

Macintosh: Troubleshooting System Bombs (1 of 3)

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TOPIC
Most system bomb error messages are due to software problems. This article provides troubleshooting tips for four major types of software.
DISCUSSION
THE FOUR MAJOR TYPES OF SOFTWARE

System Software

System software includes all the files in the System Folder that make up the Operating System.

- The files named System and Finder are the main components of the operating system and are loaded into RAM when you turn on or reset the computer.
- INITs (Extensions) are startup programs and initialization resources stored in the System Folder (with System 7, they are inside the Extensions folder). They are memory resident files that are loaded into RAM when you turn on or reset the computer. Examples: QuickMail and Easy Access.
- cdevs are control panel devices. These files appear as scrollable icons in the Control Panel desk accessory window under System 6, or as separate, launchable programs in a Control Panels folder under System 7. They are loaded into RAM when you turn on or reset the computer. You may change options from within each Control Panel. Examples: Pyro, After Dark, Adobe Type Manager, and Sound Master.
- RDEVs are remote devices or Chooser files. These files appear in the Chooser under the Apple menu. Examples: ImageWriter, LaserWriter, DeskWriter, CD-ROM, and AppleShare. Under System 7, they belong in the Extensions folder.

- Preferences files keep default or current settings for programs. Examples: Word Settings, MsWorksPref, PM4 Defaults, and Excel Settings.
- Some files are combinations of the above. Examples: Pyro (INIT/CDEV) and StyleWriter (INIT/RDEV).

NOTE: To simplify the description of INITs, cdevs and RDEVs, this document will use the collective term INIT to describe any file that contains INIT code to be executed at startup time.

Application Programs

Examples of application programs: Microsoft Word, Microsoft Excel, Microsoft Works, FileMaker Pro, MacPaint, MacWrite, and Aldus PageMaker.

Program Files

Program files are the files that contain data or instructions a program may need during its use. Examples: printer definition files, import/export filter files, and data files.

Data Files

Your files are the documents created when you choose "Save" in a program. Examples: word processing, spreadsheet, communication, database, drawing, and page layout files you created.

TROUBLESHOOTING SYSTEM BOMBS

Here are some troubleshooting tips for the various types of software.

System File & System Folder Procedures

- Put a Disk Tools or System Startup diskette in the floppy drive and turn on your computer. This prevents the INITs in the System Folder from running, and eliminates them as a possible cause of the problem. This is a quick way to determine if a major problem which occurs near startup time is related to your System Folder. If the problem is resolved, then continue on with the next step. If the computer still bombs right away and you know your System Disk is good, then you may have a hardware problem.
- Move all INITs and non-Apple files* (Preferences files, screen fonts, and so on) to a separate folder outside the System Folder and restart. If you're no longer getting system bombs, replace the INITs one at a time, and restart your computer following each replacement until you get the error again. The last one put in is likely the cause of the

crashes. It may be corrupted or incompatible with the System or other INITs and/or programs. If you still get a system bomb after removing all INITs and non-Apple files from the System Folder, try the next step.

- * Non-Apple files are any files that AREN'T found on the original Apple Macintosh System Disks that come with your computer.
- Start up from your Disk Tools or System Startup disk. Open the System Folder and drag your current System and Finder files to the trash. (For System 6, consult your user's manual on the use of the Font/DA Mover program to copy your fonts and desk accessories out of the System file first.) Reinstall a new copy of the system using the Installer on your System Tools or Install 1 disk. If this doesn't work, try the next step.
- The Preference files may be corrupted. You can drag some to the trash and the programs will recreate the files the next time you run those programs (settings saved in these files will be lost). You will have to copy some Preference files using the program installation procedure. Consult your program manual or call the manufacturer of the program to find out what is necessary. If the system doesn't work once the new Preference files have been created, try the next step.
- Start up from your Disk Tools or System Startup disk. Drag the entire System Folder to the trash (be sure you have all INITs, preference files, fonts, desk accessories, and any other non-Apple files on floppy disks or in another folder on the hard drive before this procedure. For System 6, consult the manual on the use of the Font/DA Mover program to copy your fonts and desk accessories out of the System file.) Restart from the installation disk (Install 1 under System 7) and run the Installer to place a new copy of the System Folder on your drive. Check the system before re- installing your INITs, preference files, fonts, desk accessories and any other non-Apple files. If it works, re-install them one at a time until the System Folder is back to its original state. If this does not work, continue.

Programs, Program Files, Data Files

Programs or files may be the cause of problems. Here are some suggestions.

- You may (if possible) run the program from a floppy disk instead of the hard drive to determine if it is the cause of the problem. This is likely if you get the bomb in one program and no others. If this is not possible then try dragging the program's folder to the trash (saving any files you may have created first). Also throw away any preference files or folders associated with the program in the System Folder. Re-install the program from the original diskettes. If this does not work, try the next step.
- A file that you have created may cause a bomb each time it is loaded or while you are using or editing it. Sometimes you can make a new file and copy the contents of the old file to it to solve the problem. In most cases you will need to restore the file from your backup if you

have one or re-create the file if you don't. Copyright 1992, Apple Computer, Inc.

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