

---

# HiPix™ DTV-200

## HDTV MultiMedia Control Card for your PC

---



### Users Manual

**TELEMANN**  
*Broadband Solutions*



Version 1.2 June, 2001

---

## TELEMANN HIPIX DTV-200™ SOFTWARE END-USER LICENSE

This is a legally relevant License (the "License") between Global Telemann Systems Inc, a USA company having its principal place of business in San Jose, USA (hereinafter "TELEMANN") and you, the end-user of TELEMANN HiPix DTV-200 software. This License applies to the copy of the proprietary software program delivered to you in the TELEMANN HiPix DTV-200 delivery package, on a separate media (e.g. diskette) or through electronic media (e.g. the Internet), including any updated versions thereto and the related explanatory material, whether in printed or electronic form (the "Documentation") (together the "TELEMANN HiPix DTV-200 Software").

IN RETURN FOR ACQUIRING A LICENSE TO USE THE TELEMANN HiPix DTV-200 SOFTWARE AND BY OPENING THE PACKAGE, INSTALLING THE TELEMANN HiPix DTV-200 SOFTWARE OR BY DOWNLOADING IT (AS APPROPRIATE) AND BY USING IT TELEMANN GRANTS TO YOU RESTRICTED RIGHTS UNDER THE TERMS AND CONDITIONS OF THIS LICENSE. TELEMANN WILL NOT BE BOUND BY ANY TERMS THAT ARE INCONSISTENT WITH THE TERMS HEREIN.

If you do not agree with the terms and conditions of this License, return the TELEMANN HiPix DTV-200 Software to Global Telemann Systems, Inc., 2345 Harris way, suit 100 San Jose, CA 95131 USA. TELEMANN Software is for the exclusive use of customers who use it in connection with TELEMANN HiPix DTV-200 only.

1. Grant of License. TELEMANN grants you a limited non-exclusive world-wide right to use one copy of the TELEMANN HiPix DTV-200 Software in connection with a single TELEMANN HiPix DTV-200 only

2. Limitations of Use. You may not use the TELEMANN HiPix DTV-200 Software for any other purpose than that specified in this License. You may not use, copy, modify, reverse-engineer, disassemble or decompile TELEMANN HiPix DTV-200 Software, except as expressly provided in this License or provided by the mandatory provisions of the applicable law. You may either (a) make one copy of the TELEMANN HiPix DTV-200 Software for the archival purposes, or (b) transfer the TELEMANN HiPix DTV-200 Software to a single storage media provided that you keep the original solely for archival purposes. All copyright notices must be included on the archival copy. You may transfer all your rights to the TELEMANN HiPix DTV-200 Software at the same time as you transfer the TELEMANN HiPix DTV-200 on a permanent basis, provided that you transfer all copies of the TELEMANN HiPix DTV-200 Software and the related Documentation, do not retain any copies by yourself, and the recipient agrees to the terms and conditions of this License.

3. Proprietary Rights and Obligations. The TELEMANN HiPix DTV-200 Software is proprietary to TELEMANN and it is protected by copyright laws and international treaty provisions. No proprietary notices may be removed from the TELEMANN HiPix DTV-200 Software, media or Documentation.

4. No Other Rights. TELEMANN retains title and ownership to the TELEMANN HiPix DTV-200 Software. Except for the limited right to use the TELEMANN HiPix DTV-200 Software, this License does not grant you any rights to intellectual property rights of TELEMANN or third parties.

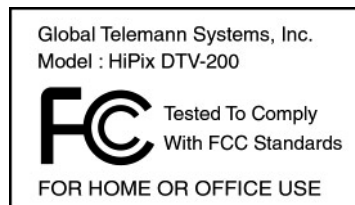
5. Term. TELEMANN may terminate this License if you fail to comply with its terms and conditions. Upon such termination you shall destroy the TELEMANN HiPix DTV-200 Software and any copy thereof as well as any related documentation.

6. Limited Warranty. TELEMANN warrants that TELEMANN HiPix DTV-200 Software function essentially according to the related Documentation for ninety (90) days from the date of the purchase. You must notify in writing your reseller or TELEMANN of any defect in TELEMANN HiPix DTV-200 Software within the above limited period. TELEMANN will, at its discretion, either (a) replace the defective TELEMANN HiPix DTV-200 Software; or (b) accept the return of the TELEMANN HiPix DTV-200 Software (and the related Documentation) for full refund of the purchase price.

THIS LIMITED WARRANTY IS YOUR EXCLUSIVE WARRANTY HEREUNDER. TO THE EXTENT POSSIBLE UNDER THE APPLICABLE LAWS, TELEMANN EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF PERFORMANCE, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE TELEMANN HIPIX DTV-200 SOFTWARE. THIS LIMITED WARRANTY IS VOID IF THE TELEMANN HIPIX DTV-200 SOFTWARE IS MODIFIED OR NOT USED ACCORDING TO THE DOCUMENTATION. IN NO EVENT SHALL TELEMANN BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFITS OR LOST SAVINGS, EVEN IF TELEMANN HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES, FOR ANY PARTY DUE TO THE USE OF THE TELEMANN HIPIX DTV-200 SOFTWARE AND THE RELATED DOCUMENTATION.

7. Export Control. You agree that you follow all export control regulations relating to TELEMANN HiPix DTV-200 Software.

8. Governing Law. The construction, interpretation and performance of this License shall be governed by the substantive laws of USA, excluding its choice of law provisions. If you have any questions concerning this License, please write to Global Telemann Systems Inc., 2345 Harris Way, Suite 100, San Jose, CA95131 USA.



**PRELIMINARY - SPECIFICATIONS SUBJECT TO CHANGE**

## Table of Contents

|                                                                                  |           |
|----------------------------------------------------------------------------------|-----------|
| <b>Introduction .....</b>                                                        | <b>1</b>  |
| About the HiPix DTV-200 .....                                                    | 1         |
| Input, Output, Recording and Playback Capabilities .....                         | 2         |
| <b>System Requirements .....</b>                                                 | <b>3</b>  |
| Optional Equipment .....                                                         | 3         |
| <b>What comes with the HiPix DTV-200 .....</b>                                   | <b>5</b>  |
| <b>Hardware Installation .....</b>                                               | <b>7</b>  |
| Internal Components .....                                                        | 7         |
| Installation of HiPix DTV-200 Card and Expansion Card .....                      | 7         |
| Connecting the HiPix DTV-200 to Sound Card (Optional) .....                      | 9         |
| External Components and Connections .....                                        | 9         |
| Connecting the Remote Control Receiver .....                                     | 11        |
| Antenna/Cable Connection .....                                                   | 11        |
| Connecting the HiPix DTV-200 to high resolution displays .....                   | 11        |
| Connections for Using 1 Monitor .....                                            | 11        |
| Connections for Using 2 Monitors .....                                           | 11        |
| Connections for Using 1 Monitor and 1 HD ready TV .....                          | 11        |
| Connecting Analog TVs and Other Devices to HiPix DTV-200 .....                   | 12        |
| <b>Software Installation .....</b>                                               | <b>14</b> |
| HiPix DTV-200 device driver installation - Windows 98 SE(Second Edition) .....   | 14        |
| HiPix DTV-200 device driver installation – Windows ME (Millennium Edition) ..... | 17        |
| HiPix DTV-200 device driver installation – Windows 2000 .....                    | 18        |
| Verification of successful device driver Installation (Windows 98 SE only) ..... | 23        |
| Device Driver Troubleshooting .....                                              | 23        |
| Installing the HiPix DTV-200 Application .....                                   | 28        |
| <b>Using the HiPix DTV-200 .....</b>                                             | <b>31</b> |
| Enabling the DMA function of the hard drive .....                                | 31        |
| Disabling System Standby .....                                                   | 32        |
| Setting up your HiPix DTV-200 .....                                              | 33        |
| General Configuration Setup .....                                                | 34        |
| General Tab .....                                                                | 34        |
| HDTV Setup .....                                                                 | 35        |
| Input Setup .....                                                                | 39        |
| Program .....                                                                    | 40        |
| Volume .....                                                                     | 40        |
| Viewing Digital Television Broadcasts .....                                      | 41        |
| <b>Control Panel Description and Functions .....</b>                             | <b>42</b> |
| Electronic Program Guide .....                                                   | 48        |
| To view a program listed in the EPG Window .....                                 | 49        |
| <b>Recording and Playback .....</b>                                              | <b>50</b> |
| Recording Digital Broadcasts .....                                               | 50        |
| How Recorded Program Files are Saved .....                                       | 53        |
| Playing Back Recorded Programs .....                                             | 54        |
| Scheduled Recording (Using EPG data) .....                                       | 56        |
| Deleting an event .....                                                          | 58        |
| Scheduled Event Recording (by setting channel, Day and Time to Record) .....     | 58        |
| MeerKat Application .....                                                        | 59        |
| Real-time Recording .....                                                        | 59        |
| Recording Error Messages .....                                                   | 59        |
| Remote Control .....                                                             | 61        |
| HotKey Control .....                                                             | 62        |
| <b>VIP Connection – Advanced PC Users Only .....</b>                             | <b>64</b> |
| Connecting the HiPix DTV-200 card to a VIP 1.1 Graphics Card .....               | 64        |
| Using Picture in Picture with HiPix DTV-200 .....                                | 64        |
| VGA Setup .....                                                                  | 65        |
| General Settings – Viewing Picture in Picture (PIP) .....                        | 65        |
| <b>Upgrading HiPix DTV-200 Software .....</b>                                    | <b>66</b> |

---

## Introduction

## Introduction

### About the HiPix DTV-200

The Telemann HiPix™ DTV-200 is the first of a new generation of PC add-in cards and application software that allows you to decode high definition Digital Television (DTV) and analog (standard NTSC) signals, and view them on an HD ready television, analog television, or PC monitor. With the HiPix DTV-200, you can:

- Receive, decode, record, and display high definition video signals.
- Receive and view analog (standard) video signals.
- Convert analog (standard definition) video and audio signals to high definition signals for display on an HD ready or analog television, or PC monitor.
- Watch standard analog and digital broadcasts on your PC monitor
- Use your computer as a home Multi-Media Control Center

#### **Receive and decode a high definition signal**

The HiPix DTV-200 decodes ATSC compliant Digital Television (DTV) signals and displays this high definition signal on a computer monitor or television screen.

#### **Convert analog video and audio signals to high definition signals**

The HiPix DTV-200 accepts analog audio and video signals from VCR's, DVD players, and DBS receivers (such as Direct TV, or DISH systems), and converts these signals to high definition signals for display on an HD ready television or computer monitor.

#### **Watch standard analog and digital broadcasts on your PC monitor**

The HiPix DTV-200 is equipped with Video Interface Port and Loop Back cable, which allows you to watch digital and analog signals on your computer monitor .

#### **Multifunction record and playback capabilities**

HiPix DTV-200 also provides multifunction record and playback capabilities, allowing you to record an DTV signal directly onto your computer hard drive, and play it back on your computer monitor or television screen.

The HiPix DTV-200 also comes with an **infrared (IR) remote control** for multiple functions

#### **Use you computer as a home Multi-Media Control Center**

With the HiPix DTV-200, you can also use your computer as a multi-media home theater control center. If you have a Dolby Digital 5.1® audio receiver, you can connect the HiPix DTV-200's Dolby Digital Audio Out to your receiver for Dolby 5.1 sound output.

You can also connect the two channel stereo audio outputs to an standard stereo receiver or amplifier.

## **Input, Output, Recording and Playback Capabilities**

### **Digital Broadcasting Reception**

- ATSC Compliant Terrestrial Broadcasting
- High Definition / Standard Definition Video
- Dolby Digital Audio 5.1 Channels
- Electronic Program Guide

### **Analog Broadcasting Reception**

- NTSC Compliant Terrestrial Broadcasting
- Analog Cable Broadcasting

### **Video Display Output**

- High Definition Display output to HD Ready Television or VGA Monitor
- Standard Definition Display output to standard television or VCR

### **Audio Output**

- 5.1 Channel Dolby Digital Serial output to audio receiver or amplifier
- Analog Stereo output to standard Television or VCR
- PCM Data to sound card (if PC has sound card with available connector)

### **Digital Recording and Playback**

- Direct recording of ATSC MPEG2 Transport Stream to a PC hard drive.
- Time scheduled recording of ATSC MPEG2 Transport Stream to a PC hard drive.
- Playback of recorded files from a PC hard drive.

## System Requirements

PC with Pentium II (or compatible) 333MHz or higher  
Microsoft Windows® 98 SE, Windows ME® or Windows 2000  
OS software disc

*Note: (OS software must be installed on the PC, **and you will need the OS software install disc** to successfully install the HiPix DTV-200 drivers and application software)*

64 MB available memory  
2 GB available disc space  
Available PCI socket  
Available I/O expansion slot  
Serial (COM1) port on PC must be available for IR Remote Control

## Optional Equipment

Some or all of the items in the following list (and shown in **Fig. 1**) will be necessary if you choose to use your HiPix DTV-200 to enable your PC to be used as a home multi-media control center.

*Note: This optional equipment is **not available from Telemann**, but can be found at the appropriate computer supply or stereo equipment outlet.*

VGA card  
Sound card

Audio cable for stereo audio input from DVD or VCR  
Audio cable for stereo audio output to TV or VCR  
RCA cable for video input from DVD or VCR  
RCA cable for video output to TV or VCR  
S-Video cable for S-Video input from DVD or VCR  
RCA cable for DD5.1 audio output to Dolby Digital Amplifier  
RGB HV cable with RCA Adapter for high resolution video output to HD ready TV  
26 pin VGA card cable  
15 pin to 15 pin VGA cable

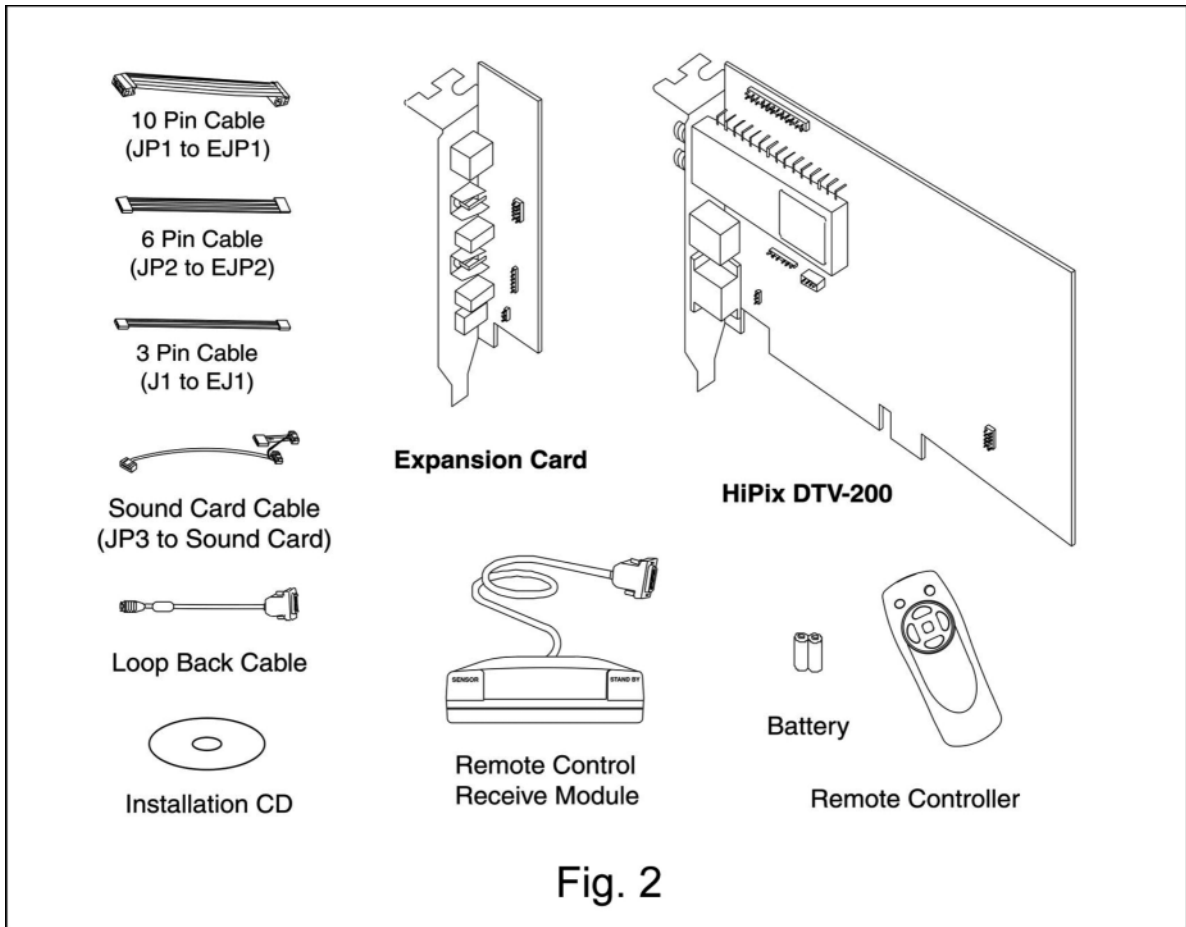


Fig. 1

Some optional equipment you may need

## What comes with the HiPix DTV-200

The following items come with your HiPix DTV-200 (Fig. 2)



Installation CD (includes application software, driver and utilities)  
 HiPix DTV-200 card  
 Expansion card  
 Loop Back cable  
 Remote controller  
 IR Remote Control receiver module  
 2 Batteries (for Remote Control)  
 10 pin cable  
 6 pin cable for  
 3 pin cable  
 Sound Card cable (4 pin)

## **H a r d w a r e   I n s t a l l a t i o n**

## Hardware Installation

### Internal Components

**Important note:**

There are two Internal Component Hardware Installation options for the HiPix DTV-200:

**Standard Connection (with Loop Back cable):**

Connection to a standard PC graphics card using cables provided with the HiPix DTV-200. For this type of installation, continue with the '**Installation of HiPix DTV-200 Card and Expansion Card**' instructions below.

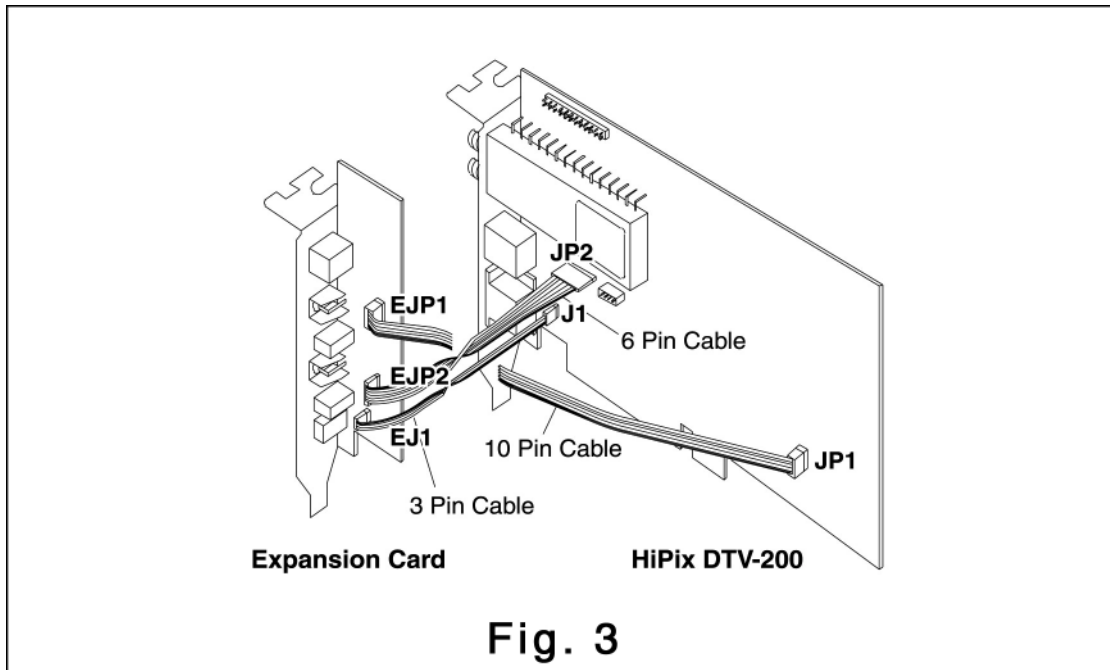
**VIP 1.1 connection (Optional):**

Connection to a VGA PC graphics card using a VIP 1.1 (26 pin) connection, (cable not supplied) which will allow you to view a Picture within a Picture (PIP) on your PC monitor. The VIP 1.1 connection option is suggested for **advanced users only**, and is described at the end of this manual (See '**VIP Connection – Advanced PC Users Only**' elsewhere in this manual).

#### Installation of HiPix DTV-200 Card and Expansion Card (Standard Installation)

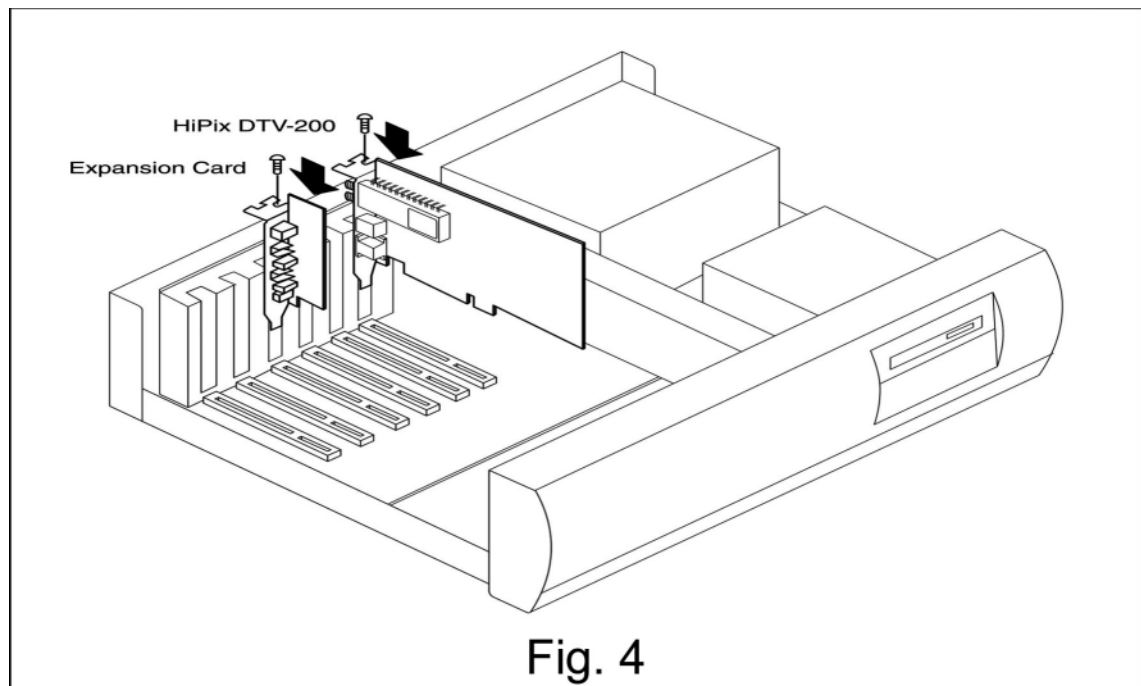
Perform the following steps in order to insure successful installation of the HiPix DTV-200 card and Expansion card.

- Turn off the computer and peripherals that are connected to it, and unplug power cords from outlets or power strips.
- Remove computer cover (refer to computer's User Manual if necessary).
- Briefly touch metal chassis of computer before touching any components in the computer (this will discharge any static charge you may have that could damage computer components).
- Remove cover plates from available PCI and I/O slots (keep screws – you will use them to secure the HiPix DTV card and Expansion card).
- Connect 10 pin cable, 6 pin cable, and 3 pin cable as illustrated in Fig. 3. Do this *before* you install the boards into the slots in your computer.



**Connect cables as shown**

- Insert HiPix DTV-200 card into the available PCI bus slot as illustrated in Fig. 4
- Insert Expansion card in available blank bracket space as illustrated in Fig. 4



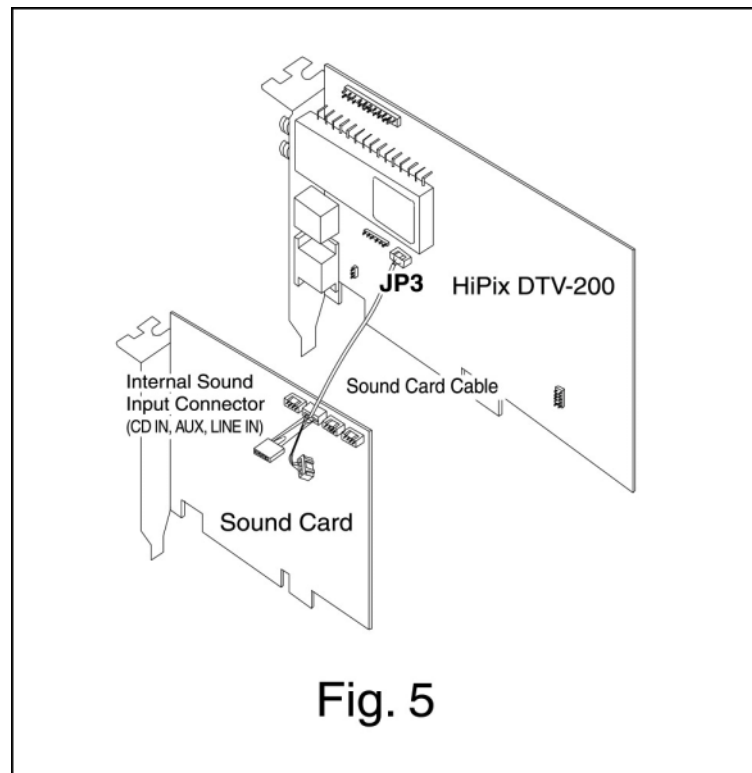
- Install the retaining screws (from the cover plates) to secure the HiPix DTV-200 and Expansion Card.
- If you are **not** going to connect the HiPix DTV-200 to a sound or VGA expansion card (see next section), then internal hardware installation is complete. Replace computer cover and secure with screws. Otherwise, proceed to next section.

### Connecting the HiPix DTV-200 to Sound Card (Optional)

If your PC does not have an available PCI slot for the HiPix DTV-200 Expansion card, you can connect the HiPix DTV-200 to your existing sound card in your PC as shown in Fig. 5. This will give you the ability to hear the sound from NTSC broadcasts through your computer.

*Note: If you do not install the HiPix DTV-200 Expansion card, you will not have the ability to connect any other components to your system, such as DVD Players, VCRs, Camcorders, analog TVs etc.*

To connect the HiPix DTV-200 card to your sound card, connect the Line Out terminal of HiPix DTV-200 card to the sound input terminal (CDIN, AUX, LINEIN) of your sound card using the supplied 4 pin **Sound card cable**, as illustrated in Fig. 5.



Once you have installed the HiPix DTV-200 cards, and made the required cable connections, the internal hardware installation is complete. Replace the cover on the PC and secure with screws.

### External Components and Connections

**Fig. 6** and **Fig. 7** shows the connection points for connecting antennas and external components. Refer to these image when reading about specific connections described below

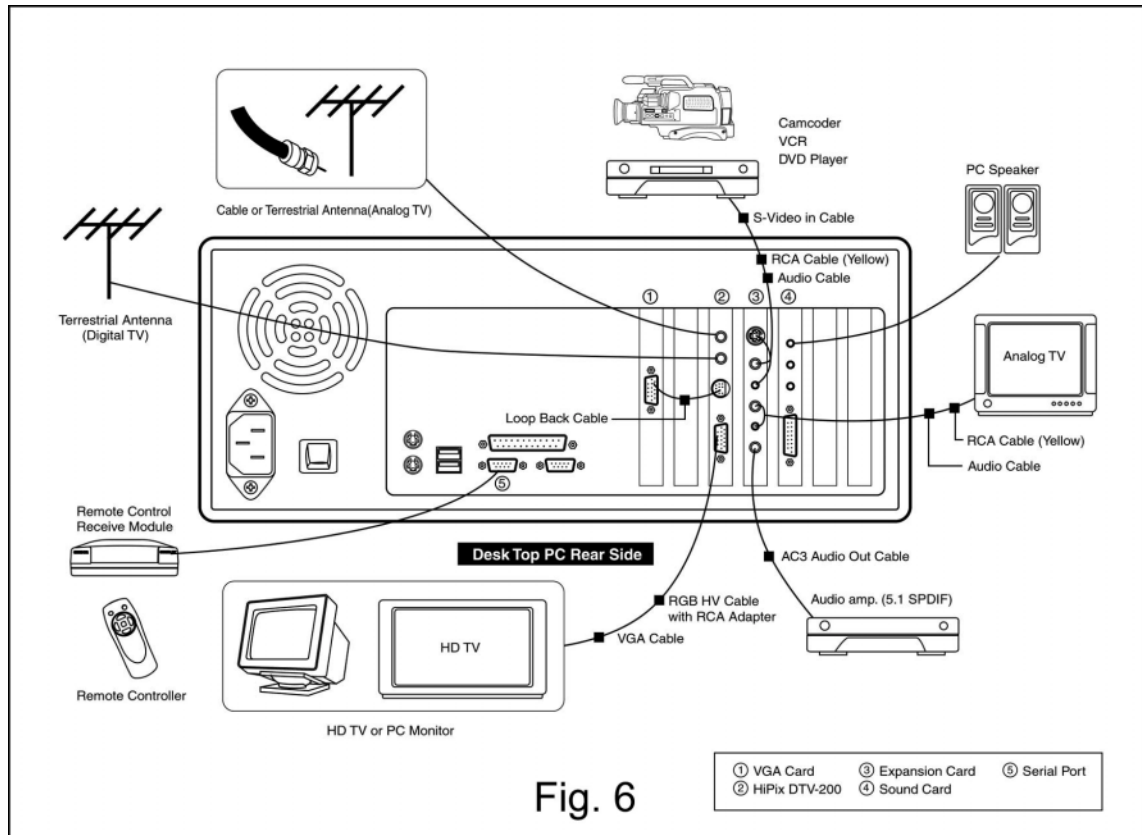


Fig. 6

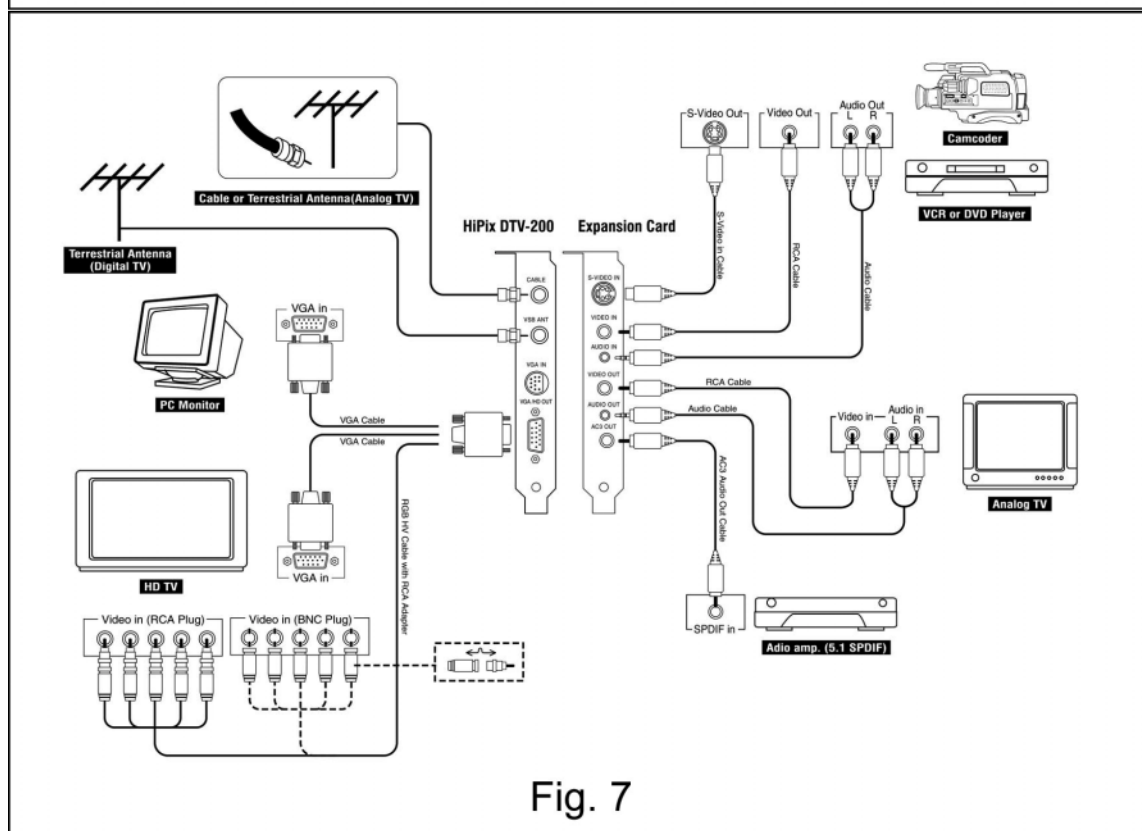


Fig. 7

## Connecting the Remote Control Receiver

The HiPix DTV-200 comes with an Infrared (IR) Remote controller. (For operation of the Remote Control, see **Remote Control Operation** section elsewhere in this manual).

Connect the remote control receiver module to the Serial (com1) port of the PC as shown in the Figure 6.

*Note: The Module must be placed so that the remote controller will have a direct "line of sight" path for proper operation).*

## Antenna/Cable Connection

There are two options for connecting antennas to the HiPix DTV-200, as described below:

**If you have 1 antenna cable**, that carries both analog (NTSC) and digital (ATSC) signals, you should connect the antenna cable to Input 1. (See **Fig. 7**) If you connect your cable to Input 1, you will be able to switch the output display using the ATSC and NTSC buttons on the HiPix DTV-200 Control Window. (See 'Using the HiPix DTV-200' elsewhere in this manual).

**If you have two antenna cables** – one for digital (ATSC), and one for analog (NTSC), then you should connect the digital (ATSC) antenna to Input 1, and the analog (NTSC) cable to Input 2. (See **Fig. 7**.) With this type of connection, you will be able to switch the output display by switching the output in the Setup menu (See 'Input Setup' in the 'Using the HiPix DTV-200' elsewhere in this manual).

## Connecting the HiPix DTV-200 to high resolution displays

The HiPix DTV-200 outputs a high quality video signal. You can view this signal on a high definition (DTV)-ready television, a standard (VGA) PC monitor, or a standard TV.

### Connections for Using 1 Monitor

If you are going to view all of your output on your existing PC monitor (that is, you will not be connecting a 2<sup>nd</sup> monitor or a HD Ready TV to your system) use the Loop Back cable (provided) to connect your standard monitor (VGA) connection on your PC to the HiPix DTV-200 card, and connect your monitor to the VGA output of the HiPix DTV-200 card. This will enable your standard PC output, as well as output from the HiPix DTV-200 to be viewed on your PC monitor.

### Connections for Using 2 Monitors

If you connect the HiPix DTV-200 to a separate display, you can watch two signals simultaneously: the standard output signal from your PC on your PC monitor, and another output signal from the HiPix DTV-200 on the other display. (If you install the HiPix DTV-200 using the VIP 1.1 connector, you will also be able to watch the output from the HiPix DTV-200 in a Picture in a Picture (PIP) on your PC monitor. See '**VIP Connection – Advanced PC Users Only**' elsewhere in this manual).

If you would like to view the output from the HiPix DTV-200 on a separate monitor, connect this monitor to the VGA connection on the HiPix DTV-200 board. (See **Fig. 6** and **Fig. 7**).

### Connections for Using 1 Monitor and 1 HD ready TV

Connection of a DTV-ready TV will require cables and adapters not supplied with the HiPix DTV-200. There are several types of connectors for HD ready TVs - your TV will have either RGB, (5 wire) input, or YPrPb (3 wire) input, and these will be either BNC (twist) connections, or RGB (push) connections. Therefore, you will need the correct VGA-to-BNC

cable to connect your HD ready TV to the VGA connection on the HiPix DTV-200 card, and you may also need BNC-to-RCA adapters, if you need RCA connections to your HD ready TV.

Once you have the appropriate cables and adapters, connect the VGA connector of your cable to the VGA connector of the HiPix DTV-200 board, and connect the RGB or YPrPb connections to your HD ready TV. (See **Fig. 6** and **Fig. 7**).

If your DTV-ready TV has YPrPb connectors connect them as follows:

Red wire to Pr input  
Green wire to Y input  
Blue wire to Pb input

### **Connecting Analog TVs and Other Devices to HiPix DTV-200**

#### **Connecting standard (NTSC) TVs, DBS Receivers, VCRs, DVD Players, Camcorders, etc.**

The HiPix DTV-200 can receive audio and video signals from analog (standard NTSC) TV antenna, DBS receivers (such as Direct TV, or DISH systems), VCRs, DVD players, camcorders, etc. These signals can then be output as either high definition or standard definition signals to DTV-ready TVs, standard TVs, or PC monitors.

Refer to **Fig. 7** for connection of these devices to the HiPix DTV-200.

## **S o f t w a r e I n s t a l l a t i o n**

## Software Installation

Once the hardware has been installed in your PC, and appropriate devices have been connected, power on your PC, and refer to the appropriate sections below for installation of the HiPix DTV-200 device driver and application software.

### HiPix DTV-200 device driver installation - Windows 98 SE(Second Edition)

When Windows 98 SE boots up the first time after you have installed the HiPix DTV-200, the HiPix DTV-200 card will be automatically detected as a multimedia device, a window will appear on the screen showing '**New Hardware Found – PCI Multimedia Video Device**'.

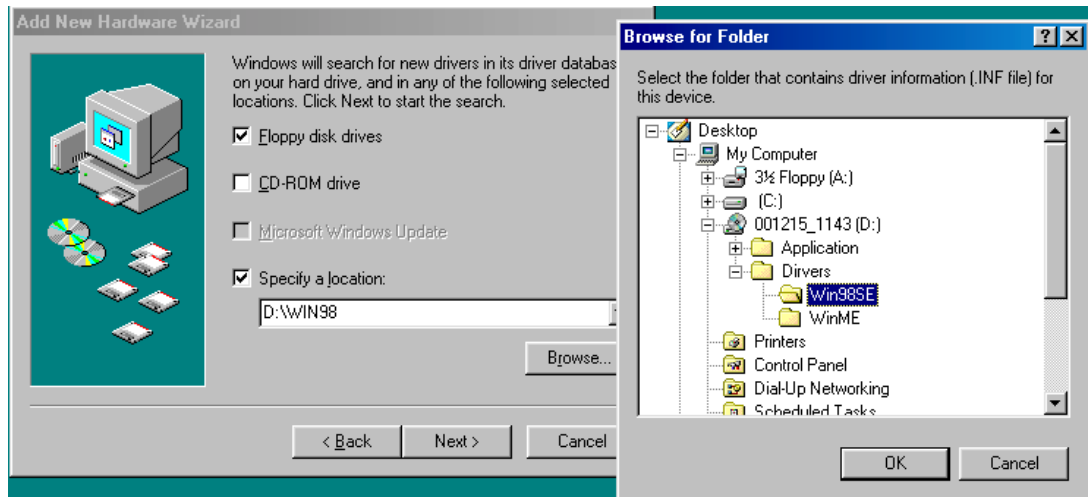
The 'Add New Hardware Wizard' window will appear on the screen, showing that it will begin searching for the proper device driver. (**Fig. 8**)



Insert the HiPix DTV-200 installation CD, and click the 'Next->' button to see the following window:



'Search for the best driver for your device (Recommended)' should be selected (default). Click 'Next->'



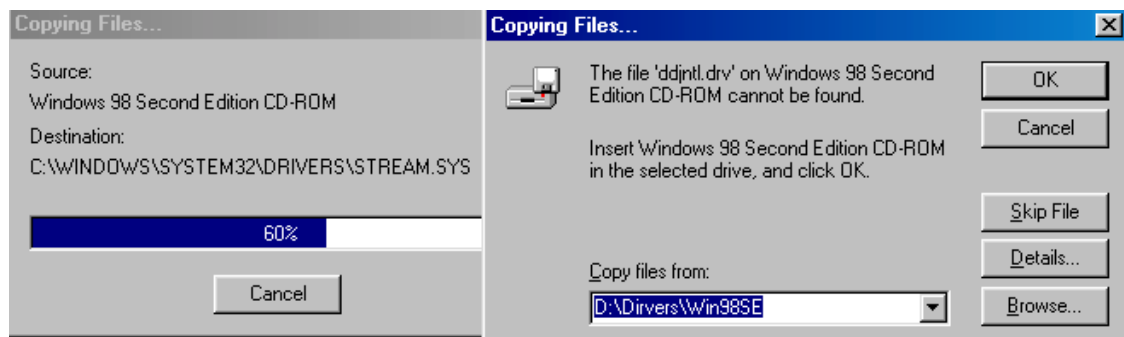
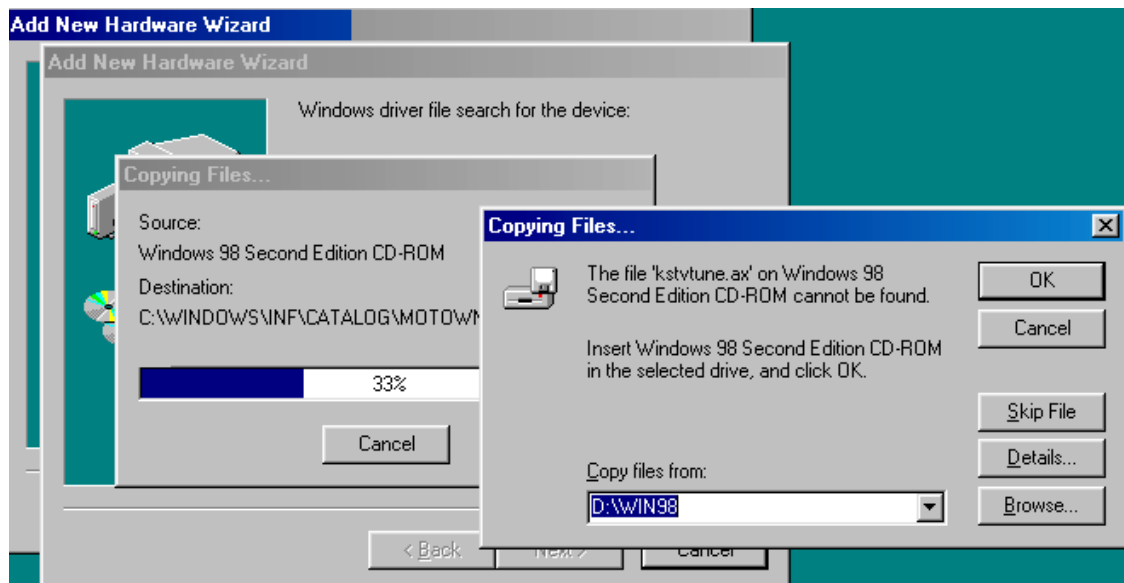
In this 'Add New Hardware Wizard' window, check the 'Specify a location' checkbox, and click on 'Browse' to navigate to the HiPix DTV-200 software install disc, and select the Win98 SE directory. (Within this directory is the HiPix DTV-200.inf driver).

Click on the 'Next->' button. The Wizard will locate the driver and will display the following window:

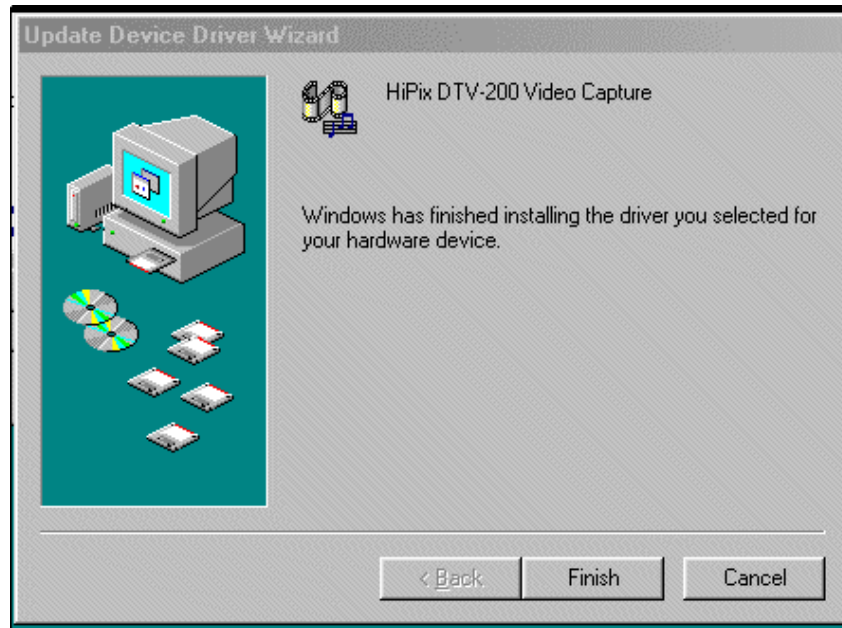


Click 'Next->'. The Wizard will install the appropriate files onto your system.

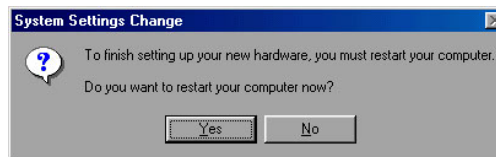
**IMPORTANT NOTE:** In some cases, Windows will ask for the Windows 98 SE OS software disc so that it can locate and install the file 'ddnt1.drv'. **DO NOT INSERT THE WINDOWS 98 SE DISC AS REQUESTED.** The required file is not on that disc. Instead, insert the HiPix DTV-200 software install disc, specify the 'Drivers' directory, and click 'OK'.



When Windows has finished loading the driver software, you will see the following window:  
Click 'Finish' to complete driver software installation.

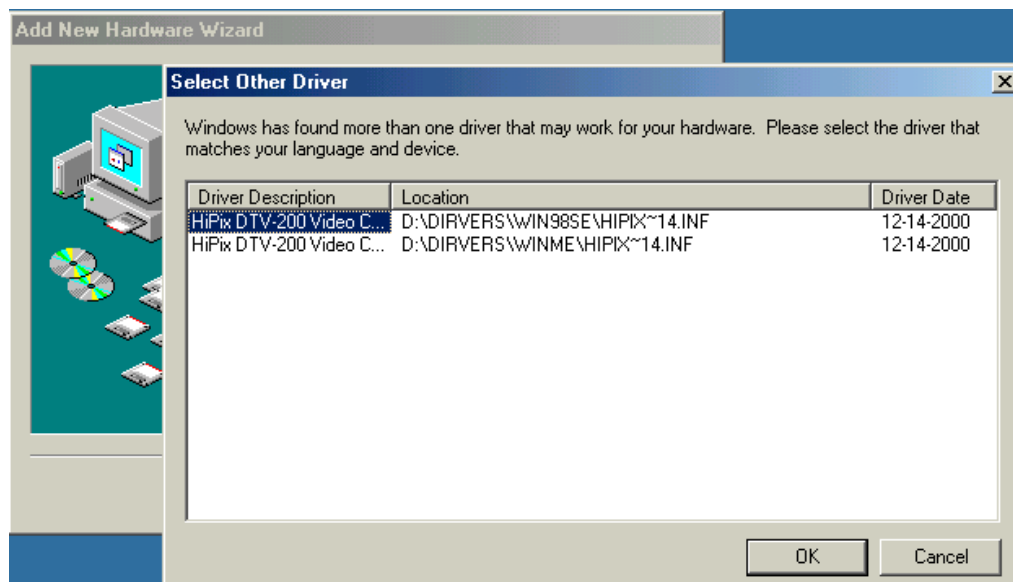


You have to restart your computer to make the new device driver available, so click 'Yes' in '**Systems Settings Change**' window that will appear.

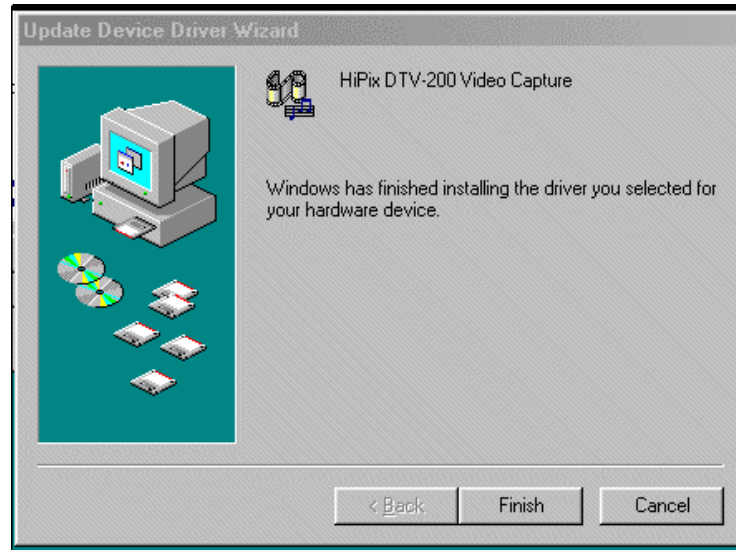


## HiPix DTV-200 device driver installation – Windows ME (Millennium Edition)

When Windows ME boots up the first time after you have installed the HiPix DTV-200, the HiPix DTV-200 card will be automatically detected as a multimedia device, a window will appear on the screen showing '**Select Other Driver**'



Select the driver in the D:\DRIVERS\WINME directory, and click 'OK'. The correct driver will be installed, click 'Finish', and restart your computer.



### HiPix DTV-200 device driver installation – Windows 2000

When Windows 2000 boots up the first time after you have installed the HiPix DTV-200, the HiPix DTV-200 card will be automatically detected as a multimedia device, a window will appear on the screen.



Click the '**Next**' button to continue. The following window will be displayed.



Click the '**Next**' button to continue. The following window will be displayed.



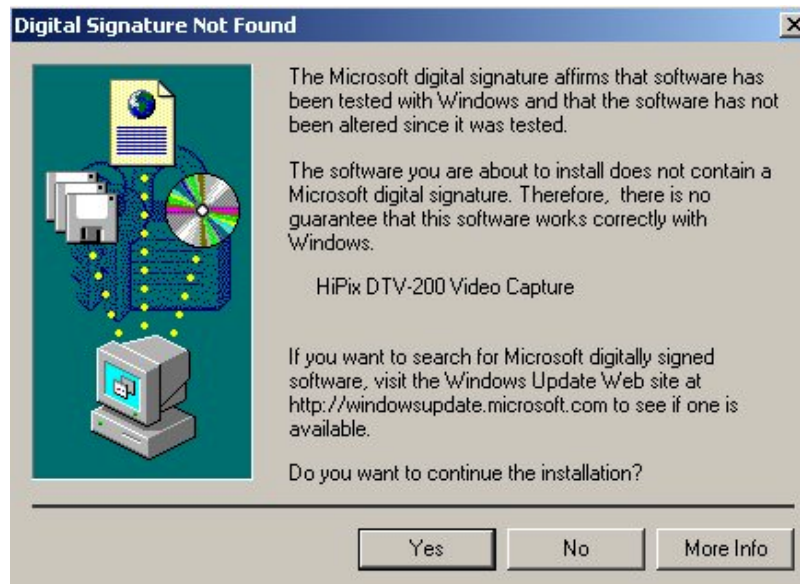
Select the '**Specify a location**' checkbox, then click on the '**Next**' button to continue. The following window will be displayed.



Be sure the HiPix installation CD-ROM is in the computer CD-ROM drive. Click on the '**Browse...**' button, and specify the Win2000 driver which is in your HiPix installation CD-ROM. Then click the '**OK**' button to continue. Once the system finds the HiPix driver on the CD-ROM you will see the following window.



Click the '**Next**' button to continue. You will see a standard Microsoft '**Digital Signature Not Found**' dialog box. Click **Yes** to load the driver onto your system.



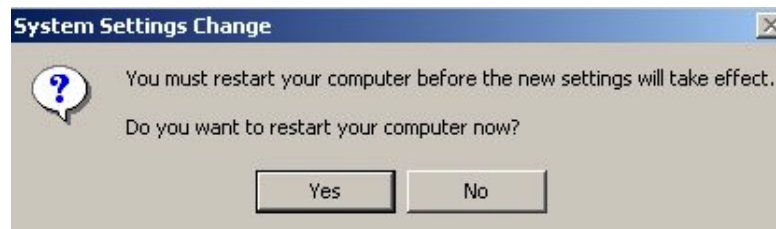
The following window will be displayed as the driver is loading.



Once the driver has been installed, you will see the following window.



Click the '**Finish**' button. You will see the following window.



Click the '**Yes**' button to restart your computer.

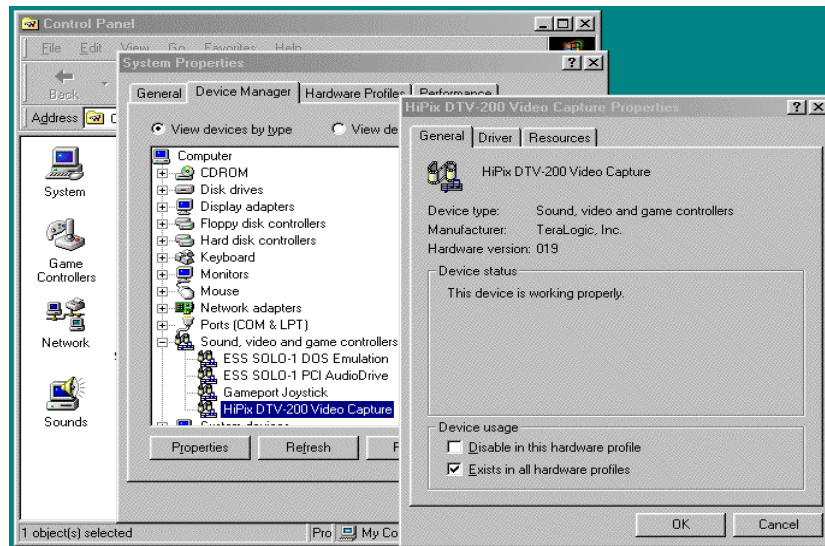
## Verification of successful device driver Installation (Windows 98 SE only)

Occasionally, the driver software does not install correctly on systems running Windows 98 SE. You can verify that the installation was successful by following these steps.

Click on '**Start**', select '**Settings**', and click on '**Control Panel**'.



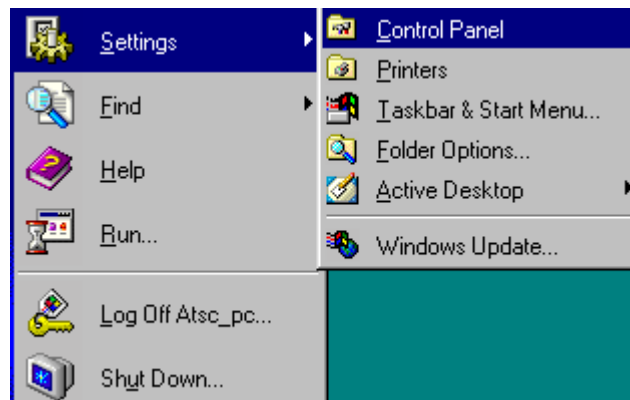
- Double click on '**System**'
- Select '**Device Manager**' tab
- Double click on '**Sound, video and game controllers**'
- Double click on '**HiPix DTV-200 Video Capture**' which will bring up the sub-window, '**HiPix DTV-200 Video Capture Properties**'
- On the '**General**' tab, in the 'Device status', area, you should see the message 'This device is working properly' - this confirms that installation has been successful.



## Device Driver Troubleshooting

If your system does not detect the newly installed HiPix DTV-200 as a new hardware device, you will have to install the device driver manually, as described here.

Click on '**Start**', select '**Settings**', and click on '**Control Panel**'.



In the Control Panel menu, double click the '**Add New Hardware**' icon, to display the following window:



Click 'Next' button, to display the following window:



Click 'Next' button, to display the following window:



Click 'Next' button, to display the following window. This window indicates that your computer is searching new hardware.

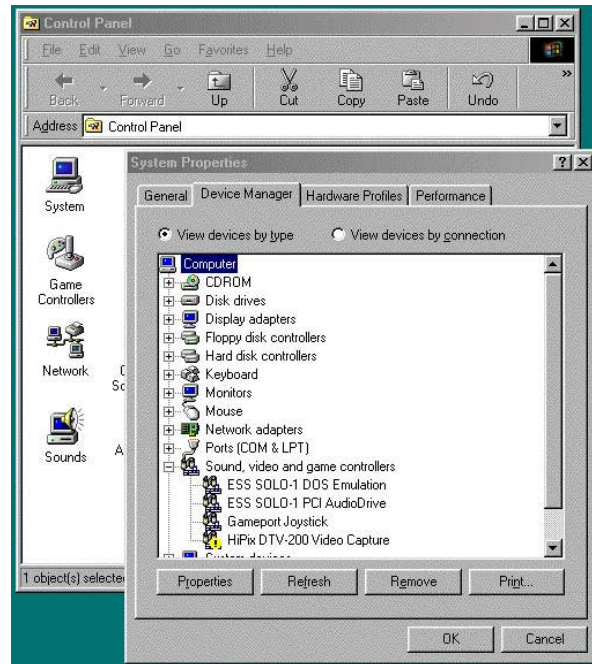


When your computer detects the HiPix DTV-200 card, the following window will be displayed.



After this step, you can follow the same procedure in '**Installation of Device Driver for the HiPix DTV-200 card**' section.

If you have problems when you install the HiPix DTV-200 device driver, you can check the following items to isolate the problem.



1. Click on '**Start**', select '**Settings**', and click on '**Control Panel**'.
2. Double click on '**System**'.
3. Select '**Device Manager**' tab.
4. Double click on '**Sound, video and game controllers**'. If there is '**HiPix DTV-200 Video Capture**', you need to remove it, as well as the HiPix DTV200.inf file located in c:\windows\inf\others\, then restart your PC.

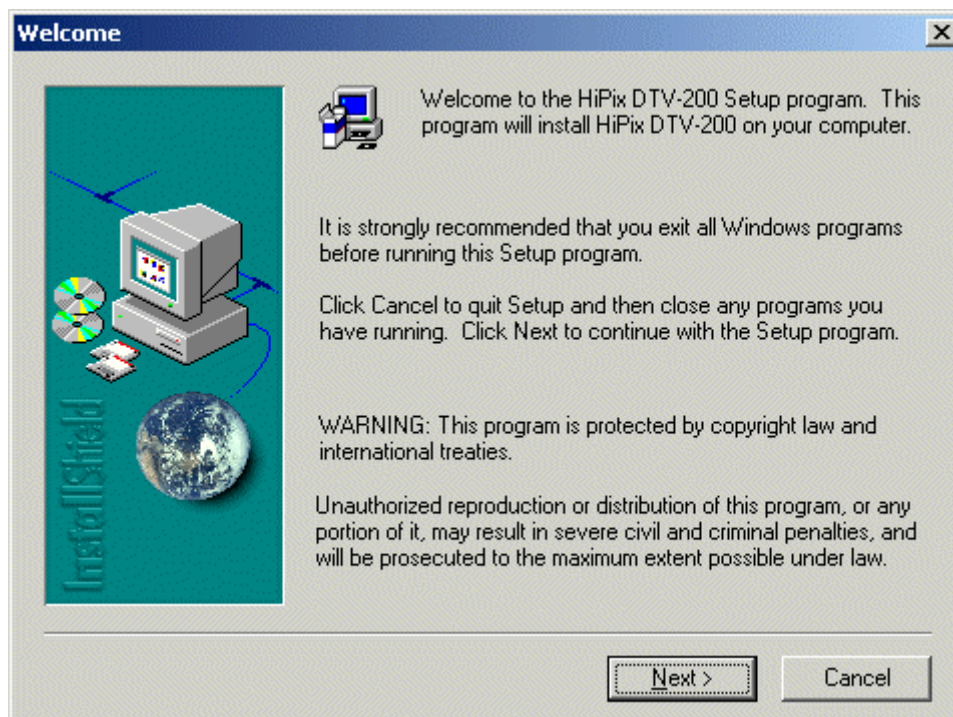
*Note: If you cannot find the 'inf' folder, it is hidden. Go to 'Control Panels', select 'Folder Options', and click on 'Show Hidden Folders'.*

5. Copy the files in the 'Drivers' directory of the CD to your PC hard drive.

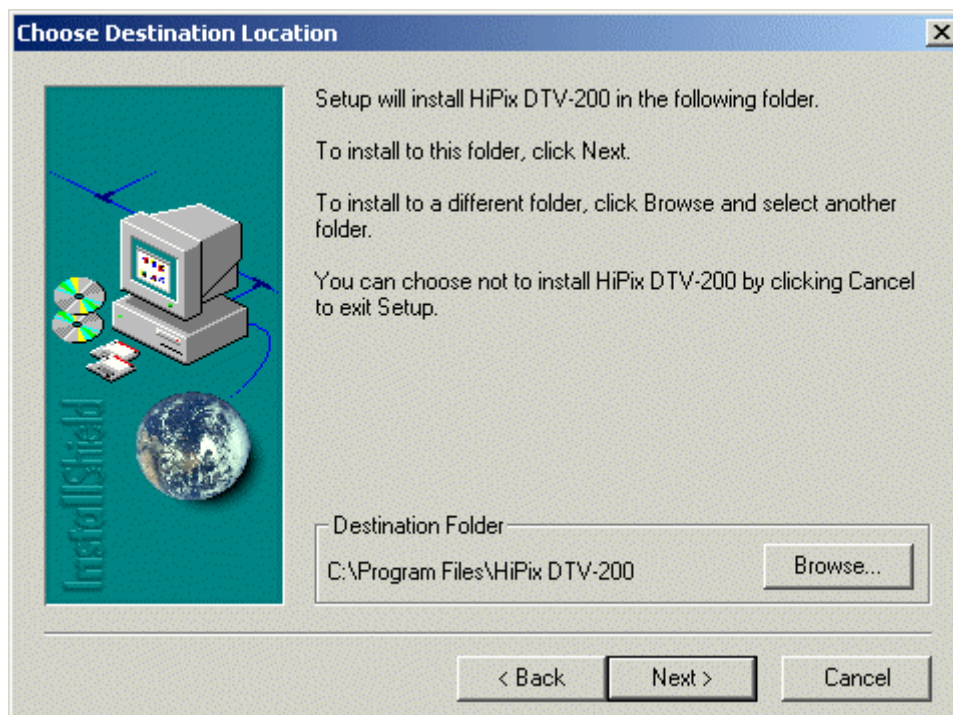
Reboot the PC, and when Windows detects the HiPix DTV-200 as a '**HiPix DTV-200 Video Capture**', install the device driver again as the previous Device Driver install procedure, except that you must now specify the 'Drivers' directory on your hard driver that you copied the files to from the CD.

## Installing the HiPix DTV-200 Application

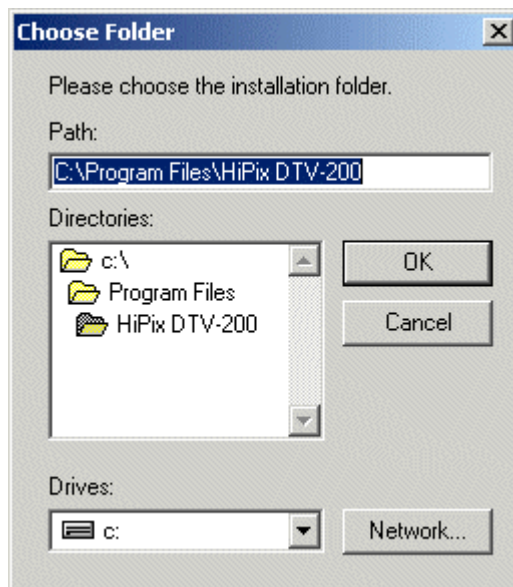
Insert the HiPix DTV-200 software CD, and double click to see the contents of the disc. You will see **HiPix Application**, click on that folder, then double-click on '**Setup.exe**'. You will see the following '**Welcome**' window. Click '**Next>**'.



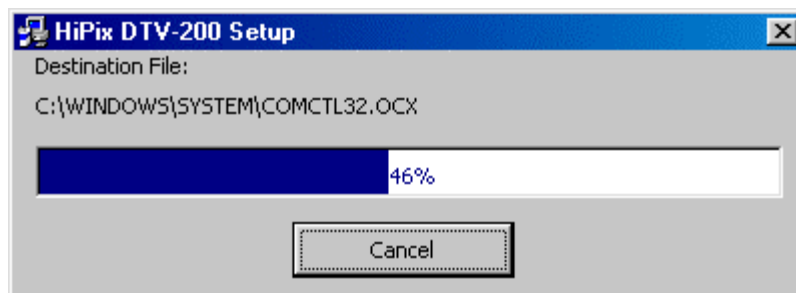
The following window will be displayed:



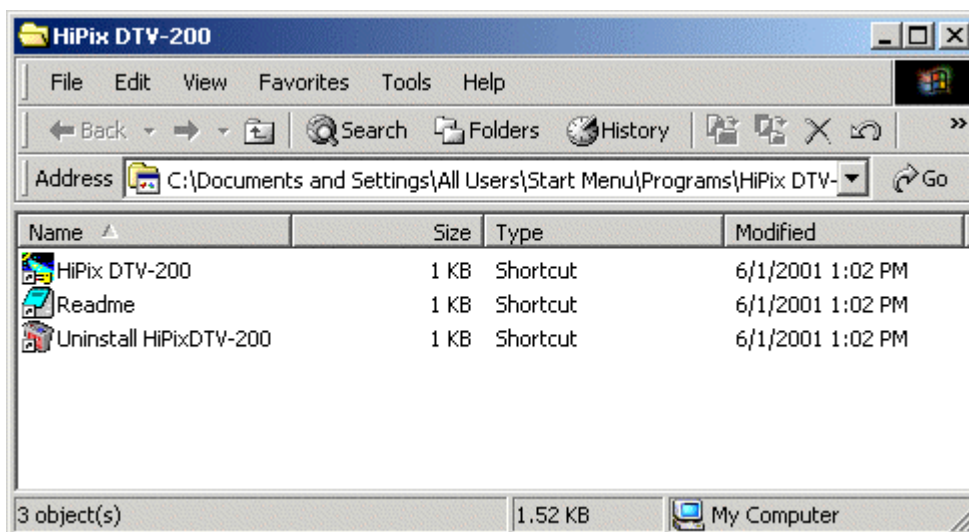
The default location is C:\Program Files\HiPix DTV-200\. Click on the next button to install the software in the default location, or click on 'Browse' button to select another location, then click on the next button.



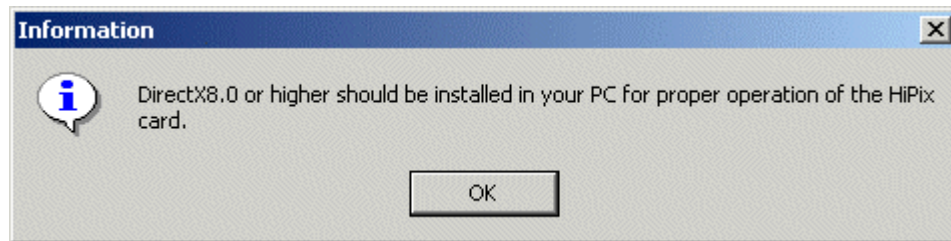
The software will be installed. You will see the following window during installation:



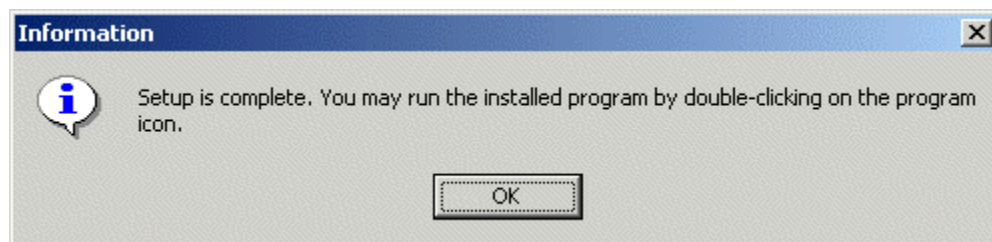
When the installation is completed, you will see the following program group window:



You will then see the window shown below, asking you to install DirectX 8.0. This file is located on the HiPix installation CD. Click 'OK'.



Once DirectX 8.0 is installed, you will see the following window. Click OK



HiPix software installation also creates a shortcut on the desktop:



## Using the HiPix DTV-200

### PC Configuration

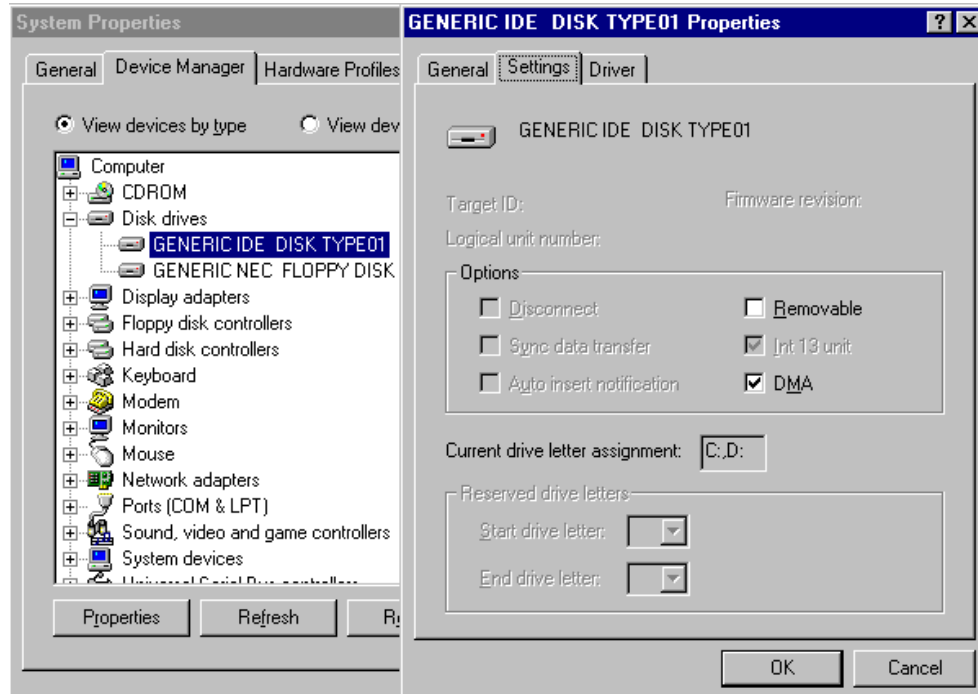
The HiPix DTV-200 uses the CPU of the PC as the main controller of the HiPix DTV-200 card. This allows you to record digital broadcasts onto the hard drive of your PC. To enable the HiPix DTV-200 to access the hard disk, you need to confirm some settings, as described below:

### Enabling the DMA function of the hard drive

- Click on '**Start**'
- Select '**Settings**'
- Select '**Control Panel**' to bring up the Control Panel window



- Double click on '**System**'
- Select '**Device Manager**' tab

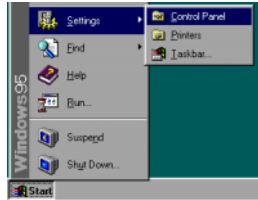


- Click on '**Disk Drives**', then double click on '**GENERIC IDE DISK TYPE**'. This will bring up the '**GENERIC IDE DISK TYPE**' window. Select the '**Settings**' tab, and check the '**DMA**' checkbox.
- Click 'OK'

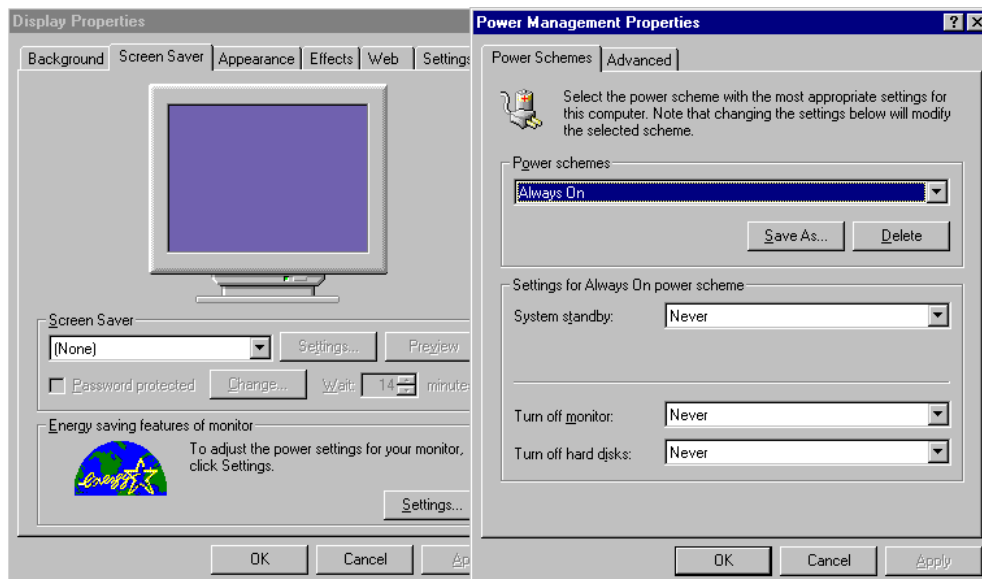
## Disabling System Standby

Even when you are not recording a file to the hard drive, operation of the HiPix DTV-200 requires that the hard drive does not go into '**Standby**' mode. Follow the directions below to set the following options:

- Click on '**Start**'
- Select '**Settings**'
- Click on '**Control Panel**' to bring up the '**Control Panel**' window



- Double click on '**Display**'
- Select the '**Screen Saver**' tab



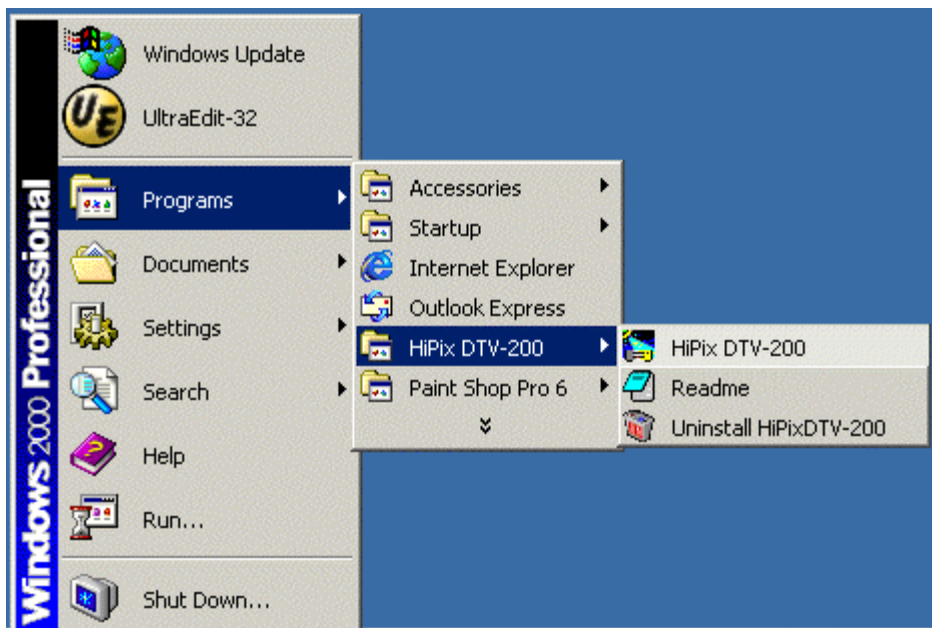
- Click on '**Settings**'
- Set '**Power Schemes**' to "**Always On**"
- Set '**System Standby**' to '**Never**'
- Set '**Turn off hard disks**' to '**Never**'
- Click '**OK**'

## Setting up your HiPix DTV-200

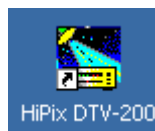
Before you begin using the HiPix DTV-200 to view broadcast or digital input signals, you will need to go through the setup procedure described here. Once you have gone through the setup, you can use your HiPix DTV-200 via the **Control Panel** as described in the next section.

To get to the Setup windows, launch HiPix DTV-200:

Click on the START button, go to Programs, then select 'HiPix DTV-200'.



Or click the shortcut on the desktop window.



This will bring up the HiPix DTV-200 control panel window, as shown below:



## General Configuration Setup

To begin Setup, click on the **Menu** button on the **Control Panel** to bring up the **Setup** dialog box.



The **Setup** dialog box has a series of 6 tabs, which enable you to set the parameters for your individual hardware configuration.

### General Tab

Begin with the **General Tab**, which displays general configuration options. Click on the boxes next to these features to toggle them off or on as appropriate.

Show VGA Window Through VIP Port

This setting is for advanced PC users only (see '**VIP Connection – Advanced PC Users Only**' section elsewhere in this manual).

Using Loop Back Cable

Check this box if you are using only one PC monitor connected to your PC, (no additional monitors or HD ready TVs connected). With a one-monitor setup, you should have connected your HiPix DTV-200 with the Loop Back cable, as described in the **Hardware Installation** section of this manual. If you have, checking this box will enable you to switch the display on your monitor between the standard PC signal and the signal from the HiPix DTV-200. If you have two monitors connected to your PC, leave this box unchecked.

Decode Audio

Checking this box enables the Dolby Digital 5.1 audio decoder, which allows Dolby 5.1 signals to be decoded by the

HiPix DTV-200 and sent to a Dolby 5.1 audio receiver. It is recommended that you check this box, unless there is a specific reason to disable it.

#### Show ToolTips

When this checkbox is checked, tool tips explaining the function of each button will be displayed when the mouse is briefly held over the button.

#### Show Signal Strength

Checking this box enables the Control Panel to display the signal strength of the ATSC signal. If this box is unchecked, the Control Panel displays the audio volume level.

#### Using Remote Controller

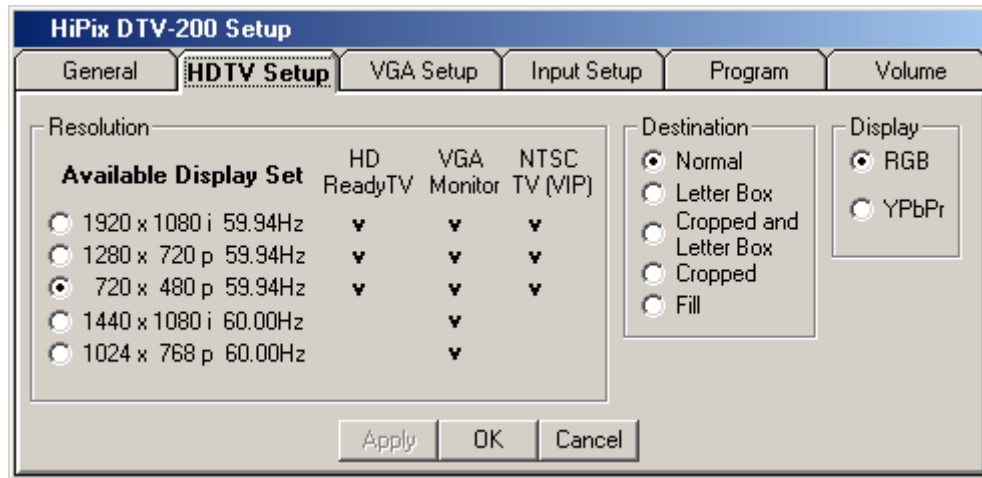
Checking this box enables the operation of the Remote Control Receiver and Transmitter.

*Note: If the Serial (com1) port of the PC is being used by a device other than the HiPix remote control receiver module, you will not be able to use this feature, in which case you should be sure this box is not checked.*

### HDTV Setup

#### (Digital and/or Analog Broadcasting Receiver Setting)

This window allows you to set the output resolution of the 'VGA/HD Out' port



The HiPix application supports five resolutions. Click the radio button to the left of the resolution & size that you want.

|             |             |                   |
|-------------|-------------|-------------------|
| 1920 x 1080 | Interlace   | 16:9 aspect ratio |
| 1280 x 720  | Progressive | 16:9 aspect ratio |
| 720 x 480   | Progressive | 4:3 aspect ratio  |
| 1440 x 1080 | Interlace   | 4:3 aspect ratio  |

1024 x 768      Progressive      4:3 aspect ratio

The last three resolution settings (720x480, 1440x1080 and 1024x768) are for use with displays that have a 4:3 aspect ratio.

If one of these three options (720x480, 1440 x 1080, 1024 x 768) is selected, the output from the 'Video Out' port of the expansion card and the VIP window (see 'VIP Connection – Advanced PC Users Only' elsewhere in this manual) will be distorted.

### Destination settings

#### Normal

If you select the 'Normal' setting when receiving a 4:3 image and you select a resolution settings with a 16:9 aspect ratio (1920x1080 and 1280 x 720), the on-screen appearance of video will be a centered picture (with a 4:3 aspect ratio), with blank side panels (blank areas) on the right and left sides (to make up the remaining display area of a 16:9 aspect ratio).



4:3 image



16:9 display

When receiving a 16:9 image and you select a resolution setting with a 4:3 aspect ratio, the displayed video will be distorted.



16:9 image



4:3 display

#### Letter box

You can choose this option when receiving a 16:9 image and you want to see the wide format on screen with a 4:3 aspect ratio. This option will place the full 16:9 image on your display, then fill the top and bottom with black panels (letterbox) to fill the remaining unused space on the 4:3 display. You can choose this only when selecting the resolution setting with a 4:3 aspect ratio.



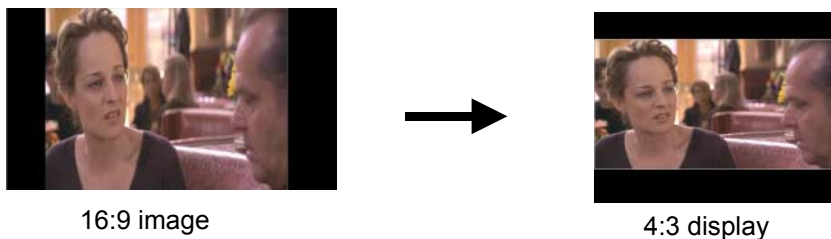
16:9 image



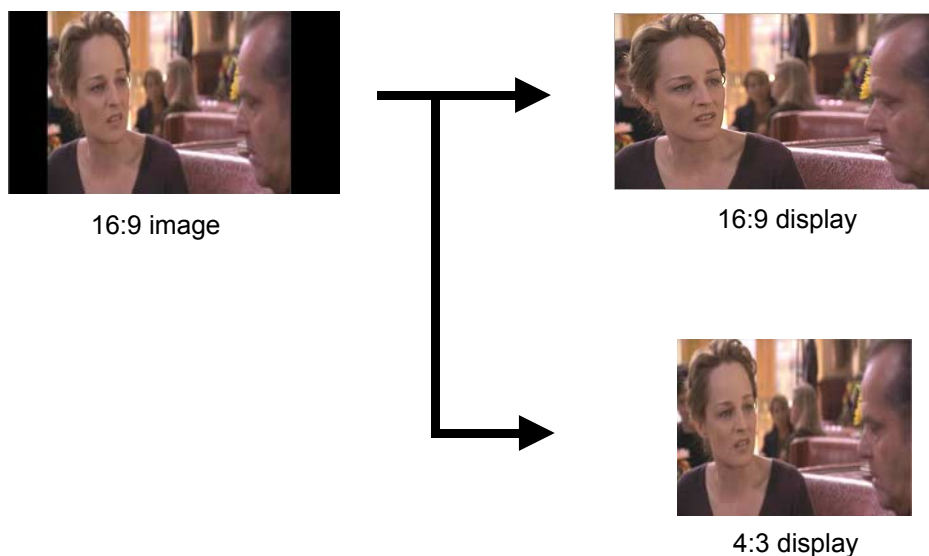
4:3 display

**Cropped and Letter Box**

You can choose this option when receiving a 16:9 image with side panels on the right and left and you want to see the wide format on the screen with a 4:3 aspect ratio. This option will "crop" the left and right panels, and place the resulting 16:9 image on your display, then place black panels on the top and bottom (letterbox) to fill the remaining unused space on the 4:3 display. You can choose this option only when selecting the resolution setting with a 4:3 aspect ratio.

**Cropped**

You can choose this option when receiving a 16:9 image with side panels and you don't want to see the image with side panels on the screen. You can use this option with either a 4:3 or 16:9 aspect ratio setting, however, since cropping the image results in an image with a 16:9 aspect ratio, it will display correctly on a 16:9 display, but will be distorted if viewed on a 4:3 display.

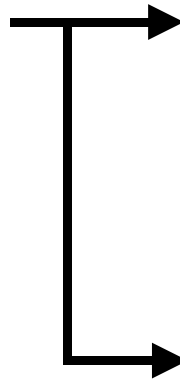


**Fill**

You can choose this option when viewing a 16:9 image that has been "letterboxed" (with black panels on the top and bottom) to create an image with a 4:3 aspect ratio and you don't want to view the image with the panels. With this option, the black panels are removed, and the resulting 16:9 image is used to fill the display. If you view this image on a display that has a 16:9 aspect ratio, the output image will be adjusted to correctly fill the 16:9 display. If you view this image on a display that has a 4:3 aspect ratio, the output image will be stretch vertically, distorting the image.



4:3 image



4:3 display

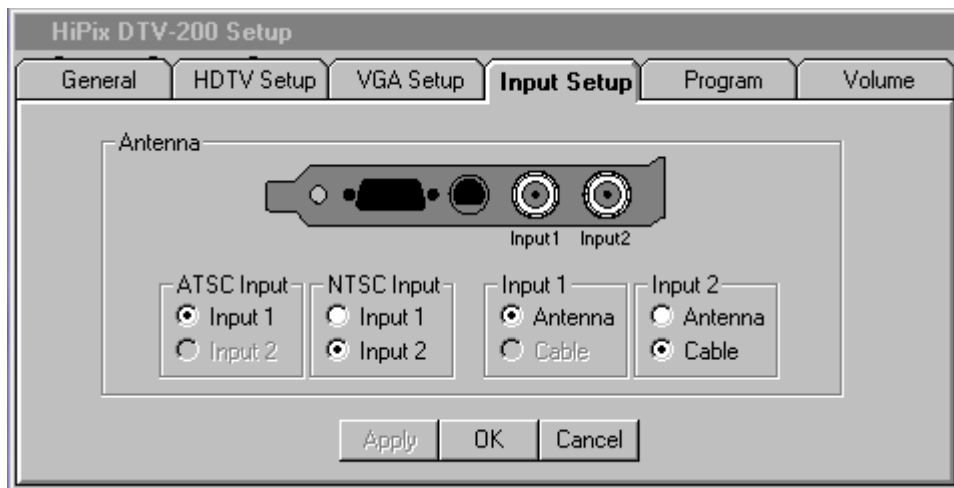


16:9 display

### VGA Setup

(This setting is for advanced PC users only (see '**VIP Connection – Advanced PC Users Only**' section elsewhere in this manual).

### Input Setup



This window allows you to set the input source of your broadcast signals. These settings relate directly to how you have connected your antenna connections to the HiPix DTV-200 card.

As described in the '**Antenna Connection**' instructions in the '**External Components and Connections**' section of this manual, your antenna cable connection to the HiPix DTV-200 will depend on whether you have one antenna cable or two.

**If you have 1 antenna cable**, that carries both analog (NTSC) and digital (ATSC) signals, you should have connected the antenna cable to Input 1. If you connect your cable to Input 1, set the radio buttons in this setup box as follows:

| ATSC Input | NTSC Input | Input 1 | Input 2 |
|------------|------------|---------|---------|
| Input 1    | Input 1    | Antenna | Antenna |

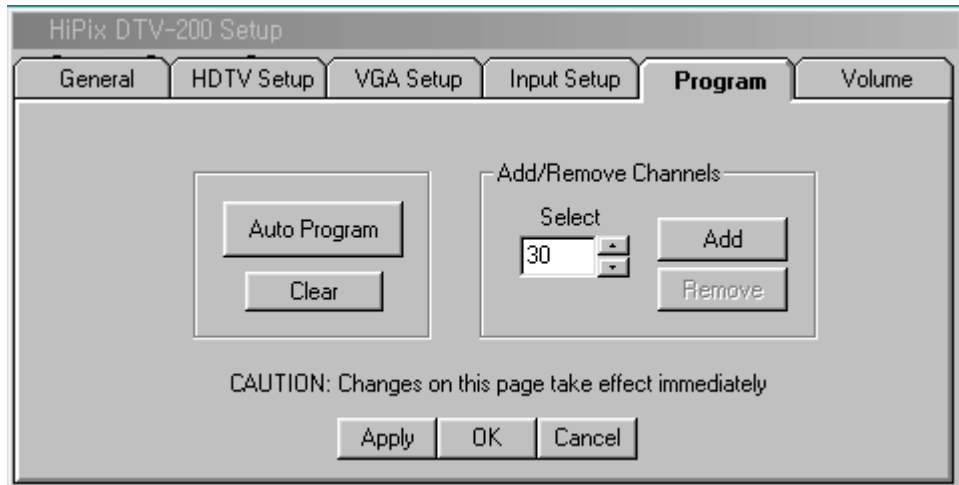
With this setting, you will be able to switch the output display using the ATSC and NTSC buttons on the HiPix DTV-200 Control Window. (See '**Using the HiPix DTV-200**' elsewhere in this manual).

**If you have two antenna cables** – one for digital (ATSC), and one for analog (NTSC), then you should have connected the digital (ATSC) antenna to Input 1, and the analog (NTSC) cable to Input 2, as described in the '**Antenna Connection**' instructions in the '**External Components and Connections**' section of this manual. If you have this type of connection, you should set the radio buttons as follows:

| ATSC Input | NTSC Input | Input 1 | Input 2 |
|------------|------------|---------|---------|
| Input 1    | Input 2    | Antenna | Antenna |

## Program

This window box enables you to make a custom channel list.



**Auto Program** - Click the Auto Program button to have the HiPix DTV-200 scan for, and compile a list of all available channels.

**Clear** – Click on the **clear** button to erase all numbers in channel list.

### Add/Remove Channels

Use the ▲ and ▼ buttons to display the desired channel, and click **Add** or **Remove** to add or remove that channel from channel list.

## Volume

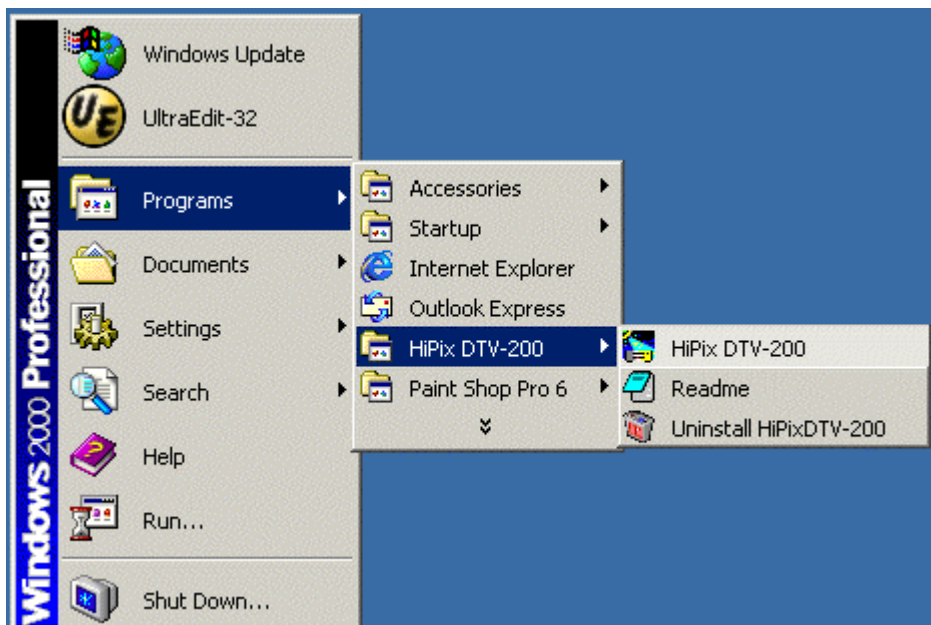


By selecting one of the radio buttons in this window, the HiPix DTV-200 volume control will affect the volume level for the PC sound card, the HiPix DTV-200 card, or both.

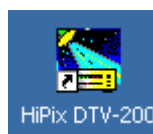
## Viewing Digital Television Broadcasts

To receive and view digital TV broadcasts through your HiPix DTV-200, launch the HiPix DTV-200 control panel window as follows:

Click on the START button, go to Programs, then select '**HiPix DTV-200**'.



Or click the shortcut on the desktop.



This will bring up the HiPix DTV-200 control panel window, as shown below:



**HiPix DTV-200 Control Panel**

*Note: If the text on the HiPix User Interface panel does not display as shown here, it may be because you have your PC set to show large fonts. If so, go to 'Control Panel' on your PC, then to 'Display', then to 'Settings', then to 'Advanced', and select 'small fonts'.*

## Control Panel Description and Functions

Once you have gone through the set-up process, (see '**Setting up your HiPix DTV-200**' in the previous section) you can receive, view, and record signals using the controls as described below.

### Display Area (Modes and Status)

This is the main display area of the HiPix DTV-200 Control Window.



This area will display a variety of information, depending on what you are doing with the HiPix DTV-200. The upper right corner of this area displays the source that you are viewing. (See '**Source**' button description below).

### Mode Source (Select via the Source Button)

There are 4 input source modes: LINE IN, S-VIDEO, FILE, and TUNER. You select the source you want via the '**Source**' button.



### ATSC [digital] and NTSC [standard analog]



When you are in **Tuner** mode, you can select either ATSC (digital) broadcast stations, or NTSC (standard analog) TV stations. The channel number will also be displayed in the Display Area, next to the '**ATSC**' and '**NTSC**' buttons.

**File name**

If you are playing back a recorded file (See '**Playing Back Recorded Files**' later in this manual) the Display Window will show the file being played.

**Channel Up/Down**

These buttons allow you to move up or down through the channels stored in the channel list. (See '**Setting up the HiPix DTV-200**' section above)

**Numeric buttons**

You can select the desired channel directly by clicking the appropriate numeric buttons. (Note: you can also use the numerical keys on the keyboard for channel selection).

**PC volume level display**

This bar displays either the current volume level of the sound setting of the PC sound card, or the ATSC signal strength, depending on the setting that was set in the 'Show Signal Strength' button on the 'General' tab of the Setup dialog box (see 'General Configuration Setup' elsewhere in this manual).

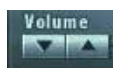
**TV volume level display**

This numeric display shows the current volume level of the HiPix DTV-200. (The maximum level is 43).

**Signal Strength display**

This display will show only if you select the 'Show Signal Strength' in the 'General' tab of setup menu. (See 'General Configuration Setup' elsewhere in this manual). This numeric display shows the signal strength of current channel. (The maximum level is 100).



**Volume ▲ and ▼ buttons**

These buttons can be set to control the volume level of the PC sound card, the HiPix DTV-200, or both. (See "**Volume**" tab setting in the '**Setting up your HiPix DTV-200**' section above).

**Record/Stop buttons**

These buttons control the record functions, allowing you to record digital broadcasts directly to the hard drive of your PC. (See the '**Recording and Playback**' section elsewhere in this manual). *(Note: this function is only available in ATSC mode).*

**Mute button**

Toggles the volume off and on

**Source button**

Clicking this button brings up a list of input sources that you can choose from.



The available sources are:



- |                |                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tuner</b>   | Selects input from the HiPix DTV-200 card. Within the <b>Tuner</b> mode, there are two sub-modes: ATSC (digital) and NTSC (analog TV). You make these selection by clicking on the appropriate ATSC or NTSC button in the ' <b>Display Window</b> ' of the ' <b>Control Panel</b> ' (See ' <b>Control Panel Description and Functions</b> ' above). |
| <b>File</b>    | This mode is used to play back files that have been recorded onto the hard drive by the HiPix DTV-200. (See ' <b>Recording and Playback</b> ' section below)                                                                                                                                                                                        |
| <b>S-Video</b> | Select this mode if you have connected a VCR to the S-VIDEO connection on the HiPix DTV-200 Expansion card, and want to view the signal from this device.                                                                                                                                                                                           |

**Line In**

Select this mode if you have connected an external analog component such as a VCR, or DVD Player to the '**Video In**' connection on the HiPix DTV-200 Expansion card, and want to view the signal from this device.

**Full Screen button**

In Tuner mode, this button is used to view the selected digital (ATSC) signal in full screen on your PC monitor or HD Ready TV.



*Note: This is used if your PC is set up with only one display monitor, utilizing the Loop Back cable. See '**Connections for Using 1 Monitor**' under the '**Connecting the HiPix DTV-200 to high resolution displays**' section elsewhere in this manual).*

When you are in Full Screen mode, click anywhere on screen, or hit the ESC button on your keyboard to switch back to PC display.

**Menu button**

Clicking on the **Menu** button brings up the Setup dialog box, which enables you to configure the HiPix DTV-200. (See **Setting up your HiPix DTV-200**, in the previous section. *(Note, this must be done prior to using the HiPix DTV-200 for the first time)*)

**Icon Button**

Clicking the Icon button minimizes the HiPix DTV-200 control panel to an icon in the application bar.

**Help button**

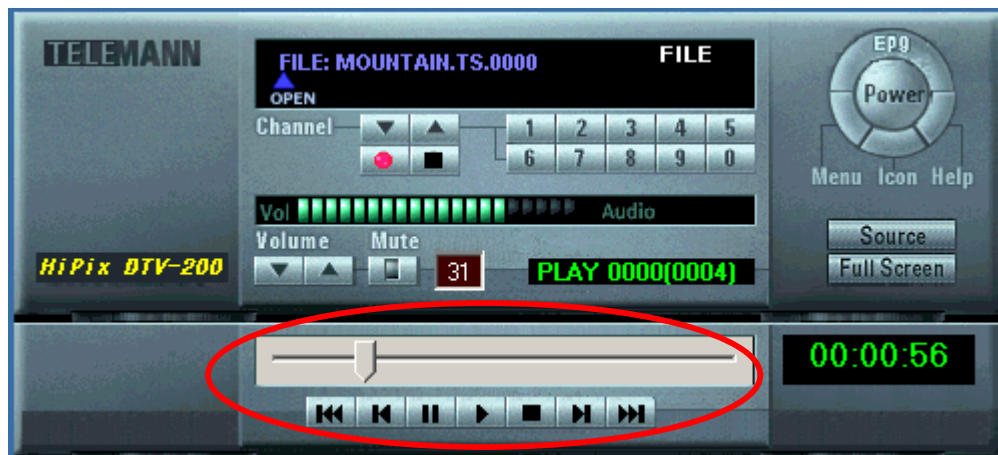
This button displays the version of the HiPix DTV-200 program installed on your system.

**Power button**

This is the Power Off button. Exits the HiPix DTV-200 application and closes the Display Window.

**EPG button**  
**Electronic Program Guide button**


Digital (ATSC) signals are broadcast with program schedules encoded into the signal. HiPix DTV-200 will decode this data, allowing you to see what programs are scheduled to be broadcast. (See '**Electronic Program Guide**' in next section).

**File Play control buttons**

You can control the current file playback function using VCR-like buttons. (See 'Recording and Playback' in next section)

## Recording and Playback

### *Notice*

*HiPix DTV-200 supports the recording and playback of broadcasting signals. Please note that this function is restricted to personal use only.*

*The Digital Millennium Copyright Act makes releasing or sharing the captured signals to others illegal.*

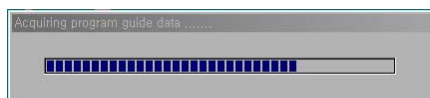
## Electronic Program Guide

The HiPix DTV-200 gives you the ability to receive **Electronic Program Guide (EPG)** data, which is encoded into the ATSC broadcast. This data provides information about the program being broadcast. You can use this data to determine what programs are available, either for viewing at the time of broadcast, or for setting the HiPix DTV-200 to record them to your PC hard drive for later viewing.

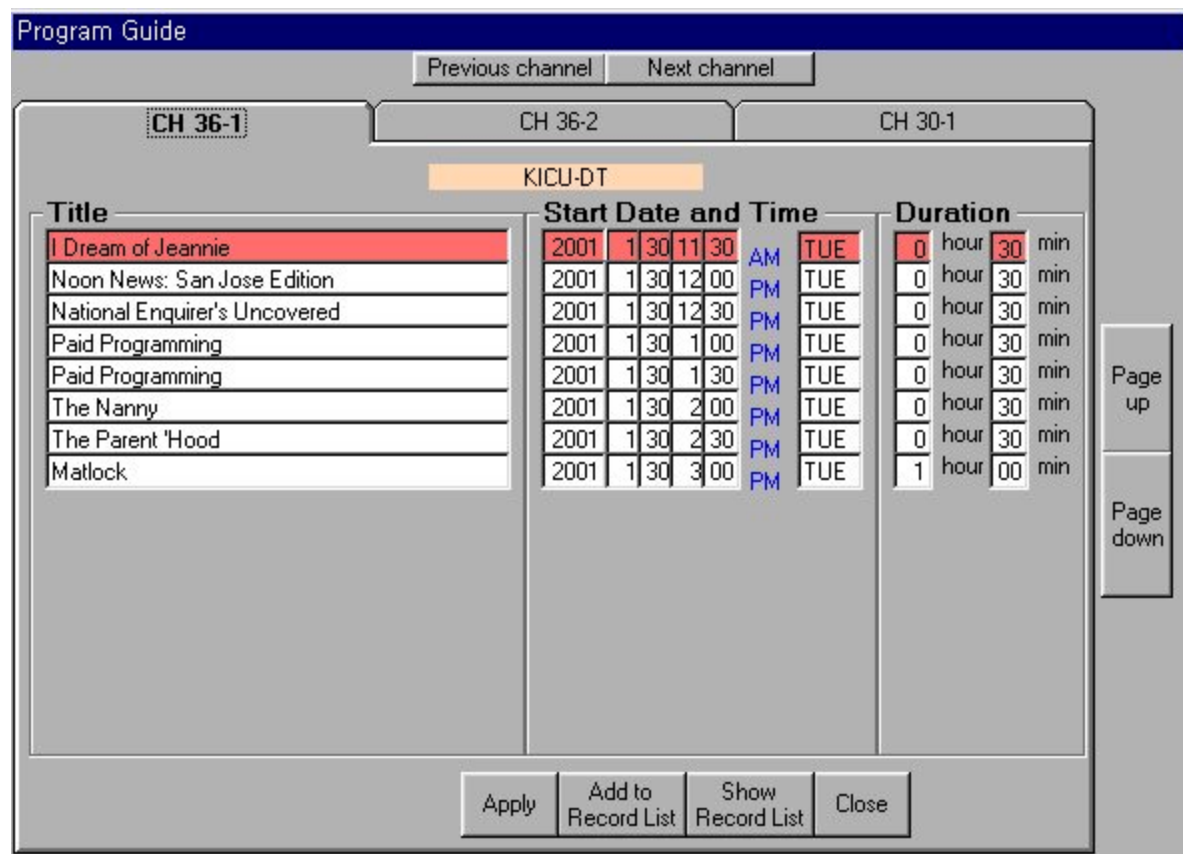
To access the EPG data, click on the 'EPG' button on the HiPix DTV-200 control panel.

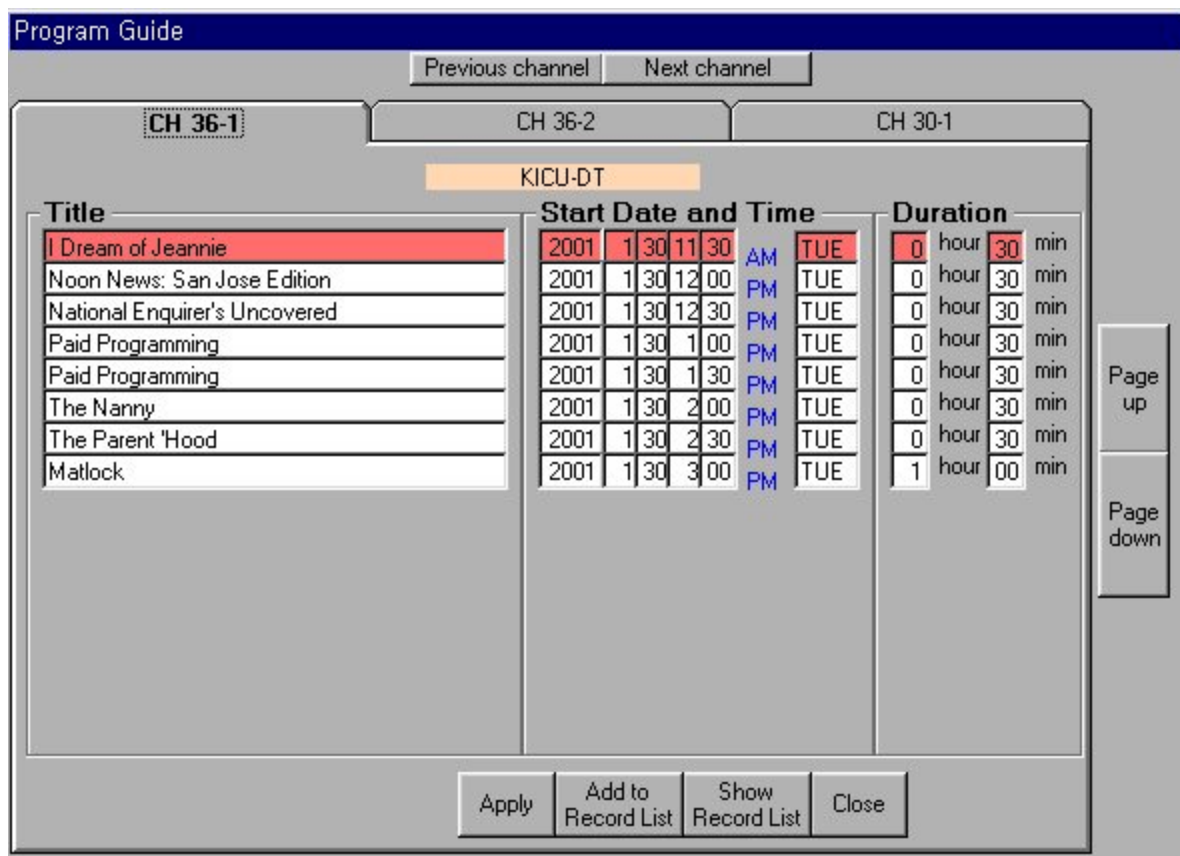


You will see an 'Acquiring program guide data...' window, indicating that this data is being accessed.



Once the data has been acquired, the EPG Main Panel will be displayed.





This EPG data includes event title, start time, and length. If there is additional descriptive data for a selected program, an additional information window will be displayed with that information when the program title is selected.

The EPG Main Window will show the EPG data for a 6 hour period for the selected channel. To view data for either the previous, or next 6 hours, click on the 'Page up' or 'Page down' buttons.

To view the data for another channel, either click the tab for that channel, or click on the '**Previous Channel**' or '**next Channel**' button at the top of the window to view the data for the channel (tab) to the left or right of the currently selected channel.

The Main Window can display a maximum of 12 channels (tabs). If you have more than 12 channels available, click on the far left or far right tab, and select the '**Previous Channel**' or '**next Channel**' buttons to view additional channels (tabs) and their corresponding EPG data.

If you select a tab (channel) that has no data, you will see a message stating "Not available for the current channel at this time".

### To view a program listed in the EPG Window

If you want to view a currently broadcast program that is listed in the EPG Main Window, click on the event to highlight it, and click the '**Apply**' button at the bottom of the window to view the program.

## Recording and Playback

HiPix DTV-200 provides multifunction record and playback capabilities, allowing you to record MPEG2 Transport Stream (High Definition Broadcast Programming) directly onto your computer hard drive, and play it back on your computer monitor or HD ready television screen.

### Recording Digital Broadcasts

To record a digital broadcast, follow the steps described below.



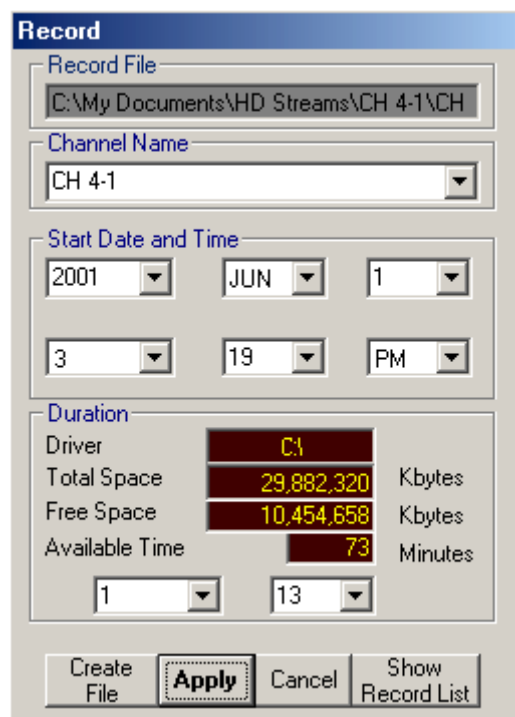
Be sure the HiPix DTV-200 display window is in the **'Tuner'** mode, (change mode via the **'Source'** button if necessary).

Be sure that 'ATSC' mode is on (click on the 'ATSC' button if necessary).

Select the channel you want to record, using the Channel ▲ or ▼ buttons or the numeric buttons.

Click the 'RECORD' button.

When you click on the **Record** button, the **'Record (Select filename and duration)'** dialog box will appear.



The default name for the file to be recorded is the selected channel. See "Renaming Record File" below to change the file name.

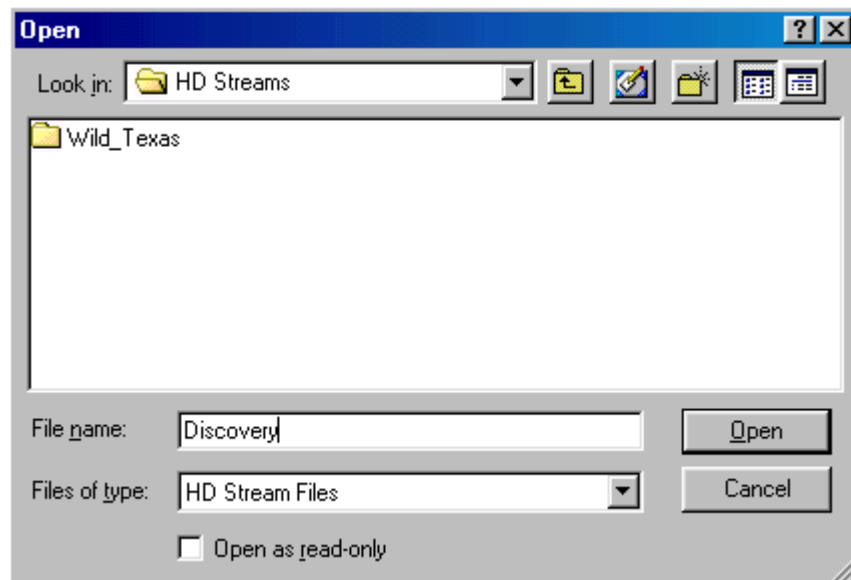
The default duration is the available time, currently displayed in the 'Available Time' window.

If you want to record this channel with the default settings, click the 'Apply' button.

If you want to record another channel, select the desired channel in 'Channel Name' window. (This will automatically change the default file name to this new channel).

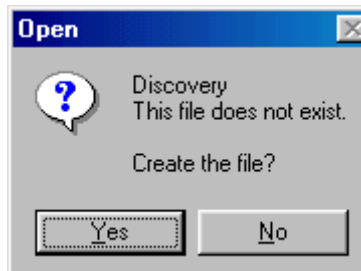
### Renaming Record File

If you want to change name of the file to be recorded, click the 'Create File' button, to bring up the 'Open' dialog box, where you can name the file, and select the directory to save the file in.



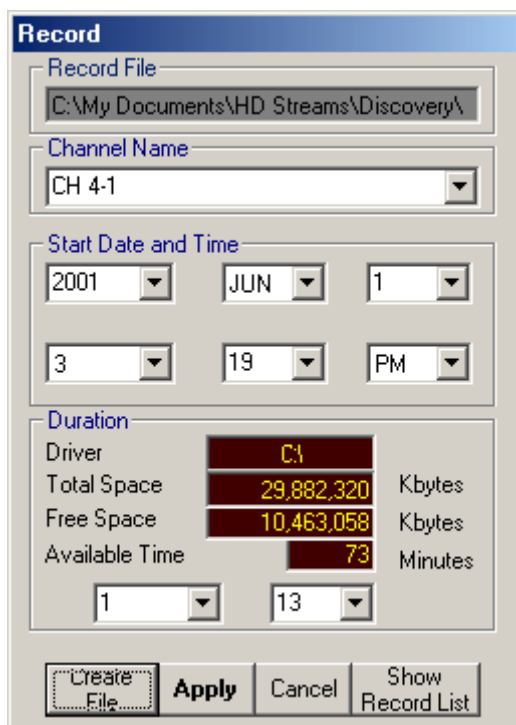
At the top of this dialog box, you can select the directory to where you want to save the recording file, by typing in the path, or navigating through your directory structure using standard Windows functions.

Enter the desired file name in the lower portion of this dialog box in the area labeled '**File name**'. Once you type in a file name, (in this example, a file named <Discovery>) click the 'Open' button, which will bring up a small window confirming that you want to create a new file.



If this is the file name you want, click the 'Yes' button.

When you click the 'Yes' button in the smaller 'Open' window, a second 'Open' dialog box will be displayed.



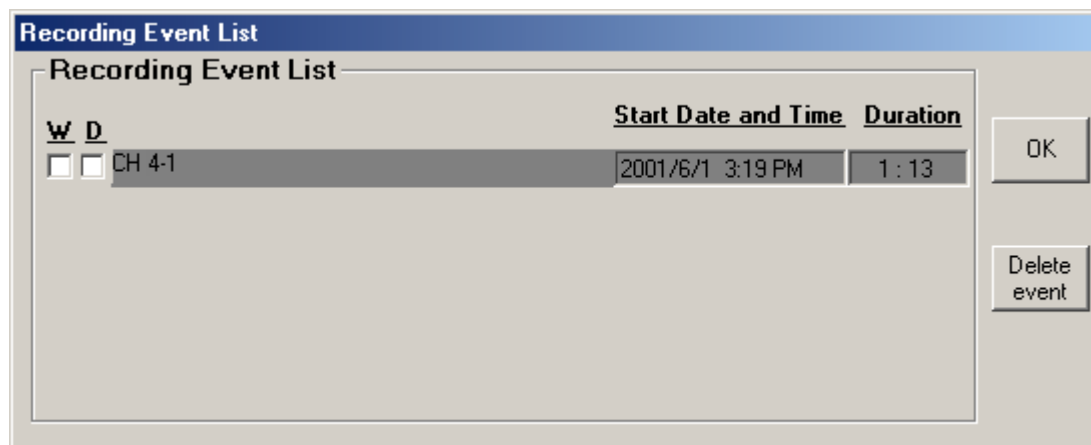
The 'Record' dialog box contains the following fields and controls:

- Record File:** A text field showing the path 'C:\My Documents\HD Streams\Discovery\'.
- Channel Name:** A dropdown menu showing 'CH 4-1'.
- Start Date and Time:**
  - Year: 2001, Month: JUN, Day: 1.
  - Hour: 3, Minute: 19, Period: PM.
- Duration:**
  - Driver: C:\
  - Total Space: 29,882,320 Kbytes
  - Free Space: 10,463,058 Kbytes
  - Available Time: 73 Minutes
  - Hours: 1, Minutes: 13.
- Buttons:** 'Create File...', 'Apply', 'Cancel', and 'Show Record List'.

In this window, you will now see the directory path and file name that you have selected, and the file name will be appended with 'ts', (creating a file named Discovery.ts, in this example).

At the bottom of this window, enter the number of hours and minutes that you want to record. (The total recording time available is displayed in the "Available time to record" just above this area).

Click the "Apply" button, then you can see the below window.



The 'Recording Event List' dialog box displays a table of recording events:

| <u>W</u>                 | <u>D</u>                 |        | <u>Start Date and Time</u> | <u>Duration</u> |
|--------------------------|--------------------------|--------|----------------------------|-----------------|
| <input type="checkbox"/> | <input type="checkbox"/> | CH 4-1 | 2001/6/1 3:19 PM           | 1 : 13          |

Buttons on the right: 'OK' and 'Delete event'.

If the 'W' (Weekly) or 'D' (Daily) checkbox on the left of the event listing is checked, the recording will occur at the same time each day or week (depending on which boxes are selected).

Click the "OK" button to begin recording. The Control Window will now display the recording status in the recording status area - the total number of minutes you have set to record will be displayed on the right, and the remaining time left to be recorded will be on the left.

### Pause recording

When recording is in progress, the 'Record' button changes to a 'Pause' ( || ) button, so that you can pause the recording if you wish. You can pause the recording in progress by clicking the pause button. This will temporarily stop the recording, and the button will change back to a 'Record' button.



While the recording is paused, the display changes from 'REC' to 'PAUSE', and the remaining available record time will also stop.

Pressing the 'Record' button will resume recording.



### How Recorded Program Files are Saved

When you save a file to be recorded, HiPix DTV-200 actually creates a directory with that name. During recording, a separate file will be created for each minute that is recorded. These files will be numbered sequentially, beginning with 0000 (<Discovery.ts.0000>), and increasing by 1 with each file ( 'Discovery.ts.0001', 'Discovery.ts.0002', 'Discovery.ts.0003', etc.). If you set HiPix DTV-200 to record for 10 minutes, it will actually create 10 individual files. All of these individual files will be in the directory that was created when you named the file to be saved.

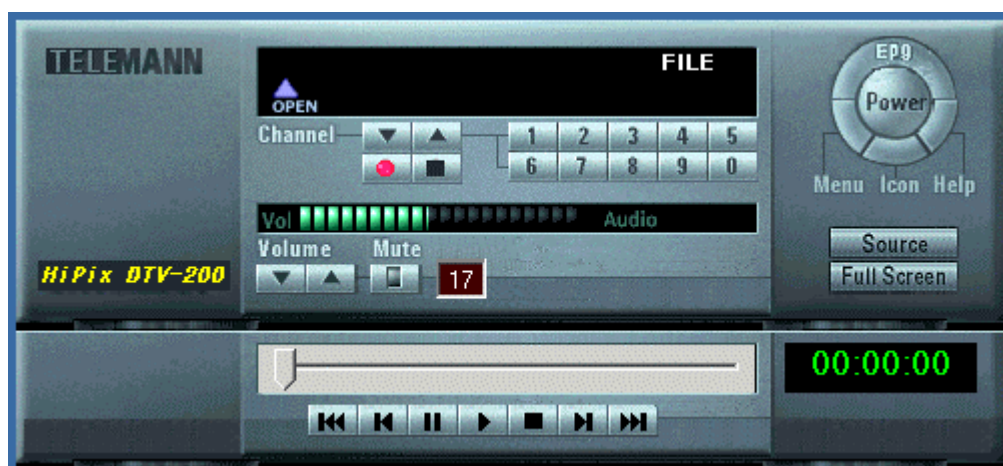
In addition to the individual recorded files, a '.pid' file will be created (<Discovery.ts.pid>, in this particular example). This file holds information about the individual files that are created during the recording process, and enables seamless playback of all the files in sequential order.

*(Note: because this file contains the file and playback information, it is important that you do not delete this file unless you intend to also delete all of the associated Program files that were recorded with it – that is, if you want to delete the entire Recorded Program file).*

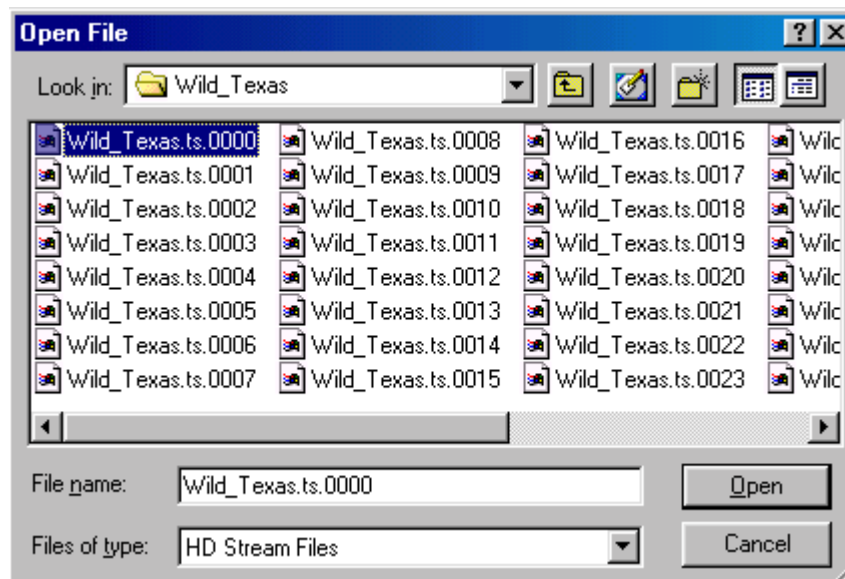
## Playing Back Recorded Programs

Files that have been recorded to your hard drive can be played back either from the beginning, or from any other point, at one minute intervals, of the recording ( you can begin playback at minute 1, or minute 4, or minute 10, etc).

To play back a Program that you have recorded, click the **'Source'** button on the HiPix DTV-200 Control Panel, and select **'FILE'** from the popup menu.

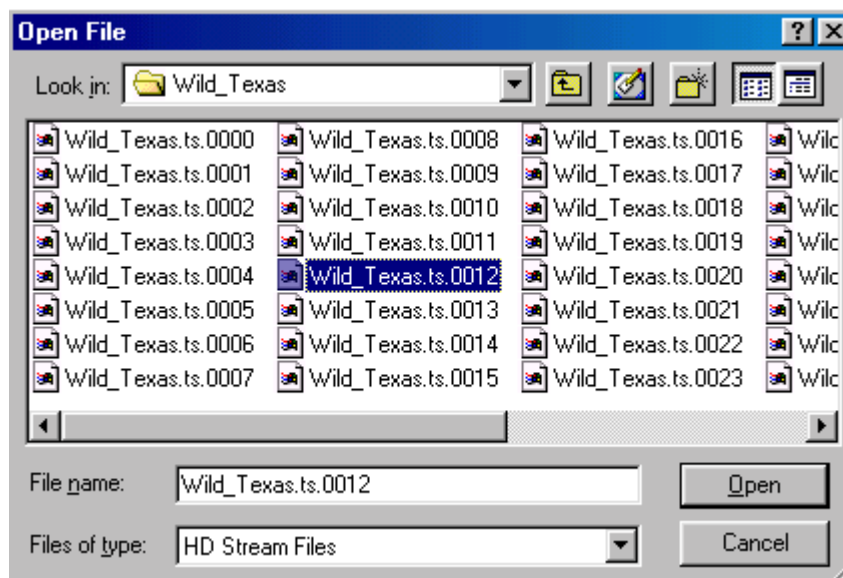


Click the **"OPEN"** button on the Control Panel. This will display an **'Open File'** dialog box.



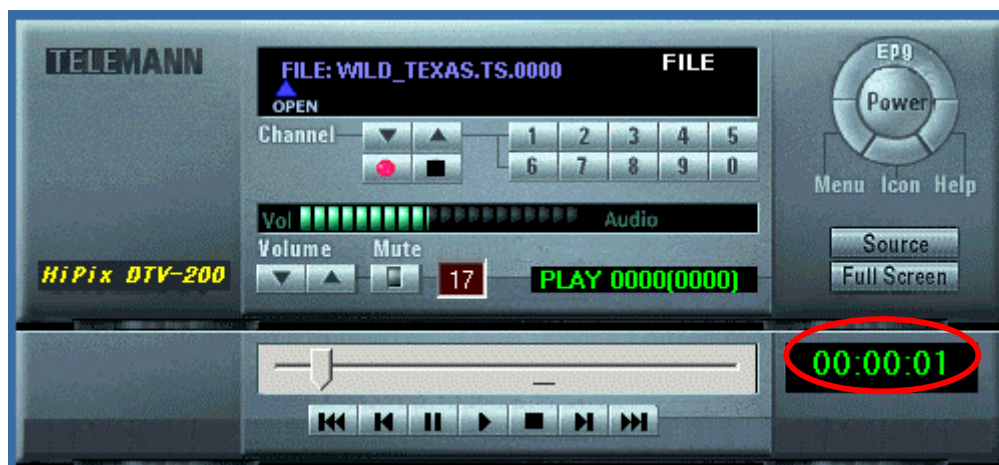
Navigate to the directory that you saved the Recorded Program file into, ('**Wild\_Texas**' in this example) and locate the desired file that you would like to begin viewing at. If you want to view the Recorded Program from the beginning, select the file that is appended with '.0000'. Selecting this file will begin playback at the beginning of the recording.

If you wish to begin viewing the program from a point other than the beginning, choose the desired file based on the number that is appended to the file. For example, to begin playback at minute 12, select the file that has '.0012' appended to it (<Wild\_Texas.ts.0012> in this example).



Once the desired file is selected, click the 'Open' button.

In the HiPix DTV-200 Control Window, you will see the file name displayed, and the current playing time for the file is displayed on the playback time window.

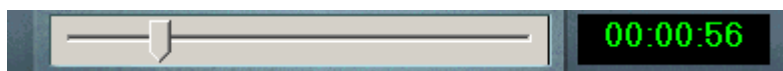


### Manipulating playback

During playback, you can pause and resume playback, and you can fast-forward and backup using the slider and jump buttons.

#### Slider

To use the slider, click and drag the slider arrow. As you drag the arrow, the playback start position (time) will be displayed in the playback time window. When you release the mouse button, viewing will begin at that time that is displayed in the window when you released the mouse button.



#### Using Jump Buttons

Jump back about 1 minute from current time:



Jump back about 15 seconds from current time:



Pause/Play/Stop



Jump forward about 15 seconds from current time:



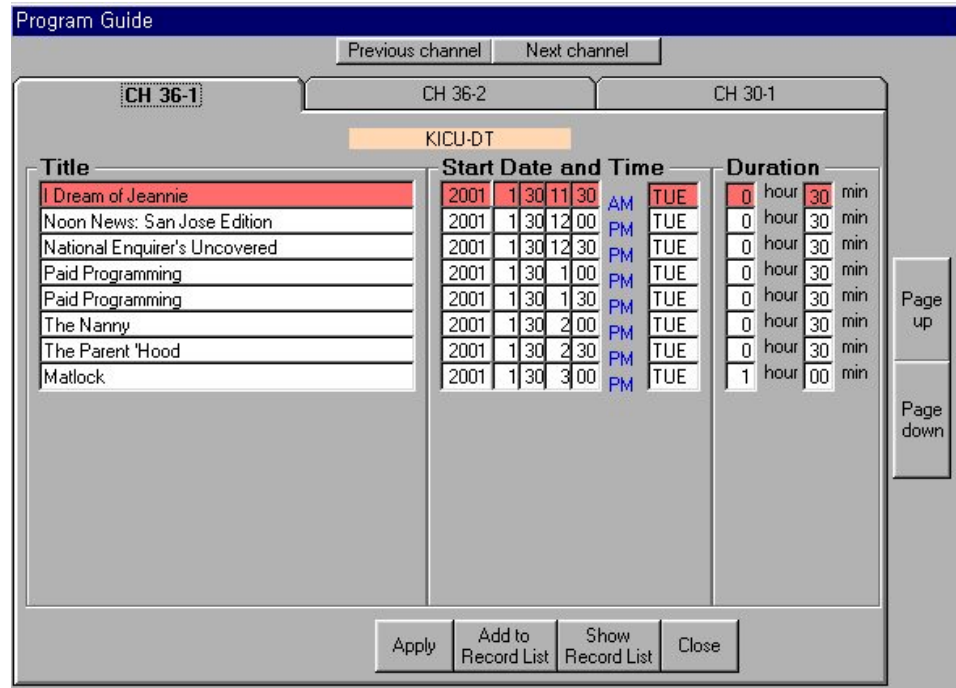
Jump forward about 1 minute from current time:



When playback of all files of the Recorded Program has been completed, or if you manually stop the playback with the ■ (Stop Button), the Control Panel will display 'STOP' in the Record/playback display section.

### Scheduled Recording (Using EPG data)

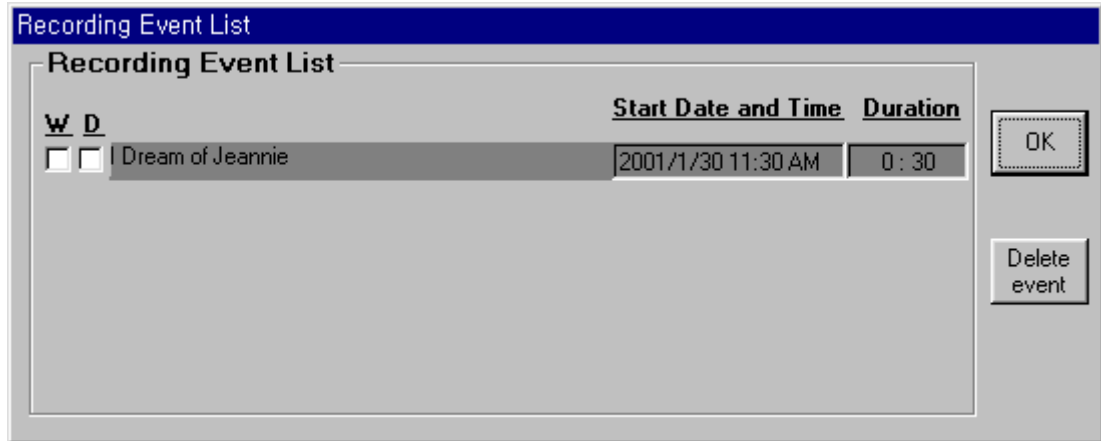
To record a digital broadcast directly on your PC hard drive, you need to locate the program in the EPG window first. (See **Electronic Program Guide** section above). Once you have located the desired program, click to highlight it, and click on the 'Add to record' button at the bottom of the EPG window.



This will bring up an '**Open record files**' dialog box. In this dialog box, navigate to the desired directory that you want to save the program file into, name the file, and click on the 'Open' button.



This will bring up the '**Recording event list**' window.



This window displays all of the programs that have been selected for recording. The list will display the program name, the start time, and it's duration.

#### Deleting an event

If you wish to delete a scheduled event from the recording event list, click the event to highlight it. With the event highlighted, click the **'Delete event'** button, the following dialog window will be displayed. Click 'Yes' to delete the event, click 'No' to leave the scheduled event unchanged.



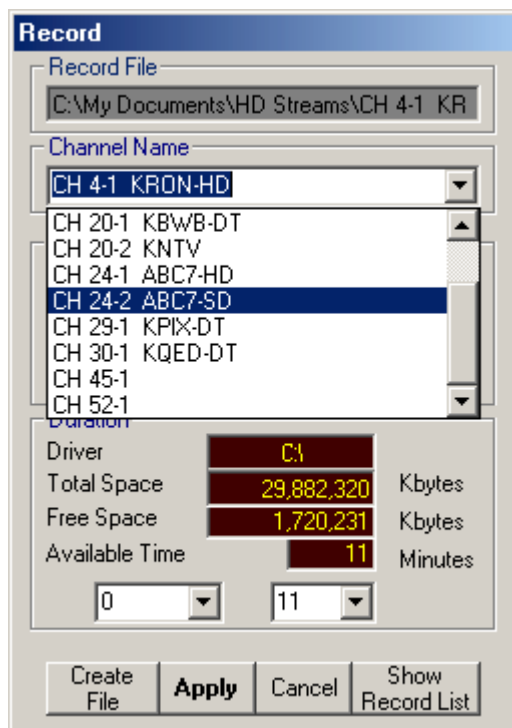
*Note: Any time you want to see the **'Recording event list'**, click **'Show record list'** button in the EPG window.*

If you wish to stop a recording while it's in progress, click on the ■ (Stop) button on the HiPix DTV-200 Control Window.

### Scheduled Event Recording (by setting channel, Day and Time to Record)

If there is no EPG data for the currently selected channel, you can record events by day and time. You can also record the channels which have EPG data by day and time.

When you click the **'Record'** button, the Record menu window will be displayed.



The selected channel will be displayed in the '**Channel Name**' box, enter the start date, time and duration, and click the '**Create File**' button to specify the file name and directory.

### MeerKat Application

Even if the HiPix DTV-200 application is not running at the time of a scheduled event recording, the recording list will be saved, and as long as the computer is powered on, the HiPix MeerKat application will be invoked.

The HiPix MeerKat application launches the HiPix DTV-200 application at the scheduled time, and the scheduled event will be recorded. (If the computer is in sleep mode, the MeerKat application will wake up the computer at the scheduled time).

The MeerKat icon will be displayed in the system tray as shown below, anytime the HiPix application is not running.



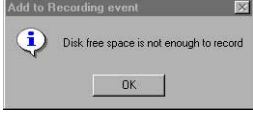
If you wish to see the recording events list, or make additions or changes to the Event Record list without launching the HiPix application, right-click on the MeerKat icon - this will bring up the Event Recording menu.

## Real-time Recording

The steps in the '**Scheduled Event Recording**' above are also used for recording currently broadcast signals.

### Recording Error Messages

You will get one of the following error message if you select a program to be recorded and one of the following conditions exists:

| Warning box                                                                       | Cause                                                                                                              | Solution                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | You have selected a program that is longer than your PC hard drive capacity can hold.                              | Delete files on hard drive to free up enough space to record the desired program.                                                                                                                                                                       |
|  | You are attempting to name a Record file with a name that already exists.                                          | Choose another file name.                                                                                                                                                                                                                               |
|  | You are attempting to schedule a program to be recorded at a time that you have already set record another program | You can only record one program at any given time – you must choose to either not record the program you are currently attempting to schedule, or delete the conflicting program from the Recording Event List, and then set the new program to record. |

## Remote Control

The HiPix DTV-200 comes with a remote control to allow you to control various listening and viewing functions remotely. If you have installed the Remote Control Module (See '**Connecting the Remote Control Receiver**' in the '**Hardware Installation**' section of this manual) you will be able to use the remote control, as described below.



- MUTE button: ..... Toggles sound muting from PC sound card and/or HiPix DTV-200 Expansion card (not of AC3 / Dolby 5.1 output).
- TV button: ..... This button toggles the display on your PC monitor between '**Full Screen**' and the standard PC signal. (This function is used when you are using one monitor, and need to switch the signal between the standard PC signal, and the signal from the HiPix DTV-200 board. (Loop Back mode). See '**Full Screen button**' description in the '**Control Panel Description and Functions**' area elsewhere in this manual).
- CH▲ and CH▼ buttons: ..... Changes the channel you are viewing
- ◀ VOL and VOL ▶ buttons: ..... Adjusts the volume level from PC sound card and/or HiPix DTV-200 Expansion card (not of AC3 / Dolby 5.1 output).
- i button: ..... Cycles through input signal sources. (See '**Source button**' description in the '**Control Panel Description and Functions**' section elsewhere in this manual).

## HotKey Control

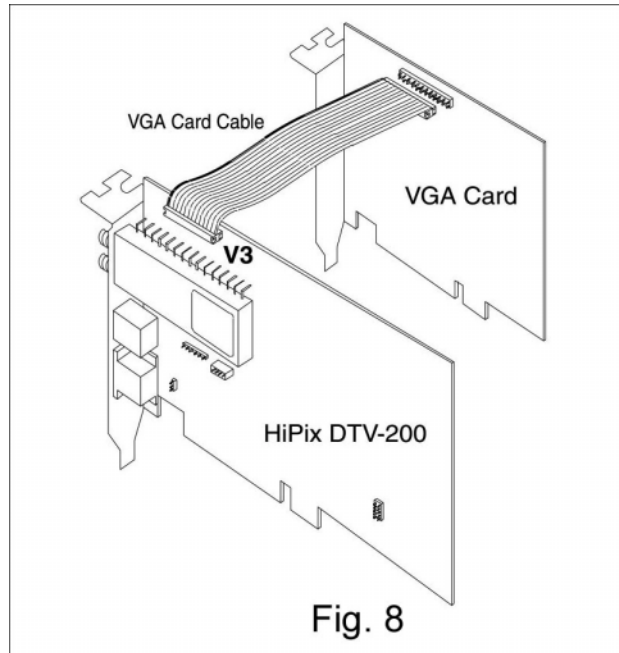
HiPix application is equipped with several Hotkey-functions. You can control and setup the HiPix Application using a standard or wireless keyboard with the following keys:

- ALT+R: Alternates between Record and Pause, (available only in ATSC mode).
  - ALT+S: STOP (available in Recording or File mode).
  - ALT+E: EPG (available in ATSC mode. Not available during recording).
  - ALT+H: Help
  - ALT+A: ATSC Changes the input source to ATSC.
  - ALT+N: NTSC Changes the input source to NTSC.
  - ALT+L: Line-in Changes the input source to Line-in.
  - ALT+V: S-Video Changes the input source to S-Video
  - ALT+M: Display Setup Menu.
- 
- f: Full Screen
  - u: Volume Up
  - d: Volume Down
  - m: Mute
  - +: Channel Up
  - : Channel Down

## **VIP Connection - Advanced Users Only -**

## VIP Connection – Advanced PC Users Only

The HiPix DTV-200 has a VIP1.1 interface for use with a PC graphics card that has a VIP 1.1 26 pin connector (see **Fig 8**) If your PC is equipped with such a graphics card, you can connect the HiPix DTV-200 via a 26 pin ribbon cable (not supplied) as shown.



This type of connection will allow you to view digital (ATSC) signals as a Picture within a Picture (PIP) on your PC monitor (in addition to viewing the same signal on an additional monitor or HD Ready TV, if you have connected such a display to your system. See '**Hardware Installation**' section elsewhere in this manual).

### Connecting the HiPix DTV-200 card to a VIP 1.1 Graphics Card

As shown in **Fig. 8** connect the VGA out terminal of HiPix DTV-200 card to the corresponding VIP 1.1 terminal of your VGA graphics card using a 26 pin VGA ribbon cable.

### Using Picture in Picture with HiPix DTV-200

#### General Configuration Setup

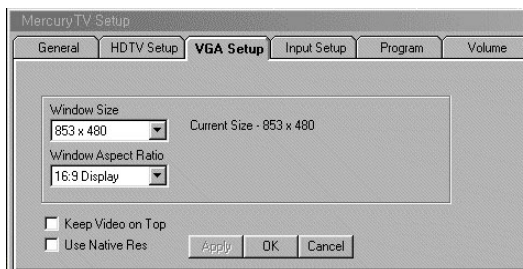
To view Picture in Picture (PIP), click on the '**Menu**' button on the HiPix DTV-200 Control Window



This will bring up the HiPix DTV-200 Setup window. There are two areas that you will need to set – '**VGA Setup**', and '**General**' setup.

**VGA Setup**

Click on the '**VGA Setup**' tab.



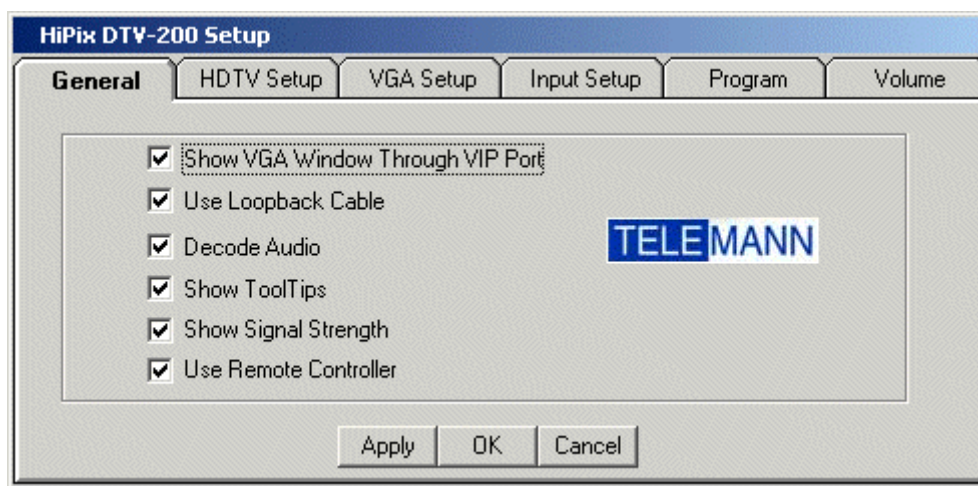
This window will allow you to set the window size and aspect ratio of the PIP window that will appear on your PC monitor when you select PIP.

There are 4 aspect ratios available, each in several sizes, as shown in the chart below

| Aspect Ratio | Sizes   |         |         |          |
|--------------|---------|---------|---------|----------|
| 4:3          | 320x240 | 640x480 | 800x600 | 1024x768 |
| 3:2          | 360x240 | 720x480 | 900x600 |          |
| 16:9         | 427x240 | 853x480 |         |          |
| 1:1 (Square) | 240x240 | 480x480 | 600x600 | 768x768  |

**General Settings – Viewing Picture in Picture (PIP)**

Once you have set the size of the PIP window you want to display on your monitor, (described above) click on the '**General**' tab.



Check the '**Show VGA Window Through VIP Port**', then click on '**Apply**' or '**OK**' to see the Picture in Picture window pop up on your PC monitor.

## Upgrading HiPix DTV-200 Software

You should always be sure to have the latest version of the HiPix DTV-200 driver and application software loaded onto your PC. You can determine the version of your HiPix DTV-200 software by launching the HiPix DTV-200 software, and clicking on the **'Help'** button on the HiPix Control Panel.

You can check for the latest HiPix DTV-200 driver and application software on the Global Telemann Systems, Inc. web site. Go to

<http://www.Telemann.com>

and go to the **'Downloads'** section. There you will see the latest versions of the software. If the version of the software on the Telemann web site is newer (higher rev. number) than what you currently have loaded on your PC, download and install the latest versions by following the instructions in the download section of the Telemann web site.

*Note: Please read the up-grade instructions on the web site carefully before proceeding with any software downloads or installations.*