

# WinTV-PVR-usb

## Personal Video Recorder

## Quick Installation Guide

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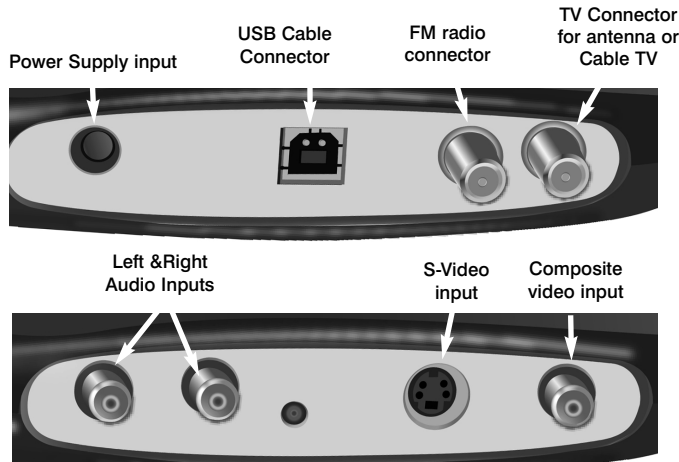
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### WinTV-PVR-usb connectors



### Installing the WinTV-PVR-usb

The WinTV-PVR-usb is a USB device designed for Microsoft® Windows98, WindowsME, Windows2000 and WindowsXP.

#### Installation overview

To install WinTV under Windows98, WindowsMe, Windows2000 or Windows XP, follow these steps:

- ✓ Plug the supplied **Power Supply** into WinTV-PVR-usb's power input.
- ✓ Plug your **TV antenna** or **cable TV** cable into the WinTV-PVR-USB's TV Connector.
- ✓ **Boot your PC.** After Windows is running, plug the supplied **USB cable** into the WinTV-PVR-usb and into one of your PC's **USB ports**. The Windows Hardware Wizard will then load the WinTV-PVR-usb driver from the WinTV-PVR-usb Installation CD-ROM.
- ✓ After the WinTV-PVR-USB driver is installed, install the WinTV application software from the **Installation CD-ROM**.

#### Step 1: Connect the WinTV-PVR-usb cables

Plug the supplied **Power Supply** into the **Power Supply input**. Plug your **TV antenna** or **cable TV** cable into the WinTV-PVR-usb'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-usb's USB Cable connector**. **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.

#### Step 2a: Installing the WinTV-PVR-usb driver for Windows XP and Windows2000

After booting into Windows, plug the WinTV-PVR-usb 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. Now go to step 3 to install the WinTV-PVR applications.

#### Step 2b: Install the WinTV driver for Windows98SE, WindowsMe

**Boot your PC.** When it is completely booted, plug the other end flat rectangular end) of the **supplied USB cable** into your PC's USB port.

When you plug in the WinTV-PVR-usb the first time, the **Add New Hardware Wizard** will appear. Click **Next**.

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

When you see the dialog box, insert the **WinTV Installation-CD-ROM** into your CD-



ROM drive.

Select **CD-ROM** drive and click **NEXT**. It normally takes 10 seconds or so for the CD-ROM drive to spin up. If Windows cannot find the **Hauppauge WinTV** video driver, the CD had not yet spun up, so click **Back** and then **Next** again.

Once the **Hauppauge WinTV** video driver has been detected, click **NEXT**. You will see a number of files being copied to your **hard disk drive**.

Click **FINISH**.

Now go to step 3 to install the WinTV applications.

#### Step 3: WinTV-PVR-usb Software installation

To start the **WinTV-PVR software installation**, click **Start / Run** then type your CD-ROM drive letter (for example: E:) and then **Setup.exe**.

Chose a language, and click **Next**.

The standard applications are selected, ready to be installed.

Click **Install** to start the application installation.

After the Setup program is complete, you will need to reboot your PC. After rebooting, you will see the **WinTV2000** icon on your Windows desktop.

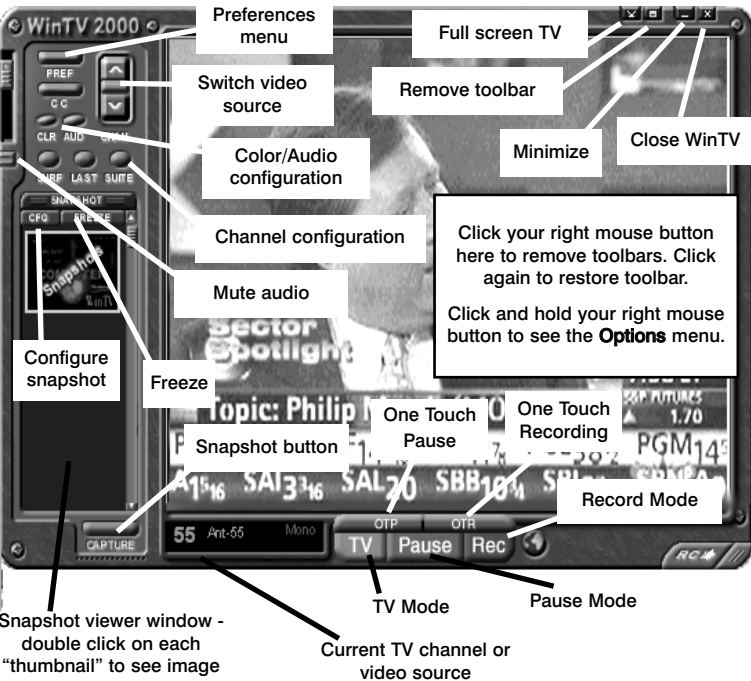
## The WinTV2000 application

### Running WinTV for the first time

When running WinTV-PVR-usb for the first time, you will need to scan for your TV channels.

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

**North America** uses **NTSC(M)**  
**Europe** uses **PAL B/G**



U.K. uses **PAL I** in **South America**, either **PAL M** or **PAL N** is used.

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

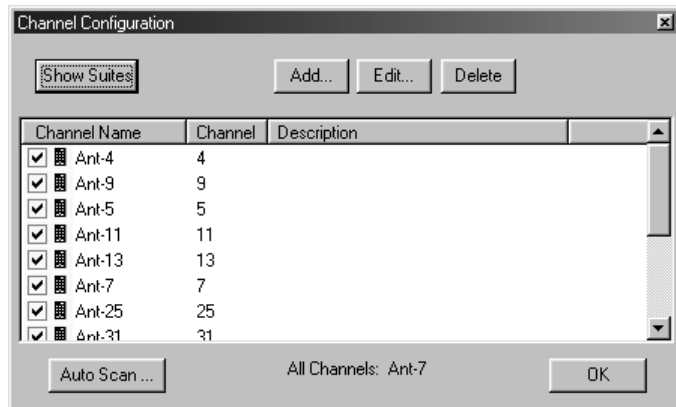
Then click on **Start**.

#### Setting up the channels

After you have scanned for channels, you can add channel names and fine tune for better reception. To do this, click on the **Channel configuration button (Suite)** in the WinTV2000 application. Then click on the desired channel, then **Edit**. Change the Channel Name to the name of the station. Fine tune if necessary. Then click **OK**.

#### To set up an External video source

Click on the **Channel configuration button (Suite)** in the WinTV2000 application and click **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), then click **Add** and then **OK**. Now you have a external video channel.

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

#### Rescanning for channels

If later on you want to re-scan channels, click on the **Channel configuration button (Suite)** and then **Auto scan**. Make sure you select **cable** or **antenna** in **Broadcast / cable**. In the U.S. if you scanned using cable and only received a few channels, try rescanning, but use **Cable (HRC)** instead.

Chose the correct **Video format** for your region and then click **Scan**.

### Tips on using WinTV2000

#### To watch TV without the WinTV toolbar:

Click your **right mouse button** in the WinTV's video window to remove the toolbar and leave just the TV window ("no-title" mode). You can change channels in the no-title mode by typing a number or by hitting the +/- keys. To adjust the audio volume, hit **PgUp/PgDn**, or **CTRL-M** to mute the audio. To restore the toolbars ("title mode"), click your **right mouse button** in WinTV's video window.

You can set the window size and position differently in each mode.

#### "Always-on-Top" mode

With the **Always on Top** mode, the WinTV window can always be visible on your Windows desktop, so that you can see you favorite

TV show while working on your PC.

To turn on Always-on-Top, simply **click and hold your right mouse button** in the **WinTV's** video window. Then click on **Options** and click on **Always-on-Top**. A convenient way to use Always-on-Top is to make the TV window in the no-title mode small, and to make the TV window in the title mode larger. Then you can switch very quick from a small window to a larger one simply by clicking the right mouse button.

#### Allowing WinTV to display TV full screen

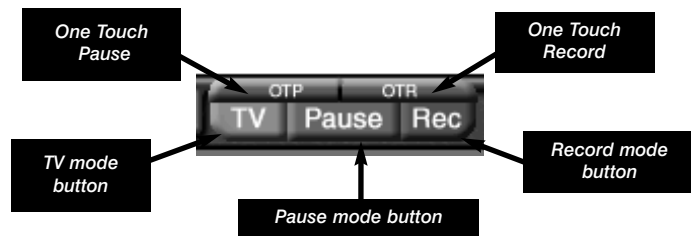
Click on the **Pref** button in WinTV2000 then click **TV mode**, and check the box which says "Allow resolution change". When you click the **Full screen TV** button on WinTV2000, Windows will change your screen resolution to either 640x480 or 800x600, and TV will appear full screen. When finished watching TV full screen, click your **right mouse button** to return to "TV-in-a-window" mode.

#### Watch TV, Pause and Record

There are three buttons to control the Watching, Recording and Pausing of TV. Clicking on the Pause or Record buttons will cause the Pause mode and Record mode menu's to be displayed.

The **One Touch Pause** button prepares the WinTV-PVR-usb 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 time the **OTR** button is clicked. For example, if you click the **OTR** button 3 times, the **WinTV-PVR-usb** will record for 30 minutes.



### Troubleshooting audio problems

If you cannot hear audio when the WinTV application is running, check the following:

- Click on the **WinTV applications'** audio configuration button **AUD** and make sure the Audio Mixer Input is set to Wave.

#### Time counter

The time is specified in a **Hour:Minute:Second** format. When Recording, the time of the recording will be displayed. On playback, the current position time and the total time in the video being played will be displayed.

#### 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** by clicking the **PREF** button / **Capture / MPEG** (see the section entitled "Configuring the format for MPEG compression") .

#### 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 while playing 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.

#### Slow Motion button:

Clicking the **Slow Motion** button while playing will play the video in Slow Motion. To start playing your video file at the normal speed, click the Slow Motion button again.

#### File button:

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

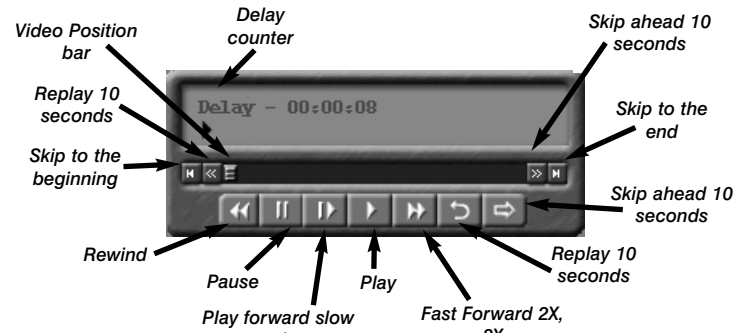
In the File menu you can:

- **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 **\_dvr**), **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**.

- **Burn your recorded video file onto CD-RW media in a Video CD format.** If you want to burn the last file recorded, simply click **Burn**. If you want to select another file to be burnt onto CD-ROM, **highlight it with your mouse** (one click of the mouse button) then click **Burn**. For more complete instructions, see the section entitled **Creating Video CD's**.

### Pause mode

Clicking the **Pause** button on the WinTV2000 application starts the **Pause mode**. The **Pause Menu** will drop down.



**Note: It takes about 20 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 a circular buffer on your hard disk. 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").

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**.

**Note: it takes about 20 seconds for the recorder to initialize. Do not click any WinTV buttons while the record mode is initializing.**

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 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 **\_dvr001.mpg**. The second file will be **\_dvr002.mpg** and so on.

The quality of the recording is sectioned from the **MPEG Configuration Menu** (see the section entitled "Configuring the format for MPEG compression"). There are several video qualities: VCD plus MPEG-2 2.0, 4.0, 6.0 MBit/sec. etc. The highest quality is MPEG-2 6.0 MBit/sec, and the least is **VCD**.

Clicking the **Stop** button will stop your recording, and then saves the recorded audio/video file to disk using the automatically assigned file name. The Counter will be reset to 00:00:00 after the file is saved.

#### VCD Record button:

Clicking the **VCD Record** button will automatically generate a file name and start recording your audio/video program using the VCD record quality. This button makes it easy to save VCD quality video, for burning later on to a Video CD (CD-R or CD-RW). To burn a Video CD, see the section entitled "Creating Video CD's".

#### Stop button:

Clicking the **Stop** button will stop the video you are recording or playing back. Once the video is stopped, live TV will be displayed in the WinTV window.

#### Play button:

Clicking the **Play** button in Record mode will play the last video file created. When playing back a video, you can rewind, fast forward, replay 10 sec or forward 10 sec using the buttons on the time slider.

#### 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 WinTV 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.

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.

#### 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 video. Clicking the **Rewind** button again will continue 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.

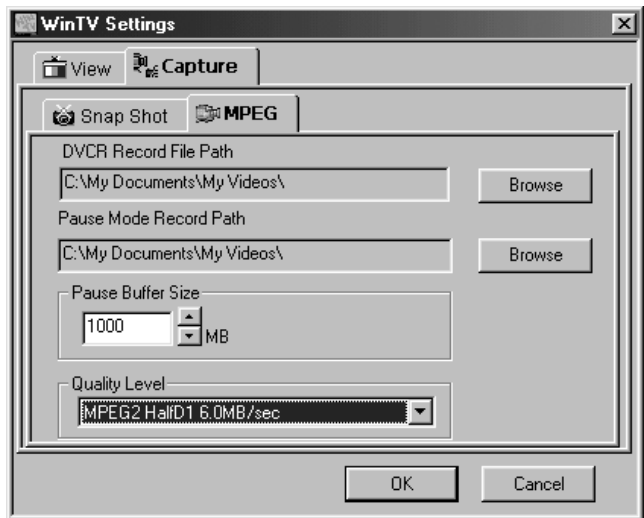
#### Slow Motion button:

Clicking the **Slow Motion** button while Playing, will play the video in slow motion. Clicking the **Slow Motion** button again will continue playing normal.

## Configuring the MPEG compression format

The **WinTV-PVR-usb** supports several different formats for MPEG video compression. The differences in these formats is:

- the video quality that you will see when playing back recorded video or while in the pause mode



- the amount of CPU horsepower required during playback and pause mode.
- the compatibility when creating Video CD's.

To configure the MPEG compression, click on the **Preferences** button on **WinTV2000**, then **Capture** and then on the **MPEG** folder.

There are several different MPEG format settings which can be selected:

**MPEG-1 VCD**

**MPEG-2 2.0-MB/sec**

**MPEG-2 4.0-MB/sec**

**MPEG-2 6.0-MB/sec**

For creating Video CD's for playback on your home DVD player, chose the **MPEG-1 VCD** format.

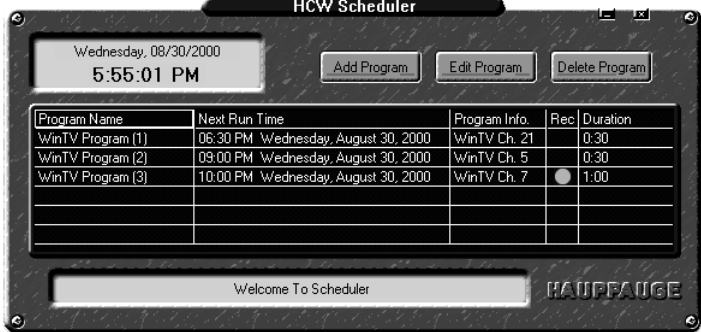
If you have a fast PC and would like the best video image quality, chose **MPEG-2 6.0MB/sec**.

If you have a slower PC, try either the **MPEG-1 - VCD**, **MPEG-2 - 2.0 MB/sec** or the **MPEG-2 - 4.0 MB/sec** formats.

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.

## Using WinTV-Scheduler

**WinTV-Scheduler** allows you to schedule your TV watching and 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. **WinTV-Scheduler** can be found in the **Hauppauge WinTV** folder. Click the **Start** button, then **Programs**, then **Hauppauge WinTV** and then **Scheduler**.

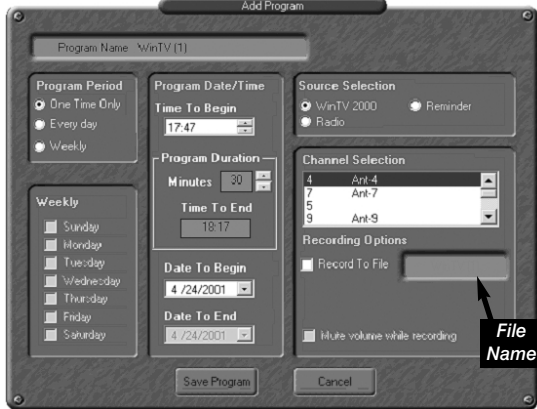


Once **WinTV-Scheduler** is running, to set up an **event** for timed watching or recording, click on the **Add Program** button.

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

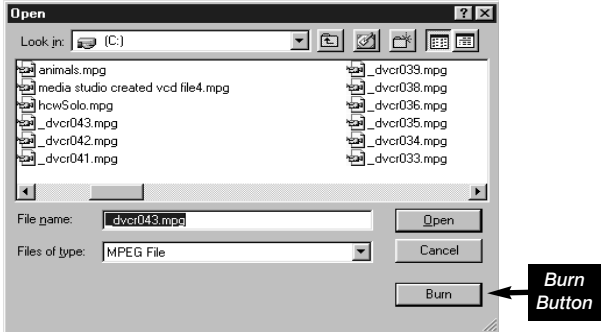
- **Time to Begin Program:** set to the desired start time. The default time is about 3 minutes from the current time. Click on the hour to set the hour, the minute to set the minute and the second (if you feel this is necessary) to set the minute to start the program.

**Note:** it takes about 1 minute to launch the WinTV and set up for



### Step 1: Creating a Video CD compatible video file

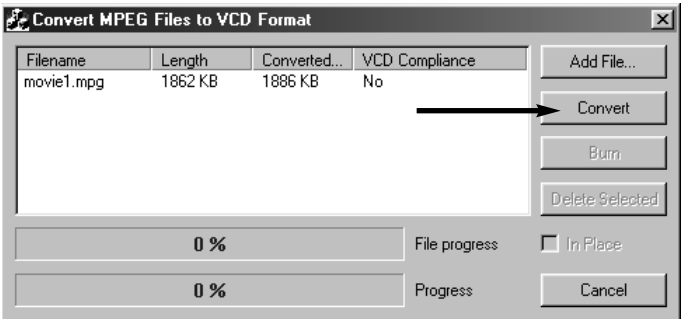
While in the record mode, click on the **Video CD Record** button. You can also have set the MPEG Quality to **MPEG-1 VCD** format, and then click the **Record** button. In both cases, a Video CD compatible file will be created on your hard disk, with the name of the file automatically generated by the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



### Step 2: Converting Your video file

After you have clicked the **burn** button, the "Convert MPEG files to VCD format" window will open with the file you listed. At this point you have an opportunity to add other files to be burnt on the Video CD. Remember, only files that have been recorded in the Video CD format can be recorded as a Video CD.

Once you have chosen any other video files to be added to the Video CD, highlight your files and click the **Convert** button.



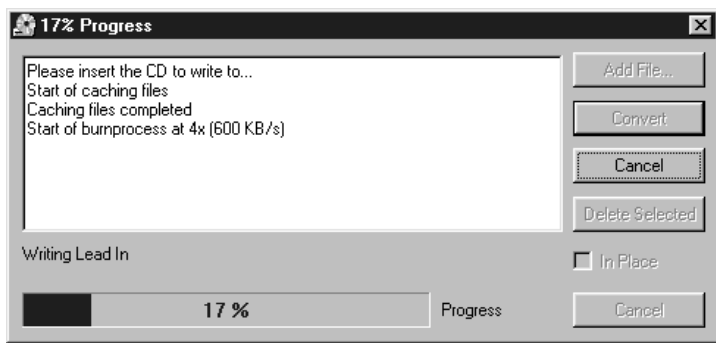
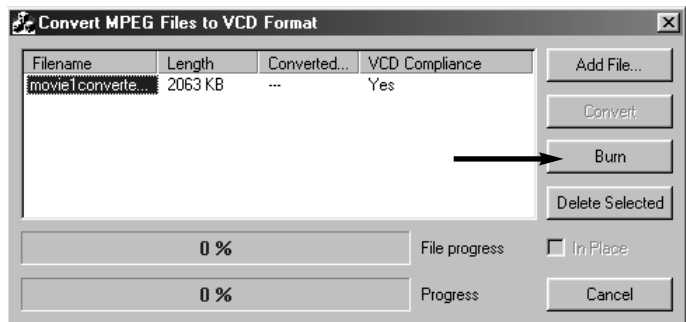
### Step 3: Burning your converted file to a CD-R or CD-RW

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

Click the **Burn** button to burn your Video CD's.

The **Hauppauge VCD** converter will locate your burner and show your progress, during your burn. (below)

**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 the DVD player does not turn on the Video CD light or display Video CD 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 on Windows98 based PC's using MediaPlayer.

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

<http://www.hauppauge.com/dvdplayers>

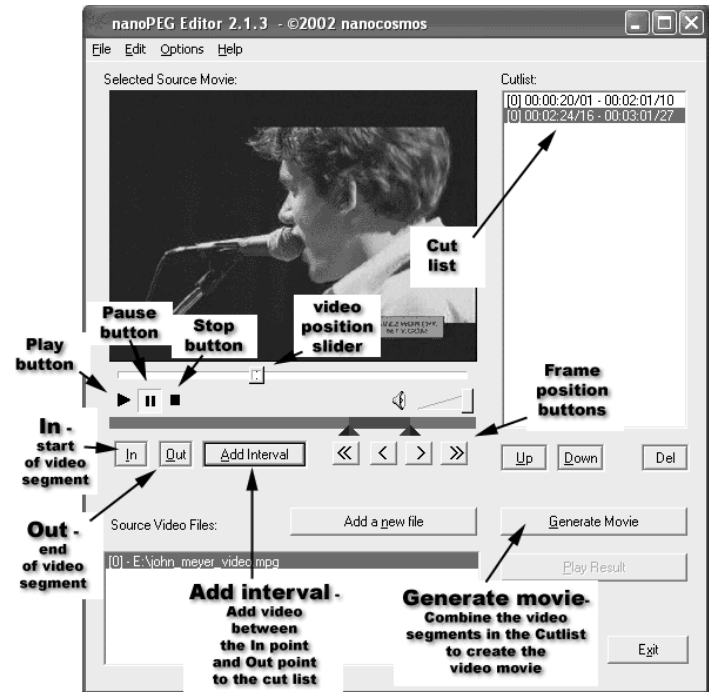
Sometimes a version of MediaPlayer cannot "see" the Video CD movie file. If this is the case, you can manually select a video to be played by **opening the Video CD using Windows Explorer**, and looking in the **MPEGAV** directory on the Video CD. There will a file (or several files if your Video CD 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.

## WinTV MPEG Editor

The Hauppauge MPEG Editor is an MPEG1/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.

This version of the MPEG has these features:

- Edit (cut) MPEG1 and MPEG2 files.
- Join MPEG files of the same resolution and bit rate



recording, so set the **Time to Begin Program** to 1 minute before the time your TV show actually starts.

- **Program Duration:** Set to the duration, in minutes, of this event. **Note:** you need to leave at least 1 minute 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 **WinTV32** 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 above dialog box.

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 scheduler to work. If **WinTV** is not running, it takes about 30 seconds to start **WinTV** and to start the recording of TV.

## Creating Video CD's

Most PC's based on Windows98, WindowsMe and Windows2000 can play MPG files created with **WinTV-PVR-usb** through the **Windows MediaPlayer**. The most universal format for PC playback is the **MPEG-1 VCD** format. 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 them 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-usb** includes a conversion utility, **WinTV-Convert**, which will take **WinTV-PVR-usb** created **MPEG 1** video files and convert them into Video CD (VCD)compliant files.

**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**

- Remultiplex Video CD compatible files so they can be "burnt" into VCD's
- Remultiplex S Video CD compatible files so they can be "burnt" into SVCD's
- Split large MPEG videos into pieces, so that these can be burned onto CD-ROM or DVD media
- Has a "play" option so you can play the file you have just edited without having to close the editor

### How to use the WinTV 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 awhile.

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 you want to keep (everything which belongs to the movie) and add

them to the cut list.

### Remultiplex File for VCD

**Note:** If you have an VCD file open, when you click on **Generate Movie**, the file will be saved as a "burnable" VCD file. But if you have a VCD file on your PC and would like to simply make it burnable, use this option.

You will be prompted for a **File name**. Enter the name of a file which has VCD characteristics (MPEG-1, datarate not exceeding 1.1Mbps/sec, etc.). Next, enter the name of the "burnable" VCD file to be written. The file will be remultiplexed into a "burnable" VCD format.

**Note:** If you enter the name of a file which is not VCD compliant, an error message will pop up.

### Remultiplex File for SVCD

If you have a SVCD file on your PC and would like to make it burnable onto a SVCD, use this option.

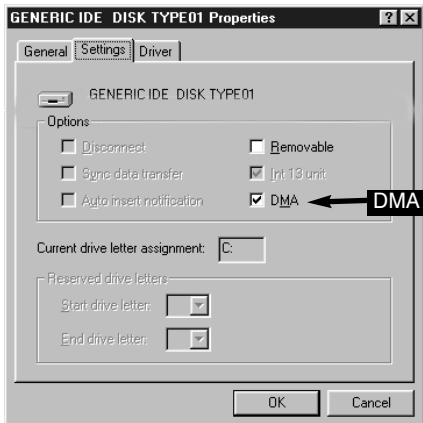
You will be prompted for a **File name**. Enter the name of a file which has SVCD characteristics (MPEG-2 with 2.2Mbps/sec datarate, 44.1KHz audio and 480x480 image sizes for NTSC video sources). Next, enter the name of the "burnable" SVCD file to be written. The file will be remultiplexed into a "burnable" SVCD format.

**Note:** If you enter the name of a file which is not SVCD compliant, an error message will pop up.

## 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.
- 3.) Turn off screen savers, Disconnect from a local area network, and any programs in your windows startup.
- 4.) Defragment your Hard Disk. To Defragment your hard disk, in



Windows click on **Start / Programs / Accessories / System Tools** and click on **Disk Defragmenter**.

- 5.) 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.

## Troubleshooting

**Note:** The Troubleshooting chapter in the **WinTV Installation Manual**, found in the **Hauppauge WinTV** directory on your PC, has more information.

Our FAQ can be found at:

<http://www.hauppauge.com/html/faq.htm>

**Problem: Poor image when running WinTV 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 insufficiently strong 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 step 8) but use **CABLE (HRC)**

instead of **cable** in the **Broadcast/Cable box**.