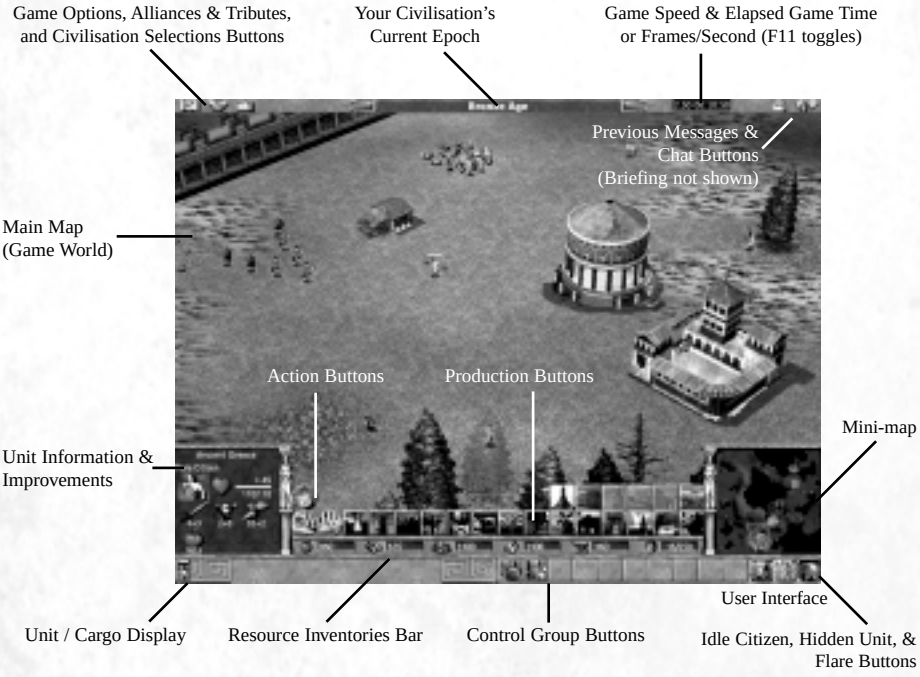
Another defining phenomenon of this epoch was the explosion of agriculture. The ability to farm enabled people to settle in one area – a necessary condition for the emergence of civilisation. The earliest known civilisation arose in Sumer, in southern Mesopotamia, during the 5th Millennium BC. In addition to growing crops like barley, wheat, and grapes, the Sumerians domesticated animals for meat and other materials, as well as to provide power for plows and carts. Lists of commodities, including the lineages of horses, were recorded on clay tablets using cuneiform, the first system of writing. By the end of the Copper Age, agriculture had spread from the Middle East through all of Europe.

Chapter IV
Playing Empire Earth

To forge an empire, your people need direction and supervision. This chapter explains how to control your Citizens, military forces, and means of production so that you can build the mightiest empire the Earth has ever seen. The User Interface for Empire Earth is designed to give you complete control over your civilisation while remaining simple to learn and use.

The Game Screen

Empire Earth's game screen is composed of two major parts: the game world – as shown on the Main Map – and the User Interface. The game world is where the game itself takes place. The User Interface allows you to control and monitor events in the game world. When you move the mouse pointer over a button, help text is displayed in the lower-left corner of the screen. The Epoch your civilisation is currently in is displayed at the top of the screen.



The Game World

What's in the World

The game world of Empire Earth imitates the real world. As you explore the landscape, you'll see grasslands, hills, cliffs, oceans, shallows, and other terrain features. You will also discover natural resources such as trees, mineral deposits, animals, and edible vegetation. These resources can be collected to help build your civilisation.

Food – Forage Patch

Food – Wild Animals

Food – Fish

Wood

Stone

Gold

Iron

Players

You will eventually run into other civilisations as you explore the world. Each civilisation has its own unique colour emblazoned on its people and buildings – take note, as it is a sure fire way to keep track of your enemies. And perhaps plot a little revenge.

Above a selected individual or building – whether friend or foe – is a bar that shows its relative health. A fully green health bar means the individual is at full health, while a bar that is partly green and partly red means that it has been injured or damaged. Additionally, hovering the mouse cursor over any unit will show its health bar and the name of the player to whom it belongs.

Fog of War

Areas of the game world you have yet to explore appear black (if the Reveal Map option is off). As members of your civilisation move around the map, it is gradually revealed. Parts of the world that your people have explored but are not currently within their lines of sight are hidden by the "fog of war." The fog of war prevents you from seeing what is going on in places that your forces cannot presently see. Similarly, your enemies cannot see what your people are doing if they do not have anybody there to look.

User Interface

Resource Inventories

The resources available for use by your civilisation are displayed in the Resource Inventories bar near the bottom of the screen. As your Citizens gather resources and deposit them at a drop-off point (e.g., a Settlement), your resource inventories increase accordingly. As you use resources – for example, to construct buildings or train troops – your resource inventories decrease to reflect this. There are five resources in Empire Earth: Food, Wood, Stone, Gold, and Iron.

Food Wood Stone Gold Iron Population

Population Count

To the immediate right of your Resource Inventories is the display of your population count or "pop count." The first number indicates how big your current population is. The second number, after the slash, indicates how big your population can get – this is also known as your population capacity or "pop cap." You cannot produce any more units if your pop count equals or exceeds your pop cap.

Button Areas

Action Buttons

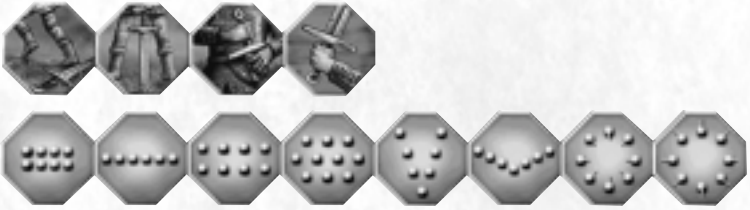
Sometimes you'll want to order your people or buildings to perform special actions. Many orders can be given using an Action button. Action buttons are the buttons that appear next to the Unit Information and Improvements area when you select a person, military weapon, or most types of buildings.

BUTTON	ACTION	ISSUED TO	FUNCTION
	Stop	Any Unit	Stops the selected unit and cancels any orders.
	Explore	Any Unit	Instructs the selected unit to automatically explore the unexplored areas of the map.
	Set Unit Behaviours	Any Military Unit	Sets the “rules of engagement” for a unit. Behaviours tell units under what circumstances to attack and pursue enemies.
	Patrol	Any Military Unit	Instructs the selected unit to patrol around the nearest friendly town.
	Set Formation	Any Group of Military Units	Orders a selected group of military units to line up in the specified formation.
	Attack Ground	Artillery and other units	Fires at the ground indicated, rather than a specific unit or building.
	Populate	Citizens	Instructs a Citizen to populate a Settlement, Town Centre, or Capital. You populate these buildings to upgrade them and to receive an economic bonus.
	Convert	Priests	Instructs a priest to attempt to convert an enemy.
	Heal	Medic	Instructs a Medic to heal the unit indicated
	Repair	Apollo Cyber	Orders the Apollo .to heal the Cyber indicated.
	Battle Cry	Strategist Heroes	Has the Hero emit a Battle Cry, which demoralises enemies so they take more damage in battle.

	Unload	Transports (air, land, and sea), Fortresses	Unloads a selected transport at (or as near as possible to) the location indicated.
	Cancel Action	Citizens, Prophets, Cybers, Transports	Cancels the current order, such as build, cast Calamity, etc. (This button appears by itself in the UI when it's applicable.)
	Set Rally Point	Any Production Building and Aircraft Carriers	Defines a point on the map where units produced at that building will assemble. (Airports have special Rally Points. See Chapter VIII for details.)
	Replant Farms	Granary	Replants farms around the Granary (if any have been destroyed).
	Lock	Gates	Locks a gate so neither friends nor enemies can get through.
	Unlock	Gates	Unlocks a gate so that the gate opens for allies, but not for enemies.

Behaviour and Formation Buttons

The Set Unit Behaviour and Set Formation buttons are special Action buttons, octagonal in shape, that allow you to assign a behaviour or formation to your troops. The picture on each button displays what the current behaviour or formation is for the selected unit(s). When you click either button, the individual Behaviour or Formation buttons appear, allowing you to select the behaviour or formation you want.



Unit Behaviour and Formation Buttons

REFERENCE: Additional information on both Behaviours and Formations can be found later in this chapter and in Chapter VIII.

Production Buttons

Your civilisation can produce many kinds of things: buildings, people, military forces, new technologies, and more. You control production through the use of Production buttons. There are several types of Production buttons, described below, which vary depending on what Epoch you are in and which unit or building you select. (Note that most military units have no Production buttons.)

To produce something, you generally just have to click on its button (or right-click to stop/cancel its production). The resources needed for production are then deducted from your inventories. If you do not currently have enough resources to produce a particular thing, its production button will appear “grayed out”.

Build Buttons

Your Citizens can build structures – like Settlements, Airports, Docks, walls, and Wonders – for your civilisation. Constructing buildings is accomplished using special Production buttons called Build buttons. When you click a Build button you must then select a place on the map where you want your Citizens to build the structure. More information on how to construct buildings can be found later in this chapter..

Granary Build Button

Training/Creation Buttons

To fill out the ranks of your civilisation you can train additional Citizens and soldiers, and create weapons of war. Certain types of buildings – Production Buildings such as the Barracks and Tank Factory – are used for this purpose.

Prehistoric Citizen Training Button

Unit Upgrade Buttons

As your civilisation advances through the Epochs, new types of warriors and weapons become available. Many of these new military units are “upgrades”of earlier units. Upgrade buttons allow you to replace your older units with more up-to-date units. For example, Clubmen upgrade into Mace Men, Mace Men upgrade into Short Sword Men, and so on.

Upgrade Button

Research Buttons

Historically, progress has been measured in part by a society’s technological advances and achievements. Your civilisation can perform technological research at certain types of buildings, such as the Capital and University. Technologies give your civilisation particular benefits, such as stronger buildings, stronger Citizens, or increased economic production.

Hafted Tools Button (+15% Stone Gathering)

Unit Improvement Buttons

All other things being equal, the army that has better equipment and training tends to prevail on the battlefield. In Empire Earth, military units can be customised by improving their attributes – in essence, improving their equipment and training.

Each type of soldier and military weapon has its own set of unique attributes. When you improve an attribute for an individual soldier, all soldiers of that type receive the improvement. For example, when you improve the Speed of a single Club Man, the Speed of all Club Men improves – even ones you have not trained yet. Additionally, improvements carry over when you upgrade, so when Club Men are upgraded to Mace Men, the Speed improvement carries over. Each improvement costs your civilisation a certain amount of resources.

Improvements are made in the Unit Information and Improvement area – just click on the button of the attribute you want to improve. The number before the plus sign ("+") for each attribute is the base level of that attribute. The number after the plus sign indicates by how much that attribute has been improved. Each individual attribute has a maximum amount that it can be improved. Additionally, you are allowed to make up to a maximum number of improvement "steps" in total. Each armour improvement counts as one step, and all other improvements count as 2 steps. The number on the unit portrait indicates the total number of steps so far.

NOTE: Any bonuses that your civilisation provides to your units are also shown in the Unit Information and Improvement area.

Unit Information & Improvements Area

Attack

Range

Speed

Area Effect

Shock Armour

Arrow Armour

Pierce Armour

Gun Armour

Laser Armour

Flight Time

Power

Cargo/Garrison

Control Group Buttons

Military forces have long been organized into groups, such as divisions, platoons, and wings. The Control Group Buttons in Empire Earth, along the bottom, right of the game screen, help you to both create groups and keep track of the groups you have created. Use of these buttons is explained later in this chapter.

Idle Citizen Button

The Idle Citizen button, beneath the Mini-Map, allows you to seek out individual Citizens (and Fishing Boats) who have nothing to do. When you click the Idle Citizen button (or the Tab hotkey), the next idle Citizen found on the map is selected for you so that you can give him or her a task to perform. This feature is very useful for keeping your civilisation running efficiently.

> TIP: Hold in the Shift key on your keyboard while clicking the Idle Citizen button to add idle Citizens to your selection group. You can select idle military units by pressing the comma “,” hotkey on your keyboard, and holding in the Shift key works for idle military units, too.

Hidden Units

The Hidden Units button, beneath the Mini-map, has three states. Click this button to make all buildings and trees transparent so that you can see and select units behind them. Clicking again makes the buildings and trees opaque. Clicking the third time returns to the default setting, which makes buildings and trees transparent only when units are behind them. You can also press the F5 hotkey on your keyboard.

Flare Button

You can call attention to a spot on the map by setting off a Flare. Flares can be used to co-ordinate attacks with allies or to call for help at a specific location. Just click the Flare button beneath the Mini-map (or press Ctrl-F) and then click on the Main Map or the Mini-map where you want the flare to fire. The flare will show up, with an accompanying sound, on the Mini-maps of your allies. You can also signal computer allies with a flare.

Other Buttons

The buttons at the top left and top right of the screen provide access to several game features. Note that Multiplayer games do not pause when you access these features.

BUTTON	NAME	FUNCTION
	Game Options	Displays the in-game options menu. Options include resigning, restarting the game, saving the game, and changing game settings. (See below)
	Alliances & tributes	Used to display the Alliances & Tributes screen (see Chapter IX) Player Status is also shown (see below).
	Civ Selections	Lets players select a civilisation (first 5 minutes of the game only) or view their selected civilisation (see Chapter III). This button also appears above the Mini-map at certain times and is used to allow players to spend Civ Points in scenarios.
	Briefing	For scenarios only, this button displays the Intro screen so players can review the instructions and objectives for the scenario. This button also appears above the Mini-map and it blinks when new objectives are added.
	Previous Messages	Lists all the previously sent chat and dialogue messages, which you can scroll through. This button appears only when there are messages to view and is particularly useful in scenarios.
	Chat	Used to send messages to other players (see Chapter IX).

In-Game Options

The In-game Options menu, accessible by clicking the Game Options button, provides you with the following choices:

- **Quit this Game** – Quit the game and exit to the statistics screen. This button is called Return to Editor if you are testing a scenario from the Scenario Editor, and it does just that.
- **Game Settings** – Go to the Game Settings screen. (Remember: Multiplayer games do not pause.)
- **Save Game** – Save the current game. Play continues after the save is complete.
- **Play Saved Game** – Load and play a previously saved game (Single Player only).
- **Resign** – Resign the current game and become an observer (results in your defeat).
- **Restart Game** – Restart the current game from the beginning (Single Player only).
- **Pause (Unpause) Game** – Pause (or unpause) the game.
- **Play Scenario** – Load and play a stand-alone scenario (Single Player only).
- **Return to Game** – Exit the menu and return to the current game.

Player Status

You can check the status of each player in the game by going to the Alliances & Tributes screen. The icons on the extreme left of the screen (next to the Chat checkboxes) indicate what the current status of each player is. Behind each icon, the background colour tells you whether the player is human (dark gold) or computer-controlled (light silver).

ICON	WHAT IT MEANS
	The player is connected and active in the game.
	The player is disconnected and is not active in the game. The player either was dropped or left the game on purpose.
	The player has been defeated and is not actively participating in the game anymore.
	The player is an observer and is not actively participating in the game.

REFERENCE: The other uses of the Alliances & Tributes screen are described in Chapter IX.

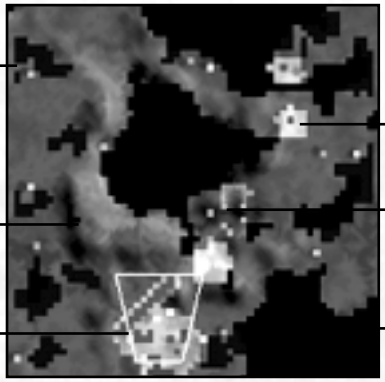
Unit/Cargo Display

When you select your civilisation's buildings or people, portraits of them are shown in the Unit/Cargo Display area at the bottom-left of the screen. If you select an Airport, Fortress, Aircraft Carrier, or any kind of transport, the Unit/Cargo Display area shows what's inside of it. You can select an individual unit by clicking on its portrait. Clicking on an individual plane inside an Airport or Aircraft Carrier causes it to "Scramble" (take-off). Clicking on a unit in a Fortress causes the unit to exit the building (if you are currently under your pop cap).

Mini-Map

The Mini-map, as its name implies, is a small version of the entire game world. Unexplored areas of the world appear black on the Mini-map, just as they do on the Main Map. Parts of the map that are not currently within the line of sight of any of your units are under the "fog of war" and appear grayed.

Any units or buildings visible on the Main Map appear on the Mini-map as dots. The colour of each dot corresponds to the unit's player colour. Resources, such as trees and gold, are also shown on the Mini-map in their own unique colours.



Mini-Map

Game Controls

Mouse Basics

Your mouse is the primary means of controlling your civilisation in Empire Earth. You use it for selecting people and buildings, clicking buttons, assigning tasks, scrolling the Main Map, and many other functions.

NOTE: Throughout this manual, the term “click” is interchangeable with “left-click.” Right-clicks are always designated as such.

Mouse Pointer

Moving the mouse pointer to the top, bottom, left, or right edge of the game screen scrolls the Main Map in that direction. When you move the mouse pointer over a button in the user interface, help text will appear at the bottom-left of the screen to explain what that button is for.

On the Main Map, the mouse pointer changes to indicate when you can (and sometimes cannot) perform an action – assuming you currently have something or someone selected. For example, when you have a Citizen selected, the pointer turns into a sword when you move it over an enemy unit or building that you can attack, and it turns into a pail and shovel when it is over a resource gathering site.

Mouse Buttons

The basic rule of thumb with the mouse buttons is that a left-click is used to select something or click a button, while a right-click is used to assign an action or task to what you have already selected.

To select a Citizen, for example, simply click on him or her. To move the Citizen, right-click anywhere on the Main Map or the Mini-map to have the Citizen travel to that point (or as close as it is possible to get). To assign the selected Citizen a task, gathering wood for example, right-click on a tree.

NOTE: You can swap the left and right mouse button assignments in the Game Settings. See Game Settings in Chapter III.

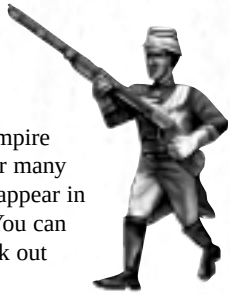
Mouse Wheel

The mouse wheel (if your mouse has one) allows you to smoothly zoom in and out of the Main Map. If you hold in the wheel and move the mouse, you can scroll around the Main Map.

TIP: You can also zoom in and out using the bracket keys ("[" and "]") on your keyboard. Note that you can increase game performance (frame rate) by playing zoomed in a little.

Controlling Units

The word "units" refers to all the individuals that make up your civilisation's population: Citizens, military personnel and weapons (collectively called military units), priests, heroes, etc. This is to distinguish them from your buildings. Your units can do many different things, which are explained below.



Selecting Units

You can't give orders to someone until you get their attention. In Empire Earth, this means selecting them first. You can select a single unit or many units at once (see the table below). Portraits of the units you select appear in the Unit/Cargo Display area in the lower-left corner of the screen. You can select individual units that do not belong to your civilisation to check out their attributes. Of course, you cannot issue orders to them.

TO SELECT…	DO THIS
One unit	Click on the unit
Multiple units	Click and drag a "lasso" around the units you want to select. You can also hold down the Ctrl key on your keyboard and click on additional units.
Units of the same type	Double-click on a unit. All like units currently on the screen are selected.

Moving Units

To give one or more of your units a move command, select the unit(s) and then right-click on the Main Map where you want the unit(s) to go. Units will follow as direct a path to their destination as they can, avoiding obstacles automatically. If the destination is unreachable – for example, if you tell a land unit to go to the middle of an ocean – the unit will attempt to get as close as possible to the location you indicated.

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Setting a Path

You can also order your forces to follow a set path to their destination by giving them "waypoints." To set waypoints for selected units, hold down the Shift key while right-clicking on the map. A marker will appear to represent each waypoint you set and the unit will start moving towards the first waypoint immediately. You can set as many waypoints as you wish. Your units will diligently move from waypoint to waypoint, in the order you set them, until they reach the last waypoint you set. If you want to interrupt the unit and send it somewhere else immediately, just select the unit and right-click on the map (without pressing shift). This cancels the waypoints. Note that if the unit is already performing a task, you should tell it to stop by clicking the Stop button before setting the waypoints.

Movement with the Mini-Map

The Mini-map provides an additional method for moving your units. On the Main Map, select the unit(s) you want to move. Then, right-click on the Mini-map where you want the unit(s) to go. This is especially convenient for moving units a long distance.

Formations and Unit Facing

Whether you are establishing a frontline or preparing a defensive position, you can organise your troops into specific formations and tell them what direction to face. (As described earlier, you select a formation by clicking the Set Formation button and then choosing a formation.)

To order selected units to line up in the selected formation and face in a particular direction, hold down the right mouse button and drag the pointer when you right-click on the Main Map to set the final movement waypoint. An arrow appears on the Main Map. Still holding down the right mouse button, move the arrow to point in the direction you want your units to face when they finish their move order, then release the button. Setting the unit facing in this way has the additional effect of causing a group of units to stay together, to the best of their ability, during a move.

Orders and Actions

Besides movement, you can order your troops and civilians to carry out a variety of other actions. Orders can be given to an individual or a group all at once, often with a simple right-click of the mouse. Some actions require you to click an Action button first – a list of all the Action buttons can be found earlier in this chapter.

General Actions

ACTION	ISSUED TO…	FUNCTION
Stop	Any Unit	Stops any current action, including movement.
Attack and Move-Attack	Units (and Towers)	Tells units to attack an enemy unit or building.

Stop

Stop is a general command that tells any unit to stop whatever it is doing and wait for new orders. For example, you might stop a unit that is moving. To order a unit to stop what it is doing, simply select the unit and click the Stop button in the user interface.

Attack

When it's time to engage in battle, all you have to do is give your troops a target. They will then move within range of the target, if necessary, and begin their attack. To order an attack, select the unit(s) you want to carry out the attack and then right-click on the target.

NOTE: If the target is invalid for the type of unit you have selected, your unit will move to the place where you clicked but won't attack. Also note that some units have a minimum range as well as a maximum range.

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Move Attack

The move-attack command orders units to move to a specified destination and attack any enemy units within their range along the way. To issue a move-attack order, hold down the Ctrl key on the keyboard while right-clicking the units' destination on the Main Map (you don't have to select a target).

Citizen Actions

Your Citizens can perform actions that no other unit can perform (also see Chapter VI).

ACTION	FUNCTION
Gather	Collects resources and deposit them in the resource reserves.
Construct	Constructs a building, wonder, wall, or tower in a specified location.
Repair	Repairs a selected building, wall, etc.
Populate	Instructs a Citizen to permanently enter a building for the purpose of upgrading the building. Populated buildings also produce an economic bonus.

Gathering Resources

To have a Citizen gather a resource, select the Citizen and then right click on the resource on the Main Map. For example, to have a Citizen gather wood, click on the Citizen and then right-click on a tree.

Planting Farms

Beginning in the Copper Age, you can farm for food. To plant a Farm, have your Citizens first build a Granary. Up to eight farm plots can be planted around a Granary and each plot must be farmed by one Citizen. Constructing buildings is explained below and more information on farms can be found in Chapter VI.

Construction

Your Citizens are skilled builders. They can construct all kinds of things for your civilisation – you just have to tell them what to build and where to build it. Resources are deducted from your civilisation's reserves once the foundation for a structure is placed. If you don't currently have enough resources for a certain building, you won't be able to build it – the Build button for it will appear "grayed out."

Buildings, Wonders, Towers, and AA Guns

To construct any type of building or tower, first select one or more Citizens to be the builders. Special Production buttons known as Build buttons, which represent the various structures available to your civilisation, will appear in the lower portion of the game screen. Click on the button corresponding to the building you want to construct.

When you move the mouse pointer on to the Main Map, a "ghost" building helps you to choose a construction site. You cannot construct buildings on top of existing things, on uneven terrain, or in an unexplored area (where the map is still black). If the ghost building is

tinted green then it is okay to put the building there. If it is red, you must choose a new site for the building. Left-click where you want to construct the building (or right-click or press Esc to cancel the order). A foundation appears when you click on the map, but actual construction does not begin until at least one of your Citizens reaches the construction site.

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Constructing Multiple Buildings

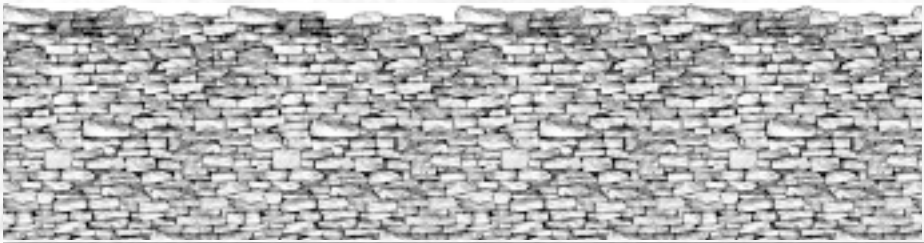
To construct several buildings of the same type in succession, hold down the Shift key while placing the buildings. Your selected Citizens will construct the buildings in the order you placed them.

If a Citizen is already constructing something, you can assign additional construction orders. First, select the Citizen and click the appropriate Build button. Then, hold down the Shift key and left-click on the map to place the new building's foundation. When the Citizen completes the first building (and any others in the build queue), he or she will start on the new building. If you want to construct the new building immediately, do not hold down the Shift key and simply left-click to place the building. The Citizen will stop work on the current building, construct the new building, and then return to finish the first building.

NOTE: Because enemies cannot see your foundations until your Citizens actually begin to construct the building, it is possible (though rare) that an enemy could place a foundation on top of your foundation. If the opponent's Citizens start construction before yours do, your foundation will be removed from the map and you will get your resources back.

Walls

Walls are constructed in a line from point to point. To construct walls, select a Citizen and then click on the Build button for a Wall. Then, click on the Main Map where you want the wall to start. This anchors one end of the wall. Next, move the mouse and a "ghost" wall shows you what the wall would look like if you placed it there. When you're satisfied with the placement of this section of wall, click on the map again to anchor the other end of the wall. If you want, you can place additional sections of wall, connected to the first wall, in a similar fashion. Right-click (or press Esc) to stop placing walls.



NOTE: Walls segments, like buildings, cannot be constructed on top of other objects (except other walls) or in an area you have not yet explored. Unlike buildings, walls can be constructed on sloping terrain (but not cliffs). Additionally, any portion of a wall that can be built will be built. Segments that appeared red under the ghost wall are skipped over and not constructed, but all the segments that appeared green are built by your Citizens.

Gates

Gates are a special type of wall that, when unlocked, will open for you and your allies, but not for your enemies. Gates can only be put into an existing section of wall, and the wall must be straight. To make a gate, simply click on a constructed wall and click the Gate button. Green parts of the wall indicate where you can place a gate (if no part of the wall is green, it means you can't make a gate in this wall). Move the mouse pointer over a green section of wall and a "ghost" gate appears. Then just move the ghost along the wall and click wherever you want to place the gate.

NOTE: You do not use Citizens to construct a gate, but you must have at least five (5) segments of straight wall in a row to put in a gate. Note that constructing a gate does not cost any additional resources.

Repairing Buildings

Any building, including a wall, that sustains damage can be repaired back to full strength. Note that repairs cost your civilisation resources based on how much damage needs to be repaired. To repair a damaged building, select a Citizen and then simply right-click on the building you want the Citizen to repair.

Populate

Your Town Centres and Capitals must have Citizens in them to keep them running smoothly. In order to upgrade a Settlement into a Town Centre (or a Town Centre into a Capital) you must populate the building with permanent workers. To accomplish this, select one or more Citizens and then click the Populate Action button. The mouse pointer turns into a hand icon (clicking the Cancel Action button restores the normal pointer and cancels the action). Then, click or right-click on the building that you wish to populate. Once the building is staffed with the appropriate number of Citizens, it upgrades automatically.

As a side benefit, each Citizen working inside a Settlement, Town Centre, or Capital increases the productivity of Citizens who drop off resources there. In other words, you get a gathering bonus when you drop off resources at a populated building. The bonus applies only to stone, gold, and iron, and the drop-off building must be close enough to the resource site to get the bonus. The size of the bonus is based on how many Citizens are working inside the building. You can also populate Granaries.

NOTE: Once your Citizens have populated a building, they keep their civil servant jobs forever and cannot leave. As a result, they no longer count against your population cap. You can see how many Citizens are in a Settlement, Town Centre, or Capital by selecting the building and looking in the Unit Information area.

Fishing with Fishing Boats

Fishing is another way to gather food, but it is not done by your Citizens. In order to fish you must first construct a Dock and then create fishing boats at the Dock. To fish, select a fishing boat and then right-click on a school of fish.

Military Unit Actions

In addition to Stop and Attack, your military units can perform several other kinds of actions. See Chapter VIII for additional information.

ACTION	ISSUED TO…	FUNCTION
Set Unit Behaviour	Military Units	Set the Behaviour or "rules of engagement" for the units.
Set Formation	Military Units	Tells a group of units how to line up at the end of a move order.
Patrol	Mobile Military Units.	Keeps watch around the nearest town.
Attack Ground	Artillery and other units	Attacks a location on the map rather than a specific target.
Unload	Transports	Tells transports (and Fortresses) to unload all units currently on board at a specified location.
Rally Point	Fighters	Assigns a rally point to a fighter.

Set Unit Behaviour

To assign a Behaviour to your selected military units, click the Set Behaviour Action button and then click on one of the specific Behaviour buttons. The behaviour you select stays assigned until you assign a different Behaviour.

Set Formation

To have a group of units line up in a chosen formation, select the units, then click the Formation Action button. Next, click on one of the specific Formation buttons that appears. Units do not line up immediately – the formation is a standing order that tells them how to form up at the end of every movement order.

Patrol

To order a unit to patrol around the town nearest to it, select the unit you want to put on patrol and then click the Patrol Action button. Your unit will move to your nearest town and begin patrolling around the buildings.

Attack Ground

Some types of military units can be ordered to attack a location rather than a particular unit or building. These units have an Attack Ground Action button. To have a unit attack the ground, select the unit and then click on the Attack Ground button. Then right-click on the Main Map where you want the unit to attack.

NOTE: Some long-range units have a short Line of Sight (LOS). In order to attack beyond their LOS, they require a "Spotter" – that is, another unit to scout ahead and spot a target for them.

Unload

Transports – whether ship, siege tower, or helicopter – are used to convey troops and civilians from one place to another. To transport units, you must first load the transport. Select the units you want to transport and then right-click on the transport (each transport has a maximum cargo capacity). Units aboard a transport are displayed in the Unit/Cargo Display area (when the transport is selected). To unload the transport, select the transport and click the Unload button. Then, left or right-click on the map where you want the units to exit the transport. The transport will move to that location and then unload all the units.

Fortresses are similar to transports except they do not move and units inside them do not count towards your population cap. You can garrison (load) a Fortress just like a transport and unload it by clicking its Unload button, but you must have enough room in your population to accommodate the units you are unloading.

NOTE: You can unload a transport only in a location that is passable by the units inside (e.g., a shore tile or shallows). To cancel an unload order and restore the normal mouse pointer, click the Cancel Action button or press the Esc key. Note also that units carrying a disease (e.g., the Plague calamity) won't enter a transport or Fortress to avoid infecting everyone else inside.

Rally Point

Each individual fighter plane you own can be assigned its own rally point so that the fighter always returns there after refueling at an airport. Setting a rally point for a fighter works just like setting a rally point for a building: select the fighter, click on the Rally Point button, and then click on the map to place the rally point. (Click the Cancel Action button or press Esc to cancel the placement of the rally goal.)

Special Unit Actions

Some units, such as Priests, Prophets, and Cybers, have special actions that they can perform. More information can be found in Chapter VIII: Warfare and Chapter X: Religion.

ACTION	ISSUED TO…	DESCRIPTION
Heal (Repair)	Medics (Apollo)	Heals a friendly unit. The Apollo Cyber can repair other Cybers.
Convert	Priests	Converts an enemy unit (except ships) to your side.
Cast Calamity	Prophet	Causes a Calamity at a specified location or target. There are several Calamities to choose from.
Battle Cry	Strategist Heroes	The Hero emits a Battle Cry, which demoralises enemies.
Cyber Weapons (Various)	Ultra-Cybers	Have a Cyber perform a special attack or action. There are several to choose from, and different Cybers have different weapons.

Heal

Medics (and Strategist Heroes) automatically heal any nearby friendly unit that is injured. To order a Medic to heal a specific unit, select the Medic and click the Heal action button. Then, right-click on the friendly unit you want to heal. Alternatively, simply select the Medic and then right-click on the unit to heal. The Apollo Cyber works in the same way, but only repairs other Cybers.

Convert

Conversion is a Priest's default attack. To have a Priest attempt a conversion, select the Priest and then right-click on the unit you wish to convert. Alternatively, you can click the Convert Action button, then right-click on the unit you want to try to convert.

NOTE: Some Conversions take longer than others.

Cast Calamity

Prophets can cast Calamities, such as earthquakes and plagues, when they have accumulated enough Faith (power) to do so. To have a Prophet invoke a calamity, select the Prophet and click on the square Calamity button of your choice (e.g., earthquake). Then, left or right-click on the Main Map where you want the Calamity to occur (for some Calamities, such as Plague, this must be a specific unit). If you cannot cause a Calamity in a particular area – near a Temple, for example – the mouse pointer will indicate this. Click the Cancel Action button or press the Esc key to cancel the Calamity invocation.

REFERENCE See Chapter X: Religion for more information about Priests, Prophets, and calamities.

Battle Cry

Strategist Heroes can demoralise enemies with a powerful yell called a Battle Cry. Click the Battle Cry button and select an enemy to be the target for the Hero's Battle Cry (click the Cancel Action button or press Esc to cancel). All enemy units around the target become more susceptible to taking damage.

Cyber Weapons

The Ultra-Cybers in Empire Earth have special weapons and abilities. To have an Ultra-Cyber perform one of its special attacks or actions, select the Cyber and then click on the appropriate button (make sure the Cyber has enough power stored up). For example, to have the Poseidon Cyber attempt to take over an enemy Cyber, select the Poseidon, click the Assimilate button, and then click or right-click on an enemy Cyber. Click the Cancel Action button or press Esc to cancel the action and restore the normal mouse pointer.

Grouping Units Together

You can group your units together in order to issue a command to all the units in the group simultaneously. To group units together, select the units you want in the group using any appropriate selection method (e.g., a dragging a lasso around them). This kind of grouping is only temporary – once you select something else, the units are no longer grouped together.

ADVANCED

Control Groups

Control Groups are ideal for organizing your forces into more-permanent squads or divisions. You can have up to 10 Control Groups set at any one time. There are two interchangeable ways to create and use a Control Group: with the Control Group buttons or with the keyboard.

At the bottom-right of the game screen are ten Control Groups buttons. To create a Control Group using these buttons, select a group of units on the Main Map and then click on an “empty” Control Group button. The unit most represented in the group becomes the Control Group button’s portrait. You can then select the Control Group by clicking on its button, or double-click to select and centre the view on the group. To add more units to an existing Control Group, select the units on the Main Map and then hold down the Shift key while clicking on the appropriate Control Group button. To disband a Control Group, right-click on its button.

To turn a selected group of units into a Control Group via the keyboard, hold down the Ctrl key and press a number key. This assigns the group to one of the ten Control Group slots. For example, to assign a group to Control Group 3, select the group and then press the Ctrl and 3 keys (for group ten, use 0). From then on, just press the 3 key to select that group or quickly press 3 twice to select and center the Main Map on them. To add units to the Control Group, press 3 on the keyboard and then, while holding in the Shift key, select additional units. Now press the Ctrl and 3 keys again.

NOTE: You can give an order to an individual unit even if it is part of a Control Group.

Using Buildings

Selecting Buildings

You select buildings in exactly the same way as units, including double-clicking to select multiple buildings. The only difference is that you cannot lasso multiple buildings at once.

Training/Creating Units

Adding to you civilisation's population is a simple matter. To train a soldier or civilian or to create a weapon, click on the appropriate building and then click on the Training/Creation button that corresponds to the unit you want to produce. For example, to create a Citizen, click the Citizen button at a Town Centre or Capital. Resources are deducted from your reserves as soon as you click the Training/Creation button.

To produce several units one after the other, continue to click on the Training/Creation button. This is known as “queuing up” units. A number in the upper left-hand corner of the Training/Creation button tells you how many of that unit are currently in the building’s production queue. You may add different types of units to the queue by clicking on any other Training/Creation buttons you wish. The units will be produced in the order you queued them.

> TIP: Hold down the Shift key and click on a Training/Creation button to instantly queue five of that unit.

To remove units of any type from the queue, right-click on the appropriate Training/Creation button and the number will decrease accordingly. The status of the unit currently being produced is shown as a status bar on the building’s portrait in the Unit Information and Improvement area. You can click or right-click on the status bar to cancel the unit currently being produced.

Rally Points

As a building produces units, you can have those units assemble at a rally point. To set a rally point, select the building for which you want to set a rally point and then click the Place Rally Point button. Then, right-click on the map where you want to place the rally point. Alternately, you can select the building and simply right-click on the map to set that building’s rally point. You may also right-click on the Mini-map. For a Town Centre or Capital, the rally point can be used to set a goal for newly produced Citizens. For example, if you set the rally point on a resource site, new Citizens will automatically go there to gather that resource.

> NOTE: Airports have several special kinds of Rally Point buttons, which are explained in Chapter VIII in the section about aircraft.

Researching Technologies

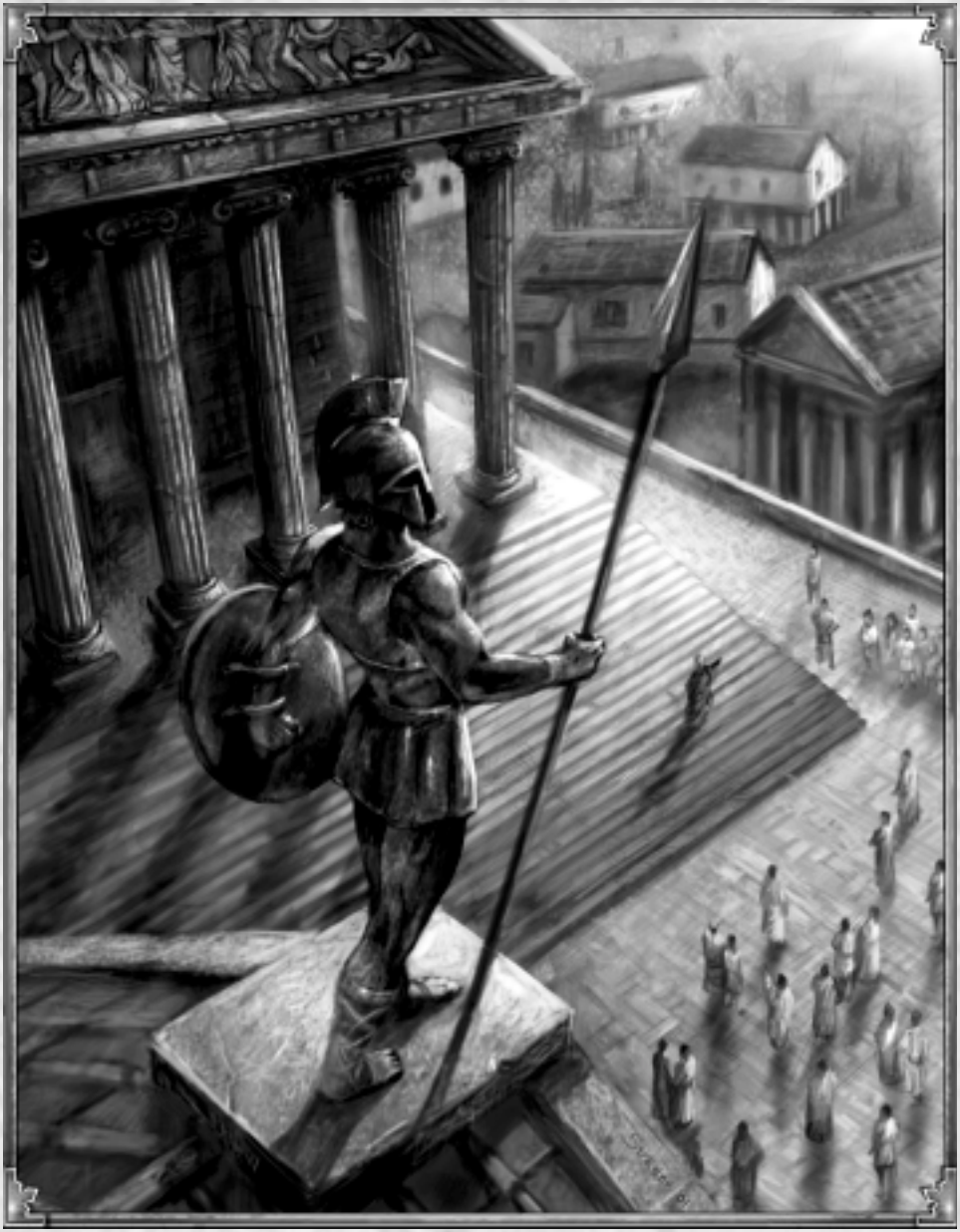
Technologies provide benefits to those civilisations that choose to research them. To research a technology, select the appropriate building and then click on the Research button for the technology you want to research. For example, in the Copper Age you can click on the Oil Lamp Research button at the University to increase the line of sight of all your buildings. You can also "queue up" research in a building's production queue, just as if you were producing a unit (or right-click to remove something from the queue).

The status of the current research is shown as a status bar on the building's portrait in the Unit Information and Improvement area. To cancel research that is currently taking place, click or right-click on the status bar.

Advancing Epochs

A special kind of Research button is used to advance your civilisation to the next historical Epoch. To advance to the next Epoch, first fulfill the prerequisites: build two buildings – excepting Houses and Granaries – and accumulate the necessary resources. Then click on a Town Centre or Capital and click the Epoch button (the roman numeral indicates the Epoch you will advance to). You can cancel an Epoch advancement in progress by clicking or right-clicking on the status bar, just like researching a Technology. When you queue up an Epoch advancement, however, it takes precedent over everything else in the building's production queue and begins to be researched as soon as the current research or training is complete.

TIP: Hover your mouse pointer over the Epoch button to see how many resources you need to accumulate.



Bronze Age (2,000 BC – 0 AD)

The production of bronze commenced when separate ores containing copper and tin were first smelted together. This innovation may have been accidental, but the value of the stronger metal was not lost on ancient armorers. In time, the best proportion of tin to copper was found (about 1 part in 10). This discovery was an early triumph in metallurgy.

The Bronze Age marked the appearance of both the sword – the first weapon not to have a secondary use as a tool – and the phalanx. The phalanx was a block formation of armored infantrymen who each carried a long, bronze-tipped spear called a sarissa. Both Philip II of Macedon and his son and successor, Alexander the Great, used the phalanx to devastating effect in their campaigns.

In an effort to protect their cities, fortification methods were improved during the Bronze Age. Siege equipment therefore evolved as well. The Assyrians pioneered the use of covered rams and the Greeks made use of stone throwers and siege towers. During an attack on Rhodes, the Macedonians made a siege tower so large that more than 3,000 men were required to move it up to the city walls.

Medicine, as well, made considerable progress in the Bronze Age. The Code of Hammurabi, which encapsulated the legal system of ancient Babylon, included laws that dealt with the practice of medicine. Egyptian papyri describing folk remedies and surgical techniques also date from this period. Later, in Greece, the role of the supernatural in medicine was down-played until, by the time of Hippocrates in the 5th Century BC, disease was being regarded as a bodily affliction with natural causes. Around 300 BC, the Greeks established a medical school in Alexandria, which continued to be a center of learning throughout the Roman era.

Formal education of the young can trace its roots back to ancient Egypt and Mesopotamia, but it was the Greeks who standardized and expanded its role. Whereas earlier schools were devoted to training scribes or teaching religion, schools in Greece taught physical education, literacy, good conduct, and other subjects. Higher education also developed in Greece, open to all who had both spare time and money. The most famous example of the day was the Academy, founded by Plato circa 387 BC.

Chapter V
Quick Walkthrough

If you've started Empire Earth and asked yourself "what should I do first," we recommend trying the Learning Scenarios. (The Learning Scenarios are accessible from the Single Player menu; see Chapter III for more information.) If you have a little experience with RTS games and want to try jumping into a Random Map game, this chapter will walk you through some of the basics of Empire Earth. It also offers some tips and suggestions for building up your civilisation.

From the Single Player menu, click the Play Random Map button. Start a Standard single player game in the Prehistoric Age. The number of players in the game should be set to 2 (you and a computer opponent). Set the Map Size to Small and make sure to set the Resources to Standard-High so you have plenty to start with. Also, it's very important to set the Difficulty to Easy, or you may find the computer opponent in your town before you know it! Give yourself 10 starting Citizens (or as many as 20, if you want) to provide you with an instant economic advantage over the computer player, who will start with just 5 Citizens. All the other game options can be left at their default values. Click the Start button to begin the game. Remember that you can restart the same game from the In-game Options menu (click the Game Options button or press F10).

Keep in mind that Empire Earth is a game of many possibilities. The descriptions in this chapter do not and cannot describe everything that you can do. Consider the following to be merely an introductory guide for those who would like a little instruction about the basics. If you are new to RTS games we again suggest that you play through the Learning Scenarios. But, however you chose to learn Empire Earth, it won't be long before you are building cities, commanding armies, and growing your glorious empire.

REFERENCE: Explanations of all the game options are available in Chapter III. Chapter IV explains all the controls and the user interface of Empire Earth. You may find it useful to refer back to Chapter IV during this walkthrough.

Choosing a Civ

When a game of Empire Earth begins, you have 5 minutes to choose which civilisation you want to control. The blinking crown buttons (Civilisation Selections) are there to remind you to select a civ. In a normal game, you'll have enough time to look around a little before you commit to a particular civ, but for this walkthrough click either blinking button now. In the list that appears, choose Babylon. The bonuses for the civilisation appear in the left-hand list. Click OK to confirm your civ selection and return to the game.

NOTE: In Single Player games, the game pauses while you pick a civilisation.

Exploration

You start the game with your Citizens and a Capital. Blackness surrounds your small tribe. It is important at the beginning of a game to explore your surroundings. The world – or map – is revealed as members of your civilisation walk through it. You can use your Citizens to do a little scouting for you.

INSTRUCTION
To move a Citizen, click (i.e., left-click) on the Citizen and then right-click on the map where you want the Citizen to go. You move all other types of units in the same way. To select more than one Citizen, click on the map and, while holding down the mouse button, drag a "lasso" around the Citizens (or any units) that you want to select. Alternatively, you can hold down the Shift key on the keyboard while clicking on additional Citizens.

Only a small portion of the entire map is displayed on the screen at once. Move the mouse pointer to any edge of the screen to scroll the map. If your mouse has a wheel, you can press and hold it in while moving the mouse to scroll the map. Additionally, you can use the mouse wheel to zoom in and out of the map (or use the left and right bracket keys [and]).

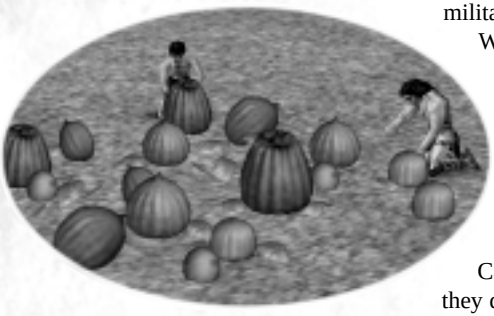
TIP: Use the Explore action button to automate your exploration of the map. Select a Citizen and then click the Explore button. The Citizen will automatically explore areas you have not been to yet. For scouting purposes, you can also create a Canine Scout at your Capital by clicking the scout's Training button, and then assign the scout the task of exploring.

Fog of War

You'll notice that areas of the world that you have explored remain visible on the screen, even when you have no units there. These explored areas are shrouded by the "fog of war," which prevents you from seeing changes that take place in the world when no one is there to observe them. For example, an opponent may cut down trees or construct a building somewhere you have already been. You will see these changes only if one of your units revisits that area.

Resources

Early in the game you are exploring primarily to find natural resources. You will need to gather several resources as you build your civilisation, but the one you should collect first is food. Food is needed mainly to produce new Citizens and military units, but it has other important uses too. When exploring, look for wild vegetation and animals, which are sources of food.



Once you find a source of food, order one or more of your Citizens to gather it. Citizens will forage or hunt an animal (depending on the food source) and then carry as much food as they can back to the Capital (or the nearest drop-off building). After they deposit their load, they will automatically go back to the source to get more food.

INSTRUCTION
To have a Citizen gather food (or any resource), click on the Citizen and then right-click on the resource. To pick vegetables, for example, select one or more Citizens and then right-click on a forage patch. Note that only 6 Citizens at a time can forage from a single forage site (or a mine).

TIP: Be careful when hunting animals. Some will defend themselves, so it is best to have several Citizens hunt an animal together. In later Epochs, you can build fishing boats to catch fish, and farms to harvest crops.

Wood is also important as it is used by your Citizens to construct buildings. As you explore, look for trees, which provide wood. When you find a tree – or an entire forest – send in Citizens to gather the wood. As with food, Citizens will chop as much wood as they can carry and then deposit it at a drop-off site. Once a tree is all chopped up, Citizens automatically move on to a new tree if one is nearby.

Creating Citizens

The more Citizens you have working, the faster you can stockpile resources or accomplish other tasks like constructing buildings. You can create Citizens at a Capital or at a Town Centre. Early in the game it is a good idea to keep producing new Citizens as often as your food supplies permit, because your civilisation will need many. For now, create an additional four Citizens for your civilisation.

INSTRUCTION
To create a Citizen, click on your Capital and then click the Citizen button. Producing a Citizen (or any unit) takes a little time. You can watch the progress of the production in the unit display area of the Capital.

To create the remaining three Citizens, click on the Citizen button three more times. This is called "queuing" units. The number on the button indicates how many of that unit are in the queue (excluding the one currently being produced). Once your new Citizens appear at your Capital, put them to work!

TIP: You can remove units from the production queue by right-clicking on the unit's training button. To cancel the unit currently being trained, right-click on the progress bar.

Constructing Buildings

Construction is important for the growth of your civilisation and the job of constructing buildings falls on your Citizens. When you order your Citizens to build something, you must first choose a site for it. When you pick a site, a foundation is placed on the map and the resources necessary for the building are deducted from your reserves. However, construction of the building does not begin until at least one Citizen reaches the construction site.

Settlements

A Settlement is a drop-off point for every kind of resource. By building a Settlement near a resource site you can increase the rate at which that resource is gathered by your Citizens because they do not have to walk as far to deposit their loads. Constructing a Settlement is also the first step in constructing Town Centres and, eventually, Capitals. Choose a resource site, such as a forest, that is not too close to your Capital and then construct a Settlement next to it.

INSTRUCTION
To construct a Settlement (or any building), click on a Citizen and then click on the appropriate Build button – in this case, the Settlement button. Then, click on the map where you want the building to be constructed. A "ghost" of the building helps you choose where to build it. Green means it is okay to construct the building there. Uneven ground or obstructing objects like trees make some sites unsuitable for construction. If the ghost building is tinted red, it means you cannot build there; you must choose a different location for the building.

REFERENCE: For more information about Settlements, Town Centres, and Capitals and how they work, see Chapter VII: City-States.

TIP: Once your Citizens are finished constructing the Settlement, you'll notice that they start gathering from the nearest resource site (they'll gather wood if you built your Settlement next to a forest). If the Settlement isn't close enough to the resource site, they might not know what you want them to do, so they will wait for you to tell them. Select the idle Citizens and right-click on the nearest resource. You want to maintain a steady flow of raw materials for your civilisation, so it is a good idea to put idle Citizens back to work as quickly as possible. To help you find idle Citizens, you can click the Idle Citizens button below the Mini-map.

Training an Army

Always keep in mind that there are rivals waiting for the opportunity to conquer your civilisation – in this walkthrough, the computer player is your rival. Empire Earth has many options available to help you protect your civilisation. Training military units, for example, will help you defend against a possible enemy attack, as well as prepare for a future offensive of your own.

The only military building available in the Prehistoric Age is the Barracks. At the Barracks you can train Clubmen and Rock Throwers. In later Epochs you can train other infantry units. Construct a Barracks near your Capital and then train five Clubmen.

INSTRUCTION
First, have your Citizens construct a Barracks by selecting some Citizens and clicking the Build Barracks button. Then, place the Barracks on the map. Once the Barracks is finished, you can train Clubmen (don't forget to put your Citizens back to work!). To train five Clubman, click on the Barracks and then click on the Train Clubman button five times (you can also hold down the Shift key and click the Train Clubman button once). The resources required to train each Clubman are automatically deducted from your reserves. In a few moments, the Clubmen begin to appear next to the Barracks, one at a time.

TIP: You can set a rally point for each building that produces units. Simply select the building and then click the Place Rally Point button. Then, left or right-click on the map where you want each unit to move to once it is produced (or click the Cancel Action button if you decide not to place the flag.). A flag marks the rally point. Alternately, you can simply right-click on the map to place the rally point whenever you have a production building selected.

Improving Units

Clubmen, like all military units, can be improved to make them more effective in combat. You can increase their offensive and defensive capabilities – such as Attack Strength and Hit Points – on an attribute-by-attribute basis. When you improve one Clubman, all Clubmen get the improvement (even ones you haven't trained yet). Improve the Attack strength of your Clubmen.

INSTRUCTION
To improve all of your Clubmen, click on any of the Clubmen you have already trained. In the Unit Improvement Area of the user interface, click on the Attack button to increase the Attack strength by 1. Once the improvement is complete, the number after the plus-sign ("+") goes up to show how much that attribute improved. Improvements cost resources, which are deducted from your reserves each time you improve any attribute.

NOTE: Military units have many different attributes that you can improve. Which attributes a unit has depends on what type of unit it is. For example, you cannot increase the weapon Range of a Clubman, but you can increase the Range of Stone Throwers. All attributes have a maximum possible value. When this maximum value is reached, you cannot improve the attribute any further. Additionally, each type of unit can have only so many total improvements. When that total is reached, no more improvements can be made.

Morale

Another way to make your forces stronger is to increase their morale. Units with morale are tougher and therefore more difficult to kill in combat. Capitals and Town Centres provide morale to your troops and Citizens once houses are built around them. Each completed house adds 1 to the overall morale, which is depicted as dots in a ring around each affected unit. (In later Epochs, you can create Warrior Heroes who provide morale to troops they lead into battle.) Build two houses within the morale area of effect of your Capital.

INSTRUCTION
First, select your Capital and notice that the land around it is "highlighted." This indicates its area of effect. Now select one or more Citizens and click the Build button for the House. Pick a location for the first House that is within the highlighted area you saw. Repeat the process for the second House when the first House is finished. Once the second House is done, note that Units within the area of effect of your Capital have a morale of 2, as indicated by the dots.

TIP: You can build several of the same type of buildings one after the other. Go back to the instruction above and, this time, try holding in the Shift key on the keyboard when you place the first House. Then, still holding in the Shift key, place the second House. This way, the Citizens will construct the first House and then immediately construct the second House. If you had wanted, you could have continued to place Houses while holding down the Shift key – assuming you had enough resources for them all!

Taking the Offensive

Having already trained a band of Clubmen, you have the option of using them to attack your enemies. Of course, before you can launch an offensive, you must locate your opponent's civilisation. Earlier, you sent your Citizens to explore the region immediately around your Capital. Now it is time to scout out the map further and find enemy towns. Select your Capital and train a Canine Scout. When the scout is ready, send it to the opposite side of the map to look for your computer-controlled enemy.

TIP: The Mini-map, in the lower right of the screen, gives you a top-down view of the entire map, including any visible units, trees, resources, water, etc. Only areas that you have explored are visible. Areas you have not explored appear black, just like on the Main Map. You can use the Mini-map to send units a long distance. Select your Scout and then right-click on the Mini-map to send the Scout there. Select a place you have not yet explored in order to scout out more of the map.

When you find your rival's town, send in your Clubmen. Attack enemy Citizens to slow your opponent's economic growth. Destroy houses to diminish the defenders' morale. Do whatever damage you can do, but be alert; a raiding party may already be on its way to your undefended village!

INSTRUCTION
To attack an enemy Citizen or House, select one or more Clubmen and then right-click on the Citizen or House. Your Clubmen will march to the target and attack. If they manage to destroy the target, they will automatically look for a new target in their immediate area. You can intervene at any time by selecting them and giving them new orders.

Advancing to the Next Epoch

While it is possible to defeat your opponents in the Prehistoric Age (or any other Epoch), you may find it beneficial to move your civilisation into the next Epoch of history, the Stone Age. The Stone Age is a more-advanced time period that will offer your growing civilisation new opportunities for development. Once you have collected the requisite resources and constructed at least two buildings (excepting Houses, walls, Towers, and Granaries), you will be ready to research the advancement.

INSTRUCTION
To advance to the Stone Age, click on the Capital (or a Town Centre) and then click on the Epoch Stone button. Researching the advance will take a short while to complete. You can see its progress in the Capital's (or Town Centre's) Unit Information area in the user interface.

When the research process is done, your Citizens and some types of buildings change to their Stone Age appearance. New buildings, technologies, and units are available to your civilisation in the Stone Age. It’s up to you to decide how best to make use of them.

Researching Technologies

One way to further enhance your burgeoning civilisation is to research technology. Technologies in Empire Earth refer to all the individual technological, social, and scientific advances that you can research. Each Epoch of history has its own set of technologies associated with it. You research technologies at certain buildings, such as a Capital, Temple, or University.

For example, you can research Hafted Tools during the Stone Age at either a Capital or a Town Centre. Early humans found that by attaching a tool to the end of a handle they could make each blow with the tool more effective. This technology had many applications, including making it easier to break and collect stone. Researching Hafted Tools in Empire Earth makes Stone gathering more efficient. Doing research takes time and costs resources, but the potential benefits are worth the price.

INSTRUCTION
To research the Hafted Tools technology, click on the Capital and then click on the Research button for Hafted Tools. When the research is complete, your Citizens will gather Stone with improved efficiency.

TIP: Since you probably won’t be able to research all the technologies avail able in Empire Earth in a single game, choose to research those technologies that best fit your strategy. The Technology Tree Foldout is a great quick-reference tool. Keep it handy when you are playing.

Unit Upgrades

New time periods also bring new types of units. As you progress through the Epochs, older types of military units become less effective when compared to contemporary units. One option available to you is unit upgrading. Upgrading allows you to modernize your older units to keep your forces up to date. For example, in the Copper Age you can upgrade all your Clubmen into more-powerful Mace Men. There are many upgrade paths in Empire Earth, with new lines forming and old ones ending as your civilisation progresses through time.

INSTRUCTION
Advance to the Copper Age – you will need to build two more buildings and accumulate the necessary resources. Then go to the Barracks and you will see an Upgrade button above the Train Clubman button. Click that Upgrade button and all your Clubmen upgrade into Mace Men. The Train Clubman button is replaced by the Train Mace Man button so that you can train new Mace Men.

NOTE: Unit upgrades keep any improvements you made for the previous units. You'll notice that your Mace Men have retained the improved Attack strength you gave to your old Clubmen.

Winning a Game

There are many possible strategies and paths to victory in Empire Earth and they can't all be covered here. You might build up a massive army and conquer your enemies, construct Wonders of the World, unleash devastating Calamities on enemy cities, or convert an opponent's populace with Priests. You decide how to play and how to win.

REFERENCE: See Chapter III for more information on winning and losing the game. To exit a finished game, click on Quit this Game in the Game Options menu. You can then view the game statistics.

Dark Age (0 – 900 AD)

Not long after iron superseded bronze, early civilisation reached its peak with the incomparable Roman Empire. When the Empire finally collapsed, it brought about what has been called the Dark Ages. There are numerous reasons for the decline and fall of Rome, chief among them military defeats at the hands of the so-called barbarian tribes. In 378 AD Gothic horsemen trounced the Romans at the Battle of Adrianople, foreshadowing the dominance of cavalry that was to come. The city of Rome itself was sacked in 410 AD by the Visigoths.

After Rome's collapse, pockets of civilisation continued to exist, most notably in the Byzantine or "Eastern Roman" Empire. Its capital at Constantinople was established in 330 AD by Roman Emperor Constantine, who also legitimized Christianity in the Roman world. The Eastern Roman Empire continued on for some 1,000 years after the fall of its Western counterpart, becoming a power in its own right. Byzantine warships were formidable vessels that made use of the latest rigging and armament technologies, such as the lateen sail and ballistae capable of hurling missiles hundreds of yards. On land, the core of the Byzantine army after the 8th Century was the cataphract, a heavily armed and armored cavalryman.

Emperors in Constantinople wanted – and even tried – to regain full control of the splintered Western Empire. But widening religious differences led the Roman Catholic church to resist reunification. In 800 AD, after Charlemagne, the Frankish King, had taken over Western Europe, Pope Leo III crowned him the new Roman Emperor mainly to protect Rome from the Byzantines. The Eastern Orthodox and Roman Catholic churches remain separate to this day.

Chapter VI
Expanding Your Society

Transforming a small tribe into an empire is no easy feat. It takes strong leadership, organization, and plenty of hard work. Essential resources must be garnered from the land. Towns must be built and maintained. And the needs of society must always be kept in mind. A production shortage or error in civil planning, if not remedied, may slow a civilisation's progress and make it ripe for conquest by a more attentive rival.

Citizens

A civilisation and its people are one and the same. Indeed, the name of the civilisation is traditionally shared with its inhabitants. The Roman Empire was populated by Romans, even if they weren't from Rome itself. Not all in the empire, however, were Citizens.

The concept of Citizenship first developed in the city-states of ancient Greece. Citizens in ancient times were a subset of the population that generally excluded women, children, slaves, foreign nationals, and other groups. Today Citizenship is much more inclusive, traditionally granted as a birthright.

In Empire Earth, Citizens – both men and women – are the core of your civilisation. They are your workers, performing all the tasks necessary to transform your humble village into a mighty empire. Though they are civilians, Citizens can even engage in battle if necessary.

You begin Random Map games of Empire Earth with several Citizens and a Capital. New Citizens can be produced at any Capital or Town Centre for a one-time cost in food, each. The cost is deducted from your food reserves automatically. New Citizens appear at the Capital or Town Centre ready to go to work.

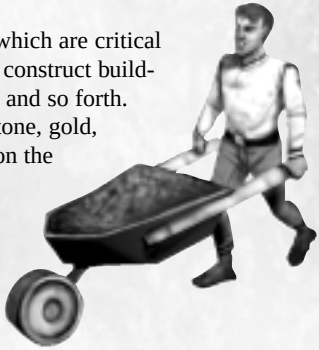
Your Civilian Workforce

Your Citizens are good workers, diligently finishing any job you give them. Once done, they will even look to continue their work at a nearby location. Citizens who have nothing to do quickly get bored, fidgeting until they are given a task to perform.

TIP: You can assign more than one Citizen to a single task (except farming a single Farm). For example, you can assign several Citizens to construct a building. Note that up to 6 Citizens at a time can gather from a single forage site or mining site.

Gathering Resources

The Earth is rich with raw materials. Historically, these natural resources have provided for all of humanity's needs – from basic sustenance to building materials to energy. Indeed, it's the exploitation of these resources that has permitted the continued progression of human civilisation.



The primary task of your Citizens is to gather natural resources, which are critical to the growth of your civilisation. You expend these resources to construct buildings, research technologies, produce Citizens and military forces, and so forth. There are five different resources in Empire Earth: food, wood, stone, gold, and iron. As in history, the relative importance of each depends on the immediate needs of your civilisation.

Citizens gather as much of a resource as they can carry and then bring it to the nearest drop-off point (Settlement, Town Centre, or Capital). Then, they automatically return to the resource site to collect more. Citizens stop gathering only if they are ordered to, if they are attacked, or if the resource runs out and no other sites are nearby.

NOTE: Regardless of where a resource is dropped-off, it goes into your civilisation's resource reserves and can be used anywhere it is needed. To see how much of a particular resource your civilisation currently has on hand, check the Resource Inventories Bar near the bottom of the screen.

TIP: The more Citizens who work inside (Populate) a specific Settlement, Town Centre, or Capital, the greater the economic bonus you receive for dropping off stone, gold, or iron at that building. You can also populate a Granary to boost Farm production. See Chapter VII for more details.

Gathering Food

Food is the most basic of human resources as it is essential for our survival. Long ago, food was synonymous with power. Those who controlled the sources of food thrived while those who didn't tended to die out. Today, food is just one of several resources crucial to every modern nation.

In Empire Earth, food is vital to your civilisation's continued development. Consequently, there are several ways to gather food. Your Citizens can forage, hunt, and farm. You can also build fishing boats to harvest fish from the seas.

Foraging and Hunting

Early nomadic tribes were both hunters and gatherers. Employing both methods of acquisition broadened the range of potential food sources. Foraging for what nature provided was a holdover from more-primitive ancestors. The diet of early humans consisted largely of wild berries, grains, fruits, roots, and other vegetation.

Hunting probably had a similar origin. Evidence suggests our ancestors started out as scavengers, taking advantage of kills left by more successful predators. In time, the advent of stone tools and weapons – not to mention intelligence – allowed humans to become formidable predators in their own right. But, despite such advances, some animals were still dangerous. To reduce the risks and increase the chance of success, individuals banded together into hunting parties.

Citizens in Empire Earth can both forage for edible vegetation and hunt wild animals. When hunting, your Citizens will attempt to kill an animal and then butcher it for meat. Some animals won't go down without a fight. Your Citizens will not gather rotten meat, so don't leave a carcass alone for too long.

NOTE: Military units can kill animals, but you lose most of the meat.

Farming

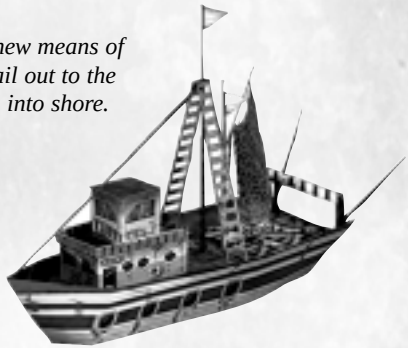
Farming spread slowly from its origins in the Middle-East and Greece some time in the 8th Millennium BC. It wasn't until the beginning of the Bronze Age that farms were common all across Europe. Technological and practical improvements in subsequent centuries made farming even more productive.

Beginning in the Copper Age, your Citizens can plant and work Farms to harvest food. Farms can only be planted around a Granary, so you must build a Granary first. Only one Citizen at a time can gather food from a single Farm. Periodically, the farmer carries the harvest to the Granary, where it is added to your reserve of food, and then returns to farming. A Farm will grow food forever unless it is deleted by you or destroyed by an opponent.

TIP: If a farmer is killed or moved elsewhere, you can assign a new Citizen to a Farm by selecting the Citizen and then right-clicking the Farm. If a farm is destroyed, press the Replant Farm button at the associated Granary to plant a new one.

Fishing

The development of seaworthy vessels opened up a whole new means of catching fish for early Man. Boats allowed fishermen to sail out to the schooling fish, rather than having to wait for them to come into shore. This increased the likelihood of making a catch.



In Empire Earth, fishing becomes an option for acquiring food in the Stone Age. In order to fish you must produce Fishing Boats at a Dock, so you have to build a Dock first. Your Fishing Boats automatically deposit their catches at the nearest Dock that belongs to your civilisation.

Logging

Wood has long been Mankind's favorite building material. It has been used to create boats, construct buildings, fashion tools, build fires, and for numerous other purposes. Trees have also been cut to clear land for agriculture. Deforestation reached such a level in some areas that replanting programs were instituted. In the 16th Century, the German states divided wooded areas into sections and carefully managed them. When a section was harvested, it was then painstakingly replanted to assure a steady supply of timber. These actions are among the earliest examples of modern forestry practices.

As in the real world, your Citizens gather wood by chopping down trees. When a tree is used up, Citizens automatically start on another tree (if one is nearby).

Mining Resources

At first confined to scavenging the surface for useful rocks and minerals, humans eventually discovered that deposits could stretch deep into the Earth. In time, people learned to dig minerals from the ground and even to extract minerals they wanted from rocks they didn't. Sometimes, however, it was the rocks themselves that were important.

Citizens can mine Stone, Gold, and Iron ore in Empire Earth. A maximum of 6 miners at a time can work at a single mining site and mines are virtually inexhaustible.

Stone

Humans have been using stone since the invention of the first stone tools well over a million years ago. Since then, its primary use has been in construction – many of the worlds great historic buildings have been made of stone. Walls and fortifications, too, made extensive use of stone. Hadrian's Wall defined the northernmost border of the Roman Empire, separating their civilisation from the so-called barbarians who lived beyond. After Hadrian's Wall was abandoned by the Romans, when they left Britain in the 5th Century AD, locals routinely plundered it for stone to use in their own construction projects.

Gold

Gold's beauty, malleability, and comparative scarcity have combined to make it one of the most desired substances in history. Early in human history, gold was used almost exclusively for ornamental and decorative purposes. But Greece, Rome, Byzantine, and other civilisations used gold (among other metals) for coinage. It has even served as a means of international barter and for backing national currencies in more modern eras.

Iron

Civilisations have valued a number of metals over the course of history, but none has enjoyed broader use than iron. Iron has been fashioned into tools, cast into weapons and armour, and used in machinery. Iron is mined from the ground as ore. The ore is then processed to separate out the iron from the unwanted material. One of iron's major uses today is in the production of steel, which is made by alloying iron with carbon (at a ratio of up to 2% carbon). Due to the abundance of iron, relatively low cost of production, and desirable mechanical properties, steel became by the 20th Century one of the most widely used materials in construction and manufacturing.

Construction and Repair

Every so often, visionary architects, talented artisans, and gangs of laborers have combined their skills to erect a structure of such magnificence that it stands out for all time as a monumental achievement, a testament to the ingenuity of Mankind. The Parthenon of Athens, the Pantheon of Rome, the Pyramids of Egypt – these amazing remnants from antiquity are well-known the world over and still delight visitors to this day.

Yet such buildings are but a smattering of those constructed over the course of human history. Most were far less remarkable or long-lasting. They were simple dwellings, nondescript places of worship, compounds where warriors were trained, halls where lessons were taught, and walls that kept invaders at bay. Such pedestrian structures may not seem as impressive, but they were vitally important to the people who constructed them.

To improve and enhance your civilisation, your Citizens can construct all manner of buildings, from houses and Settlements to Wonders of the World. They can also build towers, walls, gates, and, in later Epochs, AA guns. (For simplicity, the word "buildings" is used to represent all the things a Citizen can build.) Citizens can also repair damaged buildings.

TIP: Construction and repair each take time, but you can speed up the process by assigning more Citizens to the task.

Constructing Buildings

Your Citizens are at once architects, artisans, and laborers. They will see your construction projects through from start to finish once you tell them what sort of building to construct and where to construct it. When you pick a site, a foundation for the building is placed in the world (this initial foundation is not visible to your opponents). However, construction of the building does not begin until at least one Citizen reaches the construction site. The resources necessary for constructing the building are deducted from your reserves once the foundation is placed.

TIP: If you change your mind about a building and remove (delete) the foundation before construction starts, you get the resources for it back. If you remove the building during its construction, you get only a portion of the resources back.

REFERENCE: For a complete list of buildings and their functions, see Chapter XIII. Wonders are described in Chapter XII. Additional information on Walls, Towers, Gates, and AA Guns can be found in Chapter VII. Chapter IV contains more information on how to start construction.

Repairing Buildings

History has shown time and again how vulnerable buildings are to the ravages of war. Fortunately, your Citizens are skilled enough to repair any damage done to your buildings short of complete destruction. Repairing requires materials – resources are deducted from your reserves as you make repairs. Repairmen work until they have repaired all the damage or run out of the required resource.

TIP: In Empire Earth, Citizens cannot repair military hardware such as tanks and siege weapons. However, Hospitals and Medics can treat the crews who operate military weapons and they can simultaneously make repairs on their equipment.

Enhancing Your Citizens

Certain technologies have had a positive impact on the lives of average people, helping them with their daily chores and improving their overall quality of life. Investing in technologies that benefit your Citizens is one way to enhance your civilisation by making your Citizens stronger and more productive. For example, in the Copper Age you can research Herbal Medicines at the Hospital to increase your Citizens' overall health and attack strength.

Population

It is estimated that right before the widespread adoption of agriculture there were only between 5 and 10 million human beings on Earth. By 1 AD, several thousand years later, the population had surged to approximately 300 million worldwide. As more people crowded into cities, ignorance about sanitation, personal hygiene, and other basic health issues inflated the death rates. Wars and epidemics such as the plague also took their toll. As a result, the world population grew more slowly, not even reaching 800 million by the beginning of the Industrial Age seventeen centuries later.

After the Industrial Revolution, there was a slow and then more accelerated decrease in the mortality rate due to many factors, including improved healthcare, nutrition, and sanitation (though war, disease, and natural disasters somewhat mitigated these advances). The population exploded, reaching 2 billion by about 1930, over 6 billion by 2000, and almost 22 billion by 2100.

At the turn of the 22nd Century, industrialisation had reached much of the world. Population growth slowed on a global scale the way it had for the developed nations of the late 20th Century. In addition, the first colonies on the Moon and Mars were sending a trickle of people off-world. By 2200, the population of humans on Earth was nearly 52 billion.

In Empire Earth, your civilisation's population is the sum of all your individual people and military weapons. Since buildings produce all the people and weapons that contribute to your population, the growth rate of your population is dependent upon how many production buildings you have and how often they produce. In this sense, you have complete control over how quickly you population grows.

What Counts Towards Your Population?

Your pop count is the total number of individuals who currently call your civilisation home. Every unit you produce – Citizens, military personnel and weapons, Heroes, Priests, Prophets, fishing boats, etc. – contributes to your civilisation's pop count. (Most units add one to your population, but some add more –cavalry units, for example, add two.) Buildings, including towers, do not contribute to your pop count. Any enemy units you convert with your Priests (or enemy Cybers you take over) add to your population count.

Population Capacity

There are limits on how large your population can get, which is based on how many people the world is capable of supporting at one time. In Empire Earth the uppermost limit placed on your population is called the population capacity or "pop cap."

Scenarios each have their own pop cap. For Random map games, the pop cap for each player's civilisation is based on the overall population limit of the entire world (called the Game Unit Limit) and the total number of players in the game, both of which are set before a game begins. The Game Unit Limit is divided equally among the players, so the pop cap for each individual player is the same. For example, if the Game Unit Limit is set to 800 and there are four players, then each player gets a maximum of 200 units – this is the pop cap for each player.

NOTE: You current pop count and your pop cap are shown at the far right of the resource bar near the bottom of your screen – for example, 25/200 means you currently have a pop count of 25 out of a possible 200, which is your pop cap. While it is possible for your population count to slightly exceed your pop cap, you will not be able to produce any new units if your pop count is greater than or equal to your pop cap.

TIP: Certain Technologies available for research at the Hospital increase your pop cap. Also, building the Coliseum Wonder increases your pop cap while decreasing those of your enemies.

Technological Progress

The Roman Empire was the dominant civilisation of its time, but it could not hope to compete militarily or economically with any modern world power. But if we instead consider any two rival civilisations from the same era, the question arises: at what point do technological, social, or economic advances suddenly translate into an overall advantage of one civilisation over its rivals?

The answer surely depends on how such advances are utilised. Gunpowder finally changed the way wars were fought, but centuries of other improvements had to occur – for example in gun design and battlefield tactics – before that could happen. Once firearms had developed sufficiently, armies that possessed them held a distinct advantage over armies that didn't. So, while a particular advancement may not make a difference by itself, it is reasonable to assume that a civilisation with more advances will have an advantage over less-advanced rivals.

In Empire Earth, you can advance your civilisation in many ways. Two of the most direct and potentially valuable methods are researching new technology and progressing to a new Epoch.

REFERENCE: Consult the Technology Tree Foldout for information on the various technologies and research tracks. Chapter IV provides information on how to perform research and advance to the next Epoch.

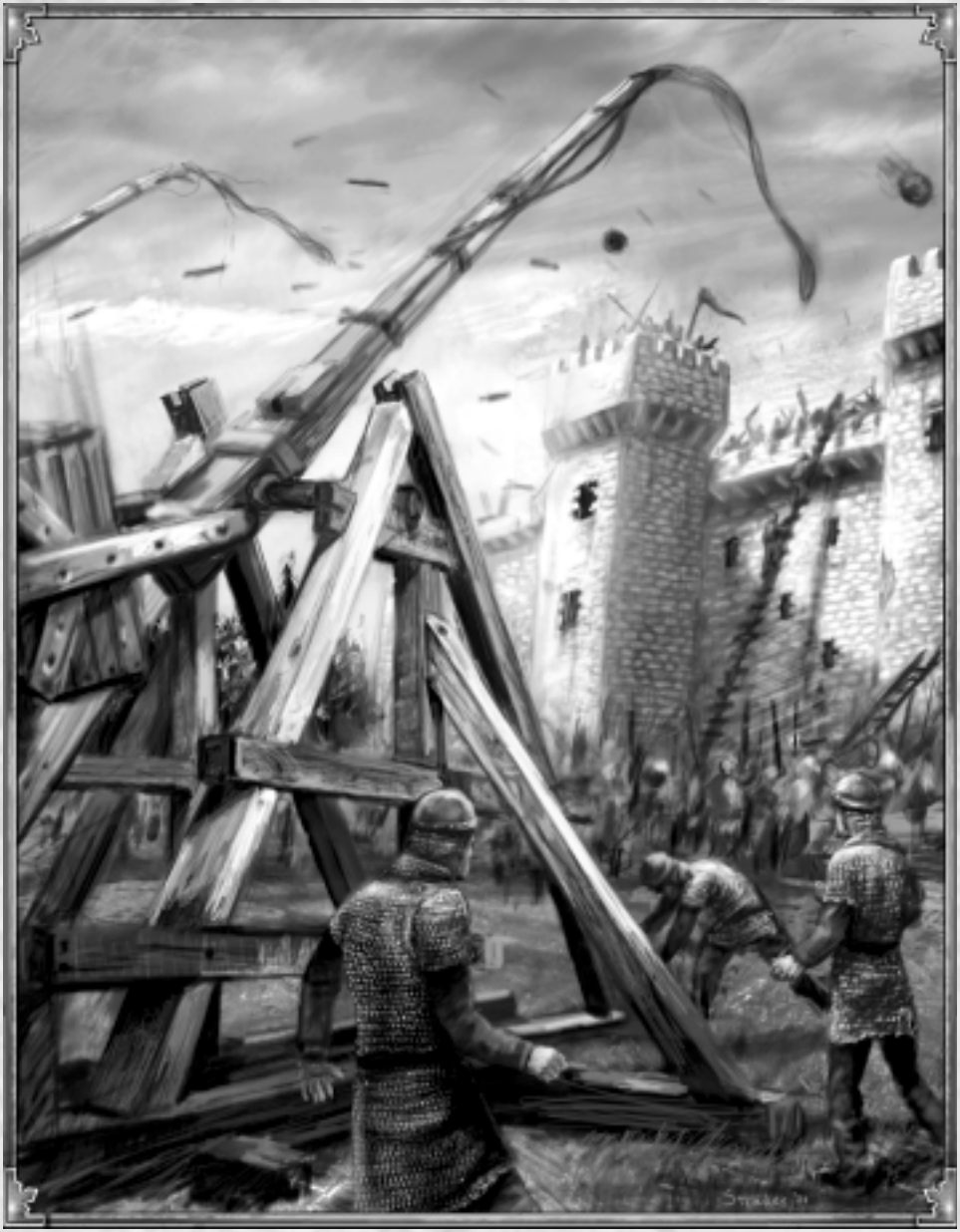
Technologies

Simply put, new technology benefits your civilisation by allowing it to do something that it couldn't do – or couldn't do as well – before. The Greeks built some magnificent structures, but the Romans took the art of construction to a new level by improving upon and then exploiting earlier inventions such as concrete, bricks and mortar, and the arch. Later, in the 18th and 19th Centuries, the invention and use of both steam power and standardised parts greatly increased the economic output of nations undergoing industrialisation. Technological research is, thus, one way to try to gain an edge over rival civilisation.

Advancing to a New Epoch

The options available to a civilisation are largely determined by its place in history. Many ideas cannot even be formed before certain preconditions have been met. Nuclear reactors and warheads, for instance, were inconceivable before atoms were identified. Sometimes, however, inventions are conceived "before their time." Leonardo da Vinci designed a helicopter on paper in the 15th Century, yet nearly 500 years elapsed before a helicopter actually flew. The theoretical possibility of using wormholes to travel through time was known in the 20th Century, long before a time machine could be built.

When your civilisation moves into a new historical Epoch, new technology, military units, and buildings become available. Advancing to a new Epoch requires preparation. A civilisation must invest both time and resources into a consolidation of its existing knowledge base. Once this process is complete, building styles and even your Citizens' manner of dress may change to reflect the new time period. Then, it is up to you to turn the new opportunities available to your civilisation into a distinct advantage.



Middle Ages (900 – 1300 AD)

The Middle Ages saw the steady reemergence of centralised authority and technological progress. The rising feudal system re-established a semblance of governmental authority in Europe, albeit at a localised level. A local lord ruled over his own property, often from a central castle outside of which was a village protected by walls. Serfs farmed the surrounding land. Mounted knights commonly made up the lord's armed retinue, riding out to defend the town when necessary.

For a time, castles were the ultimate defensive structures on Earth. But siege weaponry slowly advanced in response to them. The definitive siege engine prior to gunpowder was the trebuchet. Trebuchets used a counterweight to generate a force that could hurl a 300 pound projectile over 300 yards. Some of these machines were enormous, with counterweights in excess of 10 tons. Once properly aimed they could make short work of any target.

The longbow – the pre-eminent weapon of this time – was used extensively in siege warfare on both sides of the castle wall, especially in Britain. Longbow men were selected and trained from childhood, and the investment was worth while. Men skilled in its use could fell even heavily armored knights from a distance of up to 300 yards.

Castles were not the only large buildings being constructed at this time. Advances in architecture, such as the invention of the flying buttress, allowed huge cathedrals with vaulted ceilings and magnificent stained glass windows to be built. Christianity was spreading, as was the power of the Roman Catholic Church. Eight major Crusades were organised and launched from Europe in an effort to regain Muslim-controlled territory in the Holy Land. Though the Crusaders managed to retake a few Holy sites, including the city of Jerusalem, they were eventually driven out again. At home, meanwhile, the first papal Inquisitions were instituted to deal with suspected heretics.

Chapter VII
City Building

Civil planning is an important consideration for an expanding empire. With a little work, frontier settlements can be transformed into thriving, independent city-states. Such self-sustaining strongholds are capable of withstanding enemy attacks, natural disasters, and other onslaughts… if developed properly. They might even surpass the grandeur of the towns from which they arose.

City-States

A classic example of the city is the "city-state." A city-state is an independent and often self-supporting sovereign territory dominated by a principal city. Ancient Greece was home to many city-states, of which Athens and Sparta are certainly the two best remembered today.

Sparta, over time, all but abandoned the humanities and arts in favour of developing a militaristic culture. Eventually Sparta assembled the most powerful army in Ancient Greece. Athens, meanwhile, founded a democratic society with a flourishing artistic culture. The Athenians constructed fortifications to protect their lands and a strong Navy to defend their ports. The Peloponnesian Wars of the 5th Century BC pit Athens and Sparta – along with their respective allies – against one another. After many years of see-saw battles and a few intervening truces, Sparta finally defeated Athens in 404 BC. Yet today, Athens is generally better known than Sparta due to the relatively large number of surviving artistic artifacts, philosophical texts, and other records.

Vatican City in Rome is a city-state that still exists today. At just over 100 acres it is the world's smallest fully-independent state, physically separated from Italy by walls built in Medieval times. Since the 16th Century, a contingent of Swiss Guards has been on hand to defend it. The Vatican maintains its own post office, bank, and telephone system, though it relies on external sources for most other supplies and services.

Fortifications

Humans have built all kinds of fortifications through the ages: wooden palisades, earthworks, castle keeps, walls and battlements. After WWI, France constructed the Maginot Line along the German border from Switzerland all the way to Belgium. This massive fortification, named after the man who proposed it, was well equipped with troops and gun emplacements, making it impregnable to a frontal assault. So, when the Germans launched their invasion in 1940, they bypassed the Line by cutting through Belgium. The one fatal flaw in the Maginot Line turned out to be that it simply wasn't long enough.

At one time or another, it is likely that that you will have to defend your empire against attack. You can fortify your city-states and other strategic positions by building towers, walls, and gates. You can also garrison units in a Fortress to keep them in reserve for later battles. Choose carefully where and when to construct fortifications to ensure that your defenses meet your civilisation's needs.

Illustration of French soldiers attacking an English fortified camp, c. 1443 © Archive Photos

TIP: In some Epochs, you can research an upgrade for your Walls and Towers (including stationary AA Guns) to make them stronger and more powerful. These upgrades, when available, can be researched at a Town Centre or Capital. Also, constructing the Ishtar Gate Wonder will increase the strength of your Walls and Towers.

Guard Towers

Historically, towers have taken many forms, from lone, frontier outposts to heavily fortified keeps at the hearts of castles. Commissioned by William the Conqueror in 1066, the Tower of London was originally constructed to protect a port on the Thames River. Over the years, it was expanded many times and served numerous roles, including a royal residence, a place for executions, an arsenal, and a prison.

Towers in Empire Earth perform two important functions: they watch for enemies and attack those who come too close. Your Citizens construct Towers in the same way as buildings. Build them wherever you believe they are needed, but keep in mind that Towers built near a Town Centre or Capital are stronger than Towers built outside of your towns.

Guard Tower

Anti-Aircraft Gun

TIP: Your Citizens can also construct stationary Anti-Aircraft Guns in later Epochs to defend against air attacks. These gun emplacements are built just like towers.

Walls and Gates

Walls are among the oldest defensive structures. From the famous walls of Jericho, first constructed around 8,000 BC, to the infamous Berlin Wall of the late 20th Century, walls have been built to protect towns or restrict access to areas deemed important by the builders. Gates allowed defenders to let friends and allies through the walls while keeping enemies out.

Your Citizens can construct walls of virtually any length to keep would-be invaders at bay. Walls block projectiles fired into them (taking damage in the process), but many units can fire over walls. To allow you and your allies to pass through your walls, gates can be built into them (you don't need Citizens for this). When unlocked, gates open for friendly forces, but stay closed when enemies approach. Locked gates let no one through.

Fortresses

A strategically placed fortress with a garrisoned army can dominate the land surrounding it. Late in the 12th Century, King Richard the Lionheart had the castle Château Gaillard built into the rocks overlooking the Seine River in Normandy, France. When finished, it was the greatest castle of its day – its location ideally suited for controlling access to the river valley. The massive fortress fell to Phillip II of France in 1204, but only after a costly 8 month siege. Château Gaillard continued to be used for several centuries thereafter and much of the structure still stands today.

The Fortresses of Empire Earth are fortified buildings used to garrison land units. Fortresses do not attack or train units, but instead provide a shelter for the military units and/or Citizens that you garrison inside. Units garrisoned inside a Fortress do not count against your pop cap (they are, in effect, removed from the map). You can ungarrison (unload) a unit from a Fortress whenever you want, but you must have room for it in your civilisation (that is, you must be below your pop cap). If a garrisoned Fortress is destroyed, the units inside will attempt to escape just before it collapses. If there is no room in your civilisation for them, they perish in the burning structure.

NOTE: Fortresses have a maximum capacity and cannot hold more units than their capacity allows (remember that some military units, such as cavalry, are counted as more than one unit). When ungarrisoning many units from a Fortress when you are near your pop cap, they leave in a “last in first out” order.

The Benefits of Buildings

An organised city provides many advantages over a mere haphazard collection of buildings. In addition to providing a better defense against enemies, a well-planned city is better able to withstand disasters, repel rival religious threats, and boost the economy of the civilisation of which it is a part. This is due to the localized benefits that certain kinds of buildings provide.

Several types of buildings in Empire Earth have an “area of effect” around them – a sphere of influence in which the building is able to provide its special benefits. These benefits can be of great value to those within your towns and cities. The area of effect around a building appears as a moving line on the landscape (when the building is selected).

TIP: There are Technologies that increase the range of certain buildings – that is, they make the area of effect bigger. Other Technologies increase the rate at which certain buildings heal or repair units. Consult the Technology Tree Foldout for more information.

Morale

Morale is a strong motivating force that should not be underestimated. When morale is high, troops and civilians alike are more willing to carry on their duties even in the face of overwhelming odds or hardships.

Town Centres and Capitals

Many animals defend their territory tenaciously, and humans are no exception. A Town Centre rouses defenders around it to supernormal heights of endurance. As a result, people within a Town Centre's area of effect can fight longer than they would be able to otherwise. The passions stirred by a Town Centre can be magnified even further if it is transformed into a Capital. The level of morale that a Town Centre or Capital instills depends on the number of houses in the immediate area (see below).

Houses

People are strongly motivated to protect the communities where they live. Each house constructed fully within the area of effect of a Town Centre or Capital increases by one the morale provided by that building, up to a maximum level. (The maximum morale for a Capital is greater than that provided by a Town Centre.)

NOTE: Morale is not an additive effect. For example, if the areas of effect of two Town Centres overlap, units in the overlap area receive the higher of the two morale bonuses, not a sum of both. However, houses built within this overlapping area are “shared” by both Town Centres.

Economic Production

Settlements, Town Centres, and Capitals can have permanent civil workforces assigned to them (see Planning, below). A side benefit to populating these buildings with Citizens is the economic infrastructure these governmental-workers automatically provide. This infrastructure makes the Citizens dropping off resources (stone, gold, or iron) at the populated building more productive on each trip. Put simply, the more Citizens working in a Settlement, Town Centre, or Capital, the larger the economic benefit. A Capital, with its larger workforce, therefore provides the greatest economic benefit of the three buildings. You can also populate Granaries to increase your Farm production.

NOTE: To receive the economic bonus, drop-off buildings must be close to the resource site. Also, resource gathering in Tournament games is faster than in Standard games.

Protection

In addition to the benefits provided by civil buildings, you can construct other buildings to protect the towns and people of your civilisation.

Temples – Protection against Calamities

In times of crisis, people throughout history have sought refuge in Temples. The feeling of safety provided by places of worship is a remarkable source of strength for the victims of natural as well as manmade disasters. Prophets, who are deeply attuned to the spiritual world, know they cannot overcome this overwhelming faith. Consequently, they cannot invoke calamities in the vicinity of a Temple.

Universities – Protection against Conversions

Early Universities were steeped in religious tradition, while more modern institutions placed a heavier emphasis on science. Both approaches instilled strong beliefs in those who were attending the University. In Empire Earth, rival theologies will fail to find a sympathetic ear at your Universities. Therefore, members of your civilisation (buildings included) in the vicinity of a University cannot be converted by an enemy's Priests.

Healing and Repair

Hospitals

Members of your civilisation enjoy free health care. Any person who sustains a wound or other injury can receive medical help at a Hospital. In time, patients are returned to full health. Your Hospitals will even treat members of allied civilisations and the crews operating weapons of war (but not ships or aircraft).

Docks and Naval Yards

All your naval vessels and those of your allies, regardless of type, can be repaired at a Dock or a Naval Yard. Ships in the vicinity of either type of facility receive repairs automatically, if they need them.

NOTE: Airports repair airplanes, but only when they are inside the hangar. Airports also automatically repair any helicopters near them.

Planning an Empire

Implicit in the definition of empire is the idea of expansion. One of the greatest empires ever known – the Roman Empire – started out as a small settlement on the Tiber River and grew to encompass much of the known world. More than a thousand years later, at the height of England's power, her territories stretched around the world, leading to the famous saying, "The sun never sets on the British Empire."

Settlements, Town Centres, and Capitals

When your civilisation acquires new land, the next step is to develop it. This is where a little planning can go a long way. Choose wisely where to establish new Settlements, which can later be upgraded into Town Centres. Settlements are drop-off points for resources, and so are ideally constructed near resource sites. Additionally, having a presence near a resource site will allow it to be more easily defended.

A Town Centre cannot be built from scratch; you must have a Settlement in place before you can expand your government and upgrade to a Town Centre. To upgrade a Settlement into a Town Centre, you must populate the Settlement with Citizens, who become the Town Centre's permanent workforce (they will no longer count towards your population cap). Once populated with the minimum number of workers, the Settlement automatically transforms into a Town Centre.

You can upgrade a Town Centre into a Capital in the same way. You will need more Citizens to staff the larger building. A Town Centre automatically upgrades into a Capital once it is sufficiently staffed with civil workers.

REFERENCE: For details about the various bonuses provided by Settlements, Town Centres, and Capitals, see Economic Production, above, or Chapter XIII: Buildings.

Other City Buildings

Settlements, having no defensive capabilities of their own, are weak and vulnerable. Even an established town can be susceptible to a variety of attacks. As you expand your empire, think about how best to protect your assets and interests. Wall and towers, of course, can help fend off would-be conquerors. Towers built near a Town Centre or Capital are stronger than those built outside your towns. Consider also if other buildings will help you preserve your control over your territories. The decisions are yours to make.

Strider

Renaissance (1300 – 1500 AD)

The gradual recovery of ancient knowledge in Europe culminated in the Renaissance – a word that literally means “rebirth.” The Renaissance originated in Italy and gradually spread to the rest of the continent, stimulating technological innovation and new ways of thinking. The invention of moveable type and the printing press made the mass production of books possible. Literacy rates went up, which set the stage for the accelerated pace of change that was to come.

In response to the Black Death of the mid-1300’s – which killed a quarter or more of the European population – cities attempted to improve sanitation by instituting measures to dispose of garbage and sewage. Such efforts had not been undertaken in Europe on a large scale since Roman times. Another idea that followed the plague was the establishment of quarantines as a means of controlling the spread of disease.

Gunpowder, though invented earlier, saw its use spread rapidly during this period. Early artillery pieces and firearms, such as the culverin and matchlock arquebus, began to appear on the battlefield. Castles were easily breached by the new artillery and eventually became obsolete. But early gunpowder weapons were unreliable, slow to load, and dangerous to operate. Thus, their superiority over more traditional forms of weaponry, such as the longbow, was not to be fully demonstrated until the 16th Century.

Gunpowder also found use at sea. The galleon was one of the first ship designs to have broadside guns as opposed to forward and rear-facing guns mounted on the deck. This allowed galleons to carry more weapons, resulting in greater fire power. Galleons also employed full-rigging, which made them faster and more maneuverable than ships of earlier design.

Chapter VIII
Warfare

Warfare, as a formal practice, has existed for thousands of years. Weapons and tactics have changed through the centuries, but the central purpose has not. We fight wars to establish superiority, to decide which clan or country or civilisation is the dominant. Combat, of course, is not the only way to settle such questions. But it is certainly the most widely practiced method of any used by "Civilised Man."

Military Advances

Many kinds of weapons – and warriors to wield them – have evolved throughout the history of warfare. In Empire Earth, military progress takes two forms. The first is characterised by those incremental improvements that make an existing weapon or combatant more effective. Improved training and drilling techniques, updated equipment, better workmanship, cheaper manufacturing processes, and the lessons learned in combat have all produced noticeable results on the battlefield without fundamentally affecting the nature of battle. The development of armour before firearms provides an excellent example of gradual progress.

Early armour of leather or padded cloth countered dull weapons effectively, but offered little defense against the first fine-edged swords. To address this problem, small overlapping "scales" of bronze were sewn on to the cloth. The transition from bronze to iron, coupled with improved smelting and casting techniques, led to additional innovations such as chain mail. Made of interlocking iron rings, chain mail armour was time-consuming to produce, but afforded better protection than scale mail against slashing attacks. Iron, however, had an impact on sword design as well, allowing blades to be longer, thinner, sharper, and stronger. A thrust with a fine iron sword could force mail rings apart. Plate armour solved the problem of thrusting attacks, but covering joints with plates presented a difficulty – gaps in the armour were necessary to allow the wearer to move. An undercoat of mail usually filled these gaps, but did not altogether eliminate the vulnerability. The evolution of traditional armour ultimately reached its pinnacle during the 14th Century once articulated joints of overlapping plates were perfected and steel superceded iron.

The second form of military progress in Empire Earth can be thought of as changes on a more fundamental level, what could be called the “revolutions.” New kinds of military personnel, weapons, and gear become available as your civilisation advances through the Epochs, while others become increasingly outmoded and eventually fall out of use. You can upgrade older military units into new ones.

Traditional armour all but disappeared once firearms became sufficiently advanced and widespread. To stop high-velocity bullets, armourers had to make plate armor so thick that it became too heavy to wear in combat. By the turn of the 17th Century, full suits of armour were rarely worn on the battlefield. Adequate protection against bullets had to await the revolution of synthetic materials in the 20th Century. The invention of strong yet light-weight materials, such as Nylon and Kevlar, made bulletproof vests possible.

Improvements

Each type of military unit in Empire Earth has its own set of attributes. The values of these attributes largely determine how effective a unit is in combat. The table below describes the various attributes.

ATTRIBUTE ICON	ATTRIBUTE	DESCRIPTION
	Hit Points	The “health” of a unit – how much damage it can sustain before it is killed or destroyed.
	Attack	The amount of damage a unit inflicts when it attacks an opponent.
	Range	The distance at which a unit is capable of attacking. The Range for all melee units is 1 and cannot be improved.
	Speed	How quickly a unit moves – the higher the speed, the faster it goes.
	Area Effect	The size of the blast area for certain explosive weapons.

	Shock Armour	How well a unit is protected from attacks by swords, clubs, and other shock weapons.
	Pierce Armour	Protects against attacks by piercing weapons, such as spears and lances.
	Arrow Armour	Protects a unit from arrow attacks.
	Gun Armour	The effectiveness of a unit's armour to stop bullets.
	Laser Armour	The ability of a unit's armour to deflect/absorb laser and other energy-weapon attacks.
	Flight Time	How long airplanes can stay in the air before they need to return to an Airport for refueling.
	Cargo Capacity	The maximum number of troops that a transport can carry in one load.
	Power	The power – whether spiritual or actual – available to a unit for special attacks (e.g., Calamities or Cyber weapons).

Improving attributes increases a unit's combat effectiveness for all units of that type. For example, if you improve the Shock Armour of one Short Sword Man, all your Short Sword Men (including any new ones you train) get improved Shock Armour. This is comparable to outfitting your swordsmen with chain mail instead of scale mail. Additionally, the improvements you make carry over to the next unit in the upgrade line (see below). So, when you upgrade your Short Sword Men to Long Sword Men, they also have better Shock Armour.

Improvements come at a cost; innovation takes times and expends resources. The costs of researching particular improvements vary (help text tells you how much they cost). All attributes have a maximum possible value, so you cannot improve attributes beyond a certain point – plate armour, after all, can only be made so thick.

Additionally, you make unit improvements in “steps,” which may not exceed a maximum total number for a particular type of unit (and any subsequent units in the upgrade line). Improvements to armour count as 1 step towards the total, while improvements to the other attributes count as 2 steps. Therefore, if you improve a unit’s Hit Points once and Shock Armour once, the total number of steps so far is 3.

REFERENCE: More information on basic unit attributes and how to improve them can be found in Chapter IV.

Upgrades

Inevitably, all troops and weapons become outdated as military progress marches on. While superior strategies and skillful guidance can keep older armies (not to mention navies and air forces) competitive, a good commander always keeps an eye open for other options. Military upgrades provide another option.

As your civilisation advances through the Epochs, new units become available. In most cases, these new units are upgrades of older units – that is, they are replacements for them. You can upgrade an old unit type into a new unit type by going to the appropriate building and selecting the correct upgrade button. For example, the Arquebus upgrades into the Musketeer, and Musketeers upgrade into Grenadiers, and so on. When you carry out an upgrade, all the old units are replaced by the new units and you will be able to train more of the new units. Additionally, any unit improvements you made to the old units are carried over to the new units.

REFERENCE: The Tech Tree Foldout shows all the unit upgrade paths.

Combat

Combat in Empire Earth mirrors the real world. Battles can take place on land, on and under the sea, and in the air. The heaviest burdens of combat are borne by military personnel – historically men – who make use of a wide variety of weaponry. On the home front, Citizens work to support the war effort (though often targets, citizens seldom engage in battle themselves).

Every kind of weapon gives its wielder an advantage against certain adversaries. The flipside, of course, is that there is inevitably a disadvantage against other opponents. Back in the Middle Ages, pole-arms such as pikes were the perfect weapons for engaging cavalry due to their great length (some pikes were upwards of 20 feet long). Yet pikemen were easy targets for archers, who could rain arrows on them from a safe distance. These pros and cons, taken to their extreme, mean that some combatants are completely ineffective against particular opponents and may even be at their mercy. A man with a rifle is not likely to bring down a B-2 bomber, but that same bomber, dropping a well-placed bomb, will leave little left of the rifleman.

"Battle of Bannockburn - 1314" by Mark Churms ©1994

REFERENCE: See Appendix C or the Tech Tree Foldout for the unit relationship charts.

Commanding Your Units

In Empire Earth you command your military forces by giving them orders. Military units are tenacious and will continue to perform any task you give them until they are killed, given a new task, or – in the case of an attack order – run out of nearby targets. When military personnel have no orders to follow, they stand by attentively for you to give them one.

REFERENCE: For more information about how to issue orders – as well as how to produce, select, and move units – see Chapter IV.

Engaging the Enemy

You can order your forces to attack any unfriendly unit or building, including Wonders and other structures such as walls. If the target is out of range, the attacking units move to try to bring the target within range so that they can proceed with the attack. Thus, if you wish, you can order a soldier to attack an enemy target on the other side of the map and he will do his best to obey. In addition, military units will attempt to engage any feasible enemy targets that come within their Line Of Sight.

Units that are attacked fight back if they can. The result of a battle depends upon a number of factors such as: the combatants' relative strengths and weaknesses, the number of units involved, their level of morale, and so forth. If a target retreats, attacking units try to pursue (unless you have changed their Behavior).

TIP: Listen for the "We're under attack!" warning. When you hear it, it means one or more of your units is under attack. A flashing X on the Mini-map shows where you are being attacked. Press the Spacebar on your keyboard to cycle through the last several attack warnings, focusing the map on each battle.

TIP: You can order your units to perform a move-attack. To issue a move-attack order, hold down the Ctrl key while right-clicking the units' destination. The units will move to that destination and attack any enemy units within their range along the way.

Special Orders

Your military forces can be given orders beyond just moving and attacking. These special orders allow you to control your forces with more precision or assign them specific actions.

ACTION BUTTON	ORDER	DESCRIPTION
	Explore	Tell units to explore the map. Unexplored areas are given preference.
	Patrol	Patrol a town.
	Attack Ground	Order some types of units such as artillery to attack a location on the map rather than a specific target.
	Set Unit Behaviour	Set the “rules of engagement” for units.
	Set Formation	Assign a formation to a group of units.
	Stop	Order units to stop whatever they are doing, including moving.

Explore

Reconnaissance can provide you with invaluable information such as enemy troop positions and the location of natural resources. Units sent to explore will first search out areas where intelligence has yet to be gathered (represented as black areas on the map). If the entire map has been searched, units explore areas veiled by the fog of war.

Patrol

You can order your many land units (those who can attack) to patrol a town. Units on patrol move from building to building until they are killed or you give them a new order. If a patrolling unit engages and kills an enemy, it returns to its patrol route afterwards. Patrols are ideal for keeping a town watch.

Attack Ground

Some field weapons, naval vessels, and other types of units can be ordered to attack a location rather than a particular unit or building. This ability is useful for aiming an attack among several dispersed enemy units to do splash damage to each of them.

> NOTE: Some long-range units have a short Line of Sight (LOS). In order to attack beyond their LOS, they require a "Spotter" – that is, another unit who scouts ahead to spot a target for them.

Set Unit Behaviour

Your forces can be ordered to react to enemies in several different ways. These basic behaviours essentially define the "rules of engagement" for your units. Most military units assume an Aggressive behaviour by default, but some automatically adopt a different behavior.

Scout – A unit with Scout behaviour never attacks an enemy unless it is specifically ordered to do so. If attacked it will retreat from the attacker. This is an excellent behaviour to use for units on reconnaissance missions.

Stand Ground – Units told to stand their ground attack enemies that approach too close, but do not move to engage or pursue an enemy. Units standing their ground do not retreat if attacked and attempt to fight back if they can do so without moving. This behavior is useful if you want your forces to hold their ground at all costs.

Guard – Units given the Guard behaviour automatically engage enemies that enter their Line Of Sight. Once the enemy is defeated, or if the enemy leaves the initial contact area, the guarding unit returns to its original position. This is a good behavior to use for guarding a specific spot on the map.

Aggressive – A unit told to be aggressive automatically engages any enemy that enters its Line Of Sight. Aggressive units pursue retreating enemies until one or the other is destroyed, or until the enemy units move out of sight.

Set Formation

Commanders have long arranged their troops into lines, wedges, and other kinds of formations. You can order your forces to form ranks as well by selecting one of the available formations. Units do not line up immediately – the formation is a standing order that tells units how to form up at the end of every movement order. You can also choose the direction the formation should face when you give them a movement order (see Chapter IV for more information).

Stop

The Stop button is a general action available to every unit that tells it to stop whatever it is doing and wait for new orders. For example, you might stop a unit from moving or attacking ground. Stop does not make troops stop attacking an enemy target, however.

Ground Forces

Warriors far back in prehistory fought each other on foot with just a handful of different arms at their disposal. Over time, weaponry diversified to meet the ever-changing demands of warfare. Soldiers also utilised different modes of transportation to carry themselves into combat. Some proved more effective than others, and those that worked well endured. The use of horses, for example, lasted many hundreds of years. Horses were finally displaced in the early 20th Century by motorised vehicles such as tanks.

The units in Empire Earth have been carefully balanced so that every unit has its preferred targets and its nemeses. Thus, every unit in Empire Earth can be countered in battle by at least one other type of unit. Unit relationship charts can be found in Appendix C and on the Technology Tree Foldout.

TIP: Controlling the high ground is worthwhile. Units up on a hill firing down at enemies below them receive an attack bonus. Units attacking uphill, conversely, are less effective.

Naval Vessels and Combat at Sea

The first warships specifically built for combat appeared on the Nile in Egypt some 5,000 years ago. These small boats were constructed from lashed-together reeds covered with pitch, a far cry from modern, all-steel vessels which displace tens of thousands of tons. Between these two extremes were many designs, some of which, like triremes and galleons, endured for many years. Some, like the submarine, were constructed with specific missions in mind.

There are several categories of ships in Empire Earth: battleships, frigates, galleys/galleons, transports, cruisers, attack submarines, nuclear submarines, and aircraft carriers. Fishing Boats are also available. Naval vessels differ from other types of units in a few important ways, described below.

REFERENCE: See Appendix C or the Tech Tree Foldout for the unit relation ship charts.

Special Naval Vessels

Three categories of naval vessels merit additional explanations: transports, submarines, and aircraft carriers.

"Reign of Fire" by Mark Churms ©1998

Naval Transports

Amphibious landings have long been a part of warfare. At the onset of the Trojan War, the Greeks sailed an army across the Aegean Sea to attack Troy. According to legend, they wanted to recover the king of Sparta's wife, Helen: "the face that launched a thousand ships." One of the most famous amphibious assaults was the D-Day invasion in June 1944, in which the Allies transported more than 150,000 troops plus tanks and other vehicles from Great Britain across the English Channel to Normandy, France.

Transport ships in Empire Earth are used to convey troops across water. Each transport has a maximum cargo capacity, which indicates how many troops can be transported at once (note that some units, such as cavalry, take up more than one space on the transport).

TIP: To view the current cargo of a transport (if any), select the transport ship and look in the Cargo Display area at the lower left of the screen.

Submarines

Submarines are among the stealthiest weapons in the world. They glide silently underwater and strike without warning against unsuspecting ships and other targets. Cold War era subs could stay submerged for months at a time. In fact, their deployments at sea were limited primarily by the amount of supplies they could carry.

Subs in Empire Earth are produced at Naval Yards and operate exclusively underwater. Attack submarines can target ships and other subs. Nuclear-powered subs fire conventional (non-nuclear) Submarine-Launched Ballistic Missiles or SLBMs at inland targets. Both kinds of subs are safe from most types of above-water units, but are vulnerable to Frigates and the Sea King Anti-Submarine Warfare (ASW)
Helicopter.

TIP: Towers can attack subs, so you can build them to protect your shores against both surface and submerged vessels that approach too close.

Aircraft Carriers

The most powerful weapon in the arsenals of 20th Century navies was the aircraft carrier. The earliest carriers were ships converted from other uses by adding a large, flat platform to serve as a runway. By World War II, carriers had proven themselves invaluable, winning decisive battles in the Pacific Theater. The first nuclear-powered carrier, the Enterprise, was launched by the United States in 1960.

In Empire Earth, Aircraft Carriers are essentially floating Airports. They carry special fighter/bomber aircraft, which are assembled and maintained on board, that can attack air and ground units, as well as ships. As with airports, a single carrier can maintain a number of aircraft at once, which must periodically return to the carrier for refueling, rearming, and for repair (if necessary). Unlike Airports, carriers are mobile and can sail deep into enemy waters. Aircraft Carriers are produced at Naval Yards.

TIP: Aircraft carriers are vulnerable to a submarine's torpedoes, so it's a good idea to have Frigates and/or Sea King Helicopters around to protect them.

NOTE: Planes produced on an Aircraft Carrier are of a special design and so must return to an Aircraft Carrier after a flight; they cannot land at an Airport. See the section on Aircraft and Air Combat for additional information about airplanes.

Ship Repair

Damaged ships need skilled mechanics to carry out repairs. Any naval vessel that returns to a Dock or Naval Yard is repaired automatically. The Cofferdam, Dry Dock, and Scuba Repairs Technologies, which can be researched in different Epochs at the University, increase the repair rate of Docks and Naval Yards.

Aircraft and Air Combat

The 20th Century witnessed the birth and rapid growth of airpower, which forever freed combat from its terrestrial bounds. Air forces appeared around the world as control of the airspace above a battlefield became all but necessary to assure victory on the ground.

Empire Earth's aircraft include helicopters and airplanes, which are further divided into bombers and two kinds of fighters. These categories, and the differences between aircraft and other types of units, are described in the following sections.

REFERENCE: See Appendix C or the Tech Tree Foldout for the unit relation ship charts.

TIP: You can build Anti-Air (AA) Guns to help defend against air attacks. AA Guns can be built in two ways. Stationary gun emplacements can be built by your Citizens, much like Towers, except that AA Guns shoot only at air units. You can also build mobile AA vehicles at the Tank Factory.

Types of Aircraft

Fighters

Fighters have evolved from WWI era prop-driven biplanes and triplanes into highly-advanced supersonic jets. Originally used strictly for reconnaissance, it wasn't long before airplanes were also engaging in combat. Air combat initially consisted of pilots shooting at each other with handguns, but mounted machineguns quickly became standard equipment. The jet aircraft of later decades were additionally armed with a variety of guided missiles. By the late 21st Century, high-energy lasers had replaced most projectile weapons.

There are many fighter aircraft available in Empire Earth, organised into two basic categories: Air Superiority Fighters (called simply "Fighters") and Fighter/Bombers. Air Superiority Fighters are good against all other types of aircraft but cannot attack ground targets. Fighter/Bombers can attack ground targets and surface ships, but are less effective against other airplanes than the Air Superiority Fighters. Both categories of fighters should take care to avoid Anti-Aircraft (AA) Guns, Cruisers, and surface-to-air missiles.

Bombers

Bombers, too, have undergone many changes over the years. At first limited to short range missions, bombers developed into impressive strategic weapons capable of hitting targets far behind enemy lines. Additionally, indiscriminant carpet bombing gave way to surgical strikes where a target could be an individual building or vehicle. In World War II and afterwards, some bombers were fitted to carry nuclear weapons.

Bombers in Empire Earth are expert at attacking stationary ground targets such as buildings. They can also pepper a battlefield in an effort to take out ground forces as each dropped bomb does splash damage. Atomic bombers are also available. Though expensive and vulnerable to attack, these aircraft can drop devastating atomic bombs.

Helicopters

Although designs go back as far as the drawing boards of DaVinci, helicopters did not take to the skies until nearly 500 years later in the second half of the 20th Century. Helicopters were used initially for transportation, but developed into sophisticated weapon platforms with specialised uses, such as knocking out tanks and sinking submarines.

There are several categories of helicopters available in Empire Earth. The Gunship helicopters excel against human targets, while the Anti-Tank (AT) helicopters can make short work of tanks. The Sea King is an anti-sub helicopter, perfectly suited to hunting down and killing submarines. Unlike Airplanes, helicopters do not have to return to an Airport for refueling, but they can return to any friendly Airport for repairs.

Helicopter Transports

In addition to combat helicopters, transport helicopters are available in Empire Earth. Transport helicopters function like transport ships, expect that they can fly anywhere on the map and drop off their passengers on any unoccupied piece of land (except cliffs).

NOTE: Sea King Helicopters can be produced and repaired at either an Airport or a Naval Yard. Note that the Bomber/Helicopter Rally Point sets a one time rally point for helicopters.

Flight Time

Airplanes carry a limited amount of fuel. Eventually, they need to return to an Airport to refuel and rearm. Flight Time is an improvable attribute of airplanes and refers to how long a plane can stay aloft before it must return to an Airport. For example, consider an F-15 fighter that flies to its destination and engages a group of bombers. When it runs low on fuel, it will break off its attack and return directly to its home base – that is, the Airport from which it took off. It cannot veer off course or attack any other targets until it has been refueled and rearmed. If a plane's home Airport is destroyed while it's in flight, it will look for another nearby Airport that is not full. If another Airport cannot be found, the plane eventually runs out of fuel and crashes.

TIP: If you assign an airplane a target that is beyond its flight range, it flies as far as it can, but will immediately return to its Airport as soon as it runs out of fuel. If this happens, try improving the airplane's Flight Time and/or Speed.

Refueling and Repairing Airplanes

Airplanes automatically return to their home Airport when they run out of fuel and ammunition (as measured by their Flight Time). Planes land and take-off one at a time so, when multiple aircraft return to a single Airport at the same time, they are given clearance to land in the order that they arrived.

Planes are automatically refueled, rearmed, and repaired (if necessary) while hangared at an Airport. How long repairs take depends upon how much damage an aircraft has sustained. A plane will not re-launch until it has been completely repaired. A single Airport can accommodate up to 15 airplanes at once – note that if an Airport is destroyed, any planes within are destroyed also.

TIP: Helicopters are automatically repaired when near an Airport, and they never need to be refueled.

Controlling Aircraft

Fighters and Bombers can be given orders in two general ways: as individual planes or collectively through the air traffic control center of their home Airport. You give orders to planes in flight by selecting the aircraft and providing the orders, just like any other unit in Empire Earth. (The easiest way to select airplanes is with the Idle Aircraft hot keys, explained on the next page.) Once selected, aircraft can be ordered to move, attack, or stop what they are doing and fly in a circle. You can have airplanes land at a specific Airport by selecting them and right-clicking on the Airport (remember only 15 airplanes are allowed per Airport).

TIP: Each individual fighter can have a standing order set just for it. Select the fighter and then click its Rally Point button. Then right-click on the map to set the rally point for that plane. Note that if you have a rally point set for all fighters at an Airport (explained below), the individual fighter's rally point takes precedence over the Airport's

At the Airport, planes can be given objectives in the form of Rally Points, which are standing orders that tell the planes to fly to a particular location or target repeatedly until they are told to do something else. When you set a rally point, the planes take off, fly to the rally point (if they have enough Flight Time), carry out an attack (if there is anything to attack), and then return to the Airport to start the cycle over again. You can set a separate Rally Point for fighters, bombers, and atomic bombers – there is a separate Action button for each. (To set a rally point for all planes at once, simply select the Airport and right-click on the target.) You can also Cancel all the orders to remove all Rally Points.

Fighter Rally

Bomber Rally

Atomic Rally

TIP: You can “scramble” an individual airplane hangared in an Airport by selecting the Airport and then clicking on the plane you want in the Unit/Cargo Display area. That plane will immediately take-off (if the runway is clear) and circle the Airport looking for enemies. When the plane’s Flight Time runs out, it lands and waits for new orders.

Idle Aircraft

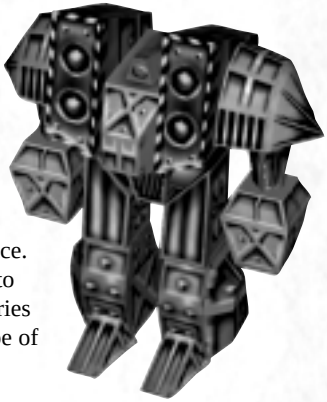
To provide more control over your air forces, you can select idle airplanes by using special hot keys. Idle planes are those planes that have no current orders and are either in flight with Flight Time remaining or in an Airport and not currently under repair. Unlike idle Citizens, selecting an idle plane does not center it on your screen, but the plane's portrait and attributes appear in the Unit Information area at the lower-left of the screen. To select an idle airplane, press one of the following keys:

Key	Function
A	Selects Nearest Idle Atomic Bomber
B	Selects Nearest Idle Bomber
D	Selects Nearest Idle Fighter/Bomber
F	Selects Nearest Idle Fighter

You can then give the selected airplane an order - for example, right-click on an enemy to have the plane attack that target (remember that the plane must have enough Flight Time to get there). To select more than one plane, hold down the Shift key while pressing the appropriate hot key. This adds planes to your selection group and then you can issue an order to all the selected planes at once.

Cybers

The field of Artificial Intelligence or AI owed its very existence to the silicon microchip, but the microchip also ironically limited its progress. Quantum computers, with their massively-parallel computational abilities, ultimately revolutionised the digital world. At the vanguard of AI research at that time were labs funded by secret military programs. The common goal of these labs was to design and build weapon systems that were fully autonomous, needing no human control or supervision to carry out their missions. In the mid-21st Century, after decades of research which produced numerous automated systems that were successful though not truly intelligent, the first real "Cyber" was put into production in Europe. Codenamed Cyclops, it was designed to fill an anti-infantry role.



There are two main categories of Cybers your civilisation can produce. Combat Cybers, following traditional combat models, are designed to defeat specific types of foes. These Cybers are built at Cyber Factories and make use of conventional types of weapons. Pandora is one type of Combat Cyber.

The second category is comprised of Cybers developed to fill specialised roles on the battlefield. Known collectively as Ultra-Cybers, they are the most advanced combat machines ever created.

REFERENCE: See Appendix C or the Tech Tree Foldout for the unit relation ship charts.

Ultra-Cybers

Ultra-Cybers are constructed at Cyber Laboratories. They employ secret weapons that can make them formidable adversaries. Many of these weapons require colossal amounts of power, and must recharge in between uses. To achieve maximum effectiveness on the battlefield, Ultra-Cybers work best as part of a larger force. Several types of Ultra-Cybers are available.

Apollo

The Apollo was designed to fill an auxiliary role. Hovering behind the lines, the Apollo uses its array of high-tech accessories to provide the main battle group with both offensive and defensive support.

Diffraction Shield – Shielded units take less damage.
The Diffraction Shield is a protective shield that can be projected around a nearby unit. The shield partially disrupts incoming fire, so the protected unit take less damage.

- **Repair** – Repairs other Cybers.
  One of the first uses of nano machines was making repairs to damaged systems. Since repairs could be undertaken at the atomic level, objects could be fixed as good as new. When deployed in the field, the nano machines piggyback on a low-energy particle beam, which delivers the tiny mechanics right to where they are needed.

- **Ion Pulse** – Units in the area of effect take more damage.
  The Apollo can fire a highly-charged ball of contained energy, which temporarily ionises the area around the point of impact. Targets caught in this strong electric field have their electrical properties (nervous systems or electronics) altered, which makes them more vulnerable to incoming fire.

Furies

Designed for demolition, Furies are capable fighters with an explosive special weapon.

- **Self-Destruct** – Explodes on command or on death, doing splash damage.
  A tiny amount of anti-matter is housed within the Cyber, contained inside strong electric and magnetic fields. When the Cyber is destroyed, the fields collapse. This releases the anti-matter, which immediately comes into contact with normal matter and is annihilated in a tremendous explosion.

Hades

The Hades is the most advanced Cyber design ever put into production. It is a master of time and space, capable of having a profound effect on the outcome of a battle.

- **Time Warp** – Sends a targeted unit a few minutes into the future.
  The Hades has the ability to open a wormhole through space-time and send a target into the future. In effect, the target is removed from the world until it reappears a short time later.

- **Teleport** – Lets the Hades teleport to a new location, but it loses a portion of its hit points.
  Teleportation is related to Time Travel in that it involves tunneling though the fabric of space-time. When teleporting, the Hades appears to leave the physical universe and then reappear in a new location. What actually happens is that the Cyber opens a wormhole that connects one space-time location to another and simply passes through to the opposite end. But the strain incurred by maintaining and simultaneously traversing a wormhole takes its toll and inevitably causes damage to the Hades Cyber.

- **Nano Virus** – A nasty computer virus.
  The Nano Virus is an invasive program that slowly corrupts a Cyber's software. Additionally, microscopic nano machines attack the Cyber's physical structure. The eventual result is a catastrophic systems failure followed by the complete destruction of the Cyber. The virus can also spread to adjacent Cybers, whether friend or foe.

Poseidon

In addition to being able to travel under water (like the Hyperion Cyber), the Poseidon has one offensive and one defensive weapon.

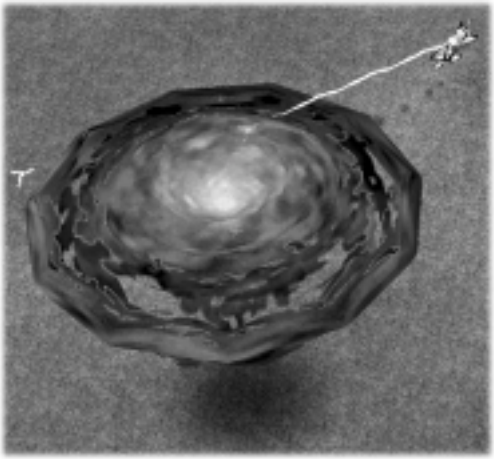
- **Refractive Cloak** – Turns all friendly units within its Line of Sight invisible (except itself).
  The Poseidon Cyber projects a carefully tuned electro-magnetic beam, which alters the refractive properties of the surfaces of nearby units, bending the ambient light rays around them and essentially turning them invisible. Since the Poseidon is able to aim its EM beams, only friendly forces are affected. If enemy units get too close, the angle at which the light rays must bend becomes too great and the cloaked units become visible.

- **Assimilate** – Converts other Cybers.
  An Assimilation attack rewrites the command-level code of the affected Cyber's software, while simultaneously changing the communication protocols used to establish a link with the Cyber. The procedure takes a little time, but eventually the hacked Cyber changes sides.

Tempest

The Tempest is a powerful Ultra-Cyber with two advanced weapons: one for grouped targets and another specifically for air targets.

- **Resonator** – Causes damage proportional to the attack strength of units within its area of effect.
  All matter naturally vibrates at specific frequencies. Resonance occurs when an object is made to vibrate at its natural frequency, and the result can be shattering, such as when a singer breaks a wine glass with her voice. The Resonator tunes itself to match the inherent energy frequencies of a target's weapons and/or power cells, causing them to resonate, overload, and eventually explode.

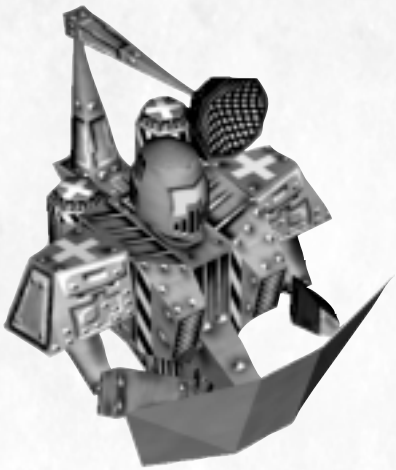


Anti-Matter Storm – A devastating storm that affects aircraft.
This weapon creates a swirling energy vortex that generates small but lethal amounts of anti-matter. The anti-matter instantly collides with normal matter and causes thousands of tiny, localised explosions. Tendrils of lightening-like energy produced by these explosions are attracted to the hulls of passing aircraft, which take significant damage. Additionally, by varying the pressure around it, the storm can be made to move in specific directions.

Healing and Repairing Units

Casualties are inevitable in war. In real combat, soldiers may suffer non-fatal injuries that never fully heal. In Empire Earth, you have the ability to fully heal anything short of death. There are several ways you can heal or repair your military units. Hospitals mend nearby units automatically, while Docks and Naval Yards repair any naval vessels in their vicinity. Airports repair planes (inside) and helicopters (outside). Strategist Heroes increase the stamina of troops under their command, and Medics can treat injuries behind the lines as well as on the battlefield.

NOTE: Units in the process of being healed are indicated with a graphic effect.



Imperial Age (1500 – 1700 AD)

The appearance of ships capable of circumnavigating the Earth heralded the beginning of the Imperial Age. Muzzle-loading cannons cast in bronze – and later iron – were introduced as seafaring nations battled for access to new resource-rich lands. Massive warships such as the Henry Grâce à Dieu, commissioned by and named after Henry VIII, carried a total of more than 150 large iron cannons and smaller guns.

Small arms continued to advance as well. The flintlock musket was quicker to load and cheaper to produce than the earlier matchlock. As firearms got more accurate and reliable, the era of the archer slowly came to an end. But it wasn't until the introduction of the bayonet – especially the under-the-barrel design adopted by the French army in 1688 – that hand-to-hand weapons like the sword and halberd began finally to disappear. With that development, the fundamental shift from medieval to modern warfare was at hand.

Major changes were also taking place in science. The Scientific Revolution was underway and its crowning achievement would be the establishment of the scientific method, which emphasised empirically-collected data and reproducible experiments. Galileo, an early proponent of the method's principles, used the newly-invented telescope to provide the first evidence that the Earth was not the centre of the universe. An important achievement in the 17th Century was the invention of calculus, with which Sir Isaac Newton was able to describe his laws of motion.

The Catholic Church, meanwhile, was coming to grips with the Protestant Reformation. In addition to setting up a Roman Inquisition, which put Galileo himself under house arrest, the Church sent missionaries all over the world to convert populations in new lands as well as to reclaim those who had become Protestant.

Chapter IX
Alliances

Political alliances have helped to maintain balances of power since the dawn of civilisation. Often, a common foe can form just as strong a bond between nations as a common heritage, especially when war is imminent. Direct dialogues between nations have served to both make and break friendships, as well as to draw proverbial lines that rivals are dared to cross. When warranted, gifts in the form of tributes have also been used to win friends, placate enemies, and even buy favours.

Allies and Enemies

In the 5th Century BC, the Greek City-States temporarily banded together to defeat the powerful Persian Empire. Following Athens's decisive victory at the Battle of Marathon in 490 BC, a Greek alliance was formed to repel the expected return of a much larger Persian force. The principle members of the alliance were Athens, who had control of the combined Greek Navy, and Sparta, who commanded the combined land forces. Ten years after Marathon, the Persians under Xerxes I invaded once again. A heroic stand at Thermopylae and victories at the Strait of Salamis and the Battle of Plataea finally drove the Persians from Greece.

Diplomatic Stances

In Random Map games of Empire Earth, you can choose with whom you want to be allied before the game begins by choosing teams. Teammates begin the game as allies. If you do not choose the Lock Teams game option, you are free to change your diplomatic stance to each of the other civilisations in the game whenever you wish. But beware because the other civilisations can do the same.

Allies cannot attack each other. If you are allied with a civilisation that is hostile towards you, your troops can be attacked by that civilisation's forces, but your troops will not attack back – not even to defend themselves. To allow your troops to fight, you must un-ally yourself with that civilisation. Whenever a civilisation changes its diplomatic stance to any other civilisation, a message is sent to all the players in the game to inform them of the change.

The Alliances & Tributes screen allows to change your diplomatic stance towards other civilisations, as well as arrange tributes (explained later in this chapter). Click the Alliances & Tributes button to access the Alliances & Tributes screen. The screen displays all of the civilisations in the game, starting with yours, and the Disposition of each civilisation towards you, either Friendly or Hostile.

To change your stance towards a particular civilisation, simply click its Ally checkbox. If the Ally box is checked, you consider that civilisation to be your ally. If the box is unchecked, then you consider that civilisation to be an enemy. Any diplomatic changes you make on the screen do not take affect until you click the OK button.

Alliances & Tributes Screen

Tributes

You can tribute resources to other players in Empire Earth for whatever purposes you deem necessary. To send resources to another civilisation, friend or foe, enter the Alliances & Tributes screen by clicking the Alliances & Tributes button. On that screen, each civilisation has a set of tribute buttons associated with it. Click the appropriate tribute buttons to select the types of resources and the amounts you wish to tribute (left-click to increment the amount, right-click to decrement).

You can transfer resources in increments of 100 in any combination you desire to any civilisation currently in the game. Click the Clear Tributes button to reset all the tribute amounts to zero. Click the OK button to send the tributes you arranged and exit the screen. A transaction fee is automatically applied to each tribute and a message regarding who gave and who received each tribute is automatically sent to every player in the game.

TIP: The transaction fee is charged over and above the tributed amount of resources. This fee can be decreased by in the Dark Age by researching Commercial Law at the University.

Communication

High-level communication between nations is a useful tool. Skillful German diplomatic efforts just prior to the First World War set the stage for a secret treaty with the Ottoman Empire (now Turkey). The treaty pledged that the Ottoman Turks would join the war on Germany's side should Germany, by its obligations to Austria-Hungary, be forced into a war with Russia. The Turks were looking for allies against Russia, so both sides benefited by the agreement. When Germany followed Austria-Hungary and declared war against Russia in August 1914, the Ottoman Empire entered the war as well.

German diplomacy did not go as planned later in the war, however. In 1916, President Woodrow Wilson was having a difficult time convincing the American public that the US should renounce its neutrality and intervene in the war across the Atlantic. Even when Germany announced its resumption of unrestricted submarine warfare in January 1917, Americans were reluctant to enter what they viewed as a European conflict. What ultimately changed American attitudes was the publication of the infamous Zimmermann Letter.

The letter was actually a coded message telegraphed by Arthur Zimmermann, Germany's new Foreign Secretary, to Mexican President Venustiano Carranza. In it, Zimmermann asked Mexico to ally with Germany if the US entered the war. If the US were defeated, the message concluded, Mexico could seek to recover Texas, New Mexico, and Arizona. But the British intercepted and deciphered the message, then passed it on to President Wilson. The President had the letter published in major newspapers all over the US on March 1. Public sentiment changed virtually overnight and, on April 6th, 1917, the US Congress officially passed a declaration of war against Germany.

Chatting with Other Players

Chat to players with whom you are allied

Chat to every active player

Chat to players who are your enemies

Chat to players specified on the Alliance & Tributes screen

You can communicate with other players in a multiplayer game to send messages, work on combined strategies, taunt rivals, and so on. Click the Chat button or press the Enter key on the keyboard to bring up the Chat box. (The game does not pause while you are chatting.) Type your message in the Chat box and select to whom you want to send the message: Allies, All, Enemies, or Custom (see below). Pressing Enter will send your message to the recipients you selected. To cancel a message before sending it, click anywhere outside the Chat box.

TIP: In the Chat Box, you can cut selected text with Shift-Delete and paste text with Shift-Insert.

All messages sent to you, including any you send, are displayed on the upper-left side of the game screen. Messages are always attributed to the player who sent them, color coded with the player's colour, and displayed with the recipients – either "(Allies)", "(Enemies)", or "(Custom)", or blank for All. Care should be taken to ensure messages do not fall into the wrong hands and produce undesired results.

TIP: Flares can be used to co-ordinate attacks with allies or to call for help at a specific location. Just click the Flare button, beneath the Mini-map, and then click on the Main Map or the Mini-map where you want the flare to fire. Flares show up, with an accompanying sound, on the Mini-maps of your allies. You can also use flares to request assistance from computer player allies, who will send troops to the location if they have them to spare.

Custom Chat

If you want to send a chat message to specific players, you must first choose the players. Click the Alliances & Tributes button to enter the Alliances & Tributes screen. Then, select the players to whom you want to send your chat message by clicking on the appropriate Chat checkboxes (or click to uncheck the box). Click OK to return to the game and then click the Chat button (or press Enter). In the Chat box click the Custom button and then type and send your message. The Custom button remembers the players you selected so you don't have set them each time, unless you want to select different players.

NOTE: By default, your allies are selected for Custom Chat. Therefore, until you choose which players your custom messages should go to, Custom sends your messages to your allies.

REFERENCE: Next to each Chat checkbox is an indication of the Player's Status (e.g., who is connected, disconnected, defeated, etc.). Player Status is explained in Chapter IV.

Industrial Age (1700 – 1900 AD)

An important consequence of the Scientific Revolution was the effect it had on people's attitudes towards science and technology. There was a growing confidence that science could accomplish anything. This belief, more than actual scientific inquiry, helped to bring about the Industrial Revolution.

The Industrial Age was principally powered by steam. The steam engine found use in many places, from factories to underground mines to ships. In factories, the concept of standardised products with interchangeable parts allowed manufacturing to become cheaper and more efficient. Firearms were among the first products to benefit from such mass production methods. Various design modifications further improved the quality of guns: breach-loading, rifled barrels, and percussion-fired bullets all became standard during this period.

Several scientific breakthroughs made major impacts on civilisation. In medicine, the germ theory of disease was highly influential. Pasteurisation and antiseptics, which kill micro-organisms, contributed to the near doubling of life expectancies over the next 150 years. Darwin's Theory of Evolution, coupled with Gregor Mendel's work on heredity and genetics, made possible a deeper understanding of the diversity life on Earth.

Electricity, previously a scientific curiosity, found its first practical applications in the Industrial Age. Once the first electric batteries and generators were invented, electric power became available to perform all sorts of feats. The electric motor was developed to convert electrical energy into mechanical energy. The telegraph, followed closely by the telephone, revolutionised communications. And incandescent light bulbs eventually replaced gas lamps to light up the night.

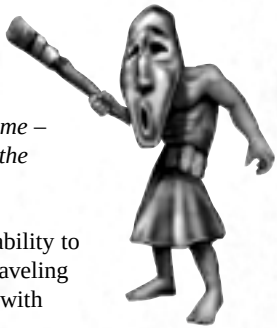
Chapter X
Religion

Of all human practices, Religion ranks as one of the most consequential. Convictions of faith are powerful personal motivators. On an interpersonal level, strong bonds often form among people who share a religious heritage, while differences can lead to animosity and even bloodshed. In most religions, believers look to holy people and holy places for inspiration, seeing in them a tangible link between the natural and the supernatural.

Priests

The importance of spiritual leaders to both past and present civilisations cannot be overemphasised. People have traditionally seen them as intermediaries between the Earth and the heavens, between humanity and the spiritual realm. In some cultures, it was normal to assume that such holy men and women had special powers and abilities.

But one civilisation's gospel was sometimes another's heresy. Spreading religious ideas to outsiders was a potentially dangerous activity. Early Christians in the Roman Empire were sporadically persecuted for their "mysterious" beliefs and practices. In the late 1st Century AD, Christianity was even made a capital crime – confessed Christians who did not renounce their faith in favor of the accepted Roman gods were put to death.



The spiritual leaders of Empire Earth are Priests. They have the ability to convert enemies to their faith. But Priests must take care when traveling abroad, for those who do not share their faith will not greet them with open arms.

TIP: You can improve your Priests and your Prophets by researching various religious advances at a Temple.

Conversion

It has been the duty of missionaries and other religious figures to preach their faith to unbelievers in an effort to help them see the light. At times, their words would touch those who listened and a life-changing revelation would take place. Embracing their new faith, converts would begin life anew.

Following the Reformation in the 16th Century, Protestant missionaries worked to spread their ideas in predominantly Catholic Europe. The Catholic Church sent out their own missionaries in an effort to reclaim regions where Protestantism had gained a foothold, while simultaneously continuing to export their beliefs to new lands where Christianity had not yet taken root.

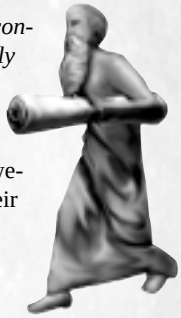
In Empire Earth, Priests can be ordered to preach their faith to the "infidels" of a rival civilisation. Being persuasive orators, Priests are capable of converting any person if given enough time. Once convinced of the error of their ways, converts join your civilisation unconditionally. Even the operators of war machines are susceptible, though others, such as the crews of ships and aircraft, are unable to hear the words and so cannot be swayed. But preaching is exhausting work. Priests must rest for a time after each successful conversion.

The presence of a University protects those around it from conversion.

TIP: By constructing the Tower of Babylon Wonder, Priests can convert more than one enemy at a time. Also, Priests can be given the power to convert other Priests (by researching the Printing Press technology in the Renaissance) and even buildings (by researching Missionaries in the Imperial Age).

Prophets

There are certain religious persons who possess an even deeper spiritual connection than Priests. Called Prophets, these rare individuals are not merely in tune with the spiritual realm, they are capable of communing directly with their gods.



Prophets are powerful religious figures in Empire Earth. They have the awesome power to call upon the heavens and unleash terrible calamities on their foes. Prophets are a rarity by comparison to Priests and, as a result, each Prophet takes up more of your pop cap than a Priest.

Calamities

In ancient times, it was commonly believed that calamities such as earthquakes and volcanic eruptions were caused by angry spirits or the wraith of the gods. Some in the 14th Century regarded the Black Death as a punishment sent by God, while others turned to forms of mysticism in an effort to protect themselves from the terrible disease.

Many kinds of calamities have befallen mankind, and predicting just when they will occur has proven difficult. The best thing for a society to do is prepare for a disaster before it strikes.

Fire Storm

Target: Any building, wall, or tower, or ships
Effect: Damages buildings and ships, and can spread to adjacent structures

Fire is one of humanity's oldest tools, but it has never truly been tamed. Controlled it is a great asset. Unleashed, it has the potential of causing great damage, especially when winds fan the flames.

Earthquake

Target: Land
Effect: Damages buildings and other structures

Perhaps nothing is as terrifying as feeling the seemingly solid earth shake beneath your feet. Earthquakes are most common along known fault lines, but they can theoretically strike anywhere. Earthquakes sometimes tear the ground apart, obliterating whatever was on the surface.

Malaria

Target: Land units (groups), except Cybers
Effect: Infected individuals lose health (but don't die)

Malaria is an ancient scourge of humans and other animals, particularly those living in tropical areas. Mosquitoes carry the parasite that causes the disease from host to host. Symptoms include fever, weakness, and chills. Hippocrates, the famous Greek physician, described and classified malarial fevers in the 5th Century BC.

Hurricane

Target: Water
Effect: Damages ships with lightning

Hurricanes or tropical cyclones are among the most destructive forces in nature due to their extreme power, immense size, and slow, meandering pace. In addition to the winds, which commonly exceed 100 mph, heavy rain and frequent lightening accompany such storms. Hurricanes always form over water.

TIP: You have the ability to move a Hurricane wherever you want (except over land). Move them over fleets of enemy ships for maximum destruction.

Volcano

Target: Land or water
Effect: Creates a volcano that shoots damaging fireballs

Many people have lived in the shadow of a volcano, but generations can come and go between eruptions. After a long period of dormancy, the 79 AD eruption of Mt. Vesuvius in Italy buried the towns of Pompeii, Stabiae, Herculaneum, and others. Excavations indicate that the people who lived there were taken entirely by surprise. Occasionally, new volcanoes rise up from the earth. The Hawaiian Islands were formed in this manner.

Plague

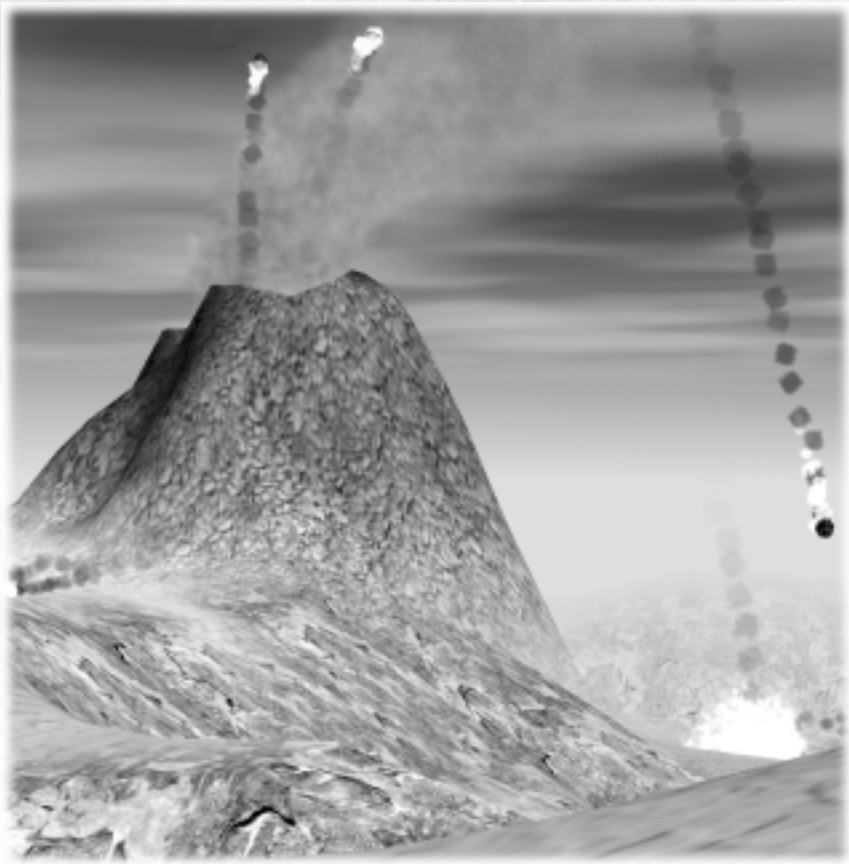
Target: Land units, except Cybers
Effect: Slowly kills infected units, and can spread

The plague is a nasty bacterial infection that is highly contagious and typically fatal. The most devastating outbreak of plague in history was the Black Death, which ravaged Europe in the mid-14th Century. The Black Death wiped out whole villages, killing by some estimations one out of every four persons in Europe at the time or about 25 million people.

Invoking Calamities

Some religious traditions have attempted to sway the spirits or gods through offerings, sacrifices, holy invocations, or other rituals. The Greeks and early Romans used animal sacrifices and prayers to maintain – and even coerce – the favour of the gods. Curses, too, were requested, usually by way of an inscribed stone left at a holy site. In Egypt, depictions of rain dances have been found in tombs that date back as far as the 3rd Millennium BC.

Your civilisation's Prophets – by virtue of their strong links to the supernatural world – can curry the favour of their gods to invoke any of the Calamities listed earlier. Invoking a Calamity requires time, intense concentration, and the power of faith. Once a Prophet has amassed enough power, he need only decide on a Calamity and then select a target for his god's wrath. When the calamity strikes, friends and enemies alike will be affected (unless protected by a Temple), so Prophets should take care when deciding on a target.



Protection from Calamities

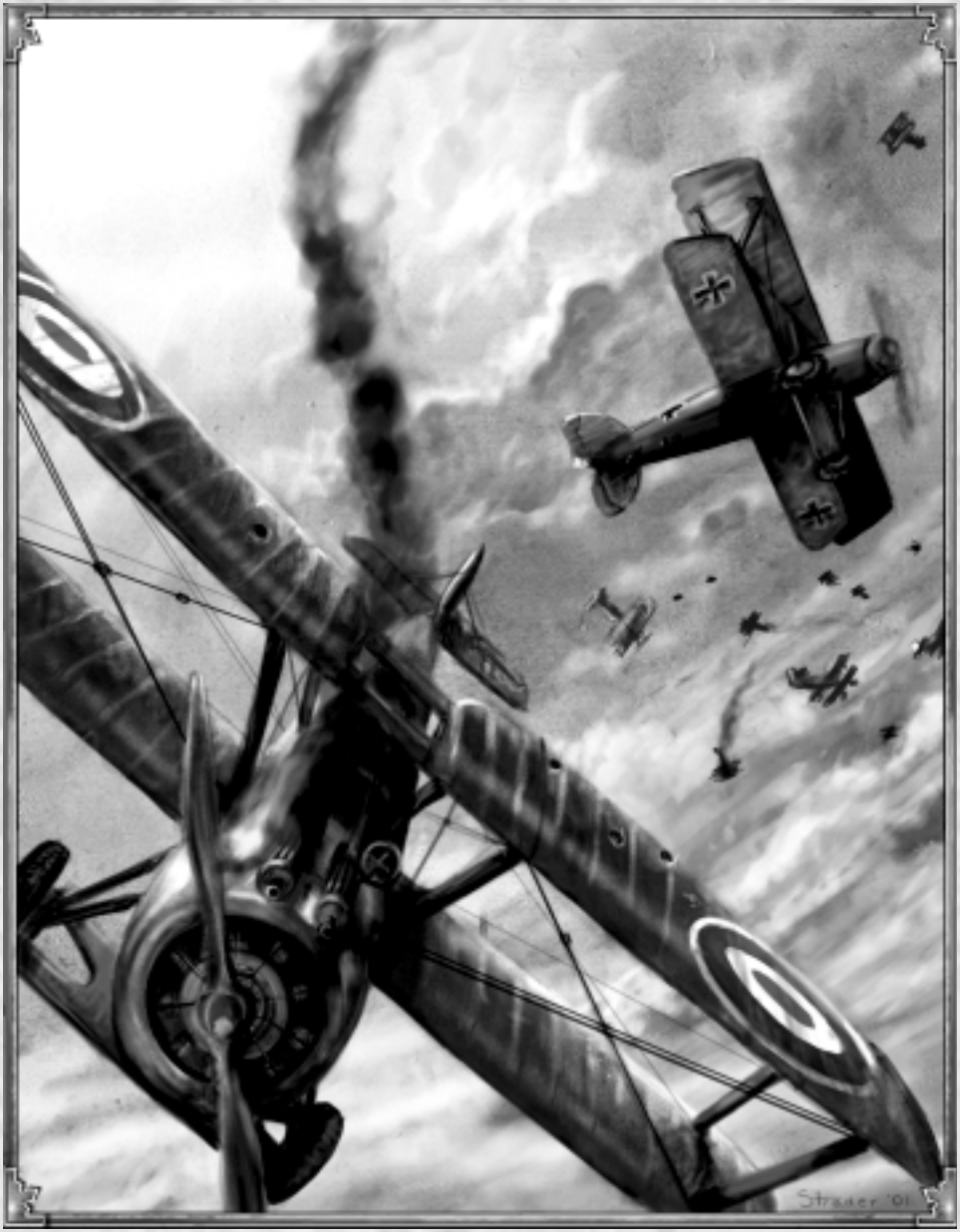
Despite – or perhaps because of – their powerful connections, no Prophet can desecrate a Temple, regardless of who was worshiped within its walls. Thus, a Temple and the sacred ground that surrounds it are both safe from the effects of all Calamities. Any civilisation, with a little foresight and planning, can guard against the disastrous effects of Calamities by constructing Temples in those areas they wish to protect.

Temples

Individual places of worship hold a special significance to people of faith. Alexander the Great, in putting down an uprising in the Greek City-State of Thebes in 335 BC, left no building standing except the temples (and the home of Pindar, a famous poet) because he appreciated their significance to the people. By contrast, in 70 AD the Romans destroyed the Second Temple of Jerusalem, bringing an end to a four-year rebellion by the Jews. This act of desecration is well remembered to this day – the surviving West Wall of the Temple, also known as the Wailing Wall, continues to be a focal point for Jewish prayer and pilgrimage.

Fixed religious centers first appeared when ancient nomads began settling in one place. The buildings and even the ground on which they are built have traditionally been considered sacred – sanctuaries from the evils of the mortal world.

In Empire Earth, Temples are used to train both Priests and Prophets, and to upgrade their abilities. Additionally, the sphere of influence surrounding a Temple provides protection against calamities. More information on Temples can be found in Chapters VII and XIII.


Strauer '01

Atomic Age (1900-2000)

World War I

World War I was the first truly global conflict. Nations entered the war in 1914 believing that it would be over in a matter of months, with their side proving victorious. Before the fighting finally ended in 1918, over 8 million soldiers were dead and warfare itself had fundamentally changed.

New warships made of steel and weighing thousands of tonnes patrolled the world's oceans, exchanging fire while still miles apart. Under water, stealthy U-boats wreaked havoc on surface ships. Meanwhile in the skies, the airplane made its debut. Thanks to an interrupter gear, mounted machine guns were able to fire between the rotating blades of an airplane's propeller. This allowed aviators to aim their aircraft directly at a target, increasing their accuracy. Skilled fighter pilots kept track of the number of planes they shot down and the concept of the flying ace was born. Of all the aces in the war, Manfred von Richthofen, better known as the Red Baron, topped the list with 80 kills.

Combat on land had degenerated into trench warfare as early as 1915, with artillery and machine guns serving only to strengthen the stalemate. On the Western Front in 1915 alone, hundreds of thousands of lives were sacrificed by both sides for only minor gains. To break the impasse, military leaders developed novel strategies and tactics. One such idea with implications for the future was the development of the tank. In November 1917, 474 British tanks achieved a spectacular – if short-lived – breakthrough against the Germans at the Battle of Cambrai. But such successes ultimately did little to bring the war to a close. It was the entry of the United States into the war, both economically and later militarily, that tipped the balance in favour of the Allies and brought about the 1918 Armistice.

Chapter XI
Heroes

The 19th Century British Historian Thomas Carlyle wrote, "The history of the world is but the biography of great men." Every culture has had its heroes, those men and women who, through their actions and personal attributes, led their people to greatness. But heroes are more than the sum of their deeds – their "biographies." They are important symbols of their respective civilisations, often idolised in a manner usually reserved for gods.

Heroic Actions

Heroic individuals are people of action, celebrated for seizing the moment and taking charge. Hannibal, the renowned Carthaginian general, is remembered for valiantly crossing the Alps and carrying the fight to Roman soil. Elizabeth I was, in a sense, fortunate to become Queen of England during such a male-dominated time. But she skillfully held on to power and, in the process, guided England to one of the highpoints of its long history. Napoleon's exploits are legendary, but he would never have become such a legend had he remained in his native Corsica. These individuals had the ambition, skills, and energy necessary to leave their marks on history.

Warriors and Strategists

Numerous historic figures have had the label "hero" applied to them. Of these individuals, many had military careers while others were statesmen or politicians. A number were both. All commanded respect and obedience, inspiring those around them with their courage, charisma, and self-confidence.

Heroes in Empire Earth are divided into two classes: Warriors and Strategists. From an historical perspective, Warrior Heroes often put themselves on the line, directing their troops and even partaking in battle themselves. They understood tactics and achieved significant military victories. Strategist Heroes, by contrast, tended to have larger – often political – goals and sweeping strategies to achieve them. Some commanded their armies from the front lines, but others stayed back, directing their forces from behind the lines according to their master plan.

Epoch	Warriors	Strategists
Copper Age (3)	Gilgamesh	Sargon of Akkad
Bronze Age (4)	Hannibal	Alexander the Great
Dark Age (5)	Julius Caesar	Charlemagne
Middle Ages (6)	Richard the Lionheart	William the Conqueror
Renaissance (7)	Henry V	Isabella
Imperial Age (8)	Oliver Cromwell	Elizabeth I
Industrial Age (9)	Napoleon	Otto von Bismarck
Atomic Age – WWI (10)	Manfred von Richthofen	Givan DeVerran
Atomic Age – WWII (11)	Travis Shackelford	Erwin Rommel
Atomic Age – Modern (12)	Dennis St. Albans	RW Bresden
Information Age (13)	Sergei Molotov	Alexi Septimus
Nano Age (14)	Molotov (Cyborg)	Molly Ryan

The ability to lead – not just to command, but to motivate – is a Hero's greatest weapon. Troops under the leadership of a Hero are able to fight beyond their normal limits of endurance, so they last longer in combat than they would otherwise. Thus, an army with a Hero leading them into battle holds an advantage over an identical army without a Hero.

In Empire Earth, Warrior Heroes and Strategist Heroes lead in different ways. Warrior Heroes are strong and brave, often leading their troops by example. Their style of leadership produces high morale in the area immediately surrounding them, so they are most effective on the front lines. Morale gives troops more stamina, so they are harder for enemies to kill.

Strategist Heroes can inspire their troops from a greater distance, and do best when avoiding personal combat. Their style of leadership promotes self-confidence. In effect, these Heroes restore the vitality of their troops, thus giving them more staying power in a battle. They can also demoralise an enemy with their Battle Cry. Upon hearing a heroic Battle Cry, disheartened enemies lose their will to fight and are therefore easier to kill.

NOTE: Heroes can influence only land forces (except for Cybers, who are affected by a Battle Cry but no other heroic abilities). Morale is not an additive effect, so troops within range of two Warrior Heroes, or a Warrior and a Town Centre or Capital, receive morale from one source, not both. Likewise, the restorative effect of a Strategist and the healing of a Hospital are not additive, though Hospitals can restore full health.

Producing a Hero

In history, predicting the appearance of a hero was next to impossible. In Empire Earth, your civilisation has the ability to produce a Hero at a Town Centre or Capital. Heroes are special individuals and therefore rare.

Improvements and Upgrades

Just as a regular swordsman can be made better by outfitting him with a better sword, so a Hero can benefit from better equipment. You can improve the Hit Points, Attack Strength, and Speed of each hero just like any other unit.

Heroes are not just a collection of characteristics, they are also products of their times. It is hard to image Julius Caesar without ancient Rome, or Rommel without tank warfare in WWII. Most heroic figures became heroes by making the most out of their particular place in history.

The Heroes you can produce in Empire Earth are also products of their times – that is, each Epoch (starting with the Copper Age) has its own Heroes. When you advance to a new Epoch, you can upgrade to new Heroes who are more appropriate to the era. Each successive Warrior or Strategist Hero is better equipped to face the conflicts of his or her time. You upgrade Heroes just like any other unit, in the building where they are produced – for Heroes, this is the Town Centre or the Capital.

King Henry V of England © Archive Photos

REFERENCE: For more information on unit improvements and upgrades, see Chapter IV.

Heroes

Gilgamesh

Epoch: Copper Age
Type: Warrior

Gilgamesh became King of the City of Uruk sometime in the 3rd Millennium BC. The legends of this great warrior are perhaps the oldest surviving written stories and poems. The most complete version of the Epic of Gilgamesh is written on 12 clay tablets in the cuneiform script of the ancient Akkadian language. Though it is impossible to fully assess how much of the accounts are true, they are nevertheless considered among the greatest works of ancient Mesopotamia.

In the legends, Gilgamesh is described as a skilled warrior who fights and then befriends the divinely-created wild man, Enkidu. Working together, they manage to kill the monster Huwawa, guardian of the forest, and the mighty "bull of heaven" sent by the goddess Ishtar to destroy Gilgamesh for jilting her. Enkidu then suddenly takes ill and dies, punished by the gods for helping Gilgamesh to slay the bull. Saddened and feeling vulnerable, Gilgamesh seeks out Utnapishtim, who is rumored to know the secret of eternal life. But, though he learns the secret, Gilgamesh ultimately falters and his desire for immortality goes unfulfilled.

Sargon of Akkad

Epoch: Copper Age
Type: Strategist

Legend tells that Sargon had a meager upbringing, rising on his own merits to become ruler of Southern Mesopotamia. He spoke Akkadian, a Semitic language which supplanted the Sumerian spoken by earlier rulers. The name Akkad derives from Agade, the capital city founded by Sargon around 2300 BC.

Sargon had a keen military mind. He first conquered the Sumerian city-states and maintained control over them throughout his reign. From there, Sargon expanded his empire into Syria, Anatolia, and parts of modern-day Iran. He also encouraged trade and turned Agade into a major trading centre. Sargon ruled for over 50 years, establishing the Akkadian Dynasty, which survived for 100 years after his death. So successful was Sargon that later Mesopotamians wrote epics about his life, regarding him as the originator of their military heritage. Today, he is widely considered to be the first great empire builder.

Hannibal

Epoch: Bronze Age
Type: Warrior

The great Carthaginian general, Hamilcar Barca, brought his son, Hannibal, with him to Spain around 237 BC. In the wake of Carthage's loss to Rome in the First Punic War, young Hannibal learned to hate the Romans. Hamilcar died in battle in 228 BC and his successor, Hasdrubal, gave Hannibal his first command. Hannibal performed brilliantly and assumed leadership of the army when Hasdrubal was assassinated in 221 BC. During Hannibal's subsequent consolidation of Carthaginian holdings in Spain, he sacked the city of Saguntum. Rome, an ally of Saguntum, formally protested to Carthage and demanded the surrender of Hannibal. Carthage refused and the Second Punic War began.

In the Spring of 218 BC, Hannibal began his famous march through Gaul and over the Alps, finally crossing into Italy some 5 months later. Hannibal's army achieved numerous victories in Italy, securing local allies and approaching to within several miles of Rome itself. But the Romans adopted a strategy of harassing Hannibal's forces without committing to an all-out battle. Instead, they sent legions to Spain and Northern Africa. Eventually Hannibal's numbers waned and, in 203 BC, he left Italy with the remnants of his army to help defend Carthage.

Hannibal launched a last-ditch attack, which ended in his only defeat at the Battle of Zama. Carthage lost the Second Punic War, and Hannibal later committed suicide rather than be captured by the Romans.

Alexander the Great

Epoch: Bronze Age
Type: Strategist

Alexander was born in 356 BC to King Philip II of Macedon. As a teenager he was tutoured by none other then Aristotle, the famous Greek philosopher and scientist. Alexander displayed military prowess at a young age and, upon his father's assassination, took the throne with the full support of the army. He immediately put his father's alleged murderers to death and proceeded to shore up his control over the Balkans.

Alexander went on to become one of the greatest generals even known, famous for his leadership and use of combined arms including phalanxes, cavalry, and siege weapons. He conquered Persia and marched his army all the way to India, achieving many victories along the way. He also conquered Egypt and founded numerous cities – which he invariably named Alexandria – in many parts of his short-lived empire.

While consolidating his conquests in Babylon, Alexander died of an illness at the age of 33. His empire, lacking strong leadership, soon splintered into smaller kingdoms. Nevertheless,

Alexander had succeeded in spreading Greek culture around the ancient world, and his legacy influenced all of Western Civilisation that was to come.

Julius Caesar

Epoch: Dark Age
Type: Warrior

Julius Caesar was a man of ambition. After early political forays, he rose to become one of the three Roman Consuls in the first so-called triumvirate, the others being Crassus and Pompey. Soon thereafter he was given command of the Roman forces in Gaul. Over the next several years, Caesar conquered the rest of Gaul and, by 50 BC, Roman rule there was firmly entrenched. The campaign in Gaul established Caesar as a major political power – and potential threat to Pompey (Crassus having been killed in battle in 53 BC). Political maneuvering followed, which led ultimately to civil war. Caesar's troops defeated Pompey's and, in 47 BC, he became dictator.

Around this same time, Caesar managed to establish the Julian Calendar, extend Roman citizenship to many aliens, and even help rebuild the cities of former enemies Carthage and Corinth. But he had grown too powerful for some of Rome's nobles and politicians, some of whom Caesar himself had appointed. In 44 BC, he was assassinated by a group of conspirators on the floor of the Roman Senate.

Charlemagne

Epoch: Dark Age
Type: Strategist

Charlemagne became the sole ruler of the Frankish Kingdom in 771, following the death of his younger brother, Carloman. The first part of Charlemagne's rule was spent expanding his holdings. He fought many campaigns: conquering the Lombards in Italy, annexing Bavaria, and defeating the Saxons more than a dozen times from 772 to 804. Though he failed to take Spain and never attempted to cross the English Channel, Charlemagne controlled most of Western Europe by 788.

The Frankish expansion did not go unnoticed by the Pope in Rome nor by the powerful Byzantine Empire, the last vestige of the old Roman Empire. In 800 AD, Pope Leo III crowned Charlemagne as Roman Emperor Charles I, largely for protection from the Byzantines, who still pressed for reunification with Rome.

Much of Charlemagne's later reign was spent developing the culture of his kingdom. He had a personal interest in acquiring knowledge and even founded an academy to educate Frankish knights. Charlemagne was also a pious man who worked to spread Christian practices and increase the rule of law. No other individual of his time period left so profound a mark on the history of Europe.

Richard I the Lionheart

Epoch: Middle Ages
Type: Warrior

Richard, the third son of King Henry II and Eleanor of Aquitaine, showed promise as a warrior even as a boy. When his father died in 1189, Richard took the throne and immediately made plans to join the Third Crusade to recapture Jerusalem from the Muslims.

Richard and the French King, Philip II, temporarily put aside their dispute over English holdings in France and prepared for the Crusade. They met in Sicily in 1191, where Richard had taken the city of Messina by force. Philip sailed ahead to Acre and Richard, after stopping briefly to conquer Cyprus, followed. Acre fell under their combined siege in July 1191.

Philip then returned to France, but Richard continued the fight, taking Arsuf in September. He came close to recapturing Jerusalem, but the city was too well defended. After a year, Richard finally signed a truce with the Muslim leader, Saladin, and sailed for England. When a storm blew his ship off course, he was forced to take an overland route and the Germans captured him in Vienna. Richard secured his release from the German King, Henry VI, by paying a huge ransom. He returned home at last in 1194, but almost immediately left for France to renew England's fight against Philip II. In 1199, at the age of 41, Richard died from wounds suffered in battle.

William the Conqueror

Epoch: Middle Ages
Type: Strategist

Robert I, Duke of Normandy, died in 1035 having named his only son, William, as his heir. But William was an illegitimate child and his claim to the Dukedom was questioned. Numerous attempts were made against William's life before he had even reached adulthood, but they were unsuccessful and served only to strengthen his resolve to retain Normandy. With the help of Henry, King of France, young William defeated his rivals and secured his grasp on the Duchy of Normandy.

With the death of King Edward the Confessor in 1066, William anticipated becoming the next King of England, as Edward had promised him. When Harold, Earl of Wessex, succeeded Edward to the throne instead, William planned and executed a daring cross-channel invasion of England. William's forces bested the English at the Battle of Hastings, in which King Harold himself fell in battle. England capitulated and William was crowned King. William spent the following years solidifying his hold on power. Among other projects, he commissioned the Tower of London. William ruled harshly, by some accounts, but quite capably until his death in 1087.

Henry V

Epoch: Renaissance
Type: Warrior

During the nine years of his reign, Henry V took a weak England and turned it into a major power. As a young man he fought against rebels in Wales, taking command of the English forces after 1403. When his father, Henry IV, died in 1413, he ascended to the throne. Henry successfully thwarted two early plots against him and, soon thereafter, embarked on the campaign for which he is best known: the planned conquest of France near the end of the Hundred Years' War.

Henry's superlative leadership and military skills led to important victories at Harfleur (Sept., 1415) and, a month later, at the Battle of Agincourt. At Agincourt, Henry used archers and superior tactics to overcome overwhelming odds, inflicting some 6,000 French casualties at a cost of fewer than 500 English soldiers. Henry secured a treaty with the French in 1420 which provided that he would become King of France, but he fell ill and died in 1422 mere months before it would have come to pass.

Isabella I

Epoch: Renaissance
Type: Strategist

Against the wishes of her older brother, King Henry IV of Castile, Isabella married Ferdinand II of Aragon in 1469. Isabella had been named Henry's heiress, but the marriage caused problems. When Henry died in 1474, civil war broke out in the Kingdom of Castile. Isabella's opponents, backed by king Alfonso V of Portugal, were finally defeated in 1479. That same year, Isabella's husband became King of Aragon and the two kingdoms were effectively joined, forming the foundation of modern Spain.

Both rulers were interested in the reconquest of Granada, still controlled by the Moors. Isabella's role in handling the campaign was significant, and included the setting up of a hospital to treat wounded soldiers. While in Santa Fe conducting the war, Isabella had the meeting for which she is perhaps best remembered: she agreed to let Columbus undertake his now-famous expedition and even partly funded it. This action was to have numerous long-term consequences and eventually helped turn Spain into a major European power. Isabella, to her tremendous credit, stood by her religious convictions; accounts indicate that she was far more concerned for the welfare and rights of the natives living in the New World than many of her contemporaries, including Columbus.

Oliver Cromwell

Epoch: Imperial Age
Type: Warrior

Oliver Cromwell's grievances against the Monarchy eventually brought him to the forefront of the English Civil War between King Charles' Royalists and the Parliamentarians. Cromwell, a three-time member of Parliament, first fought at the Battle Edgehill in October 1642. The following year he was promoted to Colonel and set about training a highly-disciplined cavalry regiment, which won its first victory at Gainsborough in July 1643.

Having distinguished himself in battle, Cromwell helped form Parliament's new offensive army and assumed second in command. The army handed the Royalists their biggest defeat to date at Marston Moor in July 1644, but Cromwell was critical of his commander's handling of the battle. He recommended that Sir Thomas Fairfax take over the army and intended to resign, but Fairfax insisted that Cromwell be made his second in command. Cromwell fought brilliantly at several battles, including the major victory over the Royalists at the Battle of Naseby in June 1645.

In 1648, Cromwell was sent north to deal with a combined Royalist-Scottish invasion. Cromwell's army defeated them and, despite his efforts to mediate, Charles I was put on trial by Parliament and executed. A final, decisive victory at Worcester over Charles II, who wanted to claim the throne, brought the civil wars to an end. In December 1653, after two successive Parliaments failed to win the trust of the army, Oliver Cromwell was made Lord Protector of the Commonwealth.

Elizabeth I

Epoch: Imperial Age
Type: Strategist

Elizabeth was the daughter of the King Henry VIII by his second wife, Anne Boleyn. As male heirs were desired at the time, Elizabeth was an unlikely successor to the throne. Nevertheless, she received extensive tutouring and was regarded by her teachers as highly intelligent – as an example, she is known to have spoken at least four languages in addition to English. Following the short reigns of her siblings, Edward VI and Mary, Elizabeth became Queen of England in 1558, beginning what became known as the Elizabethan Age.

As a woman in a male-dominated world, Elizabeth did her best to maintain tight control over the country. She was a shrewd ruler, adept at manipulating individuals to further her own and her monarchy's ends. She reinstated Protestantism in England following her sister Mary's brief return to Catholicism. Disputes with Spain, aggravated by religious differences, led ultimately to a showdown with the infamous Spanish Armada in 1588. The Spanish were soundly defeated, and England secured its place as master of the sea.

Napoleon Bonaparte

Epoch: Industrial Age
Type: Warrior

Though born on Corsica in 1769, Napoleon Bonaparte was educated in France and came to regard himself as French. In 1795, he helped put down a rebellion against the new post-Revolution government. The next year, he was given command of the French forces in Italy and led them to victory over the Austrian and Sardinian armies, securing the annexation of Nice and Savoy. Napoleon repelled several Austrian counterattacks and was advancing towards Vienna when the Austrians finally sued for peace in 1797.

The Austrian surrender left just Great Britain to deal with. An excursion to Egypt to disrupt British trade routes with India began successfully, but ended prematurely due to the French Navy's loss at the Battle of the Nile in 1798. Spurred by the British victory, a new European coalition against France emerged and Napoleon returned to Paris to help guard against a possible coup d'etat. The threats were squelched and Napoleon, now First Consul, became the undisputed leader of France. His newly reorganised armies again defeated the Austrians, and in 1801 Great Britain decided to formally end the struggle as well. But, just two years later, territorial disputes had led once more to war.

To solidify his hold on power, Napoleon crowned himself Emperor of France in 1804. A planned invasion of Britain never came to pass – thanks to the British victory at Trafalgar in 1805 – but Napoleon orchestrated a string of triumphs on the continent. He routed the Austrians in 1805, beat the Prussians in 1806, and defeated the Russians at the battles of Eylau and Friedland in 1807. At its height in 1810, Napoleon's empire stretched across Europe from Spain to Russia.

Otto von Bismarck

Epoch: Industrial Age
Type: Strategist

Otto von Bismarck began his political career as a conservative member of the Prussian Chamber of Deputies. He was then appointed to the Diet of the German Confederation in 1851 and later gained invaluable experience in foreign policy from his ambassadorships in Russia and France. It was during these postings that Bismarck's conservative philosophy began to change.

In 1862, King William I recalled Bismarck from Napoleon III's court in Paris and made him Prime Minister of Prussia. William, who was looking to reform the Prussian military, wanted an ally against the liberally controlled Chamber of Deputies. But Bismarck instead sought a compromise between William and the liberals, alienating both sides. When that failed, he pushed the reform through by exploiting a loophole in the constitution. With the funding he gained in the maneuver, Bismarck turned to his ultimate goal: unifying Germany under Prussian authority.

A quick war against Denmark and a huge victory over the hitherto major power of Austria solidified Prussian dominance in the emerging unification. But the southern German states held out. To win them over, Bismarck orchestrated a conflict with France in which France appeared to be the aggressor. The southern states fell into line and the combined German force won the Franco-German War of 1870-71. German unification followed and Bismarck became the first Chancellor of the German Empire.

Manfred von Richthofen

Epoch: World War I
Type: Warrior

Manfred von Richthofen began his military career in the Prussian Cavalry. He fought in Russia early in the First World War, but got himself reassigned to the recently-formed German Air Force. In the Fall of 1915, after a few weeks of observation but little actual instruction, Richthofen flew his first solo flight... and crash-landed. But in 1916 after just a month of flying in his new Albatros fighter, he tallied 6 victories and was well on his way to becoming the greatest flying ace of the war.

With his reputation growing, Richthofen reorganised the German Air Force into larger groups of aircraft (called Jastas), and he personally took command of Jasta 11 in January 1917. He flew a number of aircraft during the war, including the red Fokker triplane for which he is best remembered. Bright-red planes became Richthofen's lasting symbol, and earned him the moniker "The Red Baron." After learning that the Allies were gunning for his red plane, Richthofen had all his pilots' planes painted the same colour and his fighter group became known as "Richthofen's Flying Circus."

The Red Baron is credited with a total of 80 aerial victories, including an incredible 21 during the month of April 1917. He received several decorations for his bravery and achievements in battle, including the coveted Orden Pour le Mérite in 1917.

Givan DeVerran

Epoch: World War I
Type: Strategist

A long-time friend of Joseph Gallieni, military Governor of Paris, DeVerran had pursued a successful career as a civil engineer before volunteering for the army in September of 1914. Gallieni himself swore DeVerran in as a Captain in the Paris militia. DeVerran quickly gathered his scattered company as German forces pressed into France. To halt the advancing threat, he helped commandeer every motorised transport in the Paris metropolitan area, then rushed to the river Marne himself in a milk truck. The celebrated "taxicab army" saved Paris and, for his role in its organisation and the subsequent battle, DeVerran received a field promotion.

DeVerran served valiantly throughout the rest of the war. As commandant of one of the besieged forts near Verdun - at one time under incessant artillery fire for four straight weeks - he led a successful counterattack against the German breakthrough for which Marshal Joseph Jacques Joffre personally awarded him the Croix de Guerre. DeVerran was wounded during the battle, but was back in combat leading a regiment of French regulars when the Armistice came in 1918.

After the war DeVerran retired to his native Normandy, but in World War II, at the age of 68, he joined the French Resistance. Though older and less physically active, his mind was still sharp and he organised no fewer than a dozen successful raids against German encampments and supply depots. Givan DeVerran was killed by machine gun fire on the afternoon of June 6, 1944, while personally guiding US troops off Omaha beach.

Travis Shackelford

Epoch: World War II
Type: Warrior

Travis Shackelford was born at home near Austin, Texas, and graduated from the US Military Academy at West Point in 1917. His first combat experience came in France during the First World War, just a short time after graduation. Shackelford led a platoon of the 306th Battalion of the US 77th Division. German forces surrounded the 306th and other so-called "lost battalions" in the Argonne Forest on the 3rd of October, 1918. Shackelford personally led forays against the enemy lines to keep from being overrun. For more than four days he battled, with neither food nor sleep, before reinforcements finally broke the encirclement and rescued them. The War ended shortly thereafter.

By 1941, Shackelford was a committed "tank man." He fought against Rommel's Afrika Korps, helping to drive them from North Africa. As a Brigadier General in Patton's 3rd Army, he was instrumental in rescuing paratroopers of the US 101st Division who were surrounded in the city of Bastogne during the infamous Battle of the Bulge. Shackelford himself led the point tank of CCB, 7th Armored Division, and was first to break the ring of enemies besieging Bastogne. Waving off the cheers of the grateful troopers he said, "Boys, I know what you've been through. I was just repaying an old debt."

Five years later in Korea, Major General Travis Shackelford chose to remain with the rear guard holding the road open for Americans fleeing from the Yalu river. Though his body was never recovered, his selfless sacrifice is credited for helping to save thousands of men who surely would not have survived otherwise. He is officially listed as "Missing in Action" on the rolls of the US Army.

Erwin Rommel

Epoch: World War II
Type: Strategist

Erwin Rommel joined the German Army in 1910, before he was 20 years old. During the First World War, Rommel fought courageously as an officer cadet in the infantry. He received several decorations, including the prestigious Pour le Mérite, and achieved the rank of Captain. Between the wars, Rommel taught at several military academies and even wrote a textbook on infantry tactics.

Rommel commanded the 7th Panzer Division during the invasion of France in 1940. Though is was just his first command of armoured units, he pushed all the way to the French coast. In 1941, he was made commander of the Afrika Korps, where his cunning in battle earned him the nickname "The Desert Fox." After relieving the Italian forces there, Rommel reconqered most of Northern Africa from the British and was promoted to Field Marshall. But British reinforcements and a landing of US troops in western North Africa finally turned the tide. Outnumbered and facing severe supply shortages, the Germans were finally driven off the continent in 1943 and Rommel was recalled to Germany.

Rommel was put in charge of forces in Northern France. He strengthened the coastal defenses with innovative obstacles and other protective barriers, but recommendations such as the addition of reserve troops were ignored. After D-Day in June 1944, Rommel tried unsuccessfully to convince Hitler that Germany had lost the war and that they should make peace with the Allies. Then in July, Rommel was badly injured when his staff car was strafed by Allied fighters. While he convalesced, conspirators attempted to kill Adolph Hitler, but failed. Though not directly involved in the assassination attempt, Rommel was nevertheless implicated in the plot due to his connections with the conspirators. The Desert Fox was then given a choice: be tried for treason or commit suicide. On October 14, 1944, Rommel took poison to protect his family from the likely repercussions of a trial. He was buried with full military honors.

Dennis St. Albans

Epoch: Modern
Type: Warrior

As the pampered son of the Lord and Lady Bexhill, Dennis St. Albans need never have worked a day in his life. But, despite being born into a privileged family, he chose a different way of life. St. Albans' strength of character first exhibited itself in 1954 when he was just 11 years old. When fire enveloped his Prep school dormitory, young Dennis scaled the building's granite wall to a third story window carrying a rope. His daring feat allowed 23 trapped boys to climb to safety.

Dennis joined the Royal Marines when he was 18, very much against his parents' wishes. He displayed uncommon courage and a strong ability to lead, which earned him rapid advance-

ment. He was eventually attached to US Army Headquarters in Vietnam as a NATO observer. Maj. St. Albans was patrolling the Ho Chi Minh trail with men from the US 75th Ranger Regiment when they came across a company of Viet Minh looting a village. As point man that day, St. Albans was first on the scene. Thinking only of the civilians, he single-handedly charged the enemy, forcing them to take cover. The diversion allowed the other men in his combat patrol to surround the village. Seventy-three captives were taken in less than 15 minutes and, thanks to St. Albans' swift action, there were no civilian casualties. St Albans was wounded twice in the valiant raid, for which he received both the US Purple Heart and a British DSC. After a lengthy recovery, St. Albans retired from the military as a full Colonel.

In 1977, St. Albans founded the Philanthropic Board of Commonwealth Funds with money from his family's estate. Within a decade, the PCBF was collecting over a billion pounds sterling annually and distributing it to charities around the world.

RW Bresden

Epoch: Modern
Type: Strategist

In 1980, Roderick Willem "RW" Bresden entered the rigorous process of Selection for the British Special Air Services (SAS), the elite forces unit formed during WWII. Ninety-five percent of his fellow trainees did not complete the program; Bresden finished first in his class. He served with distinction in the Falkland Islands War (1982) where he participated in several successful raids into Argentinean-held positions.

His intelligence and bravery under fire got him noticed. Throughout the remainder of the Cold War, Bresden was often "borrowed" by MI6, the Secret Intelligence Service, for covert missions. In one case in 1984, MI6 had been tipped off that an important Moscow operative was under KGB surveillance. On the day before the Soviets were going to arrest her as a spy, Bresden led a small team that liberated her and destroyed all the incriminating evidence, leaving the Soviet authorities without any proof of espionage. Bresden's flawless execution of the plan, which he had devised, earned him an "eyes-only" commendation.

RW Bresden also served during the Gulf War where he personally destroyed 2 mobile SCUD Missile launchers. At the end of that war, he went against orders and joined the Kurdish rebels, helping them retreat and entrench in Northern Iraq to escape Saddam Hussein's wrath. After Iraq, Bresden retired from the SAS and entered life as a "contractor," hiring out and even volunteering his special skills and training for causes that he believed in. Though his contracted activities have never been verified, there is evidence that Bresden took jobs in Somalia, Rwanda, the states of former Yugoslavia, and other "hot spot" locations, helping local civilians organise and fight back against marauding aggressors.

Sergei Molotov

Epoch: Digital Age – Nano Age
Type: Warrior

Sergei Molotov was born too late to see the heyday of the Soviet Union. Even the troubled times immediately following its downfall were a fog of indistinct memories, the hardships softened through the filter of a child's eyes. Molotov grew up in the new Russia, rapidly advancing under a new regime.

As an impressionable youth, Molotov fell under the spell of Grigor Stoyanovich. Grigor wanted to rebuild a strong Russia that was given the respect she was due. Molotov joined the new Russian Army as soon as he was old enough. He proved to be a courageous and level-headed fighter. During the invasion of Finland, Molotov was part of a squad sent behind enemy lines to secure an important bridge. They found it protected by twice the expected number of Finnish troops and the squad leader was killed. Molotov instantly took charge and managed to take the bridge intact while capturing over 400 prisoners.

Within a few years, Molotov had received two decorations for bravery, one commendation, and ascended to the rank of lieutenant. His heroics came to the attention of Grigor himself, who arranged to meet the young warrior. Scheduled for 15 minutes, the meeting lasted well over an hour and, by the end, Grigor had brought Molotov into his inner circle.

Alexi Septimus

Epoch: Digital Age
Type: Strategist

Born in Russia in 1982, Alexi Septimus grew up to become arguably the greatest researcher ever in artificial intelligence and robotics. He earned his doctorate in Germany, though the review board readily admitted that some of Alexi's work was beyond their understanding. Afterwards, he vanished into the research laboratories of Western Europe, pursuing his dreams of creating machine intelligence.

Meanwhile, upheaval in the country of his birth began to inflame old rivalries. It was while working in Warsaw that Dr. Septimus had his traveling privileges revoked – the West did not want to risk losing the brilliant scientist. Dr. Septimus continued to work in his research lab for several more months, under virtual house arrest. Then, one morning, he simply didn't show up at the lab. A security guard was eventually arrested for accepting a bribe, but the whereabouts of the Doctor were never discovered. Rumour has it that he returned to help his homeland in its time of need.

Molly Ryan

Epoch: Nano Age
Type: Strategist

Molly Ryan was toughened by her upbringing. Both her parents had been in the military, and she grew up in bases across the globe. Often the "new kid" at school, Ryan learned to defend herself when necessary. At the age of 9, she hospitalised a 15 year-old bully who had been terrorising her and her classmates. The boy was in intensive care for 6 days, but the authorities accepted that it was self-defense and the assault charges against young Molly were dropped.

Ryan graduated from school with honors and immediately followed her parents' lead by entering military service. She spent 3 years in the United States Marines Corps, earning two promotions, as well as a commendation for planning and leading the assault into Libya that recovered four stolen nuclear warheads. In 2090, Molly transferred into the special services.

The next several years were spent much like her childhood, without a permanent address or permanent friends. But Ryan accomplished every mission she was given, finding herself once again at the top of her class. During an assignment in the Middle East, Ryan infiltrated a terrorist group and stopped a smuggling ring dealing in high-energy weapons. She was captured and held briefly, but managed to escape. After that close call, Ryan decided to take a break and went into semi-retirement. But she always stayed in shape, ready to return to active duty if her country needed her.

"First Consul Bonaparte, crossing the Alps
at the Great St. Bernard's Pass, 20 May, 1800,"
by Jacques-Louis David, ca. 1801
© Archive Photos

Strader '01

Atomic Age (1900-2000)

World War II

The tanks and aircraft of the Second World War were vastly superior to those of WWI. The German Blitzkrieg, which relied heavily on the use of modern weapons, rolled quickly over much of Europe in 1939-40, in stark contrast to the morass that had developed in 1915.

The Battle of Britain (1940-41), fought entirely in the air, showcased how much air power had changed between the two wars. The heavy bombing of Germany that followed was made more feasible by the advent of long-range escort fighters, such as the P-38. Eventually, entirely new propulsion systems resulted in the first jet aircraft and long range rockets.

Warships played a greater role in WWII than they had in the previous World War. Battleships and submarines of improved design were joined by aircraft carriers, which demonstrated their striking power at Pearl Harbor, Midway, and other battles. Sophisticated anti-submarine warships actively patrolled the waters around these larger, more-vulnerable vessels.

Military research also produced the defining – if frightening – scientific achievement of the Atomic Age: the splitting of the atom. The atomic bomb closed the horrific story of the Second World War. But no individual technology or weapon was responsible for bringing the war to an end. Rather, it was technology as a whole – both on and off the battlefield – that decided the outcome of WWII. In that respect, it foreshadowed the future of combat.

Chapter XII
Wonders

When one considers all of the structures people have built, those that may be called "Wonders" make up only a tiny percentage. Yet their historical significance is far greater than their scarcity would suggest. Such architectural and engineering marvels instill a pride of accomplishment so profound that even enemies of the builders cannot help but admire the achievement. The most famous examples in history are certainly the Seven Wonders of the Ancient World, but any edifice that transcends time and exceeds national boundaries can evoke that same sense of wonder.

Wonders of the World

History is replete with magnificent tombs and temples, but a civilisation may decide to build a Wonder for any number of purposes. The Ishtar Gate in the city of Babylon, though beautifully constructed and decorated, was a fortified gate that could be closed to deny enemies access to the city. The impressive Pharos Lighthouse was fully functional, standing as a beacon in the harbor of Alexandria, Egypt.

The feeling of awe that such structures arouse is not limited to those who visit them. Descriptions, depictions, and personal accounts can stimulate the same feeling in those who have never seen the sights firsthand. The reputation of a Wonder such as the Statue of Zeus or the Roman Coliseum possesses its own power, its own ability to stir one's passions. In this sense, Wonders are able to inspire from afar.

Beyond mere bragging rights, Wonders in Empire Earth can benefit your civilisation in two substantial ways. In normal games, constructed Wonders can lead directly to victory. Additionally, each type of Wonder provides a special bonus or "Power" to your civilisation. When a Wonder falls, however, its bonus ceases.

WONDER	POWER
Tower of Babylon	**Revelation** Priests can convert multiple enemies at once.
Ishtar Gate	**Safe Haven** Significantly increases the hit points of the owner's walls, towers, and gates.
Temple of Zeus	**Sanctity** Members of the owner's population can heal themselves.
Library of Alexandria	**Survey** All enemy buildings become visible.
Pharos Lighthouse	**Guiding Light** Reveals all oceans, lakes, and water ways – and any units on, in, or over them – in a large area around the Lighthouse.
Coliseum	**Spectacle** Redistributes the world's population, increasing the population capacity of the owner and decreasing the capacities of all enemies.

Victory with Wonders

By building a Wonder, a civilisation demonstrates its superiority over other civilisations. Such status symbols serve to impress upon rivals the futility of resistance, for a civilisation capable of erecting a structure of such magnificence is surely capable of anything.

In normal games of Empire Earth, constructing Wonders is one possible path to victory. The number of Wonders that need to be standing simultaneously to achieve victory is set before a game begins. If during a game a player builds at least that number of Wonders and keeps them standing for the minimum amount of time, then that player is declared the winner. A countdown clock ticks off the game-seconds to victory.

Wonder Victory Examples

Consider a “free for all” game in which 2 Wonders are needed for victory. Player 1 decides to pursue a Wonder victory. As soon as Player 1 finishes constructing his second Wonder, a countdown clock appears, which is visible to all players in the game. If and when the countdown clock expires, Player 1 wins. If, on the other hand, either one of his Wonders is destroyed by an opponent before the clock expires, then the clock disappears. Player 1 must then construct another Wonder in order to bring his total back to 2 and start a new countdown clock.

NOTE: For the purpose of determining victory, teammates share Wonders. However, if you forge a new alliance when you have a Wonder clock running, the clock will be reset.

Constructing Wonders

Herodotus, the celebrated Historian of Ancient Greece, wrote that the Great Pyramid of Khufu in Egypt took 20 years to complete. A permanent workforce of 20,000 laborers (by modern estimates) cut, moved, and fit together the more than 2.3 million blocks of stone used in the Great Pyramid. Projects on so massive a scale required preparation to begin and resolve to finish.

To construct any one of Empire Earth’s Wonders, your civilisation must first prepare for the undertaking by advancing to the second playable Epoch in the game. The Copper Age is the earliest Epoch in which you can build a Wonder in any game. No Wonders can be built in the Prehistoric or Stone Ages because the level of technology available in those Epochs is insufficient to construct a Wonder. Wonders can always be built in the Nano Age.

Wonders are large and require a lot of raw material. Before you can build one, your civilisation must accumulate the resources necessary for it. Once you have the resources on hand, you can assign citizens to carry out the construction. Wonders are constructed like any other building, but due to their size and unique design they take longer to complete than other buildings. Wonders are not one-of-a-kind, so you can build a Coliseum, for example, even if there is already one elsewhere on the map.

NOTE: The cost of each Wonder increases in later Epochs. So for example, a Wonder built in the Nano Age is more expensive than the same Wonder built in the Bronze Age.

The Wonders

Tower of Babylon

Power: Revelation

Also known as the Tower of Babel and mentioned in the Book of Genesis, this enormous Ziggurat had a square foundation 300 feet on a side. Its multiple stepped levels (including the crowning religious shrine) rose nearly 300 feet into the air. The Tower, which stood just north of the Great Temple of Marduk in the city of Babylon, was also dedicated to Marduk, the principle deity of the Babylonian civilisation. The Babylonians built the Tower out of baked mud bricks and it was renovated several times, most likely reaching the pinnacle of its magnificence under Nebuchadnezzar II, who ruled from 605 – 563 BC. But the bricks eroded easily and, after an uprising in the 5th Century BC against the city's foreign ruler, Persian King Xerxes I, the Tower fell into disrepair.

The Tower of Babylon, capped with its religious shrine, reaches up towards the heavens. This spiritual beacon serves to increase the effectiveness of disciples attempting to sway the infidels of other civilisations. Priests can therefore convert many with the same effort it previously took to convert one.

Ishtar Gate

Power: Safe Haven

Babylon was also home to the famous Ishtar Gate, the grandest of the city's eight fortified gates. It spanned the Processional Way, the main route into the city, and consisted of an outer gate and inner gate with a courtyard in between. Nebuchadnezzar II rebuilt the Ishtar Gate three times, raising the level of the roadway each time. The Gate, named after the Mesopotamian Goddess of Fertility and War, was also a monument, decorated with a blue glaze and adorned with hundreds of reliefs of lions, bulls, and dragons. A reconstruction of the Gate, made from original materials, stands in the State Museum in Berlin today.

The knowledge and craftsmanship necessary to complete the Ishtar Gate is immediately transferable to all the other walls and towers belonging to the civilisation that constructs it. As a result, all the owner's walls, towers, and gates become much more durable.

NOTE: The power of the Ishtar Gate has a greater affect in Tournament games than it has in Standard games. Also, building two Ishtar Gates does not double the Wonder's effect.

Temple of Zeus

Power: Sanctity

Completed around 460 BC, the Temple of Zeus at Olympia was built as a centerpiece for the Festival of Zeus. The Festival, which included the legendary Olympic Games, was held every four years in Olympia from 776 BC until it was abolished by Roman Emperor Theodosius I at the end of the 4th Century AD. The Temple contained the Statue of Zeus, the most famous statue of Ancient Greece and one of the Seven Wonders of the World. Made of ivory and gold and assembled in pieces by the master sculptor Phidias, the statue was 40 feet high and depicted the King of the Gods seated on a throne holding a scepter in his left hand and a figure of Nike, the Goddess of Victory, in his right. The temple was knocked down by order of Theodosius II in 426 AD, but legend has it that wealthy Greeks had already moved the great statue to Constantinople. Sadly, it was destroyed in a fire there later that same Century.

By honouring the King of the Greek Gods, the Temple of Zeus provides a special benefit to all believers. Members of the owner's population can slowly heal their own wounds (or repair their own damage) until their health is fully restored.

Library of Alexandria

Power: Survey

The greatest collection of texts in the ancient world resided in the celebrated Great Library of Alexandria, part of a research institute known as the Alexandrian Museum. The library and museum were founded by Demetrius Phalereus near the beginning of the 3rd Century BC under the watchful eye of Ptolemy I, one of Alexander the Great's generals. Like Alexander, Demetrius was a student of Aristotle and he wished to create a repository for all the written knowledge of the world. By contemporary estimates, the library contained in excess of 500,000 scrolls on virtually any subject then imaginable. Accounts of the Library's destruction are numerous, but the most popular version claims that Julius Caesar accidentally burned the Library down when he set fire to a fleet of docked ships during the Roman Civil War. This account, however, is by no means proven.

Included in the Great Library's vast collection are surveying maps that pinpoint all the standing buildings in the region. And so up-to-date is the collection that even newly constructed buildings are shown. Thus, the Library allows the owner to see where enemies have constructed all their buildings, walls, and towers.

Pharos Lighthouse

Power: Guiding Light

Ptolemy I was also responsible for the construction of the Pharos Lighthouse, which was completed in about 280 BC by his successor, Ptolemy II. The Lighthouse stood over 350 feet high and was topped with a statue of Poseidon, the Greek God of the Sea. It was the second tallest manmade structure of its time after the Great Pyramid. A moveable mirror reflected the light of the sun during the day and the blaze of a fire at night. Legend claims the light could be seen 100 miles away. After standing for more than 1,500 years on the Island of Pharos in Alexandria's harbor, the Lighthouse finally succumbed to earthquakes in the 14th Century AD and collapsed into the sea. Scuba divers discovered remnants of the great Lighthouse in the late 20th Century.

The Lighthouse, with its tremendous height and bright light, is capable of casting its beam far and wide. It illuminates all nearby water realms and any units traversing them.

Roman Coliseum

Power: Spectacle

The Coliseum, called the Flavian Amphitheater in ancient times, was opened in 80 AD by Roman Emperor Titus and stayed in operation for more than 300 years. The enormous stadium could seat upwards of 50,000 spectators, who would pack the marble benches to witness gladiatorial death matches, combat with exotic animals, and public executions. The arena was even purposefully flooded from time to time in order to stage mock naval battles. The Coliseum's events drew crowds from every level of society, from citizens and slaves to Senators and even the Emperor himself, who had a box seat in the first row. A partial roof of cloth is reported to have protected patrons from the harsh Roman sun.

The reputation of both the Coliseum itself and the bloody spectacles staged within attract the curious from miles around. Its extraordinary seating capacity allows the owner to accommodate many visitors, increasing the overall population capacity of the owner's civilisation while decreasing the capacity of his or her rivals. But should a rival civilisation erect a competing stadium, the population capacities of the two civilisations even out once again.

NOTE: If two or more Coliseums are built by the same civilisation, the effects are not cumulative.

Atomic Age (1900-2000)

Modern

In the latter half of the 20th Century, the Cold War dominated the international policies of many countries. Localised conflicts in Korea and Vietnam grew to involve world powers. Nuclear weapons were available, but never used. Instead, conventional weapons were modernised and new weapons, such as attack and transport helicopters, were deployed.

With the invention of microcomputers, military hardware went high-tech, resulting in advanced weapons systems such as the M1 tank, the F-15 fighter, and the B-2 bomber. Heavy long-range bombers – such as the B-2 and the earlier B-52 Stratofortress – were built all through the Cold War. The world powers also developed stealthy nuclear-powered submarines, which could remain hidden beneath the waves for months at a time. When the Cold War ended in the early 1990's, nations struggled to redefine how best to use the vast arsenals they had amassed. The Gulf War and the conflicts in former Yugoslavia became de facto showcases for some of the world's latest weapons.

Advances in computers and communications were not limited to military uses however. These technologies revolutionised business and industry, as well as the private lives of millions of people. Soon, they defined a new Epoch of human development.

Chapter XIII
Buildings

Since humans first started constructing artificial shelters, many kinds of buildings have sprung from the human mind. In some Epochs of history, new types of buildings proliferated almost as rapidly as new construction. Form often followed function, but architectural designs changed over time to take advantage of new construction techniques and materials, and to reflect contemporary artistic tastes.

Civil Buildings

Settlement

Epochs: All
Produces: Nothing
Researches: Nothing
Area of Effect: None

Nomadic peoples roamed the land in search of food and other resources, setting up temporary shelters as necessary. Once people began living in more-permanent communities, individuals wishing to move to a new location were undertaking a major task… and risk. Pioneering settlers would set out into the unknown to set up the rudiments of a new town: a settlement. Access to needed resources was just one of the criteria they used to choose where to build. If the location for the settlement was well chosen and all went according to plan, the settlers might decide to turn the site into a full-fledged town centre. In the meantime, the settlement served as a simple collection site for raw materials.

In Empire Earth, Settlements are used as resource drop-off points. Populating a Settlement with Citizens increases the economic productivity of the Citizens who drop off stone, gold, or iron there. (Note that the Settlement must be fairly close to the mining site in order to receive the bonus.) Once Populated with enough Citizens, a Settlement automatically transforms into a full-fledged Town Centre.

Town Centre

Epochs: All
Produces: Citizens, Heroes, and other units
Researches: Economic Technologies, Epoch Advancement
Area of Effect: Morale bonus, based on number of Houses.

Humans have always created public gathering places at the centres of their communities. There were rudimentary Town Centres even before there were true towns. Originally no more than a fire pit, the Town Centre gradually evolved into a place where citizens could meet to conduct the business of government, exchange goods, learn the news, enjoy works of art and culture, and muster for military service.

Villages and towns first appeared when nomadic hunter-gatherers began settling into an agricultural lifestyle. In order to protect themselves and their food supplies from raiders, they constructed their public and private buildings within a naturally fortified area or else erected walls. As Towns developed and grew, Town Centres became cleared plazas, castle keeps, and town halls. Eventually, they expanded into the bustling downtowns of modern cities. Some even became Capitals – the seat of a civilisation's government. Regardless of how communities evolve in the future, so long as humans require social contact, towns will always have a focal point.

Like the Settlement, your Town Centre is a collection point for resources. The number of Citizens working in the building determines how much of an economic bonus you get for dropping off mined resources there. Unlike Settlements, Town Centres can produce Citizens and Heroes, and they provide morale to surrounding defenders. The morale provided by your Town Centre depends on the number of Houses you have built within its area of effect. The higher the morale of your troops, the longer they can last in a battle. Additionally, Town Centres upgrade into Capitals as soon as they are Populated with enough Citizens.

Capital

Epochs: All
Produces: Citizens, Heroes, and other units
Researches: Economic Technologies, Epoch Advancement
Area of Effect: Morale Bonus, based on number of Houses.

As civilisations expanded, the governments that served – or ruled – them often had to expand as well. In the ancient Greek democracies, the governing assembly of a city-state was composed of its many citizens, with officials being selected or elected from their ranks. The Roman Senate contained several hundred Senators during the years of the Republic, about 900 under Julius Caesar, and as many as 2,000 by the 4th Century AD. A central hall or Capital often served as the place where government representatives or officials conducted the business of the state.

As the seat of government and successor to the simpler Town Centre, the Capital can be considered the hub of a civilisation. It has a symbolic significance and practical importance to the people of the civilisation for which it stands. Not surprisingly, a sense of nationalistic pride is often instilled in those who are in its presence. In times of crisis, it can serve as a rallying point to motivate the troops to fight on regardless of circumstance. Its value, in peacetime or war, cannot be overstated.

Capitals are the successor to the Town Centre. Each civilisation starts out with a Capital and some Citizens (in Random Map games). Capitals perform all the functions of the Town Centre, but they are stronger and can instill extra morale to defenders (by building additional Houses). You can continue to Populate a Capital with Citizens – beyond the number needed to upgrade from a Town Centre – in order to further increase the building's economic bonus.

House

Epochs: All
Produces: Nothing
Researches: Nothing
Area of Effect: Morale Bonus, when built around Town Centre or Capital.

Shelter, along with water and food, ranks as one of the "three great needs" of every human. Over the course of history, humans have sheltered themselves in many ways. The earliest domiciles were caves, yet even these naturally-made homes were altered by early humans to suit their needs. Floors were leveled and cleared of stones, and simple sleeping pallets were made of woven vines. Once fire was harnessed, shelters often contained – or were located near – a fire pit.

An important change took place when humans learned to build their own shelters. People moved out of cold, drafty caves into warmer lean-tos and teepees, which could be constructed wherever they were needed. More-permanent mud huts followed. Half-timber construction – in which the spaces between structural supports are filled with other substances like brick or plaster – was widely used in Europe from the late Middle Ages on. As building techniques continued to be refined, multi-story houses became common. By the 20th Century, standard designs and cheaper materials had led to subdivisions and tract housing, allowing many families to own homes.

Paralleling these new designs were other domestic innovations, such as central heating systems, indoor plumbing, and glass windows, though at first only the wealthiest citizens could afford such luxuries. Electricity was brought into people's homes to provide light, heat, and power. Later, houses were wired for telephones, cable TV, and Internet access, while computers monitored and controlled the temperature, humidity, light level, and other environmental factors.

Houses in Empire Earth do not effect your population limit, but they do work with Town Centres and Capitals to provide morale to your people. The more homes your forces are defending, the more morale they feel and the longer they last in battle. Each House built within the area of effect of a Town Centre or Capital increases morale by 1, up to a maximum level. The maximum morale level of a Capital is higher than that of a Town Centre.

Granary / Farm

Epochs: 3-14
Produces: Food
Researches: Agricultural Technologies
Area of Effect: None

Agriculture came into existence sometime during the 8th Millennium BC, but took roughly 4,000 years to spread from the Middle East and Greece throughout all of Europe. Farming the land was hard work, but it was more productive and reliable than nomadic scrounging and scavenging. Since that time, many kinds of plants and

animals have been domesticated. Through selective breeding, species have been tailored to live in harsher climates, resist disease and pests, and produce more for each harvest.

Beyond food production, the problem of preserving food limited the growth and expansion of civilisation for many years. Meat and vegetables spoil only a few days after being gathered if not properly stored. Additionally, the presence of uneaten food often attracts insects and other vermin. The ability to maintain stores of healthy food not only addressed these concerns, but also meant that people could spend less time hunting, gathering, and farming. This in turn allowed the specialisation of labour that is the hallmark of an advanced society.

Humans tried many methods over the centuries to preserve food. As early as 3,000 BC, the Egyptians built granaries to house harvested grain. They even domesticated the cat to defend the stored grain from mice and rats. As technology advanced, people began to salt meat and dry vegetables, often storing them in cool, dry barrels or sealed stone basements to retard the growth of fungus. Later developments included canning, mechanical refrigeration, the addition of preservative chemicals, and irradiation. The granary advanced as well, becoming a distribution center in addition to a storage and preservation facility.

Your civilisation builds Granaries and Farms together. A single Granary can support up to eight farm plots, and each plot requires only one Citizen to farm it. Harvested crops are deposited in the Granary. You can also Populate a Granary with Citizens, just like a Settlement, to increase farm production. Your Citizens are skilled farmers who can keep their Farms productive indefinitely, once they are planted. Farms only need to be replanted if they get destroyed.

Fortress

Epochs: 2-14
Produces: Nothing
Researches: Nothing
Area of Effect: None

To protect their expansive territories, civilisations often stationed troops in outlying areas to maintain a stabilising military presence. Fortified shelters or fortresses were built to house these garrisons. The presence of a fortress served to remind the locals who was boss as well as protect the land on which it was built from enemy incursions.

Along Hadrian's wall, constructed in Northern Britain during the 2nd Century AD, the Romans built small forts at regular intervals to garrison the legions who were guarding the frontier from the "barbarians" to the north. In Medieval times, castles were the most advanced fortresses. So durably built were these castles that many still dot the landscape of Europe and elsewhere today. Military strongholds continued to play important roles in modern times. At the Battle of Verdun during the First World War, the Germans launched an offensive to capture several French Forts that controlled the region around the town of Verdun. Though the Germans were initially successful, the Allies eventually retook all the forts over a period of several months, resulting in a combined total of more than 600,000 casualties.

A garrisoned Fortress can help you maintain dominance over a key location or territory. You can also keep an army in reserve inside a Fortress. Troops and Citizens garrisoned inside a Fortress do not count towards your total population. However, you cannot ungarrison units if they would cause your civilisation to exceed its pop cap.

Technology Buildings

Temple

Epochs: All
Produces: Priests and Prophets
Researches: Religious and Spiritual Advances
Area of Effect: Protects against Calamities

Early peoples revered natural objects like trees, stones, and mountains, believing them to possess a spiritual significance. After the advent of permanent settlements, artificially created places of worship began to appear. Some were even built on sites considered to be spiritually important. One of the most famous early structures is Stonehenge, near Salisbury, England. Though the true purpose of Stonehenge is not known, its placement and alignment with the sunrise on the Summer solstice suggests that it was erected by sun worshipers. Started in approximately 3,100 BC, it went through three main phases of construction, ending with its final arrangement in the 16th Century BC, the ruins of which still exist today.

The layout and placement of places of worship have always been important considerations in their construction. The concept of reaching toward the heavens is found in many religious structures, from the Ziggurats – or stepped towers – of Mesopotamia to the vaulting cathedrals of Europe to the simple spires of modern churches. The ancient Greeks built their most important temples on the acropolis of their cites, the Parthenon in Athens being a prime example. Accessibility, also a key factor, has assured that temples are present wherever people choose to live, providing sanctuary and spiritual peace of mind.

Temples produce both Priests and Prophets. In addition, the solace afforded by holy places to those seeking sanctuary is a powerful spiritual force. As a result, Calamities cannot occur in the area surrounding a Temple.

University

Epochs: 3-14
Produces: Nothing
Researches: Scientific, Social, and Technological Advances
Area of Effect: Protects against Conversion

A leading cause of the sustained advance of civilisation has been education. In Sparta in the 8th Century BC, the education of children included a large artistic component for both sexes. In succeeding years, however, emphasis on military

concerns grew, shifting the goal of education into turning girls into good mothers and boys into good warriors. Boys were grouped into small, age-dependent classes to learn discipline, obedience, and loyalty to Sparta. Meanwhile, in Athens, artistic and moral concerns formed the majority of the curriculum. Different disciplines, such as writing, poetry, and physical education, were taught in different classrooms by different masters. Higher education took place in institutions such as Plato's Academy and Aristotle's Lyceum.

What we today call a university did not evolve until the Middle Ages. The University of Bologna was founded in the 11th Century to teach law. The University of Paris, followed by the University of Oxford, came into being in the 12th Century. These institutions were made up of colleges and even maintained residence halls for their students. The University of Paris had a two-semester system, final examinations, and courses that consisted of lectures, reading texts, and discussions – a model many universities still follow today.

Both lower and higher education were steeped in religious tradition through both the Renaissance and the Protestant Reformation. It was not until the late 17th Century that scientific methods and inquiries began to replace religious traditions at the University level. Today, universities are well known for carrying out scientific research as well as being hotbeds of social change.

The educational process has long been concerned with giving students the knowledge they need to become successful members of society. Educated persons have not only learned but lived by the rules and customs of their civilisation. As a result, they are far less likely to be swayed by foreign ideas that conflict with their own. Thus, missionaries and evangelists from rival nations will find it impossible to convert people in the presence of a local University.

Hospital

Epochs: 3-14
Produces: Nothing
Researches: Medical and Medicinal Advances
Area of Effect: Heals Land Units (except Cybers)

Healing, at first, was a matter for spiritual leaders and sacred sites. Early hospitals were really places where a patient might receive divine help. In Greece and elsewhere, for example, a ritual known as incubation was used in which illness was said to be cured by sleeping in a holy place. Bathing in curative waters was also thought to be beneficial and this practice may have been the origin of modern health spas. Later Greek doctors – Hippocrates being the most famous – were instrumental in pushing the science of medicine forward. Roman hospitals, based largely on Greek medicine, were first established around 100 BC to treat injured and ill soldiers.

The rise of Christianity helped to transform hospitals into the care facilities familiar today. In the 6th Century AD, the Hôtel-Dieu of Lyon opened. It had a large hall lined with beds and emphasised treating the patient, not just the ailment. Monastic infirmaries in Europe and elsewhere cared for monks and outsiders alike. At the end of the Middle Ages, civil authorities increasingly began to take on the responsibilities of healthcare. By the turn of the 16th

Century, England alone reportedly had more than 200 secular hospitals to care for its people. These medical facilities were precursors of the vast health care industry that was to come.

Your Hospitals are the healing centers of your civilisation. Hospitals slowly restore their patients back to full health – including the crews of land-based war machines.

Military Buildings

Barracks

Epochs: All
Produces: Infantry, including Medics
Researches: Unit Upgrades
Area of Effect: None

Standing armies did not always exist. Early armed forces consisted of tribal members who would sporadically come together to protect or obtain fertile hunting grounds from rival tribes. Once humans began living in permanent locations, the concept of selective service emerged. Community leaders would conscript a group of villagers to conduct raids in the months between sowing and harvest. As agriculture improved and food acquisition became more reliable, a specialised warrior class arose. And none were more numerous than the foot soldiers – the infantry. These soldiers were initially employed for the purpose of defending the community, though they came to be used for attaining territory in organised military campaigns.

The rise of the professional soldier necessitated the creation of facilities where the warriors could train, sleep, eat, store their equipment, and otherwise prepare for war. Barracks were constructed, at public expense, for these purposes. The barracks' role eventually expanded to include housing for soldiers' families and facilities for manufacturing weapons. Today, barracks contain everything that modern soldiers need to train for their primary job: defending the larger state.

At the Barracks you can train all manner of infantry, from primitive foot soldiers who brandish clubs and spears to modern soldiers carrying guns and lasers. In later Epochs you can also train Medics.

Archery Range

Epochs: 2-7
Produces: Foot and Mounted Archers, and other ranged units
Researches: Unit Upgrades
Area of Effect: None

The use of the bow goes back at least 30,000 years, as clear depictions of bow-wielding hunters have been found in cave paintings from that time. Bows evolved into several distinct varieties, including the composite bow, the crossbow, and the long bow, all of which had their advantages and disadvantages in battle. Crossbows were better at close range and required less skill to use, while the longbow, though a difficult weapon to master, could fire light arrows 500 yards. Some archers – the Mongols of the 13th Century, for instance – even took to horse back, which provided them greater speed though diminished their aim while riding.

To perform their best, archers, perhaps more than any other early soldier, needed training and practice. Some archers, such as English longbow men, trained from early age to become proficient with their weapon. Target shooting, hunting, and even contests at an archery range helped archers as well as other missile-throwers get into battle-ready condition. Archery ranges also provided a convenient storage facility for arrows, javelins, and other equipment.

All types of missile-throwing warriors, including archers, are trained at the Archery Range.

Dock

Epochs: 2-14
Produces: Fishing Boats, Transport Ships, and Warships
Researches: Unit Upgrades
Area of Effect: Repairs All Ships

From earliest times, docks have served two main purposes: as a place to build and repair ships, and as a transfer point to load and unload cargo. Many early Mediterranean powers, such as the Phoenicians and Greeks, rose to prominence due to their capacity to exploit their access to the sea. Fishing, trade, transportation, and eventually naval warfare were all facilitated by the construction of docks, which went hand in hand with advances in ship construction.

Many types of docks have appeared over the course of history. The most primitive designs were little more than retaining walls with a deck on top that provided access to and from the docked ships. Wharfs – essentially artificial shorelines built in deeper water – were built to allow larger ships to dock. In the 13th Century BC, the Phoenicians were building artificial harbours to shelter docks from wind and the open sea. In time, docks grew into complexes of piers, dry docks, and warehouses capable of servicing many ships at once.

Docks produce fishing boats and transports as well as warships. There are several classes of warships available for construction at a Dock: battleships, galleys (later galleons), frigates, and gun boats (later cruisers). Naval vessels can be repaired at a Dock – just sail a damaged ship up to a Dock to initiate repairs.

Stable

Epochs: 3-10
Produces: Mounted Units
Researches: Unit Upgrades
Area of Effect: None

Evidence suggests that horses were first domesticated prior to 3000 BC. Early horses were much smaller than those with which we are familiar today. Generations of selective breeding made them larger, more powerful animals, better suited to the demands of war.

Horses were first used in combat to pull chariots, replacing donkeys and other beasts of burden. The Hittites and Egyptians, among other civilisations, used them expertly during the 2nd Millennium BC. Later, horses were ridden into battle, most notably after the 4th Century AD by the Byzantines as well as many of the Germanic "barbarian" tribes. In the Middle Ages, mounted knights wielding lances or swords were formidable adversaries, especially when attacking in a cohesive group against hapless infantry.

The use of cavalry continued, with modifications, right through to the early 20th Century. As mechanisation ensued during and after World War I, cavalry disappeared from the battlefield. But horses still hold a place of honour and respect in military circles to this day.

Mounted soldiers (except for archers) need the special training and facilities provided by a Stable. These highly regarded men can wield a wide variety of arms, from melee weapons to lances to firearms. They remained the fastest forces on the battlefield until the advent of mechanisation.

Siege Factory

Epochs: 4-14
Produces: Siege Weapons, Cannon, Artillery, and Anti-Tank (AT) Guns
Researches: Unit Upgrades
Area of Effect: None

Siege weapons have undergone many changes from ancient times to today, but their uses have remained very similar. In general, such weapons have been used to attack fortified positions or clusters of ground troops. Around the turn of the 4th Century BC, Dionysius the Elder of Syracuse used ballistae in his war against Carthage. Alexander the Great is also known for his use of stone throwers and siege tactics. Siege engines, when not crafted on-site, were assembled from pieces made in a workshop and carried along by the army.

Once gunpowder was introduced to Europe in the 13th Century AD, siege artillery underwent a significant transformation. Mechanically-thrown missiles gave way to chemically-propelled projectiles. Foundries – employing techniques previously used for making bells – cast the brass and bronze barrels of early cannon. The first gunpowder artillery pieces were only slightly more powerful than traditional siege weapons, but advancements in ballistics and gun design soon widened the gap. By the end of the 14th Century, workshops were constructing iron cannon capable of firing 450-pound cannonballs well over 1,000 yards, but ranges under 300 yards were preferred for maximum force at impact. Artillery then changed little until the 19th Century, when a host of improvements – such as recoil control systems, "fast-loading" technology, better ammunition, and standardised components – made guns far more efficient and effective.

You can produce a myriad of siege weapons and artillery in Empire Earth. You can begin to fabricate siege engines in the Bronze Age. In the Renaissance, the catapults, rams, and siege towers of Medieval warfare give way to cannon forged from bronze and iron. In later Epochs, gunpowder weapons are superceded by lasers and other energy weapons.

Airport

Epochs: 10-14
Produces: Airplanes and Helicopters
Researches: Unit Upgrades
Area of Effect: Repairs and Refuels Airplanes when Hangared, repairs nearby Helicopters

As soon as the Wright Brothers had solved the riddle of powered flight in 1903, airplanes captured the public's imagination. Few, however, foresaw the impact airplanes would have on the world. Even the military took a while to understand the potential of the airplane, only beginning to show an interest in air power just prior to WWI. Yet it was this interest that ultimately spurred many of the designs and technological improvements that were to come. Planes were made to fly faster, higher, and stay aloft longer, and the safety of flying improved as well. Fighters and bombers emerged as distinct categories of military aircraft, each containing a multitude of role-specific variants. Following World War Two, helicopters joined airplanes in the arsenals of many nations.

The concept of an airport took a while to develop. In the early days, planes often had no permanent homes – any clear field could serve as a runway. So-called "barnstormers" would hop from town to town in their biplanes, selling rides and maintaining their aircraft themselves. But, as flight technology matured and airplanes proliferated, permanent facilities became essential. Airports were needed for refueling and maintaining aircraft, in addition to picking-up and dropping-off passengers and cargo. In the growing air forces of the world, military airports repaired and rearmed aircraft and also trained pilots.

Airports not only produce your aircraft, but allow you to issue orders to your air force. Airplanes inside an Airport are automatically repaired, refueled, and rearmed for their next mission. Helicopters, also built at the Airport, are repaired when they are near an Airport. For the details about controlling your air forces, see Chapter VIII: Warfare.

Naval Yard

Epochs: 10-14
Produces: Submarines, Aircraft Carriers, and Sea King Helicopters
Researches: Unit Upgrades
Area of Effect: Repairs Ships, Subs, and Sea Kings

When 20th Century navies began using new classes of vessels such as U-boats and aircraft carriers, naval facilities more advanced than simple docks were needed to accommodate them. Dedicated Naval Yards not only built these new types of warships, but also provided them with specialised berths where they could dock to receive regular maintenance, repairs, and crew replacements.

During the Cold War, navies came to rely more and more on vessels that ran on nuclear power and carried nuclear weapons. They were key components of the military strategies of many countries and were often at sea for many months at a time. Naval Yards supplied these nuclear-equipped vessels and gave them the meticulous pre-deployment attention they needed to keep them running safely during their long tours of duty.

The Naval Yard produces modern classes of warships as well as Anti-Sub Helicopters. Like the Dock, the Naval Yard can make repairs to any kind of naval vessel. Aircraft Carriers, built at the Naval Yard, are capable of producing, launching, and repairing their own fighter/bomber aircraft. In this sense, they are like floating Airports.

Tank Factory

Epochs: 10-14
Produces: Tanks and Mobile Anti-Air (AA) Guns
Researches: Unit Upgrades
Area of Effect: None

The British developed and used the first armored track-propelled vehicles during World War I. The name "tank" arose in order to maintain secrecy; the vehicles were assembled in pieces which were then shipped to the front in crates marked "tanks." The first major tank assault came at the battle of Cambrai in 1917. Though the initial success of the British tank offensive was subsequently pushed back by the Germans, tanks had proved their worth and soon became a mainstay of modern warfare. Dedicated production facilities, however, were slow to develop. The United States, when it entered World War II in 1941, adapted its giant automobile manufacturing plants to tank production.

Tanks advanced significantly during and after the Cold War. Designers improved the engines, armour, and armaments of tanks and introduced computerised fire control and tracking systems. By the middle of the 21st Century, the need for sophisticated equipment and operational security had resulted in tank factories with self-contained computer design and testing labs.

Your civilisation can begin constructing Tank Factories at the start of the Atomic Age (WWI). In addition to tanks, your factories can produce armoured anti-air vehicles.

Cyber Factory

Epochs: 13-14
Produces: Combat Cybers
Researches: Unit Upgrades
Area of Effect: None

Automated intelligent weapons known as "Cybers" were introduced in the 21st Century mostly to keep human beings out of harms way. The precursors to Cybers were small robots – remotely operated – which were used for reconnaissance and disposing of unexploded ordnance. Later, larger machines were lightly armed and sent into hostile areas to gather intelligence for their operators. The first truly autonomous Cybers appeared in the mid-21st Century once neural nets and processing power became sufficiently advanced to provide machines with rudimentary intelligence. In time, continued advances in materials, propulsion, weapon systems, and machine intelligence lead to an explosion of Cyber designs.

Though previously used in minor skirmishes, the first large-scale use of Cybers came during the expansionist wars of Novaya Russia. The ability of the machines to function in all kinds of conditions made them ideal for the operations to which they were assigned. Thereafter, Cybers became standard equipment in all modern armies and Cyber Factories sprang up around the world.

Cyber Factories are available in the Digital and Nano Ages, and produce Combat Cybers.

Cyber Laboratory

Epochs: 13-14
Produces: Ultra-Cybers
Researches: Nothing
Area of Effect: None

Not all Cybers were mass produced in factories, destined to fill out the ranks of one army or another. Some were specially created to fill distinct, specialised roles on the battlefield, supporting or augmenting standard Combat Cybers. These "Ultra-Cybers" could protect friendly troops behind an energy shield or make battlefield repairs to their brethren. Others were outfitted with secret weapons that produced aerial anti-matter storms or debilitating energy fields. A insidious Cyber codenamed "Poseidon" was developed to capture other Cybers by introducing an invasive program into its target. As a result, later designs incorporated anti-virus countermeasures in an effort to fend off such attacks, though few were as effective as hoped.

Research and development of these more specialised designs required a dedicated facility with state-of-the-art equipment. Only the richest nations could afford to invest such advanced R&D Labs, but proper use of the resulting weapons often proved decisive in battle.

Cyber Laboratories, also available in the Digital and Nano Ages, produce Ultra-Cybers of various designs. For full descriptions of these Cybers and their special abilities, see Chapter VIII: Warfare.

Digital Age (2000 – 2100 AD)

The proliferation of microchips and the advent of the Internet ushered in the Digital Age. Global communications brought parts of the world closer together, but tensions elsewhere were not easily assuaged. In the New World Order that immediately followed the Cold War, warfare reverted to localised conflicts involving regional powers – with the occasional intervention of first-world nations. To fight these limited wars, military hardware needed to be highly mobile, versatile, and reliable. And, of course, it had to pack a punch.

High-energy laser and particle beam weapons had been prototyped by the start of the Digital Age. But their large size and immense consumption of energy made them impractical for field use. High-density power cells, developed in the early 2020's, were used in the first practical energy weapon designs, but they were large, cumbersome, and prone to running dry during heavy combat. The real breakthrough came with advanced fusion technology, which by 2031 allowed HD power cells to be replaced with smaller, lighter fusion batteries. Body armour was also updated to deflect energy beams while still providing decent protection against bullets and shrapnel. Early designs were of marginal benefit, but more-sophisticated materials were soon invented that absorbed incoming beams, capturing and distributing the energy throughout the armour.

The single most important development in military hardware during the Digital Age was the advent of artificially intelligent combat units known as Cybers. These advanced military robots, at first remotely operated, were eventually given a rudimentary intelligence which allowed them to carry out simple operations unassisted. By the 2050s, neural networks implemented on optical chip architectures were so far advanced that they exceeded the capacity of the human brain. When the hardware was imbued with "bottom-up" algorithms and "top-down" commonsense, the mechanical giants gained the ability to think and attained true consciousness. As a result, Cybers became the staple of all modern armies. Powered by fusion batteries and outfitted with the latest weaponry, these marvels of modern warfare were employed heavily by Grigor Stoyanovich, founder of Novaya Russia, during his country's wars of expansion.

In pure science, two breakthroughs had tremendous consequences. The first was the completion of the human genome project at the beginning of the 21st Century. The genetic revolution in medicine that followed increased the average life expectancy of people to 125 by the turn of the 22nd Century. The second breakthrough was finding the "Theory of Everything," considered to be the "holy grail" of physics. Discovered in bits and pieces, the Theory of Everything finally came together towards the end of the 21st Century. In time, it opened a whole new world.

Chapter XIV

Choosing a civilisation

On a large scale, the whole of recorded history can be viewed as intertwined ascensions and declines of all the civilisations humanity has ever produced. Some civilisations expertly used their unique combination of societal and cultural attributes to attain a peak of excellence whose significance did not diminish with time. But, for every eminent civilisation, there were many that never reached their full potential, leaving at most only minor imprints on history. Such shortcomings may have had little to do with the underlying characteristics of these civilisations, but rather with how those characteristics were or were not put to use.

Civilisations

The chronicle of time has been inexorably tied to the ebb and flow of civilisation since its very beginning. The disintegration of the Roman Empire, for example, led in large part to the so-called Dark Ages and eventual rise of Feudalism. A millennium later, the unprecedented exploration of the world during the late 15th and 16th Centuries resulted in an age of imperialistic expansion. The history of the 20th Century revolved principally around international struggles which culminated in two World Wars and a lingering Cold War.

Empire Earth offers you the opportunity to lead a civilisation of your choosing through any period of time in human history. You can also create a civilisation – even one that never existed in history – by using Empire Earth's Civilisation Builder. However you choose to play, you'll have the chance to make your own mark on the chronicle of time.

Historic Civilisations

Empire Earth comes with 21 great civilisations, each with its own strengths, ready for you to lead to world dominance and victory. These predefined Civilisations are from every era in history and include the Greeks, English, French, Germans, and Russians. Depending on the period of time you choose to play, you may want to select a civilisation that is appropriate to that period, though you do not have to. The choice is yours.

When a Random Map game of Empire Earth starts, you have 5 minutes to choose the civilisation you want to play. Just click on the blinking Civilisation Selections button to bring up the list of predefined civilisations (assuming the Use Custom Civ option was not chosen during the Game Setup). Then, select the civilisation you want and click OK to return to the game.

REFERENCE: A list of all the predefined civilisations and their bonuses can be found in Appendix A. Details on how to choose a civ to use in a game are given in Chapter III.

The Civilisation Builder

For those who want to leave their own personal imprint on history, Empire Earth's Civilisation Builder gives you the power to create your own customised civilisations. You can create different civilisations for different game situations, if you want to. For example, you could create a civilisation specifically for use in the Atomic Age or for Island Map Types. There are literally thousands of different civilisations you can create, but the process for making a civilisation is very simple.

Civilisations in Empire Earth are distinguished from one another by their unique characteristics. While all civilisations are, for example, able to produce fighter aircraft starting in the Atomic Age, some can innately produce better fighters by virtue of their particular strengths. Creating a civilisation in the Civ Builder is simply a matter of choosing which strengths or "bonuses" you want to give your civilisation.

Civilisation Builder

Load Save Exit

Bonuses

There are around 100 individual bonuses to choose from as you build your civilisation. The bonuses are organised under general headings, such as: Aircraft – Bombers, Civ – Economy, and Tanks. Different kinds of bonuses are available (as shown in the lists below).

Choosing a Civilisation

The percentages indicate the amount of each bonus. For example, if you chose to purchase the 20% Attack bonus for Calvary – Ranged, then all the ranged cavalry units you produce during the game will have an Attack that is increased by 20% over their base attack. Note that each bonus you purchase is applied automatically, IN ADDITION to any unit improvements you choose to research during the course of a game. Like unit improvements, bonuses that you purchase for units are shown in the Unit Improvement area of the user interface (after the "+" sign). See Chapters III and VIII for more information on Unit Improvements.

Unit & Building Bonuses	Civ – Economy Bonuses	Civ – General Bonuses
Area Damage	Farming	Conversion Resistance
Armour	Fishing	Mountain Combat Bonus
Attack	Gold Mining	Pop Cap
Cost Reduction	Hunting and Foraging	
Flight Range	Iron Mining	
Hit Points	Stone Mining	
Range	Wood Cutting	
Rate of Fire		
Speed		
Build Time Decrease		

TIP: The Civ – General bonuses are applied to your entire civilisation. You can make your units and buildings more resistant to conversion with the Conversion Resistance bonus, increase the damage they do when attacking down from a hill with the Mountain Combat bonus, or increase the overall population capacity of your civilisation with the Pop Cap bonus. The Civ – Economy bonuses increase the gathering efficiency of your Citizens (or Fishing Boats).

Creating Your Own Civilisation

To enter the Civilisation Builder, click the Game Tools button on Empire Earth's Main Menu. Then, click the Civilisation Builder button in the Game Tools menu. When you enter the Civ Builder you can create a new civilisation or click the Load button to load a civilisation you already created in order to modify it.

NOTE: When playing a Random Map game, if the Use Customs Civs option was chosen during the Game Setup, you can enter the Civ Builder during the game when you go to choose the civilisation you want to play. Just click the Civilisation Selections button during the first 5 minutes of the game to bring up the Civ Builder and load or create the Custom Civ you want to use (you can't save the civilisation for later use, however.)

Civ Points

When you create a new civilisation, you are given an allowance of "Civ Points" to spend on whichever bonuses you want. To purchase a specific bonus for your civilisation, simply click on it in the Available Bonuses list. The bonus automatically moves to the Civilisation Bonuses list and the appropriate number of Civ Points are deducted from your total Points Left. Note that the cost of the other bonuses under the same heading go up after you choose a bonus. When you run out of Civ Points (or have too few), you cannot buy any more bonuses.

You can "sell" purchased bonuses to get a refund of Civ Points, which you can then spend differently. To sell a bonus, just click on the bonus in the Civilisation Bonuses list. The bonus moves back to the Available Bonuses list and the Civ Points for it are added back to your Points Left. Note that you can only sell bonuses while you are creating your civ.

Saving Your Civilisation

When you are satisfied with the bonuses you have chosen, click the Save button to save your civilisation. You will be asked to specify a name for the civilisation (which will appear in the game for you and the other players to see). Your saved civilisations are available to you in Random Map games of Empire Earth, both Multiplayer and Single Player, as long as the Use Custom Civs Game Option is enabled. (If that option is not enabled, you must use one of the predefined civilisations.)

NOTE: You can save your civilisation only if you entered the Civ Builder from the Game Tools screen or the Scenario Editor. You can't save a civilisation during a game.

REFERENCE: For information about selecting a civilisation to use in a game, see Chapter III.

Strader '01

Nano Age (2100 – 2200 AD)

The ongoing technological process of miniaturisation attained its ultimate objective in the Nano Age. Nanotechnology had its first successes in the early 21st Century in medical applications. But subsequent improvements in imaging and manipulation techniques allowed for the creation of "nanomachines," with sizes measured in billionths of a meter. Working in concert, these amazing machines could theoretically build *anything*, atom-by-atom, including copies of themselves.

Programming the trillions of nanomachines needed to make a sizeable object in a reasonable amount of time was a major hurdle to overcome. The solution involved developing a simple coding system – not unlike DNA – that provided the instructions on how to make any type of compound. Larger structures were then assembled from the compounds. Quantum computers – the smallest and most powerful computers yet devised – handled the astronomical amount of data involved.

Nanomachines were soon being used to build a wide variety of things. Biological structures were merged with mechanical structures, creating cyborgs and other hybrids. The designs for Cybers – already highly successful – received a host of internal refinements that made them even more effective. And researchers developed artificial viruses that could be used for everything from medical treatments to mind control. The only restriction was that objects first had to be described on an atomic level, which was often a time-consuming process.

The other major development of the period was learning to synthesize "negative matter," an exotic substance with extraordinary physical properties. First hypothesised in the 20th Century, the formulation of the Theory of Everything in the 21st Century brought negative matter into clear focus. Applying the theory allowed humans to do something previously considered impossible: travel through time. Nanotechnology provided the means to magnify a phenomenon known as the Casimir effect to open a wormhole – a tunnel through the fabric of space-time. Once enough negative matter was synthesized to enlarge and stabilize the wormhole, objects were able to pass through. As soon as other technological barriers were overcome – such as minimizing the extreme forces involved and controlling where the "far end" of the wormhole appeared – time travel and teleportation both became a reality. The technology was even installed on a Cyber, codenamed Hades.

In the Nano Age, humankind gradually gained mastery over matter and energy, time and space. On the political front, a global movement calling for a free, united Earth gained a significant following. Yet despite these achievements and the virtually limitless possibilities they presented, life on Earth continued much the way it had over the previous 500,000 years.

Chapter XV
Scenario/Campaign Editors

The Empire Earth Scenario and Campaign Editors are versatile and robust tools for creating original maps, scenarios, and campaigns. Both give you maximum control over your creations without sacrificing ease of use. The Scenario Editor allows you to create Empire Earth maps and specify explicit goals which the player(s) must accomplish to win. The Campaign Editor lets you tie scenarios together into an integrated campaign. This chapter provides an overview of these editors; a complete manual can be found on your Empire Earth CD-ROM.

Scenario Editor

The Empire Earth Scenario Editor was designed from the ground up to be the best RTS scenario editor ever. It provides all the tools you need to create original game scenarios that are as simple or as complex as you wish to make them. You can build your own Empire Earth maps, add event triggers such as victory conditions, set game and player starting conditions, and include instructions and other messages. You can even create and direct your own in-game movies or cinematics.

Though the options available to you in the Scenario Editor are vast, learning the basics is really quite simple. The following sections in this chapter provide an overview of all the things you can do with the Scenario Editor. (A complete manual for the Scenario Editor is provided on your Empire Earth CD-ROM.) With a little practice, you'll be ready to create just about any game situation you can imagine.

Scenario Editor: Unit Placement Screen

The Scenario Editor is divided into seven main parts or “screens.” Icon buttons along the bottom-left of the editor take you to each screen (the eighth button accesses the Civilisation Builder, described in Chapter XIV). The buttons just to the left of the Mini-map provide save, load, and testing options. In the Scenario Editor, the Mini-map functions as it does during a game.

NOTE: Player 1 is always considered to be a human player, but does not have to be the only human player in the scenario. If you are planning to use computer players in your scenario, you must define where each computer player’s starting position is located when you create the scenario. The first land unit (i.e., not a building) that you place on the map for each computer player defines that computer player’s “home base.” Do not use a ship as that will put the home base in the water. You can, if you want, set up a trigger to kill that first unit as soon as the scenario starts. The computer player will defend its home base and perform most of its initial activity there (assuming it is an active player).

Starting the Scenario Editor

To start the Scenario Editor, click on the Game Tools button in Empire Earth’s Main Menu. Then click the Scenario Editor button to launch the Scenario Editor. A blank map is automatically loaded for you.

Moving the Camera

In the Scenario Editor, you have full control over Empire Earth’s 3D camera, so you can look at any part of the map from just about any angle you want. To rotate and pitch the camera, simply hold down the tilde “~” key while you move the mouse (you do not have to hold down the Shift key). Moving the mouse left and right rotates the camera, while moving the mouse forward and backward pitches the camera down and up. The mouse wheel zooms the camera in and out. It may take a little practice to get used to moving the camera in three dimensions, but you’ll soon learn to point it at exactly what you want. To return the camera to the normal game view, press the Home key on your keyboard at any time.

Making Movies

The Scenario Editor allows you to create your own movies or cinematics using triggers. Triggers, in general, allow you to control the actions and events in your scenario. To make a movie, you create special triggers to move the camera. The camera can be made to move from one location to another, zoom in and out, track moving units, follow along with moving units, and so on. Information about Cinematics and controlling the camera can be found in the full manual about the Editors on the Empire Earth CD-ROM.

Loading, Saving, and Testing Scenarios

The buttons to the left of the Mini-map provide access to the Scenario Editor's many save and load options. From left to right, these buttons are:

BUTTON	USE	DESCRIPTION
	Quick Load	Loads the scenario last saved with Quick Save – if there is one – into the Scenario Editor. Hot Key: / (forward slash).
	Quick Save	Saves the scenario on which you are currently working to the file EEQuickSave.scn in Empire Earth's root directory (i.e., where the .exe file is). Please note that each time you do a Quick Save, it overwrites the previous Quick Save file, so you can have no more that one Quick Save at a time. Hot Key: ; (semi-colon).
	Save	Saves the scenario on which you are currently working via the Save screen. The Save screen lets you enter a name for the scenario or choose a previously saved scenario to overwrite. It's always a good idea to save your work often.
	Load	Opens a window that allows you to pick a previously-saved scenario to load into the Scenario Editor.
	Test	Launches Empire Earth and loads the scenario on which you are currently working. As the button name implies, this allows you to test your scenario so you can make sure that it is working the way you intended. When testing, pressing the F1 key allows you to re-enter the Scenario Editor, or you can click the Return to Editor button on the Game Options menu.
	Exit	Returns you to Empire Earth's Game Tools Menu.

Map Creation Screen

When creating a scenario you'll need to have a map so you'll have something to work on. The default map is a Blank map covered with a grass texture. If you wish, you can generate a different base map. There are three different base maps from which to choose: Blank, Random, and Seed. Using Elevations Files is an advanced option that is explained in the manual on the CD ROM.

To create a new base map:

1. Select a base map type: Blank, Random, or Seed.
2. Set the Map Size for the map. For Blank maps you can set a Map Width and Height, as measured in tiles – for example, 50 x 50 or 40 x 20. The Width and Height of your map do not have to be the same.
3. For Blank base maps, select a Default Terrain. For Random and Seed Maps, choose a Map Type.
4. For Seed Maps only, enter a seed number. Every random map in Empire Earth has a seed number so that it can be recreated.
5. Click “Create Map” to generate the new map.

Map Elevations Screen

To add variety to your map’s topography, you can create hills and valleys. There are many elevation levels for the land. The default level is zero (0), which is just above sea level. Land set to an elevation of less than zero is under water. An elevation of -1 is considered “shallows” and is passable by land units.

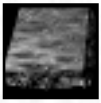
Land Elevation

To raise or lower the land:

1. Be sure the Elevation button is selected.
2. Select a Brush Size.
3. Set the Terrain Elevation slider to the elevation you want. Negative elevations are under water.
4. Select whether you want to Paint Hills, Paint Cliffs, or Paint Cliff Paths:
   - Paint Hills – Paints smooth slopes that land units can climb.
   - Paint Cliffs – Paints steep slopes that land units cannot climb.
   - Paint Cliff Paths – Paints a smooth slope onto a cliff so that land units can climb up the path.
5. Left-click (and drag, if desired) to raise or lower the elevation of the land under the Brush. All the tiles under the Brush move up (or down) to the altitude specified by the Terrain Elevation slider.

TIP: If you press and hold the space bar when you left click, the elevation slider is ignored. Instead, the elevation under the center tile of the Brush is set as the current elevation and you can paint using that elevation while dragging the mouse pointer.

Terrain Screen



There are many types of terrain available in Empire Earth, which allow you to create practically any type of look for your map that you can think of. To paint terrain:

1. Click the Terrain button.
2. Select the Brush Size you want.
3. Choose the Terrain Type you want from the list.
4. Choose the Terrain Colour you want. If you don't choose a colour, the default colour for that Terrain Type is used. Just to the left of the Mini-Map, a preview shows the selected Terrain Type and Colour.
5. Left-click and drag to paint with the selected Terrain Type and Colour.

Bear in mind that terrain paints the vertices of tiles (i.e., where the tiles meet) and not the tiles themselves. This is to ensure the different terrains blend together smoothly. Some Terrain Types, however, actually "paint" units (e.g., the various Ambient and Forest types) on to the map. These units get placed on the tiles, not the vertices.

Bulldozer

The Bulldozer control on the Terrain Screen is used to delete objects on the map (e.g., player units, trees, etc.). Select Bulldozer and the Brush Size you want, then left-click on the map to delete all objects under the brush. Hold down the left mouse button and drag to "erase" swathes of objects. The terrain under the objects is not affected.

Unit Placement Screen

Using the Unit Placement Screen you can place all kinds of objects on the map – including units, buildings, heroes, and world units (e.g., ambient objects) – so that they are available to players at the beginning of the scenario. You can also place units inside transports, Airports, and Fortresses. Just like in the game, certain units cannot be placed in certain locations – for example, ships must be placed in water, not on land.

NOTE: If you are planning to use computer players in your scenario, you must define where each computer player's starting position is located. For each computer player, the first land unit you place on the map that is not a building (i.e., a unit that can move) defines that computer player's "home base." Do not use a ship as that will put the home base in the water. You can, if you want, set up a trigger to kill that first unit as soon as the scenario starts. The computer player will defend its home base and perform most of its initial activity there (assuming it is an active player).

To place objects on the map:

1. Select World Player to place objects that belong to the world (and not to a player), such as trees or other resources. Or, select Player and choose the player for whom you want to place objects.
2. Select the category of objects you want to place using the buttons at the top left of the screen. You can choose: land units, air units (aircraft), water units (ships), structures (buildings), heroes, and ambient objects (including resources). The items belonging to the selected category will appear in the list on the left side of the screen. Note that all resources (except animals) must belong to the World Player.
3. Select the particular type of object you want from the pick list by clicking on it (e.g., click on "Knight"). The Sort buttons determine how the list of objects is sorted: Alphabetically ("Alpha"), by Epoch, or by Family.
4. Place the object you selected by left-clicking on the map – you can place as many of that type of object as you like. Red means you cannot place the object there – try a different location. Right-click to stop placing that object. (Thereafter, right-clicking on a placed object will delete it from the map.) Note that units that do not move (e.g., resources, buildings) "snap" to the map tiles while units that can move (e.g., Citizens, ships, animals) can be placed just about anywhere.

NOTE: You can change to a different player at any time by selecting a different player from the drop-down list.

Other Unit Controls

- **Select** – You can select units already placed on the map using any of the normal selection methods (e.g., click on or lasso units).
- **Delete** – Right-click on a placed unit to delete it. The Delete key on the keyboard also deletes the selected unit. To delete multiple units at once, select the units and press Shift-Delete or use the Bulldozer tool on the Terrain screen.
- **Moving Units** – Double-click on a placed object to "pick it up." You can then move it to a new location on the map (click to re-place it). You can move only one unit at a time.

- **Rotate** – Left-click the Rotate button (the arrow) to turn a selected unit clockwise or right-click to turn it counter-clockwise. The arrow shows the direction the unit faces. You can also use the Rotate button for objects you are about to place on the map. For finer control of the unit's facing, you can select a unit or units on the map and then right-click and drag to change the direction they are facing, just like you can during a game (except that the units don't move, they just rotate in place).

Triggers Screen

On the Triggers Screen you can create "triggers" which control actions and events that transpire during your scenario. Creating triggers may look difficult at first glance, but it isn't. Once you get the hang of it, you'll see how simple and powerful the Scenario Editor really is. Consult the manual, provided on the Empire Earth CD-ROM, for a comprehensive explanation of triggers and the components from which they are built. They are defined in-brief below.

- **Trigger** – A Trigger is a set of conditions and related effects. Every trigger is periodically evaluated by the game engine. If a trigger's conditions are evaluated to be TRUE, then the trigger's effects are queued to happen in the game.
- **Condition** – A Condition is an expression evaluating some state of the game which can be tested to be TRUE or FALSE. For example, a condition might be: "Player2 has a population that is greater than or equal to 100." During the scenario, if Player2's population count equals or exceeds 100, then this condition would be evaluated as TRUE. If Player2's population count is less than 100 the condition is FALSE.
- **Effect** – An Effect is an action, event, or change in the game that can be caused to occur. For example, an effect might create new units for player 1 or take 200 stone away from all computer players.
- **Object** – An Object is a unit or list of units (or buildings), which can be combined with a state such as "has 50 hit points" or "is near Player2's Town Centre." These may be specific units selected on the map or general-purpose descriptions of objects, such as "any cavalry archer that belongs to player 1."
- **Area** – An Area is a rectangular region selected on the map, a specific continent or ocean, or "off" the map entirely. You can also select a "town."

Each component is accessible by clicking the button of the same name. For example, click on the Object button if you want to define an object. For each of the component types, you can create new ones, duplicate existing ones, or delete them. You can also reorder the lists of the components and give each component a unique name.

- **New** – Click the New button to create a new component (e.g., a new trigger or new object).
- **Duplicate** – Select a component in the list and then click the Duplicate button to create an exact copy of it. The name of the component will be appended with "_Copy".

- **Delete** – Selecting a component and clicking the Delete button will permanently remove it from the list of components.
- **Reordering** – The up and down arrows just to the left of the component list are used for moving a component up or down within its list. Select a component in the list and use the arrows to move it up or down. You can sort the list alphabetically by pressing the AZ button (except the Trigger list because the order of the triggers is important).
- **Name** – You can name the selected component by typing a name in the Name text box. Default names called "autonames" are shown in triangular brackets ("< >").
- **Hide UI** – The checkbox just to the right of the Exit button (at lower-right) shows or hides the upper portion of the UI on the Trigger Screen. This is useful if you need to see more of the map on your screen.

Trigger Basics

This section gives a little basic information about triggers, but much more info – including trigger examples – can be found in the Editor manual on Empire Earth's CD-ROM.

Triggers are made up of Conditions and Effects, which in turn are made up of Objects and Areas. Thus, to create a trigger, you must first create Objects and (optionally) Areas, and then Conditions and Effects. Every scenario usually has at least one trigger, this being the trigger that sets the victory conditions. A trigger to award victory is unnecessary if you decide to turn on the Victory Allowed option (set on the Player Setup Options page). If Victory Allowed is enabled, then you do not need to create any triggers for your scenario if you do not want to. Every trigger that you do create, however, will be comprised of at least one Condition and one Effect.

It is recommended that you name your triggers to make them easier to identify (default auto-names are Trigger0, Trigger1, etc.). Once a trigger is defined, it is periodically evaluated during the scenario. If and when a trigger's conditions are evaluated as TRUE, then the trigger "fires" and its effects are queued to be carried out. Triggers are evaluated once every game second.

NOTE: A game second may not be the same as a real second – it depends on what the game speed is set to.

Trigger Order

The order of triggers is important. You can set the order in which your triggers are evaluated by selecting a trigger in the list and using the up and down arrow buttons next to the trigger list. The trigger order is important because certain triggers may require that other triggers fire first in order to work as intended. For example, if Trigger1 creates 4 Citizens and Trigger2 tells the 4 Citizens to gather wood, then Trigger1 should appear before (above) Trigger2 in the trigger list or else Trigger2 won't have any Citizens to act upon.

Trigger Statement

The Trigger Statement defines the trigger in the form of an “IF… THEN” statement (e.g., IF Condition0 THEN Effect0). You choose the conditions and effects for a trigger via drop-down lists – there is a list for each condition and each effect in the trigger. Each drop-down list contains all the conditions or all the effects that you have created for the scenario (so you must create conditions and effects first). Before you choose any conditions or effects via the drop-down lists, default values are used as place holders. “Always True” is the default Condition and “Do Nothing” is the default Effect.

Operators

Conditions can be combined using the operators NOT, AND, or OR. Effects can be combined using AND or OR. The END operator indicates the last condition or effect in the trigger. The AND and OR operators are chosen via drop down lists between the conditions and effects. The NOT operator is activated via a checkbox directly before the condition it is meant to modify. For effects, a Delay (in game seconds) can be specified.

The operators obey the following rules:

- **Not** – Any condition may be preceded by a NOT operator. The NOT operator applies only to the condition immediately following it and does not effect any other condition in the trigger. As you might expect, NOT tells the trigger to evaluate the condition as TRUE when the condition is NOT met.
- **Delay** – Entering a delay tells the game to wait the specified number of game seconds before carrying out the effect that immediately follows it. The delay count starts when the conditions are evaluated as TRUE and the trigger fires – this is considered time zero (0). Therefore, if different effects in a single trigger have delay times set, the delays are all relative to that zero time, and not relative to one another. Also note that, regardless of the delay time, there is no way to cancel an effect once it is queued up.
- **And** – Any condition may be immediately followed by an AND operator. If the condition preceding the AND operator is FALSE, then the condition(s) following the AND operator will not be evaluated. Effects can also be chained together using AND.
- **Or** – Any condition may be immediately followed by an OR operator. The OR operator logically joins all the conditions preceding it with all the conditions following it (until another OR operator is encountered). If the conditions preceding the OR operator are TRUE then the conditions following the OR operator will not be evaluated. For effects, the OR operator can be used to essentially randomise the effects of a trigger (e.g., play effect1 OR effect2 OR effect3).
- **End** – End is used to signal the end of the list of conditions and the end of the list of effects in the trigger statement. It appears only after the last condition and the last effect in the trigger.

When either AND or OR is chosen, a new condition or effect is automatically added to the trigger statement (e.g., the first condition in the trigger is called Condition0, the next is called Condition 1, and so on). The left and right arrow buttons that appear on either side of the trigger statement allow you to scroll through the conditions and effects. You can have as many conditions and effects in a trigger as you want, but bear in mind that the longer a trigger is, the longer it will take for the game engine to evaluate it and the result could be choppy game play.

Deleting Conditions and Effects

You can remove conditions and effects from the trigger statement by clicking the Del button that corresponds to the condition or effect you wish to remove. For example, clicking the Del Condition1 button will delete Condition1 from the trigger statement and Condition2 (if there is one) will "slide down" to become Condition1, Condition3 will become Condition2, and so on. The Del buttons appear only if there is more than one condition or effect in the trigger statement because each trigger must have at least one condition and one effect.

Player Setup Screen

After the Triggers button is the Players button. On the Player Setup Screen, you can configure the starting conditions for each player in the scenario. This includes the number of players in the scenario, starting resources, available technologies, alliances, and other settings.

The following controls are available on Player Page 1, Player Page 2, and the AI Settings pages:

- **Max Players** – Set the maximum number of players in the scenario using the Max Players drop-down list.
- **All Players** – You can quickly set all players to use the same settings by selecting the values you want in the All Players row and then clicking the Set All Players button. Note that clicking the Set All Players button copies exactly what appears in the All Players row to all the individual player's rows.
- **Player Color** – Set the player colour for each player. Click (or right-click) on the colour button to change the player's colour.

Player Page 1

With the controls on Player Page 1, you can set resource levels and the Epochs for each player.

- **Resources** – Set the starting resources for each individual player (or all players). Type the amount in the appropriate text box in the row for the player you want.
- **Epochs** – Set the Start Epoch and End Epoch for each player using the appropriate drop-down list. (This can also be set with the Set All Players button.)

Player Page 2

You can set more player options with the Player Page 2 controls. Note that the All Players row and Set All Players button can be used to set conditions for all players at once, just as on Page 1. The Page 2 options are:

- **Player** – Lets you enter a name for each player, such as who the player is supposed to be in the scenario.
- **Civilisation** – Select each player's civilisation from the drop-down list. The list shows all the available civilisations.
- **CPU Only** – This is used for Multiplayer games. If CPU Only is checked, that player must be controlled by the computer and cannot be removed from the game. If unchecked, the player can be controlled either by the computer or a human; the choice is up to the host of the game.
- **Shared LOS** – If checked, this player shares Line Of Sight (LOS) with all allied players in the scenario, both human and computer.

AI Settings

The controls on the AI Settings page provide advanced options that allow you to modify the behaviour of each computer player globally, that is, for the entire scenario. The behaviours are very general, allowing you to do a quick setup for each computer player. The Active checkbox must be checked if you want the computer to make decisions above the unit level. The other AI checkboxes are ignored if the Active checkbox is unchecked.

You can modify the behaviour of computer players more explicitly using AI Effects Triggers. The controls available on this page are explained in the Manual for the Scenario Editor on the Empire Earth CD-ROM.

Tech Tree Page

This page allows you to modify the technology tree for any player by enabling or disabling individual units, buildings, heroes, or technologies. Disabled items will not be available to that player during the scenario. Some items are "dependent" on others – disabling an item also disables any dependent items. For example, if you disable the upgrade to the Imperial Age Battleship, all the upgrades to subsequent battleships are also disabled.

To modify a player's technology tree:

1. Choose the player you want from the Player drop-down list.
2. Select the type of items ("Unit Types") you want to enable or disable: Units, Buildings, Heroes, or Technologies. You can display the Epoch in which the items in the list become available by checking the Display Epoch box – note that this sorts the listed items by Epoch.
3. Move the item(s) you want to disable from the Enable Technologies list to the Disable Technologies list (or vice-versa, if you want to enable a currently-disabled item). This is

accomplished by using the buttons provided. Move the selected item in the list (and any dependent items) with the < and > buttons or all items in the list with the << and >> buttons.

Options Page

The last of the player pages lets you set additional options for each of the players, including the diplomatic disposition (ally or enemy) of any player to any other player.

To change a diplomatic stance of two players to each other, click on the icon where the two players intersect. If there are only two players in the scenario, there will be only one intersection and, hence, only one icon. Note that the disposition is mutual, so if player 1 is the enemy of player 2, then player 2 must be the enemy of player 1. The icon colours mean the following:

- Green (complete circle) = Ally
- Red (broken circle) = Enemy

Other Options

The other controls on this page are as follows:

- **Game Unit Limit** – Lets you set the world population limit that gets evenly divided among all the players in the scenario. The number of units per player is based on the number of players you have chosen for the scenario. The number of units per player will vary slightly depending on which Epoch a player starts in (because some technologies add to a player's pop cap and these techs are researched automatically, unless the scenario designer disables those techs).
- **Wonders for Victory** – Lets you set how many Wonders are needed for a wonder victory (if Victory Allowed is enabled). If you do not want Wonders to count towards victory during the scenario, set this value to zero (0).
- **Victory Allowed** – Victory (or defeat) can always be granted via triggers (see the section on Triggers in the Editor manual provided on the Empire Earth CD-ROM). However, you can check this checkbox to allow a player or team to win by eliminating all the opposing players in the scenario in standard conquest fashion. This box is unchecked by default since designers generally prefer to set up their own victory conditions via triggers.
- **Teams Locked** – If checked, players are not allowed to change their diplomatic stances towards one another during the scenario on the Alliances & Tributes screen. The scenario designer, of course, can still change stances via triggers.
- **Cheat Codes** – Check this checkbox to allow players to use Empire Earth's cheat codes while playing the scenario. This is unchecked by default.
- **Unit Improvements** – Check this checkbox to allow players to improve their units during the scenario. If unchecked, players are not allowed to improve the attributes of their units when playing the scenario.

Story/Instructions Screen

On this screen in the Scenario Editor you set various story elements for the scenario – instructions, hints, and others. This information can be changed during a game by creating appropriate triggers. All the information below is displayed in its appropriate place on the Scenario Intro screen.

- **Scenario Inst. Map** – Choose the JPEG file for the map you want to display on the Scenario Intro screen, where the instructions are shown. These files must be saved in the ..\data\scenario folder.
- **Movie** – Choose the movie file you want to play before the start of the scenario. These files must be saved in the ..\data\movies folder.
- **Inst. Sound Over** – Choose the MP3 file to use for sound effects, voice over, or music for the Scenario Intro screen. MP3 files must be saved in the ..\data\sounds folder.
- **Scenario Instructions** – Enter the instructions for the scenario. These can include directions and objectives. Instructions appear at the beginning of the scenario on the Scenario Intro screen (along with the maps and sounds, if any).
- **Hints** – In this field you can enter hints for the scenario. The hints are shown on a separate screen from the instructions so players won't see them unless they want to read them.
- **History** – Add any history or background information for the scenario in this field. This is optional but can be useful for providing an historical context or story elements.

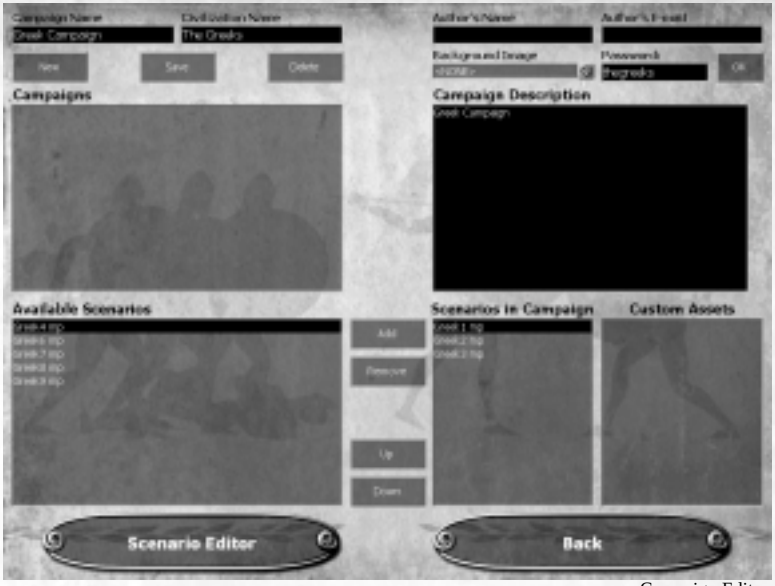
Civilisation Builder

You can enter the Civilisation Builder to create customised civilisations for your scenarios. See Chapter XIV for information on how to use the Civilisation Builder.

Campaign Editor

The Campaign Editor is used to "assemble" scenarios created with Empire Earth's Scenario Editor into complete campaigns. A campaign is a collection of scenarios presented in an order determined by the scenario designer, therefore you must first create the scenarios before you can put them into a campaign. A full explanation of the Campaign Editor is given in the manual provided on Empire Earth's CD-ROM.

Campaigns must be put into the ..\data\campaigns folder to be available to play. You can access these "custom campaigns" from the Single Player menu by clicking the Play Campaign button and then clicking the Custom Campaign button.



Campaign Editor

Starting the Campaign Editor

To open the Campaign Editor, click the Game Tools button on Empire Earth's Main Menu and then click the Campaign Editor button.

Using the Campaign Editor

Creating a campaign is a very simple task. The only prerequisite is that you have working scenarios to put into the campaign. Then all you need to do is give your campaign a name, select the scenarios and put them in the order you want, and then save the campaign. That's all there is to it. Once created, a campaign contains all the files needed to play each of the scenarios in it. Associated files (such as bitmaps, MP3s, etc.) are automatically saved as part of the campaign when you click the save button. The only exception is movie files, which must be saved manually in the ..\data\movies folder.

REFERENCE: Information on where to put additional files for your scenarios, such as sound and picture files, is provided in the Story/Instructions Screen section on the previous page.

Appendix A
Civilisations

Prehistoric to Dark Ages

Ancient Greece: 18th – 2nd Centuries BC

Like many long-lived civilisations, the Greeks went through many historical periods. Different peoples controlled the region known as ancient Greece at different times, and each contributed pieces to what is today considered collectively as the legacy of the Greeks.

Early Greeks, known as the Mycenaeans after the ancient city of Mycenae, conducted what is perhaps the most famous siege of ancient times: The Trojan War. Once thought to be just a myth, archeological evidence indicates that the Trojan War actually took place around 1250 BC. The siege of the city of Troy is said to have taken 10 years, and legend maintains that it finally came to an end through the use of the Trojan Horse. Greek soldiers hid inside the large, wooden beast, which was left at the gates of Troy apparently as a gift. When the Trojans brought it inside their walls, the soldiers jumped out and opened the gates for their comrades.

The largest of the Greek-based empires arose under the Macedonian hegemony of the 4th Century BC. Alexander the Great subdued the rebellious Greek city-states and then went on to conquer Persia, Egypt, and lands as far west as India. Remarkably, he accomplished his feat in a span of just 14 years, from 336 to 323 BC. Though Alexander's empire splintered after his death, the Greek legacy stands as the cornerstone of Western civilisation.

Economy	**Resource Gathering**
	20% Hunting & Foraging
	15% Gold Mining
	Citizens & Fishing Boats
	20% Speed
	Civilisation-wide
	50% Conversion Resistance
Military	**Infantry - Spear/Melee**
	25% Attack
	20% Hit Points
	20% Speed
	Cavalry - Spear/Melee
	25% Attack
	20% Hit Points
	30% Build Time Decrease
	Siege Weapons
	25% Attack
	25% Rate of Fire
	20% Cost Reduction
Naval	**Frigates & Cruisers**
	20% Attack
	20% Range

Assyrian Empire: 18th – 6th Centuries BC

Assyria, situated between several powerful civilisations, contended for mastery of western Asia for many centuries. These circumstances necessitated Assyria's development of a strong military. In the 2nd Millennium BC, the Assyrians were subjects of Babylonia and then the Mitanni Kingdom. With help from the Hittites, the Assyrians attained independence from the Mitanni in 14th Century BC, thus beginning what is now called the Middle Assyrian Period. This period of power lasted until about 1200 BC, when Babylonia again asserted its dominance.

Assyria emerged again as a great power in the 10th Century BC. Strong kings led Assyria's formidable army to victories over the Babylonians, Aramaeans, and other peoples. The army was well trained and equipped – one of the first to be outfitted with iron weapons – and professional officers commanded the troops. Assyria's greatest strength was her cavalry, which far outclassed the meager cavalries of other civilisations of the time. By the 7th Century BC, at the height of their power, the Assyrians controlled lands from Egypt and the eastern Mediterranean to the Persian Gulf.

Economy	**Resource Gathering**
	20% Hunting & Foraging
	20% Farming
	Citizens & Fishing Boats
	35% Range
	Buildings, Walls, & Towers
	50% Hit Points
	30% Build Time Decrease
	Civilisation-wide
	15% Pop Cap
Military	**Archers - Foot**
	20% Attack
	20% Speed
	Cavalry - Sword
	25% Attack
	20% Hit Points
	Cavalry - Ranged
	25% Hit Points
	20% Range
	20% Speed

Babylon: 19th – 6th Centuries BC

The greatest king of the first Babylonian dynasty was Hammurabi, who ruled from 1792 to 1750 BC. Hammurabi conquered southern Mesopotamia, including the city of Uruk, and part of Assyria. The famous Code of Hammurabi is among the earliest written collections of laws and was the most comprehensive and balanced of its day. Weaker kings after Hammurabi resulted in the decline of the first dynasty, which culminated in the sack of Babylon in 1595 BC by the Hittites.

The Kassites next came to power and their dynasty brought almost 500 years of prosperity to the region. Power struggles with the Assyrians and the Elamites erupted during the late 13th and 12th Centuries BC. King Nebuchadrezzar I defeated the Elamites in the late 12th Century BC, but the Assyrians finally absorbed Babylonia into their empire in the 9th Century BC.

The Babylonian civilisation underwent a resurgence when the Chaldeans took over after the collapse of the Assyrian Empire in the 7th Century BC. Nebuchadrezzar II, who reigned for over 40 years until his death in 561 BC, conquered Syria and all of Palestine, and sacked the city of Jerusalem. He also embarked on a great building campaign in Babylon and is credited with the construction of the Tower of Babel, numerous fortifications including the impressive Ishtar Gate, and the fabled Hanging Gardens.

Economy	**Resource Gathering**	
		20% Wood Chopping
		20% Stone Mining
	Citizens & Fishing Boats	
		30% Hit Points
	Buildings, Walls, & Towers	
		20% Range
Religion	**Prophets**	
		20% Range
		20% Speed
Military	**Archers – Foot**	
		25% Hit Points
		20% Range
		20% Speed
	Infantry – Spear/Melee	
		25% Attack
		20% Hit Points
		30% Build Time Decrease
	Cavalry – Spear/Melee	
		20% Armour
		20% Speed
		20% Hit Points

Byzantine Rome:

2nd Century BC – 15th Century AD

The Byzantine Empire, centered in Constantinople, stood for over one thousand years. The Byzantines maintained a strong army and almost singlehandedly kept the art of ship building alive throughout the Dark Ages. At its height, following the reign of Justinian I in the 6th Century AD, the empire included modern day Turkey, the Balkans, Egypt and North Africa, Italy, and even southern Spain.

The original city of Byzantium, a Greek settlement, became part of the Roman Republic when Greece was conquered by Rome during the 2nd Century BC. Hundreds of years later, in 330 AD, Emperor Constantine renamed the city Constantinople and transformed it into the new capital of the eastern half of the Roman Empire. Though Rome collapsed in the 5th Century AD, the "Eastern Roman Empire" endured for another millennium. Constantinople became the center of Eastern Orthodox Christianity, which developed down a separate but parallel path from the Roman Catholic Church.

Byzantine military strength began to decline in the 11th Century AD, while neighbours, such as the Ottoman Turks, gained in strength and power. Constantinople's extensive fortifications kept enemies at bay for many years, but the city finally fell in 1453 to the Ottoman Turks, who battered its walls with early cannon.

Economy	**Resource Gathering**
	20% Farming
	Citizens & Fishing Boats
	10% Build Time Decrease
	Buildings, Walls, & Towers
	50% Hit Points
	15% Cost Reduction
	Civilisation-wide
	15% Pop Cap
Military	**Infantry - Sword**
	25% Attack
	20% Hit Points
	Infantry - Ranged
	20% Range
	20% Speed
	Siege Weapons
	20% Area Damage
Naval	**Battleships & Carriers**
	20% Attack
	30% Build Time Decrease

Carthage: 9th – 2nd Centuries BC

According to traditional accounts, Phoenicians from the city-state of Tyre founded the city of Carthage in 814 BC, though evidence suggests it may actually have been later than that. The name Carthage literally means "new town." In time, the simple colony grew to become a major centre of commerce and a Mediterranean power.

The events that best serve to define Carthage's place in history are those of the Punic Wars, fought periodically against Rome in the 3rd and 2nd Centuries BC. The Carthaginians, owing to their Phoenecian roots, had a strong maritime tradition and an excellent navy. This held them in good stead during the First Punic War, which was largely fought over control of the island of Sicily.

The Second Punic War erupted over land disputes in Spain. The Carthaginian forces, under the masterful leadership of Hannibal, marched over the Alps and into Italy itself. Hannibal and his army had many victories and came very close to defeating Rome, but attrition and lack of supplies eventually halted his campaign. After 15 years in Italy, Hannibal was recalled to Carthage to defend against a Roman invasion. He was defeated at the Battle of Zama (202 BC) and Carthage was forced to surrender. Carthage attempted to revive herself in the middle of the 2nd Century BC, but Rome, fearful of a strong Carthage, destroyed the city in the Third and final Punic War. A century later, the city was rebuilt as a Roman colony.

Economy	**Resource Gathering**
	20% Fishing
	20% Stone Mining
	Citizens & Fishing Boats
	20% Cost Reduction
	Civilisation-wide
	20% Mountain Combat Bonus
Military	**Infantry - Ranged**
	20% Armour
	20% Cost Reduction
	Cavalry - Sword
	20% Hit Points
	20% Armour
	Cavalry - Spear/Melee
	25% Attack
	20% Speed
	30% Build Time Decrease
Naval	**Galleys, Transports, & Subs**
	20% Range
	20% Cost Reduction

Kingdom of Israel: 19th – 1st Century BC

The Hebrew people emigrated from northern Mesopotamia to Canaan, around Palestine, in the 19th Century BC. From there they moved to the Egyptian delta, where they were eventually enslaved by Pharaoh (probably Ramses II). In the 13th Century BC, by modern estimates, the prophet Moses led his people out of Egypt in an event known as the Exodus. Traditional accounts describe a covenant with God in which the Hebrews received divine protection and guidance in return for adherence to God's laws. Additionally, God had promised the land of Canaan to the Hebrews, who became known as the Israelites.

By the turn of the 10th Century BC, the 12 Israelite tribes living in Canaan had established a single Kingdom of Israel under King Saul. The two succeeding Kings, David and Solomon, incorporated new lands and the Kingdom attained the height of its power. A split occurred the following century, leading 10 of the 12 tribes to establish a second, independent Kingdom of Israel to the north. In the south, the Kingdom of Judah was founded, retaining Jerusalem as its capital. The northern kingdom fell to the Assyrians in the 8th Century BC. The southern kingdom flourished until it was overrun by the Babylonians under Nebuchadrezzar II in the early 6th Century BC.

Over the next several centuries, Jerusalem and the surrounding lands were controlled first by the Persian empire and then by the Greeks after the conquests of Alexander the Great. Independence, lasting for about 100 years, was again attained in the 2nd Century BC under the militarily-strong Maccabees. After that the region became part of the Roman Empire.

Economy	**Resource Gathering**
	20% Fishing
	15% Iron Mining
	Citizens & Fishing Boats
	10% Build Time Decrease
Religion	**Priests**
	20% Hit Points
	20% Cost Reduction
	30% Build Time Decrease
	Prophets
	20% Hit Points
	20% Range
Military	**Archers - Foot**
	20% Armour
	25% Hit Points
	20% Range
	Infantry - Sword
	20% Hit Points
	20% Speed
Naval	**Battleships & Carriers**
	20% Attack
	Frigates & Cruisers
	20% Attack
	Galleys, Transports, & Subs
	20% Attack

Middle Ages to Industrial Age

Austria: 10th – 20th Centuries

Austria's history, especially early on, is deeply intertwined with that of the Germanic region as a whole. With the conquests of Charlemagne around the turn of the 9th Century, the lands of Austria became part of the loosely organised group of kingdoms that retained the name Holy Roman Empire for many centuries. After Charlemagne, various ruling families came to control Austria.

Rudolf of Habsburg was elected German King Rudolf I in 1273 by the regional princes of the Holy Roman Empire. In 1276, he invaded Austria, taking it away from the Bohemian Prince, Otakar II, who had wanted to be the German King. Rudolf left Austria to his two sons, beginning the association of the Hapsburg family with Austria that persisted for nearly 750 years.

Conflicts between Austria and the Ottoman Turks were frequent from the 16th to 18th Centuries, and Vienna itself was threatened on more than one occasion. Prince Eugene of Savoy helped push the Turks back from walls of Vienna in 1683. He then assumed command of the combined Austrian and allied forces and cleared neighboring Hungary of the Turks (which, incidentally, set in place Austria's dominance over Hungary that culminated in the creation of the Austria-Hungarian state in 1867). Victories over the Ottoman Turks in the Balkans finally convinced them to make peace with Austria in 1699. But hostilities over territory renewed less than 20 years later and Prince Eugene was called upon again, wining several decisive battles including the siege of Turk-controlled Belgrade (1718). Austria's power and influence grew substantially during this period, and it remained one of the great European powers right through to the 20th Century.

Economy	**Resource Gathering**
	20% Foraging & Hunting
	Citizens & Fishing Boats
	30% Attack
	20% Cost Reduction
	Civilisation-wide
	50% Conversion Resistance
Military	**Infantry - Spear/Melee**
	25% Attack
	20% Hit Points
	20% Speed
	Cavalry - Sword
	25% Attack
	20% Armour
	20% Speed
	Field Cannon & AT Guns
	25% Hit Points
	20% Armour
	30% Build Time Decrease

England: 6th – 19th Centuries

What can rightfully be called England began to take shape in the late 5th and 6th Centuries AD when the Germanic Angle and the Saxon tribes invaded and settled the British Isles. A number of petty kingdoms sprouted up, but the cultural and linguistic similarities between them led to the development of a unified English nationality.

Over the next centuries, Celts, Vikings, and other groups assailed parts of England, but the definitive conquest was the Norman invasion of 1066. Launched by Duke William of Normandy (later "the Conqueror"), it set the stage for future conflicts between the English and the French.

The English achieved many important victories against the French during the following centuries, but could never hold any territory they gained for long. Near the end of the Hundred Years' War, King Henry V of England defeated the French – largely through his exceptional use of archers. Henry would have become King of France, but he died in 1422 before it could happen, leaving open one of the great "what if" questions in history. His infant son, Henry VI, briefly became king of both countries, but the political unification did not last: Charles VII claimed the French throne and England went on to lose the Hundred Years' War in 1453.

The power of England then waxed and waned, reaching peaks under such rulers as Elizabeth I. During her reign, the English navy defeated the Spanish and their Armada, thus making England's fleet the most powerful in the world. Under another Queen, Victoria, in the 19th Century, English holdings stretched around the world, resulting in the famous saying, "The sun never sets on the British Empire."

Economy	**Resource Gathering**
	20% Fishing
	15% Gold Mining
	Citizens & Fishing Boats
	10% Build Time Decrease
	Buildings, Walls, & Towers
	20% Range
	15% Cost Reduction
Military	**Archers - Foot**
	20% Range
	Infantry - Ranged
	25% Hit Points
	20% Range
	Cavalry - Ranged
	20% Cost Reduction
	Siege Weapons
	25% Rate of Fire
	30% Hit Points
Naval	**Battleships & Carriers**
	20% Attack
	30% Build Time Decrease

Franks: 5th – 19th Centuries

Around the turn of the 6th Century AD, the tribes known collectively as the Franks united under Clovis I. With Roman power fading in the region, the Franks spread out from their holdings around the Rhine and Belgium to take over northern Gaul (now modern France). Clovis' successors expanded Frankish territory, especially east of the Rhine.

In the 8th Century AD, a new ruling family, the Carolingians, came to power. The best known ruler from this family – indeed of all of Europe during this time period – was Charlemagne, also known as Charles the Great. Charlemagne conquered northern Italy and southern Germany, and subdued the Saxons living on the continent. He united most of Christian Western Europe (with the exceptions of Spain and Britain) into one political entity. So great was his power that, in 800 AD, Pope Leo III crowned him Holy Roman Emperor. Though his empire did not last long after his death, he left lasting impressions in Europe, particularly in France and Germany.

Following this period, France began slowly to emerge from its Frankish roots. By the late 12th Century, kings were known as Kings of France (and not the Franks), and France was reclaiming its place as a major power in Europe. On going disputes with England over land in France were largely settled by the Hundred Years' War. King Charles VII, with the notable help of Joan of Arc, finally succeeded in taking back virtually all English holdings in France by 1453. Years later, Napoleon's French Empire in 1810 spanned Europe from Iberia to Russia.

Economy	**Resource Gathering**
	20% Wood Chopping
	15% Gold Mining
	Buildings, Walls, & Towers
	20% Attack
	15% Cost Reduction
	Civilisation-wide
	50% Conversion Resistance
Religion	**Prophets**
	20% Range
	20% Cost Reduction
Military	**Cavalry - Spear/Melee**
	20% Hit Points
	Cavalry - Sword
	20% Hit Points
	20% Speed
	20% Cost Reduction
	Siege Weapons
	25% Attack
	30% Hit Points

Kingdoms of Italy: 8th – 19th Centuries

The disintegration of the Roman Empire left the lands of Italy divided until the 19th Century. Numerous powers – including the Ostrogoths, Byzantines, Lombards, and Franks – controlled parts of the peninsula at one time or another. After Charlemagne's Frankish empire dissolved, German leaders under the guise of Holy Roman Emperors controlled northern Italy until the 14th Century. Thereafter, a plethora of independent states and kingdoms existed in northern Italy.

Medieval Italy, despite its fragmentation, was generally a thriving cultural and economic region. City-states such as Venice, Pisa, and Genoa (and later Milan and Florence) flourished. These mercantile states had strong navies, wealth, and trading posts and colonies around the Mediterranean. Additionally, the papacy in Rome – though not immune to shifts in political power in Italy – continued to provide a strong Christian influence in Western Europe. During the 12th and 13th Centuries, an intellectual renaissance of sorts began among Catholic monks such as Anselm and Thomas Aquinas. By the 14th Century, the vitality, diversity, and prosperity of Italy – especially in the north – was bringing about the full Italian Renaissance.

Economy	**Resource Gathering**
	20% Stone Mining
	Citizens & Fishing Boats
	20% Cost Reduction
	Buildings, Walls, & Towers
	50% Hit Points
	30% Build Time Decrease
	Civilisation-wide
	20% Mountain Combat Bonus
Religion	**Priests**
	20% Hit Points
	20% Range
	20% Speed
Military	**Infantry - Ranged**
	25% Hit Points
	20% Cost Reduction
	Cavalry - Sword
	30% Build Time Decrease
	Cavalry - Ranged
	20% Attack
	20% Armour
Naval	**Frigates & Cruisers**
	20% Attack

Ottoman Empire: 13th – 20th Centuries

The Islamic Ottoman Empire grew in power and territory as the Christian Byzantine Empire shrunk. The name "Ottoman" is derived from the Turkish Warlord Osman, who founded the Ottoman dynasty at the turn of the 14th Century. The rise of Ottoman power began with conquests in Anatolia over both Byzantine and Muslim rivals. The empire then expanded into south-eastern Europe and the Balkans. The city of Constantinople was bypassed, as its defenses were too great for the cavalry-based Ottoman army of that time.

In 1402, the Ottomans were defeated at the Battle of Ankara by the Mongols under Timur (also known as Tamerlane), forcing a brief halt to their expansion. But the Ottomans quickly recovered and renewed their dominance over lands they had previously conquered. Uprisings in Europe were put down and plans were made finally to take Constantinople. The siege of the Byzantine capital began in April 1453 and lasted almost 8 weeks before the walls were finally breached by cannon fire. Sultan Mehmed II renamed the city Istanbul and it became the new capital of the Ottoman Empire.

The peak of the Empire came under the reign of Suleyman I, called both "the Lawgiver" and "the Magnificent." The Ottomans took Belgrade, Hungary, and were stopped at Vienna in 1529 only because of supply problems. The Empire was also extended east to Baghdad and the Persian Gulf, as well as to Egypt and North Africa to the south and west. The Ottoman Empire slowly declined after that, but still lasted all the way into the 20th Century.

Economy	**Resource Gathering**
	20% Wood Cutting
	20% Stone Mining
	Citizens & Fishing Boats
	20% Speed
	10% Build Time Decrease
	Civilisation-wide
	15% Pop Cap
Religion	**Priests**
	20% Hit Points
	20% Cost Reduction
Military	**Cavalry - Ranged**
	20% Attack
	25% Hit Points
	20% Range
	Field Cannon & AT Guns
	20% Cost Reduction
	30% Build Time Decrease

Spain: 6th – 19th Centuries

Following the decline of Roman Power, the Iberian peninsula was largely in the hands of the Visigoths, one of the so-called "barbarian" tribes of Germanic decent. The Visigoths converted to Christianity and controlled Spain until the Islamic invasion of the 8th Century AD. Although Muslim Spain under the Moors was one of the more advanced civilisations of its time, the Christian kingdoms that remained in the mountains of the north made it their goal to reconquer the lands they had lost.

Over the next five centuries, the Reconquest progressed – slowly at first and then with increased momentum. By the 13th Century, Moorish control had been whittled down to only the region of Granada in the south. The Kingdoms of Aragon and Castile were steadily gaining power and both desired to rid the peninsula of the Moors completely. In the 15th Century, Isabella of Castile married Ferdinand of Aragon, effectively uniting the two kingdoms. With their combined strength, they attacked Granada and brought the Reconquest to a conclusion in 1492.

In that same year, Christopher Columbus sailed to the New World with Isabella's blessing. The Spanish acquired land and wealth in the Caribbean, South and Central America, and even parts of North America. Though they conquered and subjugated the native people there, they also wanted to educate them and make them Christians. Spain's official colonial policies were, in fact, less severe than any other European state of the time. With well-trained and battle-tested infantry, and access to over-seas riches, Spain rose to become the greatest power in Europe in the 16th Century.

Economy	**Resource Gathering**
	20% Farming
	15% Iron Mining
	Citizens & Fishing Boats
	20% Speed
	Civilisation-wide
	20% Mountain Combat Bonus
Military	**Infantry - Spear/Melee**
	25% Attack
	20% Hit Points
	30% Build Time Decrease
	Infantry - Ranged
	20% Attack
	25% Hit Points
	30% Build Time Decrease
Naval	**Galleys, Transports, & Subs**
	20% Attack
	25% Hit Points
	20% Cost Reduction

Atomic – Nano Ages

France: 19th Century –

The French Revolution and the empire forged by Napoleon forever changed France. Decades of internal political struggles followed the Napoleonic wars, but throughout much of the 19th Century France remained a powerful state with which the other European powers had no choice but to contend.

France entered alliances with both Russia and Britain prior to Word War I in an effort to isolate its powerful neighbour, Germany. When WWI came, fighting rapidly degenerated into trench warfare and much of north-eastern France was decimated. The French lines ultimately held and the allies brought the war to a successful close in 1918. The French authorities, resolved to protect France from any future invasions, advocated severe terms for the Treaty of Versailles, which laid out the conditions for peace. France, along with the other major allies, received payments for damages from Germany as well as territory in Europe and abroad.

Between the World Wars, the French constructed the impressive Maginot Line along the German border from Switzerland to Belgium. This massive fortification was a modern marvel, impervious to a frontal assault. When the Second World War began, the German High Command was forced to send troops through neutral Belgium to avoid the Line.

Despite a formal surrender in 1940, the French Resistance operated throughout WWII, slowly gaining strength and inflicting damage on Germany's occupying army. When Allied forces landed in Normandy on June 6, 1944, the Resistance assailed the retreating German army at every opportunity. Paris was liberated and, on August 19, Free French troops marched into the city.

Economy	**Resource Gathering**	
		20% Wood Cutting
		15% Iron mining
	Citizens & Fishing Boats	
		30% Hit Points
		35% Range
	Buildings, Walls, & Towers	
		20% Attack
		50% Hit Points
		20% Range
Military	**Infantry - Ranged**	
		20% Attack
		20% Range
	Field Cannon & AT Guns	
		20% Range
		20% Speed
		30% Build Time Decrease

Germany: 19th Century –

Modern Germany emerged out of the unification of German states orchestrated by Otto von Bismarck in the second-half of the 19th Century. Germany had the largest and best equipped army in Europe at the turn of the 20th Century, and it was soon put to use.

World War I began in 1914 following the assassination of the Archduke Ferdinand of Austria-Hungary by a Serbian nationalist. An intricate system of treaties and alliances quickly plunged Europe into war. Germany, Austria-Hungary's ally, mobilised its forces hoping to knock France out of the fight before Russia could fully mobilise its army. But the Western Front bogged down into a stalemate and the war dragged on for four bloody years. At sea, the British navy was superior to the German surface fleet, so Germany relied heavily upon U-boats to sink warships and disrupt supply lines. When WWI ended in 1918, it had not settled the differences between the European nations. Moreover, the harsh terms imposed by the Treaty of Versailles became a rallying cry in Germany.

The Second World War began in 1939 when Germany, now under the control of Adolph Hitler and the totalitarian National Socialists (Nazis), invaded Poland. Germany had begun to rearm itself in the 1930s, in violation of the despised Treaty of Versailles. Employing a strategy called the "Blitzkrieg," which involved the heavy use and rapid movement of Panzer tank divisions and aircraft, German forces rapidly overran Europe. By the end of 1941, Germany controlled most of the continent from the Atlantic Ocean to the outskirts of Moscow and from Norway to the Balkans, as well as North Africa.

Economy	**Resource Gathering**
	20% Stone Mining
	Citizens & Fishing Boats
	30% Hit Points
	20% Cost Reduction
Military	**Tanks**
	20% Attack
	10% Armour
	25% Hit Points
Naval	**Galleys, Transports, & Subs**
	20% Attack
	25% Hit Points
	20% Range
Air	**Fighters and Fighter/Bombers**
	20% Attack
	25% Hit Points
	30% Build Time Decrease
	Bombers
	20% Flight Time
	20% Cost Reduction

Great Britain: 19th Century –

Great Britain, known officially as the United Kingdom, entered the 20th Century as a major world power. Industrialisation and several wars during the 19th Century had resulted a strong military – including the world's most powerful navy – and a bustling British economy. As with most nations, Britain assumed the First World War would be over in short order, but the fighting raged for four long years.

Europe began to move towards war again in the 1930s. Diplomatic efforts for peace on Great Britain's part ultimately failed, and the British found themselves facing Germany alone following the surrender of France in 1940. The German Luftwaffe subsequently launched an all out air war against the island nation, hoping to bomb the British into submission. Known as the Battle of Britain, the beset Royal Air Force managed to shoot down German planes faster than they could be replaced, finally ending the aerial threat in early 1941. Three years later, an Allied invasion force gathered in Great Britain, crossing the channel in June to land in Normandy. By May 1945, Berlin had been taken and the war in Europe was over.

Decades later, in 1982, Great Britain fought the Falkland Islands War. An Argentine invasion force had captured the islands, claiming ownership of them. The British responded by sending a task force to retake the islands. Combat took place largely at sea and in the air, with guided missiles taking their toll on ships and aircraft. The British forces defeated the Argentineans after about two months of fighting.

Economy	**Resource Gathering**
	20% Hunting & Foraging
	15% Gold Mining
	Citizens & Fishing Boats
	20% Speed
	Buildings, Walls, & Towers
	20% Attack
	20% Range
	30% Build Time Decrease
Military	**Field Cannon & AT Guns**
	20% Attack
	25% Hit Points
	20% Speed
Naval	**Frigates & Cruisers**
	25% Hit Points
	20% Speed
	30% Build Time Decrease
Air	**Fighters and Fighter/Bombers**
	20% Range
	20% Speed
	30% Build Time Decrease

Italy: 19th Century –

The separate kingdoms on the Italian peninsula and islands began to move toward unification in the 19th Century. Disputes with Austria and France over land were eventually resolved – sometimes through war. In 1870, final unification was achieved when Rome was established as the capital of Italy.

When WWI broke out in 1914, Italy negotiated with both sides and ended up joining the Allies in the hopes of gaining more territory. Italian forces soon found themselves in a difficult defensive struggle for control of their Alpine border with Austria. In the end, the Allies were victorious, but the victory was costly for Italy. While she gained territory, she had lost 600,000 men and found herself in both political and economic crisis.

It was against this troubled backdrop that Benito Mussolini rose to power. By forging key political alliances, Mussolini's National Fascist Party came to dominate the Italian government. After an opposition leader was found murdered in 1924, Mussolini began transforming Italy into a fascist state in order to stay in power. Constitutional checks were abolished and the press came increasingly under governmental control. Mussolini also looked to increase Italy's holdings in Africa, taking Ethiopia in 1936.

Ties with Hitler's Germany developed in the 1930s, frightening many Italians. But the Fascists were firmly in control and political opposition easily suppressed. The infamous Rome-Berlin Axis was founded in 1938. Despite the alliance, Mussolini did not enter WWII until June 1940, once again hoping for territorial gains. But the Italian people were not behind their fascist leader. When Allied forces invaded Italy in 1943, Mussolini was deposed and the former King restored. A few months later, Italy declared war on Germany.

Economy	**Resource Gathering**
	20% Farming
	20% Stone Mining
	Buildings, Walls, & Towers
	20% Attack
	20% Range
	30% Build Time Decrease
	Civilisation-wide
	50% Conversion Resistance
Military	**Infantry - Ranged**
	20% Cost Reduction
	30% Build Time Decrease
	Siege Weapons
	25% Attack
	30% Hit Points
	25% Rate of Fire
	Field Cannon & AT Guns
	20% Range
Air	**Helicopters**
	20% Range
	20% Speed
	30% Build Time Decrease

Russia: 20th – 21st Centuries

Russia dropped out of WWI following the Bolshevik Revolution of 1917. After a few tumultuous years, the Union of Soviet Socialistic Republics was formed. Russia was the mightiest state in the new union and its capital, Moscow, became the USSR's capital.

The Soviets under Joseph Stalin signed a non-aggression pact with Germany on the eve of World War II, but the treaty didn't last: Hitler ordered the invasion of Russia and the Soviet Union in 1941. After some of the fiercest fighting of the entire war, the Red Army pushed the invaders all the way back into Germany and took Berlin in 1945. After the war, the Soviets were given control of East Germany and East Berlin.

Russia had sustained about 9 million casualties in WWI and the USSR some 20 million, if not more, in WWII. Determined not to be invaded again, the Soviet Union began systematically taking control of Eastern Europe to act as a buffer around her European borders. Puppet governments were installed and the so-called Iron Curtain fell between East and West. The Red Army, with her modernised tanks and numerous troops, arguably became the most powerful land force in the world.

In 1949, the USSR shocked many in the West by successfully testing their own nuclear weapon, breaking the monopoly owned by the United States. The Cold War between East and West deepened, and did not let up for 40 years. The Soviets went on to launch the first earth-orbiting satellite, Sputnik, in 1957, and the first man in space, Yury Gagarin, in 1961.

Economy	**Resource Gathering**
	20% Fishing
	20% Wood Chopping
	Citizens & Fishing Boats
	10% Build Time Decrease
	Buildings, Walls, & Towers
	20% Attack
	Civilisation-wide
	15% Pop Cap
Military	**Infantry - Ranged**
	25% Hit Points
	30% Build Time Decrease
	Siege Weapons
	20% Range
	20% Area Damage
	Tanks
	20% Range
	10% Armour
Naval	**Frigates & Cruisers**
	20% Cost Reduction

United States: 18th Century –

The United States won independence from Britain in 1782, but by the First World War the two nations were on friendly terms. The US sent materials to Britain and the Allies before finally committing to join the war in 1917. The Allies were victorious in 1918 and the United Stated emerged as a world power.

At the start of the Second World War, the US again began sending huge amounts of materials overseas, but the attack on Pearl Harbor in December 1941 brought America's armed forces into the conflict. Fighting a war on two fronts was a huge undertaking, so the US decided to concentrate on victory in Europe first. After the D-Day invasion in June 1944, the Allies on the western front steadily pushed all the way to Berlin. The war in Europe ended in May 1945.

Meanwhile in the Pacific, US forces managed to make headway against the formidable Japanese forces. At the Battle of Midway in June 1942, American planes sank four irreplaceable Japanese carriers. After retreating to Australia, General MacArthur hopped from island to island, finally retaking the Philippines by 1945. The Pacific war concluded with the Americans' use of a terrifying new weapon: the atomic bomb.

The power struggle between the US and the Soviets after WWII dominated the foreign policies of both countries – and virtually every nation on the globe – for the next four decades. Dubbed the Cold War, it was a time marked by mistrust and political sparring. An arms race raged as both nations stockpiled hundreds of nuclear weapons while simultaneously striving to develop superior conventional armaments. The US built many bombers, fighters, and helicopters hoping to control the skies in a possible war. Warships, too, were modernised and produced in large numbers. The cost of preparing for a hypothetical war took a high economic toll on both countries, but the United States' stronger economy ultimately prevailed.

Economy	**Resource Gathering**
	15% Gold Mining
	15% Iron Mining
	Citizens & Fishing Boats
	30% Attack
	20% Speed
	Buildings, Walls, & Towers
	15% Cost Reduction
	30% Build Time Decrease
	Civilisation-wide
	15% Pop Cap
Military	**Tanks**
	20% Cost Reduction
Naval	**Battleships & Carriers**
	25% Hit Points
	20% Range
Air	**Fighters and Fighter/Bombers**
	20% Range
	20% Flight Time
	Bombers
	20% Attack
	20% Speed
	20% Flight Time
	Helicopters
	25% Hit Points

Digital – Nano Ages

China: 20th Century –

With more than four millennia of history behind her, modern China began to emerge with the Revolution of 1949. By the end of the 20th Century, China was poised to take its place as one of the greatest powers the world had ever known.

The strength of China lay in her people. As the most populous country on earth, it was only a matter of directing and focusing that resource to achieve spectacular results. In 1949, China was largely and agrarian society, but modernisation came relatively quickly for a country of China's size. China tested its first nuclear weapon in 1964. Beginning in the 1990s – especially with the return of Hong Kong to China by Great Britain in 1997 – high-tech industries began to spring up at a rapid pace. By the 2020s, China's overall level of technology had met or exceeded those of most Western nations. With the exception of some rural regions in western China, the country was as modern as any in the world.

The transition to a Cyber-based military began in the mid 21st Century. In addition to having the world's largest standing army in terms of human combatants, the availability and continued improvement of Cyber forces kept China's military among the most-modern in the world. As a result, China was well prepared to deal with any threat that came its way.

Economy	**Resource Gathering**
	20% Farming
	Citizens & Fishing Boats
	20% Cost Reduction
	Civilisation-wide
	15% Pop Cap
	20% Mountain Combat Bonus
Military	**Field Cannon & AT Guns**
	20% Armour
	25% Hit Points
	20% Cost Reduction
	Cybers - Ultra
	20% Armour
	25% Hit Points
	30% Build Time Decrease
Air	**Fighters and Fighter/Bombers**
	20% Cost Reduction
	Helicopters
	20% Attack
	25% Hit Points
	30% Build Time Decrease

Novaya Russia: 21st Century –

The fall of the USSR in the early 1990s led to a generation of near-stagnation in Russia. While some former Soviet and Eastern Bloc states managed to transform their governments and economies relatively quickly, Russia, the largest of the former states in terms of both size and population, struggled to find its place in the new world order. By the 2010s, very little had changed. The Russian people had yet to see any of the benefits that were supposed to result from the downfall of communism. It was time to try something else.

Following the food riots of 2016, a young Russian nationalist stepped into the public eye. Disenchanted with western-style reforms and hungering for the return of a strong Russia, Grigor Stoyanovich set in motion a chain of events that would return his nation to the centre of the world's stage.

Economy	**Resource Gathering**
	20% Wood Cutting
	Citizens & Fishing Boats
	30% Hit Points
	20% Cost Reduction
	Buildings, Walls, & Towers
	50% Hit Points
	20% Range
Military	**Siege Weapons**
	30% Hit Points
	20% Range
	25% Rate of Fire
	Cybers - Combat
	20% Attack
	20% Range
	Cybers - Ultra
	25% Hit Points
	20% Speed
	20% Cost Reduction

Rebel Forces: 21st Century –

The establishment of Novaya Russia was not welcomed by all Russians. A resistance movement known simply as the Rebels kept constant pressure on Grigor Stoyanovich and his new State. The Rebels' method of striking hard and then relocating their base of operation allowed them to keep up an effective insurgency for many decades. An underground network of international arms traders kept them supplied with modern weapons.

Successes against the giant State prompted factions sympathetic to the Rebels to appear outside the country, especially in Europe, Southeast Asia and, later, the Americas. What had been just a resistance movement in Novaya Russia developed into a global Rebel network dedicated to the abolition of all forms of totalitarianism and the creation of a Free Earth based entirely on humanitarian principles. Rebel cadres set up secret bases and production facilities around the world. So widespread did these separate yet united cabals become that, by the turn of the 22nd Century, the Free Earth movement was effectively unconquerable – there was no practical way to defeat them all. The movement that began as a rebellion may yet be the force that propels humankind to abandon its divisive tribal mentality and embrace a united Earth.

Economy	**Resource Gathering**
	15% Iron Mining
	Citizens & Fishing Boats
	10% Build Time Decrease
Military	**Infantry - Ranged**
	20% Attack
	25% Hit Points
	20% Range
	Tanks
	20% Attack
	20% Range
	Cybers - Combat
	20% Range
	20% Cost Reduction
Air	**Bombers**
	25% Hit Points
	20% Speed

"The Eagle Attacks" by Mark Churms ©1999

Appendix B
Hot Keys

Key	Action

View Keys

Up Arrow	Scroll Up
Down Arrow	Scroll Down
Left Arrow	Scroll Left
Right Arrow	Scroll Right
Right Bracket	Zoom in
Left Bracket	Zoom out
Period	Follow Unit
F2	Toggle through perspective Zoom modes
F5	Toggle through 3 Show Hidden Units modes
F9	Take a Screen Shot with UI
Shift – F9	Take a Screen Shot without UI
Ctrl – F9	Take a Low Resolution Screen Shot of Entire Map
Alt – F9	Take a High Resolution Screen Shot of Entire Map
Space	Move to location of last player event (keep pressing to review the queue of recent events)

Selection Keys

Tab	Idle Citizen
Comma	Idle Military Unit
A	Idle Atomic Bomber
B	Idle Bomber
D	Idle Fighter/Bomber
F	Idle Fighter
Ctrl - #	Create group #
Shift - #	Add selection to group #
Alt - #	Select and centre group #
#	Select group # (Press the group's number)
##	Select and centre group # (Press number twice)

Key	Action

Selection Keys (continued)

H	Select and centre Town Centre
Ctrl – A	Select and centre Archery Range
Ctrl – B	Select and centre Barracks
Ctrl – C	Select and centre Siege Factory
Ctrl – D	Select and centre Dock
Ctrl – F	Select and centre Tank Factory
Ctrl – G	Select and centre Granary
Ctrl – I	Select and centre Missile Base (Campaigns Only)
Ctrl – N	Select and centre Settlement
Ctrl – Q	Select and centre Airport
Ctrl – R	Select and centre Cyber Factory
Ctrl – S	Select and centre Stable
Ctrl – V	Select and centre Naval Yard
Ctrl – X	Select and centre Cyber Lab
Ctrl – Y	Select and centre Temple

Game Commands

Numpad +	Increase Game Speed
Numpad -	Decrease Game Speed
Esc	Cancels Current Input or Action Mode (exits cinematics in scenarios)
Enter	Chat
F1	Return to Scenario Editor (When in Test Mode)
F3	Pause
F4	Quick Save
Shift – F4	Quick Load
Ctrl – F4	Auto Save Load
F10	In-Game Options
F11	Toggle Display of Game Clock/Speed and Frame Rate
Alt - F	Enter Flare Mode
Page Up	Display Previous Messages
Ctrl – Shift - Z	All out “Banzai” computer player attack - allied computer players will assist you (single player only)
Ctrl - Alt - Z	All out “Banzai” computer player attack - allied computer players will not assist you (single player only)

Unit Commands

Shift	Show Goal Queue / Add Goal to Queue (with other key)
B	Unit Behaviours
G	Garrison / Populate a Building
L	Explore
M	Formations
P	Stop
D	Unload Transport or Fortress
Z	Patrol (Land Military Units Only)
Del	Kill First Selected Unit
Shift – Del	Kill All Selected Units

Unit Behaviours

Alt – A	Aggressive
Alt – D	Defend (Stand Ground)
Alt – G	Guard (Guards a location)
Alt – S	Scout

Citizens

A	Build Archery Range or AA Gun
B	Build Barracks
C	Build Siege Factory
D	Build Dock
E	Build House
F	Build Tank Factory
J	Build Granary/Farms
N	Build Settlement
O	Build Fortress
Q	Build Airport
R	Build Cyber Factory
S	Build Stable
T	Build Tower
U	Build University
V	Build Naval Yard
W	Build Wall
X	Build Cyber Lab
Y	Build Temple
Z	Build Hospital

Priests

C	Convert

Prophets

A	Plague
C	Hurricane
E	Earthquake
F	Firestorm
R	Malaria
V	Volcano

Tempest

A	Anti-Matter Storm
R	Resonator

Hades

E	Teleport
T	Time Warp
V	Nano-Virus

Apollo

C	Ion Pulse
R	Repair
S	Diffraction Shield

Furies

D	Self-Destruct

Poseidon

C	Assimilate

Transports

D	Unload

Strategist Heroes

C	Battle Cry

Buildings

I	Set Rally Point

Town Centre / Capital (H)

C	Create Citizen
E	Train Strategist Hero
R	Train Warrior Hero
B	Produce Spotting Balloon
D	Train Canine Scout (Dog)
A	Research Epoch Advance
G	Research Gold Mining Technologies
N	Research Hunting / Foraging Technologies
S	Research Iron Mining Technologies
T	Research Stone Mining Technologies
U	Research Wall and Tower Upgrades
W	Research Wood Cutting Technologies

Archery Range (Ctrl-A)

A	Train Foot Archers
C	Train Chariot and Cavalry Archers
E	Train Ranged Spear Throwers
F	Train Elephant Archer
X	Train Crossbow Man

Barracks (Ctrl-B)

A	Train Ranged Shock (Gun) Units and Sampson
B	Train Grenade Launcher and Bazooka
C	Train Medics
D	Train Elite Guard
E	Train Pierce (Spear) Units and Flame Thrower
F	Train Hand Cannoneer and Mortars
G	Train Machine Gunner
N	Train Barbarian
R	Train Sharp-shooters and Snipers
S	Train Melee Shock (Sword) Units and Stinger Soldier
T	Train Partisan
V	Train Viking
W	Train Rock Thrower

Dock (Ctrl-D)

B	Build Battleships
C	Build Cruisers (Anti-Air)
D	Build Frigates
F	Build Fishing Boats
G	Build Galley/Galleons
T	Build Transports

Stable (Ctrl-S)

C	Train Shock (Melee) Cavalry
E	Train Pierce (Spear) Cavalry
F	Train War Elephant
G	Train Gun Cavalry
S	Train Persian Cavalry

Siege Factory (Ctrl-C)

A	Build Anti-Tank (AT) Guns
B	Build Artillery
C	Build Siege Weapons
E	Build Field Cannon
G	Build Siege Cannon
R	Build Rams
S	Build Field Weapons (pre-gunpowder)
T	Build Siege Towers

Naval Yard (Ctrl-V)

C	Build Aircraft Carriers
G	Build Sea Kings (Anti-Sub)
S	Build Attack Submarines
T	Build Nuclear-Powered Missile Submarines

Tank Factory (Ctrl-F)

F	Build Mobile AA Units
S	Build Armour-Piercing (AP) Tanks
T	Build High-Explosive (HE) Tanks

Airport (Ctrl-Q)

V	Set Atomic Bomber Rally Point
X	Set Bomber / Helicopter Rally Point
Z	Set Fighter Rally Point
A	Build Atomic Bombers
B	Build Bomber s
C	Build Anti-Tank (AT) Helicopters
E	Build Gunship Helicopters
F	Build Fighter/Bombers
G	Build Sea Kings (Anti-Sub)
R	Build Transport Helicopters
S	Build Fighters
T	Build Anti-Tank (AT) Airplanes

Aircraft Carrier (Ctrl-Q)

F	Build Fighter/Bombers

Cyber Factory (Ctrl-R)

A	Build Ares Cybers
C	Build Pandora Cybers
R	Build Hyperion Cybers
T	Build Minotaur Cybers
Z	Build Zeus Cyber

Cyber Lab (Ctrl-X)

A	Build Apollo Cyber
D	Build Hades Cyber
E	Build Poseidon Cyber
F	Build Furies Cyber
T	Build Tempest Cyber

Temple (Ctrl-Y)

E	Train Priest
R	Train Prophet
A	Research Techs to Increase Temple Range
B	Research Tech to Allow Conversion of Buildings
C	Research Tech to Allow Conversion of Priests
D	Research Techs to Increase Prophet Speed
F	Research Techs to Increase Priest Hit Points
M	Research Tech to Increase Priest Recharge Rate
N	Research Techs to Increase Prophet Range
P	Research Techs to Increase Prophet Hit Points
S	Research Techs to Increase Priest Speed
T	Research Techs to Increase Priest Range

University

B	Research Techs to Increase Building Line of Sight
F	Research Techs to Increase Building Hit Points
R	Research Techs to Increase University Range
S	Research Techs to Increase Rate of Repair at Dock
T	Research Tech to Decrease Cost of Tributes

Hospital

A	Research Techs to Increase Citizen Attack and Hit Points
C	Research Techs to Increase Your Pop Cap
R	Research Techs to Increase Hospital Healing Rate
S	Research Techs to Increase Citizen Speed

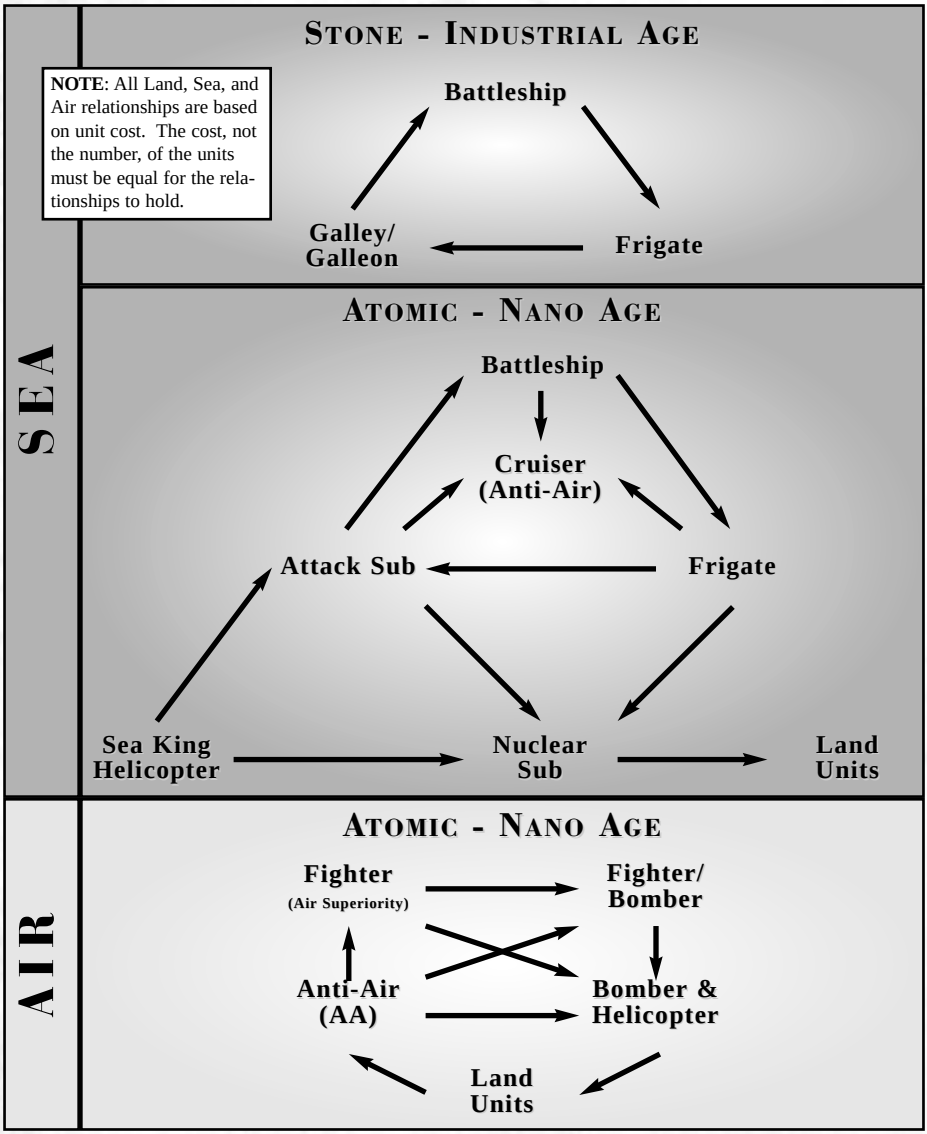
Granary

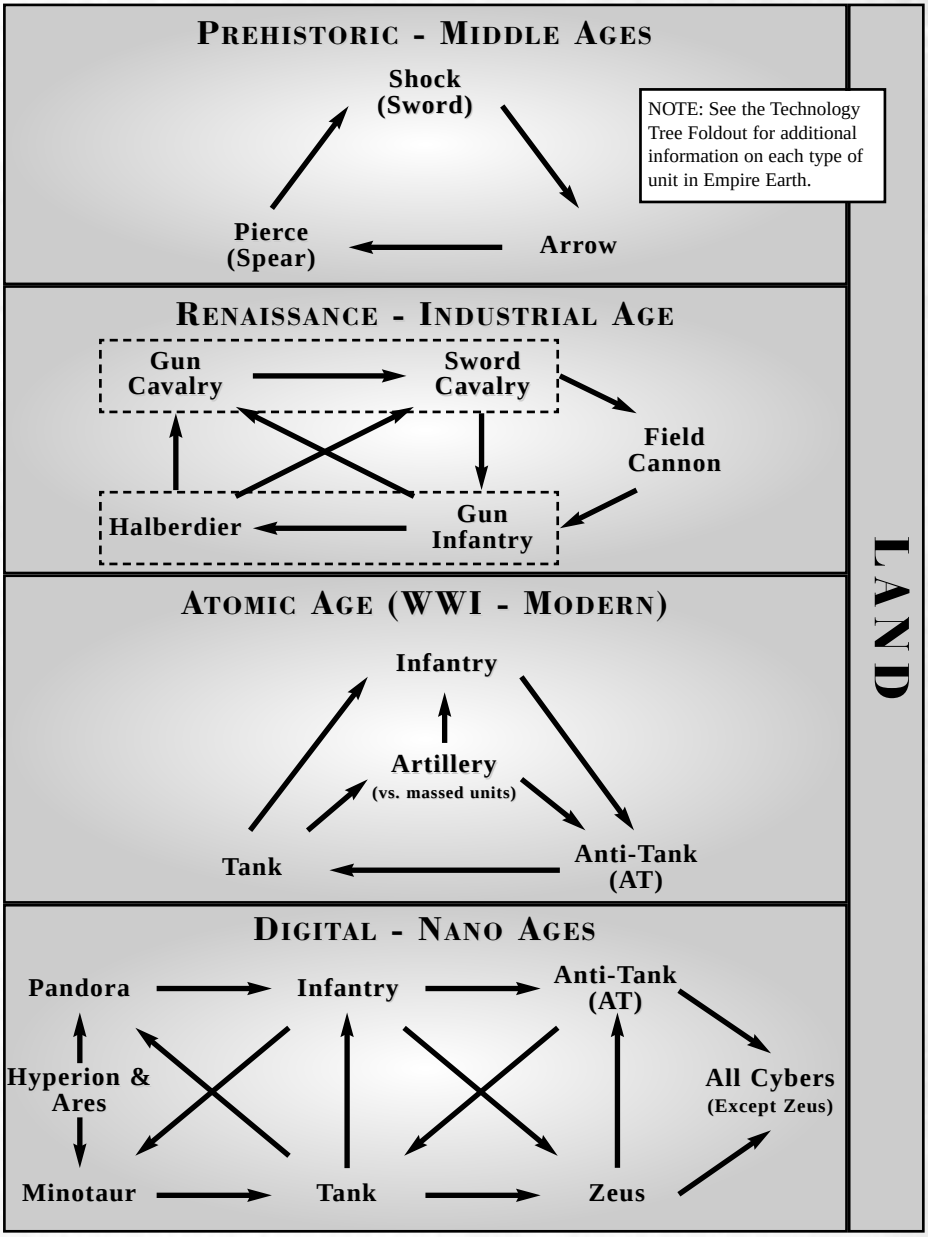
F	Research Techs to Increase Farming Rate
R	Replant Farms

Wall

G	Make Gate

Appendix C
Unit Relationships




Prehistoric - Middle Ages
Shock (Sword)
Arrow
Pierce (Spear)
NOTE: See the Technology Tree Foldout for additional information on each type of unit in Empire Earth.
Renaissance - Industrial Age
Gun Cavalry
Sword Cavalry
Field Cannon
Halberdier
Gun Infantry
Atomic Age (WWI - Modern)
Infantry
Artillery
(vs. massed units)
Tank
Anti-Tank (AT)
Digital - Nano Ages
Pandora
Infantry
Anti-Tank (AT)
Hyperion & Ares
All Cybers
(Except Zeus)
Minotaur
Tank
Zeus
LAND

Empire Earth Credits

Stainless Steel Studios, Inc.

Programmers

Scott Marison – Lead
Chad Dawson
Dan Higgins
Keith Patella
Bob Scott
Greg Seegert
Shawn Shoemaker
Brian Stephens
Michael Tatro
Charlie Cleveland
Dan Johnson

Artists

Steve Ashley – Lead
Josh Buck
Jeff Carroll
Jason Childress
Eric Dannerhoj
Cory Strader
Ben Smith

Game Design

Rick “Mr. Grinch” Goodman
Jon “Blood Donor” Alenson

Multiplayer Game Design

Richard “Methos” Bishop - Lead
Mike “YoungGunZ” Enchino
Damon “Stratus” Gauthier
Ryan “Age of Egos” Geiler
Nate “REDLINE” Jacques
Sunny “Crexis” Sihota
Ben “Ranger” Wilson

Single Player Game Design

Christopher “Eggman” Theriault - Lead
Gordon "The Old Campaigner" Farrell
Jason “The Rasher” Dillman
Tim “Yogurt” Mitchell
Ben Schneider
GJ Snyder III
Stephen “Lobby” Ryan

Producer

James Hsieh

Sound Designer

Scott Haraldsen

Documentation Specialist

Stefan B. Arnold

Director of Recruiting and Operations

Dara-Lynn C. Pelechatz

Operations

Brian Zuzelo
Katherine Kelly

Music

Steve Maitland
Ed Lima

Voice Actors

Nikolle Doolan
David J. Fielding
Jeremy Gottlieb
Ken Letendre
Frank Mitchell
Doug Weeks

Multiplayer Strike Team

Rich “Mrfixit” Andrews
Willy “Willy” Annand
Tim “Grand Pooba” Campbell
Teresa “Dana Ri” Cardwell
Che “Poisonberry” Chang
Paul “187” Clayton
Mathieu “Lightning_CN” Couillard
Keith “Iketh” Downes
Jon “Jonny Quest” Ebbert
Daniel “Major Eloff” Eloff
Gaspard “Elfanor” Gilot
Magnus H.”Loko” Haslebo
Kevin “Dhamon” Hoeschele
Eric “VG Messiah” Holmberg-Weidler
Kristine “Nanogirl” Ishii
Chris “Janman” Janson
Ronnie “Jinx” Jenkins
Esben “Blackgrail” Johannsen
Jacob “High” Lendeldt
James “ThumP” Mecham
Alan “Vasago” Michaud
Sean “Zip” Morris
Brian “Kleitus” Noonan
Robert Geoff “Malachi” Price
Mike “FallofRome” Rudolph
Yalina “Anne” See
Greg “Shaf” Shaffer
Randy “Stalin” Solberg
Andrew “Kaban” Temlyakov
Jeff “Gutter Rat” Wehnes
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Morale Committee Chair-dog

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CAMPAIGN/SCENARIO EDITORS

The Empire Earth Campaign and Scenario Editors are versatile and robust tools for creating original maps, scenarios, and campaigns. Both give you maximum control over your creations without sacrificing ease of use. The Scenario Editor allows you to create Empire Earth maps and specify explicit goals which the player(s) must accomplish to win. The Campaign Editor lets you tie scenarios together into an integrated campaign. This document provides more detail about these editors than the chapter in the printed manual.

Campaign Editor

The Campaign Editor is used to "assemble" scenarios created with Empire Earth's Scenario Editor into complete campaigns. A campaign is a collection of scenarios presented in an order determined by the scenario designer, therefore you must first create the scenarios before you can put them into a campaign (see the Scenario Editor section later in this chapter). Campaigns also include associated files such as JPEGs and sound files.

Starting the Campaign Editor

To open the Campaign Editor, click the Game Tools button on Empire Earth's Main Menu and then click the Campaign Editor button.

Using the Campaign Editor

Creating a campaign is a very simple task. The only prerequisite is that you have working scenarios to put into the campaign. Then all you need to do is give your campaign a name, select the scenarios and put them in the order you want, and then save the campaign. That's all there is to it. Once created, a campaign contains all the files needed to play each of the scenarios in it. Associated files (such as JPEGs, MP3s, etc.) are automatically saved as part of the campaign when you click the save button.

The Campaign Editor Screen

This section describes all the controls on the Campaign Editor screen and how to use them. You can exit the Campaign Editor by clicking the Back button, or click the Scenario Editor button to launch EE's Scenario Editor.

Campaign Name

In this field you can type the name for your campaign. If you select a campaign from the Campaigns list, its name appears here. If you edit the selected campaign's name, the Campaign Editor assumes you are creating a new campaign based on the settings of the selected campaign.

Civilization Name

In this field you can enter a name for the civilization that players will use for the entire campaign. Players cannot change this name. If you do not specify a name here or in the scenario, players can make up a name themselves when they enter the Civ Builder.

New Button

This button resets the Campaign Editor screen so you can create a new campaign starting from scratch. Default text, including a default campaign name, is added to some of the text fields for you.

Save Button

Click Save to save the current campaign under the name in the Campaign Name text box. Saving a campaign also packages together any files associated with the campaign's scenarios (such as JPEGs or MP3s).

Delete Button

Use the Delete button to delete the campaign currently selected in the Campaigns list. Note that there is no undo for this action.

Author

This is an optional field where you can include your name, if you want to. If you are looking at someone else's campaign, his or her name will be displayed here if it was included.

Author's E-mail

Like the Author field, this is an optional field that lets you include your email address. If the campaign was created by someone else, his or her email address will appear here, if it was provided.

Background Image

Select a graphic (JPEG) to use as a background for this campaign. This is optional. The image you select will appear behind the UI when players choose your campaign, otherwise a generic background is used. The .jpg file must be in scenario directory under the Empire Earth folder.

Password

The Password field allows you to password protect your campaign so that others cannot edit it. To protect your campaign with a password, type a password into this field. When you click the Save button, the password you entered is saved along with the campaign. To access your campaign again you must select the campaign in the Campaigns list, type the password in the password field, and click the OK button. Be careful not to forget or lose your password!

When you view a campaign that is password protected all the controls in the Campaign Editor are disabled (except for the Password controls) and some fields are left blank. This prevents users other than the author from making changes to the campaign.

Campaigns List

The Campaigns list displays all the campaigns saved in EE's campaigns folder. You can select campaigns in this list to edit them. If the campaign is password protected, you must enter the password in order to edit the campaign.

Description

You can type a description for your campaign in this field. Descriptions are optional, but they are useful for introducing the campaign to players.

Available Scenarios

This list displays the scenarios available for you to add to your campaign.

Scenarios in Campaign

This list displays all the scenarios in the currently selected campaign. If the selected campaign is password protected, nothing is shown in this list until the password is entered. The scenarios that appear in this list

are shown in the order in which they are to be played, from the first scenario at the top to the last scenario at the bottom.

Assets in Campaign

This is simply a list of all the non-scenario files currently in the campaign. These are any files that are associated with the individual scenarios, such as sound files and JPEGs. Note that movie files are not included in the assets and must be included as separate files when a campaign is distributed. Movies should be put into the ..\data\movies folder by the user. Only Bink Video (.bik) is supported.

Add Button

Click the Add button to move the selected scenario in the Available Scenarios list over to the Scenarios in Campaign list. This adds the scenario to the campaign.

> NOTE: If you try to add a scenario but do not have all the media associated with that scenario (e.g., sound files), you will be notified that files are missing. You cannot save your campaign until all the media for all the scenarios are in place.

Remove Button

Click the Remove button to remove a selected scenario from the Scenarios in Campaign list and put it back in the Available Scenarios list.

Up Button

Use the Up button to reorder your scenarios in the campaign. Click Up to move up a selected scenario in the Scenarios in Campaign list up in the list.

Down Button

Use the Down button to move a selected scenario down in the Scenarios in Campaign list.

Scenario Editor

The Empire Earth Scenario Editor provides all the tools you need to create original game scenarios that are as simple or as complex as you wish to make them. You can build your own Empire Earth maps, add event triggers such as victory conditions, set game and player starting conditions, and include instructions and other messages.

> TIP: Though the options available to you in the Scenario Editor are vast, learning the basics is really quite simple. For some hands-on examples, take a look at the Trigger Examples at the end of the Triggers section. With a little practice, you'll be ready to create just about any game situation you can imagine.

The Scenario Editor is divided into seven main parts or "screens." Icon buttons along the bottom-left of the editor take you to each screen. The buttons just to the left of the Mini-map provide save, load, and testing options. In the Scenario Editor, the Mini-map functions as it does during a game.

> NOTE: Player 1 is always considered to be a human player, but does not have to be the only human player in the scenario.

Starting the Scenario Editor

To start the Scenario Editor, click on the Game Tools button in Empire Earth's Main Menu. Then click the Scenario Editor button to launch the Scenario Editor.

Loading, Saving, and Testing Scenarios

The buttons to the left of the Mini-map provide access to the Scenario Editor's many save and load options. From left to right, these buttons are:

- **Quick Load** – Loads the scenario last saved with Quick Save – if there is one – into the Scenario Editor. **Hot Key:** / (forward slash)
- **Quick Save** – Saves the scenario on which you are currently working to the file EEQuickSave.scn in Empire Earth's root directory (i.e., where the .exe file is). Please note that each time you do a Quick Save, it overwrites the previous Quick Save file, so you can have no more that one Quick Save at a time. **Hot Key:** ; (comma)
- **Save** – Saves the scenario on which you are currently working via the Save screen. The Save screen lets you enter a name for the scenario or choose a previously saved scenario to overwrite..
- **Load** – Opens a window that allows you to pick a previously-saved scenario to open in the Scenario Editor.
- **Test** – Launches Empire Earth and loads the scenario on which you are currently working. As the button name implies, this allows you to test your scenario so you can make sure that it is working the way you intended. When testing, pressing the F1 key allows you to re-enter the Scenario Editor, or you can click the Return to Editor button on the Game Options menu.
- **Exit** – Returns you to Empire Earth's Main Menu.

Moving the Camera

In the Scenario Editor, you have full control over Empire Earth's 3D camera. You have a larger zoom range and you can point the camera in any direction you wish. To rotate and pitch the camera, simply hold down the tilde "~" key while you move the mouse (you do not have to hold down the Shift key). Moving the mouse left and right rotates the camera, while moving the mouse forward and backward pitches the camera down and up. The mouse wheel zooms the camera in and out. It may take a little practice to get used to moving the camera in three dimensions, but you'll soon learn to point it at exactly what you want. To return the camera to the normal game view, press the Home key on your keyboard.

Creating Cinematics

The Scenario Editor allows you to create your own movies or cinematics using triggers. Triggers allow you to control the actions and events in your scenario and are explained later. This section gives a basic overview of creating cinematics and describes where in this chapter you can find information about how to create cinematics. Don't worry, creating cinematics sounds more complicated than it actually is. With a little practice, you'll soon be able to setup and "film" just about any scene you can imagine.

The cinematics you create are saved as part of your scenario – you can even make the entire scenario just a cinematic if you want to. Once you have set up all the elements that you want to appear in your cinematic (e.g., the landscape, buildings, units, etc.) creating the cinematic is largely accomplished by creating triggers that utilize the Script Camera Effect. These Effects tell the camera what to do and when to do it. When the camera Effects are all strung together, when the scenario is played, they make up the cinematic. See the Player section under the Effects section, later in this chapter, for more information about the Script Camera Effect.

You can use triggers to move the camera at any time during the scenario, if you wish, but if you want the player to watch the cinematic without interacting with the game, you should trigger the scenario to go into "Cinematic Mode." During Cinematic Mode, the screen shrinks to a letterbox format and players cannot control what is happening on the screen (but they can press the Esc key to return to the game whenever they want). You, as the scenario designer, have control over when Cinematic Mode starts and ends by using the Start Cinematic Mode and the End Cinematic Mode Game Effects, which are explained in the Game section under Effects, later in this chapter.

There are a number of ways to control the camera during a cinematic. Most involve using the Script Camera Effect, but you also have some control over the camera when you use the Send Dialogue Effect (see the Media section under Effects). You can also have the camera Fade In or Out, but only while in Cinematic Mode (see the Player section under Effects). Additionally, you can place Camera Markers to define points for the camera to move to. Placing these markers is described in the Unit Placement Screen section.

Map Creation Screen

When creating a scenario, before you do anything else, you'll need a starting map so you'll have something to work with. The default map is a Blank map covered with a grass texture. If you wish, you can generate a different base map. There are three different base maps from which to choose: Blank, Random, and Seed. Each is described below.

To create a new base map:
1. Select a base map type: Blank, Random, or Seed.
2. Set the Map Size for the map. For Blank maps you can set a Map Width and Height, as measured in tiles – for example, 50 x 50 or 40 x 20. The Width and Height of your map do not have to be the same.
3. For Blank base maps, select a Default Terrain. For Random and Seed Maps, choose a Map Type.
4. For Seed Maps only, enter a seed number.
5. Click "Create Map" to generate the new map.

Blank

The Blank base map selection creates a flat map using the Default Terrain setting – for example, grass. The land elevation is set to zero (0).

Random

The Random base map generates a random map (based on a seed number) with a Capitol and Citizens for each player. You can choose the Size and Type of random map to create The seed used to create the map is displayed once the map is generated.

Seed

Creates a map based on the entered seed number. Maps based on the same seed are identical assuming the number of players remains the same.

Elevation File

The Elevation File allows advanced users to specify a file containing elevation data. This file is used in conjunction with generating a Blank map. To use this feature, you must first download the elevation data from a web site such as the National Geophysical Data Center (NGDC) of the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce (http://www.ngdc.noaa.gov/cgi-bin/seg/ff/nph-newform.pl/seg/topo/subset or http://www.ngdc.noaa.gov/mgg/global/seltopo.html).

Make sure the data you download is in a binary 16-bit integer format compatible with an Intel machine. Also take note of the height and width (or rows and columns) of your data, as you will need them later. Save the downloaded file in your ..\Data\Scenarios\Elevation Maps folder as <filename>.dat. Note that you may need to change the extension to .dat. You must also add a text file in that same directory called <filename>.txt. Note that both <filename>s must be the same. In the txt file, put the width (columns) and then the height (rows) of your downloaded data separated by only a space and no return at the end of the line, for example:

240 240

With the two files in place, you can choose the Elevation File from the drop down list on the Map Creation screen. When you do, some of the controls will disappear and new ones will appear. You can now choose only a width for your map. The height will be automatically scaled to the same ratio as the width and height of the elevation data you downloaded.

The new controls that appear are as follows:

- **Water Depth** – This is the maximum depth that the water will reach in Empire Earth elevation.
- **Water Cutoff** – This is the depth, in meters, that is set to be equal to the Water Depth value. Any depths greater that this in the data will be cut off at the maximum water depth.
- **Land Height** – This is the maximum height that the land will reach in Empire Earth elevation.
- **Land Cutoff** – This is the height, in meters, that is set to be equal to the Land Height value. Any heights greater than this value in the data will be cut off at the maximum land height.

For example, you might set:
Water Depth = 10 (this is the maximum depth)
Water Cutoff = 5000 (meters)
Land Height = 20 (this the maximum altitude)
Land Cutoff = 2000

To create your new map, hit the create map button. You may need to fine tune the map by adjusting the Land and Water values.

Map Elevations Screen

To add variety to your map's topography, you can create hills and valleys. There are 65 discrete elevations (levels) for the land, from –24 to +40. The default is zero (0), which is just above sea level. Land set to an elevation of less than zero is under water. An elevation of –1 is considered "shallows" and is passable by land units.

Land Elevation

To raise or lower the land:
1. Be sure the Elevation button is selected.
2. Select a Brush Size.
3. Set the Terrain Elevation slider to the elevation you want. Negative elevations are under water.
4. Select whether you want to Paint Hills, Paint Cliffs, or Paint Cliff Paths:
   - Paint Hills – Paints smooth slopes that land units can climb.
   - Paint Cliffs – Paints steep slopes that land units cannot climb.
   - Paint Cliff Paths – Paints a smooth slope onto a cliff so that land units can climb up the path.
5. Left-click (and drag, if desired) to raise or lower the elevation of the land under the Brush. All the tiles under the Brush move up (or down) to the altitude specified by the Terrain Elevation slider.

> TIP: If you press and hold the space bar when you left click, the elevation slider is ignored. Instead, the elevation under the center tile of the Brush is set as the current elevation and you can paint using that elevation while dragging the mouse pointer.

You can also drag land up or down by clicking and holding the right mouse button and dragging the pointer up or down. Tiles under the brush raise or lower as you drag (note that your choice of Paint Hills, Cliffs, or Paths is still active). This is useful for dynamically adding elevations to the landscape. If you hold in the left button at the same time, you can drag the current elevation to the adjacent tiles.

> NOTE: Adding hills near cliffs can "replace" the cliffs with smoother slopes. A little practice will show how this works.

Terrain Screen

There are many types of terrain available in Empire Earth, which allow you to create practically any type of look for your map that you can think of. To paint terrain:

1. Click the Terrain button.
2. Select the Brush Size you want.
3. Choose the Terrain Type you want from the list.
4. Choose the Terrain Color you want. If you don't choose a color, the default color for that Terrain Type is used. Just to the left of the Mini-Map, a preview shows the selected Terrain Type and Color.
5. Left-click and drag to paint with the selected Terrain Type and Color.

Bear in mind that terrain paints the vertices of tiles (i.e., where the tiles meet) and not the tiles themselves. This is to ensure the different terrains blend together smoothly. Some Terrain Types, however, actually "paint" units (e.g., the various Ambient and Forest types) on to the map. These units get placed on the tiles, not the vertices.

> TIP: To paint using just color (i.e., without a particular type of terrain), select White as the Terrain Type and then choose the Terrain Color you want to use.

Bulldozer

The Bulldozer control on the Terrain Screen is used to delete objects on the map (e.g., player units, trees, etc.). Select Bulldozer and the Brush Size you want, then left-click on the map to delete all objects under the brush. Hold down the left mouse button and drag to "erase" swaths of objects. The terrain under the objects is not affected.

Unit Placement Screen

Using the Unit Placement Screen you can place all kinds of objects on the map – including units, buildings, heroes, and world units – so that they are available to players at the beginning of the scenario. Just like in the game, certain units cannot be placed in certain locations. For example, ships must be placed in water, not on land.

> NOTE: If you are planning to use computer players in your scenario, you must define where each computer player's starting position is located. For each computer player, the first land unit you place on the map that is not a building (i.e., a unit that can move) defines that computer player's "home base." Do not use a ship as that will put the home base in the water. You can, if you want, set up a trigger to kill that first unit as soon as the scenario starts. The computer player will defend its home base and perform most of its initial activity there (assuming it is an active player).

To place objects on the map:

1. Select World Player to place objects that belong to the world (and not to a player), such as trees or other resources. Or, select Player and choose the player for whom you want to place objects.
2. Select the category of objects you want to place using the buttons at the top left of the screen. You can choose: land units, air units (aircraft), water units (ships), structures (buildings), heroes, and ambient objects (including resources). The items belonging to the selected category will appear in the list on the left side of the screen. Note that all resources (except animals) must belong to the World Player.
3. Select the particular type of object you want from the pick list by clicking on it (e.g., click on "Knight"). The Sort buttons determine how the list of objects is sorted: Alphabetically ("Alpha"), by Epoch, or by Family.
4. Place the object you selected by left-clicking on the map – you can place as many of that type of object as you like. Red means you cannot place the object there – try a different location. Right-click to stop placing that object. (Thereafter, right-clicking on a placed object will delete it from the map.) Note that units that do not move (e.g., resources, buildings) "snap" to the map tiles while units that can move (e.g., Citizens, ships, animals) can be placed just about anywhere.

NOTE: You can change to a different player at any time by selecting a different player from the drop-down list.

Other Unit Controls

- **Select** – You can select units already placed on the map using any of the normal selection methods (e.g., click on or lasso units).
- **Delete** – Right-click on a placed unit to delete it. The Delete key on the keyboard also deletes the selected unit. To delete multiple units at once, select the units and press Shift-Delete or use the Bulldozer tool on the Terrain screen.
- **Moving Units** – Double-click on a placed object to "pick it up." You can then move it to a new location on the map (click to re-place it). You can move only one unit at a time.
- **Rotate** – Left-click the Rotate button (the arrow) to turn a selected unit clockwise or right-click to turn it counter-clockwise. The arrow shows the direction the unit faces. You can also use the Rotate button for objects you are about to place on the map. For finer control of the unit's facing, you can select a unit or units on the map and then right-click and drag to change the direction they are facing, just like you can during a game (except that the units don't move, they just rotate in place).

Placing Cargo

Transports that you place on the map can be given cargo. This way, the transport will be carrying cargo when the scenario begins. This includes not only moveable transports (e.g., transport ships and helicopters) but any object that can hold units (e.g., Airports and Fortresses).

- **To put a unit in a transport,** click on the transport when placing the unit. (You can also put units into an air transport such as the Chinook or in a Fortress.)
- **To see the cargo in a transport,** select the transport. The units in the transport appear in the cargo list. The units' health bars appear above the transport's health bar.
- **To remove (delete) a unit from the transport,** select the transport, select the unit in the transport's cargo list, and then click the Remove button.

NOTE: Be sure to use a unit (e.g., Citizen, Knight) in all your trigger definitions BEFORE placing it on a transport because you cannot add that unit to or remove it from Objects after it becomes part of a transport's cargo. You can, however, change the qualifiers of the Objects of which that unit is a part.

Placing Camera Markers

The Scenario Editor allows you to create your own movies or cinematics using triggers (see the Triggers section of this chapter). Placing Camera Markers is one way to plan out your shots. A Camera Marker defines a place for the camera to move to during the cinematic. Thus, Camera Markers allow you to set up a camera shot without using another Object (e.g., a tree or building) or Area as a reference point. To place a Camera Marker:

1. On the Unit Placement screen, select the World Player and the Buildings list. Then select Camera Marker from the list.
2. Move the camera until you are looking at the part of the map at the camera angle you want.
3. Left click to place the Camera Marker anywhere on the map. What you see on the map is exactly what the camera will see when it moves to that marker (though you can alter the zoom level when you create the Effect). The marker is placed in 3D space – if you zoom out a little, you can see the marker – but it is only visible when you are in the Scenario Editor.
4. You can use the Camera Marker in your Object definitions like any other unit you place. Then, those Objects can be used when you create a Script Camera Effect – see the Player section of Effects, later in this chapter, for more information.

If there is just one Camera Marker in an Object that you use in a Script Camera Effect, the scroll speed for the camera dictates how quickly the camera will move to that marker. When you have multiple Camera Markers in an Object, the order in which you select the markers for the Object is important. The order dictates how the camera will move, from the first marker to the second, to the third, and so on. You can, in this way, create a sequenced camera flyby that smoothly moves the camera between the multiple camera markers. To create a flyby sequence, create a Script Camera Effect that uses the Object for the Move Camera and Face Camera selections. Set the zoom level to None so the exact camera marker position is used. During the cinematic, the camera will snap to the first Camera Marker in the Object and use the "scroll speed" to determine the speed at which the camera moves through the sequence of markers.

> TIP: When you use a Camera Marker in an Object Definition (see the section on Triggers), you can click on the Camera Marker in the Unit Selected List to display what the camera is looking at.

Player Setup Screen

On the Player Setup Screen, you can configure the starting conditions for each player in the scenario. This includes the number of players in the scenario, starting resources, available technologies, alliances, and other settings.

> NOTE: Player 1 is always considered to be a human player, but does not have to be the only human player in the scenario.

The following controls are available on Player Page 1, Player Page 2, and the AI Settings pages:

- **Max Players** – Set the maximum number of players in the scenario using the Max Players drop-down list.
- **All Players** – You can quickly set all players to use the same settings by selecting the values you want in the All Players row and then clicking the Set All Players button. Note that clicking the Set All Players button copies exactly what appears in the All Players row to all the individual player's rows.
- **Player Color** – Set the player color for each player. Click (or right-click) on the color button to change the player's color.

Player Page 1

With the controls on Player Page 1, you can set resource levels and the Epochs for each player.

- **Resources** - Set the starting resources for each individual player (or all players). Type the amount in the appropriate text box in the row for the player you want.
- **Epochs** – Set the Start Epoch and End Epoch for each player using the appropriate drop-down list. (This can also be set with the Set All Players button.)

Player Page 2

You can set more player options with the Player Page 2 controls. Note that the All Players row and Set All Players button can be used to set conditions for all players at once, just as on Page 1. The Page 2 options are:

- **Player** – Lets you enter a name for each player, such as who the player is supposed to be in the scenario.
- **Civilization** – Select each player's civilization from the drop-down list. The list shows all the available civilizations, Predefined as well as User Defined.
- **CPU Only** – This is used for Multiplayer games. If CPU Only is checked, the player must be controlled by the computer and cannot be removed from the game. If unchecked, the player can be controlled either by the computer or a human; the choice is up to the host.
- **Shared LOS** – If checked, this player shares Line Of Sight (LOS) with all allied players in the scenario, human and computer.

AI Settings

The controls on the AI Settings page allow you to modify the behavior of each computer player globally, that is, for the entire scenario. The behaviors are very general, allowing you to do a quick setup for each computer player. You can modify the behavior of computer players more explicitly using AI Effects Triggers (explained later, in the Triggers section). The controls available on this page are:

- **Active –** When off (unchecked), the associated computer player is totally deactivated. Units belonging to an inactive computer player still respond when attacked or when enemies become visible, but no decisions above the unit level are made. Generally, this control should be left on unless you have specific reasons for deactivating the specified computer player. Note that the rest of the settings on this page are ignored for a computer player if its Active box is unchecked.
- **Cheat –** When checked, the computer player gets a discounted cost in resources to produce or research anything. In other words, everything is cheaper for this computer player.
- **Attack –** Turning this on (checked) causes the computer player to produce units to attack enemy players, as normal. If turned off, the computer player does not produce units to attack enemies (but it may produce units for defensive reasons if Defend is on).
- **Defend –** This control, when on, tells the computer player to produce units to defend areas it deems important, such as its buildings or resources. If the control is turned off, the computer player does not produce defensive units (but it may produce offensive units if Attack is on). Note that a defensive group may appear to be offensive if it is created and sent to an area where there are hostile units.
- **Build/Repair –** The computer player is allowed to produce new buildings and repair existing ones if this control is turned on. If it is off, the computer player does not construct or repair buildings.
- **Explore –** The computer player will create units specifically for exploration purposes if this control is turned on.
- **Ignore –** When turned on, this tells computer players to ignore the human player(s) when it calculates its population needs and when it decides to advance to the next Epoch. If turned off, the computer players tries to "stay close" to the human player(s) in these two respects.
- **Gather –** When this control is turned on, the computer player creates and sends Citizens to gather resources. Note that when the computer player is allowed to gather, it may do so whether it truly requires any resources or not (for example, if Cheat is turned on).
- **Citizen Percentage –** This control lets you specify what percentage of the computer player's total population should be Citizens. For example, if this control is set to 50, then half of the computer player's population (i.e., 50%) at any given time will be Citizens. Note that since some units count more towards the total population (e.g., each cavalry unit counts as 2 units for the purpose of determining population), the number of Citizens produced by the computer player in this example may not be exactly half of the total number of units produced.

> NOTE: If you are planning to use computer players in your scenario, you must define where each computer player's starting position is located. For each computer player, the first land unit you place on the map that is not a building (i.e., a unit that can move) defines that computer player's "home base." Do not use a ship as that will put the home base in the water. You can, if you want, set up a trigger to kill that first unit as soon as the scenario starts. The computer player will defend its home base and perform most of its initial activity there (assuming it is an active computer player).

Tech Tree Page

This page allows you to modify the technology tree for any player by enabling or disabling individual units, buildings, heroes, or technologies. Disabled items will not be available to that player during the scenario.

To modify a player's technology tree:

1. Choose the player you want from the Player drop-down list.
2. Select the type of items ("Unit Types") you want to enable or disable: Units, Buildings, Heroes, or Technologies. You can display the Epoch in which the items in the list become available by checking the Display Epoch box – note that this sorts the listed items by Epoch.

3. Move the item(s) you want from the Enable Technologies list to the Disable Technologies list (or vice-versa). This is accomplished by using the buttons provided. Move the selected item in the list (and any dependent items) with the < and > buttons or all items in the list with the << and >> buttons.

Note that when you select Technologies to enable or disable, the individual technology you select is highlighted green. All the technologies affected by the selected technology – the "dependent" technologies, such as a later unit upgrade – are highlighted blue. When you disable (or enable) the green technology, all the blue technologies are also disabled (enabled). For example, if you disable the upgrade to the Imperial Age Battleship, all the upgrades to subsequent battleships are also disabled. If an item in the disabled list is displayed in red it means it cannot be enabled unless one (or more) of its prerequisites is enabled first.

Options Page

The last of the player pages lets you set additional options for each of the players, including the diplomatic disposition (ally or enemy) of any player to any other player.

To change a diplomatic stance of two players to each other, click on the icon where the two players intersect. If there are only two players in the scenario, there will be only one intersection and, hence, only one icon. Note that the disposition is mutual, so if player 1 is the enemy of player 2, then player 2 must be the enemy of player 1. The icon colors mean the following:

- Green (complete circle) = Ally
- Red (broken circle) = Enemy

Other Options

The other controls on this page are as follows:

- **Game Unit Limit** – Lets you set the world population limit that gets evenly divided among all the players in the scenario. The number of units per player is based on the number of players you have chosen for the scenario. The number of units per player will vary slightly depending on which Epoch a player starts in (because some technologies add to a player's pop cap and these techs are researched automatically, unless the scenario designer disables those techs).
- **Wonders for Victory** – Lets you set how many Wonders are needed for a wonder victory (if Victory Allowed is enabled). If you do not want Wonders to count towards victory during the scenario, set this value to zero (0).
- **Victory Allowed** – Victory (or defeat) can always be granted via triggers (see the section on Triggers later in this chapter). However, you can check this checkbox to allow a player or team to win by eliminating all the opposing players in the scenario in standard conquest fashion. This box is unchecked by default since designers generally prefer to set up their own victory conditions via triggers.
- **Teams Locked** – If checked, players are not allowed to change their diplomatic stances towards one another during the scenario on the Diplomacy screen. The scenario designer, of course, can still change stances via triggers.
- **Cheat Codes** – Check this checkbox to allow players to use Empire Earth's cheat codes while playing the scenario. This is unchecked by default.
- **Unit Improvements** – Check this checkbox to allow players to improve their units during the scenario. If unchecked, players are not allowed to improve the attributes of their units when playing the scenario.

Story/Instructions Screen

On this screen you set various story elements for the scenario – instructions, hints, and others. This information can be changed during a game by creating appropriate triggers (explained in the Triggers Screen section). All the information below is displayed in its appropriate place on the Scenario Intro screen.

- **Scenario Inst. Map** – Choose the JPEG file for the map you want to display on the Scenario Intro screen, where the instructions are shown. These files must be saved in the ..\data\scenario folder.
- **Movie** – Choose the movie file you want to play before the start of the scenario. These files must be saved in the ..\data\movies folder. Only Bink Video (.bik) is supported.
- **Inst. Sound Over** – Choose the MP3 file to use for sound effects, voice over, or music for the Scenario Intro screen. Mp3 files must be saved in the ..\data\sounds folder.
- **Scenario Instructions** – Enter the instructions for the scenario. These can include directions and objectives. Instructions appear at the beginning of the scenario on the Scenario Intro screen (along with the maps and sounds, if any).
- **Hints** – In this field you can enter hints for the scenario. The hints are shown on a separate screen from the instructions so players won't see them unless they want to read them.
- **History** – Add any history or background information for the scenario in this field. This is optional but can be useful for providing an historical context or story elements.

Civilization Builder

You can enter the Civilization Builder to create customized civilizations for your scenario. See Chapter XIV in the EE Manual for information on how to use the Civilization Builder.

Triggers Screen

On the Triggers Screen you can create "triggers" which control actions and events that transpire during your scenario. There are five trigger components from which you build the conditional trigger statements. The components are: Triggers, Conditions, Effects, Objects, and Areas. They are defined below and described in detail in the following sections.

- **Trigger** – A Trigger is a set of conditions and related effects. Every trigger is periodically evaluated by the game engine. If a trigger's conditions are evaluated to be TRUE, then the trigger's effects are queued to happen in the game.
- **Condition** – A Condition is an expression evaluating some state of the game which can be tested to be TRUE or FALSE. For example, a condition might be: "Player2 has a population that is greater than or equal to 100." If Player2's population count equals or exceeds 100, then this condition would be evaluated as TRUE. If Player2's population count is less than 100 the condition is FALSE.
- **Effect** – An Effect is an action, event, or change in the game that can be caused to occur. For example, an effect might create new units for player 1 or take 200 stone away from all computer players.
- **Object** – An Object is a unit or list of units (or buildings), which can be combined with a state such as "has 50 hit points" or "is near Player2's Town Center." These may be specific units selected on the map or general-purpose descriptions of objects, such as "any cavalry archer that belongs to player 1."
- **Area** – An Area is a rectangular region selected on the map, a specific continent or ocean, or "off" the map. You can also select a "town."

Each component is accessible by clicking the button of the same name. For example, click on the Object button if you want to define an object. For each of the component types, you can create new ones, duplicate existing ones, or delete them. You can also reorder the lists of the components and give each component a unique name.

- **New** – Click the New button to create a new component (e.g., a new trigger or new object). You will need to click this button whenever you want to create a new trigger or trigger component.
- **Duplicate** – Select a component in the list and then click the Duplicate button to create an exact copy of it. The name of the component will be appended with "_Copy".
- **Delete** – Selecting a component and clicking the Delete button will permanently remove it from the list of components.
- **Reordering** – The up and down arrows just to the left of the component list is used for moving a component up or down within its list. Select a component in the list and use the arrows to move it up

or down. You can alphabetize the list by pressing the AZ button (except the Trigger list because the order of the triggers is important – see the following section on Triggers).

- **Name** – You can name the selected component by typing a name in the Name text box. Default names called "autonames" are shown in triangular brackets ("< >").
- **Hide UI** – The checkbox just to the right of the Exit button (at lower-right) shows or hides the upper portion of the UI on the Trigger Screen. This is useful if you need to see more of the map on the screen.

The Description field allows you to leave notes to yourself (or others) about what each defined component is meant to do.

> TIP: You can "jump" to a specific component you have defined by right-clicking on it. For example, in a trigger definition, you can right-click on a specified condition to immediately jump to the definition of that condition. Then, you can click on a specific object in that condition to jump to that object.

Component Names

It is very helpful to give components meaningful names so that they are easily identifiable. All components are given "autonames" for convenience, but you should come up with your own names to keep all the components and their uses straight. The autonames for conditions and effects are self explanatory, but autonames for objects are a little more involved. A full explanation of the object autonames is given in the Objects section later in this chapter. All autonames are enclosed in triangular brackets – for example, "<play sound>" or "<citizen213>" – so that they can be easily distinguished from the names you enter yourself.

Triggers

Clicking the Trigger button displays the controls used for setting up triggers. Triggers are made up of Conditions and Effects, which in turn are made up of Objects and Areas. Thus, to create a trigger, you must first create Objects and (optionally) Areas, and then Conditions and Effects. (Objects, areas, conditions, and effects are all explained in their own sections later in this chapter.)

Every scenario should have at least one trigger, this being the trigger that sets the victory conditions, unless you decide to turn on the Victory Allowed option (set on the Player Setup Options page). If Victory Allowed is enabled, then you do not need to create any triggers for your scenario if you do not want to. Every trigger you do create will be comprised of at least one Condition and one Effect.

You can name your triggers to make them easier to identify (default autonames are Trigger0, Trigger1, etc.). Once a trigger is defined, it is periodically evaluated during the scenario. If and when a trigger's conditions are evaluated as TRUE then the trigger "fires" and its effects are put in a queue to be carried out. Triggers are evaluated once every game second. The options for triggers are described in the following subsections.

> NOTE: A game second may not be the same as a real second – it depends on what the game speed is set to.

Trigger Order

The order of the triggers is important. You can set the order in which your triggers are evaluated by selecting a trigger in the list and using the up and down arrow buttons next to the trigger list. The reason trigger order is important is because certain triggers may require that other triggers fire first in order to work as intended. For example, if Trigger1 creates 4 Citizens and Trigger2 tells the 4 Citizens to gather wood, then Trigger1 should appear before (above) Trigger2 in the trigger list or else Trigger2 won't have any Citizens to act upon. If you wish, you can use the checkbox beneath the arrow buttons to display the unique number that was assigned to each trigger when it was created.

Trigger is On

New triggers are set to ON (box is checked) by default. You can set this OFF (box is unchecked) to keep the trigger from being evaluated, for example, if you want to have another trigger turn it on at a later point in the scenario. Once a trigger fires, it is turned OFF automatically (unless Looping is set ON – see below).

Condition True For

This control sets how many game seconds the condition(s) of a trigger must be TRUE before the trigger fires. The default is zero (0) – in other words, the instant the conditions are met, the trigger fires (though the effect(s) can be delayed, see the Trigger Statement section, below).

Looping

You can set a trigger to "loop" so that it is always active – that is, it does not turn OFF after it fires.

- ON – The trigger is constantly reevaluated even if it has already fired. Thus, the effects are carried out whenever the trigger is evaluated to be TRUE.
- OFF – The trigger is evaluated until its conditions are met (TRUE), then it fires once and is never reevaluated (unless turned back on by another trigger).

> TIP: Strange things can happen if looping is turned on. Since the trigger stays active, the effect(s) will be carried out every game second that the conditions remain TRUE. Thus, if the effect is to create a Musketeer, your map might soon be filled with Musketeers! Once fired, a looping trigger is marked as "Has Fired." You can then have another trigger check to see whether a looping trigger Has Fired and then use that trigger to turn the looping trigger off.

Include in Cinematic

Check this box if you want the trigger to be evaluated during Cinematic Mode. This is set OFF by default, meaning the trigger is evaluated only while the scenario is in progress and no cinematic is playing. See Start and End Cinematic Mode in the Effects section for more information.

Trigger Statement

The Trigger Statement defines the trigger in the form of an "IF… THEN" statement (e.g., IF Condition0 THEN Effect0). You choose the conditions and effects for a trigger via drop-down lists, one for each condition and effect in the trigger. These drop-down lists contain all the conditions and effects that you have created for the scenario (so you must create conditions and effects first; see the Conditions and Effects sections later in this chapter). Before you choose any conditions or effects via the drop-down lists, default values are used as place holders. "Always True" is the default Condition and "Do Nothing" is the default Effect.

Operators

Conditions can be combined using the operators NOT, AND, or OR. Effects can be combined using AND or OR. The END operator indicates the last condition or effect in the trigger. The AND and OR operators are chosen via drop down lists between the conditions and effects. The NOT operator is activated via a checkbox directly before the condition it is meant to modify. For effects, a Delay (in game seconds) can be specified.

The operators obey the following rules:

- **Not** – Any condition may be preceded by a NOT operator. The NOT operator applies only to the condition immediately following it and does not effect any other condition in the trigger. As you might expect, NOT tells the trigger to evaluate the condition as TRUE when the condition is NOT met.

- **Delay** – Entering a delay tells the game to wait the specified number of game seconds before carrying out the effect that immediately follows it. The delay count starts when the conditions are evaluated as TRUE and the trigger fires – this is considered time zero (0). Therefore, if different effects in a single trigger have delay times set, the delays are all relative to that zero time, and not relative to one another. Also note that, regardless of the delay time, there is no way to cancel an effect once it is queued up.
- **And** – Any condition may be immediately followed by an AND operator. If the condition preceding the AND operator is FALSE, then the condition(s) following the AND operator will not be evaluated. Effects can also be chained together using AND.
- **Or** – Any condition may be immediately followed by an OR operator. The OR operator logically joins all the conditions preceding it with all the conditions following it (until another OR operator is encountered). If the conditions preceding the OR operator are TRUE then the conditions following the OR operator will not be evaluated. For effects, the OR operator can be used to essentially randomize the effects of a trigger (e.g., play effect1 OR effect2 OR effect3).
- **End** – End is used to signal the end of the list of conditions and the end of the list of effects in the trigger statement. It appears only after the last condition and the last effect in the trigger.

> TIP: There are no parentheses available for grouping conditions or effects in trigger statements. Such groupings can be created only by using the OR operator, so an expression such as "Condition1 AND (Condition2 OR Condition3)" can be expressed as "Condition1 AND Condition2 OR Condition1 AND Condition3". The conditions in a trigger are always evaluated from left to right.

When either AND or OR is chosen, a new condition or effect is automatically added to the trigger statement (e.g., the first condition in the trigger is called Condition0, the next is called Condition 1, and so on). The left and right arrow buttons that appear on either side of the trigger statement allow you to scroll through the conditions and effects. You can have as many conditions and effects in a trigger as you want, but bear in mind that the longer a trigger is, the longer it will take for the game engine to evaluate it.

Deleting Conditions and Effects

You can remove conditions and effects from the trigger statement by clicking the Del button that corresponds to the condition or effect you wish to remove. For example, clicking the Del Condition1 button will delete Condition1 from the trigger statement and Condition2 (if there is one) will "slide down" to become Condition1, Condition3 will become Condition2, and so on. The Del buttons appear only if there is more than one condition or effect in the trigger statement because each trigger must have at least one condition and one effect.

Conditions

Clicking the Condition button displays the controls used for setting up conditions, which may then be used in triggers. Conditions are the parts of triggers that are evaluated to determine whether or not the trigger's effects should take place. There are several types of conditions, chosen from a drop-down list, which are described below. The default condition is "Always True" which is useful if you want a trigger to fire immediately when the scenario starts. The specifics of the condition definitions are entered using the controls under the "Condition Details."

Object Exists

An "Object Exists" condition is created automatically for each object you create for the scenario. When objects are added, deleted, or renamed on the Objects screen, their corresponding "object exists" condition is modified accordingly. Since there may be many of these conditions, they are not displayed on the Conditions screen, but are available on the Trigger screen in the Conditions drop-down lists.

The Object Exists condition is a general condition that tests whether the object you defined is in the state you defined. It is used if you want to evaluate the state of any units, buildings, trees, animals, etc. that you have defined as an object on the Object screen. For example, you could test to see whether a specified unit

has entered a specified area or if a particular building has less than 50% of its hit points left. See the section on Objects for more information on objects and their possible states.

Player Conditions

You can set conditions that apply to particular players. In each such condition, you can choose the player(s) to whom the condition applies via a drop-down list. Your choices are:

- Any Human – Any of the human-controlled players in the game.
- Any Computer – Any of the computer-controlled players in the game.
- All Human – Every human-controlled player in the game.
- All Computer – Every computer-controlled player in the game.
- Any Exclude World – Any human or computer player, but not the "world player" which controls animals, trees, and other such objects.
- Player # – The player number indicated by the # (e.g., Player2).

Player Has Attribute

This condition is used either to test whether the selected player(s) has a certain amount of a given attribute or to compare attributes between players. For example, you might set a condition to test whether Player 1 has the same or more gold than any computer player. The different options for this player condition are explained below.

Attribute

This is the attribute to be evaluated. There are many player attributes (or statistics) to choose from, most of which are tracked by the game for the post-game statistics.
The choices are fairly self-explanatory – here are just a few examples:

- Resource – There are several choices: Any Resource, All Resources, or a particular resource.
- Population – The total population count.
- Units Killed – The total number of killed units.
- Razings – The total number of buildings destroyed.
- Conversions – How many units have been converted.

Modifiers

Choose an inequality or equality symbol to use in the condition.

- < – Less than.
- <= – Less than or equal to.
- > – Greater than.
- >= – Greater than or equal to.
- = – Equal to.

Use Amount or Use Player Attribute

If Use Amount is selected, you must enter a number. This is the amount that will be used to evaluate the condition, for example, if Player 2's gold is greater than 1000.

If you choose Use Player Attribute, you must select another Player and another attribute. The specified attribute of the first player(s) you chose will be compared to the attribute of the player(s) you choose here. Note that you can compare different attributes to each other, such as gold to population. The exact values of each are used for the comparison. If you want to compare the same attribute (e.g., gold to gold), you must select the same attribute in both attribute lists.

Player Has Technology

This Player Condition is used to test whether the selected player(s) has researched a certain technology, Epoch, or can train a certain unit. The technology, upgrade, or Epoch must be researched for the condition to be TRUE. The unit, however, does not have to be trained, just available to the specified player(s).

Has Researched

Choose a particular technology, Epoch, or unit from the drop-down list. Every such thing available in Empire Earth including buildings and unit upgrades is listed here.

Player Has Diplomacy

Using this condition you can test one or more players' diplomatic stance against any other player(s). For example, you might want to check to see if Player1 is an enemy of Player2.

Diplomacy Toward

This sets up the comparison. The first player selection you made is compared against the player(s) you select here. You can also choose the diplomatic stance: Ally or Enemy.

Trigger Has Attribute

This condition allows you to specify the state another trigger must be in for the condition to be TRUE. An example of its use is if you want a certain trigger to fire only after another trigger has fired.

Trigger

A drop-down list of all the existing triggers in the scenario.

Is On

The specified trigger is active but has not yet fired. (You can create a trigger to turn other triggers ON or OFF. See the Effects section.)

Has Fired

Once a trigger is fired, it is always in the state of "has fired." (You can create a trigger to reset a particular trigger to "not fired." See the Effects section.)

Game Has Attribute

Using these types of conditions, you can create triggers that test various game attributes. The choices are: Difficulty Level At, Elapsed Time Is, and Hour Is.

Elapsed Time Is

Set this to the number of game seconds you want to elapse from the start of the game before the condition is considered TRUE. You can enter both a Minimum and a Maximum value.

Hour Is

The condition will be TRUE anytime after the specified hour (in game time). The game uses a 24 hour clock (0-23), with 0 being midnight. Hour Is can be used to have effects take place during a particular part of the day/night cycle – for example, to have enemy units attack at night. Set the hour using the slider.

Chat Message Contains

Allows you to enter a string which, if it appears in any player's chat message, will cause the condition to be TRUE. The string is not case sensitive, but note that what you enter in this edit box must appear character-

for-character somewhere in the chat message. For example, the string “gold” would be found in the chat message “Give me 10 Gold.” But the string “give gold” would not be found in that same chat message.

Effects

Clicking the Effect button displays the controls used for setting up effects, which may then be used in triggers. Effects are the results of triggers, in other words, what happens in the game when a given trigger is fired. Delays can be implemented to keep the effect from happening for a specified number of game seconds (the default delay is zero (0) seconds – see the Trigger Statements section). There are several classes or “types” of effects, which are explained in the following subsections. The default effect for any new trigger is “Do Nothing,” which, appropriately enough, does nothing. It is merely a place holder.

Object

This class of effects has to do with objects, that is, units or buildings and their related states (see the Objects section). The effects below can apply to any object you define.

Create

Creates a specific unit or building in the location specified in the Object definition. The location can be relative to a defined object or in a defined area. When creating an Object, only the In Area, LOS/Range/Near, and Has Attribute modifiers are checked to decide where to place the object on the map. The Visible By, Has State, and Selected By modifiers are ignored when an object is created (See the Objects section, later in this chapter, for information about these Object States).

Freeze

Takes away control of the specified object (unit or building). The frozen unit(s) or building(s) may be selected, but cannot be given commands or take damage, nor can they be deleted. Planes in flight that are frozen will circle, but will not lose flight time. Frozen units will still “fidget” – they are not frozen in the literal sense. Also, frozen units can still be affected by other trigger effects.

Unfreeze

Restores a frozen object to full control. The unit(s) or building(s) return to whomever’s control they were originally under.

Kill

Kills the specified unit(s) or building(s). The appropriate death animations and sounds play.

Remove

Permanently removes the specified unit(s) or building(s) from the game. No animations or sounds are played. This might be used, for example, to simulate a unit entering a building.

> TIP: Use Task Object to Area to temporarily remove units from the map by selecting “off map” as the area.

Task Object

This effect commands the specified unit(s) to move to another defined object (such as another unit or a building). You can also specify a particular task or “action” that the unit(s) should carry out at the destination from the drop-down list. These actions work the same way they do during a standard game. If you specify “Normal,” the unit will perform whatever its normal right-click action is; for example, if a military unit is tasked to an enemy building, it will attack the building while a Citizen tasked to a resource will gather that resource.

If the normal right-click action is inappropriate for units in the Object (e.g., a military unit was tasked to a forage site) then those units will go idle once they reach the site. Selecting "patrol" or "attack move" will make this effect operate like Task Area (see below). The game will approximate the center tile of the location where the target Object is on the map and the units in the first Object will attempt to move to that tile.

NOTE: Use of this effect will unfreeze the specified unit if it was previously frozen.

Task Area

Same as Task Object except the unit(s) move to a specified area. (Defining areas is described in the Areas section, later in this chapter.) You can also move objects to the "off map" area, which removes them from the map but does not delete them from the scenario. This is like a storage area for units. To put them back on the map where they were, use the Previous Location area or you can task them to any other area on the map. However, if there are no unoccupied tiles in the specified area, then the unit will not come back from off map.

NOTE: Use of this effect will unfreeze the specified unit if it was previously frozen.

Stance

Allows you to set the specified object's stance or behavior. The choices include all the standard unit behaviors as well as special stances such as Explore and Idle:

Unit Attribute

Lets you modify the attributes of the specific unit(s) or building(s) defined in the object. For example, you can change a unit's hit points, used flight time, even how much stone a Citizen is carrying. The attribute you want to modify is chosen via the drop-down list. You can adjust the attribute up or down by a set value (number) or a percentage. If a unit's hit points are set to zero or less, the unit dies.

NOTE: Attributes that apply to every unit of that type, such as Shock Armor or Attack Strength, are set using the Set Unit Class Attribute effect, described below.

Owner

This effect causes the unit(s) or building(s) in the defined object to change ownership. The unit(s) or building(s) can be given to a specific player or a randomly chosen player – the choices are similar to those available for the Player Conditions.

Units that have been damaged will still be damaged after the ownership change, however other modifications (such as using Set Object Attribute to increase the shock armor of a unit class) will be lost unless the new owner has had the same modifications made to that unit class.

NOTE: If a transport (including Airports and Fortresses) changes hands, any units inside the transport will also change owner whether they were members of the target Object or not.

Class Name

You can change the name of a unit type (i.e., class) with this effect. Note that all units of the type selected will be renamed, but only for the player to whom the units belong. For example, if you changed the name of one of Player 1's Composite Bowmen to Robin Hood, all Composite Bowmen belonging to Player 1 would be renamed Robin Hood. Units that change ownership will receive the name appropriate to the player who receives them.

TIP: Name your units or buildings with a space preceding the name (press space bar once) to get the new name to show up when a player moves the mouse pointer over the

unit or building. Also, it's a good idea to set unit names right at the start of a scenario so that players do not briefly see the old unit name before the new name takes effect.

Face Object

Lets you set a direction for a unit to face. Select the units from the Object menu. Then set the direction for the units to face in degrees (°). Zero degrees (0°) is towards the top-right of the map. The degrees then run counterclockwise, so 45° points to the top of the map ("north") and 225° is towards the bottom of the map. If you select the Snap option, the units will instantly align themselves to face the direction you set. If you leave Snap unchecked, the unit will quickly rotate to the desired direction.

Class Attribute

With this effect you can change an attribute for an entire unit class, e.g., all Simple Bowmen or all Hospitals. This is similar to how Unit Improvements work in a standard game. You can either Increase or Decrease the chosen attribute via drop-down list. Each attribute can be changed by an exact amount or, by clicking Use Percent, you can specify a percentage for the change. Changes are relative to the base value of the selected attribute for that type of unit or building. The changes are also player-specific, so modifying the Marines of Player 1 will not affect the Marines of Player 2.

If an Object consists of units of different types, such as M1 tanks and Marines, both of these unit classes would be affected by the change in Attribute, so be careful not to adjust an attribute too high or low for one of the unit types you have selected. For example, you might Decrease the Hit Points of the M1's but this same decrease applied to the Marines will kill them!

NOTE: The plus (+) at the end of the attribute simply means that the attribute applies to a whole unit class rather than a specific unit.

TIP: Use this Effect to turn on or off the AI for the animals (e.g., hippos, chickens, etc.) in the scenario. The AI is on by default. To disable the animal AI, be sure the type of animal is represented in the object to which you are applying the effect. Then, choose the Animal AI Active+ attribute from the Attribute list. Decrease this attribute to a negative value to disable the AI for that type of animal. To enable the AI again, increase the value to a positive number.

Player

This class of effects is used to affect specific players. The effects, explained below, include awarding victories and allocating resources.

Award Victory

This Effect allows you to immediately award Victory to the specified player or players. Players that are not specified and are not on the same team as a specified player lose the game.

Script Camera

Using the Script Camera effect, you can create your own in-game movies. Specify the player(s) for whom the movie will play. Then set the following controls as you wish:

- **Move Camera** – Select Use Area or Use Object and select any area or object that you have already defined. The camera moves to the specified object or area (for large areas, it moves to the center of the area). To "turn off" Move Camera for a given effect, choose Off Map for the area or Empty Object for the object. Do this to make the camera rotate in place instead of move.
- **Face Camera** – Select Use Area or Use Object and select any area or object that you have already defined. The camera rotates to face the area or object specified. (Again, for large areas, the center of the area is the focal point.) To "turn off" Face Camera for a given effect, choose Off Map for the area or Empty Object for the object.

- **Follow** – Check this box to have the camera follow the object specified under Move Camera. If the camera is both moving with an object and facing an area, you might want to check this box to ensure the camera can stay pointed towards the area while it is moving around with the object.
- **Track** – If Track is checked, the camera continues to face the object specified under Face Camera even if the object moves.
- **Scroll Speed** – Set the speed of the camera's movement: Snap (i.e., the camera cuts immediately) or choose a number from 1 to 99. 99 is the slowest.
- **Zoom Level** – Set the level of the zoom from -50 to 50, or choose "Current" to use whatever the current zoom level is for the player. 50 is a wide shot of the ground from high in the air, 0 is a ground-level close-up, and -50 looks up towards the sky from ground level. This is the same way the zoom (mouse wheel) functions when you are in the Scenario Editor.

> NOTE: Use the Game Effect "Start Cinematic Mode" to take away the player(s) ability to control the game so that he or she must watch the movie (unless they choose to exit the movie by pressing Esc). End Cinematic Mode restores control to the player. (See the Game section, below.)
>
> TIP: Place Camera Markers in your scenario to set an exact view with the camera. A Camera Marker marks the view shown on your screen at the moment you place the marker. This allows you to set up a camera shot without using a defined object (e.g., a tree or building) or area as a reference point. See Placing Camera Markers in the Unit Placement Screen section, earlier in this chapter, for more information.

Defeat

The specified player(s) immediately lose the game. The teammates of the player(s) are not affected.

Set Diplomacy

Changes the specified player(s) diplomatic stance toward another specified player or players to ally, neutral, or enemy.

Set Attribute Level

Allows you to increase, decrease, or set the exact amount of a particular attribute for the specified player(s). There are many attributes you can alter, including the population count, a specific resource amount, a randomly chosen resource, or all resources. You might, for example, increase Player 1's food by 500 as a reward for performing some task. Note that you can alter the player's statistics shown on the Post Game Summary screen by using this Effect.

Modify Tech Tree

This effect lets you alter the specified player's technology tree so that certain technologies and units are either available or not available during the scenario. For example, you could remove Stone Throwers for Player 1 so that Player 1 could never produce them during the scenario. Alternately, you could grant Player 1 the ability to make Stone Throwers. Note that making units available does not automatically make the building that produces them available. So, if a player is in the Copper Age and a trigger gives them aircraft technology, they will not be able to produce aircraft unless the Airport is also enabled (and constructed). If you enable the Airport but not the individual aircraft units then the building will be useless.

Award Civ Points

This effect lets you reward a player with civ points that can be used in the Civ Builder to purchase new attributes for the player's civilization. You can specify which player(s) and the number of civ points to award.

Fade In and Fade Out

These two Player Effects allow you to fade in the screen from black or fade out to black for the specified player(s). These effects each last for about 3 seconds and function only in Cinematic Mode (see Game Effects).

Visibility On/Off

These two effects allow you turn on or off full map visibility for the specified player. This does not effect any "visible by" object states.

Minimap Flare

With this effect, you can set off a Mini-map Flare for the specified player(s). Select whether to Use Area or Use Object, then specify the area or object over which the flare should fire. (For areas, the center of the area is used.) The Flare will be visible to the player(s) you set on his/her Mini-map.

Trigger

This class of effects modifies existing triggers. With it, you can turn specified triggers On or Off, or set their state to "Fired" or "Not Fired" regardless of whether they have been fired already. Triggers can be essentially "reset" using this effect.

Trigger

This is a drop-down list of existing triggers that allows you to pick the trigger you want to modify.

State

Lets you choose the state the specified trigger will enter once the effect takes place. There are four states from which to choose:

- **On** – Turns the specified trigger on.
- **Off** – Turns the specified trigger off.
- **Fired** – Causes the specified trigger to be evaluated as having been fired – note that this does not actually fire the trigger, but merely sets its status. Once a trigger is set to fired, it is always in the state of "has fired." (You can reset a trigger using "not fired.")
- **Not Fired** – Causes the specified trigger to be evaluated as never having been fired. This is the only way to fully reset a trigger once it has fired.

Media

This class of effects plays sounds, sends messages, and changes storyline text. Such effects are very useful for progressing a story or for giving a player directions or hints during the scenario.

Play Sound

Causes the specified sound file to play. The sound file must be in MP3 or .wav format and be saved in the ..\data\sounds directory under the Empire Earth root directory. Be sure to enter the extension of the file in addition to the file name. This effect could be used, for example, to give vocal directions or special audio cues.

> TIP: If two MP3's are played in close succession, the second one may start before the first is finished. To ensure that your MP3s do not overlap, you should specify a delay time in your trigger definition for the effect that plays the second MP3.

Change Text

Changes the text entered on the Story/Instructions Screen (see the Story/Instructions Screen section earlier in this chapter). You can change the Hints, Instructions, and set the Loss and Victory text. You may either

use Add Line to add your new text to the end of the old text, or select Clear to delete any specified text. Adding a line will automatically insert a carriage return for you, so the next line of text will appear on its own line.

Send Dialogue

Lets you send a dialogue message to the specified player(s). A dialogue message appears in the top-center of the screen, as opposed to a chat message, which appears at the left just like in a regular game.

- **Object** – Specify a defined object. The dialogue message will seem to come from the object. The portrait of the unit appears next to the message and the camera moves to look at it.
- **Player** – Specify the player(s) to whom this dialogue message is being sent.
- **File Name** – You can specify an MP3 or a .wav file to play along with the dialogue message. This could be a voice over of the message, for example.
- **Message** – Type the dialogue message in this field.
- **Camera Scroll Speed** – Set the speed that the camera moves to the specified object. The camera automatically zooms in on the specified object, and follows the object if it moves. You can set the scroll speed to Off (the camera does not move to the object), Snap (the camera cuts to directly face the object), or a speed from 1 to 10, 10 being the fastest.
- **Duration in Seconds** – This controls how long the message stays on the screen. If an audio file is specified, the dialogue will stay on the screen for the time it takes to play the audio file plus the time specified here. If no file is given, the message remains on screen for the amount of time specified here. When any dialogue completes, any sounds currently playing may be cut off.

Send Chat Message

Sends a chat message you provide to the specified player(s). The message appears in the chat area of the screen as opposed to the dialogue area.

- **Player** – Specify the player(s) to whom this chat message is being sent.
- **Duration in Seconds** – This controls how long the message stays on the screen.
- **Message** – Type the chat message in this field.

> TIP: To make it appear as though a chat message is coming from a particular player or unit, manually enter a suitable name in the Message text field and type the message after the name.

Game

The following types of Effects produce effects related to the game world.

Set Daylight Hour

Allows you to set the hour in game time. The game clock is a 24-hour clock with 0 (zero) being midnight and 12 being noon. Using this effect you could have a scenario take place at a certain time of day – at dusk, for example. Note that this effect does not turn on the day/night cycle if it was turned off – it merely sets the time of day.

Set Day/Night Cycle Time

Set this to 0 (zero) to turn the cycle off. Any other value turns the day/night cycle on.

Start Calamity

Starts the specified calamity in a specified area or near a specified object (building or unit). This effect might be used to simulate a natural disaster, for example.

> NOTE: The protective area of effect of Temples applies in scenarios, so calamities targeted on a protected area will not take place.

Fire Graphic Effect

Allows you to play a graphic effect, such as an explosion or water ripple or even a calamity (without the calamity's destructive forces). Select the effect you want to play from the Graphic Effect list. Then pick the defined object or area where you what the graphic effect to appear.

> NOTE: Graphic Effects that require a unit to act on are labeled "(Unit)". Graphic Effects that require 2 or more units to act on are labeled "(Units)".

Start and End Cinematic Mode

These two effects are used to put the scenario into and then out of Cinematic Mode. While in Cinematic mode, the screen is shrunk to a letterbox format, units take no damage, and players have no control over the game. Essentially, the game "waits" for Cinematic Mode to end before the scenario continues. At any time, players can press the Escape key (Esc) on the keyboard to exit Cinematic Mode and return to the game. Otherwise, they must wait for the End Cinematic Mode effect to fire and return them to the game. The only two other active hotkeys are F3, which pauses the game (but not a sound in progress), and F9, which takes a screen shot.

With Start Cinematic Mode, you can specify the Game Speed – which controls how quickly the cinematic plays – by adjusting the slider. Setting the Game Speed to 0.1 creates a "freeze frame"-like effect. Note that the game continues to evaluate triggers in the background even if the Game Speed slider is set to its lowest value.

Triggers must be checked "Include in Cinematic" in order to be evaluated during Cinematic Mode. If not, they are ignored until Cinematic Mode ends. Any Trigger Effects that are queued to happen in Cinematic Mode will be aborted if Cinematic Mode ends before the Effects take place.

> NOTE: Every Start Cinematic Mode should have an accompanying End Cinematic Mode or else the player is forced to press Escape to return to the game. When Cinematic Mode starts, any audio that is currently playing will be cut off. **Delays specified in the trigger definitions for Effects in Cinematic Mode are in Real Time and not Game Time.**

Ambient Weather

Turn ON or OFF the ambient weather effects (rain and snow).

AI

The AI Effects allow you to fine tune the computer players in your scenario. These effect give you much greater control over how the computer players behave compared to the AI Settings page.

> NOTE: If you are planning to use computer players in your scenario, you must define where each computer player's starting position is located. For each computer player, the first land unit you place on the map that is not a building (i.e., a unit that can move) defines that computer player's "home base." Do not use a ship as that will put the home base in the water. You can, if you want, set up a trigger to kill that first unit as soon as the scenario starts. The computer player will defend its home base and perform most of its initial activity there (assuming it is an active player).

Modify AI Military Target

This Effect allows you to define additional, specific targets that the computer player(s) can either attack or defend (if it chooses to do so). These targets – which can be either an object or an area – are added to the computer player's own preferences of what to attack or defend. When the computer player decides where to send its military units, it chooses from among all its preferences more-or-less randomly. You can tip the balance towards a particular target by creating more than one Modify AI Military Target effect that defines the same target.

You have several options when defining a possible military target:

- Choose the computer player you want to affect.
- Choose whether to use an Object or an Area as the target, then choose the specific one you want from among the objects and areas you have already defined.
- You can either Add a new target or Remove a target from the preference list.
- Finally, decide if the target is to be considered for an attack or defense.

Create AI Military Group

With this Effect, you can have the computer player(s) create a military group with units you specify and then have them either attack or defend a specified target. To create a military group:

- Choose whether to attack or defend the indicated target (if the Attack option is not checked, the military group will defend) with the military group.
- Check whether or not to have the computer player fill out the military group by choosing units from its predefined list of "Favorite" units.
- Choose whether to use an Object or an Area as the target, then choose the specific object or area you want from among the objects and areas you have already defined.
- From the list of Objects to Add, select which of the objects to include in the military group by clicking on the object in order to move it to the Objects Added list. Choices that do not make sense (e.g., a building or another players units) are ignored.

> NOTE: The effect of attacking or defending with the military group is a goal that the computer will work toward and carry out as soon as it has the units to commit; it will not necessarily happen immediately when the trigger fires.

Build Object

With Build Object, you can give the specified computer player(s) a goal to create a specific object. Just select the player and the defined Object that you want it to construct or train. This becomes the player's top build priority.

Maintain Object

Like Build Object, except this is an object that the computer player gives top priority for repair.

Set AI Toggle

This AI Effect allows you to turn on or off (activate or deactivate) any of the options available on the AI Settings page. The choices are identical to that page; this just gives you a way of changing those settings during the scenario.

Set AI Variable

This effect allows you to modify any of the AI variables in the game. The list of variables is extensive and they should be altered with caution. Help text provides information on what each variable controls.

Set Favorite Units

With Set Favorite Units, you can choose the computer player's favorite air, land, and sea units via the drop-down lists. Favorite units are given preference when the computer player creates units for any purpose, assuming specific units have not otherwise been specified.

Objects

Clicking the Object button displays the controls used for setting up objects, which may then be used in conditions and effects. "Objects" refers both to objects (e.g., units, buildings, etc.) and the possible states

they may be in (e.g., owned by player 1, is in a specific area, etc.). Objects are used as qualifiers for Conditions, recipients of Effects, and to define where an Effect takes place.

> NOTE: Be sure to use a unit (e.g., Citizen, Knight) in all your object definitions BEFORE placing it on a transport because you cannot add that unit to or remove or remove it from Objects after it becomes part of a transport's cargo. You can, however, change the qualifiers of the Objects of which that unit is a part.

Object Autonames

The autonaming of objects uses a few rules and symbols to help distinguish between similar objects. If an object contains a unit selected on the map, it is given an autoname of the unit's class type (town center, citizen, clubman, etc.), followed by the unit's unique identification number. Thus, one object may be named "<citizen213>" and another "<clubman012>". If an object contains multiple units selected on the map, it is given an autoname of the first unit selected followed by a "+" symbol to indicate that there are more units in the object. For example, if an object contained both a Citizen and a Clubman, its autoname might be "<citizen213+>".

For objects that use an Object Specification (see below), the autoname consists of the name of the class of unit used by the object. This may be additionally followed by an asterisk "*"if the object is dynamic. If the Object Specification uses a nested object, its autoname starts with a "#" and is followed by the name of the nested object.

Select On Map

This is a method of selecting units and buildings for use in an object definition. The names of the selected units appear in a list. You can select specific units and buildings on the map by clicking on them or "lassoing" them. Left-clicking and lassoing continually adds units to the object definition. Right-clicking or right-lassoing selected units removes them from the object definition. If you right-click on an empty part of the map, all units are removed from the object. Clicking on a unit in the list centers the map on that unit.

Object Specification

With Object Specification you can specify different units or buildings that are not yet on the map to be part of an object definition. During the scenario, the game engine looks for those units (or buildings) that fulfill the requirements you have provided and, once found, uses them in the object definition. Object Specifications are defined using the following criteria:

Owner

Use this drop-down list to select the player(s) who owns the unit(s) or building(s). Thus, for example, you can confine the Object Specification to look only for units that belong to player1 or that belong to any computer player, etc.

Family

This is a drop-down list of loose categories into which the unit(s) or building(s) must fall in order to be selected by the Object Specification. Families include buildings, submarines, mounted archers, heroes, units/buildings from a specific Epoch, etc. If a Family is selected, Class and Use Object are ignored.

Class

This is a drop-down list of specific unit types and building types, such as a Simple Bowman or a Hospital or a U-Boat. Use "Any Class" if you do not wish to specify a particular type. If a Class is selected, Use Object is ignored. Family supercedes both the Class and Use Object selections.

Use Object

You can create Objects that refer to other Objects you have already created. When you "nest" an Object inside a "higher-level" Object, the qualifiers of the higher-level Object overrule those of the nested Object, but only if the nested Object is of the type "Select On Map" or if it is an "Object Specification" that is not Dynamic. If the nested Object is Dynamic, then the nested Object is evaluated with its own qualifiers in order to return a list of units to the higher-level Object. Once the list of units is given to the higher-level Object, then the higher-level Object is evaluated with its own qualifiers.

In the case where a nested Object is defined as not Dynamic but it is not evaluated *before* the higher-level Object of which it is a part, then the nested Object is evaluated as if it were Dynamic – that is, it returns a list of units to the higher-level Object.

Example: Object A is defined as a citizen, selected on the map, with the qualifiers In Area and Selected By activated. Object B uses Object A in its definition and adds the qualifier Has Attribute with the value Hit Points = 50. Object A is, therefore, nested inside Object B. As a result, when Object B is evaluated, only the Has Attribute qualifier is used, so the trigger looks for the Citizen on the map and checks to see if it has 50 hit points. The other two qualifiers (i.e., In Area and Selected By) are ignored.

Use Object is always superceded by both Family and Class. If either is selected, the Use Object selection is ignored.

> NOTE: Anytime you "nest" an Object in another Object with Use Object, the game will check to see if you are making a closed loop (e.g., A is nested in B which is nested in C which is nested in A). If this is the case, you will not be allowed to select that Object for nesting.

Dynamic

If Dynamic is unchecked, the first unit(s) or building(s) found to meet the indicated requirements will be chosen for the object definition and no further selecting will be done, even if the object definition is used in another condition or effect. Checking the Dynamic box means new units or buildings will be picked for the object each time the object is used (the same unit(s) may or may not be selected each time). This is useful if you want to use the same Object Specification in several condition and/or effect definitions but do not want the same unit(s) to be used each time.

Min and Max

You can set the minimum and maximum number of units or buildings to use in the object definition. When creating/selecting the object during the game, the game engine will be "satisfied" with the minimum number, but will try to find up to the maximum number of units or buildings that fulfill the requirements of the object. If you want the object to use a specific quantity, make Min and Max the same number. For example, if you always want five citizens to be chosen for the object, set both Min and Max to 5.

Object States

All of the states described below can apply to both Conditions and Effects, specifically the Object Exists condition and the Object class of effects. For the Object Exists condition these states act as qualifiers in determining whether the condition is TRUE or FALSE (for this purpose, all the qualifiers must be true in order for the condition to be evaluated as TRUE). For the Object class of effects they act as modifiers to describe how or where or to what the effect should be applied (e.g., kill a Citizen who is carrying 10 gold).

> NOTE: The checkboxes for each of these States have three settings: OFF, ON, and NOT. OFF is represented by an unchecked box, ON is checked, and NOT is represented by an "X" in the box. The NOT setting is useful for excluding states, for example, NOT Near a specified object or NOT having a certain attribute.

In Area

If In Area is checked while a unit or building is selected, you can choose an area from among the areas you have defined (see the Areas section in this chapter). This is the "target area" for the condition or effect. Thus, you might want an effect to happen only when a specified unit enters a certain area. Bear in mind that you can also set the checkbox to NOT to have conditions be TRUE or effects fire when units are NOT in the specified area.

There are two special, predefined areas you can use: Off Map and Previous Location. The Off Map area is a like a storage area for units that are not currently on the map but still exist in the game. It can also be used to remove units from the map that you want to return to the map later. The Previous Location area is used to return Off Map units to the location where they were when they were removed from the map.

> NOTE: When the game tries to create an Object that is using the In Area qualifier, if the target Area does not contain any valid placement tiles for the object then the object will not be created.

LOS/Range/Near

Similar to In Area except you select an object (i.e., unit(s) or building(s)) instead of an area to be the "target." For example, a condition might be evaluated as TRUE once a unit is within its Line Of Sight (LOS) of a specified building or an effect can be made to freeze units that are in Range of a specific cannon. The meanings of the states are as follows:

- **LOS** – The selected object is within its line of sight of the target unit(s) or building(s).
- **Range** – The selected object is within its attack range (for units) or area of effect (for certain buildings) of the target unit(s) or building(s).
- **Near** – The selected object is adjacent to the target unit(s) or building(s).

> NOTE: Units that are Off Map or in a container (e.g., a transport) are never considered Near, in LOS, or in Range of another object.

Has Attribute

Lets you specify a particular attribute of an object (i.e., unit or building) that "narrows down" how a condition is evaluated or how an effect is applied. There are many attributes available in the drop-down list, such as Hit Points, Any Resource (being carried), or Attack strength. (A plus sign "+" means that attribute applies to an entire unit class, not just a specific unit or building.) You can set an exact amount, a range, or a percentage for the selected attribute. To set a range, enter a Min and a Max value. To set an exact amount, set the Min and Max to the same number. To use a percentage instead of an amount, check the % box. The percent is calculated with respect to the base amount of the specified attribute for that unit or building.

Bear in mind that if an object contains units of various types, then checking Has Attribute can lead to the Object State never being evaluated as TRUE if at least some of the units chosen do not all have that Attribute. For example, suppose you select a Battleship and a Chinook Helicopter Transport on the map and set an Attribute of "Cargo Count between 2 and 5." Since Battleships cannot normally carry Cargo, this state can never be TRUE if it is used as an "Object Exists" condition in a trigger statement. Likewise, if you used that object in a "Kill Object" effect, the effect would not be carried out because no objects in the game fit the given description.

> NOTE: Nested Objects can render the above example untrue. If Object A is a Bismarck and a Chinook, and Object B is Ref:A, Cargo 2-5, min1 max1, then Object B could be true if the player loads up the Helicopter.

Visible By

Lets you choose a player or players to whom the selected unit or building must be visible for the condition to be TRUE. For an effect, you might, for instance, give more hit points to a certain unit that is visible to Player 2. Visibility is determined by using the Line of Sight of any of the indicated player's units or buildings. Visible By is ignored for a Create Object effect.

Has State

This drop-down list is used to choose the task or action a specified unit or building must be performing in order for the condition to be TRUE or for the effect to be carried out. For example, you might want to have a condition be TRUE for a Citizen only when she is building/repairing a building. Or, you might want to have that Citizen go into a Defensive stance only while repairing a building. When used in a Create Object effect, Selected By is ignored.

> NOTE: Many of the available unit/building states are specific to certain classes or families of units. For example, TakeOff, Taxi, Fly, etc. are specific to airplanes, while GatherResource applies only to Citizens.

Selected By

Defines the unit(s) or building(s) that the specified player must select in order for the condition to be TRUE. If a group is chosen for the object, only one member of the group must be selected for the condition to be TRUE. For an effect, Selected By could be used, for example, to remove a unit from the game if it is currently selected by a specific player. Selected By is ignored for Create Object effects.

Areas

Clicking the Area button displays the controls used for setting up areas, which may then be used in object and effect definitions. Areas can be defined in three ways: Select Rectangular Area, Select Continent Tile, or Select Town Tile.

Select Rectangular Area

Lets you select a rectangular area anywhere on the map. Select an area by clicking and dragging the mouse pointer over the desired area. The selected tiles are highlighted. When selecting an area, you can drag the mouse cursor off the map to select edge tiles.

Select Continent Tile

Continents are either areas of land or areas of water. A "continent" of land is any land mass surrounded by water that has a depth of two (2) or more. Land masses connected by shallows (water with a depth of one) are considered to be one continent. A "continent" of water (from here on called an "ocean") is any water mass of depth two (2) or more. Oceans entirely separated by land or shallows are considered to be separate oceans.

Select Town Tile

This works the same as Select Continent Tile, except the defined area is the Town (or towns) in which the selected tile is located. It finds all Towns (if any) that contain the selected tile and includes all the tiles in those towns in the definition of the area.

Center Camera On Area

You can center the camera on the selected area (in the list of areas) by clicking this button. This is a useful tool for reminding yourself where a particular area is. For rectangular areas, the camera centers on the center tile of the area.

Trigger Examples

The section is meant to introduce you to using the Scenario Editor, specifically how to create triggers. Because the Scenario Editor provides an essentially limitless number of possibilities, this set of examples can serve only as a basic introduction to the concepts and techniques of creating triggers and scenarios. The best way to familiarize yourself with the Scenario Editor is to experiment with it, and these examples provide a good foundation for that. (Thanks to Albert Meranda for these examples)

The following examples explain how to put together several basic trigger statements. They also demonstrate some of the basic functions of triggers. The main objective of this exercise is to create a trigger in which a unit entering a town causes nearby units to "freeze," that is, the player loses control of the nearby units. Then you'll create a trigger that reverses this condition, and another that prevents these two effects from happening at all. Finally, you'll make a trigger that causes the town area to be destroyed if all the special effect units enter the town at the same time. Throughout the process, the triggers and components will be given useful names to describe what they do. These names ARE NOT the actual triggers themselves; they are just reminders so that you can keep their functions straight.

1. Start Empire Earth and go into the Scenario Editor by clicking the Game Tools and then the Scenario Editor buttons. The first thing you'll need to do is make the map, so go to the Map Creation screen by clicking the Map Creation button (lower-left corner of the screen). Select the Random Map radio button. Select a Small Map Size and a Continental Map Type. Now click Create Map to create the map.
2. Now you'll start building the triggers. Click on the Triggers button at the bottom of the screen.
3. To create triggers, you must first create the components from which the triggers themselves will be put together. Click the Object button and then click the New button to create a new object.
4. The default setting is Select On Map, which is the method you want for this example. Lasso your starting town center and citizens to select all of them. Name this object "my town" by typing the name in the Name text field.
5. Click the Effect button to go to the effect screen. Click New to create a new effect. The default effect is an Object Effect, and this is the type you want.
6. Under Action, choose Freeze Object from the drop-down list. Next, select "my town" as the object. Note that the effect is automatically named "<freeze my town>".
7. Click the Units button at the bottom of the screen. On the Units page, pick Knight from the list and place it on the map (several tiles from the town) by left clicking. This will be the first special effect unit.
8. Click the Triggers button again and then click the Object button. Click New to create another new object and select the Knight you just placed on the map.
9. Now click the LOS checkbox and then select Near from that drop-down list. From the adjacent drop-down list, which lists the available objects, select "my town". Note that the object was given a default name enclosed in triangular brackets "<…>". To help you remember what the function of this object is, name the object "freezer near my town" by typing it into the Name field.
10. Since creating an object automatically creates a condition of the type Object Exists, you do not need to create this condition for the trigger. Instead, click the Trigger button and click New to create a new trigger. Under Condition 0 select "freezer near my town Exists".
11. Now you need to set the effect for this trigger. Under Effect 0, choose "<freeze my town>".
12. Finally, make sure the trigger is on (i.e., checkbox is checked), and also check the Looping checkbox so that the trigger doesn't shut off after it has fired. This trigger is now finished. Name it "the big freeze".

Test the trigger by pressing the Test button. Have the "freezer" walk into the town and notice that the citizens designated as part of "my town" become frozen and cannot be controlled. Keep in mind that since you've selected three citizens and a town center to be called "my town," even if one of the citizens is far away from the town he (or she) will still be affected. Likewise, if your "freezer" is far away from the town and one of the citizens that is included in "my town" walks up to him, the town center and the other citizens will also be affected.

A trigger that reverses the freeze effect can be made using pretty much the same steps.

1. Go back into the Scenario Editor via the Game Options Menu (or pressing F1) and place a new land unit on the map – a Dragoon, for example – to be the unfreezing unit.
2. Now go to the Triggers screen by clicking the Triggers button.
3. Click the Object button. Create a New object and select the unit that you just placed.
4. In the lower portion of the object screen, click the LOS checkbox and then select Near from that drop-down list. From the adjacent drop-down list, which lists the available objects, select "my town". Name this object "unfreezer near my town".
5. Click the Effect button to go to the effect screen and then click New to create a new effect. Under Action, choose Unfreeze Object from the drop-down list. Select "my town" as the object to unfreeze. Note that the effect is automatically named "<unfreeze my town>".
6. Again, in this case you do not need to create a condition, so click the Trigger button to go to the triggers screen. Then, click New to create a new trigger. Under Condition 0 select "unfreezer near my town Exists".
7. Now set the effect – under Effect 0, choose "<unfreeze my town>".
8. Finally, make sure the trigger is on by checking that checkbox and also check the Looping checkbox so that the trigger doesn't shut off after it has fired. This trigger is now finished. Name it "the big thaw".

Test your scenario again. Now, when the "freezer" enters the town, control is lost. But when the "unfreezer" enters the town, control is restored. If you have both units near the town at the same time, their effects will alternately cancel each other out every second, so that you'll have one second of control, followed by one second of loss of control, and so on. Another trigger can be created that will prevent your town center from being endlessly frozen and thawed by these special units.

1. Re-enter the scenario editor and place a new land unit that will be designated the town's protector.
2. Next, go to the Triggers screen and click the Object button. Select the new land unit you placed and give it the qualifier of Near "my town" just as you did for freezer and unfreezer. Name this object "protector near my town".
3. Click the Trigger button and select the trigger labeled "the big freeze" from the list of triggers.
4. Right after Condition 0 in the trigger statement, you'll see a drop-down list labeled END. Change the END to AND. Condition 1 appears in the trigger statement – this is how you add more conditions (or effects) to a trigger. For Condition1, choose "protector near my town exists" and check the NOT box in front of this condition. This makes the trigger statement: "If freezer is near my town AND protector is NOT near my town, then freeze my town." The freeze effect will now take place only if the freezer enters the town and the protector is not nearby.

This situation can also be applied to the "unfreezer" with essentially the same steps. Try modifying the trigger "the big thaw" yourself so that the protector also prevents the unfreezer from having any effect. You'll need to add a second condition using the AND operator and use NOT to make the trigger statement, "If unfreezer is near my town AND protector is NOT near my town, then unfreeze my town."

Finally, let's create a trigger that takes effect only if all three specially designated units are near the town at the same time.

1. In the scenario editor, go to the effect screen. Create a New effect and set the type of effect to Object. Select Kill as the Action and select "my town" as the object to be killed. Note that this effect gets named "<kill my town>".
2. Now click Trigger and create a New trigger. In the condition part of the trigger statement, select "freezer near my town Exists" for Condition 0, then select AND. For Condition 1 choose "unfreezer near my town Exists", then add another AND. For condition 2, select "protector near my town Exists".
3. For the effects, set Effect 0 to "<kill my town>". Name this trigger "the big explosion".

Now, whenever all the above conditions are TRUE, that is, when the units designated "freezer", "unfreezer", and "protector" are all near the town at the same time, the town and citizens will be destroyed. Note that it did not matter in what order you put the three conditions since they were connected by ANDs.

If you had used ORs instead, then the town would be destroyed if any one of the three special units went near the town.

Test your work. Then try adding some of your own triggers to this scenario. For example, you could place down another Town Center and call it “town2”. Then define a new object by selecting the Knight (the “freezer”) and adding LOS town2 to the definition – call the object “freezer in LOS of town2”. Then create a Player class of effect (instead of an Object class) that awards victory to any human player. You can then create a trigger that awards a victory when the freezer gets within its Line Of Sight of Town 2.

Empire Earth Technology Tree

Prehistoric | Stone | Copper | Bronze | Dark | Middle | Renaissance | Imperial | Industrial | Atomic | Digital | Nano

500,000 BC | 50,000 BC | 5000 BC | 2000 BC | 0 AD | 900 AD | 1300 AD | 1500 AD | 1700 AD | 1900 AD | 2000 AD | 2100 AD

World War I | World War II | Modern

Agriculture

Granaries store crops produced at farms and provide agricultural advancements.

- Granary
- Irrigation +15% Farming
- Wheeled Plow +15% Farming
- Enclosure +15% Farming
- Pesticides +15% Farming
- Hydroponics +15% Farming

Health

Hospitals heal and units within their area, and perform medical research.

- Hospital
- Herbal Medicines +70% Citizen/Dog HPs & +3 Citizen Attack
- Hippocratic Oath +Hospital Rate and Range
- Comparative Anatomy +42% Citizen/Dog HPs & +2 Citizen Attack
- Pharmacy +1 Citizen Speed
- Sanitation +5 Pop Cap
- Human Anatomy +30% Citizen/Dog HPs & +2 Citizen Attack
- Quarantine +Hospital Rate and Range
- Orthopedics +1 Citizen Speed
- Chemical Drugs +5 Pop Cap
- Pasteurization +20% Citizen/Dog HPs & +3 Citizen Attack
- Anesthesia +Hospital Rate and Range
- Vitamins +1 Citizen Speed
- Vaccinations +5 Pop Cap
- DNA Research +30% Citizen/Dog HPs & +3 Citizen Attack
- MRI +Hospital Rate and Range
- Genetic Engineering +20% Citizen/Dog HPs & +3 Citizen Attack
- Cybernetics +1 Citizen Speed
- Anti-Aging Pill +5 Pop Cap

Education

Universities protect units in their area from conversion and perform academic research.

- University
- Oil Lamp +1 Building LOS
- Pulley +50% Building HPs
- Philosophy +1 University Range
- Commercial Law -50% Tribute Cost
- Colleges +100% Dock Repair Rate
- Bulls-Eye Lantern +1 Building LOS
- Law School +1 University Range
- Strengthened Concrete +3% Building HPs
- Scientific Method +1 University Range
- Dry Dock +150% Dock Repair Rate
- Gas Lamp +1 Building LOS
- Civil Liberties +1 University Range
- Scuba Repairs +80% Dock/Naval Yard Repair Rate
- Building Codes +25% Building HPs
- Digital Library +1 University Range

Navy

Docks produce both civilian and military vessels. Naval Yards produce modern classes of warships. Both facilities can repair naval vessels.

- Dock
- Fishing Raft → Fishing Boat – Bronze → Fishing Boat – Imperial → Fishing Boat – Trawler → Fishing Boat – Digital
- Transport Raft → Transport – Copper → Transport – Bronze → Transport – Imperial → Transport – Atomic → Gargantua Transport
- War Raft → Frigate – Copper → Frigate – Bronze → Frigate – Byzantine → Frigate – Middle → Frigate – Renaissance → Frigate – Imperial → Frigate – Royal → Good Hope → Warrington → Juggernaut
- Battleship – Copper → Battleship – Bronze → Battleship – Byzantine → Battleship – Middle → Battleship – Renaissance → Battleship – Imperial → Battleship – Royal → Dreadnought → Bismarck → Leviathan
- Galley – Copper → Galley – Bronze → Galley – Byzantine → Galley – Middle → Galleon – Renaissance → Galleon – Imperial → Galleon – Royal → Dardo Cruiser → Sagittarian Cruiser
- Gunboat Cruiser
- Naval Yard
- U-Boat → Nautilus Submarine → Hammerhead Sub
- Trident Submarine → Triton Submarine
- Sea King Helicopter → Sea King II Helicopter
- Enterprise Carrier → Nexus Carrier
- Corsair → F-14 → Avenger

Religion

Temples produce Priests and Prophets (priest quality). Columbiads, and provide religious advancements.

- Temple
- Prophet* → Mysticism +50% Prophet HPs → Sandals +1 Prophet Speed
- Priest*
- Shamanism +1 Prophet Range
- Ancestor Worship +1 Temple Range
- Ceremonial Burial +100% Priest HPs
- Mythology +1 Priest Speed
- Polytheism +1 Priest Range
- Oracle +1 Prophet Speed
- Monotheism +1 Temple Range
- Sainthood +1 Prophet Range
- Prophecy +40% Priest HPs
- Excommunication +1 Priest Range
- Crusades +1 Temple Range
- Indulgences +1 Priest Speed
- Inquisition +50% Priest HPs
- Tarot +1 Prophet Speed
- Astrology +1 Prophet Range
- Printing Press Priests Can Convert Priests
- Occultism +25% Prophet HPs
- Reformation +1 Priest Range
- Missionaries Priests Can Convert Buildings
- Sunday School +1 Temple Range
- Religious Tolerance +25% Priest HPs
- Radio Services +1 Priest Speed
- Televangelism +1 Priest Range
- Religious Resurgence +25% Priest HPs
- Virtual Services +1 Priest Speed
- Mind Control +20% Priest Recharge Rate

Economics & Government

Settlements are resource dropoff points that can be upgraded into Town Centers. Town Centers produce Citizens and research all economic and civic Objects. Town Centers and Capitols can also research any technology.

- Capitol
- Citizens*
- Canine Scout*
- Town Center (Upgrade)
- Settlement (Upgrade)
- Sargon of Akkad → Gilgamesh
- Fine-Edged Tools +15% Hunting/Foraging
- Hand Axe +15% Wood Gathering
- Hafted Tools +15% Stone Gathering
- Alexander the Great → Hannibal
- Metal Casting +15% Gold Gathering
- Hardened Chisel +15% Iron Gathering
- Upgrade Bronze Age Walls/Towers
- Upgrade Copper Age Towers
- Charlemagne → Julius Caesar
- Falconry +15% Hunting/Foraging
- Iron Saw +15% Wood Gathering
- William the Conqueror → Richard the Lionheart
- Amalgamation +15% Gold Gathering
- Shaft Mining +15% Iron Gathering
- Upgrade Medieval Walls/Towers
- Isabella → Henry V
- Windlass +15% Stone Gathering
- Elizabeth I → Oliver Cromwell
- Land Conservation +15% Hunting/Foraging
- Forestry +15% Wood Gathering
- Upgrade Imperial Age Walls/Towers
- Otto von Bismarck → Napoleon → Hot Air Ballon
- Steam Engine +15% Gold Gathering
- Mining Explosives +15% Iron Gathering
- De Verran → Richthofen → Observation Ballon
- Hammer Drilling Rigs +15% Stone Gathering
- Upgrade Concrete Walls/Towers
- Rommel → Shackelford
- Environmental Law +15% Hunting/Foraging
- Mechanized Logging +15% Wood Gathering
- RW Bresden → St. Albans
- Hydraulic Mining +15% Gold Gathering
- Basic Oxygen Furnace +15% Iron Gathering
- Septimus → Molotov
- Self-Sufficiency +15% Hunting/Foraging
- Upgrade Laser Walls/Towers
- Ryan → Cyborg Molotov
- Atom Manipulation +15% Gold Gathering
- Core Mining +15% Iron Gathering

Infantry

Barracks produce foot soldiers. Melee weapons give way to firearms beginning with the Renaissance.

- Barracks
- Club Man → Spear Man → Sampson
- Rock Thrower
- Mace Man → Short Sword → Phalanx
- Long Sword → Pike Man
- Barbarian → Viking
- Arquebus
- Musketeer → Halberdier → Sharpshooter → Hand Cannoneer → Elite Guard
- Medic – Imperial
- Grenadier → Partisan
- Doughboy → Grenade Launcher → Sniper → Trench Mortar → Machine Gun
- Medic – Atomic
- Marine → Bazooka → Flame Thrower
- Heavy Mortar
- Stinger Soldier
- Sentinel
- Medic – Digital
- Guardian

Missile Weapons

Archery Ranges produce archers and other ranged units.

- Archery Range
- Slinger → Simple Bowman
- Javelin Thrower → Chariot Archer → Elephant Archer
- Composite Bow → Pilum → Crossbow
- Long Bow → Cavalry Archer

Cavalry

Stables produce mounted units (except mounted archers).

- Stable
- Horseman → Bronze Cavalry → War Elephant
- Cataphract → Persian Cavalry
- Knight
- Cuirassier → Carabineer
- Imperial Cuirassier → Dragoon

Siege & Artillery

Siege Factories produce siege units, cannons, and other artillery pieces.

- Siege Factory
- Stone Thrower → Siege Tower → Catapult → Ram
- Ballista → Heavy Siege Tower → Trebuchet → Heavy Ram
- Culverin Cannon → Basilisk Cannon
- Bombard
- Bronze Cannon → Serpentine Cannon
- 57mm AT Gun → Howitzer Cannon → Artillery
- 120mm AT Gun
- Thor AT Gun → Paladin Cannon → Colossus Artillery
- Hercules AT Gun

Aircraft

Airports produce fighters, bombers, and helicopters. Fighters can fight other aircraft, and bombers bombard.

- Airport
- Sopwith Fighter → Fokker Fighter/Bomber → Gotha Bomber
- Spitfire → ME 109 → HE 111
- P-51 → ME 262 → B-17
- B-29 (Nuclear)
- Typhoon (AT)
- F-15 → F-117 → B-2 → B-52 → A-10 (AT)
- Sea King Helicopter → Helicopter Transport → Helicopter AT → Helicopter Gunship
- Jackal → Talon → B-111 Wyvern → Titan
- Pegasus Transport → Spectre AT → Reaper Gunship
- Nebula → Phoenix
- Sea King II

Tanks

Tank Factories produce tanks and various anti-aircraft guns.

- Tank Factory
- Mark V (HE) → A7V (AP) → Flak Halftrack (AA)
- Sherman (HE) → Panzer (AP)
- M1 (HE) → Leopard (AP)
- Gladiator → Skywatcher (AA)
- Centurion

Mechanized Units

Cyber Factories produce Combat Cybers. Cyber Labs build specialized units, called Ultra-Cybers.

- Cyber Factory
- Ares → Pandora → Hyperion → Minotaur
- Ares II → Pandora II → Hyperion II → Minotaur II → Zeus
- Cyber Lab
- Apollo → Furies → Tempest
- Hades → Poseidon

Advancing Epochs

To advance from one Epoch to the next a player must build 2 buildings and then expend a quantity of resources.

Legend

Building | Technology | Unit

Upgrade

Buildings, Units, and Technologies are shown in the first Epoch in which they are available. Units with an asterisk(*) are available in every Epoch.

(Percentages shown are approximate values.)

EMPIRE EARTH™

TECHNOLOGY TREE

Units

Town Center / Capitol Units & Temple Units

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
Citizen	All	Varied	Food	4	65	Construct, repair, gather resources; Needed for TC and Capitol Building
Priest	All	-	Food, Gold	0	100	Converts enemies; Trained at Temple
Prophet	All	-	Food, Gold	0	150	Casts calamities; Pop Count=5; Trained at Temple
Canine Scout	All	-	Food	0	60	No attack, good for scouting
Balloon	IX, X	-	Gold, Wood	0	600	Hot Air Balloon upgrades to Observation Balloon. Long Line of Sight.
Sargon of Akkad	III	Shock	Food, Gold	12	900	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Gilgamesh	III	Shock	Food, Iron	41	1275	Warrior – Strong fighter; Provides morale to troops
Alexander the Great	IV	Shock	Food, Gold	14	1235	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Hannibal	IV	Shock	Food, Iron	46	1800	Warrior – Strong fighter; Provides morale to troops
Charlemagne	V	Shock	Food, Gold	16	1575	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Julius Caesar	V	Shock	Food, Iron	52	2250	Warrior – Strong fighter; Provides morale to troops
William the Conqueror	VI	Shock	Food, Gold	19	1950	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Richard the Lionheart	VI	Shock	Food, Iron	60	2775	Warrior – Strong fighter; Provides morale to troops
Isabella	VII	Shock	Food, Gold	22	2300	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Henry V	VII	Shock	Food, Iron	90	3270	Warrior – Strong fighter; Provides morale to troops
Elizabeth I	VIII	Shock	Food, Gold	25	2610	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Oliver Cromwell	VIII	Shock	Food, Iron	110	3750	Warrior – Strong fighter; Provides morale to troops
Otto von Bismarck	IX	Gun	Food, Gold	33	3000	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Napoleon	IX	Gun	Food, Iron	140	4245	Warrior – Strong fighter; Provides morale to troops
Givan DeVerran	X	Gun	Food, Gold	43	3330	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Manfred von Richthofen	X	Gun	Food, Iron	150	4740	Warrior – Strong fighter; Provides morale to troops
Erwin Rommel	XI	Gun	Food, Gold	55	3650	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Travis Shackelford	XI	Gun	Food, Iron	160	5235	Warrior – Strong fighter; Provides morale to troops
RW Bresden	XII	Gun	Food, Gold	60	4000	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Dennis St. Albans	XII	Gun	Food, Iron	180	5730	Warrior – Strong fighter; Provides morale to troops
Dr. Alexi Septimus	XIII	Laser	Food, Gold	70	4725	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Molotov	XIII	Laser	Food, Iron	230	5600	Warrior – Strong fighter; Provides morale to troops
Molly Ryan	XIV	Laser	Food, Gold	85	5000	Strategist – Restores health to troops; Battle Cry demoralizes enemies
Cyborg Molotov	XIV	Laser	Food, Iron	360	6075	Warrior – Strong fighter; Provides morale to troops

Archers

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
Slinger	II	Arrow	Gold, Wood	9	70	
Simple Bowman	III	Arrow	Gold, Wood	9	95	
Javelin Thrower	III	Pierce	Gold, Wood	11	130	
Chariot Archer	IV	Arrow	Gold, Wood	17	180	Good Speed; Pop Count=2
Elephant Archer	IV	Arrow	Food, Gold	25	600	Slow Speed but many Hit Points; Pop Count=2
Composite Bow	V	Arrow	Gold, Wood	13	145	
Pilum	V	Pierce	Gold, Wood	13	155	
Cross Bow	V	Arrow	Gold, Wood	40	125	One shot – one kill vs. Infantry (without improved armor)
Cavalry Archer	VI	Arrow	Gold, Wood	23	275	Good Speed; Pop Count=2
Long Bow	VI	Arrow	Gold, Wood	17	190	

Infantry (Epochs I-VI)

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
Club Man	I	Shock	Food, Iron	8	135	
Rock Thrower	I	Shock	Food, Gold	5	75	
Spear Man	II	Pierce	Food, Iron	15	85	
Sampson	II	SW	Gold, Wood	60	105	Anti-Walls/Towers/Buildings
Mace Man	III	Shock	Food, Iron	13	150	
Short Sword	IV	Shock	Food, Iron	15	215	
Phalanx	IV	Pierce	Food, Iron	24	155	
Barbarian	V	Shock	Food, Iron	16	250	May walk through forests
Viking	V	Shock	Food, Iron	10	160	Stealthy; Good against ranged units
Long Sword	VI	Shock	Food, Iron	29	400	
Pike Man	VI	Pierce	Food, Iron	40	240	

Infantry (Epochs VII-XIV)

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
Arquebus	VII	Gun	Food, Iron	44	270	
Musketeer	VIII	Gun	Food, Iron	44	325	
Halberdier	VIII	Pierce	Food, Iron	40	350	Good against all Cavalry
Sharpshooter	VIII	Gun	Food, Gold	50	315	One shot – one kill vs. Infantry (without improved armor)
Hand Cannoneer	VIII	FW	Food, Gold	65	350	Fires over walls; Strong vs. early Tanks; Splash damage
Medic - Imperial	VIII	-	Food, Gold	0	360	Heal units
Elite Guard	IX	Gun	Food, Iron	35	350	Bonus vs. enemy Infantry
Grenadier	IX	Gun	Food, Iron	44	390	
Partisan	IX	Gun	Food, Iron	20	325	Path through forests; Can shoot air units
Doughboy	X	Gun	Food, Iron	44	370	
Grenade Launcher	X	AT	Food, Gold	16	525	Anti-Tank
Sniper	X	Gun	Food, Gold	60	405	One shot – one kill vs. Infantry (without improved armor)
Trench Mortar	X	FW	Food, Gold	90	375	Long range; Splash damage
Machine Gun	X	Gun	Food, Gold	16	400	Anti-Infantry
Medic - Atomic	XI	-	Food, Gold	0	425	Heals units
Marine	XI	Gun	Food, Iron	52	470	
Bazooka	XI	AT	Food, Gold	20	625	Anti-Tank
Flame Thrower	XI	SW	Food, Gold	25	430	Good against buildings
Stinger Soldier	XII	AA	Food, Gold	55	265	Anti-Air
Heavy Mortar	XII	FW	Food, Gold	120	425	Long range; Splash damage
Sentinel	XIII	Laser	Food, Iron	62	600	
Medic - Digital	XIII	-	Food, Gold	0	500	Heals units
Guardian	XIV	Laser	Food, Iron	74	800	

Cavalry

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
Horseman	II	Shock	Food, Gold	17	240	Pop Count=2
Bronze Cavalry	IV	Pierce	Food, Gold	23	290	Pop Count=2
War Elephant	IV	Shock	Food, Gold	23	600	Slow Speed but many Hit Points; Does trample damage to adjacent units; Pop Count=2
Cataphract	V	Shock	Food, Gold	24	440	Pop Count=2
Persian Cavalry	V	Pierce	Food, Gold	18	225	Pop Count=2
Knight	VI	Pierce	Food, Gold	38	400	Pop Count=2
Cuirassier	VII	Shock	Food, Gold	40	605	Pop Count=2
Carabineer	VII	Gun	Food, Gold	55	425	Pop Count=2
Dragoon	IX	Gun	Food, Gold	65	480	Pop Count=2
Imperial Cuirassier	IX	Shock	Food, Gold	60	655	Pop Count=2

Siege & Artillery (Epochs IV-VI)

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
Stone Thrower	IV	FW	Gold, Wood	65	180	Good against massed units
Siege Tower	IV	-	Gold, Wood	0	675	Transport units over walls
Catapult	IV	SW	Gold, Wood	85	160	Anti-Walls/Towers/Buildings/Ships; Pop Count=2
Ram	IV	SW	Gold, Wood	125	275	Anti-Walls/Towers/Buildings
Ballista	VI	FW	Gold, Wood	75	200	Good against massed units; Pop Count=2
Heavy Siege Tower	VI	-	Gold, Wood	0	720	Transport units over walls
Trebuchet	VI	SW	Gold, Wood	150	215	Anti-Walls/Towers/Buildings/Ships; Pop Count=2
Heavy Ram	VI	SW	Gold, Wood	200	325	Anti-Walls/Towers/Buildings

Siege & Artillery (Epochs VII-XIV)

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
Culverin Cannon	VII	FW	Iron, Wood	80	215	Anti-infantry (when massed); Pop Count=2
Basilisk Cannon	VII	SW	Iron, Wood	145	360	Anti-Walls/Towers/Buildings/Ships; Pop Count=2
Bombard	VIII	SW	Iron, Wood	140	175	Low Line of Sight, but long Range; Does Splash Damage; Pop Count=2
Bronze Cannon	IX	FW	Iron, Wood	90	280	Anti-Infantry (when massed); Pop Count=2
Serpentine Cannon	IX	SW	Iron, Wood	250	405	Anti-Walls/Towers/Buildings/Ships; Pop Count=2
57mm AT Gun	X	AT	Gold, Wood	35	440	Anti-Tank
Howitzer Cannon	X	SW	Iron, Wood	250	500	Anti-Walls/Towers/Buildings/Ships; Pop Count=2
Artillery	X	FW	Iron, Wood	175	225	Anti-Infantry; Pop Count=2
120mm AT Gun	XII	AT	Gold, Wood	44	455	Anti-Tank
Thor AT Gun	XIII	AT	Gold, Wood	52	550	Anti-Tank
Paladin Cannon	XIII	SW	Iron, Wood	425	800	Anti-Walls/Towers/Buildings/Ships; Pop Count=2
Colossus Artillery	XIII	FW	Iron, Wood	200	300	Anti-Infantry; Pop Count=2
Hercules AT Gun	XIV	AT	Gold, Wood	62	680	Anti-Tank

Ships & Subs

Unit Name	Epoch	Ship Type	Cost	Attack	HP Points	Special
Fishing Raft	II	FB	Wood	0	120	
Transport Raft	II	T	Wood	0	120	Transports up to 10 units over water
War Raft	II	F	Iron, Wood	12	220	
Transport - Copper	III	T	Wood	0	200	Transports up to 10 units over water
Frigate- Copper	III	F	Iron, Wood	15	240	
Battleship - Copper	III	B	Gold, Wood	62	900	
Galley - Copper	III	G	Iron, Wood	6	260	
Fishing Boat - Bronze	IV	FB	Wood	0	280	
Frigate - Bronze	IV	F	Iron, Wood	18	310	
Battleship - Bronze	IV	B	Gold, Wood	72	1180	
Galley - Bronze	IV	G	Iron, Wood	8	335	
Transport - Bronze	IV	T	Wood	0	360	Transports up to 12 units over water
Frigate - Byzantine	V	F	Iron, Wood	21	400	
Battleship - Byzantine	V	B	Gold, Wood	90	1560	
Galley - Byzantine	V	G	Iron, Wood	9	440	
Frigate - Middle	VI	F	Iron, Wood	25	540	
Battleship - Middle	VI	B	Gold, Wood	108	2025	
Galley - Middle	VI	G	Iron, Wood	11	575	
Frigate - Renaissance	VII	F	Iron, Wood	33	625	
Battleship - Renaissance	VII	B	Gold, Wood	150	2450	
Galleon - Renaissance	VII	G	Iron, Wood	15	675	
Fishing Boat - Imperial	VIII	FB	Wood	0	420	
Transport - Imperial	VIII	T	Wood	0	530	Transports up to 14 units over water
Frigate - Imperial	VIII	F	Iron, Wood	38	750	
Battleship - Imperial	VIII	B	Gold, Wood	175	3060	
Galleon - Imperial	VIII	G	Iron, Wood	18	825	
Gunboat Cruiser	VIII	C	Gold, Wood	30	1400	Can shoot aircraft
Frigate - Royal	IX	F	Iron, Wood	51	1060	
Battleship - Royal	IX	B	Gold, Wood	200	4525	
Galleon - Royal	IX	G	Iron, Wood	24	1100	
Transport - Atomic	X	T	Wood	0	750	Transports up to 14 units over water
Good Hope	X	F	Iron, Wood	55	1350	
Dreadnought	X	B	Gold, Wood	230	5750	
Dardo Cruiser	X	C	Gold, Wood	70	2300	Anti-Aircraft
U-Boat	X	S	Iron, Wood	130	1000	
Fishing Boat - Trawler	XI	FB	Wood	0	700	
Frigate - Warrington	XI	F	Iron, Wood	68	1600	
Bismarck	XI	B	Gold, Wood	276	6625	
Enterprise Carrier	XI	AC	Gold, Wood	0	6000	Builds, refuels, repairs, and launches carrier-based fighters/bombers; Pop Count=2
Nautilus	XII	S	Iron, Wood	200	1350	
Trident	XII	NS	Gold, Iron	800	800	Nuclear Powered Sub - good against all land units and buildings; Low LOS
Fishing Boat - Digital	XIII	FB	Wood	0	900	
Gargantua	XIII	T	Wood	0	920	Transports up to 14 units over water
Juggernaut	XIII	F	Iron, Wood	100	2100	
Leviathan	XIII	B	Gold, Wood	380	8600	
Sagittarian	XIII	C	Gold, Wood	110	3800	Anti-Aircraft
Nexus Carrier	XIII	AC	Gold, Wood	0	8000	Builds, refuels, repairs, and launches carrier-based fighters/bombers; Pop Count=2
Hammerhead	XIV	S	Iron, Wood	250	1900	
Triton	XIV	NS	Gold, Iron	1000	1000	Nuclear Powered Sub - good against all land units and buildings; Low LOS

Tanks

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
A7V	X	AP	Food, Iron	85	405	Good against Tanks; Pop Count=2
MkV	X	HE	Food, Iron	85	315	Good against Infantry; Pop Count=2
Halftrack	X	AA	Food, Iron	50	450	Anti-Aircraft
Panzer	XI	AP	Food, Iron	100	500	Good against Tanks; Pop Count=2
Sherman	XI	HE	Food, Iron	100	400	Good against Infantry; Pop Count=2
Leopard	XII	AP	Food, Iron	110	600	Good against Tanks; Pop Count=2
M1	XII	HE	Food, Iron	110	450	Good against Infantry; Pop Count=2
Gladiator	XIII	Laser	Food, Iron	110	600	Pop Count=2
Skywatcher	XIII	AA	Food, Iron	100	575	Anti-Aircraft
Centurion	XIV	Laser	Food, Iron	145	750	Pop Count=2

Aircraft

Unit Name	Epoch	Weapon	Cost	Attack	HP Points	Special
Fokker DR.1	X	F/B	Gold, Iron	18	350	
Sopwith	X	F	Gold, Iron	17	425	
Gotha	X	B	Gold, Iron	100	850	
ME 109	XI	F/B	Gold, Iron	22	425	
ME 262	XI	F/B	Gold, Iron	26	500	
Spitfire	XI	F	Gold, Iron	23	502	
P-51	XI	F	Gold, Iron	26	550	
HE 111	XI	B	Gold, Iron	120	1100	
B-17	XI	B	Gold, Iron	135	1400	
Typhoon	XI	F/B	Gold, Iron	11	450	Anti-Tank
B-29	XI	AB	Gold, Iron	2200	400	Atomic Bomber
Corsair	XI	F/B	Gold, Iron	12	496	Aircraft Carrier-based Fighter/Bomber
F-117	XII	F/B	Gold, Iron	190	625	
F-15	XII	F	Gold, Iron	236	661	
B-2	XII	B	Gold, Iron	160	1700	
B-52	XII	AB	Gold, Iron	2800	500	Atomic Bomber
A-10	XII	F/B	Gold, Iron	14	575	Anti-Tank
F-14	XII	F/B	Gold, Iron	105	610	Aircraft Carrier-based Fighter/Bomber
Helicopter Transport	XII	H	Gold, Iron	0	550	Helicopter Transport; Transports up to 5 units
Helicopter Gunship	XII	H	Gold, Iron	25	450	Anti-Infantry
Helicopter AT	XII	H	Gold, Iron	75	850	Anti-Tank
Sea King	XII	H	Gold, Iron	400	315	Anti-Submarine; Made at a Naval Yard or Airport
Talon	XIII	F/B	Gold, Iron	227	740	
Jackal	XIII	F	Gold, Iron	285	796	
B-122 Wyvern	XIII	B	Gold, Iron	200	2000	
Titan	XIII	AB	Gold, Iron	3300	600	Atomic Bomber
Avenger	XIII	F/B	Gold, Iron	120	740	Aircraft Carrier-based Fighter/Bomber
Pegasus	XIII	H	Gold, Iron	0	660	Helicopter Transport; Transports up to 10 units
Reaper Gunship	XIII	H	Gold, Iron	35	600	Anti-Infantry
Spectre AT	XIII	H	Gold, Iron	100	1100	Anti-Tank
Sea King II	XIII	H	Gold, Iron	475	450	Anti-Submarine; Made at a Naval Yard or Airport
Phoenix	XIV	F/B	Gold, Iron	265	860	
Nebula	XIV	F	Gold, Iron	338	941	

Cybers

Unit Name	Epoch	Type	Cost	Attack	HP Points	Special
Ares	XIII	Combat	Food, Gold	65	1200	Flying Cyber; Self Repair; Pop Count=2
Pandora	XIII	Combat	Food, Gold	67	550	Anti-Infantry; Pop Count=2
Hyperion	XIII	Combat	Food, Gold	105	2200	Walk under water and over cliffs; Pop Count=2
Minotaur	XIII	Combat	Food, Gold	72	1500	Anti-Tank; Pop Count=2
Apollo	XIII	Ultra	Food, Iron	0	2500	Flying Cyber; Diffraction Shield; Repair other Cybers; Ion Pulse; Pop Count=2
Furies	XIII	Ultra	Food, Iron	150	900	Self-Destruct; Pop Count=2
Tempest	XIII	Ultra	Food, Iron	115	800	Anti-Matter Storm (Anti-air); Resonator (Anti-land); Pop Count=2
Ares II	XIV	Combat	Food, Gold	75	1500	Same as Ares; Pop Count=2
Pandora II	XIV	Combat	Food, Gold	80	660	Same as Pandora; Pop Count=2
Hyperion II	XIV	Combat	Food, Gold	130	2500	Same as Hyperion; Pop Count=2
Minotaur II	XIV	Combat	Food, Gold	82	1800	Same as Minotaur; Pop Count=2
Zeus	XIV	Combat	Food, Gold	350	2300	Anti-Cyber; Pop Count=2
Hades	XIV	Ultra	Food, Iron	0	1700	Teleport; Time Warp; Nano Virus; Pop Count=2
Poseidon	XIV	Ultra	Food, Iron	0	3000	Walk under water; Refractive Cloak; Assimilate other Cybers; Pop Count=2

Buildings

	Building Name	Epoch	Cost	Special
Civil	Capitol	All	Citizens	Produce Citizens & Heroes; Morale bonus; Resource drop-off bonus
	Farm	III-XIV	Wood	Citizens can harvest farms for food
	Granary	III-XIV	Wood	Collection point for farm crops
	Hospital	III-XIV	Wood, Stone	Heals land units
	House	All	Wood, Stone	Modifies Morale around a Town Center or Capitol (adds 1 per house up to max.)
	Settlement	All	Wood	Drop off for resources; Can be upgraded into a Town Center with Citizens
	Temple	All	Wood, Stone	Protection against Calamities
	Town Center	All	Citizens	Produce Citizens & Heroes; Morale bonus; Resource bonus; Can be upgraded into a Capitol with Citizens
	University	III-XIV	Wood, Stone	Protects against conversion
Navy	Dock	II-XIV	Wood	Repairs all nearby ships
	Naval Yard	X-XIV	Wood	Repairs all nearby ships
Military	Airport	X-XIV	Wood	Repairs, refuels, & rearms all aircraft
	Archery Range	II-VI	Wood	
	Barracks	All	Wood	
	Fortress	III-XIV	Wood	Garrisons land units; Garrisoned units do not count toward population
	Cyber Factory	XIII-XIV	Wood	Makes Combat Cybers
	Cyber Laboratory	XIII-XIV	Wood	Makes Ultra Cybers
	Siege Workshop	IV-XIV	Wood	
	Stable	III-IX	Wood	
	Tank Factory	X-XIV	Wood	
Defense	Tower	All	Stone	Upgrades at Town Center/Capitol
	Wall	III-XIV	Stone	Upgrades at Town Center/Capitol
	Gate	III-XIV	-	To build a gate: select a straight wall, click the Gate button, then click on the wall to place the gate
	AA Gun Emplacement	X-XIV	Gold, Wood	Non-Mobile Anti-Aircraft Towers

	Wonder Name	Power Name	Effect
Wonders	Tower of Babylon	Revelation	Priests convert with an area effect
	Temple of Zeus	Sanctity	Players' units self-heal automatically
	Library at Alexandria	Survey	All enemy buildings are revealed
	Pharos Lighthouse	Guiding Light	Reveals water areas on the map and any units on them
	Colseum	Spectacle	Raises the owner's pop cap and lowers the pop cap of all enemy civilizations
	Ishtar Gates	Safe Guard	Increases the hit points of the owner's walls and towers

Epochs

I	Prehistoric	VIII	Imperial Age
II	Stone Age	IX	Industrial Age
III	Copper Age	X	Atomic - WWI
IV	Bronze Age	XI	Atomic - WWII
V	Dark Age	XII	Atomic - Modern
VI	Middle Age	XIII	Digital Age
VII	Renaissance	XIV	Nano Age

Calamities

Calamity Name	Power/	Effect
Earthquake	60%	Damages Buildings, Walls, and Towers
Volcano	75%	Creates a volcanic eruption that shoots out molten rock
Hurricane	100%	Creates a storm over water that devastates ships (player can control storm's movement)
Plague	100%	Infects target and slowly causes death; Can spread to nearby units
Malaria	100%	Infects units in target area, who lose health; Not fatal
Fire Storm	75%	Burns Buildings and Ships; Can spread to adjacent structures

Cyber Powers

Power Name	Cyber Name	Effect
Diffraction Shield	Apollo	Reduces damage taken by shielded unit
Repair	Apollo	Repairs damaged Cybers
Ion Pulse	Apollo	Increases damage taken by target
Self-Destruct	Furies	Cyber explodes and surrounding units take splash damage
Time Warp	Hades	Causes target unit to disappear and reappear several minutes later
Teleport	Hades	Teleports Hades anywhere on the map, but Hades takes damage
Nano Virus	Hades	Infected Cybers eventually explode; the virus can spread
Refractive Cloak	Poseidon	Units surrounding the Poseidon are invisible to enemies except at close range
Assimilate	Poseidon	Takes over enemy Cybers
Resonator	Tempest	Causes affected units to take damage proportional to their attack strength
Anti-Matter Storm	Tempest	A violent airborne storm damages nearby aircraft (player can control storm's movement)

Weapons

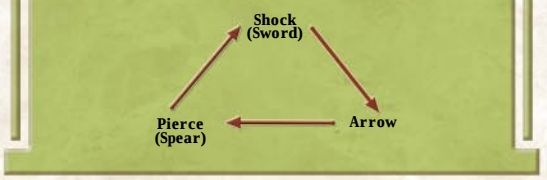
AA	Anti-Air	AC	Aircraft Carrier	AB	Atomic Bomber
AP	Armor Piercing	B	Battleship	B	Bomber
AT	Anti-Tank	C	Cruiser	F	Fighter (Air Superiority)
FW	Field Weapon	F	Frigate	F/B	Fighter/Bomber
HE	High Explosive	FB	Fishing Boat	H	Helicopter
SW	Siege Weapon	G	Galley/Galleon		
		NS	Nuclear Sub		
		S	Submarine (Attack)		
		T	Transport		

Unit Relationship Diagrams

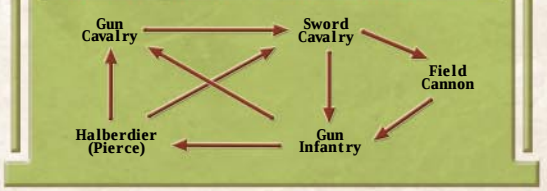
NOTE: The dark red arrows indicate battle relationships. For example, Pierce (Spear) weapons beat Shock (Sword) weapons, Shock beat Arrow, and Arrow beat Pierce. Keep in mind, relationships are based on cost and not number of units.

Land

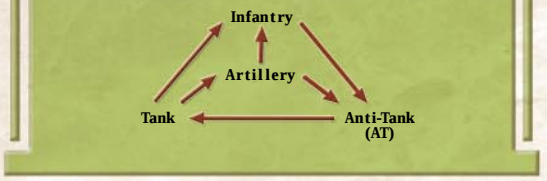
Prehistory – Middle Ages



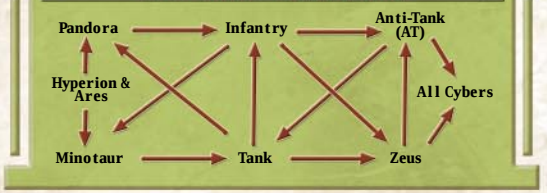
Renaissance – Industrial Age



Atomic Ages (WWI – Modern)

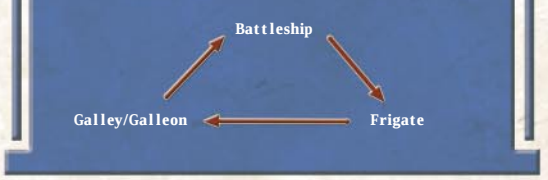


Digital & Nano Ages

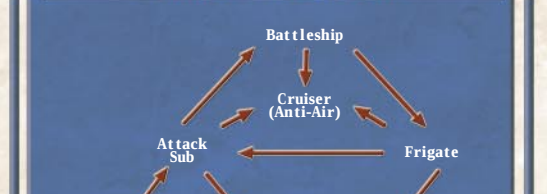


Sea

Stone – Industrial Age

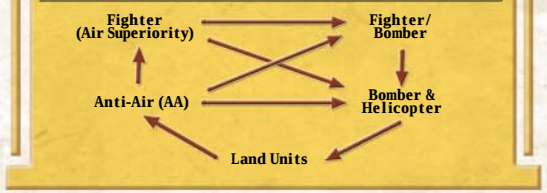


Atomic – Nano Age



Air

Atomic – Nano Age



EMPIRE EARTH™

Technology Tree

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