


VIDEO CAPTURE AND PLAYBACK

This chapter describes two of the most useful features of WaveWatcher Net-TV 98—how to capture and playback video. You can view and capture “live” video from a variety of different sources, such as a VCR, television, cable, laserdisc, DVD player, or video camera. At a later time, you can play back the video or use it in multimedia productions.

Video Capture

Pressing  on the remote control changes the television window to a **Recorder** window (see Figure 3-1).

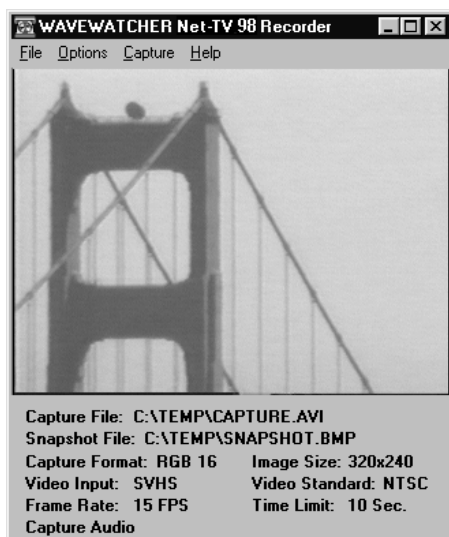


Figure 3-1 *Sample Net-TV 98 program Recorder window.*

Capture settings can be customized, using the **Recorder** window menus, as described in the following section.

Setting the Capture Options

The following steps describe how to capture full-motion video. Instructions for capturing to the Windows clipboard or still-frame video are discussed in Lights, Camera, Action... on page 3-7.

1. Create a *file name* for the capture.

Choose **File | Set Capture File...**, enter a *file name*, then choose **OK**. All video sequences are saved as AVI files.

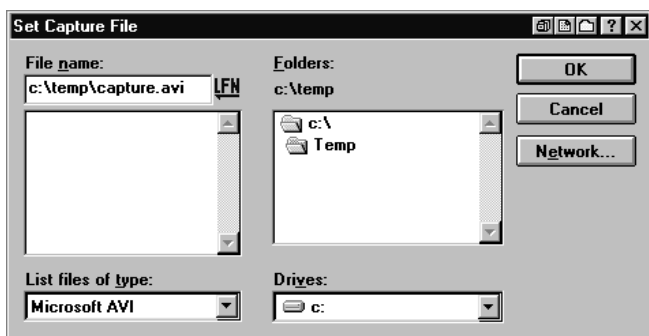


Figure 3-2 Enter a path and file name for the captured video sequence.

2. To capture audio as well as video, choose **Options | Audio Format...**

Choose CD-, radio-, or telephone-quality sound, *audio format*, and *attribute setting*. Choose **Save As...** if you want to save the setting configuration for future use. Choose **OK** to continue.



Notes: The **Sound Selection** dialog box does not appear if the system is unable to detect a sound card.

Audio formats listed vary by sound card manufacturer.

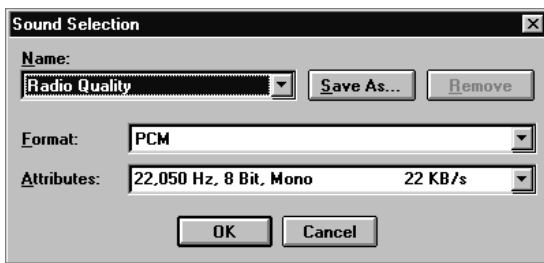


Figure 3-3 *Specify the video capture sound settings.*

3. Choose **Options | Video Format...**

Three capture formats are currently available—RGB 16-bit, RGB 24-bit, and RGB 32-bit. The **Video Format** dialog box also allows setting of the image size, as well as the field order (that is, whether to begin the capture on an odd or even video frame).

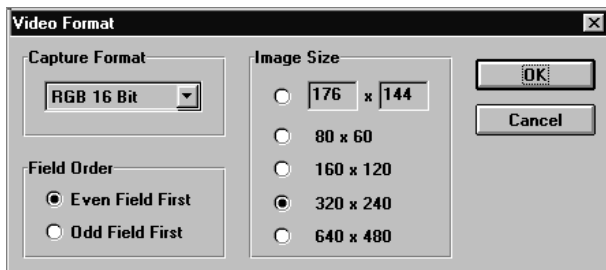


Figure 3-4 *Specify the video format settings.*



Note: Resizing the video window with the mouse has no effect on the output in Video Capture mode.

4. Choose **Options | Video Source...** to specify the source of the input and the video standard used. The **Brightness**, **Contrast**, **Hue**, and **Saturation** bars function identically to those on the remote control.

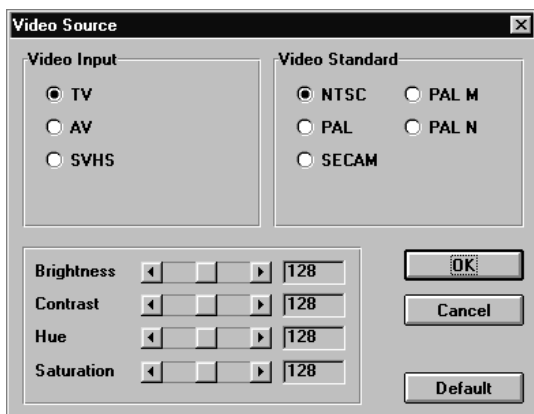


Figure 3-5 Specify video source settings.



Note: View the moving video in the **Recorder** window to study the effect of changing these settings.

5. Choose **Options | Compression...** to specify a video compression method. The available choices vary, depending upon the other software compression drivers installed on the computer.

For best capturing performance, specify *Full Frames (Uncompressed)* as the **Compressor** selection.

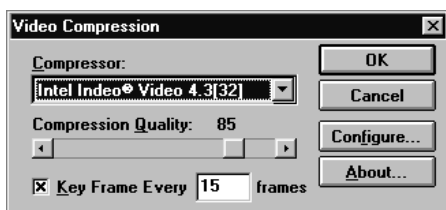


Figure 3-6 Specify video compression settings.



Note: You can further configure the compression method by choosing **Configure...** Configuration settings vary by manufacturer and method selected. Contact the video card manufacturer if you need help with the configuration settings.

6. Choose **Options | Preview -or- Options | Overlay**.
 - **Overlay** sends the input video directly to your monitor, which usually results in better viewing.
 - **Preview** displays the input as the computer “sees” it, and is useful for experimenting with the effects of different capture settings.
7. Choose **Capture | Capture Settings....**
8. Select **Capture Audio** if you want to capture sound with your video.
9. Specify any other parameters for capturing the video clip, then choose **OK**.



Note: *If you selected Hit OK to Capture, capturing begins after choosing OK.*

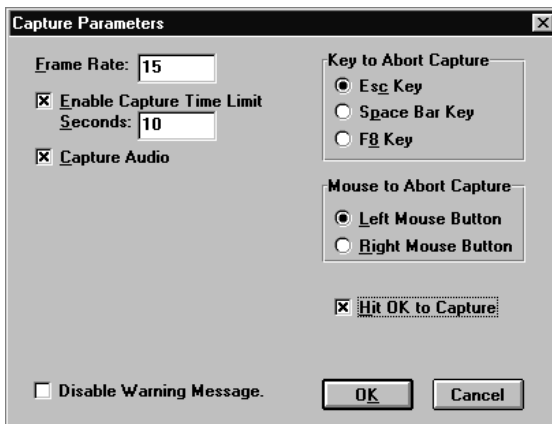


Figure 3-7 *Configure video clip capture parameters.*



Lights, Camera, Action...

This section describes how to capture a full-motion video sequence and single frame of video.



Note: *This product supports motion video and single-frame still images captured to an AVI files. This product does **not** support time lapse or manual frame-by-frame capture to an AVI file.*

To capture a full-motion video sequence

1. Choose **File | Set Capture File...**.
2. Specify *file name* and *path* in which to save the file.
3. Choose **OK**.
4. Choose **Capture | Capture Video**. Video capture continues until ended by pressing the primary mouse button (typically the left-mouse button) or by pressing the keystroke (hotkey) selected from the **Capture Parameters** dialog box (available by choosing **Capture | Capture Settings**), or when the Capture Time Limit is reached.

When the capture is complete, the video freezes and the **Recorder** window displays information similar to that shown below.



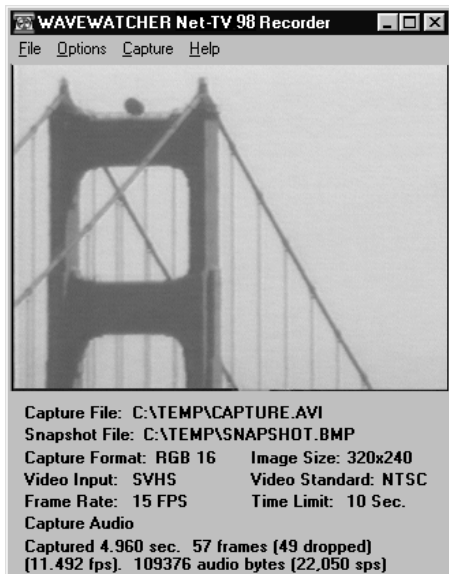


Figure 3-8 Recorder window displays information about the captured video.

To capture and use a single frame of video

1. Choose **Capture | Snapshot to Clipboard** to capture the displayed frame of video to the clipboard.
2. Paste the copied frame into another file (such as a Video for Windows, QuickTime, or a word processing file).

To capture a single frame of video to a BMP file

1. Choose **File | Set Snapshot File....**
2. Specify *file name* and *path* to which to save the file.
3. Choose **OK**.
4. Choose **Capture | Snapshot to File**.



Playing AVI Files

To play back an AVI file

1. Choose  on the remote control.

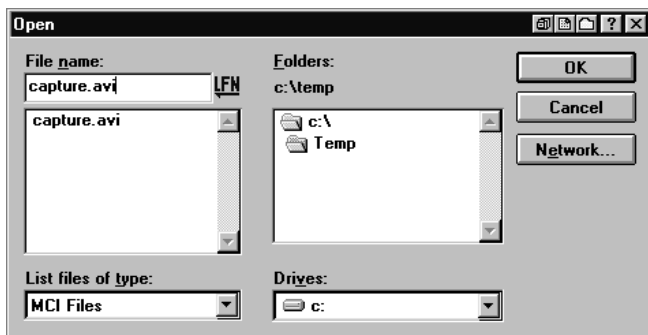


Figure 3-9 *Open a file for AVI playback.*

2. Select *videoclip* file to play.
3. Choose **OK**.

The file appears in the **AVI Player** window and the clip begins to play. The fader bar indicates playback progress.



Figure 3-10 *AVI Player window indicates videoclip playback progress.*



4. Choose  to start or pause video playback.
5. Choose  access drop-down menus with additional configuration options.



Figure 3-11 Drop-down control and configuration options optimize playback quality.

Playback speed and audio volume are controlled by faders that appear alongside the menu when the corresponding options are selected. Both faders operate over a range of 0 to 100. A playback speed of 100 means 100 percent of the original speed of the videoclip. The audio volume setting is visible only if a sound card is installed in the computer.



Note: Audio settings changed with the Net-TV 98 program—volume increase, volume decrease, and mute—change the sound card settings used by your computer system. Be sure to return your system to the settings of your preference before exiting the Net-TV 98 program. If you have not changed the settings back while in the Net-TV 98 program, choose **Start | Programs | Accessories | Multimedia | Volume Control**, then reset the audio settings as necessary.




Figure 3-12 *Adjust playback speed.*

Playback Options

This section describes how to use the **Copy** and **Configure** options.

To copy a the current frame to the clipboard


1. Choose .
2. Choose **Copy**.

The current frame is immediately copied to the Windows clipboard, as shown below. To view the clipboard, choose **Start | Programs | Accessories | Clipboard Viewer**. Paste the frame into a document, paint program, video, or any other medium that allows clipboard pasting.



Figure 3-13 *A single frame of playback video can be copied to the clipboard.*

To configure the playback window size

1. Choose .
2. Choose **Configure....**
3. Specify *playback settings*, then choose **OK**.

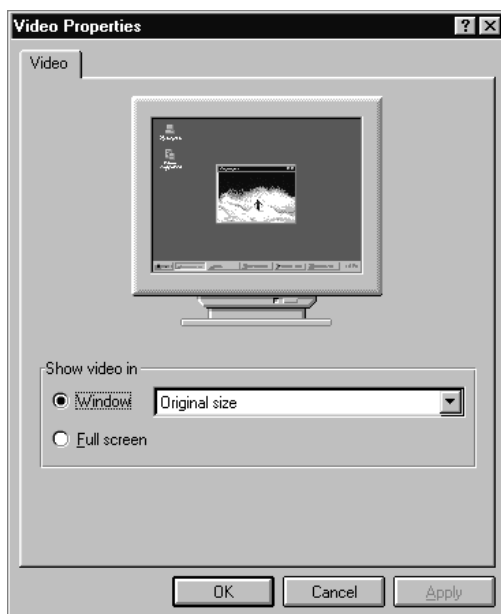


Figure 3-14 *View the video properties and specify playback settings.*



Note: *These settings do not affect the current playback size.*



SPECIFICATIONS AND INTERFACE

This appendix provides specifications for WaveWatcher Net-TV 98 and illustrates typical system interface configurations.

Specifications

TV Broadcast

- 125-channel, built-in cable-ready tuner
- Full NTSC broadcast support (PAL and SECAM units also available)—default is NTSC_USA

Video

- Supports up to 1280x1024 resolution and 24-bit True Color
- DirectX support

Full-Motion Video Capture

- Captures up to 640x480 resolution
- Supports 16-, 24-, or 32-bit RGB color
- Captures up to 30 frames per second (fps)
- Captures to AVI file format
- Audio capture up to CD quality with sound card
- Compression methods supported include Cinepak™ and Intel Indeo™



Still-Frame (Single-Frame) Video Capture

- Sizable captures up to 640x480 resolution
- Supports 16-, 24-, or 32-bit color
- Saves to a BMP file or to the clipboard

External Interface

- 75-ohm IEC coaxial input
- Composite A/V (RCA) input
- S-Video (SVHS) input
- Audio input and output

Dimensions

- 11.0625 x 6.625 x 2.5 inches

Weight

- 1 pound, 9.7 ounces

System Requirements

To successfully use WaveWatcher Net-TV 98, the following is required:

- Pentium 90 MHz (or better) IBM PC or compatible system
- Microsoft Windows 95 or Windows 98
- Minimum 8 MB RAM
- Minimum 4 MB of available disk space
- One available PCI slot
- One available IRQ
- 1 MB PCI SVGA display card with DirectX support (DirectDraw video driver supporting 16-bit color or higher)
- Sound card optional but necessary for audio capture
- Camera, sound card, and conferencing software to use this product for videoconferencing



Signal Interface

The WaveWatcher Net-TV 98 PCI card input and output connections extend through the slot opening once the card is installed.

Figure A-1 illustrates the inputs and outputs available on the WaveWatcher Net-TV 98 PCI card, as well as the component layout. Figure A-2 illustrates common interconnections between the WaveWatcher Net-TV 98, a sound card, and external devices.

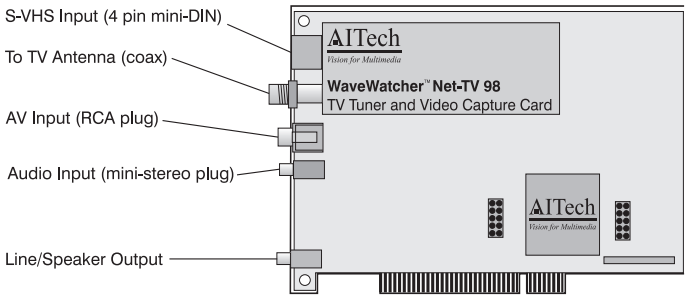


Figure A-1 *WaveWatcher Net-TV 98 PCI card inputs, outputs, and component layout (not all card components shown).*

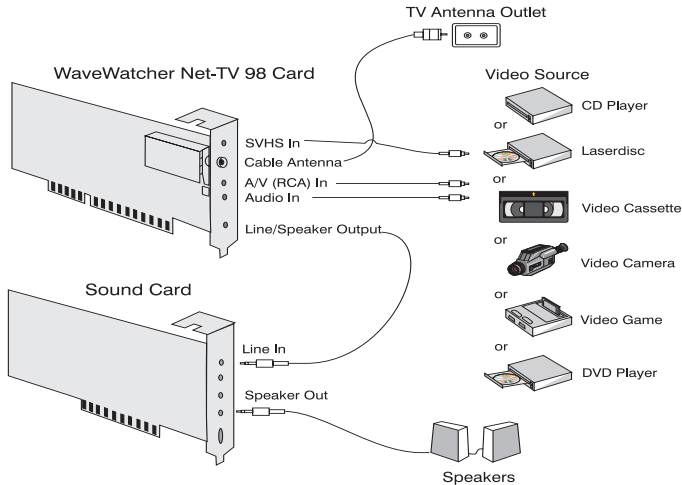


Figure A-2 *Diagram for connecting various external components.*

Considerations for Satellite and DSS Users

The WaveWatcher Net-TV 98 TV tuner provided does not work as described for cable or air reception because satellite signals are carried on different frequencies than off-air signals. See Net-TV 98 Program Window Menus on page 2-8 for additional information.





TROUBLESHOOTING AND SUPPORT

This appendix offers basic troubleshooting to help solve problems you may have with WaveWatcher Net-TV 98. Technical Support, warranty information, and repair service details are also provided.

Troubleshooting Problems

This section lists common problems and resolutions experienced with WaveWatcher Net-TV 98. Up-to-date troubleshooting tips may be found on our website at <http://www.aitech.com>.



Troubleshooting Display Problems

Table B-1 *Troubleshooting Display Problems*

Problem	Resolution
No TV or video appears in the display window.	Verify TV Settings to ensure the correct broadcast standard for your area is being used. Check the WaveWatcher Net-TV 98 PCI card connections to ensure the proper video sources are being used.
Unable to view video while doing an AVI capture.	This is a system performance problem. During AVI capture, half of the data stream is used for capturing the video and the other half for displaying video. If the CPU or PCI Bus-burst data stream is not sufficient, this problem may occur. This is especially true at the higher resolutions (800 x 600 or higher). Capturing on a system with a Pentium Pro or a Pentium II CPU significantly lessens this problem.
Video appears choppy during AVI capture or playback.	This is a system performance problem. The chances of this problem occurring increases if a compression codec (such as Cinepak or Indeo) is applied to the AVI capture. If the system hard disk can support data transfer rates of 12 MB (or better), then compression provides better performance. If not, use the uncompressed video setting for best performance. Please refer to the "Capture" documentation in the Customer Support section of our website.
WaveWatcher Net-TV 98 program (Net-TV 98 program) will not start. Error messages appear. (See Figure B-1 on page B-5.)	The color setting is low. Access Start Settings Control Panel Display Settings and ensure that 16-bit high color (or higher) is selected. Current versions of DirectDraw are not supported by older video drivers. See Troubleshooting Driver Problems on page B-8 for additional information.
When expanding window size, picture is lost.	The video card is not capable of handling a larger image size at 16-bit high color. Contact the manufacturer of the video card for more information.

Table B-1 *Troubleshooting Display Problems (Continued)*

Problem	Resolution
<p>Pressed the Record or Play button on the remote control, which caused the standard Net-TV 98 program view to disappear, and no Record or Play window to appear.</p>	<p>Memory is overextended. If you have other programs running, close one or more of them, then try pressing Record or Play again. If you still have problems, exit the Net-TV 98 program, restart your computer, then restart the Net-TV 98 program.</p> <p>To avoid this problem, try not to run other programs while running the Net-TV 98 program. Also, avoid changing the Control Panel Display settings more than once or twice during a Net-TV 98 program session.</p>
<p>Video display is showing multiple images and is no longer contained within the Window view or other Net-TV 98 program display.</p>	<p>Video memory is overextended. If you have other programs running, close one or more of them, then see how the display looks. If you still have problems, exit the Net-TV 98 program, restart your computer, then restart the Net-TV 98 program.</p> <p>To avoid this problem, try not to run other programs while running the Net-TV 98 program. Also, avoid changing the Control Panel Display settings more than once or twice during a Net-TV 98 program session.</p>

Table B-1 *Troubleshooting Display Problems (Continued)*

Problem	Resolution
<p>All troubleshooting tips have been tried, the current drivers are being used, but I remain unable to capture video.</p>	<p>Perhaps a video card is being used that is not compatible with WaveWatcher Net-TV 98. As of this writing, WaveWatcher Net-TV 98 supports the following video cards:</p> <ul style="list-style-type: none"> • Alliance Promotion • ARK ARK2000 • ATI Mach64 VRAM, Mach64 DRAM • Cirrus Logic 5446 • Matrox Mystique, Millennium • Number 9 Imagine 128 • S3 968, 868, 964, 864, Trio64V+, Trio64, ViRGE • Trident 9680, 9440 • Tseng Labs ET6000 • Weitek P9001 <p>If you are using a video card other than those listed here, contact Tech Support to determine whether an updated WaveWatcher Net-TV 98 driver is available that supports your video card.</p>

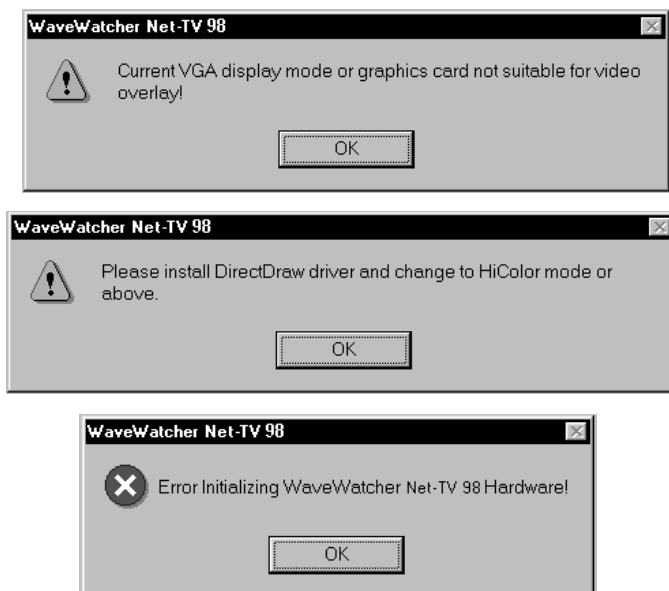


Figure B-1 *Display-related error messages that appear when the color setting is low or video driver is not supported.*

Troubleshooting Audio Problems

Table B-2 *Troubleshooting Audio Problems*

Problem	Resolution
<p>No sound is coming from the speakers.</p>	<p>If using a sound card, ensure the stereo cable is properly hooked between the Line/Speaker Output (labeled AUDIO OUT) on the WaveWatcher Net-TV 98 PCI card and the Line Audio Input on the sound card. If the Line Audio Input was previously connected to another card (such as a modem), disconnect the cable from the other card as well.</p> <p>After verifying the connection, ensure the audio line-in is not muted. Choose Start Programs Accessories Multimedia Volume Control, then verify Mute is <i>not</i> selected.</p> <p>If a sound card is not being used, increase the volume setting on the Net-TV 98 program remote control. If this does not help, the gain may not be sufficiently high for the speakers and it may be necessary to obtain active (amplified) speakers.</p>
<p>Sound is not captured with AVI.</p>	<p>Verify a sound card is connected to the WaveWatcher Net-TV 98 PCI card. Confirm the Capture Audio box is chosen in the Capture Settings dialog box (available through the Recorder Capture menu). Also, the Options Audio Format... settings are configured correctly.</p> <p>If everything checks out, try using a different cable between the WaveWatcher Net-TV 98 PCI card and the sound card.</p> <p>If you cannot choose the audio options as described in this manual, then your system does not detect a sound card.</p>

Table B-2 *Troubleshooting Audio Problems (Continued)*

Problem	Resolution
A sound card is installed, but not detected by my system.	<p>Either the sound card is not connected properly or there is a problem with the sound card hardware. WaveWatcher Net-TV 98 only supplies the line out audio signal.</p> <p>Contact the manufacturer of your sound card for assistance.</p>



Troubleshooting Driver Problems

Table B-3 *Troubleshooting Driver Problems*

Problem	Resolution
<p>WaveWatcher Net-TV 98 does not run or it freezes the system.</p>	<p>Ensure you are using the latest DirectDraw-compliant drivers for your video card. To determine if you are using the most current drivers, contact the SVGA card manufacturer.</p> <p>Verify the driver display versions by accessing Start Settings Control Panel Display Information. Record the version levels of the DirectDraw driver and Microsoft DirectX, then contact the card manufacturer to determine whether these are the current versions.</p> <p>If the DirectDraw driver and Microsoft DirectX are not listed, contact the video card manufacturer to obtain the driver and software.</p> <p>Other possibilities to consider:</p> <ul style="list-style-type: none"> • Problems with the motherboard PCI BIOS settings if the PCI busburst settings are not properly set or not defaulted. However, this is something common only to non-Intel chipset motherboards. Check with the system manufacturer to verify. • DMA page setting is low (<i>for example</i>, 175 may be overly low, which could lock your system). Consider increasing DMA page size with the Configuration utility, located in the AITech WaveWatcher Net-TV 98 folder (see Appendix C, "Configuration Utility"). For additional information, please refer to our website.
<p>MMTask or MMSys276 error messages with Net-TV 98 program AVI player appear.</p>	<p>Possible driver conflict. Check the Device Manager to see whether there is more than one capture driver in use. This is only possible if another capture board was previously installed in the computer.</p> <p>Remove the "old" capture driver and restart Windows.</p>

Table B-3 *Troubleshooting Driver Problems (Continued)*

Problem	Resolution
Residual lines/pixels from previous video window position appear as the video window is moved.	Video card or driver may not be able to properly handle concurrent PCI burst to frame buffer and graphic acceleration properly. Contact the manufacturer of your video card for updated drivers. If the problem continues, contact Tech Support for assistance.
Unable to capture video. System has both a WaveWatcher Net-TV 98 PCI card and an internal DVD drive.	The capture chip on the WaveWatcher Net-TV 98 PCI card is unable to work in tandem with any other capture device, including internal DVD drives. This process works okay if the DVD drive is connected as an external peripheral.



Troubleshooting IRQ Problems



Notes: *Certain IRQs are reserved for system devices (such as keyboard, clock, hard drive controller). Windows 95 Plug-and-Play assigns IRQs based upon the sequence in which hardware is detected. Changing the sequence in which the hardware is detected may result in a different combination of IRQ addresses that work for all devices. Therefore, try a different combination of IRQ assignments before using the BIOS to assign a different IRQ.*

Windows 98 does not assign an IRQ until after the software utilities are installed. For additional information, please refer to our website.



Caution: *The WaveWatcher Net-TV 98 PCI card requires a unique IRQ—it cannot share another system device IRQ. Instructions for checking and changing IRQ settings are provided at the end of this section.*

Table B-4 *Troubleshooting IRQ Problems*

Problem	Resolution
Windows cannot assign an IRQ setting to the WaveWatcher Net-TV 98 PCI card.	<p>In most cases, Windows automatically assigns IRQ settings and this problem should not exist. Ensure you have at least one available IRQ for Windows to assign to the PCI card.</p> <p>The WaveWatcher Net-TV 98 PCI card can use any available IRQ. If necessary, you may need to reassign the IRQ of another hardware component to open an IRQ needed by the WaveWatcher Net-TV 98 PCI card. Instructions for changing the IRQ are provided at the end of this section.</p>
How may I check whether the WaveWatcher Net-TV 98 PCI card is in conflict with another system device?	<p>If there is a conflict, there are two ways to resolve this problem.</p> <ol style="list-style-type: none"> 1. Choose Start Settings Control Panel System Device Manager Computer Properties. 2. Ensure the Interrupt Request (IRQ) button is selected, then scroll down until you see WaveWatcher Net-TV 98. There should be no other system device on that IRQ. The only exception is the device "IRQ Holder for PCI Steering" (Figure B-2 on page B-12).

Table B-4 *Troubleshooting IRQ Problems (Continued)*

Problem	Resolution
How may I change the IRQ setting?	<ol style="list-style-type: none"> 1. Choose Start Settings Control Panel System Device Manager Sound, video, and game controllers. 2. Choose WaveWatcher Net-TV 98 Properties Resources. 3. Ensure Use Automatic Settings is <i>not</i> checked (Figure B-3 on page B-12). 4. Choose Interrupt Request, then type a valid available <i>IRQ address</i> (Figure B-3 on page B-12). If No Modifications Allowed dialog box appears (Figure B-4 on page B-13), then you must change it manually in the motherboard BIOS settings.
Unable to change IRQ setting within Windows.	<p>If you are unable to change the IRQ setting within windows, it can be done through your computer BIOS.</p> <p>During system reboot, press the <i>Hotkey</i> sequence to access the BIOS, or insert the motherboard BIOS setup disk to access the motherboard bids setup. (<i>Hotkey</i> is a key sequence created to access the BIOS. Hotkeys vary with each system. Normally, there is a message during preboot that lists which key sequence to press.) Consult the technical manual of your computer or BIOS hardware for specific instructions in setting an IRQ.</p> <p>Similarly, the procedure to change PCI IRQ settings vary with each system. Again, consult the technical manual of your computer or BIOS hardware for specific instructions in setting an IRQ or call the manufacturer for directions.</p> <p>If these methods do not solve the problem, contact Tech Support for further assistance.</p>

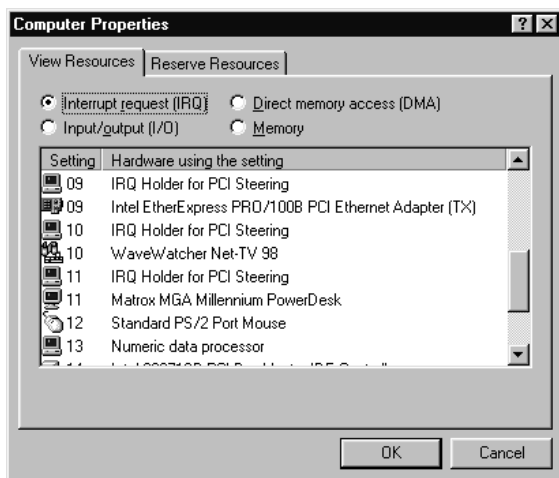


Figure B-2 *Ensure there are no other devices sharing the same IRQ (IRQ 10 is being shared—one of the devices at IRQ 10 must be reassigned to another IRQ).*

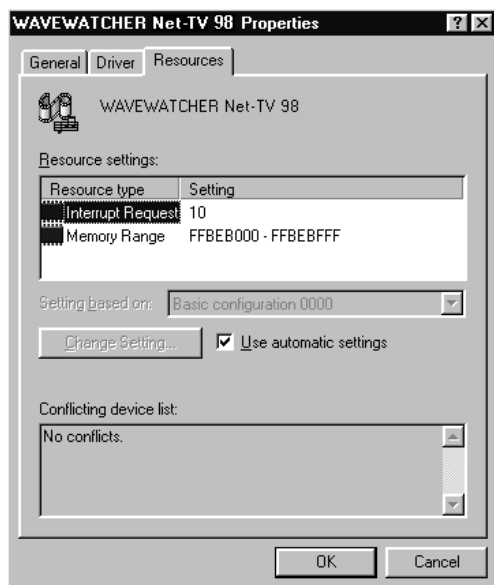


Figure B-3 *Ensure **Use Automatic Settings** is **not** checked, then enter an available IRQ address.*

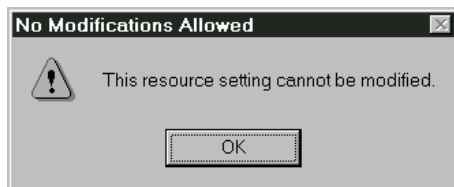


Figure B-4 *Message indicates the IRQ is not editable and must be manually set, using the motherboard BIOS settings.*



Troubleshooting Memory Problems

Table B-5 *Troubleshooting Memory Problems*

Problem	Resolution
<p>A contiguous memory error message appears when the Net-TV 98 program is launched. (See Figure B-5 on page B-15.)</p>	<p>The Net-TV 98 program requires a continuous memory block to capture video in single frame snapshot or full motion AVI video. The Configuration utility configures the size of this memory block. Windows default size is 304. These values ensure you capture 64 x480 video at 24 bit in most situations. The key point here is "continuous!" Net-TV 98 program may fail even if you have sufficient available physical memory. On start up, the program tries to allocate requested memory by looking for the largest free memory block from the Global Heap. If this memory block cannot satisfy its requirement, Net-TV 98 program concatenates two or more of the largest free memory blocks, moving any used block in its way to make it "continuous."</p> <p>Some applications or device drivers explicitly request Windows not to move their codes or data in memory. If the software occupies the location where WaveWatcher Net-TV 98 is trying to move, WaveWatcher Net-TV 98 fails.</p> <p>Try restarting Windows and launch the Net-TV 98 program before any other applications. If this does not solve the problem, or this message is encountered overly often for restarting to be a practical option, reduce the number of DMA pages with the Configuration utility (say to 250). (See Appendix C, "Configuration Utility.")</p> <p>If DMA errors are experienced after trying these options, it's possible that the IRQ is in conflict. (See Troubleshooting IRQ Problems on page B-10 for additional information.)</p> <p>Also, if DMA errors are experienced after verifying the IRQ is not shared with another system device, contact Tech Support for further assistance.</p>



Figure B-5 *WaveWatcher Net-TV 98 program cannot open because insufficient contiguous memory is available.*

Troubleshooting TV Standard Problems

Table B-6 *Troubleshooting TV Standard Problems*

Problem	Resolution
Unable to scan beyond noncable channels (beyond Channel 10) when an area uses NTSC TV standard.	<p>The television standard defaults to the NTSC_USA television signal. Other NTSC options include cable signals, IRC and HRC (NTSC_USA_IRC or NTSC_USA_HRC, respectively). Standard and IRC are basically the same, but HRC is quite different signal-wise. If NTSC_USA is installed, Net-TV 98 program does not correctly tune, and you are using a cable TV input, use the Configuration utility (see Appendix C, "Configuration Utility") to change to NTSC_USA_HRC standard.</p> <p>If this does not solve the problem, or this message is encountered overly often for restarting to be a practical option, reduce the number of DMA pages with the Configuration utility (say to 250). (See Figure B-6 on page B-16 and Appendix C, "Configuration Utility.")</p> <p>If problems with the TV standard continue to be experienced, contact Tech Support for further assistance.</p>

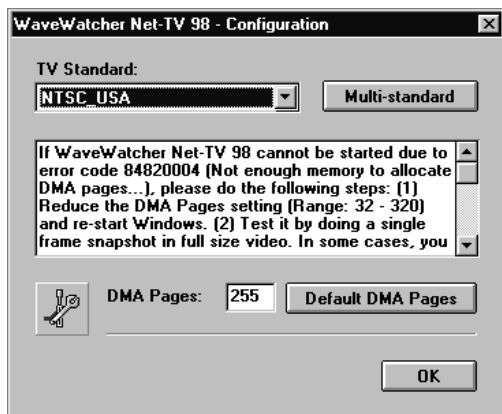


Figure B-6 *Changing the number of allocated DMA pages.*



Note: The Configuration dialog box explains how to test whether a single frame of full-sized video can be captured after reducing the number of DMA pages. In some cases, you must reduce the largest capturable video size memory to start the Net-TV 98 program.

Technical Support

If you require our assistance to resolve problems with the product, call our Technical Support Hotline at **510-226-9246**:

- Monday through Friday, 7:00 am and 7:00 pm (PST);
- Saturday through Sunday, 9:00 am and 5:00 pm (PST); or
- **Outside the United States or Canada**, contact your local distributor

You may also contact us by Email at tech_support@aitech.com.

Tech support notes are available on our website at <http://www.aitech.com>.

Placing a Support Call

To enable our technicians to accurately and quickly resolve your problems, please have the following information available before you call us:

- Your Name
- Your Company Name
- Address
- Email Address
- Phone Number
- FAX Number
- Product name and serial number
- Software version number
- Your computer system configuration, including
 - Windows revision level
 - DirectDraw video driver version
 - Video card manufacturer and device driver versions
 - Slot in which the WaveWatcher Net-TV 98 PCI card is installed
 - Video and audio input being used



- Detailed description of your problem including
 - History
 - What you have tried to resolve the problem
 - Conditions under which this occurs
 - Number and exact wording of any software error messages

Warranty Information

- **United States:** AITech warrants your WaveWatcher Net-TV 98 for a period of one year from the date of purchase. Products becoming defective during the period are repaired or replaced.
- **Outside the United States:** Please contact your local distributor.

Repair Services

- **United States:** If it becomes necessary to forward WaveWatcher Net-TV 98 for repair or modification, first obtain a Return Authorization Number (RA) from AITech. *Any product sent to AITech without an RA number will be returned to sender.* Call our Technical Support Hotline at **510-226-9246** to obtain an RA number.
- **Outside the United States:** Please contact your local distributor.

Please ensure your product is adequately cushioned to prevent damage during shipping. Please include all hardware and software that came with your WaveWatcher Net-TV 98 PCI card, so the integrity of these pieces can be verified by AITech technicians.



Caution: *It is recommended that you ship your WaveWatcher Net-TV 98 PCI card fully insured. AITech is not responsible for loss or damage caused by shipping.*



CONFIGURATION UTILITY

This appendix describes the Configuration utility provided with WaveWatcher Net-TV 98 and how to use it.

Overview



Note: *The Configuration utility cannot be used while the Net-TV 98 program is running.*

The Configuration utility (located in the **AItech WaveWatcher Net-TV 98** folder) enables changing of parameters not available during setup. Use this utility if you encounter a contiguous memory error message (see Figure C-1) when attempting to launch the Net-TV 98 program.

This error may occur because the WaveWatcher Net-TV 98 PCI card requires a block of contiguous memory (that is, memory in one continuous block) to capture still-frame or full-motion video. The size of this memory block can be increased or reduced by changing the number of DMA pages specified in the Configuration utility window. The default of 255 normally allows capture of 24-bit video at a resolution of 640 x 480 pixels.



Figure C-1 *WaveWatcher Net-TV 98 cannot open because there is insufficient contiguous memory available.*

DMA Page Setting

Often, there is sufficient physical memory, but insufficient memory available in one contiguous block because of the way memory is allocated to other programs. A workaround is to restart Windows and launch the WaveWatcher Net-TV 98 program before any other applications.

However, if this does not solve the problem, or you encounter the message overly often for restarting to be a practical option each time, reduce the number of DMA pages, as shown in Figure C-2.

To change the DMA page setting

1. Choose **Start | Programs | AITech WaveWatcher Net-TV 98 | Configuration**. The Configuration window appears (Figure C-2).
2. Enter a new DMA page *quantity*.
3. Choose **OK**. A dialog box appears, prompting you to restart Windows to effect the changes.
4. Choose **Yes** to restart Windows.

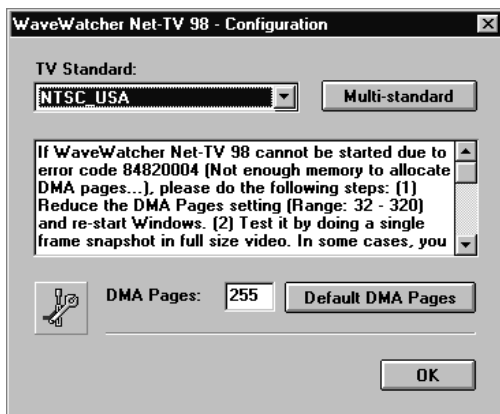


Figure C-2 Changing the number of allocated DMA pages.



Note: The dialog box explains how to test whether you are able to capture a single frame of full-sized video after reducing the number of DMA pages. In some cases, you must reduce the largest capturable video size memory to start the WaveWatcher Net-TV 98 program.

Television Standard Selection

The Configuration utility also provides the ability to change the TV standard from the default, NTSC_USA (see Figure C-3).

To change the TV standard

1. Choose **Start | Programs | AITech WaveWatcher Net-TV 98 | Configuration**. The Configuration window appears (Figure C-2).
2. Select a *standard* valid for your geographical location and signal type.

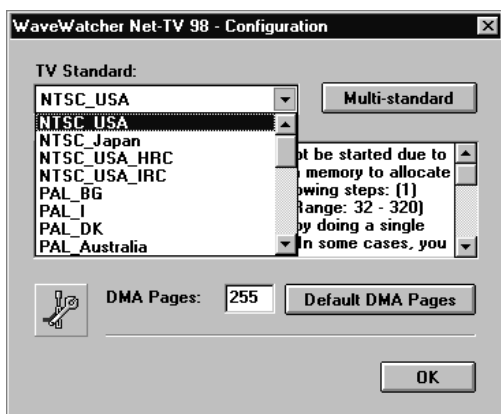


Figure C-3 *Selecting a different television standard.*

3. Choose **OK**. The TV standard selection is retained until you change it.



GLOSSARY

aspect ratio	Proportional height and width of the on screen picture. Current standard for conventional television receivers or monitors is three by four (3:4).
audio capture	Saving an incoming audio signal to a file for playback or editing.
AVI	Audio Video Interleave. Microsoft platform-independent format for multimedia files.
BIOS	Basic Input/Output System. Built-in series of routines and commands that work with the system hardware to support the transfer of data between system devices. BIOS information is usually contained on a chip in the computer's motherboard.
bit	Binary Digit. The smallest information unit recognized by a computer. It is a single digit in a binary (1 or 0) numbering system.
bits per pixel	Measure of the amount of information stored in each pixel. The more bits per pixel, the more colors or grayscale a pixel can support.



BMP	Microsoft Windows bitmap file format. This graphic format is used by Microsoft Paintbrush. It is a standard format in Windows 95. BMP files exist in 1-, 4-, 8- and 24-bit forms.
brightness	Overall level of light and dark in an image.
coaxial cable	Cable that consists of two conductors—a center wire inside a grounded cylindrical shield. Used for connecting to a TV signal, such as from a cable modem. Can be used with WaveWatcher Net-TV 98.
CD-I	Compact Disc Interactive. Interactive CD standard requiring specialized players.
chrominance	Portion of video signal that carries color information (hue and saturation, but not brightness). [see <i>composite video</i> , <i>luminance</i>]
composite video	Composite video mixes the chroma and luminance information on the same signal. Use provided RCA video cable for composite video connection. [see <i>chroma</i> , <i>luminance</i>]
contrast	Tonal difference between light, mid-tone, and dark areas of an image. High-contrast images contain sharp blacks and whites; low-contrast images consist primarily of gray variations.
DVD	Digital Versatile Disk (originally called “digital video disk”). New optical disk technology expected to rapidly replace the CD-ROM or compact disk. DVD holds 4.7 GB of information on one of its two sides, or sufficient information for a 133 minute movie. DVD uses MPEG-2 file compression standard.



DVD-ROM Player	Typically referred to as a DVD drive, designed to playback DVD-format video or regular CD-ROM disks.
DirectDraw	One of the components of Microsoft DirectX. Device-independent graphic interface standard for Windows 95. Usually included with video SVGA drivers, this standard accelerates the video, and is necessary for smooth digital video playback.
field	Half a television scanning cycle. Two interlaced fields comprise a complete video frame. [see <i>frame</i>]
flicker	Instability in displayed picture because screen phosphors begin fading before they are redrawn.
frame	Smallest increment of a complete television picture, equal to a thirtieth of a second for NTSC, and twenty-fifth of a second for PAL. [see <i>field</i> , <i>NTSC</i> , <i>PAL</i>]
frame capture	Storing one frame of moving or still-frame video. WaveWatcher Net-TV 98 supports frame capture to BMP files and to the Windows clipboard.
frame rate	The measurement of frames captured per second. Each TV standard has a certain frame rate that must be achieved to accurately show live video as it occurs. NTSC frame rate is 30 and PAL frame rate is 25. The ability of the WaveWatcher Net-TV 98 PCI card to capture at these prescribed frame rates varies, depending upon system performance.



interlaced video	Process of scanning frames in two passes, each painting every other line on the screen, with scan lines alternately displayed in even and odd fields. Broadcast TV signals are interlaced. [see <i>noninterlaced video</i>]
IRQ	Interrupt request line. A hardware interrupt on a PC, used by external input devices. WaveWatcher Net-TV 98 PCI card requires an interrupt that is not shared with another device.
JPG/JPEG	Joint Photographic Experts Group File Interchange Format (JFIF). Format used for compressing graphics files, while maintaining close-to-original quality.
luminance	Black-and-white portion of video signal that carries brightness information representing picture contrast, light, and dark qualities. [see <i>chrominance, composite video</i>]
MPEG	Moving Pictures Experts Group. Standard for compressing full-motion video. WaveWatcher Net-TV 98 does not support playback of MPEG-compressed video.
noninterlaced video	Process of scanning complete frames in one pass, painting every line on the screen, yielding higher picture quality than that of interlaced video. Most computers produce a noninterlaced video signal. [see <i>interlaced video</i>]



NTSC	<p>National Television Standards Committee. Group formed by Federal Communications Commission to develop United States television broadcasting specifications. NTSC refers to all video systems conforming to this 525-line, 30-frame-per-second signal standard.</p> <p>NTSC is used in North America, parts of Asia, and Latin America. The NTSC TV standard is supported by WaveWatcher Net-TV 98. [see <i>PAL</i>, <i>SECAM</i>]</p>
PAL	<p>Phase Alternate Line. 625-line, 25-frame-per-second TV signal used primarily in Europe and parts of Asia.</p> <p>The PAL TV standard is supported by WaveWatcher Net-TV 98. [see <i>NTSC</i>, <i>SECAM</i>]</p>
pixel	<p>Short for picture element. One of the basic elements that make up a video image.</p>
PCI	<p>Peripheral Component Interconnect. A local bus that provides a high-speed path between the computer CPU (central processing unit) and peripheral devices.</p>
PCM	<p>Pulse code modulation. Technique for digitizing audio by sampling the sound waves and converting each sample into a binary number. PCM is one of the digital audio formats supported by WaveWatcher Net-TV 98.</p>
Plug-and-Play (PnP)	<p>Hardware/software standard designed to automatically detect and configure compliant hardware. WaveWatcher Net-TV 98 PCI card is a PnP device.</p>



RCA plug	Also called <i>phono</i> or <i>RCA phono</i> plug. Popular cable connector for direct audio/video input/output signals. Can be used with WaveWatcher Net-TV 98. Do not use the VIDEO output connector (RCA) if using the S-VHS output connector.
refresh rate	Number of times per second screen image is completely redrawn.
resolution	Degree of sharpness of a displayed or printed character or image. Monitor resolution is expressed in terms of the number of vertical and horizontal dots on the screen.
remote control	Control panel on the Windows desktop used in conjunction with Net-TV 98 program to control video input and playback.
RGB	Red/Green/Blue. Color mixing system used in transmitting, displaying, and recording video signals. Color information is processed as separate red, green, and blue components for optimum image quality. All colors are displayed on a video monitor as varying intensities of red, green, and blue dots.
SECAM	Sequential Color and Memory. 625-line, 25-frame-per-second TV signal standard used in France, some former French colonies, and the Soviet Republic. Incompatible with NTSC. PAL and SECAM are partially compatible. [see <i>NTSC</i> , <i>PAL</i>]



SVGA	Super VGA. Extension of the VGA (Video Graphics Array) standard, allowing video adapters to support resolutions of 1024x768 pixels or higher, with 16.7 million colors. WaveWatcher Net-TV 98 requires SVGA video adapter supporting 16-bit color or higher. [see <i>VGA</i>]
Super-VHS (SVHS)	Improved version of VHS videotape format, characterized by separate carriers of chrominance and luminance information, yielding a sharper picture. Can be used with WaveWatcher Net-TV 98. [see <i>VHS</i>]
S-video	Also known as Y/C video, signal type employed with S-VHS. Chrominance and luminance information are carried on separate wires for higher quality. The S-Video connector is a 4-pin, mini DIN circular socket, usually located on the rear of a TV, or front or back of a VCR. Do not use the S-VHS output connector if using the VIDEO output connector (RCA). [see <i>chrominance</i> , <i>luminance</i>]
VGA	Video Graphics Array. Video standard supporting a resolution of 640x480 with 16 colors. WaveWatcher Net-TV 98 does not work with standard VGA graphics cards. [see <i>SVGA</i>]
VHS	Video Home System. Predominant half-inch videotape format, developed by Matsushita and licensed by JVC. [see <i>Super-VHS</i>]

video compression

The use of hardware and/or software to reduce the digital data in a video frame, typically from nearly 1 MB to 50 KB or less, by throwing away information the eye cannot see. Compression makes it possible to store much larger amounts of video on a hard disk. JPEG, Motion-JPEG, MPEG, DVI, Indeo, Fractals, and Wavelets are all compression schemes.





LICENSING AND WARRANTIES

This appendix documents the product warranty applicable to the United States only, as well as information about FCC radio frequency interference. For warranty information outside of the United States, please contact your local distributor.

Software License Agreement

AITech International Corporation (AITech) grants the original purchaser a limited, nonexclusive license, without the right to sublicense, to use this copy of AITech software on a single computer at a time. AITech reserves all rights not expressly granted and retains title and ownership of the software including subsequent copies in any media. It is strictly prohibited to copy this software except to load the software from the supplied diskette(s) or compact disc (CD) onto the computer's hard disk solely for the purpose of executing the program and for backup purposes in support of your use of the software on a single computer. You are granted no other rights to copy, duplicate, sell or otherwise distribute this AITech software product.



Software Limited Warranty

As the only warranty under this agreement, and in the absence of accident, abuse, or misapplication, AITech warrants, to the original licensee only, that the diskettes on which the software is recorded are free from defects in material and workmanship under normal use and service for a period of one year from the date of original purchase as evidenced by a copy of the purchase receipt. AITech's only obligation under this warranty is, at AITech's sole option, to replace the diskette that does not meet AITech's limited warranty and which is returned to AITech, postage prepaid with a copy of the purchase receipt.

THIS WARRANTY GIVES YOU LIMITED SPECIFIC LEGAL RIGHTS. YOU MAY HAVE OTHER RIGHTS, WHICH VARY FROM STATE TO STATE. EXCEPT AS EXPRESSLY PROVIDED ABOVE, THE SOFTWARE AND ACCOMPANYING WRITTEN MATERIALS (INCLUDING THE USER GUIDE) ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, EVEN IF AITECH HAS BEEN ADVISED OF THAT PURPOSE. AITECH SPECIFICALLY DOES NOT WARRANT THE OPERATION OF THE SOFTWARE AND WILL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SUCH PRODUCT EVEN IF AITECH HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGE, SO THE ABOVE LIMITATION MAY NOT APPLY.



Hardware Limited Warranty

AITech imaging boards/cards are warranted to be free from failures due to defects in material and workmanship for one year from the date of original purchase as evidenced by a copy of the purchase receipt. During the warranty period, AITech, at AITech's sole discretion, will repair or replace at no charge, the product which, in its opinion, is defective.

The original purchaser is responsible for packing the product for shipment and charges to ship the failed product to AITech. AITech is responsible for charges to ship the repaired or replaced product. If any charge to you is involved, the replacement product will be shipped C.O.D.

If the failed product has been modified in any way without the consent of AITech or if the failure is the result of misuse, abuse, or misapplication, AITech has no obligation to repair or replace the failed product.

EXCEPT AS EXPRESSLY PROVIDED ABOVE, THE HARDWARE AND ACCOMPANYING WRITTEN MATERIALS (INCLUDING THE USER'S GUIDE) ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. AITECH SPECIFICALLY DOES NOT WARRANT THE OPERATION OF THE HARDWARE AND WILL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE SUCH PRODUCT EVEN IF AITECH HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGE, SO THE ABOVE LIMITATION MAY NOT APPLY.



FCC Radio Frequency Interference Statement

This equipment has been tested and found to comply with the limits for 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 communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and then on again, you are 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 the receiver
- Connect the equipment to an outlet on a different circuit from the circuit to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Shielded cables and I/O cords must be used for this equipment to comply with the relevant FCC regulations. Changes or modifications not expressly approved in writing by AITech may void the user's authority to operate this equipment.



INDEX

A

- always on top 2-8
- aspect ratio D-1
- audio
 - capture D-1
 - format options 3-2
 - keep in background 2-7
 - on/off, toggling 2-5, 2-8
 - problems, troubleshooting B-6–B-7
 - volume during playback 3-9
- AVI file
 - definition D-1
 - opening 3-8
 - playing 2-5, 3-8–3-12
 - saving 3-6
 - set capture file 3-2
 - signal capture 2-5

B

- BIOS D-1
- bit D-1
- bits per pixel D-1
- BMP file
 - definition D-2
 - saving capture to 3-7
- brightness
 - adjusting 2-4
 - definition D-2
- Browse view 2-7
 - display live feed 2-9
 - show/hide remote control 2-5
 - show/hide remote control, no 2-11
 - special considerations 2-11

C

- Cabinet view
 - sample display 2-6
 - selecting 2-4
 - show/hide remote control 2-5, 2-11
 - special considerations 2-11
- cable TV signals, accessing 2-9
- capture file, setting 3-2
- capture formats 3-3
- capturing performance A-1–A-2
- capturing video 3-1–3-7

- audio format options 3-2
- BMP file 3-7
- capture options 3-2–3-5
- compression, setting 3-4
- full motion 3-6
- input source, specifying 3-3
- limitations 3-6
- single frame 3-7
- sound quality options 3-2
- still frame 3-7
- video clip capture parameters 3-5
- video format settings 3-3–3-4
- video source, specifying 3-3
- video standard, specifying 3-3
- CD player input 1-3, A-3
- CD-I D-2
- channels
 - changing 2-4
 - DSS input 2-9, A-4
 - entering 2-5
 - satellite input 2-9, A-4
 - scanning 2-9, 2-10
- chroma D-2
- chrominance D-2
- coaxial cable D-2
- color
 - parameters, adjusting 2-4
 - requirements x, A-2
- color setting, adjusting 2-4
- component interconnection 1-3, A-3
- composite video D-2
 - See also* RCA plug
- composite video, definition D-2
- compression, setting video 3-4
- configuration connections A-3
- Configuration utility
 - DMA page settings C-2
 - TV standards, changing C-3
- configure playback window size 3-12
- connecting devices A-3
- considerations, special 2-11
- contrast
 - adjusting 2-4
 - definition D-2
- copy frame to clipboard 3-11



D

- device driver
 - installing 1-4-1-23
 - checking 1-20-1-23
 - Windows 95 1-5-1-8
 - Windows 95 OSR 2 1-8-1-10
 - Windows 98 1-11-1-15
 - uninstalling 1-25-1-26
- dimensions A-2
- DirectDraw
 - definition D-3
 - features viii
 - requirements x, A-2
- display driver, acquiring up-to-date viii
- display problems, troubleshooting B-2-B-4
- display requirements 1-21
- DMA pages
 - error messages 1-20
 - troubleshooting B-8, B-14, B-15
 - value, setting C-2
- document conventions xii
- document organization xi
- driver problems, troubleshooting B-8-B-9
- driver. *See* device driver
- DSS input channels, selecting 2-9, A-4
- DVD D-2
- DVD player input 1-3, A-3
- DVD-ROM player D-3

E

- exiting the program 2-5, 2-8
- external interface A-2

F

- FCC radio frequency interference
 - statement E-4
- field D-3
- field order, specifying 3-3
- flicker D-3
- frame D-3
- frame capture D-3
- frame rate D-3
- freeze/unfreeze view 2-8
- full-motion capture
 - how to 3-6
- full-motion video capture
 - specifications A-1

H

- hardware
 - installing 1-1-1-3
 - uninstalling 1-24
 - warranty E-3
- help, accessing 2-4, 2-9
- hue, adjusting 2-4

I

- input sources
 - specifying 3-3
 - toggling between 2-4
- inputs 1-3, A-3
- installing
 - device driver 1-4-1-23
 - device driver, non-OSR2 1-5-1-8
 - device driver, OSR2 1-8-1-10
 - device driver, verify install 1-20-1-23
 - device driver, Windows 98 1-11-1-15
 - hardware 1-1-1-3
 - PCI card 1-1-1-3
 - software 1-4, 1-16-1-23
- interlaced video D-4
- IRQ
 - definition D-4
 - problems, troubleshooting B-10-B-11
 - requirements x, 1-20, A-2

J

- JPG/JPEG D-4

L

- laserdisc player input 1-3, A-3
- license agreement E-1
- live feed, displaying 2-9
- luminance D-4

M

- memory
 - problems, troubleshooting B-14
 - requirements x, A-2
- Movie view
 - sample display 2-6
 - selecting 2-4
 - show/hide remote control 2-11
 - special considerations 2-11
- MPEG D-4
- mute the audio 2-5, 2-8



N

- noninterlaced video D-4
- NTSC
 - default TV standard 1-17
 - definition D-5
 - See also* TV standards

O

- off-air TV signals, accessing 2-9
- outputs 1-3, A-3

P

- package contents ix
- PAL
 - definition D-5
 - See also* TV standards
- PCI D-5
- PCI card
 - installing 1-1–1-3
 - uninstalling 1-24
- PCI compliance vii
- PCM D-5
- pixel, definition D-5
- playback options 3-11–3-12
 - configure 3-12
 - copy 3-11
- playback speed 3-9
- playback window size 3-12
- playing AVI files 3-8–3-12
- Plug-and-Play (PnP) D-5
- power button 2-5
- product features vii–viii

R

- RCA plug D-6
- record 2-5
- Recorder window 3-1
- refresh rate D-6
- remote control
 - definition D-6
 - interface tasks 2-4–2-5
 - show/hide 2-5, 2-8
- repair services B-18
- requirements
 - color x, A-2
 - display 1-21
 - IRQ x, 1-20, A-2
 - operating environment x, A-2
 - preinstallation ix
 - SVGA x, A-2
 - system x

- resolution D-6
- RGB
 - capture formats 3-3
 - definition D-6

S

- satellite input channels, selecting 2-9,
A-4
- saturation, adjusting 2-4
- scanning channels 2-9, 2-10
- SECAM D-6
 - See also* TV standards
- signal capture 2-5
- signal interface A-3
- single-frame capture
 - how to 3-7
 - specifications A-2
- software
 - installing 1-4, 1-16–1-23
 - license agreement E-1
 - uninstalling 1-25–1-26
 - warranty E-2
- sound card
 - connecting 1-3, A-3
 - troubleshooting B-6
- sound quality options 3-2
- sound settings 3-3
- sound, toggling on/off 2-5, 2-8
- speaker input 1-3, A-3
- special considerations 2-11
- specifications x, A-1–A-2
 - dimensions A-2
 - external interface A-2
 - full-motion video capture A-1
 - single-frame capture A-2
 - still-frame capture A-2
 - system requirements A-2
 - TV broadcast A-1
 - video A-1
 - weight A-2
- still-frame capture
 - how to 3-7
 - specifications A-2
- Super-VHS D-7
- SVGA
 - definition D-7
 - requirements x, A-2
- SVHS D-7
- S-video D-7
- system requirements x, A-2



T

- technical support B-17–B-18
 - placing a support call B-17
 - repair services B-18
 - warranty information B-18
- Television menu tasks 2-8–2-9
- time display, toggling on/off 2-4
- toggle between input sources 2-4
- troubleshooting B-1–B-16
 - audio problems B-6–B-7
 - display problems B-2–B-4
 - driver problems B-8–B-9
 - IRQ problems B-10–B-11
 - memory problems B-14
 - TV standard problems B-15–B-16
- TV antenna connection 1-3, A-3
- TV broadcast specifications A-1
- TV channels
 - changing 2-4
 - entering 2-5
- TV program
 - exiting 2-5, 2-8
 - remote control interface 2-3–2-7
 - starting 2-1
 - user interface 2-1–2-10
 - Window view menus 2-8–2-10
- TV signals
 - accessing 2-9
- TV standards
 - changing 2-8, C-3
 - problems, troubleshooting B-15–B-16
 - special considerations 2-11

U

- unfreeze/freeze view 2-8
- uninstalling
 - device driver 1-25–1-26
 - hardware 1-24
 - PCI card 1-24
 - software 1-25–1-26
- user interface 2-1–2-10
 - remote control 2-3–2-7
 - Window view menus 2-8–2-10

V

- VCR input 1-3, A-3
- version level of program 2-5, 2-9
- VGA D-7
- video
 - composite video, definition D-2

- compression, setting 3-4
- input sources 3-3
- input, connecting 1-3, A-3
- interlaced D-4
- noninterlaced D-4
- playback 3-1, 3-8–3-12
- playback options 3-11–3-12
- specifications A-1
 - standard, specifying 3-3
- video camera input 1-3, A-3
- video capture 3-1–3-7
 - audio format options 3-2
 - BMP file 3-7
 - capture options 3-2–3-5
 - compression, setting 3-4
 - full motion 3-6
 - input source, specifying 3-3
 - limitations 3-6
 - single frame 3-7
 - sound quality options 3-2
 - still frame 3-7
 - video clip capture parameters 3-5
 - video format settings 3-3–3-4
 - video source, specifying 3-3
 - video standard, specifying 3-3
- video cassette input 1-3, A-3
- video clip capture parameters 3-5
- video driver
 - problems, troubleshooting B-8–B-9
 - requirements x, A-2
- video format settings 3-3–3-4
- video game input 1-3, A-3
- video sources, cycling between 2-8
- view, freeze/unfreeze 2-8
- views
 - Browse 2-7
 - Cabinet 2-6
 - cycling between 2-4
 - Movie 2-6
 - special considerations 2-11
 - Window 2-6
- volume
 - adjusting 2-4
 - playback, during 3-9

W

- warranty B-18
 - hardware E-3
 - software E-2
- weight A-2
- window always on top 2-8

- Window view 2-6
 - sample display 2-6
 - selecting 2-4
- Windows 95
 - device driver, installation,
 - verifying 1-20–1-23
 - device driver, installing 1-5–1-8
 - OSR 2. *See* Windows 95 OSR 2
 - requirements x, A-2
 - software, installing 1-4, 1-16–1-23
 - version levels 1-4
- Windows 95 OSR 2
 - device driver, installing 1-8–1-10
- Windows 98
 - device driver, installation,
 - verifying 1-20–1-23
 - device driver, installing 1-11–1-15
 - software, installing 1-16–1-23



