WinTV

Installation and Reference Manual

Web site:
http://www.hauppauge.com

FCC Statement

Radio Interference Statement:

The WinTV boards 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: H90WINCAST   M A D E   I N   U S A

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance to the FCC Rules could void the user's authority to operate the equipment.

CE Statement:

This equipment has been tested and complies with EN 55013, EN 55020 and IEC 801-3 part 3 standards.

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10/1/05

Introduction

This manual is covers all of the **WinTV** models based on the "PCI Push" technology for displaying TV on your PC's VGA screen. It covers, but is not limited to, the following models:

WinTV-Go

WinTV-Express

WinTV-dbx

WinTV-radio

WinTV-pci

WinTV-primio

WinTV-Theater

References to the **WinTV** apply to all models. The Windows driver for all of the WinTV boards will be referred to as the **WinTV driver**, and the installation CD-ROM will be referred to as the **WinTV Installation CD-ROM.**

For models which have particular features (such as the chapter on the Radio application), we will note which models these features are available on.

For a description of how the WinTV boards display video on your VGA screen, see the chapter entitled **How WinTV Works.**

Installing the WinTV boards

The **WinTV** boards are Plug-and-Play devices designed for WindowsXP. Plug-and-Play simplifies the installation and hardware setup of WinTV by having hardware settings assigned by Windows, instead of needing to set jumpers. This chapter describes how to install these boards and how the automated Plug-and-Play installation procedure works .

Installation overview

To install **WinTV** under WindowsXP, you will follow these steps:

✓   Install the **WinTV board** in your PC

✓   After booting Windows, you will install **WinTV's** Windows device driver from the **WinTV Installation CD-ROM**

✓   After the Windows driver is installed, you will then install the WinTV application software from the **WinTV Installation CD-ROM**

✓   Finally, if necessary, an updated Windows Direct Draw Driver can be installed from the **WinTV Installation CD-ROM**

WinTV board diagram

The following diagram shows the main functions and connectors of the **WinTV** board. Since there are several different models with different features and functions, your board may not have all of the components installed.

Board connections

FM:	FM radio antenna connection (some models)
TV:	TV antenna or cable TV connection
Audio LineOut:	Audio output 1/8" minijack (connects to sound card LineIn jack)
Video In:	VideoInput jack (S-Video on some models)
Audio Line In:	Audio input 1/8' minijack J2, left/right channel
Remote Control:	Minijack J3 (optional on some models)

CD audio passthrough

*FM

TV

Cable-Ready
TV Tuner

stereo
decoder*

Audio LineOut J5

* Video In J6

Audio LineIn J7

*Remote J3

PCI bus
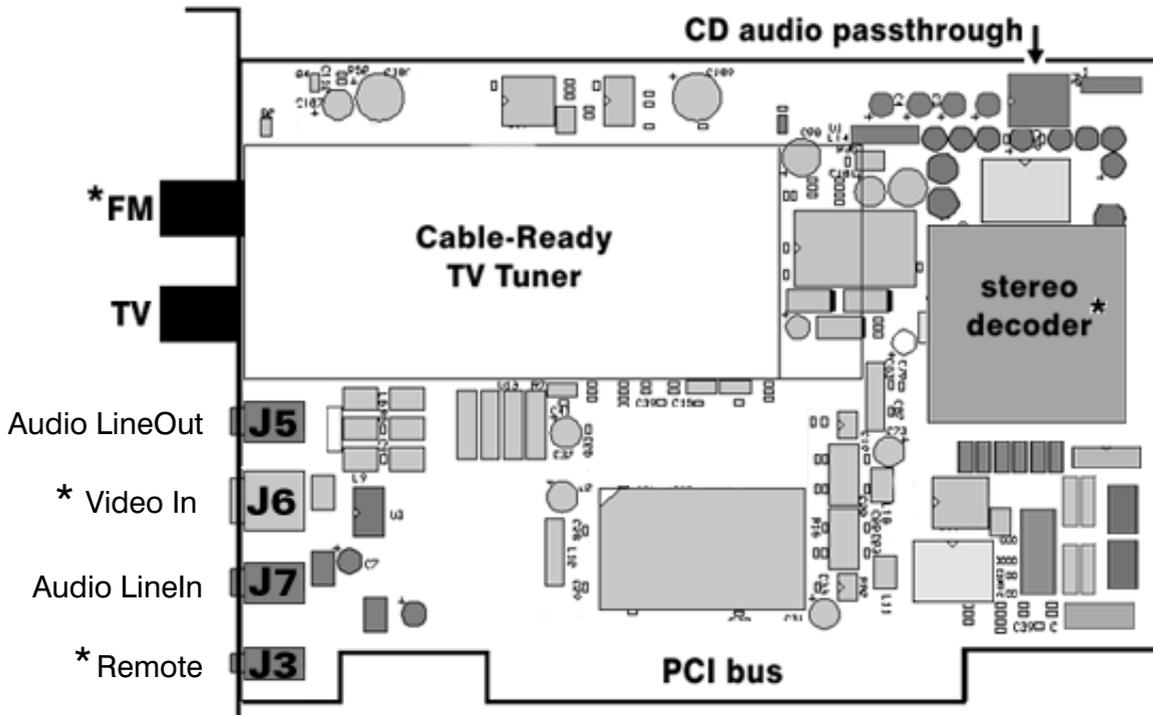
*Note: not available on all models.
Note: this outline may not reflect the current revision of your WinTV board. For the most up to date information, see the WinTV QuickInstall Guide provided with your WinTV board.

Installing the WinTV board in your PC

Before installing the **WinTV** board, turn off the power to your PC and remove the cover. Since the **WinTV** board is sensitive to static electricity, we recommend that before you remove it from its protective anti-static bag, you touch the chassis with your hand to discharge any static electricity.
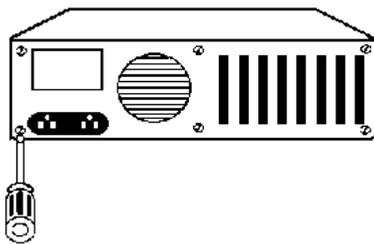
Once the cover is removed, plug the **WinTV** board into any free PCI slot.

Now connect the **Audio Cable** between the **WinTV** board and your PC's sound card. Plug one end of the audio cable into the **Audio LineOut jack** of the **WinTV**. The other end (a 1/8" audio jack) then

plugs into the **LineIn jack** of your sound card.

Note: *Most sound cards have three round jacks on the outside of the PC. They are: Microphone Input, Audio Output and Line Input. The Audio Output would go to your speakers, while the Microphone input might go to a microphone (if you are using one). The LineIn jack is normally a blue connector, and is indicated on the sound card by the words IN or LineIn stamped into the metal bracket on the outside of your PC. This is where you would plug your WinTV Audio cable.*

Installing the WinTV driver under WindowsXP

When the **Found New Hardware Wizard** appears, insert the **WinTV Installation CD-ROM** in your PC's CD-ROM drive and make sure **Install the software automatically (Recommended)** is checked.

Then click *NEXT*.

If the **Hardware Installation** dialog box opens, click *Continue Anyway*.

Click *Finish*.

After the video driver is installed, the **Found New Hardware Wizard** will detect the WinTV audio driver.

Click *Next*, then *Continue anyway* and then *Finish* to complete the audio driver installation.
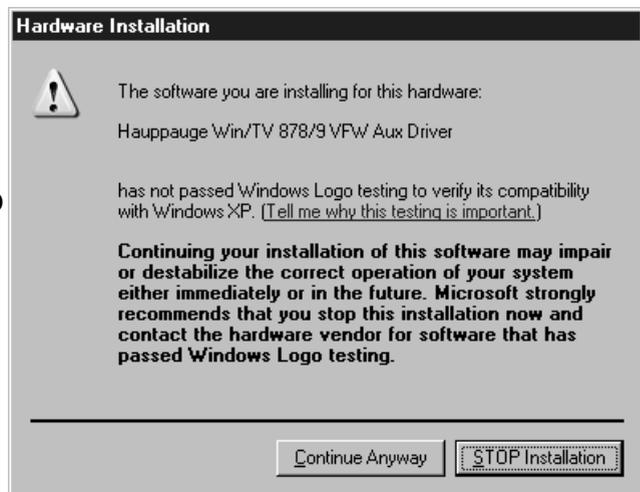
Primary Surface

It is sometimes useful to force WinTV to use a mode of operation of your VGA card known as **Primary Surface mode**. This can be helpful in eliminating VGA compatibility problems.

To force WinTV to use **Primary Surface mode**, run the program **"PRI-MARY"**, which is installed with the WinTV application. Click *Start*/ *Programs* and then *WinTV*. Double click on *Primary.EXE*. Click on *Force*

Primary then close the program by clicking on the *X*.

The Primary program simply makes a setting in the Windows Registry that tells the WinTV application to always use the Primary mode of operation. This can be changed at any time to "Allow Overlay" by re-running Primary and clicking *Allow Overlay*.

Note: *When using Primary Surface mode, you will not be able to view live Closed Caption data overlaid on your TV Window.*

Connecting the WinTV board to a VCR, Video Camera or Camcorder

Most VCR's or camcorders have a female RCA jack labeled "Video Out". Most also have a jack labeled "Audio Out". Most video cameras simply have one output connection labeled "Video Out".

To connect the video to the WinTV board, use shielded video cables (not supplied) with male RCA connectors on both ends:

- connect from the **"Video Out" jack** on your video camera, VCR or camcorder to the **Composite Video input jack** on the **WinTV** board.

  Note: Some WinTV models have a yellow RCA jack on the back panel bracket. Others have a high-quality S-Video input jack, which requires a supplied S-Video to Composite video adapter to connect to your camcorder.

To connect the audio from your VCR or camcorder to the WinTV, use a 1/8" stereo minijack extension cable (1/8" male minijacks on each end) and:

- connect the "Audio Output" 1/8" minijack on the VCR or camcorder to the **Audio LineIn jack** on the WinTV board.

  Note: Some camcorders use RCA connectors instead of 1/8" mini-jacks to connect the audio. If so, you will need an female RCA to 1/8" minijack adapter. These adapters can be found at most Radio Shack stores.

Connecting the WinTV board to a Sound Card

The **WinTV** board's audio output should be connected to a sound card using the supplied **Audio Cable**:

- plug one end of the **Audio Cable** into the jack marked **LineOut** (**Audio Line Out jack**) on the back panel bracket of the **WinTV** board

- plug the other end of the **Audio Cable** into your soundcard's **LineIn** jack.

Note: *Most sound cards have three round jacks on the outside of the PC. They are: Microphone Input, Audio Output and Line Input. The Audio Output would go to your speakers, while the Microphone input might go to a microphone (if you are using one). The LineIn jack is normally a blue connector, and is indicated on the sound card by the words IN or LineIn stamped into the metal bracket on the outside of your PC. This is where you would plug your* **WinTV** *Audio Cable.*

Adjusting the Audio Volume

Once the audio cable is connected to your Sound Card, the WinTV application can change the audio volume coming from the **WinTV** board by adjusting the **LineInput** sound volume of the **VolumeControl** program in Windows.

The **VolumeControl** program is normally installed with Windows or by the sound card installation program, and allows the control of volume from the various sound sources. If you cannot hear sound when running the **WinTV** application, you might need to check the volume level of **LineInput** in **VolumeControl**.

The VolumeControl application is started by clicking either:

Programs/Accessories/Multimedia/VolumeControl

or

Start/Programs/Accessories/Entertainment/VolumeControl
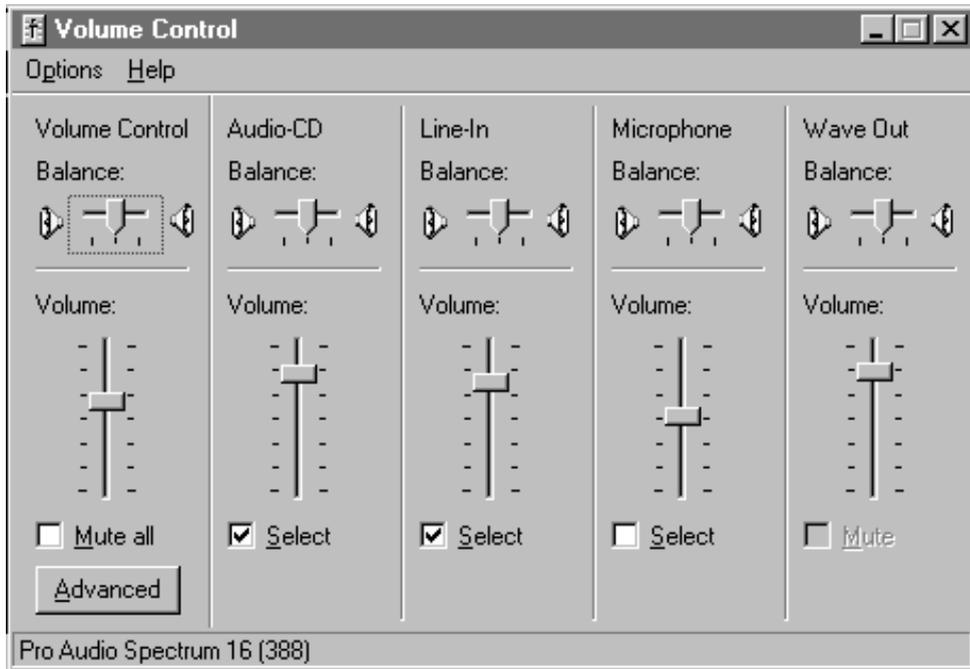
If LineIn is muted, unmute it to hear audio from the WinTV.

You should see Line-In balance as one of the selections. If not, then click on **Options/Properties** and under **Show the following volume controls** check **Line-In**. Then click **OK**.

You should now see a selection for **Line-In**. Make sure the **Select box** is checked, then raise the volume to about 1/2 of the way to the top. This should be a good starting point for the volume control.

In the WinTV application under the **Configure/Audio** menu, the Mixer ID should be set at **Line-In**.

As you adjust the audio volume in the WinTV application, you should see the slide bar in the VolumeControl window rise and fall.

Checking the WinTV Plug-and-Play Setup

After the WinTV board has been installed, you can find out what memory range and interrupt have been assigned by Windows Plug-and-Play by looking at the configuration in the **Control Panel**. Plug-and-Play will not let you change the Interrupt it has assigned, but you can, if necessary, change the Memory Address chosen by Windows.

Open up **Control Panel** by clicking on *Start*/*Settings*/*ControlPanel*. Now open up the **System properties** setup by double clicking on its icon, then click on the *Device Manager* folder:
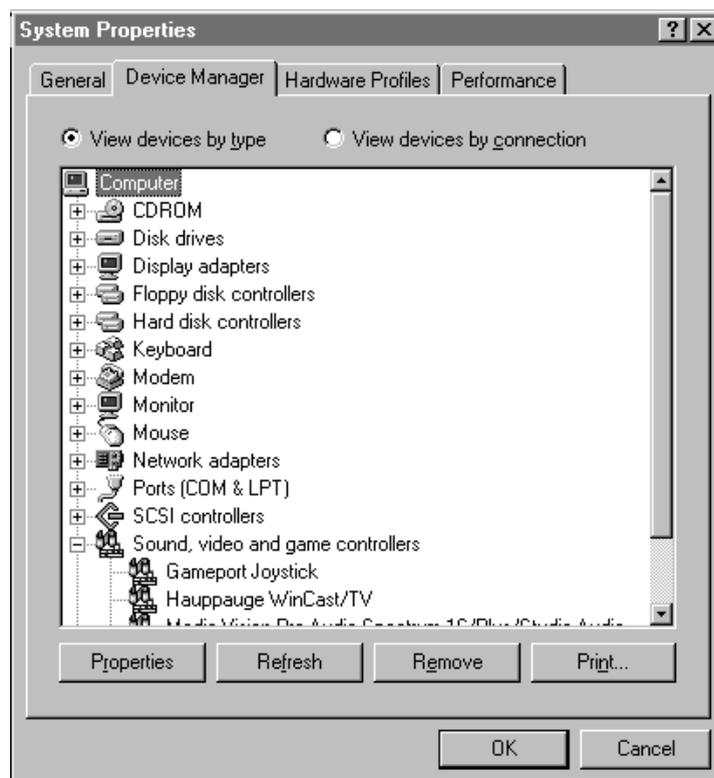
Then select **Sound, video and game controllers**, then click on **Hauppauge WinTV** and then **Properties**:
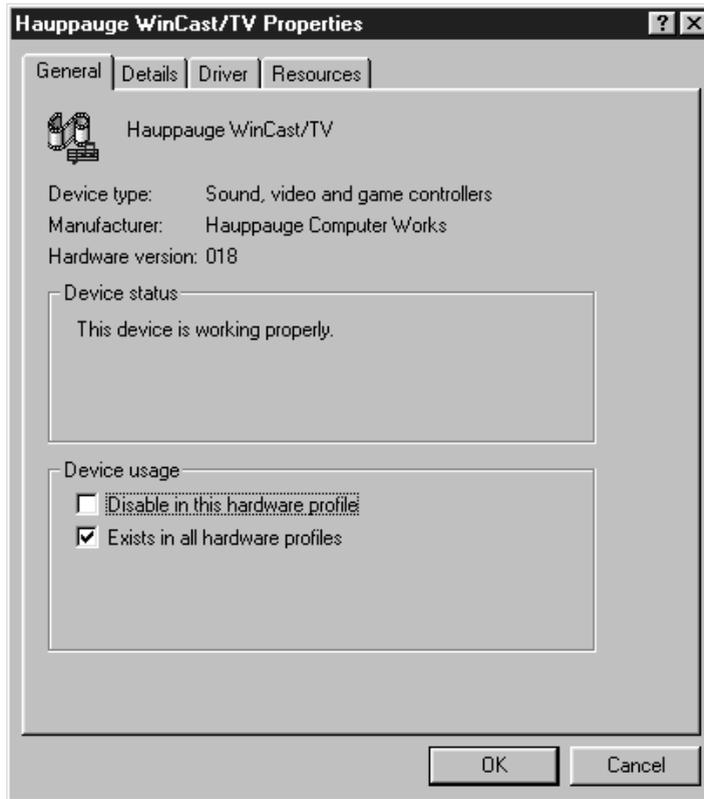
Click on **Resources** to see which resources Windows has assigned to the **WinTV**. Remember: the Interrupt setting cannot be changed (since it is assigned by Windows Plug-and-Play) but the Memory Address can.

To see which versions of drivers are being used, click on **Drivers**:

2-2
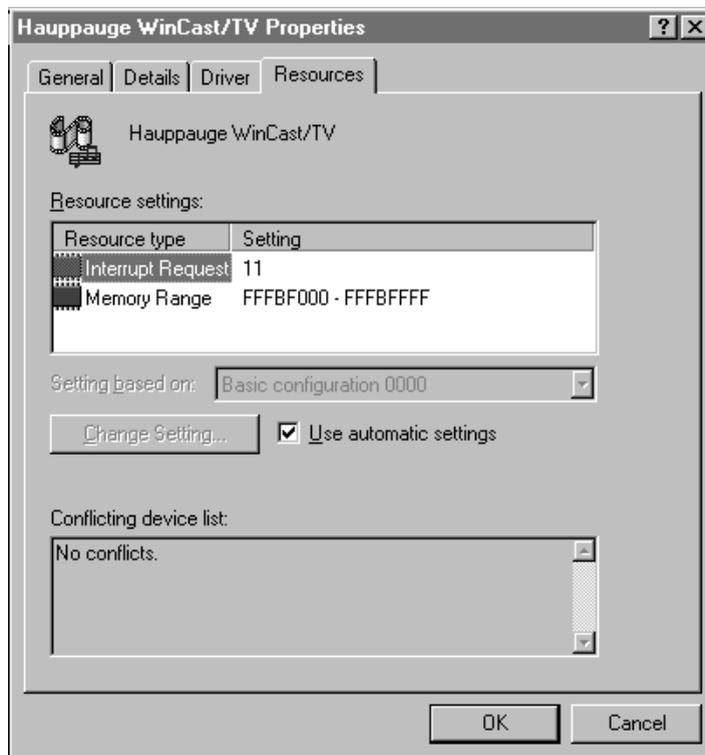
Click the **Details** tab to see the configuration of the **WinTV driver**
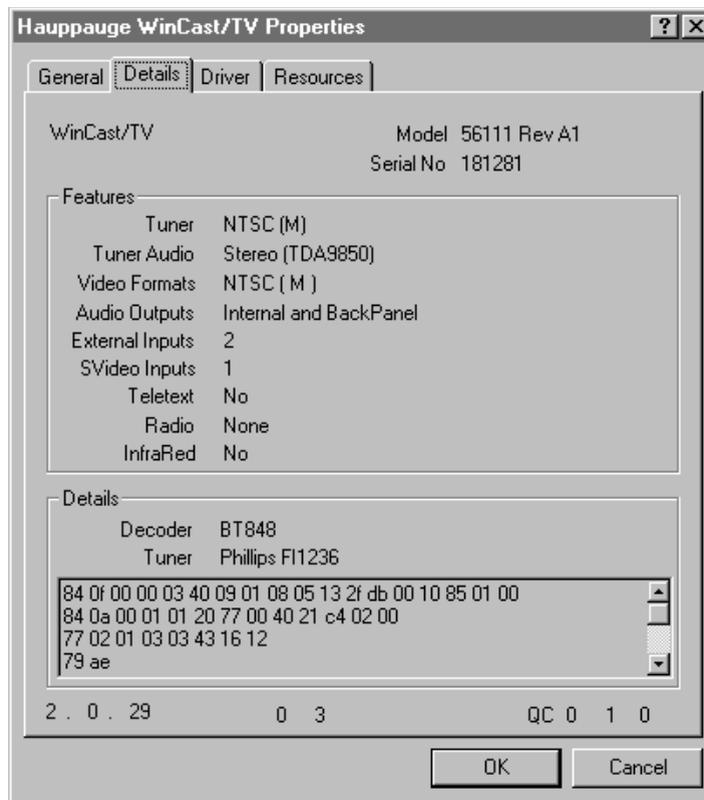
This window will show the type of TV tuner, the serial number and revision of your **WinTV** board.

The WinTV2000 Application

To run the WinTV2000 application for watching TV and for recording videos, double click the **WinTV2000 icon**.

Full screen TV

Always-on-top

Channel up

Video source select

Remove toolbars
"no toolbar" mode

Pref
Preferences menu

Channel down

Minimize

Close
WinTV

Menu
Setup Menu

Channel surf

Previous channel

CFG
Configure Snapshot

Remove toolbars
Click your right mouse button in the TV window to remove toolbars.

Click again to restore toolbars.

Freeze
video

Snapshot viewer window

Double click on each "thumbnail" to see image full size. **Click and hold your right mouse button** to see image options.

Snap
Snapshot Button

Current TV channel or video source

Click your **right mouse button** here to see the channel selector

One Touch Record

Record
open the record controls

21 Ant-21 Stereo cc

OTP OTR
TV PAUSE RECORD

RC ▶

RC: Software remote control

Scanning for channels

When running WinTV for the first time, you will need to scan for your TV channels. If you are using Cable TV, in the **Broadcast/Cable** box select *Cable (or Cable HRC)*. Otherwise select *Antenna*.

Choose the **Video Format** for your geographic region:

North America uses **NTSC M**
Europe uses **PAL B**/**G**
the U.K. uses **PAL I**
in South America, either **PAL M** or **PAL N** is used

Then click *Start* to start the channel scan.

Setting up the channels

After you have scanned for channels, you can add channel names and fine tune for better reception. To do this, click the *Menu* button on WinTV2000, then click *Suite Manager*. You can also **click and hold your right mouse button**, then click *SuiteManager*.

Click on the **desired channel**, then *Edit*. Change the **ChannelName** to the name of the station, change the description or fine tune. Then click *OK*.

New features on the WinTV2000 application

Selecting an External Video source (VCR, camcorder, etc.)

Click the *green Video source select* **button** to select **TV**, **Composite** and **S-Video** sources. The video sources will use the TV standard chosen when you scanned for your TV channels (NTSC or PAL).

Rescanning for channels

Click the *Menu* **button** and click on *Suite Manager* and then *Auto scan*. Make sure you select cable or antenna in **Broadcast** / **cable**. Choose the correct **Video format** for your region and then click *Scan*.

Displaying TV full screen

When you click the *Full screen TV button*, TV will appear full screen. When finished watching TV full screen, click your *right mouse button* in the TV window.

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**, the WinTV window can always be visible on your Windows desktop. To turn on Always-on-Top, simply click the *Always-on-top* **button**. It will turn green. To turn off Always on Top, 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 quick from a small window to a larger one simply by clicking the right mouse button.

Menu button

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

Suite Manager: configure the TV tuner (scanning, naming, fine tuning, etc.), setting up 'favorite channel lists' and set an external A/V source to a TV channel.

Configuration: duplicate configuration menus for color, audio, MPEG settings, etc.

View: for setting the TV window size

Pref button

Click the *Pref button* to open the **Preferences menu**. You will have tabs for:

View: these are the settings for the On Screen Display of the TV channel and Audio Volume, where you can enable Close Captions, 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 settings for SoftPVR. You can set the movie record directory (DVCR Record File Path), the MPEG Quality settings, and the Audio setings.

Snap Shot: set the size of captured images plus single or two field captures.

Audio: your audio settings are configured here.

Color: adjust the color of your TV picture here.

To hide the WinTV toolbar:

Simply 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 WinTV's video window. You can set the size of the window differently in each mode.

Recording MPEG video with SoftPVR™

Note: The following functions are not currently enabled with SoftPVR: the **OTP** and **Pause buttons**, plus the **Fast Forward** and **Rewind** functions.

Note: a Pentium III 800MHz minimum system is recommended for best SoftPVR operation.

To start recording, either click the _OTR (One Touch Record)_ or the red _Record_ **button** on WinTV2000. You can also start a recording by using **WinTV Scheduler**.

To stop recording, click _Stop_. To close the recording controls, click the _TV mode_ **button**.

If you click OTR more than once, a record timer will be set and the record timer will be set 15 minutes for each time the OTR button is clicked. For example, if you click the OTR button 3 times, the WinTV will record for 30 minutes.

The recorded video file is saved in the **DVCR Recorded File Path** directory. To set this directory, click the _PREF_ **button** (Preferences menu), then the _Movies tab_. In **DVCR Record Path** set the directory for your recordings.

Record Button: Clicking the _Record button_ will automatically generate a file name and start recording your audio/video program. Everytime you record a file, a new file is automatically created and the file name is displayed in the record window. The file name has the format **channel/date/time**. For example: **ANT_21_20050927_153807** where **ANT_21** is antenna channel 21, **20050927** is the date 09/27/2005 and **153807** is the 15th hour, 38th minute and 07 second.

While recording:

- **Live video** continues to play in the WinTV window

- **The Counter** will display the length of your recording in hours:minutes:seconds

- If you had started recording with the **OTR button**, and had clicked it more than once, the **total time for the recording will also be displayed**. You can also click OTR after a record has been started, and the record timer will be set.

Click the _Stop_ button to stop your recording. The recorded audio/video file is then saved to disk using the automatically assigned file name. The Time counter is reset to 00:00:00 after the recording is saved.

Play Button: Clicking the Play button will playback from disk the last video file created. With SoftPVR, you can only Play and Pause your videos.

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, Play a video file previously recorded, Delete recorded video files.

If you have problems with audio:

If you find that there is no audio while playing your video recordings, this is often due to the sound card not being setup to record audio from its 'Line-in' socket. To enable audio recording, open the **Recording Control** panel by clicking *Start* / *Run* and then **SNDVOL32** /**REC**. This will open the Recording Control panel. Make sure that '**Line-in**' is enabled (this is sometimes called 'Line' or 'Aux').

Installing the IR Remote

Note: the IR remote control is found only on some WinTV models.

Note: Before installing the **IR Remote for WinTV**, make sure that the WinTV application and radio application (only for the WinTV card with FM radio tuner) work properly when using your mouse or keyboard.

To install the WinTV IR Remote hardware:

- turn off your computer. Plug the sub-mini jack at the end of the **IR Receiver cable** into the **Remote control (IR) receiver socket** of the WinTV card.

- place the **IR Receiver** on your desktop so that the infrared light from the **IR Remote transmitter** can reach the IR Receiver.

- turn on your computer.

- If you have previously installed the WinTV applications, the IR software should automatically run every time you reboot your PC. You will see the **WinTV Remote icon** in the Device Tray. If not, look in the **IR32 directory** of the **WinTV Installation CD-ROM** version 2.2 or later. Run **IR32.EXE** from this directory. The install procedure will add a shortcut to IR.EXE to the Startup group, so that IR.EXE is loaded every time after Windows has booted.

Checking the function of WinTV's IR Remote

When your PC is booted, the WinTV's Remote software is automatically launched. You will see a **Remote icon** in the device tray. Point the **Remote transmitter** at the **IR Remote receiver**. When you click the TV button on the **Remote transmitter**, after 3-4 seconds the **Remote icon** should flash,

Go button

Application on/off

Power button

Go button

TV Videos Music Pictures

Guide

Radio

0 - 9 buttons

Audio mute

Menu button

Volume up/dn

Menu

Channel up/dn

Record

Play

Stop

Fast rewind

Fast forward

Play

Fast forward

Fast rewind

Skip back

Skip ahead

Stop

Record

Pause

Pause

Skip back

Skip ahead

0 - 9 "Quick Skip" buttons
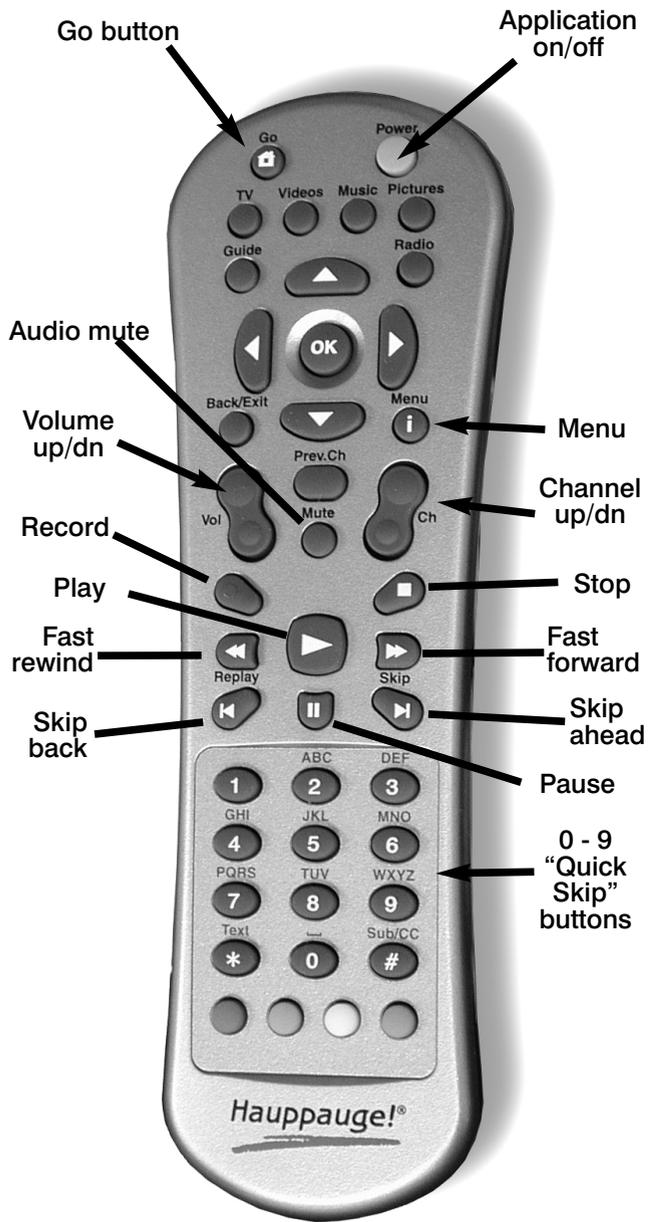
New style Hauppauge remote control
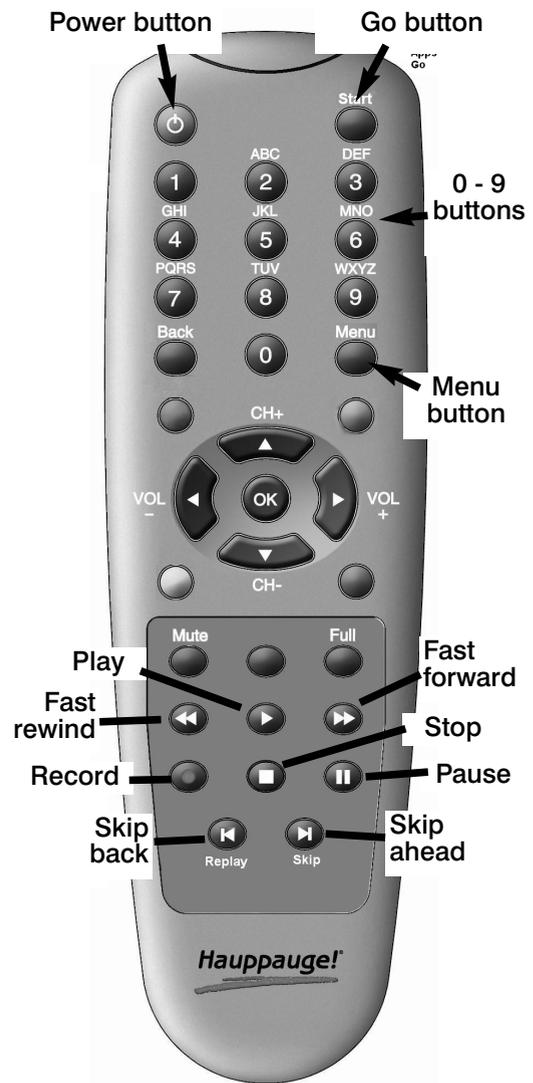
Old style Hauppauge remote control

indicating that the Remote application is running and then the WinTV application will be run.

WinTV remote control for SoftPVR™

Remote control buttons when watching live TV

0 - 9 buttons: channel numbers.

Full button: makes WinTV go full screen. Clicking the Full button again brings WinTV into a window.

Record button: opens the SoftPVR tray.

Remote control buttons when playing video recordings

Skip ahead button: skips ahead in the video 30 seconds per click. Holding the skip ahead button will autorepeat, and advances the video about 5 minutes per 10 seconds the button is depressed.

Skip back button: skips back 30 seconds per click. pressing and holding the Skip back button makes the video go back about 5 minutes for 10 seconds the button is depressed.

Go button: brings up the WinTV task list. Allows you to start WinTV2000, WinTV32 or WinTV-radio.

Menu button: brings up the Windows Task list. Use the left and right arrows to change to other Widnows tasks.

Green power button: will turn off the WinTV application

0 - 9 buttons: When playing back a recording, the "1" button will skip to 10%, the "2" button 20%, etc. of the length of the recording.

Teletext Data Reception using VTPlus (European WinTV boards)

Teletext is used in Europe and other parts of the world to transmit digital data along with a television picture. Teletext data is transmitted in an invisible part of the TV picture called the "Vertical Blanking Interval" or VBI.

Teletext data is normally formatted into pages. A master index is also transmitted which lists the various categories that can be received, and which Teletext page they are being transmitted on. Teletext data must be inserted into the VBI by your TV broadcaster, and can only be received on the Win/TV boards if the Hauppauge Teletext decoder is installed.

An example of a Teletext page follows. Each Teletext page has a page number, a date and the current time in the right hand corner:

VTPlus for Win/TV is a sophisticated Teletext software application which runs exclusively on the Hauppauge Win/TV card. VTPlus allows you to view multiple Teletext pages, save or print Teletext pages and create Dynamic Data Links so that Teletext data can be used in other Windows applications. The Win/TV application does not have to be active while

the VTPlus Teletext application is running.

Installation of the VTPlus software

If the VTPlus application is provided on CD-ROM, then it will automatically be installed from the **WinTV Installation CD-ROM.**

If it is provided on diskette, click on the **Start** button, then **Run** and then type: A:\VTSETUP.EXE The program will install in the default directory c:\VTPLUS. The installation creates a group headed **VTPlus for Win/TV** and three icons will be created. The main icons are:

VTPlus program: VTPlus On line help:

VTPlus window

VTPlus toolbar

Select TV channel

TOP text select

Center Teletext page

Set Time/Date

VTPlus for

Page   Edit   Window   Show   Toptext   Options   Help

get ex

Teletext   440 D

Current Teletext service

Current page number

Reveal invisible text

Next Subpage

Previous Subpage
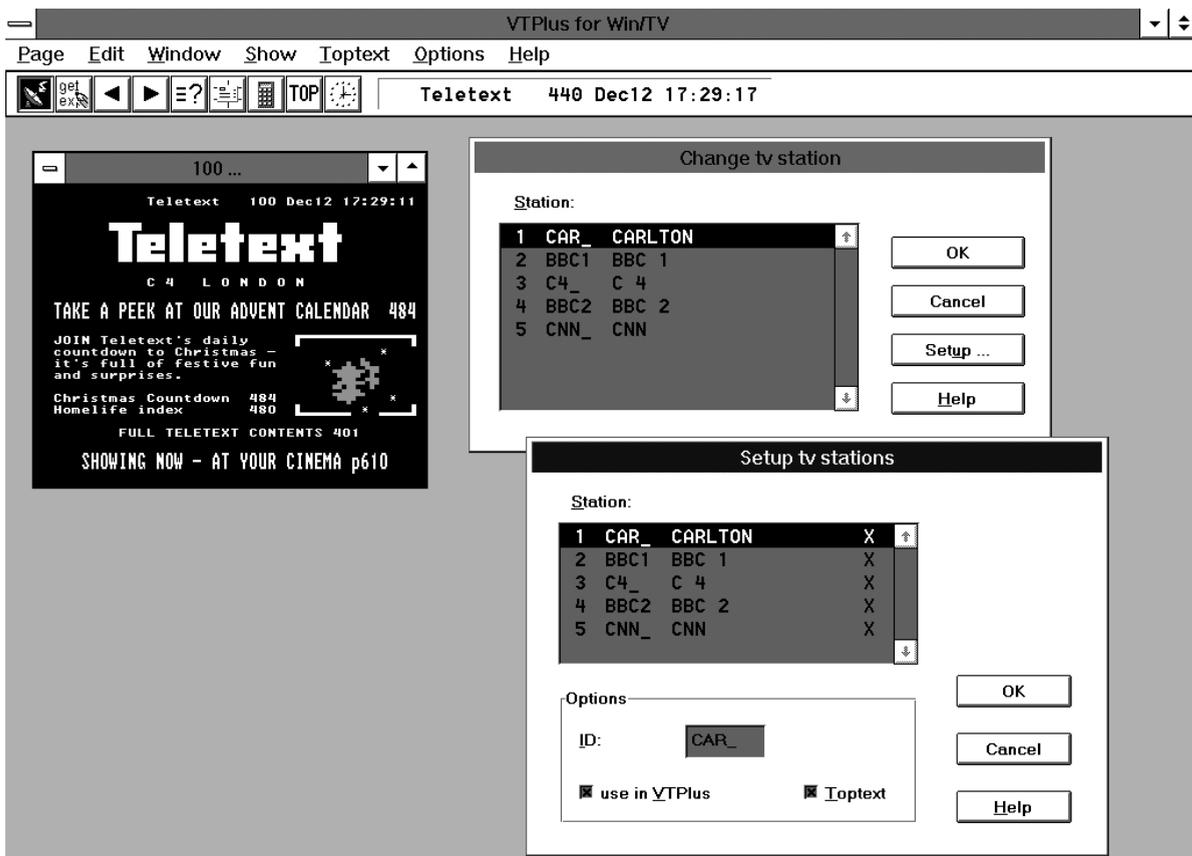
Script

Reception indicator
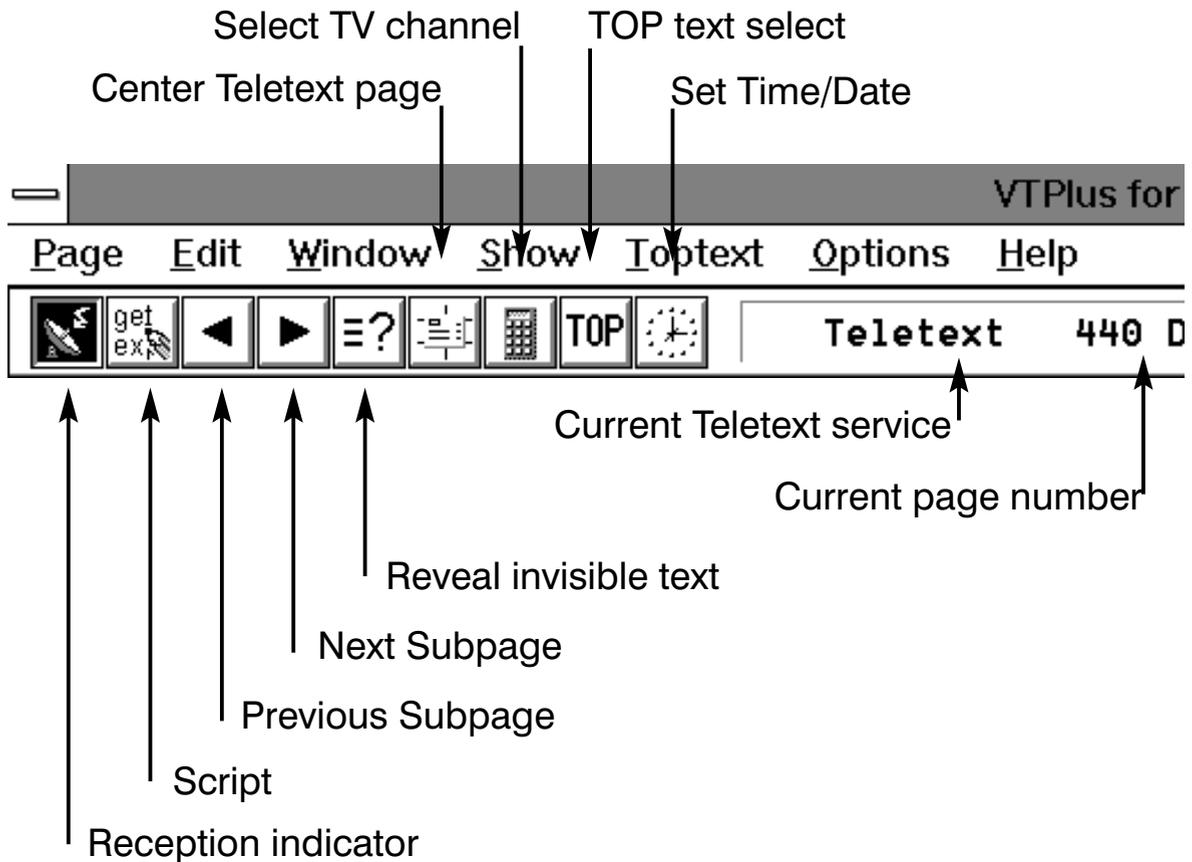
1. **Reception indicator:** when this symbol is red, your requested page is being received.

2. **Script:** shortcut for **Options/Script**. See **Help** for information on programming the Script.

3. **Select previous Subpage:** indicates, when dark, that there are subpages before the current subpage. When a light grey, there are no subpages before the current page.

4. **Select next Subpage:** indicates, when dark, that there are subpages after the current subpage. When light grey, there are no subpages after the current page. For example, if the current page is 100 and there are no subpages in page 100, the **Select next Subpage** icon will be light grey.

5. **Reveal button:** shortcut for **Show/HiddenCharacters**. When you use this button you might see hidden text, such as VPS time codes or answers from a Quiz.

6. **Arrange in Center:** shortcut for **Window/ArrangeInCenter**. When you click on this button, the actual page will be positioned full size in the center of the Window. The centralized page will return to its original position as something else is activated.

7. **Channel Selection:** shortcut for **Options/Change TV Station**.

8. **Toptext window:** shortcut for **Toptext/ToptextWindowVisible**. When you click the TOP button, the Toptext window will appear. Toptext is also being received with invisible Windows. Toptext is a protocol being used in Germany by TV stations like ZDF/ARD to help the user get a clear, fast overview of the available information being transmitted and to give the user fast access to this transmitted information.

9. **Set System Clock:** shortcut for **Options/SetSystemClock**. Click on this button with your mouse and the received Time from the Teletext channel will be used by the System clock of your PC.

Setting up VTPlus TV channels

By double clicking on the **VTPlus for Win/TV** icon, the VTPlus Teletext application will be launched. The channels that have been previously tuned in by the Win/TV application now have to be selected for VTPlus. To do this, select **Options/ChangeTVstatio**n:
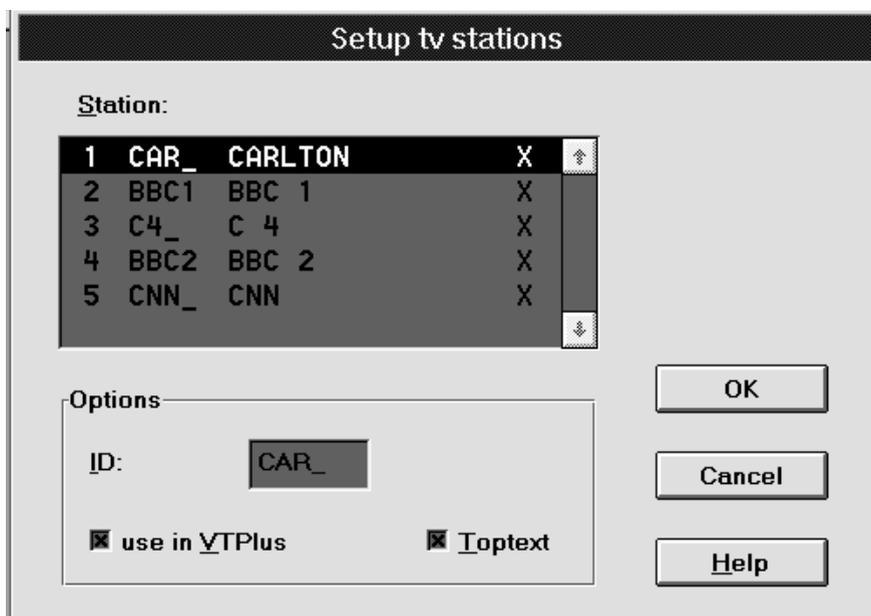
A menu will pop up called **Setup TV stations**. Now select all the sta-

tions required and click **use in VTPlus** box for each station desired. Up to three letters can be used as the channel ID, to allow you to identify which channel you are viewing.

Quickselect Teletext pages

By using the **Ctrl+N** key a Create and Receive page pops up requesting a page number. Type the requested page number. If this page is to be received continuously (every time the page is received, the page is automatically updated), click the **Update Continuously** box.

Many Teletext pages have a reference to other pages. For example, the TV guide section has a number of page referrals to movie background information which is being transmitted in other pages. Quickselect allows you to select these pages directly. Double click the left mouse button on the desired page number in the current Teletext page, and a new Window appears with the selected page.

If you do not want to open a new Window, but simply change to the new page, push the **Shift-Key** while double-clicking on the page number in the current Teletext page, and the new selected page will appear in the original window.

With Quickselect, several pages can be called at once. If a Teletext page refers to a page sequence such as "Share Prices: 500-505", mark the first page number with a single mouse click, click a page number and start the reception with a left Doubleclick on the end page. The distance between the selected pages may not be more than 11.

Example: "News from Page 300-303" are selected with by a single click on 300 and a Doubleclick on 303. The multiple page reception will open individual windows for each of the pages within the selected page numbers.

Dynamic Data Exchange with Teletext

DDE links can be created between the Teletext pages and any Windows program supporting DDE. Programs supporting a live DDE link from a Teletext page include the Microsoft EXCEL spreadsheet and Microsoft WORD.

To create a link, use your mouse to highlight the section of the Teletext

page of interest. For example, if the current Teletext page has financial data, highlight with the mouse the financial item of interest by click on the beginning of the field on the Teletext page, holding your mouse button down, and releasing the mouse button at the end of the field.
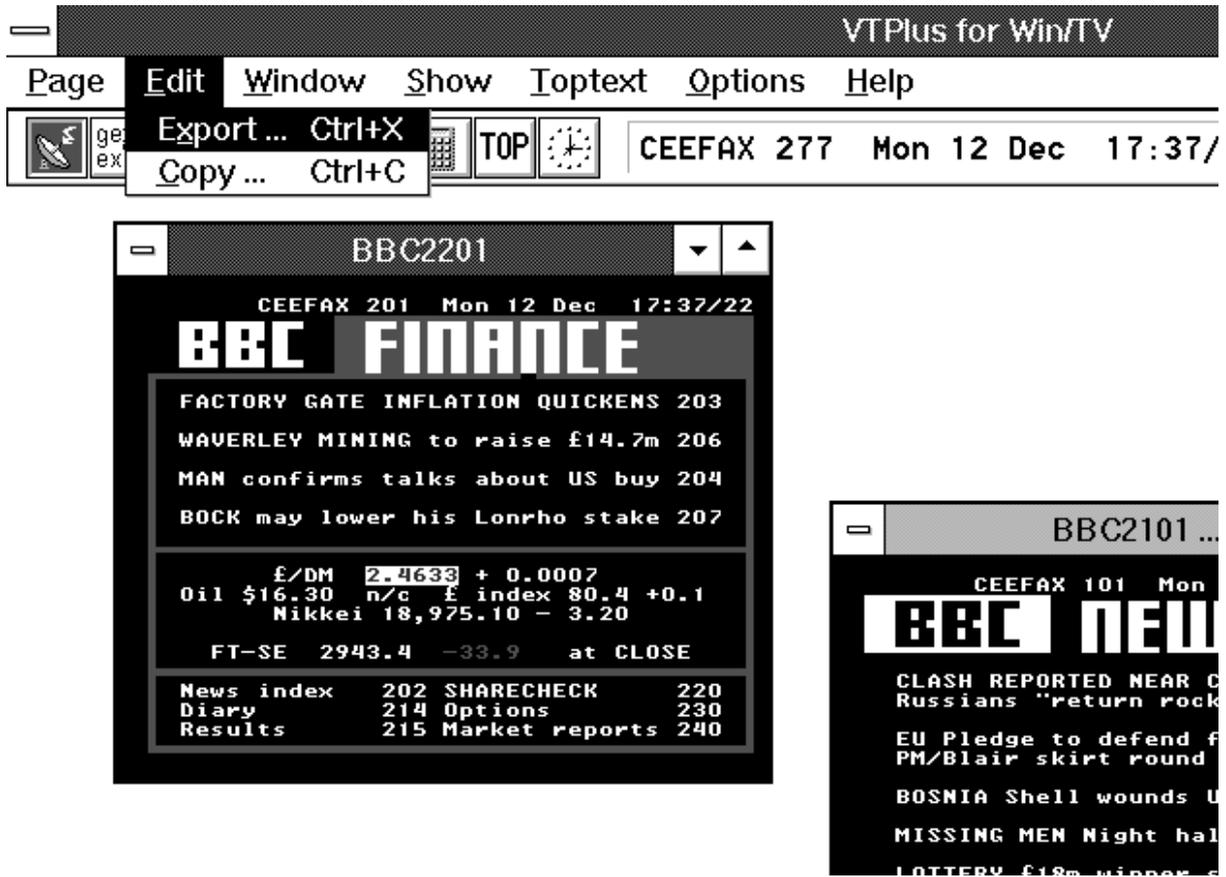
Then click on **Edit/Copy** option from the Edit menu and click the left button mouse. The information is now in the PC memory. To create a link to the DDE supported applications (such as your spreadsheet), select "edit past link" in your application. VTPlus will now create a direct link to your program.

When the data changes in the selected field on the Teletext page, VTPlus will deliver the data automatically to your DDE supported program. Updates through the DDE occur when all subpages are being received and at every update, when the option **Update Continuously** is marked.

Using the WinTV-radio Application

(on boards equipped with FM radio)

If you have purchased the WinTV-radio board, in addition to watching TV you can also tune in radio stations on the FM band.

The WinTV-radio board has two aerial inputs, one for TV and one for FM radio. If your TV antenna (or cable TV network) carries both TV and FM radio, you can connect to the TV antenna connector only:
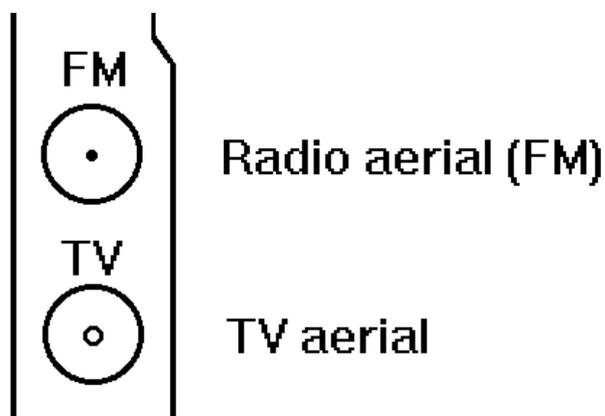
Running the WinTV-radio application

Click on **Start** / **Programs** / **WinTV** and then **Radio** to run the radio application.

The WinTV-radio window

Note: Radio cannot be hooked up to the cable TV source. It must use either a supplied FM antenna or a digital FM antenna.

Using the WinTV-radio Buttons

Volume: The audio volume is adjusted by setting the LineIn level in the Volume Control applet.

Tune: Fine tune the current radio channel.

Seek: Search for the next active FM radio channel.

Mem: Sets a FM radio channel preset. To assign the current station to a preset, click on **Mem** and then on one of the **Preset** buttons (**1-10**).

Mute: Turn off the sound.

Mono: Force mono reception.

Scan: Searches for new stations until you click on Stop. Click the RIGHT mouse button anywhere on the WinTV-radio window to set the Scan mode.

Min: Minimizes the WinTV-radio window.

CD: Starts the Audio CD-Player for playing back Audio-CD´s.

TV: Closes the radio application and starts the WinTV application.

OFF: Closes the radio application.

1 - 10: Preset 1 - 10

Programming the Presets

To assign a radio station to a special Preset button do the following:

1. Tune in the desired station with the **Seek** button (or by using **Tune**).

2. Click on the **Mem** button. It will change to red.

3. Click on one of the **Preset** buttons (**1-10**).

Using the right Mouse button

When you click the RIGHT mouse button in the WinTV-radio window, this menu comes up:

1. **Scan Mode: Presets** - When **Presets** is chosen and the **Scan** button is clicked, WinTV-radio tunes in only the stations which are assigned to the Preset buttons.

2. **Scan Mode: All** - When **All** is chosen and the **Scan** button is clicked, WinTV-radio tunes in all radio stations.

3. **Frequencies** - A list of all frequencies assigned to the preset buttons is shown.

4. **Tool Tips** - Turn on/off bubble help.

5. **Minimize** -   Minimizes the WinTV-radio application window.

How WinTV Works

How WinTV displays Video-in-a-Window

To display live video on your PC monitor, the **WinTV** boards use a technique called **PCI Push**. With this technique, the live video is digitized by the **WinTV** board and then moved over the PCI bus into the memory of your VGA display adapter. Here are the steps in getting live TV onto your VGA screen:

-   the **TV Tuner** is controlled by software to tune to a specified TV channel. It takes a modulated television broadcast signal and turns it into **demodulated video** and **audio** signals.

-   the **demodulated video** from the TV tuner goes into the **848, 871 or 881 Video Digitizer chip**, where it is converted into a digital form using YUV 4:2:2 sampling. This is a high quality sampling format which results in resolution equivalent to 24-bits of RGB per video pixel.

-   the **demodulated audio** goes into an on-board audio switcher. **WinTV**'s audio switcher can receive audio from the TV tuner or the **Audio Input Jacks (Left, Right)**. The output of this audio switcher goes to both the **Audio Out Jack** (**Line Out**) and the **CD-audio passthrough connector** for connection to a sound card.

-   the **Video Digitizer chip** is also a **PCI-bus Master** device. After the video pixels are digitized, it "pushes" them over the PCI bus into the memory of your PC's VGA display adapter. It does this without requiring your PC's processor to do any work, therefore live video can be displayed in a window on your VGA screen without slowing down your PC.

Video Overlay mode of operation

Live TV can be displayed on your VGA screen by using either the **Video Overlay** or the **Primary Surface** mode. The mode which is used is dependent upon your PC's hardware and software. If your VGA has enough display memory to hold the digitized video image, then WinTV's Video Digitizer "pushes" YUV 4:2:2 video pixels for temporary storage into an off-screen part of the VGA memory called a Secondary Surface. This method is called Video Overlay. The VGA display adapter will then convert the video image from YUV 4:2:2 into RGB video and continu-

ously overlay the VGA screen with the video image. Using Video Overlay, the VGA controller treats the live TV image just like any other window, which results in a 24-bit video image on your VGA screen. You will also be able to display full screen TV at all VGA resolutions.

Primary Surface mode of operation

If your VGA display adapter but does not have either a Video Port or enough memory to hold the video image off-screen, then the WinTV board converts the YUV 4:2:2 video pixels into an RGB format which is compatible with your VGA display adapter's operating mode (8 bits per pixel, 16 bits per pixel or 24-bits per pixel), and then moves the pixels directly into the display memory or Primary Surface of your VGA.

This results in a high quality video image whose color depth is dependent upon your VGA display adapter's operating mode. For example, your TV image when running in a 256 color mode will not be as good as when running your VGA in 16-bit per pixel mode.

Also, because the video is moved directly onto the Primary Surface, features such as close captioning and full-screen TV in resolutions greater than 640x480 will be disabled.

Troubleshooting

This chapter includes troubleshooting help for solving common problems.

Trouble shooting the WinTV driver

Error message: "No memory available" after running the WinTV application or "WinTV card not installed or drivers not loaded"

Sometimes, during the installation of the **WinTV driver** (see chapter 2 and the **New Hardware Found** menu) you do not answer all of the questions correctly and the **WinTV driver** does not get correctly installed.

In this case you might find the **WinTV** listed in? **Other Devices**. To delete this driver, highlight **PCI Multimedia Video device** and then click on **Remove**.

Then **browse** the **Hauppauge WinTV** installation **CD-Rom,** open the folder **Win98,** and run VFW95/98.exe file.
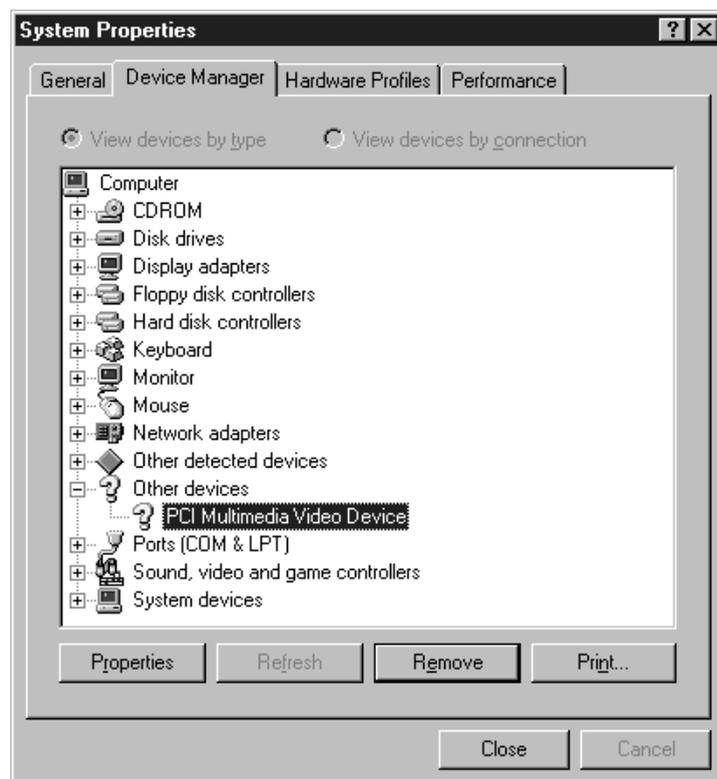
Problem: Poor TV picture quality

A poor TV image could be caused if your VGA display adapter does not have enough video RAM to hold the TV image. In this case, WinTV resorts to Primary Surface mode, which lowers image quality. A memory upgrade on your VGA display adapter might fix this problem.

Problem: TV picture displays a blue screen

The TV picture might display a blue screen under the following conditions:

Momentary loss of signal

A weak video signal

Channel changing

A scrambled channel

Note: *Changing channels may cause a temporary blue screen. To fix the problem, switch the channel up or down, then return to the original channel.*

The audio might continue to broadcast, even though the video picture displays a blue screen. This indicates a strong audio signal and a weak video signal.

A scrambled channel is not a valid channel.

Updating the WinTV driver

From time to time, there might be a new **WinTV driver** which is an improvement over the existing driver. Driver updates can be downloaded from the Hauppauge Internet Web site (see the front page of this manual for the URL).

The **WinTV update** is combined with the driver uninstaller and the driver installer. Once you have downloaded the updated WinTV driver, you can install the update simply by running the downloaded program. You will see the following message:

Click **Next**.

Click **Next**.

The **WinTV Update** program now uninstalls the existing WinTV driver, then copies a number of files to your hard disk:

After the WinTV Driver installation program has copied all of the files over to your disk drive, you will be asked to reboot:
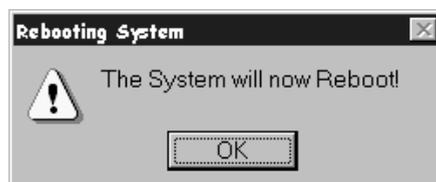
Click **OK** to reboot your PC.

8-2

After rebooting Windows, an automatic installation of the new **WinTV driver** takes place. You will see the **New hardware Found** message, followed by the **WinTV Inspection** program and the **WinTV Direct Draw Check** program.

After installing a new WinTV driver, it is advisable to install the latest WinTV applications, including the **WinTV32**, the **WinTV-radio** and **IR remote control** applications (if your WinTV board has these features).

Removing the WinTV driver with HCWCLEAR

On occasion, it might be necessary to remove all traces of the WinTV driver on your PC's hard disk. To do this, there is a program on the **WinTV Installation CD-ROM** called **HCWCLEAR**.

Before running HCWCLEAR, you must manually stop the **WINTV IR Remote Control** application. This can be done by double clicking on the **IR icon** in the Windows toolbar, and clicking on **Stop**.

The HCWCLEAR application can be found in the **MISC/UTILITY** directory:
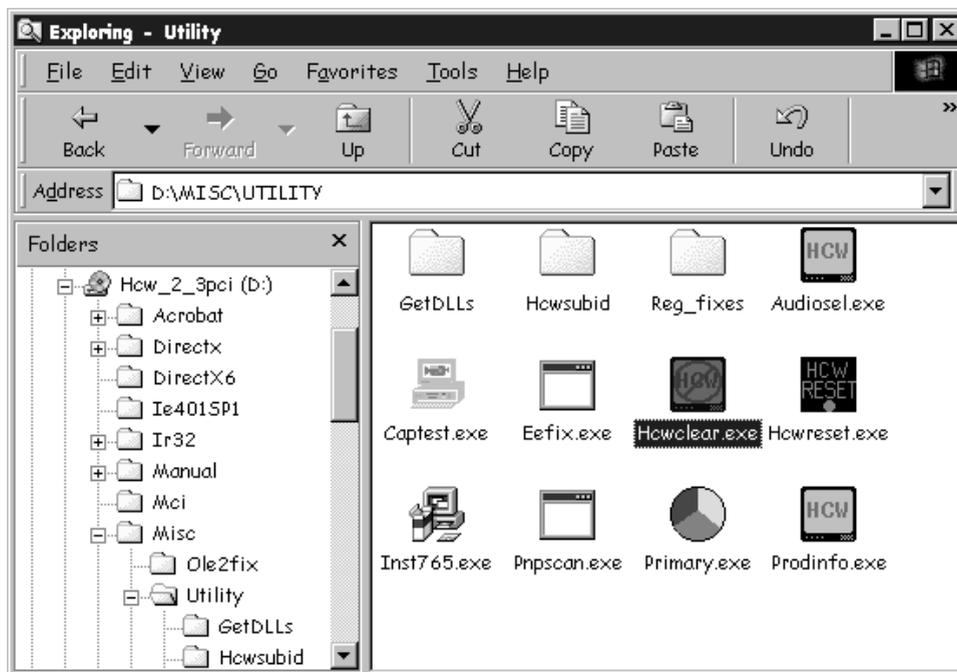
Once you have stopped the IR application, run HCWCLEAR by double clicking on its icon:
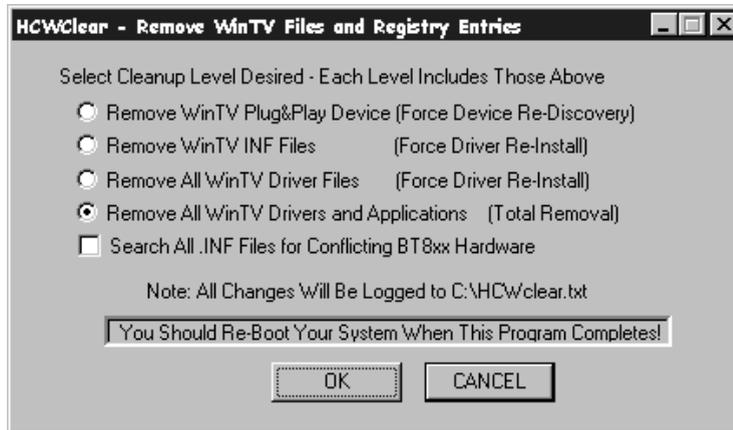
Click **OK**.

You will then see the following message:
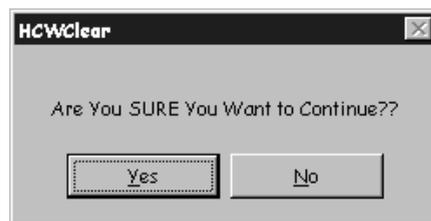
Click **Yes**.

If there are any errors which come up during the running of HCW-CLEAR, then it means that there is an application running which is using the WinTV drivers. For example, if you see the following error:
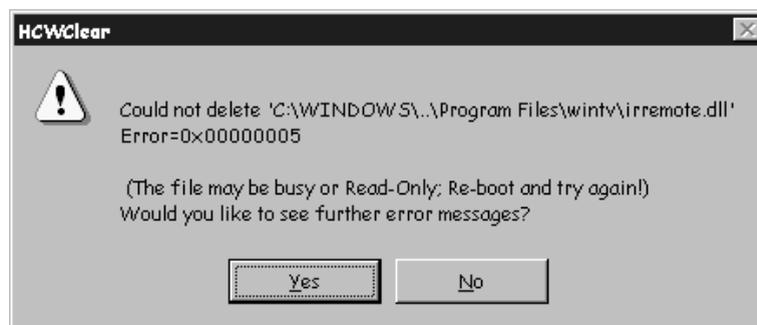
it means that one of the WinTV driver files in use (in this case it is the IR remote driver). You can either ignore the error, or can can double check to make sure there are no applications running in the system that might be using the WinTV driver. In general, to make sure the re-installation is done correctly, all applications using the WinTV driver should be stopped before HCWCLEAR is run.

Checking the WinTV Plug-and-Play Setup

After the WinTV board has been installed, you can find out what I/O port and interrupt has been assigned by Windows Plug-and-Play by looking at its configuration in the **Control Panel**. Windows Plug-and-Play will not let you change the Interrupt it has assigned, but you can, if necessary, change the **Memory Address** selected.

Open up **Control Panel** by clicking on *Start*/*Settings*/*ControlPanel*. Now open up the **System properties** setup by double clicking on its icon, then click on the *Device Manager* folder. Then click on *Sound, video and game controllers*:
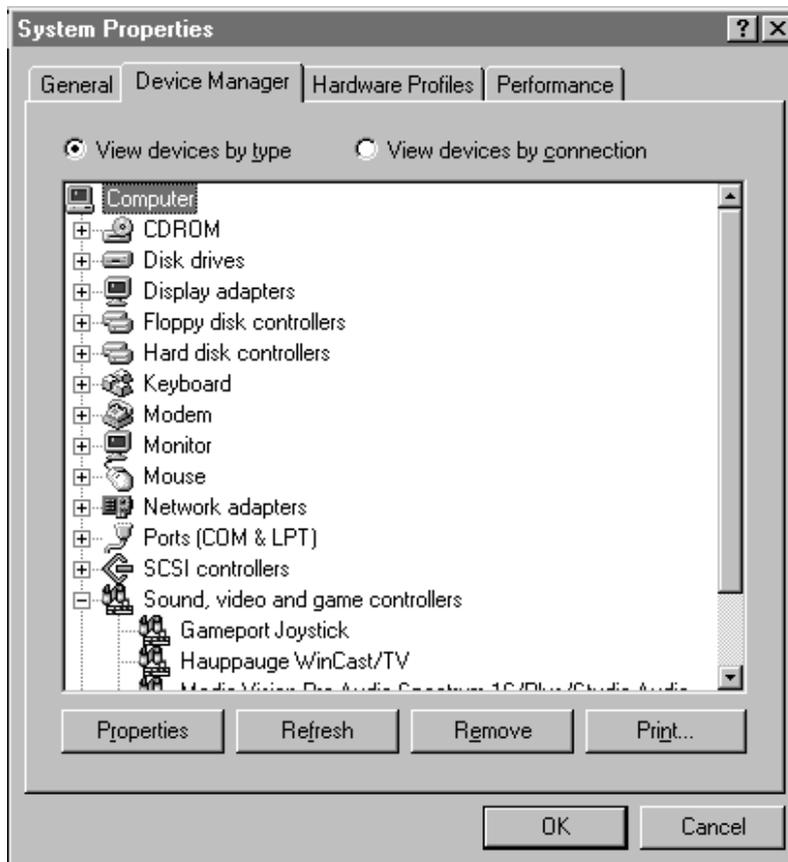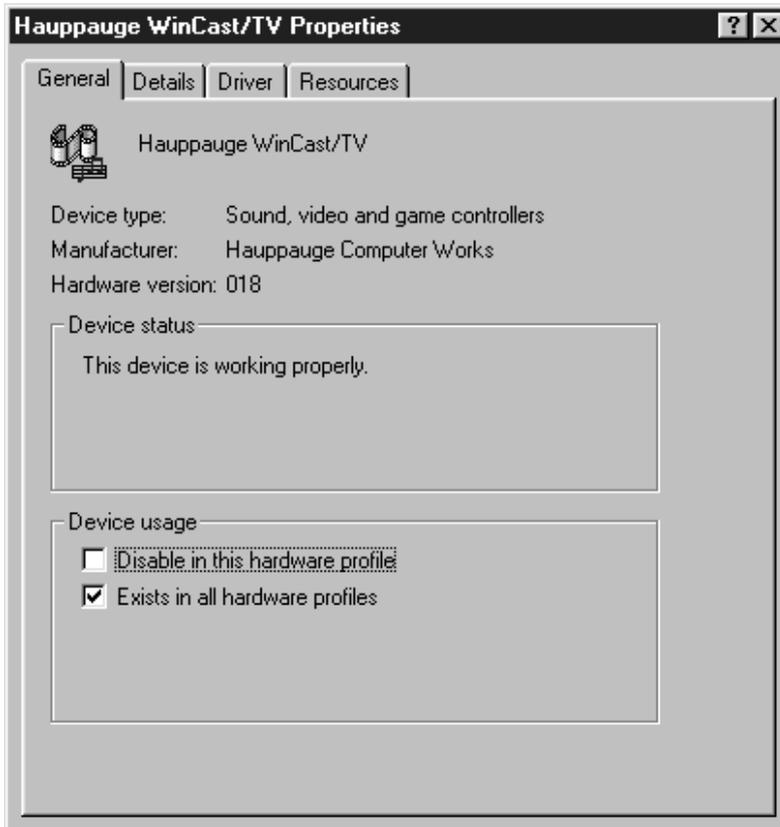
then click on *Hauppauge WinTV* and then *Properties*:

Click on **Resources** to see which resources Windows has assigned to the **WinTV**. Remember: the Interrupt setting cannot be changed (since it is assigned by Windows Plug-and-Play) but the **Memory Address** can be changed if there is a memory conflict between the WinTV and another board.

To see which versions of drivers are being used, click on **Drivers**:

You can also see the hardware configuration of the **WinTV** by clicking on the **Details** tab:

```
┌────────────────────────────────────────────────────────┐
│ Hauppauge WinCast/TV Properties                  [?][X] │
├────────────────────────────────────────────────────────┤
│  General │ Details │ Driver │ Resources │               │
│                                                          │
│   WinCast/TV                      Model  56111 Rev A1    │
│                                 Serial No  181281        │
│   ┌─ Features ─────────────────────────────────────────┐│
│   │        Tuner    NTSC (M)                            ││
│   │   Tuner Audio   Stereo (TDA9850)                    ││
│   │  Video Formats  NTSC ( M )                          ││
│   │  Audio Outputs  Internal and BackPanel              ││
│   │  External Inputs   2                                ││
│   │   SVideo Inputs   1                                 ││
│   │      Teletext   No                                  ││
│   │        Radio    None                                ││
│   │     InfraRed    No                                  ││
│   └─────────────────────────────────────────────────────┘│
│   ┌─ Details ──────────────────────────────────────────┐│
│   │      Decoder   BT848                                ││
│   │        Tuner   Phillips FI1236                      ││
│   │  ┌──────────────────────────────────────────────┐ ▲ ││
│   │  │84 0f 00 00 03 40 09 01 08 05 13 2f db 00 10 85 01 00│││
│   │  │84 0a 00 01 01 20 77 00 40 21 c4 02 00        │   ││
│   │  │77 02 01 03 03 43 16 12                       │   ││
│   │  │79 ae                                         │ ▼ ││
│   │  └──────────────────────────────────────────────┘   ││
│   └─────────────────────────────────────────────────────┘│
│   2 . 0 . 29          0  3            QC 0   1  0        │
│                              ┌─────────┐  ┌─────────┐    │
│                              │   OK    │  │ Cancel  │    │
│                              └─────────┘  └─────────┘    │
└────────────────────────────────────────────────────────┘
```

This window will show the type of TV tuner, the serial number and revision of your **WinTV** board and other information which can be used to help diagnose hardware problems.

Technical Support

Technical support telephone

If you have questions regarding installation or compatibility, please contact our technical support staff at:

(631) 434-3197
(631) 434-3198 Fax

Service

If you should need assistance with the installation, operation, or application of your Hauppauge WinTV board, there are several options available to you. Your primary source for information and problem assistance is always your dealer. Should the need arise, contact your dealer for on-site or repair service.

Hauppauge's Technical Support and Customer Service staff can aid in solving many problems. Our service department is available to repair any Hauppauge product. For completion of repair, the product must be returned to our factory.

If this **WinTV** board is not in working order, your only recourse is repair or replacement, as described above. UNDER NO CIRCUMSTANCES will Hauppauge be liable for consequential damages, including any lost savings, lost profits, or any other damages, caused by the use of the **WinTV** board or inability to use it, even if the dealer or Hauppauge has been advised of such liability or other claims.

Using DirectX setup to install an updated Direct Draw VGA Driver

To install an updated DirectDraw driver

An updated version of DirectX is installed automatically for Windows users. If you would like to re-install DirectX for your VGA card, or if you did not get a "Good News" message after the **WinTV DirectDraw Inspection** was run, follow this procedure.

DirectDraw drivers for your PC's VGA card is installed as part of the DirectX setup. DirectX is provided on the **WinTV Installation CD-ROM** in the DIRECTX directory.

To install DirectX, look in the DIRECTX directory on the **WinTV Installation CD-ROM** rand double click on DXSETUP. You will then see the following menu:

Click **OK**.

Installing Microsoft(R) DirectX(tm) 5

Searching for updated DirectX Runtime Components and updating as necessary. This may take a few minutes...
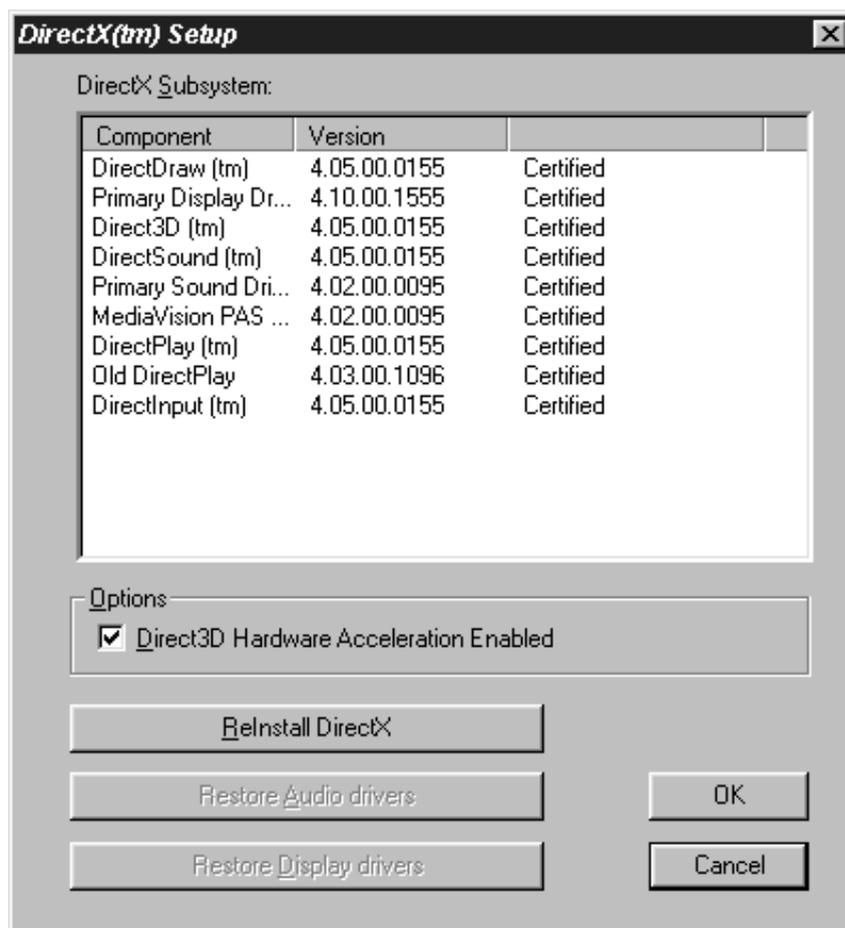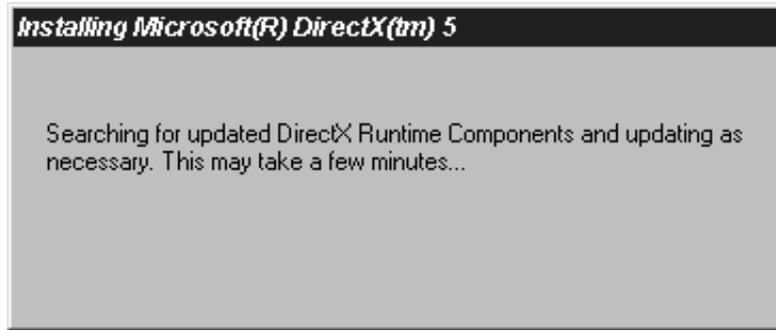
The DirectX setup will spend several minutes looking for drivers in your system which can be updated. As it finds drivers, you will see messages such as:

DirectX Setup

Display Driver Install
ATI Graphics Pro Turbo PCI (mach64) (inactive)

The existing driver for this device does not need to be upgraded.

Press OK to continue.

OK

Click on **OK**.

After DirectX has updated all drivers, it will ask you to restart your PC.   Do   so.

DirectX Setup

DirectX setup needs to restart your machine, press OK to restart now.

OK
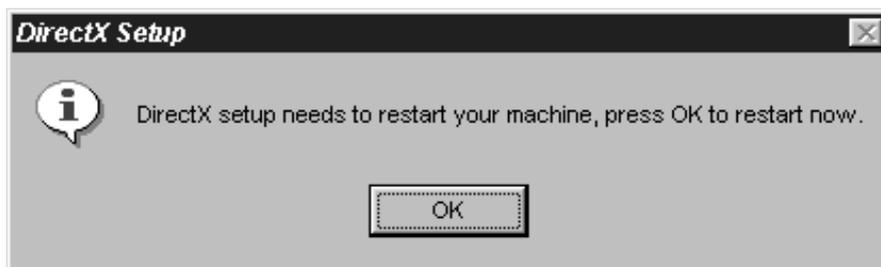
After rebooting, you can check to see if your VGA card driver has been updated by running the DDCHECK program. Click the Start button, then Run then type DDCHECK. Look for the "Good News" message.