

Empire Master Documentation (V1.9)



Empire Master Rule Editor Saved Game Template Rules

This documentation corresponds with Empire Master version 1.9. (Formerly this program was called Empire Builder.)

Existing users: Change notes are at the end. An upgrade order form may be printed from the File menu or from About Empire Master.

Quick start: Just copy the file Empire Master 1.9 Demo onto your hard disk double click and run!

If you like the demo version order the full program and documentation from:

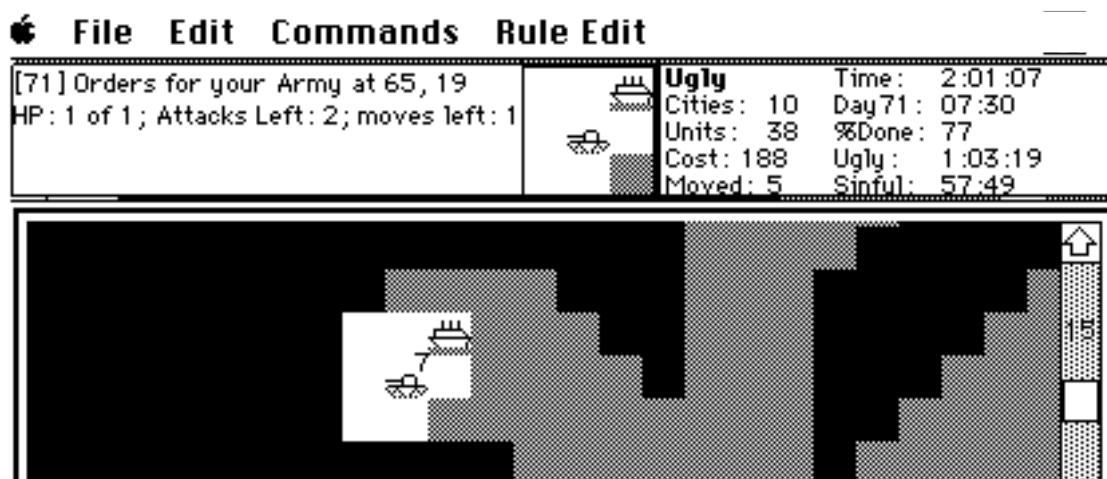
Christopher Eliot
P.O. Box 371
Leeds Massachusetts, 01053

An order form can be printed from Empire Master with the Print Order Form under the file menu.

Until July 1991 the price is:

Full program and documentation:	\$25
Full time students:	\$15

Overseas Air Mail: \$5
Massachusetts residents please add sales tax.



Introduction to Empire Master

Empire Master™ is a computerized wargame for the Macintosh. You start out with a single city in an unknown world. Your city builds units which move out to explore the world finding and conquering more cities. When you capture more cities they will build more units for you. Eventually you will build transports to cross the sea and capture cities on different islands. Air units can quickly map the area near your cities, but their range is limited by the amount of fuel they can carry.

As you build up your empire, the enemy will be working on another one somewhere else. Eventually your forces will collide and the enemy has no intention of tolerating your existence. If your empire is too small and weak it will be quickly devoured. Only if you quickly build up your production capacity and develop a large and well balanced military will it be possible to save your empire.

A demo version of Empire Master is distributed freely, but the registered version is only available by mail. The Print Order Form command in the File menu will generate an order form that you can use. It also prints bug reports and upgrade forms. The demo version does not include any of the rule editing facilities, the map parameters (size and density) can only be varied among tight limits and saved games cannot be read back in. A game saved by the demo version can be read by the unrestricted version. Since a single game can take a number of hours to play this is a useful feature.

When you register I will send you a disk containing the latest release of the program and a printed copy of the documentation. The documentation describes each of the commands and includes pictures to explain everything. The disk will also contain the latest demo version which you can give away to anyone. Please let me know how you found out about Empire Master and

which version you have seen.

Empire Master was implemented on a Macintosh SE using Think C™. It will run on any Macintosh provided there is enough memory. One megabyte is recommended and more is better. A 512K Mac without multifinder might be able to run games as large as 90 X 90. A full size 255 X 255 map requires about four megabytes.

Playing Empire Master

Although this is a very complex game the sophisticated interface makes it easy to play. Unlike many games there are advanced intelligent commands allow you to give high level commands to your forces freeing you to concentrate your attention on the areas where crucial decisions must be made. Supply lines can be defined through cities to move your units automatically up to the front. Your pilots will keep track of their own fuel limits automatically, refueling when needed. Your effort goes into strategy and crucial battles rather than trivial details.

Terrain of the map.

There are four basic types of terrain: land, sea, lake and city. Furthermore, cities can be neutral or owned by the machine or the player. The difference between a lake and a sea is that a lake only touches one island. Generally there will be one sea and there may be a number of small lakes.





There are eight types of units and up to eight more could be defined. The currently defined units are armies, fighters, bombers, destroyers, transports, submarines, carriers and battleships. Armies move only on land or on transports. Fighters and bombers can move anywhere within range of fuel. Destroyers, transports, submarines, carriers and battleships can only move on sea squares or into port cities.

The picture shows a section of the map as it may appear early in the game. White squares are land, gray squares are sea and black squares are unexplored. The player's home city is near the middle surrounded by three armies and there are two neutral cities visible. The player's fighter has just discovered one of the neutral cities, and it is flashing to indicate that it is time to move the fighter. No enemy units or cities are visible.



Features on the map are identified by small pictures as shown here:

Terrain and Units

	Friendly	Enemy
 Land		 Army
 Sea		 Fighter
 Lake		 Bomber
 Neutral City		 Destroyer
 Enemy City		 Submarine
 Friendly City		 Transport
		 Carrier
		 Battleship

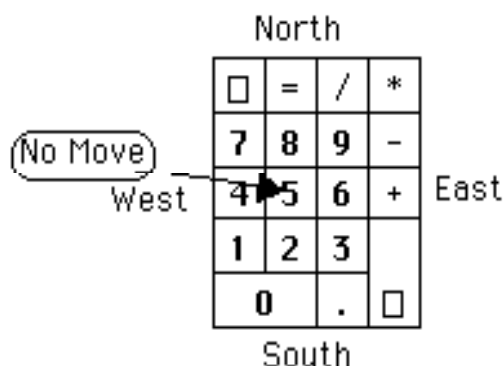
These pictures can be edited using a built in fat-bits style editor. The pictures of units change completely when using different display scales. This means there are 120 different icons to design and I have (clearly) been lazy about some of them.

Commands

The basic movement commands are given from the keyboard or with the mouse. The keypad

commands are based upon the keypad layout.

The numbers 1 - 9 indicate directions, except 5 which commands the unit not to move this turn. For example a "6" would command the fighter above to move over the neutral city. Think of it as if the unit were sitting on top of the "5" key. (The keypad is not treated specially: you may use the number keys on the main keyboard interchangeably.)



Some modifiers provide shortcuts. The Shift key makes commands apply to every unit of the same type in the square. The shift modifier applies whenever it makes sense. The S (sleep), 1-9 (Keypad) and mouse click commands all support the shift modifier. This makes it very easy to move a whole stack of units.

The Option modifier does different things to different commands. For mouse movement commands the option modifier makes the unit sleep when it gets to its destination. For the 1-9 (Keypad) commands the option modifier makes the unit keep going in the specified direction until something happens. (You may always use the W (wake) command to a previous order.) For example, a land unit will move unit it reaches the sea, or an enemy unit. A sea unit will move until it reaches the edge of the board, land or the enemy. The L (Load) command with the option modifier will order a transport to load armies as long as there are some immediately available. The Option Load command will never cause a transport to wait if no armies are present.

Clicking the mouse on any square adjacent to the current unit will also move it to that square. Clicking on the unit itself and dragging to another square will move the unit to that square, even if this requires more than one turn. Further commands can be given using the Commands menu or from the keyboard.

Mouse Command Summary

Double-Click

On Friendly City

On Friendly Unit

On visible enemy unit or city

Set City Production

Describe Unit(s)

Describe visible unit(s)

Single-Click

Adjacent to flashing unit	Go There
On other Friendly unit	Move that unit now

Click and Drag

On Unit	Set destination for unit	
With Shift	Also set destination for city and units of the	same type
in this square		
With Option	Also sleep at destination	

Keyboard Command Summary

C	Set City Destination
D	Duplicate Destination
E	Explore
F	Fuel or Fix
G	Gather
H	Come Here
J	Just Move Transport
L	Load Transport
M	Markers
P	Patrol
Q	Quit
R	Random
S	Sleep
Shift-S	Sleep All
T	Triangle
U	Unit List
W	Wake
X	eXplode now
1-9	Movement
Shift-1-9	Other Units Too
Option-1-9	Go as far as possible
(Option-Shift-1-9 combines)	
5	Don't move
[Space]	Move later this turn
?	Help

Version 1.7 changes and comments.

by Clay Prestia, Empire Master co-author.

- Color and Multiple Screens. Using the Color menu item under the Map menu one can choose the colors to be used to display the various map feature (and, indeed, choose whether to use color at all). Additionally, if one has multiple monitors, one can choose which monitor to display the various windows on. (For now, window position within the monitor is predefined and fixed, and only the main map window is resizable.) Although color looks nice, experienced users will find that size is more critical. For example, I have 3 screens, including a standard size Mac II monitor, but I place the main map on my Sigma Designs L-*View in 96dpi mode (which is, effectively, like a 25 inch monitor at the normal 72 dpi resolution.) Users with large color monitors without acceleration hardware may find that color is just too slow, and also opt for black and white (setting the screen to black and white in the Monitors CDEV). We have just about completely rebuilt the screen draw portions of Empire Master in this release, primarily to speed up this function, but even given our success here, Macs short of the IIfx probably just don't have the horsepower to drive color tubes as rapidly as the game requires.

- EM Settings file. Earlier versions of Empire Master "remembered" things like rule and option setting from run to run by changing bits of the application file. Because this can have some bad side effects, we have opted to save this info in a separate EM Settings file. Empire Master will look for this file either in the folder where the application file is, or in the System Folder. If it can't find the file, it will create a new one (set with some initial, slightly funky values) and tell you that it did so. (No, we won't look for a "Preferences" sub-folder, but I promise, next release...)

- Sounds. Empire Master can now play a user specified sound on the occasion of certain events during the play of the game. This is controlled by the Sound item under the map menu. The dialog presented by selecting that item allows one to choose from all sounds available in the system file (or through utilities such as Suitcase II). Additionally, Empire Master will look for sound resources in a file named "EM Sounds" (without the quotes) in the same folder as the application. That file is not required to run the program or make the sound feature operational. It is only distributed with the full version of Empire Master sent to registered users. (If you choose, you can construct your own using ResEdit or SoundMover. Empire Master looks for ordinary SND resources.)

- Rule Sets. The full version of Empire Master allows one to edit (change) the characteristics of the military units used in the game. Their relative strengths, speeds, production costs, move timing, name, mobility, and many other aspects can be changed to vary the nature of the game. These capabilities are disabled in the demo, but we supply two different rule sets to illustrate some of the differences.

These rules sets are in the files "Clay's EM Rules" and "Chris' EM Rules" included in the demo release set.

There are three major differences between the rules sets, each of which illustrates a new feature in EM 1.7.

- **Missiles.** Each rule set defines a type of unit called an ICBM. (This is actually a misnomer — the behavior of the unit is much more analogous to a cruise missile). These missiles are nuclear — they destroy everything (friend and foe) within the radius of their blast. (Cities are reverted to neutral status.) In Chris' rules, the blast has a radius of 2, so 25 squares are affected by the blast; in Clay's rules, the radius is only one. They are launched either by selecting a flight direction or (more typically) by selecting a destination using the normal click and drag method. They will be detonated by any enemy unit encountered along their path. Units may attack and destroy them if they can reach them and initiate an attack, so there are defenses against them, but you must be skillful with your pieces. BE CAREFUL with them. Once launched (moved) they can't be withdrawn, and they will blow up friendly units and cities if caught in the blast. (They are normally transported to a battle area using Bombers or Submarines, the two unit types equipped to carry them.)

- **Counterattacks.** In Clay's rules, the Fighters and Submarine have counterattack capability. This means they will automatically attack any unit which moves adjacent to them which they have a decent probability of defeating. (In practice, this means fighters will counterattack missiles, bombers and, maybe, fighters. Submarines will counterattack destroyers, transports, crippled capital ships, and, maybe, other submarines.) In this rule set, your main defense against missiles is to position fighters over potential targets so they will automatically counterattack the approaching missile.

- **Mines.** The game supports this type of unit now, but the machine strategy doesn't (it simply wouldn't use them). Consequently neither of the rule sets include them.

- **Empire Master, in earlier versions, allowed one to place ("stack") an unlimited number of armies and air units on any square, but limited each sea square to occupation by just one unit. In V1.7, all units may be stacked on a given square, subject to editable "stacking limits". In Clay's rules, the limits are set to infinity. In Chris' rules, the limits are 10, 2, and 5 pieces per square for land, sea and air units, respectively. 15, 5 and 10 are allowed to be within a city.**

- **Machine strategy.** We have significantly improved the quality of the game played by the machine. We believe this is the first ever implementation of Empire which, without giving the computer opponent any handicap, will give an experienced human player a game that is not easy to win. Indeed, it will win many games itself.

In addition, the program "learns" how to play better, both during the game and from game to game. (The latter is not enabled in the demo version.) The program, given a couple games to gather some experience, will be able to adapt to radically different rule sets.

- **More on Memory.** Empire Master requires a lot of it. The demo set, which is limited to a board size no larger than 100 x 100 requires at least a megabyte. I play fully expanded games (255 x 255 with lots of cities) with the MultiFinder partition size set to over 3

megabytes. (EM works well under Connectix' Virtual.) To play the demo under MultiFinder will require at least 2 megabytes of memory; to play on a 1Mb machine will require that MultiFinder not be used, and that you have a minimum number of memory hungry Inits and use a small (if any) RAM cache.

We did a lot of work in this release to make EM use memory more conservatively and to react more gracefully to memory low conditions. Unfortunately, the new machine logic, flight graphing, and other new features consumed much of our savings.

But, then, you were looking for an excuse to buy more memory. Now you have it!

- **Speed.** We also continued our efforts to speed the game up. It is now to the point where we have begun to favor memory savings over compute savings when the choice presents itself. If you have used an older version, we think you will appreciate the results.

One note. We made some major "apparent" speed savings by moving doing some of the computational chores needed to maintain status in the background while waiting for a user action, and during other "dead time" conditions, such as the time spent doing the flickering animation when a piece engages in battle. Consequently, EM may sometimes appear a bit sluggish responding to a mouse click or other command. We felt this was a small price to pay to avoid having to wait for 5 to 15 seconds every time a city is conquered or for half a minute or more at the start of each turn for certain calculations to be performed.

- **Patrol Mode.** The "P" command for patrol now simply has a piece patrol areas. The areas chosen are those squares which have been moved into least recently. The old "Patrol" mode (describing a triangle for the piece to traverse endlessly) can be requested by the Triangle command on the file menu or by typing a "T".

This is the first step toward making available to the human player some of the higher level logic used by the machine's playing strategy. Our intent is to allow the user to use the machine's automation logic in the area of transport army gathering and other loading in the future.

- **Other New Features.** Look around, there are many more of them. Menu layouts have changed a bit. Try waking pieces you have previously set for (and want to "undo") no more moves this turn, either by "sleeping" it or using a "5" command. Try a "known world" game. Most importantly, when playing in simultaneous mode, and near enemy units, use the space command ("move later") liberally. The machine logic will. (The name of the game is "chicken".)

- **Bugs.** We squashed a bunch. Then we rustled up a whole pile of new ones. Then we squashed those. And then squashed a few that thought they had got away. Then we played the game a bunch, and let some others do it too, and fixed a few more. We think it's in pretty good shape. But then, we've been wrong about this before (and, thankfully, right on other

occasions.) In any case, if you find 'em, please let us know. There's a bug report form which will print from the file menu and can be sent to Chris, or you can reach me (Clay Prestia):

America Online: ClaytonP

CompuServe: 72510,535

AppleLink: D5904

FAX: 1-412-366-6519

Voice: 1-412-366-6515

Mail:

Clayton Prestia

Pacific Forecasting Systems, Inc

9645 Kummer Rd.

Allison Park, PA 15101 U.S.A.

- The Future. Our "to do" lists seem to get longer rather than shorter with each new release. Seems that each new idea spawns three more beyond, and adding to the pile are the excellent suggestions we have received from users. (keep those cards and letters coming, folks.)

Version 1.8 Changes and comments

by Christopher Eliot

The big change in version 1.8 is a total redesign of the internal rules format. The rule editor is now a separate application from the game. The primary reason for this change is to make type definitions independent from each other. Eventually we will build up a library of unit types and it will be possible to construct new rule sets just by selecting unit types from the library and starting it up.

A second and more immediately visible change is the addition of supplies and technology levels. Supplies are consumed during production, and technology levels must be raised to certain levels before units can be produced.

Multiple maps are another major new feature. You can now open up to eight map windows, each showing a different part of the world. The windows can be scrolled, moved and resized independently. Each window is fully functional allowing you to select a unit in one window and give it a destination in another window. Using large and small scale views of the same map it is possible to understand what is happening much more easily than ever before.

Bugs: Last time we didn't get all of them. This time we did. Honestly. Really. I hope.

Version 1.9 Changes and comments

The new rule format implemented for version 1.8 solved many problems but the rule editor was rather shaky. The new version checks for and prevents all of the common problems, and

makes several tricky steps automatic. Rules files are now “installed” simply by putting them into the same folder as the game. Several rule sets are included.

There are not too many visible changes in this version. Primarily we have just added lots of error checking and consistency checking to make things work smoothly. But a few new commands did get in anyhow. Wake now lets you select a rectangle. With shift it cancels city destinations and with option it cancels city production after the current unit is finished. The Gather command lets you move all armies from a rectangle into a single square. The shift and option modifiers will program city destinations and make them sleep at the destination as expected. The Just Move Transport (J) command makes a transport stop picking up units until you give it one of the load commands. This is especially useful for moving missiles around without launching them.

Future Releases and Upgrades.

Future releases can only be guaranteed if users continue to support the game! Please distribute the demo version as widely as possible.

Already at least five versions of the game have been distributed. Sometimes the difference is minor and sometimes substantial. For now the upgrade policy is given by the Upgrade Form option in the Print Order Form FILE menu item. Currently the charge for upgrades only pays for copying and mailing expenses. The prices in that form will be honored through the date indicated.