



# Tech Info Library

## Apple Personal Diagnostics 1.1.3: ReadMe File (8/95)

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TOPIC -----

This article contains the Read Me file included with Apple Personal Diagnostics 1.1.3.

DISCUSSION -----

### APPLE PERSONAL DIAGNOSTICS 1.1.3

The purpose of this document is to provide late-breaking information as a supplement to the Apple Personal Diagnostics User's Guide. Please refer to the User's Guide for operating instructions and other important and time-saving troubleshooting tips when using Apple Personal Diagnostics (APD). Also, be sure to fill out and return your software registration card so that Apple can notify you of future upgrades to APD 1.1.3 as they become available.

### System Requirements

APD 1.1.3 runs on Apple computers starting with the Macintosh Plus and is fully compatible with system software versions 6.0.7 through 7.5.2 (including Performa system software). Installing and using the Automated Diagnostics functionality of APD 1.1.3 requires that your system is running system software version 7.0 or greater.

### What's New

APD 1.1.3 includes the following changes and enhancements:

- APD 1.1.3 is required for the recently released Power Macintosh 9500 series computers. If you attempt to run previous versions of APD on any Macintosh with the new PCI-bus architecture (which has replaced NuBus), APD will give false RAM Test results and may crash. Note that APD 1.1.3 will not display PCI-bus information in the "Video and Expansion Cards" window of the System Info screen and will not test VRAM installed in a Power Macintosh computer.

- APD 1.1.3 now supports over 140 Macintosh computers. (See the "Computers Supported by APD" file on the Application Disk for a complete listing.)
- The two emergency disks included with APD 1.1.3 continue to provide startup and emergency repair software for most Macintosh computers, but not Macintosh computers which require MacOS 7.5.1 or 7.5.2. (See "Creating New Emergency Disks" later in this document for a complete list of the exceptions.)
- The option settings allowed by APD 1.1.3 (such as turning test selections on or off) are now saved in the preferences file, so that you do not have to reset these options each time you run APD.
- APD Emergency 1.1.3 has a new on-screen log window which displays the status and results of diagnostic tests, as well as additional hardware information.
- The APD Emergency 1.1.3 bootable disks contain the international version of the MacOS. When you boot from an APD Emergency disk, the international time and date formats will appear in the on-screen log window.
  - Time will be displayed using a 24-hour clock (instead of a 12-hour clock which is more common in the United States). For example, "13:23" is the equivalent to "1:23 pm".
  - Dates will be displayed in the DD/MM/YY format (instead of MM/DD/YY). For example, "02/03/95" is equivalent to "March 2, 1995" rather than "February 3, 1995".If you prefer to use another time and date format, please see "Creating New Emergency Disks" to create an emergency disk using the System Software from Apple Macintosh CD or Disk Tools disk that came with your Macintosh computer.
- APD 1.1.3 and APD Emergency 1.1.3 now display the location of duplicate System Folders and corrupted System files found by the System Software test.
- APD 1.1.3 now supports file checking and directory structure repair of larger volumes (over 2 GByte).
- The System Software test in APD 1.1.3 and in APD Emergency 1.1.3 will now only run once, even if it is selected as one of a suite of tests for looping. This allows more time for tests where looping is effective in finding intermittent problems.
- When you launch APD Emergency 1.1.3 from a floppy, the System Software test now deselects the floppy drive by default. (There is generally no reason to run the System Software test on the APD Emergency disk.)
- APD 1.1.3 and APD Emergency 1.1.3 System Software test now also checks for duplicate System Folders on non-boot drives.
- APD 1.1.3 and APD Emergency 1.1.3 now limits the looping of tests to a maximum of 24 hours.

#### Installation Instructions

1. Insert the Application Disk into your floppy drive.

2. Drag the APD application icon from the floppy drive onto your hard drive.
3. To install the Automated Diagnostics (System 7 or later only), drag the Automated Diagnostics system extension from the floppy drive onto the closed System Folder of your hard drive. Allow the system software to place the extension in the proper folder (the Extensions folder within the System Folder).

In most cases, you'll want to start up your computer and run APD from your computer's hard drive.

#### File Sharing Alert

Turn off File Sharing before you start the APD application. If File Sharing is on, you will receive an on-screen alert or see dimmed selection buttons. To switch File Sharing off, go into the Sharing Setup control panel and click on the stop button.

#### Turn Off Extensions, Applications, and Other Programs

For best results, start your system with all extensions, applications, and other programs off before launching APD (or use an extensions manager to disable extensions at startup).

To turn extensions off, shut down your system, then switch on the system while holding down the Shift key (System 7.0 and later). You should then see a message saying "Welcome to Macintosh, Extensions Off." To perform the equivalent operation on a computer running System 6.0.7 or 6.0.8, please refer to the "Software Remedies" section in the Troubleshooting chapter of the Apple Personal Diagnostics User's Guide.

There is a known conflict between APD and Thunder 7 spell checking software from Baseline Publishing. Before using APD or APD Emergency, use the Thunder 7 control panel to turn off spell checking.

#### Using the Emergency Disks

This package contains two emergency disks that allow you to perform certain system software repairs and to boot from a floppy disk when you are unable to boot from your system's hard drive. Each disk provides the APD Emergency application, as follows:

APD Emergency Disk 1 is a 1.4 MB bootable startup and repair disk for most Macintosh computers with a 1.4 MB floppy drive released through January 1995 (excluding Workgroup Server 9150 computers, computers in which the Macintosh Processor Upgrade card is installed, and computers requiring System Software 7.5.1 or 7.5.2).

Note: To create emergency disks for these computers see "Creating New Emergency Disks" below.

Note: If you have installed a Power Macintosh Upgrade Card, you can use APD

Emergency Disk 1 to start your Macintosh computer with the Power Macintosh Upgrade Card on or off at startup. However, if you have a problem, you may want to reset PRAM first and then use APD Emergency Disk 1 to boot your computer. (Refer to the "Software Remedies" section in the Troubleshooting chapter of the Apple Personal Diagnostics User's Guide for instructions on resetting PRAM.)

APD Emergency Disk 2 is an 800K bootable startup and repair disk providing the APD Emergency application for Macintosh computers that did not originally come with, or were not upgraded to include, a 1.4 MB floppy drive (Macintosh Plus, SE, SE/30, II, IIx, and IIx computers).

The system software on these disks has been minimized to reduce disk requirements. Do not use the software on these disks to install system software on your computer's hard drive. Also, make copies of the original disks to use when you need to start your computer from an emergency disk, and keep your original disks in a safe place. Please refer to the "Getting Started" section of the Apple Personal Diagnostics User's Guide for detailed instructions on the proper use of these disks.

#### Creating New Emergency Disks

Workgroup Server 9150 computers, computers with the Macintosh Processor Upgrade card installed, and computers requiring System 7.5.1 or 7.5.2 require different system software from that provided on APD Emergency Disk 1. To make an emergency startup disk for these computers:

1. Insert the Apple Macintosh CD or Disk Tools disk that came with your computer or Processor Upgrade Card. Create a temporary folder named Emergency Disk on your computer's hard drive and copy the System file and the System Enabler file from the Apple Macintosh CD or Disk Tools disk to the Emergency Disk folder. Eject the Apple Macintosh CD or Disk Tools disk.
2. Insert APD Emergency Disk 1 and copy the APD Emergency application to the Emergency Disk folder. Then eject the APD Emergency Disk 1.
3. Format a 1.4 MB floppy disk and label the disk APD Emergency Disk. Optionally, you may want to add your computer's model name to the label.
4. Copy the System file, the System Enabler file, and the APD Emergency application file from the Emergency Disk folder to the new emergency disk.
5. On the floppy disk, rename the APD Emergency application to Finder. (Changing the application's name to Finder lets you start up using the APD Emergency application instead of the System Finder.)
6. Eject the new emergency disk and lock the disk. Drag the Emergency Disk folder on your computer's hard drive to the Trash and empty the trash (select Empty Trash from the Special menu).
7. Check the new emergency disk you've created to make sure that your system boots correctly and that you can run the APD emergency application from the new disk.

## Automated Diagnostics

Installing and running the Automated Diagnostics functionality of APD software requires that your system is running System Software version 7.0 or greater. The startup delay for Automated Diagnostics has been set to 20 minutes (default).

Certain extensions and third-party software programs that perform functions considered to be system activities may prevent Automated Diagnostics from starting up. Also, some third-party utilities may interfere with Automated Diagnostic's operation.

Automated Diagnostics runs in non-native or emulation mode on Power Macintosh computers, so it does not perform an FPU test (since Power Macintosh emulation does not provide FPU functionality).

Automated Diagnostics may erroneously report problems with drives that support removable media, if the media is removed after the Macintosh is booted.

## Help Window

The default setting for the Help window is to have it hidden from view. You can activate the Help window from the Windows menu in the Menu bar. Note: In addition to hiding and showing the Help window, you can move it or change its size to suit your preferences.

## Accelerator Cards

If you've installed a third-party accelerator card, you may want to remove or disable the card before running APD to avoid possible incompatibilities.

## Video Mirroring

Turn off video mirroring before running APD.

## RAM Test Conflicts

Turn off virtual memory and disable RAM optimization utility applications before you run APD RAM tests. (Some RAM optimization utility applications cause your system to behave as if virtual memory were on. The virtual memory setting in your system's Memory control panel cannot disable these applications.)

## Low-Memory Alerts

APD returns a low-memory alert when it does not have enough memory to run or is running low on memory, for example, if you've created a report that requires more memory than is currently available. To allocate more memory to the APD application, you can do one or more of the following:

If you are using System 7, or System 6 with MultiFinder:

- Quit other applications that may be running at the same time as APD.
- If you have sufficient RAM installed in your system, quit the APD application,

open the APD Get Info box and increase the "preferred" application memory size to 1500K. (The application memory size is initially set to 1200K.)

- Close any open report.
- Reduce the size of any installed RAM disk and the system RAM cache.

If you are using System 6 with Finder rather than MultiFinder:

- Close any open report.
- Reduce the size of any installed RAM disk and the system Disk cache.

#### AppleTalk Zones

Under certain conditions (for example, during periods of heavy network activity) System Information may report an AppleTalk zone to be "Unknown."

#### System Info and Partitioned Hard Drives

The SCSI Device display in System Info does not provide information on multiple drive partitions. Typically, the display lists the name of a single partition on the drive corresponding to the SCSI device, however, the exact information that appears depends on the software used to partition the hard drive.

#### Looping the Floppy Drive Test

Running the Floppy Drive test for more than approximately 50 loops can cause the floppy drive to temporarily overheat and induce a test failure.

#### Power Macintosh Upgrade Cards

Basic Info identifies the CPU type as Power Macintosh when a computer with a Power Macintosh Upgrade or Macintosh Processor Upgrade card is operating in "Power Macintosh" mode; however, the card does not appear in Video and Expansion Card Information displays.

#### Creating Report Log Files

Using APD 1.1.3, you can create log files and then reload them later to compare with updated reports. Due to changes in the information included in reports, APD 1.1.3 cannot read log files created by APD 1.0.

#### Basic Info Reporting of Startup Devices

Basic Info lists the startup device selected in the Startup Disk control panel when APD was launched. If no device is selected in the Startup Disk control panel, or if you've disconnected (or unmounted) the original startup device, Basic Info will not reflect the current setting or may report it as an unknown device.

If you run System Software Check on the boot disk before you run System Info, then the Basic Info screen may report the startup device as an unknown device.

## Benchmark Check Results

The results you get from running Benchmark checks may vary, depending on a range of different factors (see the User's Guide for more information). Therefore, you can obtain more accurate and consistent comparisons if you run Benchmark checks several times, and then average the results.

The results of the Individual Checks reflect the true speed of your system compared to a Macintosh computer chosen by you from the pull-down menu. The Overall Check graph, on the other hand, is a performance ratio that uses a relative scale of zero to 150 (or zero to 2000 on a Power Macintosh), where a Macintosh Plus equals 1. For example, if the score for your computer is 80, then you can infer that, overall, your computer is 80 times faster than a Macintosh Plus. All scores are relative to a Macintosh Plus.

Benchmark results may be affected by currently active applications and whether you are using FPU emulation software, video mirroring, accelerator cards, virtual memory, RAM optimization utilities, etc. Turn off all of these items before running APD to obtain more accurate and consistent results from the Benchmark checks.

On Macintosh Centris AV and Quadra AV computers, there is a known conflict between the Benchmark FPU checks and Express Modem software. Disable the Express Modem extension before running Benchmark checks.

## Display Patterns

For a PowerBook with an external display, the Display Patterns Test uses patterns designed for an LCD display on the external monitor, rather than the specific patterns that would otherwise appear.

When using System 7.5 or third-party clock utilities, the clock may appear when test patterns display on your screen. The clock does not affect the operation of the Display Patterns checks.

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