



DVB-PC TV Stars

User's Guide

DVB Viewer TE2

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Chapter 1: Introduction

Using printed help

User's guide conventions

For clarity, the User's Guide employs the following conventions:

1. Navigation paths are represented as follows:

"Start" => "Programs" => "DVBViewer TE2" => "DVBViewer TE2"

The path shown in this example launches DVBViewer TE2

2. Pay attention to the following:



This icon designates a note, which is important information about the description above.



This icon designates a warning, which is important information about the description above.

3. The DVB-PC TV Stars TV application "DVBViewer TechniSat Edition Version 2" is designated in the following as "DVBViewer TE2"

Chapter 2: Watch TV with DVBViewer TE2

Summary

This chapter is divided into three parts. In the first part, the DVBViewer TE2 GUI (graphical user interface) and the main functionalities are introduced. In the second part, the more advanced features like the EPG or the PVR are described. The third part shows, how to use the DVBViewer TE2 in combination with your keyboard, mouse or the available TechniSat remote control.



This chapter requires a correctly configured channel list. If you are using ASTRA 19.2°E or Eutelsat Hotbird 13.0°E, the DVBViewer TE2 is already set up. If you use another satellite you have to add this to your channel list first before trying to receive a channel. Read chapter 4 for managing your channel list first.

Configure the attached remote control

For setting configuring your remote please start DVBViewer TE2 and open the “Remote” tab (DVBViewer TE2 -> Settings -> Remote)

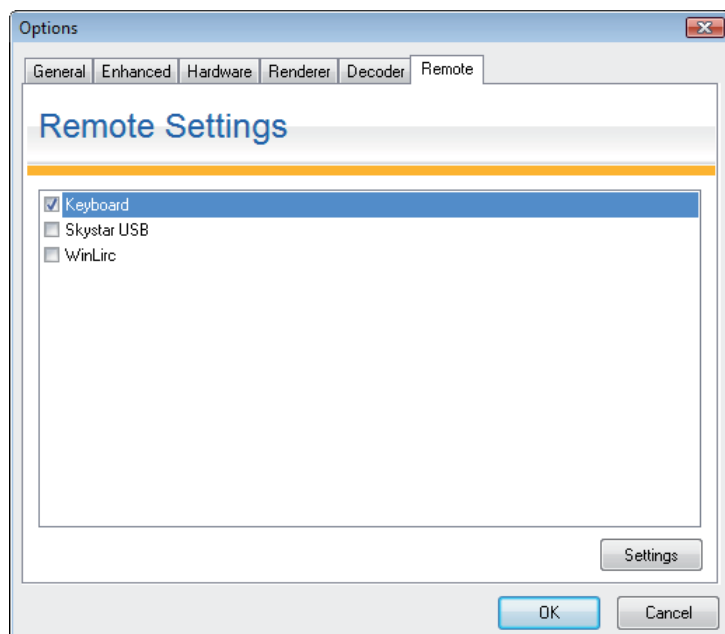


Figure 2.01: opening remote control settings tab within DVBViewer TE2

Configure your keyboard shortcuts or an HID remote control

This option is used for configuring your keyboard shortcuts and HID remote controls (like the USB IR receiver, the 3.5mm jack of the SkyStar HD2/CableStar HD2 and the build in IR receiver of the SkyStar USB 2 HD CI and CableStar USB Combo box).

It is always enabled and cannot be unchecked. You can replace the default shortcuts by assigning functions to your individual keys. Therefore please select “Keyboard” and press the “Settings” button, which opens the “Input Editor” dialog. For assigning new keyboard shortcuts you have to switch to the learning mode by pressing the “Learn” button.

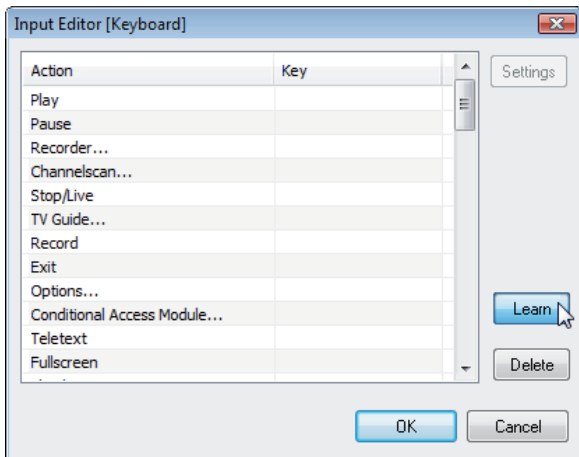


Figure 2.02: Remote control settings -> input editor (keyboard)

Now just select the function you intend to assign and press the corresponding key on your keyboard or remote control.

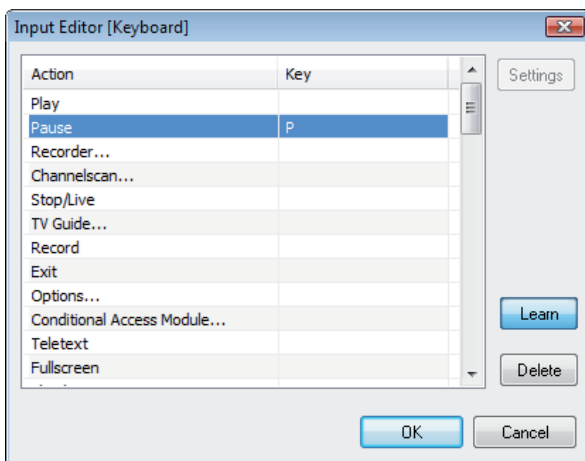


Figure 2.03: Remote control settings -> new shortcut assigned

For deleting a previous assigned shortcut please switch to learning mode and select the entry you want to remove. By pressing the “Delete” button this assignment will be deleted:

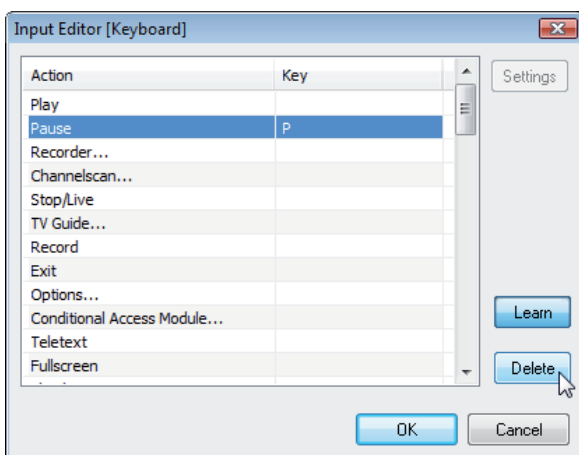


Figure 2.04: Remote control settings -> remove a shortcut

Configure COM Port IR Receiver / WinLIRC

If you want to use the TechniSat COM-Port IR receiver, you have to enable the entry “WinLirc” within the remote control settings tab:

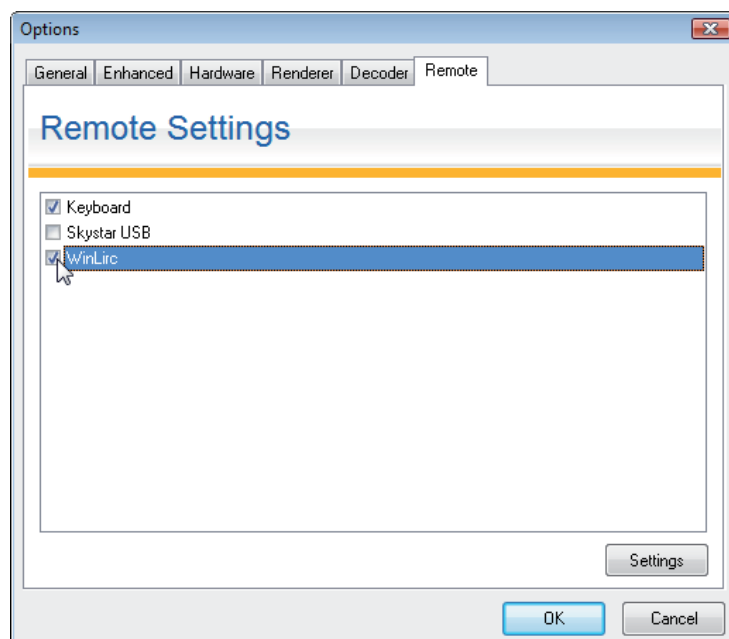


Figure 2.05: opening remote control settings tab within DVBViewer TE2

When WinLIRC is started for the first time the “Windows Security Alert” dialog might appear. You have to allow WinLIRC to open a connection by clicking the button “Unblock”.

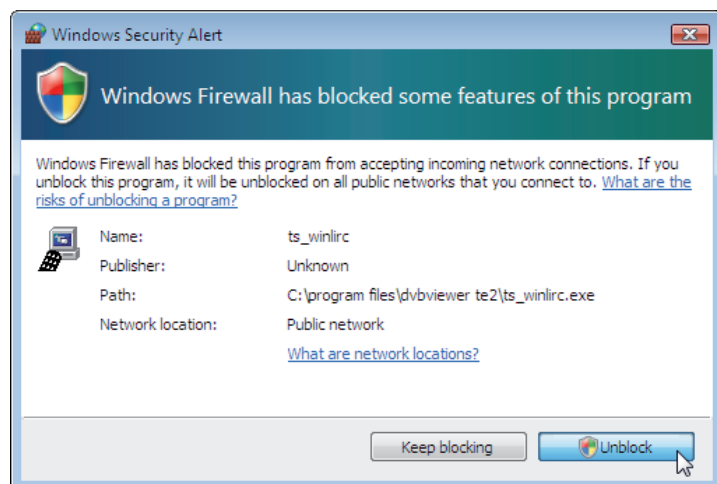


Figure 2.06: Windows Firewall

Now you have to configure the WinLIRC application

The following error message might appear:

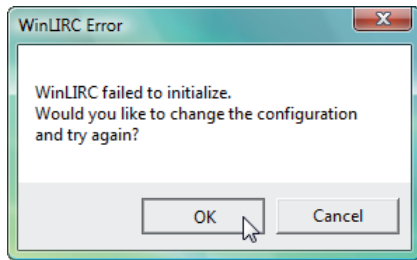


Figure 2.07 WinLIRC Error

If this message appears, the default configuration of WinLIRC does not match the needs of your system.

Press "OK" to show the configuration tab.

Here you have to configure the COM port (e.g. COM1) where your IR receiver is attached.

You also have to choose the configuration file, which contains the configuration for your remote control. Press the "Browse" button and choose the file "technisat.cf" (default location: "C:\Program Files\DVBViewer TE2") in the appeared "Open" window. Click "Open" to finish the select.

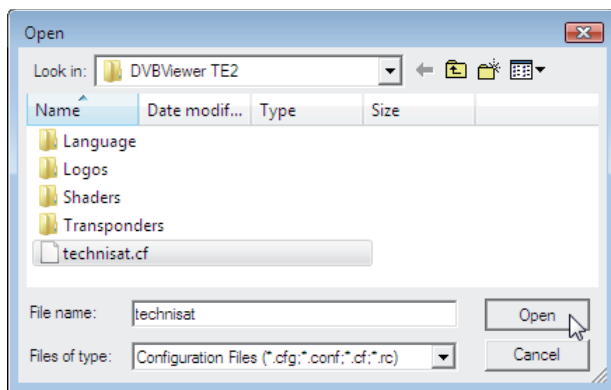


Figure 2.08 WinLIRC Configuration

Now your configuration has been completed. Choose "OK" to finish the configuration and start WinLIRC.

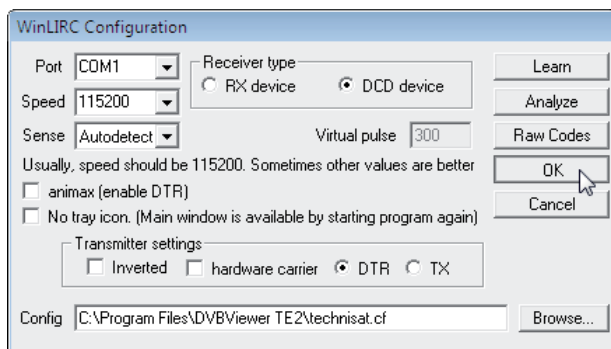


Figure 2.09 WinLIRC Configuration completed

After you configured WinLIRC you have to assign the desired function to the keys on your remote control. Please select "WinLirc" within the DVBViewer TE2 remote control tab and click on the "Settings" button for opening the input editor. Within this dialog please click the "Learn" button for assign remote control keys to the given functions:

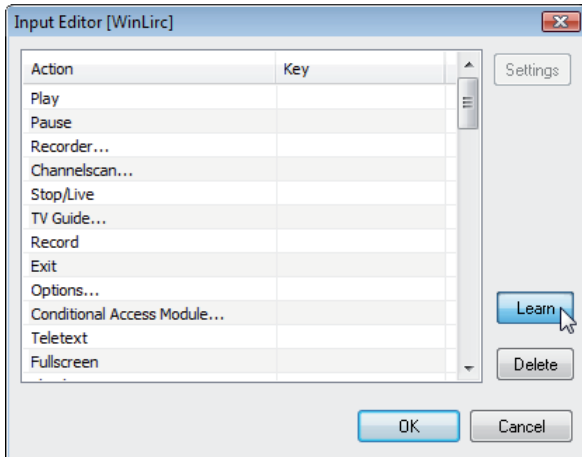


Figure 2.10: Remote control settings -> input editor [WinLirc]

After you switched to the learning mode just select a function (e.g. record) and press the desired key on your remote control:

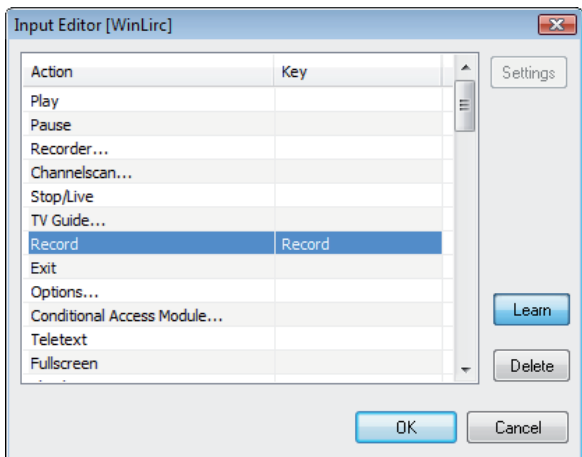


Figure 2.11: Remote control settings -> new shortcut assigned

For deleting a previous assigned shortcut please switch to learning mode and select the entry you intend to remove. By pressing the “Delete” button this assignment will be deleted:

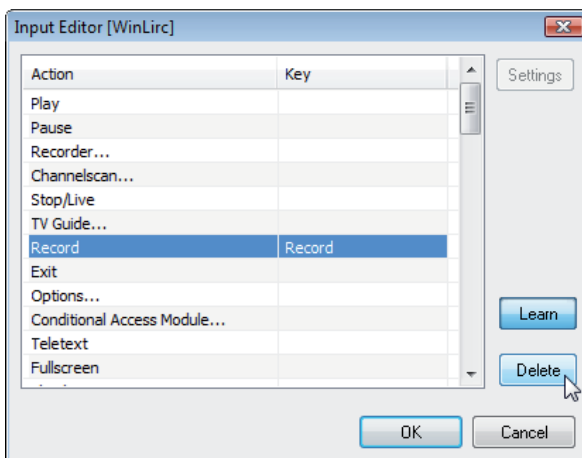


Figure 2.12: Remote control settings -> remove a shortcut

Configure the integrated IR Receiver of the SkyStar USB 2

If you are using a SkyStar USB 2 please check the entry “SkyStar USB” within the remote control settings tab:

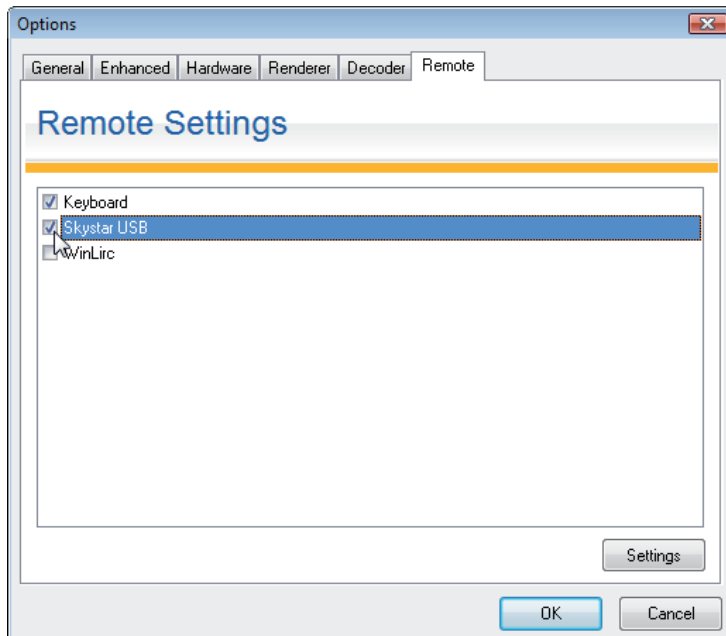


Figure 2.13: opening remote control settings tab within DVBViewer TE2”

When starting up the SkyStar USB 2 IR control software for the first time the “Windows Security Alert” dialog might appear. You have to allow WinLIRC to open connection by clicking the button “Unblock”.

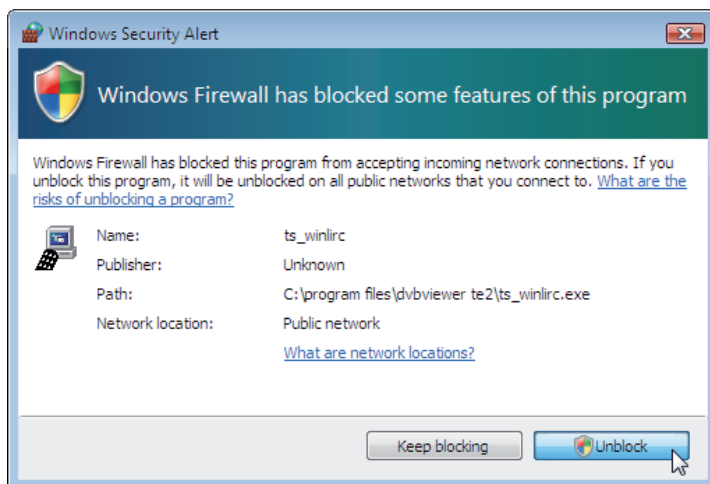


Figure 2.14: Windows Firewall

On first use of DVBViewer TE2 you have to assign the desired function to the keys on your remote control. Therefore please select “SkyStar USB” within the DVBViewer TE2 remote control tab and click on the “Settings” button for opening the input editor. Within this dialog please click the “Learn” button to assign remote control keys to the given functions:

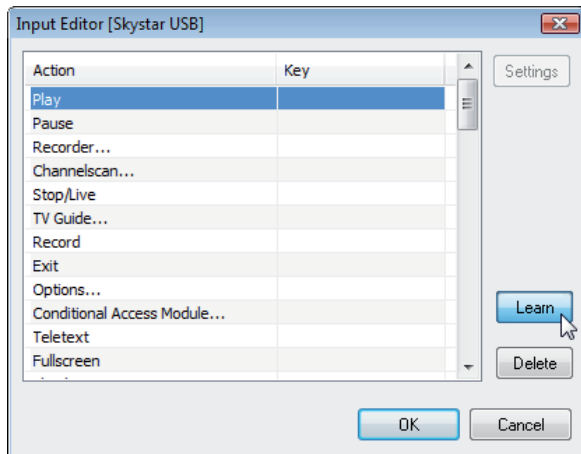


Figure 2.15: Remote control settings -> input editor (SkyStar USB)

Now just select the function you intend to assign and press the desired key on your remote control.

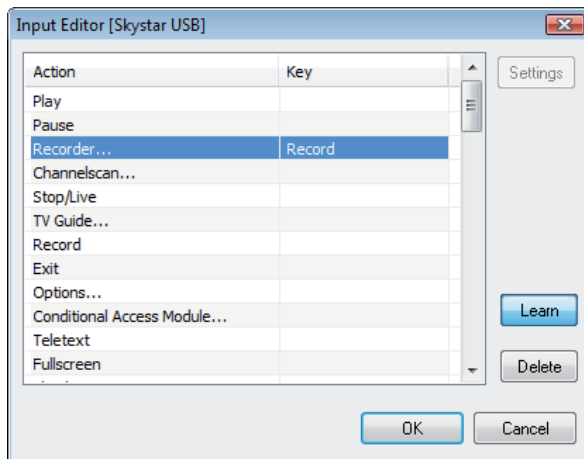


Figure 2.16: Remote control settings -> new shortcut assigned

For deleting a previous assigned shortcut please switch to learning mode and select the entry you intend to remove. By pressing the “Delete” button this assignment will be deleted:

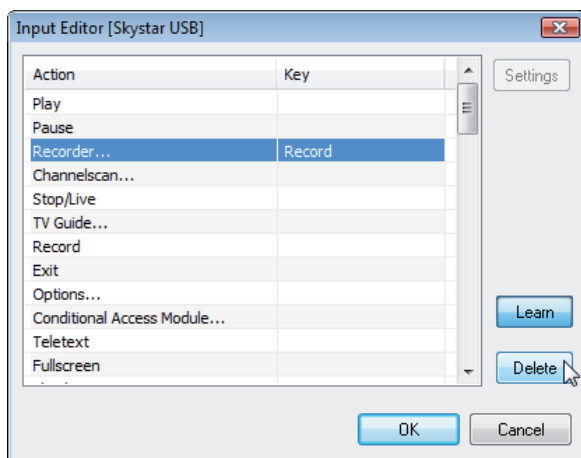


Figure 2.17: Remote control settings -> remove a shortcut

Device support

No device

If no compatible TechniSat DVB device is available during start-up of DVBViewer TE2 the following error message will appear:

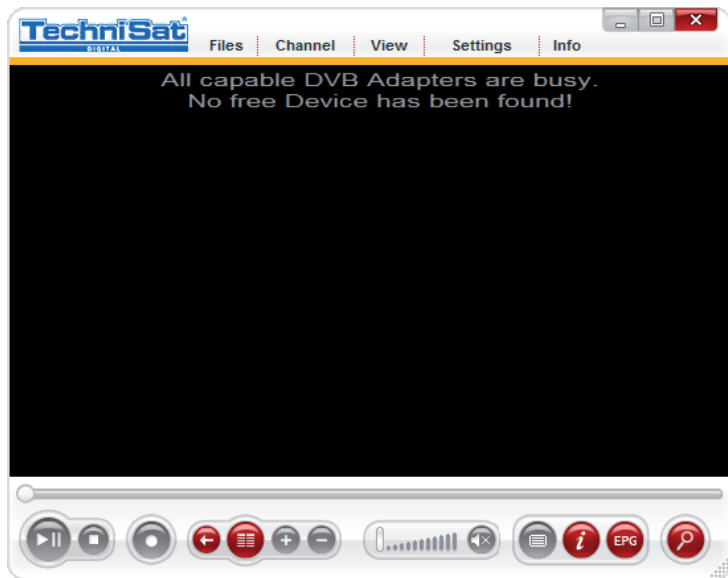


Figure 2.18: Message “No free Device has been found!”

Single device

If you use one single device with DVBViewer TE2 the application will recognize the used device automatically and present the GUI for the used front-end type (DVB-S / DVB-T / DVB-C).

Multiple devices

If you have installed a multiple number of compatible TechniSat DVB cards / USB devices, DVBViewer TE2 will automatically recognize the devices installed at the first start-up. You will be able to use your TechniSat DVB-PC Stars devices within the same session of DVBViewer TE2 (one for watching TV and one for recording another channel). DVBViewer TE2 can be used as multimedia player for files, which were recorded with this application



If you scheduled a recording DVBViewer TE2 will start the recording without any further information to the user. DVBViewer TE2 will use the required device for this operation automatically.

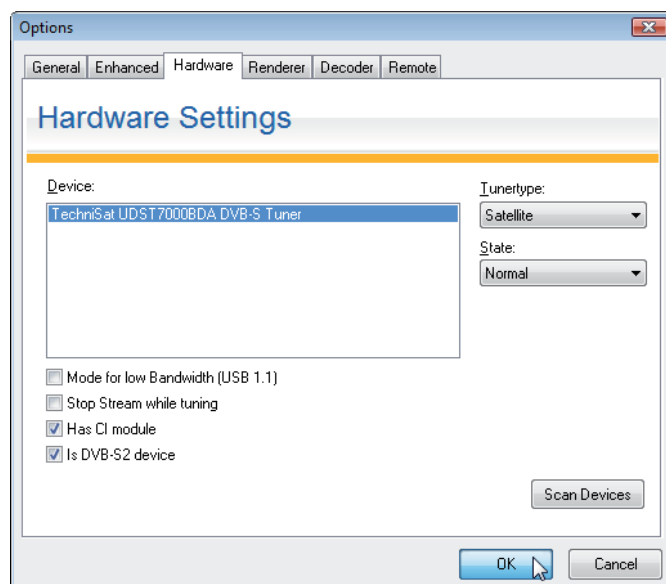


Figure 2.19: Options menu “Hardware”

If you add or remove one or more TechniSat DVB-PC Stars devices you have to update the device list manually. For this operation you must start the options menu and open the hardware menu. Here you have to click onto the “Scan Devices” button for refreshing the device list.

DVBViewer TE2 - introduction

Main window

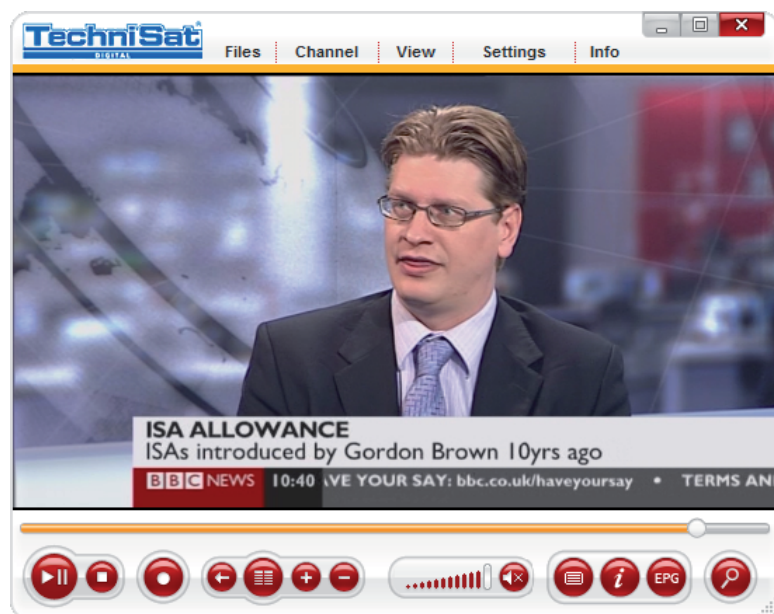


Figure 2.20: main window during DVB reception

The main window is divided into three areas:

- The first is the menu bar, which contains text-based options to the user.
- The second is the display area. This is the window where TV programs are displayed. The On-Screen display, EPG info, Channel List and Favourite list will also be displayed in this area.
- The third is the control and tool bar. This area provides access to main functionalities of DVBViewer TE2 such as EPG, teletext, PVR/time shift, record and the volume control.

Control and tool Bar



Figure 2.21: control and tool bar during DVB reception



Figure 2.22: control and tool bar during DVB reception in full screen mode

To start the time shift function of DVBCViewer TE2 simply press the “Play/Pause” button. If you press the “Play/Pause” button again, the time shift toggles from paused to playback.



Figure 2.23: control bar -> Play/Pause button

If you press the “Stop” button, time shift will stop and DVBCViewer TE2 will switch back to live playback.



Figure 2.24: control bar -> Stop button

The “+” and “-” buttons are used to switch channels up and down.



Figure 2.25: control bar -> Channel +/- buttons

If you want to switch back to the previous tuned channel you are able to do that via the previous channel button.



Figure 2.26: control bar -> previous channel button

Click onto the channel list button to access the channel list or favourites list



Figure 2.27: control bar -> channel list button

If you want to search for new channels please use the channel scan button for opening the channel scan dialog.



Figure 2.28: control bar -> channel scan button

To open a media file (e.g. *.avi, *.mpeg, *.mp3,...) please select the media file button.



Figure 2.29: control bar -> media file button

The next buttons will open and close the teletext window and the EPG window (both described in this manual) and show/hide the mini EPG onscreen display.



Figure 2.30: control bar -> teletext button



Figure 2.31: control bar -> mini EPG button



Figure 2.32: control bar -> EPG button

The record button is used to start and stop manual recordings. The button indicates that a recording is running, when its inner circle is coloured red.



Figure 2.33: control bar -> record button

You also can schedule records with the recorder dialog, which opens by clicking on the VCR button.



Figure 2.34: control bar -> VCR button

The volume during the DVB/file playback can be controlled by the volume slide and muted/unmuted by the mute button.

Drawn to the left will decrease the volume; drawn to the right will increase the volume.



Figure 2.35: control bar -> volume slider



Figure 2.36: control bar -> mute button

The playback slider indicates the position within the program running.



Figure 2.37: control bar -> playback slider

This slider indicates the current position only, if EPG data is sent as part of the TV channel.

A convenient way to open the options dialog is to click the options button located on the toolbar.



Figure 2.38: control bar -> options button

Watching TV - advanced features

Time shift

Time shift provides the possibility to pause and resume the running program for short breaks. After you pause the current program the DVBCViewer starts recording the program. After you resume the playback of the video you can jump forward and backward within the recorded time.



Figure 2.39: control bar during DVB reception

The time shift will be started after you have pressed the pause button of the control bar. After the time shift has started the DVBCViewer TE2 records the running program into a DVBCViewer TE2 time shift file, saved to the “\My Documents\My Videos” folder of the “All Users” profile. You can change this under Options, General.

To resume playback during time shift you have to press the play button in control bar. To hold the program again you have to press the pause button again.

If you want to leave the time shift mode of DVBCViewer TE2 you can do this by switching the channel you are currently watching or simply press the stop button on the control bar. The time shift will be cancelled immediately.



If a recording is scheduled while you are currently using the time shift function with only one TechniSat DVB card installed the time shift will be cancelled without notice and the recording will start immediately. It is possible to resume the time shift during the recording with only one TechniSat DVB card installed if these two channels are located on the same transponder.

Channel list

If you want to choose a TV or radio channel directly, without clicking through the whole channel list you might do this using the channel list of DVBCViewer TE2. Just move your mouse to the right corner of the DVBCViewer TE2 main window or click the “Channel List” button located in the tool bar.

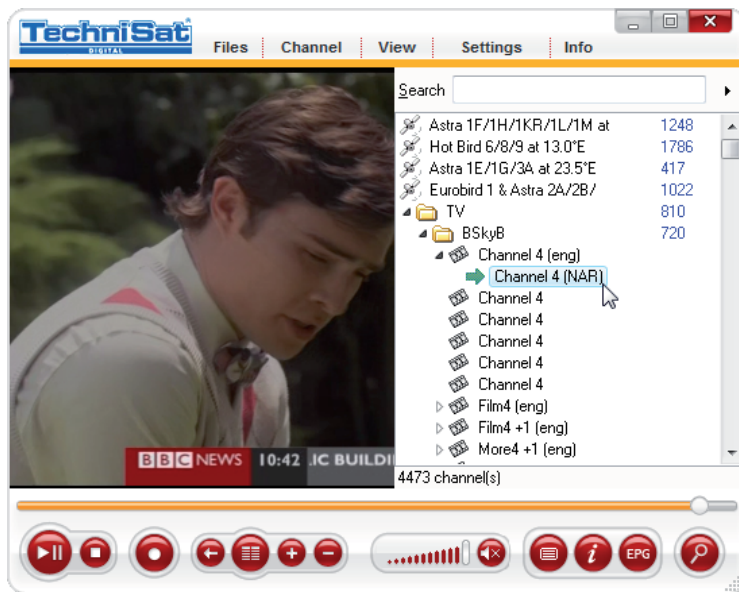


Figure 2.40: Channel list

The “Channels” tab of the channel list is arranged like a directory tree. Choose your satellite, choose the type of content (Video or Audio) and select your channel. To choose a channel you have to double-click onto this channel, DVBViewer TE2 switches directly to the selected one. For information about editing existing channels or scan for new channels, read chapter 4.

Favourite list

Another way for tuning to a channel more comfortably is to use the built in favourite list of the DVBViewer TE2. Just move your mouse to the right corner of the DVBViewer main window or click the “Channel List” button located in the tool bar.

To switch from the channel list to the favourite list you have to click onto the button within the upper right corner, within channel list.

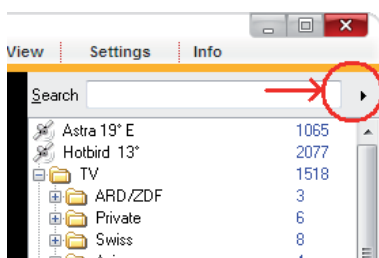


Figure 2.41: switch from channel list to favourite list

To switch from the favourite list to the channel list you have to click on the button within the upper right corner, within the favourite list.

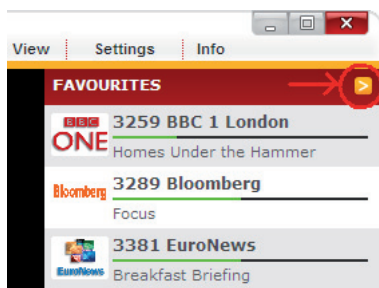


Figure 2.42: switch from favourite list to channel list

To add a channel to the favourite list you have to click on the channel you want to add with the right mouse button and select “Add to favourites”.

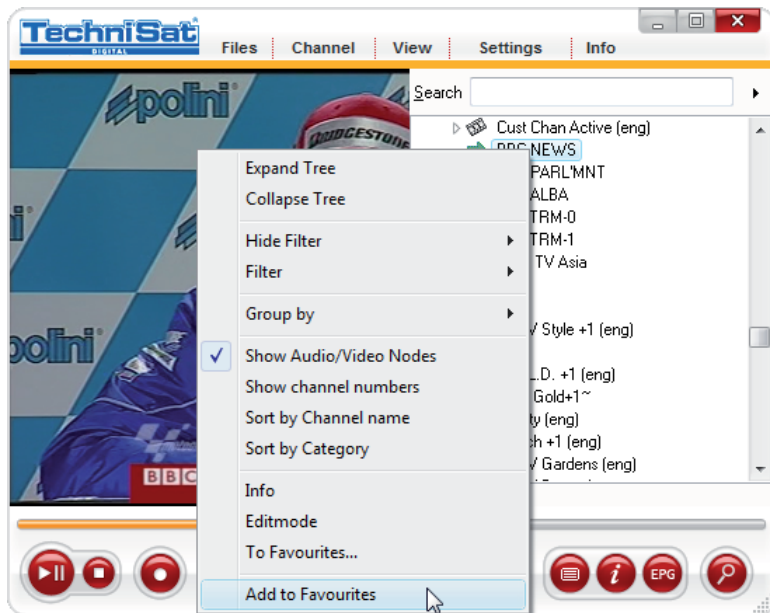


Figure 2.43: channel list “Add to Favourites”

The channel will be added to the bottom of the favourite list. You can sort the items of the favourite list by selecting and moving them within the list.

To open a channel you have to click on the channel twice.



Figure 2.44: Favourite list

If EPG information is provided by a channel broadcaster in your favourite list the current broadcast and the progress will be displayed.

To remove a channel from the favourite list you have to select the channel, click on the channel with the right mouse button and select “Delete”.



Figure 2.45: Favourite list “Delete”



The removal of a channel from the favourite list will not have any effect to the channel list. If you delete a channel from the channel list this channel will also be removed from the favourite list.

For information about adding channels to the channel list or deleting existing channels from the channel list read chapter 4.

EPG

The Electronic Program Guide is a service of the DVB technology, which offers additional information about the running program to end-users. DVBViewer TE2 is capable to receive that kind of information and offers three methods of presenting that information.



Not all TV stations provides EPG data. This information can only be displayed if the chosen TV channel provides EPG data.



Please ensure the current system date and time is set correctly.

EPG onscreen display:

Insert the content into the display area. This option is useful if you want to know which program is currently running and which program follows.

To display the EPG data into the view area select the MiniEPG Button on the toolbar or press the TAB-key on your keyboard.



Figure 2.46: main window during DVB reception with EPG OSD

SFI – TechniSat SiehFernInfo

The TechniSat SFI service is an extension to existing EPG services provided by the broadcasters.

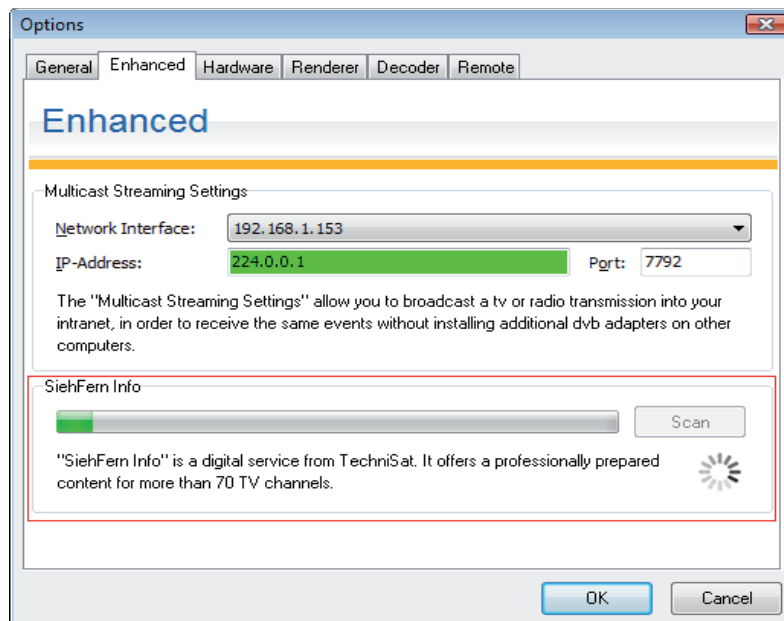


Figure 2.47: Options menu "SiehFern Info" download

The SiehFernInfo download dialog is located under: DVBCViewer TE2 -> Settings -> Enhanced

You start the download process of the service content by pressing the Scan button. The update process might take between 30 and 45 minutes. You cannot use DVBCViewer TE2 for any other task while the download of the SFI data is in progress.

The EPG data from SFI service will be merged within the EPG database and can be accessed by using the EPG Window.



The TechniSat SiehFern Info service is hosted on the satellite Astra 1G at 19.2° E and can be received in Europe only.



This service is limited to German channels only.

EPG window:

For showing the EPG window click the EPG button on the toolbar.

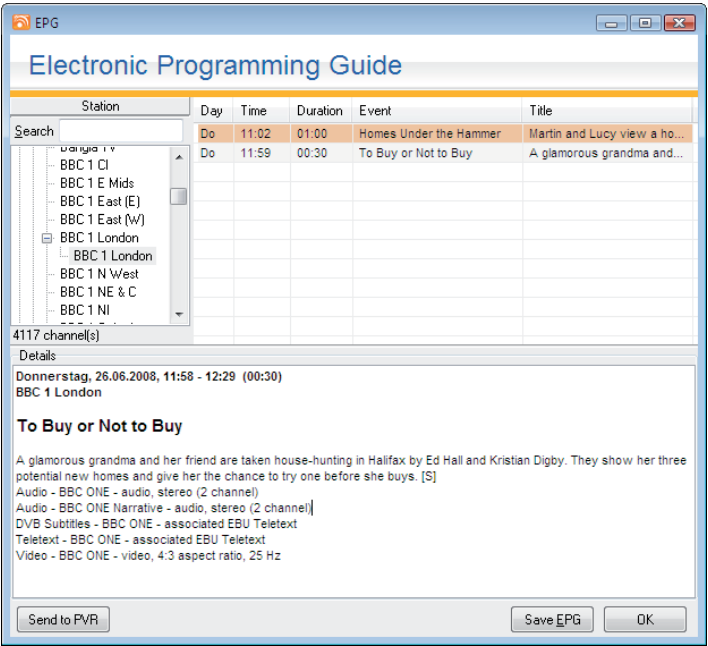


Figure 2.48: EPG window

Within this EPG window it is possible to change the display of the EPG data to the timeline layout. To do this open the context menu by clicking the right mouse button and select the entry “Timeline”. You can also simply push the keys “Ctrl + Tab” simultaneously to change to the timeline view.

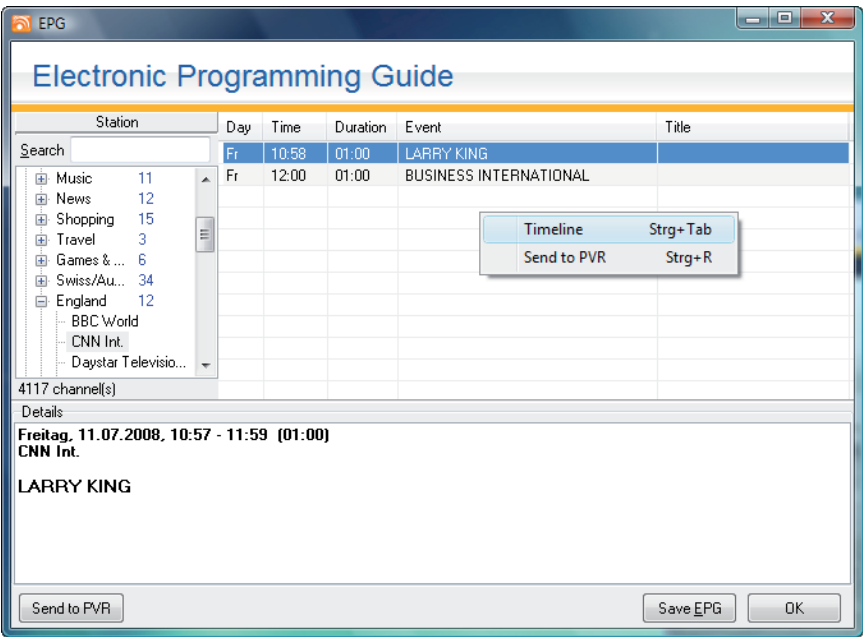


Figure 2.49: EPG window -> changing view to timeline

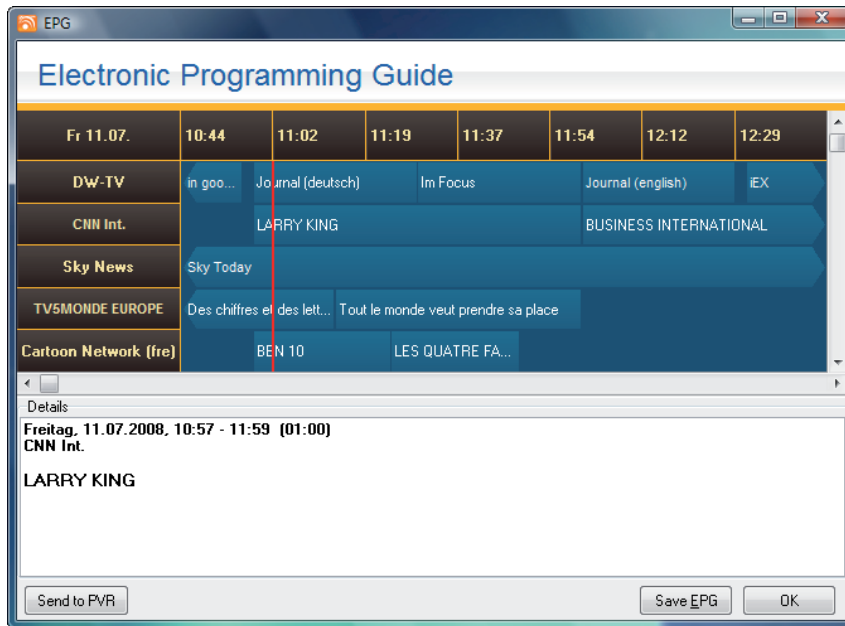


Figure 2.50: EPG window -> timeline view

Using the EPG window you can gain access to additional information not shown within the EPG display. It is also possible to save the EPG data to your hard drive as HTML TV magazine. For this purpose the “Save EPG” button opens the save as dialog.

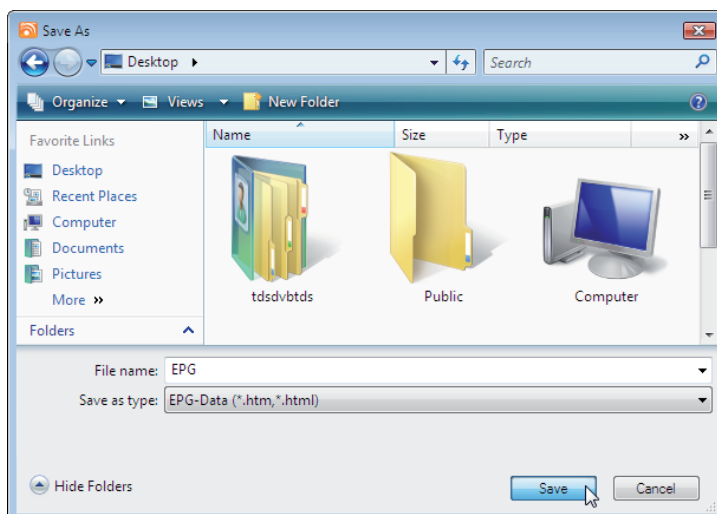


Figure 2.51: Save as dialog

Enter the location and the name of the files and press the “Save” button. All known EPG data will be combined into a set of HTML files, which can be displayed with a web browser



Figure 2.52: Browser with opened DVBViewer TE2 HTML EPG

The second option is the capability of sending programs directly to the DVBViewer TE2 recorder module. This option is described in chapter 3 “Using DVBViewer TE2 as PVR”

Teletext

Using DVBViewer TE2 you can also gain access to the teletext services of most TV stations. The teletext is displayed by using the teletext button of the control bar.



Figure 2.53: Teletext display

The use of this application is very simple. Enter the page number using your keyboard or remote control. You are also able to access sites by clicking on displayed page numbers with the left mouse button.

Subtitles

The DVBCViewer TE2 supports displaying and recording of teletext and DVB subtitles. By selecting an entry of the menu "View" => "Subtitles" this option will be enabled.

Teletext subtitles



Figure 2.54: Subtitle dialogue for teletext subtitles



The teletext subtitle function requires a channel with teletext and at least one subtitle page. If the channel does not provide teletext information this option is unavailable.



Figure 2.55: Main window during DVB reception with teletext subtitle

DVB subtitles



Figure 2.56: Subtitle dialogue for DVB subtitles



Figure 2.57: Main window during DVB reception with DVB subtitle



The DVB subtitle function requires a channel with DVB subtitle information. If the channel does not provide this data the option is unavailable.

Configure the application

Within the DVBViewer TE2 options menu you can configure most of the functionality of the DVBViewer TE2 to your needs. First the general and enhanced options are introduced:

“General” options

Within the general options you can configure the main settings of DVBViewer TE2.

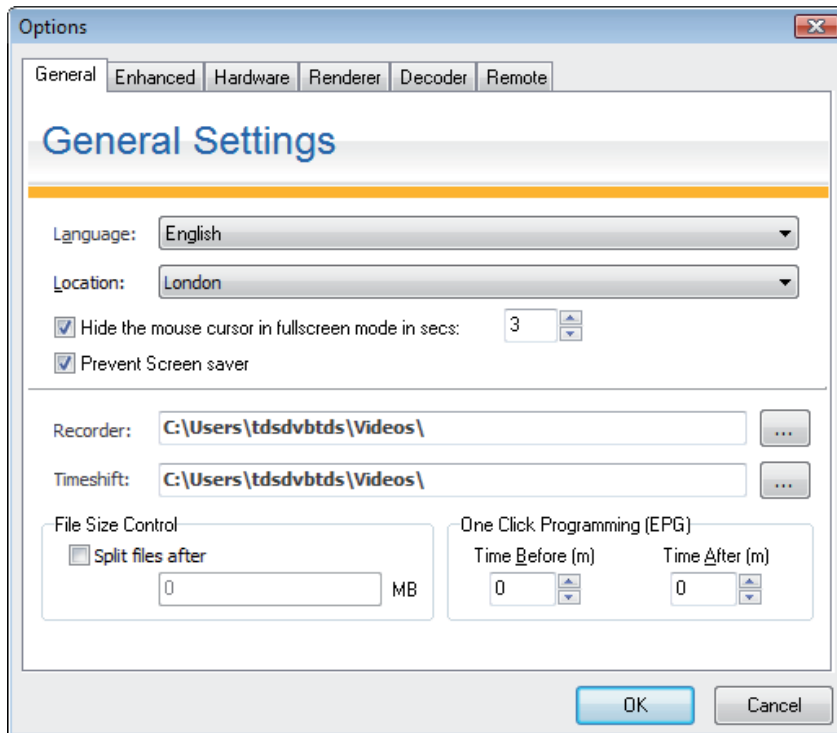


Figure 2.58: Options “General”

Language:

Using this dropdown box allows you to change the language of the DVBViewer TE2.

Hide the mouse cursor in full screen mode in seconds:

This option configures the timeout when the mouse cursor will be hidden in full screen mode.

Prevent Screen saver:

If a screensaver is activated in your system this option will not allow it to start during the runtime of the DVBViewer TE2.

Recorder:

For your future records you can specify the location where this file will be saved.

Time shift:

The time shift function of the DVBViewer TE2 will create a temporary file, which may need massive space on your hard disk drive. With this option you can select a location where this file is created so you can ensure you choose a disk with plenty of space.

Split files after:

If you intend to burn your records to a CD or DVB this option is a convenient way to split the files after the desired size during the recording process.

One Click Programming (EPG):

DVBViewer TE2 lets you schedule a recording by selecting an event directly out of the EPG. Here you can specify the time span when the recording process should be started before and after your scheduled event.

Enhanced options

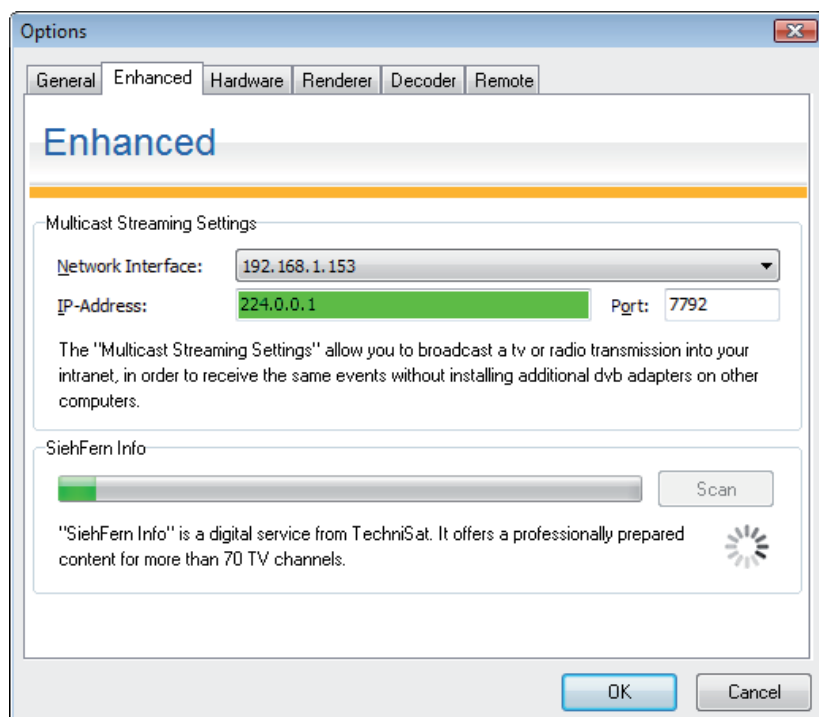


Figure 2.59: Options “Enhanced”

Network Interface:

Please select here the IP address of the network card you are using for streaming video/audio data via multicast.

IP-Address:

Enter the multicast IP for streaming video/audio data.

Port:

Here you can change the port you are using for your multicast stream.

SsiehFernInfo (Scan):

You start the download process of the service content by pressing the Scan button. The update process might take between 30 and 45 minutes. You cannot use DVBViewer TE2 for any other task while the download of the SFI data is in progress.

The EPG data from SFI service will be merged within the EPG database and can be accessed by using the EPG Window.



The TechniSat SsiehFernInfo service is hosted on the satellite Astra 1G at 19.2° E and can be received in Europe only.



This service is limited to German channels only.

Hardware options

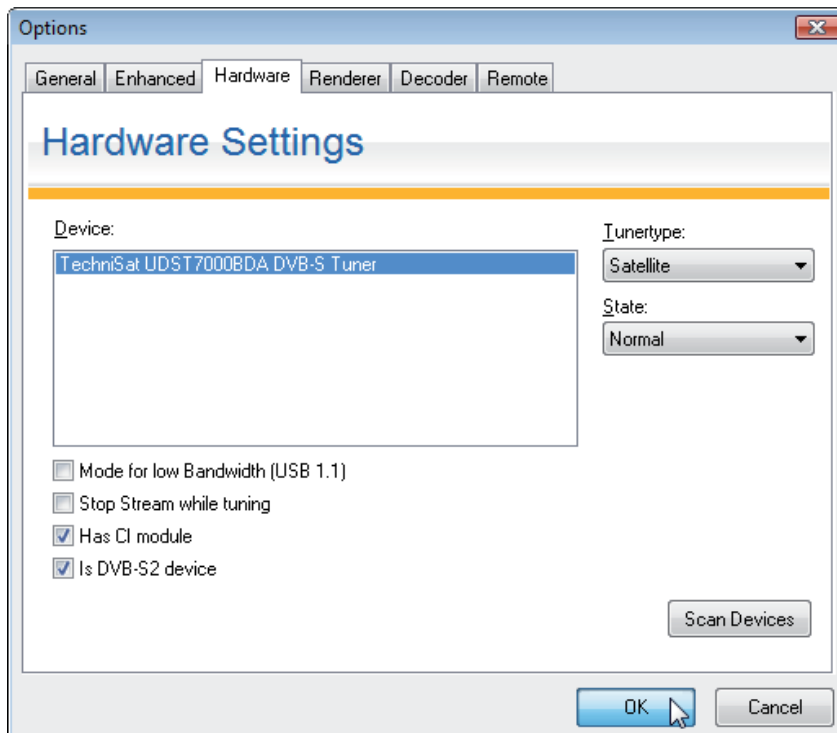


Figure 2.60: Options “Hardware”

Scan Devices:

DVBViewer TE2 will search for new DVB devices attached to your PC since the last usage of DVBViewer TE2.

Mode for low Bandwidth (USB 1.1):

If you are using an older USB 1.1 device only capable of lower bit rates this option optimises the playback especially for those types of devices.

Stop Stream while tuning:

For switching between different channels more fasten please use this option.

Has CI module:

If your device has an integrated CI slot/module you can enable this functionality by activating this option.

The CAM menu dialog itself is located under:

DVBViewer TE2 -> Settings -> Conditional Access Module

Is DVB-S2 device:

To activate the DVB-S2 support within DVBViewer TE2 please enable this checkbox (your DVB-S must be capable of DVB-S2).

Remote:

To select the IR receiver type press the “Remote” button. The remote control selection dialog will pop up.

Renderer options

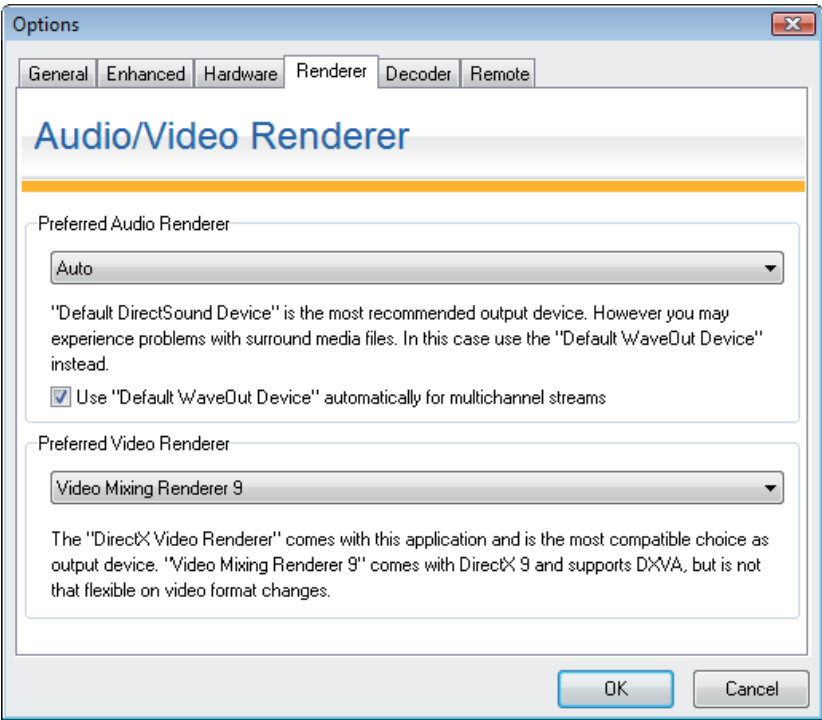


Figure 2.61: Options “Renderer”

- Preferred Audio Renderer:
Select your preferred Audio Renderer.
- Preferred Video Renderer:
Select your preferred Video Renderer.

Decoder options

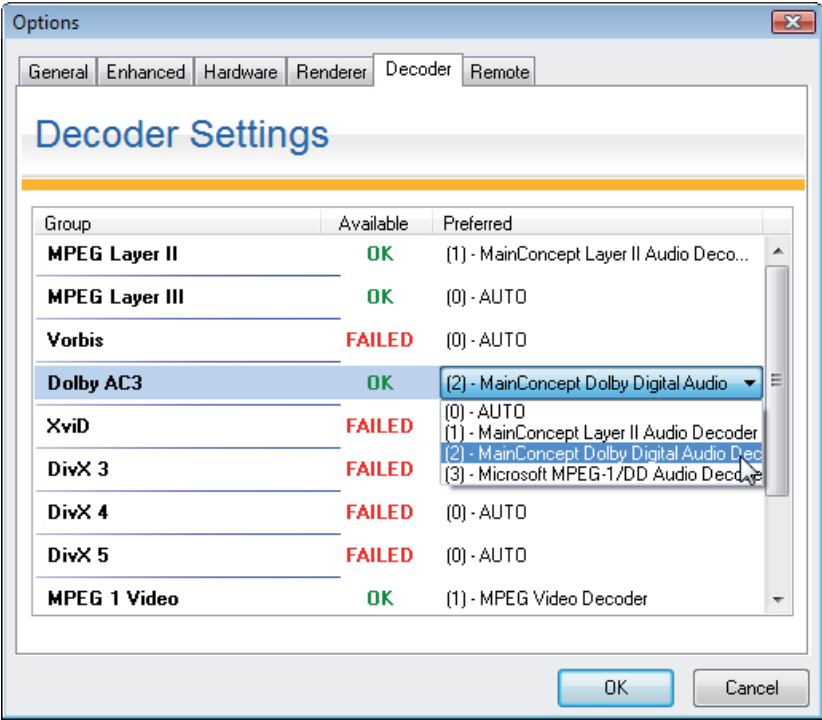


Figure 2.62: Options “Decoder”

For solving issues between different decoders installed on your system you can use the decoder settings dialog. Within this configuration panel it is possible to check if a required decoder is installed or missing. You can also select one specific decoder if more than one decoder is installed on the system.

Chapter 3: Using DVBViewer TE2 as PVR

Summary

This chapter shows how to use the built in PVR functionality for recording and playback of the DVBViewer TE2 and also how to play recorded videos with third party software.

Necessary setting:

Before you record files for the first time you should ensure there is enough space available for recording DVB content.



DVB TV channels could create data rates with up to 25Mbit/s. For this purpose you need more than 10GB of free hard disk capacity for one hour of recording time.

Specify a Volume under “Settings” => “General Settings” => “Recorder” that has enough free disk space available.



If you are using the FAT32 file system you have to split files caused by the fact that FAT32 can handle files up to 4GB only. In this case you have to check the “Split files” checkbox.

You should also split files if you want to backup the recorded files with CD or DVD recorders. If you are using NTFS formatted drives and don't want to save files to CD or DVD there is no need to enable file splitting (see chapter Configure the application -> General Options).

Record programs manually

To start a manual recording press the record button in the tool bar.



Figure 2.28: toolbar -> record button

The recording starts immediately. If you want to stop the recording press the record button again. The recorded file will be saved in the specified directory.





If you change to another channel during a recording the „All capable DVB Adapters are busy“ message appears.



Figure 3.01: "All capable DVB Adapters are busy"

Record programs automatically

The PVR functionality of DVBViewer TE2 provides a recording schedule, which can be programmed manually or by using the EPG.

-  Your PC must be active and DVBViewer TE2 must be started for scheduled recording. If DVBViewer TE2 is not started or the system is not active while passing a scheduled event time the event entry will be discarded without recording.
-  If a recording is scheduled while you are time shifting a TV program the time shift will be cancelled without notice and the recording starts immediately.

Add events to recorder manually

Using the recorder window of DVBViewer TE2 it is possible to add multiple events to the recording scheduler. You'll find the recorder window by choosing "DVBViewer TE2" => "Record Setting".

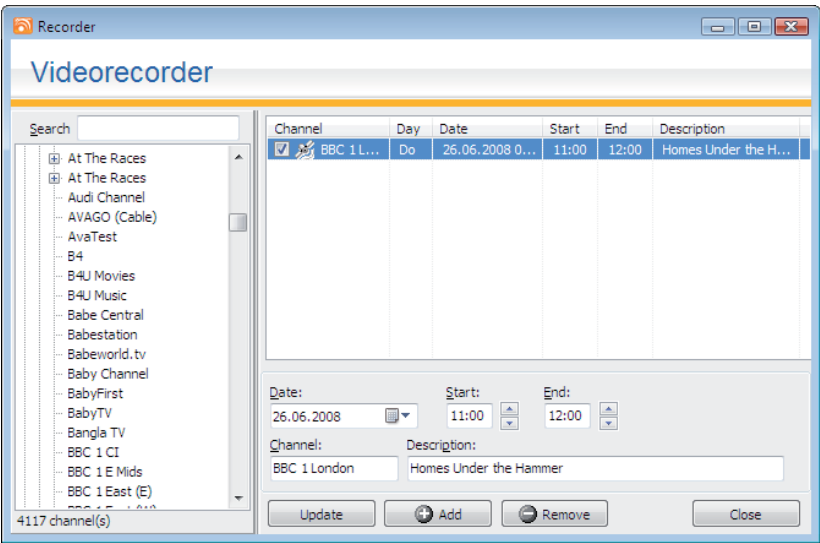


Figure 3.02: Recorder window

To add a new event to the scheduler enter the event date, start and end time, the channel number and the event description. You might take the channel number using the tree view of the channel list located at the left side of the recorder window. Click “Add” to add the event to the scheduler. If you want to remove an event choose it and click “Remove”. If you want to edit an existing event choose this event and edit the necessary values. After this press “Update” and the scheduled event will be updated.

Add events to recorder using the EPG

For all channels that provide EPG data you might want to use the EPG window to add recording timers to the recorder timetable:

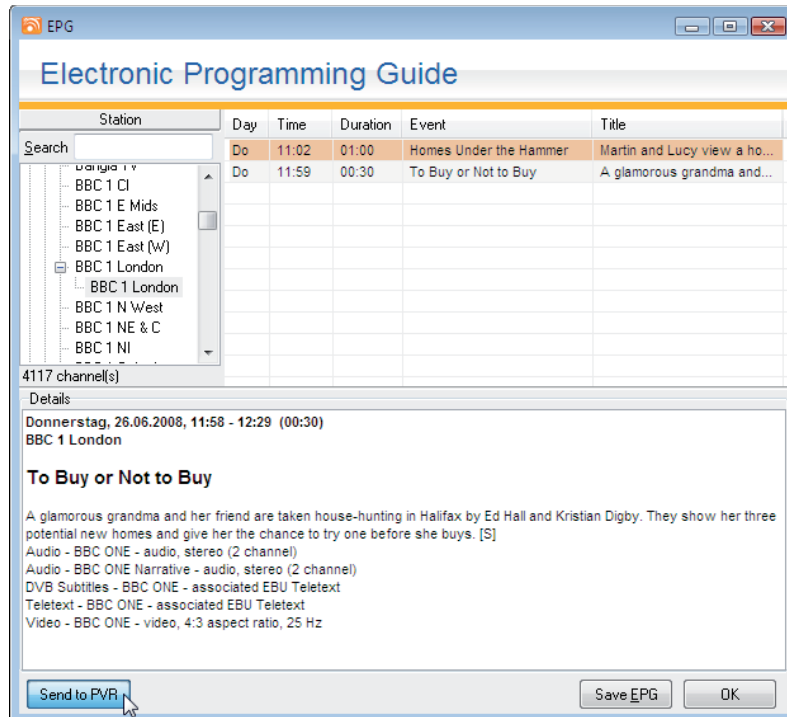


Figure 3.03: EPG window -> add event to the recorder

To add events using the EPG you have to open the EPG window. Select the event you want to record and press the “Send to PVR” button.

This event will be added to the recorder scheduler and automatically recorded on your hard drive.



If a recording is scheduled while you are time shifting a TV program the time shift will be cancelled without notice and the recording starts immediately.

Play recorded programs with DVBViewer TE2

Play files with DVBViewer TE2

To play recorded files with DVBViewer TE2 open the video using “DVBViewer TE2” => “Files” => “Open File...” the “Open” dialogue will appear. Here you can select the multimedia file (i.e. *.ts, *.mpg) you want to watch using DVBViewer TE.

After DVBViewer TE2 has loaded the file the playback will start immediately.

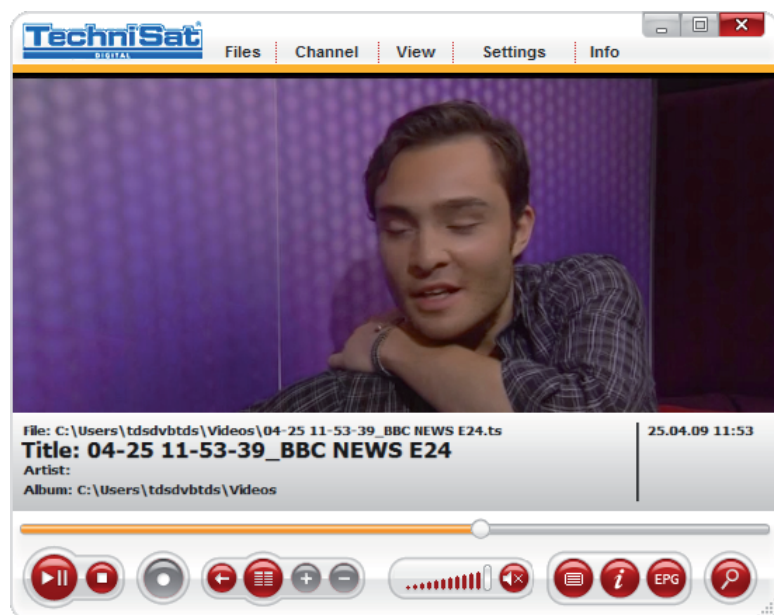


Figure 3.04: main window in media file playback mode

There are several ways of returning to TV mode. Choose a channel by using the graphical interface, your keyboard or a remote control.

Play files with third party software

Almost every media player (e.g. the Windows Media Player) is capable of playback of a file recorded by DVBViewer TE2.



If you want to play a file recorded using DVBViewer TE2 in a system without this software you have to transcode the file(s) to normal MPEG2 files.

Chapter 4: Managing TV/radio channels

Channel List

Edit mode

Before you are able to delete, rename, or move channels, categories or whole target roots, you have to switch to “Edit mode”.

Click with your right mouse button within the channel list. A context menu will open where you have to activate “Edit mode”.

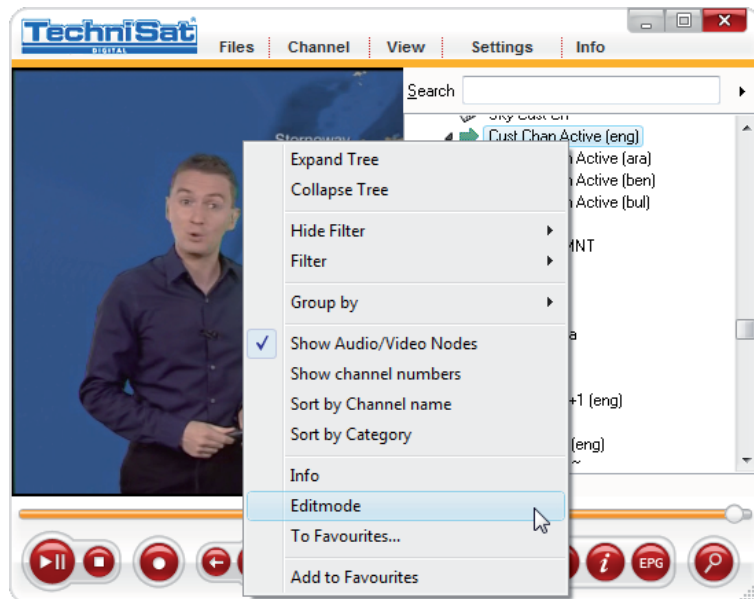


Figure 4.01: Channel list -> activated Edit mode

After you have finished editing your channel list deactivate Edit mode again.

Removing and renaming entries from the channel list

To remove an existing element from the channel list you have to select it using the tree view of the channel list. Click the right mouse button on it and select “Delete” from the context menu.

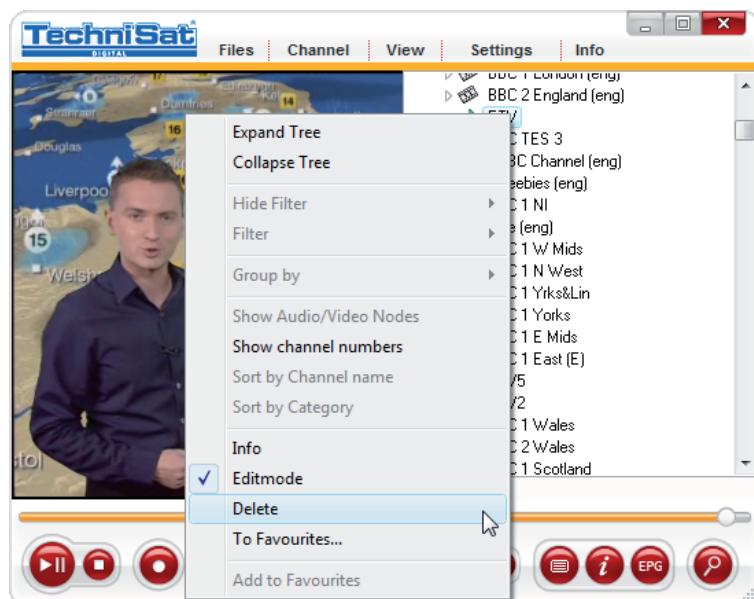


Figure 4.02: Channel list -> delete a channel

A dialog will pop up to confirm the delete process (press “OK”).

If you want to rename an entry in the channel list select this entry and click on it (like renaming files and folders in the Microsoft Windows file explorer).



Figure 4.03: Channel list -> rename an entry

Scan for new channels

Add new channels using the “Channel Scan”.

To perform a channel scan you can use the channel scan button within the control bar.



Figure 2.33: Channel scan button in the control bar

DVB-S/DVB-S2 (Digital satellite reception)

This option is used to search for new channels from a satellite reception system.

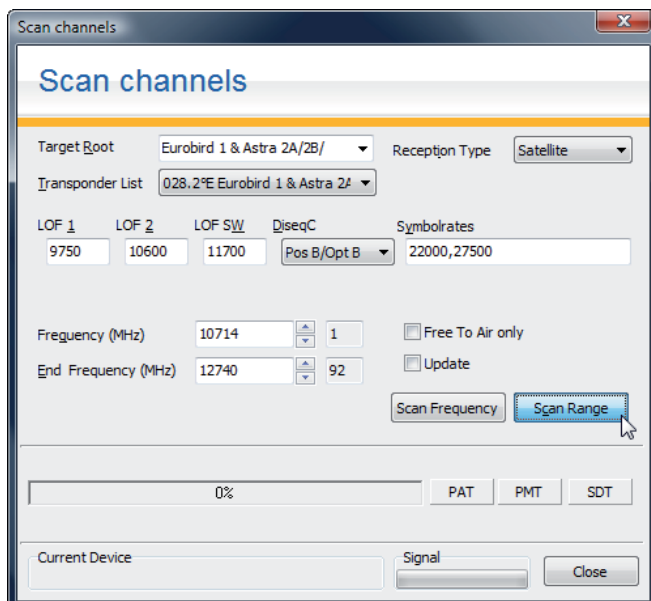


Figure 4.04: Channel list -> Scan channels

You must enter the name for the target root and select the satellite you want to scan.

After you have selected the root check the settings required for the LOF and switch frequencies. DVBViewer TE will use the settings required for universal LNB by default.

If you want to update a channel list you have to enable the option "Update". Then click the button "Scan Range" to start the channel scan.



The scan procedure might take several minutes to complete.

You will find the channels found within the root you specified after the channel scan is completed. If you used the update function, non-existent channels will be removed and new channels are added to the specified root.

DVB-C (Digital broadband cable reception)

This option is used to search for new channels from a broadband cable reception system.

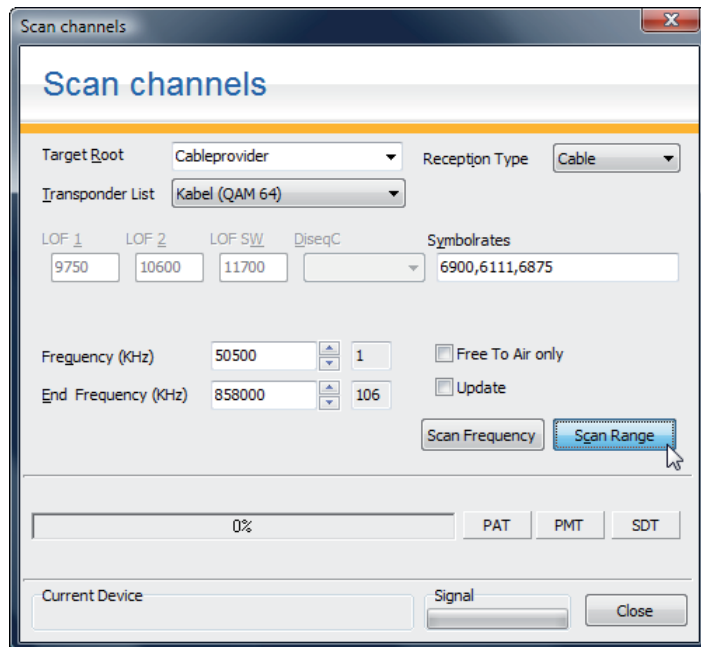


Figure 4.05: Channel list -> Scan channels

You must enter the name for the target root and select the transponder list you want to scan.

If you want to update a channel list you have to enable the option "Update". Then click the button "Scan Range" to start the channel scan.



The scan procedure might take several minutes to complete

You will find the channels found within the root you specified after the channel scan is completed. If you used the update function channels will be removed which are no longer existing and new channels where added to the specified root.

DVB-T (Digital terrestrial reception)

This option is used to search for new channels from a digital terrestrial reception system.

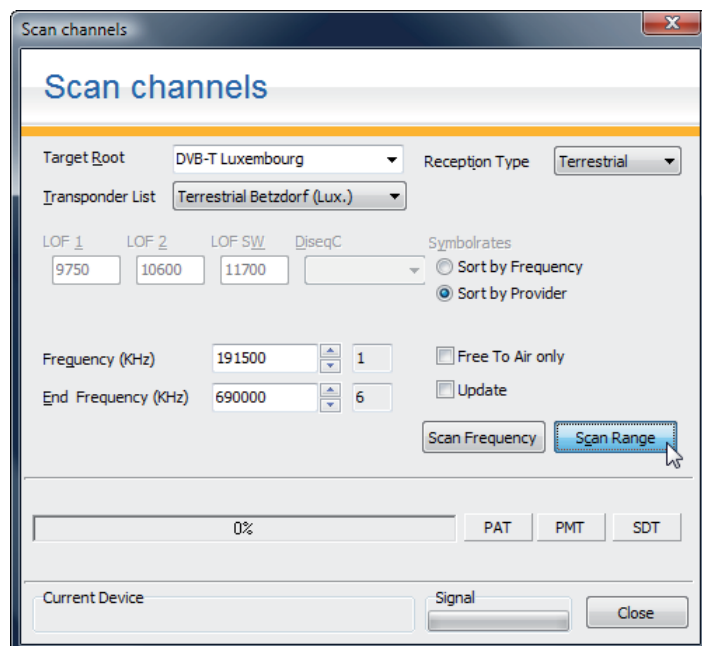


Figure 4.06: Channel list “Channel => Scan”

You must enter the name for the target root and select the transponder list you want to scan.

If you want to update a channel list you have to enable the option “Update”. Then click the button “Scan Range” to start the channel scan.



The scan procedure might take several minutes to complete

You will find the channels found within the root you specified after the channel scan is completed. If you used the update function, non-existent channels will be removed and new channels are added to the specified root.

Chapter 5: IP multicast streaming

Summary

This chapter will introduce the IP multicast streaming functionality, which is part of the DVBCViewer TE2.

Recommended system requirements

- Supported operating systems:
Windows 2000 Professional/Server (service pack 4 required)
Windows XP Home Edition/Professional (service pack 2 required)
Windows XP Professional x64 Edition
Windows Vista (x86, x64)
 - Two computer systems, both equipped with fast Ethernet network adapter cards, which are capable of handling at least 100MBit/s
 - Direct connection cable
- or
- 100/1000 Mbit/s Ethernet switch or hub

Important information

This HOWTO requires two computer systems, which are configured to operate in a local area network (LAN) environment. The internal IP network settings should be configured correctly and the wiring and distribution components should be connected correctly.



To stream a normal TV station you have to ensure that your network is capable of handling a transfer rate of up to 15MBit/s. If you want to stream HDTV channels you will need up to 80MBit/s.



Network streaming works well at a data rate of up to 8MBit/s. If you want to stream channels, requiring more than 8MBit/s, it should work properly, but this depends on the quality of the infrastructure components used. Some switches cannot handle higher bandwidth over a long time period and might break down during operation. The same is also valid for SoHo broadband routers with integrated switches used for broadband connections.



You need an MPEG-2 software decoder installed on the streaming client machine to decode the received DVB content.



WARNING:

If you want to use IP multicast transfers in large-scale environments ensure that the switching components are capable of handling multicast transfers and the network routers in this environment are configured to block IP multicast. Otherwise heavy network problems might occur. Contact your system administrator first, before starting a multicast stream in your environment.

Streaming of one TV channel through a network

Building a network environment for IP streaming

The common system requirements are listed below:

PC 1:

- One operable DVB-PC TV Stars device
- One configured network interface (100BaseTX or 1000BaseTX)
- 3D AGP/PCIe Graphic card with hardware acceleration
- DVBViewer TE2

PC 2:

- One configured network interface (100BaseTX or 1000BaseTX)
- 3D AGP/PCIe Graphic card with hardware acceleration
- A streaming client software installed (e.g.: VideoLAN Client)

In our example we are using two systems:

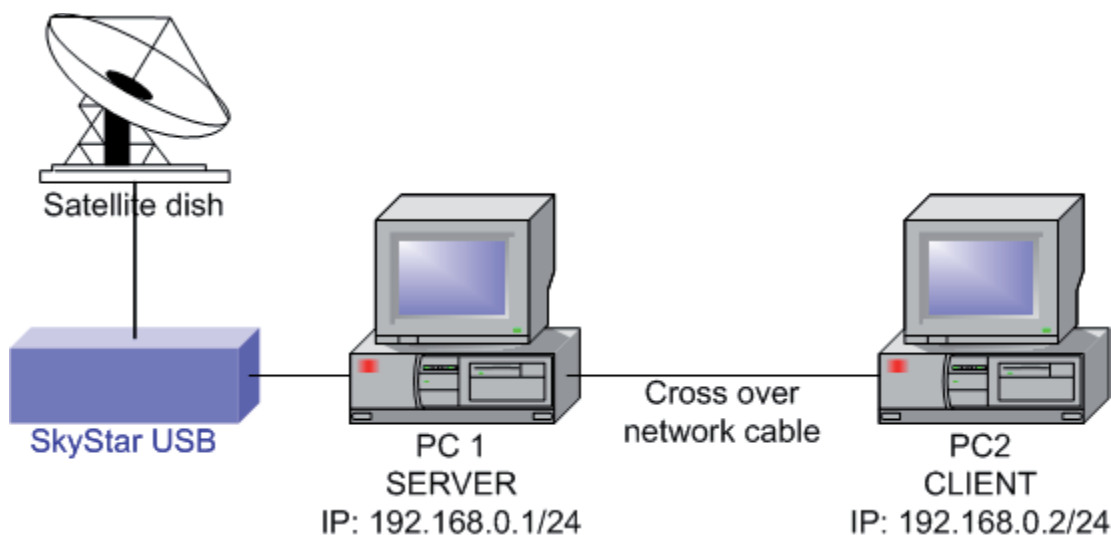


Figure 5.01: Multicast test configuration

The multicast server is equipped with a SkyStar USB card and correctly connected to a dish. The satellite on which the dish is aligned to and the channel, streamed over the LAN, is not important in this example.

The connection between both systems will be realised with a crossover network cable for direct connection. It is also possible to use a 100/1000MBit/s network switch or a 100/1000MBit/s Ethernet hub.

On our server, we open "Settings" => "Enhanced".

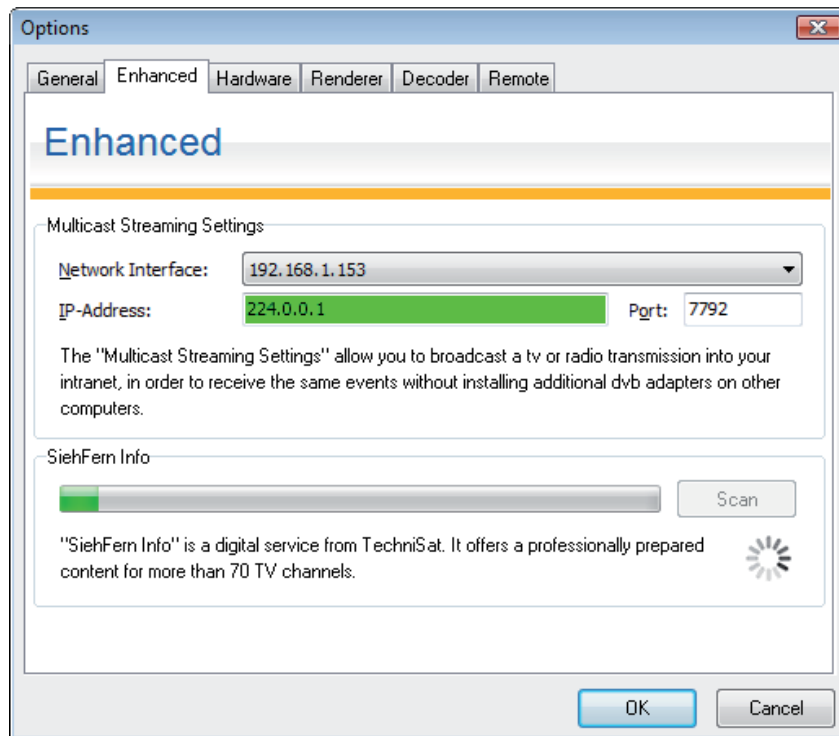


Figure 5.02: Options menu "Enhanced"

Here you have to configure the necessary options for the IP multicast stream. First you have to choose the IP-address of the network interface. The multicast stream is sent for distribution. In our example the network interface has the IP 10.0.3.182.

The second piece of information, necessary for IP multicast, is the multicast address and the port the stream is located on.

If the MC-IP is valid the MC-IP field is filled with green. If the IP is invalid the field is red.

The multicast IP range is specified in RFC 1112 (Aug-01-1989) and the following RFC documents. Multicast IP addresses are defined to the range between 224.0.0.0 to 239.255.255.255. If you want to send the stream to all clients in your subnet you have to use the multicast IP 224.0.0.1. For further information about multicast IP addresses you should read the RFC document.

The multicast port number can be chosen from the range between 0 and 65500. You should not use the first 1024 ports because they are reserved/used by IP services.

In our example we use the multicast IP 224.0.0.1 for all clients in the local subnet and the port number 7792.

Press OK to confirm the settings and close the options window.

Now you can start the multicast IP streaming.



Figure 5.03: Main window “View” menu with disabled multicast option

To initialise the multicast stream, choose “View” => “Multicast”. Now the current channel will be sent to the selected network interface.

To receive and view the data stream a streaming client is required. In our example we use the application “VLC Media Player”. This open source application is available at the project website.

Start the application.

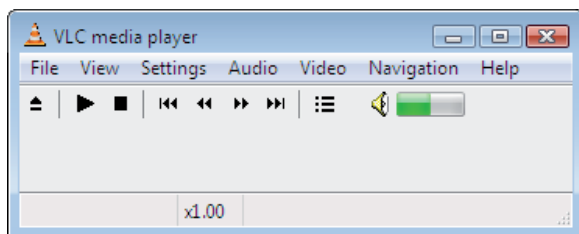


Figure 5.04: VLC media player

Here you simply click onto “File”...

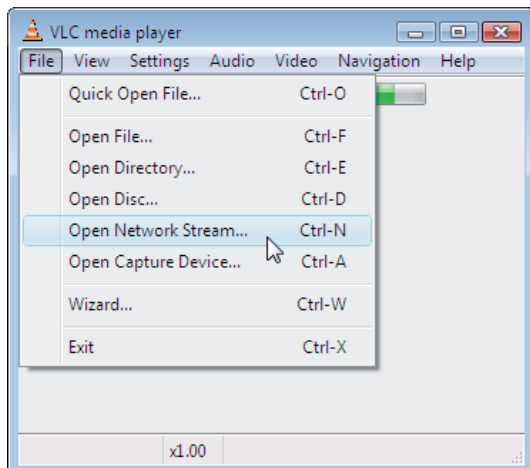


Figure 5.05: VLC media player “File” menu

... and then select the option “Open Network Stream...”.

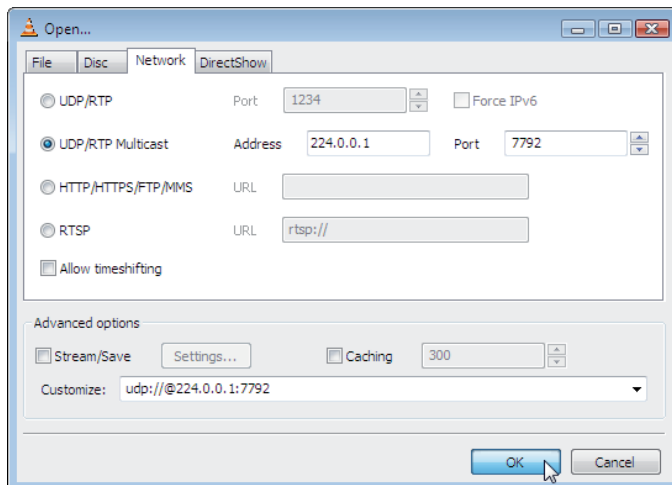


Figure 5.06: VLC media player “Open...” menu

Then you have to choose “UDP/RTP Multicast” and enter the address and port number where the multicast IP stream is located.

Then press the “OK” button and VLC Media Player will start the playback of the stream immediately.

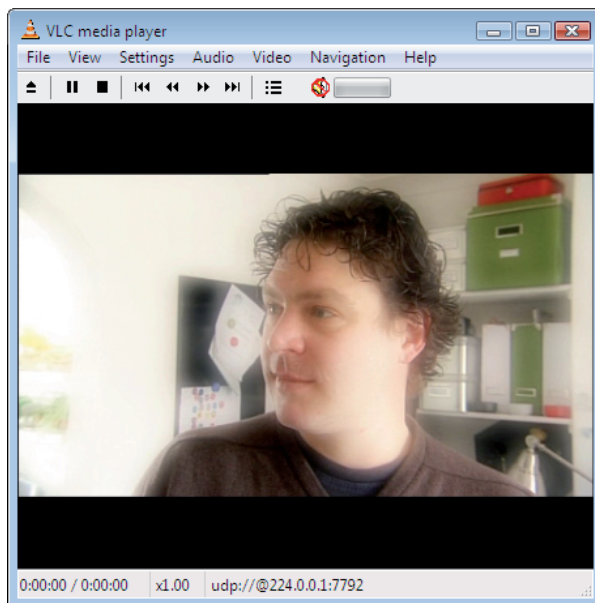


Figure 5.07: VLC media player during multicast stream playback

Chapter 6: Keep your DVBViewer TE2 updated

How to use the DVBViewer TE2 online update application

By using the DVBViewer TE2 online update application you have the ability to get the newest DVBViewer TE2 versions, transponder lists, etc.

You can start the update application by clicking on “DVBViewer TE2 Online Update” under “Start” => “Programs” => “DVBViewer TE2”.

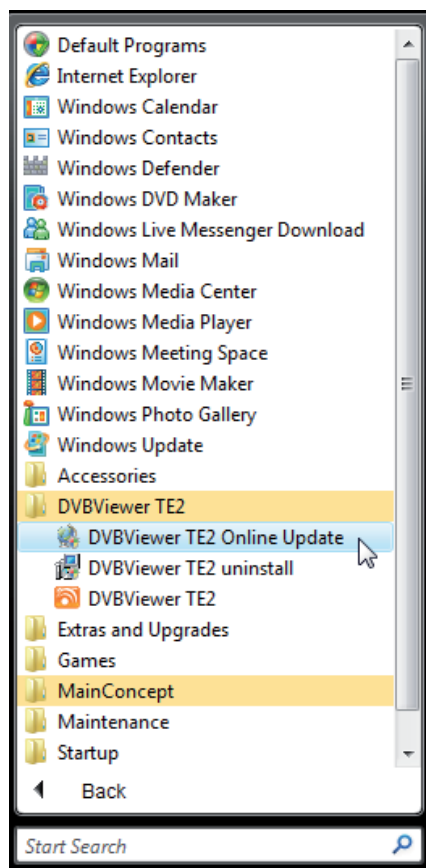


Figure 6.01: Shortcut to the DVBViewer TE2 update application

Before starting the updater please ensure that you have an active Internet connection and have closed any active instance of the DVBViewer. Otherwise the following error message will appear:

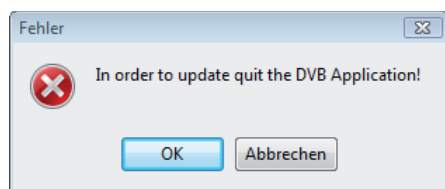


Figure 6.02: Error message if DVBViewer is still active

All available downloads are shown within categories. A marked entry indicates a new download and unchecked entries show you have already downloaded this item before:

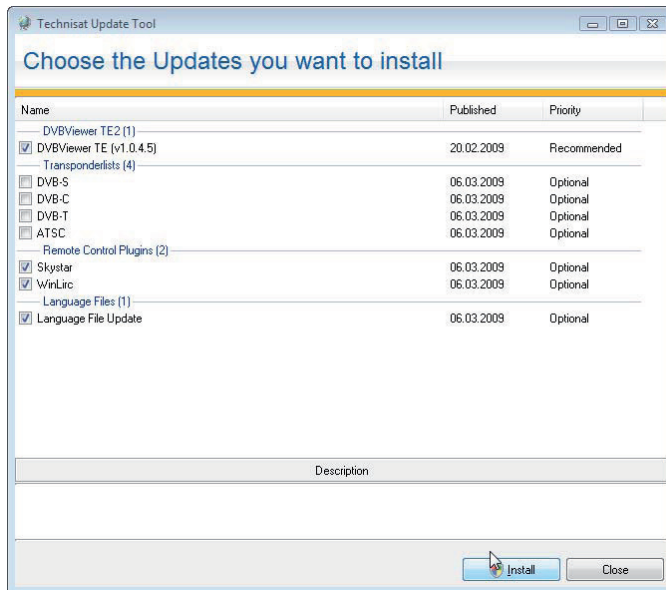


Figure 6.03: New updates are available

If you do not want to download and install an item uncheck it. It will appear as a new available item the next time you start the update application.

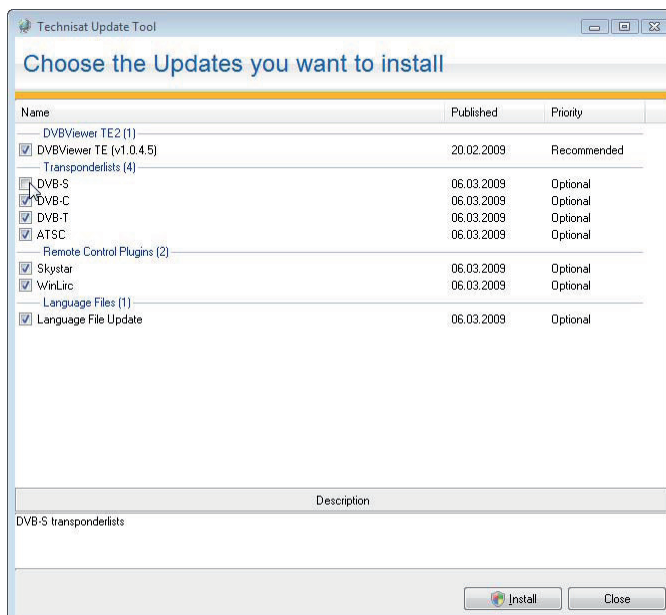


Figure 6.04: Selecting and deselecting items

After selecting the items to be installed just click on “Install”.

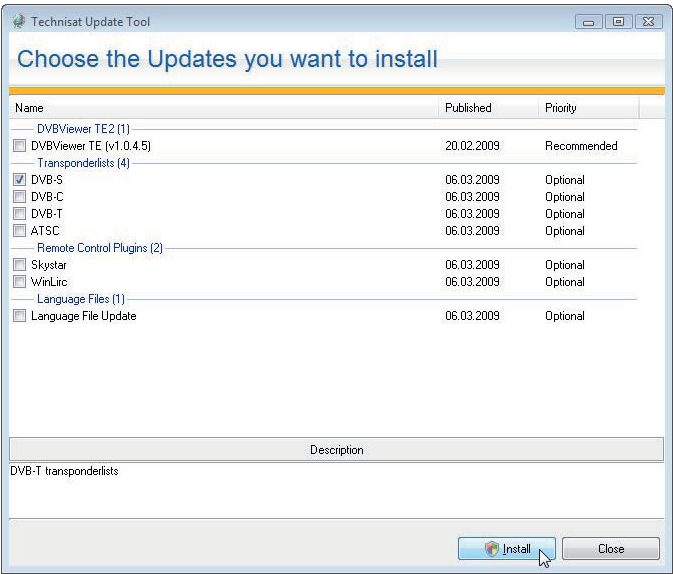


Figure 6.05: Start the download and installationThe packages selected will be downloaded and installed.

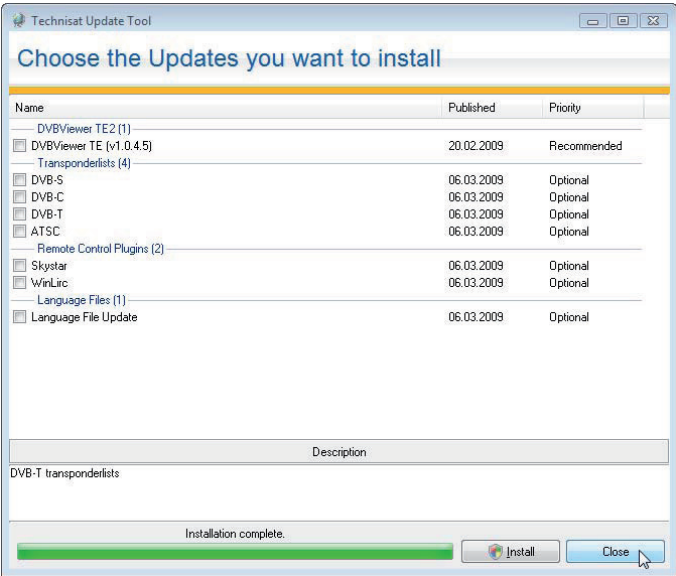


Figure 6.06: Download and installation completed

After the installation has been completed you can close the updater application and use the updated DVBViewer TE2.