Hauppauge!®

WinTV-HVR-1950
Quick Installation Guide for Windows

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1. Included with the WinTV-HVR-1950

- **WinTV-HVR-1950 device** with ATSC/NTSC/clear QAM receiver, 125 channel cable ready TV tuner, FM radio receiver and MPEG-2 hardware audio/video compressor for recording analog cable TV to disk
- **Remote control transmitter** and batteries
- **IR Blaster cable**
- **Wall mounted power supply** (6 volt)
- **1 meter USB cable**
- **FM radio** antenna
- **WinTV Installation CD-ROM**
- **WinTV-HVR-1950 Quick Installation Guide** (this guide)
- **IR Remote Blaster Quick Installation Guide**

2. What is ATSC and QAM digital TV, and how does the WinTV-HVR-1950 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 digital satellite TV. To watch and record satellite TV, you need a satellite receiver box plus the WinTV-HVR-1950.

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.

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.

WinTV-HVR-1950 has a built-in tuner for analog cable TV, digital ATSC and clear QAM digital cable TV. To receive ATSC, you will need an antenna. To receive digital clear QAM or 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

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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 portable antennas are 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 digital 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-1950

The WinTV-HVR-1950 is a USB device designed for Microsoft® Windows 7, Windows Vista (all versions) and Windows XP SP2. It can be used with the Hauppauge WinTV application, with Windows Media Center and other TV tuner applications.

Connect the WinTV-HVR-1950 cables

Plug your **TV antenna** or **cable TV cable** into the WinTV-HVR-1950's **TV Connector**. Plug the supplied Radio aerial into the FM radio connector. Note: 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-HVR-1950's **USB Cable connector**. The WinTV-HVR-1950 is compatible with USB 2.0 (high speed USB) only.

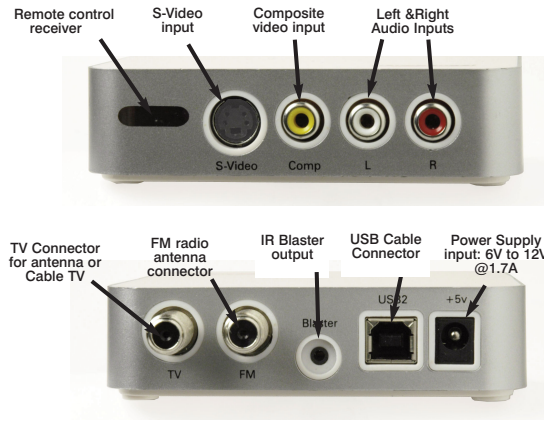**Plug the other end** of the USB cable into a USB port on your computer.

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

Information on the installation of the IR Blaster Cable can be found in the **IR Remote Blaster Quick Installation Guide**.

Boot your PC.

Plug the power supply into WinTV-HVR-1950.

Plug the supplied Power Supply into the **Power Supply input** on WinTV-HVR-1950. The WinTV-HVR-1950 can accept 6V to 12V inputs.

Remote control receiver | S-Video input | Composite video input | Left &Right Audio Inputs

S-Video   Comp   L   R

TV Connector for antenna or Cable TV | FM radio antenna connector | IR Blaster output | USB Cable Connector | Power Supply input: 6V to 12V @1.7A

TV   FM   Blaster   USB2   +5v

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4. Installing the WinTV driver and application

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

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. You might see this message two or three times. Please click 'Cancel' each time you see the New Hardware Wizard.

For Windows 7:

Insert the WinTV Installation CD-ROM in your PC's CD-ROM drive. You will see an AutoPlay message.

Click **Run Setup.exe**

For all versions of Windows:

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

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

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

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.

Step 1: Install Drivers
Step 2: Install WinTV
Register
Browse CD
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**.

Please do not lose your WinTV CD-ROM! You will need to use it each time you upgrade to a new version of WinTV.

> **N**ote: the latest driver updates are available at: www.hauppauge.com in the Support section.

5. Running WinTV for the first time

To run **WinTV v7** for watching TV, recording videos and playing them back on your PC, **double click on the WinTV icon** on your Windows desk top.
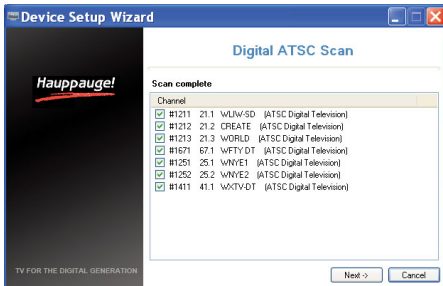
When you run WinTV for the first time, the **WinTV Device Setup Wizard** appears. Select the TV source that you are using.

> **N**ote: 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 over-the-air channels. The digital TV scanning process will scan from channels 2 to 51. As TV channels are found, they will appear in the **Channel box**.

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

> **N**ote: 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 are using cable TV with clear QAM programs, chose **Digital QAM** and click **Next**.

Encrypted channels are automatically not selected and will not appear in your channel list. 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".

> **N**ote: Pal BGHIDK is the commonly used format in Europe. NTSC is the broadcast format used in North America.
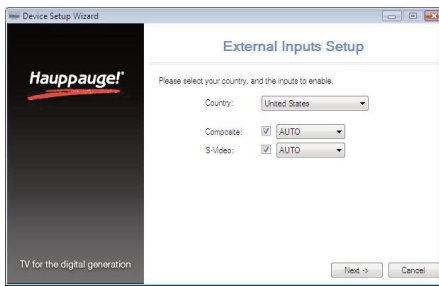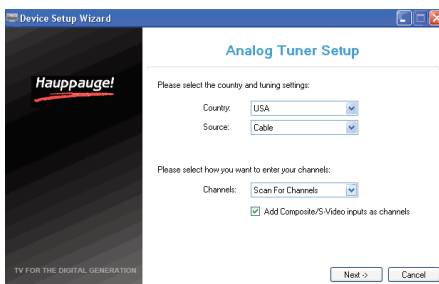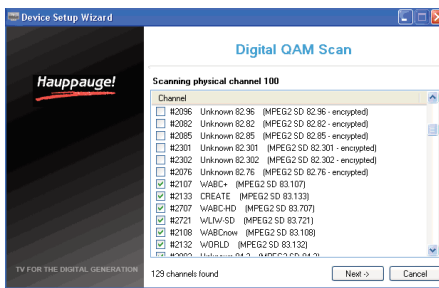
Rescanning TV channels

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**. Choose 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**.

IR blaster in WinTV v7

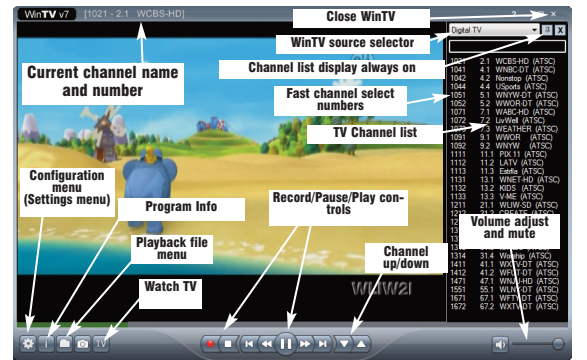If you would like to use the Hauppauge IR blaster to change the

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channels on your cable TV or satellite set top box, see the section entitled "Configuring the remote control for WinTV v7".

Using the WinTV v7 application

To watch TV, click the Watch TV button.

Close WinTV
WinTV source selector
Current channel name and number
Channel list display always on
Fast channel select numbers
TV Channel list
Configuration menu (Settings menu)
Program Info
Record/Pause/Play controls
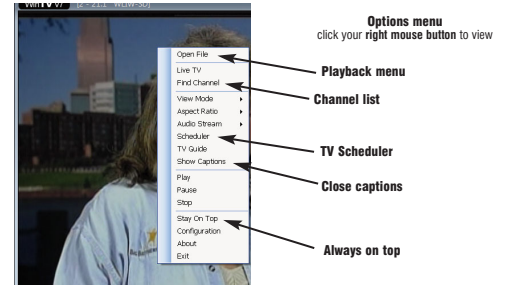Playback file menu
Channel up/down
Volume adjust and mute
Watch TV

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 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.

Options menu
click your right mouse button to view

Playback menu
Channel list
TV Scheduler
Close captions
Always on top

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.

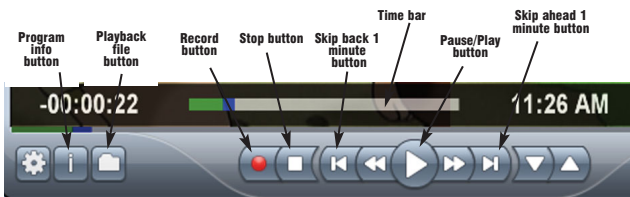**To turn on Close captions**, click on **Show Captions**.

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

Program info button | Playback file button | Record button | Stop button | Skip back 1 minute button | Time bar | Pause/Play button | Skip ahead 1 minute button

-00:00:22   11:26 AM

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** which can be found in the **Configuration menu**. The default directory is MyVideos. To change the default 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 6Mbits/sec. This will be a configurable setting in a future version of WinTV v7.
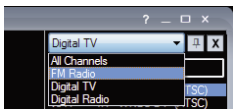
If you want to pause a TV show you are watching:

- **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.

Selecting FM radio programs

On those WinTV products which support FM radio, if you have scanned for FM radio

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staions in the section entitled "Using WinTV for the first time" you can change the WinTV v7 application to FM by clicking FM radio in the Source selector, found in the upper right hand corner of the WinTV application.

Configuration menu

The **WinTV v7 Configuration menu** is accessed by clicking the gear button in the lower left hand corner of WinTV v7.

General tab: you can set the Video Renderer which allows WinTV v7 to display video with a wide range of graphics systems.

Devices tab: allows is where you can re-scan for TV channels and set up the TV sources in WinTV v7.

Parental control tab: is where you can set the Parental Control level.

Advanced options: you can set options such as Convert TV recordings to .MPG file type and Game mode here.

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.
- **Recurrance:** 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.

The Hauppauge remote control

The WinTV 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, select **Restart IR** from the **Start \ All Program Files\WinTV** directory.

Please ensure the following before trying to use this option:

1. **Infrared Remote control** - has batteries inserted
2. **Infrared-Receiver**, is fully connected to the IR socket of the WinTV-Card
3. **Infrared software is started** - The IR icon is on the start bar

To start WinTV, press the **GO** button.

Remote control buttons

TV button: when WinTV is running, this button will start live TV (if in playback mode).

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

Pause button: if watching live TV, will pause 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.

Stop button (square icon): stops live TV, the recording or playback.

Play button: plays the last video recorded.

Back/Exit button: will close the current menu or exit full screen mode.

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: skip ahead 30 seconds.

Skip back button: skip back 30 seconds.

Go button: Start WinTV.

Menu button: opens channel list.

Power button (green): close WinTV or Windows Media Center.
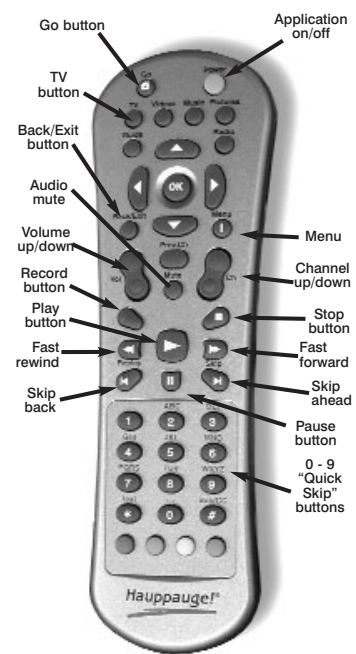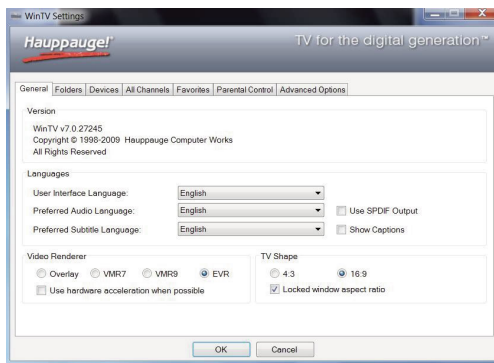
Red button at bottom: Full screen TV

Green button at bottom: not currently used

Yellow button at bottom: not currently used

Blue button at bottom: not currently used

Sub/CC (#):   Sub-titles on / off

Go button | Application on/off | TV button | Back/Exit button | Audio mute | Menu | Volume up/down | Channel up/down | Record button | Stop button | Play button | Fast forward | Fast rewind | Skip ahead | Skip back | 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.

Troubleshooting

*N**ote: the latest WinTV-HVR-1950 software can be found at www.hauppauge.com/site/support/support_hvr1950.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 or QAM 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 digital 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:
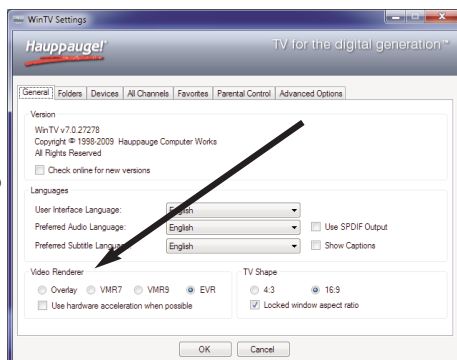
- Use the latest graphics driver: graphics drivers are often 'tweaked' to improve performance, especially the built-in graphics on laptops. Check the Microsoft Windows update site to download the latest graphics driver for your computer. For Dell computers, check the Dell website for the latest graphics 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.
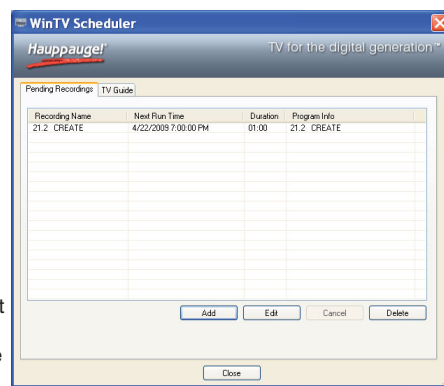
To use hardware graphics acceleration, put a check in the tick box Use hardware acceleration when possible. This will allow your graphics system to use hardware acceleration for video decode. Note: graphics hardware acceleration does not work on all systems.

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
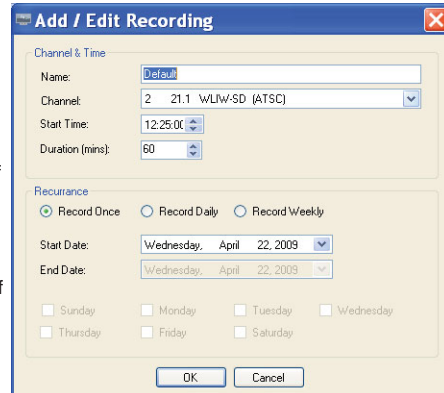

"use hardware acceleration" and rerun WinTV.

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-1950 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 P	Previous channel
Ctrl D	Display the video and audio format of the TV program	Ctrl Q	Pause
		Ctrl P	Play
Ctrl F	Freeze the video	Alt R	Record
Ctrl Z	Open TV Scheduler	Alt S	Stop
Ctrl O	View program details (digital TV program, where provided in the broadcast)	Alt T	Start TV
		Ctrl C	Catch up
Ctrl S	Display subtitles	Ctrl >	Skip ahead
Ctrl W	Full screen toggle	Ctrl <	Skip back
Alt F	Open File menu for playback		
Alt M	Open the Task Menu		

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