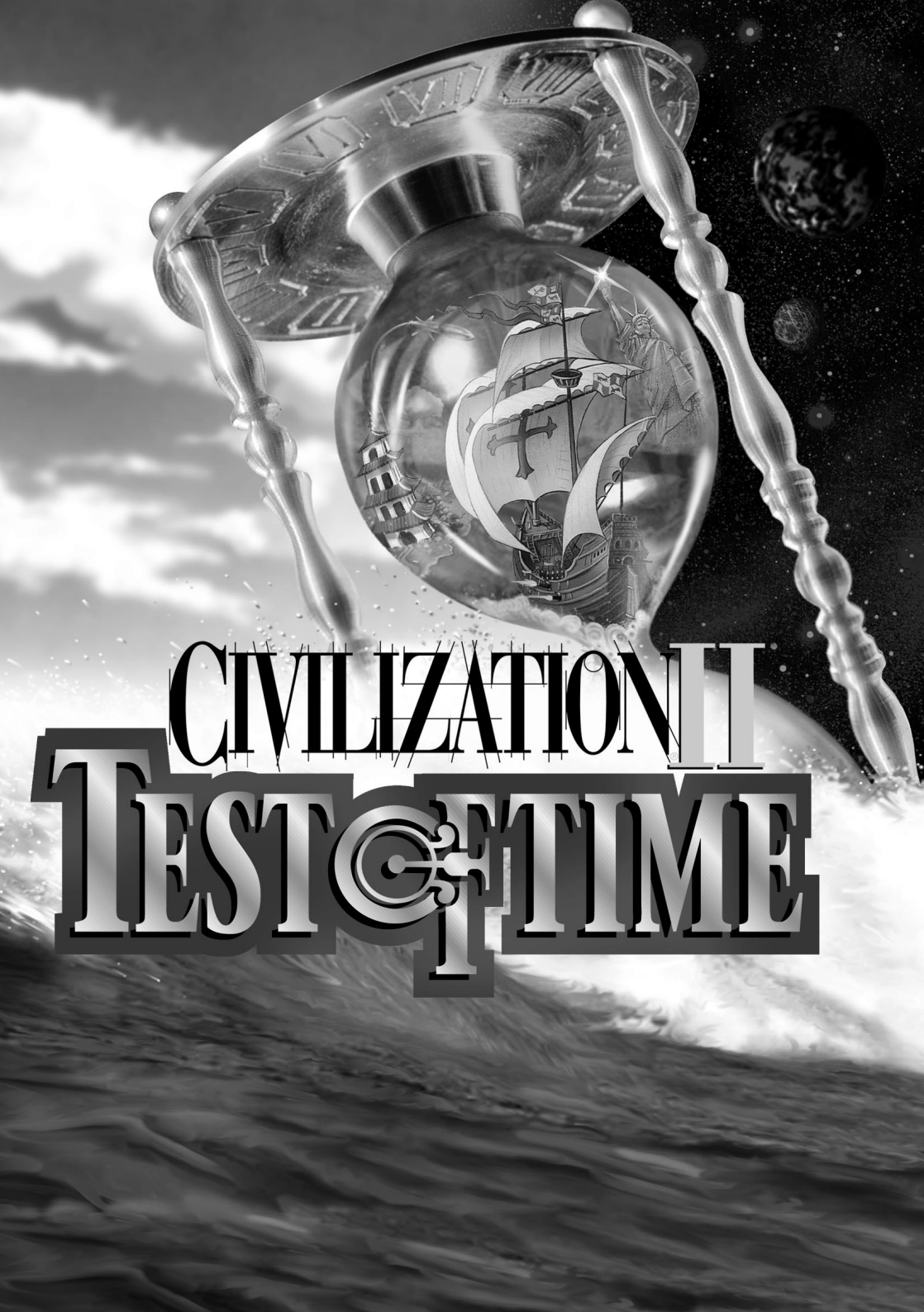
CIVILIZATION II
TEST OF TIME

TECHNICAL STUFF

You can't start playing until you install the game. Here's how.

REQUIREMENTS

Before you can install ***Civilization II: Test of Time*** and start playing, check this list to make sure that your computer has everything you need:

- The processor has to be a 166 MHz Pentium® or better. For best performance, we recommend at least a 200 MHz Pentium with MMX.
- You must have at least 16 Mb (megabytes) of RAM. (If you're running Windows 95, it's a safe bet you have 16 Mb or more.) For best performance, we recommend 32 Mb or more.
- You must have at least 16 MB (megabytes) of RAM. (If you're running Windows 95 or 98, it's a safe bet you have 16 MB or more.) For best performance, we recommend 32 MB or more.
- You must have a 4x speed (or faster) CD-ROM drive.

- Since the installation program will copy parts of the ***Civilization II: Test of Time*** onto your hard disk, you must have sufficient empty storage space on your hard drive. How much you need depends on how much of the game you choose to install; the different amounts are calculated for you by the installation program, and it shows you what you need versus what you have. The minimum required is 60 Mb.
- Your computer must be capable of SVGA (16 bit) quality graphics, and your video card must have at least 1 Mb of onboard memory.
- There must be a working mouse (or a device that fulfills the same function) attached to the computer.
- You should have DirectX version 6.0 (or higher). If you don't have this, you can install version 6.0 as part of the installation process.
- To hear the game sounds and music, you must have a working Windows 95 compatible sound card—and the requisite drivers installed.

If you intend to play multiplayer games, you'll need at least one of the following things:

- A Windows-compatible modem. The game should work on a modem as slow as 28800 baud, but we recommend a 56 kps modem or faster.
- Access to a local area network (LAN) running either the TCP/IP protocol or the IPX/SPX protocol.
- Access to the Internet with the Winsock protocol and a 28.8 kps connection (or faster).

  If you think you have all of these, but still have a problem running the game, please contact MicroProse Customer Support for assistance.

INSTALLING

If you have all of the required equipment, then it's time to install the game. To do so, follow these instructions:

- Turn on your computer.
- Open the CD-ROM drive, place the ***Civilization II: Test of Time*** CD in it, and close the drive.
- This is a Windows "AutoPlay" CD-ROM. That means that just putting the disc in the drive for the first time starts up the installation program.

IF AUTOPLAY DOESN'T WORK

If, for whatever reason, the AutoPlay feature does not work when you put the CD-ROM in the drive, here's how to start the installation program yourself:

- Double-click your "My Computer" desktop icon.
- In the window that opens, double-click your CD-ROM drive (it's usually the D drive).
- In the list that appears, find a file named **setup.exe** and double-click it.

  The installation program should begin.

- Click **Install** to continue. (If you change your mind at this point, close the window to **Exit**.)
- As is usual in Windows installation procedures, there are two decisions you need to make before the installation process can begin. The first decision is to what folder you want to install the game. You can accept the default, type in a directory path, or use the **Browse** button to seek out a folder. Click **OK** when you're done.
- The second decision is what sort of installation you want to do. You have the option of doing a **Typical** installation, a **Compact** one, or a **Custom** one. If your hard drive space is limited, **Custom** allows you to decide what you want installed and leave nonessential files on the CD-ROM. Note that the game will not function unless you install the **Required** files, and there will be no sound effects unless you install the **Recommended** files.
- Once you've made your choices, the installation program copies the files you requested to your hard drive from the CD-ROM, then creates the new program group and icons. You also have the option of adding ***Civilization II: Test of Time*** to the Windows Start menu.
- After the game itself has been copied over, ***Civilization II: Test of Time*** installs a few necessary utility programs. These include Microsoft's DirectX drivers (version 6.0) , and Direct X Media. Note that the space these take up was not included in the total noted when you selected what type of installation to do. If it is suggested that you restart your machine - please do so after the installation is complete.

PLAYING

Once the automated installation and set-up are complete, the game is ready to play. To start:

- Make sure that the CD-ROM is in your drive. (If you did not install the **Recommended** files, there will be no sound effects. There will be some music.)
- Now simply double-click on the ***Civilization II: Test of Time*** icon or select the game from the Windows 95 Start menu to start.

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INTRODUCTION

"There are so many worlds, and I have not yet conquered even one."

– Plutarch,
attributed to Alexander the Great

Civilization II: Test of Time improves and expands on a beloved classic. ***Civilization II***, its predecessor, cast you as the ruler of an infant civilization, struggling to survive and prosper in the earliest moments of history. Eventually, growth and exploration brought you into competition with other civilizations, and the struggle for supremacy began in earnest. As much fun as this is, once you had conquered the world, that was that. In ***Test of Time***, there are multiple worlds to explore and conquer, both familiar and strange.

Two of the new games in ***Civilization II: Test of Time*** expand on the Midgard scenario first introduced in ***Civ II Fantastic Worlds***. In the Fantasy game and the new Midgard scenario, you can lead tribes of elves, goblins, and other fantastic folk as they strive to survive in a four–tiered world. There's a science fiction flavour to the Extended Original game, in which your spaceship landing is not the end of the game, but the beginning of your adventure on a second world. Finally, there's the Science Fiction game, in which you must start from scratch in a faraway, alien system of planets. The result is the same compelling quality and lots of fresh challenges for the expert player–and wide–open worlds for the novice to explore.

The names of items and options are often different from game to game, though they represent the same concepts. For brevity's sake, the examples we use throughout this manual are taken from the Original game. The important differences are covered in the sections on the Fantasy and Science Fiction games.

Like most things in life, civilization is more fun when it involves other people. That's why ***Civilization II: Test of Time*** has a multiplayer aspect, too–sharing the fun.

The basics of the game are still the same. Both you and your opponents–human and AI–begin with a small band of settlers surrounded by the hazards and delights of unexplored territory. Each decision you make can have important ramifications later. Should you build a city on a coast or inland? Should you concentrate on military production or agricultural improvement? Innovative displays make it easy to understand the shifting situation and implement action. If you prove an able ruler, your civilization grows larger and even more interesting to manage. The inevitable contact with neighbouring civilizations opens new doors of opportunity: treaties, embassies, sabotage, trade, and war.

As time passes, you are confronted with increasingly difficult decisions. First, you must think tactically. Where is the optimum location for another city? When should you produce specific military units and city improvements? How rapidly should you explore the surrounding land? Soon, circumstances demand that you formulate strategic plans. Should you pursue war or peace with neighbours? When should you explore and expand overseas? Is it advantageous to change your type of government? Where should you focus technological research? What advantages do the other worlds offer you?

The success of the civilization that you build depends on your decisions. As ruler, you manage the economy, diplomacy, exploration, research, and the war machine of your civilization. Your policies must be flexible to fit an evolving world. Military units inevitably become obsolete and need replacement as you gain more advanced technologies. The balance of power among your rivals shifts often. You might have to modify your economic and governmental policies, lest you fall behind in a critical area. The empires of Alexander the Great, the Hittites, Napoleon, and Genghis Khan (to name just a few) all held pride of place on the world's stage at one time. All eventually collapsed. The challenge is to build an empire that stands the Test of Time. You might succeed where great predecessors have failed. If you locate cities properly, build them soundly, defend them aggressively, and neutralise the danger from potential enemies, the descendants of your first tiny tribe might not only survive, but thrive.

FOUR IMPULSES OF CIVILIZATION

There is no single driving force behind the urge toward civilization, no one goal toward which every culture strives. There is, instead, a web of forces and objectives that impel and beckon, shaping cultures as they grow. In ***Civilization II: Test of Time***, there are four basic impulses that seem to be of the greatest importance to the health and flexibility of your fledgling society.

EXPLORATION

An early focus in ***Civilization II: Test of Time*** is exploration. You begin the game knowing almost nothing about your surroundings. Most of the map is dark. Your units move into this darkness of unexplored territory and discover new terrain; mountains, rivers, grasslands, and forests are just some of the features they might reveal. The areas they explore might be occupied by minor tribes or another culture's units. In either case, a chance meeting provokes a variety of encounters. As your units "map" the unknown by revealing terrain squares that once were black, they also lessen the likelihood that you will be surprised by random barbarian attacks.

Economics

As your civilization grows, you need to manage its ever–more–complex production and resource requirements. Adjusting the tax rates and choosing the most productive terrain for your purposes, you can control the speeds at which your population grows larger and your cities produce goods. By setting taxes higher and science lower, you can tilt your economy into a cash cow. You can also adjust the happiness of your population. Perhaps you'll make luxuries more available, or you might clamp down on unrest with a larger military presence. You can establish trade routes with other powers to bring in supplemental income every turn.

Knowledge

On the flip side of your economics management is your commitment to scholarship. By setting taxes lower and science higher, you can increase the frequency with which your population discovers new technologies. With each new advance, further paths of learning open up and new units and city improvements become available for manufacture. Some technological discoveries let your cities build unique Wonders of the World.

Conquest

Perhaps your taste runs to military persuasion. ***Civilization II: Test of Time*** allows you to pursue a range of postures, from pure defence through imperialistic aggression to co–operative alliance. One way to win the game is to be the last civilization standing when the dust clears. Of course, you'll face both random barbarian attacks and calculated sorties by your computer opponents, not to mention the devious tactics real human players can employ.

THE BIG PICTURE

A winning strategy is one that combines all of these aspects into a flexible whole. Your first mission is to survive; your second is to thrive. It is not true that the largest civilization is necessarily the winner, nor that the wealthiest always has the upper hand. In fact, a balance of knowledge, cash, and military might allows you to respond to any crisis that occurs, whether it is a barbarian invasion, an aggressive rival, or an upsurge of internal unrest.

WINNING

There are now more than just two ways of winning ***Civilization II: Test of Time***. In the Original game, you can still win the race to Alpha Centauri, with a large factory base devoted to producing spacecraft components. You can still conquer the world by focusing on a strong military strategy or financing insurrections. In addition, most of the new games allow you to pursue technological advances to complete a research–based victory. The new scenarios and games will provide plenty of challenges for both experienced players and novices. See Winning the Game for an in–depth analysis of the scoring system.

THE VARIOUS DOCUMENTATION

It's a truism at computer game companies that most customers never read the manual. Until a problem rears its head, the average player just bulls

through by trial and error; it's part of the fun. When a problem does come up, this type of player wants to spend as little time in the book as possible, then get back to the game. For those of you who just need a quick reference, the ***Reference: Screen by Screen*** section is the place to go.

For the rest of you, we've tried to organise the chapters in the order that you'll need them if you've never played ***Civilization*** or ***Civilization II*** before. If you're new to ***Civ***, the sidebars on concepts should help you understand the fundamentals of the game.

The **Technical Supplement** (in the front of this book) is the place to find installation and start–up instructions and any late changes to the game. Since it was written later, the information in it supersedes anything in the manual.

The **README** file that comes on the CD-ROM has the rundown on the very latest changes (due to printing and binding time, the manual has to be completed before the playtesters recommend their final tweaks). That info supersedes even the **Technical Supplemen**t.

The **Terrain Reference** booklet and the **Poster** offer visual keys to ***Civilization II: Test of Time*** and lots of handy reference material. The **Terrain Reference** covers every terrain type on every world in every game, with statistics of production, movement, and improvement. You can plan small city agriculture projects or full–scale terraforming with its help. The **Poster** shows both technology tree and all the units for each of the game types–Original, Extended, Fantasy, and Science Fiction.

In addition to the printed stuff and the **README**, ***Civilization II: Test of Time*** comes with a unique compendium of on–screen help. Click on the CIVILOPEDIA menu to call up a list of options describing units, improvements, governments, terrain, and even game concepts. When you're faced with an alien world and suddenly even the landscape is unfamiliar, the Civilopedia has notes from your scientists and philosophers that describe your new environment and the species you might encounter within it. Entries are linked so that you can jump from one entry to another with ease.

Interface Conventions

You play ***Civilization II: Test of Time*** using a combination of both mouse and keyboard. Many people find that the short–cut keys on the keyboard significantly speed up their play.

Using a Mouse: Throughout the text, we assume that you understand basic mouse functions and terms, like "clicking and dragging." Since not everybody knows these things, we've provided brief definitions of how we use the most common terms. One preliminary note: ***Civilization II: Test of Time*** puts both buttons on a two–button mouse to use. If you are using a three–button mouse, the centre button has no function for this game.

- "Clicking" refers to placing the mouse pointer over an area of the screen and clicking with the left mouse button.
- "Right–clicking" is clicking with the right mouse button.
- "Click–and–hold" means keeping your finger on the mouse button longer than usual (long enough that the game recognises the "hold").

- "Dragging" means holding the left button down while moving the mouse.
- "Selecting" means clicking on something.
- "Pressing a button" with the mouse means clicking on one of the on–screen buttons.
- You can "scroll" some of the menus and boxes in the game by dragging the button along a slider bar that's on one side of the box.

The Map: ***Civilization II: Test of Time*** still uses an isometric grid instead of the old, square grid. This means each square (what we call a terrain square, or tile) is a diamond shape, as if you are viewing it from an angle. Movement proceeds along the compass points as it always did. Some players may have difficulty getting used to this view, finding it hard to tell where a city's radius begins and ends, for instance. If you have this problem, we recommend you select SHOW MAP GRID (Ctrl G) from the VIEW menu. This activates a grid overlay that outlines each map square.

Menus: The MENU BAR runs across the top of the screen. As is standard in Windows games, clicking on the name of a menu opens that menu, giving you access to the menu options. If you prefer not to use the keyboard and have enabled mouse movement of units, you can play ***Civilization II: Test of Time*** using the mouse and menus exclusively.

Short–Cut Keys: Almost all of the menu options have a short–cut (R for Roads, for example), which is noted on the menu. Pressing this key (or combination of keys) has the same effect as selecting the option from the menu. Another quick way to use menu options is also a Windows standard. The name of each menu has one underlined letter. Holding the Alt key and typing that letter opens the menu. The name of each option on the menu also has one underlined letter. Typing that letter when the menu is open activates the option.

Cursors: The mouse pointer, or cursor, has many different shapes in ***Civilization II: Test of Time***, depending on what task you're currently attempting.

Most often, the cursor looks like an arrow. If you have chosen a special "desktop theme" in Windows 95 or otherwise customised your cursor, you'll see your own cursor sometimes, too.

{An outline around a terrain square indicates that you are in VIEW PIECES mode. By moving the cursor with the number keypad on your keyboard, you can use this cursor to count squares from one location to another or move around the map without moving units. Toggle back to the arrow cursor by pressing the V key or choosing MOVE PIECES from the VIEW menu.

A bold (black) arrow indicates the direction the unit on which your mouse pointer is positioned will move when you click. If you don't like this unit–movement cursor, make sure the MOVE UNITS WITH MOUSE option under GAME OPTIONS in the GAME menu is not checked. ***Civilization II: Test of Time*** starts with this option disabled.

A cross–hair indicates that you can click on the spot where your mouse pointer is positioned in the WORLD WINDOW to centre the active MAP window on that spot.

The word "Go" and a bent arrow indicates that when you release the mouse button, the active unit will begin moving toward the indicated square. See **GoTo Orders** in the **Terrain and Movement** section for complete details.

A parachute indicates that the active paratrooper unit will make a paradrop into the designated square; a "crossed–out" parachute indicates that the designated square is not a valid paradrop target. See **Paradrop Orders** in the **Terrain and Movement** section for complete details.

As in most Windows programs, an I–beam or vertical line indicates that you can type in text from the keyboard.

As in most Windows programs, a double–ended arrow indicates that you can resize the window frame on which your mouse pointer is positioned.

As in most Windows programs, an hourglass indicates the program is working; please wait.

TUTORIAL

Those who have played a previous version of ***Civilization*** are already familiar with most of the concepts presented in this tutorial. However, even if you are well acquainted with the DOS, Windows, or Macintosh version, you will find that there are many new features in ***Civilization II: Test of Time***. Also, many of the game's existing elements, including screen layout, icons, and controls have changed from the earlier games.

The primary purpose of this tutorial is to introduce new players to the basic elements of ***Civilization II: Test of Time***. It provides an overview of the basic game elements and guides you through several centuries of a sample game. New actions and events are explained as they occur. The tutorial game has been set up in such a way that most of the events should be fairly predictable; however, one of the things that makes ***Civilization II Test of Time*** exciting game after game is the element of random chance that exists. The way your computer–controlled opponents act and react to one another (and to you) might cause certain events to deviate from the path described in this tutorial. If you feel that things have got too far out of control, feel free to reload the saved game and start again.

To begin the tutorial, start the game and select LOAD A SAVED GAME from the GAME menu. Load the game called **tutorial.sav** from the **original** folder. The tutorial game is set to CHIEFTAIN level, the easiest difficulty option available. The game starts on the first turn, in 4000 BC, with you taking the part of Abe Lincoln, leader of the Americans. You might want to go to the GAME OPTIONS in the GAME menu and turn off the INSTANT ADVICE and TUTORIAL HELP options, if you find the pop–up boxes distracting.

IMPORTANT

Do not try to open the file named **Do Not Open Me.sav**. This is a place-holder file that the game program needs; it is not a saved game.

Instructions you are to follow are set in italics. Explanations and descriptions are set in regular type. Keep in mind that this tutorial is a simple walk through, and it only touches briefly on game concepts and control features. If you want more information on anything, detailed descriptions can be found in the other sections of this manual.

BUILDING YOUR FIRST CITY

At the start of the game, your civilization consists of a single band of wandering nomads. This is a Settlers unit. Although Settlers are capable of performing a variety of useful tasks, your first task is to move the Settlers unit to a site that is suitable for the construction of your first city.

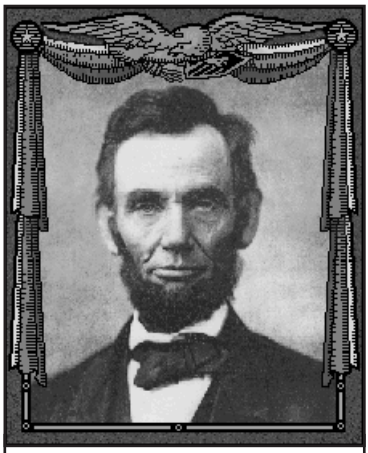
Looking for a place to settle

Finding suitable locations in which to build cities, especially your first city, is one of the most important decisions you make in the game. In order to survive and grow, each city must have access to all three resource types: food (represented by grain), production (represented by shields), and trade goods (represented by arrows). The map in ***Civilization II: Test of Time*** is divided into individual "squares," each of which contains a different type of terrain. Each terrain type yields resources in differing amounts. A good city site provides all three resources. Normally, the lines dividing the map squares are invisible. To get an idea of how the terrain is divided, turn on the map grid by choosing SHOW MAP GRID from the VIEW menu, or using Ctrl G. Repeat this step to remove the grid lines.

Before you move your Settlers, take time to examine the surrounding terrain. *Right-click on any visible square*, and it becomes outlined in flashing white. The terrain type and any features in the square appear in the STATUS WINDOW (it reminds you that you're in VIEW mode by displaying the legend "Viewing Pieces"). You will note that only 21 map squares are visible. This represents the extent to which your civilization has explored the world. (This 21–square pattern is significant with regard to cities as well, as you will see later.) The surrounding black areas represent unexplored terrain. You can build a city on any terrain square except for Ocean. As mentioned earlier, each terrain type yields differing proportions of resources, so the type of terrain you choose for a city site determines the level of the city's success.

Your Settlers currently occupy a Grassland square. Normally, Grassland produces two grain when worked by one of your citizens. Note that a small shield symbol appears in the centre of each of the Grassland squares to the north-east. That means that, in addition to its normal resources, these Grassland squares also yield one shield when worked. Grassland squares (with and without shields) also appear to the far south-west of your Settlers.

Forest squares, which produce only one grain but two shields, appear to the west and north-east. Notice that the Forest in the north-west contains the village of a minor tribe; this can have many different ramifications to your civilization, and we will go into much more detail later in the chapter.



Abraham Lincoln

One square to the north-west is Plains, which produces one grain and one shield. The remaining type of land terrain that appears within this area is Swamp, to the north and north-west. Swamps produce only one grain until improved.

Ocean squares fill most of the area south of your Settlers. The Ocean terrain type produces one grain and two trade arrows when worked by one of your citizens. Notice that the Ocean in the north-west contains Whales (one of many special resources available), which provide two grain, two shields, and two trade arrows. Directly south–east of your Settlers is an Ocean square containing Fish, which produce three grain and two trade arrows. The Whales and Fish squares make this an excellent site for a city.

You have the option of moving around to find a suitable city site. If the nearby terrain is less than optimal it is worth doing so, considering the importance of proper city placement. You shouldn't waste too much time looking, however. Settlers move only one square per turn, and many years pass every turn this early in the game. Luckily, your starting position here is excellent; the local terrain provides a diverse resource mix, you are adjacent to an ocean coast, and Grassland squares make good city locations.

Switch back to MOVE mode by clicking on your Settlers unit again. Then build your first city by selecting BUILD NEW CITY from the ORDERS menu, or by pressing the B *key*. You can rename the city if you like, but we'll refer to it as Washington.

Examining the City Display

As soon as the city is built, a new window appears. This window is called the CITY DISPLAY. The CITY DISPLAY gives detailed information on the city's current status, including the amount of resources generated, the item currently being built by the city, and the size and attitude of the city's population. See the **Reference: Screen by Screen** section for more details.

Washington's City Display

Your first priority is to check the status of the city's resources. The POPULATION ROSTER shows that there is one citizen in Washington, and he is content. Under most circumstances, each citizen in the city is working in one of the terrain squares surrounding the city, generating resources for the city's use. As new citizens are added to the population, the game puts them to work in the terrain square it considers the most productive available. In this case, the city's single resident is producing resources in the Ocean square that contains a Whale.

You have the option of moving citizens to different terrain squares if you want to produce different combinations of resources. As you can see by the icons on the RESOURCE MAP, the Whale square is generating two grain, two shields, and two trade arrows. *Click the Whale square to "pick up" the citizen working there, then click on the Swamp square.* Notice that in the Swamp square, the citizen now generates only one grain. Since the Whale square produces the most, *click on the Swamp square and then on the Whale square to return the citizen to his original position.*

As you can see, the combination of resources produced is based on terrain type. Under normal circumstances, each city can assign citizens to generate resources in any of the 20 terrain squares surrounding the city. The pattern of 21 squares with the city at the centre that is seen in Washington's RESOURCE MAP is called the CITY RADIUS. In addition to the terrain squares in the CITY RADIUS, the city square itself always generates resources. Like the squares worked by your citizens, the number and type of resources produced in the city square is dependent on the terrain type.

Washington is currently generating four units of food. Each citizen requires two units of food each turn in order to survive, so the NET amount of two appears under CITY RESOURCES. *(If you want to see all the production details, click anywhere in the CITY RESOURCES box, and the full display appears. Click again to return to the summary mode,* in which only net amounts appear.) Excess grain icons accumulate in the FOOD STORAGE BAR. The more surplus food the city generates, the faster it grows. Washington is also generating three shields. Shields represent raw materials used for supporting units and building new items. Since there are currently no units to support, the shields generated each turn go directly into the PRODUCTION BAR. Finally, the city is producing three arrows, which represents trade goods. Trade goods are divided into three separate categories: taxes (gold icons), luxuries (goblet icons), and science (beaker icons). Currently, two arrows are being used to generate science, and one is generating taxes.

Click IMPROVEMENTS underneath the city name to change the display to the IMPROVEMENTS ROSTER. Washington's IMPROVEMENTS ROSTER shows that the only building in the city is the Palace. Your Palace denotes that Washington is your civilization's capital.

First Priorities

Because there is so much information to assimilate at the start of the game, it's hard to know what you should do first. There are four priorities that you must keep in mind early in the game: defence, research, growth, and exploration.

Defence: Your top priority is to defend Washington from potential enemies. After all, who knows who might be lurking in all that unexplored territory? To defend the city, you must build a military unit. When the city is built, it automatically begins to construct a defensive unit. The PRODUCTION BOX shows that Washington is currently producing a Warriors unit.

Research: The science portion of your trade income is used to research new Civilization Advances. Civilization Advances are new discoveries and technologies that allow you to build newer and better military units, city improvements, and Wonders of the World.

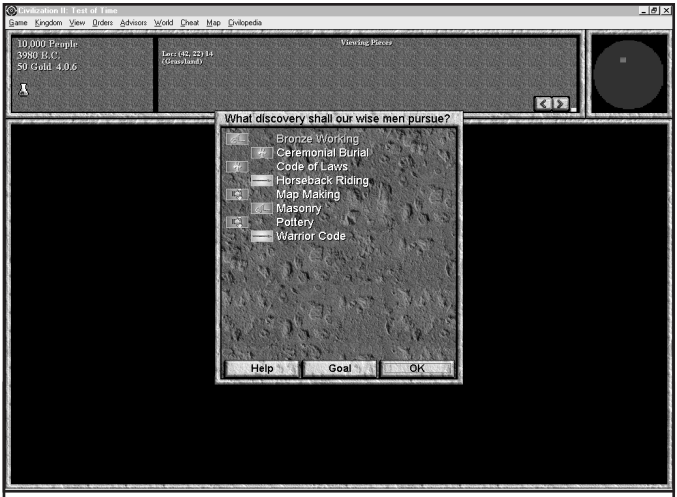
Growth: The surplus food generated by the city eventually leads to population growth. When the FOOD STORAGE BAR is completely filled with grain, a new citizen is added to the population. Steady city growth leads to increased productivity and the ability to expand your civilization by building more Settlers to colonise the continent.

Exploration: If you don't explore the dark areas of the map, you have no way of knowing what benefits and dangers might be lurking there. By using spare units to explore the world around you, you can discover the villages of minor tribes (which often provide you with benefits such as money and new discoveries), sites for new cities, and neighbouring civilizations.

When you're finished examining Washington, close the CITY DISPLAY by clicking the CLOSE button underneath the city name.

RESEARCHING CIVILIZATION ADVANCES

After you close the CITY DISPLAY, the first turn ends. At the start of the next turn, you are prompted to choose the first Civilization Advance you want to research.



You can only choose one

When the game begins, your civilization has only minimal knowledge, usually consisting of only Irrigation, Mining, and Roads. (In some games you might be given additional advances at the start of the game, and in this tutorial you have already learned Alphabet and Writing.) The bulk of your knowledge throughout the game is gained through research. There are many different strategies dictating the order in which advances should be researched. For the purposes of this tutorial, we'll adopt a conservative, defensive strategy. You can experiment with research strategies of your own as you become more familiar with the game.

When the menu of possible advances appears, select Bronze Working, then click OK. We have chosen Bronze Working because the discovery of this advance allows you to build the Phalanx unit. Phalanxes are twice as effective at defending cities as Warriors.

The amount of time required to research discoveries is based on the amount of science your city is currently generating. Remember, science is one of the components of trade. *Select the TRADE ADVISOR option from the ADVISORS menu, or press the* F5 *key.* As you can see from this display, it currently takes five turns to make a new discovery. The more beaker icons you generate each turn, the faster you make new discoveries. *Click CLOSE to close the TRADE ADVISOR window.*

As you can see by looking at the STATUS window, 20 years of game time have passed. (On CHIEFTAIN level, turns start out spanning 20 years each. As the game progresses, the turns get shorter, dropping to ten years per turn, then five, two, and eventually one year per turn.)

The amount of trade allocated to taxes, luxuries, and science can be adjusted to a certain degree to suit your needs. Select TAX RATE from the KINGDOM menu. As you can see, there are three sliders in the TAX RATE window, each of which controls the percentage of one of the three elements of trade. Moving a slider left or right decreases or increases (respectively) the percentage of trade allocated to that element, and adjusts the other elements accordingly so that the total percentage equals 100 percent.

Unlike ***Civilization*** and ***CivNet***, ***Civilization II: Test of Time*** limits the maximum percentage of trade that can be allocated to taxes, luxuries, and science based on your civilization's government type. You start the game in Despotism, so the maximum percentage you can allocate to any trade element is 60 percent. Note that the game automatically sets science at 60 percent and taxes at 40 percent. Since your focus should be on research at this time, and you currently require no luxuries to keep your population happy, the default settings are fine for now. *Close the TAX RATE window by clicking the OK button.*

MEANWHILE, BACK IN THE CITY...

Now, let's take a look at what happened in the city after the first turn. Open Washington's CITY DISPLAY by clicking the city icon on the map. Several things have changed since you last looked inside Washington. *Look at the FOOD STORAGE BAR.* It is no longer empty. This is the surplus food that was generated by the city on the first turn. It is stored in the FOOD STORAGE BOX for later use. A note at the bottom of the box reminds you there are nine turns before the city population gains another citizen.

Look at the PRODUCTION BAR. Like the FOOD STORAGE BAR, it is no longer empty. The three shields generated on the first turn were used to help build the Warriors unit currently under production. You are now only three turns from completion.

Press the CLOSE button to exit the CITY DISPLAY.

Your First Unit

Until your Warriors unit is completed, you have little to do. *Press the* Enter *key three times.* It is now the fifth turn, and you have just built your first military unit. The Warriors unit is flashing on and off in the city square. This means the unit is ready to receive orders.

There are two things you can do with your first military unit. You could use the unit to defend your city. In most cases, it is unwise to leave a city undefended. This is especially true if you know that an enemy unit is nearby. However, early in the game, the world is sparsely populated, so you can take a chance and send the unit out to explore hidden terrain outside the CITY RADIUS.

If you are at all curious, you'll probably want to see what possibilities that minor tribe village to the north-west has in store. After all, you could find another Warriors unit–or something better. But keep in mind that the results of finding a minor tribe are random, so the consequences might not be beneficial. *Move the Warriors unit to the north-west by pressing the* 7 *key on the numeric keypad.* Note that when you move next to a black area, any black squares around it are revealed. Most units can "see" one square around them; this is how you explore (and claim!) the neighbouring terrain. At this point, your Warriors have not entered any "unknown" territory, so you can only see the same 21 squares you could see in the beginning of the game,

Your turn ends automatically when your last unit finishes its movement. Since Warriors can move only one square per turn, your turn is now over.

Your First Civilization Advance

We'll go back to exploring the world in a moment. For now, something more interesting has happened. At the start of this turn, your scientists announce

that they have discovered the secret of Bronze Working. Congratulations! You have discovered your first civilization advance. After the initial message of discovery, the TECHNOLOGY TREE–part of the CIVILOPEDIA–appears. The CIVILOPEDIA is an in–game encyclopaedia of game facts. The CIVILOPEDIA screen that appears after the discovery of each advance shows the units, improvements, and Wonders you can now build as a result of the advance, as well as new lines of research available. Bronze Working allows you to build Phalanx units and the Colossus Wonder, and it allows you to research Currency. Bronze Working also allows you to study Iron Working, but only after you have also discovered Warrior Code. *Explore the advance "paths" in the Tech Tree by clicking the TREE button and selecting the names of the advances that interest you, then close the CIVILOPEDIA screen by clicking the CLOSE button.*

Once again, the list of research choices appears, allowing you to choose the next advance you want to discover. Since Bronze Working has provided the ability to build a good defensive unit, you can now move on to a research path that enhances your growth capability. *Choose Pottery from the menu, and click OK.*

Changing Production

Before you do anything else, its time to look inside the city again. *Open Washington's CITY DISPLAY by clicking the city's icon on the map.* When you look at the PRODUCTION BOX, you'll notice that the city has automatically begun to build another Warriors unit. In fact, a city goes on producing another of what was last produced until it receives orders to the contrary.

Since the city is still defenceless, you need to build a unit to protect Washington from possible invaders. A Phalanx is a better defensive unit than Warriors, *so click on the Warrior icon inside the PRODUCTION BOX. When you do so, a menu listing the possible production options appears. Choose Phalanx by clicking on it. Click OK to exit the PRODUCTION menu.* The Phalanx's icon now appears inside the PRODUCTION BOX to indicate that the city is now building a Phalanx. *Click CLOSE to close the CITY DISPLAY.*

FINDING A MINOR TRIBE

Remember your Warriors unit? It's flashing again, indicating that it is once again ready to move. Since it is next to the village, *save your game by choosing the SAVE GAME option from the GAME menu, or by pressing* Ctrl S.

Your initial exploration (or starting point) revealed a "hut" to the north-west of Washington. This hut is home to a minor tribe. Minor tribes are not rival civilizations; rather, they are small villages populated with people who might be inclined to help you.

You are about to make contact with this minor tribe. The results of such contact are random. You could receive a gift of knowledge or gold, the tribe might band together to form a mercenary military unit and join you, or the tribe might decide to honour you by establishing a new city in your empire. Of course it is possible that negative events might occur as well; the village could be empty or populated by hostile barbarians. By saving the game prior to contact, you have the option of reloading from the save if you don't like the results of exploring the village.

Now, move your Warriors one square to the west, onto the hut, by pressing the 4 *key on the numeric keypad.* One of a number of random events will occur as a result of contacting a minor tribe. For the purposes of

this tutorial, we'll assume that you receive a gift of gold from the minor tribe, although the discovery of a military unit could speed this game up considerably.

SUPPORT NOTE

If you received a unit from the minor tribe, you have to support it. Since Washington is your only city, one of its shields is going to the upkeep of the new unit. *Click the SUPPORT button under the city name to check if your new unit has a shield symbol underneath it.* If it does, you may want to consider disbanding your Warriors, a concept explained below (the new unit is almost always cooler than a Warriors unit—if it's not, you can disband the new unit, instead).

POPULATION INCREASE

Continue your exploration for the next several turns. Move the Warriors around the area west of Washington.

Soon, two things happen. First, the population of the city increases to two, as indicated by the number next to the city's icon. Second, Washington completes the Phalanx it was building. *Open Washington's CITY DISPLAY.* Notice that the FOOD STORAGE BOX is now empty. Next turn it will start filling up again, accumulating grain for the next population increase.

Notice that the POPULATION ROSTER now contains two citizens. On the RESOURCE MAP, you can see that the new citizen is already at work generating resources; specifically, the citizen is generating two grain and one shield in the Grassland–Shield square north–east of the city. That's fine for now, so although we can improve this later, leave the citizen there.

As for production, it's time to change again. This early in the game, one defensive unit is more than adequate for city protection. *Click the Phalanx icon, and select Settlers from the PRODUCTION menu.* It's time to start thinking about the next priority: growth. In order to expand your civilization, you need to build other cities, and for that, you need Settlers. *Close the CITY DISPLAY.*

FORTIFYING

Now the Phalanx is flashing. In order to protect the city, the Phalanx must remain inside Washington. Units provide the best protection when they are fortified. *Fortify the Phalanx by choosing FORTIFY from the ORDERS menu, or by pressing the F key.* Fortified units remain in their defensive position until you manually reactivate them. For now, the Phalanx should be left alone to guard Washington.

DISBANDING TO SPEED PRODUCTION

As noted on the PRODUCTION menu, it will take Washington ten to fourteen turns to produce a Settlers unit. You can speed this up a bit. When a unit is disbanded inside one of your cities, half of its original cost in shields is added to the production currently in progress. *Move the Warriors unit (or, if you have one, the unit gained from the minor tribe) back into the city, and re-open the CITY DISPLAY.* Depending on how far the Warriors roamed,

it might take them a few turns to return. If something new occurs, skim the next section to see what to do. When they get home, click on the Warriors unit icon in the INFO BOX at the top right of your screen. You can tell the units apart by the little fortification around your Phalanx. *If you accidentally click the Phalanx, choose the No Changes option, and click OK. Then click the other little guy.* From the menu of options that appears, choose DISBAND and click OK. Now, look at the PRODUCTION BAR. Five shields appear as soon as the Warriors unit is disbanded (or more, as appropriate to your alternate unit). *Check the CITY RESOURCES Box;* Washington should have a net production of four shields a turn. Then close the CITY DISPLAY.

THE WAITING GAME

Soon, your wise men discover Pottery. In addition to allowing research into Seafaring and two new Wonders, Pottery allows you to build Granaries, which store half your grain when a new citizen is produced in a city. This will greatly speed the growth of your cities. The Pyramids Wonder is a national Granary for all your cities, so each new city you build automatically acts as if it has a Granary. Producing Wonders takes too long to demonstrate in the tutorial; however, they become increasingly valuable throughout the game.

Our goal now is to develop Trade. In order to do so, you must research both Code of Laws (which requires knowledge of Alphabet) and Currency. Code of Laws also leads to Monarchy, a more advanced form of government that helps to increase your productivity. *Choose Code of Laws as the next advance to research. Press* Enter *to end the next few turns.*

Soon, you are notified that Washington has completed the Settlers unit it has been building. *Choose the ZOOM TO CITY option in the notification box to open the CITY DISPLAY. Once there, change production so that Washington is building a Granary.*

You'll notice that Washington's population has dropped to one. That is because Settlers units represent citizens who leave the city in order to improve the surrounding terrain or to establish a new city. Also, under Despotism, any units beyond the size of the city's population require one shield each turn to support them. Right now, you have two units, but only one citizen. At any rate, the FOOD STORAGE BOX shows that the population will soon increase again, so these situations are only temporary. Close the CITY DISPLAY.

EXPANDING YOUR EMPIRE

Now it's time to expand your empire. Move your Settlers north-west one square, west one square, then south-west three squares. Your Settlers now occupy a Grassland square near a lot of Forest. *Use the BUILD CITY command on the ORDERS menu, or press* B *to build a new city.* Again, you can name the city anything you want, but we'll refer to it by its default name, New York.

When New York's CITY DISPLAY opens, you'll notice a couple of differences from Washington when it was first built. Although New York is generating just as much food as Washington did, trade generation is significantly lower. That's because the only special resource to take advantage of within New York's CITY RADIUS is a Pheasant, which produces grain and shields, but no trade.

Another oddity is that the entire CITY RADIUS of New York is not visible. That's because there is still some unexplored terrain nearby. In order for the city to take advantage of its entire CITY RADIUS, all the terrain therein must be explored. You'll have to take care of that as soon as possible; you never know what useful resources might be lurking in the dark. Notice that New

York is currently producing a Phalanx. Since this city needs to be protected too, a Phalanx is just what you want. *Close the CITY DISPLAY.*

When you are notified that your advisors have discovered Code of Laws, *choose to research Currency, then Trade.*

In a few more turns, New York completes its Phalanx. *Change the production in New York to a Settlers unit.* While you're waiting for this to be completed, you can explore New York's hidden terrain to the west. *Move the Phalanx west, and then march south and north, filling in all that black terrain. Finally, bring it back into New York and fortify it.*

A couple of turns later, Washington completes its Granary. *Choose the ZOOM TO CITY option, then change the production to another Settlers unit.* You can use this band of Settlers to improve the terrain around Washington and New York.

You also discover Trade. To be able to change your government to a Monarchy, *choose to research Ceremonial Burial, then Monarchy.* When you discover Trade, the game informs you that you are now able to build Caravans. Caravans can travel between two cities, bringing loads of goods to cities that demand them. While trading among your own cities can be lucrative, you will make more money by trading with other civilizations. Since you have not yet encountered any rivals, keep producing Settlers in both cities.

IMPROVING THE TERRAIN

Soon, New York finishes building its Settlers. *Change production to a Granary. When the Settlers unit becomes active, move it one square to the north-west (using the 7 key on the numeric keypad), onto the Grassland–Shield square, then open New York's CITY DISPLAY.*

When you look at New York's RESOURCE MAP, you see that the Grassland–Shield square north-west of the city is currently generating one shield and two grain (if it's not, it will be soon when the city grows to size two. You can pick up the citizen working on the Pheasant square and put him on the Grassland–Shield square temporarily). That's not bad, but you can use your Settlers unit to improve the production in that terrain square. *Close the CITY DISPLAY. When the Settlers becomes active, choose BUILD ROAD from the ORDERS menu, or press the R key.*

For the next couple of turns, the Settlers unit spends its time building a road. When the Settlers become active again, you see on the map that there is now a road leading out of New York to the north-west. *Now, open New York's CITY DISPLAY again and look at the RESOURCE MAP.* Notice that, after the construction of the road, the same Grassland–Shield square is now generating one trade goods icon in addition to its former resources. Not only do you get this benefit, but roads also increase movement speed; units only expend one–third of a movement point to move along a road, no matter what type of terrain the road occupies. *Close the CITY DISPLAY.*

Believe it or not, the terrain can still be improved further. *When the Settlers become active again, choose BUILD IRRIGATION from the ORDERS menu, or press the I key.* Building irrigation takes a bit longer than building roads. It's likely that while you're waiting for the Settlers to complete their task, Washington produces their Settlers unit. *Change production to a Library to increase the science rate in Washington by 50%, and send the Settlers north-east to build a road and irrigation in that Grassland–Shield square.*

You also discover another civilization advance: Ceremonial Burial. *Select Monarchy as your next advance.*

Several turns later, the New York Settlers complete their irrigation project; the terrain square is now marked to show that it is irrigated. *Open the CITY DISPLAY for New York.* Notice that the resource production has not changed as a result of irrigation. Normally, irrigation increases the grain output of Grasslands by one. However, under Despotism, your current system of government, any terrain square producing three or more of any resource type has its production reduced by one. So, instead of three grain, the square still produces only two. This illustrates the drawbacks of Despotism, and explains why your research is now proceeding toward Monarchy, under which such penalties do not exist. *Close the CITY DISPLAY.*

While you're waiting to discover the next advance, *send the New York Settlers south-west into the Forest square and build a road. Then move south and build both a road and irrigation.* If your neighbours the Germans come calling, skip down to the **Meeting Another Civilization** section. When the Washington Settlers unit finishes building both a road and irrigation, *move one square west, and repeat the improvement process. Then build a road connecting Washington to New York.*

When you discover Monarchy, *research Map Making and Literacy as your next two advances.* Now, it's time to change governments. When the Monarchy information window appears, *choose BEGIN REVOLUTION when you are offered the chance to start a revolution to change governments.* It'll cost a few turns of anarchy before your population settles down, so we'll digress just a little.

When you discover Map Making, you can build the Lighthouse Wonder, and when you get Literacy, you can construct the Great Library, each of which grants huge benefits to your growing civilization. While you will try to complete these soon, you can't build them until you know how! So, when New York completes its Granary, *change production to a Marketplace. As you learn Map Making, once Washington completes its Library, order it to build the Lighthouse. If you haven't learned Map Making yet, build a Caravan instead.*

CHANGING GOVERNMENTS

By now, you have established a small, but thriving, civilization. You are doing well, but you could do better. Here's how to improve your civilization by switching to better forms of government.

Within a few turns, a menu appears listing the systems of government currently available to you. *Choose Monarchy and click OK.* Your civilization is now ruled as a Monarchy. The TAX RATE window appears, giving you the opportunity to reset your division of trade between taxes, luxuries, and science. *Set science to the new maximum rate of 70 percent, and close the window.* Now, you'll make discoveries more quickly.

Let's take a look at the effects of the government change. *Open Washington's CITY DISPLAY and look at the production changes.* The city's grain production has increased by three. Note that the Grassland–Shield square you irrigated earlier is now generating three grain instead of two. The other extra grain is coming from the city square itself (it is automatically irrigated when the city is built) and the Fish square. Trade has also increased as a result of the change in government. The Whale square is producing an extra trade arrow, which has the effect of increasing

the number of beakers. Shield generation has remained the same, because none of the terrain currently in use around New York is capable of producing more than two shields under the present circumstances. If you look at the CITY DISPLAY for New York, you'll notice similar increases in that city as well.

MEETING ANOTHER CIVILIZATION

Continue exploring with New York's Settlers to the south-west, where you eventually meet your nearest neighbours, the Germans (alternatively, they might come north–east to meet you). Their capital city, Berlin, is located some distance away. As soon as you enter German territory, or as soon as German scouts discover your fields, their leader, Maria Theresa, requests an audience with you. *Accept this invitation by clicking OK.*

Establishing effective communication with your neighbours is vital to your success. Early in the game, you should take any reasonable actions to ensure that nearby civilizations enjoy your company. Not only does this keep your civilization reasonably safe from attack, it can also lead to profitable exchanges of money and information. You can see your opponent's attitude toward you when you make contact with one another. The attitudes of rival leaders are based on your past behaviour when dealing with other civilizations. Since this is your first contact with any civilization, Maria Theresa should have a fairly good attitude when you first meet (though sometimes she's downright uncooperative).

Whatever Maria Theresa offers, accept her proposals. The most likely result of this encounter is that Maria Theresa will offer to exchange knowledge or sign a peace treaty. Notice that each time you agree to her proposals, Maria Theresa's attitude steadily improves. This is important, because you want to make friends at this stage in the game. If Maria Theresa's attitude is particularly good ("enthusiastic" or "worshipful"), *SUGGEST A PERMANENT STRATEGIC ALLIANCE with the Germans.* A permanent alliance is better than a treaty, because it allows both civilizations to move freely through one another's territory. *Whether the alliance is accepted or rejected, end the meeting by choosing CONSIDER THIS DISCUSSION COMPLETE and clicking OK.* If the alliance was rejected, move your Settlers unit away from all German cities as soon as possible to avoid violating the peace treaty. (Use these Settlers to continue improving terrain around New York.) If you establish a reputation of violating peace treaties, your opponents are less likely to sign agreements and treaties with you in the future.

After this encounter, you have gained a friend (for now), and possibly one or two civilization advances as a result of technology exchange with the Germans. Now that you have made contact, you can chat with Maria Theresa at any time by selecting the FOREIGN MINISTER option from the ADVISORS menu, and sending an emissary to the Germans. Maria Theresa can also contact you at any time. You shouldn't pester your opponents too frequently, however, because rival leaders quickly grow weary of interruptions.

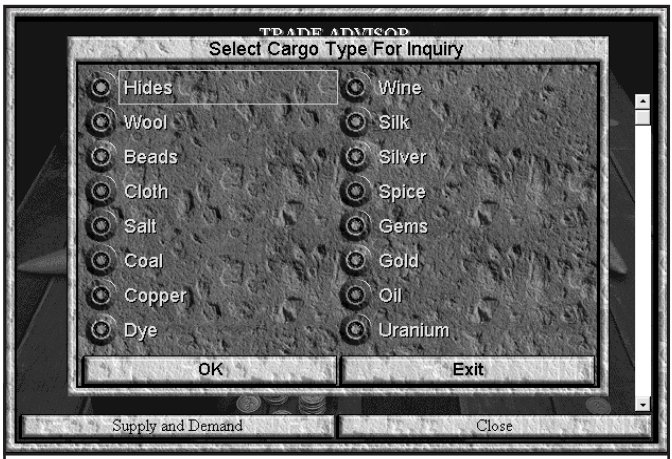
If you are contacted by the Germans at any time during the remainder of this tutorial, agree to their demands. During the tutorial game, you want to keep the Germans happy so they won't attack you. During a real game, use your own judgement as to how to respond to an opponent's demands.

Establishing a Trade Route

Shortly after you meet the Germans, the Marketplace in New York is completed. *Change the production to a Caravan,* which you'll use to establish a trade route between your civilization and Berlin. *(If you are already building a Caravan in Washington, switch to a Temple in New York.)* Trade routes increase the amount of trade goods generated in both their home city and the city with which the trade route is established. Trade routes also give the Caravan's home city a cash and science bonus on the turn when the route is established. Each city can operate up to three separate trade routes.

After you are notified of the Caravan's completion, a menu appears listing the possible trade goods that the Caravan can carry. *Select each commodity in turn, and click the SUPPLY AND DEMAND button to review what cities traffic in that item. If Berlin demands one of the items on your list, select that item and click OK. Otherwise, select any item and click OK.* You get both the trade increase and a cash and science bonus no matter what your Caravan carries, but the cash and science bonuses are bigger if you supply goods demanded by the destination city. *Confirm your choice by clicking CONFIRM AND ZOOM. When the CITY DISPLAY appears, change the city's production to the Lighthouse.* The Lighthouse Wonder will allow your ships to travel over the sea without fear of sinking.

As soon as the Caravan becomes active, start moving west toward Berlin. It takes a while to get there, because a Caravan moves at a rate of one square per turn. It's worth the trip, though. The farther away the destination, the higher your cash and science bonus.



Possible commodities a Caravan can carry

En route to Berlin, you discover another civilization advance. *Select your next advance: Seafaring.* You will, in fact, discover Seafaring before your Caravan reaches Berlin. *This time, choose Republic.* If New York completes the Temple before the Caravan reaches Berlin, *begin building the Great Library.* This will give you any advance once two other civilizations have discovered it.

Meanwhile, back on the trade route, your Caravan eventually reaches Berlin. In some cases, a Caravan will have to pass through your other cities on its way to its destination. When the Caravan enters these cities, you get a list of options. You can establish a trade route with that city (which you don't want to do this time). If that city belongs to your civilization and is constructing a Wonder of the World, you are also given the option to HELP BUILD WONDER. If you were to choose this option, the Caravan would be disbanded, and 60 shields would be added to the production of the Wonder. This is an excellent way to accelerate the construction of Wonders of the World which, obviously, take quite a long time to build. However, your goal is to establish a trade route with a different city, *so choose KEEP MOVING and click OK.*

Continue moving the Caravan until you reach Berlin, then move the unit into the city. You have now established your first trade route! A message appears telling you how much money you receive as an immediate bonus. An equivalent number of beakers is added to your current research project at the same time. *Open Washington's CITY DISPLAY (or New York's CITY DISPLAY, if the Caravan came from New York).* Click on the INFO button, then note that the trade route is now listed in the INFO BOX, and that the city's arrow production has increased as a result of the trade route.

CONCLUSION

So ends the tutorial. You should now be familiar with many of the basic concepts of ***Civilization II: Test of Time***. Feel free to continue playing the tutorial game and see how you do, or go back and start a new game on a randomly generated world. Remember, you have only scratched the surface when it comes to learning the game. Use the rest of this manual and the CIVILOPEDIA in the game to help you with new concepts as you encounter them.

Have fun, and good luck! May your reign be long and fruitful!

SETTING UP A GAME

When you launch the game, the opening animation begins. You can watch it through, or you can click either mouse button or press any key to cut it short.

Beginning a game of ***Civilization II: Test of Time*** means choosing the circumstances in which you want to play. Your options include specifying the number and identity of your opponents and manipulating the environmental and physical parameters of the world you'll explore.

YOUR FIRST DECISION

Setting up a game means making easy decisions on a series of options screens. The full list of options is described below.

Start a Single Player Game: Proceed to the next level of options, which are described below.

Start a MultiPlayer Game: Begin a game with other human players. The pre–game options are a bit different for this type of game; see the section on **MultiPlayer Games.**

View Hall of Fame: See the standings of previous conquerors and despots.

View Credits: Find out who's responsible for creating any of the games.

Once you've chosen an option, you'll need to click OK to continue or CANCEL to quit ***Civilization II: Test of Time***.

If you selected a Single Player game, the next set of options are:

Original Game: You direct settlers on an Earth–like world (you can even play using Earth's actual geography, if you like).

Science Fiction Game: Your civilization is a band of colonists crash–landed on a far–off, inhabitable planet. If you're successful, you can settle multiple worlds in this star system.

Fantasy Game: You head a fantasy tribe on a four–tiered world full of magical and fantastic elements.

Extended Original Game: Launch an expanded version of the Original game in which reaching Alpha Centauri doesn't end the game. You get to colonise another planet!

Begin the Midgard Scenario: This scenario, based on the Fantasy game, includes quests, predetermined events, and plot devices. You task is to defeat the evil wizard Volsang before he lays waste to the world of Midgard.

Begin a Scenario: Choose this option to load a scenario. You can create your own game scenarios, or play scenarios your friends have constructed to challenge you. To load successfully, scenarios must have been created with ***Civilization II: Test of Time***. Older scenarios from other ***Civ II*** games are not compatible, though maps created with the ***Civilization II*** Map Editor should work just fine.

Load a Saved Game: Load and continue a previously saved game. A dialog box lists all of the saved games available in this folder. You can switch folders to find games saved in other locations; each game puts save files in its own folder. Choose the game you wish to load.

If you chose the Original, Extended Original, Science Fiction, or Fantasy game, you will choose from the following options:

Start a New Game: Begin an entirely new game. Choosing this option means going through the basic pre–game options screens, as we explain below.

Start on Premade World: Play on a custom map created with the ***Civilization II*** MAP EDITOR utility or a map extracted from a saved game. A dialog box lists all of the saved maps and games available in the current folder. Choose the map you wish to load. You can switch folders to find maps you've saved in other locations.

Customise World: Build a world, right down to the picky details of land form, climate, and geologic age. When you choose this option, you see all of the set–up screens, not just the important ones.

SETTING GAME OPTIONS

These option screens progress from whole–world effects down to the name of your tribal leader. If at any point you realise that you'd like to reset an earlier parameter (you suddenly wonder what a jungle planet would be like, but you're past that screen), you can click the CANCEL button located on each screen to "turn back the page" to a previous screen, then make another choice. When you are happy with the choices you have selected, click the OK button to continue on to the next screen. If you want to be surprised, you can click the RANDOM button to let the game select a parameter for you.

Select Size of World

By choosing the size of the map, you can determine how much territory there is, and to a large degree, how long the game takes to play.

Small: This size map leads to short, intensely contested games. Tribes find each other quickly.

Normal: This is the standard size map.

Large: This sprawling map takes longer to explore and exploit. Consequently, games go on longer.

Custom: Choose this option to specify the height and width of your map. The dialog box explains the limits of your choices.

Customise: Land Mass

This parameter sets the percentage of terrain squares that are land.

Small: Choosing this option gives your world a small number of land squares and a larger number of ocean squares.

Normal: This option yields about equal numbers of land and ocean squares.

Large: This option produces a large number of land squares and a small number of ocean squares.

Customise: Land Form

This parameter determines how your world's land is shaped into land masses.

Archipelago: This option produces relatively large numbers of relatively small continents.

Varied: Choosing this option gives your world an average number of average sized continents.

Continents: This option yields one or two large land masses.

Customise: Climate

This parameter sets the relative frequency with which particular terrain types occur.

Arid: Choosing this option gives your world a larger number of "dry" terrain squares, such as Plains and Desert.

Normal: This option yields about equal numbers of "wet" and "dry" terrain squares.

Wet: This option produces a larger number of "wet" terrain squares, such as Grassland, Forest, and Swamp. It also increases the number and length of rivers generated.

Customise: Temperature

This parameter determines the relative frequency with which particular terrain types occur.

Cool: This option produces larger numbers of polar terrain squares, like Tundra and Glacier.

Temperate: Choosing this option gives your world an average number of each terrain type.

Warm: This option yields a larger number of tropical terrain, like Desert, Plains, and Jungle.

Customise: Age

This parameter determines whether like terrain squares clump together or are widely scattered.

3 Billion Years: This option yields a young world, one in which terrain squares seem to occur in clusters.

4 Billion Years: This option yields a middle–aged world, one in which glaciation and plate tectonics have been acting to diversify terrain.

5 Billion Years: This option produces an old world, one in which the forces of nature and chaos have almost wholly randomised the terrain features.

Difficulty Levels

Choose the level of difficulty at which you wish to play. Although ***Civilization II: Test of Time*** is not necessarily more difficult as a whole than its predecessor, there are new features and adjustments that will not be familiar to players of previous versions. (New players don't need to worry, as they have no bad habits to break.) If you are used to playing ***Civ*** at a particular level, we recommend that you start your first ***Civilization II: Test of Time*** game at one level of difficulty easier.

A number of factors are adjusted at each difficulty level, including the general level of discontent among your citizens, the average number of barbarian units encountered in a surprise attack, the pace of technological advancement, and the total number of turns in the game.

Chieftain: This easiest level is recommended for first–time players. The program provides advice when a player must make decisions.

Warlord: Civilization advances take longer to acquire at this level of play. Warlord level best suits the occasional player who doesn't want too difficult a test.

Prince: At this difficulty level, advances come much more slowly. You need some experience and skill to win.

King: Experienced and skilled players often play at this level, where the slow pace of advancement and the unstable attitude of citizens presents a significant challenge.

Emperor: This level is for those who feel the need to be humbled. Your opponents will no longer pull their punches; if you want to win, you'll have to earn it.

Deity: The ultimate ***Civ*** challenge, for those who think they've learned to beat the game. You'll have to give a virtuoso performance to survive at this level. And yes, some can actually win (sometimes). Good luck!

Level of Competition

Choose to have between three and seven civilizations running loose in the world. More opponents do not necessarily mean more danger, although having more opponents means earlier contact and an increased risk of war. Of course, contact with other civilizations also offers opportunities for trade, alliances, and the rewards of the spoils of war when you emerge victorious. The fewer your opponents, the more time you have to peaceably expand and

develop before encountering rivals. Barbarians are a factor in either situation, and do not count as a rival civilization.

Your civilization counts as one of the cultures, so if you choose a world with three civilizations, you only face two rivals. Seven civilizations (you and six others) is the maximum number for any ***Civilization II*** game.

Note that in multiplayer games, you also have the option of having only two civilizations (a one–on–one game versus another person.

In the Extended Original game, you can have only six civilizations on Earth. If you choose to play with seven, one culture will be an alien civilization based on the second planet.

Level of Barbarian Activity

You may also set the level of aggression of barbarian units in the game.

Villages Only: Players who really hate barbarians can choose to play in this "ideal world." There is a significant scoring penalty, however, so you'll have to make the most of it.

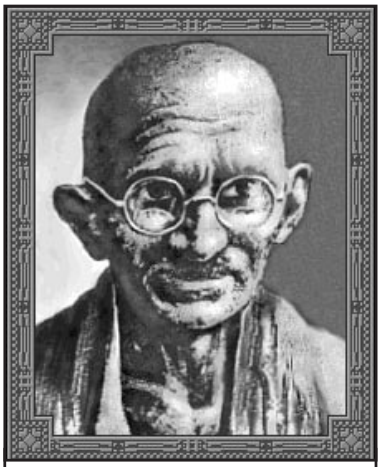
Roving Bands: Barbarian bands and pirates occasionally appear, but half as frequently and in smaller numbers than at higher levels. There is a slight scoring penalty at this level.

Restless Tribes: Barbarians, in moderate to significant numbers, appear at intervals. This represents the "standard" level of barbarian activity found in the original Civilization. Your score is unaffected at this level.

Raging Hordes: You asked for it! The world is full of barbarians, and they appear in large numbers. If you survive, you receive a scoring bonus.

Select Game Rules

The default option here is USE STANDARD RULES. If you want to tweak the parameters of the game, choose the CUSTOMISE RULES option to change the whole flavour of the challenge. The SELECT CUSTOM FEATURES screen offers several different possibilities.



'Mahatma' Gandhi

Simplified Combat: When this box is not checked, units have hit points and firepower statistics. When it is checked, combat is absolute–the unit that wins is completely whole, and the unit that loses is demolished.

Flat World: When this box is checked, the map edges are the boundaries of the world, and no ships can cross from the east margin of the map to the west margin (or from west to east, either).

Select Computer Opponents: The location of your first unit and the proximity of your rivals is usually determined randomly. However, you can choose to specify the identities of your opponents. For each rival position, a dialog box gives you three tribes from which to choose and a RANDOM button if you have no strong preference.

Accelerated Start–up: When this box is checked, you can choose from a starting date one or two millennia into the game. The computer settles your first city (or two) for you, builds initial units, and completes initial research into advances, all in the blink of an eye.

Bloodlust: When this box is checked, no player can build spaceship or siege engine parts, and the only way to see the winner's animation is to conquer the world. (This option would be pointless for the Extended Original game, and thus is not available.)

Don't Restart Eliminated Players: Normally, when a civilization is wiped out, the computer looks to see if conditions are right to settle another civilization flying banners the colour of the eliminated culture. When this button is checked, no colours are resurrected, and each opponent eliminated is one less power in the world.

Select Your Gender

You can choose to play a male or a female leader. Each civilization has one default leader of each gender, and, of course, you can customise your leader's name.

Select Your Tribe

Select the name of your tribe from the options available, or click on the CUSTOM button. The CUSTOMISE YOUR TRIBE dialog box includes spaces for you to enter the name of your LEADER, your TRIBE, and an ADJECTIVE, the adjectival form of your tribe's name (for messages and announcements). The default options give examples of each entry.

Use the TITLES button to specify the titles by which you prefer to be addressed for each form of government in the game.

When you're satisfied with your choices in each screen, click the OK button.

Select Your City Style

Here you can choose the style in which your citizens build. The default style is chosen to reflect your tribe's national origins as closely as possible. The choices that appear are appropriate to whichever type of game you are playing. For the Original game, they are:

Bronze Age Monolith: In the style of the Mayan and Sumerian empires, your city icons build from simple stone boxes to complex clusters of megalithic proportions.

Classical Forum: Following the Greek and Roman styles, your city icons progress from neat marble structures to gleaming colonnaded vistas.

Far East Pavilion: In the Oriental tradition, your city icons build from red–tiled gables to elaborately layered pagodas.

Medieval Castle: Following European models, your city icons grow from narrow thatched cottages to tightly packed labyrinths of humanity.

The city styles available in the Fantasy games are rather race–specific:

Elf Town: Elves prefer to build in harmony with the forest environment in which they dwell. Their cities reflect this by blending almost seamlessly into the verdure, and by incorporating existing elder trees into the structure, rather than eliminating them.

Buteo Town: The airborne Buteo civilization finds rest on mountain peaks. Their settlers have a remarkable talent for finding and exploiting high ground wherever they're ordered to build.

Infidel Town: The Infidel civilization prefers buildings that are easily built and moved, much like those of the Far Eastern nomadic tribes of Earth history.

Human Town: Humans tend to build a mixture of humble huts and protective fortresses.

FANTASY CITIES

If you choose to play as either the Merfolk, Goblins, or Stygians, your choice of city style is actually a moot point. When the game begins, those civilizations are assigned a style of architecture appropriate to their culture and environment.

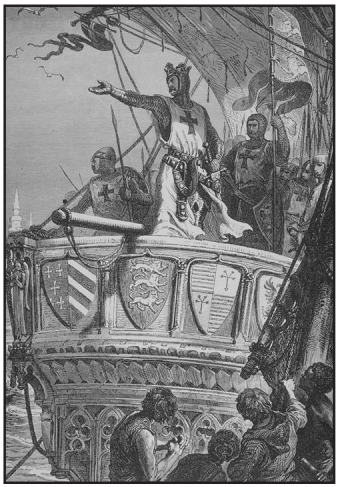
In the Lalande game, the city styles are:

Jury–rigged Community: This is a style of architecture based on necessity being the mother of invention. After the crash landing, these folks have simply done what they could with salvaged materials and local resources.

Defensible Compound: A more militaristic culture tends to build with defence in mind. Taking a lesson from the fortresses of feudal Earth, the compound includes within its walls an area dedicated to limited agriculture in case of siege.

Harmonious Pods: Very little is known about the non–human civilizations' theories of architecture. This one is said to be based on a geometry that is pleasing to the (alien) eye and filled with "fortunate" mathematical constructs.

Biophilic Structure: This non–human building style seems to actually incorporate organic elements. The cities are, in some measure, living things that provide a comfortable internal environment without the need for engineered systems like air conditioning and light sources.



READY, SET, GO

After you are satisfied with your settings, click OK to start the clock ticking on your civilization. A screen pops up welcoming you to your position as leader and detailing the accomplishments of your culture thus far. When you have finished reading the screen, press any key or click the OK button on the screen to begin the game.

CHANGES FROM CIVILIZATION II

If you're already familiar with Civilization in one of its previous incarnations, ***Civilization II: Test of Time*** will still look familiar. However, the game has evolved and grown, so that this new version is substantially different. Take a few moments to peruse this section for a summary of the changes you can expect.

CIVILIZATION'S NEW LOOK

As Civilization has matured as a game, the potential quality of graphics has also matured. ***Civilization II: Test of Time***, understandably, has completely updated graphics in the Original game as well as new images for the Fantasy and Science Fiction games–but there's more than just different pictures.

THE UNITS

Every unit icon in the game now carries a key symbol. The head of the key has two indicators; its colour represents the civilization to which that unit belongs, and any orders the unit has been given appear as a letter printed inside. Barbarian units are always red. The coloured strength bar (the length of the key) indicates the overall health of the unit. We'll go into detail in the ***Combat*** section, but you should know that green indicates a healthy unit, yellow means the unit has been somewhat damaged, and red shows a critically injured unit.

In addition to the graphic changes, there are quite a few new and interesting unit attributes and abilities. Please refer to **Units** for all the details.

The Displays

Some screens and displays, especially the CITY DISPLAY, have been redesigned to better present new information and to take advantage of the more sophisticated graphics now available. Most of the information should be self–explanatory. For those few that are not, all the major game windows are illustrated in **Reference: Screen by Screen.**

CHANGES FROM CIVILIZATION II

If you're already familiar with ***Civilization II***, there are a few things you should know. In the time between the original release (way back when) and today, we've upgraded the game just a little. Take a few moments to browse this section; it's a summary of the changes.

- *Engineers and other second–stage Settlers units no longer ignore zones of control.* This change helps prevent computer–controlled Engineers from slipping into your territory and building cities within your borders.
- *You can now automate Settlers and other infrastructure–building units.* Automated Settlers and Engineers behave exactly as if a friendly AI were controlling them, except that they will not build cities. They will improve the terrain around existing ones.
- *There are a few new menu options,* and the ones that were changed after the original manual was printed have been properly documented. Read **The Menu Bar** in **Reference: Screen by Screen** to find out about them all.
- *In the Original game, a few units have been modified.* The attack strength of the Cruise missile is now 18, not 20. The defence strength of Fighters, Stealth Fighters, and Stealth Bombers has been increased slightly.
- *The Colossus now affects sea squares as well as land squares.* This means the benefits of building it extend throughout the city's radius.
- *In the Science Fiction and the Fantasy games, all units, improvements, and Wonders have been redefined.* Rather than printing an exhaustive comparison chart, we recommend you consult the **Poster** and frequent the CIVILOPEDIA. It's more fun learning the new items for what they are than trying to memorise which are counterparts to what. This is especially true of units, which all have different strengths and functions–and some new abilities.

Impassable Terrain

A new concept that affects both terrain and movement in ***Civilization II: Test of Time*** is that of impassable terrain. This is terrain that regular ground troops cannot enter, even if a river runs through it. (Air units pass over this type of terrain without any problem.) This new type of terrain occurs most often in the worlds of the Science Fiction game, but also appears, though less frequently, in the Fantasy worlds. We don't want to spoil too much of the fun, so check the CIVILOPEDIA or the **Terrain Reference** booklet for specifics.

Multiple Maps

The Original game is not affected by this particular addition, but the Extend Original, Fantasy, and Science Fiction settings all include more than one map–up to four in any one game. Once you have discovered certain advances and perhaps built certain units (see the **Science Fiction Games** and **Fantasy Games** sections for more details), you can travel to other planets or realms with completely different terrain. Then you can begin to integrate a whole new "world" into your empire. Only some units can move between the worlds, and only certain areas of each map allow travel, so your challenge is to exploit your skills and terrain to the maximum.

Restricted Advances Concept

Your civilization might be unable to research certain advances (the only game exempt from this is the Original game). Sometimes this is because advances are restricted to specific species or races. (Alien technology is bound to be, after all, alien.) Other times, there might be a quest you must complete or other prerequisite that must be met in order to gain access to a certain technology.

You can, of course, play your next game as a different tribe to see the effects of any advances you could not research before. Or, you could try to parley with the other tribes for those specific advances; some advances you can gain through trade or theft even though you cannot research them yourself. These might allow new kinds of troops, or improvements, just like any other advance. That's one of the challenges of the new games; sometimes you might not have access to an improvement or unit you normally depend on. Flexibility can be an important virtue.

THE BASICS OF CITIES

When you start a game of ***Civilization II: Test of Time***, your first unit stands on a terrain square surrounded by the darkness of the unknown. Though you can choose to let this single group of settlers (if you're really special, you could possibly have two) wander the world alone, that's not the point of the game. As soon as you've found a decent site, you want your settlers to build a permanent settlement–a city. You must build at least one city, because only cities can produce new units, allowing your civilization to grow and develop. You'll probably build a dozen or more cities over the course of the game.

Cities are the residences of your population, the sources of tax dollars, and the homes of your scientists. Each city organises the development of the area surrounding it, harvesting the nearby agricultural land, natural resources, and potential trade goods, then converting these resources into food, industrial production, technology, and cash.

One way to measure the success of your civilization is by the number and size of the cities you have built or captured. Larger cities collect more taxes, conduct more technological research, and produce new items faster. Civilizations with small numbers of cities and small city sizes risk being overrun by larger and more powerful neighbours.

CITY CONCEPTS

To comprehend the CITY DISPLAY in ***Civilization II: Test of Time***, you must understand the symbolism the game uses to represent the concepts relevant to population growth and urban dynamics. Take a look at the CITY DISPLAY while you're reading–it'll make things a lot clearer.

Cities arose when stationary populations banded together to produce not only enough food to feed themselves day to day, but sufficient leftovers to

The City Display

store for later use. Once food storage developed, not every citizen had to produce food all day, and some people specialised in producing other goods. Eventually, cities accumulated enough surplus food and goods that they could trade their excess with nearby populations.

To represent the accumulated population in a game city, ***Civilization II: Test of Time*** maintains a POPULATION ROSTER. Each citizen icon–a small symbol–stands for a segment of that city's population (the exact number of people he or she represents changes as the city grows). The roster displays both citizens who work the land around the city and citizens whose specialisation's produce other effects. The POPULATION ROSTER tells you more than just how large your city has grown (you'll find lots more details under **Population Roster** in **Reference: Screen by Screen**), but there are other points of interest in this display, so we're moving on.

Other icons in the CITY DISPLAY represent a city's production of food, raw materials, and trade goods. We're going to call these materials the resources of the city. Production is linked to terrain in the game, just as it is in the real world (for example, deserts are not the best food–producing areas in either case). A full discussion of the types of terrain available in ***Civilization II: Test of Time*** and their resources is outside the scope of this chapter (you'll find it under **Terrain & Movement**, and the details are in the **Terrain Reference** booklet). For now, you need to know that citizens working on terrain squares (or "map squares") can produce three different types of icon: food, raw materials the city can use to produce goods, and trade goods. On some terrain squares, workers produce a larger proportion of one than of the others. On some squares, workers can't produce any of one type (a citizen working on Tundra produces no shields, for instance).

The resource icons that appear on the map are recapitulated in other displays, where they reveal further details of your city's economy and growth. We'll explain all the details in the reference sections that describe those displays.

GAINING NEW CITIES

You can acquire new cities in three ways. Most frequently, you build them with settler–type units. If you are aggressive, you can conquer the cities of your neighbours. Occasionally, you can gain a city when a minor tribe discovered by your units elects to join your civilization.

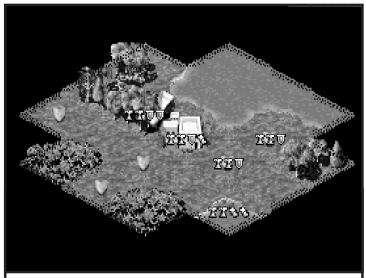
Founding New Cities

The most common way to gain new cities is to send out settlers to tame the wilderness. In fact, you start the game with a Settlers unit whose primary task is to found your first city. The terrain under and around your city is important, so if you want to select the best possible place for your metropolis, skip down to **Choosing Your Location**. If you want to jump right in, choose a square with rivers and special resources near it.

When your active Settlers unit stands on the square where you wish to build a new city, choose the option BUILD NEW CITY from the ORDERS menu. If you accidentally build a city by mistake, you can select the CANCEL button on the NAME CITY screen to retrieve your unit.

Your advisors propose a name for the new city; you can type in a different name if you prefer something else. When you are satisfied with the name, press Enter or click the OK button. The CITY DISPLAY opens so that you can arrange the city's initial production and economic development. When the display closes, your new city appears on the map. The Settlers unit disappears, having converted into the first citizens of your new city.

Choosing Your Location



Choose a location carefully

When building a new city, carefully plan where you place it. Citizens can work the terrain surrounding the city square in an X–shaped pattern (see **City Radius** for a diagram showing the exact dimensions). This area is called the CITY RADIUS (the terrain square on which the settlers were standing becomes the city square). The natural resources available where a population settles affect its ability to produce food and goods. Cities built on or near water sources can irrigate to increase their crop yields, and cities near mineral outcroppings can mine for raw materials. On the other hand, cities surrounded by desert are always handicapped by the aridness of their terrain, and cities encircled by mountains find arable cropland at a premium.

In addition to the economic potential within the city's radius, you need to consider the proximity of other cities and the strategic value of a location. Ideally, you want to locate cities in areas that offer a combination of benefits: food for population growth, raw materials for production, and river or coastal areas for trade. Where possible, take advantage of the presence of special resources on terrain squares (see **Terrain & Movement** for details on their benefits).

Proximity Of Cities

Another consideration when planning new cities is the current or potential location of other cities. You want to minimise the chance that one city's radius overlaps another's. Since a map square can only be used by one city at a time, radius overlap restricts the potential growth of one or both cities. Explore nearby lands as soon as possible to begin planning the placement of future cities. You want to take best advantage of the terrain. Of course,

the geography of your particular continent will limit your choices. If you find yourself on a small island, your potential city sites will necessarily be more crowded than if you can sprawl across a vast continent.

Strategic Value

The strategic value of a city site is a final consideration. A city square's underlying terrain can increase any defender's strength when that city comes under attack. In some circumstances, the defensive value of a particular city's terrain might be more important than the economic value; consider the case where a continent narrows to a bottleneck and a rival holds the other side. Good defensive terrain (Hills, Mountains, and Jungle, for example) is generally poor for food production and inhibits the early growth of a city. If you need to compromise between growth and defence, build the city on a square with a river running through it if possible. This yields decent trade production and gains a 50 percent defence bonus.

Regardless of where a city is built, the city square is easier to defend than the same unimproved terrain. In a city you can build the City Walls improvement, which triples the defence factors of military units stationed there. Also, units defending a city square are destroyed one at a time if they lose. Outside of cities, all units stacked together are destroyed when any military unit in the stack is defeated (units in Fortresses or Force Fields are the only exception; see **Fortresses**).

Placing some cities on the seacoast gives you access to the ocean. You can launch ship units to explore the world and to transport your units overseas. With few coastal cities, your sea power is inhibited.

Capturing Cities

Other civilizations normally defend their cities with one or more military units (armies for short), and sometimes with the city improvement City Walls. A defended city flies a pennant showing its owner's colour. A walled city is surrounded by a short wall. There are two ways to acquire enemy cities: force and subversion. If you choose force, you must destroy the defenders by successfully attacking with your military units. Once the city is undefended, you can move a friendly army into the city and capture it. If you prefer subversion, you must successfully bribe dissidents in the city with your diplomatic or espionage unit (and sufficient funds–see **Diplomats & Spies** for all the details on such espionage). The dissidents capture the city for you, as their armies automatically convert to your side. Once captured, the city becomes yours to control and manage as you would any other.

Capturing an enemy city can also lead to side benefits, such as the discovery of a new technological advance and plundered cash to add to your coffers. Capture, however, eliminates one point of population (unless the City Walls, which can prevent this loss, are still standing). Therefore, when your units enter a city with only one point of population remaining, it is destroyed instead of captured. Diplomats and Spies can incite dissidents (see **Diplomats & Spies**) to capture a city without reducing its population below one.

Occupation of an enemy city destroys roughly half of the improvements the city has built, including all Temples and Cathedrals (or their equivalent). Certain military units, such as Fighters and Bombers, are also destroyed rather than captured. Capture does not affect **Wonders of the World** (though, of course, destroying a city does–see Wonders of the World for more details). Inciting revolt

creates less damage to the city, as the dissidents rely less on bombardment, and their familiarity allows them to pinpoint targets more accurately. A city captured by revolt loses only the Temple and Cathedral improvements (if it had them).

Converting Minor Tribes

As your units explore the world, they might encounter minor tribes–civilizations too small or too peripatetic to count as "settled" (see **Minor Tribes** for the scoop on these situations). Minor tribes react to contact with a range of emotions, from delight to hostility. Occasionally, a minor tribe is sufficiently awed by your emissaries to immediately form a new city and become part of your civilization.

Move your exploring unit onto the minor tribe icon to discover the tribe's attitude towards your civilization. If they choose to form a new city, you need do nothing: Your advisors propose a name for the new city (which you can change if you prefer something else). When you are satisfied with the name, press Enter or click the OK button. The CITY DISPLAY opens so that you can arrange the city's initial production and economic development. When you close the display, your new city appears on the map. The icon is replaced by the new city square, and members of the tribe settle in as the first citizens of your new city.

Renaming Your City

You may rename any of your cities whenever you wish. This feature is useful when you capture a city and wish its name to be consistent with the names of cities you have founded, or when you discover that you're confusing units from two cities because their names are too similar.

In the new CITY DISPLAY, simply click on the name of the city. A dialog box opens in which you can type in the new city name. Press Enter or click the OK button to accept the name. If you decide not to change it, click CANCEL. In the original CITY DISPLAY, click on the RENAME button, and the dialog box with the same choices appears.

FANTASY NOTE

Renaming your capital city or customizing your tribe's name when you start a new game in either the Fantasy game or the Midgard scenario will cause problems with the events in those games.

THE PARTS OF A CITY

The City Square

The terrain a city occupies is especially important because it is always under development. You cannot take workers off of this square when adjusting resource development on the RESOURCE MAP (see **Resource Map** in **Reference: Screen by Screen**). If this area is not useful, especially for producing food, then population growth in the new city is handicapped. For this reason, you'll find new cities do best when they are built on squares with

high food production or squares with rivers. These terrain types provide the best food source and, thus, faster population growth.

Note that all beginning civilizations possess the technologies of building Roads, Mining, and Irrigation (or their equivalent). When you found a city on a square that can take advantage of these improvements, including squares with rivers running through them, the city square is automatically improved by roads and irrigation. When you found a city on any other type of terrain, the city square is automatically improved by roads and, if applicable, mining. You cannot assign a Settlers or Engineer unit to further improve a city square by, for example, adding mining or railroads, regardless of terrain, although you can change the terrain to another type (Forest to Plains, for example). Move a Settlers or Engineer unit into the city square and check the ORDERS menu to see what changes are possible. City squares do automatically improve with the discovery of certain advances.

The City Radius

The potential area of development, called the *City Radius*, extends two map squares out from a city in every direction except vertically or horizontally. Since the development area only extends one square from the city square in these directions, the resulting "radius" actually looks like a fat X, not like a circle. If the city grows large enough, its citizens can bring all of this area into development. When planning a new city, consider the long–term benefits of all the terrain squares within this radius.

For the city's population to increase, the radius must encompass terrain that workers can cultivate to produce food. Your (potentially) most important cities also have raw materials available. These cities can quickly build and support military units and Wonders. Hills and Forests allow your citizens to produce good quantities of raw materials, as do squares containing special terrain icons (pheasants, buffalo, coal, fish, and others–see **Special Terrains** for complete details).

The importance of trade in generating taxes and civilization advances makes river squares especially good sites for cities early in the game. Where you have no rivers or coastal areas, you can generate trade by building roads on Plains or Grasslands.

When a square within your CITY RADIUS is outlined, it indicates that another city is claiming that terrain's resource production. It could be one of your cities, if the city radii overlap. If you own both cities, you can flip between RESOURCE MAPS to adjust production in each to the best benefit of both locations. It could also be a rival city that one of your opponents has built close to you. Finding an outlined square in your city's radius might even lead you to discover a rival city in unrevealed territory or outside of your units' observation range.

CITY STYLES

You can choose what style of architecture your civilization prefers to build when you set up a game. As your cities increase in size, the icons that represent them on the map also change, reflecting the increasing urbanisation and population of the site. Whenever you capture a city, its icons change to reflect your preferred style of architecture. Once your civilization reaches certain milestones in technology, the architecture of your cities changes to reflect your new level of knowledge.

MANAGING YOUR CITIES

Once you've founded, captured, or gained a city, you need to direct its growth and production. Each city has different assets and demands, so each should be managed individually. You must keep several goals in mind when managing a city: maintaining population growth, maximising a useful mix of economic development (food, raw materials, and trade), producing tax revenue, producing technological research, and producing useful units and improvements, all the while maintaining an attitude of contentment and thereby avoiding civil disorder. For cities to grow and prosper, they need to balance economic output with the citizens' needs for infrastructure and services.

POPULATION GROWTH

Keeping a city's population growing is important because each additional citizen contributes something to your civilization. Each new citizen brings a new terrain square under production in your CITY RADIUS until there are no empty squares to work. After this point, each new citizen becomes an Entertainer (see **Specialists** for details on what Entertainers do). Thus, population growth increases your economic power, and concurrently, the strength of your civilization. The size of your population is a major factor in determining your civilization score, and is a measure of how well you have ruled.

RESOURCE DEVELOPMENT

The citizens of a city that work the surrounding countryside harness the economic resources within the city's radius. Depending on the needs of your civilization, there might be times when you prefer increased industrial output from a particular city over population growth. At other times, you'll

want increased trade revenues. Still other times, sheer population growth might be the most important goal.

CITY MANAGEMENT CONCEPTS

As your city increases in size, its population expands, and it produces more and more food, shields, and trade. These represent your city's basic resources: edibles, raw materials, and trade goods. In city management, you add another layer of concepts that address how you turn these materials into products you can use. Refer to the CITY DISPLAY as you read.

Grain feeds your population and supports the city's units. When a city produces more food than its population and units consume each turn, the excess accumulates in the FOOD STORAGE BAR. When the box is full, another citizen is added to the POPULATION ROSTER, and the city increases in size. If your city is not producing enough food each turn to feed its population, the shortfall is noted, and stores are removed from the FOOD STORAGE BAR. If the box empties, any units that require food for support are disbanded, one by one, until a balance is achieved. If your city still experiences a shortfall, one citizen is removed from the POPULATION ROSTER, and your city decreases in size.

Shields power your industrial capacity and support the city's units. When a city produces more shields than your units expend each turn, the excess shields accumulate in the PRODUCTION BAR each turn. When the PRODUCTION BAR is full, your city produces something. It can "build" one of three kinds of things: units, which move around the map (like Settlers and Chariots); city improvements, which are tied to specific cities (like Libraries and Aqueducts); and *Wonders of the World*, which give unique benefits to the civilization that builds them (like the Pyramids or Magellan's Expedition). The type of government your people develop and the distance remote cities are located from your palace affect your shield production. Sometimes raw materials can be lost to waste. You can read all about the details of waste under **Trade Management Concepts**. If your city runs short of the raw materials it requires each turn, one or more units that it supports are forced to disband. The units farthest from home are disbanded first.

Based on the tax rates you set, trade arrows are further divided into three commodities that your civilization acquires: luxuries, taxes, and science. These commodities each have their own icons: luxuries are represented by goblets, taxes are represented by gold, and science or research is represented by beakers. The type of government your people develop and the distance cities are located from your palace affects your trade income. Sometimes trade can be lost to corruption. You can read all about the details of trade transactions under **Trade Management Concepts.**

You can manipulate the output of a city by reassigning workers on the RESOURCE MAP. A citizen is working each terrain square that shows resource icons. Click on one of those squares, and you take the citizen off work. An Entertainer icon appears at the end of the POPULATION ROSTER. Now click on an empty terrain square. The Entertainer icon disappears from the POPULATION ROSTER and resources appear in that square, indicating that a citizen is now working there. By experimenting with the placement of workers on the RESOURCE MAP, you can find the optimum production ratio of food to raw materials to trade for that city.

Having an Entertainer on your POPULATION ROSTER might change the attitude of one or more of your citizens. For more information on this reaction, see **Happiness & Civil Disorder.**

Tax Revenue

The percentage of your trade that is converted into tax revenue (gold icons) is determined by the tax rate you set–see **Trade Rates** for information on how to manipulate the ratios of taxes, science, and luxuries. Why do you need tax revenue, anyway? You need revenue, or cash, because most improvements you build within cities require a stipend of gold for maintenance. Gold is also useful for speeding industrial production (see **Rush Jobs**), bribing enemy armies or inciting revolts in enemy cities (see **Diplomats & Spies**), and for negotiating peace with your neighbours (see **Diplomacy**).

The combined tax revenues of all your cities must exceed their combined maintenance requirements before gold can accumulate in your treasury. It is not necessary for each city to have a positive cash flow. However, enough cities must do so to cover your civilization's expenses, or your treasury will be depleted to cover the deficit. You can watch your STATUS window or check with your TRADE ADVISOR to see if you have a surplus or a deficit, as we'll explain under **Advisors** in **Reference: Screen by Screen**.

Some cities might not be especially suited for industrial production because of terrain or other factors, but they might still be good trading centres and capable of generating lots of income. Develop these locations with roads (and later, railroads), trade routes (see **Caravans & Freight** for the low–down on trade route bonuses), city improvements like Marketplace, Bank, and Stock Exchange, and Wonders to be your civilization's cash cows. If you get to the point where you are no longer interested in building new items in a location, you can use the Capitalisation improvement to convert a city's shields into gold–see the CIVILOPEDIA entry for details.

Technological Research

The greater the research contribution each city makes toward new civilization advances, the faster your people discover each new advance. The science rate you set determines the amount of research done in each city (see **Trade Rates** for the essentials of adjusting the ratios of science, taxes, and luxuries).

A city's research contribution can be influenced by adjusting the city's total trade income (research is a fraction of trade) by creating Scientists (see **Specialists**), and by building certain city improvements. Improvements that can help are the Library, University, and Research Lab, and several Wonders. The **Civilization Advances** chapter goes into detail about how to read the advance tree, so if you want the nuts and bolts, flip there next.

Industrial Production

Your most valuable cities can be those with the greatest industrial capacity–those cities whose workers produce the greatest number of shields. These cities can quickly produce expensive military units with which you can extend the power of your civilization. They are also best at producing Wonders of the World, as Wonders generally cost immense numbers of shields. But city management is dynamic. You must regularly monitor the production of your cities to ensure you are building the items you most need.

Mao Tse-tung

Several factors influence a city's production of shields: The terrain within your CITY RADIUS is most important, as citizens working on some types of terrain produce no shields at all (see **Terrain & Movement** for further explanations). You might find it worthwhile to set Settlers (and later, Engineers) to improving the terrain squares within your CITY RADIUS so that they yield more or different resources (see **Settlers & Engineers** for examples of what terrain improvements they can make).

Beyond terrain, the form of government your civilization chooses can cause each city to spend some of its raw materials as maintenance for the military units that call the city home. It is possible that you can have so many units drawing raw materials from a city that there are no surplus shields. In a city where this is the case, progress on the item under construction (unit, improvement, or Wonder) stops until the situation is resolved.

A number of strategies allow you to adjust industrial capacity. The simplest is to shift citizens working on the RESOURCE MAP so that they produce more shields (see **Resource Development** for instructions). You can also use Settlers or Engineers to improve a terrain square within the CITY RADIUS so that it yields more shields. Or, order Settlers to build a new city (they'll no longer draw support from the city that sponsored them when they've settled their own town). You might also try reassigning units so that they are attached to a different city (see **Homing Units** for the low–down on how to do this).

Within each city, you can order the construction of improvements such as a Factory, Hydro Plant, or Offshore Platform that increase shield production. Several Wonders also affect shield output. Consult the CIVILOPEDIA for the complete list of possible city improvements and Wonders. It shows the construction and maintenance cost of each item, its purpose, and what advance is required to make it available.

Penalties for Switching Production

Civilization II: Test of Time enforces a significant penalty for switching production between different types of project–units, improvements, and Wonders (changing from City Walls to Knights, for example). Switching from one type of production to another in mid–stream costs at least 50 percent and in some games up to 70 percent of the shields already accumulated. Switching production within a type–from one unit to a different unit, for instance–incurs no penalty.

CITY PROTECTION

Great economic management of a city is worthless if the city is captured by rivals or barbarians. Therefore, part of your management plan must concern the defence of each city. The minimum city defence is one army, preferably one with a good defence factor. A second defender can provide back–up in case the first is taken out (see **Military Units** for details of combat). An army with a strong attack factor is also useful. This unit can strike at enemies that move

adjacent to the city, perhaps destroying them before they can launch an attack. Fortify any armies that you expect to defend a city (choose the FORTIFY option from the ORDERS menu or press the F key) because fortified units gain an increased defence strength–as we'll explain more fully under **Military Units.**

A city's defence can be substantially increased by building City Walls, an improvement that triples any defender's strength against most attackers (although not against air units or certain others, like Howitzers). Veteran status and terrain bonuses are figured in before this tripling takes effect. City Walls also prevent population loss when defending units are destroyed (see **Combat**).

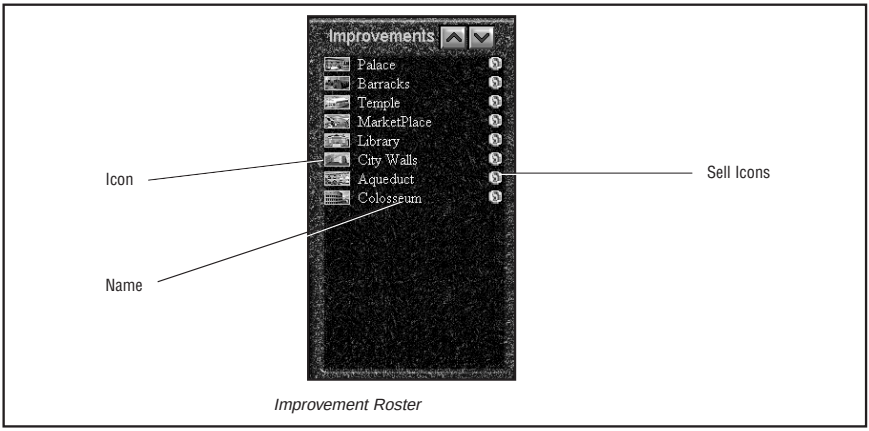
When civilization advances make available new army types with better defence factors, take the first opportunity to replace old defenders with better units. Since the offensive capability of your enemies improves as they acquire new advances, your defences must improve to keep up.

Linking cities with roads and railroads can be very helpful in speeding the movement of units from one end of your empire to trouble spots elsewhere. This puts your defensive armies on "interior lines," allowing them to move rapidly to where they are needed.

IMPROVEMENTS

City improvements represent the commercial, bureaucratic, educational, and public works infrastructure that make large and efficient cities possible. In the real world, New York City's dense population depends on the extensive subway system for transportation, and buys electrical power generated by distant grids. Los Angeles is located in a desert and pipes in much of its water from sources hundreds of miles away.

In ***Civilization II: Test of Time***, improvements are also critical to the growth and importance of cities. Inadequate provision of these facilities can limit the potential of a city. Each improvement provides some service or otherwise makes a city work more efficiently. You must choose which improvement to implement at what time–does your city need a Marketplace or a Library more? Would a Courthouse provide more benefit than a Coliseum? Some improvements specifically impact military units. For example, Port Facilities repair naval units, Airports repair air units, and Barracks restore ground units (as well as producing veteran units). Some improve your city's



Improvement Roster

output–Superhighways grant a 50 percent increase in trade to citizens working land within a CITY RADIUS, and the Supermarket improvement allows workers on irrigated land to produce 50 percent more food.

There are certain combinations that dramatically increase production in a city with both improvements, yet there are some restrictions. You cannot build a Manufacturing Plant in a city that does not yet have a Factory. Further, plants in cities where the Factory has been sold or lost increase output 50 percent (not 100 percent) until the Factory is rebuilt. The same loss of bonus applies to the Bank & Marketplace combination and to the University & Library pairing.

City improvements are listed alphabetically in the CIVILOPEDIA. Each explains the building costs, benefits, and maintenance fees of each improvement, along with any conditions which might make the improvement obsolete or non–functional, so be sure to check them out.

Losing Improvements

Improvements are not invulnerable, nor are they guaranteed to be permanent fixtures in an ever–dynamic city. The Barracks improvement, for instance, has a planned obsolescence. Once your civilization discovers the advance of Gunpowder, all your old Barracks are rendered obsolete, and they disappear. (The same result attends your discovery of Mobile Warfare. These military installations are sensitive to changes in technology.) To regain its benefits each time, you must rebuild a Barracks improvement in each city where you want one.

Most improvements don't disappear over time, but they can be vulnerable to capture, fire sale, and sabotage. If you're really strapped for cash, you can even sell a city's improvements.

Capture

Some, all, or none of a city's improvements might be destroyed when it is captured by another civilization. When a city is completely destroyed, all improvements are destroyed as well.

Fire Sale

If you have less money in your treasury than is needed to pay a city improvement's maintenance cost at the beginning of your turn, ***Civilization II: Test of Time*** automatically sells the improvement for cash. Deficit spending is not allowed–even if by the end of the turn you would have had a positive cash flow again.

Sabotage

Foreign Diplomats or Spies can enter one of your cities and attempt industrial sabotage (of course, your envoys can attempt to sabotage your rivals' cities, too). This might result in the destruction of an existing improvement (or it might scrap the item that city is currently producing–see **Diplomats & Spies** for complete details on diplomatic actions). There are two defences against this type of attack–destroying the Diplomat or Spy before he or she can enter your city, or stationing Diplomats or Spies of your own in the city for counterespionage.

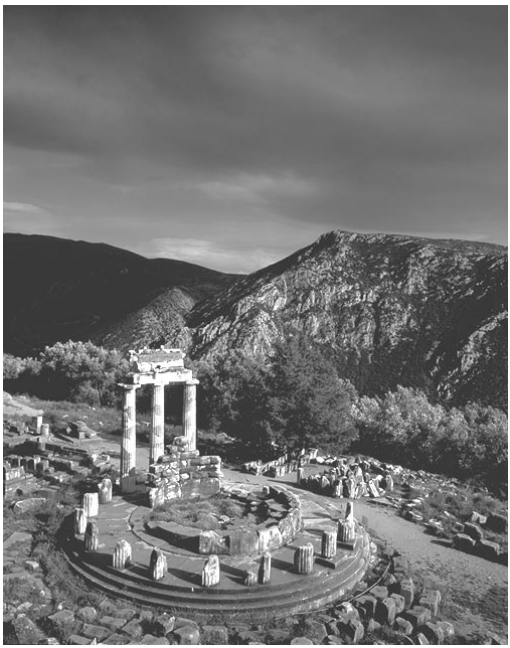
SELLING IMPROVEMENTS

Vladimir Lenin

To raise cash, click on the IMPROVEMENTS button in the CITY DISPLAY to bring up the IMPROVEMENT ROSTER, then click on the improvement in the roster. A dialog box shows how much gold you could receive for selling the improvement, and how much you could receive for selling that same improvement in all of your cities. Normally you can gain one gold per resource invested in construction. If you sell, the improvement disappears from the city and the money is added to your treasury.

Selling improvements can be useful when you are short of money and are threatened with the random sale of an improvement. It can also be useful when you are under attack with no reasonable chance of defending or recovering a city. By selling off its improvements, you reduce its value to the enemy and salvage something. You can sell only one improvement per turn in each city. You cannot sell Wonders of the World.

RUSH JOBS



There are also times when you need the specific benefits of an improvement right now, and not 20 turns down the line. If you have sufficient funds, you can rush completion of a partially built item by paying cold, hard cash. However, speeding con–struction in this manner costs a premium. When workers are rushed, they receive overtime wages, and must pay surcharges on material delivery and fabrication. The surcharges for a rush job depend on what proportion of the work is already completed, whether the job is civil or military or a Wonder, and can cost up to eight times as much gold as the normal accumulation of shield icons.

To rush a job without paying cash, you have two options. When any one of your Caravan or Freight units enters a city where a Wonder is under construction, you can have it deliver its goods specifically to the project by choosing the HELP BUILD WONDER option when it arrives. The unit contributes its cost in shields directly to the RESOURCE BAR. Alternatively, any unit that you disband in a city contributes one–half its unit cost in shields to the current construction, whether it is a Wonder, an improvement, or another unit. This represents the retraining of troops and redisbursement of their supplies.

Items completed by rush jobs are available at the beginning of your next turn, so there is no advantage for rushing items that would be complete on the next turn anyway. To judge whether an item can be completed next turn without rushing, check the status. The number of turns to completion is noted toward the bottom of the RESOURCE BOX in the new CITY DISPLAY. In the classic CITY DISPLAY, you can compare the surplus raw materials the city is generating to the number needed for completion. For very expensive items, it might be useful to consult your CITY STATUS advisor from the ADVISORS menu for an exact count of the remaining cost.

MANAGING YOUR TRADE

Trade is a fundamental force driving civilizations. It introduces unique and exotic valuables, stimulates the economy, and fires the imaginations of a culture's foremost thinkers. The effects of trade permeate society in many surprising and subtle ways, and your ability to direct trade's impact is likewise varied.

TRADE RATES

When you start a new game of ***Civilization II***, none of your trade benefits are tied up in luxuries–instead, 40 percent of your trade goes toward revenue from taxes, and 60 percent of it is funnelled into science. To change the proportion of tax and science income, pull down the KINGDOM menu and choose the option TAX RATE. Choose a new rate by sliding one or more of the buttons along the slider bars. A notation at the top of the box mentions the maximum any one percentage can be, given your current form of government. Another notation lists the income and outflow as gold per turn, and finally, an entry calculates how many turns it will take to achieve a new advance. If you are interested in focusing on civilization advances, you might want to increase the amount of science being conducted. If you rapidly build city improvements, you might want to increase your taxes to cover the maintenance costs. If you are concerned about the attitude of your citizens, you might want to increase the availability of luxuries to make your citizens happier (we'll explain all about happiness in a few moments). Experiment with different rates to see what levels of income and science you can achieve.

If it is difficult to adjust all three sliders at once, you can click the box at the right end of any bar to lock that value in place. Now only the other two sliders move when you drag on one.

TRADE MANAGEMENT CONCEPTS

Taking up where we left off in **City Management Concepts**, these are the further divisions that result from trade income: luxuries, taxes, and science funding.

Luxuries make your population more content. The availability of luxuries means that some citizens can enjoy a more pampered existence. Every two goblets make one contented citizen happy. We'll talk more about happiness a little later.

Taxes maintain city improvements and add to your treasury. Taxes support basic city services, and surplus funds accumulate in your treasury. There are plenty of useful ways to spend money in ***Civilization II: Test of Time***, as we'll explain in a little while. If funding dries up, your city might be forced to sell off improvements.

Research funding powers your technological research. Each new advance requires the accumulation of a certain number of beakers to achieve. The **Civilization Advances** chapter explains the details of the search for knowledge, but for now, you just need to know that new discoveries often allow you to build new units and city improvements, and sometimes open up the possibility of building Wonders of the World. In addition, each discovery leads to further discoveries, creating a chain of progress. If your cities don't produce many beakers, your civilization doesn't progress very quickly.

Which of these three is the most important? That varies according to what you want to achieve right now. To give trade management the most flexibility, ***Civilization II: Test of Time*** lets you adjust the proportion of trade income that is devoted to each of these three areas. The TAX RATE option on the KINGDOM menu lets you change the ratio of taxes to science to luxuries by ten percent increments, and also shows you how these rates affect your funding and the speed at which your knowledge increases.

In **City Concepts**, we mentioned that the POPULATION ROSTER can tell you more than just the number of citizens in your city. It can also tell you your citizens' general level of contentment. Citizen icons appear in four different attitudes: *happy, content, unhappy, and angry*. When you start building cities, you start with content citizens. The type of government your ***civilization*** develops and the level of difficulty at which you chose to play affect how rapidly unrest begins to trouble your populations. Unhappy citizens must be balanced by happy citizens, or your city falls into ***civ***il disorder. Not only does ***civ***il disorder sound bad, it has all sorts of nasty consequences, as we'll explain shortly.

For now, you need to know that you can increase the happiness of your citizens in several different ways, among them: building specific city improvements like Temples and Marketplaces (see **Improvements**), reassigning military units (the dirt about martial law and foreign service effects appears under **Military Units**), adjusting the tax rates (as we'll discuss under **Kingdom Menu** in **Reference: Screen by Screen**), and pulling citizens off production work to make them specialists (see **Specialists** for the skinny on this).

Phew! That's a lot of stuff to digest all at once. Just one more thing-we mentioned types of governments two paragraphs ago. Discovering new advances encompasses more than just new gadgets to improve sanitation and military might. The game counts philosophical concepts and theories as "new technologies," too. Every ***civilization*** starts out under Despotism, but you can develop new forms of government. These might, in turn, have a profound effect on the happiness of your citizens and the rate at which your citizens produce raw materials, food, and trade.

Corruption

Trade is modified by corruption much as production is lowered by waste. When an empire sprawls over a wide area and its form of government is low on the sophistication scale, corruption lowers the total trade goods intake in cities on the fringes and frontiers. The more sophisticated the government and the smaller the sprawl, the less effect corruption has. This loss can be counteracted by building certain city improvements, and by switching to a more advanced form of government.

GOVERNMENTS

Another tool of city–and trade–management is the type of government under which your culture operates. Every civilization starts out as a Despotism, but some of the advances you can research are intellectual in nature, rather than technological, and these include governmental concepts. Once you have discovered a new form of government, you can choose to sponsor a revolution in order to change government types. (You can also gain access to new forms of government by building the Statue of Liberty Wonder, or its equivalent.)

Anarchy, or the lack of government, occurs only when you lose control, either because civil unrest topples your current government, or immediately following a revolution. Civil unrest continues as long as conditions are ripe for it. In the case of a revolution, your people's attitude naturally stabilises. After a few turns, once your civilization settles down, a dialog box appears listing all the possible forms of government your culture has available. Choose the one you like, and that regime takes effect immediately.

A feature in ***Civilization II: Test of Time*** lets you change governments instantaneously and without penalty for the remainder of this turn. If your first choice turns out to be unsatisfactory, pull down the menu again and select a different government. Once you press Enter to end your turn, you must go through the entire revolution process (including several turns of Anarchy) if you want to change governments again.

There are three "ancient" forms of government–Despotism, Monarchy, and the Republic–and three "modern" ones–Communism, Fundamentalism, and Democracy. The Republic and Democracy are the most sophisticated from an economic point of view, but they impose severe restrictions on your military forces. The other forms offer trade–offs between economics and increased military flexibility. In essence, you could summarise governmental variants this way: the more freedom you give your people, the less they will want to fight for you, but the stronger your economy will become. We've collected the details of each form of government's bonuses and drawbacks in regard to trade, support provided to units, production, and the attitude of the citizenry. Depending on your style of play, you might not develop each advance in order of sophistication.

A NOTE ON THE SENATE

You cannot avoid Senate interference in your foreign policy by simply refusing to meet foreign emissaries. However, in the Senate of a *Republic*, the "Doves" are in power only about 50 percent of the time. In a *Democracy* the "Doves" are always a force to be reckoned with.

Anarchy

You have temporarily lost control of the government. You continue controlling the movements of your units, and cities continue to operate on their own, but some important functions of your civilization grind to a halt until control is restored.

Attitude: Up to three troops in each city can institute martial law; each makes one unhappy citizen content (see **Happiness & Civil Disorder**).

Corruption & Waste: Corruption is rampant. Although no maintenance is charged for city improvements, no tax revenue is collected and no scientific research is accomplished while Anarchy continues.

Resource Support: Military units do not require raw material support until the number of units making a city their home (see **Unit Roster**) exceeds the number of citizens on the POPULATION ROSTER. Each military unit in excess of the city's population points requires one shield for industrial support. Settlers require one food for support each turn.

Special Conditions: While Anarchy continues, citizens cannot work up to their potential. The penalty for this atmosphere of tension is that workers produce one fewer resource icon in any terrain that can generate more than two icons of any one kind. Mines, for example, which might normally be worked for three shields, only produce two under Anarchy.

Equivalents: In the Lalande game, *Pandemonium* is equivalent to Anarchy.

Despotism

You rule by absolute fiat. The people just have to live with it because your will is enforced by the military. Due to the severe limits on economic and personal freedom, production is at a minimum. But total control makes conducting war relatively easy.

Attitude: Up to three troops in each city can enforce martial law; each makes one unhappy citizen content (see **Happiness & Civil Disorder**).

Corruption & Waste: Corruption and waste are both major problems under Despotism. Trade income losses due to corruption, and shield production losses due to waste, increase with the distance a city is located from its capital.

Resource Support: Under a Despotism, military units do not require resource support until the number of units making a city their home (see **Unit Roster**) exceeds the number of citizens on the POPULATION ROSTER. Each military unit in excess of the city's population points requires one shield for support each turn. Settlers require one food for support.

Special Conditions: Citizens cannot work up to their potential. The penalty for this atmosphere of tension is that workers produce one fewer resource icon in any terrain that can generate more than two icons of any one kind. Mines, for example, which might normally be worked for three shields, only produce two under Despotism. In addition, the maximum rate at which you can set tax, luxury, or science production is 60 percent.

Monarchy

Your rule is less than absolute, and an aristocracy of upper–class citizens influences your decisions. The aristocratic classes, at least, have a certain amount of economic freedom, and this results in the potential for greater production. Your feudal vassals are partially responsible for helping to

defend your kingdom, but they may in some cases deduct a share of your civilization's production as maintenance for military units.

Attitude: Up to three troops in each city can institute martial law; each makes one unhappy citizen content (see **Happiness & Civil Disorder**).

Corruption & Waste: A certain amount of your economic output is siphoned off by your aristocrats, particularly those farthest from your watchful eye–corruption and waste are significant problems under a Monarchy, though not as severe as they are under Despotism. Trade income losses due to corruption, and shield production losses due to waste, increase with the distance a city is located from its capital.

Resource Support: Your feudal vassals support up to three units from each city at no cost to you. Each additional unit requires one shield per turn. Settlers require one food per turn for support.

Special Conditions: Under a Monarchy, the maximum rate at which you can set tax, luxury, or science production is 70 percent.

Equivalents: In the Lalande game, Hierarchy is equivalent to Monarchy.

Republic

You rule over an assembly of city–states formed from the cities that your civilization controls. Each city is an autonomous state, yet also is part of the republic which you rule. The people feel that you rule at their request. They enjoy substantial personal and economic freedom, and this results in greatly increased trade. A Senate reviews your diplomacy, and has a chance to override your decisions. Military conflict is unpopular among the masses, and your government must bear the full cost of supporting its army.

Attitude: Each ground and naval unit beyond the first that is not stationed in a friendly city or in a Fortress within three squares of a friendly city (except units whose attack strength is zero), and each of certain other units–Bombers, Stealth Bombers, Helicopters, and missiles in the Original game–regardless of the city it occupies, makes one citizen unhappy each turn.

Corruption & Waste: Corruption and waste remain a problem under a Republic, though not as severe as they are under a Monarchy. Trade income losses due to corruption and shield production losses due to waste increase with the distance a city is located from its capital.

Resource Support: Each military unit requires one shield for support each turn. Settlers require two food per turn.

Special Conditions: Under a Republic your workers produce an extra arrow icon in any square where they are already producing at least one. Your Senate can force you into accepting a peaceful resolution to any negotiation, though it will only choose to do so roughly 50 percent of the time. Finally, the maximum rate at which you can set tax, luxury, or science production is 80 percent.

Equivalents: In the Fantasy and Midgard games, the Althing is equivalent to the Republic. In the Lalande game, it's Confederation.

Communism

You are the head of a communist government, and you rule with the support of the controlling party. Although this form of government allows more

production than Despotism, the orthodoxy of the party restricts personal and economic freedom, limiting trade. On the positive side, corruption is negated by the action of the local party apparatus, the army and secret police suppress most dissent, and your large security forces recruit excellent spies.

Attitude: Up to three troops in each city can enforce martial law; each makes two unhappy citizens content (see **Happiness & Civil Disorder**).

Corruption & Waste: Under Communism, state control of the economy eliminates organised crime, and none of your cities suffer corruption or waste.

Resource Support: Regardless of city size, each military unit beyond the third a city supports requires one shield each turn. Settlers require two food for support.

Special Conditions: All espionage units produced under Communist governments are Veterans. Under Communism, the maximum rate at which you can set tax, luxury, or science production is 80 percent.

Equivalents: In the Fantasy and Midgard games, the Commune is equivalent to Communism. In the Lalande game, it's the Collective.

Fundamentalism

Fundamentalism is a form of government based on the literal, forceful, and uncompromising interpretation of religious dogma. Fundamentalist societies maintain that their own beliefs are the only true path to salvation, and tend to be rigidly intolerant of any dissenting view–a fact which tends to choke off intellectual development. On the other hand, the people in such societies are often fanatically devoted to their beliefs, and may be willing to die, use force, or commit great atrocities to preserve them. This unthinking devotion, often obnoxious to neighbouring societies, can be harnessed by a clever and cynical leader.

Attitude: Under Fundamentalism, no citizen is ever unhappy! Improvements that normally convert unhappy citizens to content citizens produce "tithes" (gold) equivalent to the number of people they would normally convert, and require no maintenance.

Corruption & Waste: Fundamentalism has very low rates of corruption and waste.

Resource Support: Because of your people's zeal, each city can support eight military units at no cost to you. Settlers eat two food per turn. Only fundamentalists can build Fanatic units, which never require support.

Special Conditions: Under Fundamentalism, tax/luxury/science rates cannot be set higher than 80 percent. In addition, the rigidity of mindset and emphasis on doctrine means that all scientific research is curtailed; for example, it is HALVED in the Original game. The diplomatic penalties for "terrorist acts" (such as bombing city improvements, poisoning wells, and so forth) committed by Diplomats and Spies is reduced, since the world comes to expect no better.

Equivalents: In the Fantasy and Midgard games, Fanaticism is equivalent to Fundamentalism. In the Lalande game, it's the non–human Great Joining.

Democracy

You rule as the elected executive of a modern Democracy. The people feel that you rule because they chose you. The degree of freedom allowed under

this government results in the maximum opportunity for economic production and trade. However, the people also have a very strong voice in determining how much economic production is devoted to improving the standard of living. Any diplomatic decisions you make are subject to review by your Senate–and the Senate always opposes actions that would lead to war. Maintaining a military force in the field comes with great political and economic costs.

Attitude: Each ground and naval unit not stationed in a friendly city or in a Fortress within three squares of a friendly city (except units whose attack strength is zero), and each of certain other units–Bombers, Stealth Bombers, Helicopters, and missiles in the Original game–regardless of the city it occupies, makes two citizens unhappy in its home city.

CIVIL DISORDER AND COLLAPSE

Democracy is fragile. If even one of your cities remains in civil disorder for more than a turn, your government collapses into Anarchy.

Corruption & Waste: One of Democracy's greatest advantages is its ability to squelch corruption and waste. Neither exists in your cities.

Resource Support: Each military unit appropriates one shield for support each turn. Settlers require two food for support each turn.

Special Conditions: Under Democracy, your workers generate an additional trade (arrow) icon wherever at least one already exists. Patriotism and strong democratic traditions make your cities and units *immune to all forms of bribery*. Finally, the Senate can force a peaceful resolution to any negotiation, and will do so whenever possible.

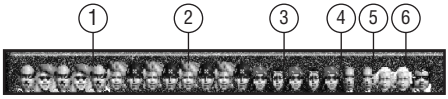
Equivalents: In the Fantasy and Midgard games, the *Greatlaw* is equivalent to Democracy. In the Lalande game, it's *Proteocracy*.

HAPPINESS & CIVIL DISORDER

Happiness and its inverse state, civil disorder, are indirectly related to trade. Lack of trade leads to stagnation, and a slow economy means a lack of goods and services. The citizens in your cities have one of four different attitudes or emotional states: happiness, contentment, unhappiness, or anger. (Anger is quite rare.) The first citizens of your first city start out in a contented state. As the population of the city grows, competition for jobs, commodities, and services increases. Eventually, depending on the difficulty level at which you play, the form of government your civilization employs, and the economic conditions in your city, some citizens start to grumble and display unhappiness. If you don't take an active role in city management as population increases, the natural trend of citizens' attitudes is toward unhappiness.

So what can you do to counter this trend? If your population is already suffering civil disorder because of an attitude imbalance, you need to take immediate steps, as we suggest under **Restoring Order**. However, you needn't wait until a crisis occurs; you can keep citizens content by taking a longer outlook and providing services as the demand becomes imminent, or even ahead of demand.

The temperament of your citizens depends on the level of difficulty at which you play. At Chieftain level, your people are so even–tempered that the first six citizens on the POPULATION ROSTER start out content. Each new citizen above this number starts with a bad attitude, and must depend on



1 Happy Citizens
2 Content Citizens
3 Unhappy Citizens
4 Taxmen
5 Scientists
6 Entertainer

improvements, luxuries, martial law, and Wonders of the World to improve his or her state of mind. The number of citizens who start content decreases by one with each successive level of difficulty, until at Deity level, your people are so temperamental that only one citizen starts out content. The second and subsequent citizens show their unhappiness, and must be cajoled into better humour with any of the management tools at your disposal.

Special Unhappiness Factors

There are two special conditions that cause further unhappiness in some populations. Under a Despotism, and to a progressively lesser degree under other types of government, citizen unhappiness increases with the number of cities. This can lead to angry citizens who must be converted first to unhappy citizens before they can become content.

In Republics and Democracies, each ground or naval unit not in a friendly city or fortress within three squares of a friendly city, and some long range air units and all missile units–regardless of where they located–might create unhappy citizens. You can think of it as units "in the field." Because of their routine flight training, most air units are always "in the field," but the protective role of fighters makes them an exception to the rule.

In a Republic, the first unit in the field does not cause discontent. Each subsequent army in the field creates one unhappy citizen. If your civilization is a Democracy, each unit in the field causes two unhappy citizens. Units with an attack strength of zero (that is, an ADM rating that starts with zero, like Transports and Engineers) do not cause unhappiness in this manner. When a city is in disorder, disbanding distant military units, returning them to their home cities, or changing their home cities can make some unhappy citizens content and might restore the city to order.

Civil Disorder

As we mentioned in **City Management Concepts**, cities that don't maintain a favourable balance of happy people over unhappy people go into civil disorder. Cities in civil disorder produce no tax revenue, technological research, or food surpluses, and the condition suspends production. Prolonged civil disorder might bring down a government and throw your civilization into Anarchy. A nuclear reactor in a city suffering civil disorder might experience a meltdown due to lax safety controls (see **Nuclear Meltdown**). Keeping a city stable is a very high priority.

A city suffers civil disorder when unhappy people outnumber happy people. Content people and Specialists are ignored in the calculation. When order is restored, the city returns to normal operation the next turn. You can restore order in several ways.

Restoring Order

You can pay to complete an improvement, such as a Temple, that can convert sufficient unhappy citizens to contentment (or content citizens to happiness) to restore the balance. See **Rush Jobs** for instructions on how to do this.

You can also change the tax rates of your civilization. Increasing the availability of luxuries might convert some content people into happy citizens, allowing them to balance the unhappy populace. See **Trade Rates** for information on economic manipulation.

You can take one or more citizens out of the work force, and make them Entertainers. This increases the number of happy people. For information on how to do this, see Specialists. When creating **Specialists**, be careful not to also cause shortages of food or resources that trigger starvation of the population or the scrapping of armies.

If your civilization operates under Anarchy, Despotism, Monarchy, or Communism, you can use martial law to restore order to a city. Up to three military units, each with an attack factor of one or more, can be stationed in a city to enforce martial law. Each military unit makes one unhappy citizen in a city content under the first three types of government. When you are operating under Communism, martial law is doubly effective, and each army makes two citizens content. If you have enough military units to enforce it, and a low enough level of unhappiness, martial law might be enough to restore order.

We Love the _____ Day

If a city's population becomes sufficiently happy, it (not your whole civilization–just this one location) spontaneously holds a celebration in honour of your rule. The people declare a "We Love the (title of the leader) Day" in thanks for the prosperity your management has made possible. While the circumstances that support this celebratory mood continue, the city enjoys certain benefits, depending on your civilization's type of government. You will see the effects of celebration begin on the first *full turn* that a city celebrates, that is, the turn after the party is announced.

The people love you!

To trigger a celebration day, a city must fulfil certain conditions; there can be no unhappy citizens in the city, there must be at least as many happy citizens as content citizens, and the POPULATION ROSTER must number at least three citizens. Specialists are considered content citizens for this calculation. For example, a city with five happy citizens, four content citizens, and no unhappy citizens celebrates. A city with ten happy citizens, three content citizens and one unhappy citizen does not.

Anarchy

The celebration has no effect when your government is in Anarchy.

Despotism

The celebrating city collects resources as if its government is a Monarchy (see **Governments**). This can increase the amount of food and raw materials your citizens can produce in certain improved (irrigated and mined) terrain types.

Monarchy/Communism/Fundamentalism

A celebrating city currently ruled by any of these governments collects resources as if its government is a Republic (see **Governments**). This increases the amount of trade your citizens can produce in any terrain that generates trade goods.

Republic/Democracy

A city currently ruled by either of these governments increases in population by one point each turn it celebrates, so long as sufficient food is available. This can result in dramatic growth of the city.

TERRAIN AND MOVEMENT

TYPES OF TERRAIN

The differences in terrain are deeper than a variety of artwork and colours to make the game map more visually interesting. Each type of terrain has its own economic usefulness, effect on movement, and effect on combat. Detailed information about the terrain types is provided in the **Terrain Reference** booklet and in the CIVILOPEDIA.

To get terrain information from the CIVILOPEDIA, click on the CIVILOPEDIA menu, and select the TERRAIN TYPES option. A list of both standard terrain types and their special resources appears. If you don't recognise the icon for a special resource, click on the standard terrain type to see what special resources are possible.

TERRAIN & MOVEMENT CONCEPTS

The game map in ***Civilization II: Test of Time*** is divided into small independent parts, or terrain squares, as we mentioned in **City Concepts**. For simplicity, each square consists of a single type of terrain, even though the real world is not as perfectly organised as that. To represent that some types of terrain are easy to walk across and others require slogging through mud or hacking through thick underbrush, your units spend movement points to enter each new square. Every unit has an ADM rating (the acronym stands for Attack/Defence/Movement); the M, or third number in the rating, indicates how many movement points it can spend in a turn. You can find out all about units and their ADM ratings under **Military Units**.

Each terrain type has its own movement point cost (and they're all conveniently listed in the **Terrain Reference** booklet). Your settler units (like Settlers and Engineers) can lower these movement point costs by improving terrain (see **Settlers & Engineers**). When a unit moves into a new square, it pays that square's movement point cost. If it has any movement points-or fractions of movement points-left after moving one square, a unit can attempt to move again until it reaches the limit of its movement points. Your units also spend movement points to attack. You can read about the details under **Military Units;** what you need to know here is that a unit's attack strength might be reduced if it has less than a full movement point remaining at the time of combat. You'll get a message asking if you want to continue with the attack.

The proximity of enemy units or cities can also restrict a unit's movement options. Units and cities have what in military circles is called a zone of control; their influence extends into the eight squares that immediately surround them. Your units cannot move directly from one rival's zone of control into another's zone of control unless you have an alliance with the second tribe. This represents a unit's ability to threaten or pin down enemy troops nearby. When an enemy Legion is nearby waiting to pounce, your troops cannot afford to expose their vulnerable flanks. The blockers don't have to be units or cities of the same civilization. The **Movement Restriction** diagram should make it clearer, so give it a look-see. Some units (such as Diplomats and Caravans) have special abilities that allow them to ignore these restrictions. Zones of control are not relevant to air units and naval units.

Your units will occasionally encounter impassable terrain. This is terrain that regular ground troops cannot enter, even if a river runs through it. This new type of terrain occurs most often in the Science Fiction worlds, but it also appears, though less frequently, in the Fantasy worlds. We don't want to spoil too much of the fun, so check the CIVILOPEDIA or the **Terrain Reference** booklet for specifics.

The Fantasy and Science Fiction settings include a new feature: *multiple* maps. There can be up to four separate realms or planets available for exploration and settlement. This amounts to having four worlds in one game to conquer-peacefully or not. Once you have met certain requirements, some of your troops can travel to and begin to integrate new worlds into your empire. In the Fantasy setting, the map on which you start depends on which tribe you choose to rule.

A Note About Rivers

Rivers are features that can be found running through almost any terrain, making their appearance more true–to–life. To simulate the beneficial effect rivers had on trade, especially in ancient times, any ground unit can follow a riverbed (either upstream or down) for a cost of only one–third of a movement point per square, unless the terrain through which the river flows is impassable. The presence of a river in an adjacent terrain square indicates access to water for irrigation, if that adjoining terrain can be irrigated. Rivers convey a defence bonus of 50 percent, and squares through which they run can be worked for trade goods in addition to the yield of the basic terrain. You cannot build roads across rivers until your tribe discovers the technology that makes it possible–Bridge Building, for example.

Note also that "rivers" might take different forms in fantasy and science fiction settings–for example, they're Dust Runs on the dry planet Naumachia–but they always have the same characteristics.

Standard Terrain Squares

The standard types of terrain in the Original game can be divided along climactic lines. Here's a short summary. Glacier and Tundra squares are both cold terrain. Neither produces much in the way of raw materials, and neither can be converted into more profitable terrain. Swamp and Jungle are both wet terrain. Neither is easy to move through, and it costs a considerable investment of time to convert either into more profitable terrain. Plains and Grassland squares are both open terrain. Both are easy to travel across, and when improved, both produce substantial amounts of food as well as other raw materials. Hills and Mountains squares are both vertically challenging. They take some effort to travel across and yield more raw materials when developed by mining. Ocean squares generate substantial amounts of trade, and appropriate types of terrain bordering them can be irrigated. Desert squares are dry terrain that can be developed for marginal production. Forest squares are difficult to travel through, but yield decent raw materials.

Special Terrain Squares

Most standard terrain types have two associated special resources, each with its own developmental bonuses. Each special resource has an icon that rests on top of the basic terrain square. Where special resources appear, they add significantly to the economic value of the terrain. Distinct symbols mark the location of these resources. If your Settlers or Engineer units convert a square containing a special resource icon into another terrain type, the original speciality is lost. If the new terrain type can be enhanced by special resources, it is; if the new terrain is Grassland, it remains a standard terrain. As an example of the kinds of resources special terrains represent, we'll give you a brief summary of the terrain in the Original game. When your units get to exploring the terrain in other worlds, both Fantasy and Science Fiction, you'll discover whole new types of special resources. Refer to the CIVILOPEDIA and the **Terrain Reference** booklet for details.

Glaciers can be enhanced by *Oil* deposits, representing increased mineral wealth, and therefore yielding extra shields when worked. Alternatively, the

presence of Walruses indicate the availability of *Ivory*, with its greatly enhanced trade goods yield.

Musk Ox stand in some Tundra squares, indicating excellent food sources or the potential for good grazing; workers in these squares can produce additional food. Other Tundra squares display *Fur*, indicating the high potential for arrows because of desirable trade goods.

Swamp squares can contain *Peat*, whose usefulness as fuel is indicated by the enhanced shield yield, or perhaps *Spice*, exotic flavourings that are prized the world over, and therefore represent bonus yields in both food and arrow icons.

Gems shine in Jungle terrain to indicate the presence of precious stones, ivory, spices, salt, or other valuable commodities. These are good trade items and, therefore, the square in which they appear generates substantial arrows. Jungles also have the potential to produce exotic *Fruits* which naturally increase the food output.

Buffalo trotting across the Plains represent raw materials on the hoof; workers in these squares generate extra shields. On the other hand, *Grain* represents a particularly fertile piece of open ground, and a rich source of food.

Coal deposits, shown as black lump icons in Hills terrain, represent rich locations of coal or metal ores. These areas produce greatly increased shields, especially when mined. On the other hand, some hills are *Wine* country, especially suited for growing grapes. Wine terrain yields greatly increased trade.

Gold gleams in Mountains terrain, representing a bonanza of precious metal ore. The value of these deposits produces tremendous trade goods. Alternatively, workers might discover *Iron* deposits in mountainous areas, yielding a substantial number of shields.

Fish swimming in Ocean terrain represent the location of underwater banks and reefs where currents and nutrients create excellent fishing grounds. Fishing grounds produce increased amounts of food. On the other hand, *Whales* indicate the bounty of the deeps, and an increase in raw materials and trade goods as well as foodstuffs.

An *Oasis* is a very fertile island in Desert terrain where workers can harvest substantial quantities of food. Conversely, *Oil*, representing the presence of mineral wealth, especially petroleum, can also be found in Desert squares. As they do in Glaciers, Oil squares in Desert terrain yield extra shields when worked.

A *Pheasant* peers through some Forest terrain. The presence of game indicates excellent food sources available. On the other hand, *Silk* represents a luxurious product of mulberry Forests that brings increased yield from trade goods.

Impassable Terrain

A new concept that affects both Terrain and Movement in ***Civilization II: Test of Time*** is that of impassable terrain. This is terrain that regular ground troops cannot enter, even if a river runs through it. This new type of terrain occurs most frequently in the planets of the Science Fiction games, but it also shows up in the worlds of the Fantasy game. We don't want to spoil too much of the fun, so check the CIVILOPEDIA or the **Terrain Reference** booklet for specifics. There are very few types of impassable terrain, but they may be in a position to block you–or your enemies; they can

cut off ground travel onto a peninsula, for instance. Through technology, you might eventually develop ground troops capable of traversing even the harshest environments, air units that can fly over it, and naval units that can ferry your troops around these barriers. Finding impassable terrain represents a challenge to your civilization's ingenuity. You should still consider such tiles for production purposes when choosing a city site.

Optimal City Sites

The economic usefulness of the various terrain types is important when selecting city sites. Citizens work the terrain within a city's radius to produce the food, raw materials, and trade that the city needs to grow and be productive (see **The City Radius**). Some terrain types are more valuable than others, in that citizens working them produce more resources. Other terrains start out yielding little, and only develop their full potential when they are improved. These squares can be irrigated, mined, or surfaced for increased economic value. Other squares are important because they can be converted into more valuable terrain, as we'll discuss soon (for instructions on how to irrigate, mine, surface, and convert terrain, see **Settlers & Engineers**). The best city sites offer immediate food, raw material, and trade production, plus the potential for long term development.

Terrain Conversion

When surveying sites for a new city, keep in mind the potential for terrain squares within the city's radius to be improved. Hills and Mountains squares can be mined so that citizens working them produce increased raw materials. Plains and Grassland squares, whether or not rivers run through them, can be irrigated so that citizens working there produce more food. Swamp and Jungle squares can be cleared to yield Grassland or planted to yield Forest. Forest can be cleared to yield Plains. Plains and Grassland squares can be timbered to yield Forest if you need raw materials. An area dense with Jungle and Swamp squares looks barren at first, but has the potential to become a very rich city site.

Improvements are not limited to agricultural effects. Settlers and Engineers also improve terrain by laying roads across terrain squares. Roads allow better access to a city and, therefore, increase the trade goods citizens working some squares produce. Plains, Grassland, and Desert squares, for example, all produce trade once penetrated by roads. Railroads eliminate the movement point cost of the terrain across which they are laid and might increase resource production as well. For more information on terrain improvements, see **Settlers & Engineers**–they're the units that do the work.

Planetary Caretaking

Manipulating terrain to produce the maximum number of shields has a downside, of course. One cost of heedless industrial growth is a gradual polluting and poisoning of the environment. Of the many dangers posed by pollution in the real world, the greatest might be global warming. Theorists believe an unchecked rise in the planet's atmospheric temperature threatens catastrophic geographic changes, including melting polar ice caps, rising sea levels, and parched farmlands. Different threats of poisoning occur if nuclear weapons are detonated or a nuclear reactor melts down.

Civilization II: Test of Time models pollution from industry and nuclear disaster as a balancing factor for growth. As you steer your civilization into the industrial age, you must manage your cities and monitor your terrain to minimise pollution and prevent the disaster of global warming.

POLLUTION

Every turn, the game assigns a probability of pollution occurring within the economic radius of each city. The likelihood of this contamination depends on two factors: the number of shields produced (industrial pollution) and the population supported (smog). In some cities, industrial pollution is the major factor in the calculation, and in other cities smog is a bigger hazard. Below a certain level, the chance of pollution is negligible, but as industrial output builds, so does the likelihood of its darker side effects. Smog has no effect on pollution calculations until your civilization acquires the advance of Automobile.

Pollution is icky!

Pollution warning symbols (yellow triangles with little skulls in the Original game) begin appearing on the CITY DISPLAY in the GENERAL INFORMATION window when the combined pressures of smog and industrial pollution begin to create a significant threat of contamination. The number of symbols roughly indicates the probability each turn of a square within the city radius becoming polluted. For example, a city generating a large number of raw materials each turn (say 20) and inhabited by a large population might show several pollution symbols in its CITY DISPLAY. The exact probability of pollution being produced by industrial pollution and smog depends on the difficulty level at which you set the game.

Certain city improvements can help the situation. For example, a Nuclear Power Plant, Hydro Power Plant, Solar Plant, or Recycling Centre improvement in a city reduces the impact of industrial pollution, in turn decreasing the accumulation of warnings. Solar Plants also help prevent global warming by absorbing excess heat from the atmosphere. The Hoover Dam, a modern Wonder of the World, acts as a Hydro Power Plant for all friendly cities. The Mass Transit improvement eliminates smog.

Special Contamination

The detonation of certain extremely powerful weapons or a disaster in a city improvement can also cause contamination. For game purposes, ***Civilization II: Test of Time*** treats this as identical to industrial pollution, though in real life the effects might be considerably different (and longer term).

Extreme Weapons

Certain special, extremely destructive units not only destroy the army or city they target, but all units stacked with the target and those in adjacent squares as well. These also pollute a number of map squares around the impact square. Enemy units' zones of control (which are discussed under **Movement Restrictions**) might make it impossible for your Settlers or Engineer units to clean up this contamination in a timely fashion, and your rival might not spend the time or manpower. Unchecked pollution significantly raises the risk of a global warming disaster.

The units that cause this sort of mass damage are: Nuclear Missiles, Xaos Missiles, Fireballs, and Ne Plus Ultra disintegrator bombs.

Improvement Meltdown

If a Nuclear Power Plant, Nexus, or Biochaotic Generator suffers a catastrophic failure, half of the city's population is destroyed. Additionally, a random number of squares near the city become polluted.

The risk of meltdown always exists when a city that has one of these power sources goes into civil disorder. Civilian unrest might result in safety procedures becoming so lax that a catastrophic accident occurs. If you build these improvements in any of your cities, take special care not to allow those cities to go into disorder.

There is a technological solution to this threat in each game. For example, when your civilization achieves the technological advance of Fusion Power, the risk of meltdown disappears. Your Nuclear Plants automatically convert to fusion–powered facilities once you have achieved this advance.

POLLUTION'S EFFECTS

Pollution is represented graphically on the terrain square in which it occurs. It reduces the production of food, raw materials, and trade to one–half (rounded up) of pre–pollution levels. For example, a square where workers produced four food, one shield, and two trade before pollution blighted the square yields only two food, one shield, and one trade after contamination. Once the terrain is detoxified, workers' production returns to pre–pollution levels. In addition to the production effects, pollution causes practical problems. You can't build cities, Airbases, Elevated Platforms, Service Pads, or any sort of transport sites on a square that is currently polluted.

Polluted terrain can be detoxified by any settler unit. The working unit's key is marked with a "P" to note it has been ordered to detoxify a polluted square. After four turns of work (an Engineer can clean up in two), the pollution disappears. Adding more settler units to a polluted square speeds the cleanup. If you use the GOTO CITY order, your city list marks which locations suffer from pollution. Note that a polluted square within the radius overlap of two cities is listed once for each city; if your cities are close

together, this might give you an alarming overstatement of the total pollution your civilization suffers.

Monitoring Pollution

Your environmental advisors inform you immediately when any map square within your territory becomes polluted–unless you've disabled that feature. A pollution icon appears on the polluted square.

You can monitor the extent of pollution throughout your civilization by watching the pollution indicator, a small icon in the Status window. The colour of the icon depends on the number of currently polluted terrain squares and the number of turns they have remained contaminated. It indicates the extent of the risk of global warming.

Global Warming

Global warming might occur at any time that at least nine map squares, anywhere in the world, are polluted. The probability that it will happen increases with the length of time contamination on this scale is left untreated. If polluted terrain is left unattended for too long, environmental damage occurs.

Once environmental disaster strikes, the cycle starts over again. The planet achieves equilibrium at the new, higher temperatures. If pollution continues or increases once more to high levels, another bout of environmental problems might occur. This cycle can repeat endlessly if pollution is not controlled.

MINOR TRIBES

Thatch–roofed hut icons scattered about the map of the Original game indicate the presence of minor tribe villages. (In the Science Fiction worlds, minor tribes appear as wreckage from the crashed space ship and ruins of previous civilizations. In the Fantasy setting, minor tribes look like stone circles, pillars, and other ruins.) These populations are too isolated, too unorganised, or too migratory to develop into major civilizations. Minor tribes react to contact with a range of emotions, from delight to hostility. There is no way to predict a village's response, but most potential responses are favourable. There is one unique situation; most air units cannot encounter minor tribe villages. Instead, their overflight scares the villagers, and the hut icon vanishes as the tribe abandons their territory in terror.

Playtesters and **Civilization** fans alike call these icons "goody huts." Here's what might happen when you move a ground unit onto terrain that a minor tribe occupies.

- Occasionally a minor tribe is sufficiently advanced, yet awed by your emissary, to immediately form a new city and become part of your civilization.
- On the other hand, your unit might have stumbled upon a village which has discovered an advance unknown to your civilization. Graciously, they share their knowledge.
- To placate your emissary unit, a village might give your civilization valuable resources (gold) as a gift. The gift is added to your treasury.

- Your emissary unit stirs up the young bloods in the village with his tales of valour and victory. All the impressionable warriors run off to join your army, creating a new military unit "carrying your colours."
- Your emissary makes a horrible faux pas, and the minor tribe turns vicious. A random number of barbarian units comes boiling out of the terrain squares that adjoin the village. Duck (or run, if you can)!
- Your emissary arrives at a spot rumoured to contain a village only to find the inhabitants long gone and the dwellings empty. Nothing occurs.
- Your unit catches up with a particularly peripatetic tribe, and impresses them with his or her goods and possessions. The minor tribe is willing to join your civilization, though not necessarily interested in settling in their present location. The villagers become a Settlers (or Engineer) unit carrying your key.

MOVEMENT

There are two basic methods of moving units a square or two at a time: by keyboard commands or (if you have enabled mouse movement) by mouse clicks. The keyboard method uses the eight edge keys of the numeric keypad. The [5] key in the centre is inactive; think of it as your unit's position. The keys surrounding the [5] represent the points of a compass. For example pressing [7] sends your unit north-west, while pressing [6] sends your unit east.

The mouse method involves placing your mouse cursor near the edge of the unit in the direction you want it to travel. When the cursor turns into an arrow pointing in the appropriate direction, click the left mouse button to make the unit move. Note that this method works only if you turn on the MOVE UNITS W/ MOUSE option in GAME OPTIONS. You can also use the GOTO order to send a unit over long distances, as we explain in detail under **GoTo Orders**.

Units can move up to the limit of their movement factors, with a few caveats. The most important exception is that a unit can always move at least one square in a turn, regardless of the movement point cost of the terrain. Are we saying a unit can always move? Not quite. An enemy unit or city's presence can hamstring any unit with the zone of control restriction, as you'll see in a moment. There are other, common–sense restrictions on where units can move and where they can't, which are elaborated under **Movement Restrictions**.

Back to movement factors. A unit with a movement factor greater than one must compare its movement factor with the movement point cost of the terrain square you wish it to enter. The unit pays the movement point cost (subtracts the movement point cost from its remaining movement factor) for each new square it enters, until you choose to stop advancing or the unit's movement factor is smaller than the movement point cost of the terrain square. There's a small chance that a unit can enter a square even if its movement factor is lower than the movement point cost of the terrain, which is why sometimes Chariots can cross Mountains squares, and sometimes they can't. When an army is unable to complete a movement order because it doesn't have enough movement points to proceed, its movement is finished for the turn. The map then centres on the next active unit.

Roads and railroads (and their equivalents) speed the movement of ground units. They do this by lowering the movement point cost of the terrain over which they are built. Any terrain square with a road across it costs just one–third of a movement point to cross. Any terrain square with a railroad costs no movement points to cross–zero! Cities automatically have roads in their city squares, so entering a city square always costs one–third of a movement point. Once your civilization discovers the requisite advance, city squares are automatically upgraded to railroads (or ley lines or slideways), so your units can slide through them for free.

To simulate the effect of river transport, which was particularly important to early civilizations, ground units moving along most rivers only use one–third of a movement point for each square (i.e., as if they were moving along a road). Note that the unit must follow the main river channel to receive this benefit; simply hopping from one bend to another doesn't count. If the river runs through impassable terrain like vertical canyons or acid swamps, however, the terrain remains impassable to regular ground troops.

In addition, some units (like Alpine Troops, Explorers, and Partisans) have the ability and equipment to move quickly through even the most difficult terrain. In game terms, they treat all terrain as roads. This means that it never costs them more than one–third of a movement point to enter any square–regardless of the terrain type or the actual existence of roads. Units with the ability to treat all terrain as roads can still use railroads for free movement, just as any other unit.

Sailing experience accumulates with new advances. In the early days, your primitive ships, like Triremes, have a 50 percent chance of being lost at sea each time they end their turn in a square that is not touching the shoreline. However, once your civilization discovers Seafaring, your crews' experience of the coastal waters is vaster, and they are less likely to panic, only foundering 25 percent of the time; the chance of a Trireme being lost at sea is correspondingly reduced. Once you discover Navigation, the crews' knowledge and confidence is greater still, and their likelihood of unexpected foundering is reduced to one in eight. (If you possess the Lighthouse Wonder, the chance of foundering is eliminated altogether–but we'll tell you more about that in **Wonders of the World** later on).

THE ACTIVE UNIT

How do you know whose turn it is? Every turn, ***Civilization II: Test of Time*** activates each unit in turn by centring the map around the unit, highlighting the terrain square it is in, and making it blink. You can give orders to each unit as it becomes the active unit (see the **Orders Menu** in **Reference: Screen by Screen**). Five special orders deserve fuller explanations here.

NO ORDERS

To skip a unit for the turn, press the SKIP TURN key (Spacebar) or choose the option from the ORDERS menu. Once you've skipped a unit's turn, the troops are on liberty for the day–you can't recall them to duty again this turn.

GOTO ORDERS

To send a unit on a long trek, you have two options. You can click–and–hold on any square on the map until your cursor turns into a crooked "Go" arrow. If the destination square isn't visible in the MAP window, you can use the

ZOOM OUT button to enlarge the area you are viewing, click on the WORLD window to shift your view to another area of the map, or switch to VIEW PIECES mode by pressing the V key or choosing the option from the VIEW menu, and move the cursor with the number pad keys. If you'd rather send a unit to a city, you can press the GOTO key (G) or choose the option from the ORDERS menu. A screen pops up listing all of your cities; click on the ALL PLAYERS button to see every destination city in the world.

Once a destination is established, the unit automatically "goes to" that square, whether it takes only one turn or many to complete its orders. If the unit is attacked or an obstruction prevents it from completing its journey, the unit becomes active once again. Ground units cannot travel between continents on a GOTO order, and units cannot travel between maps on a GOTO order, either.

Wait Orders

To skip a unit temporarily, press the WAIT key (W) or choose that option from the ORDERS menu. This passes you on to the next unit and sends the skipped army to the end of the line. You'll see this unit again after all the others have had a chance to move.

Paradrop Orders

Paradrop–capable units (like Paratroopers) that have not moved this turn have the special ability to make paradrops when in a city, Airbase, Elevated Platform, or Service Pad. Press the PARADROP key (P) or choose the option from the ORDERS menu. Your cursor turns into a parachute. You can make a paradrop in any land square within the unit's paradrop range of the origination square, as long as the target square is not occupied by enemy troops. As you run the mouse over the map, the cursor changes from a parachute to a crossed–out parachute to indicate "illegal" destination squares. Click on a square to make the drop. Paratrooper units have one movement point after they drop to attack or change position. You cannot paradrop onto a different map.

Airlift Orders

Once your civilization has discovered the requisite advance, you can build Airport improvements–and their equivalents, Temporal Portals and Instaporters–in your cities. Once you have two or more of these on the same map, you can airlift one unit per turn into or out of each. Activate a unit in a city, then press the AIRLIFT key (L) or choose the option from the ORDERS menu. A list of cities with this improvement appears, and you can select your destination. Enemy air–to–air units within range of either the target or destination city have a chance to scramble and interdict the transport.

Note that these airlifts work only between cities that are on the same map. In the new games, there is a city improvement that acts as an advanced version of the Airport. The Starport, Astral Portal, and Spaceport allow units to be airlifted not only between cities on the same map, but also between cities–both of which must have the improvement–on different maps.

Activating Fortified and Sleeping Units

Fortified and sleeping units do not become the active unit. If you want them to move or change position, you must activate them first. Click the mouse pointer on the square in which fortified or sleeping units are stationed. This opens a box displaying all units in that square. Click again on the icons of all units you wish to activate. Fortified or sleeping units within a city must be activated from within the CITY DISPLAY–see **City Display** for instructions on how to do this. Sleeping units automatically activate when enemy units move into an adjacent square.

NAVIGATING THE MAP WINDOW

We've talked about moving your units around the map, but there are several tools that allow you to look at different map areas and move around the game world. First, let's describe the two modes of ***Civilization II: Test of Time***. In MOVE PIECES mode, the active unit moves, and you can use the number pad keys or cursor arrows to direct it across the map. In VIEW PIECES mode, the square–outline cursor blinks, and you can use the number pad keys to move it across the map. You are automatically placed in MOVE PIECES mode at the beginning of each turn, and automatically switched to VIEW PIECES mode when "end of turn" is flashing. Toggle between the modes by pressing the [V] key, clicking on the units portion of the STATUS window, or selecting your choice on the VIEW menu. You cannot switch to MOVE PIECES mode unless there are units still waiting to move.

Of course, you can simply click on a map square to centre the MAP window there. If you want to move a long distance, you can use the ZOOM buttons to increase the acreage shown in the window, or click on the WORLD window.

If your cursor is over a unit, stack of units, or city square in VIEW PIECES mode, you can press the ACTIVATE UNIT key ([A]) to activate some or all of the units in that square. If there is more than one unit, a pop–up box allows you to choose among them. If the active unit in MOVE PIECES mode happens to be standing in a city, the ACTIVATE UNIT key also works to activate any fellow units in the city, without opening the CITY DISPLAY.

MOVEMENT RESTRICTIONS

Most of the restrictions placed on unit movement are a matter of common sense, as we mentioned earlier. We're spelling them all out here, in case you try to order a unit somewhere that seems possible and the game won't let you do it.

Ground Units

Ground units (all non–ship and non–air units) normally move only on land. To traverse the wide (or narrow) oceans or even to get across lakes, they must board naval transport. In addition, some ground units can move to other maps on their own power, some can use transport sites (built by settler units), and some must be taken there by naval transport. Not all ships take passengers; see **Naval Units** under **Mobile Units** for a list of those that do in the Original game. The others are listed on the **Poster** and in the CIVILOPEDIA.

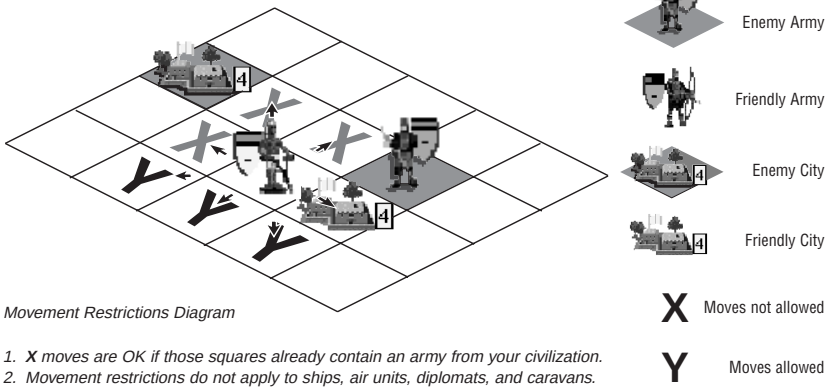
Boarding a ship uses up all a unit's movement points for the turn and puts it to sleep. If you attempt to move a naval unit into a land square that does not contain a port city, any passengers are offered the option to MAKE LANDFALL and disembark. If a naval unit carrying ground troops makes port, all passengers automatically wake up.

Naval Units

Ships normally move only on the ocean, although they can also sail across inland lakes. Ships cannot navigate rivers, deltas, or swamps in the game, though of course some do in real life. Instead, river navigation is represented by the reduced movement point cost for ground units following riverbeds. City squares that touch a shoreline along one side or at one corner are the only "land" squares that ships can enter–here they make port. Making port costs one movement point.

Air Units

Air units can cross both land and sea squares at a cost of one movement point per square, but most must land in a friendly city, at an Airbase (or Elevated Platform or Service Pad), or on a carrier–type unit to refuel every turn or two. Some air units, like Helicopters, have the flexibility to land almost anywhere, but many of them are damaged if they remain in the field for too long. Though planes can sometimes fly above rival ground units in real life without causing an incident, they are always required to encounter enemy ground units that they overfly in ***Civilization II: Test of Time***. To avoid attacking rival units by accident, carefully guide your planes around them. Air units have the advantage in manoeuvrability. Neither ground nor ship units can attack air units that appear "next to them" because of the disparate vertical locations. The one exception is the Diplomat or Spy unit's ability to bribe adjacent units into switching sides. See **Diplomats & Spies below.**



Movement Restrictions Diagram

1. ***X*** *moves are OK if those squares already contain an army from your civilization.*
2. *Movement restrictions do not apply to ships, air units, diplomats, and caravans.*

Zones of Control

Ground units cannot move directly from one square adjacent to an enemy army or city to another such square. The squares that surround a unit are in that unit's *zone of control*–the same holds true for a city. Neither ground troops nor most other ground units can move directly from one rival's zone of control into another square within a rival's zone of control. The prohibited square might be adjacent to the first enemy army, to another army (even one

from a different civilization), or to any enemy city. Ground units can only move into such a controlled square if a friendly unit or city already occupies the square, or if you have formed an alliance with a rival player (which we'll explain fully in **Diplomacy**).

Some units have special abilities that allow them to ignore zones of control. Air units have the whole sky in which to manoeuvre; naval units have the open sea. Diplomats and Spies use social convention and diplomatic immunity with equal aplomb, and Caravans and Freight units can argue neutrality and engineer special deliveries. Partisans use intimate knowledge of the local terrain to good effect. Explorers' solitary nature and singleness of purpose get them out of tight places. The **Movement Restrictions** diagram offers a graphic representation of a unit confronted by enemy zones of control.

CIVILIZATION ADVANCES

The major dynamic of change throughout the history of civilization has been the continuing advance and accumulation of knowledge. As humankind progressed by fits and starts through the ages, civilizations rose and fell, their success or failure due to what knowledge they acquired and how they employed it.

Those who first acquire new knowledge are often able to employ it to build a more powerful position, but there are many cases of civilizations that obtained some new invention first, then failed to use it to their advantage. The pace at which a society develops and implements new knowledge depends on many factors, including its social organisation, economic organisation, geographic location, leadership, and competition.

The concept of progress being not only inevitable, but even good, is a relatively recent phenomenon. Only in the last several hundred years have we actively studied history and considered the evidence of the historical record. For most of human history, the pace of progress was so slow as to be barely detectable, but since the Industrial Revolution, the pace of advance and change has dramatically increased. Rapid change is now considered normal. For much of the world, new discoveries are continually expected and are not a surprise.

THE CONCEPT OF CIVILIZATION ADVANCES

As we said in **City Management Concepts**, scientific research is what drives your civilization's scientific and intellectual growth. The science (beaker icons) each city generates every turn represents a percentage of the total trade that city brings in. You can adjust the amount of science generated with the TAX RATE option on the KINGDOM menu. A low science ratio generates advances slowly; a high ratio generates them more quickly.

You want to accumulate research, in the form of beakers, to gain advances–new technologies. Each new advance allows your civilization to build new units or city improvements; sometimes a new advance makes possible the construction of a new Wonder of the World. Each new civilization advance also opens up a path to researching further technologies. You could look at the connections between advances as a flow chart, as a web, or as a tree. The important concept is that each technology is a building block that allows research into further advances. You can even research into the realms of science fiction; each futuristic advance you discover adds bonus points to your final score, as we'll explain in **Future Technology**, coming right up.

Accumulated research isn't the only way to gain advances. Contact with a minor tribe might also net you a new civilization advance–see **Minor Tribes** for all the possible outcomes of an encounter. Finally, parley with other civilizations can result in an option to exchange technologies, and war offers the opportunity to wrest them by force from cities you subjugate. We'll give you the full details under **Diplomacy**.

In the new science fiction and fantasy games, it is possible that your civilization will be physically or psychologically incapable of researching certain advances (the only game exempt from this is the Original). Some advances are unique to a particular tribe–aliens, for example, or elves. Others can be traded for, stolen, or discovered through the effects of events, but not researched. You may, of course, play your next game as a different tribe to see the effects of any advances you could not research before.

The scientific research performed in each city you own is totalled in the SCIENCE ADVISOR's Report (see **The Advisors** menu in **Reference: Screen by Screen** for more about the Science Advisor and his duties). Each new advance that your civilization discovers "costs" a certain amount of science (accumulation of beakers). As time progresses, new advances require more funding to research. The SCIENCE ADVISOR's Report also lists the technologies you have already discovered or been given, and the current advance your scientists are researching.

CLIMBING THE TECHNOLOGY TREE

Once your civilization begins to accumulate scientific research, your Science Advisor asks you to choose a new civilization advance to research. Before making your choice, you can immediately get help concerning the available technologies. Press the GOAL button to see a list of all the advances in the game. Select the one you're most interested in pursuing, and click OK to find out which of the options you now have will further your research toward your goal. A message informs you if none of the options is suitable. Technologies you should be able to research but that are not on the current list of possibilities eventually show up (at a later choice–point). Once you have chosen a direction for your research, you cannot change your mind. Your scientists pursue that topic until they learn the new civilization advance. If you are unfamiliar with the advantages of a particular advance, highlight it and click on the HELP button to see the CIVILOPEDIA entry.

Advances in each game are divided into broad categories. The icons in front of each advance show which category each advance belongs to. They can help you decide which advance will further your general strategy if you are, for instance, following a militaristic path, rather than an economic one. These icons also appear in the diplomatic screens, to help summarise the technology paths of your opponents.

When research is complete, your chief investigator announces the discovery. The CIVILOPEDIA screen appears, detailing the impact of the advance, including any new units, city improvements, and Wonders that have become available. The PRODUCTION menus in each CITY DISPLAY are immediately revised to include these new items wherever they are appropriate (for instance, inland cities can never build ships, so ship units never appear on their PRODUCTION menus, even if you have discovered Navigation or later seafaring advances).

As each new advance is acquired, your advisor appears again to ask for a new topic to research. The list of choices is updated with each new discovery to reflect your growing knowledge base. Technologies you acquire through means other than research (see **Diplomats & Spies** and **Minor Tribes** for details) no longer appear on the list of choices–you've already discovered them. If by chance you're given the civilization advance your scientists are currently researching, your Science Advisor immediately switches the research effort to a new topic of your choice–the accumulated beakers that represent research into the gift advance are transferred to the new topic.

We've provided advice about which advance you may need at any given time, and when. When deciding which next civilization advance to research, you can use the GOAL button to help you navigate from low-level discoveries to their as–yet–theoretical conclusions. In addition, each CIVILOPEDIA entry includes the relevant segment of the "advance tree" in a graphical form.

THE POSTER

The Poster included with the game contains a graphic technology tree, or flowchart, that lists every civilization advance in all of the various games. Each entry on the chart gives the name of the advance and any new units, improvements, Wonders, or grand project parts your civilization can now build as a result of this discovery. Some advances also allow your Settlers or Engineer units to undertake new orders.

Many technologies are the synergy of two diverse threads of inquiry. As a result, a second prerequisite advance might be listed in parentheses below the name of the current advance. By following the arrows along the Original chart, for example, you can see that Alphabet leads to Mapmaking. By reading the second prerequisites, you can see that Mapmaking (along with Astronomy) leads to Navigation.

You can use this flowchart as a quick reference to what you want to discover next, or to plan an extensive research effort that culminates in an important technology like Railroad or Nuclear Fission. It can also remind you of advances you are ignoring.

FUTURE TECHNOLOGY

In the Original game, after your scientists discover the Fusion Power and Recycling advances, they can begin researching futuristic advances. These not–yet–imagined civilization advances are collectively known as "Future Tech;" when your civilization accumulates enough scientific research (beakers) to finish one unit of Future Tech, you can research another. Each

Future Tech you discover adds five points to your final score (see **Scoring** for other ways to boost your final total).

In the fantasy games, Future Tech is called Hanging from Yggdrasil (representing the wisdom Odin gained while hanging helpless from a branch of the World–Tree). In the Lalande game, it's Xenology Studies. Be forewarned–unlike in the Original game, getting to Future Tech, Hanging from Yggdrasil, or Xenology Studies in the new games does not necessarily mean that you have exhausted the research possibilities in that game; it might simple mean that you have reached a point at which you must trigger an event in order to move forward–check the poster.

Special Advance Effects

A number of the advances in ***Civilization II: Test of Time*** have effects independent of the new units and improvements you can build. We'll summarise these effects, as they relate to the Original and Extended games, here. Similar advances have similar effects in the other new games; each advance's CIVILOPEDIA entry reminds you of these effects.

- Achieving the Corporation advance allows you to focus a city's production on revenue. The discovery of the Corporation advance allows your citizens to "build" the Capitalisation improvement, and market a city's research to produce high-tech consumer goods that generate tax income.
- The discovery of the Democracy advance allows each Courthouse improvement to make one content citizen happy.
- Once your civilization discovers the Electronics advance, your Coliseums can make four unhappy people content in each city, not just three.
- he discovery of Fusion Power eliminates the possibility of a meltdown in your Nuclear Power Plants. In addition, it gives the Thrust Components of your spaceship 25 percent more power.
- Both Navigation and Seafaring reduce the chance of your Trireme units being lost at sea.
- Once your culture has embraced the Nuclear Power advance, all of your Naval units gain one extra movement point.
- If you discover the Philosophy advance before any other civilization has done so, you earn a "free" advance.
- Once your civilization has achieved the Railroad advance, your city squares are automatically upgraded from roads to railroads. It no longer costs any movement points to enter cities.
- Once your civilization has achieved the Refrigeration advance, all your city squares are automatically upgraded from irrigated land to farmland, if the terrain is suitable. Once you build the Supermarket improvement, your workers can harvest 50 percent more food from these spaces.
- The discovery of Theology makes your Cathedrals more influential. Instead of making three unhappy people per city content, a Cathedral now relieves four.

There is one disadvantageous special effect. Once you discover the advance of Communism, the effect of the Cathedral improvement (which discovering the Monotheism advance allows you to build) is lessened. Instead of making three unhappy people per city content, a Cathedral now only relieves two.

If your culture has discovered both Theology and Communism, the special effects cancel each other.

WONDERS OF THE WORLD

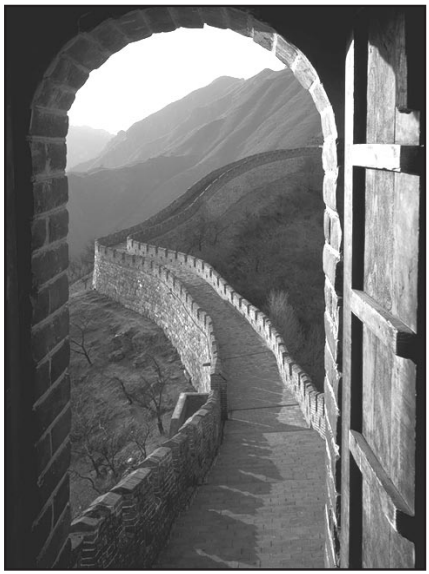
A Wonder of the World is a dramatic, awe–inspiring accomplishment. It is typically a great achievement of engineering, science, or the arts, representing a milestone in history. As your civilization progresses through the years, certain advances make building Wonders of the World possible. Twenty-eight Wonders are included in each game in ***Civilization II: Test of Time***. In the original game, there are seven to represent each of the four great epochs of civilization: the Ancient World, the Renaissance (including the High Middle Ages), the Industrial Revolution, and the Modern World (present and future). These Wonders are the extraordinary monuments of a civilization, bringing everlasting glory and other benefits to their owners.

THE CONCEPT OF WONDERS

Wonders of the World are like extraordinary city improvements, in that they are structures (or achievements) that your civilization can undertake to "build." Unlike city improvements, each Wonder is unique, existing only in the city where it is constructed. Each one confers a specific, unique benefit on the civilization that owns it (you can find the specifics in the CIVILOPEDIA listing for each Wonder). If one of your cities is captured by a rival power, and you had built a Wonder there, that Wonder no longer benefits your civilization. Instead, its bonuses now apply to the conquering civilization. The same holds true if your units capture a city containing a Wonder from a rival player.

If a Wonder is destroyed by the decimation of the city in which it stood, it can never be rebuilt. Its benefits are lost to the world forever. Further, some of the glories of certain Wonders dim over time. Objects and accomplishments that awed the ancients lose their lustre for people of the Modern Age. The achievement of later advances can negate the benefits of older Wonders, regardless of whether your civilization or another discovers the cancelling advance.

You can build a Wonder only if you have discovered the advance that makes it possible, and if it does not already exist somewhere else in the world (if it exists in another city, it won't appear as an option on your PRODUCTION menu). However, you can start construction of a Wonder even if another civilization is working on the same project–you just race to see who gets done first. A message warns you if another civilization's completion of a Wonder is imminent.



If you are building a Wonder in one of your cities and the same Wonder is completed elsewhere before you finish, you must convert your production to something else. Any excess shields you have accumulated beyond the number required to construct your new project are lost, so be careful what you choose. As you click on each potential project, you see a graphic or numeric representation of the shortfall or excess of shields you currently have with respect to the new project's requirements.

Wonders are not destroyed when an enemy captures the city in which they exist. However, if a city possessing a Wonder is destroyed (that is, if its population is reduced to zero by siege or bombardment), that Wonder is lost forever and cannot be rebuilt.

Wonders of the World are often long–term projects, as befits their magnificence. If you want to accomplish construction of a Wonder faster than the city that is building it can generate shields, you have several options. You can divert trade goods into the Wonder's coffers by moving a Caravan or Freight unit into the city of construction and accepting the choice HELP BUILD WONDER–see **Caravans & Freight** for details about Caravan interactions. You can also spend cash directly from your treasury. Click the BUY button at the top of the PRODUCTION menu; if you have enough cash on hand to purchase the Wonder, you can choose to pay, and the Wonder will be completed next turn. In addition, you can disband troops currently in the city that is constructing the Wonder. Each disbanded unit contributes shields equal to one-half its construction cost directly to the RESOURCE BOX, representing the reallocation of support from the unit to the construction.

Wonders can be built in any city and more than one may be built in the same city. Each Wonder has both specific and general benefits. You can read about the specific benefits in the appropriate CIVILOPEDIA entry. The glory that accrues to your civilization for possessing a Wonder is one of the general benefits conferred by such great works; more importantly, this glory continues to accrue even if new advances make the Wonder's specific benefit obsolete. In addition, each Wonder that your civilization possesses adds to your score. The presence of Wonders is significant to the calculations determining the top five cities in the world. Further, the presence of Wonders influences historians, such as Gibbon, who periodically rate the world's civilizations.

UNITS

Units are groups of citizens, soldiers, and envoys that can move around the world of ***Civilization II: Test of Time*** and interact with other units and civilizations. Some non-combat units, like Caravans, Explorers, and Settlers, have special functions that are explained separately.

UNIT CONCEPTS

Units are the pieces you move around on the map in ***Civilization II: Test of Time***. Each civilization's units carry a different colour key (located at the top of the icon). Units carrying red keys are always barbarians.

Units can be divided into types according to the way they move: ground (or land) units, air units, and naval (or sea) units. Each unit has statistics for attack strength, defence strength, and movement points. These stats are listed in a shorthand, code–like set of numbers, which we've already mentioned is called the ADM–this stands for Attack/Defence/Movement. You can find each unit's ADM numbers in the CIVILOPEDIA. In addition, each unit–even non–combat units–has statistics for hit points and firepower, which are also found in the CIVILOPEDIA. The strength bar (part of a unit's key) indicates how many hit points that unit currently has, both by its length and by its colour.

Attack strength shows the likelihood of inflicting damage when attacking an opponent. Units with a high attack strength are useful for offensives (attacking the other unit first).

Defence strength represents the ability of a unit to defend itself when attacked; it is the likelihood that damage will be inflicted on an attacking unit. Units with high defence strength are useful for defending cities and other positions against enemy troops. The terrain on which a unit stands can increase its defensive strength, as you'll find in **Terrain & Movement**.

Movement points indicate how far a unit can travel–or how many times a unit can attack–in a turn; they're explained in detail in **Terrain & Movement**, too.

Hit points indicate how much damage a unit can withstand before it is destroyed. Units with a greater number of hit points can absorb more damage in combat. A green strength bar indicates that a unit has more than two–thirds of its hit points remaining, a yellow strength bar means the unit has between one–third and two–thirds of its hit points, and a red strength bar shows that a unit has less than one–third of its total hit points remaining. Hit points can be restored by skipping turns (pressing the Spacebar), especially in cities with repair facilities.

Firepower indicates how much damage a unit can inflict in a round of combat. Units with a high firepower pack a powerful wallop.

A unit's status is important when you want to give it orders. Units can be on active status, which means they take a turn becoming the active unit. Units on sleep status remain inactive until an enemy unit comes within one square of them; at that point, they "wake up" and become active. Units on fortified status are also inactive; their status is indicated by the letter "F" on the unit's key and by the "entrenchment" icon that appears around the base of the unit–in fact, they are entrenched in a defensive posture. They remain inactive even if rival units approach them, though they will defend themselves when attacked. Clicking on either a sleeping or fortified unit allows you to change its status to active. When the unit becomes the active unit, you can give it new orders.

Every unit has an *observation factor*. Most units can only "see" units and objects on the edges of the terrain squares directly adjacent to their own. Early in the game, when most of the map is black, the limits of this observation area are obvious, as the blackness rolls back only so far with each move a unit makes. Even after you have explored a continent, barbarians and rival units can appear "out of nowhere" because they are lingering outside the limits of your units' observation.

Some advanced units have greater observation factors. They can "see" into a second square in all directions, which makes them useful for monitoring a rival's movements and anticipating surprise attacks. Exceptional observation factors are noted in unit descriptions in the CIVILOPEDIA.

As time passes, civilizations develop refinements, and new technologies allow you to replace old units of a particular type, like infantry or naval units, with a progression of ever more capable ones. Modern units often fulfill specialized roles, and some units have special abilities and unique capabilities. Non–combat units also have advanced versions: Settlers are followed by Engineers, for instance.

In multiple map games, most units have common sense restrictions about which maps they can exist on. Normal folk cannot enter the undersea world, for example, because they would drown. Some units, like the Dropships in the Science Fiction game, can transport other units *between* maps. Of course, units that cannot exist on the destination map also cannot use transport facilities that would take them to that map. Unit interaction with multiple maps and the various types of intermap transport are covered below.

MILITARY UNITS

Through the years, much of your time is spent moving and positioning armies. A strong military is the best defence against rivals and barbarians. Military units are also the eyes of your civilization, exploring the world as they move. Finally, they can serve you offensively by defeating the armies of your rivals and capturing their cities.

Armies can be ground units (Legions, Cannons, and Armour, for example), naval units (Triremes, Ironclads, Battleships, etc.), or air units (Fighters, Bombers, and Nuclear missiles). Several non-combat units need further explanation, so they're discussed in detail a little later. All units, whether they are combat or non-combat oriented, are described in the MILITARY UNITS option of the CIVILOPEDIA.

GROUND UNITS

The majority of the units in ***Civilization II: Test of Time*** are ground units. These armies move over the map terrain square by terrain square. They spend movement points according to the type of terrain they are entering, observe movement restrictions like zones of control, and attack rival units when you move them into a square containing an enemy army. Most ground units have an observation of one square.

PILLAGE

Armies can strip the countryside through which they roam of any improvements any settler–type units have built, tearing up roads, trampling crops, and collapsing mines. The occupying army destroys your choice of one improvement each time you press the Shift and P keys simultaneously, or choose PILLAGE from the ORDERS menu. It takes one turn to pillage one improvement.

Air Units

Air units operate under some special movement rules. These units can cross any terrain square at a cost of one movement point per square. Because they are airborne, they get no bonus for crossing squares improved by roads or railroads. Most air units (except missiles) have an observation range of two squares in any terrain.

Many air units must end their movement in a friendly city, at an Airbase (or equivalent), or on a naval unit capable of carrying air units, as these are the only areas where they can safely land. Flyers with multiple turn ranges, like Bombers and Stealth Bombers, must land for refuelling before their turn allowance runs out. In addition, attacking uses all of a multiple-turn range air unit's remaining movement points for each turn. Therefore, if you attack during the last leg of a return flight, the unit does not have enough movement points to return home safely, and it crashes and disappears. Fighters and other single-turn range air units can attack targets as many times as they have movement points. However, be sure you save enough movement after the attack to return to a landing area, or your pilots kamikaze!

All missile units are one-shot attackers; the icons represent missiles that are spent in the aggression. If you have miscounted the number of squares to your destination, or another unit's movement or position prevents a missile unit from reaching a target city or unit, you can attempt to return the missile to a friendly city or Airbase, or to a unit capable of carrying missiles (like a Submarine or Carrier). If your missile gets stranded–that is, there is no target unit or city within reach, and no safe landing area–the missile is a dud that falls to earth harmlessly. It disappears from the game.

If a city is the target of a normal missile attack, the strongest military unit defends against it (the unit in that city with the largest defence factor). There is no collateral damage to city improvements. If a city is the target of a special missile attack–Nuclear, Xaos, Fireball, or Ne Plus Ultra–half of the population is destroyed. All military units in and adjacent to the target square are destroyed as well, regardless of the civilization to which they belong. If a military unit or stack of units is the target, all units in the stack are destroyed. In addition to the loss of units, all land terrain squares adjacent to the impact square become polluted.

Helicopters are an example of a unique type of air unit that does not need to return to a base for refuelling; these have an unlimited movement range similar to a ground unit. However, some of these units have a fatal limitation. Every turn that a Helicopter starts in the field–not taking off from a friendly city, Airbase or Carrier–it suffers a small amount of damage. Eventually, it must return to a friendly city or Airbase for repairs. A helicopter–type unit can only make one attack per turn; attacking uses all remaining movement points for that turn.

Naval Units

Naval units also adhere to some special rules. Some naval units have the capacity to carry passengers–ground units. These include Triremes, Caravels, Galleons, Frigates, and Transports. Carriers can only transport air units. Submarines can only transport missile units. When two ships occupy the same square, the one that leaves first takes up to its carrying capacity of passenger units with it.

Most naval units can conduct shore bombardments–that is, they can attack units standing on the coastal squares of continents and islands. Because of the high degree of inaccuracy, the firepower of both the ship and its target is reduced to one when a ship bombards a unit, city, or stack on shore. Submarine and Transport units cannot conduct shore bombardments at all.

Many naval units, like Battleships, Carriers, Cruisers, Destroyers, and Submarines, have enhanced observation ranges at sea. Each can "see" enemy ships and planes from two ocean squares away. Rival submarine–type units are the only exception to this rule, as their ability to travel underwater camouflages them from most units' view (it likewise conceals your subs from your enemies), unless the submarine unit is attacking the observing unit. Some units–Destroyers, Cruisers, AEGIS Cruisers, and Helicopters are examples–can spot Submarines if they are adjacent to them. Note that Submarines cannot spot rival Submarines!

COMBAT

Combat occurs when a unit attempts to enter a map square occupied by a unit or city of another civilization–unless the unit is a Diplomat or Spy, in which case it can offer bribes to units or conduct a variety of business in cities–or unless the unit is a Caravan or Freight unit, in which case it can establish a trade route when it enters a city. Everybody else just fights. Battles are resolved immediately.

Most battles result in the destruction of one army or the other. When more than one unit occupies the defender's square, the unit with the highest defensive strength (as determined by comparing the second digit in the units' ADM numbers, and making allowance for veteran status) defends. If it loses, then all other armies stacked with it are destroyed as well. However, stacked units taking advantage of Fortress improvements or taking cover in city squares are destroyed one at a time.

Players of the original ***Civilization*** were occasionally disconcerted when a "lucky" veteran Phalanx unit, fortified in an enemy city, destroyed an attacking Battleship unit. Mathematically it was possible, but the image conjured up just didn't sit right. How could ancient spearmen take out a modern steel warship? To smooth out such freakish reaches of probability, ***Civilization II: Test of Time*** has two statistics for each unit: hit points and firepower.

Hit Points & Firepower

Hit points are graphically indicated by the coloured strength bar in each unit's key. Both the length of the strength bar and the colour are significant. As a unit loses hit points in an attack, its strength bar gets shorter. In

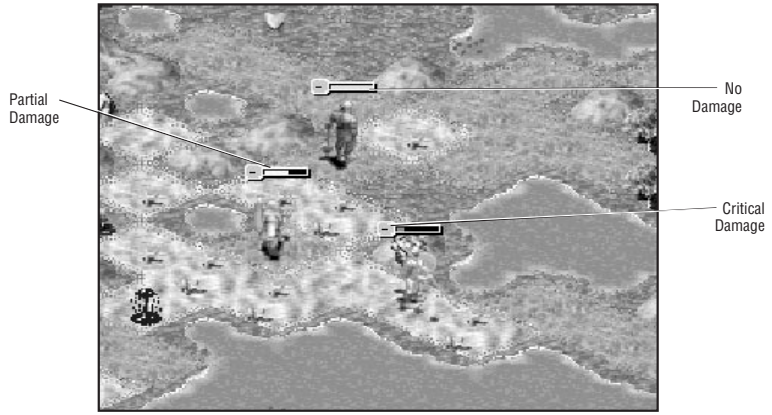
addition, when the unit is reduced to approximately two-thirds of its full strength, the strength bar changes from green to yellow. When a unit's hit points are reduced to around one–third of its full strength, the bar changes from yellow to red.

Hit points represent a unit's relative durability in combat situations. Ancient and unarmed units generally have 10 hit points. Units with firearms have 20, and units with steel armour have 30. Battleships, with their extraordinarily thick armour, are unique in having 40 hit points. A unit with 10 hit points can have ten points of damage done to it before being destroyed. This does not necessarily mean that ten units each hit it one time. Units also have a statistic, firepower, which indicates the number of points of damage that unit does each time it successfully scores a hit.

These statistics widen the gap between primitive technologies and modern weaponry. A Musketeers unit with a strength of three attacking Pikemen of strength two has an "effective strength" of far greater than three, simply because its increased hit points (20, representing its firearms) allow it to sustain twice as much damage as the Pikemen. A veteran Phalanx unit might still damage a Battleship, but the chance of utterly demolishing it is negligible.

The Effect of Damage

Successful attackers which have movement points remaining after combat can continue moving normally–and even continue attacking–if they choose. However, successful attackers often sustain damage in each battle, and this is indicated by changes to the colour and length of the strength bar. In addition to losing strength, damaged units also lose mobility. A unit's damage is factored into its movement allowance, so a unit which has sustained damage of 30 percent has only 70 percent of its movement points. For example, if the damaged unit normally had three movement points, damage of 30 percent would reduce its movement to two (even though it would still have a green strength bar). There are two important exceptions to this rule; naval units are never reduced below two movement points per turn, and air units do not suffer reduced movement at all.



Different colored strength bars indicate different levels of hurt

Restoration

When combat was all–or–nothing, defeated units were always destroyed, and victorious units emerged unscathed. Now, victory is not always without cost. A damaged unit might suffer curtailed movement points and is vulnerable to counterattacks by further enemy units. So how do you regain full strength?

A damaged unit can partially restore itself by skipping its entire turn (press the Spacebar). Units regenerate faster when they remain in cities for a full turn. If the city they occupy has certain improvements, they can heal even more rapidly. Along with its capacity for turning out veteran units, a Barracks can repair ground units. The Port Facility improvement can repair naval units, and the Airport improvement can repair air units–in all three cases, the damaged unit is restored to full strength in a single turn. If you prefer, you can ignore partial damage and restoration by choosing the SIMPLIFIED COMBAT option in the CUSTOM RULES when you set up a game.

Calculating the Winner

Combat in ***Civilization II: Test of Time*** is essentially like a rapid–fire boxing match. Units fight one–on–one rounds, with damage (equal to the firepower of the winner) being subtracted from the hit points of the loser of each round. When one unit loses all its hit points, it is destroyed. If the loser is defending a stack of units and they are not inside a Fortress or a city, the whole stack is destroyed.

The important factors in combat are the attack and defence strengths of the combatants, as well as their hit points and firepower, the presence of veteran units on either side, the terrain occupied by the defender, and any defensive improvements in the square. In addition to considering all of these factors, combat also includes an element of chance. Imagine that sometimes a unit just gets lucky. We don't want to drag you through lots of heavy arithmetic for each combination of factors, but the calculations for each round of combat can be boiled down to a simple comparison.

The total modified attack and defence factors are combined and the probability of either side winning is approximately the ratio of each side's factor compared to this total. For example, if an Elephant (attack factor 4) attacks a Phalanx (defence factor 2), the total of the factors is 6 (4 + 2). The Elephant has about a 66 percent chance of winning (4 out of 6) and the Phalanx about a 33 percent chance (2 out of 6).

Both the Elephant and the Phalanx have ten hit points and a firepower of one, so the battle goes between ten and nineteen rounds, until one or the other unit is reduced to zero hit points. It is possible for one opponent to win every round and take no damage at all, and it is possible for the opponents to trade damage for damage until even the eventual winner is badly beaten up. Most combats fall somewhere in the middle.

Adding in Adjustments

How do those adjustments for veteran status and terrain and so on work? They're added into each factor they affect before the total is determined. For instance, if both units are veterans, each gets a 50 percent bonus to attack and defence, giving the Elephant an attack factor of 6 (4 + 2) and the Phalanx a defence factor of 3 (2 + 1). Of course, modifying each unit's

factors also changes the total; instead of 6, it is 9 (the total of each modified factor, 6 + 3). Now the odds are close to 6 out of 9 for the Elephant and about 3 out of 9 for the Phalanx.

If both are veterans and the Phalanx is behind City Walls (which triples a unit's defence factor, making the veteran Phalanx a 9), the odds are about 6 out of 15 for the Elephant and close to 9 out of 15 for the Phalanx. Though the adjustments change the odds of each unit winning a single round, they have no affect on the total number of rounds or on the amount of damage inflicted.

Special Combat Cases

To better reflect their real–world abilities and handicaps, many units have unique combat rules and abilities. For instance, when a ship bombards a ground unit on shore, the firepower of both units is reduced to one. This simulates the low accuracy of shore bombardment. Similarly, ships defending in port have their firepower reduced to one, because of the limitations of manoeuvrability. Air units attacking ships in port have their firepower doubled, to represent the vulnerability of their targets.

There are a number of special combat situations, which have special rules, detailed below.

Air Battles

Only air–to–air units, like Fighters and Stealth Fighters, can attack multiple–turn range air units like Bombers and Stealth Bombers. In fact, Bombers and Stealth Bombers prevent enemy units (other than Fighters and Stealth Fighters) from even entering, much less attacking, the square they occupy.

Note that in this case, helicopter–type units are not counted as multiple–turn range; any unit can attack a Helicopter. When an air–to–air unit attacks a Helicopter unit, the Helicopter's disadvantage is represented by reducing its firepower to one and reducing its defence factor by 50 percent.

When an air–to–air unit is stationed in a city that is attacked by a bomber–type unit, the defending units scramble, gaining a defence factor four times their normal value. However, they gain no additional protection from city improvements like SAM Missile Batteries (because the SAMs don't want to down their own planes).

Air Defence

Some naval units are specially designed to fend off air attacks. For example, when an AEGIS Cruiser is attacked by air units, it gains defence bonuses; its defence factor is tripled against plane or Helicopter attacks, and it is quintupled (x5) against missile attacks. Which units gain this benefit is noted in the CIVILOPEDIA.

City Attacks

A successful ground attack on a city destroys only one defending unit at a time. However, each successful attack also reduces the population of the city by one point unless the city is protected by City Walls. Population loss does not result from naval or aerial attacks, but does result in the event of special missile (i.e. Nuclear) strikes.

City Defences

The City Walls (or equivalent) improvement triples the defence strength of units within against all ground units–except those designed to overcome such defences, like Howitzers–and it protects a city's population from reduction. The Coastal Fortress doubles the defence strength of all units within a city against shore bombardments by enemy ships. The SAM Missile Battery doubles the defence strength of all units within the city against all air units except specially destructive (Nuclear) missiles. See **Nuclear Attacks** for the scoop on SDI Defence improvements.

Fortresses

Units within a Fortress gain significant advantages. A unit stationed within a Fortress doubles its defensive strength, and stacked units are destroyed one at a time. Settler–type units can build Fortresses on any terrain square (except a city square) once your civilization has discovered the requisite advance; see **Settlers & Engineers** for complete details.

Nuclear Attacks

Nuclear attacks occur when a specially destructive missile–Nuclear, Xaos, Fireball, or Ne Plus Ultra–attempts to enter a square occupied by enemy units or an enemy city. An espionage unit can make a suicide bomber attack by smuggling a device into an enemy city, regardless of the presence of an SDI Defence city improvement (or equivalent). In any case, all units in the target square and adjacent squares are destroyed, regardless of their cultural allegiance (in other words, both theirs and yours). In addition, a bombed city loses half of its population. The defence against most nuclear attacks is the SDI Defence city improvement.

An SDI Defence improvement is like an umbrella that extends three squares from a city in any direction. The city and all units and improvements within this radius (including Airports, Fortresses, and other city squares) are protected from all effects of a direct Nuclear attack, other than the suicidal bomber Spy mentioned previously.

Pearl Harbour

When air units or ground units attack ships in port (naval units defend a city against air units), the attackers' firepower is doubled against the defending units and the defender's firepower is reduced to one, to represent the defenders' vulnerability. Air units also pick off city defenders one at a time, except for special missiles (see **Nuclear Attacks**, above).

Shore Bombardments

Other than submarine–type units, any naval units with an attack factor greater than zero can attack enemy units on adjacent land squares (they are conducting shore bombardments). Cities along the coastline are vulnerable to shore bombardments, too. Naval units can defend the cities they occupy against attack, though their firepower is reduced to one because of their limited manoeuvrability.

TRADING UNITS

Trade units, like the Caravan, represent shipments of trade goods and materials. (Though the icon remains a camel, as history progresses, your Caravan units are stand–ins for the continuum of trade vehicles from camel caravans to wagon trains.) They can be used to establish trade routes between cities or to transfer resources for the construction of Wonders of the World.

Once your civilization has discovered the requisite advance, the advanced trade unit (Freight) replaces the early one (Caravan) on the PRODUCTION menu. Advanced trade units generally have more movement points per turn. They represent the modern movement of goods and materials by truck convoys and cargo containers.

Trade Routes

A trade unit can establish a trade route by entering any city, even a rival's city. Your treasury gains an immediate cash payment for delivery of the first load of goods, and your research scientists gain an immediate bonus for cultural exchange of an equal amount of science (beakers). The home city of the trade unit gains an increase in the trade generated each turn, which represents a continuing economic relationship. A listing in the GENERAL INFORMATION window shows the cities with which trade routes have been established and the amount of bonus trade generated every turn. The bonus is added to the total amount of trade your city produces, so that this indirectly boosts your research, tax, and luxury production in that city.

Each city can have up to three functioning trade routes, one for each commodity the city produces. As each route is established, the commodity traded on that route is enclosed in parentheses, to indicate a successful deal. Thereafter, when a Caravan is completed, loads of that commodity are no longer available. Food loads are always available.

The amount of trade generated by a trade route depends greatly on supply and demand, and partly on the size of the two cities. Bigger cities generate more trade. Trade with a city from another civilization is of greater value than trade within your own cities. The farther apart the two cities are, the greater the bonus for trading between them. Trade bonuses also increase when the cities are on different continents. If you capture a rival city with whom you were previously trading, the trade route remains active. However, the amount of trade it generates is reduced, because items which were once exotic imports have become domestic commodities.

Trade units can enter any city they can reach. They are not hampered by movement restrictions like zones of control, but their ADM numbers are low enough that they might find it difficult to smuggle goods into an enemy city without being destroyed. Caravan and Freight units can take advantage of naval transport to trade overseas (you can load them aboard any ship that carries units), and they can disembark into a city directly from a ship.

Supply & Demand

Each city in the game can supply three commodities because of their local abundance. Similarly, each demands three other commodities that are in short supply thereabouts. While a trade unit can deliver goods to any city, it gains the largest profits from delivering a commodity to a community that demands it. You can check the marketplace wisdom by clicking the SUPPLY & DEMAND button at the bottom of the TRADE ADVISOR's Report. A list of commodities appears. Choose the commodity in which you're interested,

then click OK. A second list shows all known cities that supply the item and all known cities that demand it. The list is updated to reflect your exploration and contact with other cultures.

Food Caravans

A fourth and always available option for trade goods is food. You can transfer one food per turn to another city by sending a load of food from a city with a surplus to a city that needs help. A needy city can be on the receiving end of more than one food route. Once a food route is established, it cannot be countermanded. It is automatically cancelled, however, if the sending city runs out of food for its own people.

Building Wonders

A trade unit can contribute shields equal to its construction cost to any Wonder of the World you are undertaking. Simply move the unit into the city in which construction of a Wonder is underway. A dialog box offers you the choice of contributing to the construction. If you decide to help build the Wonder, your trade unit disappears and its worth is added to the production of the Wonder, speeding its completion. If you divert goods to help build a Wonder, that commodity is still available later to establish a trade route.

DIPLOMATS & SPIES

Diplomats are unique units that can act as ambassadors, envoys, secret agents, and saboteurs. They can open contacts with other civilizations and establish embassies to gather information about your rivals. They can steal information and otherwise disrupt your rivals. They can bribe enemy armies. Stationing diplomatic or espionage (Spy) units in your own cities reduces the effectiveness of enemy Diplomats and Spies. Be aware that enemies can use all the same techniques against your civilization as you use against theirs.

Once your civilization has developed the requisite advance, the espionage unit replaces the diplomatic unit on the PRODUCTION menu. To take an example from the Original game, a Spy is superior to a Diplomat in several ways. Her greater sophistication and more elaborate training allows her to choose a specific technology or target improvement when entering a city intent on mischief. In addition, she can travel more rapidly, moving up to three squares a turn, regardless of the terrain. A Spy has an observation range of two squares in every direction. When a Spy successfully completes a mission, she has a chance of escaping and returning to the nearest friendly city. The easier the mission, the greater the chance that she will escape. For instance, stealing a random civilization advance is easier than stealing a specific one. Finally, Spies have the unique ability to plant nuclear devices in enemy cities, as we'll explain in **Entering Enemy Cities**.

Bribing Enemy Units

You might convince an enemy unit to defect and join your civilization. Units of civilizations governed by Democracy and certain special units are completely immune to bribery.

In game terms, simply move a diplomatic or espionage unit into a square occupied by a single enemy unit (neither Diplomats nor Spies can bribe units that are stacked together). A dialog box appears, showing how much gold the unit demands to defect. If the unit is immune to bribery, a dialog box will remind you of this condition.

The farther a unit is from its capital, the less gold is required. If you accept, the gold is deducted from your treasury and the army switches sides (that is, it becomes your colour). The Diplomat or Spy survives the discussion regardless of his or her success in negotiating; however, if you do not choose to pay the bribe, the enemy unit might attack your negotiator later. Diplomats and Spies can bribe naval and air units as long as these are not stacked with other units.

The nearest friendly city becomes the home city for a newly bribed unit (see **Unit Roster** for information on this point).

Counterespionage

Diplomats and Spies stationed in friendly cities have a chance to thwart "steal technology" attempts by enemy Diplomats and Spies. Each Diplomat has a 20 percent chance to do so per attempt. Spies have a 40 percent chance; veteran Spies have a 60 percent chance of catching their fellow envoys. Getting caught ends the interloper's turn.

Entering Enemy Cities

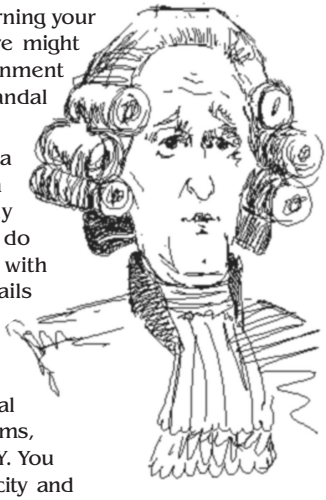
Diplomats and Spies can slip past enemy armies without pausing to observe zones of control, using superior powers of persuasion and/or diplomatic immunity as a shield. Diplomats and Spies are also subject to *deportation* (a special form of "attack") even from civilizations with which they are not at war. Any military unit can "attack" a Diplomat or Spy from a civilization with which it is at peace, provided that the envoy is nearer to a city of the military unit's culture than to one of its own cities. The offending envoy is returned to friendly territory. Diplomats and Spies can travel overseas in ships as do other ground units.

Diplomats and Spies comprise one of only two types of units that can enter defended enemy cities (trade units are the other type). A menu listing the tasks a Diplomat or Spy can perform appears whenever you send your envoy on an urban mission. If, after you've looked over your choices, you decide not to take any action, click the CANCEL button to back out of the menu. Each task is fully explained below.

International Incidents

Whenever a Diplomat or Spy *successfully* steals technology, sabotages a city improvement, poisons the water supply, or incites a revolt in a city of a civilization with whom you have signed a treaty, an international incident almost inevitably occurs. Your victim is likely to treat your treachery as an act of war, although a victim with whom you are allied may sometimes choose to

disregard your act. In addition, if you are governing your civilization as a Republic or Democracy, there might be domestic repercussions as well. Your government may collapse into Anarchy when the scandal reaches the Senate floor.



Do not confuse international incidents with a Spy's ability to escape unharmed after a mission–the two events are completely independent. The only times when incidents do not occur are when you are already at war with your victim and when the Diplomat or Spy fails in its mission.

Investigate City

Your unit gathers information about the rival city's production and development. In game terms, this option shows you the enemy's CITY DISPLAY. You can examine what armies are defending the city and what improvements have been built there. When you exit the CITY DISPLAY, you return to the MAP window. Your Diplomat has been eliminated, or your Spy has been charged one–third of a movement point for her efforts. There is no possibility that your envoy is detected. Until the end of the turn, you may click on the city again at any time to review the knowledge you have gained.

Establish Embassy

Your unit establishes official contact with the rival civilization, setting up an office in the city to which you sent him or her. If you sent a Diplomat, he stays there to head the office, so the icon disappears; if you sent a Spy, she is charged one–third of a movement point for her efforts. There is no possibility of international embarrassment. In game terms, you can access information about your rival's type of government, treasury, number of armies, the name of its capital city, treaties with other civilizations, diplomatic states, and technological advances whenever you look at your FOREIGN MINISTER's Report (see **Advisors** for the complete description). It is only necessary to establish an embassy once with any particular civilization.

Steal Advance

Your unit attempts to steal one civilization advance from a rival civilization. In game terms, a Diplomat can only confiscate one advance per city. A Spy can make more than one attempt per city, although her chance of capture increases with every additional mission. If you send a Spy, she has the option to try the more difficult task of filching a specific advance from the list of unique technologies your rival has.

Even if he succeeds, a Diplomat disappears in the process (his cover is blown). If she evades capture, a Spy returns to the closest friendly city and is promoted to veteran status for her work. While veteran status cannot improve her ADM rating of zero defence, it does increase her chances of escaping detection on later missions.

If you have already stolen a civilization advance from this particular city, or if the enemy civilization has discovered no technology worth stealing, and

your envoy is undetected, a Diplomat unit loses its turn but is not destroyed. If the enemy civilization has discovered no technology worth stealing, a Spy remains empty–handed. The only way a Spy can fail to steal an advance is if she has opted to confiscate a particular technology.

Industrial Sabotage

Carefully manoeuvring in the back streets, your envoy manages to infiltrate some critical city organisation or defence. In game terms, your unit destroys either whatever item the rival city currently has under production or one of the rival city's existing improvements–the item targeted is a matter of random chance. If you send a Spy, she has the option to try the more difficult task of destroying a specific target from the list of existing improvements that city has.

Regardless of his success, a Diplomat is lost in the effort (think mad, suicidal bombers if it helps). If your Spy is not captured, she returns to the closest friendly city and is promoted to veteran status for her work. The only way a Spy can fail to complete her sabotage is if you have opted to destroy a particular improvement.

If your envoy destroys a critical improvement, it might throw the city into unrest (Temple, Cathedral), weaken its defences (City Walls, Coastal Fortress), or cut its production (Factory, Solar Plant). Diplomats and Spies never destroy Wonders of the World.

Incite a Revolt

Your unit contacts dissidents within a city and provides the necessary means for them to overthrow their current regime. In game terms, for a suitable payment, the city revolts and joins your civilization. The amount needed to finance a revolt depends on the size of the city and its proximity to the enemy civilization's capital. If you wish to avoid an international incident, you must subvert the city by paying double the listed amount, as the dialog box warns.

Enemy capitals never agree to revolt, and neither do cities in a Democracy (or equivalent). Cities with Courthouses cost twice as much to bribe. Cities under Communism tend to remain expensive to bribe even when they are situated far from their capital. Also, it costs less to push a city already in civil disorder into open revolt than it does to undermine a contented city.

A Diplomat is lost in a successful revolt (he stays to organise the new government). A Spy returns to the closest friendly city if she is not captured, after appointing a new city government. A successful Spy is promoted to veteran status.

If you don't have enough cash to finance the project, your envoy doesn't even attempt to incite the natives. He or she escapes outside the city if you refuse to pay the cost.

If the overthrow is successful, all units within one square of the revolting city that belong to that rival civilization also revolt and join your regime. All other rival units who counted that city as home are disbanded. All existing city improvements except Temples and Cathedrals (and their equivalents) remain intact.

Poison the Water Supply

Only espionage units can attempt to weaken the resistance of a rival city by poisoning the water supply. In game terms, a successful attempt reduces the target city's population by one point. If your Spy is successful and undetected, she discards her environment suit and returns to the closest friendly city for promotion to veteran status.

Plant Nuclear Device

Only espionage units can attempt to plant ultra–destructive devices (nuclear, disintegrator, or fireball) in rival cities. In game terms, this is the only way to nuke a city protected by the SDI Defence improvement. This is the most difficult mission to accomplish, and the likelihood of capture is high. Furthermore, there is the possibility that your Spy will be caught red–handed, causing a major international incident. If this happens, every civilization in the world will declare war on you, appalled by your atrocity (unless you have a Fundamentalist government).

SETTLERS & ENGINEERS

Settler–type units are groups of your most resourceful and adventurous citizens. As independent pioneers, they perform two critical functions for your civilization; they found new cities and they serve as civil engineers, improving the terrain for your empire's benefit. After your civilization develops the requisite advance, an engineer–type unit (Engineers, for example) replaces the settler unit on the PRODUCTION menu. These industrial–era citizens have better training and better equipment than your basic settler unit. Engineers can accomplish all the same tasks Settlers can, and they can perform them twice as quickly. In addition, Engineers have the unique ability to Transform formerly unimprovable terrain like Desert, Glacier, and Mountains squares.

Your civilization produces Settlers and Engineers in the same manner as it does any other unit, with one caveat. When one of these units is completed, the population of the city that produced it is reduced by one point (one citizen on the POPULATION ROSTER), representing the emigration of these pioneers. If a city has only one population point when it completes the task of building a Settlers or Engineer unit, the city disappears when its population is absorbed into the new unit. This is one of the only ways to eliminate a city that is in a poor or inconvenient location.

Founding New Cities & Increasing Existing Ones

To found a new city, move a settler–type unit to the desired location and press the BUILD (B) key, or choose BUILD NEW CITY from the ORDERS menu. The unit disappears as the people it represents become the first population point of the new city.

The ADD TO CITY order can be used to increase the size of an existing city with less than ten population points. Move a settler–type unit into an existing city and press the BUILD key or choose ADD TO CITY from the ORDERS menu. The unit is absorbed into the city, adding one point to its population.

Making Improvements

Settlers, and later Engineers, can make a number of agricultural and industrial improvements to your civilization's topography. Each task takes a

certain number of turns to complete, depending on the terrain being improved. Some improvements can only be undertaken after your civilization has acquired certain technologies. Engineers, being better trained and equipped, can accomplish tasks twice as fast as Settlers. Engineers are also the only units that can Transform terrain. Teamwork makes these units work faster. You can combine Settlers and/or Engineers to accomplish tasks more rapidly. For example, two Settlers units work twice as rapidly as one, and three can accomplish a task in one–third the standard time. One Settlers unit and an Engineer can also accomplish a task in one–third the standard time, since the Engineer naturally works faster than the Settlers unit does.

There is no limit to the number of times your Settlers or Engineers can build new improvements on any given terrain square–if the changing needs of your civilization demand clearing, irrigation, reforestation, clearing, pollution clean–up (detoxification), and reforestation in succession, the land can take it. If an option is greyed out on the ORDERS menu, that task cannot be accomplished at this time. Perhaps undertaking another improvement will make the desired option available in the future. For instance, a Plains square surrounded by Forest has no access to water and cannot be irrigated. You'll need to clear at least one of the adjacent Forests (one that shares a side with the target square) and irrigate it before irrigation becomes available to the target square.

We've extracted all the variations from the Original game into a table which lists the task, the shortcut key, the required advance, if any, and the terrain types which benefit from this improvement. (For the scoop on other worlds, please refer to the **Terrain Reference** booklet.) Full explanations of each activity appear after the table.

TASK	SHORTCUT KEY	REQUIRED ADVANCE	TERRAINS THAT BENEFIT
Irrigate	I	–	Desert, Grassland, Hills, Plains, River
Clear	I	–	Forest, Jungle, Swamp
Build Farm	I	Refrigeration	Any Irrigated Land Square
Build Fortress	F	Construction	Any Land Square
Mine	M	–	Desert, Hills, Mountains
Reforest	M	–	Grassland, Jungle, Plains, Swamp
Clean up	P	–	Any Polluted Land Square
Build Road	R	–	Any Land Square
Build Railroad	R	Railroad	Any Road Square
Transform	O	Explosives	Any Land Square
Build Airbase	E	Radio	Any Land Square

Irrigate

Depending on the form of government employed by your civilization, irrigation can improve the agricultural production of a city's relatively level terrain. A suitable square can be irrigated if it shares one full side (diagonal doesn't count) with a source of water (Ocean square, terrain with a river running through it, or another irrigated square). Although your city square might be irrigated when the city is founded, it does not count as a source of water for further irrigation. Sometimes you might find it necessary to irrigate squares to which your city has no access in order to extend irrigation into squares the city uses. When your settler–type unit is positioned in the appropriate terrain square, choose the BUILD IRRIGATION option on the ORDERS menu or press the [I] key.

Change To...

Changing terrain is a low–tech, labour–intensive form of land transformation, available only for some terrain types. In the Original game, this improves the movement point cost of dense terrain (although it eliminates the defensive bonus), and provides land suitable to further improvement through irrigation or reforestation. Sometimes a terrain square might need to be changed to allow for irrigation access, and later reforested to restore valuable resources. When your settler–type unit is positioned in the appropriate terrain square, choose the CHANGE TO_ option (the order notes what terrain type will result) on the ORDERS menu or press the shortcut key.

Build Farmland

Planting market gardens and other high–yield farmland is the post–industrial farmer's task. Once your civilization has discovered the requisite advance (Refrigeration in the Original), Settlers or Engineer units can intensify the food output of irrigated land by another 50 percent in cities that build the Supermarket improvement. When your settler–type unit is positioned in the appropriate terrain square, choose the IMPROVE FARMLAND option on the ORDERS menu or press the [I] key.

Build Fortress

Building Fortresses can be essential for defence of terrain that is not a city site. Fortresses provide a defensive bonus to rural or frontier units in the same way the City Walls improvement benefits urban defensive units (see **Combat** for the full details). In addition, representative governments can station troops in Fortresses that are within three squares of a friendly city without incurring a field service penalty (see **Happiness & Civil** Disorder for complete details). Once your tribe has discovered the requisite advance (Construction in the Original), this option becomes available in the ORDERS menu. When your Settlers or Engineer unit is positioned in the appropriate terrain square, choose the BUILD FORTRESS option or press the [F] key.

Mine

Mining terrain allows full utilisation of the natural resources present. It is especially useful in special terrain like Coal and Gold. When your settler–type unit is positioned in the appropriate terrain square, choose the BUILD MINE option on the ORDERS menu or press the [M] key.

Clean Up Pollution

Detoxifying squares by cleaning up the pollution there restores the full (pre–pollution) production capacity to the affected squares. A long–term benefit of clean–up is the reduced chance of global warming, which might otherwise occur (see **Terrain & Movement** for details). Both industrial pollution and nuclear contamination can be eliminated by clean–up efforts. When your settler–type unit is positioned in the appropriate terrain square, choose the CLEAN UP POLLUTION option on the ORDERS menu or press the [P] key.

Build Road

Building roads across terrain reduces the movement point cost of that square to one–third of a point, provided that the moving unit enters from an adjacent road square. Depending on the form of government under which your civilization operates, it can also improve the trade production of the square. Roads are the foundations for railroads and their equivalents. When your settler–type unit is positioned in the appropriate terrain square, choose the BUILD ROAD option on the ORDERS menu or press the [R] key.

Build Railroad

Laying track across terrain eliminates the movement point cost of that square, providing the moving unit enters from an adjacent railroad square. Railroads (or the Fantasy or Science Fiction equivalents: ley lines or slideways) also increase shield production by 50 percent, rounded down. You can only build them where you have already built roads. When your settler–type unit is positioned in the appropriate terrain square, choose the BUILD RAILROAD option on the ORDERS menu or press the [R] key.

Transform

Modern equipment and engineering techniques allow workers to transform even the most inhospitable land into a productive terrain. Once your civilization has discovered the requisite advance, this option becomes available to your Engineer (or equivalent) units. When your Engineer unit is positioned in the appropriate terrain square, choose the TRANSFORM option on the ORDERS menu or press the [O] key.

Build Airbase

Building rural airbases (or their counterpart Elevated Platforms or Service Pads) allows your air units more flexibility in their flight plans and enables them to patrol a greater area. Once your civilization has discovered the requisite advance, this option becomes available on the ORDERS menu. When your settler–type unit is positioned in the appropriate terrain square, choose the BUILD AIRBASE option or press the [E] key.

Build Transport Site

In any game that includes more than one map (all games except the Original), settler–type units can build transport sites that allow movement from one world to another. In some games, there are multiple types of transport sites, all with different names and each giving access to different worlds. Your best bet is to check the ORDERS menu to see if (and when) a location is right for a transport site. If so, the appropriate order appears on the ORDERS menu (the actual wording of the order depends on the game

and the type of site available). If the destination terrain is not accessible–it is of the wrong type, or is impassable, or an enemy city or unit already occupies the square–no site can be built at this time. Move the unit to another square and try again. If you've explored several worlds, you can click between them to check the terrain in any particular spot when you have the World Map window showing the flat view (see the **Reference: Screen by Screen** section for details). When you find an appropriate location, choose the BUILD TRANSPORTER option or press the [N] key.

AUTOMATED SETTLERS

If you tire of giving orders to your settler–type units, you can turn control over to a subordinate(a friendly AI. Use the new AUTOMATE SETTLER ([K]) order to put the unit "on automatic" for a while. Automated units improve the terrain around your cities, but will not establish any new cities. In some situations (the approach of an enemy army, for instance), the settlers might need instructions from you. At those times, the automated unit will revert to your control.

EXPLORERS

Explorers are non–combat units that treat all terrain as roads. Their bravery and resourcefulness makes them ideal for opening up new continents and discovering the far reaches of a landmass quickly. Explorers can ignore enemy units' zones of control; however, for diplomatic purposes (peace treaties and alliances) your rivals consider Explorers as dangerous as they do combat units.

BARBARIANS

Barbarians are small tribes of raiders that are not part of any opposing civilization. They are always indicated by red keys. You can set the likelihood and frequency of barbarian attacks in the initial game choices you make. You will encounter them periodically as your civilization begins to expand and grow. They sometimes invade from the sea; other times they arise suddenly in unsettled parts of any continent. Barbarians might attempt to capture or destroy your cities and pillage your fields and mines. Most barbarian tribes are accompanied by a leader.

Because barbarians can appear along any coast or in any unsettled area, it is important to defend your cities with at least one military unit. Barbarians (and rival armies) can walk right into an undefended city, capturing it with only minor bloodshed (the captured city loses one population point, just as any city taken by force does–see **Capturing Cities** under **Cities** for the gory details).

Even if barbarians capture a city or several cities, they do not become a rival civilization–that is, they do not join the space race, or negotiate treaties, or earn rank in historians' reckonings. Sea raiders can be fought on land or engaged at sea in their ships. Land barbarians arise in areas that are outside the radius of a city. As time passes, they appear at even farther distances from civilization. Thus, expanding your network of cities over a continent eventually removes the threat of land barbarians, because the entire area has become more or less civilized by your urban presence.

Ransoming Barbarian Leaders

When you attack and destroy stacked barbarian units, the leader units fall with their troops and are also destroyed. However, if a barbarian leader stands alone in a square, and your army wins an attack against him, he is captured. His compatriots immediately give you gold to ransom him back–the amount they pay is based on the barbarian level you chose in game set-up. Barbarian leaders who have lost their armies attempt to escape. If not captured in a few turns, they disappear.

UNITS & MULTIPLE MAPS

The Fantasy, Midgard, Extended Original, and Science Fiction games allow you to explore and conquer terrain on multiple maps. Of course, not every unit can exist on every map; normal folks cannot survive in space, for example. What units can exist on which worlds is specified in the CIVILOPEDIA and on the **Poster**.

Another consideration is movement between worlds. Some units can use the transport sites that settler–type units build (and some can't). In addition, certain special units have a "native ability" to move from world to world. Some of those are transport units, capable of carrying other units along with them. All of them, however, retain their type–naval, ground, or air. A unit can only move to another world if the terrain at the destination is appropriate–ocean for a naval unit, for example.

Your best bet is to check the ORDERS menu to see if (and when) a particular unit can move between worlds. If the selected unit has native transport ability, a teleport order appears on the ORDERS menu (the actual wording of the order depends on the game and the technology being used). If the unit's destination terrain is not accessible–it is of the wrong type, or is impassable, or an enemy city or unit already occupies the square–the order is greyed out. Move the unit to another square and try again. If you've explored several worlds, you can click between them to check the terrain in any particular spot when you have the World Map window showing the flat view (see the **Reference: Screen by Screen** section for details).

DIPLOMACY

Other cultures share your world in ***Civilization II: Test of Time***. If your attitude is expansionist and your home continent is large, you might seek out–and find–your rivals early in the game. If you concentrate on perfecting your own cities or find yourself limited by a small continent, it might be centuries before you encounter other civilizations. Whether you opt for peaceful communications or aggressive action depends on your style. This section describes the essentials of diplomacy, but note that it is geared toward single player games. There are significant differences when dealing person–to–person instead of with a computer–controlled tribe. These are described in the **Multiplayer Games** section.

CONCEPTS OF DIPLOMACY

Eventually, no matter how isolated your location or how isolationist your policies, you will have contact with rival civilizations. Choosing to meet with a rival allows you to explore the intricacies of negotiation.

Once you make contact with a rival, you can speak to him or her at any time by calling up the FOREIGN MINISTER and clicking the SEND EMISSARY button. You are not required to set up an embassy with a rival civilization first. However, constantly chatting up opponents makes them weary, and you can exhaust their patience with too many requests.

Every AI opponent has an attitude that he or she presents to negotiators. Your rivals' attitudes can range from friendly to inimical. You can tell what attitude a leader has by observing the titles of the dialog boxes during negotiations. A ruler's personality affects his or her attitude. Your rivals' attitudes can change over time, depending on your rank in the game, the current balance of power, the gifts you offer them, and your reputation for keeping your word in negotiations: Every time you go back on your word, international observers notice and remember.

Diplomatic negotiations can result in five different states: alliance, peace, cease–fire, neutrality or war. A rival might demand money or civilization advances (the reverse is also true–you can demand money or civilization advances from rival rulers). In addition, negotiations can include requests to share maps and instructions to withdraw trespassing troops. A ruler might even ask you to declare war on a third party. All negotiations progress through a series of screens, each with a variety of pre–set options.

Establishing embassies in your rivals' cities allows you to increase your negotiating power. By checking your FOREIGN MINISTER's reports, you can see whether, for example, the bellicose Indians have the city base to back up their threats, or whether they are just bluffing. You'll have a better idea of when to back down and when to press for concessions.

YOUR RIVAL'S ANTECHAMBERS

When you meet with an emissary of a rival ruler, the decor of his antechamber can tell you much about the relative size and type of government employed by the enemy civilization. One alcove displays icons relating to the military might of your rival; the other icons represent his or her knowledge and advancement. Decorative details indicate what type of government is in power.

You can learn a lot here.

CONDUCTING DIPLOMACY WITH COMPUTER OPPONENTS

In game terms, once you choose the SEND EMISSARY option, a dialog box opens, offering you several responses from which to select your intent. The form of government under which your civilization currently operates can influence the choices you have; see **Governments** for the details.

Establishing embassies with other civilizations can be a very useful preparation for negotiations. Your FOREIGN MINISTER collects information from all of your embassies. You can learn important facts about your opponents, including the personalities of their leaders, their diplomatic states with respect to all civilizations with whom they have contact, the number and names of their cities, the extent of their technological advances, their current research project, and the amount in their treasury. This information is not available for civilizations with which you have not established an embassy.

Mood and Personality

The tone and result of any negotiations are greatly influenced by the mood of your rival. The opposing leader might be antagonistic, obsequious, or somewhere in between. This mood depends on the leader's personality and how your two civilizations compare to each other and to the rest of the world.

A rival leader's personality might be aggressive, rational, or neutral. Aggressive leaders are more likely to lean toward war or demand high payments for peace. Rational leaders are more likely to offer peace and might only be bluffing when asking for payment. If you have broken previous peace agreements with any civilization, your perfidy is remembered and influences all rivals' degree of antagonism.

If you are the largest, most powerful, and richest civilization in the world, all rivals are likely to be very demanding or antagonistic. However, if a particular opponent is puny in comparison to your might, his or her natural tendency to belligerence might be overridden. A civilization threatened with extinction is more interested in survival.

Leaders with whom you are allied tend to become jealous as your civilization grows larger and more powerful; they expect to be appeased with gifts of cash or knowledge. On the other hand, allies who leap ahead of you may be generous when asked to share their good fortune.

Reputation

Your reputation is based not on how peaceful or how warlike you are toward your neighbours, but on how often you keep your word. Breaking alliances or treaties can blacken your reputation in the international community. Savagely sacking the city of a treaty partner with Legions, or breaking a cease–fire to bombard your opponent's city by Stealth Bombers are acts likely to be deplored throughout the known world. The actions of your Diplomats and Spies can also damage your standing. Your computer opponents learn from your actions and adjust theirs to fit their expectations. If you habitually break treaties, other leaders will have no qualms about doing the same to you. It is important to note that the most severe censure is reserved for ringleaders; if you break your word because you were "incited" by another player, the diplomatic penalty is drastically reduced. For example,

if you have signed a treaty with the Romans, and the Greek emissary asks you to declare war on your erstwhile friends, it is a chance for you to break your treaty with the Romans at a much–lessened penalty than if you had been the principle figure of treachery.

Julius Caesar

Over long periods of time, if you mend your ways by keeping your word to other rulers, the black marks on your reputation can be partially erased and your honour somewhat redeemed. If you build the Eiffel Tower Wonder (or equivalent), the process of character redemption is speeded by a "lump sum" 25 percent shift in your favour, followed by a more rapid recovery over time. Only through the Eiffel Tower effect can a player who has broken his word regain a spotless reputation.

Finally, your reputation matters on the domestic front, too. When you choose to govern your civilization as a Republic or Democracy, your Senate pays careful attention to your conduct in foreign affairs. They can, for instance, force you to sign a cease–fire or peace agreement. They are also vigilant in trying to force you to keep your agreements. If they catch you circumventing their oversight by intentionally provoking an enemy (by refusing to leave enemy territory during a peace treaty, for instance, or if a Diplomat or Spy causes an international incident), your government is likely to collapse into Anarchy because of the scandal.

THE FIVE DIPLOMATIC STATES

In ***Civilization***, all negotiations ended with an offer of peace or a declaration of war. In ***Civilization II: Test of Time***, however, there are finer gradations of posture, or diplomatic state, than just these two options. The relationship between two cultures can be expressed as one of five different states: alliance, peace, cease–fire, neutrality, or war. Each has repercussions in the movement and position of armies and other units, as well as on the international reputation of the participants. A short description of each state follows.

ALLIANCE

In an alliance, you and your ally agree to full (or almost full) co–operation against your common enemies. This shared purpose and trust manifests in a relaxation of restrictions. You can freely enter each others' territories, ignoring zones of control, although you cannot stack your units with those of your ally or actually enter each others' city spaces. (You can request repairs by attempting to enter an ally's city.) If you have convinced a weaker power to ally with you, that ruler will expect occasional awards for his or her faithful service. Your ally also expects your military assistance if he or she is attacked.

Because an alliance involves a great deal of trust and co–operation, it is more difficult to cancel than other types of agreement. You cannot simply back–stab an ally by attacking him or her, but must first cancel your agreement during diplomatic negotiations. All units nearer to one of your former ally's cities than to one of your own are returned from the field to the

closest friendly city. The reverse is also true; your former ally's armies are returned to his or her territory at the same time.

Breaking an alliance, for any reason, is remembered as a major transgression by all of the computer–controlled players. If you unilaterally cancel an alliance, your reputation suffers a "black mark" that is only very slowly erased by time. To cancel an alliance without receiving a black mark, you must manoeuvre your ally into terminating the agreement for you.

Peace

A peace treaty is in theory a permanent arrangement, in which you and your rival agree not to attack each other or even enter the other's territory with military units. A ruler's territory encompasses any space within the radii of his or her cities. Units that violate this agreement may be asked to leave–and their failure to do so immediately can be considered a treaty violation, even if circumstances (like opposing units' zones of control) render the trespassing unit temporarily immobile.

Since it is a degree less co–operative than an alliance, there is no barrier that prevents you from breaking a peace treaty at any time–other than your concern for your reputation. Breaking a peace treaty is a serious matter, and your ruthlessness is long remembered by all other cultures, not merely the one you double–crossed. If you wish to avoid the black mark on your reputation, you can try taunting the other leader into declaring war on you. If he or she falls for the manoeuvre, you reputation remains spotless, though your military preparedness might suffer as your armies absorb his or her first strike.

Peace treaties are most useful when you want a long period of quiet on a particular border, since their recognition of territorial borders keeps enemy units from harassing you and fortifying near your cities. By the same token, they impede you from entrenching your units in your treaty–partner's territory.

Cease-fire

A cease–fire is an agreement with a former enemy to end a war. Your enemy might agree to a cease–fire because he or she wants to make peace, is tired of fighting, or simply wants to get some breathing space before attacking you again. Once a cease–fire is signed, your former enemy ceases attacking your units and cities for approximately 16 turns.

Although a cease–fire enjoins you from attacking your former enemy, there are no territorial restrictions on where you may move your units–you can remain in your fortified positions, even adjacent to enemy cities. Of course, maintaining military units near enemy cities is considered a sign of bad faith and will lead to friction in the future.

Unlike a peace treaty, a cease–fire is only a temporary agreement whose effects dwindle with time. Once the cease–fire expires, your civilizations remain in a state of neutrality (described below) until some other negotiation or aggression takes place. A cease–fire is automatically extended for an additional 16 turns or so whenever tribute is paid by either side. A message informs you when a cease–fire you have signed expires. Violating a cease–fire is an act of treachery that is remembered internationally, and that blackens your reputation.

NEUTRALITY

This state represents not so much an agreement as a wary agreement to disagree–you are not openly at war with an enemy, but you have no formal connection, either. The lack of binding paperwork means that you can freely start a war at any time simply by attacking an enemy unit or city. On the other hand, you might also send an emissary to start negotiating a peace treaty or even an alliance with a neutral rival.

Territory is considered important while cultures maintain a neutral stance, and refusing to remove a unit that has entered the opponent's territory might be enough provocation for a declaration of war. The expulsion of your Diplomat or Spy from an opponent's territory is not in itself a contravention of neutrality.

WAR

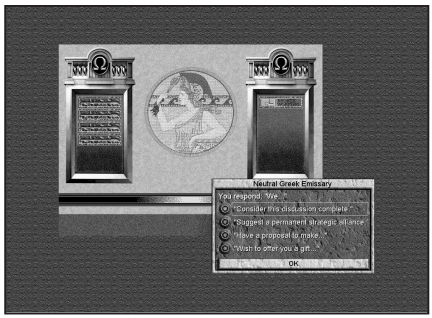
This diplomatic state represents the likelihood of open hostilities at any point in which your units contact your opponent's units. However, there are times when you might enter or remain in a state of war without the exchange of gunfire, as when continents separate your main forces from the enemy's.

Wars can start for innumerable reasons, ranging from self defence to greed and conquest. War might be openly declared after a breakdown in negotiations or in return for offences rendered by ill–placed troops, or it can start with a sudden sneak attack. Civilizations at war with yours might drag their neighbours into the conflict, too, by activating alliances (that is, paying their allies to assist them in the attack).

Once you are at war with another civilization, that ruler considers you a hated enemy unless and until you sign a cease–fire or other, more permanent, agreement. You must make up separately with each opponent (even those allied with a civilization with whom you have already negotiated). If, for instance, the Vikings and the Sioux were allies in a war against you, you must negotiate one agreement to end hostilities with the Vikings and a separate one to placate the Sioux.

NEGOTIATIONS

To begin negotiations with another ruler, simply pull down the FOREIGN MINISTER's report from the ADVISORS menu and click the SEND EMISSARY button. The options available to you depend on your current diplomatic state and the attitude of your rival. If you send too many emissaries, a leader can get annoyed and refuse to speak to you. Wait a few turns for his or her impatience to wear off, then try again.



If you are at war with a rival, he or she might make a demand that you must satisfy if you wish to progress in your negotiations or might even refuse to meet with you. If you are in a state of neutrality or better and have not exhausted your welcome, you progress to the DIPLOMACY menu. Again, the options available to you depend on your current diplomatic state. We've prepared several tables to clarify your choices. The table below displays the gist of your emissary's polished

phrases, the states in which he or she is allowed to offer such remarks, and the opponent's probable response. Most results are self–explanatory; the two which direct you to other menus are expanded on below.

Diplomacy Menu

DIPLOMATIC OPTION	WHEN OFFERED	RESULT
"Consider this discussion complete."	always except war	end conversation
"Suggest a permanent strategic alliance."	peace	possibly sign alliance, might ask for concession
"Suggest a permanent peace treaty."	cease–fire/neutral	possibly sign peace treaty, might ask for concession
"Request a gift from you, our gracious allies."	allied	possibly receive gift, but possibly lower ally's esteem
"Demand tribute for our patience."	peace/cease–fire/neutral	possibly receive tribute, possibly declare war, possibly no reaction
"Insist that you withdraw your troops."	peace	possibly withdraw, possibly declare war
"Cancel this worthless alliance."	allied	end alliance, get black mark
"Have a proposal to make..."	always except war	go to Proposal menu
"Wish to offer you a gift..."	always except war	go to Gift menu

"Have a Proposal to Make..."

Once you have your rival's ear, you can make a variety of suggestions. Common sense tells you that the more an opponent likes you, the more likely he or she is to agree to your proposal. Opponents also take your relative standing in the game into account. They are more likely to be magnanimous if you are far behind than if you are the pre–eminent power in the world. The following table gives the gist of your emissary's remarks and the rival's likely response.

Proposal Menu

COMMENT	RESULT
Never mind	Return to Diplomacy menu
Ask to exchange knowledge	Possibly exchange advance, possibly receive as a gift or for a fee
Ask to declare war against an enemy attack an enemy	Demand bribe of gold or knowledge to
Ask to share world maps	Possibly exchange maps

Exchanging Knowledge: Civilizations that are not extremely antagonistic might accept an offer to trade civilization advances. They negotiate by requesting a particular advance from you. Your options include accepting the deal as offered, vetoing the exchange, or offering an alternative advance instead of the one they requested. They, in turn, can accept or decline your revised offer. Sometimes an opponent thinks less of you for offering lesser alternatives. You may continue trading as many technologies as you possess, provided the other party is interested. Occasionally, you might be offered an advance as a gift or for a monetary fee.

Declaring War: Civilizations who see an advantage in changing the balance of power might be persuaded to declare war on a mutual enemy. They usually request a cash payment for their trouble, but might demand two advances in lieu of gold.

Exchanging Maps: Civilizations might agree to exchange knowledge of the world in the form of accurate maps of territory they have explored. If they accept, the darkness is rolled back in your MAP window to represent their information.

"HAVE A GIFT TO OFFER..."

Sometimes rivals appreciate a tangible result more than mere flowery words. If you'd like to improve an opponent's attitude toward you, you have the option of offering a gift. Three categories of persuasion are available: knowledge, money, and troops.

Gift Menu

COMMENT	RESULT
Never mind	Return to Diplomacy menu
Offer knowledge	Give knowledge, improve attitude
Offer money	The more money, the better the attitude
Offer military unit	Transfer military unit

Offer Knowledge: You can agree to offer knowledge to cement a better relationship. Your rival suggests an advance he or she is interested in. You can agree to that choice, change your mind about the exchange, or make a counter–offer. Your rival's opinion of you improves with each gift you make.

Offer Money: You can attempt to offer a gift of cash to placate your rival. A dialog box lists your three levels of generosity. If you change your mind, the NEVER MIND option is always available. Your rival's opinion of you always climbs if you give him or her gold.

Offer Military Unit: You can attempt to offer one of your existing military units to bolster a friend's army and encourage his or her good opinion. If the leader feels your technology is superior, a list of your cities appears. Choose one to see the roster of units stationed there. Click on a unit to send. That unit becomes part of the other civilization's army, and no longer draws support from your city.

WINNING THE GAME

As we explained in the Introduction, there are several ways to win ***Civilization II: Test of Time***. You can beat the other civilizations by being the first to successfully complete the grand project–in the Original game, for example, it's the spaceship voyage to Alpha Centauri–conquer all the other civilizations in the game, or complete a research– or event–based victory.

THE GRAND PROJECT

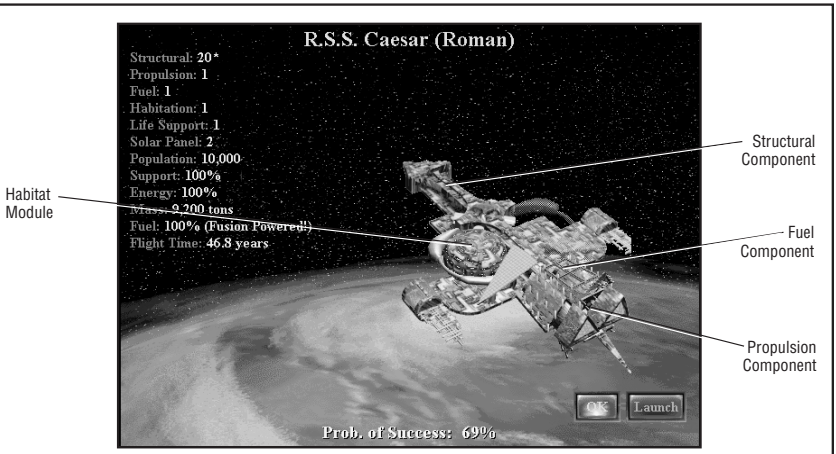
In the Original ***Civilization II***, the one non–military method of winning was to construct an interstellar colony ship and send it to successfully land on a planet in the Alpha Centauri system. That's still the case, and each of the new games has its own grand project that can lead to victory.

No civilization can undertake grand project component construction until one civilization has built the necessary Wonder–Apollo Program, Deus Ex Machina, or View From Earth. Thereafter, the race is on and any civilization that has acquired the necessary advances can begin building the parts.

Grand projects are in many ways a one–shot deal. Each civilization, including yours, can build only one at a time. Restrictions prevent you from building a second, back–up vehicle once you launch the first. Once launched, vehicles cannot be recalled or turned around. You can construct a second grand project only if your current vehicle is destroyed or if your capital city is captured while your vehicle is under construction (the conquerors burn it on the construction site).

Spaceship to Alpha Centauri

The environmental pressures of growing populations in the modern world are forcing humans to look into space for resources and room to live. The question is not whether humans will travel to the stars, but when. The final act of stewardship you can perform for your civilization is to ensure that they lead this exodus.



Your spaceship

In the Original game, the history of your civilization ends when either you or one of your rivals reaches a nearby star system with colonists. If your spaceship is the first to arrive, you receive a bonus to your civilization score in recognition of this final accomplishment. Regardless of how many colonists your spaceship is carrying or how fast it is, if a rival makes planetfall first, you receive no bonus.

In the Extended Original game, a successful landing on the far–off planet is not the end, but the beginning of your efforts to explore, tame, and colonise your second world.

Siege Engine

As is the case in many lands where magic works, the shadow of one powerful evil hangs over Midgard. To stop the spread of this awakening doom, you can build a giant siege engine armed with magical bolts that will travel to and destroy the fortress from which this evil emanates disharmony throughout the realm.

In the Fantasy and Midgard games, the history of your civilization ends when either you or one of your rivals reaches and assaults the evil fortress with magical weapons. If your siege engine is the first to arrive, you receive a bonus to your civilization score in recognition of this final accomplishment. Regardless of how many magic bolts your siege engine is carrying or how fast it is, if a rival besieges the fortress first, you receive no bonus.

FTL Starship

As would probably be true of most people stranded far from home, the accidental colonists on Funestis dream of returning to their home world. Having built a large civilization, however, they would find it absurdly difficult to return the entire population to Earth. Sending a delegation to re–establish contact must suffice to fulfil the dream. Afterward, when regular communication is set up, perhaps those who wish to can visit.

In the Lalande game, the history of your civilization ends when either you or one of your rivals reaches the Earth with emissaries. If your starship is the first to arrive, you receive a bonus to your civilization score in recognition of this final accomplishment. Regardless of how many diplomats your starship is carrying or how fast it is, if a rival makes planetfall first, you receive no bonus.

Constructing a Grand Project

The purpose of your spaceship is to carry as many colonists as possible to another star system. The siege engine's is to carry as many magical bolts as possible to the evil fortress. At a minimum, each must provide all the necessary support mechanisms, energy sources, propulsion power, and fuel for the engines. Spending more time constructing additional components can result in a faster voyage and a higher success rate.

As each new component is completed, the Spaceship/Siege Engine display appears, showing where the component is positioned and updating the statistics and specifications. All grand projects have similar characteristics. We'll explain each in turn.

Population

This figure represents the number of pioneers or emissaries a spaceship is outfitted to carry or the population of weapons ready to be brought to bear. The higher this number, the higher your score bonus.

Support

This figure shows what percentage of the vehicle's payload is currently serviced by the necessary support systems. Passengers not provided with life support cannot survive the voyage, and weapons without firing mechanisms are useless.

Energy

This figure indicates what percentage of the energy required for success is currently being provided. If sufficient energy is not available, the probability of success will be very low.

Mass

All of the functional parts and structures add to the mass of your grand vehicle. The greater the mass, the more power is required from propulsion parts to move it.

Fuel

This figure indicates what percentage of the fuel your propulsion units require is currently aboard. If insufficient fuel is provided, the propulsion components cannot work to their maximum power and the vehicle cannot attain its best possible speed.

Flight Time/Travel Time

This calculation indicates the number of years required for your grand vehicle to reach its destination, based on its current mass and engine power. Adding more engines and fuel reduces travel time.

Probability of Success

This figure incorporates all the other data in an estimate of the approximate percentage chance the voyage will be successful. The faster the trip and the more payload onboard, the higher the expected success rate.

Launch

To send your spaceship or siege engine on its voyage, click on the LAUNCH button. You cannot retrieve a vehicle once it has been launched.

Construction

Your grand project is such a large undertaking that it cannot be built whole–cloth the way improvements are built–it is, instead, constructed of parts. There are three types of these parts: components, modules, and structural bits, each of which we describe below. You must achieve a new civilization advance to make each type of part available for construction. However, the delivery of parts to your capital city is handled automatically as each part is completed.

Though you can construct parts in any order, and most likely will have multiple parts under production simultaneously, all modules and components must eventually be connected to structural parts if you want them to function. Unconnected modules or components are emphasised to signal that they are not working. Once sufficient structural parts have been added to provide supply and support lines, the problem disappears.

Components, Engine, and Drive Elements

There are two kinds of components that make up the propulsive system for each type of vehicle. As each component is completed, you choose which type has been built. For the spaceship, you can build Components:

Propulsion: These parts are the engines that provide the power for space flight. More engines mean the ship travels faster, reaches its destination sooner, and has a higher probability of a successful mission.

Fuel: These parts provide fuel for the propulsion units. In order for the propulsion units to perform at maximum levels, you must provide one fuel component for each propulsion component.

For the FTL starship, you can build FTL Drive Elements:

Abaryonic Chamber: In each of these advanced fuel cells, a micro–miniature particle accelerator catalyses high–energy reactions. The reaction products and energies derived from each chamber are fed into a Hyperfusion Coil.

Hyperfusion Coil: The reaction products and energies derived from an Abaryonic Chamber cause a field cascade episode in the Hyperfusion Coil it feeds. When the isolator currents are disengaged, the field cascade engulfs the entire ship, forcing the space around it through a phase transition and, effectively, propelling the vessel beyond the speed of light.

For the siege engine, you can build Siege Engine Engines:

Boilers: These parts are the engines that provide the physical power that moves the engine forward. (The use of magical power might alert the target to its approach.) More boilers mean the siege engine travels faster, reaches its destination sooner, and has a higher probability of a successful mission.

Fuel: Each fuel supply provides enough flammable material to fire one boiler for the duration of the trip. Thus, every boiler requires one fuel supply in order to function.

Modules, Armament, and Facilities

The payload of each type of vehicle–what you're hoping to deliver to the final destination–comes in three pieces. As each is completed, you choose which type it is and add it to your ship. For the spaceship, you can build Modules:

Habitation: Each habitation module provides living space, community services, and recreational facilities for 10,000 colonists.

Life Support: Each life support module provides the food and other requirements for the 10,000 colonists carried in one habitation module. Colonists carried in a habitation module that doesn't receive life support have a very low probability of surviving.

Solar Panel: Each solar panel module provides enough energy to power two of the other types of module. Modules that don't receive power cannot function properly.

For the FTL starship, you can build Ship's Facilities:

Habitat: Habitat is simply the living quarters for the emissaries to Earth. Each of these provides living space and recreational facilities.

Lability Cell: A Lability Cell ceaselessly provides the energies and materials required for the emissaries onboard to maintain both life and protean flexibility. Emissaries carried in a habitat that doesn't receive lability energies have a very low probability of surviving.

Quantron Shield: The Quantron Shield protects the representatives from dangerous side effects of both the abaryonic hyperfusion field cascade and the resulting FTL phase transitions.

For the siege engine, you can build Siege Engine Armaments:

Weapon: Each weapon onboard provides for a more powerful attack when the siege engine reaches its intended target.

Mechanical: For each weapon, a mechanical firing mechanism is needed to launch the missile.

Mobility: Both the weapon and the firing mechanism require a mobility mounting in order to be aimed and used.

Structural Support

You must build sufficient structural units to connect the components and modules together. Parts that are not connected do not work and provide no benefit to the ship.

CONQUERING THE WORLD

When striving to win this way, aggressiveness helps. Your object is to take over any and all rival civilizations. Note that if you vanquish other civilizations early enough in the game, some new tribe might develop a Settlers unit and found a civilization using the colour originally assigned to the vanquished culture. In this way, some civilizations "re–start." Eventually, if you're lucky, you might be able to subjugate the entire world. If at any time you control the only settled civilization, you win, and the End Game sequence proclaims you the ruler of the world.

BLOODLUST OPTION

If you prefer to eschew the grand project altogether, you can choose an optional rule during the initial set-up of the game that disables the building of these things. Although you can still achieve, for example, the Space Flight and Plastics advances, the spaceship parts would not be available for construction, and you would remain planetbound. Thus, your only possible methods of victory would be total world domination, research, and events.

WINNING THROUGH RESEARCH AND EVENTS

A new option in ***Civilization II: Test of Time*** is winning the game based purely on research. In all of the new games, it is possible to study your way to success–although that doesn't mean military actions become unnecessary. The poster notes which advance in each game is the ultimate goal, as does the CIVILOPEDIA.

Another type of victory is based on the events built into the new games. (These are similar to events as used in scenarios.) In the games set in Midgard, it is possible that, through completing quests, you might find an alternate way to win (or at least bring an early end to) the game. The events in question are puzzles for you to solve; we don't want to give away too much.

SCORING

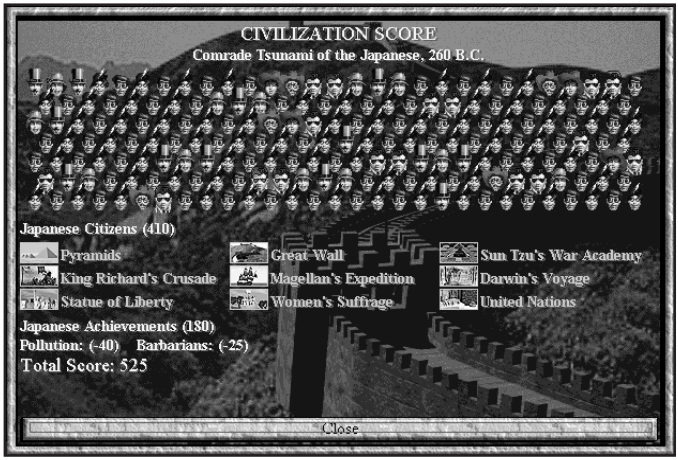
Completing a ***Civilization II: Test of Time*** game can take many hours, especially if you are playing at one of the tougher levels of competition. There are a couple of ways to get a general idea of how you're doing along the way.

DEMOGRAPHICS

This option, available on the WORLD menu, provides a number of real world statistics about your civilization's health, growth, economic, and military status. Each measure shows both an actual value and your rank among the world's civilizations. If you have established an embassy with the nation that is top–ranked in a particular measure, your rival's achievement is listed along with your own ranking. You can use the DEMOGRAPHICS report to compare your performance with that of your rivals and to determine what areas of your civilization need the most immediate attention.

CIVILIZATION SCORE

If you're the type who prefers the concreteness of numbers, choose the CIVILIZATION SCORE option from the WORLD menu for a numerical representation of your progress. The game keeps a running total of the points you've earned for population size and various achievements. It also keeps track of penalties for pollution and other negatives. This chart covers basic scoring:



CONDITION	POINTS SCORED
Each happy citizen	2
Each content citizen	1
Each Wonder of the World that you possess	20
Each turn of world peace (no wars or combat)	3
Each futuristic advance	5
Each map square currently polluted	-10

FANTASY SCORING

Note that in the Fantasy game and the Midgard scenario, the points scored for each of these achievements is slightly different. There are also point penalties in those games for betraying civilizations with whom you have treaties and for getting too many of your units killed.

When you reach the end of the game (2020 AD for the Original game), this total becomes the basis of your score. However, the level of barbarian aggression you chose affects the final tally. The lowest level of activity (none) results in –50 points, the next higher level –25, and the normal level causes no change. Playing at the highest level of barbarian villainy adds 50 points to your final score.

The basic scoring goal–a challenging one–is to score 1,000 points or more. Of course, there are ways to score even higher, but they involve winning the game before time runs out.

If you conquer the world before the last year of the game, ***Civilization II: Test of Time*** calculates an alternate score, based on the number of rivals you've squelched and the speed with which you moved. You can earn up to 1,000 points for conquered cultures, and nearly as much for speed. ***Civilization II: Test of Time*** compares this alternate score to your running total and awards you the higher point value of the two.

If you successfully settle the stars, assault with the siege engine, or return to Earth, you earn a bonus based on the number of modules onboard. This bonus is added to your running total score when you complete your mission.

MULTIPLAYER GAMES

Like most things in life, ***Civilization II: Test of Time*** is more fun when it involves other people. That's what the multiplayer option is all about–sharing the fun. You can play with others in the same room (Hot Seat), over a network, or even the Internet.

The differences in how the game plays are relatively minor. There are some new diplomatic functions, and the method of taking turns has a few new twists. Otherwise, multiplayer ***Civilization II: Test of Time*** is the same game you already know.

BEING CONNECTED

Before you attempt to start a multiplayer game of ***Civilization II: Test of Time***, make sure that you are connected to your Internet service provider (ISP) or network. (If you're planning on playing a Hot Seat game, naturally this is a moot point.)

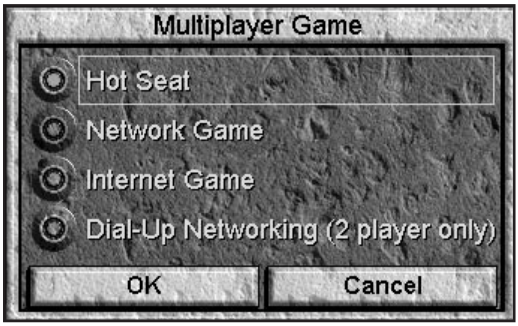
TIMEOUT/LATENCY

If you're the technically oriented sort, it might help to know that you can modify the timeout (latency) for each of the various types of connection. The default values are stored in a text file in the folder to which you installed ***Civilization II: Test of Time***; this file is named civ.ini. Note that this file does not exist until you have started up the game at least once, and the value for each type of connection is not established (and written into the file) until you have used that type of connection at least once. Each of the values is on a line by itself, and they're all in seconds.

Do not edit anything else in this file, or you risk causing problems with the game.

STARTING THE GAME

Getting a multiplayer game started is a relatively simple process. For the most part, it's just like setting up any other game of ***Civilization II: Test of Time***–there are just a few additional steps. The first difference is that you must



select START A MULTIPLAYER GAME from the first menu. The options on this menu represent the different ways you can play a multiplayer game:

Hot Seat: Everyone uses the same computer; you just take turns at the keyboard. (You might be surprised how much fun this can be.) When it's not your turn, the AI handles diplomacy for your empire.

Network Game: Each player plays at his or her own computer. Diplomacy between human players takes place in the NEGOTIATION window.

Internet Game: This is just like a network game, except that you're playing over a really big network called the Internet.

Dial-up Networking: This game is played over a network created by two computers connected to each other.

Choose the type of multiplayer game you plan to play, then click the OK button to confirm your choice or EXIT to return to the previous menu.

After you've chosen the type of game, you end up at another menu. (For Network, Internet, and Dial-up Networking, you must choose what type of network connection you're using, and then you move on.) This is where you choose what type of game you want to play, just like you do for single-player games.

New Original Game: You and your buddies direct settlers on an Earth–like world (you can even play using Earth's actual geography, if you like).

New Science Fiction Game: Your civilizations are bands of colonists crash-landed in the inhabitable Lalande 21185 star system.

New Fantasy Game: You head fantasy tribes on a world full of magical and fantastic elements.

Begin Scenario: Choose this option to load a scenario and play it as a multiplayer game. ***Civilization II: Test of Time*** doesn't discriminate between scenarios and other games; you can play any scenario as a multiplayer game. There's one minor caveat. When you load a scenario as a multiplayer game, each player chooses an empire to rule from among the civilizations already existing in the selected scenario–no one can start a new civilization. If you're playing a scenario as a multiplayer game, every player involved must have that scenario installed.

Begin Midgard Scenario: This scenario, based on the Fantasy game, includes quests, predetermined events, and plot devices. You task is to defeat the evil wizard Volsang before he lays waste to the world of Midgard.

Load a Saved Game: Load and continue a previously saved game. You can load any valid saved game (see the sidebar for a list of the possible types) and play it as the type of multiplayer game you chose, regardless of whether the saved game started life as that type–or even as a multiplayer game.

Join a Game: Join a game of Civ II: ToT that someone else is hosting. This option is not available for Hot Seat games; there is a menu option that allows new players to join Hot Seat games.

Use the OK button to confirm your choice or CANCEL to quit ***Civilization II: Test of Time***.

SAVED GAMES

There are a few different types of saved game files, one for each type of game that you might play. For ease of recognition, each type has a distinct file extension.

.SAV for single player games

.NET for Network and Internet games

.HOT for Hot Seat games

Remember that saved games are stored in the folder appropriate to the type of game you're playing-Original, Fantasy, and so on-and saved scenario games are stored in the corresponding scenario folder.

Next, you must choose one of two options:

Start a New Game: Begin on an entirely new map or set of maps. Choosing this option means going through the usual game set-up steps, plus a few additional ones, as we explain below.

Customise World: Specify the general characteristics of the world on which to start your new game. Choosing this option is no different from starting a new game (as above), except that you go through the world design set-up, too.

Use the OK button to confirm your choice or CANCEL to back up one step.

The following small sections describe the few unusual set-up procedures required for multiplayer games in general and those for each type of multiplayer game. Outside of these exceptions, the rest of the set-up is not significantly different from the way you begin any other game of ***Civilization II: Test of Time***. There are also a few features, menu options, and other items of interest peculiar to multiplayer games; we cover all of those in SPECIAL FEATURES.

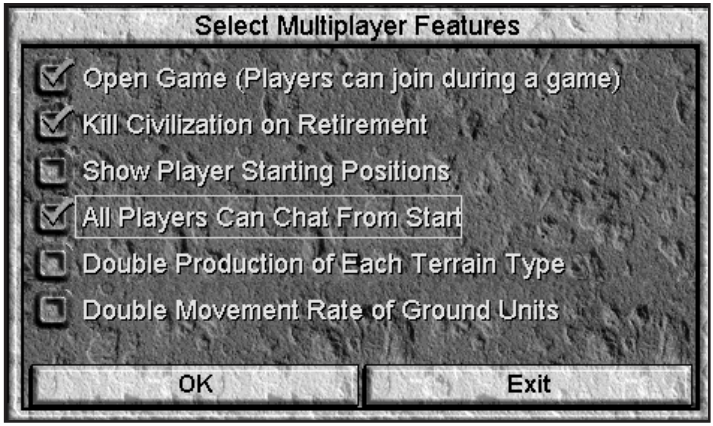
GENERAL SET-UP

If you're setting up a multiplayer game, you are considered the host. As host, you have control over how the game will behave. (You have no control over how the other players will behave.) The SELECT MULTIPLAYER FEATURES menu gives you the opportunity to decide on several important issues.

Open Game: A closed game is one in which no new players can join once the action has started. In an open game, you allow new human players to jump in and take over any civilizations not already controlled by someone, provided that there are any available. For example, in a seven–civilization Open multiplayer game with only two human players, other players could join during the game. Enable this option to make your game an open game.

Kill Civilization on Retirement: When this option is enabled, all of the cities and units of any player who retires or quits are immediately destroyed. If you leave this disabled, the game takes over instead and rules the civilization. Note that, in an open game, this would allow another player to join and take over that civilization.

Show Human Starting Positions: In some games, you'd prefer that the players know each others' starting positions. (It makes finding one another much easier if you're planning to cooperate.) When this option is enabled, the starting positions of all human–led civilizations in the game are visible on their WORLD MAP from the beginning of the game. When this option is disabled, starting positions are hidden, just as they are in a single-player game.



All Humans Can Chat From Start: You cannot normally speak with other kings until you have encountered one of their ground units or cities. This option is a partial way around that; when it's enabled, you can use the CHAT WITH KINGS option (described in **Special Features**) to contact the other human rulers in the game. You still cannot negotiate, however, until you've met face to face. Leave this disabled, and the original rules apply.

Double Production of Each Terrain Type: Sometimes, multiplayer games progress more slowly than you'd prefer. If you want to speed up the rate at which things get done (city growth, research, income, and production), use this option to double the output of every terrain type–food, trade, and production shields.

Double Movement Rate of Ground Units: Another way to speed up the pace of a multiplayer contest is to allow units to move faster. If you check this option, every ground unit in the game (but not sea or air units) has its movement allowance doubled. Note that this does not affect the movement cost of terrain.

When you have set these options as you want them, the next step is to decide on the GAME TIMER. This clock determines the length of time each player has to take a single turn. You can use the GAME TIMER to keep games moving at a reasonable pace. Choose one of the pre-set time limits or set this to any turn length between 10 seconds and 3600 (one hour). If you don't want to limit the length of turns, select Unlimited. The turn timer countdown is displayed in the title bar of the MAP window.

During the game, the host can propose to change the time limit and the status of either (or both) of the doubling options. If all of the players agree (the vote must be unanimous), the change goes into effect.

Hot Seat

There is only one extra choice to make when setting up a Hot Seat game. After you have already decided how many civilizations there will be, you're prompted to choose the number of human rulers participating in the game. Select any of the number from two players up to the total number of civilizations you specified for the game. Any civilizations left over are controlled by the game, as usual.

Network Game

When you choose to play over a network, there are two extra steps you must take.

Step One is to select the network protocol that you are using. ***Civilization II: Test of Time*** supports both the TCP/IP and IPX/SPX protocols.

Step Two is entering your Net Name. This is simply the name by which you want to be known on the network. You can enter any name you want, but you cannot leave your Net Name blank.

If you're joining someone else's game, that's all the extra set-up you need to do. If, on the other hand, you are hosting your own game, there are two more steps to take.

Name the game. You must give your game a name. This is the name that appears on the Games on the Network list, from which other players select a game to join. The name can be whatever you want, but you cannot leave it blank.

Choose the players. Once you've named your game, you see the Players on the Network list. On it are the names of all the players who want to join your game. When you click on the START GAME button, the game begins with all of the listed players included. (You can start a game by yourself, and if it's open, others can join later.) If there are players in the list you don't want included, select each in turn and click the REJECT PLAYER button to remove the highlighted name from the list. (Rejected players are notified.) Use CANCEL if you change your mind about the game entirely.

Once you've clicked the START GAME button, the game begins.

Internet Game

When you choose to play over the Internet, there is one extra step you must take; that is to enter your Net Name. This is simply the name by which you want to be known online. You can enter any name you want, but you cannot leave your Net Name blank.

If you're joining someone else's game, that's all the extra set-up you need to do. If, on the other hand, you are hosting your own game, there are a few more steps to take.

1) **Name the game.** You must give your game a name. This is the name that appears on the GAMES ON THE NETWORK list, from which other players select a game to join. The name can be whatever you want, but you cannot leave it blank.

2) **Choose the players.** Once you've named your game, you see the PLAYERS ON THE NETWORK list. On it are the names of all the players who want to join your game. When you click on the START GAME button, the game begins with all of the listed players included. (You can start a game by yourself, and if it's open, others can join later.) If there are players in the list you don't want included, select each in turn and click the REJECT PLAYER button to remove the highlighted name from the list. (Rejected players are notified.) Use CANCEL if you change your mind about the game entirely.

3) **Verify the IP Address.** Before the game can begin, you must verify the IP Address of your computer (the host machine). If the displayed IP Address is incorrect, type in the correct address before proceeding.

Once you've clicked the START GAME button and verified the IP Address, the game begins.

A NOTE ON CHOOSING TRIBES

After all the set-up is complete and the game begins, the players each make the usual choices–a tribe, a name, titles, a city style, and so forth. At this point, you'll notice one of the only differences in the game set-up procedure for multiplayer games.

As you each select a tribe to rule, the choices become more and more limited. That's because the civilizations selected by players who have already passed this point are no longer available. In addition, all the tribes that normally use the same colour as a civilization already spoken for (the ones in the same row) are also unavailable. That's because there can only be one tribe of each colour in the game, and the colours are pre–set. For example, if Player 1 chose the Egyptians as his tribe, Player 2 would not be able to select the Egyptians, the Aztecs, or the Spanish, because all three civilizations share a single colour (Yellow).

In the rare instance when you and another player pick a tribe of the same colour at the same time, only one of you gets that tribe; the other player must pick again.

SPECIAL FEATURES

There are a few features in ***Civilization II: Test of Time*** that apply only to multiplayer games. This section introduces them.

On the Game Menu

The multiplayer features on the GAME menu are:

Join Game: This option is available only during Hot Seat games. Use it to add a new player to a game already in progress.

Set Password: Allows you to protect your civilization from poachers by setting a password lock on it. Whenever you load a saved multiplayer game or join a game loaded by someone else, each player reselects his or her civilization from those included in that saved game. Unless you have assigned a password to your civilization, an unscrupulous player could select your civilization as his or her own.

Change Timer: Allows the host player to reset the GAME TIMER. This clock determines the length of time each player has to take a single turn. Choose one of the pre–set time limits or set this to any turn length between 10 seconds and 3600 (one hour). If you don't want to limit the length of turns, select Unlimited. The turn timer countdown is displayed in the title bar of the MAP window. If the Host proposes to change the time limit during the game, all players must agree (the vote must be unanimous) before the change goes into effect.

Multiplayer Options: This option calls up a checklist of other options. Each of these is a toggle; those with checked boxes are currently "on," and those with empty boxes are "off." Click on an option to toggle it on or off. When you have these options set as you want them, click OK to return to the game or CANCEL to ignore your changes. The MULTIPLAYER OPTIONS are:

- **Clear chat buffer at the start of a new game:** When you enable this, old messages are cleared out of the CHAT window whenever you start a new game or load a saved game.
- **Clear chat buffer each time we boot up:** Turn this on to have old CHAT messages cleared every time you start ***Civilization II: Test of Time***.
- **Double production of each terrain type:** If you're the host, use this to propose a change in the doubling status for terrain output. If you propose to change this during the game, the other players must agree before the change goes into effect.
- **Double movement rate of ground units:** If you're the host, use this to propose a change in the doubling status for unit movement. This option works like the one above.

In addition, one of the normal game options is not available. The TUTORIAL HELP option under GAME OPTIONS does not function during multiplayer games.

On the Advisors Menu

The ADVISORS menu contains one new option, CHAT WITH KINGS. This opens the CHAT window, in which you can exchange messages with other players. For the detailed description of how chatting works, please read the **Chat with Kings** section in **Playing a Multiplayer Game**. Chat features are not available in Hot Seat games.

On the Cheat Menu

If you're playing a multiplayer game, no one has access to the CHEAT menu. The CHEAT menu features are not available in multiplayer games.

Negotiation Window

Whenever you enter into negotiations with another human player, the bargaining process takes place in the NEGOTIATION window. This window includes all sorts of options, so that you have the flexibility when dealing with humans that is certainly necessary during multiplayer games. For the detailed description of how the window works, please read the **Initiating Negotiations** section in **Playing a Multiplayer Game**. The NEGOTIATION window is irrelevant in Hot Seat games, and thus it does not appear.

PLAYING A MULTIPLAYER GAME

Once the set-up is done and all players have connected to the game and taken over a civilization, play begins in earnest. Multiplayer ***Civilization II: Test of Time*** is turn–based, just like single–player games.

This basic truth applies to every multiplayer method of play, but not all of them handle turns in exactly the same way. There are some features and differences intrinsic to each method. We'll take them one at a time.

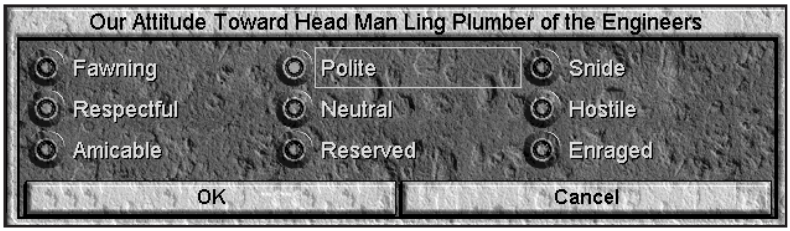
TOAST THE HOST

If the host player is eliminated during a network or Internet game, the game does not end. The "host" status is automatically transferred to another player, so that the game can continue. If the host is wiped out in a two-player game, the other player can continue against any remaining AI civilizations.

HOT SEAT

In a Hot Seat game, all the players take their turns at the same computer, one after the other. (Other players should probably avert their eyes.) The computer–controlled civilizations (if there are any) make their moves in turn, just as in any other game of ***Civilization II: Test of Time***.

If it's not your turn and someone wants to negotiate with your civilization, the negotiations are handled by the computer as if it were ruling your empire. Obviously, this could leave you vulnerable to another player's ethical lapses–even if you are standing nearby. The negotiating tactics of the AI are somewhat predictable, and almost certainly won't match your intentions. To compensate for this loss of control, you can set your civilization's attitude toward each of the other empires in the world:



- Call up your FOREIGN MINISTER and select a civilization to set your attitude toward.
- Click the SET ATTITUDE button.
- Choose an attitude by checking the appropriate box.
- Click OK to put the new attitude into effect or CANCEL to leave without changing your attitude.

Thus, for example, you could set your attitude to Hostile or Icy to prevent the computer from giving anything away (particularly money and advances) while you're not watching.

If additional players want to join a Hot Seat game already in progress, each can take over one of the computer controlled civilizations using the JOIN GAME option on the GAME menu(but only if there is at least one civilization in the game which is not already controlled by a human player.

All Other Types

The games you play over a network or the Internet are likely to be among the most challenging and exciting games you'll ever play. You'll be facing other human opponents–also experienced emperors.

These games play in the same order as any other. There's one big difference, however. During your turn, all you should do is move your units. All of the other tasks a leader is responsible for–city management, negotiation, production planning, changing the tax rates, consulting advisors, and so on–are possible between your turns, while everyone else is moving their units, and any AI opponents are moving theirs. Why use up valuable unit–moving time when there's no need to? This is a new concept, so let's take a closer look at how it works.

In ***Civilization II: Test of Time***, the GAME TIMER limits the length of each player's turn (unless, of course, the host player sets the timer to Unlimited). The idea behind this is to help keep multiplayer games from becoming tedious and slow in the online environment (among other reasons, because you might be paying for the time you're online). However, one negative side effect of this timer is that it might prevent you from completing all of the things you want to do during your turn–especially late in the game, when management tasks come to take up more and more time.

To alleviate this problem, during network and Internet games of ***Civilization II: Test of Time***, you can perform most of your management while you are waiting for the other human players to complete their turns–and, to a lesser extent, while the computer–controlled civilizations are moving. Between turns, you can:

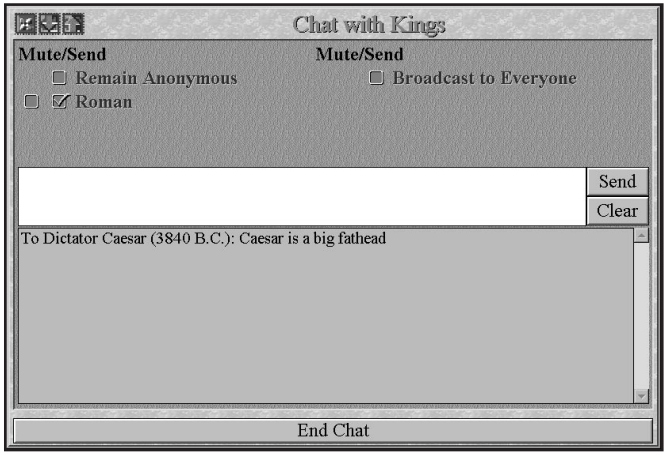
- **Manage cities:** You can do anything you need to inside your cities, including changing production orders, reassigning citizens working in the City Radius, creating specialists, and selling improvements.
- **Consult your advisors:** You have access to all of the advisors' reports.
- **Change your tax rates:** You can also change your map view and modify any of the options that don't affect the other players (most of them are on the GAME menu). If you're the host player, you can also fiddle with a few options that do affect other players.
- **Chat:** You can trade chat messages with other human players. See **Chat with Kings** for the details.
- **Send and respond to emissaries:** If you want to engage in negotiations, you can. The details are in **Initiating Negotiations** and **Responding to Negotiations**.

There is only one game function that you cannot access between turns: moving and giving orders to your units. This is reserved for use during your turn.

Any changes you make between turns to your cities, production, tax rates, and so on take effect at the start of your next turn. If something happens to prevent or moot a change you made between turns, that change does not take effect. For example, if you chose to sell off the Barracks in one of your cities, but that city is captured before your next turn begins, the Barracks remains in the city and you don't get the cash.

Chat With Kings

Whenever you wish to send a message to another human player or read one that someone has sent to you, you can do so by selecting the CHAT WITH KINGS option from the ADVISORS menu to open the CHAT WITH KINGS window.



In this window, you can send and receive text messages and thereby conduct conversations with the other human players. (The AI players cannot chat.)

The top section of this window contains all of your chat controls.

- **Remain Anonymous:** Enables you to send messages without the source of the message being identified.
- **Broadcast to Everyone:** Transmits your chat messages to all the human players.
- **Civilization Names:** This feature, found below the other two check–boxes, lists the civilizations ruled by human players with which you can communicate. If the host player selected the ALL HUMANS CAN CHAT FROM START option during set-up, the other players are listed throughout the entire game; otherwise, each name appears only after you have made contact. Click on the check–box next to the name to select that civilization. Any message you send is transmitted to all of the selected civilizations. The other column of check–boxes, MUTE, is what you use to refuse to receive chat messages from selected opponents. (Even if you have muted chat from a player, you can still negotiate normally with that civilization.)

In the centre portion of the screen–where your cursor is–you create your messages. Simply type your missive here (or use the shortcut keys–see the next section, **Chat Short–cuts and Files**). When you're satisfied with it, click the SEND button.

The scrolling section at the bottom of the window displays both the messages you receive and every message you send. If you get tired of seeing old messages, you can wipe them away (permanently) by clicking the CLEAR button. (Note that there is no way to retrieve erased chat messages.)

When you're through chatting, click the END CHAT button.

AN IMPORTANT NOTE ABOUT CHAT

Hasbro Interactive does not monitor, control, endorse, or accept responsibility for the content of text or voice chat messages transmitted through the use of this product. Use of the chat function is at your own risk. Users are strongly encouraged not to give out personal information through chat transmissions.

Kids, check with your parent or guardian before using the chat function or if you are concerned about any chat you receive.

Chat Short-cuts and Files

There are four chat-related files stored in the game folder. Three of these-*ChatMac1.txt, ChatMac2.txt, and ChatMac3.txt*-contain text that you can add to a chat message at the press of a single key. To add these "chat macros" to a message, you must be in the process of creating a message. At that time, press:

- Ctrl F3 to add text from ChatMac1; press this repeatedly to cycle through the messages in that file.
- Ctrl F4 to add text from ChatMac2; press this repeatedly to cycle through the messages in that file.
- Ctrl F5 to add text from ChatMac3; press this repeatedly to cycle through the messages in that file.

Note that you can edit these text files (using any text editing program) to contain whatever text you want to appear when you press these keys-messages you send often, for example.

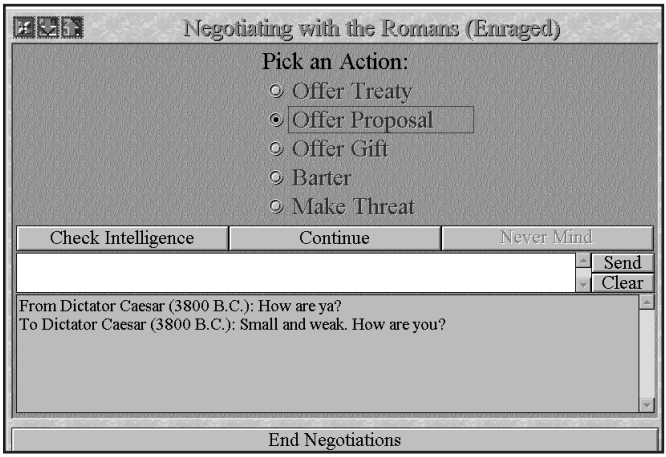
In addition to these, there are two more chat shortcut keys that add text to your chat messages.

- Ctrl F1 adds the name of a civilization (i.e., Roman); press this repeatedly to cycle through all the civilizations in the current game.
- Ctrl F2 adds the title and name of a civilization's leader (i.e., Imperator Caesar); press this repeatedly to cycle through all the civilizations in the current game.

Lastly, all of the text that appears in the scrolling section of the CHAT WITH KINGS window is stored in a file called *ChatLog.txt*. Unless you change the settings in the MULTIPLAYER OPTIONS (see **Special Features** for the scoop), this data is saved from one game to the next. You can clear it manually using the CLEAR button in the CHAT WITH KINGS window.

Initiating Negotiations

During a game played over a network or the Internet, negotiations with the other human rulers are not handled by the AI; they're face to face (well, face to screen, anyway) bargaining sessions with a real person on the other end. (When you're dealing with computer-controlled civilizations, negotiations proceed exactly as they would in the single-player game; for the details, please read the **Diplomacy** section.) At any time you choose, you can initiate negotiations with any other civilization using the FOREIGN MINISTER, just as you would in a single-player game. If you send an emissary to an empire ruled by a human player, the NEGOTIATION window opens.



The name of the civilization on the other end is listed in the title bar of the window.

The bottom half of the NEGOTIATION window is the PRIVATE CHAT area. This works exactly like the CHAT WITH KINGS window, except that here there's only one ruler you can trade messages with. This makes some of the usual chat controls (like **Remain Anonymous**) superfluous, so they're not here. Note that even these private chats might be intercepted and repeated to a third party(if there's a listening post in your capital. (Read **Spying on Chat** for the details.)

ATTITUDE

The other ruler's attitude toward your civilization-displayed during communications in the NEGOTIATIONS window-is determined by that player. By the same token, your attitude toward the other empire is under your control:

- Call up your Foreign Advisor, and select a civilization to set your attitude toward.
- Click the SET ATTITUDE button.
- Choose an attitude by checking the appropriate box.
- Click OK to put the new attitude into effect or CANCEL to leave without changing your attitude.

All of the negotiation options are provided in the upper section of the window. To choose one, simply select it and click the CONTINUE button. The upper portion of the window then fills with the relevant options for the activity you chose. If you decide to, you can back out of any negotiation option you've chosen using the NEVER MIND button. You can also cut off the negotiating session entirely by clicking the END NEGOTIATIONS button. The five negotiation options are:

Offer Treaty: This is your method for making and breaking treaties with human opponents. Your present treaty status with the other ruler is noted, and the types of treaties you can propose–plus the option to cancel the current treaty–are available for selection. Pick an option and click the TRANSMIT OFFER button to send the proposal (or notice of cancellation) to the other ruler.

Make Proposal: There are two types of proposal you can send to another human ruler.

1) **Ask to Declare War** is just like the ASK TO DECLARE WAR AGAINST AN ENEMY option available when negotiating with computer–controlled civilizations; you're asking the other leader to immediately declare war on one of your enemies. You can choose from any of the empires with whom you have no treaties. Select one or more, then click the TRANSMIT OFFER button to send the proposal to the other ruler.

2) **Ask to Share Maps** is exactly like the single–player option ASK TO SHARE WORLD MAPS; you're asking the other leader to give you his or her map of the world in trade for yours. Click the TRANSMIT OFFER button to send this proposal.

Offer Gift: This is the method you use to give things away and demand nothing in return. In a multiplayer game, you might sometimes trade a "gift" for some less tangible return, but be wary. There are five types of gift you can offer:

1) **Knowledge** means a Civilization advance. Select one of the advances listed in the scrolling box, then click the TRANSMIT OFFER button to send your offer. Note that this offer will probably be rejected if the other ruler already has that advance.

2) **Money** means gold from your treasury. Enter the amount you wish to offer, then click the TRANSMIT OFFER button. It's rare that gifts of cash are rejected.

3) **Military Unit** means exactly what it says. A scrolling box lists all of your military units and their home cities. (You can sort this list by unit type or by home city.) Click on a unit to select it, then click the TRANSMIT OFFER button to send the offer. If the offer is accepted, the unit's new owner takes control of it. (It no longer draws support from your city.)

4) **Cede Territory** is how you give away cities.

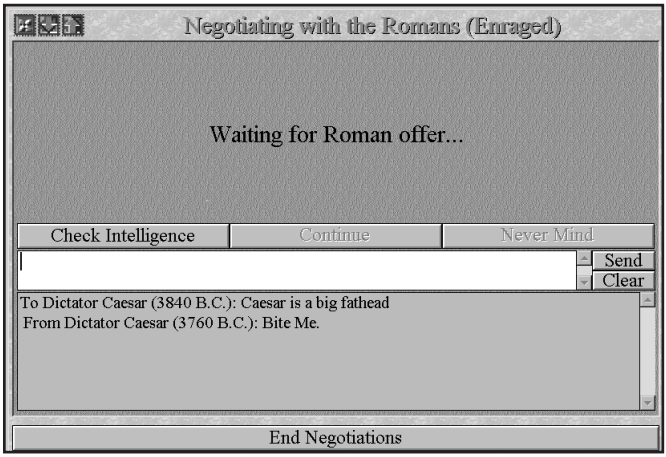
5) **Offer Maps** is a one–sided version of ASK TO SHARE WORLD MAPS; you give away your map without getting anything in return.

Barter: This option is strictly for human–to–human negotiations. Essentially, the BARTER option allows you to offer almost anything to another human ruler in exchange for nearly anything (including the same thing). Use the column on the left to choose the type of thing you want to offer, then choose the type of thing you want to get in return from the column on the right. When you click CONTINUE, you'll be prompted to pick exactly what you want to send and receive–the exact amount of gold, for example, or the specific advance.

Make Threat: This is how you make demands of the other human rulers. When you send a threat, the other ruler receives a message like this: "We agree not to attack you if you give us:" followed by what you've chosen to extort. You can demand a specified amount of gold, a specific advance, a military unit, or a copy of that ruler's world map, among other things.

Responding to Negotiations

Sooner or later, an emissary from another human ruler is going to call on you. Should you grant that ruler an audience, you'll find that responding to negotiations is a bit different from initiating them. (Emissaries from computer–controlled civilizations might also approach you, but those situations are handled in the usual way, described back in the **Diplomacy** section.)



The audience takes place in the usual way, and all of the information you're accustomed to having is available. (Remember that attitudes are under player control; see **Initiating Negotiations** for the scoop.) The PRIVATE CHAT sub–window (described in **Initiating Negotiations**) is functional as well.

The player who requested the audience opens the negotiations–composes and sends the first message. There's nothing you need to do but await the offer, threat, proposal, or invitation to barter. You can, of course, send chat messages, and that's often how much of the real negotiations take place. When the "official" communiqué arrives, you have three response options. To use one, select it and then click the OK button.

No Thanks: Sends a negative response appropriate to the other ruler's proposal. You do not propose a counter–offer, but simply wait for another proposal (or an end to the negotiations).

Accept Offer: Sends a positive response appropriate to the proposal–you accept the offer, proposal, or invitation, or you accede to the threat. Lieutenants immediately put the agreement into practice. Note that if it is not possible for you to hold up your end of the proposed bargain (for example, you have not discovered the advance your opponent asks you for), this option is not available. After this, the other ruler can make another proposal or end the negotiations.

Make Counter–offer: Does not accept the other ruler's proposal. Rather than a negative response, however, you send a proposal of your own as an alternative. When you choose this option, you use a modified version of the NEGOTIATIONS screen (the full version is described in **Initiating Negotiations**) to determine the terms of your offer. When the other ruler receives your counter–proposal, he or she has the same three response options.

At the bottom of the window is the END NEGOTIATIONS button. This cuts off the communication immediately and closes the window. Use this to leave a concluded negotiating session–or as an alternative, and less than polite, way of responding to a proposal.

Spying on Chat

During a non–Hot Seat multiplayer game, diplomatic and espionage units have a new mission possibility. If you move a diplomatic unit into the capital city of a civilization ruled by a human player, the usual menu of missions has one extra option–**Spy on Chat.**

When you assign this mission, the unit taps into the opposing leader's communications lines and installs itself in a listening post inside the city. As long as the tap remains active, copies of all of that player's incoming and outgoing chat messages are sent into your chat window.

This continues until the tap is noticed and traced to the listening post. The number of turns a unit can successfully continue to intercept messages varies with the type of unit (Spies last longer than Diplomats), the unit's status (Veteran units last longer), and the game difficulty. Once the leak is discovered, your unit is destroyed.

THE EXTENDED ORIGINAL GAME

In the Original game, ensuring that a ship with living colonists arrives at the Alpha Centauri system first is a victory condition, and the game ends when anyone's spaceship lands. The Extended Original game goes one step beyond that. That space ship that ***Civ*** fans have been launching for years finally lands, and you can step out onto the destination planet and taste the fruits of your victory–and face the challenges posed by a second world to colonise, exploit, and manage. (You've scouted the entire world from orbit, of course, so exploration is a lesser concern.)

When you play the Extended game, you get a whole new world, and you still have to deal with your empire on Earth. Though the temptation might be to throw all of your efforts into conquering the new world you have discovered, the Extended Original game is more complex than that. You must explore and utilise the new terrain of your space site while maintaining prosperity and production back on Earth. Lose focus on one world, and you risk losing them both.

EXTENDED CONCEPTS

The known world can no longer be represented on a single map. In the Extended Original game, you deal with two planets, so there are two world maps. If it helps, picture the two maps spread out flat, one above the other. Each terrain square on Earth corresponds with the square directly above (or below) it on Centaurus.

Moving from map to map is first accomplished with a giant space ship, but one reward of technological innovation is quicker means of transport. In time, your civilization can gain the ability to cross the gulf between star systems in three new ways:

- Transport Sites are terrain improvements that allow travel between maps. Once you have the requisite technology, your Engineers can build Quantum Teleportation (QT) Portals.
- Transport Improvements are city improvements that, like Airports, allow fast transport between cities that both have that improvement. Starports function just like airports, with the important difference that they can move units between the two worlds.
- Interstellar vehicles are those rare and advanced units, like the Dreadnought, that can make the trip between worlds on their own power. In the Extended Original game, none of these can carry other units.

New worlds necessarily involve totally new terrain, and new challenges to movement. Some types of terrain on Centaurus are impassable; that is, they are too dangerous or difficult for ground units to traverse. Only certain special units can cross this type of terrain.

On the new world, you might also meet with technologies and units you cannot comprehend. Since the Original game is set on Earth, all the other tribes in it are human, and they share the same advances and units. Centaurus might hold alien units and technologies that humans simply cannot duplicate. There are those technologies that can be understood by both species and shared through negotiation, and most manufactured units are easily built by both cultures. However, there are advances and units that are unique to one or the other species, and you cannot ever build (or even, generally, bribe) these units or acquire these technologies.

Putting the Extra in Extraterrestrial

The number of civilizations you choose at game start–up allows you to decide whether you want to face an empire of extraterrestrials when you reach the second world. If you choose six or fewer civilizations, only fellow Earth cultures, stowaways, and mutineers can threaten your interstellar colony. If you want a real challenge, play a seven–civilization game. In this case, the debate about whether we are alone in the universe is resolved with a resounding "No!" Not only are there Centaurans, but they've been through a few wars of their own, and they're not exactly pushovers.

There's one caveat. Though you can choose to play the aliens in a seven–civilization Extended game, we don't recommend it. You'll find that, isolated as they are from all the other empires, they're not a lot of fun to rule. There are only a handful of units available to them at the start of the game, and their limited technological development yields few more. They're meant to be a foil for space–faring human explorers, not a civilization that's controlled by a human player. You have been warned.

Winning

Obviously, you cannot win the Extended Original game merely by successfully landing a spaceship on Centaurus. You still have two ways to win, however. You can conquer the new world in the same way you did the Earth, exploiting the land and vanquishing all opposition. Alternatively (for the not–so–militarily inclined) you can continue the research race toward the goal of Transcendence, which removes you to a higher plane of existence–far from mundane and petty concerns such as mere territorial conquest.

LALANDE: THE SCIENCE FICTION GAME

For a total Science Fiction game experience, ***Civilization II: Test of Time*** offers an adventure in the planetary system orbiting the star Lalande 21185. Your goal is nothing less than a full–fledged colonisation of the entire system–three planets and an orbital environment. Though play in this game is similar in many ways to normal ***Civilization***, there are significant differences and many additional elements to consider, including hyperadvanced technologies, non–human adversaries, and directing the future evolution of your species.

SCIENCE FICTION CONCEPTS

The system of planets orbiting Lalande 21185 is similar to and yet unlike our own, full of strange phenomena and ancient ruins to investigate. In this game, *there are four habitable spheres* in the system-four different maps to explore. *Each terrain square on a world corresponds with the squares on other maps that have the same co-ordinates*. (If it helps, picture the planets as four maps spread out flat, one above the other.)

Moving from map to map is not possible at first, but one reward of technological innovation is an expansion in means of transport. In time, your civilization can gain the ability to leave Funestis and cross the gulf between planets in three new ways:

- *Transport Sites* are terrain improvements that allow travel between maps. Once you have the requisite technology, your Colonists, Niduses, Environeers, or Meliors can build SSTO Pads, Planetary Bases, and Gravitic Grids.
- *Transport Improvements* are city improvements that, like Airports (in the Original game, or Instaporters in this one), allow fast transport between cities that both have that improvement. Spaceports function just like airports, with the important difference that they can move units between the two worlds. (Instaporters, in contrast, work exactly like airports; they cannot move units to other worlds.)
- *Interplantary vehicles* are advanced units, like the Interceptor and Hohmann, that can make the trip between worlds on their own power. Some of these, like the Shuttle, can carry other units.

Keep in mind that many units cannot survive in the inhospitable environment of space, or on planets with extremely thin or poisonous atmospheres. In addition, not all space-going vessels are designed to enter an planet's gravity and land. The majority of your forces suffer limitations of some kind in terms of which maps they can visit.

Some types of terrain on each world are impassable; that is, they are too dangerous or difficult for your ground units to traverse. Only certain special units can cross this type of terrain.

Each civilization in this game is either human or non-human. Though many sciences are universal, some technologies are not, and the two species do have some unique advances. In addition, though many units-primarily inanimate and genetically engineered ones-can be built by both humans and non-humans, there are quite a few that are limited to one or the other species. Some are strictly naturally occurring (barbarian), and no one can build them.

Many units have new abilities. One of these is natural camouflage, a form of *invisibility* that lasts until the unit enters combat. Other units are completely unbribable, due sometimes to ethical strength and other times simply to the lack of a common ground for negotiations. Powerful genetically engineered units tend to view themselves as individuals, and they often *refuse to be disbanded*. The CIVILOPEDIA notes which units have what new abilities.

The names of certain basics of ***Civilization*** *have been changed to make sense in a science fiction setting.* Instead of harvesting trade from terrain, for example, you now gather data (genetic and otherwise) on the local biosphere, which serves as a medium of commerce. Most of these changes should be self-evident. If you run into any that are not clear after reading this section, please check the CIVILOPEDIA.

HOW DID YOU GET HERE?

The first effort to colonise planets around another star was in its early stages, but progressing nicely. To follow up on the success of that historic pioneering spaceship, those in charge of such things launched a second ship. This back–up settlement ship, filled with hardy and eager potential colonists, followed a similar but slightly different course than the first–after all, as the years pass, the stars move in relation to one another.

En route, the new ship encountered what can only be described as an artefact. The clearly artificial and just as obviously alien structure was several times as massive as the puny colony ship, and after a brief discussion and a quick vote, the settlers changed course to inspect it. No one remembers clearly exactly what happened next, but what is certain is that as they approached the artefact, energy patterns built up rapidly around the colony ship. Survivors speculated that their proximity must have triggered some sort of defensive mechanism.

The crew and passengers of the spaceship suddenly found themselves on a fast approach into an unidentified system of planets circling a red dwarf star. Fighting for their lives to regain control of systems damaged beyond repair by accelerations far in excess of anything the ship was ever built to withstand, the crew quickly realised that they had no other choice but to find a site for an emergency landing–fast. Oddly enough, their trajectory was taking them straight for the second planet in the system–the only world within reach that telescopic observations showed to be even remotely able to support life.

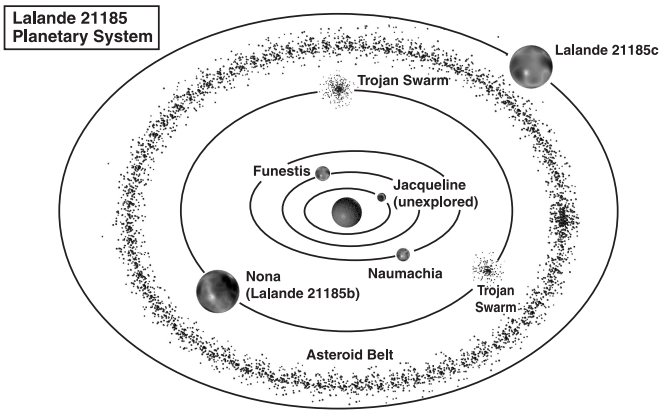
Unfortunately, their ship was moving too fast and had just been pushed too far past its operational limits. In an attempt to conserve the engines and cut velocity to near that needed for a safe approach to the planet, the crew tried to use one of the giant planets in a swing–by deceleration manoeuvre. Tidal forces and other stresses tore the ship apart during the manoeuvre, but all the pieces continued toward the target planet.

By some miracle, a few small bands of survivors not only lived through the break–up, but also the inward flight and subsequent fiery landing. You are the leader of one of these inordinately lucky groups. There are others spread around the planet, and there might be stray survivors here and there living in small chunks of wreckage. What sort of threats the planet itself might mount is anyone's guess. The planet looks as though it will support you long enough for the home world to mount a rescue operation–if they even know what happened and where you are. With some work, it might even be inhabitable for longer periods.

As with any shipwreck, your long–term goal is to get back home–or to see to it that your descendants have a fighting chance to make it. The disastrous landing has left you without most of the supplies and equipment meant for the colonisation effort, and that's set you back to a rather primitive mode of living. Your civilization has a long road ahead, rediscovering technologies and building up an infrastructure to build the means by which you can set out for home. Luckily, you're starting off with a strong bunch of folks. With some inventiveness and a lot of sweat, you just might pull through.

THE LALANDE 21185 SYSTEM

First and foremost, once you've got the essentials of survival out of the way, there's a new planetary system to explore. In ***Civilization II: Test of Time***, you can (eventually) reach three of the planets orbiting this strange, faraway sun. You begin on the second planet, Funestis (which just happens to be the only



one conducive to life), and your empire can span outward as far as the gas giant Nona (Lalande 21185b) before the end of the game.

The New Sun

Lalande 21185 is slightly more than 8 light–years from Earth, which makes it the fifth closest star to Earth's sun, Sol. (The four that are closer are Proxima Centauri, the Alpha Centauri/Beta Centauri binary, Barnard's Star, and Wolf 359.) Located in Ursa Major (near the Big Dipper), it's visible from Earth's northern hemisphere nearly every night. Lalande 21185 is also one of the growing number of stars that astronomers have already reported finding planets orbiting.

ASTRONOMICAL DATA

One of Civilization's strengths has always been the attention to detail and realism in the game. In setting up a star system for you to explore and colonise, we wanted to maintain that sense of reality. So, we picked a very particular star and planetary system to speculate about. Not just any star will do, as any good science fiction writer or reader will tell you. For those of you who appreciate this sort of thing, here's a little more data about Lalande 21185.

Distance from Sol:	approx. 8.2 light years (about one and a half trillion miles)
Apparent Magnitude:	7.5 to 7.6
Absolute Magnitude:	10.4 to 10.5
Right Ascension:	11 degrees 3 minutes 21 seconds
Declination:	+36 degrees 2 minutes 24 seconds
Spectral Type:	dM2 (cool and red)
Luminosity:	0.0048 solar luminosity (dim)
Surface Temperature:	3,000 to 4,000 degrees Kelvin
Mass:	0.3 solar masses (tiny)

The colonists' new sun is a main sequence red dwarf star of spectral class M2, much like Barnard's Star. Red dwarves are stable and predictable, like Earth's sun, but they're much smaller and cooler. Accepted theories of planet formation predict that worlds circling red dwarves should be fairly common, but it is generally believed unlikely–but not impossible–that complex forms of life would evolve on their own around a star that puts out so little energy. This is not to say that planets orbiting a red dwarf would be a bad place for life to exist; only that the chances of intelligence developing in the time allowed are slim.

On July 11, 1996, George Gatewood (et al) announced the discovery of planets orbiting Lalande 21185. Both of the Lalandian planets discernible from Earth are jovian giants(one slightly smaller than Jupiter, and one with half again (1.6 times) the mass of the largest planet orbiting Sol. No smaller bodies are observable from Earth.

Finally, according to astronomical calculations made in the 1990s, Lalande 21185 is moving at 62 miles per second (space motion), 52 miles per second of which is toward Earth (approach motion). Its closest approach to Earth will be in about 22,000 A.D.

Funestis

Funestis was not named by an optimist (the name is derived from the Latin word funestus, which means "boding evil or death"), but the world on which the survivors find themselves is much more Earth–like than they had any right to expect. This is especially true considering how little the star it orbits resembles Sol (the Earth's sun). Funestis is the only easily habitable planet in the Lalande 21185 system.

This planet is quite unlike the home worlds of both the human and non–human crash survivors, however. Though some of the terrain is familiar, the flora and fauna are different and sometimes downright bizarre. It's a nice enough world for a home base, but the resources are not superb, and the amount of impassable terrain can make exploration, colonisation, and intercolonial commerce a bit difficult. In order to develop the capacity to return home, most experts agree that a colony must spread outward; the great majority of useful resources seem to be elsewhere in the system.

Orbit

Even with a low–power, primitive telescope, an observer on the ground can easily see the giant platforms in orbit around Funestis. It's fairly obvious to most folks that the Lalande 21185 system was once home to a technologically advanced civilization, who for some reason built space structures on a grand scale. While the fate of this species remains a mystery so long as the colonies are leashed to the surface, there are also the scientific opportunities to consider; studying even the trash the ancient ones left behind could lead to leaps ahead into advanced technologies. The orbiting platforms could also offer strategic military options.

Through research and industry, your empire can reach the orbital space above Funestis. This map is mostly a "sea" of space, dotted seemingly at random with large, ancient bases. These platforms were not built to be inhabited by your species, but with the right technology, your hardy citizens can make a go of it. The science to be gained is well worth the effort.

Naumachia

Cold, rocky worlds with minimal atmosphere are a common type. Naumachia is one of these, but it's not exactly an uninteresting little planet. The extremely low gravity on this world, combined with the normal characteristics of molecular motion and some oddities in the local magnetic field, make this the only place yet discovered where vast quantities of microscopic dust particles are suspended to form roiling brown "oceans" of dust.

Given time and some luck, you'll discover the technologies and build the units that allow interplanetary travel. The next planet out from Funestis is a great place for mining and industry, but it's not scenic and isn't what you'd call a nice place to live. Settlements there tend to be little more than mining outposts. Naumachia is a good place to build up your manufacturing and research infrastructure.

Nona

Nona is the smaller of the two giant planets in the Lalandian system, and it orbits nearer the central star than its larger sibling. Like most gas giants, it has a small, rocky core surrounded by enormous amounts of hydrogen and other gasses. Advanced telescopes trained on this planet from the platforms orbiting Funestis have mapped the gargantuan climatic patterns, regular cloud movements and currents, and the unimaginably violent storms that are common on gas giant planets. These telescopic observations have also uncovered intriguing hints that there might be artificial structures on Nona. To be noticeable from this distance on a planet of that size, these constructions must be absolutely enormous.

Most experts agree that this constitutes evidence that the ancient alien species that built the orbital platforms also built something similar floating at a stable depth in the atmosphere of Nona. If this is true, these platforms would provide the only safe place to land and build on this world. It goes almost without saying that the research opportunities on this planet would outstrip even the scientists' wildest dreams.

Moving Between Worlds

One of the most important goals in the Science Fiction game is learning to travel from one world to another, to move between maps. As we mentioned in the concepts box, some units, like the Shuttle and the Rocket Man, have a native ability to traverse space, and a few of these can carry other units along. Others must leave from a properly prepared launch site. Still other transport facilities are established by the inhabitants of a particular city.

The mechanics of travel in and between multiple worlds might be difficult to understand at first, but with time, you'll get the hang of it. It can help to picture the planets of the Lalande system as a stack of four flat planes. In addition to the normal x (longitude) and y (latitude) axes, there's now a "vertical" dimension–a z axis. Four unique maps are located along this axis, and each terrain square on a world map corresponds with the squares directly "above" and "below" it. So, for example, if you had a unit at map co–ordinates (15, 35) on Funestis, that unit could move normally on the surface or it might be able to jump up to (15, 35) in Orbit or follow an outbound Hohmann trajectory to (15, 35) on Naumachia or even Nona.

There are several ways to move between the worlds, but there are two requirements that must be met; one concerns the moving unit and the other the terrain. First, the moving unit (and any passengers) must be able to exist at the destination. Otherwise, it cannot travel to or be carried there. Many units cannot survive in the inhospitable vacuum of space (Orbit) or on planets with extremely thin (Naumachia) or poisonous (Nona) atmospheres. In addition, not all space–going vessels are designed to enter a planet's atmosphere or to land at all, and some units are designed for very a specific environment. The majority of your forces suffer limitations of some kind in terms of which maps they can visit.

Next, the corresponding terrain square on the destination map (the place the unit wants to move to) must be of the same domain–ground or sea–that the unit is currently standing on (or floating in). Ground units can only move from ground square to ground square, and naval units from sea square to sea square. Every map has different land masses and oceans, and finding a spot where transport is possible can sometimes be a test of patience. Units cannot change maps directly from onboard a transport vessel. When a unit has the opportunity to change maps, the border around its key conveniently changes colour to note this.

Note that units with a native ability to move between maps cannot lift off within a city square, unless that city has a Spaceport improvement (in which case, they'll use it). For the safety of the population, they must move at least one terrain square away from a City Centre before their TELEPORT orders can become active.

CHECK THE ORDERS MENU

You can always check the ORDERS menu to see if and when a particular unit can move between worlds.

If the active unit is standing on a transport site or has a native ability for interplanetary travel, TELEPORT appears in the list of possible orders. If the destination terrain is not appropriate or the unit cannot survive at the destination, the order is greyed out.

A similar rule applies to the Spaceport city improvement. If the active unit cannot exist in any of the places to which service vessels launching from the Spaceport go, the order to use the Spaceport is greyed out.

The first launch sites that become technologically feasible are SSTO Pads, which must be located outside of city squares to protect the population from heat, noise, and possible malfunction. How do you determine where to build your launch sites? Good spots might not be simple to find. First, make sure you have a unit capable of building an SSTO Pad, at least. (The Planetary Base and Gravitic Grid offer more destinations, but come later in the game.) Move that unit to the location where you'd like to establish a site. If the terrain on which the site stands and the terrain at the destination are appropriate–both are ground, not impassable, and not occupied–the order to BUILD TELEPORTER is active. If ocean or some other obstruction makes the site inappropriate on the other (possibly unexplored) end, the build order is greyed out. Move to another square and try again.

As you discover new worlds and more destinations become available, site selection becomes both more flexible and more complex. When building these transport sites, keep in mind their strategic value. Also remember that you can

use sites built by other civilizations, and it only takes a single well placed unit to interdict a site completely.

HUMANS AND OTHER SPECIES

In a coincidence so unlikely that it's highly suspicious, colony ships of two entirely separate species have ended up wrecked on the same planet at roughly the same time. Unfortunately, none of the resulting colony fragments has the luxury of time to speculate about the possible causes of their plight. Survival is the first order of business, then returning home–if possible.

Each civilization in this game is either human or non–human. What difference does it make? Lots. Though many sciences are universal, some technologies are not, and each species has access to some unique advances that the other doesn't. As a consequence of this, though most of the units in the game–primarily inanimate and genetically engineered ones–can be built by both humans and non–humans, there are quite a few that are limited to one or the other species. A few city improvements and even a Wonder or two are also species–specific.

As an added complication, the two species cannot communicate with one another. Until you solve the labyrinth puzzle of how to talk with an alien species–xenolinguistics–your negotiators can only contact civilizations of your species. This can lead to all sorts of trouble, including unintended military violence. No matter how heated things might get, try to remember that communicating with the other species will certainly prove vital to success in your efforts to return home. Unless you pursue a military victory, you cannot win if you destroy the other species. A time will come when you must share certain key technologies in order to reach the gas giant planet Nona or progress to faster than light (FTL) propulsion. The bottom line? If you're ruling humans, don't kill off all the non–human civilizations. If you're leader of a non–human empire, don't eradicate all the human colonies.

It's not always obvious from the name which civilization belongs to which species. If you're unsure, here are two lists that should help.

Human	Cadre, True Colony, Clerisy, Engineers, Star Officers, Funesti, Seekers, Uridians, Enclave, Liberests, Sciolists, Observers
Non–human	Ellecor, Grau, Iihibati, Ponn Jahr, Vallan, Det Pin, Selephon, Jilda, Ka Rhee

In time, advances in biological engineering render the boundary between species immaterial (though the different civilizations do not overcome their research limitations). At some point, human and non–human genetics are merged and intentionally evolved into a more advanced, flexible form. This new form of life, created by the successes of science, calls itself *proteus sapiens*.

MODIFIED CIV BASICS

To conform with the theme of the Science Fiction game, quite a lot of the essentials of ***Civilization*** that we've all come to know and love–advances, terrain, units, and so forth–are quite different in the Lalande 21185 planetary system. This section is a quick run–down of the major points. For more detail, you can consult the **Poster**, the **Terrain Reference** booklet, and the trusty CIVILOPEDIA.

Difficulty Levels

The Science Fiction game is more difficult as a whole than the Original game. Among other reasons, this is because your colonists have landed in a wholly new environment without most of the tools and resources they prepared and brought along. The species limitations on negotiations and research, discussed earlier, also complicate matters. Plus, exploring and conquering four worlds takes some time. As if that weren't enough, all of the advances, units, improvements, and Wonders of the World are different–though many are similar in function. This unfamiliarity can make the first few games in the new worlds tougher for all players. If you are used to playing ***Civ*** at a particular level, we recommend that you start your first Science Fiction game at least one level of difficulty easier.

As with the Original game, a number of factors are adjusted at each difficulty level, including the general level of discontent among your citizens, the average number of barbarian units encountered in a surprise attack, the pace of technological advancement, and the total number of turns in the game.

Species: This easiest level is recommended for first–time players. The program provides advice when you must make decisions.

Genus: Civilization advances take longer to acquire at this level of play. Genus level best suits the player who doesn't want to pore over the CIVILOPEDIA entries, but wants to encounter the planets on their own terms.

Family: At this difficulty level, advances come much more slowly. You need to have a sense of the new tech tree to play with any speed, as well as some experience and skill to win.

Order: Experienced and skilled players often play at this level, where the slow pace of advancement and the unstable attitude of citizens presents a significant challenge.

Class: This level is for those who feel they've learned all there is to know about the alien settings. Your opponents will no longer pull their punches; if you want to win, you'll have to earn it.

Phylum: The ultimate ***Civ*** challenge, for those who think they've learned to beat the game. You'll have to give a virtuoso performance to survive at this level.

Level of Barbarian Activity

The settings for the level of aggression of barbarian units in the game are slightly different.

Wreckage Only: Players who really hate barbarians can choose to play in this "ideal world." The only barbarians are crazed crash survivors or local organisms living in wreckage sites. There is a significant scoring penalty, however, so you'll have to make the most of it.

Sporadic Attacks: Survivors and aliens occasionally appear, but half as frequently and in smaller numbers than at higher levels. There is a slight scoring penalty at this level.

Eco–Defence: Native organisms and madmen bent on "protecting" Funestis from the intrusion of colonists, in moderate to significant numbers, appear at intervals. This represents the "standard" level of barbarian activity found in the original ***Civilization***. Your score is unaffected at this level.

Wrath of Gaia: You asked for it! The world is full of violent indigenes and crash–survivors run amok, and they appear in large numbers. If you survive, you receive a scoring bonus.

TERRAIN

As you'll no doubt notice as soon as you begin, the terrain in this system is a wee bit different from Earth's. (The special resources are all new, too.) The detailed specs are in the **Terrain Reference** booklet and the CIVILOPEDIA, but we thought we'd give you a quick introduction to the terrain of Funestis, the planet on which you've crash landed and the first world you'll explore.

Salt Flats Flat, dry, and mineral–rich, this terrain is tough to travel through.

Prairie These broad plains of alien grasses are reminiscent of old Earth.

Gramineae The Funestian grasslands were named by one of the scientists in the expedition–gramineae is Latin for 'grasses'.

Burning Trees Many plant species on Earth take advantage of fires to spread their seeds, but these forests take a more active approach; they have evolved to occasionally set themselves aflame.

Foothills This low, rolling terrain seems to have been a favourite building site for one of Funestis' now vanished earlier empires.

Mountains Funestis' spiky mountains are a source of useful mineral ores and defensible positions.

Tundra This cold–climate terrain, named after similar terrain on Earth, does support some life forms.

Polar Like those on Earth, the poles of Funestis are cold and inimical to most forms of life.

The Willies This impassable terrain looks like any swamp or bayou of Earth, but the resemblance stops at the surface. Some of the oddest flora ever discovered developed and thrive in these murky wetlands.

Acid Shallows Another impassable terrain, the environment of the acid shallows is corrosive to most substances. Despite the harsh conditions, these areas do harbour life of a sort.

Ocean With its plentiful surface water visible from space, Funestis seemed like an ideal planet to colonise.

On Funestis, minor tribes appear as wreckage from a crashed space ship. In Orbit, they're a sort of stasis orb–remnants left by technologically sophisticated previous inhabitants.

UNITS

Even though you are building your civilization and your military essentially from scratch, that doesn't mean that you'll want to field Phalanxes or Pikemen on Funestis (especially if you're ruling a non–human empire). You haven't entirely lost your knowledge base, it's more a matter of recreating your techno–industrial capacity. Thus, throughout the Science Fiction game, none of the units are the same as in the Original game.

There are a few categories of units. Some can be built by any species, and those are considered "universal" units. These are primarily mechanical and genetically engineered forces. Several units are limited in availability to one or the other of the civilized species–human and non–human. These are mostly units that represent specially trained or equipped soldiers. For example, the Corsair unit is based on a lesson from Earth history, thus only human civilizations can train them. Then there are those few units that appear solely as barbarians; no one can build them, but you might be able to gain control of some of them.

Here are the basics you'll need to know to begin colonising Funestis:

- **Colonists** are the human, space–faring version of Old Earth's Settlers units. For those of you unfamiliar with the Original game, this means that they can establish cities, build roads, improve terrain, and build fortifications. As your knowledge base increases, Colonists can even establish transport sites linking Funestis to the platforms in Orbit. **Environeers** are their more skilful, robotic replacements. Like Engineers, Environeers can accomplish greater tasks, like terraforming terrain, and finish the simpler ones more rapidly.
- The **Nidus** is the non–human settler–type unit. The advanced version (the engineer–type) is the **Melior**.
- **Ambassadors** are the human colonies' diplomatic units. They can, like their Earthbound counterparts, establish diplomatic relations with other tribes, engage in counterespionage, investigate foreign cities, and attempt to bribe opposing units.
- The **Mediary** serves the diplomatic needs of the non–human civilizations. These units have all the same skills as Ambassadors do.
- The **Salmagundy** is the advanced diplomatic unit, a patchwork of human and alien genetics that is available to both species.
- **Arabbers** are the earliest trade units on Funestis. Like the Caravans of Old Earth, they are simple wagons pulled by draft animals. Eventually, Arabbers are replaced by High–Density Import Export Convoys, more commonly known as **Hi–DIE Tankers**.

As always, you can examine units you've built by calling up the Defence Minister's report, and the CIVILOPEDIA has listings for all the possible units.

Advances

In the Science Fiction game, the entire technology tree is new.

If you've played ***Civilization*** before, you might feel confident that you know how progress works. That experience is not applicable in this new planetary system. At Lalande 21185, advances in technology and society are not all based on gaining new knowledge via research. Quite a few advances, especially early in your efforts to survive and build a stable colony, represent the use of ingenuity. The colonists lost the majority of their equipment and supplies in the crash, and they have to reinvent and rebuild in order to get home. Stranded populations must find ways to do things that are already understood or even common at home, but using only the paltry resources at their disposal. (If you find this idea difficult to swallow, go out into the woods with nothing but the clothes on your back, then try to build an aeroplane.) Remember, finding your way through the new "Tech Trees" is part of the fun. The CIVILOPEDIA is always there to help if you get lost in the future.

As a reflection of the unquestionable cultural gulf that exists between the human and non–human civilizations, some advances (and the concurrent units or improvements) are only available to one or the other species. This means that *there are units, improvements, and even Wonders in the game that you will not be able to build*. Even if you cannot research an advance yourself, however, you might be able to gain the resulting units through other means. There are rare technologies that can only be discovered by one species, but can be understood (that is, traded to or stolen by) by the other. In fact, these advances are vital in the quest to reach the gas giant planet and uncover the dangerous secrets hidden there.

Improvements and Wonders

All the city improvements and Wonders of the World have been renamed and attached to different advances, and there's a new one.

In the Science Fiction game, the available city improvements and Wonders of the World (System) reflect the theme of the environment. For the sake of continuity, however, most of these function in the same way as some equivalent structure from the Original game. For example, the Morphon Attractor (a Wonder) updates your existing units whenever a new scientific advance makes your current units obsolete. Sound familiar?

One brand–new city improvement has been created for the Lalandian crash survivors: the Spaceport. This acts like an inter–world Airport, allowing you to launch units (one unit per city per turn) between any two cities, even cities on different maps, so long as both cities have a Spaceport. You need to discover the Quantum Gravitics advance to begin building them. (Do not confuse the Spaceport with the Instaporter, which can only teleport units between cities on the same world.)

As we mentioned earlier, some city improvements and even a Wonder or two are available only to one of the two species, human or non–human. If some vital part of your strategy seems to be missing, consult the **Poster** or the CIVILOPEDIA; it might be that what you want is only available to the others.

WINNING THE GAME

Just like in the Original, there are several ways to win the Science Fiction game. Of course, you can win by destroying all of the other civilizations in the system. There is also an equivalent to the original game's peaceful victory(a triumphant return to Earth via faster–than–light (FTL) travel. Like building the ship for the voyage outward from Earth, construction of the FTL Spaceship is an undertaking of immense proportions. You build it in sections, combining several different components that gradually improve it so that it becomes powerful enough to make the journey.

To supply an alternative to these old types of victory, the Lalande game adds a new "victory by research" possibility. Whichever civilization manages to defeat the ancient, giant guardians of Nona and unlock the secrets of the long absent alien civilization (or gain the knowledge in some other way), can then research toward the EarthGate technology that allows ships to return to Earth instantly–which counts as winning.

IMPORTANT NOTE

Civilizations of the other species are vital to your success if you choose to pursue a non-military route to victory. You cannot win if you destroy them all. At some point in the game, the non-humans and humans must share certain key technologies in order to reach the gas giant planet Nona or progress to faster than light (FTL) propulsion. The bottom line? If you're ruling humans, don't kill off all the non-human civilizations. If you're leader of a non-human empire, don't eradicate all the human colonies.

MIDGARD: THE FANTASY REALM

The Fantasy game takes place in the mythical, multileveled realm of Midgard, where the forces and creatures of magic are quite real. Though play in this land is similar in many ways to normal ***Civilization***, there are significant differences–and many additional elements to consider. The Midgard scenario is set in the same fantasy world, but its premise and victory conditions are somewhat different.

FANTASTIC CONCEPTS

The fantastic realm of Midgard is odd and mysterious, full of strange flora and fauna to discover. In this place, there are four levels to the known world-four different strata to explore. If it helps, picture a three dimensional model, with the four maps spread out flat, one above the other. *Each terrain square on a world corresponds with the squares directly above and below it.*

Moving from map to map is accomplished in three new ways:

- *Transport Sites* are terrain improvements, like Tunnel Entrances and Gates to Hel, that allow travel between maps. Take advantage of the existing sites, because very few units can create new ones.
- *Transport Improvements* are city improvements that, like Airports, allow fast transport between cities that both have that improvement. Astral Portals function just like airports, with the important difference that they can move units between worlds.
- *Travellers* are those few units, like Porpoise Pods, that can make the trip between worlds on their own power. Some of these can carry other units to different worlds, but only if those passengers can survive at their destination.

Some types of terrain on each world are *impassable*; that is, they are too dangerous or difficult for your ground units to traverse. Only certain special units can cross this type of terrain.

Each tribe in this game is native to one of the four worlds. In addition, each race has some of its own unique advances and units. *Only certain units (mostly inanimate vehicles and vessels) can be built by all tribes*. On top of that, some units have new abilities. These include magical invisibility, the moral fibre to remain *unbribable*, and the strength of purpose to *refuse to be disbanded*. The CIVILOPEDIA notes which units have what new abilities.

The names of certain basics of ***Civilization*** *have been changed to make sense in a fantasy setting*. Instead of researching science, for example, you now research magical advances. Most of these changes should be self-evident. If you run into any that are not clear after reading this section, please check the CIVILOPEDIA.

THE FOUR WORLDS

All Midgard is divided into four parts: the Surface world, Cloud world, Undersea region, and the Underworld. The surface is Midgard proper, the centrepiece that links all the other worlds. Each of the seven races have access to this realm, and it is here that the Humans, Elves, and Infidels make their homes. The Merfolk live in the Undersea world, the Clouds are the habitat of the Buteo race, and the Underworld is a dark land where Goblins and Stygians reside.

While much of the terrain found in Midgard is analogous to that of the Original game (Ocean is still Ocean, for example), there are also many differences. Please refer to the **Terrain Reference** booklet and the CIVILOPEDIA to find which produce what, which can be irrigated, and so on. Some terrain is impassable; for example, most ground units cannot enter the Bedrock found in the

Underworld and Undersea. All races will eventually have units able to pass through these squares, but be forewarned that the impassable terrain might appear in some very awkward places!

GROUND AND SEA

It is helpful to remember that in each realm, no matter its substance, terrain is divided into "land" on which ground units travel, and "sea" through which naval units move. Air units can cross both, and they are not impeded by impassable terrain.

The Surface World

This most Earth–like of the fantasy realms is the centre and gateway of the worlds, linking the other three planes. All units attempting to pass from one world to another must travel through the Surface world. It is the native home of Humans, Infidels, and Elves.

All tribes, even those native to other worlds, have access to the Surface. It is arguably the most important of the four planes. Every unit can survive on the Surface. Thus, all the races view this world as a natural part of their native homeland, ripe for expansion as they pursue their conquest of the entire realm of Midgard.

The Cloud World

This is the native world of the celestial Buteo race. Winged half–men closely related to magical birds, most Buteo units have the ability to fly through the air and between worlds. These flyers cannot ascend into the heavens or descend to the Surface directly to or from a city square, however.

While the clouds are substantial enough for the Buteo to inhabit and draw resources from, they are still only water vapour, too ethereal to allow improvement. Buteo Settlers can mine Magic Clouds, but irrigation and other forms of terrain manipulation are for the most part impossible. Thus, despite the defensive advantage that isolation offers, it follows that in order to thrive, the Buteo empire must not limit itself to the heavens, but should establish new cities elsewhere in Midgard.

The Undersea World

Home of the Merfolk, this world is full of awkward terrain and strange creatures. Most units cannot pass though the Bedrock that permeates the Undersea world, but eventually you will find or become able to build units that can. The Ocean Depths are themselves fairly barren, but they contain nutrients necessary for the improvement of tillable land around cities. Merfolk Settlers cannot irrigate through the Trenches that riddle the aquatic world, although they can build roads across them. Most Merfolk units have a native ability to move between the Surface world and Undersea, but others might need to ride a Porpoise Pod or Kraken to the Surface and then debark onto a coastal tile.

The Underworld

This is a dark realm full of peculiar tunnels and wondrous gems. Goblins race to build Tunnel Entrances that provide physical connections to the Surface world, while Stygian troops search to find the legendary Gates to Hel. These sites provide egress from the Underworld depths–and entrances to their buried kingdoms. Goblin Miners can dig mines through the Bedrock, thus converting it into Tunnels.

Moving Between Worlds

The mechanics of travel in and between multiple worlds might be difficult to understand at first, but with time, you'll get the hang of it. It often helps to picture Midgard as a three–dimensional model. In addition to the flat x (longitude) and y (latitude) axes, there's now a "vertical" dimension–a z axis. Four unique maps are located along this axis. Imagine that the Cloud world exists at the top, with the Surface world just below it. The Undersea world is one level below the Surface, and the Underworld is beneath even that.

Each terrain square on a world map corresponds with the squares directly above and below it. So, for example, if you had a unit at map co–ordinates (22, 43) on the Surface world, that unit could move normally on the Surface or it might be able to jump up to (22, 43) in the Cloud world or down to (22, 43) in the Undersea world or the Underworld.

There are a few different ways to move between the worlds, but there are two requirements that must be met; one concerns the moving unit and the other the terrain. First, the moving unit must be able to exist in the destination world, or it cannot travel to or be carried there. All units can exist on the Surface world, but not all units can breathe or function Undersea, in the Underworld, or among the Clouds. Next, the corresponding terrain square on the destination map (the place the unit wants to move to) must be of the same domain–ground or sea–that the unit is currently standing (or floating) on. Ground units can only move from ground square to ground square, and naval units from sea square to sea square. Units cannot change maps directly from onboard a transport vessel. When a unit has the opportunity to change maps, the border around its key conveniently changes colour to note this.

CHECK THE ORDERS MENU

You can always check the ORDERS menu to see if and when a particular unit can move between worlds.

If the active unit is standing on a transport site or has a native ability for intermap travel, MOVE TO ANOTHER WORLD appears in the list of possible orders. If the destination terrain is not appropriate or the unit cannot survive in the destination world, the order is greyed out.

A similar rule applies to the Astral Portal city improvement. If the active unit cannot exist in any of the places to which the portal leads, the order to use the portal is greyed out on the menu.

Some units can travel between the worlds on their own. For the others, there are two kinds of physical connections between the worlds; some can be built, while others are pre–existing. Tunnel Entrances are transport sites–built in the open, outside city squares. Astral Portals are city improvements, built only inside

cities. Every tribe can build Astral Portals (once they have learned the requisite technology), but only Goblin Miners and Dwarves can build Tunnel Entrances. That's one reason to befriend the Dwarves, and it's also a good reason to keep a wary eye on the Goblins' territory.

The two pre–existing types of transport site that no one can build are Gates to Hel and, in the Midgard scenario only, Jormungand's Maw. The Gates to Hel are gateways between the Surface world and the Underworld; you must first find them before you can use them. The Maw leads to the belly of the beast_

The best way to learn all the ins and outs of travelling between worlds is by experimentation. Each tribe has different abilities and limitations in this area, so play all the tribes and see which you enjoy most!

THE TRIBES

The four levels of Midgard are home to seven different tribes. When you begin the game, you choose which of the seven to make your own. Each tribe begins with access to the Surface world, and some also have a separate home world of their own. Importantly, each tribe has a unique character.

- **Humans** are spiritually and socially oriented expansionists.
- **Elves** are woodland ecologists.
- The **Buteo** are a race of diplomatic celestial beings.
- **Merfolk** are aquatic dwellers.
- The **Infidels** are militaristic extremists.
- **Goblins** are malevolent fanatics.
- The **Stygians** are evil undead.

These characteristics can have consequences. For instance, only Infidels and Goblins can be governed by Fanaticism. The Underworld tribes, since they are aligned with dark forces, cannot build Skidbladnir (a celestial boat). The zombie–like Stygians have no interest in trade, and cannot build Caravans.

Most units are unique to one race. This is important enough to repeat again: *Not every tribe can build every unit*. For example, Trolls are native to the Goblin tribe, Rangers are only built by Humans, and Worms are barbarian. The CIVILOPEDIA entry for each troop tells you in red letters if your race cannot build that unit. The Fantasy game includes more units than the Original game to offset these tribal limitations.

However, this rule doesn't mean that most armies will have a monotonous sameness within their ranks. Far from it. Units you gain from minor tribe encounters (known to ***Civ*** fans as "goody huts") might have originated in a tribe other than your own. This phenomenon, along with the old standard bribery, can give you control over units you cannot otherwise build. Use them wisely. These armies, once defeated, might never be replaced. You can also sometimes trade advances with other tribes and gain the ability to build new units in that fashion. Experience and serendipity will round out your forces.

There are three non–player cultures (they're not really civilizations) that might strike up an alliance with you, regardless of which tribe you rule. They are the Dragons, Dwarves, and Frost Giants. Discover how to impress these folk, and they can teach you how to build new units in your cities.

MODIFIED CIV BASICS

To conform with the theme of the Fantasy game, quite a lot of the essentials of ***Civilization*** that we've all come to know and love–advances, terrain, units, and so forth–are quite different in Midgard. This section is a quick run–down of the major points. For more detail, you can consult the **Poster**, the **Terrain Reference** booklet, and the trusty CIVILOPEDIA.

Difficulty Levels

The Fantasy game is more difficult as a whole than the Original game, partly due to the tribal limitations and unit restrictions discussed earlier, and partly because finding and conquering three additional worlds takes some time. In addition to this, all of the advances, units, improvements, and Wonders of the World are different–though many are similar in function. This unfamiliarity can make the first few games in the new worlds tougher for all players. If you are used to playing ***Civ*** at a particular level, we recommend that you start your first Fantasy game at least one level of difficulty easier.

Terrain

The terrain in the Fantasy game is often similar to Earth's, but it's also sometimes quite radically different. (The special resources are mostly new, too.) The detailed specs are in the **Terrain Reference** booklet and the CIVILOPEDIA, but we thought we'd give you a quick introduction to the terrain of the Surface world.

Haunted Forest These dismal woods offer a great defensive bonus. After all, what opponent in his right mind would follow you in?

Wildlands The wild lands yield fair resources, if effort enough is made to tame them.

Glade These meadows provide rich soil with grazing and gardening possibilities.

Old Forest Old growth yields fine, straight–grained wood.

Hills This is exactly what you're used to–low, rolling terrain with some defensive capabilities.

Mountains Spare and cold, the mountains yield little and hinder many.

Blasted Lands This marginal territory is battered by icy winds and snow.

Ice Barrens The poles of Midgard are frozen wastes of deadly beauty.

Primeval Swamp Very little here is worth the effort it takes to slog through the muck to reach it.

Wastelands This terrain redefines the word barren; nothing grows, and little worthwhile can be found or mined–all is waste.

Ocean Not only does the Ocean offer goods to harvest and a surface to travel, but it provides entrance to the world beneath the waves as well.

In the Fantasy setting, minor tribes look like stone circles, pillars, and other ruins.

Units

In Midgard, precious few of the units are the same as in the Original game. this is a reflection of the different evolution of research here; magic works, and that has led civilization in different directions than the technological progress of Earth history. Here are the essentials that you'll need to know to begin.

Settlers of some kind are available to every race. Buteo Settlers, Elf Settlers, Goblin Miners, Merfolk Settlers, Stygian Settlers, and–for the Human and Infidel tribes–plain old Settlers are the folk tasked with building cities and improving terrain. Goblin Miners have the unique ability to build Tunnel Entrances between the Underworld and the surface, as we've mentioned already.

Diplomats are represented by Skalds, Norse bards who were responsible for the dissemination of both entertainment and news.

Caravans haven't changed their name or their function, carrying trade goods from city to city. Note that, as we've mentioned, Stygians cannot build Caravans. The undead have little interest in commerce.

As always, you can examine units you've built by calling up the Defence Minister's report, and the CIVILOPEDIA has listings for all the possible units.

Advances

In the Fantasy game, the entire technology tree is new.

If you've played ***Civilization*** before, you might feel confident that you know how progress works. That experience is only applicable to the Original game. In some cases, the advances and improvements in the Fantasy game follow more or less the same paths of development as those in the Original game, but many are changed in both name and function to reflect Midgard's magical nature. Don't be misled by familiar–sounding names; explore your options. Remember, finding your way through the new "Tech Trees" is part of the fun. The CIVILOPEDIA is always there to help if you get lost in the magic.

Also, as a reflection of the great differentiation between the tribal cultures, some advances (and the concurrent units or improvements) are limited to certain tribes. Even if you cannot research an advance yourself, however, don't lose hope. You might be able to gain that advance through other means.

Certain advances can lead to alliances with important secondary cultures, such as the Frost Giants. Your own actions might lead to the discovery of these advances, so consider carefully before deciding to simply annihilate all opponents around you. Note that even if you ally with tribes like the Frost Giants, some disaffected units still continue to appear randomly as barbarian creatures.

Because the unit mix is radically different in the Fantasy setting, different advances may act as prerequisites for any particular unit equivalent. You will need to reconsider research priorities for both military and knowledge–based strategies.

Improvements and Wonders

All the city improvements and Wonders of the World have been renamed and attached to different advances, and there's a new one.

In the Fantasy game, the available city improvements and Wonders of the (Midgardian) World reflect the elaborate fantasy theme. For the sake of continuity, however, most of these function in the same way as some equivalent structure from the Original game. For example, the Sacred Rune of Alteration (a Wonder) updates your existing units whenever a new magical advance makes your current units archaic. Sound familiar?

One brand–new city improvement has been created especially for this realm: the Astral Portal. This acts like an inter–world Airport, allowing you to teleport units (one unit per city per turn) between any two cities, even cities on different maps, so long as both cities have an Astral Portal. You need to discover the Reidmar's Compact advance to begin building them.

Again, although many of the Wonders available in Midgard are similar to those of the Original game, in some cases they have been altered to better fit the Fantasy flavour. For instance, each of the seven races in the game has a unique hero, but only one hero can ever appear in the game. This warrior of providence shows up only in response to the summons of the race that builds the Crown's Emissary.

WINNING THE GAME

Just like in the Original game, there are several ways to win the Fantasy game. Conquering the world is one option. In place of the (clearly inappropriate) space race of the Original game, you can now build a giant, magical siege engine to destroy the fortress of a mischievous god–the one causing disharmony throughout the realm. Like interstellar travel, the great siege engine is an undertaking of immense proportions. You build it in sections, combining several different components that gradually improve it so that it becomes powerful enough to overcome the god's defences. There is also a new, third route to success–research. In Midgard, completing magical research into a certain Civilization Advance results in total victory for your civilization. Refer to the **Poster** or the CIVILOPEDIA to find out which one.

THE MIDGARD SCENARIO

Civilization II: Test of Time includes a unique scenario set in this fantasy realm. In the Midgard scenario, you have the same four planes, the same seven races, and the same improvements, Wonders, and units as in the Fantasy game. (The advances are somewhat different.) You can still win in the same ways, but in the process, you must deal with a number of complicating factors, not the least of which is defeating the evil wizard Volsang.

THE STORY THUS FAR

Once upon a time, a wizard with great malice in his heart tried to take over Midgard. His aim was to gain power–power he would use to corrupt and defile the entire surface of the world. This evil wizard, Volsang by name, exerted power over the dead. He could capture the spirits or shades of deceased warriors and twist them to his own ends. Many heroes died at his hand and at the sword points of his ever increasing hordes of minions, only to rise again to fight for their enemy. As his armies spread outward from Volsang's hidden fortress, the fall of Midgard seemed a certainty.

At what seemed like the last possible moment, Volsang's armies collapsed. The undead among them literally fell to pieces, and the rest were easily dispersed. Though none knew it at the time, Dreya the Wise had, after months of diligent research, discovered a spell that would imprison Volsang and free Midgard from his dark influence. At the instant she cast this spell, the evil one's hold on his forces had been cut off, resulting in unexpected victory for the haggard armies protecting Midgard.

Over time, the great evil that was Volsang became no more than a bedtime story told to frighten children.

Unfortunately, nothing seems to last forever. In recent years, Dreya's spell has begun to show signs that it is weakening. Experts who monitor the flow of magic in Midgard tell us that Volsang is gathering his power, straining at his bonds, and preparing for the moment when he can escape his prison and once again attempt to take Midgard for his own. He becomes more powerful with each passing month. Soon, they say, Volsang will be able to begin to cast spells and corrupt

the land surrounding his fortress, which will only add to his power. If Volsang is left unchecked, the entire realm will eventually be laid to waste. If that happens, everyone loses.

The Saga Continues

As the leader of one of the seven tribes of Midgard, it is your duty to your subjects to stop Volsang from escaping the imprisonment spell and befouling the world. There's more than one way to accomplish this.

- You can build a Siege Engine and use it to storm Volsang's fortress.
- Unite all the races in Midgard to form one giant empire, and the evil wizard hasn't got a chance.
- Convince the gods to help suppress Volsang, and the land's worries are over.

You'll notice that the Civilization Advances (Midgardian Advances?) in the scenario are somewhat different from those in the Fantasy game. This is a reflection of the greater differentiation between the tribes, which is primarily an after–effect of the First Volsang War. Each race has its own cultural identity; that is, every tribe begins with a different, appropriate advance that enables each to build one or more Wonders immediately. For example, the Elves innately know Wood Lore because of their deep interconnection with the forests, and the Buteo have Empyrean Lore, because they are a diplomatic tribe.

This differentiation allows each ruler to develop a unique strategy, to capitalise on the tribe's native strengths. It also requires that you pay close attention to the **Poster** and CIVILOPEDIA, especially if you are already familiar with the Fantasy game. Experiment with the different ways each tribe can make the most of its native advantage to succeed in conquering Volsang.

The Ten Obstructions

If Volsang succeeds in escaping his imprisonment, it will mean the corruption and destruction of the entire Surface world. It is extremely difficult to unite the tribes, finish a Siege Engine, or find Bifrost (the Rainbow Bridge to Asgard) in time to prevent this, but there are ways to delay the evil wizard's release. Throughout the game, you will happen across clues that can lead you to intriguing, difficult, and sometimes dangerous quests. Most of these offer some worldly reward for their completion. Some also have the beneficial side effect of hampering Volsang's efforts. Here is a list of the Ten Obstructions, the major quests that result in delaying the evil one's escape.

1) King Flytrap
2) The Dragon's Ice Lair
3) Jormungand's Inmate
4) The Ancient Worm
5) The Frost Giant Pact
6) The Labyrinth Treasure
7) The Dwarven Hoard
8) Jack O'Lantern Genesis
9) Brian's Expedition
10) The Sack of Rot

In addition to these major quests, other events occur throughout the game. Some of these events affect the outcomes of your quests, and some do not. As a general rule, you should try to accomplish as many of these tasks as possible. For instance, Fairies appear periodically. Fairies act as spies for all tribes, so if you can sway one or more to your side, you can use their skills to your benefit.

A Caution

When playing the Midgard scenario, please do not rename your civilization or cities.

As is true of any scenario, Midgard takes advantage of the events macro language to generate pre–designed occurrences. Many of these are linked to specific dates, places, civilizations, and happenings. Some of these events are linked to the names of cities and tribes. This means that if you customise your civilization with a unique name or if you rename your cities, some important events will not occur. This could not only put you at a disadvantage in terms of winning, but can also spoil the play balance of the game.

REFERENCE: SCREEN BY SCREEN

This section details all of the menus and major screens in the game and the parts and options of each. Refer to the body of the manual for the *whys* and *wherefores* (all we're discussing here is the how–to). The screens are covered alphabetically, for ease of reference.

CITY DISPLAY

Civilization II: Test of Time has a new streamlined CITY DISPLAY–though if you prefer, you can still use one similar to those in past ***Civilization*** games. You can switch from the new display to the classic and back by selecting the CITY LAYOUT option in the VIEW menu.

You can direct the operation of any city from the CITY DISPLAY. Here, you assign citizens to work in the surrounding fields, mines, forests, and fishing grounds. This display collects in one place all critical information concerning the pictured city's status: how many shields it produces, how much food and trade income it is generating, what it is producing and how close the item is to completion, the happiness of the population, who is defending the city, what improvements you've already built, and more.

You can open either CITY DISPLAY in many ways.

- Position the mouse cursor over a city in the MAP window, then click on that city.
- Pull down the KINGDOM menu and choose FIND CITY, select the city (of yours) that you want, then click the ZOOM TO CITY button.
- Position the terrain cursor or the current active unit on a city, then press Enter.
- Double–click on any city name in the CITY STATUS report.
- Click on any city name in the ATTITUDE ADVISOR's report.

The New City Display

The new version of the CITY DISPLAY looks different from those in previous editions of ***Civ***, but it works in much the same way. The information in each area is summarised for quicker city management.

The City Display

Resource Map

The bulk of the CITY DISPLAY is a detail map showing the explored terrain squares around the city. The squares within a city's radius are highlighted, and each worked square is marked with the resources being derived from it. The city square itself is always under production. For each population point (each citizen in the roster), you can work one additional square. The maximum number of squares a city can work is the number of citizens plus one or 21, whichever is smaller. Note that it is possible to have more citizens than there are squares to work.

Depending on the type of terrain in a map square, citizens working there can produce food, production shields, and/or trade goods. Most squares produce a combination of several resources. Clicking on any square under production (except the city square, which remains permanently under production) temporarily takes that citizen off work. Click on an unoccupied square to put the citizen back to work in a new place. You can move citizens from one square to another as you wish to change the mix of resources the city is harvesting. Citizens removed from work are temporarily converted into Entertainers.

When a city's population increases, each citizen is automatically assigned an area to develop. You might want to review the map of a city that has just increased in size to be certain that workers have been placed as you wish.

City Resources Box

The box in the top left shows five bars summarising the net per turn production of each type of goods the city generates. You can click anywhere in the box to change the display to reveal more detailed information.

The Default View

The Detailed View

Food Bar: The top bar shows the net food production in the city. Red letters indicate a food shortage. The detail includes:

- **Net** is the overall surplus or deficit in the city. This is the total food harvested, plus or minus any improvements, food caravans, and support. For the total raw production, count the number of food symbols on the detail map, then add any food caravan bonuses listed under INFO in the CITY DATA BOX.
- **Eaten** is the amount of food spent to feed the population of the city each turn.
- **Support** is the amount of food spent to support settler–type units each turn.

Tax Bar: This bar shows the net per turn surplus or deficit in the city budget.

Luxury Bar: This bar shows the net per turn supply of luxury goods produced in the city.

Science Bar: This bar shows the net research output of the city.

The detailed view includes all three of these interdependent measures–Tax, Luxury, and Science–in one display.

- **Net** is the overall trade total for the city. For the total raw production, count the number of trade symbols on the detail map, then add any trade route bonuses listed under INFO in the CITY DATA BOX.
- **Corruption** is the amount of trade lost to general inefficiency.
- **Tax** shows both the percentage of net trade allocated to taxes and the per turn net income, modified by improvements, trade bonuses, Wonders, governments, and any Taxmen in the city. This does not subtract the amount spent on the upkeep of any improvements in the city (see INFO in the CITY DATA BOX for that figure.)
- **Luxury** shows both the percentage of net trade allocated to luxuries and the net amount, modified by any Entertainers in the city.
- **Science** shows both the percentage of net trade assigned to research and the net value, modified by improvements, trade bonuses, Wonders, governments, and any Scientists in the city.

Production Bar: This bar shows the net material goods production in the city. Red letters mean a production shortfall.

- **Net** is the overall production surplus or deficit–the amount generated by terrain, modified by any improvements, Wonders, governments, unit support, and the amount lost to Waste. For the total raw production, count the number of shield symbols on the detail map.
- **Waste** is the amount of production lost to shoddy workmanship, poor planning, and failed contracts.
- **Support** is the amount spent to support and maintain units that call this city home.

City Data Box

The header area of this box lists the name of the city, the current population, and the amount in the treasury. You can click anywhere in this area to rename the city. The two arrow buttons allow you to scroll through all the cities in your empire (in alphabetical order). Note that if you opened the CITY DISPLAY from one of the pop–up prompts that appear during the maintenance phase of your turn (before moving your units), these buttons do not work.

The four buttons below the header control what information appears in the DISPLAY BOX to the right, and the fifth closes the CITY DISPLAY. Two arrow buttons near the DISPLAY BOX allow you to scroll up and down when there are too many items to fit into the box.

- **Info:** This is the default setting. It displays each unit currently in the city, including the unit's power bar and a three–letter abbreviation of that unit's Home City. Clicking on an icon brings up the ORDERS menu for that unit. Once you have made certain technological advances, more information appears in this summary. For instance, once you have discovered Trade (or the equivalent), INFO displays what the city supplies and demands.
- **Support:** This shows all the units supported by the city. Each icon includes the unit's key symbol (including its power bar) and notes what the city is currently spending to support that unit. Again, clicking on an icon brings up the ORDERS menu for that unit.

City Data

- **Improvements:** This displays the list of improvements and Wonders in the city. You can sell any improvement by clicking on its name. If it can be sold (Wonders cannot), a three–option menu allows you to sell the improvement, sell that improvement in all of your cities, or cancel the sale.
- **Happy:** This setting presents an analysis of the happiness of the population of the city. It is for display only; you cannot change the citizens' state of happiness here.
- **Close:** This closes the CITY DISPLAY and returns you to the game.

Food Storage Box

This appears in the bottom right corner of the CITY DISPLAY. The bar shows how far along the city is in the production of its next citizen. A nearby fraction shows the amount of stored food as it compares to the total needed for the population to grow. At the bottom of the box is a brief message commenting on the status of population growth.

If one of your cities is not producing enough food to feed its population, the shortage is subtracted each turn from the reserve in the FOOD STORAGE BOX. If the box is empty and the city still has a food shortfall, any units that draw food for support (like Settlers and Engineers) are disbanded, one per turn, until the shortfall is corrected. If there are no such units or if a shortfall still exists after they are lost, the city loses one point of population each turn due to starvation, until an equilibrium is reached.

Food Storage Box

When a population increase occurs, the FOOD STORAGE BOX is emptied and the accumulation begins anew. The Granary improvement (and equivalents) has the effect of speeding population growth. When a city has a Granary, the FOOD STORAGE BOX only empties halfway–to the granary line–when the city gains a new citizen. The Pyramids Wonder has the same effect, but for all cities rather than just one.

Population Roster

In the bottom left corner of the screen is a roster of citizen icons representing the city's population. Each icon in the POPULATION ROSTER represents one population point. (Note that each population point represents a different number of citizens as the game progresses; the actual population is listed in the CITY DATA BOX.) Citizen icons can be happy, content, unhappy, or very unhappy. If the number of unhappy people exceeds the number of happy people (content people and Specialists are ignored), that city goes into civil disorder (see **Civil Disorder** for details). In addition to the usual workers, a city can support three different types of Specialists.

Population Roster

Citizens who are not working and producing in the city radius are Specialists. For an example, click on a productive city radius square; the workers there become Entertainers (one citizen in the POPULATION ROSTER is replaced by an Entertainer icon). Specialists no longer directly contribute to the resources a city generates, but they do consume food like other citizens. However, they can be useful in adjusting the amount of luxuries, taxes, and research the city generates. There are three types of Specialists: Entertainers, Scientists, and Taxmen. Cities must have a population base of five or more to support Taxmen or Scientists.

Entertainers: Citizens removed from the work force immediately become Entertainers. Each Entertainer adds two Luxury icons to the raw production of the city. These are added before the effects of improvements are calculated. Creating Entertainers has the result of creating more luxuries, thus making more citizens happy.

Taxmen: Click on an Entertainer icon in the POPULATION ROSTER to put him to work as a Taxman. Each Taxman adds three Gold icons to the raw production (instead of the two Luxuries the Entertainer used to generate). These are added before the effects of improvements, such as Marketplaces and Banks, are calculated. No tax collection is made if a city is in civil disorder (see **Civil Disorder** for details).

Scientists: Click on a Taxman icon to create a Scientist. Each Scientist adds three Science icons to the raw production (instead of the taxes the Taxman used to generate). This additional research is added before the effects of improvements such as Libraries and Universities are calculated. As with Taxmen, Scientists are only useful if your city is not in civil disorder.

Click on a Scientist icon to return it to Entertainer status.

Production Box

This appears on the left side of the CITY MAP. Click anywhere in the PRODUCTION BOX (except on the BUY button) to change the item being produced.

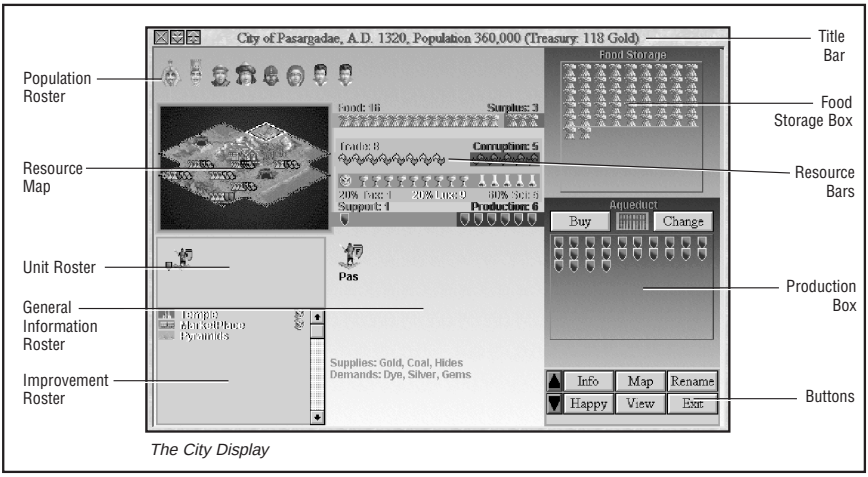
Production Box

- The **Build Bar** shows graphically how far along the current project is.
- The **Name** of the item or unit being produced is noted.
- The **Icon Box** includes both the icon for the item being constructed and a fraction listing the current number of shields as a ratio of the total needed.
- The **BUY Button** area notes how many turns are left until completion and how much you would need to spend to complete it in the next turn. (See **Rush Jobs** for reasons why you might want that option.) This area also includes the BUY button itself.

The Classic City Display

If you prefer the original ***Civilization II*** CITY DISPLAY format to the new one, you can still use it. Select the CITY LAYOUT option in the VIEW menu to switch from the new display to the classic layout (and back).

You can close the classic CITY DISPLAY by clicking the EXIT button or the window close (X) button in the top left–hand corner of the window. If you have the Enter KEY CLOSES CITY SCREEN option (one of the GAME OPTIONS accessible through the GAME menu) enabled, you can just press Enter.



The City Display

Two important shortcut features are the ZOOM buttons in the top left–hand corner of the window frame. You can click the up arrow to contract the CITY DISPLAY and click the down arrow to expand it again.

Title Bar

Along the top of the display is the TITLE BAR. The name of the city, the current date, the total population of this city, and the amount you have in your treasury are noted here.

Population Roster

Population Roster

Near the top of the display are citizen icons representing the city's population. Each icon in the POPULATION ROSTER represents one population point. (Note that each population point represents a different number of citizens as the game progresses; the actual population is listed in the TITLE BAR.) In addition to the usual workers, a city can support three different types of Specialists.

Citizen icons can be happy, content, unhappy, or very unhappy. If the number of unhappy people exceeds the number of happy people (with content people and Specialists ignored), that city goes into civil disorder (see Civil Disorder for details).

Citizens who are not working and producing in the city radius are Specialists. For an example, click on a productive city radius square; the workers there become Entertainers (one citizen in the POPULATION ROSTER is replaced by an Entertainer icon). Specialists no longer directly contribute to the resources a city generates. However, they might be useful in adjusting the amount of luxuries, taxes, and research the city generates. Specialists do consume food like other citizens. There are three types of Specialists: Entertainers, Scientists, and Taxmen. Cities must have a population base of five or more to support Taxmen or Scientists.

Entertainers: Citizens removed from the work force immediately become Entertainers. Each Entertainer adds two Luxury icons to the tally in the APPORTIONMENT bar. These additional luxuries are added before the effects of improvements are calculated. Creating Entertainers has the result of creating more luxuries, thus making more citizens happy.

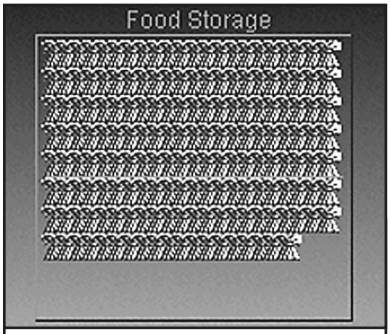
'The King'

Taxmen: Click on an Entertainer icon in the POPULATION ROSTER to put him to work as a Taxman. Each Taxman adds three Tax icons to the APPORTIONMENT bar (instead of the two Luxuries the Entertainer used to generate). These additional luxuries are added before the effects of improvements such as Marketplaces and Banks are calculated. No tax collection is made if a city is in civil disorder (see **Civil Disorder** for details).

Scientists: Click on a Taxman icon to create a Scientist. Each Scientist adds three Science icons to the total in the APPORTIONMENT bar (instead of the taxes the Taxman used to generate). This additional research is added before the effects of improvements such as Libraries and Universities are calculated. As with Taxmen, Scientists are only useful if your city is not in civil disorder.

Click on a Scientist icon to return it to Entertainer status.

FOOD STORAGE BOX



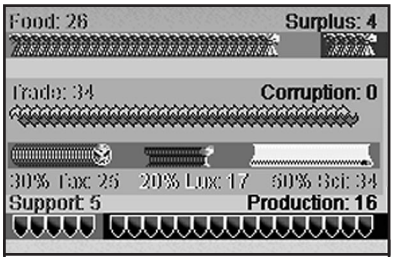
Food Storage Box

Any surplus food generated by your city each turn accumulates in this box. The capacity of the box expands as the city's population increases. When the box overflows, your city's population grows by one point, and a new citizen is added to the POPULATION ROSTER. The FOOD STORAGE BOX empties and begins to fill again the next turn.

If one of your cities is not producing enough food to feed its population, the shortage is subtracted from the reserve in the FOOD STORAGE BOX. If the box is empty and the city still has a food shortfall, any units that draw food for support (like Settlers and Engineers) are disbanded, one per turn, until the shortfall is corrected. If there are no such units, or if a shortfall still exists after they are lost, the city loses one point of population each turn due to starvation, until an equilibrium is reached.

The Granary improvement (and equivalents) has the effect of speeding population growth. When a city has a Granary, the FOOD STORAGE BOX only half empties when it overflows and creates more people. The box empties only to the granary line. The Pyramids Wonder has the same effect, but for all cities rather than just one.

THE CITY RESOURCE BARS



Resource Bars

The RESOURCE bars compile all the resources generated by the city's workers each turn. Food, shields, and trade goods are collected each turn from the CITY RADIUS squares being worked by citizens. The amount of any particular resource collected might be modified by the presence of a certain improvement in the city, the form of government you choose, or by your ownership of a certain Wonder.

Food Bar: The top bar represents the state of the city's food harvest each turn. Each population point (citizen icon) in your city consumes two units of food each turn. Also, some units consume food as part of their support needs. Any surplus or shortfall is noted on the right side of the bar. Excess accumulates in the FOOD STORAGE BOX (see above).

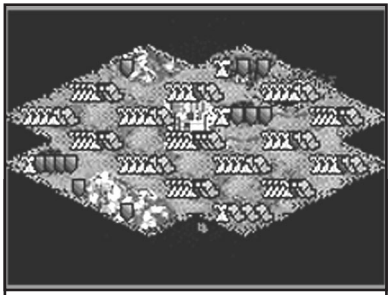
Trade Bars: The centre area contains the TRADE bar and the APPORTIONMENT bar. Together, these represent the state and disbursal of the city's trade income each turn. The TRADE bar lists the total trade goods produced on the left, including any derived from trade routes. Depending on your type of government and each city's distance from your capital, some portion of the arrow icons might be lost as corruption; this is noted on the right side of the bar.

The APPORTIONMENT bar notes how the income from these trade goods is divided into taxes (gold), luxuries (goblets), and research funding (beakers). These numbers depend on your trade rates (see the **Kingdom** Menu for details) and the assignment of the city's Specialists. The apportionment is figured after the losses to corruption have been subtracted.

Production Bar: The bottom bar represents the state of the city's production each turn. Depending on the form of government under which your civilization operates, some of the shield icons generated each turn might be required to maintain units that a city has previously built. Support requirements are noted on the left side of the bar. Any production capacity lost to waste is noted in the centre of the bar. Production surplus or shortage is indicated on the right side of the bar and any excess accumulates toward what the city is building in the PRODUCTION BOX.

If the city's industrial capacity is not sufficient to maintain the existing units and your turn ends, enough units are disbanded to make up the difference, beginning with the ones farthest from the city.

Resource Map



Resource Map

Immediately below the POPULATION ROSTER is a detail map showing all of the explored terrain squares within a city's radius. The city square itself is always under production. For each population point (each citizen in the roster), you can work one additional square. The maximum number of squares a city can work is the number of citizens plus one, or 21, whichever is smaller. Note that it is possible to have more citizens than there are squares to work.

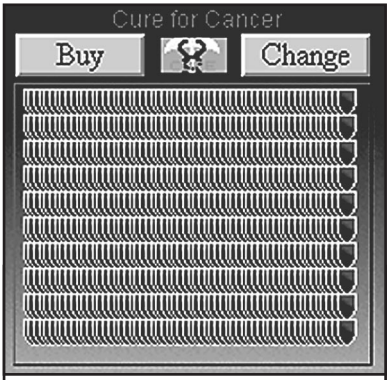
Depending on the type of terrain in a map square, citizens working there can produce food, production shields, and trade goods. Most squares produce a combination of several resources. Clicking on any square under production (except the city square, which remains permanently under production) temporarily takes that citizen off work. Click on an unoccupied square to put the citizen back to work in a new place. You can move citizens from one square to another as you wish to change the mix of resources the city is harvesting. Citizens removed from work are temporarily converted into Entertainers.

When the city population increases, each citizen is automatically assigned an area to develop. You might want to review the map of a city that has just increased in size to be certain that workers have been placed as you wish.

Production Box

Below your FOOD STORAGE BOX is the PRODUCTION BOX. The net production generated by your city each turn accumulates in this box. The capacity of the PRODUCTION BOX changes to reflect the cost of the unit, improvement, or Wonder currently under construction. When the box is full, the item is complete. The box empties, and the new item is ready for use. The item being built is noted at the top. The items available for building depend on the advances your civilization has achieved.

When the discovery of a new advance makes available a unit that supersedes units currently being built, your production is automatically upgraded to the new unit. If you are building a Wonder and another civilization completes it before you can, you are reminded that you must change production in that location.



Production Box

Some Wonders on the PRODUCTION menu might be marked with an asterisk (*). This indicates that the Wonder's special ability has been made obsolete by someone's discovery (not necessarily yours) of the terminating advance. You may still build obsolete Wonders to gain points toward your final score (see **Scoring** for details). there are two buttons in the PRODUCTION BOX.

Change: You can use the CHANGE button to switch production to another item at any time before the production of the existing item is completed. If you have already accumulated sufficient shields to construct the new item, any excess is lost, and the item is immediately completed. Otherwise, the accumulated shield icons roll over toward the new item. Note, however, that changing the type of production assignment often results in a significant loss of efficiency, which is reflected as a loss of accumulated shields. (In the Original game, 50% of the shields are lost when switching from one type of production to another.) This button changes to AUTO OFF if you set the city to automatic production mode (see below).

Buy: You can speed the completion of an item by clicking the BUY button. A dialog box shows how much cash the rush job requires. (See **Rush Jobs** for why you might choose this option.) If you have sufficient funds in your treasury, you are given the option to buy the item outright.

There are a few more buttons that need explanation. These buttons are not in the PRODUCTION BOX, but rather on the PRODUCTION menu from which you choose the next item you wish constructed (after you click the CHANGE button, that is).

Auto: This button allows you to hand the city's production choices off to your advisors (you get to choose the MILITARY ADVISOR, the DOMESTIC ADVISOR, or both). Each option causes your city to be run using a different philosophy. The game automatically decides what to build next after each item is completed. To take back the responsibility for these decisions, click the AUTO OFF button in the PRODUCTION BOX.

Help: The HELP button calls up the CIVILOPEDIA entry for whatever item is highlighted.

Cheat: When the CHEAT mode is enabled, this button allows you to select a unit, improvement or Wonder from the PRODUCTION menu and build it instantaneously, without interrupting your regular production in any way.

OK: When you are satisfied with your choice, click OK. If you've chosen an option that will result in production penalties, you'll be given one last chance to change your mind before penalties are assessed.

UNIT ROSTER

Below the RESOURCE MAP is the UNITS SUPPORTED roster. This shows all of the units that call this city home. The health status of each unit is indicated on the unit's key. Food and shield icons below these units indicate any resources required by each as support. The amount and type of support that units need depend on your civilization's chosen form of government (see **Governments**). Additionally, if your civilization operates a Democracy or a Republic, armies on foreign duty whose absence is causing unhappiness are noted. If the city does not generate enough resources to maintain all of the supported units, units left unsupported are disbanded, beginning with those farthest from the city. Click on any unit icon for its exact location. The SUPPORTED UNIT INFORMATION window that opens also gives you a few useful options:

- NO CHANGES
- CENTRE MAP ON UNIT
- CENTRE MAP ON UNIT AND CLOSE CITY SCREEN
- ORDER UNIT TO RETURN HOME
- DISBAND UNIT

These are all exactly what they sound like.

IMPROVEMENT ROSTER

Below the UNIT ROSTER is a list of all of the existing improvements and Wonders of the World in the city. Each entry in the list includes the item's icon and name. If the improvement is one you can sell, there is a gold icon next to the listing. Click the listing, and a menu appears allowing you to choose between three options: selling that improvement, selling that improvement in all of your cities, or cancelling the sale. You cannot sell Wonders. Improvements are added to the roster as they are completed. Any improvements destroyed by disaster or bombardment are removed from the list, as are any improvements you sell. Note that Wonders will remain on the roster even after their special ability has become obsolete.

GENERAL INFORMATION BOX

The information that appears in the box in the bottom centre of the CITY DISPLAY depends on what you want to see. Three of the buttons in the bottom right–hand corner of the display control this area.

Info: Click the INFO button to view the CITY INFO chart. (This is the default display the first time you open the CITY DISPLAY.) Every unit currently in the city is represented by its icon. A three–letter abbreviation naming its home city appears under each unit. You can click on any one of these units to give it orders. The possible orders available in the UNIT INFORMATION window are:

- NO CHANGES
- CLEAR ORDERS
- SLEEP / BOARD NEXT SHIP
- FORTIFY
- DISBAND
- ACTIVATE UNIT
- ACTIVATE UNIT AND CLOSE CITY DISPLAY

Once your civilization has discovered the requisite advance (Trade in the Original game), this area also lists items in demand and items the city can supply. It summarises the income from trade routes if you have any. A city can have up to three trade routes in operation at any time. Each destination city is listed, along with the commodity traded and the income generated each turn.

The threat of pollution as a result of the industrial production and smog in the city is represented by cautionary icons. The more of these that appear in the GENERAL INFORMATION box, the greater the likelihood that a random terrain square within the city radius will become polluted this turn.

Happy: Click the HAPPY button to see the HAPPINESS chart. The HAPPINESS chart breaks down the factors affecting the happiness of a city's population into a series of citizen icon representations. Up to five rows can appear, depending on the improvements and style of government you choose. Each row encompasses the effects of the previous row and adds the results of specific measures.

1) The first row shows the natural happiness of a city's population before any adjustments. The number of content citizens is determined by the difficulty level at which you are playing.
2) The second row shows the effect luxuries have in the city, if any. Every two units of luxuries make one content person happy or one unhappy person content. Note that contented persons are made happy before unhappy persons are made content.
3) The third row adds in the benefits of city improvements like Temples, Cathedrals, and Coliseums.
4) The fourth row adds in the effects of martial law and field duty. Any units imposing martial law are shown in this row. Under a Republic or a Democracy, martial law does not work, and this row instead displays any unhappiness generated by having units in the field.
5) The fifth row adds in the effects of any Wonders of the World, whether in this city or elsewhere, that influence the population's happiness. Additionally, the fifth row reflects the attitudes shown in the POPULATION ROSTER, since all of the adjustments have been factored in.

Map: Click the MAP button to see the FOREIGN SERVICE MAP, a miniature map of the world. The city location is noted on this map, and so are the locations of all of this city's units assigned to foreign service.

The Buttons

In the bottom right–hand corner of the CITY DISPLAY are two arrows and a few buttons. Here's what each does:

- The arrow buttons allow you to scroll through your cities one at a time, in alphabetical order. These buttons are not active when the CITY DISPLAY pops up in response to a report.
- **Info** changes the display in the GENERAL INFORMATION box to the CITY INFO chart.
- **Happy** changes the display in the GENERAL INFORMATION box to the HAPPINESS chart.
- **Map** changes the display in the GENERAL INFORMATION box to the FOREIGN SERVICE MAP.
- **Rename** allows you to change the name of the city.
- **Close** closes the CITY DISPLAY.

MAP WINDOW

The MAP window is the isometric map, the window in which you view and move your active units. The area shown in this window is the section of the world outlined on the FLAT WORLD view in the WORLD window. You can move and re–size the MAP window just as you would any other window. (Note that, if you open so many reports, displays, and messages that you bury the MAP window, you can always close them all and bring it to the front by choosing ARRANGE WINDOWS from the VIEW menu.)

Multiple Windows

If, for some reason, you would like to have more than one MAP window open (to keep an eye on an especially valuable piece of real estate, for example), you can do so when the WORLD window is in FLAT WORLD view. Right–click anywhere in the WORLD window. The new window acts just like the default one, except that it includes an EXIT button, ZOOM buttons, and an additional MODE button in the top left–hand corner. You can use this MODE button to cycle through the viewing modes for that window. The modes are: View Friendly Units, View Enemy Units, View All Units, and Static View (which centres on the map square you choose and stays there).

Zooming the View

You can change the scale of the main map view using the ZOOM options on the VIEW menu. Zoom out to see more territory, or zoom in to make everything appear larger. If you have multiple maps open, use the ZOOM buttons on each to scale your additional maps as you want them.

If you are using the classic map layout, you can also change the scale using the ZOOM buttons in the top left–hand corner of the window frame. Click on the up arrow to zoom out or the down arrow to zoom in.

Moving the View

To reposition a MAP window so that it shows a different section of the game map, simply click on any map square in the window. ***Civilization II: Test of Time*** redraws the map, centring on the square you selected. If you want to centre on a square that is not presently in the main MAP window, click on a location in the WORLD window. If you are in the spinning GLOBE view, the FLAT WORLD view appears, and then you can click to centre the map on your desired location.

Centring on a City

Use the FIND CITY option on the KINGDOM menu to centre the main MAP window on any known city, regardless of where or whose it is.

Centring on a Unit

To centre the view on a particular one of your units, open the CITY DISPLAY for that unit's home city. In the UNITS ROSTER, click on the icon for that unit. Use the CENTRE MAP ON UNIT option to centre the main MAP window on the unit.

MENU BAR

The Menu Bar

As is usual in Windows applications, a menu bar spans the top of the ***Civilization II: Test of Time*** window. There are nine menus: GAME, KINGDOM, VIEW, ORDERS, ADVISORS, WORLD, CHEAT, MAP and CIVILOPEDIA. You can open any menu by clicking on its name or by holding Alt and pressing whichever letter in the menu name is underlined. Having opened a menu, double–click on any option to activate it or use the arrow keys to move the highlight to that option, then press Enter. Most options also have a shortcut key, which is noted next to the option on the menu. Even when the menu is not open, you can use the shortcut to activate an option. Any option that is greyed out is currently unavailable.

Note that in the following descriptions, we refer to each option by its name as it appears in the Original game. A few options have different names in the fantasy and science fiction environments, but because they appear in the same order and have essentially the same function, there should be no confusion as to what's what.

GAME

The options on this menu are what we call "meta–game functions"; that is, they affect the game as a whole.

GAME OPTIONS

This option calls up a checklist of other options. Each of these is a toggle; those with checked boxes are currently "on," and those with empty boxes are "off." Click on an option to toggle it on or off. Note that some options, such as TUTORIAL HELP, might affect game speed. When you have set these options as you want them, click OK to return to the game. If you change your mind and wish to discard your changes, click on EXIT instead.

Sound Effects: Includes battle noises, message alerts, and construction sounds. If you would like to hear the audio cues that ***Civilization II: Test of Time*** provides, make sure this box is checked.

Music: Turns all the background music in the game on and off. Note that you will not hear game music at all unless your system is capable of playing Redbook audio.

Always wait at end of turn: Guarantees that your turn will not end until you press Enter or click in the STATUS box. If this option is not checked, you need only press Enter to end a turn when you have no active units to move.

Autosave each turn: Automatically saves your game every turn and backs it up to a save file every four turns. If something dreadful happens and you need to restart the game, you can use one of these backup files just as you would any saved game.

Show enemy moves: Makes the progress of any enemy units within observation range of your units and cities visible. When this option is not checked, you see only those enemy moves that result in combat with your units.

No pause after enemy moves: Normally, ***Civilization II: Test of Time*** pauses briefly after each enemy unit moves. This gives you time to actually see every enemy move. If you turn this option on, there is no pause; enemy units will move as quickly as possible.

Fast piece slide: Increases the speed at which all units move from square to square. Checking this option will speed up the game, but might make some unit movements difficult to follow.

Instant advice: When turned on, this option allows your advisors to provide helpful hints whenever they have an opinion to proffer. Otherwise, they'll keep silent until you ask for their input.

Tutorial Help: When active, this provides even more advice for novice players. This option does not have any effect during multiplayer games.

Move units w/ mouse (cursor arrows): As in the original Civilization, in ***Civilization II: Test of Time*** you use the keyboard controls (specifically, the numeric keypad) to move your units. If you would rather use the mouse–and–keyboard method, turn this option on. You will then be able to position the mouse just to the side (or top or bottom) of the active unit (the cursor will change to reflect the fact that you are giving movement orders) and click to have the unit move in that direction. The keyboard controls remain active regardless.

Enter key closes City Screen: When this option is checked, the CITY DISPLAY closes any time you press Enter. Otherwise, the CITY DISPLAY remains visible at all times once opened, unless you click the EXIT button to close it. Note that turning this option on removes your ability to use Enter (when the viewing cursor is on a city) to open the CITY DISPLAY.

Graphic Options

This option also opens a checklist of other options. Each is a toggle; those with checked boxes are "on," and those with empty boxes are "off." Click on an option to toggle it on or off. Note that these options are almost certain to affect game speed. When you have these options set as you want them, click OK to return to the game. If you change your mind and wish to discard your changes, click CANCEL instead.

Diplomacy Screen: When this option is checked, diplomatic discussions take place on the full DIPLOMACY SCREEN, with a portrait, military and technical information. If you turn this off, diplomacy is a spartan matter carried on in text boxes.

Civilopedia for Advances: Every time your civilization successfully researches an advance, you'll see the CIVILOPEDIA entry for that technology. Turn this off when you've got to know the advances well enough.

Animated Units: If you'd prefer to have units slide from place to place as they did in the original ***Civilization II,*** you can disable the animation of units using this option. This can significantly increase game speed.

City Report Options

This option also opens a checklist of other options. Each toggles reporting of an aspect of city information. Those with checked boxes are "on," and those with empty boxes are "off." Click on an option to toggle it on or off. Note that some options might affect game speed. When you have these options set as you want them, click OK to return to the game. If you change your mind and wish to discard your changes, click CANCEL instead.

Warn when city growth halted (Aqueduct/Sewer System): When one of your cities reaches the maximum population that its current infrastructure can support, you will receive a warning of the situation only if this option is checked.

Show city improvements built: When on, this notifies you of the completion of any improvement to a city. This is especially useful when you have a city in automatic production mode.

Show non–combat units built: If on, this notifies you when a city has completed production of a non–combatant unit (a Diplomat, for instance). This is especially useful when you have a city in automatic production mode.

Show invalid build instructions: If you assign a production order to a city that is not valid (building a Wonder of the World that another city has already completed, for example) you will not receive notification of the problem unless this option is turned on. This is especially helpful when you have cities set in automatic production mode.

Announce cities in disorder: When this is on, you will be notified of any city that goes into civil disorder.

Announce order restored in city: If this is checked, you will be notified when any city in disorder has been calmed.

Announce "We Love The King Day": If the citizens of a city are particularly happy with your rule, they have a celebration in your honour. You won't know about it unless this option is turned on.

Warn when food dangerously low: Cities running at a harvest deficit can quickly deplete their stores of food. You will be warned of the impending starvation of your people only if this option is checked.

Warn when new pollution occurs: Industrial civilizations often produce waste products that are unfriendly to the environment. News of ecological damage will only reach your ears if this option is turned on.

Warn when changing production will cost shields: Changing the production assignment of a city when it has not completed its previous assignment often results in a substantial loss of production efficiency and accumulated shields. Unless this option is checked, you will not be notified or have the option to verify your orders when this is the case; you will simply have the penalty deducted.

"Zoom–to–City" NOT default action: When you receive a warning, the notification box generally has two selections at the bottom: ZOOM TO CITY and CONTINUE. Unless you check this box, the first is always selected when the box appears.

Multiplayer Options

This option calls up a checklist of other options. Each of these is a toggle; those with checked boxes are currently "on," and those with empty boxes are "off." Click on an option to toggle it on or off. When you have these options set as you want them, click OK to return to the game. If you change your mind and wish to discard your changes, click on CANCEL instead.

Clear chat buffer at the start of a new game: When you enable this, old messages are cleared out of the CHAT window whenever you start a new game or load a saved game.

Clear chat buffer each time we boot up: Turn this on to have old chat messages cleared every time you start up the game.

Double production of each terrain type: If you're the host, use this option to propose a change in the doubling status for terrain output. All of the players must agree (the vote must be unanimous) before the change goes into effect.

Double movement rate of ground units: If you're the host, use this option to propose a change in the doubling status for the movement allowance of ground units. All of the players must agree (the vote must be unanimous) before the change goes into effect.

Pick Music

This option allows you to choose what music plays during your game. Note that you will not hear game music at all unless your system is capable of playing Redbook audio.

Save Game

Use this option to save your game. ***Civilization II: Test of Time*** suggests a name for the save file, but you can type in any name you like. The default extension for saved games is .SAV. The only limit on the number of saved games you can have is the capacity of your hard disk. Games are saved in the folder appropriate to the type of game you're playing and should not be moved.

Load Game

Use this option to load a game saved previously (including autosaved games). Select the folder (games are saved in the folder appropriate to the type of game you're playing and should not be moved), then pick one of the files listed in the window, then click OK.

Join Game

This option is available only during Hot Seat games. Use it to add a new player to a game already in progress.

Set Password

In a multiplayer game, this allows you to protect your civilization from poachers by setting a password lock on it. Whenever you load a saved multiplayer game or join a game loaded by someone else, each player re–selects his or her civilization from those included in that saved game. Unless you have assigned a password to your civilization, an unscrupulous player could select your civilization as his or her own.

Change Timer

Allows the host player to reset the multiplayer GAME TIMER. This clock determines the length of time each player has to take a single turn. Choose one of the pre–set time limits or set this to any turn length between 10 seconds and 3600 (one hour). If you don't want to limit the length of turns, select UNLIMITED. The turn timer countdown is displayed in the title bar of the MAP window. If the host proposes to change the time limit during the game, all other players must agree before the change goes into effect.

Retire

Retiring is one way of ending your game. When you retire, the game shows you how your civilization did in comparison to the others (which it does not do if you simply quit). The closing displays are exactly the same as if the game had come to a conclusion on its own. First, of course, you must confirm that you want to retire.

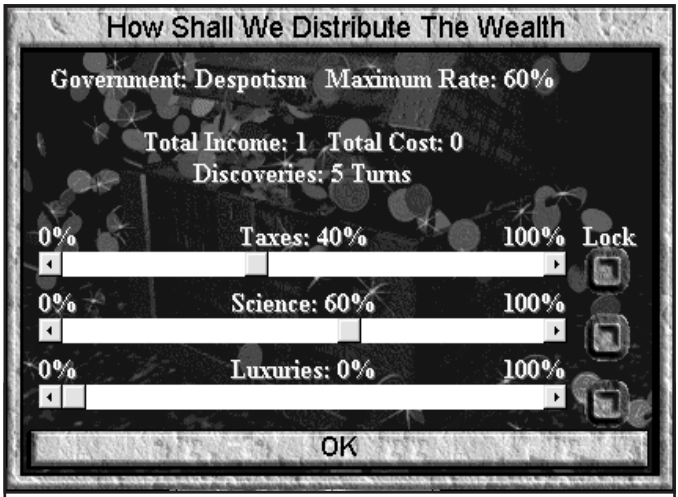
Quit

Choose this option if you just want to exit the game without all the closing displays. You have a chance to confirm or cancel quitting.

Kingdom

This menu includes options that affect not just one city, but your entire civilization.

Tax Rate



Setting the Tax Rates

Choose this option to adjust the proportion of taxes to science to luxuries that each city generates each turn. As the percentage of any one of these increases, the percentage of one or both of the others must decrease.

Find City

Select this to choose from a list of all your cities. Once you've made contact with other civilizations, their cities also appear on the list. The MAP window will centre on the city you pick.

REVOLUTION

Choose this option when you want to switch forms of government. You must have acquired specific technological advances to choose a type of government other than Despotism. Usually, a revolution brings on a period of Anarchy. This can last for several turns. Eventually, you'll receive notification that your citizens are ready to choose a new type of government. All the options available to you are listed. Click on your choice.

Note that once the period of Anarchy ends and you have chosen a new government, you can use this option for the rest of that turn to freely switch your form of government without provoking further Anarchy.

VIEW

This menu includes options that affect the views in the various game windows.

MOVE PIECES

Use this option to switch the MAP window from VIEW PIECES mode into MOVE PIECES mode. The current active unit will be centred in the MAP window.

VIEW PIECES

Use this option to switch the MAP window from MOVE PIECES mode into VIEW PIECES mode. The terrain cursor will be centred in the MAP window, blinking. You can use the keys on the numeric keypad to move this cursor just as you would a unit.

ZOOM IN

This option incrementally increases the size of the map squares shown in the current MAP window. This functions like the arrow buttons in the upper left–hand corner of the classic view windows.

ZOOM OUT

This incrementally decreases the size of the map squares shown in the current MAP window. This option also functions like the arrow buttons in the upper left–hand corner of the classic view windows.

MAX ZOOM IN

This option zooms in to the maximum size map square in the current MAP window.

STANDARD ZOOM

This option resets the map squares in the current MAP window to the default size.

MEDIUM ZOOM OUT

This option zooms to a medium size map square in the current MAP window, a size that we have found useful.

Max Zoom Out

This option zooms out to the minimum size map square in the current MAP window, showing the entire known world.

Show Map Grid

Select this option to superimpose a grid on the map in the MAP window. This can help novice players become familiar with the isometric movement system used in ***Civilization II: Test of Time***.

Arrange Windows

The windows in the new and classic MAP layout and CITY DISPLAY layout are resizable, so that you can customise your ***Civilization II: Test of Time*** game to your own tastes. This option returns the screen to its original configuration (new or classic, as you chose). Only the MAP window, the STATUS window, and the WORLD window remain open.

Show Hidden Terrain

Use this to temporarily remove the improvement graphics from all terrain, so that you can clearly view the terrain underneath. When you're done, click OK on the HIDDEN TERRAIN dialog box to return to your regular map.

Centre View

This option centres the current MAP window on the current active unit. If there is no current active unit, nothing happens.

Map Layout

This option switches back and forth between the new and the classic map layouts. The new map layout places the STATUS window along the top of the screen and the WORLD window's spinning GLOBE view in the upper right corner of the screen. The MAP window fills the rest of the screen. The classic map layout places the STATUS window on the right side of the screen, with the WORLD window showing the FLAT WORLD view in the upper right corner. The MAP window fills the rest of the screen. In classic map layout, the MAP window includes ZOOM buttons in the upper left corner.

City Layout

This option switches back and forth between the new CITY DISPLAY and the classic one. See **City Display** for all the details.

Orders

This menu lists the orders you can give the current active unit. Note that orders that are inappropriate or not currently available for the active unit are either greyed out or not listed at all. Some options have different results (and different text) depending on what type of terrain the unit is standing on.

Build New City/Join City

This option tells a settler–type unit to create a new city where it stands. If the unit stands in an existing city with fewer than eight population points, the option reads JOIN CITY instead, and the unit adds itself to the city as a population point. Note that you cannot build cities in terrain squares directly adjacent to an existing city. You also cannot build on a polluted square; you must clean up the pollution first.

Build Road/Railroad

This option tells a settler–type unit to build roads across the square in which it stands. If you have discovered the requisite advance, the option might read BUILD RAILROAD (or Slideways or Ley Lines). In this case, your unit can improve existing roads.

Build Irrigation/Change to...

Use this option to order a settler–type unit to irrigate the square in which it stands. If the introduction of agriculture requires or will cause the square to change type, the option will read CHANGE TO instead, followed by the type of terrain that will result. For example, if your unit is on a Forest square, the option might read CHANGE TO PLAINS. These alternate orders tell the unit to enact the change. Note that this change does not include irrigation; you can only do that once the terrain is suitable. For details on which terrain types can be transformed to which others, please refer to the **Terrain Reference** booklet or CIVILOPEDIA. If your unit stands in a square that will not benefit from irrigation, the option will be greyed out.

Build Mines/Change to...

Use this option to order a settler or engineer unit to mine the square in which it stands. If the introduction of mining requires or will cause the square to change its type, the option will read CHANGE TO instead, followed by the type of terrain that will result. For example, if your unit is on a Grassland square, the option reads CHANGE TO FOREST. These alternate orders tell the unit to enact the change. Note that this change is in place of the mining. For details on which terrain types can be transformed to which others, please refer to the **Terrain Reference** booklet or CIVILOPEDIA. If your unit stands in a square that will not benefit from mining, the option will be greyed out.

Transform to...

This option tells an engineer type of unit to drastically change the terrain type of the square in which it stands. For example, if your unit stands in a Mountains square, the option reads TRANSFORM TO HILLS, and it orders the unit to do exactly that. For details on which terrain types can be transformed to which others, please refer to the **Terrain Reference** booklet.

Build Airbase

This orders a settler or engineer unit to build a military Airbase (not an airport) in the square it occupies. Once it is built, your air units can land for fuel and repairs at the Airbase. Note that you cannot build an Airbase on a polluted square; you must clean up the pollution first.

Build Fortress

This orders a settler or engineer unit to build defensive fortifications in the square it occupies. Once it is built, your units can occupy the Fortress to enhance their defensive capabilities.

Build Transport Site

This orders a settler or engineer unit to build a gateway to another map in the square it occupies. Only certain of these units are able to build transport sites, and if the terrain on the destination world is inappropriate–it's Ocean, for example, or an enemy city or unit occupies that spot–you cannot build a site at that location. Note that you cannot build any kind of transport site on a polluted square; you must clean up the pollution first.

Automate Settler

If you would rather not give a settler or engineer unit specific commands every time it finishes a job, you can automate that unit–in effect, give a friendly AI control over it. Automated units will not build cities, but will work to improve terrain around existing ones. In some situations, such as the approach of an enemy unit, control reverts to you.

Clean up Pollution

Use this option to order a settler or engineer unit to detoxify a polluted square.

Pillage

This option tells a unit to wreak havoc on the square it occupies, which could mean collapsing mines, destroying irrigation, ripping up roads, or other destruction.

Unload

Give this order to a ship to activate all its passenger units, allowing them to move ashore or onto another ship. The ship must be adjacent to a land square, a city square, or another friendly ship. You can also click on the ship to bring up a box showing all of the shipboard units, then click on each one that you want to unload.

Go To

This option allows you to send a unit directly to one of your cities. Select a city from the list (only those which the unit can reach on its own will be listed), and the unit will go there without further orders. (Note: the original function of this order, sending a unit to a destination square, is now a mouse function. Click–and–hold on the square to which you want the current active unit to go until the mouse cursor changes to a "GoTo" arrow, and the unit proceeds to the selected square without further orders.)

Paradrop

This movement order is available only to paradrop–capable units currently located in an Airbase (or equivalent) or a city with an Airport (or equivalent). Choose any unoccupied square within range of the unit's current location. The unit will move immediately to that square. This order uses all but one of the unit's movement points for that turn.

Transport

Use this order to have a unit move to another map. If there is a transport site at the unit's current location, the unit will attempt to use it. Otherwise, this order is only available for those units with the native ability to transport themselves between worlds. Note that many factors can prevent a successful transport; these factors are detailed in **Terrain and Movement**.

Airlift

Use this order to move a unit that has not yet moved this turn from any of your cities served by an Airport to any other (friendly) city with an Airport. This travel uses all of the unit's movement points for that turn. Only one unit may be airlifted from or into each city per turn.

Go Home to Nearest City

Use this option to order a unit to move directly to the nearest city under your control. If the unit is already in a city, this reassigns the unit to that city for support (makes that city the unit's new Home City).

Fortify

Select this option to order a military unit to dig in and fortify itself in the square in which it stands. This enhances the defensive capabilities of the unit for as long as it remains fortified.

Sleep

When you order a unit to sleep, that unit is assigned the task of remaining in the square it occupies. The unit maintains this posture until you wake it (activate it) or an enemy unit approaches an adjacent square. You can click on a sleeping unit and give the ACTIVATE UNIT order at any time to wake it and return it to active status. Units boarding a ship to undertake naval transport automatically assume sleeping status when they ship out.

Disband

This order allows you to dismiss a unit from active duty. The unit disappears completely and irrevocably, so be careful when invoking this option. If you disband a unit in a city square, one half of the unit's construction cost is immediately added to the PRODUCTION BOX in that city. This represents the redistribution of support and retraining of soldiers.

Activate Unit

This orders the unit at the cursor location to become active. If there is more than one unit in that square, you can select which unit you want to activate.

Wait

Use this to order the current active unit to wait for orders until you have given every other active unit something to do. Note that if you give another unit the WAIT order, that unit will get in line behind the first unit you ordered to wait, and so forth.

Skip Turn

Use this order to pass over a unit for a turn. The unit takes no action, but will repair itself somewhat if it has been damaged.

Advisors

These options all provide reports on the overall picture of your civilization's strengths and progress.

Chat With Kings

During a multiplayer game, this opens the CHAT window, in which you can exchange messages with other players. For the detailed description of how chatting works, please read the **Chat With Kings** section in **Playing a Multiplayer Game**. Chat features are not available in Hot Seat or single–player games.

City Status

This report lists vital statistics for all the cities in your empire, in the order in which they were founded. This information includes how many of each resource type (food, production, and trade) each is collecting, what each city is building, and how close it is to finishing that assignment. You can double–click on any of the listed names to open the CITY DISPLAY for that city.

Defence Minister

The DEFENCE MINISTER reports on your military assets. This includes information on every one of your existing units, plus statistics on past performance in battle and casualties to date.

Foreign Minister

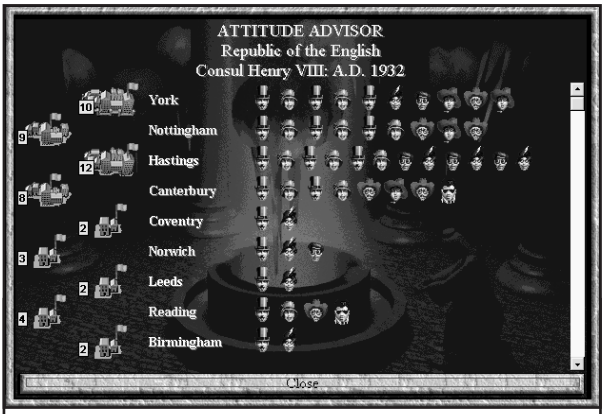
This report is a summary of everything you know about the other civilizations with whom you have made contact. This report includes thumbnail sketches of each (the name and title of the leader, your current diplomatic status with them, and their leader's current attitude toward you). If you have an embassy with a civilization, you also find out how much gold they have in their treasury.

You can double–click on any of the leaders (or the SEND EMISSARY button) to begin negotiations with that ruler immediately.

If you have established an embassy with a particular civilization, clicking CHECK INTELLIGENCE opens the INTELLIGENCE REPORT, which gives you further details, including a complete list of their cities and notice of which Wonders (if any) they are attempting to build.

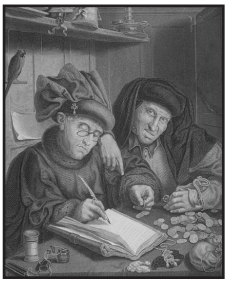
Attitude Advisor

This advisor summarises the relative happiness of your citizens. It shows the size of each city and the POPULATION ROSTER (happy, content, unhappy, and specialist citizens). Cities in civil disorder are marked. Double–click on any of the listed city names to open that CITY DISPLAY.



Attitude Advisor Report

Trade Advisor



Your TRADE ADVISOR reports the size of each city and the percentages of trade you have earmarked for tax revenue and scientific research funding. In addition, the report lists all improvements to your cities that require maintenance payments, and their individual and collective costs. If you have a large number of cities, scroll to the bottom of the window to compare your total maintenance cost with your total tax revenue (income). You can see whether the treasury of your civilization is increasing each turn, shrinking, or remaining the same.

If your treasury is shrinking, this might be a good time to increase taxes or adjust individual cities to produce higher revenue. In an emergency, you might wish to sell an improvement to raise cash. Finally, your trade advisor monitors the market for every trade cargo in the game (once you have the prerequisite advance). Click the SUPPLY AND DEMAND button to see a list of commodities. Click on the commodity in which you are interested to see which of the cities you've discovered supply and which demand that cargo. The OK button lets you choose another cargo and the EXIT button returns you to the TRADE ADVISOR's Report.

Science Advisor

Your SCIENCE ADVISOR keeps a record of the advances your civilization has already achieved and the progress of your scientists toward the next advance. (Advances that your civilization was the first to learn appear in white type.) Use the slider below the report to scroll right or left through the list.

Click the GOAL button to see the entire list of possible advances and help options that are available.

Note that it is possible to continue making advances beyond the list that defines civilization up to the end of the twentieth century. These continuing advances are called Future Tech, and each one you acquire adds to your civilization score.

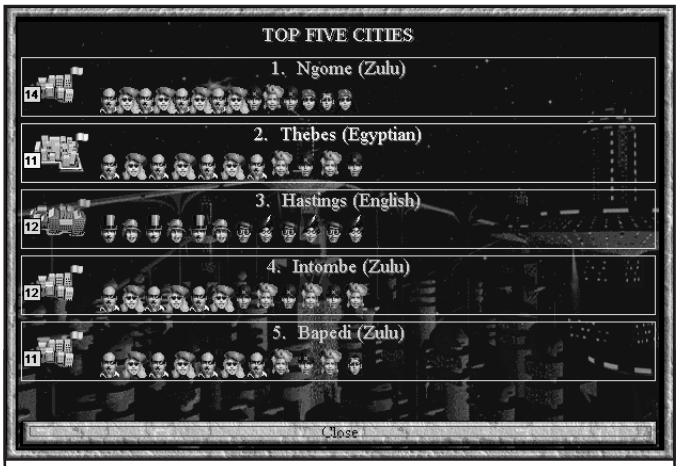
World

This menu allows you to view statistics comparing the progress of the world's civilizations.

Wonders of the World

This option shows the icon for each Wonder that has been built and identifies both its location and the culture that (currently) owns it. If a Wonder was built but has since been destroyed, that fact is also noted.

Top 5 Cities



Top 5 Cities

This option brings up important statistics about the top five cities in the world, including their population size and citizens' attitudes, the culture to which they belong, and any Wonders present. City rank is determined on the basis of the number of happy citizens, content citizens, and Wonders of the World there. This list might even contain information on places you didn't know existed (your civilization has yet to discover them).

Civilization Score

Use this option to find out your score so far. This is based on the total number of citizens in your entire civilization, Wonders you have built, bonuses for various measures like world peace, and similar penalties for negatives like pollution. If you have enabled CHEAT MODE during your game, it is noted in your score.

Demographics

This option shows you a list of demographic statistics and the ranking of your civilization for each measure mentioned. If you have diplomatic relations with civilizations whose rank in a particular category is higher than yours, that culture's statistics are listed as well.

Spaceships

Apollo Program

When you contact your grand project advisors, they report the progress of any spaceship or siege engine under construction. Select from the menu the civilization whose vessel you wish to examine. Your advisors present a picture of the construction accomplished to date and their assessment of what the craft can carry, its estimated travel time, and its probability of success.

The space race in the Original game begins once the Apollo Program Wonder of the World has been constructed, in the Lalande game after the View From Earth has been completed, and the quest to complete a siege engine begins in a Fantasy game when the Deus Ex Machina Wonder is built. Thereafter, any civilization that has the required technologies can begin building parts.

Once the race begins, it is important to maintain a watch on the vehicles of your rivals. You need to assess when they are likely to launch, so that you can plan the size of your own project and its launch date. If you conclude that your construction is too far behind to catch up, it might be necessary to mount a military campaign to capture the enemy capital. Capturing an enemy capital destroys their grand project, whether it is under construction or already launched.

CHEAT

This menu contains options designed as crutches for those of you too loathsome and pathetic to be able to win on your own. No, seriously, these are aimed at novice players who might want (or need) a head start, so that they can "jump the learning curve" and enjoy some of the more advanced portions of ***Civilization II: Test of Time***. More experienced players might want to use these to cut out some aspects of the game that they find less than fun, so as to enjoy the rest that much more. In addition, the features on the CHEAT menu are indispensable

for those of you designing and building your own ***Civilization II: Test of Time*** scenarios. Whatever your reasons for cheating, remember that using this menu goes on your permanent record.

NO GUARANTEES

Remember, the CHEAT menu comes with no guarantees-use it at your own risk and don't blame Customer Service if they can't help when it causes problems.

The options on the CHEAT menu are not available during multiplayer games.

Toggle Cheat Mode

Use this to toggle CHEAT MODE on and off. You cannot use any of the other options on this menu unless this one has been enabled. Once you use this option, even if you never actually use any of the other cheat options, the fact that you have cheated is noted permanently on your civilization score.

Create Unit

This option creates a new unit at the current cursor location. You can generate any type of unit that you can currently build, or use the buttons at the bottom of the window to select from lists of Obsolete (OBS) or Advanced (ADV) units. Other buttons determine whether or not the created unit is a veteran and which civilization has control of that unit.

Reveal Map

Use this to view the map of any civilization (what they have discovered to date), or to have the entirety of all the worlds in the game revealed to you.

Set Human Player

This option allows you to abandon your rule and take control of whichever civilization you would prefer to run. You can also abdicate completely and watch the game play against itself.

Set Game Year

Use this to turn the calendar forward or back to whatever game year you like. You will be prompted to enter a number of "Turns Elapsed." This is the game's way of expressing years. There are several different time scales for years versus turns, depending on the difficulty level and how far the game has progressed. It might help to know that there are 550 turns in a Chieftain level game, 500 in Prince level, 450 at King level, and 400 at both the Emperor and Deity levels. After these turns, there is always a grace period of twenty years between the last turn (2000 A.D.) and the end of the game (2020 A.D.). Nothing but the year (neither your civilization nor any of your opponents') will be affected.

Kill Civilization

You can completely eliminate any civilization, including your own, with this option.

Technology Advance

This option allows you to immediately confer on any civilization (including your own, of course) whatever advance it is currently researching.

Edit Technologies

This option gives you the power to edit the technology of every civilization in the game. Advances with an asterisk are knowledge that empire already has; advances with a dash are knowledge it can (eventually) research. Unmarked advances are ones for which the culture does not yet have either prerequisite. Select an asterisked advance and click OK to take it from the civilization, or select an unmarked or dashed advance and click OK to give it to the civilization. With the GIVE/TAKE ALL button, you can give a civilization all the technologies or, if you have already given all, take them all away. Use the CANCEL button to leave when you're done; this does not cancel your changes. Note that some technologies (Irrigation, for one) are known by all civilizations at the dawn of time; you cannot take these away.

Force Government

Use this to change the government of any civilization to the type you wish it to be, whether or not that form of government has been discovered.

Change Terrain at Cursor

This option gives you the ability to instantly change the type of terrain that exists in the square that is the current cursor location(using the TERRAIN button. You can also add or remove any improvements appropriate to the type of terrain, with the single exception of double irrigation (Farmland). Note that you cannot specify special resources for any terrain square; they just happen.

Destroy All Units at Cursor

This quite simply destroys any units at the current cursor location.

Change Money

Use this to specify the amount of funds in the treasury of any civilization. Note that problems arise when any treasury significantly exceeds 30,000 gold.

Edit Unit

Use this to change the attributes of any unit at the current cursor location. The veteran status, movement points, hit points, home city, and fortification status are modifiable. If you're editing a trade unit, you can change the type of commodity it is carrying. You cannot, however, change a unit to another type.

Edit City

This option allows you to meddle with the status of any city on the map–as long as you position the cursor on it first. You can set the size (population) of the town, determine exactly how many shields are in the PRODUCTION BOX, make all the Wonders of the World in that burg suddenly disappear, or copy all of the improvements in some other city to this one. If the city is in disorder or celebrating a WE LOVE THE KING Day, you can clear either state of affairs. Finally, you can make the city an objective or major objective of your scenario (the number in parentheses will change to '1') or remove it from the list of objectives ('0').

What good is an objective? Read about the **Scenario Parameters** option to find out.

Edit King

No, this doesn't let you change what the rulers of other civilizations look like. You can, however, specify any ruler's treaty status with every other civilization, the most recent turn when two civilizations had contact, the ruler's current attitude toward other rulers, and any ruler's current reputation. In addition, you can clear a ruler's patience counter (making them very tolerant for a while), set or clear a research goal for any civilization, and determine how far each ruler has progressed toward the advance currently being researched. You can copy the technology of one civilization to another–quite a shortcut from doing it one advance at a time with the EDIT TECHNOLOGIES option. Finally, you can change the name and sex of every leader in the world.

Scenario Parameters

This is a catch–all that includes some powerful tools for setting up scenarios. Most of these options have little or no use during a game already in progress.

No Changes: Returns to the game.

Tech Paradigm: Affects how long it takes to research technological advances. The default is 10/10. By lowering the numerator, you decrease the time necessary to discover new advances; the fastest you can allow research to progress is 1/10. Conversely, increasing the numerator makes scientific progress slower.

Turn Year Increment: Allows you to decide how much time passes with each game turn. If you leave this at zero, ***Civilization II: Test of Time*** uses the default increment, which changes with time as described earlier in this manual. Any positive integer sets a number of years to pass per turn; a negative integer sets a number of months to pass per turn.

Starting Year: Determines the year or month in which the scenario will begin (month if you've set the Turn Year Increment to a number of months, year if you've set it to a number of years). Any positive number is A.D., and any negative number is B.C.

Maximum Turns: Allows you to set the length of the game in turns.

Wipe all goody boxes: Removes all of the villages of minor tribes from the world, permanently.

Restore all goody boxes: Recreates all of the minor tribe villages in the world, except for those which were originally on a terrain square that is now occupied by a city or unit.

Reveal whole map: Makes the scenario take place in a known world. The entire map, excluding enemy units but including their cities, will be visible from the beginning of the game.

Cover whole map: Makes the scenario take place in an unexplored world, the Civilization standard.

Set Scenario Name: Allows you to give your scenario a title.

Toggle Total War Flag: Silences the senate in all republics and democracies. Set this to '1' to force the assumption that there is a war going on at the outset of the scenario, and that the usual senatorial meddling in foreign affairs has been effectively stifled for the duration. This also turns the BLOODLUST option on, eliminating the possibility of space flight or siege engines.

Edit Victory Conditions: This option contains multiple options:

- The effect of the first option, NO CHANGES, should be obvious.
- The TOGGLE USE OBJECTIVE VICTORY FLAG must be set to '1'; otherwise, the game ignores the rest of these settings. Essentially, the objective victory flag tells ***Civilization II: Test of Time*** to completely ignore the usual scoring conventions. Rather, all that counts is the taking of the pre–set objectives in the scenario. Using the EDIT CITY option on the CHEAT menu, you can make any city a scenario objective.
- TOGGLE COUNT WONDERS AS OBJECTIVES determines whether or not captured Wonders of the World also count toward the objective score.
- Next, you decide which civilization will be the protagonist; this is not the player's civilization. This setting only determines which civilization is used as the benchmark for the four final settings.
- The last four allow you to set conditions for the types of outcome possible in an objective scenario. For each, enter the number of objectives that the protagonist civilization must control (that is, have conquered or kept) at the end of the game in order to accomplish that level of victory or defeat. Other civilizations are automatically assigned the corresponding outcome. For example, if the Romans as protagonists achieve a Marginal Defeat, all other groups win a Marginal Victory.

Edit Special Rules: This also contains a few sub–options, each of which is fairly straightforward. You can prevent any civilization from ever changing its form of government, make it impossible to obtain advances by taking over enemy cities, and remove the spectre of pollution from the game. One caveat is necessary; you should never use the last option–SPECIAL WWII–ONLY AI. This was put in as an aid for the game designers and will almost certainly cause your scenario to crash.

Save as Scenario

This allows you to save the current game situation as a scenario file.

Map

These options enable you to save maps, or to choose a map (within the game) on which to play:

Toggle Cheat Mode

Use this to toggle CHEAT MODE on and off. You cannot use any of the other options on this menu unless this one has been enabled. Once you use this option, *even if you never actually use any of the other cheat options*, the fact that you have cheated is noted permanently on your civilization score.

Select Map

Use this option to load maps you have custom–drawn, or maps you've saved from favourite games. Note that if you are playing a fantasy, science fiction, or extended game, you must select the appropriate number of maps. In addition, they must be of the same the same dimensions.

Import Map

This integrates a chosen map into the game you are playing.

Export Map

This lets you save a map as a file for use in another game/scenario.

Civilopedia

The CIVILOPEDIA is an in–game encyclopaedia of ***Civilization II: Test of Time***. The entries under each topic appear alphabetically, and each includes detailed information about the item, its historical importance, and its significance in the game.

Civilization Advances

This option focuses on the advances. The CIVILOPEDIA entry describing each advance automatically appears when you acquire that advance, unless you turn that feature off using the CIVILOPEDIA FOR ADVANCES toggle in the GRAPHIC OPTIONS on the GAME menu.

City Improvements

This option culls the list to include only the structures you can build in a city to improve its working.

Wonders of the World

To narrow your choices down to information about the various Wonders, use this option.

Military Units

The title of this topic might be slightly misleading, as ***Civilization II: Test of Time*** considers all units to be military, even non–combat units like Diplomats, Caravans, and Settlers.

Governments

If you want information on the various forms of government, this is the place.

Terrain Types

This option provides the entries for each type of terrain square and special resource that exists in ***Civilization II: Test of Time***.

Game Concepts

This option includes all the information not covered under any of the other focused topic lists, including things like Pollution, Disbanding, and Fortresses.

About Test of Time

This directs you to the credits.

STATUS WINDOW

The information displayed in this window helps you keep abreast of the status of your civilization and your turn. Note that you can click anywhere in this window to toggle the MAP window between VIEW PIECES mode and MOVE PIECES mode.

In the new map layout, the STATUS window runs along the top of the MAP window. In the classic layout, it is on the right side, under the WORLD window.

The Status Window

WORLD PEACE BAR

At the top of this window is a bar indicating the accumulated turns of world peace. World peace is a situation in which no civilizations are at war, so this bar might not become visible for quite a while, if ever. Each turn of peace adds to your civilization score.

SUMMARY BOX

The smaller section of the STATUS window is a quick reference box summarising data you'll find useful during the game.

POPULATION

This figure reports the current size of your civilization's population.

DATE

The date is reported in years appropriate to the game. A normal Original game begins in 4000 B.C. Each turn represents the passing of a period of years. Depending on the current date, turns might be 1 year, 2, 5, 10, 20, 25, or 50 years long. In customised situations, you might have turn intervals in months, as well.

TREASURY

This figure reports the amount of gold currently in your treasury. If it increases each turn, you've got a surplus; if it decreases each turn, you're operating at a deficit.

TRADE BALANCE

The figures that appear here represent the percentages you've set for the spending of your trade income. They are, in order: taxes, luxuries, and research. (Note: multiply the number shown by 10 to get the actual percentage.) Each of these three by–products of trade has its benefits. As time passes and cities grow, you might have to adjust the trade rates to provide a minimum amount of taxes and science research while providing more luxuries to keep the population sufficiently happy. To adjust trade rates, pull down the KINGDOM menu and select the TAX RATE option.

Scientific Research

The research indicator is a graphic representation of your progress toward the next advance. The icon notes your progress, and it changes as you get closer to your current research goal. Once the new discovery is reported and your scientists are sent off to study something else, this indicator is reset.

Environment

If there is any danger of global catastrophe, the environment indicator graphically represents the extent of this risk. With the first case of pollution, the icon appears, at its lowest setting. If pollution continues, the icon changes to indicate the "progress" of pollution. If pollution is not brought under control when the indicator is at its highest, the planet suffers a bout of global trouble, then the indicator reverts to a setting that reflects the new equilibrium.

Pollution and environmental problems can also be caused by power plant meltdowns and fallout from especially destructive weapons. For more information on pollution and global catastrophe, see **Planetary Caretaking**.

Active Unit/Location Box

The larger portion of the STATUS window is an area dedicated to information on the current cursor location. This is normally the current active unit, but might also be a terrain square you have selected. Note that for the purposes of this information box, cities are ignored. The following information is included, not necessarily in this order.

Mode

Whether the MAP window is in VIEW PIECES or MOVE PIECES mode is noted.

Icons

If there are any units at the current location, each is represented by its icon. These icons include the coloured key denoting nationality and damage status. If a number of units are stacked in one square, the icons can fill up the window area. Use the arrow buttons in the lower right corner of the STATUS window to scroll through the whole list.

Nationality

If there are any rival units at the current location or if you are viewing a unit, rather than a terrain square, the name of the civilization to which each unit belongs appears.

Home City

The name of the city from which each unit at the current location derives support appears. This is normally the city where the unit was built. You can transfer a unit to another city by moving it there and using the SET HOME CITY order (or by clicking on the unit in the CITY DISPLAY and selecting the SUPPORT FROM THIS CITY option). This can be useful when one of your cities is threatened with capture, since all units supported by a captured city are destroyed.

Unit Type

The type of each unit at the current location appears. For your units, the box also tells you whether or not it is a veteran unit.

Movement

The number of movement points remaining to the current active unit appears. (If you are finished moving a unit, but it still has movement left, use the SKIP TURN order to end that unit's movement for the turn.)

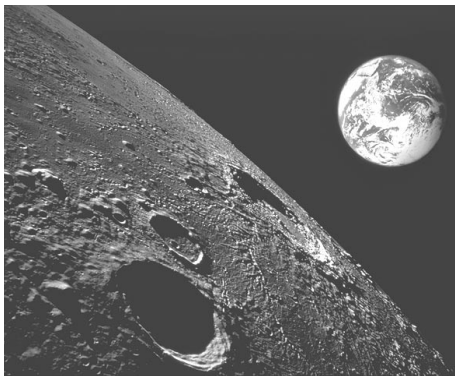
Note that points are shown as fractions when the unit is moving along a road (moving along a road costs a third of a movement point, making fractional points necessary). The fraction indicates lowered attack strength as well as the use of movement points. For example, a unit that begins with 1 movement point and moves one square along a road would show 2/3 movement points remaining, which also equates to 2/3 attack strength.

Also remember that units beginning on a square containing a railroad and moving along the railroad spend no movement points until they leave the railroad.

Terrain

This lists the terrain type of the square. This terrain report disregards the presence of a city, but does mention other improvements such as irrigation, roads, and railroads. If there are special resources available at the site, they are also noted.

WORLD WINDOW



This window shows a map of the entire known world in the upper right corner of the screen. The new MAP window layout defaults to the spinning Globe view, while the classic layout begins in the Flat World view. To change the globe to the flat world, just click anywhere in the WORLD window. To return to the GLOBE view, click the EXIT button (the X) on the border of the FLAT WORLD view.

In the FLAT WORLD view, the WORLD window is centred on the part of the world shown in the MAP window. The rectangle delineates the edges of that view. In this view, you can use the WORLD window to move rapidly around the MAP window. Click on a location in the WORLD window, and both windows shift to centre on that position.

In a multiple–map game, the arrow buttons on the border of the FLAT WORLD view let you jump from map to map. The window title changes to reflect which world you are viewing, and the MAP window displays whatever territory you have discovered at that location on that world. You can arrow up or down to cycle through all the available maps.

Right–click anywhere in the FLAT WORLD view to open a secondary MAP window. The new window acts just like the default one, except that it includes an EXIT button, ZOOM buttons, and an additional MODE button in the top left–hand corner. You can use the MODE button to cycle through the viewing modes for the new window. The modes are: View Friendly Units, View Enemy Units, View All Units, and Static View (which centres on the map square you choose and stays there).

Any secondary maps you have opened remain focused on the areas you specified, which conveniently allows you to watch multiple worlds at once. However, these windows are not labelled according to which world they are showing; you'll have to remember that yourself. Note that you can always close all secondary maps and bring the primary MAP window to the front by choosing ARRANGE WINDOWS from the VIEW menu.

APPENDIX: ENHANCED SCENARIO MACRO LANGUAGE

Starting with the original ***Civilization II***, you could use the Map Editor and other tools to build and play your own scenarios. With ***Conflicts in Civilization***, we gave you a new tool–a primitive, but rather useful, macro language that allowed you (and us) to add predetermined events to a scenario. In ***Fantastic Worlds***, we expanded the scope of this language. Well, we've done it again.

WARNING

The scenario macro language is still a supplementary design tool, not a part of the game. It has not been tested as well as the game itself and could cause problems if used incorrectly. If you experience difficulties in the game after creating an events file, do not immediately call Customer Service. The best solution is to delete (or at least rename) the events file (events.txt). If you do so and the problems still persist, then call Customer Service.

The scenario macro language has been updated and greatly enhanced for this release. Those of you who have worked with it before will find both interesting new additions and some changes to familiar favourites. If this is your first experience with the macro language, relax–it's not too complicated, but with a little imagination you can do a lot with it. Let's jump right in.

TERMINOLOGY

Before we start explaining how to use this macro "language" (it's really not a full–scale language, but there's no better word for what it is), we should define a few terms.

- An **Event** is the combination of a Trigger and an Action. Each event is a simple cause–and–effect sequence. Events are the fundamental structure of this macro language.
- A **Trigger** is the specific game occurrence that activates a particular event. This is the cause.
- An **Action** is the consequence an event generates in response to its trigger. This is the effect.
- Both triggers and actions can have **Parameters**. Each parameter is a piece of information that helps tell the event specifically how to act. (If this isn't entirely clear yet, don't worry; there are plenty of examples ahead.) Some parameters are required, some are optional, and some are mutually exclusive. Regardless, parameters must always be in the correct order.
- A **Modifier** is a command that changes the way one or more actions work. Most modifiers are very similar to parameters, but because some are not, we needed to call them something different.

Essentially, you define events so that when the trigger happens, it triggers the action. Note that a single trigger can have multiple actions associated with it, but no one trigger can have more than one action of the same type.

THE EVENTS FILE

The first step in adding events to your scenario is to create a text file in the folder in which you're building the scenario. This file must be named **events.txt** and must be in the same folder as the scenario (**.scn**) file. All of the text you put in this file represents events you want in your scenario.

The events file must begin with the line:

```
@BEGINEVENTS
```

and end with the line:

```
@ENDEVENTS
```


These tell the game program that the file is, indeed, a valid events file.

The rest of the file consists of the definitions of the events themselves. It is extremely important that these definitions are in the correct format. That format is covered a little further on, but before we get there, there is one optional statement we should mention.

DEBUGGING

One statement is not an event, but rather a tool you can use.

If you add the line:

@DEBUG

immediately after the @BEGINEVENTS line, you enable the Event Parsing Debugger (EPD). This can help you find problems in your event files.

When you load the scenario and the events file, the EPD opens a file called **report.txt** and keeps track of each line of the event file as it is processed. Only valid statements that have been processed successfully appear in this file. Thus, if the parser runs into an invalid statement in your file, the listing in the report file will stop at the line before the problem statement. This should allow you to search out errors and repair them.

Make sure to take this line out of your events file when you're done debugging the scenario.

EVENT DEFINITIONS

Each event definition must follow a strict format. There are three parts to this format:

1) The Trigger Statement (@IF) defines the trigger for the event.
2) The Action Statement (@THEN) defines the actions associated with that trigger.
3) The End Statement (@ENDIF) tells the parser that there are no more actions for this trigger.

All put together, a valid event definition looks like this:

@IF

Trigger

@THEN

Action 1

Action 2

...

Action N

@ENDIF

where the words *Trigger* and *Action* represent valid triggers and actions as defined in the next section.

For example, say you want to remind the player on the 16th turn that they have only four more turns before the end of the scenario. The trigger is the beginning of turn 16, and the action is to display some text in a pop–up box. The definition of this event should look something like this:

@IF

TURN

turn=16

@THEN

```
TEXT
You have only four more turns to meet your victory conditions!
ENDTEXT
@ENDIF
```

At the start of the player's 16th turn, a text box pops up with the message "You have only four more turns to meet your victory conditions!" displayed in it.

VALID FORMAT AND WILDCARD VALUES

What constitutes a "valid" trigger or action? Essentially, any group of lines that is in the right place and follows the correct format. The group must begin with a recognised word–one of the trigger words or action words–and must contain the proper number of required parameters and a legitimate value for each one. Note that, to be legitimate, a value does not have to make sense. Thus, for example, the value **Goober7** for a city name is legitimate, even if there is no city in the scenario by that name.

There are a few "wildcard" values that are legitimate for certain parameters.

Anybody If a parameter requires a civilization name as its value, this value sets it so that any single civilization meets the requirements.

AnyUnit If a parameter requires the name of a type of unit as its value, this value sets it so that any type of unit meets the requirements.

AnyCity If a parameter requires the name of a city as its value, this value sets it so that any city meets the requirements.

Some triggers require you to specify (as parameters) the civilization that is attacking, defending, or receiving the object of the trigger. In these cases, you can also normally use **Anybody** in place of the name of a specific civilization. For those particular triggers, there are three other wildcard values you can use with the **Receiver** and **Owner** parameters of the associated actions.

TriggerAttacker This specifies the civilization that was the aggressor ("who") in the happening that triggered the trigger.

TriggerDefender This denotes whichever civilization was the defender ("whom") in the happening that triggered the trigger.

TriggerReceiver This represents the civilization that has just received ("whom") the technology named in the ReceivedTechnology trigger.

Note that case (capitalisation or lack thereof) is not important. "ANYBODY" is the same as "anybody" or "anYBoDy" as far as the event parser is concerned.

NO SPACES

One important thing to remember is that you must not put spaces where they are not called for. This is especially vital before and after equal signs (=). Under no circumstances should there ever be a space next to an equals sign.

Now, let's go over all the recognised trigger words and action words, their parameters and modifiers, and the legitimate values thereof.

TRIGGERS

Every Trigger is a specific trigger word, which might be followed by one or more required parameters. Some triggers also allow optional parameters. Each parameter must be on a line by itself, in order and immediately after the trigger word. Also, any optional parameter must be followed by at least one required parameter. Here's a simple example:

@IF

CityTaken

city=Rome

attacker=Anybody

defender=Romans

is a valid Trigger.

Each parameter is the parameter word, which might be followed by the equals sign (=), then the value for that parameter. When a value must be entered exactly as written here, it is listed in bold type. (Case still doesn't matter.) Optional parameters are listed in italics.

TRIGGER WORD	PARAMETERS	LEGITIMATE VALUES
AlphaCentauriArrival	race= size=	civilization name number 1 to 8 or AnySize
BribeUnit	who= whom= unittype=	bribing civilization name previous owner civilization name unit index number
CityDestroyed	city= owner=	city name civilization name
CityProduction	builder= improvement= OR unit=	civilization name improvement index number name of a type of unit
CityTaken	city= *UnitType*= attacker= defender=	name of a city Spy new owner civilization name previous owner civilization name

TRIGGER WORD	PARAMETERS	LEGITIMATE VALUES
Negotiation	talker=	civilization name
	talkertype=	**Human**, **Computer**, or **HumanOrComputer**
	listener=	civilization name
	listenertype=	**Human**, **Computer**, or **HumanOrComputer**
	OR	
	talkermask=0b	21 yes/no indicators (0 or 1)
	listenermask=0b	21 yes/no indicators (0 or 1)
NoSchism	defender=	civilization name
RandomTurn	denominator=	number 1 to 1000
ReceivedTechnology	receiver=	civilization name
	FutureTech=	number >1
	technology=	technology index number
ScenarioLoaded		
Turn	turn=	number 1 to 1000 or Every
TurnInterval	interval=	number 1 to 1000
UnitKilled	unit=	name of a unit
	Map=	number of a map
	attacker=	civilization name
	Defender Only	
	defender=	civilization name

AlphaCentauriArrival: This trigger is activated when the spaceship or siege engine of the specified civilization (race) reaches its goal. The size parameter lets you specify that the ship or engine must include a specified number of working modules (this is not a minimum, the size must be an exact match to activate the trigger). In the Original and Extended Original games, this is the number of Habitation or Life Support modules, whichever is less. In the Fantasy game, this parameter refers to Mechanics and Weapon modules–in the Lalande 21185 game, Habitat and Lability Cell modules.

BribeUnit: Triggers when a unit of the specified type, belonging to the whom civilization, is bribed away by the who civilization. The unit index number is the position of the type of unit in the units list in the rules.txt file. Remember that the index numbers begin at zero (Settlers), and only go up to 79.

CityDestroyed: When city, which is owned by the owner civilization, is destroyed (reduced to a population of zero), this trigger is activated. Note that this trigger includes an implied JustOnce modifier.

CityProduction: If any city owned by the builder civilization completes the production of the specified item (regardless of whether it's built or bought), this trigger activates at the beginning of the next turn. You specify what item using either the improvement parameter or the unit parameter–never include both in the same trigger or event. The improvement index number is the position of the particular improvement in the list in the rules.txt file. Remember that the index numbers begin at zero (Nothing), and only go up to 67 (Cure for Cancer).

CityTaken: This trigger is activated when a city changes ownership. It's excellent for reacting to key cities being captured. Attacker is the civilization that took the city, defender is the one who owned the city beforehand. The optional UnitType parameter has only one possible value–Spy. This sets the trigger to activate if the city changes hand via a bribed revolt.

Negotiation: This is triggered when one civilization tries to initiate talks with another. When using this trigger, keep in mind that many things cause negotiations in the game, especially between computer–controlled players. Although it might be tempting to add some flavour to the game with a text pop–up whenever two civilizations try to meet ("Lincoln and Davis meet face to face, but Davis is adamant," for example), this can happen so often as to make the scenario unplayable. There are two ways to use this trigger: with types and with masks. Note that you must never mix parameters from the two methods.

The first method, using the type parameters, not only activates the trigger, but also automatically stops the two civilizations from talking to each other. Talker is the civilization initiating the contact, and listener is the intended receiver. The talkertype and listenertype parameters allow you to specifically include or exclude computer–controlled or human–controlled civilizations from this trigger.

The second method, using the mask parameters, creates lasting settings that determine which civilizations are allowed to initiate negotiations with which others (talkermask) and which are allowed to receive diplomatic overtures (listenermask). The 21 indicators for each control what civilizations are affected. Each of the indicators represents one of the leader entries in rules.txt, listed in reverse programmer notation. For example, *talkermask=0b00000000000000000010 used with listenermask=0b00000000000000000101* would prevent leader 2 (Babylonians) from opening talks with leaders 1 and 3 (Romans and Germans)–and prevent them from listening–but it would not prevent the others from contacting leader 2. Even if you have not specified settings with this trigger (i.e., they're still in their default state), you can use the Negotiator action to modify them.

NoSchism: In the uncommon case when someone captures or destroys the capital city of a large empire (the defender civilization), a schism might occur. In that situation, this trigger does two things. First, it prevents the schism from happening. Second, it activates any actions associated with it.

RandomTurn: Rather than a specific turn, this triggers an event on a turn chosen at random. Denominator is the "one in" number. That is, for example, if the denominator is 40, there is a one in 40 chance every turn that this event will be triggered.

ReceivedTechnology: This one's activated when a civilization receives(through whatever means(the specified technology and every turn thereafter, as long as the civilization retains the advance. Note that this can cause some irregularities unless you really want the action to happen every turn for the rest of the game. (To prevent that, make sure to include the **JustOnce** modifier in the event.) Receiver is the civilization that gets the advance. The technology index number is the position of the particular advance in the advances list in the rules.txt file. Remember that the index numbers begin at zero (AFl), and only go up to 99 (X7). Also, note that Future Technology (90) can be received over and over and over without limit. The optional parameter FutureTech allows you to activate this trigger on the receipt of a specific iteration of Future Technology (or its equivalent)–Future Tech 4, for example.

ScenarioLoaded: When a scenario is first loaded, this trigger is activated. Note that this trigger only works with one action: **PlayCDTrack**. Any other use will cause unpredictable results.

Turn: Use this to have something happen at the beginning of a specific turn (or every turn).

TurnInterval: This is a repeating trigger. The value of the interval parameter is the number of turns that pass between the last activation and the next. An interval of 4, for example, would trigger this event every fourth turn.

UnitKilled: Use this when you want to respond to a particular unit being killed in battle. This is especially good for leaders, one–of–a–kind units, and special objectives. Attacker is the civilization that killed the unit, defender is the one who owned the unit. Note that this trigger normally activates no matter which unit actually initiated the combat. The optional Map parameter allows you to limit this trigger to times when a certain type of unit is killed in a certain place. Note that you can include more than one Map parameter in the same trigger (up to 3). The other optional parameter, Defender Only (note the space between the words–it's required), prevents this trigger from activating if the specified unit was the aggressor (i.e., it was killed by a unit that was simply defending itself).

ACTIONS

Actions, much like triggers, consist of a specific action word, which might be followed by one or more required parameters and optional parameters. Each parameter must be on a line by itself, in order and immediately after the action word. Also, any optional parameter must be followed by at least one required parameter. Here's a simple example:

```
@THEN
MakeAggression
who=Romans
whom=Carthaginians
```

is a valid Action.

Each parameter is the parameter word, which might be followed by the equals sign (=), then the value or values for that parameter. If there is no equals sign, then the value(s) begin on the next line. Many parameters continue over multiple lines, but the parameter word (and the equals sign if there is one) are not repeated. When a value must be entered exactly as written here, it is listed in bold type. (Case still doesn't matter.) Optional parameters are listed in italics.

Note that, although a single trigger can cause multiple actions, each trigger can cause only one action of each type. You can, for example, use MoveUnit, ChangeMoney, and CreateUnit all in the same event, but you can't use CreateUnit twice (or more times) in the same event. If you wanted to create more than one unit, you would need to define another event using an identical trigger.

ACTION WORD	PARAMETERS	LEGITIMATE VALUES
BestowImprovement	improvement=	improvement index number
	race=	civilization name
	capital=	**Yes**, **No**, **On**, **Off**, **True**, or **False**
	wonders=	**Yes**, **No**, **On**, **Off**, **True**, or **False**
ChangeMoney	receiver=	civilization name
	amount=	number
ChangeTerrain	*Map*=	number of a map
	terraintype=	terrain index number
	ExceptionMask=0b00000	11 yes/no indicators (0 or 1)
	maprect	x1,y1,x2,y2,x3,y3,x4,y4
CreateUnit	owner=	civilization name
	unit=	name of a type of unit
	Count=	number from 1 to 255
	veteran=	**Yes**, **No**, **False**, or **True**
	homecity=	city name or **None**
	InCapital	
	locations	
		x1,y1,*z1*
		...
		x10,y10,*z10*
	endlocations	
DestroyACivilization	whom=	civilization name
EnableTechnology	whom=	civilization name
	technology=	technology index number
	value=	**0**, **1**, or **2**
EndGame	endscreens=	**Yes**, **No**, **On**, **Off**, **True**, or **False**
EndGameOverride		
GiveTechnology	technology=	technology index number
	receiver=	civilization name
MakeAggression	who=	aggressor civilization name
	whom=	victim civilization name
ModifyReputation	who=	target civilization name
	betray=	number 0 to 8
	OR	
	whom=	opining civilization name
	AND	
	modifier=	number –100 to 100
MoveUnit	unit=	name of a type of unit
	owner=	civilization name
	Map=	number of a map
	maprect	x1,y1,x2,y2,x3,y3,x4,y4
	moveto	x,y
	numbertomove=	number or **All**
Negotiator	who=	number of leader (1–21)
	type=	**Talker** or **Listener**
	state=	**Set** or **Clear**

ACTION WORD	PARAMETERS	LEGITIMATE VALUES
PlayAVIFile		file name (*.avi)
PlayCDTrack		number from 2 to 14
PlayWaveFile		file name (*.wav)
TakeTechnology	whom= *Collapse* technology=	civilization name technology index number
Text	*No Broadcast* EndText	 text to be displayed
Transport	unit= state= mode= type=	name of a type of unit **On**, **Off**, **Set**, or **Clear** **Use**, **Build**, or **Native** number 0 to 15

BestowImprovement: Gives the specified city improvement or wonder to a city owned by the named civilization, without cost. The improvement index number is the position of the particular improvement in the list in the rules.txt file. Remember that the index numbers begin at zero (Nothing), and only go up to 67 (Cure for Cancer). Race is the civilization that is to get the improvement. What city the gift is placed in is determined for you. Each city is given a rating based on its size, whether it's the capital, and how many wonders are in the city. If you set the capital parameter **False** (or **No** or **Off**), this calculation ignores the capital factor. The wonders parameter controls the wonder factor in the same way. The top rated city gets the improvement unless you include the optional Randomize parameter, in which case the city is chosen at random from the top ten.

ChangeMoney: This adds money to or subtracts it from a civilization's treasury. (Use a negative number for the amount to subtract.) If after the adjustment the treasury is less than zero, the treasury becomes zero, instead. Receiver is the affected civilization.

ChangeTerrain: This changes all of the terrain in a specified rectangular region of the map (delineated by the co–ordinates you give) to the specified type. You specify the type using the terrain index number, which is the position of the desired terrain type in the terrain list in the rules.txt file. Remember that the index numbers begin at zero (for Desert), and only go up to 10 (Ocean).

The optional Map parameter allows you to specify on which of the possible maps (the number available depends on how many are included in the particular scenario) the change should be made. Each action of this type affects only one map; the default is map 0.

The other optional parameter, ExceptionMask, allows you to specify that certain terrain types should not be affected by the change. Each of the eleven yes/no indicators represents one of the basic terrain types. This is in reverse programmer notation, which means that the last digit represents the first terrain type (Desert), and the first one represents the last type (Ocean). Any indicator that is set to 1 prevents every tile of the corresponding type from being changed; if an indicator is 0, that type changes as usual. No indicator should ever be set to anything but 1 or 0.

The co–ordinates define the corners of the rectangular region. They must (1) be on the line immediately following the word **maprect**, (2) be separated by commas, and (3) be listed in the following specific order to be valid. (They also must be valid map co–ordinates.) The first co–ordinate must be the upper left corner; next comes the upper right, then lower right, and finally lower left. Thus:

1——2

4——3

CreateUnit: Creates from 1 to 255 new units (at no expense) with specified characteristics and places them at the first of the specified locations. If that placement is invalid for any reason, the program tries the subsequent locations (there can be up to 10), in order, until one works or it reaches the EndLocations parameter. The x and y in these locations represent horizontal and vertical co–ordinates on the scenario map. The z is an optional co–ordinate specifying on which map the units should be created; if no z is entered, this defaults to map 0. The optional parameter InCapital forces the unit to be created in the capital city of the specified civilization. Even though this causes the locations to be ignored, you still must include the required Locations and EndLocations parameters and at least one location. Finally, you can use the optional Randomize modifier to have the location chosen at random from the list.

DestroyACivilization: This one is exactly what it sounds like. Cities, units, and everything else is completely wiped out. Whom is the civilization slated to meet its doom (as in, "for whom the bell tolls").

EnableTechnology: Changes the permission state of the specified advance module for the specified civilization (whom). The technology index number is the position of the particular advance in the advances list in the rules.txt file. Remember that the index numbers begin at zero (AF1), and only go up to 99 (X7). The value is the new state–0=can research and own; 1=can't research, but can own; 2=can neither research nor own (i.e. can't acquire in any way). In rules.txt, advances are separated into modules; keep in mind that changing the permission state for any advance in a module changes the state for the entire module. Also note that for the game to function, every civilization must always have a possible research route to Future Technology (90). Therefore, the module that includes advance 90 and all of its ancestor prerequisites must always have a value of 0 for all civilizations. This action must not appear in the same event with a GiveTechnology or TakeTechnology action.

EndGame: This does exactly what it sounds like; it ends the game. This is essentially equivalent to the player retiring. The endscreens parameter determines whether the information displays that usually show up at the close of a game (the POWERGraph, score, and so on) are shown.

EndGameOverride: This prevents the game from ending normally when the spaceship or its equivalent reaches its destination. Note that this does not preclude someone winning by conquest.

GiveTechnology: Bestows the specified advance on the named civilization. The technology index number is the position of the particular advance in the advances list in the rules.txt file. Remember that the index numbers begin at zero (AF1), and only go up to 99 (X7). Also, note that Future Technology (90) can be received over and over and over without limit. Receiver is the civilization on which the bestowing is to descend. This action must not appear in the same event with an EnableTechnology or TakeTechnology action.

MakeAggression: This action causes two civilizations to cancel their peace treaty, if one exists. Then who immediately declares war on whom.

ModifyReputation: Changes the way other empires feel toward a specified civilization. Who is the civilization whose reputation is to be changed. Of the other parameters, you must have either Betray or the combination of Whom and Modifier. Betray sets the number of times that all other empires believe this civilization has betrayed allies. The higher this number is, the lower their opinion of the civilization will be. Use Whom if you only want to change the opinion of a specific other empire toward the Who civilization. Modifier is the amount by which you want to increase or decrease whom's disgust with who.

MoveUnit: This scans a specified rectangular region of the map (maprect), then orders a specified number of the owner's units of the given type in that region to move to a certain location. The program only activates units that are (1) not fortified, (2) not on sentry duty, (3) not already headed for a destination, (4) not building fortifications, and (5) not nuclear weapons. **MoveUnit** does not affect units owned by human players. MOVEUNIT must not be used in the same event as the DelayPerFlag modifier.

The optional Map parameter allows you to specify which of the possible maps (the actual number available depends on how many are included in the particular scenario) the maprect and moveto locations refer to. Each action of this type affects only one map; the default is map 0.

The maprect co–ordinates define the corners of the rectangular region. They must (1) be on the line immediately following the word **maprect**, (2) be separated by commas, and (3) be listed in the following specific order to be valid. (They also must be valid map co–ordinates.) The first co–ordinate must be the upper left corner; next comes the upper right, then lower right, and finally lower left. Thus:

1–2

4–3

Negotiator: Modifies the negotiation regulations for a specified civilization, either allowing or prohibiting talks between that empire and others. Who is the civilization affected, which you specify according to its position in the list of leaders in rules.txt (or, more likely, using a wildcard). Note that, unlike all the others, this list begins with 1, not 0. The type parameter determines which type of negotiation you want to change–talker controls those initiated by the who civilization, and listener those talks started by someone else. State is the prohibition setting; **Set** prevents the specified type of negotiations, and **Clear** allows them. Note that this action affects all of the settings of the specified type and all of the civilization's Negotiation statements; there is no way to change individual indicators. (Please read the description of the **Negotiation** trigger to get the rest of this story.)

PlayAVIFile: Play the specified .avi file. The program searches the current scenario folder for the file, then (if it doesn't find it there) reverts to the game's default video folder.

PlayCDTrack: Tells your computer's CD player to play the specified audio track. On the game cd-rom, Track 1 is reserved for program information, so the first audio track is actually Track 2. Thus, the value must be 2 or greater. There are 13 music tracks on the ***Civilization II: Test of Time*** CD, so numbers above 14 will result in no music playing.

PlayWaveFile: Play the specified .wav file. The program searches the **sound** subfolder of the current scenario folder for the file.

TakeTechnology: Takes the specified advance away from the named civilization (if they have it). The technology index number is the position of the particular advance in the advances list in the rules.txt file. Remember that the index numbers begin at zero (AFl), and only go up to 99 (X7). Also, note that Future Technology (90) cannot be taken away. Whom is the civilization destined to take a step backward. As if losing a tech isn't bad enough, the optional parameter Collapse makes it devastating; this also takes away any advance that has the specified advance as a prerequisite–and all advances that have those as prerequisites, on up the tree. This action must not appear in the same event with an EnableTechnology or GiveTechnology action.

Text: This simply presents a pop–up text box to the player. The box includes whatever text you put between the Text and EndText lines. You can enter up to 10 lines of 255 characters per line, but keep in mind both the memory limits and the amount of text that will fit on the screen at one time. Short messages are generally best. The optional No Broadcast parameter (note the space between the words–it's required) specifies that this message should be shown only to the triggering civilization ("who").

Transport: The intermap transport abilities of each unit type are set in rules.txt. This action allows you to change those abilities for a specified type of unit (unit). The state parameter controls the new setting for the specified ability; **On** or **Set** enables the ability, while **Off** or **Clear** disables it. Mode determines which of the three types of transport ability you want to change–permission to **Use** a certain type of transport site, the ability to **Build** that type of site, or the **Native** ability to transport without a site. The type parameter sets which of the sixteen transport relationships (defined in rules.txt) you want to change. TRANSPORT must not be used in the same event as the DelayPerFlag modifier.

Note that unit types, civilization names, and so on must match the corresponding names in the rules.txt file exactly. Mismatches cause errors.

MODIFIERS

Modifiers are special, optional parts of an event. They're not triggers or actions, but rather are used as a part of a trigger or action. Most of them act like optional parameters, except that they can be applied to more than one trigger or action–and they have unusual effects.

Note that a modifier must never be the last parameter of a trigger or action. At least one required parameter must follow the modifier in every case.

MODIFIER WORD	PARAMETERS	LEGITIMATE VALUES
@AND		
Continuous		
Delay	delay=	number 1 to 1000
JustOnce		
Randomize		

@AND: The @AND command is a logical modifier that allows you to set up an event so that the action(s) occur only if two triggers activate. You can have one and only one @AND in any single @IF statement (and none in the @THEN portion of the event), and this modifier works only with these triggers: BRIBEUNIT, CHECKFLAG, CITYDESTROYED, CITYPRODUCTION, CITYTAKEN, RANDOMTURN, RECEIVEDTECHNOLOGY, TURN, TURNINTERVAL, and UNITKILLED. Both triggers must be complete and valid. The @AND modifier goes on a line by itself between the last parameter of the first trigger and the trigger word of the second.

Continuous: When a trigger is activated, it remains that way only until the current game turn ends. If you need a trigger to remain "true" for the rest of the game (to satisfy one half of an @AND modified trigger, for example, when the other half will be satisfied later), you must include the Continuous modifier in the definition of that trigger. This modifier is only valid for use with the CITYDESTROYED, CITYTAKEN, RANDOMTURN, TURN, and UNITKILLED triggers and the FLAG action.

Delay: Delay affects all of the actions in a single event. It causes them to not take place until a specified number of turns after the trigger is activated. You set this number of turns using the required parameter **delay=** followed by a number. This modifier is valid with all actions and triggers. Note that you can use the Randomize modifier to make the delay a random number of turns chosen from between zero and the delay you specified. Delay must not be used in the same event as the DelayPerFlag modifier.

JustOnce: This modifier affects the entire event; it tells the program to execute this event once and only once. If, for example, you wanted to do something special the first time a city is taken, but not afterward, you would use the CITYTAKEN trigger and include JustOnce as one of the consequent actions. The JustOnce statement should be included immediately after the @THEN statement. This modifier is valid with all actions and triggers.

Randomize: When you want something chosen at random from the possible alternatives, include Randomize in the definition of the action. This modifier is only valid for use as a modifier of the Delay modifier and with three actions: BESTOWIMPROVEMENT, CREATEUNIT, and DELAYPERFLAG. (The effects are different for each, and they're described in the relevant action descriptions.)

FLAGS

With this version of the language, we've added the ability to use binary 'flags' to keep track of multiple situations throughout the game. Flags have many possible uses–far too many to enumerate here. The flag system includes a command, a trigger, an action, and a modifier, but for simplicity of explanation and because they all work together, we've collected them in this section, rather than spreading them out.

FLAG WORD	PARAMETERS	LEGITIMATE VALUES
@INITFLAG		
Flag	who=	civilization name
	state=	**On**, **Off**, **Set**, or **Clear**
	flag=	flag number (0 to 31)
	OR	
	mask=0b	32 state indicators (0 or 1)
CheckFlag	who=	civilization name, **Everybody**, or **Somebody**
	Technology=	technology index number
	flag=	flag number (0 to 31)
	OR	
	mask=0b	32 state indicators (0 or 1)
	Threshold=	number
	OR	
	Count=	number
	State=	**On**, **Off**, **Set**, or **Clear**
DelayPerFlag	basedelay=	number 0 to 1000
	perflagdelay=	number 1 to 1000
	mask=0b	32 state indicators (0 or 1)

@INITFLAG: You cannot use flags unless they have been initialised–set to a beginning state of zero (the same as **Off** and **Clear**)–and this command is how you initialise them all. The @INITFLAG line belongs at the beginning of the events.txt file, immediately after the @DEBUG command.

Flag: This is the flag action; you use it to change the state of one or more of the 32 flags (0 through 31) for each civilization. The optional parameter Who determines which civilization's flags you're setting; if you don't specify one, then you're changing the flags for every civilization. State determines whether you're marking flags as **On (Set)** or **Off (Clear)**. The flag and mask parameters are mutually exclusive; you can only use one or the other in any single event. With flag, you specify the one flag, by number, that you want to affect. Mask, on the other hand, allows you to change several flags at once; each of the 32 indicators controls one flag (in reverse programmer notation, meaning that the first digit is flag 31 and the last one is flag 0), and every one you mark with a 1 will be set to the specified state. Keep in mind that unless you include the Continuous modifier, the flags remain set (and thus can activate a CHECKFLAG trigger) only until the end of the current turn.

CheckFlag: This is the flag trigger; if the state of the flags you specify to be checked matches the state you indicate, the trigger is activated.

You determine what civilizations' flags are checked using the who parameter. Enter a name to limit the check to only that civilization's flags. The **Somebody** value requires that any one civilization's flags match, but it doesn't matter whose. **Everybody** stipulates that all civilizations contribute–the flags are combined, and for each flag checked, if anyone's flag matches, that flag is considered a match.

The optional Technology parameter has no effect unless you specify a single civilization in who. This causes the entire trigger to be ignored unless the specified civilization has that technology. The technology index number is the position of the particular advance in the advances list in the rules.txt file. Remember that the index numbers begin at zero (AFl), and only go up to 99 (X7).

The flag and mask parameters are mutually exclusive; you can have only one of the two in any single event. Flag specifies a single flag (0 through 31) you want to check. (If you use flag, **Everybody** and **Somebody** become equivalent to **Anybody**.) Each of the indicators in the mask represents one flag, in reverse programmer notation (31 is first and 0 is last). Those flags you mark with a 1 will be checked. The mask parameter, in turn, supports two mutually exclusive optional parameters, Threshold and Count. Using Count, you limit the trigger to activating only if the total number of matches is exactly the number you specify. Threshold, on the other hand, is a minimum; if the match total is equal to or more than the specified number, the trigger is activated.

The state parameter denotes what state you're checking for, **On (Set)** or **Off (Clear)**. Whatever checked flags have the state you specify are considered matches.

DelayPerFlag: This is the flag modifier, which allows you to delay the actions in an event a number of turns based on the state of selected flags. It's similar to the Delay modifier, and like Delay, it belongs in the action portion of the event. Basedelay is a constant; the actions will always be delayed by at least this number of turns. The perflagdelay is an additional delay based on how many of the flags specified in the mask are **On (Set)**. Each of the indicators in the mask represents one flag, in reverse programmer notation (31 is first and 0 is last). Those flags you mark with a 1 will be checked. (Note that you cannot specify a civilization; everyone's flags are checked.) To figure the total delay, multiply the number of flags marked in the mask that are **On** by the perflagdelay, then add the basedelay. Note that perflagdelay is calculated only once, when the trigger is activated; if the states of the flags change after that, the delay is not affected. You can use the Randomize modifier to make the perflagdelay a random number of turns chosen from between zero and the actual calculated number. The DelayPerFlag modifier must not be used in the same event as Delay, TRANSPORT, or MOVEUNIT.

MEMORY LIMITS

There's a limit to how many events you can put into a scenario. If you run over that limit, your scenario simply won't run. The limit is not a number of events, but rather an amount of memory.

There is approximately 100 Kb of "heap" memory dedicated to events. This is all you get. Every event structure takes up some of this space–especially text messages, which take up lots of space. In addition, delayed actions (those using

the DELAY modifier) create countdown timers that also take up memory space. If your delays pile up and you run out of memory because of it, the scenario won't crash, but any delayed actions that don't fit in memory will not ever take place.

It takes some doing to run out of memory, but if you do, there are a few simple tactics that might help:

- Shorten your text messages. Text takes up more memory than anything else, so getting rid of it helps quite a bit.
- Combine events. If you think about it, you can probably turn several events into one with minor changes.
- Eliminate unnecessary or tedious events. You'll know which ones they are.

ORDER OF EXECUTION

This particular issue will rarely, if ever, be of concern in any but the most exactingly precise and complex scenarios. However, for those of you who need to know, here is the order in which the possible actions take place in any single event.

1) PlayWaveFile
2) PlayAVIFile
3) PlayCDTrack
4) CreateUnit
5) MoveUnit
6) Transportable
7) ChangeTerrain
8) MakeAggression
9) ChangeMoney
10) DestroyACivilization
11) GiveTechnology
12) TakeTechnology
13) EnableTechnology
14) Text
15) ModifyReputation
16) BestowImprovement
17) EndGameOverride
18) EndGame
19) Flag
20) Negotiator

A SIMPLE EXAMPLE

Here is a hypothetical sample event definition from an American Revolution scenario. If England takes New York from the Americans, this event displays the text "New York captured by the Redcoats! Enraged local citizens join the fight for liberty!" Then, it creates a new American militia unit and tries to place it at map location 84,22. If that is not a legal placement (enemy units already there or whatever), it then tries 84,23 and–if that location is invalid, too–79,31.

@BEGINEVENTS

@IF

CityTaken

city=New York

attacker=English

defender=Americans

@THEN

Text

New York captured by the Redcoats! Enraged local citizens join the fight for liberty!

EndText

CreateUnit

unit=Militia

owner=Americans

veteran=false

homecity=none

locations

84,22

84,23

79,31

endlocations

@ENDIF

@ENDEVENTS

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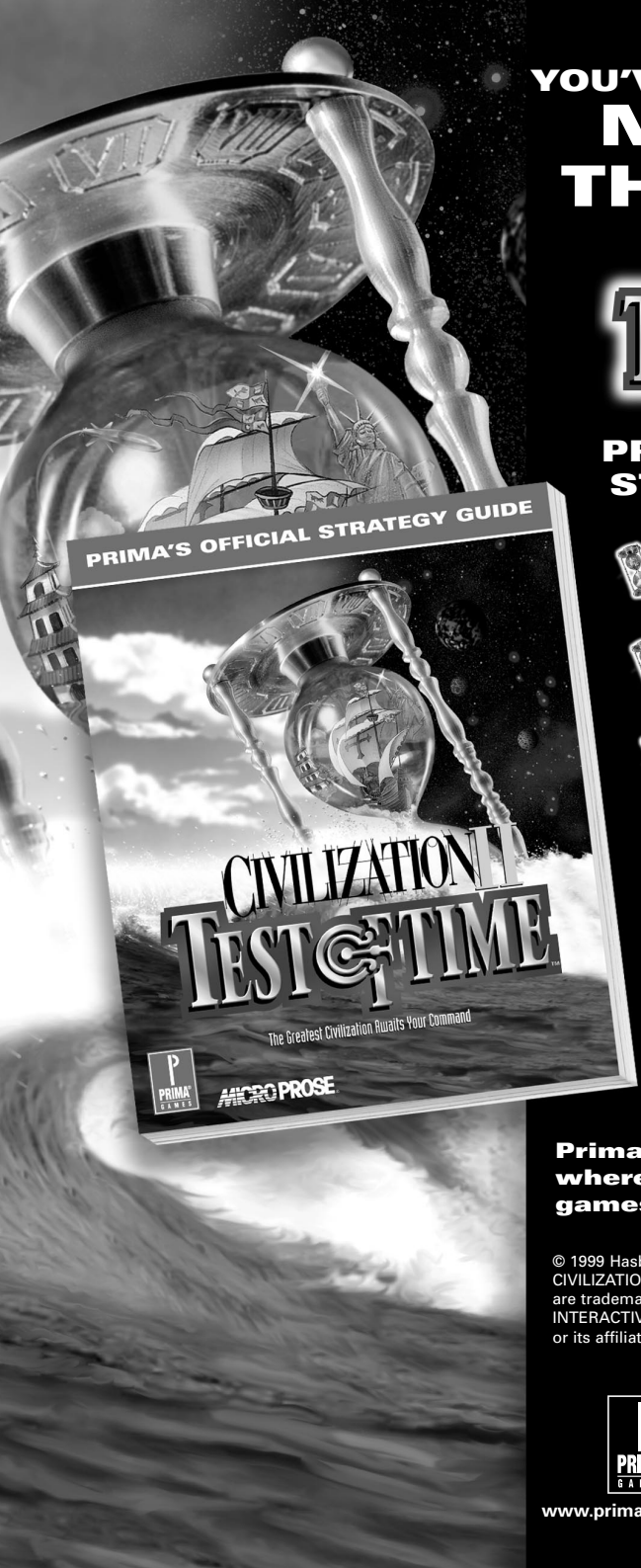

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