WinTV-PVR-150
WinTV-PVR-250
WinTV-PVR-350
WinTV-PVR-usb2

Installation and Reference Manual

Hauppauge®

FCC Statement

Radio Interference Statement:

The WinTV boards have 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, 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 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.

FCC ID: H90WINCAST Assembled in Malaysia

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance to the FCC Rules could void the user's authority to operate the equipment.

CE Statement:
This equipment has been tested and complies with EN 55013, EN 55020 and IEC 801-3 part 3 standards.

WinTV-PVR Installation and Reference Manual

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Table of Contents

WinTV-PVR Installation and Reference Manual Revision 2.0

FCC Statement .....
CE Statement .....

Installing the WinTV-PVR 1

Installation overview 1-1
WinTV-PVR 150/250/350 board diagram 1-2
Installing the WinTV-PVR board in your PC 1-3
Connecting the WinTV-PVR-USB2 cables 1-3
Installing the WinTV-PVR driver under Windows XP.....1-4
Installing the WinTV-PVR-USB2 driver on Windows XP 1-5
nstalling the WinTV-PVR-350 under Windows 98SE 1-6
Installing the WinTV-PVR-250/350 under Windows Me.....1-8
Installing the WinTV-PVR-250/350 under Windows 2000.....1-9
Finding the WinTV-PVR-150/250/350 driver in Device Manager ...1-12

Installing the Application Software 2

How to install the application software for Windows 98SE & Me....2-1
How to install the application software for Windows XP 2-4
How to install the application software for Windows 2000.....2-7

Using the WinTV2000 Application 3

The WinTV2000 window.....3-1
Running the WinTV application 3-1
Setting up your TV channels.....3-2
WinTV-PVR remote control.....3-3
Watch, Pause and Record TV buttons.....3-4
Setting up an external source 3-4
The Channel Suite Manager 3-6
Adjusting the video image color 3-6
Still Frame Image Capture 3-7
Adjusting your captured images.....3-7
Using the mouse in WinTV.....3-7
Single click TitleMode/NoTitleMode makes WinTV easy to use! 3-8
Setting preferences in Title mode 3-9
Setting full screen TV mode 3-10
Image Save, Print, Copy to Clipboard 3-10
Keyboard control of the WinTV application 3-11

Pause Mode **4**

Pause Mode 4-1
Pause buffer 4-1
Pause button 4-2
Replay button 4-3
Skip ahead button 4-3
Rewind button 4-3
Fast forward button 4-4
Slow motion button 4-4

Record Mode **5**

Timer counter 5-1
Record timer 5-1
Record button 5-1
VCD record button 5-2
Play button 5-2
Pause button 5-3
Rewind button 5-3
Fast Forward button 5-3
Slow Motion button 5-3
File button....5-3

Configuring MPEG compression formats directories **6**

Setting the Video quality 6-1
MPEG-1 6-2
MPEG-2 6-2
DVD 6-2
Creating Video CD's....6-3

WinTV MPEG Editor **7**

How to use the editor:....7-1

Using WinTV-Scheduler **8**

Time to Begin Program 8-1
Time to End Program 8-1
Program Period 8-2
Date to Begin Program 8-2
Source selection....8-2
Channel selection....8-2
Recording options....8-2
Problem: Snapshots don't display correctly 8-4

Troubleshooting **9**

Problem: Poor image when running in 256-color mode 9-1
Problem: Poor TV Reception or Not detecting all channels:.....9-1
Problem: WinTV2000 has display problems on the screen, e.g. blurred image. 9-1
How do I configure the Audio for the WinTV-PVR 9-2

Tips on System Optimization **10**

Technical Support **A**

Technical support telephone A-1
Service A-1

Warranty **B**

Warranty.....B-1

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03/15/05

Introduction

This manual covers all of the **WinTV-PVR** models for displaying TV on your PC's VGA screen. It covers, but is not limited to, the following models:

WinTV-PVR-150,
WinTV-PVR-250,
WinTV-PVR-350 &
WinTV-PVR-usb2

References to the **WinTV-PVR** apply to all models. The Windows driver for all of the WinTV boards will be referred to as the **WinTV driver,** and the installation CD-ROM will be referred to as the **WinTV Installation CD-ROM.**

For models which have particular features (such as the chapter on the Radio application), we will note which models these features are available on.

For a description of how the WinTV boards display video on your VGA screen, see the chapter entitled **How WinTV Works.**

Installing the WinTV-PVR board

The **WinTV-PVR** is a Plug & Play device designed for Microsoft® Windows® XP/2000/98SE/Me. The WinTV-PVR-150 currently only works under Windows XP. Plug & Play simplifies the installation and hardware setup of **WinTV** by having hardware settings assigned by Windows. This section describes how to install these boards using the Plug & Play installation.

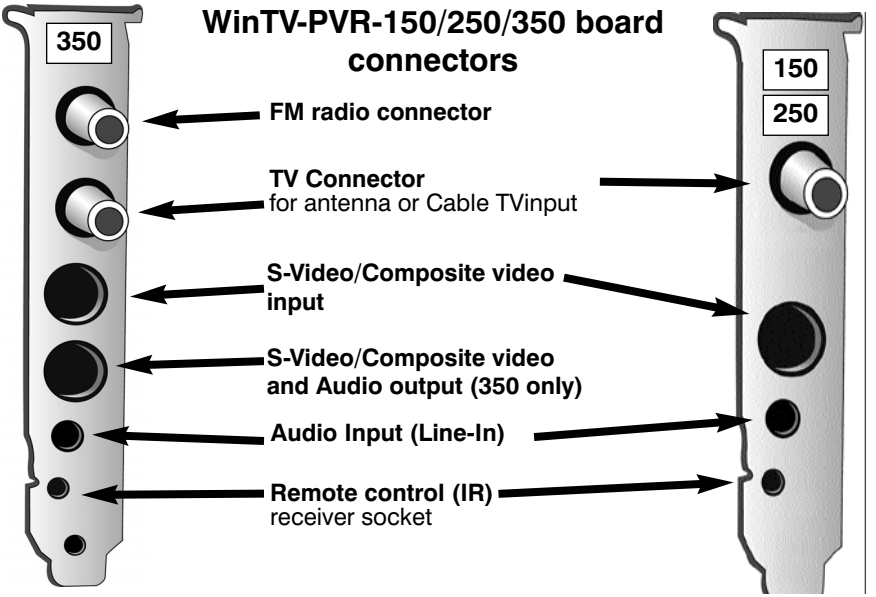
Installation overview

To install **WinTV-PVR** under Windows XP, you will follow these steps:

- ✓ Install the **WinTV-PVR** board in your PC and connect the cables
- ✓ After booting Windows, you will install WinTV Windows device driver from the **WinTV-PVR Installation CD-ROM**
- ✓ After the Windows driver is installed, you will install the **WinTV** application software from the **WinTV-PVR Installation CD-ROM**

WinTV-PVR board connections diagram

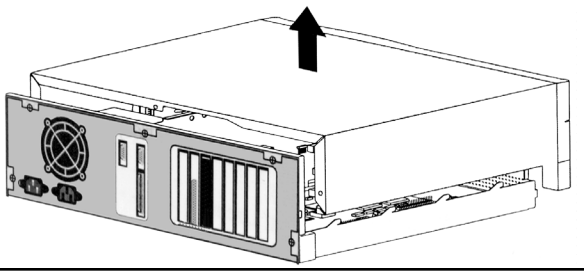
The following diagram shows the main functions and connectors of the **WinTV-PVR** board. Since there are several different models with different features and functions, your board may not have all of the components installed.

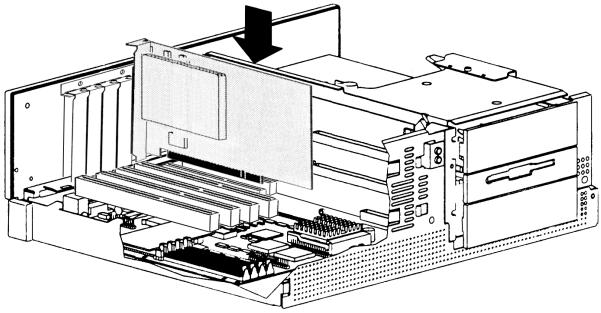


Installing the WinTV-PVR in your PC

Switch off the computer. The manufacturer of your PC supplies instructions on removing the PC cover. Remove the cover.

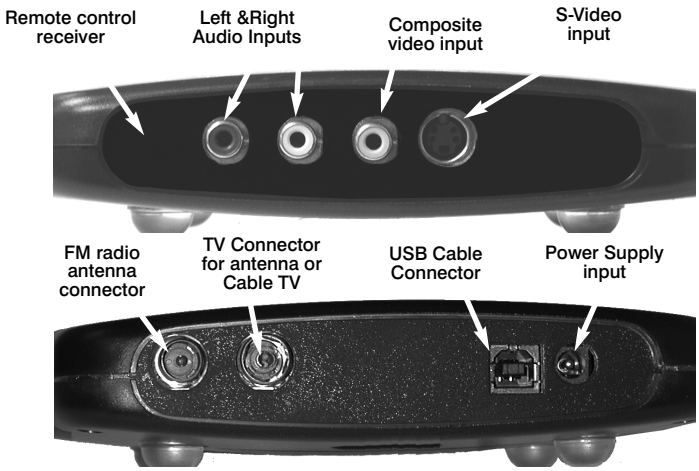
Locate a free PCI slot (a short white slot). Unscrew and remove the metal cover plate which covers the back of the empty slot.





Plug the WinTV board into the PCI slot, and screw the WinTV's metal cover plate to the PC. Replace the computer cover. Now your ready to connect your cables.

Connect the WinTV-PVR-usb2 cables



Plug the supplied **Power Supply** into the **Power Supply input**. Plug your **TV antenna** or **cable TV cable** into the WinTV-PVR-usb2's **TV Connector**.

Plug the supplied **Radio aerial** into the **FM radio connector**. This may not be necessary if your TV aerial or cable network supplies FM.

Plug one end (the square end) of the supplied **USB cable** into the WinTV-PVR-usb2's **USB Cable connector**. The WinTV-PVR-usb2 is

compatible with both USB 1.1 and USB 2.0 (high speed USB). If you are using USB 2.0, the WinTV-PVR-usb2 can create videos at higher quality.

DO NOT PLUG THE OTHER END INTO YOUR PC UNTIL IT HAS COMPLETELY BOOTED!

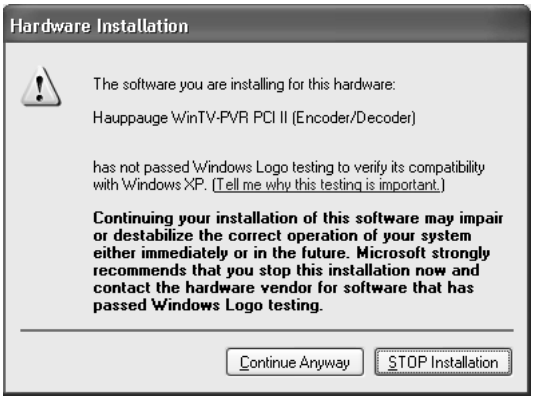
The S-Video and Composite video inputs and the L&R audio inputs can be used to bring audio/video from a VCR, camcorder, DVD player or satellite TV receiver.

Installing the WinTV-PVR-150/250/350 driver under WindowsXP

After installing the **WinTV-PVR** in your PC and booting into Windows, the **Found New Hardware Wizard** will appear.

Insert the **WinTV Installation CD-ROM** in your PC's CD-ROM drive and make sure **Install the software automatically (Recommended)** is checked. Click ***Next***.

Note: If the Hardware Installation dialog box opens, click ***Continue Anyway***:



When the window **(Windows has finished installing the software that your new hardware device requires)** opens.

Click ***Finish.***

This completes the **PVR** driver installation for Windows XP.

Continue to Chapter 2 to install the application software.

On those **WinTV** models equipped with remote control, after rebooting your PC the Remote Control will be enabled.

Installing the WinTV-PVR-usb2 driver for Windows XP and Windows2000

After booting into Windows, plug the WinTV-PVR-usb2 in your USB port. The **Found New Hardware Wizard** will appear. Insert the WinTV

Installation CD-ROM in your PC's CD-ROM drive and make sure Install the software automatically (Recommended) is checked.

Then click ***NEXT***.

When the **Hardware Installation** dialog box opens, click ***Continue Anyway***.

Click ***Finish***.

This will complete the driver installation for Windows XP.

Continue to Chapter 2 to install the application software.

Installing the WinTV-PVR-350 driver under Windows 98SE

When re-starting Windows for the first time after the **WinTV** board has been installed, the **Add New Hardware Wizard** will open. Click ***Next***.

Insert the **WinTV Windows Installation CD-ROM** into your CD-ROM

drive.

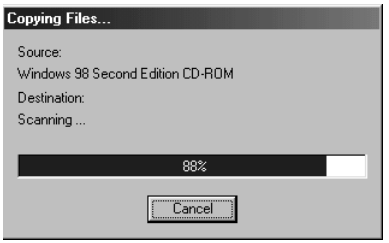
Click ***Next***.

Select **Search for the best driver for your device** (Recommended).

Click ***Next***.

Select ***CD-ROM drive*** and click **Next**.

The **Copying Files** window will open and you will see a number of files being copied to your hard disk drive



Note: If a message stating “Windows was unable to locate a driver for this device”, you did not wait long enough for the WinTV Installation CD-ROM to be read. Click ***Back*** and then click ***Next*** again for the CD to be recognized.

When the window **(Windows has finished installing the software that your new hardware device requires)** opens.

Click ***Finish***

This completes the **PVR** driver installation for Windows 98SE.

Continue to Chapter 2 to install the application software.

Note: On those **WinTV** models equipped with remote control, after rebooting your PC the Remote Control will be enabled.

Installing the WinTV-PVR-250/350 driver under Windows Me

When re-starting Windows for the first time after the WinTV board is installed, the **New Hardware Found** window will open.

Insert the **WinTV Windows Installation CD-ROM** into your CD-ROM

drive.

When the **Add New Hardware Wizard** opens, select **Automatic search for a better driver device (Recommended)**.

Click ***Next***.

The **Copying Files** window will open and you will see a number of files being copied to your hard disk drive

When the window **(Windows has finished installing the software that your new hardware device requires)** opens.

Click ***Finish***

This completes the **PVR** driver installation for Windows Me.

Continue to Chapter 2 to install the application software.

Note: On those **WinTV** models equipped with remote control, after rebooting your PC the Remote Control will be enabled.

Installing the WinTV-PVR-250/350 driver under Windows 2000

After installing the **WinTV-PVR** in your PC and booting into Windows, the **Found New Hardware** window will open.

Next the **Found New Hardware Wizard** will open. Click ***Next***.

Next, the **(Install the Device drivers)** window will open.

Insert the **WinTV Installation CD-ROM** in your PC's CD-ROM drive and make sure **Search for a suitable driver for my device (Recommended)** is checked.

Click ***Next***

Next, the **(Locate Driver Files)** window will open.

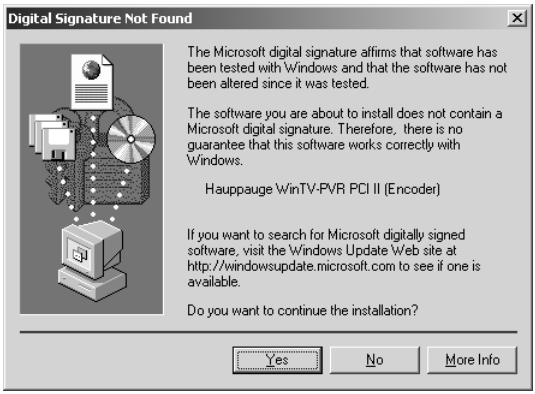
Make sure the ***CD-ROM Drives*** is checked.

Click, ***Next***

The **(Driver Files Search Results)** window will open.

Click ***Next***

The **(Digital Signature Not Found)** window opens, it will ask you if you want to continue the driver installation:



Click **Yes.**

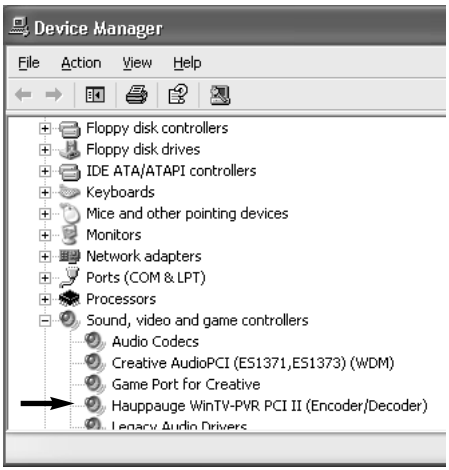
The **Copying Files** window will open and you will see a number of files being copied to your hard disk drive

Next, when the **(Completing the Found New Hardware Wizard)** window opens, click ***Finish.***

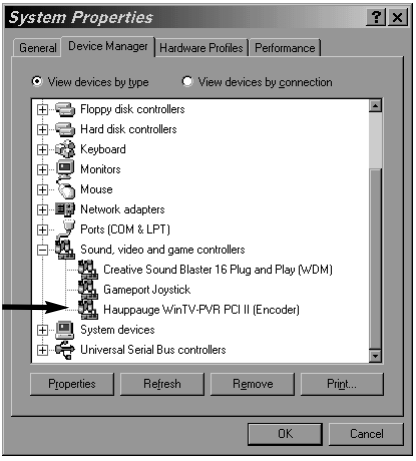
This completes the **PVR** driver installation for Windows 2000. Continue to Chapter 2 to install the application software.

On those **WinTV** models equipped with remote control, after rebooting your PC the Remote Control will be enabled.

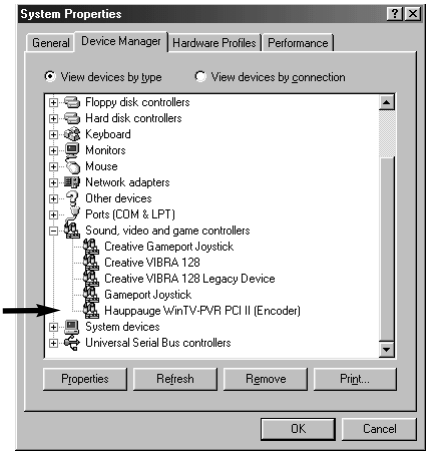
Finding the WinTV-PVR-150/250/350 driver in Device Manager



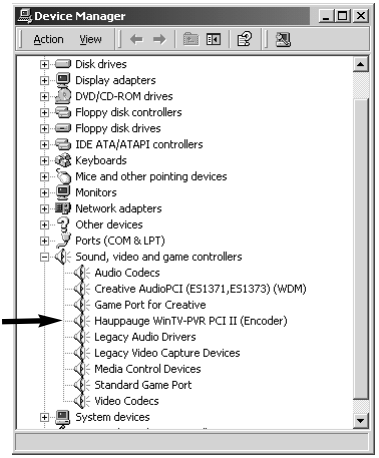
Windows XP



Windows Me



Windows 98SE



Windows 2000

Installing the WinTV-PVR Application Software

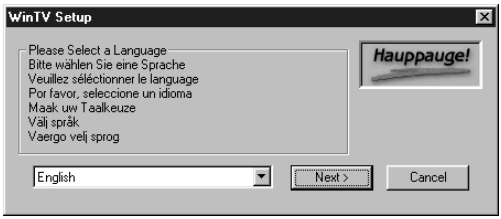
Installing the application software for WindowsXP

After the **WinTV driver** has been installed, you need to run **WinTV Setup** to complete the installation.

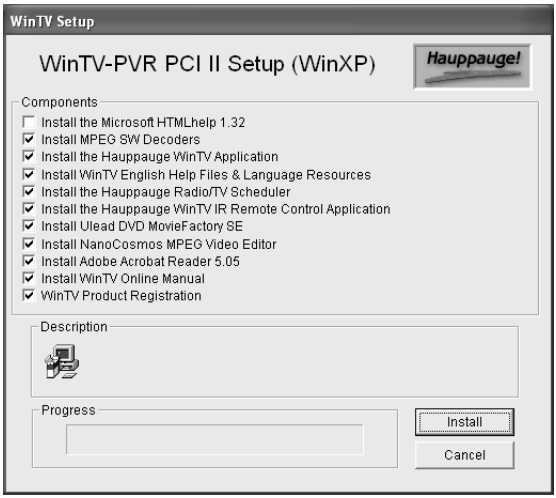
Click on the ***My Computer*** icon on your desktop and then click on your ***CD-ROM drive letter***.

Double click, ***Setup.exe*** to begin installing the application software.

Next, Select your **language** and click, ***Next.***



The WinTV Setup menu will appear. The default listing of programs shows the main TV applications which will be installed.



Click ***Install***

Next, the **Welcome** window will open.

Click, ***Next***

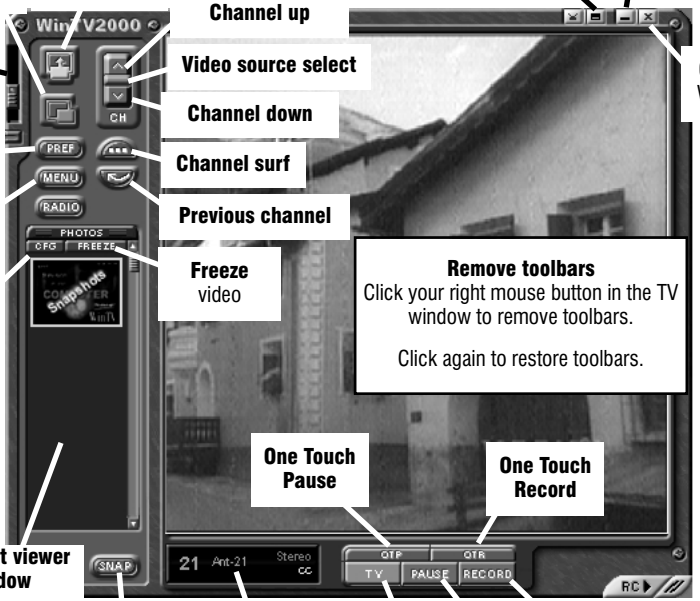
You are now **Ready to Install** the application software.

Click, ***Next***

The **Copying Files** window will open and you will see a number of files being copied to your hard disk drive.

Click, ***Finish*** to complete the **WinTV 2000** application software installation.

The WinTV2000 application



Running the WinTV application

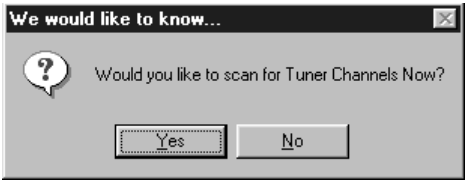
After installing the WinTV application from the **WinTV Installation CD-ROM**, you will see WinTV icons on your Windows background. Start **WinTV2000** by ***double clicking*** on its icon.

You can also click on ***Start***/***Programs***/***Hauppauge WinTV*** and then the ***WinTV2000 icon*** to start **WinTV**.

Setting up your TV channels

The first time you run **WinTV**, you will be asked to scan for TV channels.

Click ***OK.***



Choose the Video Format for your **Geographic region:**

North America uses **NTSC(M)**

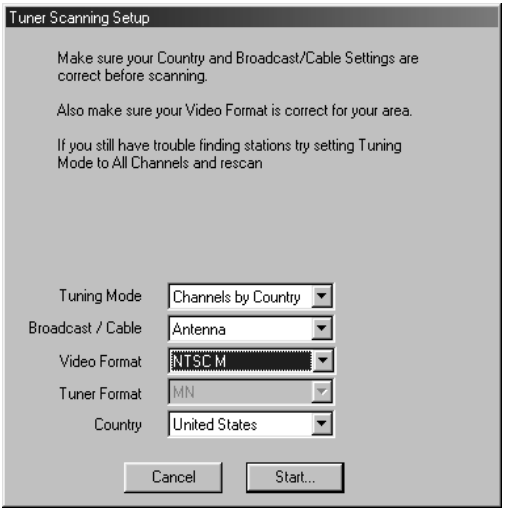
Most of Europe uses **PAL B**/**G**

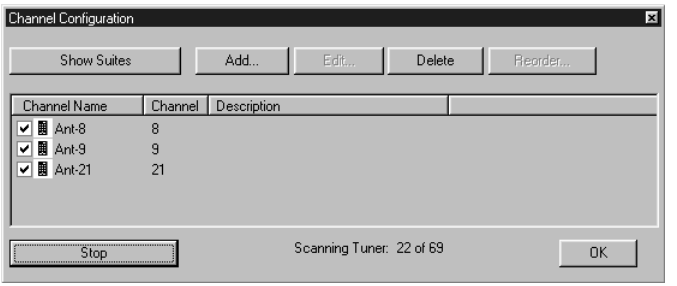
U.K. uses **PAL I**

South America uses either, **PAL M** or **PAL N**

If you are using Cable TV, in the **Broadcast**/**Cable** select ***Cable***. Otherwise select ***Antenna.***

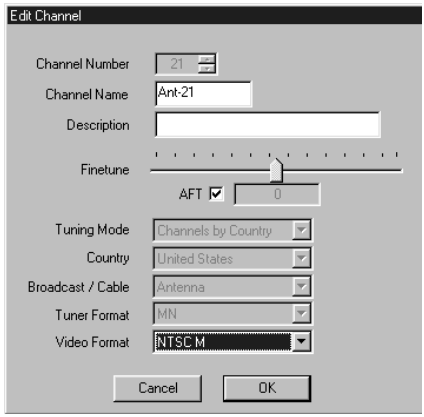
Then, click on ***Start***.





You can modify the channel names by ***single clicking*** on the **channel**.

Then click ***Edit***.



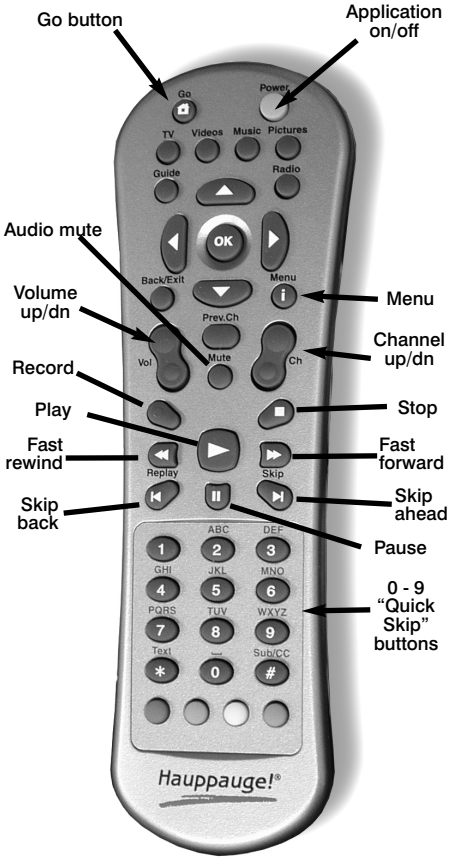
In the **Edit channe**l window, click your mouse in the ***Channel name box***, then type in your desired name. You can also add a description.

When finished, click ***OK***.

WinTV-PVR remote control

The WinTV-PVR's remote control software is installed automatically during the installation of the WinTV applications. You will see the WinTV Remote icon in the Device Tray. The installation will add a shortcut to IR.EXE to the Startup group, so that IR.EXE is loaded every time after Windows has booted.

If you need to restart the remote control, run IR32.EXE from the C:\Program Files\WinTV directory.



To install the IR Remote receiver:

- Turn off your computer. Plug the sub-mini jack at the end of the IR Receiver cable into the Remote control (IR) receiver socket of the WinTV-PVR.

- Place the IR Receiver on your desktop so that the infrared light from the IR Remote transmitter can reach the IR Receiver.
- Turn on your computer.
- If you have previously installed the WinTV applications, the IR software should automatically run, and you will see the WinTV Remote icon in the Device Tray.

Some remote control buttons

0 - 9 buttons: When playing back a recording, the "1" button will skip to 10%, the "2" button 20%, etc. of the length of the recording.

Skip ahead button: holding the skip ahead button advances the video about 5 minues per 10 seconds the button is depressed.

Skip back button: pressing and holding the Skip back button makes the video go back about 5 minutes for every 10 seconds the button is depressed.

Go button: brings up the WinTV task list. Allows you to start WinTV2000, WinTV32 or WinTV-radio.

Menu button: brings up the Windows Task list. Use the left and right arrows to change to other Widnows tasks.

Green power button: will close the WinTV application.

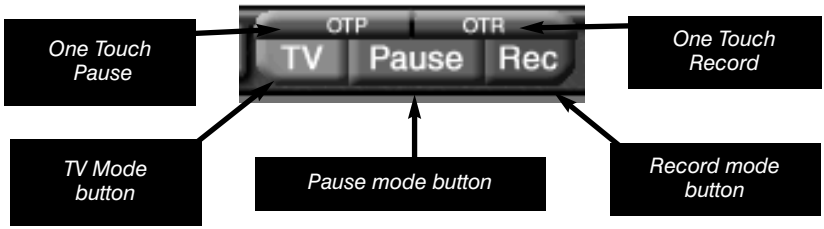
Checking the function of WinTV's IR Remote

WinTV's Remote application, IR.EXE, is loaded every time Windows is booted. You will see a Remote icon in the device tray. To check the remote control operation, point the Remote transmitter at the Remote control receiver. When you click the TV button on the Remote transmitter, after 3-4 seconds the Remote icon should flash, indicating that the Remote application is running. After the Remote icon flashes, the WinTV application will be run.

Watch, Pause and Record TV buttons

There are three buttons to control the **Watching, Recording** and **Pausing** of TV. Clicking on the ***Pause button*** will cause the **Pause menu** to roll down from the **WinTV2000** application, while clicking on the ***Rec button*** will cause the **Record menu** to roll down.

The **One Touch Pause button** prepares the **WinTV-PVR** for pausing live



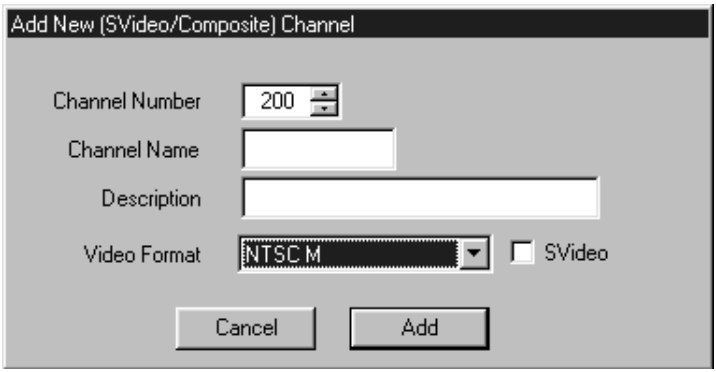
video (see Pause mode below).

The **One Touch Record** button will start a record session. If you click ***OTR*** more than once, a record timer will be set and the recording will be done for 15 minutes for each additional time the **OTR button** is clicked. For example, if you click the ***OTR button 3 times***, the **WinTV-PVR** will record for 30 minutes.

Setting up an External video source

Click the ***Suite button*** (Channel configuration) on the **WinTV2000** and click on ***Add***. Click ***Composite*** (or ***S-Video***). Pick your ***video format (NTSC for North and South America, PAL for Europe, etc.)*** and give it a name (for example: external) and description, then click ***ADD.*** Now you have a external video channel. **Note:** if setting up S-Video, make sure to check the S-Video box.

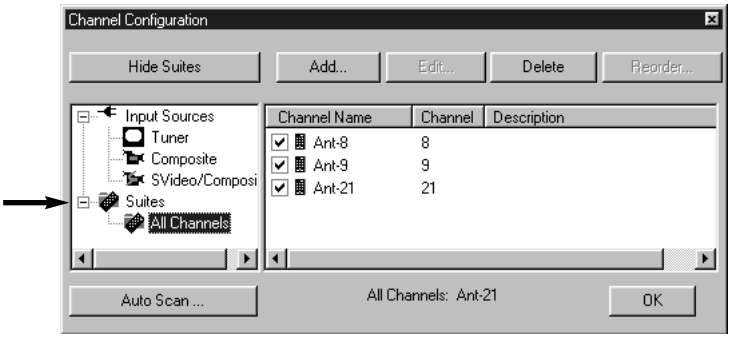
To change to External video, either select the channel name you just configured, or click the Switch video source button on the **WinTV2000**



application.

The Channel Suite Manager

From the Channel Manager, you can Add, Edit or Delete channels. You can also create channel suites, which are subsets of the All Channels

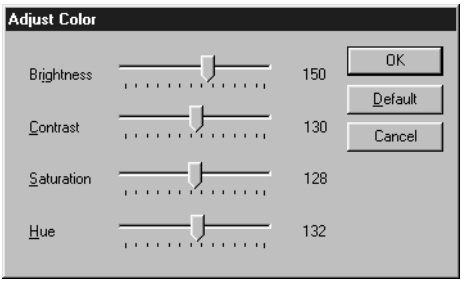


suite. For example, you can have a suite of just TV news channels, and name this suite “News”. This allows you to create a subset of all the channels, so that you can channel surf through only those channels.

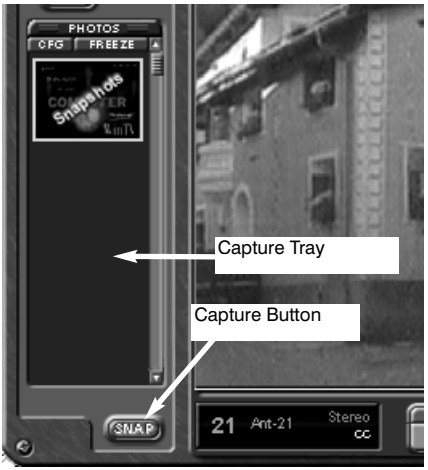
To set up a new Channel Suite, click on the ***Suite button*** in the **WinTV2000** application. Then right click your mouse on ***Suites*** (in the left column) and click on ***New***. You can then name the suite and add channels to the suite. Click ***OK*** when finished. To change to a suite, right click your mouse in the TV window for 2 seconds and go to **Select Suite,** you will then see a list of suites. **Click** on the one you would like to switch to.

Adjusting the video image color

You can adjust the Brightness, Contrast, Saturation and Hue of the live TV image by using the color adjustment menu.



Click on ***Pref button*** to get the adjustment menu.

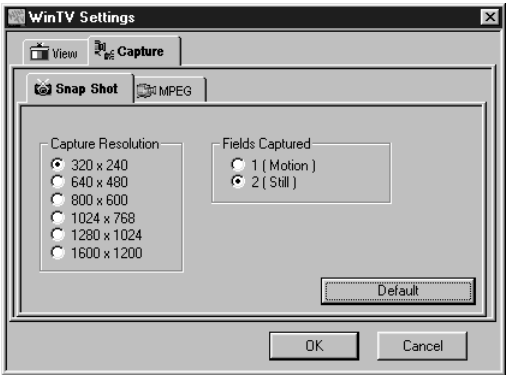


Still Frame Image Capture mode

You can capture high quality images by clicking on the ***Snap button*** in the **WinTV2000 application**, you will see a thumbnail appear in the Capture tray.

Adjusting your captured images

You can capture images from **320x240** up to **1600x1200** pixels. To reduce the effects of motion in the video image, but with lower image resolution, Click on the ***PREF*** button and then click the ***Capture tab.*** In the **Fields Captured** option choose **1 (Motion)**. Example, **1(Motion)** used for Sporting events, Football, Baseball, etc. **2(Still)** used for Interviews, talk shows, news, etc.



You can also adjust your captured image by clicking your right mouse button on the Thumbnail that appears in the WinTV application window.

Using the mouse in WinTV

The Windows mouse is used to move the TV window, resize the WinTV window, select menu options and make the WinTV window appear in full screen or adjustable screen size. WinTV uses the left and right but-

tons. The middle mouse button (if your mouse has one!) is not used.

Single click TitleMode/NoTitleMode makes WinTV easy to use!

The left mouse button is used for all control and select functions. The right mouse button when clicked once ***inside the WinTV video window will hide or display the tool and menu bars and is used to turn off the full screen TV mode***.

These modes are called **TitleMode** and **NoTitleMode**. You can toggle back and forth between **TitleMode** and **NoTitleMode** by simply clicking your ***right mouse button*** when your mouse is inside the video window.

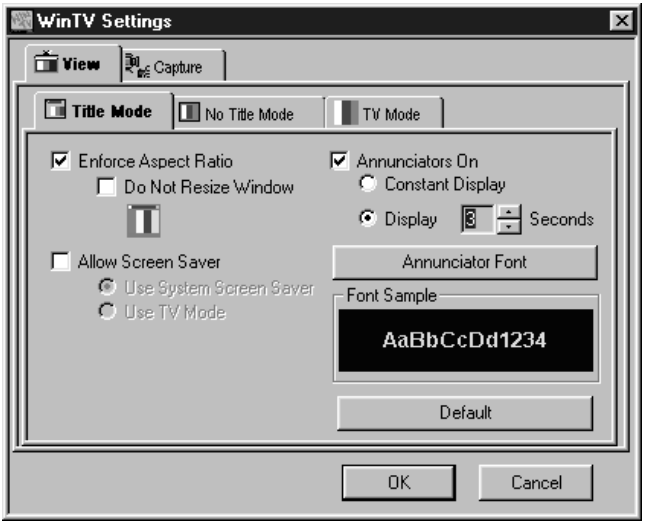
The **WinTV** window is moved in **NoTitleMode** by clicking and ***holding your left mouse button*** in the middle of the TV window and moving it to the new position. Then let it go! Move the TV window in **TitleMode** by clicking and holding your mouse button on the ***Title Bar*** (where it says Hauppauge WinTV2000), holding it down and dragging it to the new position.

You can set a different size and a different place on your VGA screen for the WinTV window in **TitleMode** and **NoTitleMode**. Then by simply clicking with the ***right mouse button***, the **WinTV** window will switch from one saved size and place on the screen to the other! Try clicking your right mouse button several times in the middle of the TV window and see what happens.

To set the window size, ***"grab"*** a corner of the video window with your mouse **(hold down the left mouse button when it is on one of the corners of the WinTV window)** and then drag it to the preferred size, then release the mouse button. You can set different sizes for **TitleMode** and the **NoTitleMode**.

For example, if you would like to watch **WinTV** without the **tool**/**menu bars** in a small corner of the Windows screen, click the ***right mouse button*** inside the WinTV video window and the **tool**/**menu bars** will disappear. Then ***drag*** the WinTV window to its preferred size and location on the Windows screen. Now click the ***right mouse button*** inside the **WinTV** window and the **WinTV application** will now save the correct size and location on screen for **NoTitleMode**. Every time you select the **NoTitleMode** by right clicking in the **WinTV window**, the window will resize and move to the saved position.

To select which bars and indicators are shown when in the **TitleBar** and **NoTitleBar** modes, click on ***Preferences***. You can **eliminate** the status bar and the toolbar in the **TitleMode** or **add** the status bar in the **NoTitleMode**.

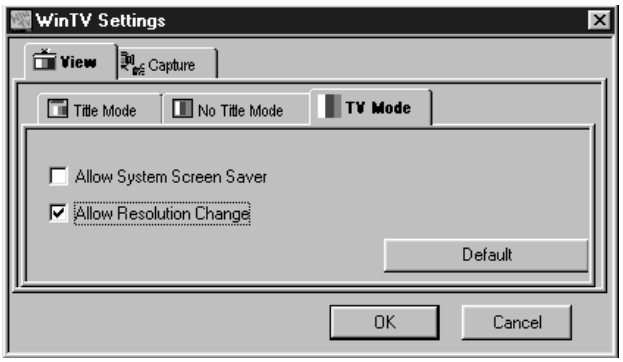


Setting preferences in Title mode

Click ***PREF*** and then click on the ***Title Mode*** tab.

Enforce Aspect Ratio : forces the viewed aspect ratio to 4:3. When turned off it will allow arbitrary aspect ratios.

Annunciators On : display the TV channel on screen when you change



channels, and display the volume when you adjust the volume.

Allow Screen Saver : On, will allow your system to use your default screen saver when **WinTV** is open or to use the live TV as a screen saver.

Setting full screen TV mode

Click ***Preferences*** and then click on the ***TV Mode tab***. Set **Allow Resolution Change**. If you then click on the ***TV icon*** on the **WinTV2000** Toolbar, the WinTV application will switch the VGA mode to the chosen size **(using the Windows Quick Res feature)**, allowing the WinTV image to be viewed full screen.

Image Save, Print and Copy to Clipboard

The process to save, print or copy an image starts with the digitizing of a single video frame. When one of these functions are clicked on, the WinTV moves the next video frame into your PC's main system memory instead of the VGA display. Your PC's processor then converts the digitized video image into a 24-bit DIB image **(a format which is used internally in Windows)**, and then copied back into the VGA memory so that you can see the image which will be printed or saved. This becomes a **"Thumbnail"** image in the WinTV tray window. The video images which are digitized can be saved to disk, printed to a color or black/white printer or copied to the clipboard. These functions can be viewed from the **PREF menu**:

There are a few things which need to be noted. First, because a video frame is composed of two "fields", an odd field with the odd lines in the image and an even field composed of the even lines, there might be a distortion in the frozen image if there was rapid motion while the image was being moved into main system memory. This distortion is called **"interlaced artifact"**.

Another item to note is that the video image, when converted into a 24-bit DIB image, will look lighter then it did when it was in motion. You can adjust the images brightness, contrast and color saturation and hue by clicking on ***CLR Button***. These adjustments are made during the digitizing process on the WinTV board and will affect both the "live" image and the frozen image.

Keyboard shortcuts

Convenient keyboard control functions:

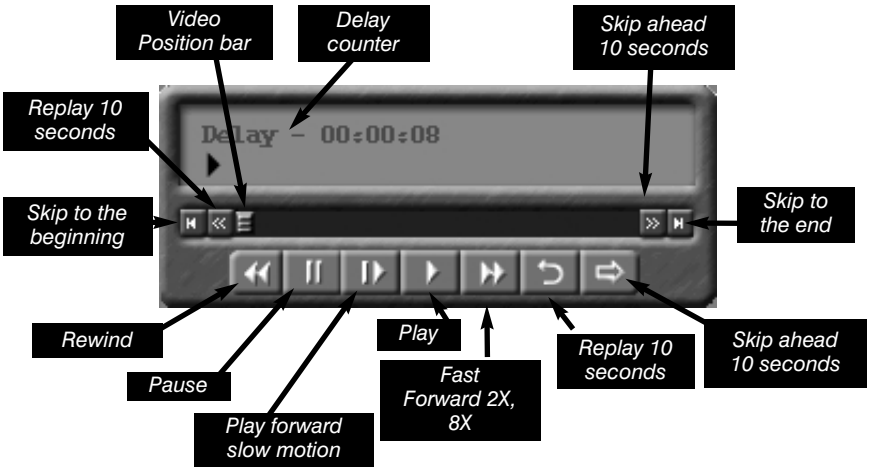
Volume Up	=	Page Up
Volume Down	=	Page Down
Mute	=	Ctrl+M
Channel Up	=	Plus (+)
Channel Down	=	Minus (-)
Print a Frame	=	Ctrl+P
Copy to Clipboard	=	Ctrl+C
Copy from Clipboard	=	Ctrl+V
Freeze Frame	=	Ctrl+F
Full screen TV mode	=	Ctrl+T

Pause Mode

Pause Mode

Clicking the ***Pause button*** or ***OTP button*** on the WinTV2000 application starts the **Pause mode**. The Pause Menu will drop down. (shown above)

Note: It takes about 10 seconds to create a pause buffer. While the buffer is initializing, do not click any buttons on the WinTV application.



Pause buffer:

The Pause buffer is space on your hard disk where video is stored during the Pause mode. The maximum amount of time which your TV program can be delayed is dependent upon how much storage space you have set for the Pause buffer and which type of MPEG format you have chosen. Both of these can be set in the MPEG settings menu (see the section entitled “Configuring the format for MPEG compression”).

To catch up to the **"live"** audio/video program, you can either exit the Pause mode by clicking the ***TV mode button***, you can click the ***Skip button***, which skips ahead 10 seconds per click, or you can **grab** the Video Position indicator and move it to the right until it is at the end of

the Video Position bar.

The Limit Pause Mode buffer size sets the maximum size of the Pause buffer.

Here are some suggested sizes:

- if you are using **MPEG-1 VCD format**, 650 MBytes per hour are used. So if you want a 1/2 hour buffer, then set the Limit Pause Mode Buffer Size to 325 MBytes.
- if you are using **MPEG-2 4.0MB/sec**, about 2 Gigabytes per hour is used for the Pause buffer. So for a 30 minute buffer, then set the Limit Pause Mode Buffer Size to 1000 MBytes.

Delay counter:

The **Delay counter** displays how much time you are behind the live video. For example, if the delay counter says 00:01:23, then the video window is showing video 1 minute and 23 seconds behind live video.

Pause button:

Clicking the ***Pause button*** or ***OTP button*** causes WinTV to start saving a audio and video stream (referred to as an A/V stream) into the WinTV's Replay Buffer. It takes about 10 seconds for the Replay Buffer to be initialized and for Pause to become effective.

Unclicking the ***Pause button*** will cause the audio/video program to start playing from the point where the button was originally pushed.

Most WinTV functions are active while in the Pause or Pause Live mode. For example, you can change volume, resize the TV window, go into "**no-title mode**", etc.

While in Pause mode, the Video Position bar shows the amount of the Replay Buffer which is filled with video. For example, if the Video Position indicator shows halfway, it means that half of the Replay Buffer is filled. If you find you cannot Replay or Pause as many minutes as you would like, increase the size of the Replay Buffer.

While in Pause mode, the A/V stream is always saved in the Replay Buffer. To stop saving the A/V stream in the Replay Buffer, you must exit the Pause mode by clicking the TV mode button.

Replay button:

While in the Pause mode, hitting the Replay button acts like the Instant Replay you see on TV broadcast sporting events: the audio/video goes back in time and you repeat what you have previously seen.

Each click of the Replay button causes audio/video to go back 10 seconds. For example, if you want to repeat the audio/video you saw 10 seconds ago, you would click the Replay button once. If you want to see the video you saw one minute ago, you would need to click the Replay button six times.

For extended replay times, you might find it more convenient to grab the Video Position indicator control bar and move it to the left. Once you let the control bar go, audio/video starts to play (it might take a few seconds for the WinTV2000 application to start playing). You might have to move the Video Position indicator to the left and right to find the desired spot to start replaying audio/video.

While Replaying, your audio/video program continues to be recorded in the Replay Buffer. Therefore, if you have clicked the Replay button 3 times (so that you are replaying the audio/video seen 30 seconds ago), the video you see in the WinTV window will be 30 seconds behind the "live" audio/video program.

Skip Ahead Button:

Clicking the **Skip button** will skip the video ahead 10 seconds.

Rewind Button:

Clicking the **Rewind button** while playing video will rewind the recorded video. Clicking the **Rewind button** again will continue the playing.

Fast Forward Button:

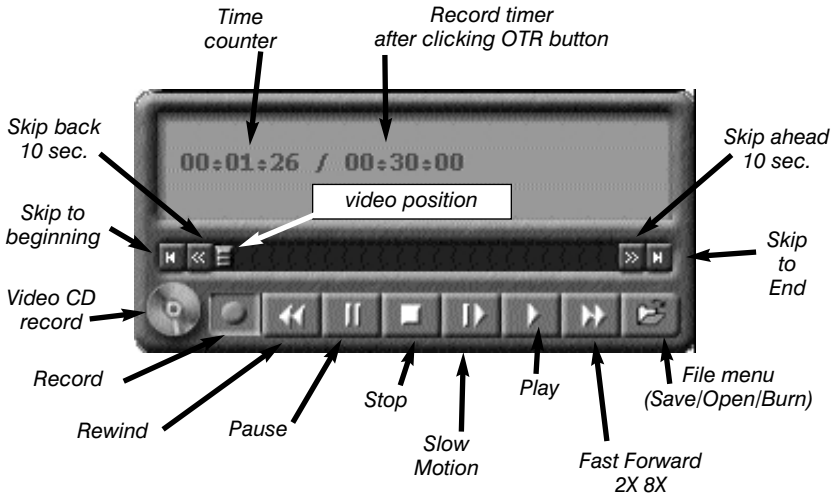
Clicking the **Fast Forward button** one time will fast forward your video at **2X** speed. Clicking the **Fast Forward button** two times will fast forward your video at **8X** speed.

Slow Motion Button:

Clicking the **Slow Motion button,** will play the video in Slow Motion. Clicking the Slow Motion button again, will continue playing normally.

Record Mode

Click on the **Record button** or the **OTR button** on the WinTV2000 application to open the Record and Playback control bar.



Time counter:

The time is specified in a **Hour:Minute:Second** format.

Record timer:

A timed record is started by clicking the **OTR button**. Each time you click ***OTR***, the Record Timer is incremented by 15 minutes. At the end of the time specified by the Record timer, the record will stop. Also, clicking the **Stop button** will stop a timed record. The time is specified in a **Hour:Minute:Second** format.

Record Button:

Clicking the **Record button** will automatically generate a file name and start recording your **audio**/**video** program.

The quality of the video recording and the directory where the files are stored are set in the **MPEG Configuration Menu** (see the section entitled “Configuring the format for MPEG compression”). Click the ***PREF*** button on the WinTV2000 application, then clicking ***Capture*** / ***MPEG***. There are several video qualities: VCD plus **MPEG-2 2.0, 12.0 MBit/sec**, **DVD** and **SVCD**. The highest quality is **MPEG-2 12.0 MBit/sec**, and the lowest quality is **VCD**.

While recording:

- Live video continues to play in the WinTV window
- the Counter will display the length of your recording
- if you had started recording with the **OTR button**, and had clicked it more than once, the total time for the recording will also be displayed.

The recorded video file is saved in the **DVCR Recorded File Path** which can be configured from the **MPEG Configuration Menu**. Everytime you record a file, a new file is automatically created. The first file will be **_dvcr001.mpg**. The second file will be **_dvcr002.mpg** and so on.

Click the ***Stop button*** to stop your recording. The recorded **audio/video** file is then saved to disk using the automatically assigned file name. The Time counter is reset to 00:00:00 after the recording is saved.

VCD Record Button:

Clicking the **VCD Record button** will automatically generate a file name and start recording your program using the **VCD record quality**. All other characteristics are the same as in the **Record mode**. This button makes it easy to save VCD quality video, for burning later on to a Video CD.

Play Button:

Clicking the **Play button** will playback from disk the last video file created. When playing a video, you can **rewind, fast forward, replay 10 sec or skip forward 10 sec** using the buttons on the control bar.

Pause Button:

Clicking the **Pause button** while Playing will pause your **audio**/**video** file. Clicking the **Pause button** again will continue the playing.

Rewind Button:

Clicking the **Rewind button** will play the video file in reverse at **1x** speed. Clicking the **Rewind button** again will continue the playing.

Fast Forward Button:

Clicking the **Fast Forward button** one time will fast forward your video at **2X** speed. Clicking the **Fast Forward button** two times will fast forward your video at **8X** speed. Clicking the button again will continue playing at normal speed.

Slow Motion Button:

Clicking the **Slow Motion button** will play video at **1**/**2** speed. Click the **Slow Motion button** again to play your video at **normal speed**.

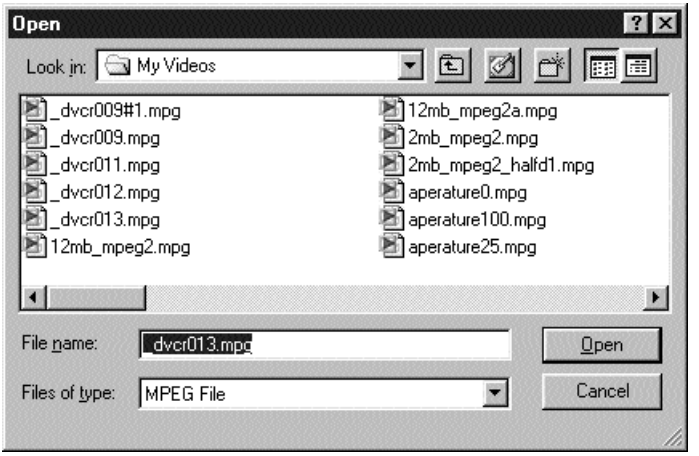
File Button:

Clicking the **File button** opens the **File menu**. The last file recorded is listed in the **File name box**.

In the File menu you can:

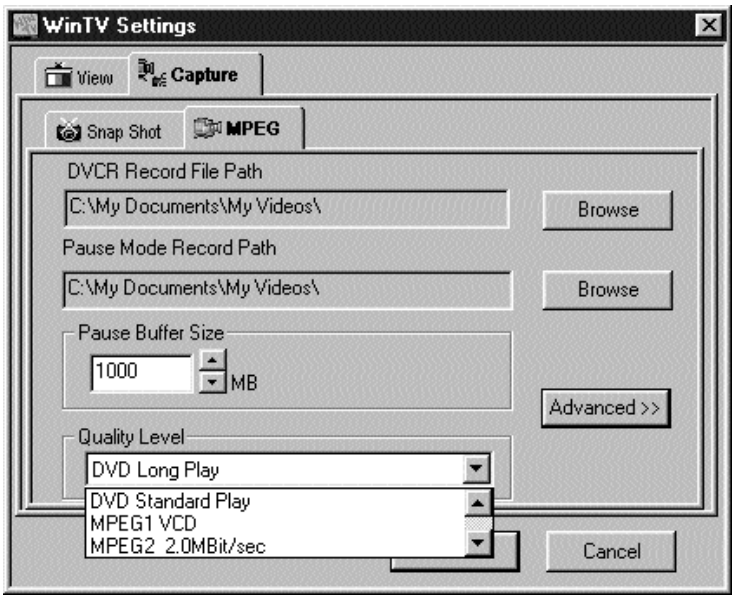
- **Rename** your recorded video file. To rename a video file, find the file you would like to rename (remember, the automatically generated file names start with _dvcr), highlight it with your ***mouse***, and click and hold the ***right mouse button***. Go down to **Rename** and then you can type in a new name. Remember: you must keep the **.MPG** extension on the file.

- Play a video file previously recorded: find the file you would like to play, highlight it with your ***mouse*** (one click of the mouse button) and click ***Open***. Then click the ***Play button.***
- Delete recorded video files which you no longer want (and which consume hard disk space). Click your ***right mouse button*** on the video file once, go down the menu and click on ***Delete.***



Configuring MPEG compression formats and record directories

To set the directory where your video recordings will be stored, click the ***PREF button*** (Preferences menu) on WinTV2000, then ***Capture*** and then on the ***MPEG tab***. Set the **DVCR File Path** to your video directory. The default path is **C:/My Documents\My Videos**



The **WinTV-PVR** supports several formats for **MPEG video compression**, called **Quality Levels**.

The differences in these formats are:

- The higher the datarate, the better the video quality you see from live TV and your recordings. The higher the datarate, the more disk space which will be required.
- CPU horsepower required during **playback and pause mode**.
- The compatibility when creating **Video CD's or S-VCD's.**

To configure the MPEG Quality Level, click on the ***PREF button*** (Preferences menu) on WinTV2000, then ***Capture*** and then on the ***MPEG tab***.

Here are the video formats:

MPEG-1: VCD

MPEG-2: 2.0MB/sec (Full D1)

MPEG-2: 2.0MB/sec (Half D1)

MPEG-2: 12.0 MB/sec (Full D1)

MPEG-2: 12.0 MB/sec (CBR)

DVD Standard Play: Datarate 8.0Mb/sec, 720x480, 48.0 kHz stereo

DVD Long Play: Datarate 6.2Mbits/sec, 720x480, 48.0 kHz stereo

DVD Extra Long Play: Datarate 4.4Mbits/sec, 720x480 48.0 kHz stereo

SVCD Standard Play: Datarate 2.5Mbits/sec, 480x480 pixels

Note: CBR is constant bit rate, **VBR** is variable bit rate.

For creating Video CD's for playback on your home DVD player, chose the **MPEG-1 VCD format**. If you would like to burn a **DVD ROM**, chose **DVD Standard Play**, **DVD Long Play, DVD Extra Long Play.**

If you have a fast PC and would like the best video image quality, chose **MPEG-2 12.0MB/sec**. If you have a slower PC, try the **MPEG-2 2.0MB/sec** format.

Once chosen, the format is set for both the **Pause** and **Record modes**. You can change the format between recordings or after you have exited **Pause mode**, but the format cannot be changed while **Recording** or while in the **Pause mode**.

Creating Video CD's

Most PC's based on Windows can play **MPEG-1** files created with **WinTV-PVR** through the Windows MediaPlayer. PC-based DVD players, such as WinDVD, can play the **MPEG-2** formats as well. So, if you simply want to play your video files on a PC, you do not have to create a Video CD. Just use Windows MediaPlayer to play your MPEG-1 encoded videos from your hard disk.

The format used on **Video CD's (VCD)** is MPEG-1. Most DVD players can play Video CD's in addition to DVD movies. The **WinTV-PVR** includes a **VCD** authoring package, Uleads' DVD MovieFactory, which can burn Video CD's on your PCs' CD-RW burner.

Note: We have found that most home DVD players can play Video CD's created with CD-RW media. Some DVD players, though, can only read CD-R media. If you are not able to have your DVD player read a CD-RW made using these steps, we suggest trying a CD-R media. A complete list of tested compatible DVD players can be found on our web site at: **http://www.hauppauge.com/dvdplayers**

Step 1: Creating a Video CD compatible video file

While in the record mode, click on the ***Video CD Record button***. You can also have set the MPEG Quality Level to **MPEG-1 VCD**, and then click the ***Record button.*** In both cases, a Video CD compatible file will be created on your hard disk, with the name of the file automatically generated by the WinTV application. After you have recorded your show, click on ***File button*** in the **Record menu**, the last file recorded will be highlighted.

Step 2: Creating a "burnable" VCD Movie

After you have recorded using the **MPEG-1 VCD** setting, it is still not in format which can be burnt onto a CD-RW and played in a DVD player. The difference between a VCD compatible video file and a burnable VCD file is in the way the audio and video are interleaved within the file.

To create a **"burnable" VCD** file, you can either use the **WinTV-Editor** or the included DVD MovieFactory. If you start with a VCD compatible video file, after editing you will have a **"burnable" VCD file.**

Run the **WinTV-Editor**, then click ***File*** / ***Open***. Add you Video CD compatible video file.

After editing, click ***Make Movie***. At the end of this process your video file will be in a **"burnable" format.**

Step 3: Burning your converted file to a CD-R or CD-RW

After the converting process is complete, your file will be VCD compliant. Now you are ready to burn your VCD file on a CDRW.

Open **DVD MovieFactory**, click on A***uthor Menus***, and click on the ***VCD button***. Then click ***Next***. Click ***"Add MPEG file"***, then select your VCD compliant video file.

Note: if you select a non-burnable VCD file, MovieFactory will give you an error and not allow you to open this file.

Then click ***Next*** and you will be brought to the **Burn menu.**

Note: Hauppauge recommends using CD-RW media to create Video CD's for DVD playback. Most DVD players can use CD-RW media, while some can use either CD-RW or CD-R media. If you insert one of the created Video CD's and it does not play on your TV screen, then try creating a Video CD using a CD-R media.

Step 4: Playing the Video CD back on your DVD player or PC

Once a Video CD has been created, you can play this on most home DVD players, or you can play it back using Windows MediaPlayer.

A list of tested compatible DVD players which can play Video CD's created with the **WinTV-PVR** can be found on our web site:

www.hauppauge.com/dvdplayers

Sometimes a version of MediaPlayer cannot **"see" t**he Video CD movie file. If this is the case, you can manually select a video to be played by opening the **Video CD using Windows Explorer,** and looking in the **MPEGAV directory** on the Video CD. There will be a file (or several files if your Video CD contains more than one video file) with names like **Avseq01.dat** You can open this file with WindowsMedia Player and the video will play back in a window on your PC screen.

MPEG Editor

The **Hauppauge MPEG Editor** is an **MPEG-1**/**MPEG-2** cut and join editor. You can cut out segments from videos, or combine videos (of the same MPEG format) together. The MPEG editor makes its cuts on what are called **"MPEG I-frames"**. These types of cuts do not require a re-encode, and therefore preserves the quality of the original video.

How to use the editor:

Click on the ***Add source button*** or click on ***File*** / ***Add*** source to bring the file you want to edit into the MPEG editor. The **WinTV-PVR** uses the **c:\My Documents\My Videos** directory as the default directory to save video files created by the **WinTV-PVR**. When the selected file is opened, it will start playing back in the video window. Click the ***Stop button*** to **stop playback.**

Grab the ***video position slider***, and move it to the beginning of the video segment you want to keep. The video frame will be shown in the video window. You can also use the controls under the video window **(play, pause, stop and the frame control buttons).**

When you have correctly positioned to the video frame you want, click the **In button**. This will define the starting point of the video interval.

Grab the ***video position slider*** and move it to the end position of the clip you want to keep, then click the ***Out button***.

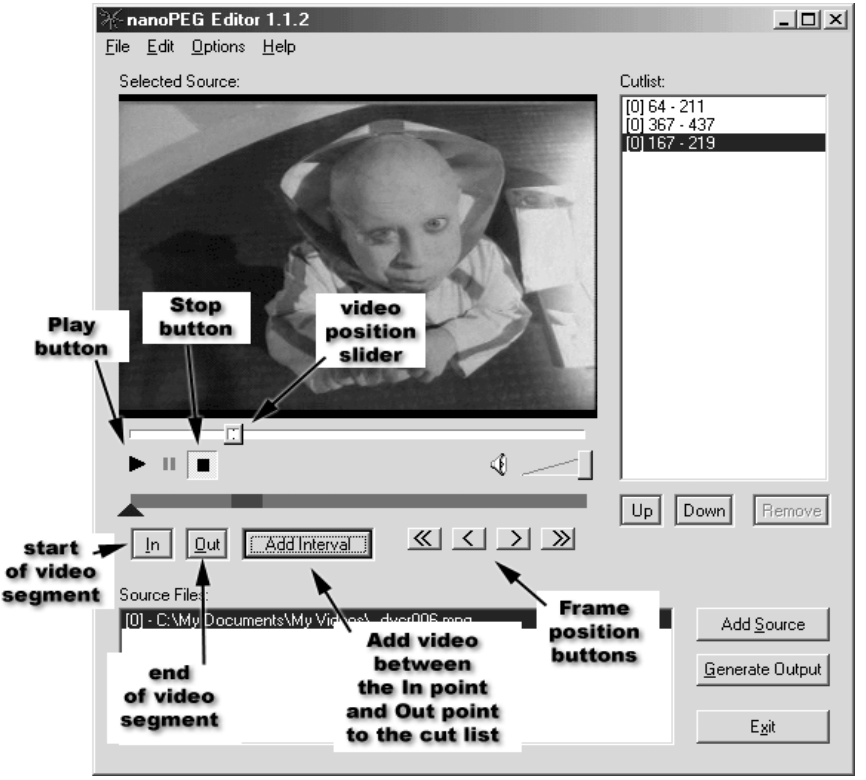
Click ***Add Interval*** to add the defined clip to the cut list. Repeat until you have put all the desired video clips in the **"cut list".**

When you have finished with your cut list, click the ***Generate output*** button. All intervals in the cut list will appear in the final video. The **Generate Output** step normally takes a while.

Your MPEG video is named **nanoEDIT.mpg**. Be sure to rename this before cutting another video, otherwise the file will be overwritten! Before you click ***Generate Output***, click ***File*** / ***SelectOutputFile*** to change the file name of your recorded file.

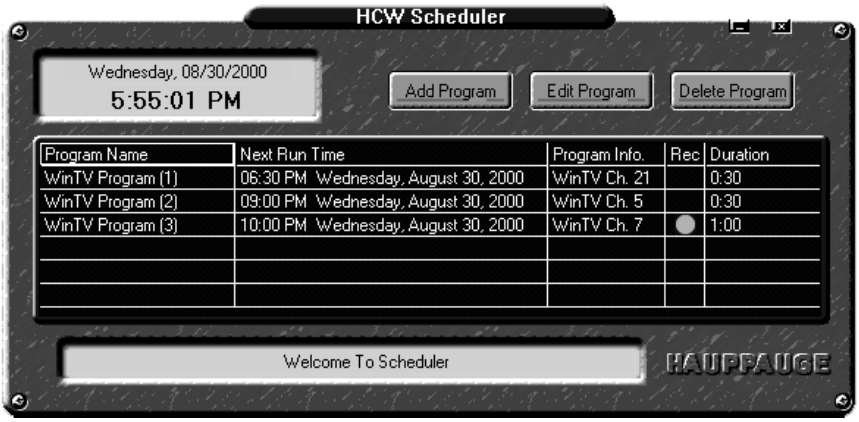
To cut away an advertisement, click the ***In button*** at the beginning of the video sequence, then click the ***Out button*** just before the advertisement starts. Click ***Add Interval***. Then click the ***In button*** at the end of the advertisement, and click the ***Out button*** at the end of the video sequence you want to keep. Then click ***Add interval.***

To cut away advertisements from a movie, you must define all pieces **BETWEEN** the advertisement (everything which belongs to the movie) and add them to the **cut list**.



Using WinTV-Scheduler

WinTV-Scheduler allows you to schedule the recording of TV shows. **WinTV-Scheduler**, once it is set, can be closed, and the WinTV application will **"wake up"** at the desired time and tuned to the desired channel.



After installation, **WinTV-Scheduler** can be found on your desktop. **WinTV-Scheduler** works by using the Windows Task Scheduler to launch **WinTV** at the chosen time. **WinTV-Scheduler** sets up a command line in Task Scheduler to run **WinTV2000**, specifying a TV channel and a length of time to record.

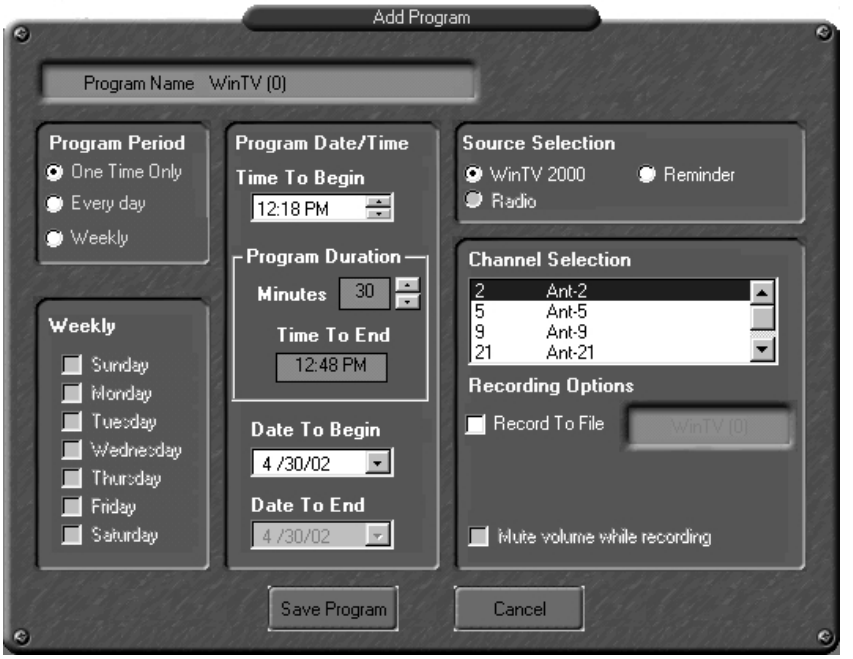
To set up an event for timed watching or recording, run **WinTV-Scheduler** and click on the ***Add Program***.

The items that need to be set for each event are:

- **Time to Begin Program:** set to the desired **start time**. The default time is about 3 minutes from the current time. Click on the ***hour*** to set the hour, the ***minute*** to set the minute and the second (if you feel this is necessary) to set the minute to start the program. **Note:** It takes about 10 seconds to launch the WinTV and set up for recording, so set the **Time to Begin Program** to at least 10 seconds before the time your TV show actually starts.
- **Time to End Program:** set to the time to end this event. **Note:** you need to leave at least 30 seconds between scheduled programs to give the recorder time to set up its disk buffers.

- **Program Period:** one time, daily, weekly
- **Date to Begin Program:** today's date is the default. Change this if you want to schedule on another date.
- **Source selection:** leave set at **WinTV2000** to bring up the **WinTV** at the requested time and on the requested channel.
- **Channel selection:** chose one of your scanned channels.
- **Recording options:** click on ***Record to File*** to record your show. Leave this button **unchecked** to watch TV at the requested time. You can also name your file to record, in the dialog box below.

Once these are set, click ***Set Program***. You can add more Events, clicking ***Set Program*** after each event is set. When you are finished click ***Close.*** The **WinTV program** does not have to be running for the **WinTV-Scheduler** to work. If **WinTV** is not running, it takes about 10 seconds to start **WinTV-PVR** and to start the recording of TV.



Troubleshooting

Installation tips and software updates can be found at:
www.hauppauge.com/html/sw_pvr_pci.htm (WinTV-PVR pci only)

Note: Our FAQ on the Hauppauge web site provides up to date Troubleshooting tips, which can be found at:
www.hauppauge.com/html/faq.htm

Problem: Poor image when running in 256-color mode

Many VGA's cannot run WinTV in 256-color mode. Instead, run in 16-bit or 24-bit color mode.

Problem: Poor TV Reception or Not detecting all channels:

Poor TV reception is generally the result of an Weak TV signal. When using a 'roof-top' antenna, an aerial booster may be required if there is poor TV reception. If you find that some or all of the channels have not been detected, you can insert channels manually. Also, in some areas using cable TV, a format called **Cable HRC** is used. If so, try rescanning (see page 3-2) but use **CABLE (HRC)** instead of cable in the **Broadcast**/**Cable box**.

Problem: Live TV program and video playback has a "Jerky" effect and/or lip synchronization during play-back.

Make sure that **DMA** is enabled for **IDE hard disks**. See the section entitled "Tips on System Optimization" (Section 10).

Problem: WinTV2000 has display problems on the screen, e.g. blurred image.

In the **WinTV** program group (**Start** / **Programs** / **Hauppauge WinTV**) there is a utility called **"Primary".** Set it to "***Allow Overlay***". If it is on **"Allow Overlay",** try it on **"Force Primary".** Some VGA cards need to upgrade from the latest drivers in order for it to support **Overlay mode**. Try to upgrade your VGA drivers from the manufacturer web site.

How do I configure the Audio for the WinTV-PVR?

While watching live TV and while recording video, the **WinTV-PVR** board amplifies the audio signal. When you adjust the audio volume slide bar in the **WinTV2000** application, the **WinTV-PVR** adjusts the audio volume accordingly.

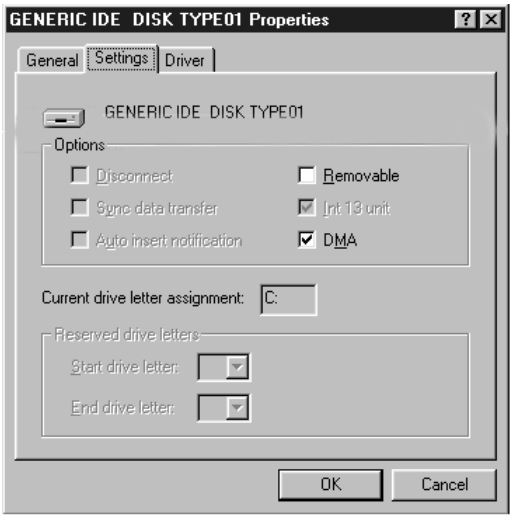
While playing back a video, the PC's MediaPlayer is used, though the video appears in the **WinTV** window. The **Wave Out** device in your PC's **Volume Control mixer** is used to adjust audio volume.

Tips on System Optimization

These are tips that will help you improve capture and playback performance of video files on you PC.

1.) Do not use DoubleSpace or any other disk compression scheme! This severely slows down your hard disk.

2.) Make sure **DMA** is checked for your Hard disk drives in Device Manager. Right click your mouse on the ***My Computer icon*** on your desktop, and click on ***Properties***. Click on the ***Device Manager tab*** and double click on ***Disk Drives***. Highlight **GENERIC IDE DISK TYPE** and click on ***Properties***. Click on ***Settings***. Make sure **DMA** is selected. **Note:** in Windows XP (enable write caching)



3.) Defragment your Hard Disk. To Defragment your hard disk, in Windows click on ***Start*** / ***Programs*** / ***Accessories*** / ***System Tools*** and click on ***Disk Defragmenter***.

4.) You can use 7200 RPM disk drives. Also, there are several hard disks on the market which are designed for higher performance video captures. These drives use 1:1 interleaving and track caching to eliminate gaps caused by a hard disk drive seeking to the next track. They are available with both **IDE** and **SCSI** interfaces.

Technical Support

Technical support telephone

If you have questions regarding installation or compatibility, please contact our technical support staff at:

Phone: (631) 434-3197

Fax: (631) 434-3198

Service

If you should need assistance with the installation, operation, or application of your Hauppauge WinTV board, there are several options available to you. Your primary source for information and problem assistance is always your dealer. Should the need arise, contact your dealer for on-site or repair service.

Hauppauge's Technical Support and Customer Service staff can aid in solving many problems. Our service department is available to repair any Hauppauge product. For completion of repair, the product must be returned to our factory.

If this **WinTV** board is not in working order, your only recourse is repair or replacement, as described above. **UNDER NO CIRCUMSTANCES** will Hauppauge be liable for consequential damages, including any lost savings, lost profits, or any other damages, caused by the use of the **WinTV** board or inability to use it, even if the dealer or Hauppauge has been advised of such liability or other claims.

The Hauppauge Limited Warranty

Warranty

Hauppauge Computer Works, Inc. warrants the **WinTV** board to be free from defects in material and workmanship for a period of 2 years from date of initial retail purchase. We will, at our option, repair or replace a defective product. The limited warranty does not cover any losses or damage that occur as a result of:

- Improper installation
- Misuse or neglect or operation with faulty equipment
- Repair or modification by anyone other than Hauppauge Computer Works or an authorized repair agent

Please complete and return the Warranty Registration Form inserted in this manual. To obtain service under this warranty, contact Hauppauge Computer works at (631) 434-3197, or fax “RMA Department” at 631-434-3198. Please see the return procedure in the “Technical Support” chapter.