Hauppauge!®

WinTV-HVR-950

Quick Installation Guide for Windows XP and Windows Vista (all versions)

1. Contents of the WinTV-HVR-950 package

- WinTV-HVR-950 Hybrid NTSC/ATSC stick
- USB extension cable
- Portable TV antenna
- WinTV-HVR-950 Installation CD-ROM including the **WinTV** application with SoftPVR™and the **WinTV-Scheduler**

2. What is ATSC digital TV, and how does the WinTV-HVR-950 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. The WinTV-HVR-950 cannot receive digital cable TV 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-950 has a built-in analog cable TV and digital ATSC TV tuner. 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 digital TV reception, a roof top 'Wideband or Highgain' 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-950 device

Turn on your Windows XP PC or laptop, and boot into Windows.

Locate a free USB 2.0 port (normally located at the side or back on the laptop or desktop). Plug the WinTV-HVR-950 stick into the USB 2.0 port. You can use a USB extender cable to locate the WinTV-HVR-950 a short distance from your USB slot.

Note: if you plug the device into a different USB socket, you will need to reinstall the WinTV-HVR-950 driver, but you will not need to reload any WinTV applications.

Note: Due to power and bandwidth requirements, we do not recommend connecting WinTV-HVR into 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-950. It is recommended to connect to a roof top aerial during the first time installation. This will provide better signal quality then the provided portable antenna.

4. Installing the WinTV-HVR-950 driver

Note: the latest WinTV-HVR-950 software can be found at www.hauppauge.com/pages/support/support_hvr950.html

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

Installing the WinTV-HVR-950 Windows XP driver

Turn on your PC. When it is completely booted, the **Found New Hardware Wizard** will appear. Insert the Hauppauge Installation CD-ROM into your CD-ROM drive.

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

Click **Next**.

Select **Install software automatically**.

Click **Next**.

Once the driver component is installed, click the **Finish** button.

Installing the WinTV-HVR-950 Windows Vista driver

After installing the WinTV-HVR-950 in your PC, boot Windows Vista. The **Found New Hardware** window will appear.

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

Click **Locate and install driver software (recommended)**.

Then click **Don't search on-line**.

Click **Next**.

When the driver is installed, click **Close**.
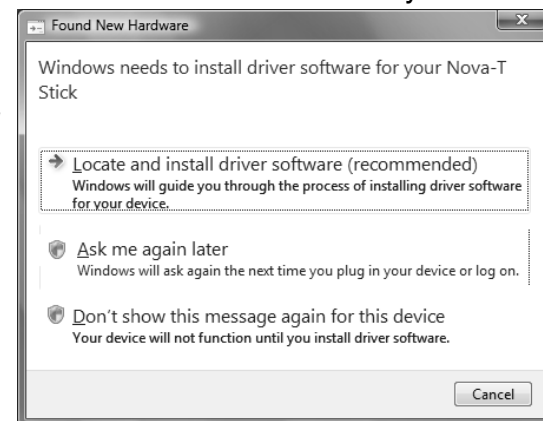
5. WinTV Software Installation

In Windows XP: Click **Start** / **Run** then type your CD-ROM drive letter (for example: **D:**) and then **Setup.exe**

In Vista: Click the **Start button,** then click **Computer,** (you can find **Computer** halfway down the right hand column) then locate your CD-ROM drive. You should see the contents of the WinTV Installation CD. Double click on **Setup.**

Choose a language, and click **Next**. Click **Install**. The Setup program will automatically install all necessary WinTV software.

Once the installation procedure is finished you will see the **WinTV2000 Icon** on your Desktop. It is also listed in the Start menu under the Program files and **Hauppauge WinTV** folder.

The main applications installed are the WinTV2000 application for TV watching and recording, and the WinTV Scheduler for scheduling your TV recordings.

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6. Running WinTV®2000 for the first time

To start the WinTV 2000 application, **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 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 subchannels, 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 have attached an antenna and do not receive any ATSC digital TV channels, either use a stronger antenna (a roof top antenna is recommended for best reception) or reposition your portable antenna. Then rescan for ATSC channels (see below for instructions on rescanning and the **Troubleshooting** section for information on choosing an ATSC antenna).
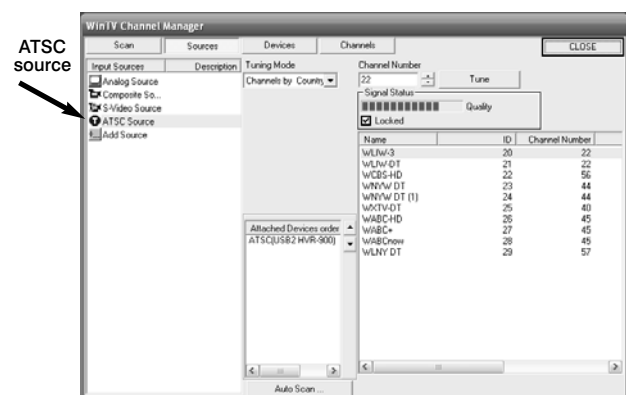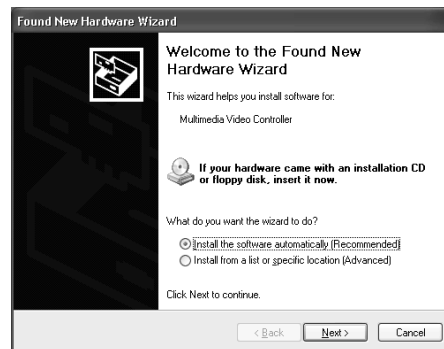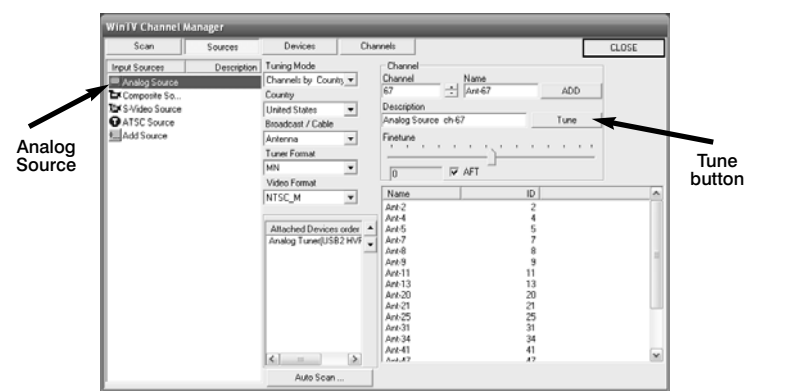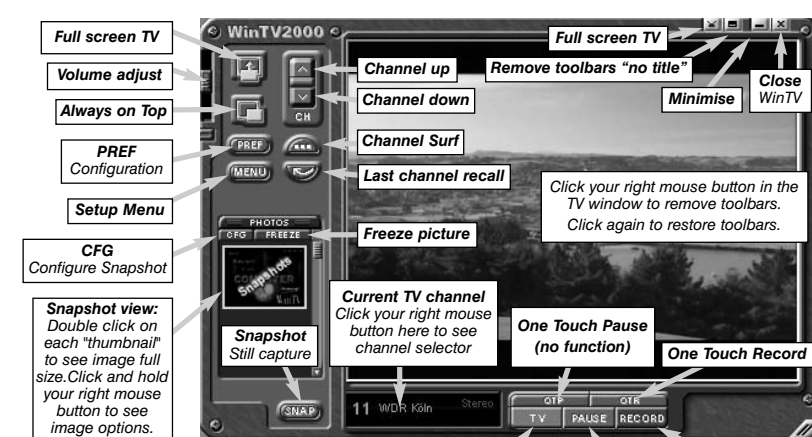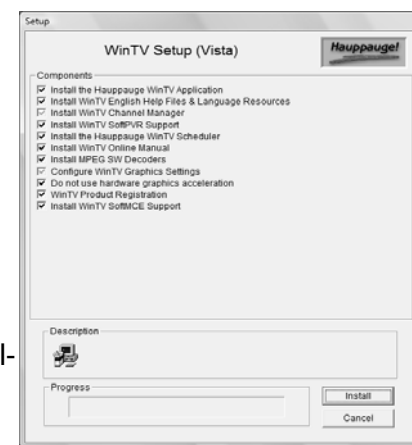
Note: When initially installed, WinTV-HVR-950 uses a setting which does not take advantage of graphics acceleration. If you experience problems when watching ATSC digital TV channels, see the **Troubleshooting** section.

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**.

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.

Other changes to channel listings

If you want to add names or fine tune an analog channel, click **Menu** / **Suite Manager** / **Sources**. Choose **Analog Source**. You will see a list of your analog channels. Click on the **desired channel**. Click the **Tune button** to change channel. You can change the **Name** to the name of the station. To fine tune an analog channel, unclick **AFT** and then use the **Finetune slide bar**. When finished, click **Close**.

WinTV®2000

Changing channels

You can change channels by clicking the **Channel Up** or **Channel Down** buttons on the WinTV2000. You can also type a channel number (for example: 27 or 1021) and WinTV2000 will tune to that channel. If the entered channel does not exist, you will see a black window. You can also **right click** in the **Current TV channel box**, where you will see a list of channels.

Changing the TV window size

You can change the size of the WinTV window by grabbing any corner and dragging the video window to the desired size.

Displaying TV full screen

When you click the **Full screen TV** button, TV will appear

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full screen on your PC monitor. When finished watching TV full screen, **right click your mouse button**.

If you see video with a black box around it, 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**, WinTV will always be visible on your Windows desktop on top of any applications. To turn on, click the **Always on top button**. It will turn green. To turn off, 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 quickly from a small window to a larger one by clicking the right mouse button.

To hide the WinTV toolbar (No-title mode)

Click your right mouse button in the WinTV's video window for the no-title mode. To restore the toolbars (the title mode), once again click your right mouse button in the video window. You can set the size of the window differently in each mode.

Pref button: Click the **Pref** button to open the Preferences menu:

View: These are the settings for the On Screen Display of the TV channel and Audio Volume 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 setting for SoftPVR™. You can set the movie record directory (DVCR Record File Path), the MPEG Quality settings, and the Audio settings.

Snapshot: Set the size of your captured image, and settings for capturing motion or still images. Note: VMR must be the graphics setting to enable snapshot.

Audio: Your audio settings are configured here.

Color: Adjust the color of your TV picture here.

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

Suite Manager: Configure the TV tuner (scanning, naming, channel preset,etc) setting up 'favorite channel lists')

Configuration: Duplicate configuration menus for colour, audio, MPEG settings, etc.

View: For setting an exact TV window size: 320x240, 640x480 etc.

## Configuring an external A/V source in WinTV2000 using the *optional* A/V breakout cable

To bring video from an external audio/video source, you will need an optional A/V cable set which is available from the Hauppauge web store.

When using an external audio/video such as a satellite TV receiver, VCR, cable TV set top box, camcorder, game console etc, you will need to connect the **S-Video input connector** or **Composite video input connector** for video and the **Audio input (Line-In)** for the sound.

To configure the external A/V source, in the WinTV2000 application click **Menu / Suite Manager** and **Sources**. To add the **S-video** or **Composite** source, highlight the entry and then select the **Video Format** from the drop down list. **NTSC** is the commonly used format in North America.

Select **Add** to finish. Then click **Close**. To select an external audio/video source, click the **Up** and **Down channel** buttons to cycle through TV, Composite and S-Video sources. The external source is at the end of the channel list.

Watch and record TV

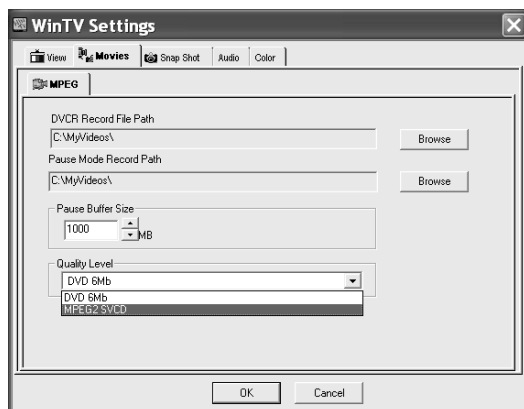One Touch Pause   One Touch Record

TV Modus   Pause   Record
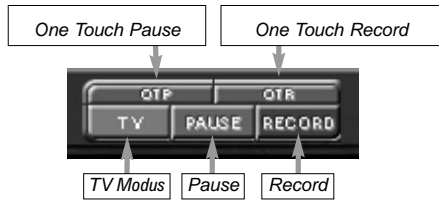
There are two buttons to control the Watching and Recording of TV. Clicking on the **Record** button will cause the **Record menu** to roll down. Clicking **OTR** will cause the **Record menu** to roll down, and start recording.

Note: Pause is not supported on WinTV-HVR-950.
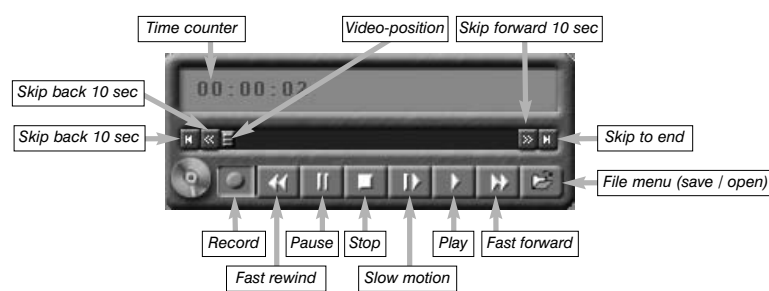
Recording TV with the WinTV-HVR-950

When recording ATSC digital TV, the recording format is the same as the digital TV resolution of the TV program. These recordings will consume a large amount of hard disk space. For example, if the TV program is being transmitted at the highest ATSC resolution, called "1080i", the recording will consume 5.6 Gigabytes of disk space per hour of recording.

When recording analog cable TV using SoftPVR, the 'DVD' MPEG-2 format will typically consume 2.8 Gbytes per hour.

Record mode

Time counter   Video-position   Skip forward 10 sec

Skip back 10 sec

Skip back 10 sec   Skip to end

File menu (save / open)

Record   Pause   Stop   Play   Fast forward

Fast rewind   Slow motion

Configuring the record formats

When recording analog TV, WinTV2000 uses your PC or laptops processor and **Hauppauge's SoftPVR** to make the recording. The default recording quality is DVD. To configure the directory to store video recordings and to check the analog recording format, click the **Pref button** and then **Movies**.

Note: since ATSC digital recording uses the format the original TV program is broadcast in, there are no other recording format options.

To record TV

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 — Clicking the Record button will automatically generate a file name and start recording your audio/video program.

Stop — Clicking the Stop button will stop the video you are recording or playing back.

Play — 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.

Pause — Clicking the Pause button while Playing will pause your audio/video.

Rewind button — Clicking the Rewind button will play the video file in reverse. Clicking the Rewind button again will continue the playing of the video.

Fast forward button — Clicking the Fast Forward button one time will fast forward your video at 2X speed. Clicking the Fast Forward button two times will fast forward your video at 8X speed. Clicking the button again will continue playing back at normal speed.

Slow motion button — Clicking the Slow Motion button during playback will cause the video to play in slow motion. Clicking the Slow Motion button again will return the video to normal playback 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, 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**: Click your right mouse button on the video file once, go down the menu and click **Delete**.

### Schedule TV recordings with 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.

When using an Electronic Program Guide (EPG) such as TitanTV, the WinTV Scheduler makes a conversion so that correct ATSC digital channels will tuned. For example, if the EPG wants to record digital channel 22.2, you will see the recording listed in WinTV Schedule as recording channel 1222.

After installation, WinTV Scheduler can be found on your Windows desktop. You can also find it in **Start / Program files / Hauppauge WinTV**.
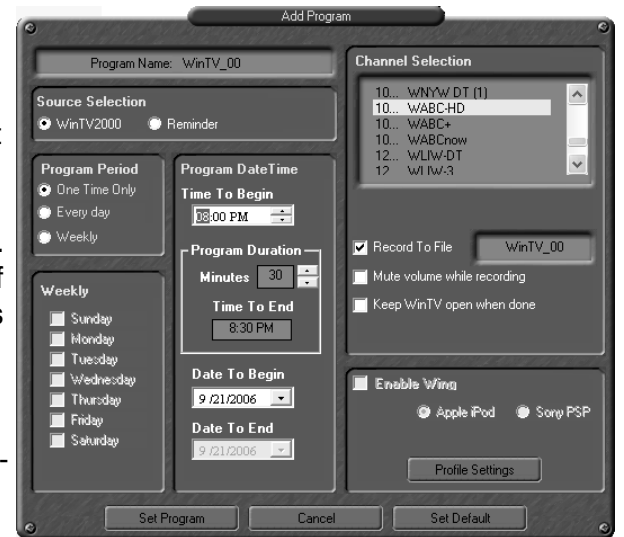
WinTV Scheduler works by using the Windows Task Scheduler to launch WinTV at the chosen time. WinTV Scheduler sets up a command line in Task Scheduler to run WinTV2000, specifying a TV channel and a length of time to record.

To set up an event for timed watching or recording, run 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 second to start the program.

  Note: It takes about 10 seconds to launch the WinTV and set up for recording.

- **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**: today's date is the default. Change this if you want to schedule on another date.

- **Source selection**: leave at WinTV2000 to open WinTV at the requested time and the requested channel.

- **Channel selection**: choose one of the 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.

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 Scheduler and to start the recording of TV.

Keyboard shortcuts

Sound up	- Page Up	**Ctrl+M**	- Mute on/off
Sound down	- Page Down	**ALT+M**	- Re-size TV menu
Plus (+)	- Chanel Up	**0-9**	- Channel number
Minus (-)	- Channel Down	**F1**	- Launch Help
Ctrl T	- Frame TV	**SHIFT+F1**	- Online Help
Ctrl P	- Frame Print	**Space bar**	- Take a Snapshot
Ctrl F	- Still image		

Troubleshooting

Note: the latest WinTV-HVR-950 software can be found at www.hauppauge.com/pages/support/support_hvr950.htm

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 watching. 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

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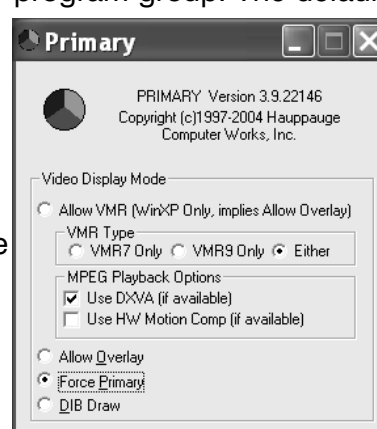
acceleration, close WinTV2000, then run **Primary**. Click **Allow VMR**. Close **Primary** and rerun **WinTV**. The **Allow VMR** setting will allow your graphics system to use hardware acceleration for video decode. **Note: graphics hardware acceleration does not work on all systems.**

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, 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-950 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.

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