

WinTV-HVR-850

Quick Installation Guide for Windows

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1. Contents of the WinTV-HVR-850 package

- **WinTV-HVR-850**
Hybrid NTSC/ATSC stick
- **USB extension cable**
- **Portable antenna**
- **WinTV-HVR-850 Installation CD-ROM** including the WinTV 7 application and the WinTV-Scheduler



2. What is ATSC digital TV, and how does the WinTV-HVR-850 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.

ATSC digital TV is transmitted in several resolutions, from "standard definition" which is similar to cable TV, up to 1080i HD, 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.

Clear QAM TV channels are digital cable TV channels which are broadcast on cable TV "in the clear". These digital cable TV channels are broadcast in various resolutions, from standard definition up to high definition. Please check with your local cable TV operator on the availability of clear QAM TV channels.

WinTV-HVR-850 has a built-in tuner for analog cable TV and digital over-the-air ATSC TV. To receive ATSC, you will need an antenna. To receive analog cable TV, you will need a cable TV connection.

It uses your PC or laptop's 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 or laptop system 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.

The supplied portable antenna is designed primarily for ATSC digital TV reception, and will work within 10 miles of an ATSC transmitter (reception might be limited by obstructions such as steel buildings).

For the best ATSC TV reception, a roof top 'High gain' antenna is recommended. In the U.S., a good ATSC digital antenna selector can be found at **TitanTV.com** under **Resources**.

3. Installing the WinTV-HVR-850 device

Locate a free USB 2.0 port (normally located at the side or back on the laptop or desktop). Plug the WinTV-HVR-850 into the USB 2.0 port. The **USB extension cable** can be used to position the WinTV-HVR-850 away from your USB slot.

Note: we do not recommend connecting via a USB Hub.

Plug an antenna for ATSC digital TV reception, or either cable TV or a TV antenna for analog TV reception, into the TV connector on WinTV-HVR-850. For over-the-air TV reception, it is recommended **to connect to a roof top aerial during the first time installation.** This will provide better signal quality than a portable antenna.

Connecting an external A/V source (optional)

You can also connect sources via the A/V input cable (optional accessory for the WinTV-HVR-850 available from the Hauppauge webstore).

Plug the **A/V input cable** into the small connector on the side of the WinTV-HVR-850. Connect your A/V source using either the **Composite** or **S-Video connection** and the **audio jacks**.



To enable the external A/V source in the WinTV application, see the section entitled **"External audio/video sources"** below.

4. Installing the WinTV-HVR-850 software

Note: the latest WinTV-HVR-850 software can be found at www.hauppauge.com/site/support/support_hvr850.html

Note: You may need to disable your antivirus programs during the installation only.

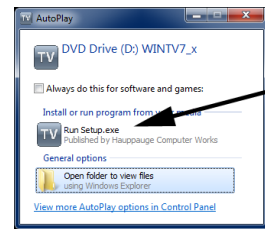
Install your WinTV products (step 3). Turn on your Windows 7, Windows Vista or Windows XP PC, and boot into Windows.

For Windows 7: You will see an **AutoPlay** message. Click **Run Setup.exe**

For Windows XP installations:

After you install your WinTV device and boot Windows, a **'Found New Hardware'** wizard will appear.

Please cancel it and allow Windows to load fully before proceeding. With some WinTV products, you might see this message two or three times. Please click **'Cancel'** each time you see the **New Hardware Wizard**.



For all versions of Windows: The **"Hauppauge WinTV Installation CD-ROM"** window will appear on the screen.

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

Click the button labeled: **Step 1: Install drivers.** A blue 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

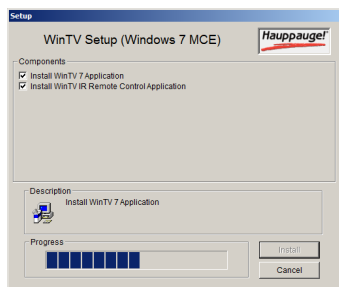


Click the button labeled **Step 2: Install WinTV**

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

The setup application will then open and begin automatically installing the WinTV application components.

The main applications installed are the WinTV v7 application for TV watching and recording. Once complete, click **OK** then **Exit**.



5. Running WinTV v7 for the first time

To run the WinTV v7 application, 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. On some model WinTVs, you have multiple tuners and therefore you can select multiple sources.

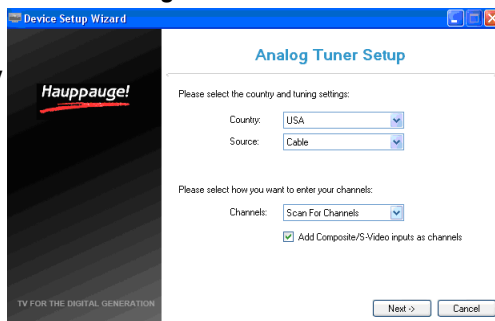


When complete, click **Next / Next** and **OK**.

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 Analog cable TV

Select your **Country** and your **TV Source** from the drop down list. To



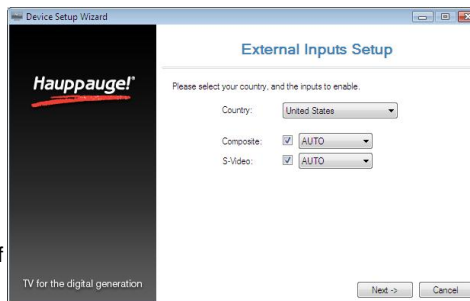
automatically scan for channels, click **Next** to continue.

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

External audio/video sources (optional)

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**.

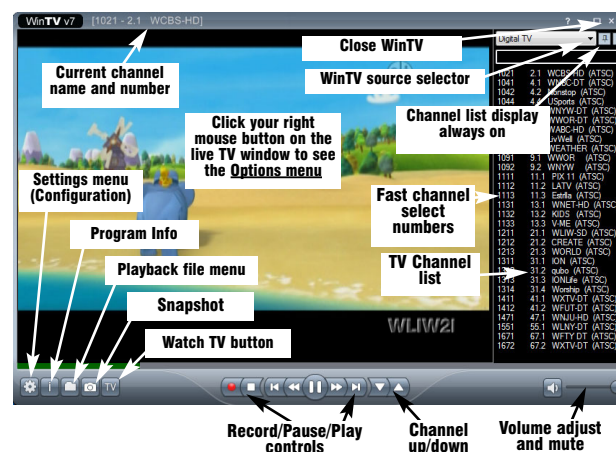
If you wish to connect a source not normally designed for operation in your country, you can configure the Video Format manually from the drop down list. Change the value from "AUTO". Pal BGHIDK is the commonly used format in Europe. NTSC is the broadcast format used in North America.

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. Chose 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**.

6. Using the WinTV v7 application



Once the WinTV v7 application is open, click the **Watch TV button** to watch TV.

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.

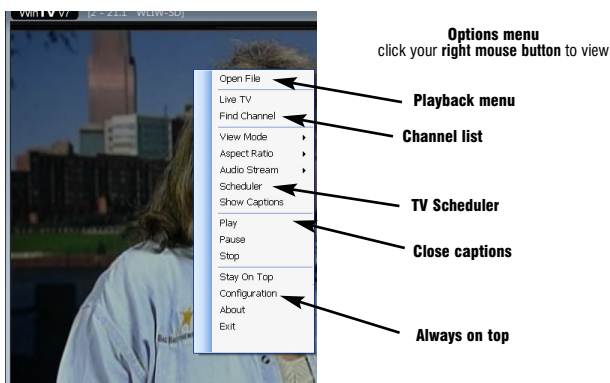
To display the channel list all the time, while the channel list is displayed, click the **Channel list display always on** button.

Options menu

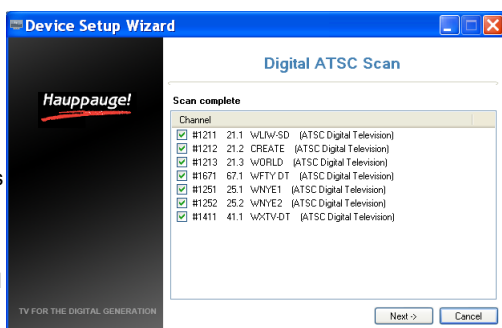
The **Options menu** is the main menu where you can select channels, turn on close captions, open the TV Scheduler, show the TV Guide and many other of the most important TV control functions.

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



The digital TV scanning process will scan from channels 2 to 51. As TV channels are found, they will appear in the Channel box.



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

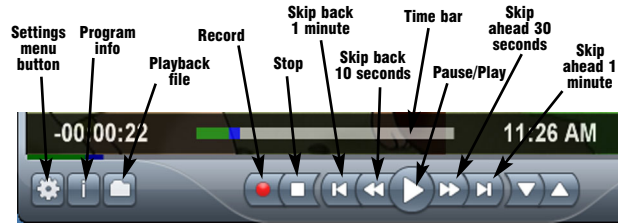
To manually schedule a TV recording, or to see which programs have been scheduled, click on **Scheduler**.

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

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 then move your mouse 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**. 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 is 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.

Image capture

To capture still images from video, click the **Snapshot button**.

To configure the formats for still image capture, click the **Settings menu button**, then click on the **Capture folder**. You will see the settings for image capture under **Snapshots**. You can chose between BMP and JPEG formats. The name of the files will be:

capture_'date'_'time'.jpg or **capture_'date'_'time'.bmp**

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.

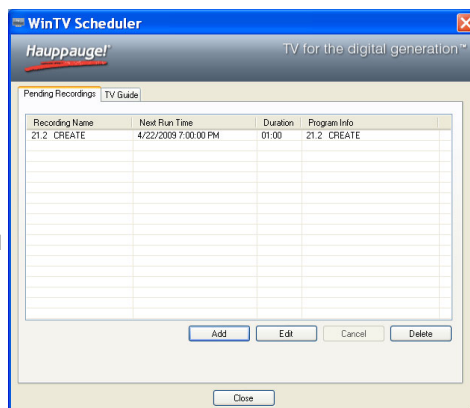
Note: your PC needs to be turned on for scheduled recording to work.

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, but your PC needs to be turned on. If WinTV is not running, it takes about 15 seconds to start WinTV and to start the recording of TV.

Install the Media Center Remote control (available in WinTV Media Center Kits)

TV Tuner set up in Windows Media Center

Run the Windows Media Center application. Cursor down to **Tasks**. Cursor left to **Settings**. Click **Enter**.

Cursor down to **TV**. Click **Enter**.

Cursor down to **Set up TV Signal**. Click **Enter**. Click **Next**.

In **Confirm your Region**, make sure your region is selected. Click **Next**.

You will see a message which says **Download TV Setup** options. This takes about 5 minutes to complete. Click **Next**

when this download is complete.

At **TV Signal**, click **'I will configure my TV signal manually'** and click **Next**.

You will then see: **Cable / Satellite / Antenna**. Chose the source of your TV signal (**Cable** for use with analog cable TV, **Satellite** for use with a satellite set top box and **Antenna** for use with ATSC digital over the air TV) and click **Next**.

At this point, Media Center will set up the TV tuner. This might take a minute or so.

Note: Windows 7 Media Center supports QAM TV channels. You can also use the Hauppauge WinTV v7 application, or SageTV or BeyondTV for QAM TV reception,

You will then see a message saying **Examining cable TV**, antenna or set top box connection.

After determining the type of signal, you will see **You are Done!**

Click through the rest of the settings, set up your **Guide listings** and click **Finish**.

Then return to the main menu. Go to **TV + Movies** and then **Live TV** to watch and record TV.

Troubleshooting

Note: the latest WinTV-HVR-850 software can be found at http://www.hauppauge.com/site/support/support_hvr850.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

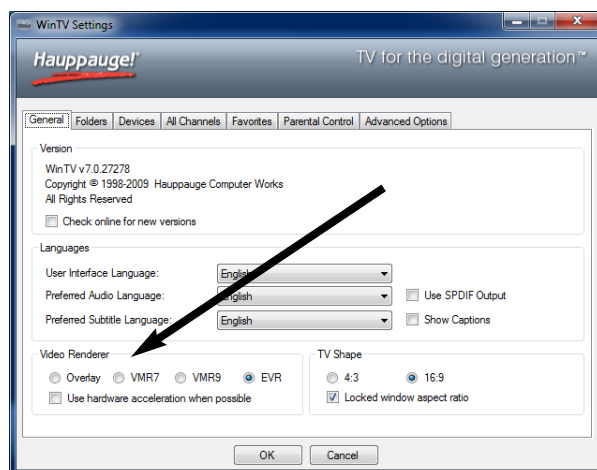
Jerky or distorted video can be caused by two things in your PC or laptop: a slow CPU which cannot decode the ATSC TV signal fast enough, and a graphics system which cannot keep up with the high datarates of ATSC TV.

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 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-850 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.

Keyboard shortcuts

Ctrl A	Aspect ratio	Alt F	Open File menu for playback
Ctrl D	Display the video and audio format of the TV program	Alt M	Open the Task Menu
Ctrl F	Freeze the video	Alt P	Previous channel
Ctrl Z	Open TV Scheduler	Ctrl Q	Pause
Ctrl O	View program details (digital TV program, where provided in the broadcast)	Ctrl P	Play
Ctrl S	Display subtitles	Alt R	Record
Ctrl W	Full screen toggle	Alt S	Stop
		Alt T	Start TV
		Ctrl C	Catch up
		Ctrl >	Skip ahead
		Ctrl <	Skip back

FCC Statement

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