

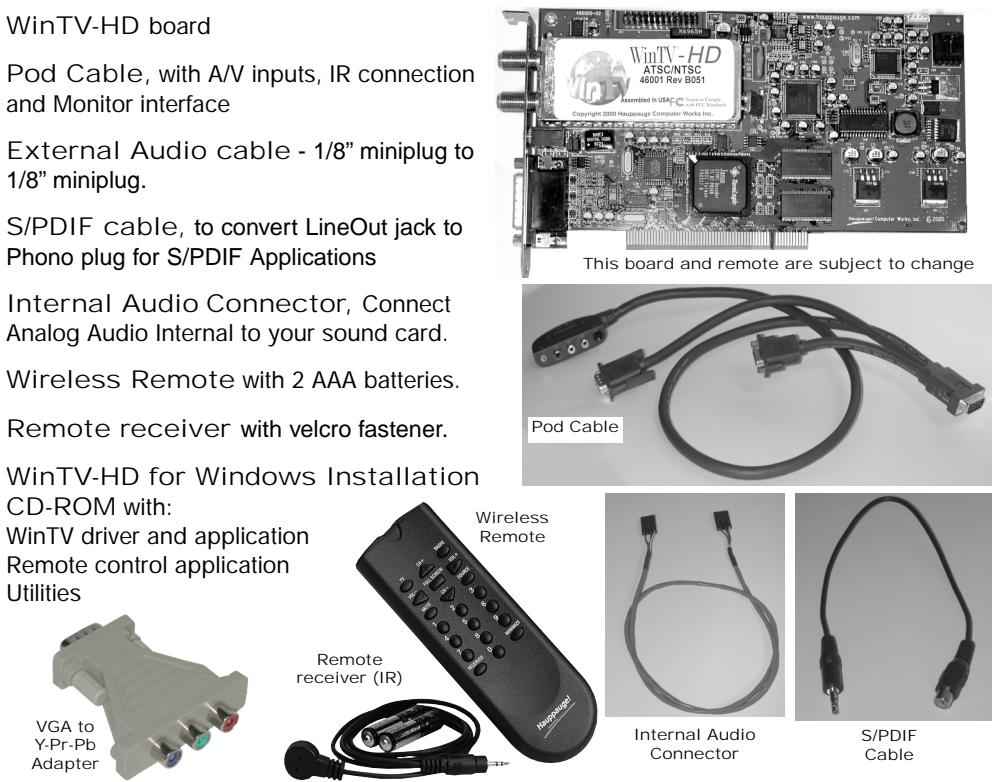
# Hauppauge! WinTV-HD

## Quick Installation Guide for Windows® 98/Me/2000

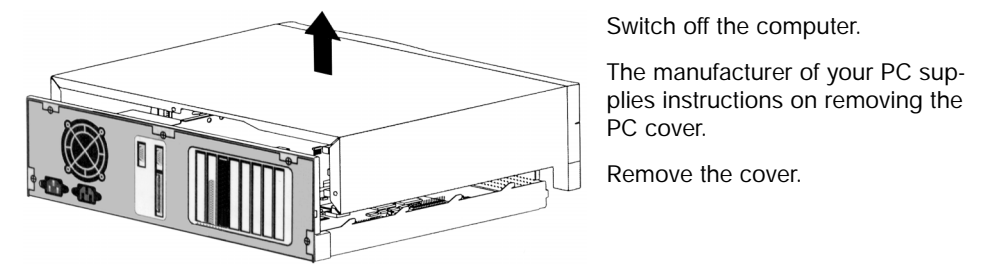
Note: The **WinTV-HD** requires the latest version of Windows98, known as Windows98-SE, any version of Windows2000 or WindowsMe.

Note: We recommend a PII 600 or better for recording transport streams to you hard disk.

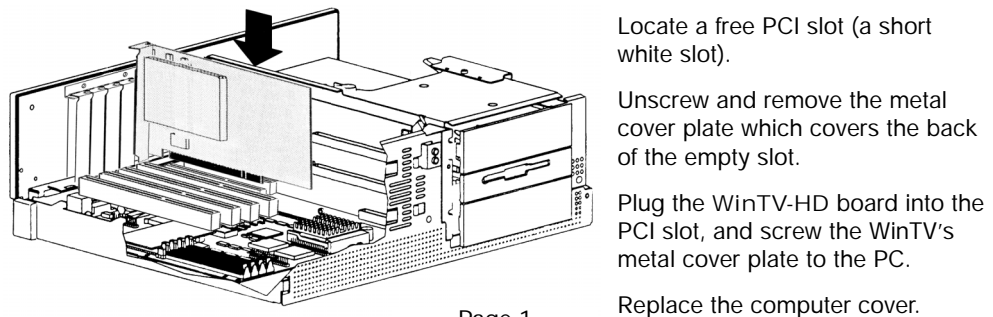
### Contents of the WinTV-HD package



### Step 1: Prepare the computer



### Step 2: Install the WinTV-HD board

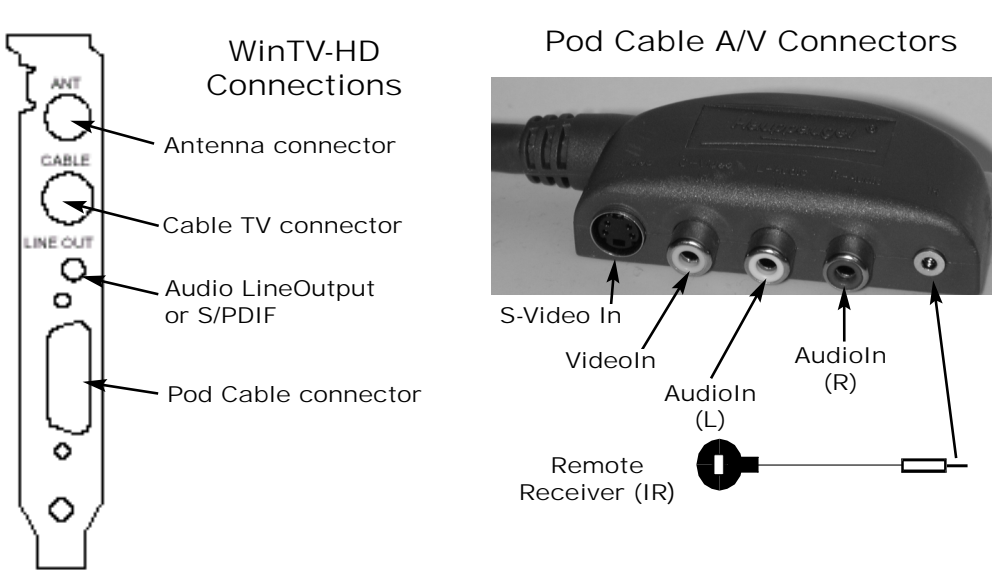


### Step 3: Connect the WinTV-HD cables

The **WinTV-HD** board has two coax video connectors: one for a **UHF/VHF TV antenna** and one for **cable TV**. Screw your UHF/VHF antenna (a rooftop antenna is recommended for digital TV reception in most areas) into the **Antenna connector**. Plug your cable TV connection to the **Cable TV connector**.

One end of the **External Audio cable (1/8" minijack)** should be plugged into **WinTV-HD's Audio LineOutput**, and the other end plugged into the **Line-In connector** on your PC's sound card for stereo speaker sound.

If you are connecting the **WinTV-HD** to a Home Theater system which uses a Digital sound input, the **WinTV-HD's S/PDIF** adapter lets you convert the 1/8" Line-Out jack to a



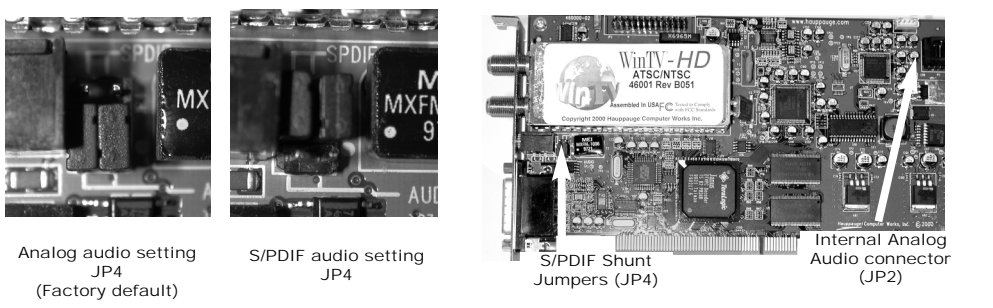
### Step 4: Using the S/PDIF & Internal Analog connectors

**S/PDIF Jumper setting**

To configure the WinTV-HD for an external S/PDIF decoder, place the 2 Shunt jumpers vertically on the top half of jumper JP4. This routes the S/PDIF output to the Audio LineOutput mini stereo connector. Then connect the supplied S/PDIF cable between the Audio Line-Out jack on the WinTV-HD back panel connector and a Digital input on your Home Theater system.

**Internal Analog Audio Connector**

When using the S/PDIF output for audio from your digital channels, audio from your analog TV channels comes from the Internal Analog Audio connector.



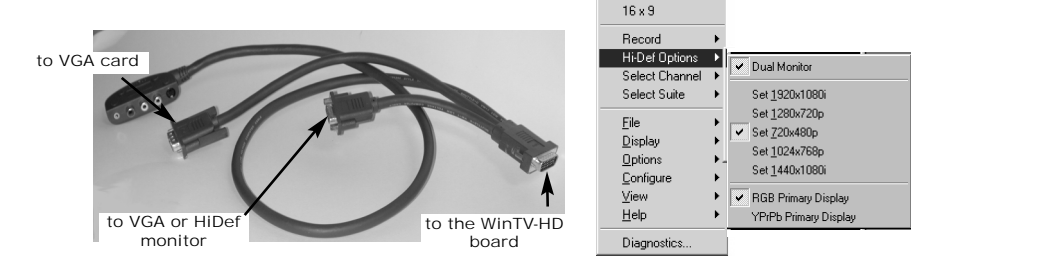
### Step 5: Single and Dual Monitor Setup

**Single Monitor mode (SMS)**

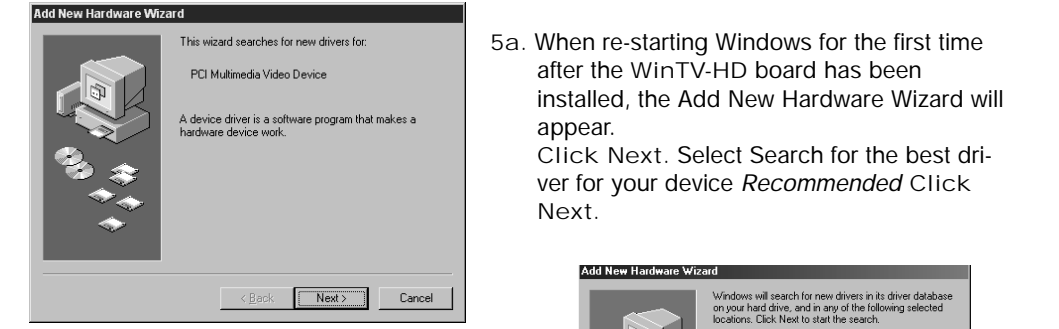
In Single Monitor mode, you can watch analog and digital TV-in-a-window plus see Hi-Def TV full screen on your VGA monitor. Remove your VGA monitor cable from your VGA card and connect it to the short leg of the Pod cable labeled "MONITOR". Now, connect the long leg of the Pod cable labeled "VGA" to your VGA card.

**Dual Monitor mode (DMS)**

In Dual Monitor mode, you can watch analog and digital TV-in-a-window on your VGA screen, plus at the same time see Hi-Def TV full screen on another Hi-Def monitor or another VGA monitor. Connect your high definition



### Step 6: Install the WinTV driver for Windows

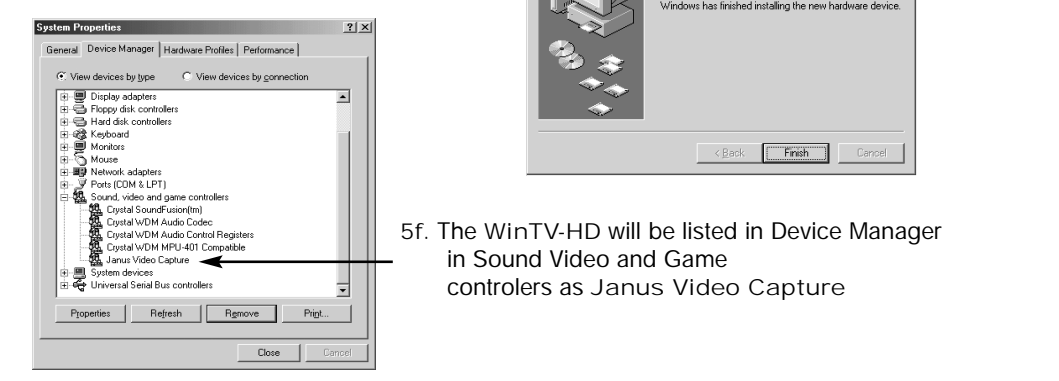


5a. When re-starting Windows for the first time after the WinTV-HD board has been installed, the Add New Hardware Wizard will appear. Click Next. Select Search for the best driver for your device **Recommended** Click Next.

5b. When you see the above dialog box, insert the WinTV Windows Installation CD-ROM into your CD-ROM drive. Select CD-ROM drive and click Next.

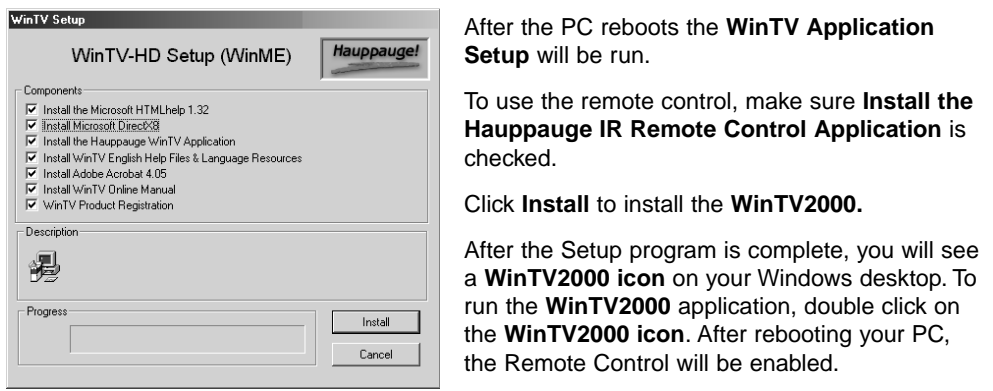
5d. You will see a number of files being copied to your hard disk drive.

5e. Click Finish. You will need to reboot your system for the changes to take effect.

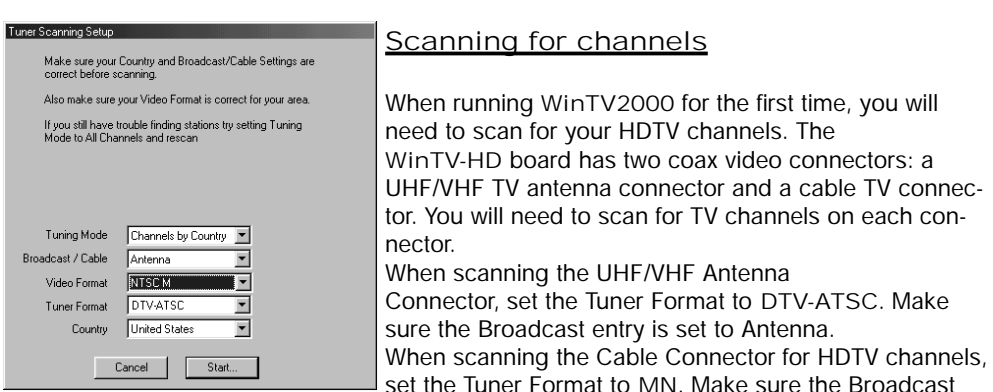
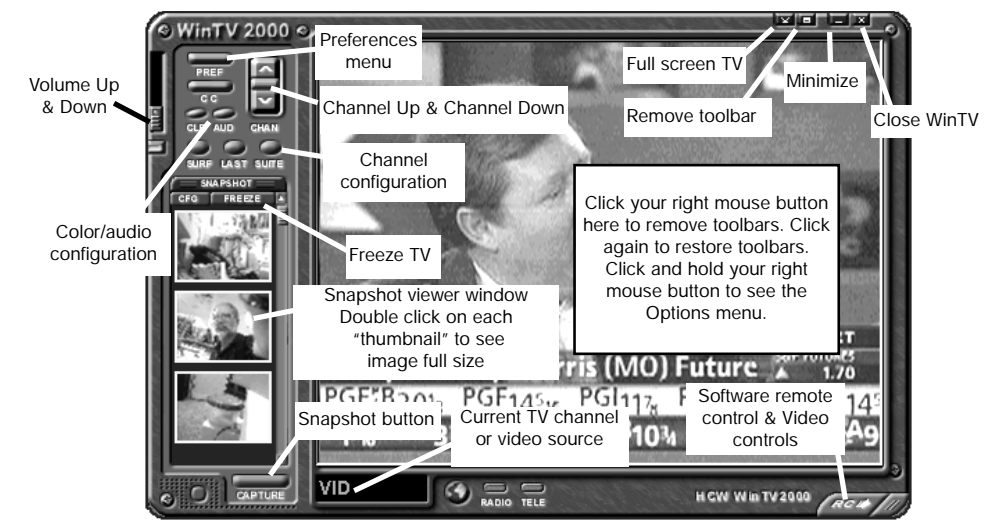


5f. The WinTV-HD will be listed in Device Manager in Sound Video and Game controllers as Janus Video Capture

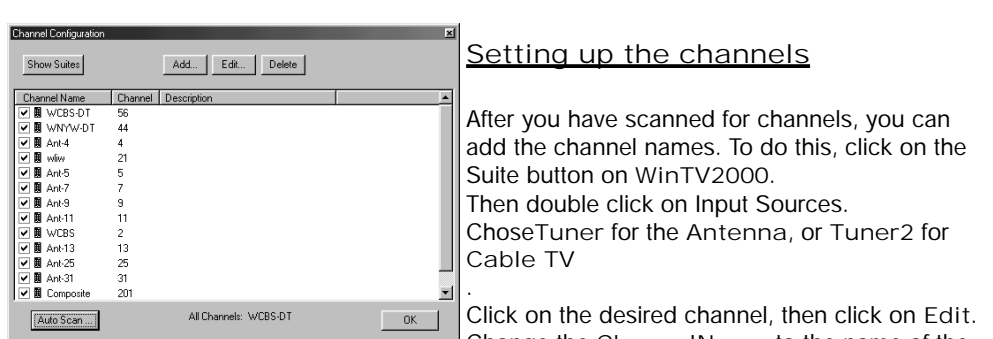
### Step 7: WinTV Software installation



### Step 8: The new WinTV2000 application



entry is set to Antenna or to Cable for regular cable channels.



Click on the desired channel, then click on Edit. Change the ChannelName to the name of the station. Then click OK.



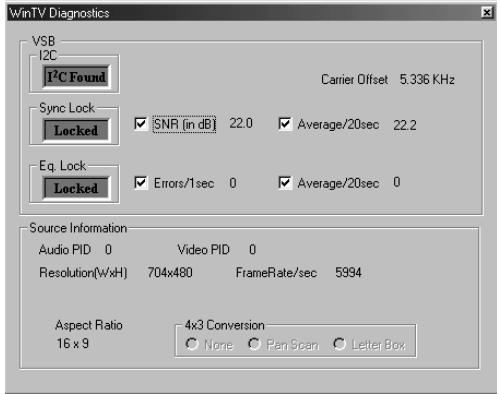
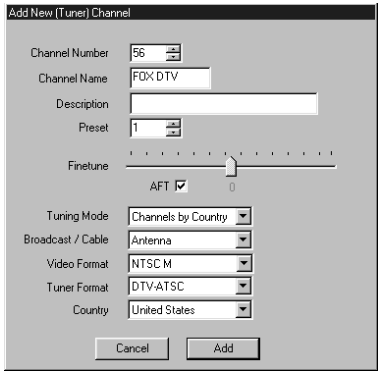
## Step 9: Manually Adding HDTV channels

HDTV is broadcast over the airwaves. To receive HDTV, a UHF/VHF rooftop antenna is recommended in most areas of the U.S. In cities, a bowtie antenna can often be used if positioned near a window facing the Digital TV broadcaster.

Since HDTV is broadcast over the air, it is necessary to position the antenna to point at the Digital TV transmitter. We have included a utility in the WinTV application to help position the UHF/VHF TV antenna.

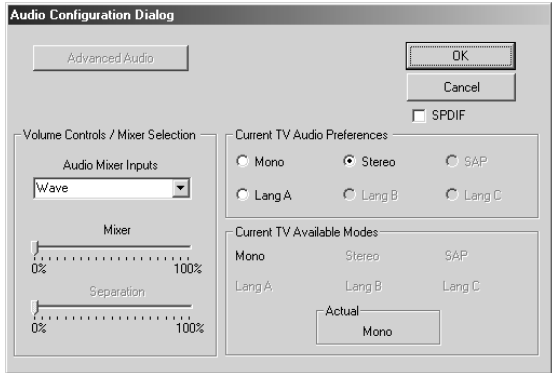
To position the UHF/VHF antenna, do the following:

- use the supplied list of Digital TV stations to find a HDTV channel which broadcasts in your area. For example, in Cleveland, WKYC broadcasts HDTV on channel 2.
- open the Channel Suite Manager. To do this, click on the Suite button on WinTV2000, or click on Configure/Channels/SuiteManager on the WinTV32 application. Then double click on Input Sources. Click on Tuner to see the Digital TV antenna configuration.
- Then click Add. Enter the HDTV Channel Number (for example: 2 for WKYC in Cleveland) and the Channel Name. Make sure Broadcast is set to Antenna, and that Tuner Format is set to DTV-ATSC. Click Add and then OK.
- Now, open the diagnostics menu to help adjust your UHF/VHF antenna. Hold the CTRL button on your keyboard down while clicking the right mouse button. Keep the right mouse button depressed for a few seconds, and you'll see a menu pop up. Click on the last line, Diagnostics.
- Now slowly rotate your antenna until the Sync Lock and Eq. Lock lights turn green. This indicates that the UHF/VHF antenna is pointed to the DTV transmitter.



NOTE: A higher (SNR) number means a stronger signal.

## Step 10: Configuring audio



### Basic audio setup

To configure the **WinTV-HD** audio for your speaker configuration, click on Configure / Audio.

Set Audio Mixer Inputs to Wave Volume. You should hear sound from a TV channel. If you do not hear audio, refer to the next section: "Quick Troubleshooting Guide."

NOTE: When S/PDIF audio, check S/PDIF in the dialog box and Jumper JP4 accordingly (Step 4).

## Recording and playing back HD TV programs

High definition digital TV is broadcast in a format called the MPEG2 Transport Stream. The MPEG 2 Transport Stream is the complete digital information from the broadcast transmission, and includes video, audio and any data broadcast with the show (close captioning data, program guide data, etc.).

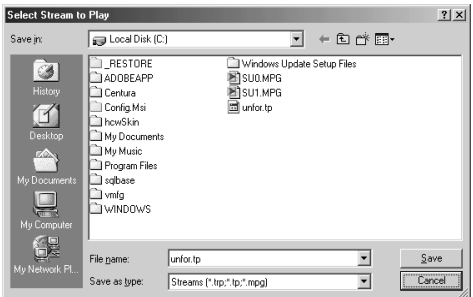
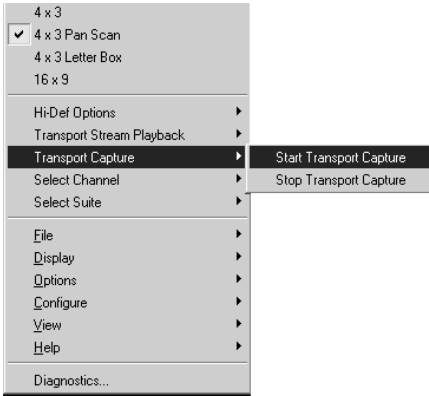
When you record a High Definition TV show to your PC's hard disk, you are actually recording the entire MPEG2 Transport Stream. Once recorded to disk, this Transport Stream can be played back through the WinTV-HD, where the video is decoded and displayed on your monitor.

Note: We recommend a PII 600 or better for recording transport streams to you hard disk. Also, while recording HD TV programs, we recommend running the WinTV-HD full screen.

### Recording an HD TV program to disk

To record a HD TV program to your hard disk:

- Right click the mouse button on the TV screen and hold it depressed for a few seconds until the Settings menu pops up. Then highlight Transport Capture and click on Start Transport Capture.
- The Select Stream to Play dialog box will open. You can change the default file name and change the directory where you want the file recorded. Click Save and you will start recording.
- To stop recording, right click the mouse button on the TV screen and hold it depressed for a few seconds until the Settings menu pops up. Then highlight Transport Capture and click on Stop Transport Capture.

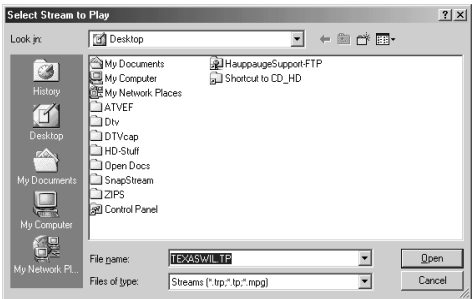
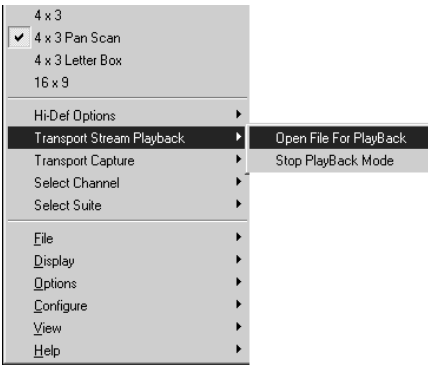


Recording HD-TV consumes a lot of disk space. Every 10 minutes of HD uses about 2 Gigabytes of hard disk space. The WinTV-HD creates new file names approximately every 10 minutes (every 2 Gigabytes) of recording. On playback, the WinTV-HD automatically plays these files uninterrupted so you see smooth playback.

### Playing back a HD TV program

To play back your recorded file:

- Right click the mouse button on the TV screen and hold it depressed for a few seconds until the Settings menu pops up. Then highlight Transport Stream Playback and click on Open File For PlayBack.
- The Select Stream to Play dialog box will open. The last recorded program will be listed in the file name box. If this is the program you want to playback, click open and your recorded file will play. Otherwise, select the program from the file list and then click open.
- To stop the playback, right click the mouse button on the TV screen and hold it depressed for a few seconds until the Settings menu pops up. Then highlight Transport Stream Playback and click on Stop PlayBack Mode.



Note: If your recorded .tp file exceeds 1.96gig, the recording program will automatically start a new file with the extension xxxxx.#1.mpg xxxxx#2.mpg and so on.

### Tips on optimizing your PC system for HD recording and playback

The HD transport stream has a datarate of 19.4 million bits per second, and therefore recording and playing back High Definition TV is very system intensive. Here are some tips on optimizing your system for recording and playing back HD TV without dropping video frames:

- use a PC with a Pentium II 600MHz or faster. Though while recording and playback the CPU does not do the actual encoding or decoding of HD video (this would require a very fast CPU), it still needs to manage the disk drive
- defragment your hard disk driver before recording, or use a second disk drive just for HD recording.
- use a 7200 RPM disk drive for recording (many old hard disk drives spin at 5400 RPM)
- make sure your hard disk drive has DMA enabled in Windows
- minimize the number of background applications running
- if you have a newer model VGA card which supports VIP1 (some of the recent NVideo and ATI cards support this), then use the internal flat ribbon cable to connect the WinTV-HD to the VGA card. By doing this, you eliminate moving the transport stream over the PCI bus, thereby improving capture performance. When using the internal VGA cable, you need to make a system registry change. See our website for more information: [http://www.hauppauge.com/html/sv\\_wintvhd.htm](http://www.hauppauge.com/html/sv_wintvhd.htm)
- if your VGA card does not support VIP1 and cannot use the internal connector from the WinTV-HD to the VGA card, then while recording we recommend running WinTV full screen.

## Keyboard shortcuts

+	channel up
-	channel down
Page Up	Volume Up
Page Down	Volume Down
Ctrl M	Mute audio
Ctrl P	Image print
Ctrl T	Full screen TV
Ctrl F	Image freeze
Ctrl C	Image Copy to the clipboard

## Quick Troubleshooting Guide

**Note:** Our web site has information on installing the **WinTV-HD** and software updates. **WinTV-HD** software updates can be found at: [http://www.hauppauge.com/html/sw\\_tvhd.htm](http://www.hauppauge.com/html/sw_tvhd.htm)

**Note:** The **WinTV-HD** requires the latest version of Windows98, known as Windows98SE, any version of Windows2000 or WindowsMe.

### Install ERROR 69:

If you receive ERROR 69, see included bulletin.

### Incompatible motherboards

We recommend the use of a motherboard with an Intel chipset because some older motherboards do not fully support the **WinTV-HD**. We have software updates on our web site which will fix incompatibilities found with several VIA and SIS-based motherboards. Please see [http://www.hauppauge.com/html/sw\\_wcst.htm](http://www.hauppauge.com/html/sw_wcst.htm) in the Tips section.

### Poor image when running WinTV in 256-color mode

Many VGA's cannot run WinTV in 256-color mode. Instead, run in 16-bit mode or higher.

### No TV audio from your PC's Left and Right speaker

Be sure your PC's audio mixer LineIn setting is not muted, and at a reasonable volume level. If the LineIn setting is not muted, you can verify that the **WinTV-HD** card is working by connecting self-amplified speakers directly to the A/V cable's 1/8" miniplug. Use the supplied Adapter if necessary.

### System lockups or error messages when running WinTV2000

Some VGA cards have memory conflicts with **WinTV-HD**. To fix this, try switching PCI slots. Also, you can increase the memory range used by the **WinTV-HD** board in Device Manager. To do this, look under Sound, video and game controllers, double click on the Janus Capture section, click on Resources, unclick Use Automatic settings and double click on Memory range. In the Edit memory range dialog box, there are small up/down arrows next to Value. Click the little up arrow a couple of times. Make sure there are no conflicts. Then click OK and then OK again. When it says Created a forced configuration, click Yes. Then reboot your PC.

### Poor TV Reception or Not detecting all channels:

Poor HDTV reception is generally the result of an weak TV signal. When using a 'roof-top' antenna, an aerial booster may be required. If you find that some or all of the channels have not been detected, you can insert channels manually. **See Step 8.**