



# Tech Info Library

## Power Macintosh 6100 DOS Compatible: ReadMe File (5/96)

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TOPIC -----

This article contains the Read Me file for the Power Macintosh 6100 DOS Compatible. This version of the Read Me file was included with the PC Setup 1.0.7 update software package.

DISCUSSION -----

Using DOS and Window Applications  
With the DOS Compatibility Card for Macintosh

This document contains important information about using your DOS Compatibility Card that is not included in your user's guide.

Contents:

- Using Memory Management Utilities
- Using the Serial Ports on the Macintosh
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Using Memory Management Utilities

If you use a memory management utility such as EMM386 or QEMM, you need to configure it to be compatible with your DOS Compatibility Card.

- If you will be using EMM386 (included as part of DOS) and you don't require

expanded memory, set CONFIG.SYS to:

```
DEVICE=C:\DOS\EMM386.EXE NOEMS RAM=D000-EFFF
```

If you require expanded memory, set CONFIG.SYS to:

```
DEVICE=C:\DOS\EMM386.EXE RAM=D000-EFFF FRAME=D000
```

- If you use QEMM, it is recommended that you use the frame option (ST:F):

```
DEVICE=C:\QEMM\QEMM386.SYS RAM ST:F ARAM=B080-B7FF ARAM=C900-DFFF R:1
```

- If you choose to use the Stealth mapping option (ST:M), set CONFIG.SYS to:

```
DEVICE=C:\QEMM\QEMM386.SYS RAM ST:M X=C800-CFFF X=FC00-FCFF X=FE00-FFFF  
ARAM=B080-B7FF ARAM=C900-DFFF R:2
```

For other memory management utilities, configure them so that the only areas in the BIOS that can be mapped to upper memory are from D000 through EFFF.

Make sure you verify that the HIMEM.SYS line in the CONFIG.SYS file has the switch to turn memory testing off. If the HIMEM.SYS line doesn't turn memory testing off, the ROM BIOS may become corrupted when the DOS Compatibility Card is configured for 2 MB of memory:

```
DEVICE=C:\DOS\HIMEM.SYS /TESTMEM:OFF
```

NOTE Apple does not recommend using automated memory configuration utilities with the DOS Compatibility Card because they can require more memory than management utilities you configure manually. They can also be incompatible with the DOS Compatibility Card.

#### Using the Serial Ports on the Macintosh

The maximum baud rate supported by the DOS Compatibility Card when a COM port is mapped to a Macintosh serial port is 19,200. If you're capturing serial output to a Macintosh file, there is no limit.

Due to the RS-232 implementation of the Macintosh, not all RS-232 signals are available. These signals are not available: Carrier Detect (CD), Data Set Ready (DSR), Request to Send (RTS), and Ring Indicator (RI). If your application or serial device requires these signals, it will not work.

NOTE See "Serial Port Pinout" later in this document for a list of the Macintosh and PC connectors.

The DOS Compatibility Card does not support Carrier Detect (CD). You must configure your communications applications so they do not use CD. Most communications applications can be set to respond to the CARRIER string sent back by most modems.

## Using Video

- Correcting Video Synchronization (Video Synch)

Some application programs that write directly to the hardware (especially games) may cause the Apple 13", 14", and 16" monitors to lose video synch when you start the program. If this happens, call the software company to see if one of the following conditions exists:

1. There is a switch to force the application program to make BIOS calls.
2. There is an upgrade available with this feature.

These applications will run on a standard VGA, SVGA, or MultiSync monitor.

- Getting Color on Your VGA Monitor

Due to the way some programs check for color VGA, they may be installed in VGA monochrome. In these cases check the documentation that came with your software to see if there is a setup option to install standard VGA. If the setup option is available, install the software with the standard VGA option. Once a program is installed with standard VGA, it will always display in color.

If you are installing Windows, even though the SETUP program comes up in color, the express setup may install in VGA monochrome. To avoid this you can use the custom setup and verify the video is set to VGA in the configuration screen.

Another way to avoid installing in VGA monochrome is to use the INSTALL.BAT file located on the DOS Compatibility Card Installer (for the DOS Environment) disk. Follow these steps:

1. Run the INSTALL.BAT command, but choose not to install.  
The Installer places WINSETUP.BAT and a hardware information file on your C:/ volume.
2. Use the WINSETUP.BAT file to install Windows.  
This will force Windows to install in color. You can also use the Windows SETUP program to change the video at any time.

- Using the Video Drivers

Included with your DOS Compatibility Card are video drivers for Windows and third-party applications. These drivers allow you to run Windows with 256 colors at 640 by 480, or if you are using an Apple 16" or VGA display, 16 colors at 800 by 600. Follow these steps:

1. Insert the Display Driver Disk 1 disk in the floppy disk drive while the PC is in the foreground.
2. From DOS, set the current drive to A by typing:

A:

3. Run the setup program by typing:

SETUP

Follow the instructions on the screen to install the video drivers.

NOTE If you are using an Apple 16" monitor, DOS will always be displayed at 640 by 480 centered on your monitor.

Using the Apple Adjustable Keyboard

If you are using an Apple Adjustable Keyboard, you cannot use key combinations that combine keys from the main keyboard with function keys at the same time (such as shift-F1). For this reason, you cannot restart the DOS Compatibility Card using the Control, Alt, and Delete key combination. If you need to restart the DOS Compatibility Card, use the Reset button in the PC Setup control panel.

Using Backup Programs

To back up the drive files on your Macintosh, either make a copy of the files by duplicating them in the Finder, or use a Macintosh backup application program. Do not use PC backup programs. PC backup programs do not work because the floppy disk drive is controlled by the Macintosh.

Using MacShare

MacShare is a PC application program included with your DOS Compatibility Card software that allows the PC to view Macintosh folders and volumes as drive letters on the PC. MacShare allows as many shared drives as there are drive letters. To specify the number of drive letters, modify your CONFIG.SYS to include a LASTDRIVE statement:

```
LASTDRIVE=x
```

x must be a letter between E and Z because the PC reserves drives A through D for its floppy and hard disk drives. For example, if you use M as your LASTDRIVE value, you could have up to nine extra drives (using drives labeled E through M). The CD-ROM driver, if installed, will use one letter.

NOTE Each additional drive letter uses 100 additional bytes of PC memory.

Using PC Drives and Partitions

The PC Setup control panel allows you to use PC SCSI drives and partitions with the DOS Compatibility Card. If you use a PC drive or partition and you have a utility that mounts these devices on the Macintosh, be sure to unmount the drive or partition before starting the PC by dragging its icon to the Trash. If you don't unmount the drive or partition, you may lose data since both the Macintosh and the PC may write to the device at the same time.

NOTE If you are using Apple's Macintosh PC Exchange 2.0 to mount PC devices, the software alerts you if you try booting the PC while the device is mounted.

If you intend to mount your PC drive file, partition, or disk on the Macintosh using a utility such as Apple's Macintosh PC Exchange, do not use a PC compression program. Drives that are compressed cannot be mounted.

#### Using Floppy Disks and CD-ROM Discs

Simultaneous use of multiple CD-ROM drives is not supported. When the PC is in the foreground, you cannot insert Macintosh floppy disks into the floppy disk drive. The PC ejects a Macintosh floppy disk if one is inserted. Also, Photo CDs can not be read on the PC side of the DOS Compatible.

Apple 600i and Apple 600e CD-ROM drives work with the DOS Compatibility card when used with Apple CD-ROM extension version 5.0.4. Standard installations of system software version 7.5.1 or earlier do not include the Apple CD-ROM 5.0.4 driver. This driver is included with Apple 600e CD-ROMs or can be obtained from Apple Technical Support.

Write-protected PC floppy disks can be accessed by both the PC and the Macintosh. Write-enabled floppy disks can be accessed only by the environment that was in the foreground when the floppy disk was inserted.

To eject a floppy disk while the PC is in the foreground, press Command-E.

NOTE Using Command-E works only when the PC can access the floppy disk. Otherwise switch to the Macintosh and eject the floppy disk from the Macintosh.

CD-ROM discs can be accessed by both the Macintosh and PC (if the included PC software is installed). To eject a CD-ROM disc from the PC, press Command-Y. If the CD-ROM disc cannot be ejected (because a file is in use or the CD-ROM is being shared), the Macintosh beeps to notify you and will not eject the CD-ROM disc.

Audio CDs cannot be controlled from both Windows and the Macintosh environment at the same time. One or the other must be used.

The PC side sets up a drive letter (E:) for a CD-ROM drive although no drive is attached. If no CD-ROM drive is connected to your system, this drive letter (and some memory) can be freed up by editing these files:

```
AUTOEXEC.BAT
REM LH C:\DOS\MSCDEX /D:CDDRV /L:E

CONFIG.SYS
REM DEVICE=C:\Apple\CDROM.SYS /D:CDDRV
```

Prefacing these commands with "REM" will cause DOS to ignore them.

Playing an audio CD in Windows while running low-level media tools, such as PC

Tools or Microsoft Anti-Virus, may cause a crash. It is best to reduce computer activity to a minimum while using such tools.

### Installing Microsoft Office, Word, or Excel

When you install Microsoft Office 4.2c or later, Microsoft Word 6.0c or later, or Microsoft Excel 5.0c or later, make sure that you use a CD-ROM installation disc or floppy disks that are non-DMF. (DMF is Distribution Media Format, Microsoft's recently changed installation disk format. DMF disks store 1.7 MB of data rather than the 1.44 MB on a single 3.5 inch high-density disk. During installation with DMF disks, an error will be reported when installing the second disk, and you won't be able to complete the installation.)

Non-DMF installation disks can be obtained from Microsoft by calling 1-800-426-9400.

### Using the Two-Button Mouse

The standard Apple mouse has no right button and users must press the "extended =" key whenever they intend to use right button functions in one of their PC applications. However, users of a third party programmable mouse or trackball, such as Kensington Turbo Mouse 4.0 or Logitech MouseMan ADB, can use the utilities included with their mouse to map the "extended =" key to the right hand button.

The Kensington Turbo Mouse 4.0 includes two utilities to configure its buttons. They are: "Turbo Mouse Control 4.0.2" and "Turbo Mouse Basics 4.0.2". "Turbo Mouse Control 4.0.2", an application that requires an extension, does not effectively map the "extended =" key to the right button and should not be used.

"Turbo Mouse Basics 4.0.2", a control panel, correctly maps the "extended =" key to the right button and should be used instead.

### Sound Control Panel Settings

For sounds generated by the Sound Blaster card and for sounds from the PC, the Sound Control Panel must be set with the Internal CD playthrough enabled. The User's Guide will explain how to make this setting (see pg. 54). With System 7.1.2, however, the setting is lost after each reboot. Install the System Update 3.0 software to correct this problem so that the playthrough setting is retained after each reboot.

QuickTime also turns off the playthrough option. This has the effect of cutting off all PC and Sound Blaster card sounds. QuickTime v1.6.2 will turn off playthrough and not restore it, while QuickTime v2.0 will restore playthrough back to its original state.

### Using the Sound Blaster Card

The PC Sound control in the PC Setup control panel does not effect sounds

produced by the Sound Blaster card. Only PC-generated sounds such as the system beep are affected by this control. Use the master volume control of the Mixer Control application from the Audio program group, or turn off the Internal CD playthrough to turn off both PC and Sound Blaster generated sounds (see pg. 54 of the User's Guide).

The Sound Blaster daughter-card included on your DOS Compatibility Card will play sounds as expected, but is not able to record them.

The DOS Compatibility Card does not fully support Sound Blaster 8-bit, Sound Blaster 2.0 or Sound Blaster Pro drivers. If problems occur, select the Sound Blaster 16 driver that comes with the DOS Compatibility Card.

### Multimedia and Game Applications

These types of applications, whether they are run in the PC or Macintosh environments, will see a marked performance improvement with the installation of a memory SIMM onto the DOS Compatibility Card. QuickTime application performance is especially improved with the addition of a SIMM.

### Printing

The recommended print driver to use with your DOS or Windows application when printing to a QuickDraw (non-PostScript) printer is the Epson LQ-2500.

If the top and bottom of your document gets clipped when you are printing from your PC, follow these steps:

1. Double-click the System Folder on your Macintosh and open the Extensions folder.
2. Double-click the PC Print Spooler.
3. Choose Preferences from the File Menu.
4. Click the button for "Gaps between pages (60 lines)" (under "When emulating an Epson printer").

You can also set notification and status options in this dialog box.

For DOS or Windows printing on the DOS Compatibility Card, we recommend using LPT1.DOS or LPT1. In general you must use printers that are Macintosh compatible, and use their corresponding printer extension for the Macintosh, selectable in the Chooser. However, in a PC Novell Netware environment you can print to a PC-compatible printer attached to a Novell network (refer to the Network Installation Guide on how to set up a Novell client).

### Printing to a Postscript Printer

If you have a Postscript printer, open the Printers icon in the Windows Control

Panel and select a Postscript driver. We recommend the Laserwriter IINT driver or Windows Postscript driver. In the Macintosh Chooser, select the corresponding printer extension for your type of printer.

#### Printing to a QuickDraw Printer

If you have a QuickDraw (non-Postscript, non-PCL printer) such as an Apple's ImageWriter or StyleWriter, or HP's DeskJet printer:

- Open the Printers icon in the Windows Control Panel and select the Epson LQ-2500 driver.
- In the Macintosh Chooser, select the corresponding printer extension for your type of printer.
- In the Macintosh Extension folder, launch the PC Print Spooler by double-clicking its icon in the Extension folder.
- From the File menu, select "Preferences".
- Click on the Epson option for "Interpret non-Postscript As" to enable the Epson emulator.

The Epson emulator works by first translating the DOS text to a similar Macintosh font, then interpreting that text into a series of QuickDraw commands. Some characters in the original DOS character set may not have exact translations to a Macintosh font. The use of a PostScript font is recommended in these cases, since use of the PostScript standard requires no translation.

The Epson emulator does not support color or greyscale. When printing from the PC to a Color or Grayscale printer, make sure to select the Black & White option from the Print dialog.

#### Printing to a PCL Printer

When printing to a PCL (Page Control Language) printer, printing is limited to text-only when printing over an AppleTalk connection. To set up this configuration:

- Open the Printers icon in the Windows Control Panel and select your printer's driver.
- In the Macintosh Chooser, select the corresponding printer extension for your type of printer.
- In the Macintosh Extension folder, launch the PC Print Spooler by double-clicking its icon in the Extension folder.
- From the File menu, select "Preferences".
- Click on the PCL option for "Interpret non-Postscript As" to enable PCL printing.

Additionally, PCL printing of text and graphics together is possible when printing over a Novell network, where a PC print server is connected to the PCL printer and handles the printing job. Select your printer's own driver in the Windows Control Panel.

Using After Dark 3.0



Do not use the PC Setup control panel "Switch at Startup" option when using After Dark. When switching to the PC side, make sure After Dark 3.0 for the Macintosh is turned off.

### Caches

Your DOS Compatibility Card works best with the Macintosh computer's caches enabled. Follow these steps to enable the caches:

1. Choose Control Panels from the Apple menu.
2. Open the Cache Switch control panel.
3. Click the button for Faster (caches enabled).
4. Close the Cache Switch control panel.

### Serial Port Pinout

To connect existing PC serial devices to your Macintosh, you need cables with the correct pinout. The following chart matches the Macintosh pin (Mac Mini DIN-8) with the corresponding PC pin (DB-25):

#### Begin\_Table

Mac Signal	Mac Mini DIN-8	DB-25	RS-232 Name
HSKo	1	20	DTR
HSKi	2	5,8	CTS, DTS
TXD-	3	2	TXD
GND	4	7	GND
RXDA-	5	3	RXD
TXDA+	6	N/C	
GPI	7	N/C	
RXD+	8	7	GND

#### End\_Table

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