

HD PVR

High Definition Video Recorder for Windows

Quick Installation Guide

©2008-2011 Hauppauge Computer Works, Inc.
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Included with HD PVR:

- HD PVR H.264 high definition video recorder, USB
- Component video cable set, 1 meter
- Audio cable set, 1 meter
- USB cable
- 5v 2 amp power supply
- IR Blaster transmitter cable to control the channel changing on your cable TV or satellite set top box (not used with game consoles)
- HD PVR Installation CD, with HD PVR drivers for Windows and Arcsoft Total Media Extreme

Overview

The Hauppauge HD PVR records video from a video game console or cable TV or satellite set top box. The recordings are made onto a computer's hard disk in a compressed H.264 format. HD PVR uses **Component video** (also called YPrPb), **S-Video** or **composite video**, and will record at resolutions from standard definition (480i) up to high definition (1080i), at datarates from 1Mbit/sec up to 13Mbits/sec.

Note: if you are connecting HD PVR to a video game console such as an Xbox360 or PS3, make sure the Component video output of the game console is set to 1080i. Please see the Hauppauge HD PVR support page for instructions on connecting the Xbox360 or PS3 to HD PVR: http://www.hauppauge.com/site/support/support_hdpvr.html

Audio can be supplied to the HD PVR from a set of stereo audio cables or via an optical SPDIF. The optical audio input to the HD PVR can be in either a 2 channel stereo audio format or a 2 or 5.1 channel AC-3 format.

The recording format used by HD PVR is H.264 video with AC-3 audio. HD PVR recordings can be played back to the PC screen or can be converted "on the fly" to a Blu-ray format AVCHD file for burning onto a DVD disk.

There are three types of record formats which can be selected:

.TS: the native H.264 format with 2 or 5.1 channel audio. You create this format when you click **AVCHD** in **Arcsoft Capture**.

.M2TS: this is an H.264 format which can be played on a Sony



Playstation3. You create this format when you click on **Playstation3** in **Arcsoft Capture**.

.MP4: this is an H.264 format which can be played on an Xbox360. You create this format when you click on **XBox 360** in **Arcsoft Capture**.

HD PVR comes bundled with **Arcsoft's Total Media Extreme (TME)**. **Arcsoft's TME** is used to record videos, play back the recorded videos to your PC screen (using the TME Theater function), plus can burn your video recordings into a AVCHD format using conventional DVD disks for playback on a Blu-ray DVD player.

Installing the HD PVR

Step 1: Connect the HD PVR cables.

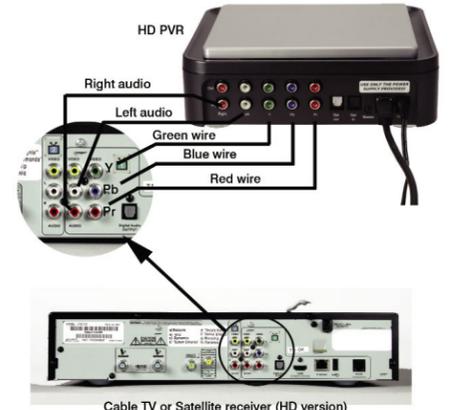
USB connection

Plug one end (the square end) of the supplied **USB cable** into the HD PVR's **USB cable connector**. HD PVR is compatible with USB 2.0 (high speed) only.

Video input connection

From your game console, cable TV or satellite TV set top box, there are three ways to connect video to the HD PVR. You only need one audio/video connection from your set top box to the HD PVR:

- a.) **Component Video** (YCrCb, YPrPb or Green/Blue/Red). Connect the **Component Video** from your game console or satellite or cable box to the **Component video inputs** on the rear of the HD PVR (see diagram).
Note: Component video is limited to 1080i HD format.



Connecting HD PVR to a satellite or cable TV set top box, showing left and right audio connections

- b.) **S-Video:** connect the **S-Video output** of your set top box to the **S-Video input** on the front of the HD PVR.
c.) **Composite video:** connect the **composite video output** from your set top box (the yellow RCA connector) to the yellow **Composite video input** on the front of HD PVR.

Pass Through Video for no delay recordings (optional):

To watch live video from your game console on a HD TV set without any delay, you can connect the **Component Video output** from the HD PVR to the **Component Video input** on your TV set.

Note: your HD PVR needs to be powered on for Pass Through Video Output to operate. If the HD PVR is powered on, Pass Through will operate even if your PC is turned off.

Audio connection

Audio from the set top box is connected where you have connected the video input: either to the optical audio in (rear), RCA audio in (rear) or RCA audio in (front). Optical audio is connected on the rear panel.

Step 2: Boot your PC

Step 3: Plug the power supply into HD PVR

After your PC has booted to Windows, plug the supplied Power Supply into the **Power** input on HD PVR. The power supply is 5VDC@ 2amps.

Step 4: Install the HD PVR Windows driver and applications

Note: the HD PVR needs to be powered up in this step and plugged into your PC while the Windows drivers are installed.



Turn on your 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 HD PVR driver

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 HD PVR application

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

Choose a language, and click next, click **Install**.

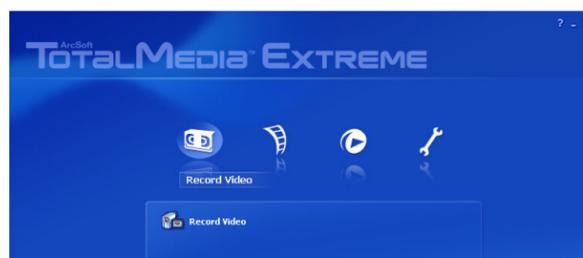
The **Arcsoft Total Media Extreme** software application, **HD PVR Scheduler** application, and **IR Blaster** application will be installed.

Once complete, click **OK** then **Exit**.

Note: the latest driver updates are available at: www.hauppauge.com in the Support section.

Running Arcsoft TotalMedia Extreme

To start the ArcSoft Total Media Extreme application, double click on the **TotalMedia Extreme icon** on your desktop.



The program will open to this initial screen which has four icons along the top: **Record video**, **Create Disc**, **Play Video**, **Utilities**.

Recording Videos

Click on the **Record video icon** to open the **Arcsoft Capture Module** recording function. Make sure the **Source** is set to **Hauppauge HD PVR Capture**.

Select your A/V input source

Choose the **Video** and **Audio inputs** you are using to setup up the recording:

If you are using **Component video** from your set top box, choose **Component**.

If you are using **S-Video** or **Composite video** from your set top box, choose **S-Video** or **Composite**.

Note: if you are connecting HD PVR to a game console, make sure the Component video output of the game console is set to 1080i.

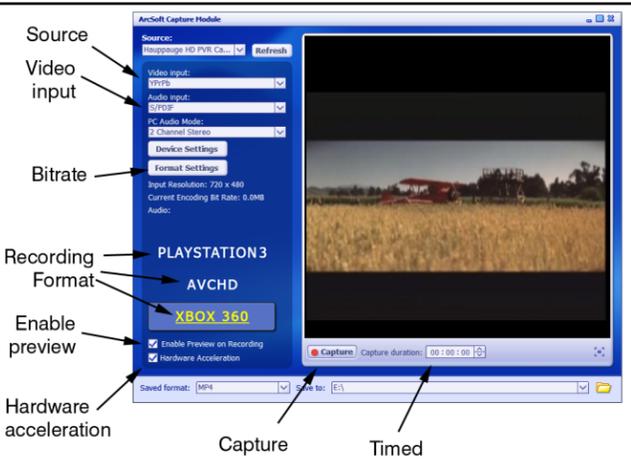
Adjust the **bitrate** by clicking on **Format Settings**. You can set the bitrate from 1Mbit/sec to 13 Mbits/sec. The higher the bitrate, the more disk space is used but the higher the video quality of the recording. When recording high definition videos, we recommend a bitrate of 5Mbits/sec or higher.

The format created by the HD PVR is a H.264 using AC-3 audio in an AVCHD (.TS), PlayStation3 (.M2TS) or Xbox360 (.MP4) file format.

Start the recording by clicking on the **Capture button**.

During recording, the **Capture button** will turn green and the button will change to a **Stop button**. The recording will be saved in the default directory of **My Documents\My Videos**. The default name of the video will be the date and time (i.e. 2008_3_20_09_08_32.TS).

You can make a recording of a specified time duration by entering a



value in the **Capture duration** box. The recording will start and continue until the time duration.

Note: to preview your video while recording, check the 'Enable preview on recording' button.

Playing back your video recordings

To play back a file, close the **Arcsoft Capture Module** recording window and click on the **Play Video** icon.



This will open **Arcsoft TotalMedia Theater**. In **Arcsoft TotalMedia Theater**, click on the **folder icon** and choose **Open media file**. It will open the **My Videos folder**. Click on the file you wish to play and then click on the **Open** button. Video playback will begin automatically.

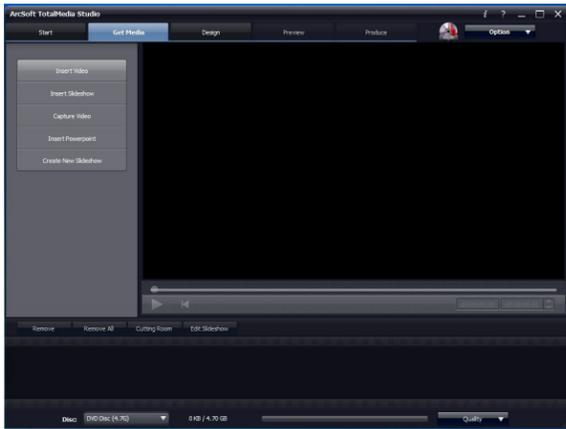


To burn a Blu-ray compatible DVD disc

You can burn about 110 minutes of 5Mbit/sec high definition HD PVR video onto a standard DVD-R or DVD-RW disk, and then play those recordings back in a Blu-ray DVD player. The number of minutes which can be burned on a DVD disk is determined by the bit rate which you selected in the section entitled **Recording videos**. The higher the bit rate you choose, the less amount of time which can be recorded onto a DVD disk.

From the main menu of the TotalMedia Extreme, click **Create Disk**. This will open the **Arcsoft TotalMedia Studio** application, which can be used to author a DVD disk plus edit your videos.

The **Get Media** screen in TotalMedia Studio screen shows what your DVD disk will look like after it is 'burnt' onto a DVD disk.



The default disk setting for **Disc** is a 4.7 GByte DVD disk. If you have made HD recordings at 5Mbits/sec, this disk will hold about 110 minutes of video.

To add videos to the DVD layout

Click the **Get Media** tab.

Click on the **Video** button to add a recording you have previously made.

Click on **Capture Video** to capture a new video to the hard disk for editing and burning.

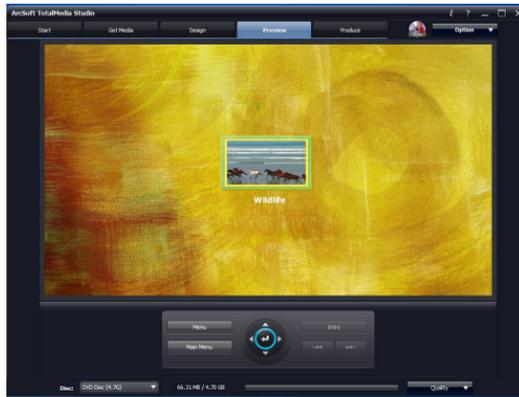
There are also options for adding a submenu and custom text.

To design the background of your DVD disc

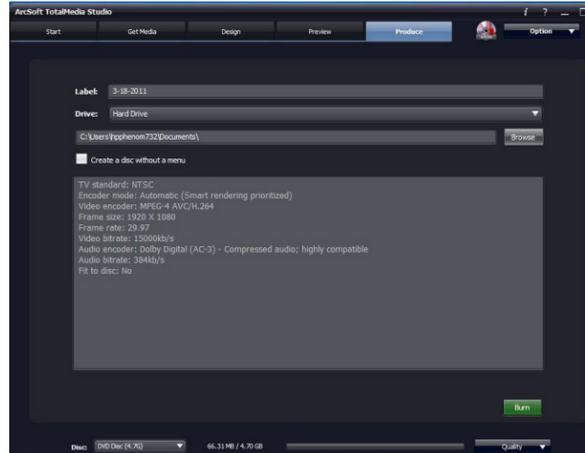
The **Design** tab will allow you to customize the menu screen for the Blu-ray DVD disc:

Burning your videos onto a DVD disk in a Blu-ray format

The **Preview/Produce** tab will allow you to finalize the Blu-ray and to burn directly to DVD disc.



Clicking the **Burn** button will give you the options of writing to disk. You can also save the project as a disc image file to the hard drive.



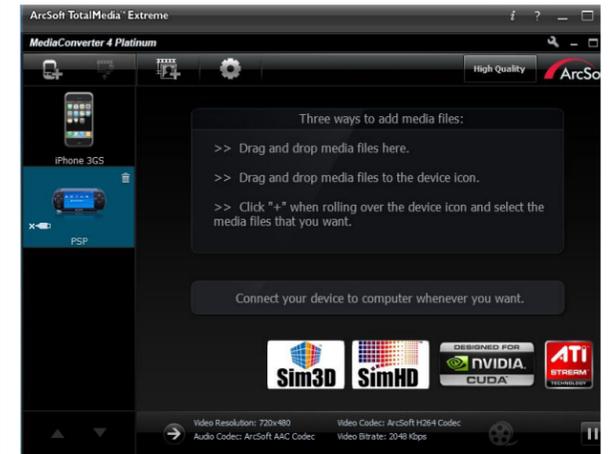
Utilities: Arcsoft Media Converter

Click the **Utilities** option from the main menu, then choose **Arcsoft MediaConverter**



The Arcsoft MediaConverter application will allow you to convert your HD PVR captured .TS files into an Apple (.MP4) format, Microsoft (.WMV) format, Philips (.WMV) playable format, a Sandisk (.MOV) playable format, or a Sony (.MP4) playable format

Select the file you wish to convert by clicking the add file button, and select the Manufacturer & Device model options for the format you wish to convert to.



Click the **Start** button, which will begin the conversion process.

When the conversion process completes, it will display the results.

Configuring the IR Blaster (when using HD PVR with a cable TV or satellite box)

Install the IR Blaster cable

Plug the IR blaster jack at the end of the **IR Blaster transmitter cable** into the **IR Blaster Out jack** on the HD PVR.

Install the IR transmitter (blaster) at your set top box: Attach the end of the IR transmitter over the remote sensor on the set top box to be controlled. **Placement of the IR transmitter is important!** The IR transmitter **only works over a 1 inch distance**, so you need to make sure it is placed over the remote sensor in your set top box. Some set top boxes have the position of the remote receiver indicated on the plastic front of the set top box. With others, you might need to look carefully at the set top box for what looks like a round or square area underneath the plastic front panel. There is double sided tape on the back of the IR transmitter to hold it in place over the remote sensor in your set top box.

You will configure the IR Blaster for your set top box in the section entitled **Configuring the IR Blaster**.

The IR Blaster lets the HD PVR change the channel on a satellite or cable TV set top box by transmitting 'channel change' commands to the box via an Infra Red (IR) transmitter. The IR Blaster consists of two components:

1. **IR Blaster cable.** This cable has an IR cable jack and an IR transmitter. The IR cable jack plugs into the back of the HD PVR, and the IR transmitter needs to be positioned over the IR receiver on your set top box using the self stick tape supplied on the front of the transmitter.
2. **IR Blaster Config program** (BlasterCfg.EXE) for configuring the codes for the IR transmitter.

During the installation of the HD PVR software from the Installation CD-ROM, the Hauppauge IR Blaster applications will be automatically installed. You will be asked during the IR software installation to acknowledge a software license.

Configuring the IR Blaster

The **IR Blaster Configuration program** can be found in the **Program Groups / Hauppauge WinTV**. Run **BlasterCfg.EXE**

Select the **Device** (cable or satellite), then **Vendor/Model** of your cable TV or satellite set top box.

The **CodeSet** will contain a list of codes which IR Blaster knows about the selected Vendor. There might be as many as ten codes for the Vendor chosen.

To determine the correct CodeSet for your set top box:

- On Blaster Config, click the **Power On/Off** button. You should see the IR transmitter blink after each click of the Power On/Off button.
- **If your set top box turns on or off, then this code is the correct one for your set top box.**
- If not, click **Test Next**. Continue to click **Test Next** until your set top box turns on or off, at which time you have found the correct code.
- Close the **Blaster Configuration** program to save the configuration.

If you cannot find a code which works with your set top box, HD PVR has a **Scan function** which allows it to scan for all known set top box remote control codes. To scan:

- First, make sure the **IR transmitter is positioned over the remote sensor** on your set top box. The IR transmitter has a very short transmission distance and needs to be positioned carefully over the remote sensor on your set top box.
- Next, click the **Test All** button. This button will go through all of the codes in our database of set top boxes (over 200 devices at present). After clicking Test All, watch your set top box. If it goes on or off, immediately click **Stop Test**. You have found the correct code for your set top box.

If your set top box does not turn on or off even after going through all the codes, then either the IR transmitter is not positioned correctly or your set top box is not in our database (see **Learning a new set top box**).

Once you have determined the Code, click **Next** to go to the IR Channel Test menu. You can click the **Send** button to send a number sequence to your set top box. If your set top box is on, you should see 1 2 3 appear on the channel indicator of your set top box.

Learning a new set top box remote control code

If you have a set top box that is not part of the Hauppauge IR Blaster preset codes and the Scan function does not work, you can add a new set top box by using the Learn function.

To access the learn



For best results, the remote control can touch the HD PVR plastic case at a 45 degree angle

function, click on **Advanced config**, and then click **Learn**.

To learn the new keys:

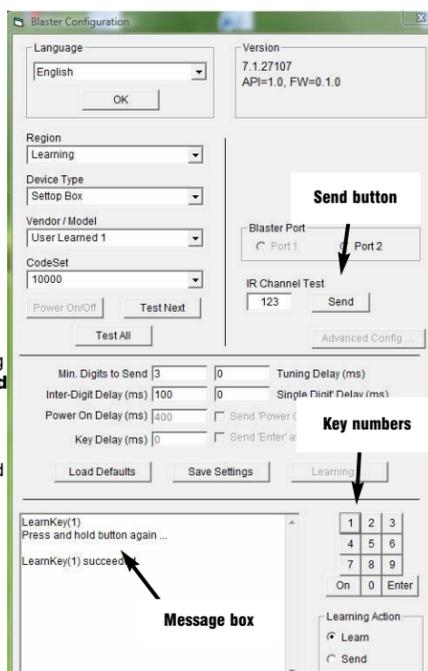
- **hold the remote control from your set top box as close to the IR receiver and learn sensor as possible. It can touch the HD PVR plastic case. a 45 degree angle, as seen above is helpful**
- in the **Blaster Configuration program**, click the button you would like to learn (for example: 1)
- then **depress and hold** the corresponding key on **your set top box remote control**. You will be instructed in the message box when to release the key on your remote control.
- Do this for the keys **0 to 9 plus On and Enter**

You should receive a **LearnKey(key#) Succeeded** message. Then move on to the next key.

If you receive a **LearnKey(key#) Failed** error, this means that the key was either held down too long, or not long enough, or that the remote was not held close enough to the IR sensor. Try again.

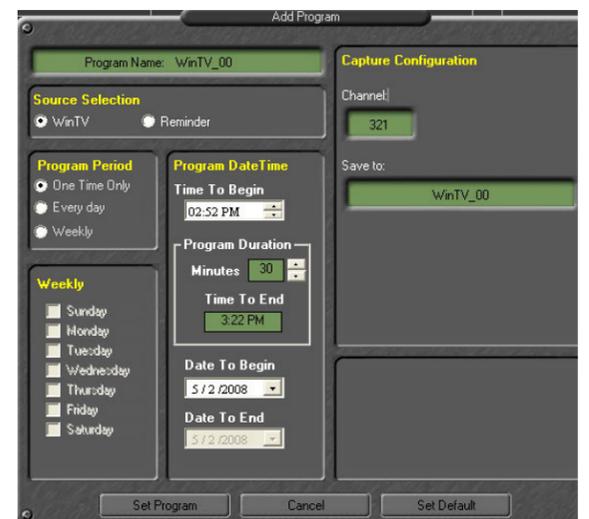
Once you are finished with the numbers 0 to 9 and On and Enter, you can test the learning by clicking the **Send** button in the Blaster Configuration program. It will send the numbers 123 to your set top box. Your set top box should now be on channel 123.

Close the Blaster Configuration program to save the configuration.



Using the WinTV Scheduler

The WinTV Scheduler can be used to control the channel changing of a set top box for cable or satellite.



NOTE: the IR blaster must be configured in advance for the Scheduler to change channels on your set top box.

To schedule a recording, click on the **HD PVR Scheduler icon** on the desktop.

Click on the **Add program** button to begin.

Use your mouse to highlight the **Channel box** and type in the **Channel number** you wish to record. In the **Save to** box type in the **name of the program** (or use the default).

Then select the **date** and **time** to begin and the duration. When finished, click **Set Program**.

You will see a list of your entries. If you need to make changes to the scheduled program, highlight the program and click the Edit button. You will see your scheduled program in the Add Program menu. After making changes, close the scheduler by clicking Set Program.

At the scheduled date and time, the HD PVR will send a command through the IR Blaster to your set top box, telling the box to change to the selected channel. Then, a few seconds later, the HD PVR will start to record video for the scheduled duration.