

# WinTV-HVR-1600

## Personal Video Recorder Quick Installation Guide

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QI-HVR-1600\_rev5a-ENG November 3, 2009

### The WinTV-HVR-1600 package:

- WinTV-HVR-1600 board
- WinTV-HVR Windows Installation CD-ROM with WinTV v7 application
- DVD MovieFactory CD-ROM, for making video CDs from your TV recordings
- Hauppauge remote control transmitter with 2 AAA batteries
- Remote control transmitter/receiver cable
- S-Video to composite adapter
- WinTV-HVR-1600 Quick Install guide (this manual)
- IR Blaster Quick Install guide

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

ATSC digital TV is 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 satellite TV. You can receive digital cable TV channels, called "clear QAM", if they are broadcast "in the clear" (contact your local cable operator for the availability of clear QAM on your cable network).**

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 built-in analog cable TV and digital ATSC TV tuners. 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 separate digital TV tuner for ATSC and clear QAM plus a hardware MPEG-2 encoder. WinTV-HVR-1600 is designed for **WindowsXP**, **Windows Vista** and **Windows 7**.

#### Installation overview

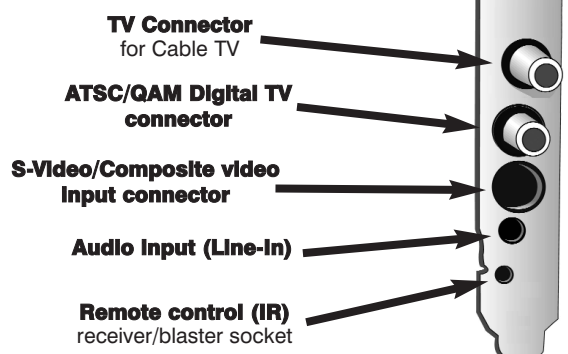
- ✓ Install the WinTV-HVR-1600 board in your PC and connect the TV cables. For the best ATSC digital TV reception, use a high quality roof top antenna.
- ✓ Run Setup from the WinTV v7 Installation CD-ROM. Run Step 1: Install device drivers.
- ✓ After the Windows driver is installed, Run Step 2: Install WinTV applications and utilities.

#### 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

#### WinTV-HVR-1600 Board connectors



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.

#### Installing the WinTV driver and applications

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

Turn on your Windows XP, Vista or Windows 7 based PC, and boot into Windows.

**If a 'Found New Hardware' wizard appears, please cancel it and allow windows to load fully before proceeding.**

Insert the WinTV Installation CD-ROM in your PC's CD-ROM drive.

**Note: if the CD does not autorun, navigate to the CD and run the 'Setup.exe' file.**

"Hauppauge WinTV Installation CD-ROM" window will appear on the screen.

#### Install the WinTV driver

Click the button labeled **Step 1: Install Drivers**.

A screen will open and begin installing the drivers for your WinTV.



Once the drivers have installed, click on the **Finish bar** to exit.

#### Install the WinTV applications

Click the button labeled **Step 2: Install WinTV**

The setup application will then open and begin automatically installing the WinTV application components. Once complete, click **OK** then **Exit**.

**Note: the latest driver updates are available at: [www.hauppauge.com](http://www.hauppauge.com) in the Support section.**

### Running WinTV for the first time

To run the **WinTV v7 application** for watching TV, recording videos and playing them back on your PC, double click on the WinTV icon on your Windows desk top.

When you run WinTV for the first time, the



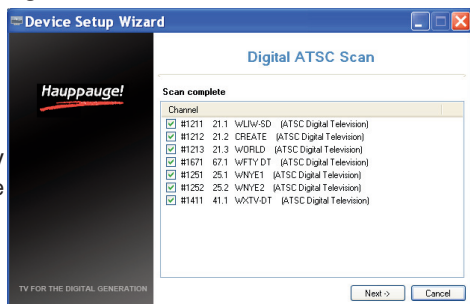
**WinTV Device Setup Wizard** appears. Select the TV source that you are using. For the WinTV-HVR-1600, you can chose either ATSC or Digital QAM and Analog TV. You cannot chose both Digital ATSC and Digital QAM.

**Note: If you'd like to use the A/V inputs, please see instructions below in External audio/video sources.**

#### If your TV source is ATSC digital over-the-air TV

Select **Digital ATSC** and click **Next**. In the **ATSC Setup menu**, click **Next**. You will see the Digital ATSC Scan scanning for digital over-the-air channels.

The digital TV scanning process will scan from channels 2 to 68. As TV channels are found, they will appear in the Channel box.

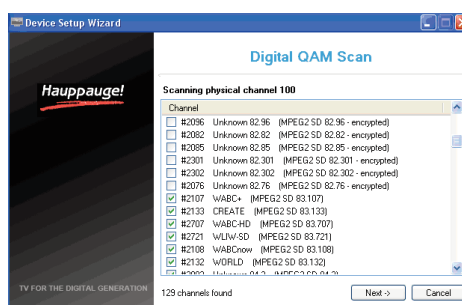


When complete, click **Next / Next** and **OK**.

**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 choosing an antenna.**

**If your TV source is Clear QAM Digital Cable TV**

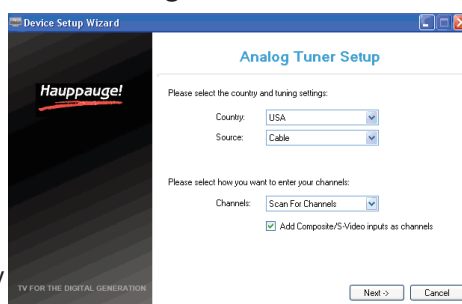
Clear QAM digital cable TV channels are those TV channels broadcast on a digital cable network which are unencrypted ('free to view'). If you would like to scan for clear QAM channels, chose **Digital QAM** and **Next**.



QAM channels which are detected but are encrypted are automatically not selected. The resulting channels in the list might be both standard and high definition channels.

#### If your TV source is Analog cable TV

Select your **Country** and your **TV Source** from the drop down list. To automatically scan for channels, click **Next** to continue.

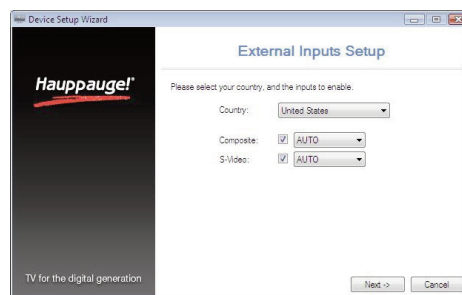


Click the **Scan button** and WinTV will automatically scan for analog channels. The scanning process takes about 10 minutes.

#### External audio/video sources

You can bring video into the WinTV from an external audio/video source such as a cable TV or satellite set top box.

In the **Device Setup Wizard**, select **External Inputs** and click **Next**. You will be presented with the option to add a **Composite** and an **S-Video Input**. Please select your country (if not correct) and click **Next**.



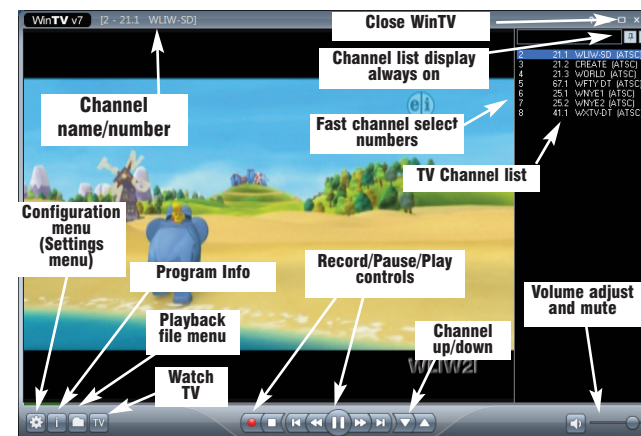
If you wish to connect a source not normally designed for operation in your country, you can configure the Video Format manually from the drop down list. Change the value from "AUTO".

**Note: Pal BGHDK is the commonly used format in Europe. NTSC is the broadcast format used in North America.**

#### Rescanning TV channels

If you want to rescan for TV channels, click the **Configuration menu** (Gear button in the lower left corner of WinTV v7). Then click on the **Devices tab**. **Choose your WinTV device** by clicking on it, then click **Tuner setup**. Chose the **TV format** you want to scan, then click **Next**. Click **Next** and a new scan will be started. When the scan is complete, click **Next / Next** and **OK**.

#### Using the WinTV v7 application



To **watch TV**, click the **Watch TV button**.

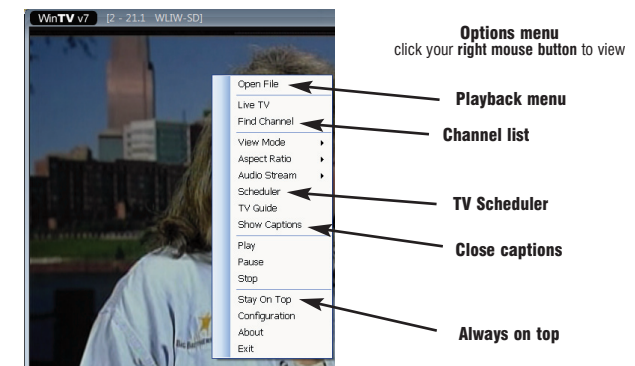
To see the **TV Channel list**, click your **right mouse button** in the TV window to display the **Options menu**. Select **Find Channel**. You will see the channel list.

To display the channel list all the time, while the channel list is displayed, click the **Channel list display always on button**.

#### Options menu

The Options menu is the main menu where you can select channels, turn on close captions, open the TV Scheduler, show the TV Guide and many other of the most important TV control functions.

To bring up the Options Menu, click your **right mouse**



**button once in the TV window.**

**To see the Channel list,** click on Find channel. You will see the list of channels which have been scanned.

**To show the Channel list as part of the TV window,** click the **Channel list always on** icon at the top of the channel list.

**To turn on Close captions,** click on **Show Captions.**

**To manually schedule a TV recording,** or to see which programs have been scheduled, click on **Scheduler.**

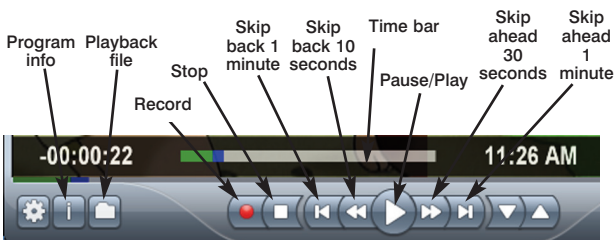
**To turn on the Always on Top mode,** click on **Stay on Top.**

## IR blaster in WinTV v7

If you would like to use the Hauppauge IR blaster to change the channels on your cable TV or satellite set top box, see the section entitled **“Configuring the remote control for WinTV v7”.**

## Watch, Pause and Record TV

WinTV v7 is always recording video to your PC's hard drive while TV is being displayed. In this way, you can immediately skip back and replay the TV program you are watching.



Clicking on the **Pause button** will cause the video to pause, while clicking the **Record button** will cause the current TV program to be recorded to hard disk.

## Recording your TV shows

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

- Click the **Record button.** The recorded file name will popup on the video for a few seconds as the recording starts.
- When you are finished recording, click the **Stop button.**
- Click the **Playback file button** and select the last file recorded to play the video you just recorded
- To play a video you recorded earlier, click the **Playback File button** and click once on the video you want to play. Click Open and the file will start playing.

The recorded video file is saved in the directory set in **Recordings directory directory** which can be found in the **Configuration menu.** The default directory is **MyVideos.** To change this directory, click the **Settings button** and then the **Folders tab.** Every time you record a

file, a new file is automatically created. The file will be formatted as **(ChannelNumber)\_(ChannelName)YearMonthDay\_Time.**

For digital TV programs, the quality level recorded is the same as it is transmitted by the TV station. For example, if the TV station is transmitting a high-definition program, WinTV will record the program in high-definition.

Close captions, parental control information and SAP audio are recorded with digital TV programs.

For analog cable TV using the built-in hardware MPEG-2 encoder, the quality of the video recording is set to 6Mbps/sec. This will be a configurable setting in a future version of WinTV v7.

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

- Click the **Pause button.** Your TV video will stop and the Time counter will start counting.
- To start the video from where you paused, click the **Play 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 1 minute, click the **Skip back 1 minute button.** If your video was paused, click the **Play button.**

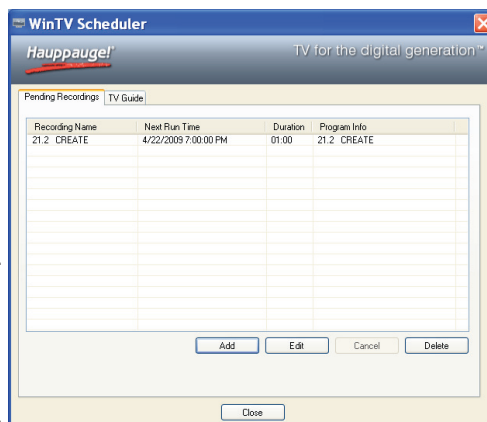
**The Delay counter** displays how much time you are behind the live video. For example, if the delay counter says 00:01:23, then the video window is showing video 1 minute and 23 seconds behind live video.

## TV Scheduler

WinTV v7's built-in TV Scheduler allows you to schedule the recording of TV shows. Once a record event is set, WinTV v7 can be closed and will “wake up” at the desired time and tuned to the desired channel.

When a scheduled record event takes place, the WinTV v7 application records “in background” so that you can continue to watch your live TV program, even as the recording progresses.

The TV Scheduler can be found in the **WinTV v7 Options menu.** **Right click your mouse button** in the TV window to see the **Options menu.**



Click

## Scheduler.

To set up an event for timed watching or recording, click the **Add button.**

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

- **Name:** you can add a name to the recording. If you do not enter a name, the name will be in the channel/date format.
- **Channel:** chose one of your scanned channels.
- **Start time:** set to the desired start time. Click on the hour to set the hour, the minute to set the minute. Note: It takes about 15 seconds to launch the WinTV and start recording.
- **Duration:** number of minutes in the recorded program.
- **Recurrence:** one time, daily, weekly. Note: If you set for Record Weekly, you must also specify the Day of the Week for the recording.
- **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 WinTV to bring up the WinTV at the requested time and on the requested channel.

Once these are set, click **OK.** You can add more recordings, clicking **OK** 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 15 seconds to start WinTV and to start the recording of TV.

## Configuring the built-in IR blaster for use with WinTV v7

For instructions on setting up your IR blaster for WinTV v7, please see the document entitled “IR Remote/Blaster Quick Install Guide”.

## Troubleshooting

Installation tips and software updates can be found at : [http://www.hauppauge.com/pages/support\\_hvr1600.html](http://www.hauppauge.com/pages/support_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 Sempron 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.

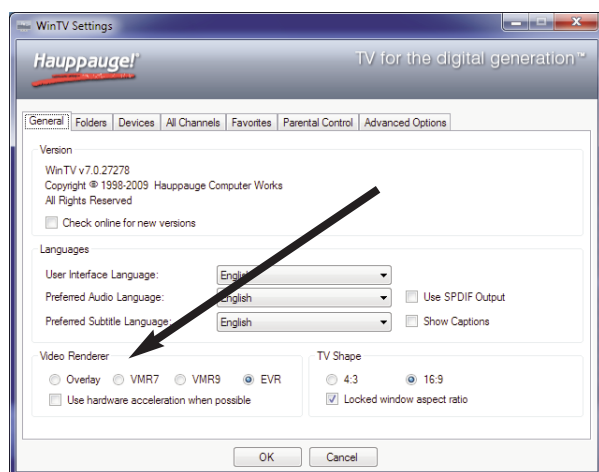
### Jerky video with live ATSC digital TV

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 for your PC:** 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 WinTV v7 Video Renderer settings to optimize**



**graphics performance:** The Video Renderer is found in the General tab of WinTV v7, and is used to change the display mode of a graphics card for TV watching. This setting does not affect any other Windows program.

The default mode is **EVR.** The other modes are **VMR9, VMR7** and **Overlay.** Each mode uses a different process to render video. Try each mode and use the one which gives you the best results.

To use **hardware graphics acceleration,** put a check in the tick box **Use hardware acceleration when possible.** This will allow your graphics system to use hardware acceleration for video decode. Note: graphics 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 go back to settings and uncheck “use hardware acceleration” and 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 **hwcwclear.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 can go to **Installing the WinTV driver** above.

### “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 resolution. 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 a 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.

## 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.

FCC ID: H90WINTV