iBOT™

Operators Manual

For Macintosh and PC

Orange Micro® inc.

http://www.orangemicro.com

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About this manual

The information in this manual is subject to change without notice. We welcome your comments on any area of Orange Micro products or services. Please send your comments to:

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Chapter 1

Introduction

What is iBOT?

Orange Micro is first to market the iBOT™ and iBOT*pro*, a FireWire-based desktop video cameras. iBOT harnesses the speed and power of FireWire unmatched by the slower USB-based web cams. In fact, the inexpensive iBOT uses the same IEEE 1394 technology built into pricey DV camcorders costing over 7 times as much. Orange Micro's iBOT is the desktop video camera for the rest of us, providing crisp, clear video at a price you can afford.

What is FireWire?

FireWire supports the IEEE 1394 High Performance Serial Bus standard. FireWire high-speed serial I/O technology is ideal for use with multimedia peripherals such as digital video (DV) camcorders, tape decks and cameras.

iBOT Features

Exclusive FireWire Speed and Clarity

With a data transfer rate that's 16 times faster than traditional USB web cams, you'll experience a Video Frame Rate of 30 frames/second - that's the same speed as you see at your local movie theater. And that's with a big 640 x 480 image size in living color.

Polish Your Presentations

With clarity only iBOT can provide, you can record and save super-crisp video in your home or office. Spice up important presentations with film clips. Hone your persuasion skills with instant video feedback.

Affordable Movie Making

iBOT can make you a star! Record special family events, such as Christmas, Thanksgiving dinner, or even just everyday life. Produce your own documentaries. The iBOT's 400 Mb/s data transfer speed lets you easily input, edit, and show-off movies with pride.

Video Teleconferencing for the Internet

The iBOT includes Video Teleconferencing software for both Mac and PC so you can talk to anyone, face-to-face, via the Internet, with a whole new level of clarity. Whether it’s the grandparents, relatives, or old friends you haven't seen, only iBOT provides quality video conferencing unmatched by older USB web cams.

Video E-Mail

Attach super-clear video clips to your email for a whole new dimension of communication. Show off brand-new additions to your family immediately! Send video greetings from Fiji! Keep the people you love updated on what you're up to.

Chapter 2

How to install iBOT in your Macintosh

In order to ensure proper operation of your iBOT product, please follow the instructions below in the order they appear. These instructions document the installation process for the iBOT and iBOT*pro* FireWire Desktop Video Camera drivers.

Step 1 – Installing iBOT Drivers in the Mac OS

- Insert the iBOT Installer CD. The window pictured on the right should pop up on your Macintosh desktop.
- Double-click on the iBOT Installer icon.
- Once the iBOT Installer has opened, double click on the "iBOT Installer" The iBOT Installer copies all necessary Orange Micro drivers to the Macintosh extensions folder. Additional utilities and shortcuts to important Apple software download websites are copied to a folder named "Orange Micro iBOT *f*" on your Macintosh startup drive.
- Open the BTV folder on the iBOT Installer CD and double click on the BTV Installer icon to install BTV.

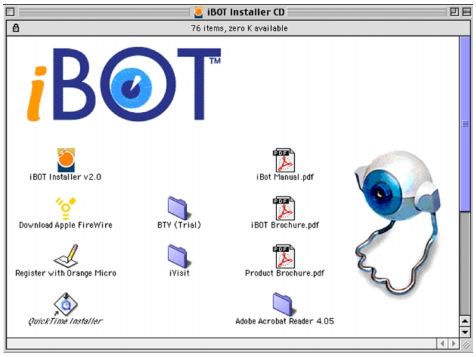


Figure 1. The Installation Window

Additional software is included with the iBOT for video editing, video teleconferencing, etc. Installers are provided for these applications in their respective folders on the iBOT Installer CD-ROM. The Manuals are provided in Adobe Acrobat Reader format in each of their respective folders once installed to your hard drive.

Step 2 – Connecting your iBOT Camera

Connect the iBOT Camera to an available FireWire port

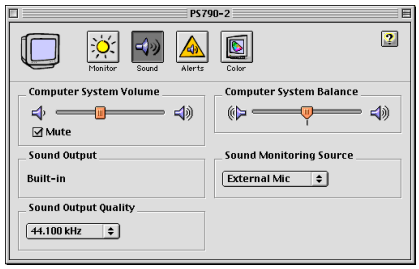
NOTE: The iBOT FireWire Desktop Video Camera draws power from the FireWire bus to function. Portable laptop computer systems with CardBus FireWire adapters do not supply power for the FireWire bus. Power may be supplied by another device that supplies power to the FireWire bus, such as the Orange Micro OrangeLink FireWire Hub.

Step 3 – Verify the proper installation of the iBOT Drivers

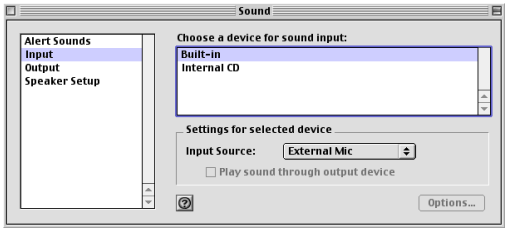
You can use BTV from the iBOT Installer CD to verify the iBOT functions properly. Simply double click on the BTV application icon, located in a BTV Folder on your hard drive. A video stream should appear from your iBOT. If a BTV Video Input window does not open, pull down the BTV Window menu and select Video Input.

Microphone Gain Control

Mac OS 8.6 Sound Control Panel allows adjustments to the External Microphone as shown in the picture to the right.

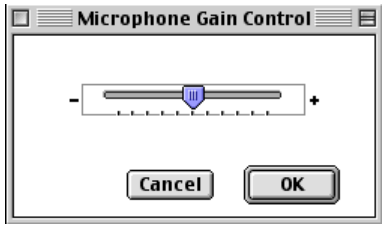


Some Mac OS Sound Control Panels do not allow adjustments to the External Microphone as shown in the picture to the right.



You can use the iBOT supplied Microphone Gain Control to adjust the intensity of your External Microphone.

The Microphone Gain Control can be found in the Apple menu under Control Panels.



Updating Apple FireWire Software

Mac OS 8.6 requires Apple FireWire Software v2.3.3. Mac OS 9.0.x requires Apple FireWire Software v2.5 or newer. Mac OS 9.1 and newer comes with Apple FireWire Software preinstalled. To update or add FireWire support, follow these instructions:

- Connect to the Internet in the manner recommended by your Internet Service Provider.
- Locate the “Download Apple FireWire”. This script can be found in the “Orange Micro iBOT ƒ” folder that was created on your Macintosh startup drive by the iBOT Installer.
- Double-click “Download Apple FireWire”.

Congratulations! You have set up your FireWire support on your Macintosh.

Frequently Asked Questions - Macintosh

Problem – I have a 4 pin FireWire port. How do I attach the iBOT to my computer?
Suggestion:
The iBOT gets its power from the FireWire bus. Because a 4 pin FireWire port does not supply power to the FireWire bus, an external source for power must be used. A good candidate for that power would be the Orange Micro OrangeLink FireWire Hub.

Problem – Is the iBOT camera compatible with Mac OS X?
Suggestion:
Currently the iBOT camera is not compatible with Mac OS X. We are working on an iBOT camera driver for Mac OS X. We expect it to be available by the end of fourth quarter 2001. When the Mac OS X driver is available, it will be downloadable from the iBOT Software Updates page.

Problem – When I use VideoLink for Macintosh to connect to a Windows NetMeeting user with the iBOT*pro*, the video that the remote user received is very slow. Why is this and what can be done?
Suggestion:
When video conferencing with a Windows NetMeeting user, the maximum rate that you will be able to send video to the NetMeeting endpoint is 15 frames per second (fps) at QCIF (medium) size and 7 fps at the CIF (Large) size. This is a restriction of NetMeeting. This does not occur if both endpoints are VideoLink.

Problem – Does the iBOT camera support the 1394 TA Digital Camera Specification 1.3?
Suggestion:
The iBOT camera meets the Digital Camera specification v1.04. It is compatible with Digital Camera specification v1.3, but doesn't provide features specific to that version.

Problem – I am a software developer and I am interested in developing a custom application for the iBOT camera. Does Orange Micro have a Developers Kit for the iBOT camera?
Suggestion:
Unfortunately we do not have a developers kit. However, most developers use QuickTime to capture video from cameras on the Macintosh. Sample source code is available from Apple Computer. Check under the heading of QuickTime DV capture. (http://developer.apple.com/samplecode/Sample_Code/QuickTime/Capturing.htm)

Problem – What system software is required for the iBOT to work?
Suggestion:
The following Extensions must be in your Apple System/Extensions folder for iBOT to function:
* FireWire Enabler (2.3.3 or newer)
* FireWire Support (2.3.3 or newer)
* FW iBOT Camera Extension
* QuickTime FireWire DV Enabler
* QuickTime FireWire DV Support

Problem – I just installed my iBOT*pro* camera. I connected the included headset and can get no sound. What can I do?
Suggestion:
Look for the included PlainTalk adapter request form in the box. Fill it out and send it to Orange Micro. We will send you the adapter free of charge if you show proof that you purchased an iBOT*pro*. Once you get it, attach the PlainTalk adapter to the microphone port on your Mac. Click on the Apple menu and select Control Panels/Sound. Click on input and under Settings for selected device, set Input Source to External Microphone. Then click on the Apple menu and select Control Panels/Microphone Gain Control and adjust input sound for your needs.

Problem – Why is using a FireWire desktop camera better than a USB desktop camera?
Suggestion:
The main benefit of using the iBOT is that the video coming from the iBOT is uncompressed. Other cameras compress video before it leaves the camera. Then the program that receives the video must decompress and then recompress the video using a different type of compression before the video is usable. This technique tends to dramatically degrade the quality and color of the video. Because the iBOT sends uncompressed video the program does not have to uncompress and then recompress the video before it can be used. It will simply take the uncompressed video from the iBOT and compress it using the appropriate compression. This will allow for better quality video along with alleviating the demand on the CPU to process more frames.

When using the iBOT for DV editing there are a few system requirements you should keep in mind. The first thing is the transfer rate. This number will vary depending on the resolution and frame rate you capture. The formula used to determine the transfer rate is “horizontal resolution x vertical resolution x 2 x frames per second = transfer rate”. If you capture 640x480 at 30 Frames/sec you simply multiply 640x480x2x30, which equals 18,432,000 Bytes/Sec or 18MB/s. If you intended to capture 640x480 at 30 Frames/sec you need a hard drive that can sustain a transfer rate of 18 MB/s.

There are other factors to keep in mind other than hard drive speed. When video editing from a Macintosh using the iBOT, Orange Micro recommends at least a G3 233 MHz processor and 80 MB of RAM. We also recommend turning virtual memory off, running a minimal set of extensions, turning off Apple Talk, have an optimized hard drive and set disk cache to 128 k.

Problem – I have a PowerBook G3 with built-in FireWire and the capture window displays green noise at the bottom 1/8th of the window. The rest of the window has diagonal black lines. What can I do?
Suggestion:
At this time there is an incompatibility between all Texas Instruments based web cams (including the iBOT camera) and the built-in FireWire port on a PowerBook G3 (Pismo) laptops made before June/July of 2000. PowerBook G3 (Pismo) laptops made after July of 2000 used a different chip, which corrected this issue. Apple and Texas Instruments are currently looking into a solution that will allow the camera to function in the older PowerBook G3 laptops, however at this time the only workaround is to use a FireWire CardBus card and attach the iBOT camera to it on a powered FireWire bus.

Problem – I cannot get iMovie to capture video through my iBOT? What can I do?
Suggestion:
Apple has confirmed that iMovie only supports a limited DV Format which is available from DV camcorders. iMovie does not support the video formats that are available from the iBOT (YUV 4:1:1, YUV 4:2:2, YUV 4:4:4, and RGB 24-bit formats). Software which does support the iBOT are: BTV Pro, Apple Final Cut Pro, Adobe Premiere for the Mac, etc.

Problem – My Macintosh does not have a built-in Microphone port. How do I connect a Microphone for use in conjunction with my iBOT?
Suggestion:
The iBook and Power Mac G4 Cube do not have built-in microphone ports. For those users who would like to use an iBOT with one of the above-mentioned machines and would also like to attach a microphone, Orange Micro recommends the iMic from Griffin Technology. The iMic universal audio adapter is a USB device that allows the connection of virtually any microphone or sound input device to the iBook, or any Macintosh with USB ports. The iMic supports both line and mic level input. For more information or to purchase the iMic please visit the http://www.1394FireStation.com under the cables section.

Chapter 3

How to install an iBOT in your PC

In order to ensure proper operation of your iBOT product, please follow the instructions below in the order they appear. These instructions document the installation process for all Orange Micro iBOT products on your Windows PC.

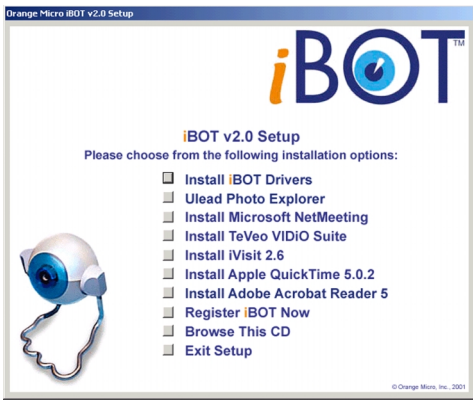
NOTE: Microsoft Windows XP has a built-in iBOT driver. Simply plug-in the iBOT cable into an available FireWire port. Double click on the "My Computer" icon. An iBOT camera icon will appear. Double click on the iBOT camera icon and a window with a video stream from the iBOT should appear.

Step 1 – Installing iBOT Drivers in Windows

Orange Micro iBOT FireWire Desktop Video Camera products may be used on any Intel Pentium compatible system with an available FireWire port.

NOTE: Microsoft refers to FireWire as IEEE-1394; the two are synonymous.

- Insert the iBOT Installer CD. Once inserted, the iBOT Installer will automatically start and display the menu to the right.
- The Orange Micro iBOT Setup screen will automatically appear.
- Click on "Install iBOT Drivers".
- Follow the onscreen instructions.
- When prompted, restart your computer.



Step 2 – Connecting your iBOT Camera

Connect the iBOT Camera to an available FireWire port. Windows will detect the iBOT camera, then request the iBOT Installer CD. Click OK.

The "Insert Disk" or "Files Needed" dialog will appear. In the copy file from field,

Windows 98
enter the path "`x:\iBot\Win98`" (x= the drive letter for your CD-ROM drive). Then click OK.

Windows Me
enter the path "`x:\ibot\WinMe`" (x= the drive letter for your CD-ROM drive). Then click OK

Windows 2000
enter the path "`x:\iBot\Win2000`" (x= the drive letter for your CD-ROM drive). Then click OK

The iBOT drivers will now be installed. Restart Windows.

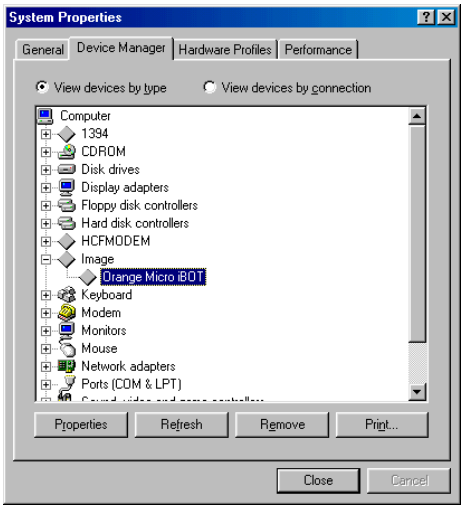
Step 3 – Verify the proper installation of the iBOT Drivers

Check your Windows System/Device Manager to confirm proper installation of iBOT drivers:

Image

-Orange Micro iBOT

If the Orange Micro iBOT driver shows up as displayed below the drivers have been installed successfully.



You can use the AMCAP application to verify the iBOT functions properly. Click on the Windows Start/Programs menu and select “Orange Micro iBOT”/AMCAP. Pull down the AMCAP “Options” menu and select Preview. A video stream should appear from your iBOT camera.

If you wish to adjust the brightness, pull down the AMCAP “Options” menu and select “Video Capture Filter…” . Then click on the “Video Proc AMP” tab. Then, remove the check mark across from the brightness label and slide the brightness bar with your mouse to the desired position.

Congratulations! You have successfully installed the iBOT on your PC.

Frequently Asked Questions - PC

Problem – I am running Windows Me and my iBOT image will only appear in monochrome, not color. What can I do to get a color image?

Suggestion:

This will happen if you are running Windows Me and do not install the iBOT software before attaching the iBOT cable to your system’s 1394 port. To correct this situation perform the following steps:

- Right-Click on the "My Computer" icon. Select Properties in the pop-up menu.
- Click on the Device Manager tab.
- Double click on the Imaging Device item. Then, select Sony Camera (normally it will be "Orange Micro iBOT") and click on the Properties button. Click on the Driver tab.
- Click on Update Driver button.
- Click Next, then select "Specify the location of the driver". Click the Next button again.
- Click “Search for better driver than the one your device is using”. Check “specify a location. Then enter the path “`x:\ibot\WinMe`” (x= the drive letter for your CD-ROM drive). Then click Next.
- “What would you like to install” dialog appears, click Next again.
- Click Next, then Finish.
- Close all windows then restart Windows.

Problem – I am running Windows 2000 and my iBOT image will only appear in monochrome, not color. What can I do to get a color image?
Suggestion:
This will happen if you are running Windows 2000 and do not install the iBOT software before attaching the iBOT cable to your system's 1394 port. To correct this situation perform the following steps:
1. Right-Click on the "My Computer" icon. Select Properties in the pop-up menu.
2. Click on the Hardware tab. Click on the Device Manager button.
3. Double click on the "Imaging Device" item. Then, double click on "Sony 1394 CCM-D5250 Desktop Camera" (normally it will be "Orange Micro iBOT") Click on the Driver tab.
4. Click on "Update Driver" button.
5. Click Next, then select "Search for a suitable driver for my device". Click the Next button again.
6. Check "Specify a location". Click Next. Then enter the path "`x:\ibot\Win2000`" (x= the drive letter for your CD-ROM drive). Then click OK.
7. "Driver Files Search Results" dialog appears, click Next again.
8. A "Digital Signature Not Found" dialog appears, Click Yes to continue the installation. Then click Finish.
9. Close all windows then restart Windows.

Problem – I am running Windows 98 SE. Working with the iBOT does not seem to be stable. What can I do?
Suggestion:
This may happen if you are running Windows 98 SE and do not install the iBOT software before attaching the iBOT cable to your system's 1394 port. A Sony Camera device appears in the device manager under "Imaging Device". To correct this situation perform the following steps:
1. Install iBOT drivers from the iBOT CD-ROM.
2. Restart Windows 98 SE in Safe Mode by tapping the F8 key continuously after the systems finishes testing memory.
3. Right-Click on the "My Computer" icon. Select Properties in the pop-up menu.
4. Click on the Device Manager tab.
5. Double click on the Imaging Device item. Then, select Sony Camera (normally it will be "Orange Micro iBOT") and click on the Remove button. Restart Windows 98 SE. The "Insert Disk" or "Files Needed" dialog will appear. In the copy file from field, enter the path "`x:\iBot\Win98`" (x= the drive letter for your CD-ROM drive). Then click OK.

Problem – I have the latest drivers installed for the iBOT but I am only getting a black and white image.
Suggestion:
To adjust the Saturation, click on the Windows Start/Programs menu and select "Orange Micro iBOT"/AMCAP. Pull down the AMCAP "Options" menu and select "Video Capture Filter…" . Then click on the "Video Proc AMP" tab. Then, remove the check mark across from the brightness label and slide the brightness bar with your mouse to the desired position.

Problem – The iBOT image is very dark
Suggestion:
Click on the Windows Start/Programs menu and select "Orange Micro iBOT"/AMCAP. Pull down the AMCAP "Options" menu and select "Video Capture Filter…". Then click on the "Video Proc AMP" tab. Then, check mark across from the exposure option. Then click OK. The image should now look normal.

Problem – I have a 4 pin FireWire port. How do I attach the iBOT to my computer?
Suggestion:
The iBOT gets its power from the FireWire bus. Because a 4 pin FireWire port does not supply power to the FireWire bus, an external source for power must be used. A good candidate for that power would be the Orange Micro OrangeLink FireWire Hub.

Problem – I cannot get my iBOT to work through an otherwise functioning 1394 PC Card in my PC laptop. What can I do?
Suggestion:
The iBOT is powered from the FireWire bus. Because the PC Card slot does not supply power to the FireWire bus, an external source for power must be used. A good candidate for that power would be the Orange Micro OrangeLink FireWire Hub.

Problem – Does the iBOT camera support Linux?
Suggestion:
Orange Micro has no plans to develop and support Linux drivers for the iBOT Camera. However, we will publish links to known Linux web sites that have drivers that support the iBOT (http://linux1394.sourceforge.net/view_device.php?id=23).

Problem – Does the iBOT camera support the 1394 TA Digital Camera Specification 1.3?
Suggestion:
The iBOT camera meets the Digital Camera specification v1.04. It is compatible with Digital Camera specification v1.3, but doesn't provide features specific to that version.

Problem – I am a software developer and I am interested in developing a custom application for the iBOT camera. Does Orange Micro have a developers kit for the iBOT camera?
Suggestion:
Microsoft® DirectShow® is the interface that most developers use to capture video from DVCAMs and Desktop Cameras, including USB and FireWire Web Cams. We have no developer kit for this purpose. All the required information is available from Microsoft.

Microsoft® DirectShow®
http://www.microsoft.com/DIRECTX/dxm/help/ds/default.htm

Problem – Why is using a FireWire desktop camera better than a USB desktop camera?
Suggestion:
The main benefit of using the iBOT is that the video coming from the iBOT is uncompressed. Other cameras compress video before it leaves the camera. Then the program that receives the video must decompress and then recompress the video using a different type of compression before the video is usable. This technique tends to dramatically degrade the quality and color of the video. Because the iBOT sends uncompressed video the program does not have to uncompress and then recompress the video before it can be used. It will simply take the uncompressed video from the iBOT and compress it using the appropriate compression. This will both allow for better quality video along with alleviating the demand on the CPU to process more frames.

When using the iBOT for DV editing there are a few system requirements you should keep in mind. The first thing is the transfer rate. This number will vary depending on the resolution and frame rate you capture. The formula used to determine the transfer rate is “horizontal resolution x vertical resolution x 2 x frames per second = transfer rate”. If you capture 640x480 at 30 Frames/sec you simply multiply 640x480x2x30, which equals 18,432,000 Bytes/Sec or 18MB/s. If you intended to capture 640x480 at 30 Frames/sec you need a hard drive that can sustain a transfer rate of 18 MB/s.

There are other factors to keep in mind other than hard drive speed. To properly perform video editing on a PC using the iBOT you will need at lease a Pentium 233MMX, 64 MB of RAM and a defragmented hard drive.

Appendix A

iBOT Package Contents

The iBOT FireWire Desktop Video Camera contains the following items:

- iBOT FireWire Desktop Video Camera w/6 foot cable with 6 pin IEEE 1394 FireWire connector
- iBOT Installation Software, Manual and Applications CD

The iBOT*pro* FireWire Desktop Video Camera contains the following items:

- iBOT FireWire Desktop Video Camera w/6 foot cable with 6 pin IEEE 1394 FireWire connector
- iBOT Installation Software, Manual and Applications CD
- An non-powered Microphone headset a with 3.5mm jack for a PC (3.5mm Mac PlainTalk adapter may be required for Macintosh)

A PlainTalk adapter allows you to connect ANY non-powered microphone to your Apple Macintosh or Mac clone. If you purchased an iBOT*pro*, a mail-in form is provided for a free PlainTalk adapter.

Software included with iBOT Desktop Video Camera:

Mac

Apple QuickTime
ArcSoft Montage (turn a regular photo into a "montage")*
ArcSoft Photo Studio (photo editing application)*
ArcSoft Photo Printer Pro (lay out and print your images)*
BTV(Trial version)**
BTV Pro (registered version. view, capture and edit video)*
iVisit (video conferencing software)
SmithMicro VideoLink (videoconferencing software)*

PC

Apple QuickTime
ArcSoft PhotoMontage (turn a regular photo into a "montage")*
ArcSoft PhotoStudio (photo editing application)*
ArcSoft PhotoPrinter Pro (lay out and print your images)*
iVisit (video conferencing software)
Microsoft NetMeeting (videoconferencing software)
Microsoft Internet Explorer
TeVeo Suite (stream live video to the web)
Ulead, Photo Explorer 7 (photo editing application)**

* These applications are included only with the iBOT*pro* (Alternative video editing software may be substituted in your version).
** These applications are included only with the iBOT (Alternative video editing software may be substituted in your version).

Appendix B

Optional Hardware

The following optional OrangeLink hardware accessories are available from Orange Micro:

FireWire cable **Part# 70CAB13942**
4.5 meter (15 feet) 6-pin to 6-pin

FireWire cable **Part# 70CAB13943**
4.5 meter (15 feet) 6-pin to 4-pin

USB 2.0 Certified cable **Part# 70CAB90033**
4.5 meter (15 feet)

FireWire Repeater **Part# 70HTL00020**
Allows an additional 4.5 meter extension for FireWire devices. Includes a 4.5 meter (15 foot) 6-pin to 6-pin cable.

FireWire Hub **Part# 70HTL00030**
Connects up to 8 devices. Also provides an additional 4.5 meter extension, and an enhanced 12 volts of power for FireWire peripherals.

USB 2.0 Hub **Part# 70USB90030**
Connects up to 4 devices. Also provides an additional 4.5 meter extension.

FireWire PCI Board **Part# 70HTL13943**
Add 3 FireWire ports to your PCI based Mac or PC.

USB 2.0 Hi-Speed PCI Board **Part# 70USB90010**
Add 5 USB 2.0 Hi-Speed ports to your PCI based Mac or PC.

FireWire PC Card **Part# 70HTL00040**
Add 2 FireWire ports to your Mac or PC Laptop.

USB 2.0 Hi-Speed PC Card **Part# 70USB90020**
Add 4 USB 2.0 Hi-Speed ports to your Mac or PC Laptop.

USB 2.0 FireWire PCI Board Part# 70HTL00110
Add 3 FireWire and 4 USB 2.0 Hi-Speed port to your PCI based Mac or PC.

FireWire/SCSI U2W PCI Board **Part# 70HTL00080**
Add FireWire and SCSI U2W support to your PCI based Mac or PC

FireWire/Ethernet PCI Board **Part# 70HTL00090**
Add 2 FireWire ports and Ethernet support to your PCI based PC Only.

Orange Converter, FireWire To SCSI **Part# 70HTL00010**
External adapter allowing users to connect Fast SCSI device through a FireWire Port.

Optional OrangeLink FireWire PC Card Power Supply
Avoid buying a FireWire Hub for the purpose of supplying power to the FireWire Bus. Available from:
http://www.1394firestation.com/

Information about the IEEE 1394 Trade Association, USB Implementers Forum, Inc. and many other related products can be found at these addresses:
http://www.1394ta.org
http://www.1394showcase.com
http://www.apple.com/firewire/firewireproducts.html
http://www.usb.org/

Appendix C

Specifications

General Features:

- 400 Mb/sec. IEEE 1394 compatible (camera consumes only 200 Mb/s bandwidth)
- Fully compatible with Macintosh and PC / Windows
- Non-compressed full-motion digital video at rates of 30 Frames/sec @ 640 x 480
- 1/4" Color CCD Image Sensor
- 62 degree angle of view
- Effective Pixels: 659 x 494
- Frame size up to 640 x 480
- Focusable lens from 1cm to infinity
- Scanning System: Progressive scan
- Supports YUV 4:1:1, YUV 4:2:2, YUV 4:4:4, and RGB 24-bit formats
- Millions of colors (24 bit)
- Supports Plug-and-Play specification
- Supports up to 2 cameras per bus simultaneously
- iBOT*pro* includes microphone for Mac and/or PC (3.5mm Mac PlainTalk adapter, NOT INCLUDED, may be required for Macintosh. iBOT*pro* comes with a mail-in form to request a free PlainTalk adapter)

Cable / Connector:

- 6 foot cable with 6 pin IEEE 1394 FireWire connector
- Microphone with 3.5mm jack for PC included in iBOT*pro.*

Software:

- PC/Mac drivers
- PC/Mac Internet Video Conferencing software
- iBOT*pro* Version provides additional software

Hardware Requirements:

- 400 MHz or above Intel Pentium compatible or any Mac with a FireWire port
- One available IEEE 1394 FireWire port supplying at least 850 mW of power
- 32 MB System RAM
- 12 MB free hard drive space
- CD-ROM (for software installation)
- iBOT*pro* requires 3.5mm microphone jack or PlainTalk jack adapter

Operating System Support:

- Windows 98 Second Edition, Windows 2000, Windows Me, Windows XP
- MacOS 8.6 or newer

Partial List of Compatible Software:

Video Teleconferencing

- CUseeMe for Mac & PC
- ICUII Video Chat for PC
- iSpQ VideoChat 5.0 Mac & PC
- iVisit for Mac & PC
- Microsoft NetMeeting for PC

Video Editing

- Adobe Premiere 6.0
- BTV Pro for Mac
- FinalCut Pro for Mac
- MGI Photo Suite for PC
- VideoWave for PC
- Ulead Video Studio for PC

Video E-Mail

- iSpQ VideoChat 5.0 Mac & PC
- Live Express for PC

Video Monitoring / Surveillance

- Digital Radar for PC

Photo Editing

- ArcSoft PhotoFantasy for Mac & PC
- ArcSoft PhotoStudio for Mac & PC
- ArcSoft PhotoMontage for Mac & PC
- ArcSoft PhotoPrinter Pro for Mac & PC
- Ulead Photo Express for PC

Appendix D

Warranty Information

LIMITED WARRANTY
Every Orange Micro product 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. Customers outside the United States should contact the Orange Micro distributor in that country and request service.

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, 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 product for consequential damages of any kind arising from or connected with the use of the Orange Micro product.

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 product sold and used in the United States of America.

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

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