

Cat's Eye USB 3560 HDTV Tuner
Installation Guide – Version 4.1



VBox Communications Ltd.

www.vboxcomm.com

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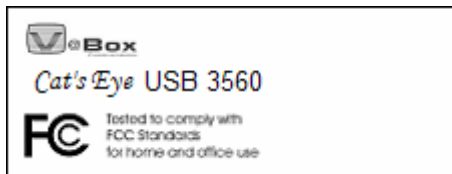
Federal Communications Commission Radio Frequency Interference Statement

WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has 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 if not installed and used in accordance with the instruction manual, may 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 interference to radio or television equipment 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 equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.
- Use a shielded and properly grounded I/O cable and power cable to ensure compliance of this unit to the specified limits of the rules.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.



Canadian Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Introduction

VBox Communications is proud to introduce to you the *Cat's Eye* USB 3560 HDTV Tuner. This is a Plug & Play device with USB 2.0 interface that enables reception of data and video ATSC terrestrial broadcasts into your PC. The unit's unique and compact design ensures its operation even in small spaces, while providing an aesthetic appearance that modernizes your whole computer environment. The *Cat's Eye* USB 3560 offers you a whole new world of possibilities for clear reception into your own PC of HDTV, Internet, and data and video ATSC Terrestrial broadcasts.

The *Cat's Eye* USB 3560 Tuner operates under all versions of the Windows XP operating system. It requires the use of an additional multimedia application for watching and handling the received HDTV (free TV) ATSC broadcasts on the computer.

This Installation Guide leads you through the installation of *Cat's Eye* USB 3560 HDTV Tuner and its drivers. It comprises the following information:

- Section 1, *Overview* – Offers a brief description of the *Cat's Eye* USB 3560 HDTV Tuner
- Section 2, *Installation Checklist* – Reviews the contents of the *Cat's Eye* USB 3560 package as well as other software and hardware requirements for installation.
- Section 3, *Connecting the Hardware* - Guides you through the steps for connecting the unit to your computer.
- Section 4, *Installing the Hardware Drivers* – Offers step-by-step instructions for installing the tuner's drivers.
- Section 5, *Watching HDTV Broadcasts* – Provides information about multimedia applications for watching and managing HDTV broadcasts through your computer.
- Section 6, *Troubleshooting* – Refers to common possible problems during installation and operation of the unit and to their solution.
- Section 7, *Contact Information* – Provides useful contact information regarding sales and support.

We recommend that you read this manual carefully to ensure proper installation and operation of the tuner and to enjoy to the utmost the new capabilities it adds to your PC.

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1. Overview

The *Cat's Eye* USB 3560 is an ATSC Terrestrial HDTV tuner for reception of ATSC video, audio, and IP data. It is capable of receiving information at the full data rate of an ATSC channel and up to 19.28 Mbps. The desired data streams are captured and forwarded to the PC through the USB 2.0 port at data rates of up to 480 Mbps. Conforming to ATSC standards, the *Cat's Eye* USB 3560 provides the flexibility and performance needed for Internet and data broadcasting applications.

The *Cat's Eye* USB 3560 combines easy PC connectivity (through a USB cable) with support for ATSC audio, video, and data broadcasting. In addition, it is designed to allow interoperability across numerous open-network DVB-based system architectures. These characteristics, together with the unit's compact design, ensure its optimal integration into the user's workspace and enhanced performance.

This document contains instructions and information relevant to the installation of *Cat's Eye* USB 3560 HDTV Tuner under the Windows XP SP2 platform. The screens presented here are for illustration purposes only. Installation under other Windows XP platforms may vary slightly.

For additional installation instructions and recommendations regarding Windows XP Media Center Edition 2005 with HDTV, read the "Read me for Update 1 for Windows XP Media Center Edition 2005 with HDTV" at the Microsoft Beta Website.

1.1 System Description



Picture 1: *Cat's Eye* USB 3560 - Side View

The *Cat's Eye* USB 3560 HDTV Tuner, shown in Picture 1 above, has an innovative design that ensures easy and comfortable use while modernizing the appearance of your computer environment. It includes an interlocking stand that allows it to remain upright or lie down on a flat surface. The unit's external connectors are located on its rear panel, and its LED indicators show in the front panel. Detailed explanations of both follow below.

1.2 Front Panel



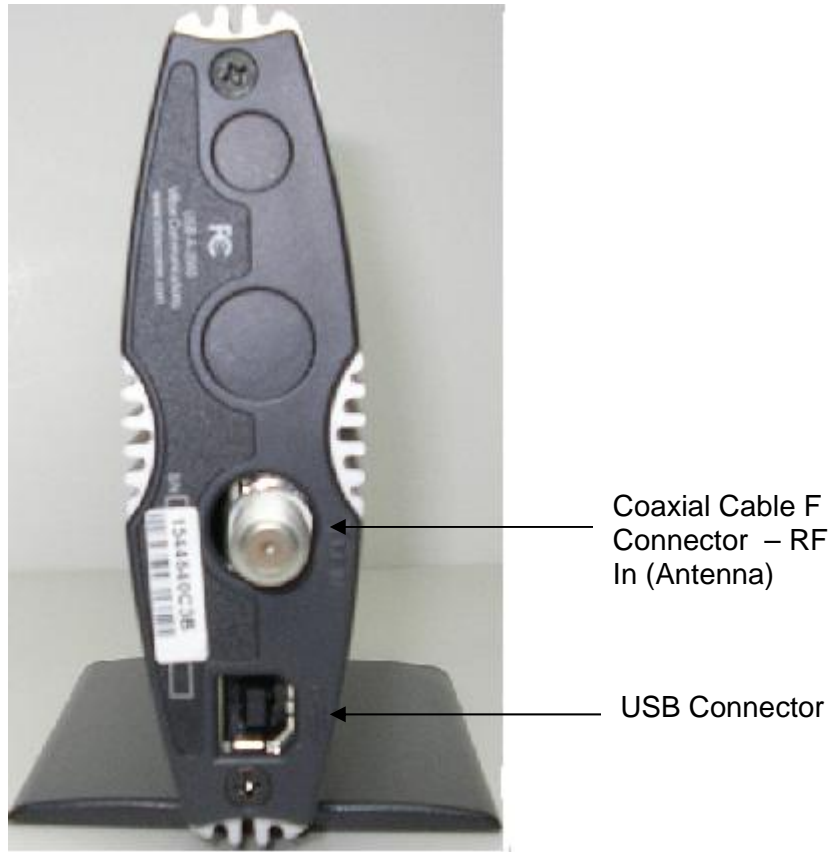
Picture 2: *Cat's Eye* USB 3560 - Front Panel

The LED panel of the *Cat's Eye* USB 3560 is located in the unit's front, as shown in Picture 2. Table 1 below provides a brief description of the LED activity and its significance. Refer to it while installing the device and initializing its operation, as explained in the following sections.

Table 1. LED Description

Description	Yellow LED (Power)	Green LED (Signal Lock)
The computer is on; the <i>Cat's Eye</i> USB 3560 device is connected to the computer	On	Off
The <i>Cat's Eye</i> USB 3560 firmware waits for first contact from host	On	Blinking
The <i>Cat's Eye</i> USB 3560 firmware starts operating but the signal is still not locked	On	Off
The <i>Cat's Eye</i> USB 3560 driver is loaded, the signal is locked	On	On

1.3 Rear Panel



Picture 3: *Cat's Eye* USB 3560 - Rear Panel

Picture 3 shows the rear panel configuration of the *Cat's Eye* USB 3560 unit. This panel includes connectors to the antenna feed (RF-In) and to the USB 2.0 port

For instructions on connecting the unit to your computer, refer to Section 3, *Connecting the Hardware*.

2. Installation Checklist

2.1 *Cat's Eye* USB 3560 Kit Checklist

The following items are included in the *Cat's Eye* USB 3560 kit. Make sure they are readily available to you at the time of installation.

- *Cat's Eye* USB 3560 HDTV Tuner + stand
- USB-2 cable to connect the unit to the computer
- Installation CD-ROM (including BDA drivers for the hardware and this Installation Guide)
- Quick Installation Guide

2.2 Minimum System Requirements

- Intel Pentium® IV processor, 1.6 GHz
- 128 MB RAM
- Free USB 2.0 High Speed port, enabled
- Audio card, compliant with Microsoft DirectX 9.0c
- Graphics card, 32 MB RAM
- CD-ROM drive
- Windows XP operating system
- Microsoft DirectX 9.0 c and all other relevant critical and recommended updates from the Windows Update site
- Multimedia application with MPEG-2 decoder (see Section 5 below)

2.3 Additional Requirements

- VHF/UHF external antenna (installed and enabled) supporting over-the-air local HDTV signals, with coaxial cable ending in F connector.
Remark: There are several types of antennae capable of High Definition reception. You should take into consideration the distance between your location and the broadcast source, the direction of the broadcasts, and the terrain between you and the source. Please note also that pairing certain external antennas with a signal amplifier may increase the number of over-the-air local HDTV channels

received. Check with the antenna manufacturer for recommendations in this respect.


The Internet offers several sites in which you can check for the most suitable types of antennae for HDTV reception according to your location, such as:

www.checkhd.com/buyersguide/antennas/installationguide.aspx (for PCs located within US territory).


- Free space on hard disk, as per the instructions of the multimedia application's manufacturer (40 GB recommended for comfortable downloading and watching of full-length movies).


3. Connecting the Hardware


Follow the instructions below to connect the *Cat's Eye* USB 3560 HDTV Tuner unit to your computer. For your safety, we recommend that you read them carefully and thoroughly before connecting the unit. If you do not feel comfortable with the process detailed below, we recommend you consult a qualified computer technician.


	Note: VBox Communications, Ltd. assumes no liability for any damage caused directly or indirectly due to improper installation or use of the unit or any of its components.
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Please pay special attention to the following recommended precautions:

	Caution: Make sure to discharge any static charge that may have accumulated in your body before undertaking a hardware-related operation. You can do so by touching any metal-grounded surface.
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	Caution: To avoid the risk of electric shock and fire, make sure that your computer is always grounded when connected to a power source.
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	Caution: To protect yourself and your computer against voltage surges and built-up static charges originating in the antenna or the cable system, make sure that both are properly grounded at all times. Also, make sure that the antenna is installed in an open space, far from power lines or other light and power circuits.
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	Caution: Handle the <i>Cat's Eye</i> USB 3560 HDTV Tuner and the PC carefully in order to avoid injury. Avoid damaging wires or using damaged wires to prevent a short circuit.
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1. Verify that the computer's designated USB 2.0 port is enabled. To do so, right-click the **My Computer** icon and select **Properties > Hardware > Device Manager**. The Device Manager window displays a list of operational devices installed on your computer. Access the "**Universal Serial Bus Controller**" item heading to check the operational USB ports.

If the Universal Serial Bus controllers (USB) are not listed, reboot your computer, enter the CMOS setup (BIOS), and enable the USB port(s). Refer to your computer's documentation for instructions.

2. Connect the antenna feed (coaxial cable) to the unit's RF-In connector and to the antenna.
3. Connect the flat end of the USB-2 cable to the designated USB 2.0 port on the PC.

4. Connect the square end of the USB-2 cable to the corresponding connector on the unit. The yellow LED indicator lights up as the unit starts to function. Windows detects a new hardware device and launches the *Found New Hardware* wizard. Follow the instructions in the next section to install the tuner's drivers.

4. Installing the Hardware Drivers



Note: Remove all previous versions of the *Cat's Eye* USB 3560 drivers existing in your computer before installing the current ones. Refer to Section 6, *Troubleshooting*, for instructions on removal of the drivers.

The *Cat's Eye* USB 3560 drivers can be installed either from the Installation CD-ROM included in the kit or from VBox's FTP site (www.vboxcomm.com). Installation from the FTP site requires prior downloading of the updated driver package onto your hard disk. Make sure to follow the instructions corresponding to your chosen driver source.

1. Upon connecting the unit to the USB 2.0 port in your computer, Windows detects a new hardware and activates the *Found New Hardware* wizard. The following window displays. Select the "**No, not this time**" option. Click **Next** to proceed with the installation of the BDA driver loader. Figure 3 displays on screen.



Figure 1: Found New Hardware Wizard

2. If you wish to use the Installation CD-ROM as the source for the drivers, insert it into the computer's CD-ROM drive. The CD-ROM's *Opening Menu* shows on screen. Click **Minimize** to return to Windows' installation wizard.



Figure 2: Installation CD-ROM's Opening Menu

3. Select "**Install from a list or specific location (Advanced)**" and click **Next**. The *Search and Install Options* window appears.

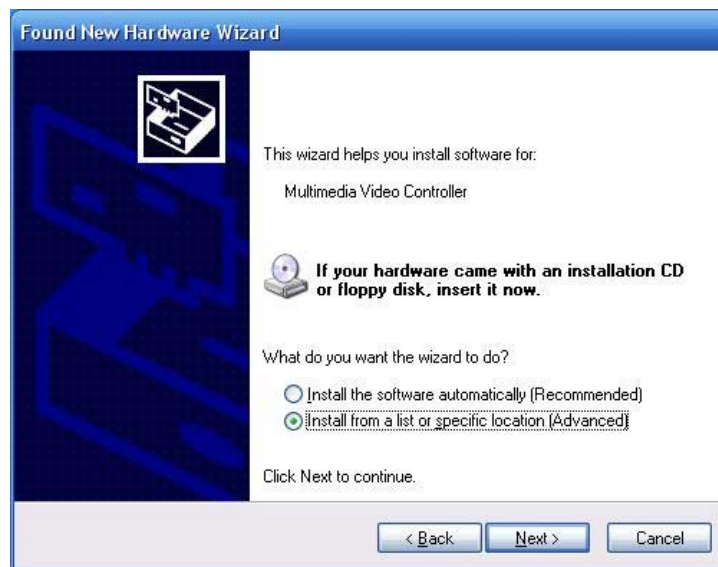


Figure 3: Installation Mode Options for BDA Driver Loader

4. a. **Installing the BDA driver loader from the CD-ROM:** select the “**Search for the best driver in these locations**” and the “**Search removable media (floppy, CD-ROM...)**” options. Click **Next**. The wizard looks for the corresponding files in the Installation CD-ROM and proceeds to install the driver loader.

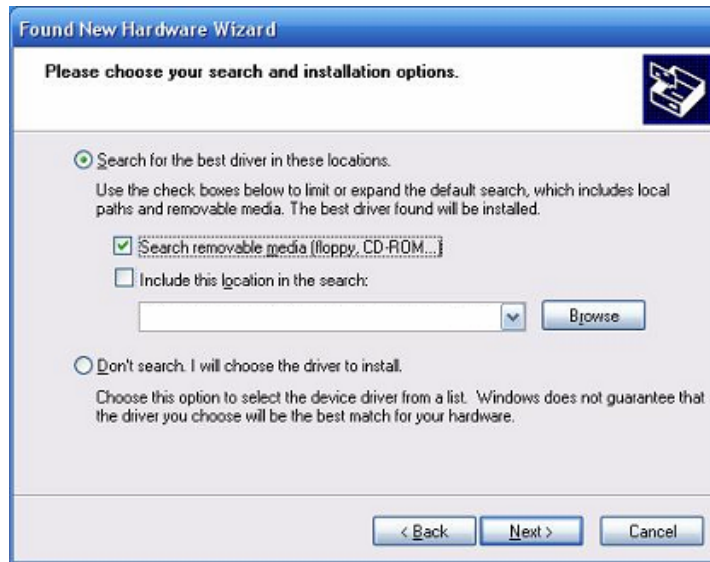


Figure 4: Search and Install Options – Installation from CD-ROM

- b. **Installing the BDA driver loader from the FTP Site:** this mode requires previous downloading of the updated drivers from the FTP source onto a designated location in your computer. To install the BDA driver loader from the downloaded package, select the “**Search for the best driver in these locations**” option. Check the “**Include this location in the search:**” box and click **Browse**. Select the path to the updated driver in the directory displayed in the drop-down list field (the path in Figure 5 below is for illustration purposes only). Click **Next** to continue. The wizard proceeds to install the driver loader from the selected location.



Figure 5: Search and Install Options – Installation from Downloaded Package

5. Click **Finish** in the following screen to complete the installation of the BDA driver loader. The wizard prepares for the installation of the BDA Tuner driver.



Figure 6: Completing the Installation of the BDA Driver Loader

6. The *Found New Hardware* window (Figure 1) displays again. Select the “**No, not this time**” option. Click **Next** to proceed with the installation of the BDA driver. The wizard asks you for instructions regarding the desired mode of installation.
7. Select “**Install the software automatically (Recommended)**” and click **Next**. The wizard proceeds to install the appropriate drivers.



Figure 7: Installation Mode Instructions for BDA Driver

8. When installation of the BDA driver is completed, the following window appears. Click **Finish**. The wizard prepares the installation of the BDA Tuner.



Figure 8: Completing the Installation of the BDA Driver

9. Figure 1 displays again. Select the “**No, not this time**” option. Click **Next** to proceed with the installation of the BDA Tuner driver. The wizard asks you for the desired mode of installation.
10. Select “**Install the software automatically (Recommended)**” and click **Next**. The wizard proceeds to install the appropriate drivers.



Figure 9: Installation Mode Instructions for BDA Tuner

11. Upon finishing the installation of the BDA Tuner driver, the following window appears. Click **Finish**. This concludes the installation of the drivers for the *Cat's Eye* USB 3560 HDTV Tuner. Proceed to configure the multimedia application of your choice to work with this tuner.

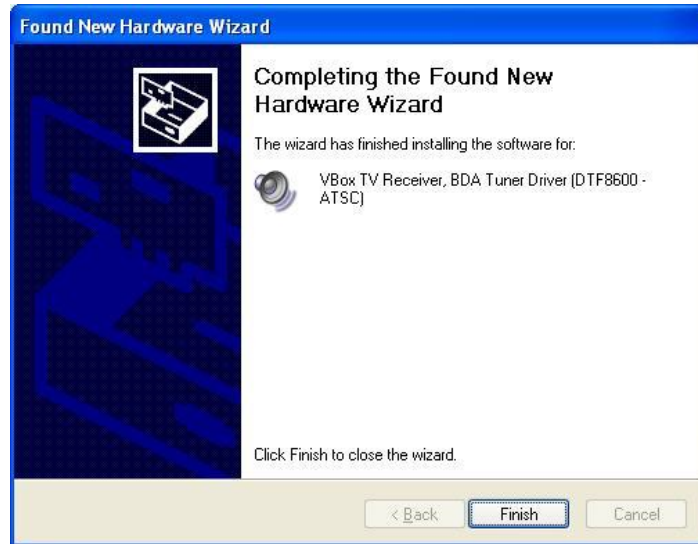


Figure 10: Completing the Installation of the BDA Tuner Driver

5. Watching HDTV Broadcasts

The *Cat's Eye* USB 3560 Tuner enables you to receive HDTV broadcasts directly into your computer. To watch these broadcasts, you need to install and run an additional multimedia application specially designed for this purpose. Some of these applications may also allow you to record and playback the received broadcasts. An example of such applications is SnapStream, Inc.'s Beyond TV[®] 3 Trial – available at www.snapstream.com/download/beyondtv/default.asp.

VBox's USB HDTV Tuner works also with Windows XP Media Center Edition 2005. VBox offers a specific *Cat's Eye* USB 3560 HDTV Tuner package for this system. For further information, please contact VBox Communications at www.vboxcomm.com.



Note: Check that the minimum system requirements for each application, as per manufacturer's notice, are compatible with your system. Make sure that you configure the applications to work with the *Cat's Eye* USB 3560 HDTV Tuner.

6. Troubleshooting

The *Cat's Eye* USB 3560 HDTV Tuner is designed to work smoothly under most normal conditions. However, in the event that you experience some trouble with this device, proceed as follows:

6.1 Basic Troubleshooting

1. Check that the USB 2.0 and antenna connections are properly established at both ends.
2. Check the installation of the tuner's drivers:
 - a. Access the *Device Manager* window. Right-click the **My Computer** icon, and do either of the following:
 - Click "**Manage**". The *Computer Management* window shows. Select "**Device Manager**". The *Device Manager* window appears, displaying a list of all hardware devices installed on the computer. Or
 - Click "**Properties**". The *System Properties* window displays. Access the **Hardware** tab and click the **Device Manager** button. The *Device Manager* window displays.
 - b. Scroll through the Device Manager list until you reach the **Sound, Video and Game Controllers** menu. Click the + icon on its left to open it. Look for the "**VBox 3560 USB2 Receiver, BDA Driver**" and the "**VBox TV Receiver, BDA Tuner Driver (DTF8600-ATSC)**" items. In case there is a problem with any of the tuner's components, one of the following symbols displays besides the item:
 - A yellow question mark denotes a problem with the connection of the device to the computer, or with the operation of the drivers or their recognition by the operating system
 - A red "X" indicates a device failure or the operating system being ordered not to use the device.

In either case, it is recommended that you remove and re-install the drivers.

- c. To uninstall a driver, right-click the relevant item on the list and select "**Uninstall**". A dialog box asks you to confirm your request. Click **OK** to continue. The system removes the driver and displays the list of hardware devices without it. Repeat the process for the second driver.
- d. To renew operation of the *Cat's Eye* USB 3560 tuner, re-start your computer and install the hardware drivers again, as per the instructions in this document.

3. Check that your system complies with the minimum requirements for operating the *Cat's Eye* USB 3560 Tuner. To check your system configuration, proceed as follows:
 - a. Press **Start** and select "**Run**". The Run window appears
 - b. Type "DXDIAG" and click **OK**. A dialog box displays on screen, asking you to confirm whether you wish the program to check for WHQL digital signatures. Click **Yes**. The DirectX Diagnostic Tool window appears. The program starts checking your computer. A progress indicator on the lower left-hand section of the window lets you monitor the operation.

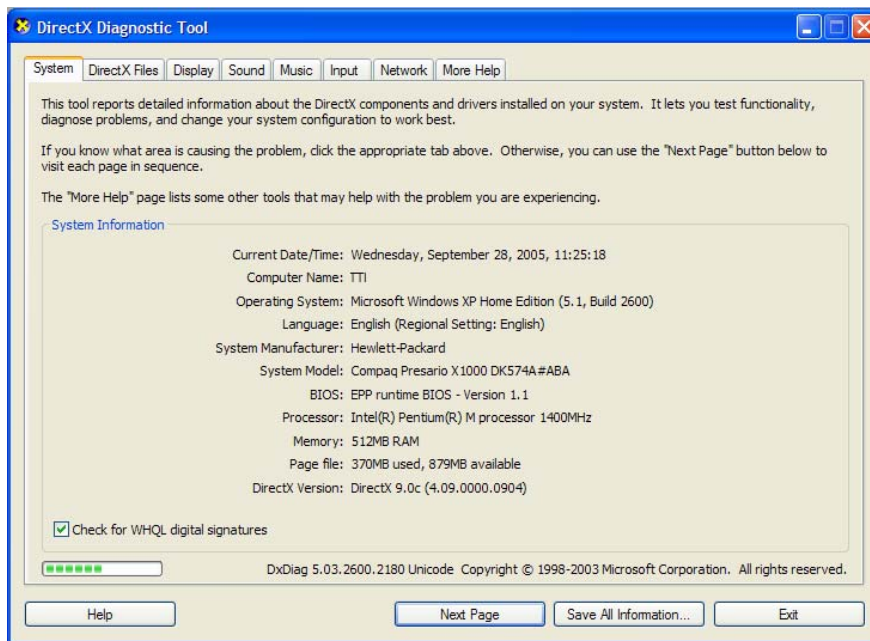


Figure 11: System Configuration Diagnostics

- c. At completion of the diagnostics operation, the progress indicator disappears. The DirectX Diagnostic Tool window shows your computer's system data. Press the **Save All Information** button to generate a text file with the information. A message indicates that the program is collecting information for saving.
- d. Upon finishing collecting information, the Save As window displays on the screen. Choose a known location in your computer to save the file and press **Save**. The Save As window disappears and you return to the DirectX Diagnostic Tool window. Press **Exit** to close this window.
- e. Check the file and verify that your computer fulfills all minimum requirement for the operation of the *Cat's Eye* USB 3560 HDTV tuner. In case you wish to consult with VBox Communications Ltd., please e-mail this file to the Support department together with your query.

6.2 Advanced Troubleshooting

Video film does not display smoothly (“jerking” image):

1. Make sure that you are using a USB-2 cable to connect the device to the computer.
2. Make sure that the device is connected to a USB 2.0 High Speed port in your computer. Verify that the CPU Chipset’s drivers correspond to this requirement.
3. Make sure that you are using a suitable graphics card, preferably the latest generation of nVidia® or ATI® products.
4. Update the drivers of the graphics card to the latest available at the manufacturer’s site
5. Perform a full-system virus and ad-ware/spyware scan and hard-disk defragmentation
6. Lower the resolution or color depth of your computer monitor via the *Settings* tab under **Control Panel** > **“Appearance and Themes”** > **“Display”**.
7. Adjust your screen refresh rate in **Control Panel** > **“Appearance and Themes”** > **“Display”** > *Settings* > **Advanced** > *Monitor*.
8. Use an nVidia® Ver. 2 MPEG 2 decoder or a more advance version of this product.

Signal quality is not satisfactory:

1. The *Cat’s Eye* USB 3560 device receives all its power input from the USB 2.0 High Speed port in your computer. It is possible that insufficient power supply causes unsatisfactory signal quality. To verify and correct this situation, proceed as follows:
 - a. Connect the *Cat’s Eye* USB 3560 device to another USB 2.0 High Speed port on your computer. Compare the signal quality received on each port. Leave the device connected to the port in which a better signal is produced.
 - b. If connecting the device to each of your USB 2.0 ports results in zero or poor signal quality and/or lack of video image, use a USB 2.0 Hub with an external power source to connect the device to the computer.
2. If, after verifying a correct power transfer to the device, the signal is too weak, use VBox’s SignalMeter utility (included in the Installation CD-ROM’s *Utilities* folder) to align the antenna according to the maximum signal strength measured.
3. If the signal is too strong, it is recommended for you to consider the following alternatives:
 - Use the VBox SignalMeter utility to align the antenna according to the maximum signal quality measured.
 - Use an attenuator between the antenna and the tuner.
 - Reduce the amplification, in case you use an antenna with regulated amplifier.

7. Contact Information

For issues related to the *Cat's Eye* USB 3560 HDTV Tuner, please contact VBox Communications Ltd. as per the following information:

VBox Communications USA

Marketing

Phone: + 1 (877) 261-3442

Technical Support

Support: support@vboxcomm.com

Drivers: www.vboxcomm.com/vbox/USB2-3560_BDADrivers_2.1.705.7-XP_logo.zip