WinTV-HVR-1600

Personal Video Recorder

Quick Installation Guide

© Hauppauge Computer Works, Inc. 2002-2005

Hauppauge Computer Works, Inc.   Telephone: 631-434-1600
91 Cabot Court   Fax: 631-434-3198
Hauppauge, NY 11788   Tech Support: 631-434-3197
                                                        techsupport@hauppauge.com

Hauppauge Computer Works, GmbH   Telephone: 02161-694880
Krefelder Straße 669   Fax: 02161-6948815
41061 Mönchengladbach, Germany   Tech Support: 02161-6948840
                                                        info@hauppauge.de

Hauppauge Computer Works, Ltd   Telephone: 0207-378-1997
6-10 Bank Chambers   Fax: 0207-357-9171
Borough High Street   Tech Support: 0207-378-0202
London, U.K. SE1 9QQ   support@hauppauge.co.uk

Internet addresses:
Sales: sales@hauppauge.com
Web site: www.hauppauge.com

QI-HVR-1600_rev1-ENG
December 1, 2006

What is ATSC digital TV, and how does the WinTV-HVR-1600 work?

ATSC digital TV is a over-the-air digital TV for North America. ATSC digital TV typically requires an antenna for reception, and is currently broadcast in 200 cities, with over 1500 TV stations.

Note: ATSC digital TV is NOT digital cable TV or digital satellite TV. WinTV-HVR-1600 cannot receive digital cable or digital satellite TV.

ATSC digital TV is transmitted in several resolutions, from "standard definition" which is similar to cable TV, up to high definition which has about 16 times the resolution of normal cable TV. In any resolution, ATSC digital TV gives sharper pictures than analog cable TV and near CD quality sound.

WinTV-HVR-1600 has a built-in analog cable TV and digital ATSC TV tuner. It uses your PC CPU for displaying both analog and digital TV programs on your PC screen.

The decoding of high definition ATSC is very processor intensive, and the smoothness of high definition TV programs depends upon how fast your PC is. Other PC activities that consume CPU resources might affect the display of ATSC digital TV. Slow video, jerky video and momentary pausing of video are all results of a CPU which is temporarily being used by other activities.

For the best ATSC digital TV reception, a roof top 'Wideband or Highgain' antenna is recommended. TitanTV.com has a good ATSC digital antenna selector which can be found under **Resources**.

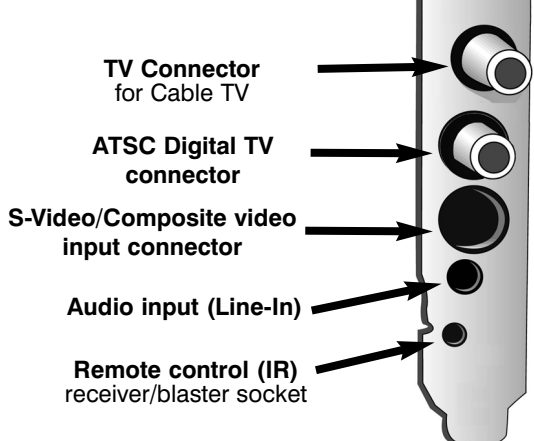## Installing the WinTV-HVR-1600

WinTV-HVR-1600 is a TV tuner board with an analog TV tuner, a seperate ATSC digital TV tuner plus a hardware MPEG-2 encoder. WinTV-HVR-1600 is designed for **WindowsXP** and **Windows Vista**.

Note: if you are running Windows Media Center application, you only need to install the **WinTV-HVR Windows device driver**.

Installation overview

✓ Install the **WinTV-HVR-1600** board in your PC and connect the TV cables. For the best ATSC digital TV reception, use a high quality roof top antenna.

✓ After booting Windows, install WinTV-HVR Windows device driver from the **WinTV-HVR-1600 Installation CD-ROM**.

✓ After the Windows driver is installed, install the **WinTV applications** from the **WinTV-HVR-1600 Installation CD-ROM**.

WinTV-HVR-1600 Board connectors

TV Connector for Cable TV
ATSC Digital TV connector
S-Video/Composite video input connector
Audio input (Line-In)
Remote control (IR) receiver/blaster socket

Step 1: Install the WinTV-HVR-1600 board and connect the cables

Turn the power off on your PC. Install the **WinTV-HVR-1600** into a PCI slot. On some PC's, the **WinTV-HVR** needs to be plugged into the first or second PCI slot. Plug your **cable TV** into **TV Connector**. Plug your **ATSC digital TV antenna** into the **ATSC Digital TV input**.

The S-Video/composite video input can be used to bring video from a VCR, camcorder, camera, DVD player or satellite TV receiver. If your video device uses **composite video** instead of S-video, use the supplied **Composite to S-Video adapter**. Plug your composite video connector (normally yellow) into one end of the **Composite to S-Video adapter** and the other end into the **S-Video/Composite video input connector** on WinTV-HVR-1600.

The **Remote control receiver/blaster cable** is plugged into the **Remote control socket**. Use the Velcro dot (on the back of the Remote control receiver) to position the **Remote control receiver** where it will be able to receive infra-red commands from the **Remote control transmitter**. Add the supplied **batteries** to the **Remote control transmitter**.

Step 2: Installing the WinTV-HVR under Windows XP

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

Click **No, not at this time**.

Click **Next**.

Insert the **WinTV-HVR-1600 Installation CD-ROM** in your PC's CD-ROM drive and

make sure **Install the software automatically (Recommended)** is checked. Click **Next**.

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

The WinTV-HVR driver will be installed. This takes several seconds.

Click **Finish**.

This will complete the driver installation for Windows XP. Go to step 3.

Step 3: WinTV-HVR Software installation

After the WinTV-HVR driver has been installed, you need to run **WinTV Setup** to complete the installation. Run **SETUP** from the **WinTV-HVR** Installation CD-ROM.

Click **Install** to start the application installation. The installation may require a file from your Windows CD-ROM, so keep it handy.

After the Setup program is complete, you will see the **WinTV2000** icon on your Windows desktop.

Running WinTV2000 for the first time

To run the WinTV2000 application for watching TV, recording videos and playing them back on your PC, **double click on the WinTV 2000 icon** on your desk top.

When you run WinTV2000 for the first time, a message says **Would you like to scan for channels now?** Click **YES**.

Click the **Scan button** and WinTV2000 will automatically scan for

---

Full screen TV

Always-on-top
Pref — Preferences menu
Menu — Setup Menu
CFG — Configure Snapshot
Snapshot viewer window

Double click on each "thumbnail" to see image full size. Click and hold your right mouse button to see image options.

Channel up
Video source select
Channel down
Channel surf
Previous channel
Freeze video

Remove toolbars "no toolbar" mode
Minimize
Close WinTV

Remove toolbars
Click your right mouse button in the TV window to remove toolbars.
Click again to restore toolbars.

Snap Snapshot Button
Current TV channel or video source
Click your right mouse button here to see the channel selector
One Touch Pause
One Touch Record
Record open the record controls

21   Ant-21   Stereo   CC

both **analog** and **ATSC digital TV channels**. The scanning process takes about 10 minutes. The scanning process for ATSC will scan from channels 2 to 68.

The ATSC digital channels that are found will appear in the channel listing box. The **Name** is the name as defined by the broadcaster. The **Channel number** is created by the WinTV application. For ATSC digital channels, since each primary channel might have several sub-channels, the channel number is calculated so that channel 22.2 would be listed as 1222. Channel 7.2 would be listed as 1072.

Note: if you do not receive any ATSC digital TV channels, an antenna signal booster might be needed. After adding a signal booster, see below for instructions on rescanning and the Troubleshooting section for information on chosing an ATSC antenna.

Note: When initially installed, WinTV-HVR-1600 uses a setting which does not take advantage of graphics acceleration. If you experience problems when watching ATSC digital TV channels, see the Troubleshooting section.

Rescanning TV channels

If you want to rescan for TV channels, click **Menu / Suite Manager**. To scan analog cable TV channels, under **Sources**, highlight **Analog source** and click **Auto scan**.

Analog Source

To scan for **digital ATSC channels**, under **Input Sources**, highlight **ATSC source** and click **Auto scan**.

During the scan for ATSC digital TV channels, the **Signal Status** will show a quality level and the **locked box** will be checked if a channel is detected.

ATSC source

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 the **Menu** button on WinTV2000, then click **Suite Manager**. You can also **click and hold your right mouse button**, then click **SuiteManager**.

Click on the **desired channel**, then **Edit**. Change the **ChannelName** to the name of the station, change the description or fine tune. Then click **OK**.

Selecting an External Video source (VCR, camcorder, etc.)

Click the **green Video source select** button to select **TV**, **Composite** and **S-Video** sources. The video sources will use the TV standard chosen when you scanned for your TV channels (NTSC or PAL).

Displaying TV full screen

When you click the **Full screen TV** button, TV will appear full screen. When finished watching TV full screen, click your right mouse button in the TV window.

If you see video with a black box to the left and right of the TV image, click the **Pref button** then click **TV mode** tab. Check the box which says "**Allow resolution change**".

"Always-on-Top" mode:

With **Always on Top**, the WinTV window can always be visible on your Windows desktop. To turn on Always-on-Top, simply click the **Always-on-top button**. It will turn green. To turn off Always on Top, click this button again.

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.

Menu button

Click the **Menu** button to open the **TV Setup menu**. Here is the main control for TV channels, and duplicate controls for other functions:

Suite Manager: configure the TV tuner (scanning, naming, fine tuning, etc.), setting up 'favorite channel lists' and set an external A/V source to a TV channel.

Configuration: duplicate configuration menus for color, audio, MPEG settings, etc.

View: for setting the TV window size

Pref button

Click the **Pref** button to open the **Preferences menu**. You will have tabs for:

View: these are the settings for the On Screen Display of the TV channel and Audio Volume, where you can enable Close Captions, plus controls for the Toolbar mode (Title mode), NoToolbar mode (No Title) and Full Screen (TV mode).

Movies: here is where you configure the **video** and **audio** settings. You can set the **movie record directory** (DVCR Record File Path), the **MPEG Quality settings**, and the **Audio settings**.

Snap Shot: here is where you can set the size of your captured images, plus single or two field captures.

Audio: your audio settings are configured here.

Color: adjust the color of your picture here.

If you cannot hear audio

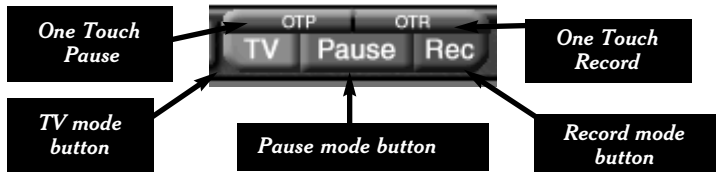If you cannot hear audio when the **WinTV** application is running, check the following:

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

- Open the **Volume control menu** (double click on the small speaker icon in the lower right hand corner of your PC screen). Make sure Wave is not muted and the level is about half way up.

- If you do not see a **Wave** listed in the **Volume control menu**, click on **Options / Properties** in this menu and under **Show the following volume controls** put a check mark next to Wave. This will add Wave to the list of devices. Click **OK** and then you should see Wave listed. Once again, make sure Wave is not muted and the volume is half way up.

- If you do not hear audio when playing back a recorded video file (or do not hear audio when in the Pause mode), then open up the **Windows Volume Control Mixer** and make sure Wave is **listed** and **not muted**.

Watch, Pause and Record TV

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** (OTP) button prepares the **WinTV-HVR** for pausing live video (see **Pause mode** below).

The **One Touch Record** (OTR) 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-HVR** will record for **30 minutes**.

One Touch Pause   OTP   OTR   One Touch Record
TV   Pause   Rec
TV mode button   Pause mode button   Record mode button

Quick instructions on recording and pausing your TV shows

If you want to record a TV show you are watching:

- Click the **Record** button to lower the record and play menu
- In the Record menu, click the **red record button** to start recording
- When you are finished recording, click the **stop button**
- Click the **Play button** to play the video you just recorded
- To play a video you recorded earlier, click the **File** button and then move your mouse and click once on the video you want to play. Click **Open** and then the **Play button**. For more instructions, see the section entitled **Record mode**.

If you want to pause a TV show you are watching:

- Click the **Pause** button to lower the pause menu. After about 15 seconds, your screen will stop and the Time counter will start counting.

- To start the video from where you paused, click the **Play button**

- To pause the video again, click the **Pause button**

- To rewind the video to the beginning, click the **Skip to the beginning button**. If your video was paused, click the **Play** button.

- To rewind the video 10 seconds, click the **rewind 10 seconds button**. If your video was paused, click the **Play** button.

For more instructions, see the section entitled **Pause mode**.

Record Mode

Click on the **Record button** or the **OTR button** on the WinTV-2000 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.

video position
Time counter
Record timer after clicking OTR button
Skip back 10 sec.
Skip ahead 10 sec.
Skip to beginning
Skip to End
Video CD record
File menu (Save/Open/Burn)
Record   Rewind   Stop   Play   Fast Foward 2X 8X
Pause   Slow Motion

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**. In **Quality Levels**, 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.

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.

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.

When playing video files, you can quickly skip to sections of your video by hitting the 0 to 9 buttons on the remote (or your keyboard). When you hit '1' you will skip to 10% of the length of the video. When you hit '2' you will skip to 20% of your video.

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 Foward Button:

Clicking the **Fast Foward** button one time will fast foward your video at **2X speed**. Clicking the **Fast Foward** button two times will fast foward your video at **8X speed**. Clicking the button again will continue playing back 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**.
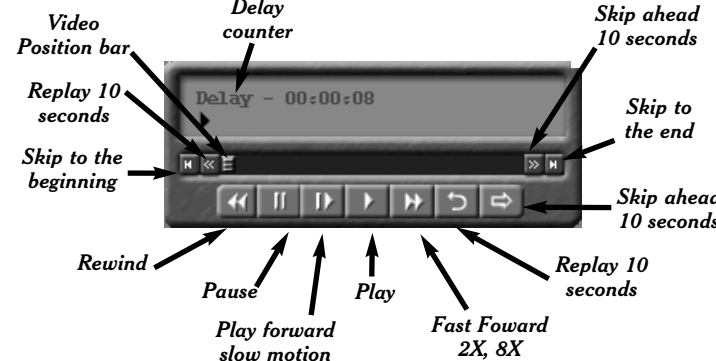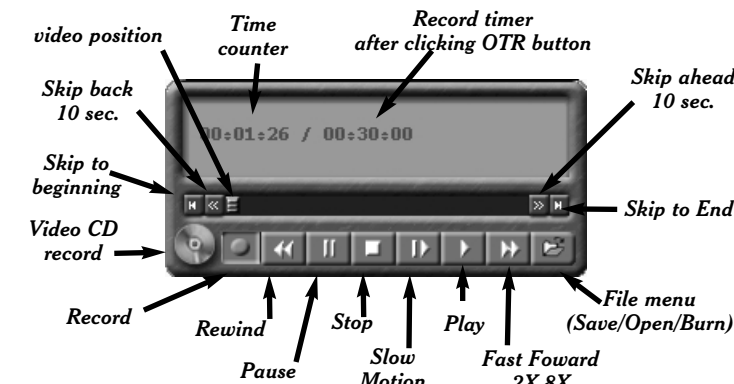
Pause mode

Clicking the **Pause button** or **OTP button** on the WinTV-2000 application starts the **Pause mode**. The **Pause Menu** will drop down.

Note: It takes about 10 seconds to create a pause buffer.

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**").

Video Position bar
Delay counter
Skip ahead 10 seconds
Replay 10 seconds
Skip to the end
Skip to the beginning
Skip ahead 10 seconds
Rewind   Pause   Play   Fast Foward 2X, 8X   Replay 10 seconds
Play forward slow motion

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 MPEG1 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 recording into 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 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 0 the playing.

⏩ Fast Foward Button:

Clicking the *Fast Foward* button one time will fast foward your video at **2X** speed. Clicking the **Fast Foward** button two times will fast foward your video at **8X** speed.
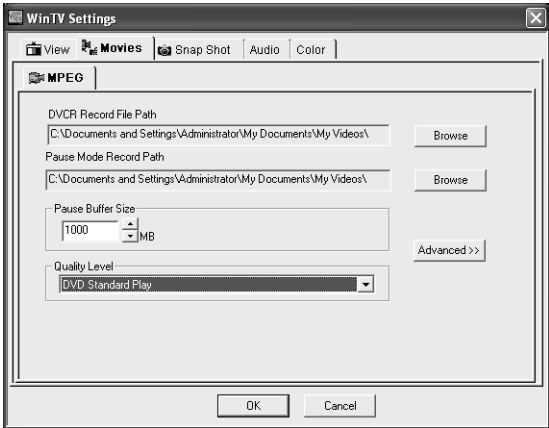
⏸ Slow Motion Button:

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

MPEG compression formats & 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 directory where you would like to store your video recordings.

The **WinTV-HVR** 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**, on **WinTV2000** click the **PREF button** (Preferences menu), then **Capture** and then the **MPEG tab**. Here are the video formats and the amount of disk space per hour used:

MPEG1 VCD	.65 Gigabytes/hour
MPEG2 2.0MBits/sec	.9 Gigabytes/hour
MPEG2 2.0MBits/sec (Half D1)	.9 Gigabytes/hour
MPEG2 12.0 MBits/sec (Full D1)	5.4 Gigabytes/hour
MPEG2 12.0 MBits/sec (CBR)	5.4 Gigabytes/hour
DVD Standard Play 8.0Mbits/sec	3.1 Gigabytes/hour
DVD Long Play 6.2Mbits/sec	2.4 Gigabytes/hour
DVD Extra Long Play 2.5 Mbits/sec	1.2 Gigabytes/hour
SVCD Standard Play 2.5Mbits/sec	.8 Gigabytes/hour

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

Which record format should you use?

If you would like to burn a DVD, then chose either **DVD Standard Play**, **DVD Long Play** or **DVD Extra Long Play**. DVD formats record at 720x480 (720x576 with PAL video sources) using 48.0 kHz stereo audio.

If you want to watch the recorded video on your PC, for the best video quality chose **MPEG2 12.0MB/sec** or **DVD Standard Play**. If you do not have much disk apace, try the **MPEG-2 2.0MB/sec**.

SVCD is a nice compromise between video quality and hard disk space. Video is recorded at 480x480 (480x576 for PAL video) at a datarate up to 2.5Mbits/sec.

For creating Video CD's for playback on your home DVD player, chose the **MPEG1 VCD** format.

Once chosen, the Quality Level format is set for both the Pause and Record modes. The format cannot be changed while Recording or while in the Pause mode.

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 Progam** to 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:** todays 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 **Schedular** to work. If WinTV is not running, it takes about 10 seconds to start WinTV-HVR and to start the recording of TV.

WinTV-HVR remote control

The WinTV-HVR'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-HVR**.
- 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

TV button: when WinTV is closed, this button starts the WinTV application. Once WinTV is running, this button makes TV go full screen, or back to "TV-in-a-window".

Red record button: starts recording using the parameters set in the **Pref menu**.

Pause button: if watching live TV, will open the record/play menu box and puase the video. When recording, this button will pause the video but WinTV will continue to record. If playing back video, this button will pause the video playback. Click the Pause button to start playing again.

Stop button (square icon): stops the recording or playback. If in Pause mode, will exit pause.

Play button: plays the last video recorded.

Back/Exit button: will close the record, play or pause menus.

0 - 9 buttons: When in "live" TV mode, is used to directly enter channel numbers. 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 minutes 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 Windows tasks.
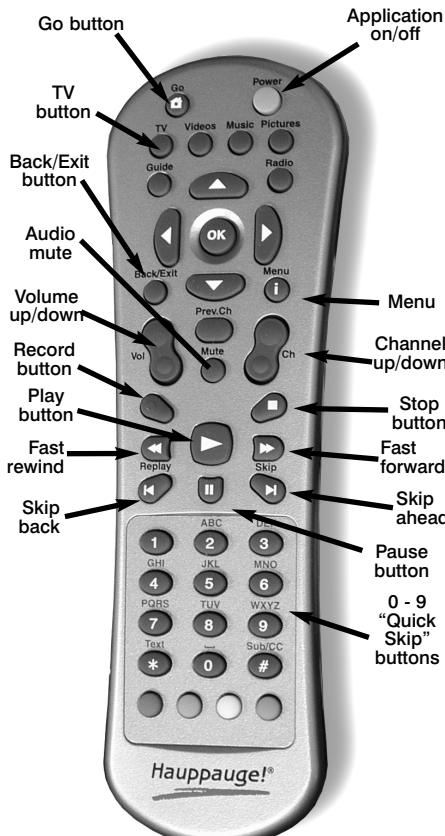
Power button (green): if WinTV is running in "Record" mode, this button will put WinTV into the "TV" mode" and close the record/play-back menu. If WinTV is in "TV mode", this button will close the WinTV application.

Red button at bottom: closes WinTV Radio and opens WinTV2000.

Green button at bottom: closes WinTV2000 and opens WinTV Radio (on models with radio).

Yellow button at bottom: no current function.

Blue button at bottom: creates snapshot in live TV, pause, record or playback modes.

Go button
Application on/off
TV button
Back/Exit button
Audio mute
Volume up/down
Record button
Play button
Fast rewind
Skip back
Menu
Channel up/down
Stop button
Fast forward
Skip ahead
Pause button
0 - 9 "Quick Skip" buttons

CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS ON THE BATTERIES.

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.
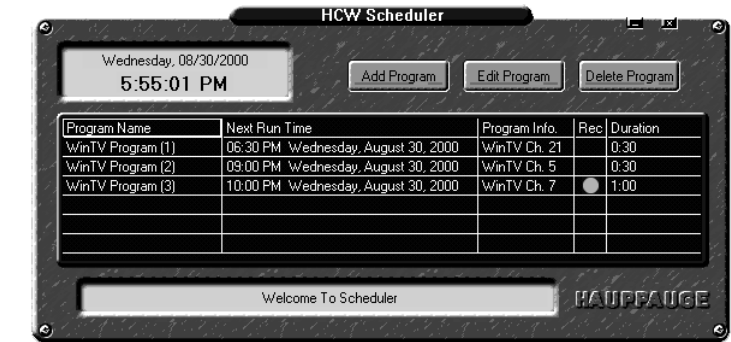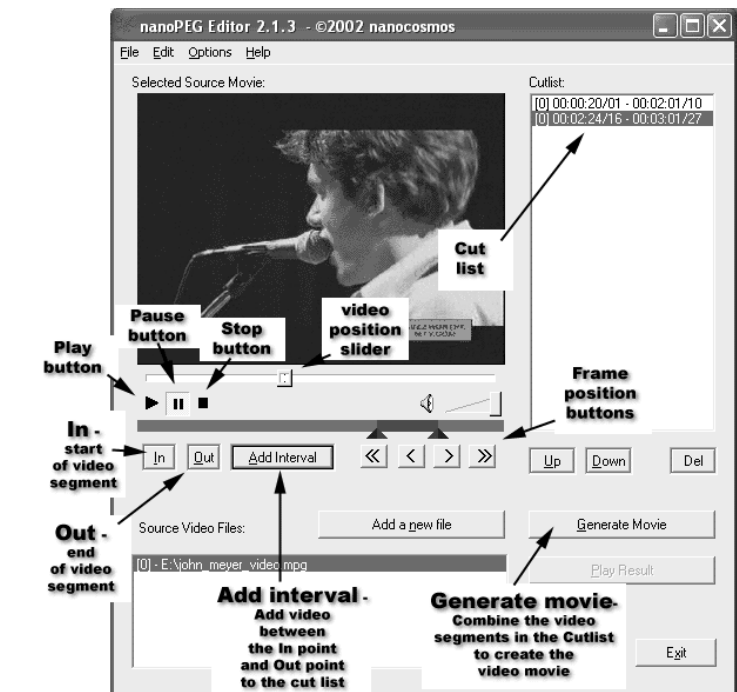
WinTV MPEG Editor

The 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.

You will find the WinTV MPEG editor by clicking **Start / All Programs / MPEG Tools for Hauppauge / nanoPEG Editior**.

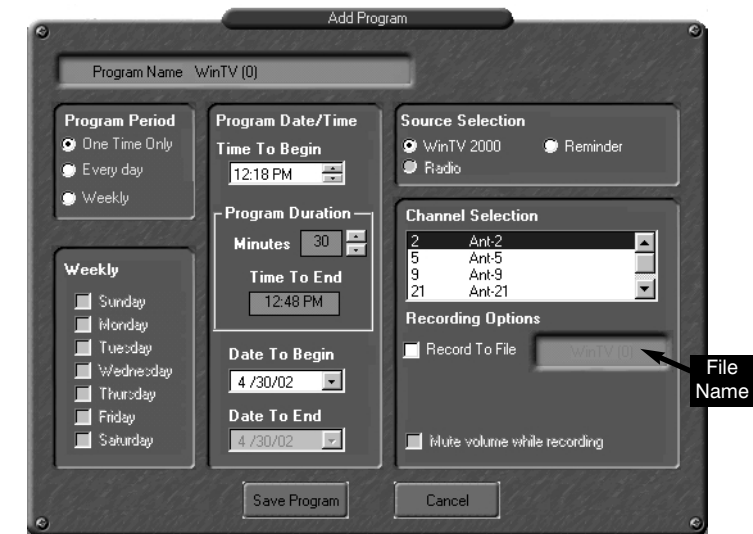This version of the MPEG editor has these features:

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

- 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-HVR** uses the **c:\My Documents\My Videos** directory as the default directory to save video files created by the **WinTV-HVR**. 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.

Making DVDs from your WinTV-HVR recordings

N*ote: The WinTV-HVR's ATSC digital TV recordings cannot currently be burnt onto a DVD. This is due to limitations of DVD media which limit recording formats to standard definition.*

DVD players which are compatible with CD's and MP3's can also read DVD's burned using standard definition MPEG-2 video files created with the WinTV-HVR.

If you plan to burn a **DVD with MovieFactory** or any other DVD authoring software package, you should use either the "DVD Standard Play", the "DVD Long Play" or "DVD Extra Long Play". These standard definition formats will allow you to make DVD's with the following recording lengths:

DVD Standard Play: 1 hour 30 minutes on DVD+R/RW disks

DVD Long Play: 1hour 50 minutes on DVD+R/RW disks

DVD Extra Long Play: 4 hours on DVD+R/RW disks

Ulead DVD MovieFactory

Start project: Used to author and burn DVD's, SVCD's and VCD's. Create chapter menus, mix videos, JPEGs and music.

Edit disk: Edit videos or menus from DVD+RW's.

Direct to disk: not currently used.

Copy disk: Burn copies of existing disc images to CD/DVD.

Troubleshooting

Installation tips and software updates can be found at : http://www.hauppauge.com/pages/support_hvr1600.html

Our FAQ can be found at: http://www.hauppauge.com/pages/support_faq_hvr1600.html

Some notes on system compatibility

Decoding high definition ATSC TV is very CPU intensive. A graphics card with at least 64MBytes of memory and the latest graphics driver

---

from the manufacturer makes the decoding task easier. Typically a 2.2 GHz Pentium 4 processor or equivalent with a graphics card having 64MBytes of memory is required to properly decode ATSC digital TV on your PC. A 1.6GHz AMD Sempro laptop computer tested in the Hauppauge lab used 50% of the CPU for playing ATSC 640i format, and 90% of the CPU when playing ATSC 1080i, the highest definition ATSC format.

In some cases, either a faster processor or more graphics memory might be required. Slow or jerky video and a noisy TV picture indicate system performance problems.

Jerky video with live ATSC digital TV

Jerky or distorted video can be caused by two things in your PC or laptop: a slow CPU which cannot decode the ATSC TV signal fast enough, and a graphics system which cannot keep up with the high datarates of ATSC TV.
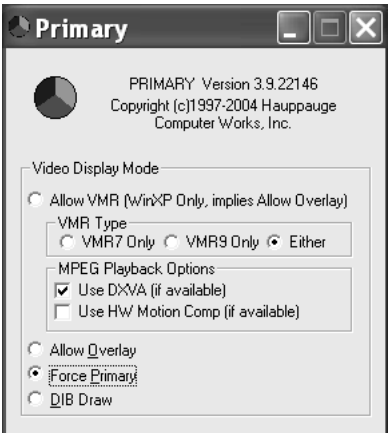
Many times, improving the performance of the graphics display will fix the jerky video display of ATSC digital TV. Here are some tips on improving graphics performance:

- Use the latest graphics driver: graphics drivers are often 'tweaked' to improve performance, especially the built-in graphics on laptops. Check the Microsoft Windows update site to download the latest graphics driver for your computer. For Dell computers, check the Dell website for the latest graphics driver.

- Use Hauppauge's Primary program to optimize graphics performance: Primary.exe is used to change the display mode of a graphics card for TV viewing. This does not affect any other Windows program. Primary.exe is found in the Hauppauge WinTV program group. The default mode used by WinTV2000 is Force Primary. Force Primary uses your processor to move the digital TV image into the graphics memory. It is more CPU intensive but often fixes display problems on some laptops. Note: Snapshot does not work in 'Force Primary' mode.

To use hardware graphics acceleration, close WinTV2000, then run **Primary**. Click **Allow VMR**. Close Primary and rerun WinTV. The Allow VMR setting will allow your graphics system to use hardware acceleration for video decode. **Note:** hardware acceleration does not work on all systems.

If this setting does not help, or if you experience WinTV not responding after a channel

---

change, then your graphics system cannot use hardware graphics acceleration.

In this case, run **Primary**. Click '**Force Primary**' then rerun WinTV.

Only some channels are found during ATSC channel scan

If you are only receiving some known TV channels when scanning, it means your TV antenna is not adequate to pick up the channel. You will need either an antenna signal booster (a Radio Shack antenna amplifier will work) or a high gain antenna. Here's a link to an ATSC antenna selector: http://www.antennaweb.org/aw/address.aspx

Black window when selecting an ATSC channel

A black window when selecting an ATSC channel means that the WinTV-HVR-1600 is not getting a signal. This is most often due to poor reception. See "Only some channels are found during ATSC channel scan" above.

Uninstalling the WinTV driver and applications

Run the hcwclear.exe from the installation CD. Select OK A black screen will briefly appear and once it has disappeared the software will be removed. If you now re-start the computer you will be at Step 4 of the installation.

"Error code 10" during installation

This is caused by a failure to load the WinTV-HVR-1600 drivers. Uninstall the software (as above) and then follow the instructions from page 3. If this still give you an error message, move the WinTV-HVR-1600 to a different slot and re-install the drivers again.

Error: "No common media type between these pins"

The WinTV-HVR uses your PC's processor to display the TV image. If the processor is too slow, or if there is something in the system which is taking system resources, you might get this message.

Check the VGA acceleration in Device manager. make sure it is set to "Full". Also check your VGA resoution. You might need to bring the number of Colors down one notch.

Conflicts with Intervideo WinDVD

Sometimes we have found that a previously installed version of WinDVD will conflict with the WinTV-HVR-1600. Symptoms include: black screen but you can hear audio, failure to scan for channels, you can't change MPEG formats without errors, bad audio/video sync, and others.

Uninstalling WinDVD will fix this problem. You uninstall WinDVD

---

through the "Add/Remove Programs" in Control Panel. You will still be able to play DVD movies in MediaPlayer, since the WinTV-HVR installation provides a MediaPlayer compatible DVD player.

Problem: Poor 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. Also, in some areas using cable TV, a format called **Cable HRC** is used. If so, try rescanning but use **CABLE (HRC)** instead of cable in the Broadcast/Cable box.

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

Your PC's sound card is used to amplify the audio during "live" TV, record and playback. The WinTV2000 application's **Volume Adjust** slidebar adjusts the volume by raising and lowering the WaveOut volume control in the sound card.

FCC Statement

Supplementary Television Broadcasting Receiving Apparatus - Appareils supplémentaires de réception de télévision, Canada.

Important note: The screen of the coaxial cable must be connected to earth (grounded) at the entrance to the building. This should be done in accordance with applicable national electrical installation codes. In the U.S., this is required by Section 820.93 of the National Electrical Code, ANSI/NFPA 70.

Radio Interference Statement:

The WinTV products 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: H90WINTV

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

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.