

Introduction to Macintosh

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This section is intended for beginners (and other Macintosh users) who would like to get a bit of background knowledge about System software. If you already know all about it, feel free to skip to the next section...

At the top ("root") level of your hard drive is a folder named "System Folder." This folder contains your "System software." System software is the software that actually makes your computer work. Also known as the operating system or "OS," it is loaded when your computer starts up ("boots") and stays in memory as long as your computer is running, directing all of its operations and functions. There are quite a few different operating systems out there: Mac OS, Windows (3.1, 95, and 98), UNIX, NextStep, OS/2, etc. Some of these work on different types of computers, some work on the same computers. More could be listed, but what is important is that there are many different types of computers, and many different operating systems to run them. Fortunately for us, we use the Mac OS.

System File and Finder

The Mac OS consists of two key components, the System file and the Finder, and many smaller files which modify them. The System file contains the instructions and code (in Mac-talk, the "resources") which your computer uses to function in the most basic way. It allows your applications to communicate with your computer's hardware, and also controls how each piece of your computer's hardware talks to the rest of the hardware. The Finder is the interface you use to work with your computer. It is actually an application which is launched when the computer starts up, and provides the graphical user interface (GUI) with which you interact. It provides a way to take advantage of the functionality of your computer, allowing you to do such things as access files, open and close windows, launch applications, etc. While it is possible to use your Mac without the Finder running, most people won't have the occasion, nor the desire, to do so.

Besides the System and Finder, there are many other files which affect the way your computer operates and which dictate the extent of its functionality and its specific abilities.

The two main types are "extensions" and "control panels." These files are sometimes referred to as "startup files" (because they are loaded when your computer starts up) or as "INITs"

Extensions

An extension is a file that loads code into your System file at startup (before the Finder launches) and temporarily modifies how your computer operates. These modifications can be outright changes in the way the System or particular applications behave, or they can provide added functionality which the System file and Finder alone do not provide. These changes remain in the System file until your computer shuts down. Because of this non-permanence, in order to perpetually gain the functionality which a certain extension provides, it must load every time your computer starts up. Unlike a control panel (below), you typically cannot make changes in the way an extension operates (unless it has a corresponding control panel which provides this functionality). Extensions are located inside your System Folder in a folder called "Extensions."

While the above description is the "official" description of what an extension is, in reality, there are different kinds of extensions: some load at startup as described above, while others wait until they are needed by either the System software or an application.

Control Panels

There are two different kinds of control panels. The first type are files which provide you with the ability to change the way your System software itself operates. These control panels let you change things such as your monitor resolution, the speed of your mouse, and many other System-related attributes. These files don't load code into your System file at startup, and the settings you choose in them are applied even if the control panel isn't "active" at startup. For example, if you use the Mouse control panel to set your Mouse speed, that setting will remain whether or not the control panel is active.

The second type of control panels are files which, like extensions, load code into your System file at startup and temporarily change how your computer operates. Their "control panel"

interface provides you with the ability to make choices about their behavior.

Control Panels are located inside your System Folder, in a folder called "Control Panels." When installed ("enabled"), all control panels are accessible from the "Control Panels" item in the Apple Menu for easy access. The "preferences" (your chosen settings) for control panels are located in one of three places:

- 1) Within the control panel itself
- 2) In a preferences file in the "Preferences" folder inside your System Folder
- 3) In what is known as Parameter RAM, or PRAM
(see the Nitty-Gritty on PRAM for details)

Which ones do I need?

Depending upon which Macintosh or Mac clone you have, the control panels and extensions you have and need may vary, as some INITs provide functionality which is not needed on all systems, and some systems require files which are not required on others. In addition, many applications and utilities, both Apple and third-party (non-Apple), install control panels and extensions of their own. However, it is often not clear whether or not you need everything you have, or have everything you need. In addition, and this is the cause of some amount of grief for Mac users, many extensions and control panels conflict with each other, causing strange behavior, crashes and freezes.

Other System-related files

There are many other files which work with your System software and applications to provide added functionality. Most of these are located within your System Folder, and provide support and/or resources.