



User's Manual

OrangePCi Application Software Version 3.4

November 1, 1999



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Before You Begin

This product includes a single PCI expansion card. The OrangePCi application is the software engine for the OrangePC and PCfx! hardware running either Windows 95, Windows 98 or Windows NT, depending upon which configuration you chose. Before you get started, please read the next few pages. They describe the Orange Micro card, software you need to run Windows and the contents of this manual.

Minimum System Requirements

To run Windows you will need the following hardware and software:

Hardware

- A PCI based Macintosh computer with one free 12" or 7" expansion slot, a hard disk with at least 300 MB of free space for Windows 95, Windows 98 or Windows NT and a minimum 1024K of free Macintosh RAM.
- An Orange Micro card
- An Apple Extended Keyboard is recommended because it is specifically designed for use with Windows and similar operating systems
- A Macintosh mouse or track ball
- An Apple FDHD internal floppy drive
- An Apple or Mac OS compatible CD-ROM drive

Software

- OrangePCi application for use with PCfx! and OrangePC: minimum system MacOS 8.1, Open Transport 1.3 or newer.

About This Manual

This manual explains how to install and use the Orange Micro card to run PC operating systems on a Macintosh. This manual assumes that you already know how to operate your Macintosh and are familiar with your PC operating system of choice. If you are new to the operating system you chose, you may want to review the user's guide included in your operating system package before proceeding.

This manual is divided into the following chapters:

“**Introduction**” describes the Orange Micro card features and benefits.

“**Hardware Installation**” instructs you on installation of the Orange Micro card, the Video Loopback cable and how to correctly configure a monitor for use with the Orange Micro card.

“**Windows 98 Easy Install**” steps you through the installation of Windows 98 from the Easy Install CD.

“**Windows NT Easy Install**” steps you through the installation of Windows NT from the Easy Install CD.

“**Using the Orange Micro card**” describes specific tasks you can perform.

“**Reference**” describes Orange Micro card software menus and commands.

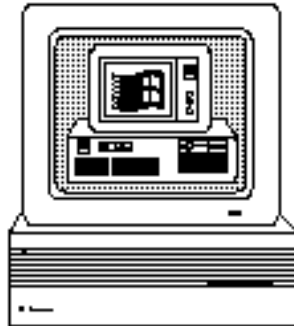
“**Appendices**” describe Orange Micro card specifications, troubleshooting procedures, full installation of Windows 95, Windows 98 and Windows NT and how to upgrade hardware.

The following conventions are used in this manual:

FORMAT	USAGE
CAPITAL LETTERS	DOS filenames are printed in capital letters (e.g., AUTOEXEC.BAT). Macintosh file names are printed as they appear on the screen (e.g., System, Finder).
type this	DOS prompts, messages, and characters to be typed are printed in the Courier typeface.
CAUTION:	Points out situations to avoid.
NOTE:	Highlights important information.
	Command key or (⌘) This is also known as the Apple key.

Screen and menu illustrations are meant to be merely representative, rather than duplicates, of those that appear on your monitor.

What is the Orange Micro Card?



The Orange Micro card is a Wintel compatible computer in your Macintosh. The Orange Micro card supports Windows 95, Windows 98, and Windows NT based applications that run on a Wintel compatible computer with the following system configuration:

- Pentium or 6x86 Processors up to 400 MHz MMX
- On-board video memory up to 4 MB on some models
- Hard disk up to 2GB, as defined in the setup according to available Mac hard disk space
- PS/2 enhanced keyboard
- PS/2 compatible three-button mouse
- Super VGA support which displays up to 16 million colors
- 1.44MB 3.5" internal floppy disk drive
- Stereo sound emulated through Macintosh sound hardware
- 512K level 2 cache on Model 660
- CD-ROM drive
- SCSI adapter via ASPI Manager
- Millennium support for the year 2000

What's Included

When you purchase an Orange Micro card, you get more than a PC computer. You get an integrated, multi-platform system, which allows you to share files between your Mac and your PC, print, logon to a network and many other features. Included with your Orange Micro card purchase are:

- An Orange Micro card
- An OrangePC Video Loopback cable with optional video adapters
- OrangePC Drive Expander utility which instantaneously expands the OrangePC Drive C container files, FAT32 or NTFS formatted, to your desired size up to 2,046 MB.
- OrangePC software, complete with your specific choice of PC operating system:

For Windows 95 and Windows 98:

- Plug and Play 32-bit drivers: floppy drive, hard drive and SCSI support, ATAPI Support, CD-ROM w/ long filename, autoplay and audio compact disk support; NDIS4 Ethernet driver
- 32-bit versions of FastSwitch, Clipboard Exchange and Snapshot
- An Orange Micro Serial/Parallel Port driver to allow Windows 95 and Windows 98 users access to the Macintosh serial ports (Modem/Printer) for use with a modem and printer.
- An Orange Micro Sound Driver to allow the Orange Micro card to play sound through the Macintosh

For Windows NT:

- 32-bit drivers: floppy drive, hard drive and SCSI support, CD-ROM w/ long filename, autoplay and audio compact disk support; NDIS4 Ethernet driver
- 32-bit versions of FastSwitch and Clipboard Exchange

This chapter describes installation of the Orange Micro card, accessory cables and explains how to set them up.

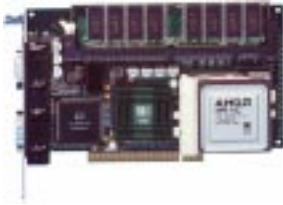
Installation Overview

Installation consists of the following steps:

- Installing the Orange Micro card into a Macintosh expansion slot.
- Attaching the Video Loopback cable to the Orange Micro card and monitor.

Unpacking Orange Micro card

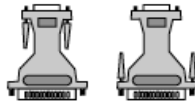
1. Remove the contents from your Orange Micro card package and make sure that you have everything shown below. If anything is missing, contact Orange Micro Sales.



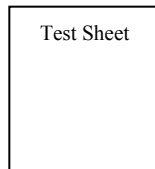
Orange Micro card



Video Loopback cable



Optional Video Adapters



Installation Test Sheet: indicates processor and memory on board.

2. Please fill out the Warranty Card send it to Orange Micro. Registering your product entitles you to technical support and enables us to keep you informed of new developments for the Orange Micro card.
3. Save the Orange Micro card box and packaging in the event Orange Micro card needs to be returned for warranty service or upgrades.

Installing the Orange Micro Card

You may need a screwdriver to open the Macintosh case.

1. Turn off your computer, wait at least 15 seconds and open the case. Leave the computer plugged in to provide a ground.
2. Disconnect the keyboard.
3. Remove the cover from the computer and touch the power supply case to discharge static electricity.
4. **Make Sure the Power is Off!** Remove the PCI back plate from computer. Align the Orange Micro card directly above the PCI slot and press the card down into the slot so that the contacts are firmly seated and the cable connector protrudes from the back of the computer. Replace the PCI hold-down screw to secure the connector bracket to your computer.
5. Replace the computer cover and re-attach the keyboard.

Attaching the Video Loopback cable to Your Monitor

The Orange Micro card supports any Macintosh compatible Multi-Scan or Multi-Sync monitor. The Orange Micro card does not support the following older Apple fixed-frequency monitors:

- AppleColor High Resolution RGB Monitor
- Macintosh Color Display 14"
- Apple Color Plus 14" Display
- Apple AudioVision 14" Display

The Video Loopback cable is a required part of the Orange Micro card installation and must be connected properly or the PC screen will not display.

1. Connect the Female DB-15HD end of the Video Loopback cable to the video-in port (labeled "Computer") on the back of the Orange Micro card. Connect the Male DB-15HD end of the Video Loopback cable to the Macintosh video port.
2. Attach the monitor signal cable to the video-out port (labeled "Monitor") on the back of the Orange Micro card. If you have an Apple computer or Apple monitor you must use the supplied video adapter(s) where required.

Dual Monitor Configuration

The dual monitor configuration allows you to use one monitor for the Macintosh and another for the PC.

For this configuration, leave your Macintosh monitor connected to the Macintosh video port. Connect the second monitor signal cable to the video-out port (labeled "Monitor") on the back of the Orange Micro card. The Video Loopback cable is not used for this configuration.

This chapter guides you through the installation of Windows 98 and networking using Windows 98 (green) Easy Install CD. If you have an (orange) Easy Install CD refer to Appendix A or B for custom installation of Windows 98.

The Easy Install CD is a Macintosh formatted CD-ROM with a Macintosh installer. The installer decompresses and copies a 260 MB OrangePC Drive C file with Windows 98 or 350 MB OrangePC Drive C file with Windows 98 SE preconfigured by Orange Micro into a folder on your Macintosh hard drive named "OrangePCi Folder", all in about 10 minutes. It comes preinstalled with Microsoft Internet Explorer 5.0 and Direct X 7.0.

Install the Orange Micro Software On Your Hard Drive

1. Insert the Easy Install CD in the CD drive. Double click the "Installer" icon and follow on screen instructions.
2. After the installer is finished, remove the Easy Install CD.
3. If you desire a larger emulated Drive C file, use the OrangePC Drive Expander utility to increase the OrangePC drive to the size you prefer. Refer to the section "Expanding your OrangePC Drive File" below.

Expanding your OrangePC Drive File

1. Make sure the OrangePC application is not running.
2. Drag and drop the OrangePC Drive file onto the Orange Drive Expander utility.
3. The following OrangePC Drive Expander dialog will appear:



4. Decide on your emulated Drive C file size. This file will take up disk space on your hard drive and will be reserved for the Windows operating system, all Windows applications and any data files created within the Windows environment.
5. Enter a number, which represents size you wish to expand your emulated Drive C file, into the "Expanded Size" field. Then , point and click on the "Expand" button. The OrangePC Drive Expander dialog will reappear with the field "Current Size" displaying the new drive size.
6. Always defragment your Macintosh hard disk after expanding the OrangePC drive file so your emulated Drive C file will occupy clean, contiguous space. We recommend using Norton Utilities Speed Disk for the Macintosh. Failure to defragment your Macintosh hard disk after using the OrangePC Drive Expander utility can result in up to 40% degradation in OrangePC disk access speed.

Starting Your Orange Micro Card For The First Time

1. Open the OrangePCi folder and start the Orange Micro card by double clicking on the “OrangePCi” application icon. This will start the OrangePC application and display the following dialog:



Review the above dialog and make any necessary changes. If you plan on accessing a Network through your Macintosh Ethernet connection, enable the Macintosh Ethernet Card selection above. Then, click on the “Cold Boot” button to start the Orange Micro card for the first time.

2. To switch to the MacOS, click on the “Switch to Mac” icon in the Windows taskbar. To return to Windows 9x, select the OrangePC icon from the application menu.

Easy Install CD has now installed the following components:

- FastSwitch
- Printing Resources
- Snapshot
- Ethernet Networking
- Clipboard Exchange
- SCSI and ATAPI Device Support
- Shared Volumes
- Emulated Serial and Parallel Ports

Networking Notes

You must enable your Macintosh Ethernet card in the OrangePC Setup before networking will be available in the PC environment. For TCP/IP configuration, you must assign a separate IP address for your PC and your Macintosh.

If both the Mac & PC require the IPX/SPX protocol, use a different frame type on the Mac than the PC.

NOTE: **Networking must be enabled in the OrangePC setup menu for networking to work.**

This chapter guides you through the installation of Windows NT using the Windows NT (red) Easy Install CD.

The Easy Install CD is a Macintosh formatted CD-ROM with a Macintosh installer. The installer decompresses and copies a 420 MB OrangePC Drive C file with Windows NT preconfigured by Orange Micro into a folder on your Macintosh hard drive named "OrangePCi Folder", all in about 10 minutes. It comes preinstalled with Windows NT 4.0 Service Pack 5, Microsoft Internet Explorer 5.0

NOTE: The OrangePC 620 series is only compatible with Windows NT when using an Intel manufactured processor. Therefore Windows NT is not recommended for use with the OrangePC 620 series.

Install the Orange Micro Software On Your Hard Drive

1. Insert the Easy Install CD in the CD-ROM drive. Double click the "Installer" icon and follow on screen instructions
2. After the installer is finished, remove the Easy Install CD-ROM.
3. Open the OrangePCi folder, if you desire an emulated Drive C file larger than 450 MB, use the OrangePC Drive Expander utility to increase the OrangePC Drive to the size you prefer. Refer to the section "Expanding your OrangePC Drive File" below.

Expanding your OrangePC Drive File

1. Make sure the OrangePC application is not running.
2. Drag and drop the OrangePC Drive C file onto the Orange Drive Expander utility.
3. The following OrangePC Drive Expander dialog will appear:
4. Decide on your emulated Drive C file size. This file will take up disk space on your hard drive and will be reserved for the



Windows operating system, all Windows applications and any data files created within the Windows environment.

5. Enter a number, which represents size you wish to expand your emulated Drive C file, into the "Expanded Size" field. Then , point and click on the "Expand" button. The OrangePC Drive Expander dialog will reappear with the field "Current Size" displaying the new drive size.
6. Always defragment your Macintosh hard disk after expanding the OrangePC Drive file so your emulated Drive C file will occupy clean, contiguous space. We recommend using Norton Utilities Speed Disk for the Macintosh. Failure to defragment your hard disk after using the OrangePC Drive Expander utility can result in up to 40% degradation in OrangePC disk access speed.

Starting Your Orange Micro Card For The First Time

1. Open the OrangePCi folder and start the Orange Micro card by double clicking on the “OrangePCi” application icon. This will start the OrangePC application and display the following dialog:



Review the above dialog and make any necessary changes. If you plan on accessing a Network through your Macintosh Ethernet connection, enable the Macintosh Ethernet Card selection above. Then, click on the “Cold Boot” button to start Orange Micro card for the first time.

2. To switch to the MacOS, press ⌘-D. To return to Windows NT, select the OrangePC icon from the application menu.

Features currently unsupported for Windows NT:

- Snapshot
- Shared Volumes
- Sound
- Emulated Serial and Parallel Ports
- ATAPI

Networking Notes

You must enable your Macintosh Ethernet card in the OrangePC Setup before networking will be available in the PC environment. For TCP/IP configuration, you must assign a separate IP address for your PC and your Macintosh.

If both the Mac & PC require the IPX/SPX protocol, use a different frame type on the Mac than the PC.

NOTE: **Networking must be enabled in the OrangePC setup menu for networking to work.**

This chapter will provide you with the steps necessary for upgrading a previous version of the OrangePCi application and the driver files for Windows 9x.

OrangePCi Version 3.4 application Upgrade (Macintosh Side)

The first part of the upgrade is to update the OrangePCi application on the Macintosh. The following steps will take you through this process:

1. Open the OrangePCi Folder located on your Macintosh's hard drive and drag the existing OrangePCi application and Disk Images folder to the Trash. **DO NOT** drag the OrangePC Drive C file to the trash. Doing so will cause you to lose all the data contained in your PC environment, including the Windows operating system.
2. Drag the OrangePC Preferences file located in your Macintosh's System / Preferences folder to the Trash and empty the Trash.
3. Run the Installer application on the OrangePCi 3.4 Easy Install CD-ROM.
4. Launch the OrangePC by dragging and dropping the Orange PC Drive C file onto the OrangePCi 3.4 application. This will create a new preference file and configure the OrangePC Setup to use your existing Emulated Drive file as Drive C. If you are using Shared Volumes or are connected to an Ethernet network, you will need to reconfigure the OrangePC Setup before Shared Volumes or the network will be made available to Windows.

Windows 9x Driver Upgrade (Windows 9x Side)

The following items will be updated or added to your Windows operating system:

- Clipboard Exchange - C:\WINDOWS\CLIP.EXE
- FastSwitch - C:\WINDOWS\SWITCH.EXE
- Snapshot - C:\WINDOWS\SNAPSHOT.EXE
- Orange Micro ASIC Controller - C:\WINDOWS\SYSTEM\PORT95.VXD
- Orange Micro CDROM Controller - C:\WINDOWS\SYSTEM\IOSUBSYS\OPCCDRM.PDR
- Orange Micro Hard Disk Controller - C:\WINDOWS\SYSTEM\IOSUBSYS\OPCDISK.PDR
- Orange Micro Floppy Disk Controller - C:\WINDOWS\SYSTEM\IOSUBSYS\OPCFLOP.PDR
- Orange Micro Network Adapter - C:\WINDOWS\SYSTEM\OPCNDIS.VXD
- Orange Micro SCSI Adapter - C:\WINDOWS\SYSTEM\IOCSCSI.MPD
- Orange Micro Sound - C:\WINDOWS\SYSTEM\OPCSND.VXD
C:\WINDOWS\SYSTEM\OPCSND.DRV

If your PC environment is currently setup for an Ethernet network using the 16-bit ODI Network Driver, it is recommended that you remove the "Existing ODI Driver" from the Windows Network Control Panel before proceeding with this installation. You should also remove the following lines from the AUTOEXEC.BAT file:

```
C:\WINDOWS\LSL.COM  
C:\WINDOWS\OPCETHER.COM  
C:\WINDOWS\ODIHELP.EXE
```

You can edit the AUTOEXEC.BAT file by going to the **Run** command in the Windows 9x **Start** menu and typing the word **sysedit**, then click **OK**. This will bring up the Windows 9x System Configuration Editor, which is a simple text editor that opens most all of Windows 9x's configuration files.

1. After Windows boots, insert the OrangePCi 3.4 Easy Install CD-ROM into your CD ROM drive. The Auto Run program will start. Follow the on-screen instructions. If the Auto Run feature is turned off, from the Windows **Start** menu, select **Run** then type d:\setup and click **OK**.
2. Windows will install this software automatically. You may then be presented with the following dialog - "To finish setting up your new hardware, you must restart your computer. "Do you want to restart your computer now?". Click **Yes** to restart Windows.

Congratulations! Your upgrade is complete!

Windows NT 4.0 Driver Upgrade (Windows NT Side)

The following items will be updated or added to your Windows operating system:

- Clipboard Exchange - C:\WINNT\CLIP.EXE
- FastSwitch - C:\WINNT\SWITCH.EXE
- Orange Micro ASIC Controller - C:\WINNT\SYSTEM32\DRIVERS\OPCPORNT.SYS
- Orange Micro CDROM Controller - C:\WINNT\SYSTEM32\DRIVERS\OPCCDRM.SYS
- Orange Micro Hard Disk Controller - C:\WINNT\SYSTEM32\DRIVERS\OPCDISK.SYS
- Orange Micro Floppy Disk Controller - C:\WINNT\SYSTEM32\DRIVERS\OPCFLOP.SYS
- Orange Micro Network Adapter - C:\WINNT\SYSTEM32\OPCNDIS.SYS
- Orange Micro SCSI Adapter - C:\WINNT\SYSTEM32\OPCSCSI.MPD
- Orange Micro Printing - C:\WINNT\SYSTEM32\OPCPRNT.SYS

1. After Windows NT boots, insert the OrangePCi 3.4 Easy Install CD-ROM into your CD ROM drive. The Auto Run program will start. Follow the on-screen instructions. If the Auto Run feature is turned off, from the Windows **Start** menu, select **Run** then type d:setup and click **OK**.
2. Windows NT will install this software automatically. You may then be presented with the following dialog - "To finish setting up your new hardware, you must restart your computer. "Do you want to restart your computer now?". Click **Yes** to restart Windows.

Congratulations! Your upgrade is complete!

Chapter 6: Using the Orange Micro card

This chapter describes specific tasks you can perform with Orange Micro card.

Starting the Orange Micro card

There are several ways to start the Orange Micro card:

1. Select the OrangePCi application in the OrangePC folder and choose “Open” from the File menu or simply double click the OrangePCi application icon.
2. Select the OrangePC Drive C icon in the OrangePC folder and choose “Open” from the File menu or simply double click the OrangePC Drive C icon. This will cause the OrangePCi application to start and boot your chosen operating system from the OrangePC Drive C file.
3. Drag and drop the OrangePC Drive C icon onto the OrangePCi application icon.

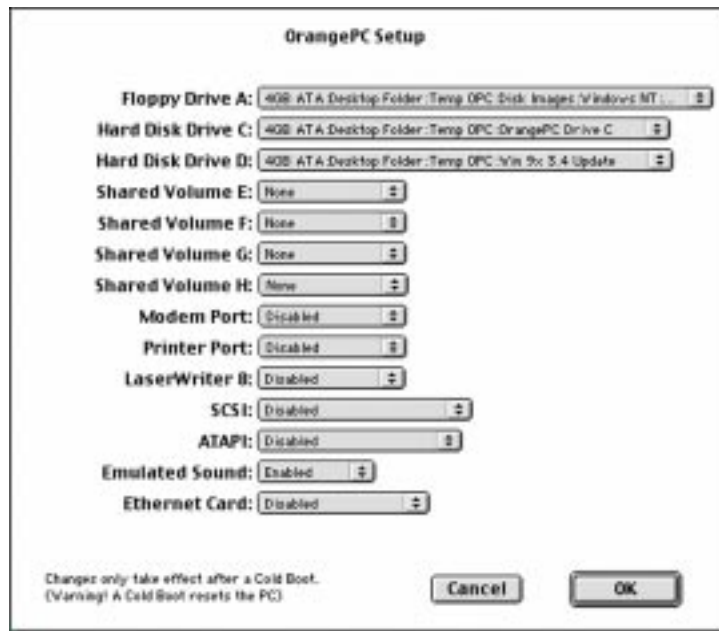
NOTE: Default memory requirements for the OrangePCi application have been set to 8192K to allow for the operation of Snapshot and Clipboard Exchange. To learn more about memory requirements, see “Memory Requirements for Clipboard Exchange and Snapshot,” later in this chapter.

Creating a Second Emulated Hard Drive File

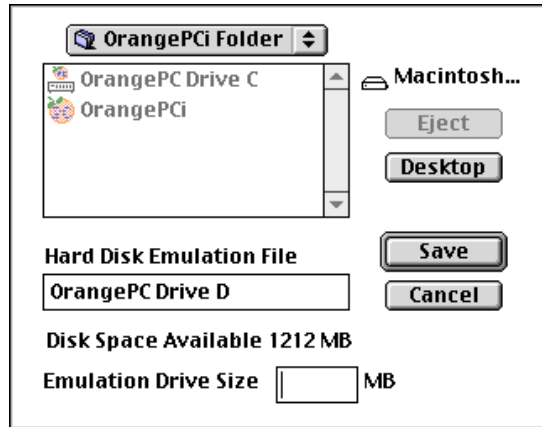
This section will guide you through the steps necessary for creating a second emulated hard drive file (OrangePC Drive D) for use with your Orange Micro card.

Creating an Emulated Drive D

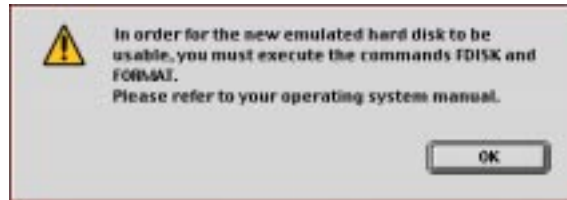
1. Select “Create New Emulated Drive” from the Hard Disk Drive D: selection in the OrangePC Setup.



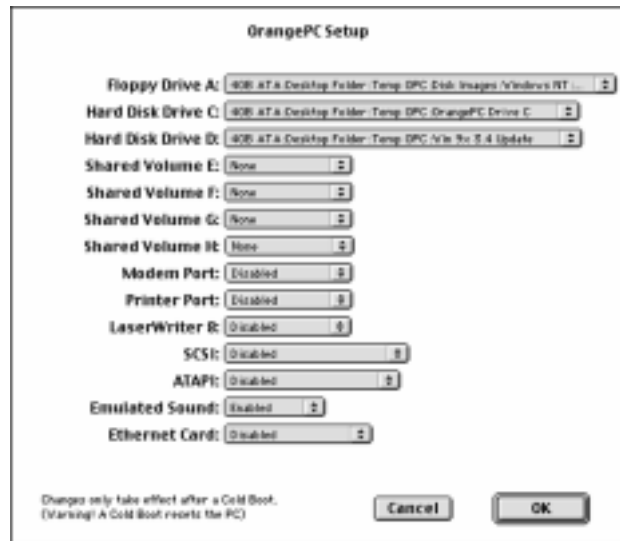
- The default filename is OrangePC Drive D. You may change the name of this file if you desire. After noting the amount of disk space available on your Macintosh hard drive in the dialog box, you must decide how large your Emulated Drive D: file will be. Enter the drive size value in megabytes in the space provided. Click “Save”.



- The OrangePC will display the following an alert dialog. Click OK:



- You will be placed back into the OrangePC Setup dialog. Click on the “OK” button. The OrangePC StartUp screen will appear. When you are ready to start the PC, type ⌘-D . Once in the PC environment a ⌘-D will return you to Macintosh video.



Running FDISK on your OrangePC (For DOS, Windows 95 and Windows 98)

1. Launch Windows or DOS. If in Windows, click on the “Start” button, select “Programs”, then “MS-DOS Prompt”. At the DOS prompt in the MS-DOS window, type “FDISK” and press “Enter”.
2. You may be asked if you want to “Enable Large Disk Support”. If this occurs, press “Y” for yes and press the “Enter” key.
3. At the FDISK Options menu, select number 5: “Change Current Fixed Disk Drive” and press the “Enter” key.
4. Change the fixed disk drive you will be modifying to number 2 by pressing the “2” key and then the “Enter” key. This will change the drive you are creating the Primary DOS Partition on to the (soon to be) D drive.
5. You will now be placed back at the FDISK Options menu. From here, select 1: “Create DOS Partition or Logical DOS Drive” and press the “Enter” key.
6. In the “Create DOS Partition or Logical DOS Drive” menu, be sure the “Current fixed disk drive:” field indicates that you are modifying drive 2.

NOTE: If you are not modifying fixed disk drive 2 do not proceed. Press the Esc key and return to step 3.

7. Select 1: “Create Primary DOS Partition” and then press the “Enter” key.
8. You will now be asked if you wish to use the maximum available size for the Primary DOS Partition. Press the “Y” key, then press the “Enter” key. This will allocate all the available drive space to a single partition.
9. The FDISK utility now tells you “Primary DOS Partition created, drive letters changed or added”. Press “ESC” to return to the FDISK main menu, then press the “ESC” key one more time to exit the FDISK utility.
10. The FDISK utility should now tell you: “You MUST restart your system for your changes to take effect. Any drives you have created or changed must be formatted AFTER you restart. Shut down Windows before restarting.” Press the “Esc” key one more time to return to the command prompt.
11. At the command prompt, type Exit and press the Enter key to exit the MS-DOS Prompt window and return to the Windows.
12. To restart your machine, go to the “Start” button and select “Shutdown”. In the shutdown menu select the “Restart the computer” radio button and click “OK”.

NOTE: If you have installed Shared Volumes for your OrangePC, you will see an error message during startup indicating “Invalid media type reading drive D Abort, Retry, Fail?”. Simply press the A key to abort and Windows will continue loading.

Formatting Your New Drive D in Windows 95 and Windows 98

1. Start Windows and double click on the “My Computer” icon.
2. Select the newly created “(D:)” drive by single clicking on its icon.
3. From the “File” pull down menu, select “Format”.
4. You will now see the Windows Format dialog box. In the “Format type” field select the “Full” radio button and click on the “Start” button to begin formatting your D drive.
5. When the format is complete, you will see the “Format Results” dialog box. Click the “Close” button to complete the format.
6. Windows will now present you with a dialog telling you that the format is complete and to run the ScanDisk utility to verify data can be stored on it reliably. Click the “OK” button.
7. You will now be presented with Windows Help. The help screen will guide you through the process of running ScanDisk. When you are finished, you will be ready to use your newly created drive D.

Using an Optional Operating System

1. If you have installed more than one OS (Windows 95, Windows 98 *or* Windows NT, etc.) and would like to boot from a different OS, hold down the **⌘** (command) key as the OrangePCi application starts. This will prevent the OrangePCi application from switching to the PC.
2. Choose “Setup” from the “File” menu and change the setting of your “Hard Disk Drive C” to the OS setup from which you would like to boot. When you have chosen your OS setup, click on the “OK” button and press **⌘+D** to start the OrangePC using your new configuration. Another method of booting is to drag the drive file from which you wish to boot and drop it on the OrangePCi application.

Using the Keyboard

The Macintosh extended keyboard maps directly to the PC extended keyboard.

If you are using a standard Macintosh keyboard (not an extended keyboard) the PC style function keys can be accessed through the “Commands” menu or command key equivalents. (See Chapter 7, “Commands Menu.”)

For details regarding the keyboard layout, see your PC operating system manual.

TIP: Pressing the **Control + ESC** keys will serve the same function as the **Windows key** on the new **Windows 101 Enhanced** keyboards. This function allows you to pull up the **Start** button from anywhere within **Windows**.

Using the Mouse

OrangePC emulates the standard Microsoft P/S2 mouse and will automatically use the PS/2 mouse driver provided with Microsoft Windows.

You can emulate three buttons on a PS/2 style mouse as follows:

PC Mouse	Macintosh Mouse
Left Button	Click
Middle Button	⌘ + Control+Click
Right Button	⌘ +Click

Using a Joystick

OrangePC emulates the standard Microsoft Game Port Joystick and comes pre-installed when installing with the Easy Install CD for Windows 95 and Windows 98. All that is necessary is that you have a Macintosh compatible joystick installed and working properly on the Macintosh.

If you did a custom install of Windows 95 or Windows 98 as described in Appendix A or Appendix B of this manual, follow the instructions provided on installing the joystick drivers. Joystick emulation is not supported on Windows NT.

How to Access Files

The Orange Micro card supports emulation of drive A: through the Macintosh SuperDrive (FDHD) or a USB Floppy. It supports C: and D: hard drive emulation through a large file located on the Macintosh hard disk.

CAUTION: There is nothing to prevent you from accidentally deleting the **OrangePC Drive C** file in the **Finder**. Removing or “trashing” the **OrangePC Drive C** file will result in a **loss of the Windows operating system, its data files and all files you have created using that operating system**.

To Access Files on Floppy drive A:

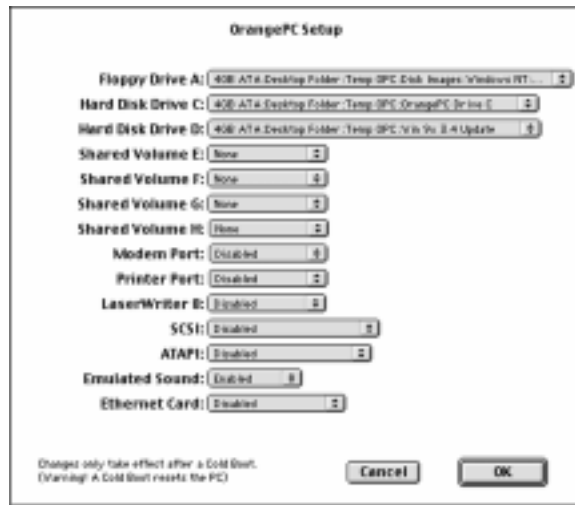
If you are using the Macintosh floppy drive to emulate a PC floppy drive, the OrangePC must be in the foreground. If the OrangePC is not the application in the foreground of the MacOS, the floppy will function as a Macintosh drive.

⌘-E or “EJECT DISK” under the “Commands” menu will eject a PC formatted disk.

NOTE: To learn how to load a Macintosh floppy disk image as a disk in Drive A:, see Chapter 7, Reference, “Select Floppy Disk Image”.

To Access Files on a Zip drive:

If you wish to access a Zip disk in a Zip drive, you must first determine whether it is an ATAPI or SCSI device. In the OrangePC Setup dialog, select “Configure SCSI Devices” in the pull down menu next to the SCSI menu item. If the Zip drive does not appear in the “Inactive Devices” window, the Zip drive is ATAPI. To access files on an ATAPI Zip drive, select “Configure IDE Devices” in the pull down menu next to the ATAPI menu item. Then click your mouse on the check box next to the Zip item listed. Then click on the Cold Boot button.



NOTE: Accessing files on an ATAPI Zip drive is not supported for Windows NT. SCSI Zip drives, however, are supported.

To Access Files on drive C: or D:

Once a drive C: or D: has been configured (see Chapter 7 “Setup ...”), you can access files on Drive C: or D: using normal operating system functions, just as you would on a regular PC.

You can keep multiple OrangePC Drive C files on your Macintosh hard disk. It does not matter what you name the OrangePC emulated drive file. Just as long as the file’s name and location are set in the OrangePC Setup. For more information on the OrangePC Setup, please see Chapter 7, Reference, “Setup...”

When you double click on the OrangePC application icon, it will pick the drive C: which was configured in the OrangePC Setup dialog. Alternatively, you may double click the bootable drive C: file of your choice to launch the application.

NOTE: The last used drive C: file becomes the default drive C: file configured in the setup dialog. Therefore your next session will use the last used drive C: file.

If you haven't created a drive C: file, then when you launch the OrangePC application you will be automatically put into the setup mode to create a new one. However, the newly created drive C: file must be partitioned, activated, and formatted before it can be used.

OrangePC Preferences File

When the OrangePC application is initially launched it creates an OrangePC Preferences file in the Preferences folder, located in the Macintosh System Folder. This file holds all the settings for the OrangePC Setup, OrangePC Preferences and PC BIOS.

Because OrangePC startup errors are often due to incompatible or incorrectly set preferences, deleting the OrangePC preferences file from your Macintosh Preferences folder can often solve the problem. The next time you launch the OrangePC, a fresh Preferences file with OrangePC default settings will be created and placed in your Preferences folder. In most cases this will eliminate startup difficulties. If you have renamed or moved your OrangePC Drive C file, the OrangePC application will prompt you to locate the file.

Accessing Windows Files From the Macintosh

If you wish to access Windows files from your Macintosh, Disk Copy 6.3 or higher is your means to do so.

1. Double click the Disk Copy 6.3 or higher application.
2. Drag and drop the drive file you wish to access from the Macintosh (OrangePC Drive C, for example), onto the Disk Copy 6.3 or higher application window. Your emulated drive file will be mounted as an accessible volume on the Macintosh desktop and will be labeled something like "AProgr."
3. Double click on the mounted emulated drive to access the files.

NOTE: While the OrangePC Drive C (or any other OrangePC drive you are using) is mounted on the Macintosh desktop it will not be available to the PC and, similarly, while the PC is using the Drive C file it cannot be mounted on the Macintosh desktop. In order to start OrangePC using the drive file that you have mounted on the Mac desktop, you must first delete it from the desktop by dragging it to the trash and to mount the drive file on the Mac, you must first quit the OrangePC application.

SoftPC®, SoftWindows®, Virtual PC®, Orange386, and Mac286™ File Access

If you have upgraded your Orange386 or your Mac286 board, or have used SoftPC, SoftWindows or Virtual PC you can access data you have stored on those emulated drives with the Orange Micro card.

To do so you need to enter the OrangePC Setup dialog. From the select drive option "Hard Disk Drive D:" choose "Select Emulated Drive" then, from the Macintosh Open dialog, find the drive file and click "Open". Files that can be recognized by OrangePC will be displayed in the dialog box. Select the file you wish to use.

NOTE: When using information stored in an Orange386 or a Mac286 emulated drive, you should always copy the information to your OrangePC drive before modifying the files. Never save to them to the old drive, because these emulated drive files have a variable size and you risk losing information.

Naming Files and Folders

DOS and the Macintosh operating system use different rules for filenames and directory/folder names. The standard DOS naming conventions apply to all files in a Shared Volume.

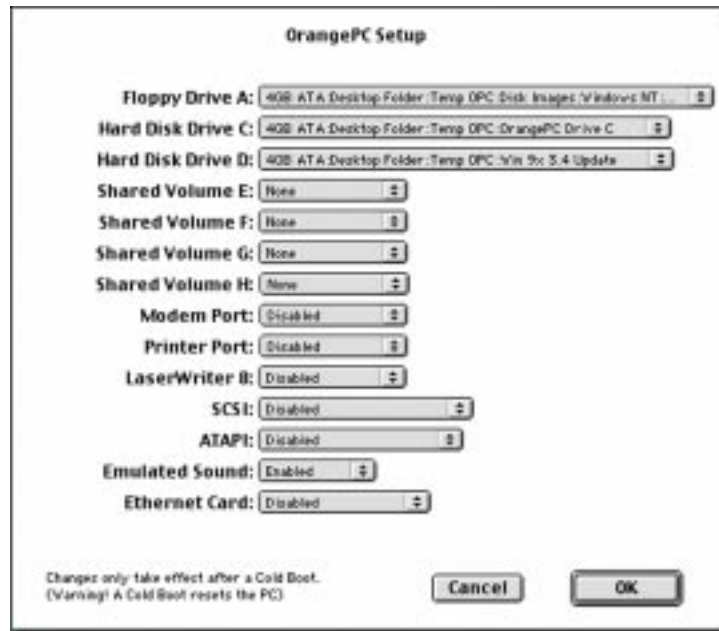
	DOS	Macintosh
Filenames	<ul style="list-style-type: none">• Up to 8 character with a 3 character extension (e.g., FILENAME.DOC)• No blank spaces• No colons (:)	<ul style="list-style-type: none">• 31 characters max.• Blank spaces OK• No colons (:)
Disks or Volumes	<ul style="list-style-type: none">• 11 characters max.• No blank spaces• No extensions	<ul style="list-style-type: none">• 27 characters max.• Blank spaces OK• No colons (:)
Folders or Directories	<ul style="list-style-type: none">• 8 characters max.• No blank spaces• No extensions	<ul style="list-style-type: none">• 27 characters max.• Blank spaces OK• No colons (:)
Valid Characters	<ul style="list-style-type: none">• Letters• Numbers• \$ & # @ ! % " () - { } _ /	<ul style="list-style-type: none">• Any character on the Macintosh keyboard, except colons (:)

Shared Volumes

Shared Volumes (OSSHARE.EXE) is a facility which allows both the Macintosh and the PC to share files on any volume mounted on the Macintosh desktop.

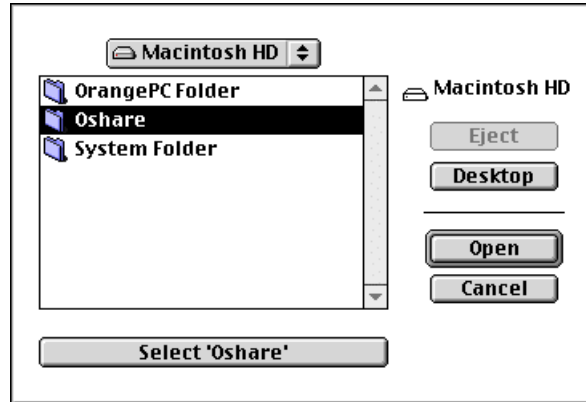
A Shared Volume can be a Macintosh folder, AppleShare volume, or other device such as a hard disk, optical disk, or similar peripheral mounted on the Mac desktop. File sharing allows the user to access and update a file from either a Mac application or PC application if the file was created in a format supported by both applications.

CAUTION: If you have created a file on the Macintosh which you will wish to share from OrangePC, it must correspond to the standard DOS naming conventions. If it does not, it will not appear as a shareable file to OrangePC (See “Naming Files and Folders” section in this chapter). In addition, Macintosh files, which have no available data such as a Mac application, or Mac resource file) will not be visible to OrangePC as a shared file.



“Set Volume” allows you to create a path to the folder to be shared. A path is a road map from the highest level (the volume name or drive) down through intermediate folder levels to the lowest level of folder.

If you have selected “Set Volume” the following dialog box will appear:



NOTE: In the above example we selected a folder called "Oshare". You can select any folder or volume name available to the Macintosh.

The Shared Volume may be created to be as encompassing as a whole drive or as specific as a lowest level folder. Highlight the volume or folder you wish to share, and use the “Select Button” to choose it as the Shared Volume.

NOTE: The “Open” button by itself will not select a Shared Volume, it merely moves you to a lower level folder.

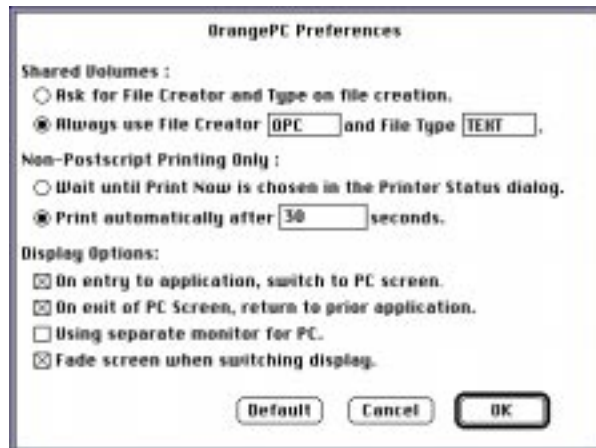
After you have made a Shared Volume selection, you will be returned to the “OrangePC Setup”. Observe that the new pathname is now displayed for the Shared Volume you have chosen. “Clear Volume” erases the Shared Volume pathname and sets it to “None”.

As always, changes will take effect only after clicking the “Cold Boot” Button.

Preferences for Shared Volumes

The Macintosh uses a resource fork to define a file. It uses “File Creator” to identify the application that created the document and “File Type” to define the type of document the file is, i.e. PICT, TEXT, etc. Windows uses a three character file extension, i.e., .DOC, .TXT, .BMP, etc. to do the same.

The “Shared Volumes” setting in the OrangePC Preferences dialog allows you to specify the method that these Macintosh file resources will be appended to the transferred PC file. You may enter the information manually each time you transfer a file or set a default File Creator and File Type for all files that will be transferred from the Windows platform to a Shared Volume.



If you select “Ask for File Creator and Type on File Creation”, when you copy a file from Windows to a Shared Volume, OrangePCi will switch you to the Macintosh platform and ask you to specify the File Type and File Creator in the following dialog box:



Selecting “Always User File Creator and File Type” will allow you to specify a default File Creator and File Type that will apply to all files transferred from Windows to a Shared Volume.

If you choose to keep the installed defaults, which are “OPC ” (OrangePC) for file creator, and “TEXT” for file type, all files transferred from the PC will be associated with the OrangePCi application and interpreted as text files by the Macintosh.

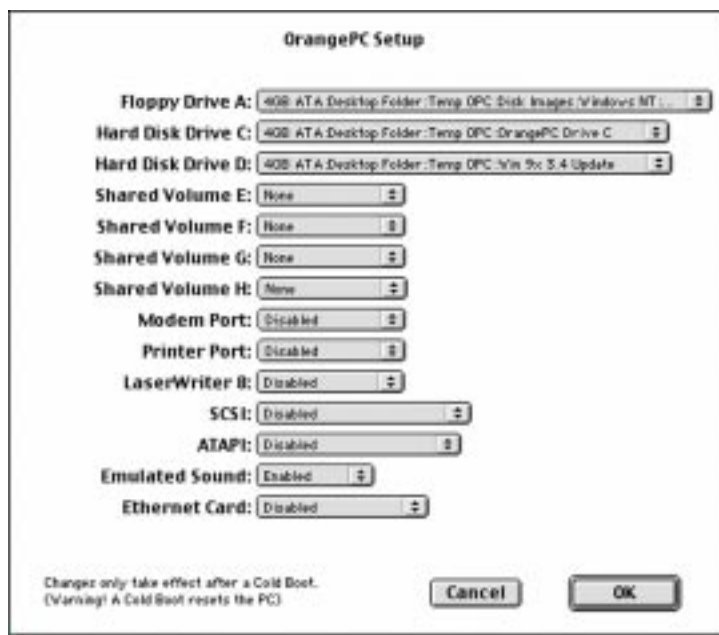
Orange Micro CD-ROM Driver

The Orange Micro CD-ROM driver was developed for use with Macintosh compatible CD-ROM drives. The Orange Micro CD-ROM driver for Windows 95, Windows 98 and Windows NT 4.0 supports 32-bit CD-ROMs.

NOTE: If you have multiple CD-ROM drives attached to your Macintosh, an ATAPI CD-ROM drive will be the default CD-ROM drive for the PC side. If all CD-ROM drives are SCSI the one with the lowest SCSI ID will be available as an OrangePC CD-ROM drive. Also, Command-U will eject the CD-ROM if it is not being shared by the Macintosh.

Orange Micro SCSI Adapter

The Orange Micro Plug and Play SCSI Adapter was developed to access SCSI peripheral devices such as removable media, external, optical and CD-ROM drives, scanners, etc., on the Macintosh SCSI Bus. Windows 95, Windows 98 and Windows NT include Plug and Play device drivers on the OEM CD-ROM for many of the common devices listed above and will automatically detect these devices and install the appropriate device drivers. You only need to activate any SCSI device you wish to use in the OrangePCi application's Setup menu, as shown below.



In most cases, the Orange Micro provided Windows 9x drivers will be sufficient to run your individual SCSI peripheral devices, but you may wish to install the manufacturer provided drivers for even better functionality. In such cases, refer to the manufacturer's documentation for specific installation information.

Orange Micro Windows 9x 32-Bit Applications

The OrangePCi application includes a number of exciting features, all of which are automatically installed by the Easy Install CD. Clipboard Exchange is a feature which makes clipboard contents from the Mac available to the PC and clipboard contents from the PC available to the Mac. The unique Snapshot feature displays the Mac environment in a PC window, and inversely, the PC environment in a Mac window. This feature allows you to keep tabs on ongoing applications like email while you work in the opposing OS. The Snapshot window also acts as a switch, taking you to your other operating system at a click of the mouse. The FastSwitch feature loads a button into the Windows Taskbar which, again, at the click of the mouse will move you back to the Mac. Together, these three features help to integrate the Mac and Windows platforms, making you more productive.

The Easy Install CD automatically places shortcuts of Clipboard Exchange, Snapshot and FastSwitch, titled CLIP.EXE, SNAPSHOT.EXE and SWITCH.EXE respectively, into the Windows 9x StartUp Group. If you performed a manual installation rather than using the Easy Install CD, follow these steps:

1. While in Windows, click on the Start button. Choose "Programs", "Accessories" and finally, "Orange Micro."
2. Select and then double click the program feature you wish to use in the Orange Micro group. That feature will then appear in the Windows Taskbar. If you want the feature to load each time you start Windows, add its shortcut to the Windows StartUp Group.

If you wish to disable Clipboard Exchange or Snapshot, single click its respective icon in the Windows Taskbar and select Close. To disable FastSwitch, press Control-Alt-Del (not the 'delete' key) to open the Windows Task Manager. Select FastSwitch and click on the "End Task" button. If you wish to re-activate any of these features, simply click on the feature in the Orange Micro Group as noted in step. 2, above.

Using Clipboard Exchange

The clipboard on both the Macintosh and Windows is a place where text and graphics are stored during Copy and Paste operations. Clipboard Exchange allows you to copy and paste text and graphics between Macintosh and Windows 9x applications via this clipboard. The amount of text or graphics that can be transferred is limited only by the amount of memory available to the OrangePC application.

Whenever you switch from the Macintosh to the PC while Clipboard Exchange is running, any text or compatible graphics in the Macintosh clipboard will be transferred to the Windows clipboard. If you change from the PC to the Macintosh, text or compatible graphics in the Windows clipboard will be transferred to the Macintosh clipboard.

Using Snapshot™

Snapshot is a new way to "watch" the progress of your work after you have switched out of the operating system in which you began the project. With Snapshot enabled, you automatically receive updated "snapshots" of the background system environment at continuous intervals, as set in your Snapshot preferences. For example, when you are working in Windows 95 or Windows 98 you can still keep tabs on your Mac email or another ongoing application on the Mac side. If you click back to the Macintosh, you can monitor the PC side in the same manner.

When Snapshot is running, a periodic delay will occur in the Macintosh environment while updating the Snapshot window. This delay will not occur in the PC environment. The length of the delay will depend on the Mac/PC resolution and the Mac/PC color depth. The frequency of the delay can be adjusted in the Snapshot Preferences.

If "Display Snapshot of PC" is turned off in the Snapshot Preferences, no delay will occur on the Mac or the PC side.



NOTE: When "Fit to Window" is selected, color depth and monitor resolutions on both the Mac and the PC should be set to matching levels.

Memory Requirements for Clipboard Exchange and Snapshot

If you should run out of OrangePC application memory while running Clipboard Exchange or Snapshot, the following dialog will appear:



This condition is caused by the large file size of the item you are transferring through the Clipboard or the file size of whatever is visible on the screen to Snapshot. Increasing the amount of memory available to the OrangePCi application will solve this problem. After closing the OrangePCi application, select the OrangePCi application icon and choose "Get Info" from the Macintosh File menu. The following window will appear:



As mentioned earlier in this chapter, the default memory requirements for the OrangePCi application have been set to 8576K to allow for the operation of Snapshot and Clipboard Exchange. While this should be enough memory to cover most user's needs, it may become necessary -- if only temporarily -- to increase the memory allocation to OrangePC further. Select the OrangePCi application, choose "Get Info" from the file menu and change the "Preferred Size" field as needed. Clipboard Exchange has a minimum memory requirement of 2048K and Snapshot has a minimum memory requirement of 8192K.

Using FastSwitch™



With just a click of the Mouse, you can easily move between Windows and your Macintosh applications. When FastSwitch is running, the “Switch to Mac” button appears in the Windows Taskbar. Click once on the FastSwitch icon and you will be returned to the last Macintosh application you were using before you switched to the OrangePC. FastSwitch also provides a great alternative method of switching back to the Mac should you decide not to use Snapshot.

Printing

There are three methods of printing from the Orange Micro card. The first method, Direct Connect Printing, allows the Orange Micro card to print to any PC compatible printer attached to the Macintosh Printer or Modem ports. The second method, Windows Network Printing, allows the Orange Micro card to print to PC compatible printers on a PC network. Because you are using an Orange Micro card, you have an optional method -- printing to a Postscript printer on an AppleTalk network.

Direct Connect Printing (Windows 9x Only)

To employ Direct Connect Printing, simply connect your PC compatible printer to the Macintosh Printer Modem or USB port. If you are accessing the printer through a USB port, Make sure you are using the latest USB driver for your specific printer. You can download the latest Epson drivers from <http://www.Epson.com/support/instance/macijans.html>.

Printing Through a USB Port to a USB Printer

If the printer is connected to the Macintosh via a USB port on the Mac, the following guidelines apply:

- 1 The USB printer must be selected in the Macintosh chooser.
- 2 In the OrangePC Setup dialog, your printer will appear, select the appropriate Orange Micro Emulated Parallel port to match your Windows port selection.
- 3 In the Windows Print Manager, install the Windows compatible printer driver software supplied by your printer's manufacturer and assign it to the appropriate Orange Micro Emulated Parallel port (LPT1, LPT2).

Printing Through a Serial or USB to Parallel Infowave PowerPrint cable

If the printer is connected to the Macintosh via an Infowave PowerPrint printer interface cable, the following guidelines apply:

- You must use an Orange Micro Emulated Parallel port.
- The Infowave PowerPrint software must be installed in the Macintosh.
- In the Windows Print Manager, install the Windows compatible printer driver software supplied by your printer's manufacturer and assign it to the appropriate Orange Micro Emulated Parallel port (LPT1, LPT2).

Printing Through an Apple System Peripheral-8 cable

If the printer is connected to the Macintosh via an Apple System Peripheral-8 cable, the following guidelines apply: Refer to the appropriate sections in this users guide for instructions on installing OrangeMicro Emulated ports.

1. If the printer is an Epson StylusCOLOR 3000, Epson StylusCOLOR 1520, Epson StylusCOLOR 850, Epson StylusCOLOR 800, Epson StylusCOLOR 600, Epson Stylus Photo, Epson Stylus Photo 700 or an Epson Stylus Photo EX, install and select an Orange Micro Emulated Parallel port to allow the Epson installer to install the Epson printer driver. Once the Epson driver is installed, install an Orange Micro Emulated Serial port and select a “COMx Epson” port in the OrangePC Setup dialog.
2. If you have a HP Deskjet 550C or a HP Deskjet 870Cse, you must use an Orange Micro Emulated Parallel port and a HP DeskJet 550C printer driver. For any other printer select a standard “COMx” port.
3. In the Windows Print Manager, install the Windows compatible printer driver software supplied by your printer's manufacturer and assign it to the appropriate Orange Micro Emulated Serial port (COM1, COM2).

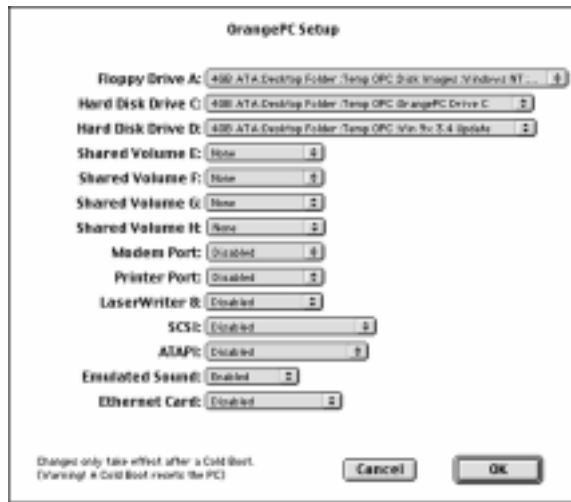
Windows Network Printing

If your Orange Micro card software is configured to a PC compatible network you can spool your print jobs to other PCs that share their printers on a peer-to-peer network, or you can spool print jobs to print servers on Windows NT or Novell networks. For more information regarding network installation and setup, please refer to Appendix B, “Installing Orange Micro Network Support” for Windows 9x, and Appendix C, “Installing Windows NT 4.0 Networking” for Windows NT. Consult your network administrator for specific network printing information.

PostScript Printing on the Macintosh Network

If your Macintosh is connected through AppleTalk to a PostScript printer, either through Ethernet or LocalTalk, your Orange Micro card can take advantage of this connection. Windows can send print jobs to the OrangePCi application, which will then create a generic Level1 PostScript file called “OrangePC Print.0” in the same folder as the OrangePCi application. Once the file has been created, the OrangePCi application will immediately send the print job to whichever PostScript printer you have selected in your Chooser. When this process has been completed, the file will then be deleted.

To configure Macintosh PostScript printing, go to the “File” menu and select “Setup”. Be sure “LaserWriter Printing:” is set to LPT1.



Configuring Macintosh PostScript Printing for Windows 9x

To configure Macintosh PostScript printing for Windows 9x, follow these steps:

1. Insert the Microsoft Windows 95 or Windows 98 CD-ROM.
2. Add an Orange Micro Emulated Parallel Port. Refer to the section “Adding an Orange Micro Emulated Parallel Port to Windows” for step by step instructions.
3. Click on the Windows “Start” button, go to “Settings”, and then go to “Printers”. In the “Printers” window double click on “Add Printer”.
4. In the “Add Printer Wizard” window, click “Next” to begin installing your printer.
5. Select “Local Printer” and click “Next” to continue.
6. You will be presented with a list of manufacturers and printer models. Use the defaults “Apple” and “Apple LaserWriter”. “Apple LaserWriter” is the recommended printer to select regardless of the type of printer you are using with your Macintosh.

7. Windows will now ask you which port your printer is connected to. Select "LPT1". Do not click the "Configure port..." button. Click "Next" to continue.
8. Name your printer whatever you wish. This printer will be set as the default printer. Click "Next" to continue.
9. When asked "Would you like to print a test page?", select "Yes" and click "Finish".
10. Windows will now copy files to your hard drive from the Microsoft Windows 9x CD-ROM you inserted in step 1.
11. When copying is complete, Windows will ask you if the test page has printed correctly. If it does not print, review these instructions.

Configuring Macintosh PostScript Printing for Windows NT

To configure Macintosh PostScript printing for Windows NT, follow these steps:

1. Insert the Microsoft Windows NT CD-ROM.
2. Click on the Windows NT "Start" button, go to "Settings", then go to "Printers". In the Windows NT "Printers" window double click on "Add Printer".
3. In the "Add Printer Wizard" window, when asked "This printer will be managed by:", select "My Computer". Click "Next" to continue.
4. Select "LPT1" and click "Next" to continue.
5. You will be presented with a list of manufacturers and printer models. Select "Apple" and "LaserWriter 16/600PS". "LaserWriter 16/600PS" is the recommended printer to select regardless of the type of printer you are using with your Macintosh. Click "Next" to continue.
6. Name your printer whatever you wish. This printer will be set as the default printer. Click "Next" to continue.
7. When asked "Would you like to print a test page?", select "Yes" and click "Finish".
8. Windows will now copy files to your hard drive from the Windows NT CD-ROM you inserted in step 1. When copying is complete Windows will ask you if the test page has printed correctly. Click "Yes" regardless of the results -- clicking "No" will only bring up Windows Help, which has no information regarding the OrangePC printer installation. If your print job did not print correctly see Appendix H for information regarding contacting Orange Micro Customer Service.

Using a Modem or Other Serial Device with the Orange Micro Serial Port Emulation

From the PC environment, you can use a modem or other serial device connected to the Macintosh serial ports. To configure a serial device for use in Windows 9x, install the Orange Micro Emulated Serial Port as described in the section "Orange Micro Serial Port Emulation" and follow the Windows installation instructions for the serial device you wish to install.

It is important to be aware that Windows 9x will not be able to take advantage of any serial device's plug and play features when connected to the Orange Micro Emulated Serial Port. One other item to keep in mind, is that the Macintosh uses the RS-422 protocol, so some RS-232 signals are not available through the Macintosh serial ports. These signals are:

- Ring Indicator (RI)
- Data Set Ready (DSR)
- Request to Send (RTS)
- Carrier Detect (CD)

Most communications applications can be set to respond to the carrier string sent back by most modems rather than requiring Carrier Detect. To learn more about using serial ports in Windows, see your Windows or serial device documentation.

NOTE: If you use a GlobalVillage modem, or are running fax or telephony software, you may need to disable these extensions in your Extensions Manager.

Orange Micro Serial Port Emulation (Windows 9x Only)

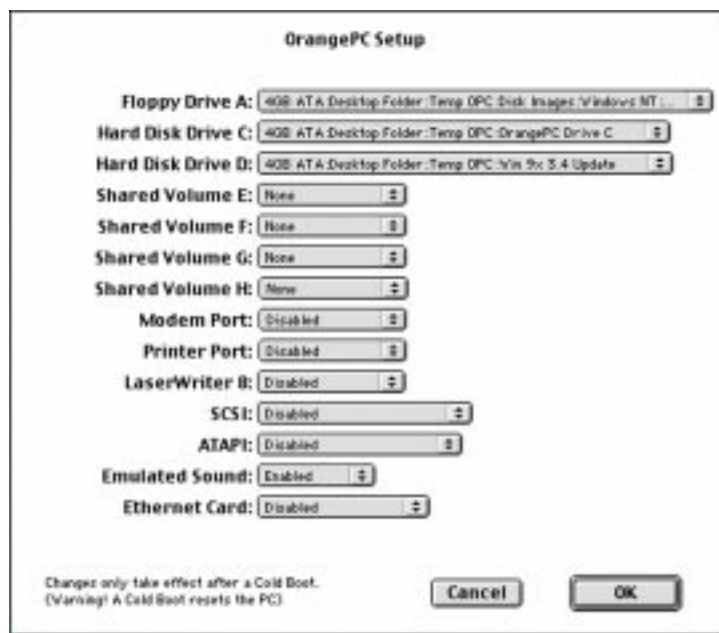
The Orange Micro Serial Port Emulation feature allows the Orange Micro card the ability to communicate with modems, printers, and other serial devices attached to the Macintosh serial (Modem or Printer) ports, when running Windows 9x. This feature is not available in Windows NT. Before the Orange Micro card can use these devices however, you must configure the ports in both the Macintosh and Windows platforms. The steps below will guide you through this process.

Configuring the Orange Micro Emulated Serial Ports in OrangePC Setup

To gain access to the Macintosh Modem and/or Printer ports in Windows 9x, you must use the OrangePC Setup dialog to assign these ports to the Orange Micro Serial COM ports of Windows. The steps below explain this procedure.

Note: If Windows 9x is currently running on the OrangePC, it will need to be shut down before you proceed with the following changes.

1. From the OrangePC "File" pull down menu, select "Setup".
2. In the OrangePC Setup, select either Modem Port: or Printer Port:.
3. Select the COM port you wish to assign to the Macintosh serial port. The Port you select must correspond to one of the Orange Micro Emulated Serial Ports installed in your Windows Device Manager - Orange Micro Serial Port (COM1), Orange Micro Serial Port (COM2), Orange Micro Serial Port (COM3) or Orange Micro Serial Port (COM4).



4. Reboot your PC for your changes to take effect.

Adding an Orange Micro Emulated Serial Port to Windows

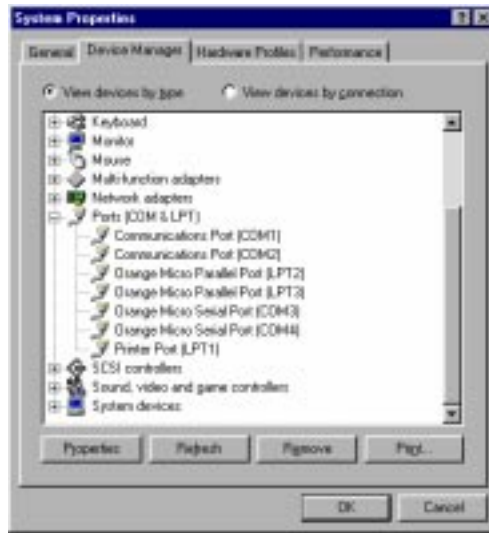
Before Windows can use the Orange Micro Emulated Serial Ports, you must install them into the Windows 9x Device Manager. As serial (COM) ports are added, Windows assigns an ascending number to the port (i.e. COM1, COM2, COM3 and COM4). The ports you will be adding will become COM1 and COM2.

1. Insert the Windows 9x CD-ROM, launch the OrangePCi application and switch to PC mode.
2. From the Windows Start button, select Settings, then Control Panel.
3. Double click on the Add new Hardware Control Panel
4. Click the Next button to continue through the Add New Hardware Wizard.



5. When prompted “Do you want Windows to search for your new hardware?” select No, then click Next.
6. Windows will prompt you to “Select the type of hardware you want to install”. From the Hardware types: window, select Ports (COM & LPT) and click Next to continue.
7. From the list of Manufacturers: select Orange Micro, Inc. and from the list of Models: select Orange Micro Serial Port. Now, click “Next”.
8. A Resource type and Setting window will now appear. These resources are pre-determined by Windows and you need not make any modifications. Click Next to continue.
9. Windows has finished installing your Orange Micro Emulated Serial Port. Click Finish to exit the Add New Hardware Wizard.
10. Windows will display a System Settings Change window. You must restart your PC before the Orange Micro Emulated Serial Port will become available. To add a second Orange Micro Emulated Serial Port, click No and repeat the steps in this procedure. If you have finished installing the Orange Micro Emulated Serial Ports, click Yes to restart your PC.

To verify the installation of the Orange Micro Emulated Serial Ports, click Start then Settings and Control Panel. Double click the System control panel and select the Device Manager tab. Click the + next to Ports (COM & LPT). You should see each installation of the Orange Micro Emulated Serial Ports. Windows will assign a COM number for each port you have added.



Orange Micro Parallel Port Emulation(Windows 9x Only)

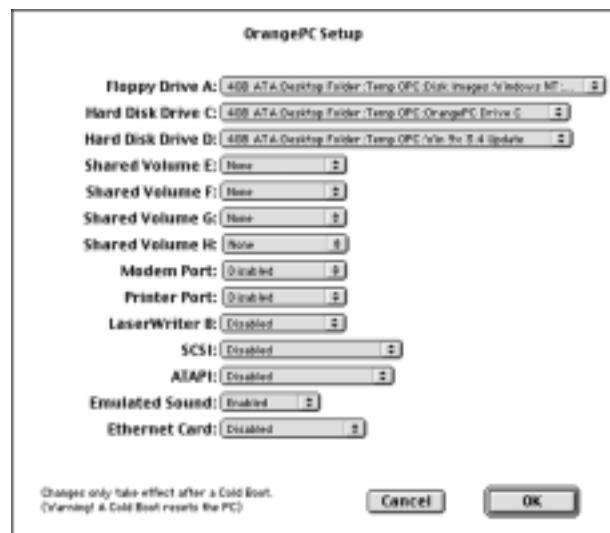
The Orange Micro Parallel Port Emulation feature allows the PC to access printers attached to the Macintosh serial ports (Printer and Modem). This feature is not available in Windows NT. Before the PC can access these printers, you must configure the ports in both the Macintosh and Windows platforms. The steps below will guide you through this process.

Configuring an Orange Micro Emulated Parallel Ports in OrangePC Setup

To gain access to the Macintosh Modem and/or Printer ports in Windows 9x, you must use the OrangePC Setup dialog to assign these ports to the Orange Micro Parallel (LPT) ports of Windows. The steps below explain this procedure.

Note: If Windows is currently running on the OrangePC, it will need to be shut down before you proceed with the following changes.

1. From the OrangePC “File” pull down menu, select “Setup”.
2. In the OrangePC Setup, select either Modem Port: or Printer Port:.
3. Select the LPT port you wish to assign to the Macintosh serial port. The Port you select must correspond to one of the Orange Micro Emulated Parallel Ports you have installed in your Windows Device Manager - Orange Micro Parallel Port (LPT1), Orange Micro Parallel Port (LPT2) or Orange Micro Parallel Port (LPT3).



4. Reboot your PC for your changes to take effect.

Adding an Orange Micro Emulated Parallel Port to Windows

Before Windows can use the Orange Micro Emulated Parallel Ports, you must install them into the Windows 9x Device Manager. As parallel (LPT) ports are added, Windows assigns an ascending number to the port (i.e. LPT1, LPT2, LPT3 and LPT4).

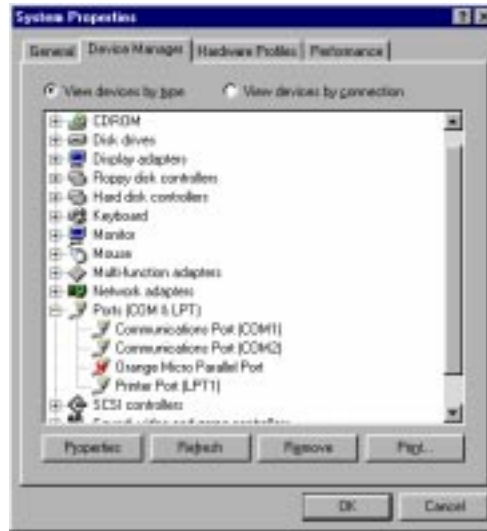
1. Insert the Windows 9x CD-ROM, launch the OrangePCi application and switch to PC mode.
2. From the Windows Start button, select Settings, then Control Panel.
3. Double click on the Add new Hardware Control Panel.
4. Click the Next button to continue through the Add New Hardware Wizard.



5. When prompted “Do you want Windows to search for your new hardware?” select No, then click Next.
6. Windows will prompt you to “Select the type of hardware you want to install”. From the Hardware types: window, select Ports (COM & LPT) and click Next to continue.
7. From the list of Manufacturers: select Orange Micro, Inc. and from the list of Models: select Orange Micro Parallel Port now, click Next.
8. You will now be presented with a dialog stating that “You are using other hardware that conflicts with the hardware you are trying to install”. Ignore this warning and click Next to continue.
9. The Add New Hardware Wizard will now tell you “The software for this device is now installed, but this device conflicts with one or more other devices.”. This is a potential problem for Windows, but we will correct this conflict in the next steps. Click “Finish” to exit the Add New Hardware Wizard.

Now that the new emulated parallel port is installed, we will need to reconfigure the Input/Output Range of the port so that it does not conflict with any other devices. The procedure for doing this is as follows:

10. From the Windows Task Bar, click Start then Settings and Control Panel. Double click the System control panel and select the Device Manager tab.
11. Click the + next to Ports (COM & LPT). You should see the Orange Micro Parallel Port with a red X through its icon



12. Click on the Orange Micro Parallel Port to select it, then click the Properties button to begin reconfiguring the port properties.
13. Under the Device usage section within the General tab, uncheck the Disable in this hardware profile box.
14. Select the Resources tab and click on the Set Configuration manually button to display the resource settings. If the box "Use automatic settings" is checked, uncheck it to make the Set Configuration manually button active.
15. Click the Input/Output Range under the Resource settings window, then click the Change setting... button to edit the value.

16. Use the up and down arrow keys on the right side of the Value field to scroll through the list of available addresses. You will know an address does not conflict when you see “No devices are conflicting” in the Conflict information box. Use the table below to select the address for the emulated parallel port you wish to add. Click OK when you have finished.

0378-037A	LPT1
0278-027A	LPT2
03BC-03BE	LPT3



17. You will now be presented with a “Creating a Forced Configuration” warning dialog. Ignore this warning and click Yes to continue.
18. Windows will display a System Settings Change window. You must restart your PC before the Orange Micro Emulated Parallel Port will become available. To add another Orange Micro Emulated Parallel Port, click Yes to restart your OrangePC and repeat the steps in “Adding an Orange Micro Emulated Parallel Port to Windows”.

Modifying the Video Memory allocation to the OrangePC 620

The OrangePC 620 shares main memory SDRAM with video memory. By default, 1MB is allocated to video memory. You may change this allocation in increments of .5MB, from a minimum of .5MB to a maximum of 4MB. Main memory allocated to video memory will not be available to Windows or the applications you wish to run in Windows. To change the video memory allocation, follow these steps:

1. Launch the OrangePCi application and switch to PC.
2. While the OrangePC counts memory, tap the DEL key located among the six key cluster above the arrow keys on the Macintosh extended keyboard. This will put you into the Award CMOS Setup Utility.
3. Use your arrow keys to scroll down to the Chipset Features Setup, then press the enter key.
4. Scroll to the VGA Shared Memory Size option and use the PAGE UP and PAGE DOWN keys to change the value. When you are finished, press the ESC key to return to the Award CMOS Setup Utility main menu.
5. Press F-10 to save changes and exit the setup utility. You will be prompted to confirm the Save and Exit. Press Y to confirm and exit. The OrangePC will now restart. If your settings have been saved, you will see the new video memory allocation while the OrangePC counts memory.

Sound Support

The Orange Micro card supports Wave, DirectX and MIDI sounds in Windows 95 and Windows 98 based applications only. There is no sound support for DOS, Windows 3.x or Windows NT.

To enable sound, go to the "File" menu in the OrangePCi application and select "Setup". Be sure "Emulated Sound:" is set to "Enabled".

Rebooting OrangePC

You can reboot the OrangePC while Windows is running, but doing so may result in a loss of data. Before rebooting, close all documents. From either Windows or the Macintosh, press **⌘+R**. For more information, see Chapter 7, “Commands Menu”.

Quitting OrangePC

Quitting the OrangePC incorrectly can result in a loss of data, so it is important that you follow these steps:

1. Close all documents and applications in Windows.
2. Click on the Start menu and choose “Shut Down”.
3. In the “Shut Down Windows” dialog box select “Shut down the computer?” and click the “OK” button.
4. When the screen goes black and displays the message “It is now safe to shut down your computer”, press **⌘+Q**.
5. If you have followed the preceding steps, click on the “Quit” button. If you still have documents open or have not shut down Windows, click the “I need to Quit” button and go back to step 1.

This chapter describes the OrangePC menus and commands.

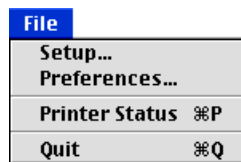
The Apple Menu

Under the Apple Menu in “About OrangePC...” you will find the version number, copyright date and information regarding how to contact Orange Micro.



The File Menu

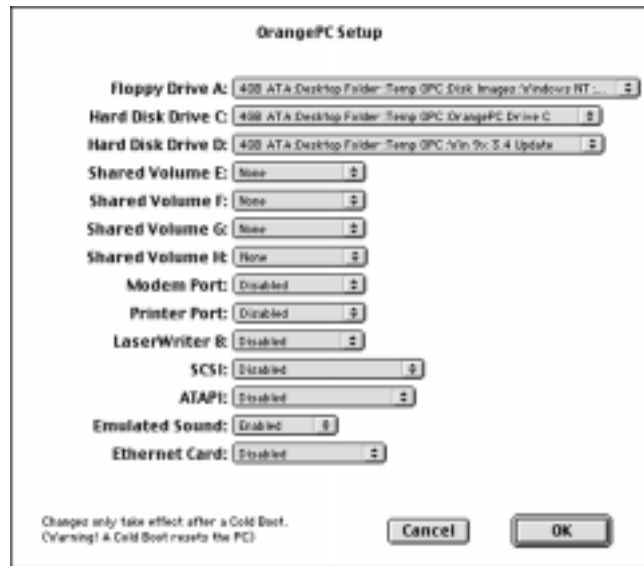
This menu allows you to setup OrangePC, to print, to set preferences and to quit the OrangePCi application.



Setup...

This section will be used in addition to the CMOS setup procedure. It also gives you the emulated facilities available to the Macintosh through Orange Micro card..

The Setup dialog has an “OK” button when the PC is not running and a “Cold Boot” button when PC is running.



Drive Setup

Floppy Drive A:

The choices depend on the types of floppy drive installed in your Macintosh. If a USB floppy drive is properly installed, it will appear automatically. If the traditional SuperDrive is installed in your Macintosh, it will appear automatically. You will also can select floppy disk images created by the Apple Disk Copy utility.

Hard Disk Drive C: and D:

The choices are “Create New Emulated Drive,” “Select Emulated Drive” and “None”.

- “Create New Emulated Drive” allows you to create new emulated drive files.
- “Select Emulated Drive” allows you to select one of multiple previously created drive files. You can also select drive files previously created by SoftWindows[®], SoftPC[®], Orange386 and Mac286 programs.
- “None” Drive is not selected and disk access to that drive is disabled.

Shared Volumes

You may create shared volumes and assign them to drive E:, F:, G: or H:.

Each shared volume may be set to a specific pathname by selecting “Set Volume”. “Clear Volume” will clear any previously created pathname and restore the status of that shared volume to “none”.

The “Set Volume” selection will ask you to choose the volume, folder, etc. which is to be shared. The pathname, or hierarchical volume/folder structure will be placed in the “Setup” dialog box for your reference.

Modem Port and Printer Port

This option in combination with the Orange Micro Emulated Serial and Parallel ports will allow you to use your Macintosh serial ports to communicate with Printers, Modems and other serial devices (See Chapter 6 “Orange Micro Serial Port Emulation(Windows 9x Only)” and “Orange Micro Parallel Port Emulation(Windows 9x Only)”).

LaserWriter 8

Any printer selected in the Macintosh chooser will appear as the name of this menu item. If you wish to print to an AppleTalk PostScript printer, this option will allow you to configure a port for OrangePC to monitor incoming print jobs (See Chapter 6 “Printing”).

Mouse

Externally connecting a real PC hardware mouse option is only available on the OrangePC 500 series products. The default is an emulated three button PS/2 mouse (See Chapter 6 “Using the Mouse” for emulation of the three button mouse).

NOTE: Changes in the OrangePC will only take place after a Cold Boot. Remember a cold boot resets the PC.

SCSI

The Orange Micro Plug and Play SCSI Adapter was developed to make setup and access to SCSI peripheral devices quick and easy. Most all installation issues are now handled automatically during the installation of the OrangePCi and Windows software, but for additional information, please refer to Chapter 6, Using the Orange Micro Card, “Orange Micro SCSI Adapter.”

CAUTION: Do not activate your Macintosh hard drives in this dialog.

ATAPI

This selection will allow you to enable ATAPI/IDE devices like an internal Zip drive. This feature is not supported when using Windows NT.

Emulated Sound

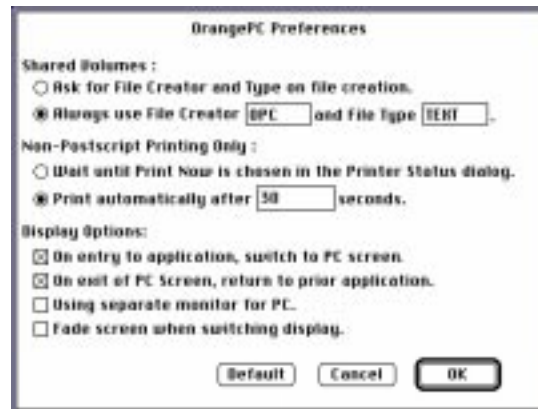
The Orange Micro card uses an emulated sound driver to play Windows sounds through your Macintosh. This option will allow you to enable or disable the sound emulation if you own a 500 series OrangePC with hardware sound support.

Ethernet Card

This item allows you to choose the Ethernet port that will be used in the PC environment. By default it is disabled. You must select the Ethernet port you wish to use before networking will be available to the PC environment.

OrangePC Preferences

Preferences give you the ability to customize the OrangePC defaults for shared volumes, printing and the emulated mouse. OrangePC will remember these choices from session to session unless you change them or click the “Default” button to return to the original defaults shown here:



The use of the Preferences for “Shared Volume” and “Non-Postscript Printing Only” is described in Chapter 6, Using OrangePC, “Printing”.

Display Options:

When the box is checked, the OrangePC will act in the following manner.

“ On entry to application, switch to PC screen.”

When you double click on the OrangePCi application to start OrangePC or click on the OrangePC window, the OrangePC will automatically switch from the Mac to the PC screen. When this box is selected, holding down the **⌘** key will suppress switching over to the PC screen, allowing you to access the OrangePC menus.

“ On exit of PC Screen, return to prior application”

When you are working in the PC environment and press **⌘-D**, the OrangePC will return you to the Macintosh application you were in before you switched to the PC.

“ Using a separate monitor for PC”

Select this option when a separate monitor is used for the PC instead of sharing the Macintosh monitor. This option will keep the PC monitor from switching off when the OrangePC application is in the background.

“ Fade screen when switching display.”

Select this option if you wish to fade the screen to black during the transition from the Mac to the PC or the PC to the Mac.

Printer Status (⌘-P)

The Printer Status dialog displays the status of the laser printer selected in the Macintosh Chooser.



Print Now is only used for non-PostScript print jobs. It is used to send a print job to the printer.

Quit (⌘-Q)

This command quits the OrangePC application and has the same effect as shutting down a PC computer system. Quitting the OrangePC incorrectly can result in a loss of data, so for detailed instructions regarding quitting, please refer to Chapter 6, Using the Orange Micro Card, "Quitting the OrangePC".

CAUTION: Be sure to close your files and exit your applications before quitting.

The Commands Menu

This menu shows all the keyboard shortcuts available to the PC.

Commands	
Switch to PC Screen	⌘D
Switch to Macintosh Menus	⌘M
<hr/>	
Select Floppy Disk Image	⌘F
Eject Floppy	⌘E
Eject CD-ROM	⌘U
Reset	⌘R
<hr/>	
Function Keys	▶

Switch to PC Screen (⌘-D)

This command toggles your monitor between Macintosh video output and PC video output. To return to the Macintosh simply type ⌘-D

Switch to Macintosh Menus (⌘-M)

If "On exit of PC Screen, return to prior application" is selected in the OrangePC Preference dialog, ⌘-M will switch to Macintosh video to allow you to select the OrangePC Macintosh Menus.

Select Floppy Disk Image (⌘-F)

⌘-F presents you with a Macintosh Open File dialog, allowing you to select a Floppy Disk Image created by the Apple Disk Copy utility as floppy drive A. In some cases using a Floppy Disk Image is more convenient than inserting a diskette in the Macintosh floppy drive. Floppy Disk Images are accessed at the speed of your hard drive, therefore access is many times faster than using floppy diskettes. Use ⌘-E to eject a Floppy Disk Image.

Eject Floppy (⌘-E)

To eject a PC Floppy disk, which is in the FDHD (SuperDrive) use, ⌘-E. It is also used to eject a Floppy Disk Image that was selected by ⌘-F.

Eject CD-ROM (⌘-U)

To eject a CD-ROM from the CD-ROM player use ⌘-U.

Reset (⌘-R)

This is equivalent to a cold boot of PC. This has the same effect as shutting down a PC computer in midstream, and then restarting it.

CAUTION: Don't use this command unless your system has frozen since it could jeopardize the integrity of your files.

Function Keys (⌘-1...)

This feature is necessary for users who do not have an extended keyboard and need some of the unique PC function keys not used by the Macintosh. The following keyboard shortcuts allow access to PC function keys F1 through F15:

⌘-1 = F1	⌘-6 = F6	⌘-Dash = F11
⌘-2 = F2	⌘-7 = F7	⌘-Equal = F12
⌘-3 = F3	⌘-8 = F8	⌘-T = F13
⌘-4 = F4	⌘-9 = F9	⌘-Y = F14
⌘-5 = F5	⌘-0 = F10	⌘-U = F15

Appendices

Appendix A: Custom Windows 95 Installation

An installation from the Easy Install CD will result in a folder named “OrangePCi Folder” containing an OrangePCi application and a Disk Images folder. The Disk Images folder contains Disk Copy v6.3.3 and folders containing disk images of all diskettes required to install all supported operating systems. You can use the Disk Copy utility to create these diskettes or you can access these disk images directly using the following methods:

NOTE: If you are using FWB CD Rom Toolkit as your CD-ROM controller please follow the Directions in Appendix D:

- In the OrangePC Setup dialog, choose “Select Floppy Disk Image” from the button next to the label “Floppy Drive A”. A Macintosh Open File dialog will appear, allowing you to select the appropriate disk image.
- While in the Windows environment a ⌘-F presents you with a Macintosh Open File dialog, allowing you to select the appropriate disk image. Use ⌘-E to logically eject the floppy disk image.

Optimizing Your Hard Drive

Prior to installing the Orange Micro software, you must defragment the Macintosh hard disk in order to create clean, contiguous space for your Drive C file. We recommend using Norton Utilities Speed Disk.

NOTE: Failure to defragment your hard disk prior to installing the Orange Micro software will result in up to 40% degradation in disk access speed on the PC side.

Though not required, we strongly recommend a minimum of 16 MB of Orange Micro card RAM for Microsoft Windows 95 and sufficient available hard disk allocated on your drive C: file as required by Microsoft Windows 95 (Windows 95 requires a minimum of 100MB) plus any additional application requirements. The Orange Micro software supports emulated hard drives up to 2046 MB.

Preparing for the installation of Windows 95

1. Insert the Microsoft Windows 95 CD-ROM in the Macintosh CD-ROM drive.

NOTE: Do not proceed if the Windows 95 CD-ROM is not mounted on the Macintosh desktop. Correct this problem before proceeding.

2. Open the OrangePCi folder and start the Orange Micro card by double clicking on the “OrangePCi” application icon.

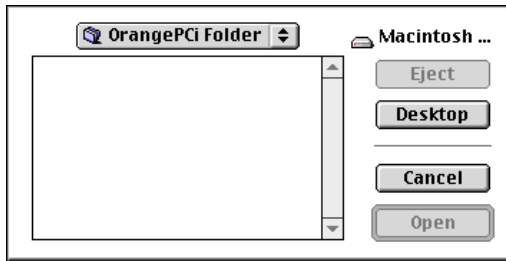


Creating an Emulated Drive C

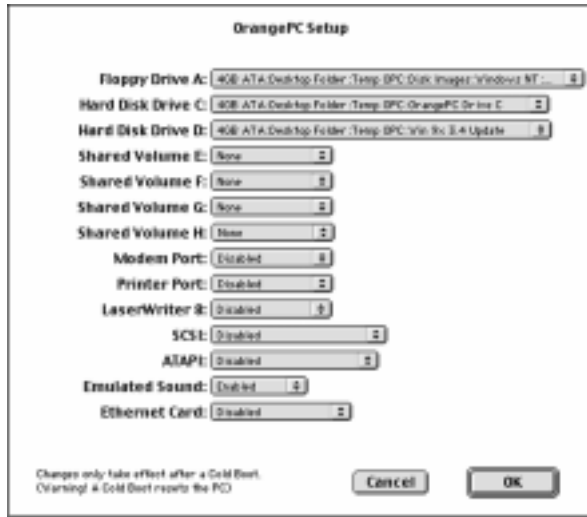
1. Upon launching the OrangePC, the application will notify you that you have moved, renamed or deleted your OrangePC Drive C File.



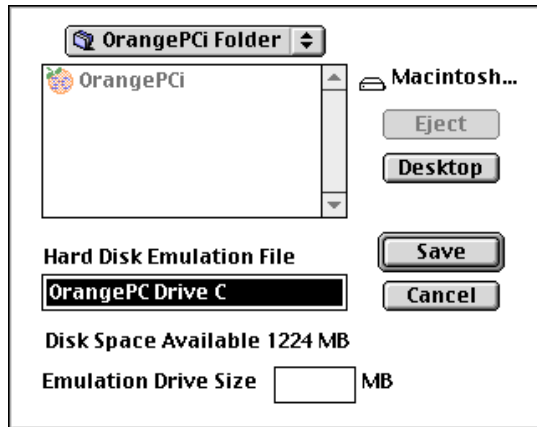
2. After clicking “OK”, it automatically places you in the following dialog box:



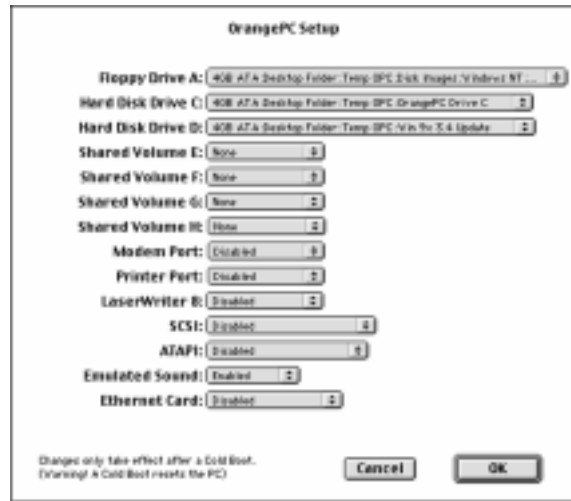
3. Because the file has not yet been created, you must “Cancel” this dialog to be placed in the OrangePC Setup where you can create your emulated drive C file. To do this, select “Create New Emulated Drive” from the Hard Disk Drive C: selection in the OrangePC Setup.



4. The default filename is OrangePC Drive C. You may change the name of this file if you desire. After noting the amount of disk space available on your Macintosh hard drive in the dialog box, you must decide how large your emulated drive C: file will be. Enter the drive size value in megabytes in the space provided. Click “Save”.



5. Insert the Windows 95 Boot Disk into your floppy drive.
6. You will be placed in the setup dialog box:



CAUTION: Do not modify any of the other setup options at this time or it may adversely affect the installation process.

7. Click on the “Cold Boot” button. The OrangePC StartUp screen will appear. Once the PC is running, pressing ⌘-D will return you to the Macintosh.

Windows® 95 Installation

1. As the OrangePC boots from the Windows “CD-ROM Setup Boot Disk”, “Welcome to Setup” appears. Read the contents of the window and press “Enter” to continue.
2. “Configure unallocated disk space” To continue - press “Enter”. You may be asked if you wish to enable large disk support. If this dialog appears, select the “Yes” option then “Enter”. “Setup will restart your computer now.” To continue - press “Enter.”
3. “Setup is now going to perform a routine check on your system.” To continue - press “Enter.”
4. Continue following on-screen instructions. We recommend you choose default selections.
5. While analyzing your computer the Windows 95 Setup Wizard will ask you to click a check box to detect Network or Sound hardware options.

CAUTION: DO NOT CLICK THE SOUND AND NETWORK ADAPTER CHECK BOXES. They will be installed later.



Continue following on-screen instructions.

6. Eventually, the following Insert Disk dialog will appear:



7. Type **⌘-U** to logically eject the Microsoft Windows 95 CD-ROM. Type **⌘-E** to logically eject the “Windows 95 Boot Disk” or you will end up with a “Disk Boot Failure”. If this does occur, simply press **⌘-E** to eject the Windows 95 Boot Disk image, then **⌘-R** to reset the PC.
8. Insert the “OrangePC Easy Install” CD-ROM in the CD-ROM bay. Click on the OK button to continue.

9. When the process of copying files has completed, the “Windows 95 Setup Wizard” will display the “Finish Setup” dialog, click on the “Finish” button. Type ⌘-E to logically eject the floppy disk image, then continue following on-screen instructions.

NOTE: You can get a “Device IOS failed to initialize.” Error when using an AMD K6-2 350 or faster processor. Install the AMD K6 update (Amdk6upd.exe) located on the OrangePC Easy Install CD-ROM.

When the “Add Printer Wizard” dialog appears, click “Cancel”. You can configure printing after Windows 95 has been installed. For more information on setting up printers in Windows 95, please see Chapter 6: Using the Orange Micro Card, Printing.

Installing Emulated Joystick Support

Before Windows can use the Orange Micro Emulated Joystick, you must install the Microsoft Gameport Joystick and Orange Joystick into the Windows 95 Device Manager. In addition, the joystick must be fully functional on the Macintosh before setting up the Windows side.

Microsoft Gameport Joystick Installation

1. Insert the Windows 95 CD-ROM, launch the OrangePCi application and switch to PC mode.
2. From the Windows Start button, select Settings, then Control Panel.
3. Double click on the Add new Hardware Control Panel.
4. Click the Next button to continue through the Add New Hardware Wizard.



5. When prompted “Do you want Windows to search for your new hardware?” select No, then click Next.
6. Windows will prompt you to “Select the type of hardware you want to install”. From the Hardware types indow, select “Ports Sound, video and game controllers” and click Next to continue.
7. From the list of Manufacturers: Select Microsoft and from the list of Models: select Gameport Joystick now, click Next.
8. The Add New Hardware Wizard will now tell you “The software for this device is now installed, Click “Finish” to exit the Add New Hardware Wizard.
9. Windows will now display the message ”To finish setting up you new hardware, you must restart you computer. Do you want to restart your computer now?” Click No to continue.

Orange Micro Joystick Installation

1. Double click on the Add new Hardware Control Panel.
2. Click the Next button to continue through the Add New Hardware Wizard.



3. When prompted “Do you want Windows to search for your new hardware?” select No, then click Next.
4. Windows will prompt you to “Select the type of hardware you want to install”. From the Hardware types window, select “Ports Sound, video and game controllers” and click Next to continue.
5. From the list of Manufacturers: Select Orange Micro and from the list of Models: select Orange Micro Joystick now, click Next.
6. The Add New Hardware Wizard will now tell you “The software for this device is now installed, Click “Finish” to exit the Add New Hardware Wizard.
7. Windows will now display the message ”To finish setting up you new hardware, you must restart you computer. Do you want to restart your computer now?” Click Yes to Restart the PC.

Installing Shared Volumes

1. Insert the Orange Micro Easy Install CD-ROM into your Macintosh CD-ROM drive.
2. From the Windows Start button, select "Run". In the field provided, type "E:SETUP" and click "OK" to launch the Setup Utility.
3. From the list provided, check the "Shared Volumes" box and click "OK".
4. Eject any floppy and restart the PC for the changes to take effect.

For additional information on how to use Shared Volumes refer to Chapter 6: Using the Orange Micro Card, Shared Volumes.

Networking Notes

You must enable your Macintosh Ethernet card in the OrangePC Setup before networking will be available in the PC environment. During the installation of Windows 95, the Orange Micro Network Adapter is installed from one of the Orange Micro Easy Install CD-ROM. Simply configure the Windows Network Control Panel for your network and you are done.

NOTE: For TCP/IP configuration, you must assign separate IP addresses for your PC and your Macintosh. If both the Mac & PC require the IPX/SPX protocol, use a different Frame Type on the Mac than the PC.

Appendix B: Custom Windows 98 Installation

Orange Micro strongly recommends that you avoid the custom Windows 98 installation described in this appendix unless you are an expert Windows 98 user. Instead, please refer to Chapter 3, “Windows 98 Easy Install.”

An installation from the Easy Install CD will result in a folder named “OrangePCi Folder” containing an OrangePCi application and a Disk Images folder. The Disk Images folder contains Disk Copy v6.3.3 and folders containing disk images of all diskettes required to install all supported operating systems. You can use the Disk Copy utility to create these diskettes or you can access these disk images directly using the following methods:

NOTE: If you are using FWB CD Rom Toolkit as your CD-ROM controller please follow the Directions in Appendix D:.

- In the OrangePC Setup dialog, choose “Select Floppy Disk Image” from the button next to the label “Floppy Drive A”. A Macintosh Open File dialog will appear, allowing you to select the appropriate disk image.

- While in the Windows environment a ⌘-F presents you with a Macintosh Open File dialog, allowing you to select the appropriate disk image. Use ⌘-E to logically eject the floppy disk image.

Optimizing Your Hard Drive

Prior to installing the Orange Micro software, you must defragment the Macintosh hard disk in order to create clean, contiguous space for your Drive C file. We recommend using Norton Utilities Speed Disk.

NOTE: Failure to defragment your hard disk prior to installing OrangePC will result in up to 40% degradation in the OrangePC disk access speed.

Though not required, we strongly recommend a minimum of 16 MB of Orange Micro card RAM for Microsoft Windows 98 and sufficient available hard disk allocated on your drive C: file as required by Microsoft Windows 98 (Windows 98 requires a minimum of 100MB) plus any additional application requirements. OrangePC supports emulated hard drives up to 2046MB.

Preparing for the installation of Windows 98

1. Insert the Microsoft Windows 98 CD-ROM in the Macintosh CD-ROM drive.

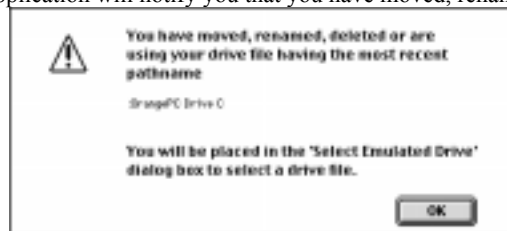
NOTE: Do not proceed if the Windows 98 CD-ROM is not mounted on the Macintosh desktop. Correct this problem before proceeding.

2. Open the OrangePCi folder and start the Orange Micro card by double clicking on the “OrangePCi” application icon.

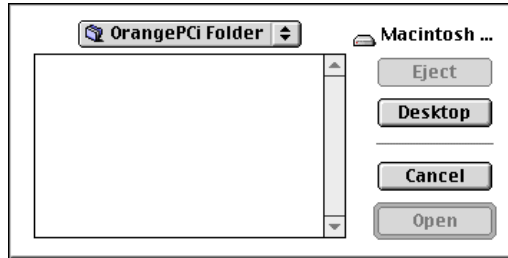


Creating an Emulated Drive C

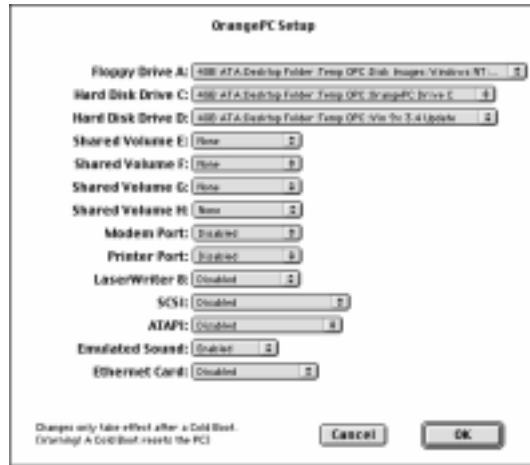
1. Upon launching the OrangePC, the application will notify you that you have moved, renamed or deleted your OrangePC Drive C File.



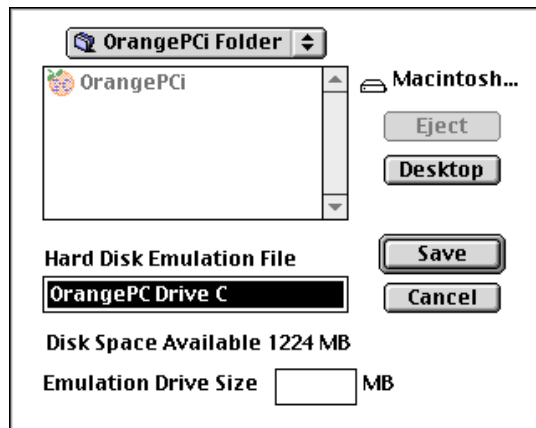
- After clicking “OK”, it automatically places you in the following dialog box:



- Because the file has not yet been created, you must “Cancel” this dialog to be placed in the OrangePC Setup where you can create your emulated drive C file. To do this, select “Create New Emulated Drive” from the Hard Disk Drive C: selection in the OrangePC Setup.



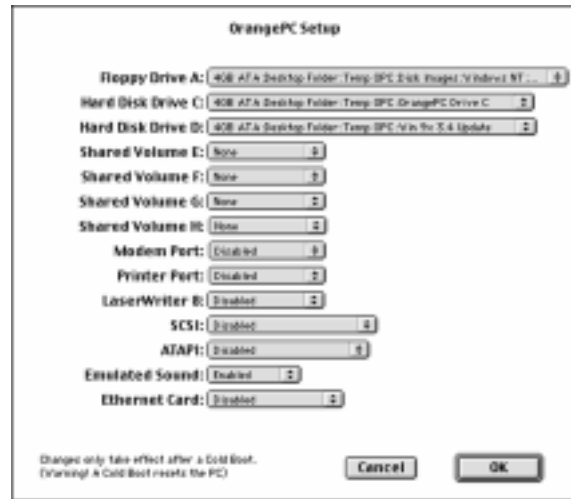
- The default filename is OrangePC Drive C. You may change the name of this file if you desire. After noting the amount of disk space available on your Macintosh hard drive in the dialog box, you must decide how large your emulated drive C: file will be. Enter the drive size value in megabytes in the space provided. Click “Save”.



- The following dialog will appear. Click on the OK button to continue.



- The OrangePC Setup dialog box will appear. Pull down the menu next to Floppy Drive A and choose the "Select Floppy Disk Image" menu item. When the Open File dialog appears, choose the "Windows 98 Boot Disk" image in the OrangePCi Folder/Disk Images/Windows 9x directory.



CAUTION: Do not modify any of the other setup options at this time or it may adversely affect the installation process.

- Click on the "Cold Boot" button. The OrangePC StartUp screen will appear. Once the PC is running, pressing ⌘-D will return you to the Macintosh.

Windows® 98 Installation

- As the PC boots from the Windows 98 Boot Disk image, The Microsoft Windows 98 Startup Menu appears. Press "1. Start Windows 98 Setup from CD-ROM" and press "Enter" to continue.
- "Welcome to Setup" appears. Read the contents of the window and press "Enter" to continue.
- "Configure unallocated disk space" To continue - press "Enter". You may be asked if you wish to enable large disk support. If this dialog appears, select the "Yes" option then "Enter". "Setup will restart your computer now." To continue - press "Enter."
- As the PC boots from the Windows 98 Boot Disk image, The Microsoft Windows 98 Startup Menu appears. Press "1. Start Windows 98 Setup from CD-ROM" and press "Enter" to continue.
- "Setup is now going to perform a routine check on your system." To continue - press "Enter."
- Continue following on-screen instructions. We recommend you choose default selections.
- Eventually, the following Insert Disk dialog will appear:



8. Type ⌘-U to logically eject the Microsoft Windows 98 CD-ROM. Type ⌘-E to logically eject the “Windows 98 Boot Disk” or you will end up with a “Disk Boot Failure”. If this does occur, simply press ⌘-E to eject the Windows 98 Boot Disk image, then ⌘-R to reset the PC.
9. Insert the “OrangePC Easy Install” CD-ROM in the CD-ROM bay. Click on the OK button to continue.
10. When the process of copying files has completed, Windows will begin a count down and restart your PC. Insert the Microsoft Windows 98 CD-ROM before Windows restarts for the final time. Continue following on-screen instructions on through to the completion of the installation. We recommend you choose default selections.

Installing Emulated Joystick Support

Before Windows can use the Orange Micro Emulated Joystick, you must install the Microsoft Gameport Joystick and Orange Joystick into the Windows 98 Device Manager. In addition, the joystick must be fully functional on the Macintosh before setting up the Windows side.

Microsoft Game port Joystick Installation

1. Insert the Windows 98 CD-ROM, launch the OrangePCi application and switch to PC mode.
2. From the Windows Start button, select Settings, then Control Panel.
3. Double click on the Add new Hardware Control Panel.
4. Click the Next button to continue through the Add New Hardware Wizard.



5. When prompted “Do you want Windows to search for your new hardware?” select No, then click Next.
6. Windows will prompt you to “Select the type of hardware you want to install”. From the Hardware types window, select “Sound, video and game controllers” and click Next to continue.
7. From the list of Manufacturers: Select Microsoft and from the list of Models: select Gameport Joystick now, click Next.
8. The Add New Hardware Wizard will now tell you “The software for this device is now installed, Click “Finish” to exit the Add New Hardware Wizard.
9. Windows will now display the message ”To finish setting up you new hardware, you must restart you computer. Do you want to restart your computer now?” Click No to continue.

Orange Micro Joystick Installation

1. Double click on the Add new Hardware Control Panel.
2. Click the Next button to continue through the Add New Hardware Wizard.



3. When prompted “Do you want Windows to search for your new hardware?” select No, then click Next.
4. Windows will prompt you to “Select the type of hardware you want to install”. From the Hardware types indow, select “Ports Sound, video and game controllers” and click Next to continue.
5. From the list of Manufacturers: Select Orange Micro and from the list of Models: select Orange Micro Joystick now, click Next.
6. The Add New Hardware Wizard will now tell you “The software for this device is now installed, Click “Finish” to exit the Add New Hardware Wizard.
7. Windows will now display the message ”To finish setting up you new hardware, you must restart you computer. Do you want to restart your computer now?” Click Yes to Restart the PC.

Installing Shared Volumes

1. At the Windows desktop insert the “OrangePC Easy Install” CD-ROM in the CD-ROM bay.
2. The Auto-Run program will start the OrangePC Update installer. From the list provided, check the “Shared Volumes” box and click “OK”.
3. When the installation is complete, you will be presented with a dialog box that reads “Please refer to Chapter 6: Using the Orange Micro Card” for further installation instructions that may be necessary for the selected software to function”. Click “OK” to exit the OrangePC Setup utility.
4. Restart the PC for the changes to take effect.

For additional information on how to use Shared Volumes refer to Chapter 6: Using the Orange Micro Card, Shared Volumes.

Networking Notes

You must enable your Macintosh Ethernet card in the OrangePC Setup before networking will be available in the PC environment. During the installation of Windows 98, the Orange Micro Network Adapter is installed from one of the Orange Micro Windows 9x Drivers Disks. Simply configure the Windows Network Control Panel for your network and you are done.

NOTE: For TCP/IP configuration, you must assign separate IP addresses for your PC and your Macintosh. If both the Mac & PC require the IPX/SPX protocol, use a different Frame Type on the Mac than the PC.

Appendix C: Custom Windows NT Installation

Orange Micro strongly recommends that you avoid the custom Windows NT installation described in this appendix unless you are an expert Windows NT user. Instead, refer to “Windows NT Easy Install”, Chapter 4.

An installation from the Easy Install CD will result in a folder named “OrangePCi Folder” containing an OrangePCi application and a Disk Images folder. The Disk Images folder contains Disk Copy v6.3.3 and folders containing disk images of all diskettes required to install all supported operating systems. You can use the Disk Copy utility to create these diskettes or you can access these disk images directly using the following methods:

- In the OrangePC Setup dialog, choose “Select Floppy Disk Image” from the button next to the label “Floppy Drive A”. A Macintosh Open File dialog will appear, allowing you to select the appropriate disk image.
- While in the Windows environment a \mathbb{C} -F presents you with a Macintosh Open File dialog, allowing you to select the appropriate disk image. Use \mathbb{C} -E to logically eject the floppy disk image.

Optimizing Your Hard Drive

Prior to installing the Orange Micro software, you must defragment the Macintosh hard disk in order to create clean, contiguous space for your Drive C file (partition). We recommend using Norton Utilities Speed Disk.

NOTE: Failure to defragment your hard disk prior to installing the Orange Micro software will result in up to 40% or more degradation in the PC disk access speed.

Though not required, we strongly recommend a minimum of 16 MB of Orange Micro card RAM for Microsoft Windows and a minimum of 200MB hard-disk allocated on your drive C. Orange Micro software supports emulated hard drives up to 2046MB.

Preparing for the installation of Windows NT

1. Insert the Windows NT CD-ROM in the Macintosh CD-ROM drive.

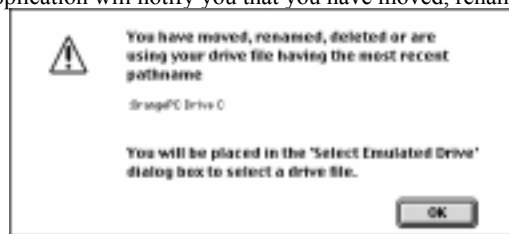
NOTE: Do not proceed if the Windows NT CD-ROM is not mounted on the Macintosh desktop. Correct this problem before proceeding.

2. Launch the OrangePC application by double-clicking on the icon.

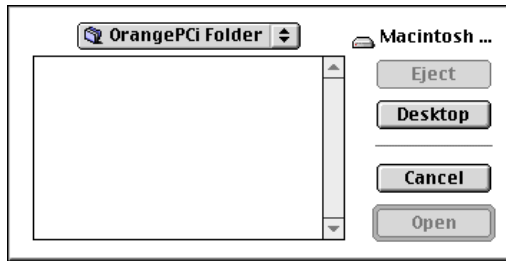


Creating an Emulated Drive C

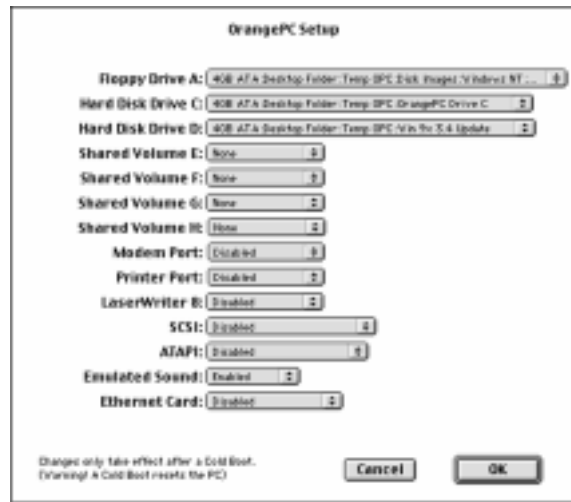
1. Upon launching the OrangePC, the application will notify you that you have moved, renamed or deleted your OrangePC Drive C File.



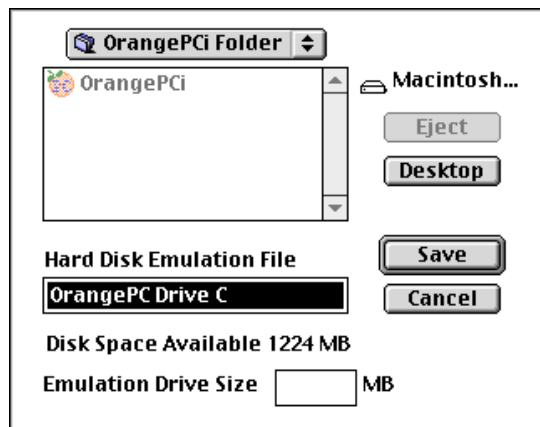
2. After clicking “OK”, it automatically places you in the following dialog box:



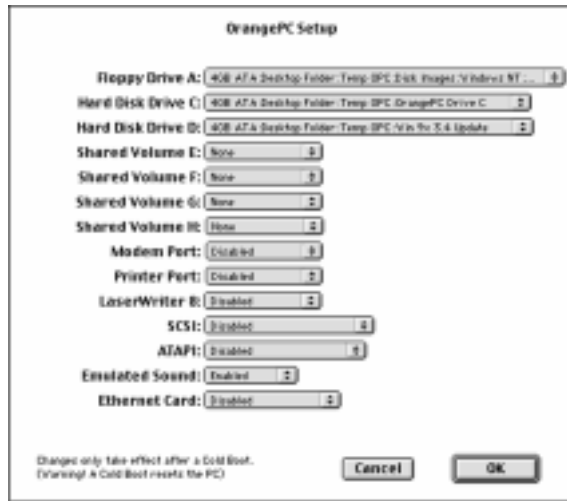
- Because the file has not yet been created, you must “Cancel” this dialog to be placed in the OrangePC Setup where you can create your emulated drive C file. To do this, select “Create New Emulated Drive” from the Hard Disk Drive C: selection in the OrangePC Setup.



- The default filename is OrangePC Drive C. You may change the name of this file if you desire. After noting the amount of disk space available on your Macintosh hard drive in the dialog box, you must decide how large your emulated drive C: file will be. Enter the drive size value in megabytes in the space provided. Click “Save”.



5. Insert the Windows NT Setup Disk 1.
6. You will be placed in the OrangePC Setup dialog box:



CAUTION: Do not modify any of the other setup options at this time or it may adversely affect the installation process.

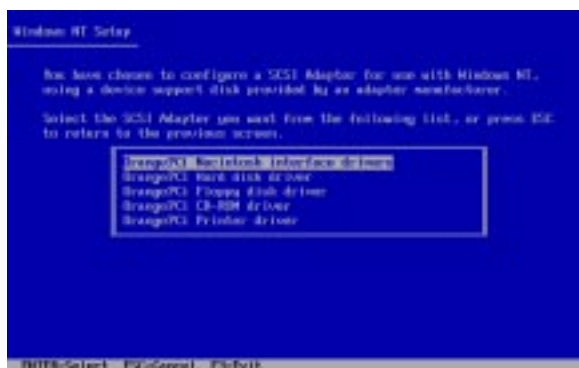
7. Click on the “OK” button. The OrangePC StartUp screen will appear. Once the PC is running, pressing **⌘-D** will return you to the Macintosh.

Installing Windows NT Workstation

1. As the PC boots, insert the Windows NT Workstation “Setup Boot Disk”. **This is very Important!!!** When “Setup is inspecting your computer’s hardware configuration...” appears, you must push the F6 key within approximately 5 seconds. If you don’t push the F6 key before the blue screen appears, Windows NT will crash sometime during the installation after you have inserted “Setup Disk 2”. If this happens you must start the installation over.
2. Insert the Windows NT Workstation “Setup Disk 2” when prompted. ⌘-E (Command-E) will eject the floppy disk from the Macintosh drive when necessary.
3. When this screen appears choose “S” to specify additional device drivers:



4. When the list of device drivers appear on the screen, highlight “Other” and press ENTER. You will be prompted to: “Please insert the Manufacturer-supplied hardware support disk into drive A.”
5. Type ⌘-F (Command-F) When the Open File dialog appears, choose the “Windows NT Drivers Disk 1” image in the OrangePCi Folder/Disk Images/Windows NT directory and press ENTER.



Use the Up and Down arrows on your keyboard to highlight a device driver and press ENTER. Return to step 3 above.

Repeat this process until each of the following device drivers have been selected:

- OrangePC Macintosh interface drivers
- OrangePC Floppy disk driver
- OrangePC Hard disk driver
- OrangePC CD-ROM driver
- OrangePC Printer driver

NOTE:

- 1) Each device driver must be selected before proceeding to step 6.
- 2) Windows NT 4.0 Setup only displays 4 drivers to be selected you must scroll down to get the fifth.
- 3) Do not add the Orange Micro SCSI driver at this time.

6. When all OrangePC device drivers have been selected, press ENTER to continue. Insert the Windows NT Workstation “Setup Disk 3” when prompted. Press ENTER to continue. You will be requested to exchange “Setup Disk 2” and “Setup Disk 3” several times.
7. When the “Welcome to Setup” screen appears, press ENTER. The next screen will list all selected OrangePC device drivers and give you the opportunity to select additional device drivers. Press ENTER to continue.
8. Once again you will be prompted to insert “Setup Disk 3”. Change disks and press ENTER. The next screen warns you that “Any data currently on the computer’s hard disk will be permanently lost”. Press C to continue setup.

NOTE: **This message refers only to the contents of the OrangePC hard drive file, not the rest of the data on your Macintosh hard drive.**

9. A Windows NT Licensing agreement appears. Read it and press F8 to continue.
10. A Windows Workstation Setup screen will appear with the detected hardware configuration. Press ENTER to continue.
11. The next screen will show a list of partitions. To install Windows NT on the highlighted partition press ENTER. Use the DOWN arrow on the keyboard to select NTFS (NT File System) and press ENTER. Your drive will be formatted. Now a screen will display the default Windows NT directory. Press ENTER to continue.
12. A Windows Workstation Setup screen will appear, press ENTER so Setup can examine your hard disk for corruption.
13. When prompted, insert the disk labeled “Windows NT Drivers Disk 1” and press ENTER. Setup will copy files to your hard disk. It will then ask you to remove the disk from the floppy drive. After removing the disk, press ENTER to restart the PC.
14. Whenever the OS Loader prompts you to select the operating system to start, select “Windows NT Workstation Version x.xx”. Do not select “Window NT Workstation Version x.xx (VGA mode). Then, press ENTER to continue.
15. A Windows NT Workstation Setup dialog will appear. Click on the Next button, so it can gather information about your computer.
16. A Windows NT Workstation Setup dialog will appear. Presenting you with Setup Options. Select Typical, then Next to continue.
17. Now you can personalize your copy of Windows NT by typing in your full name and company name. Windows NT will display your name and company again. Click on the “Next” button.
18. You will be prompted to enter your Product ID and Computer Name. Click on the “Next” button.
19. You will be given an opportunity to set up your Administrator password. Click on the “Next” button.
20. A Windows NT Workstation Setup dialog will appear, giving you the opportunity to create an Emergency Repair Disk. Make your choice and click on the “Next” button to continue.
21. A Windows NT Workstation Setup dialog will appear, allowing you to select optional components. Click on the “Next” button to continue.
22. A Windows NT Workstation Setup dialog will appear, allowing you to install Windows NT Networking. Click on the “Next” button.
23. A Windows NT Workstation Setup dialog will appear. Select “Do not connect this computer to a network at this time”. Click on the “Next” button to continue.
24. Now the Windows NT Setup dialog will appear. Windows NT is almost finished. Click on “Finish” button to complete the setup.
25. A Detected Display dialog will appear, verify a VGA compatible display adapter then click on the “OK” button.

NOTE: **The video driver must be installed for your specific Orange Micro card model. This driver is not on the Microsoft Windows NT distribution CD-ROM. As a result, Windows NT Setup will only install a VGA compatible display adapter. See the section below “Installing the Orange Micro card Video Driver” to install the appropriate video driver.**

26. A “Display Properties” dialog will appear. Click on the Display Properties “OK” button to continue.
27. Now the “Windows NT Setup” dialog will appear. Windows NT is now installed. Point and click on the “Restart Computer” button

Congratulations, the installation is now complete.

Adding SCSI Support.

1. Launch the OrangePC by dragging and dropping the OrangePC Drive C file onto the OrangePCi 3.4 application. This will create a new preference file and configure the OrangePC Setup to use your existing OrangePC Drive C file.
2. You will be placed in the OrangePC Setup dialog. Pull down the menu next to Hard Disk Drive D and select the file "Win 9x 3.4 Update". If you are connected to an Ethernet network, you will need to reconfigure the OrangePC Setup before the network will be made available to Windows. Click on the Cold Boot button.
3. After Windows boots, insert the Microsoft Windows NT Workstation CD ROM into your CD ROM drive.
4. From the Windows **Start** button, select **Run**, type **d:setup** in the field provided, and click **OK**. This will launch the OrangePC Setup program..
5. A dialog will appear with the title OrangePCi v3.4 Software setup. Click on the Next. button
6. The "Welcome" Dialog will appear, read the information on this screen and then click on the Next button.
7. From the next dialog that appears make sure the option " Upgrade OrangePC Software for Windows NT" option is selected then click on the Next button.
8. The next dialog that appears will allow you to choose whether or not you want FastSwitch and Clipboard Exchange to run automatically when you start up Windows. Choose yes or no then click finish.
9. Read the notes on the "Last Minute Changes" dialog then click on the Next button.
10. You are now finished with the upgrade. Select the item "Yes, I want to restart my computer now" then click on the Close button. Windows will then restart.

Activating Your SCSI Devices

1. Shut down Windows NT. Press Command + M.
2. Pull down the File menu and select Setup. The OrangePC Setup dialog will appear.
3. Under the SCSI section select Configure SCSI devices. The SCSI Setup dialog will appear.
4. From the SCSI Setup dialog add the device to the active device list then click OK
5. The OrangePC Setup dialog will appear. Click on the Cold Boot button.
6. At the Windows desktop open the Control Panel window and double click on the SCSI Adapters icon. The SCSI Adapters dialog will appear.
7. Select the Drivers tab and click the Add button. Under the Manufacturers section select "Orange Micro Inc". Then under the SCSI Adapter section select "Orange Micro SCSI Adapter".
8. After the adapter has been added click OK and then restart Windows.

Installing the Video Driver for OrangePC 620

1. At the Windows NT desktop select Start/Settings/Control Panel.
2. Double click on the "Display" icon. The "Display Properties" dialog appears.
3. Select the "Settings" tab. Click on the "Display Type" button.
4. In the "Adapter Type" box click on the "Change Driver" button, then click on the "Have Disk" button.
5. Change the drive path to A:\Type ⌘-F (Command-F) When the Open File dialog appears, choose the "Windows NT Drivers Disk 2" image in the OrangePCi Folder/Disk Images/Windows NT directory and press ENTER. "SiS598" will appear in the "Add Unlisted or Updated Driver" dialog. Click on the "OK" button.
NOTE: If you are using disk images, the following error will appear:
"The disk cannot be written to because it is write protected. Please remove the write protection from the volume NTDVRD5K2 in drive A:. Abort, Retry, Ignore" Each time this error occurs select "I" for Ignore.
6. After closing the "Display" Control Panel the "System Setting Change" dialog will appear. Type ⌘-E to eject the "Window NT Drivers Disk 2" image, then click on the "Restart Now" button.

Installing the Video driver for the OrangePC 660 and PCfx!

NOTE: Windows NT Service Pack 3 must be installed before installing the nVidia Riva 128 video driver.

1. At the Windows NT desktop select Start/Settings/Control Panel.
2. Double click on the "Display" icon. The "Display Properties" dialog appears.
3. Select the "Settings" tab. Click on the "Display Type" button.
4. In the "Adapter Type" box click on the "Change Driver" button, then click on the "Have Disk" button.
5. Change the drive path to A:\
6. Type ⌘-F (Command-F) When the Open File dialog appears, choose the "Windows NT Drivers Disk 3" image in the OrangePCi Folder/Disk Images/Windows NT directory and press ENTER.
7. "nVidia Riva 128" will appear in the "Add Unlisted or Updated Driver" dialog. Click on the "OK" button.

NOTE: If you are using disk images, the following error will appear:
"The disk cannot be written to because it is write protected. Please remove the write protection from the volume NTDRVRDSK3 in drive A:. Abort, Retry, Ignore" Each time this error occurs select "I" for Ignore.
8. After closing the "Display" Control Panel the "System Setting Change" dialog will appear. Type ⌘-E to eject the OrangePC Windows NT Drivers Disk 3, then click on the "Restart Now" button.

Networking Notes

You must enable your Macintosh Ethernet card in the OrangePC Setup before networking will be available in the PC environment. During the installation of Windows NT, the Orange Micro Network Adapter is installed from the OrangePC Windows NT Drivers Disk 1. Simply configure the Windows Network Control Panel for your network and you are done.

NOTE: For TCP/IP configuration, you must assign separate IP addresses for your PC and your Macintosh. If both the Mac & PC require the IPX/SPX protocol, use a different Frame Type on the Mac than the PC.


Attaching to a NetWare File Server

1. Insert the Windows NT Workstation 4.0 CD-ROM in the Macintosh CD-ROM drive.

NOTE: Proceed only if the Windows NT Workstation 4.0 CD-ROM is mounted on the Macintosh desktop. Correct this problem before proceeding.

2. At the Windows NT desktop insert the OrangePC Windows NT Drivers disk 1, select the “Windows NT Start” menu then select “Settings” then click on Control Panel.



3. Double click on  icon. The “Network Configuration” dialog will appear announcing “Windows NT Networking is not installed. Do you want to install it now?” Click on the “YES” button.
4. The “Network Setup Wizard” dialog appears. Select “Wired to the network”. Then click on the “Next>” button.
5. A “Network Setup Wizard” dialog appears, giving you an opportunity to select a Network Adapter. Click on the “Select from list...” button.
6. A “Select a Network Adapter” dialog appears. Click on the “Have Disk” button. Now an “Insert Disk” dialog appears. Make sure the OrangePC Windows NT Drivers disk 1 is in the Macintosh floppy disk drive. Then click on the “OK” button.

NOTE: At several points during this process a “System Process - Write Protect Error “ will appear. Select the “Ignore” button each time.

7. Now a “Select OEM Option” dialog will appear. The Orange Micro Network Adapter will be displayed in this window. Again, select the “OK” button.
8. At the Network Setup Wizard dialog, click on the “Next>” button. Now the “Network Setup Wizard” will give you the opportunity to select the Network Protocols you require.
9. Select only “NWLink IPX/SPX Compatible Transport” and “NetBEUI Protocol”. Then , click on the “Next>” button.
10. The “Network Setup Wizard” dialog will give you the opportunity to select additional Network Services. Click on the “Select from list...” button.
11. A “Select Network Services” dialog will appear. Double click on “Client Service for NetWare”. Then , click on the “Next>” button.
12. Again, the “Network setup Wizard” dialog will appear. Click on the “Next>” button to install the selected components.
13. A “Windows Setup NT” dialog will appear with an “A:\” Replace the “A:\” with the following characters: “D:\i386”.
14. Click on the “Continue” button. After a few seconds, a “Network Setup Wizard” dialog will appear giving you the opportunity to disable Network Bindings. Click on the “Next>” button. Again, click on the “Next>” button to start the network.
15. A “Network Setup Wizard” dialog will appear giving you the opportunity to edit the Computer Name and Workgroup. Click on the “Next>” button.
16. Type ⌘-E to eject the floppy, then click on the “Finish” button and select the “YES” button to restart Windows NT Workstation.
The Ethernet Network setup is complete.


Attaching to a Windows NT 4.0 File Server

1. Insert the Windows NT Workstation 4.0 CD-ROM in the Macintosh CD-ROM drive.

NOTE: Proceed only if the Windows NT Workstation 4.0 CD-ROM is mounted on the Macintosh desktop.

2. At the Windows NT desktop insert the OrangePC Windows NT Drivers disk 1, select the “Windows NT Start” menu, select “Settings” and select “Control Panel”.



3. Double click on  icon. The “Network Configuration” dialog will appear announcing “Windows NT Networking is not installed. Do you want to install it now?” Click on the “YES” button.
4. The “Network Setup Wizard” dialog appears. Select “Wired to the network”. Then click on the “Next>” button.
5. A “Network Setup Wizard” dialog appears, giving you an opportunity to select a Network Adapter. Click on the “Select from list...” button.
6. A “Select a Network Adapter” dialog appears. Click on the “Have Disk” button. Now an “Insert Disk” dialog appears. Make sure the OrangePC Windows NT Drivers disk 1 is in the Macintosh floppy disk drive. Then click on the “OK” button.

Appendix D: Custom Windows 9x Installation (OrangePCI Web Installer)

In this Chapter you will see the references “Windows 9x “ and “Win9x” replace the x with the version of Windows you are using (i.e. Windows 95 or Windows 98).

NOTE: If you are using FWB CD-ROM Toolkit as your CD ROM controller, the “OrangePCi Web Installer” application is located in the “Web Installer folder” on the Easy Install CD. Please run this application instead of the Installer.

An installation from the OrangePCi Web Installer will result in a folder named “OrangePCi Folder” containing an OrangePCi application and a Disk Images folder. The Disk Images folder contains Disk Copy v6.3.3 and folders containing disk images of all diskettes required to install all supported operating systems. You can use the Disk Copy utility to create these diskettes or you can access these disk images directly using the following methods:

- In the OrangePC Setup dialog, choose “Select Floppy Disk Image” from the button next to the label “Floppy Drive A”. A Macintosh Open File dialog will appear, allowing you to select the appropriate disk image.
- While in the Windows environment a \mathbb{C} -F presents you with a Macintosh Open File dialog, allowing you to select the appropriate disk image. Use \mathbb{C} -E to logically eject the floppy disk image.

Optimizing Your Hard Drive

Prior to installing the Orange Micro software, you must defragment the Macintosh hard disk in order to create clean, contiguous space for your Drive C file. We recommend using Norton Utilities Speed Disk.

NOTE: Failure to defragment your hard disk prior to installing the Orange Micro software will result in up to 40% degradation in disk access speed on the PC side.

Though not required, we strongly recommend a minimum of 16 MB of Orange Micro card RAM for Microsoft Windows 95 and sufficient available hard disk allocated on your drive C: file as required by Microsoft Windows 95 (Windows 95 requires a minimum of 100MB) plus any additional application requirements. The Orange Micro software supports emulated hard drives up to 2046 MB.

Preparing for the installation of Windows 9x

1. Insert the Microsoft Windows 9x CD-ROM in the Macintosh CD-ROM drive.

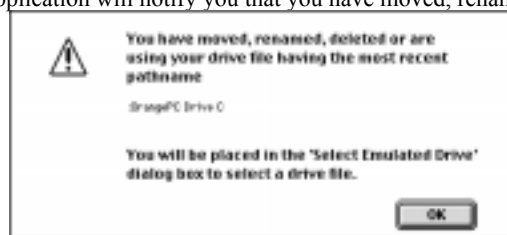
NOTE: Do not proceed if the Windows 9x CD-ROM is not mounted on the Macintosh desktop. Correct this problem before proceeding.

2. Open the OrangePCi folder and start the Orange Micro card by double clicking on the “OrangePCi” application icon.

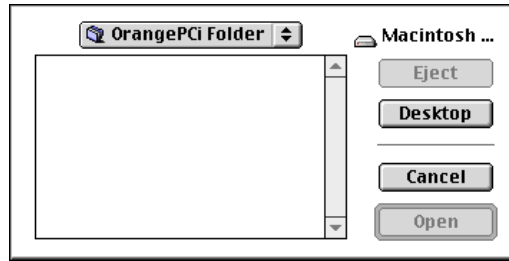


Creating an Emulated Drive C

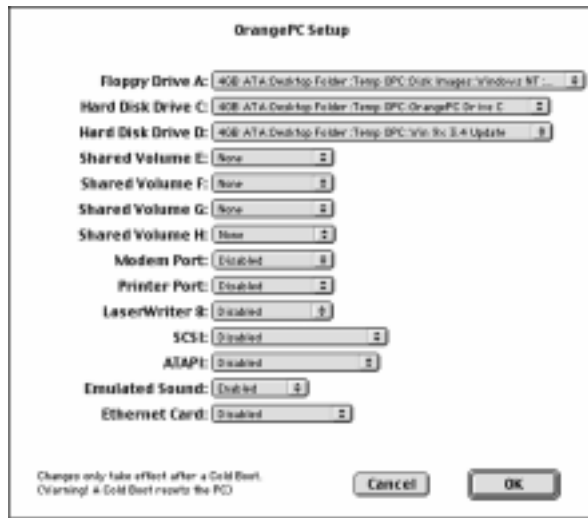
1. Upon launching the OrangePC, the application will notify you that you have moved, renamed or deleted your OrangePC Drive C File.



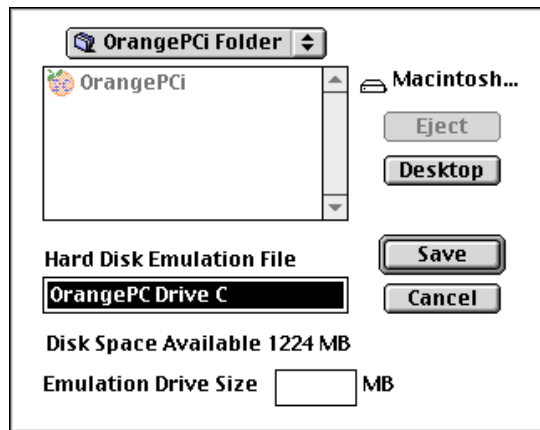
2. After clicking “OK”, it automatically places you in the following dialog box:



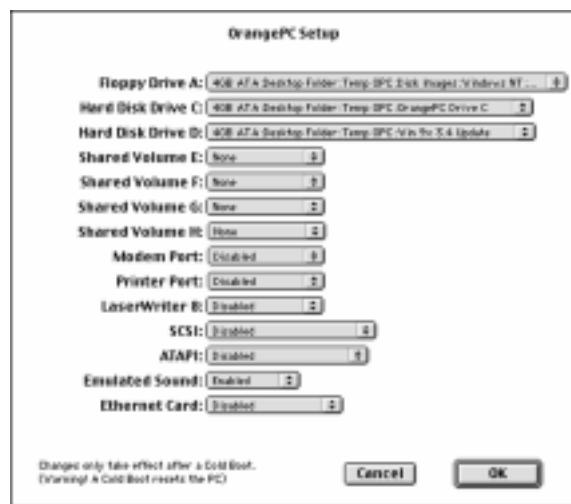
3. Because the file has not yet been created, you must “Cancel” this dialog to be placed in the OrangePC Setup where you can create your emulated drive C file. To do this, select “Create New Emulated Drive” from the Hard Disk Drive C: selection in the OrangePC Setup.



4. The default filename is OrangePC Drive C. You may change the name of this file if you desire. After noting the amount of disk space available on your Macintosh hard drive in the dialog box, you must decide how large your emulated drive C: file will be. Enter the drive size value in megabytes in the space provided. Click “Save”.



5. Insert the Windows 9x Boot Disk into your floppy drive.
6. You will be placed in the setup dialog box:



7. You must now select “Win 9x 3.4 Update” as your Emulated drive D. To do this, select “Select Emulated Drive” from the Hard Disk Drive D: menu in the OrangePC Setup.
8. A “Choose a file” dialog will appear. From the OrangePC folder choose the “Win 9x 3.4 Update” emulated hard drive file. After choosing the Had disk file you will be placed back into the OrangePC Setup dialog.

CAUTION: Do not modify any of the other setup options at this time or it may adversely affect the installation process
9. Click on the “Cold Boot” button. The OrangePC StartUp screen will appear. Once the PC is running, pressing ⌘-D will return you to the Macintosh.

Windows® 9x Installation

As the OrangePC boots from the Windows “Windows 9x Boot Disk”, “Welcome to Setup” appears. Read the contents of the window and press “Enter” to continue.

1. “Configure unallocated disk space” To continue - press “Enter”. You may be asked if you wish to enable large disk support. If this dialog appears, select the “Yes” option then “Enter”. “Setup will restart your computer now.” To continue - press “Enter.”
2. “Setup is now going to perform a routine check on your system.” To continue - press “Enter.”
3. Continue following on-screen instructions. We recommend you choose default selections.
4. While analyzing your computer the Windows 9x Setup Wizard will ask you to click a check box to detect Network or Sound hardware options.

CAUTION: DO NOT CLICK THE SOUND AND NETWORK ADAPTER CHECK BOXES. They will be installed later.



Continue following on-screen instructions.

5. Eventually, the following Insert Disk dialog will appear: Click Ok.



6. Next the “Copy Files From” dialog appears. Change the text From E:\Win9x to D:\Win_9x then click OK.

Note: If you are installing Windows 95 Please now go to page 56 and follow Steps 9-10 to complete the installation. If you are installing Windows 98 please turn to page 63 and follow step 19 to complete the installation.

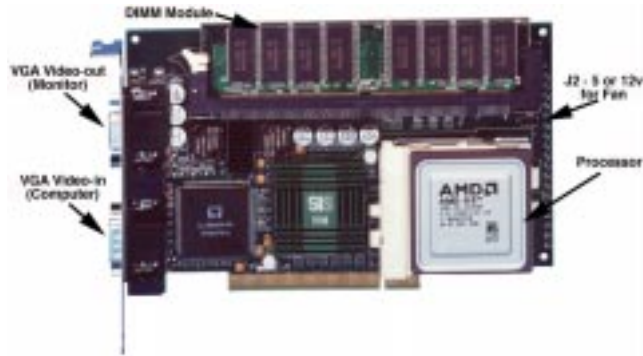
Appendix E: Installing Optional Hardware

The OrangePC 620

Installing an Intel® Pentium Compatible Processor

The processor socket is compatible with Intel Pentium MMX and classic Pentium 100-233 MHz processors, including the Cyrix 6x86, 6x86L, 6x86MX, M II PR166-300, AMD-K5, K6, K6-2 166-300 MHz, IDT WinChip C6 180-240 MHz processors. Pentium Pro and Pentium II processors are not compatible.

If you are not completely confident of your ability to install the processor, consult a qualified technician. Orange Micro assumes no responsibility for damage to your hardware due to improper or faulty processor installation. It is very important that the following jumpers be set properly.

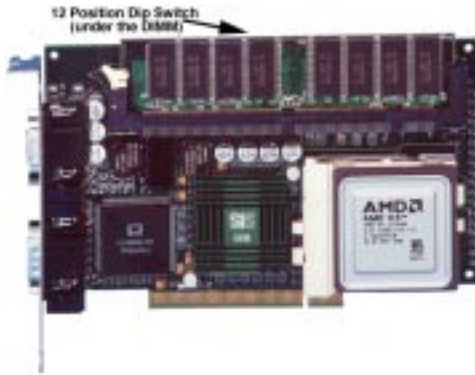


CAUTION: DO NOT put a jumper on J2. It will damage your OrangePC board. This is to be used to power a 5 or 12 volt processor fan only.

Frequently Asked Question

- Q. *Why does Cyrix call their 6x86 processor PR166+, when its clock speed is 133MHz?*
- A. Cyrix uses a P-rating system that was jointly developed by Cyrix, IBM Microelectronics, SGS-Thomson Microelectronics, and Advanced Micro Devices. The P-rating system allow end-users to base purchases on relative PC performance levels rather than just the clock speed (MHz) of the processor. The new evaluation system relates the results of industry-standard benchmarks to what is achieved by an Intel Pentium processor of a given frequency. For example, a processor with a PR150 rating would have performance comparable to a 150 MHz Pentium processor, regardless of its actual clock speed.

OrangePC 620 Dip Switch Settings:



System Board Clock Speed Options for Pentium and Compatible Processors

The OrangePC 620 dip switches come pre-configured for the processor installed at the factory. If you wish to install a different processor you may have to change the dip switch settings as indicated below. The dip switch located under the memory DIMM.

Processor Dip Switch Configurations

	CPU Core Voltage				Bus Clock				PCI Clock		CPU Core / Bus Clock Ratio			
	1	2	3	4	5	6	7	8	10	11	12			
0.0v	OFF	OFF	OFF	OFF	50MHz	ON	ON	ON	1/2 Bus CLK	OFF	1.5x	OFF	OFF	OFF
2.1v	OFF	OFF	OFF	ON	55MHz	OFF	ON	ON	32 MHz	ON	2.0x	OFF	OFF	ON
2.2v	OFF	OFF	ON	OFF	60MHz	ON	ON	OFF		2.5x	OFF	ON	ON	ON
2.3v	OFF	OFF	ON	ON	66MHz	ON	OFF	ON		3.0x	OFF	ON	OFF	OFF
2.4v	OFF	ON	OFF	OFF	75MHz	OFF	ON	OFF		3.5x	OFF	OFF	OFF	OFF
2.5v	OFF	ON	OFF	ON	83MHz	OFF	OFF	ON		4.0x	ON	OFF	ON	ON
2.6v	OFF	ON	ON	OFF						4.5x	ON	ON	ON	ON
2.7v	OFF	ON	ON	ON						5.0x	ON	ON	OFF	OFF
2.8v	ON	OFF	OFF	OFF						5.5x	ON	OFF	OFF	OFF
2.9v	ON	OFF	OFF	ON										
3.0v	ON	OFF	ON	OFF										
3.1v	ON	OFF	ON	ON										
3.2v	ON	ON	OFF	OFF										
3.3v	ON	ON	OFF	ON										
3.4v	ON	ON	ON	OFF										
3.5v	ON	ON	ON	ON										

NOTE: Dip switch 9 is not connected.

Dip switch definition
UP = ON
DOWN = OFF

Processor Dip Switch Configuration Examples

Processor	1	2	3	4	5	6	7	8	10	11	12
AMD K6-3 400 MHz 2.4v	OFF	ON	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
AMD K6-2 400 MHz 2.2v	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
AMD K6-2 300 MHz 2.2v	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	ON	ON	ON
AMD K6-2 266 MHz 2.2v	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON
IDT WinChip C6 200 MHz (MX)	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
Intel Pentium MMX 233 MHz 2.8v	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
Cyrix 6x86MX PR166L(133 MHz) 2.8v	ON	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	ON

Installing DIMM Modules

Upgrading memory is optional. Memory may be increased by replacing the existing DIMM module(s) on the OrangePC with any 16, 32, 64 or 128 MB Macintosh G3 compatible, 3.3 volt, unbuffered, 64-bit-wide, 168 pin, 10 ns SDRAM. Maximum DIMM height is one inch.

Memory upgrades can be an expensive investment and we recommend you purchase the correct types from Orange Micro or your Orange Micro dealer.

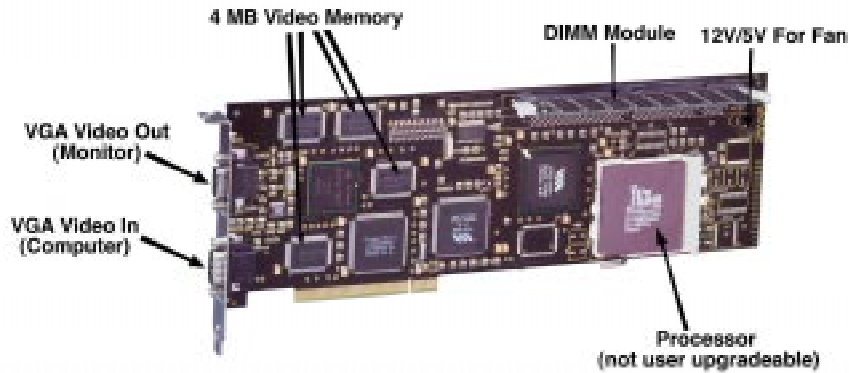
If you are not completely confident in your ability to install memory DIMMs, consult a qualified technician. Orange Micro assumes no responsibility for damage to your hardware due to improper or faulty DIMM installation.

NOTE: The DIMMs must be perfectly clean, well seated, and firmly snapped into place or the board will not function.

The PCfx! (650 version)

System Board Clock Speed Options for Pentium and Compatible Processors

The PCfx! dip switches come pre-configured for an Intel Pentium compatible 200 MHz processor installed at the factory. It is not upgradeable. Below is the factory setting.



CAUTION: DO NOT put a jumper on J2. It will damage your PCfx! board. This is to be used to power a 12 or 5 volt processor fan only.

Processor Dip Switch Configuration

Processor	1	2	3	4	5	6	7	8	10	11	12
IDT Winchip C6 200 MHz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF

Installing DIMM Modules

Upgrading memory is optional. Memory may be increased by replacing the existing DIMM module(s) on the OrangePC with any 16, 32, 64 or 128 MB Macintosh G3 compatible, 3.3 volt, unbuffered, 64-bit-wide, 168 pin, 10 ns SDRAM. Maximum DIMM height is one inch.

Memory upgrades can be an expensive investment and we recommend you purchase the correct types from Orange Micro or your Orange Micro dealer.

If you are not completely confident in your ability to install memory DIMMs, consult a qualified technician. Orange Micro assumes no responsibility for damage to your hardware due to improper or faulty DIMM installation.

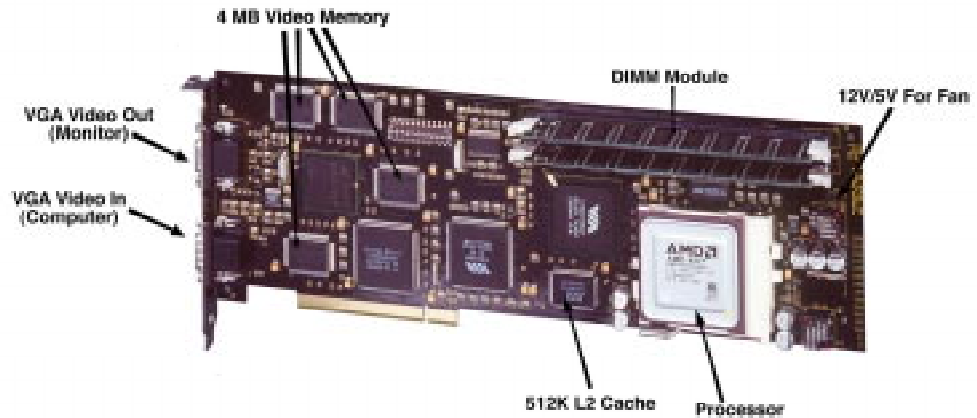
NOTE: The DIMM must be perfectly clean, well seated, and firmly snapped into place or the board will not function.

The OrangePC 660

Installing an Intel® Pentium Compatible Processor

The processor socket is compatible with Intel Pentium MMX and classic Pentium 100-233 MHz processors, including the Cyrix 6x86, 6x86L, 6x86MX, MII PR266-300, AMD-K5, K6, K6-2 166-400 MHz and IDT WinChip C6 180-240 MHz processors. Pentium Pro and Pentium II processors are not compatible.

If you are not completely confident of your ability to install the processor, consult a qualified technician. Orange Micro assumes no responsibility for damage to your hardware due to improper or faulty processor installation. It is very important that the following jumpers be set properly.

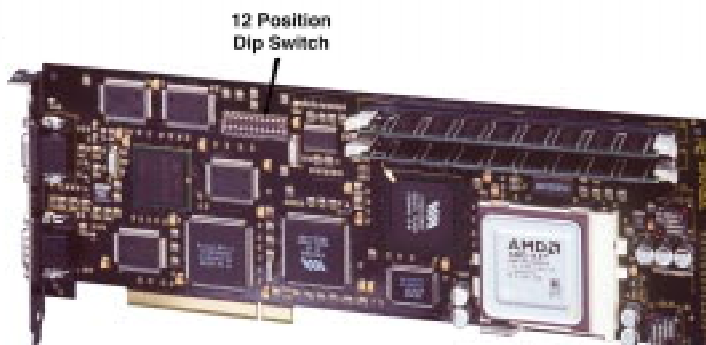


CAUTION: DO NOT put a jumper on J2. It will damage your OrangePC board. This is to be used to power a 5 or 12 volt processor fan only.

Frequently Asked Question

- Q. Why does Cyrix call their 6x86 processor PR166+, when its clock speed is 133MHz?
- A. Cyrix uses a P-rating system that was jointly developed by Cyrix, IBM Microelectronics, SGS-Thomson Microelectronics, and Advanced Micro Devices. The P-rating system allow end-users to base purchases on relative PC performance levels rather than just the clock speed (MHz) of the processor. The new evaluation system relates the results of industry-standard benchmarks to what is achieved by an Intel Pentium processor of a given frequency. For example, a processor with a PR150 rating would have performance comparable to a 150 MHz Pentium processor, regardless of its actual clock speed.

OrangePC 660 Dip Switch Settings



System Board Clock Speed Options for Pentium and Compatible Processors

The OrangePC 660 dip switches come pre-configured for the processor installed at the factory. If you wish to install a different processor you may have to change the dip switch settings as indicated below.

Processor Dip Switch Configurations

	CPU Core Voltage				Bus Clock Frequency (MHz)					Clock		CPU Core / Bus Clock Ratio			
	1	2	3	4	5	6	7	8	PCI	AGP	10	11	12		
0.0v	OFF	OFF	OFF	OFF	60.0MHz	OFF	OFF	ON	ON	30.0	60.0	1.5x	OFF	OFF	OFF
2.1v	OFF	OFF	OFF	ON	66.6MHz	OFF	OFF	OFF	ON	33.3	66.6	2.0x	OFF	OFF	ON
2.2v	OFF	OFF	ON	OFF	68.5MHz	ON	ON	ON	ON	34.25	68.5	2.5x	OFF	ON	ON
2.3v	OFF	OFF	ON	ON	75.0MHz	OFF	ON	OFF	ON	37.5	75.0	3.0x	OFF	ON	OFF
2.4v	OFF	ON	OFF	OFF	83.3MHz	OFF	ON	ON	OFF	27.77	55.53	3.5x	OFF	OFF	OFF
2.5v	OFF	ON	OFF	ON	90.0MHz	ON	OFF	ON	OFF	30.0	60	4.0x	ON	OFF	ON
2.6v	OFF	ON	ON	OFF	100MHz	ON	OFF	OFF	OFF	33.3	66.6	4.5x	ON	ON	ON
2.7v	OFF	ON	ON	ON	112MHz	ON	ON	OFF	OFF	37.3	74.6	5.0x	ON	ON	OFF
2.8v	ON	OFF	OFF	OFF								5.5x	ON	OFF	OFF
2.9v	ON	OFF	OFF	ON											
3.0v	ON	OFF	ON	OFF											
3.1v	ON	OFF	ON	ON											
3.2v	ON	ON	OFF	OFF											
3.3v	ON	ON	OFF	ON											
3.4v	ON	ON	ON	OFF											
3.5v	ON	ON	ON	ON											

NOTE: Dip switch 9 is not connected.

Dip switch definition
UP = ON
DOWN = OFF

Processor Dip Switch Configuration Examples

Processor	1	2	3	4	5	6	7	8	10	11	12
AMD K6-3 100/400 MHz 2.4v	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
AMD K6-2 100/400 MHz 2.2v	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
AMD K6-2 100/350 MHz 2.2v	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
AMD K6-2 100/300 MHz 2.2v	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
AMD K6-2 66/266 MHz 2.2v	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
Intel Pentium MMX 233 MHz 2.8v	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
IDT Winchip C6 200 MHz	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
Cyrix 6x86MX PR166L(133 MHz) 2.8v	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON

Installing DIMM Modules

Upgrading memory is optional. Memory may be increased by replacing the existing DIMM module(s) on the Orange Micro card with any 16, 32, 64 or 128 MB Macintosh G3 compatible, 3.3 volt, unbuffered, 64-bit-wide, 168 pin, 100 MHz / 10 ns SDRAM. Maximum DIMM height is one inch, when running a 66 MHz bus clock. If the Orange Micro card is configured for a 100 MHz bus clock, PC 100 certified memory is required.

Memory upgrades can be an expensive investment and we recommend you purchase the correct types from Orange Micro or your Orange Micro dealer.

If you are not completely confident in your ability to install memory DIMMs, consult a qualified technician. Orange Micro assumes no responsibility for damage to your hardware due to improper or faulty DIMM installation.

NOTE: The DIMMs must be perfectly clean, well seated, and firmly snapped into place or the board will not function.

Appendix F: Troubleshooting

Shared Volumes

- Problem:** When I set a Shared Volume up as the E: drive in Windows 9x, I can't see my shared folder.
- Solution:** The Windows 9x installation uses the E: drive for the CD ROM Drive. Try using Shared Volumes F through H instead.
- Problem:** When I configure a Shared Volume in the OrangePC Setup, I cannot see the Shared Volume in Windows NT.
- Solution:** At this time, Shared Volumes is not supported for Windows NT. You may want to seek a network alternative for sharing files between the Mac and the PC.
- Problem:** When copying large or multiple files from a Shared Volume to my C: Drive, the system freezes.
- Solution:** Shared Volumes works best when files are stored at the root level of the volume. Instead of creating sub-folders within a Shared Volume, try creating multiple shares.
- Problem:** I configure a shared volume in setup and at the C: prompt type E:, then hit return and get the message: "Invalid Drive Specifications".
- Solution:** Type OSHARE, then hit the return key. If you get the message: "Bad Command or File Name",
- Problem:** I copied Microsoft Word files into a shared volume and read the text into Microsoft Word for Mac. The text was all there but little boxes were mixed into the text.
- Solution:** Search and Replace these characters with a blank space within Microsoft Word for Mac. Another good solution is to use MacLink PC from DataViz to translate the file.

Video

- Problem:** When I switch to the PC I only get scrambled horizontal lines on my monitor.
- Suggestion:** Usually this occurs when the monitor is not Multiscan/Multisync. Check your monitor's documentation to be certain you are using a compatible monitor. The key words to look for are Multiscan/Multisync. If you have an Apple Color or RGB monitor, it is not Multiscan/Multisync.
- Problem:** When I switch to the PC I only get a black screen with the Mac menu bar.
- Suggestion:** You have not connected the OrangePC video cable. Refer to Chapter 2: Hardware Installation, under the sub-heading "Attaching the Video Loopback cable to Your Monitor".
- Problem:** When I switch to the PC I only get a black screen.
- Suggestion:** Restart the OrangePC with a bootable MS-DOS disk in the Macintosh floppy drive. Listen for disk access.
- * If the OrangePC seems to be reading the disk but not displaying video, you have a cabling problem or a bad monitor.
 - * If the OrangePC does not try to read the bootable MS-DOS disk, call Orange Micro Customer Service Department.
- Problem:** The Windows desktop does not completely fill the screen. There is a black border around the Windows desktop.
- Suggestion:** Adjust the controls on the monitor itself until there is no black border. The PC video operates at a different frequency than the Macintosh does. Most monitors will memorize your adjustments for each frequency you use, keeping the settings for the frequencies you use on both the Mac and the PC.

Sound

- Problem:** **Sound is choppy in Windows**
Solution: Turn off Virtual Memory on your Macintosh
- Problem:** **Cannot get sound-in to work on the Windows side**
Solution: Sound-in is not supported on the OrangePC 600 series products

Printing to a Printer Connected to Your Macintosh

- Problem:** **I did a "Print Screen" from the OrangePC application and it did not print on my LaserWriter.**
Comment: OrangePC does not currently support text printing on a PostScript printer. It is recommend that you print text files from Windows. Also refer to Chapter 6, Using the Orange Micro Card, under "Printing."
- Problem:** **I tried to print to my Macintosh Networked Postscript printer and the OrangePC jumped to the Macintosh side and displayed a PostScript error.**
Comment: Make sure you have the LaserWriter 8 driver selected in the Macintosh Chooser and an Apple LaserWriter driver selected in the Windows print manager.
- Problem:** **I tried to print to my Macintosh AppleTalk Postscript printer and the OrangePC, for no reason, jumped to the Macintosh side but did not display an error message. The print job completed and I could switch back to OrangePC with no problem.**
Comment: The reason this happens is that when you start a print job in OrangePC, a Postscript file gets created on the Mac side. In some instances, this will alert virus software and the switch will occur. Try turning off virus software and see if the problem persists.
- Problem:** **I cannot get my Apple printer to work on the Windows**
Solution: The QuickDraw printer language protocol is not supported under the DOS or Windows operating systems. The following printers use the QuickDraw printer language to reproduce images and text, and therefore are not compatible with DOS/Windows-based computers.
LaserWriter II SC
LaserWriter Select 300
Personal LaserWriter LS
Personal LaserWriter SC
Personal LaserWriter 300
StyleWriter I, II
StyleWriter 1200, 1500, 2200, 2400, 2500, 4100, 4500
Color StyleWriter Pro
IBM-to-LaserWriter connectivity requires a PostScript-based printer, like the Personal LaserWriter NT, LaserWriter IINT/IINTX, and LaserWriter IIf/IIfg printers.

The StyleWriter 6500 printer does allow printing via parallel connection from the Windows operating system. However, the printer does not support concurrent QuickDraw/PCL sessions. For printing to the StyleWriter 6500 under Windows from the Apple PC Compatibility card, use the Epson LQ compatible driver.

Copy and Paste

- Problem:** **When I switch from Mac to PC or from PC to Mac, OrangePC displays an error stating "Cannot transfer into the clipboard due to lack of available application memory space".**

Comment: This occurs when the size of the data on either clipboard exceeds the amount of memory available to the OrangePC application. To boost the amount of memory assigned to the OrangePCi application, see Appendix B: under the sub-heading “Using Clipboard Exchange.”

Problem: **How can I get Clipboard Exchange to launch when I start the OrangePC?**

Comment: You can do this by making a shortcut to the CLIP.EXE program and placing it in your Start/Program Files/Startup folder in Windows 9x.

Microsoft Windows 9x and Windows NT Easy Install CD

Problem: **After installing from the Easy Install CD, I double click on the OrangePCi application then I’m prompted to create an OrangePC Drive C file. After I create the file, I switch to the PC side and get a boot failure.**

Solution: When you saved the OrangePC Drive C file, you over wrote the file with Windows pre-installed. Insert the Easy Install CD ROM, choose “Custom Install” and select the Emulated drive file you wish to install. After installation has completed, double click the OrangePC Drive C file to launch OrangePCi. This will create a preference file and set the newly installed OrangePC Drive C file as the file to be used as the PC’s Drive C.

Problem: **When I try to install from the Easy Install CD, I get a message that reads “An error has occurred”, and I’m forced to quit the installation.**

Solution: * Try the installer on another Macintosh (The Orange Micro card does not need to be installed in the Macintosh to run the installer program.). If you can successfully install, there may be a problem with the original Macintosh’s System Software. Do a clean install of the MacOS and try the installation again.

* If you are unsuccessful at installing the Easy Install CD on any Macintosh, the CD may be damaged. Contact the Orange Micro’s Customer Service Department for a new CD ROM.

Microsoft Windows 9x

Problem: **Having trouble getting Microsoft Office installed?**

Solution: Make sure you are running OrangePC 3.4 software or newer. From the C:\windows\system\iosubsys directory delete the file opcflop.pdr.

Problem: **What keyboard sequence selects the Start menu?**

Solution: Pressing the Control + esc keys will serve the same functionality as the Windows key on the new Windows 101 Enhanced keyboards. This function allows you to access the Start button anywhere within Windows 95.

Problem: **During an attempt to install Windows 95, I boot from the OrangePC Windows 95 Setup boot disk. After loading the CD-ROM driver, I get the message “Please insert the disk labeled Microsoft Windows 95 CD-ROM boot disk and press Ctrl-Alt-Del to continue”.**

Solution: You may be using the wrong Windows 95 CD-ROM boot disk. Call Orange Micro’s Customer Service. Refer to the Windows 95 CD-ROM for the proper date code.

Microsoft Windows NT 4.0 Workstation Easy Install CD

Problem: **After installing from the Easy Install CD, I double click on the OrangePCi application then I’m prompted to create an OrangePC Drive C file. After I create the file, I switch to the PC side and get a boot failure.**

Solution: When you saved the OrangePC Drive C file, you over wrote the file with Windows NT Workstation pre-installed. Insert the Easy Install CD-ROM, choose Custom Install and select the Emulated drive file you wish to install. After installation has completed, double click the OrangePC Drive C file to launch OrangePCi.

This will create a preference file and set the newly installed OrangePC Drive C file as the file to be used as the PC's Drive C.

Problem: **When I try to install from the Easy Install CD, I get a message that reads "An error has occurred", and I'm forced to quit the installation.**

Solution: * Try the installer on another Macintosh (The Orange Micro card does not need to be installed in the Macintosh to run the installer program.). If you can successfully install, there may be a problem with the original Macintosh's System Software. Do a clean install of the MacOS and try the installation again.

* If you are unsuccessful at installing the Easy Install CD on any Macintosh, the CD may be damaged. Contact the Orange Micro's Customer Service Department for a new CD-ROM.

Orange Micro Networking

Problem: **After installing Networking in Windows, I get an error message "Unable to browse Network" when opening the Network Neighborhood.**

Solution: You must enable your Macintosh Ethernet card in the OrangePC Setup before networking will be available in the PC environment.

Problem: **How to use DHCP on the Mac and the PC simultaneously?**

Solution: The only way you can use DHCP on the Mac and PC simultaneously is to install a second Ethernet card into the Macintosh. Every Ethernet card has a unique Ethernet address number. DHCP servers issue one TCP/IP address to each Ethernet address. If you wish to run TCP/IP on the Mac and PC side with one Ethernet card, you must assign a static IP address to either the Macintosh or PC side. You can then use DHCP on the other side if you wish.

Miscellaneous

Problem: **Is the OrangePC year 2000 compliant?**

Solution: All OrangePC products are "Year 2000" compliant. The date and time is acquired from the Macintosh Operating System each time the OrangePC application is launched. The only possible issues would come if the operating system or an application does not use the dates supplied by OrangePC accurately. If you believe you have such an application, please contact the manufacturer of that application for an update.

The only possible issues would come if the operating system or an application does not use the dates supplied by OrangePC accurately. If you believe you have such an application, please contact the manufacturer of that application for an update.

Problem: **Why do I get an error message or a black screen after I enter the Windows 98 Product Key?**

Solution: Windows only recognizes dates from 1980 to 2099. Since the OrangePC gets its date and time at startup time from the Mac, it can potentially get dates before 1980. If this happens, correct the Macintosh time and state.

Problem: **When switching to PC, the OrangePC application presents an error 32 "The OrangePC is not responding to the Macintosh...".**

Solution: If this occurs, try shutting down the Macintosh, unplug the power cord. Then, press the power key to drain any remaining power. Now plug in the power cord and restart your Macintosh. If this does not solve the problem, contact Orange Micro Technical Support.

Problem: **If you have any problem involving hard disk access, keyboard, floppy drive, mouse, network access, crashing or any other problem that involves OrangePC emulated features.**

Solution: If you are using Now Startup Manager or Conflict Catcher, remove them and replace them with the Apple Extension Manager. Then, set your Macintosh Extension Manager to use the default System Software

settings and restart your Macintosh. It is possible that you have a conflicting extension. Do not use "Extensions Off". OrangePC requires some of the Macintosh's System Software Extensions to run.

Problem: **When trying to access the CD-ROM I keep getting the error "CDR101: Not ready reading drive E Abort, Retry, Fail?"**

Solution: The most common reasons for this error is as follows:

* There is no CD-ROM in the Macintosh CD-ROM drive.

* You have two CD-ROM drives attached to the Macintosh. The PC can only see the CD-ROM drive with the first SCSI ID number.

Problem: **When launching the OrangePC I get nothing but "error type 11" and cannot get beyond this point for the installation.**

Solution: Install MacOS 8.1 or newer. Some of the newer Macintosh computers will not run the OrangePC application with earlier MacOS system versions.

Problem: **The document "XXXXXXX" could not be opened because the application program that created it could not be found.**

Solution: This error message displays when you try to launch OrangePC from an emulated hard drive other than an OrangePC Drive C File and the application that created the disk file does not exist in the system.

Problem: **I get the error message "No OrangePC Card available in the slots. Please see user's manual "Error Message List" for possible solutions."**

Solution:

1. Check to see that the Orange Micro card is properly installed in your computer.
2. You may have a board, which is not functioning correctly. Call Orange Micro Customer Service.
3. You may have incompatible memory installed. Contact Orange Micro.

Problem: **When in EDIT.COM in order for ALT-E to be accepted, the keys must be struck twice. Why?**

Comment: When the following keys "` ,E,U,I,N" are used with the ALT key in any application, a normal Macintosh Keyboard Event does not occur and thus the PC does not receive any keyboard data. These special keys are referred to as Dead Keys and are used to generate accents on foreign characters in the Macintosh Operating System.

Problem: **How to create a larger drive C file.**

Solution: Refer to Chapter3: Expanding your OrangePC Drive File

Appendix G: Orange Micro Card Specifications

OrangePC 620 Specifications

- Model:
 - OrangePC 620: 7" card; PCI Interface; 64-bit Pentium design for PCI based Macintosh; user RAM expandable up to 128 MB; up to 4 MB video SDRAM shared from main memory
- Processor:
 - Support for Intel Pentium MMX and classic Pentium 100-233 MHz processors, including the Cyrix 6x86, 6x86L, 6x86MX, M II PR166-300, AMD-K5 and K6 166-300 MHz, IDT WinChip C6 180-240 MHz processors.
 - User upgradable Socket 7 ZIF, switch selectable CPU/bus multiplier and processor voltage from 2.1–3.5 volts
- Memory:
 - DIMM slot allowing any: 16, 32, 64 or 128 MB Macintosh G3 compatible, 3.3 volt, unbuffered, 64-bit-wide, 168 pin, 100 MHz / 10 ns SDRAM. Maximum DIMM height is one inch.
- Display Graphics:
 - High-Performance 2-D graphics video accelerator, sharing main memory. Maximum resolution up to 1280x1024, maximum 24-bit color depth at 1024x768 and vertical refresh rates as high as 85 Hz.
- Video Ports:
 - Female DB-15HD VGA video-out; Male DB-15HD VGA video-in; OrangePC Video Loopback cable connects the Macintosh video-out to the OrangePC video-in port
- Sound Support:
 - Software emulated through Macintosh sound hardware
- Input/Output Ports:
 - PC serial/parallel ports COM1, COM2, COM3, COM4, LPT1, LPT2 and LPT3: can use Mac modem and printer ports
 - 32 bit Windows 9x Plug and Play SCSI driver automatically detects OrangePC enabled SCSI devices connected to the Macintosh SCSI port, like Zip, Jaz, Syquest drives, Scanners, CD-ROMs, etc.
 - 32 bit NDIS4 Plug and Play Ethernet driver for Windows 95, Windows 98 and Windows NT
- Integration:
 - Clipboard Exchange allows copy and paste of graphics and text between Macintosh and Windows applications.
 - Snapshot enables OrangePC Windows 9x users to continuously monitor the background system environment like "Picture in Picture" on many TV sets.
 - Shared Volumes allows both the Macintosh and the PC to share files on any volume mounted on the Macintosh desktop
- Power Consumption
 - Table shows the OrangePC 620 power consumption with memory and processor. Varying amounts of memory do not affect power consumption.

Processor	+3.3V	+5 V	Watts
AMD-K6 MMX 233 MHz	0.75 A	6.00 A	32.48
Intel Pentium MMX 233 MHz	0.80 A	2.70 A	16.14
Intel Pentium MMX 200 MHz	0.80 A	2.40 A	14.64
Cyrix 6x86MX PR200 (166 MHz)	0.76 A	3.80 A	21.51
Cyrix 6x86MX PR166 (133 MHz)	0.78 A	2.40 A	14.57
IDT C6 WinChip 200 MMX	2.50A	1.20A	10.25
- Package includes:
 - A single 7" x 4.2" PCI 620 card, Easy Install CD-ROM, Video Loopback cable and 2 Macintosh video adapters

Hardware/Software Requirements

- Any Power Macintosh with at least one available 7" PCI slot
- 16 MB of Macintosh RAM (OrangePC application uses less than 1024MB)
- 300 MB free hard disk Space
- System 8.1 or newer, Open Transport 1.3 or newer
- Extended keyboard is preferred
- Any MultiScan or MultiSync Displays

OrangePC 660 Specifications

- Models:
 - OrangePC 660: 12" card; PCI Interface; 512K pipeline burst level 2 cache; user RAM expandable up to 256 MB; 4 MB video SDRAM
- Processor:
 - Support for Intel Pentium MMX and classic Pentium 100-233 MHz, Cyrix 6x86MX, 6x86L, 6x86 PR166-233, MII PR266-300, AMD K5, K6, and K6-2 166-400 MHz
 - User upgradable Socket 7 ZIF, jumper selectable CPU/bus multiplier and processor voltage from 2.1–3.5 volts
- Memory:
 - DIMM slot allowing any: 16, 32, 64 or 128 MB Macintosh G3 compatible, 3.3 volt, unbuffered, 64-bit-wide, 168 pin, 100 MHz / 10 ns SDRAM, PC100 memory required for 100 MHz bus clock
 - Maximum DIMM height is one inch.
- Cache Memory:
 - 512K 8 ns synchronous pipelined burst level 2 cache greatly enhances processing speed
- Display Graphics:
 - High Performance nVidia RIVA 128 2D/3D graphics video accelerator includes 4 MB SDRAM with a 128-bit, 100 MHz memory interface. Maximum resolution up to 1600 x1200 @ 75 MHz. DirectX 3D video support
- Video Ports:
 - Female DB-15HD VGA video-out; Male DB-15HD VGA video-in; OrangePC Video Loopback cable connects the Macintosh video-out to the OrangePC video-in port, to facilitate a shared Mac monitor
- Sound Support:
 - 32 bit Windows 9x Plug and Play driver; Wave, MIDI and DirectX sound emulated through the Macintosh sound hardware
- Input/Output Ports:
 - PC serial/parallel port driver: COM1, COM2, COM3, COM4, LPT1, LPT2 and LPT3 can use Mac modem and printer ports under Windows 95 and Window 98.
 - SCSI driver: 32 bit Windows 9x Plug and Play SCSI driver automatically detects OrangePC enabled SCSI devices connected to the Macintosh SCSI port, like Zip, Jaz, Syquest drives, Scanners, CD-ROMs, etc. under Windows 95 and Window 98.
 - Network driver: 32 bit NDIS4 Plug and Play Ethernet driver for Windows 95, Windows 98 and Windows NT
- Integration:
 - Clipboard Exchange allows copy and paste of graphics and text between Macintosh and Windows applications.
 - Snapshot enables Windows 9x users to continuously monitor the background system environment like "Picture in Picture" on many TV sets.
 - Shared Volumes allows both the Macintosh and the PC to share files on any volume mounted on the Macintosh desktop
- Package includes:
 - A single 12" x 4.2" PCI 660 card, Easy Install CD-ROM, an OrangePC Video Loopback cable and 2 Macintosh video adapters

Hardware/Software Requirements

- Any Power Macintosh with at least one available 12" PCI slot
- 16 MB of Macintosh RAM (OrangePC application uses less than 1024MB)
- 300MB free hard disk Space
- System 8.1 or newer, Open Transport 1.3 or newer
- Extended keyboard is preferred
- Any MultiScan or MultiSync Display

PCfx! Specifications

- Models:
 - PCfx! (650 version): 12" card; PCI Interface; user RAM expandable up to 128 MB (32 MB standard); 3D video accelerator chip; 4 MB video SDRAM
- Processor:
 - Intel Pentium compatible 200 MHz; not user upgradeable
- Memory:
 - DIMM slot allowing any: 16, 32, 64 or 128 MB Macintosh G3 compatible, 3.3 volt, unbuffered, 64-bit-wide, 168 pin, 100 MHz / 10 ns SDRAM
 - Maximum DIMM height is one inch.
- Display Graphics:
 - High Performance nVidia RIVA 128 2D/3D graphics video accelerator includes 4 MB SDRAM with a 128-bit, 100 MHz memory interface. Maximum resolution up to 1600 x1200 @ 75 MHz. DirectX 3D video support
- Video Ports:
 - Female DB-15HD VGA video-out; Male DB-15HD VGA video-in; OrangePC Video Loopback cable connects the Macintosh video-out to the OrangePC video-in port, to facilitate a shared Mac monitor
- Sound Support:
 - 32 bit Windows 9x Plug and Play driver; Wave, MIDI and DirectX sound emulated through the Macintosh sound hardware
- Input/Output Ports:
 - PC serial/parallel port driver: COM1, COM2, COM3, COM4, LPT1, LPT2 and LPT3 can use Mac modem and printer ports under Windows 95 and Window 98.
 - SCSI driver: 32 bit Windows 9x Plug and Play SCSI driver automatically detects OrangePC enabled SCSI devices connected to the Macintosh SCSI port, like Zip, Jaz, Syquest drives, Scanners, CD-ROMs, etc. under Windows 95 and Window 98.
 - Network driver: 32 bit NDIS4 Plug and Play Ethernet driver for Windows 95, Windows 98 and Windows NT
- Integration:
 - Clipboard Exchange allows copy and paste of graphics and text between Macintosh and Windows applications.
 - Snapshot enables OrangePC Windows 9x users to continuously monitor the background system environment like "Picture in Picture" on many TV sets.
 - Shared Volumes allows both the Macintosh and the PC to share files on any volume mounted on the Macintosh desktop
- Package includes:
 - A single 12" x 4.2" PCI 660/665 Orange Micro card, Easy Install CD-ROM for Windows 98, Microsoft Windows 98, an OrangePC Video Loopback cable and 2 Macintosh video adapters

Hardware/Software Requirements

- Any Power Macintosh with at least one available 12" PCI slot
- 16 MB of Macintosh RAM (OrangePC application uses less than 1024MB)
- 260 MB free hard disk Space
- System 8.1 or newer, Open Transport 1.3 or newer
- Extended keyboard is preferred
- Any MultiScan or MultiSync Display

Video Specifications

The OrangePC 620 uses a SiS5598 Pentium PCI Controller Chipset. It includes an integrated high-performance 2-D Graphics video accelerator that shares up to 4 MB of video SDRAM from main memory.

The video data is passed directly to your monitor through the Female DB-15HD VGA video-out port on the back of the Orange Micro card.

Display Graphics:

- Maximum resolution up to 1280x1024
- Maximum 24-bit color depth at 1024x768
- Vertical refresh rates as high as 85 Hz.

The OrangePC 660/ and PCfx! use a high performance nVidia 128 2D/3D graphics video accelerator.

The video data is passed directly to your monitor through the Female DB-15HD VGA video-out port on the back of the Orange Micro card.

Display Graphics:

- Maximum resolution up to 1600x1200
- Maximum 24-bit color depth at 1024x768
- Vertical refresh rates as high as 120 Hz.

FCC Class B Information

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio/TV Interference Problems". This booklet is available from the US Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

Appendix H: Warranty Information

LIMITED WARRANTY

Every Orange Micro card unit is fully tested and checked for quality prior to shipment. It is warranted to be free from defects in materials and workmanship for a period of one (1) year from date of purchase. During that time period, Orange Micro Inc. will, at no charge to the purchaser of record, repair or replace the defective unit returned to the Customer Service Department in accordance with the following instructions:

NOTE: DO NOT return the Orange Micro card to Orange Micro Inc. until you have received a Return Material Authorization (RMA) Number.

1. Phone the Orange Micro Customer Service Department between 8AM and 4PM PST to obtain a Return Material Authorization (RMA) number. Customer Service lines are closed from 12PM to 1PM PST for lunch.
2. Provide Orange Micro, Inc. with: Model, Serial Number, Proof of Purchase with Date, Return Address, and preferred return shipping method. Enclose a clear description of the problem experienced and any sample printouts showing the problem, if possible.
3. Ship in the original carton or securely packed in a cardboard carton with at least two inches of cushioned packing material on all sides. Mark the package "FRAGILE" and ship via UPS, Parcel Post, or Air Freight, insured and prepaid.

NOTE: DO NOT SEND COLLECT - collect shipments will be refused and returned to sender.

Orange Micro, Inc. disclaims any liability to users of the Orange Micro card for consequential damages of any kind arising from or connected with the use of the Orange Micro card.

This warranty is void in cases of misuse, abuse, abnormal conditions of operations or attempts to alter or modify the function of a part or assembly.

This limited warranty is in lieu of all other warranties expressed or implied, and no representative or other person is authorized to represent or assume for Orange Micro, Inc. any warranty liability beyond that set forth herein.

This warranty gives you specific legal rights, and you may also have additional rights, which vary, from state to state. The warranty expressed herein applies to the Orange Micro card sold and used in the United States of America.

Getting the Best Results From Your Customer Service Call

When calling our Customer Service Department for technical help, please be located at your Macintosh with the Orange Micro card and this manual. Also, be ready to supply the following information:

1. Orange Micro product name: _____
Model #: _____
2. Orange Micro application software version: _____
3. Macintosh model being used with the Orange Micro product:

4. Macintosh System software version being used with the Orange Micro product:

5. List or print a directory of all the files located in your Macintosh System Folder. Include all files in the Control Panel and Extensions folders:

Reaching Customer Service

Orange Micro Customer Service department is available from 8am to 4pm Pacific Standard time Monday through Friday except national holidays.

If you have a pre-sale technical question about an Orange Micro product you are considering for purchase, calling for RMA status or missing item in the package, please call (714) 779-2772 during normal business hours.

To help us respond to your technical questions in a timely manner, please be in front of the computer you are troubleshooting and be prepared to supply the information requested in the above section "Getting the Best Results From Your Customer Service Call".

Phone: (714) 779-2772

FAX: (714) 779-9332

<http://www.orangemicro.com/> (For information or to download the latest software release)

support@orangemicro.com (To email our Customer Service Department)

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