



DVB-PC TV Stars

User's Guide Part 1
Installation

User's Guide Part 2
Setup4PC/Server4PC

User's Guide Part 3
DVBViewer TE

**User's Guide Part 4
Troubleshooting**

This manual matches the following products:

TechniSat SkyStar 2 PCI / USB
TechniSat AirStar 2 PCI / USB
TechniSat CableStar 2 PCI

Document Release Date: 03/2006
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Version 4.4.0

TechniSat DVB-PC TV Stars - Users Guide Part 4: Troubleshooting

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Chapter 1: Introduction

Defining the TechniSat DVB-PC TV Stars

Defining SkyStar 2 PCI/USB

SkyStar 2 PCI is a small board that is plugged into a PCI slot of your computer. The SkyStar USB is the USB version that is connected to a USB1.1 port of your computer. It gives you unprecedented access to Internet services and any "Free To Air" broadcast digital satellite television channel (DVB-S).

Defining AirStar 2 PCI/USB

AirStar 2 PCI is a small board that is plugged into a PCI slot of your computer. The AirStar USB is the USB version that is connected to a USB1.1 port of your computer. It gives you unprecedented access to any free to air broadcast digital terrestrial television channel (DVB-T).

Defining CableStar 2 PCI

CableStar 2 PCI is a small board that is plugged into a PCI slot of your computer. It gives you unprecedented access to any free available broadcast digital cable television channel (DVB-C).

Using IP services with a DVB-PC TV Star Device

The TechniSat DVB-PC TV Stars products will request all information by ground-based Internet. In response the requested data will be delivered using satellite, broadband cable or terrestrial systems at high speed.

Using printed help

The DVB-PC TV Stars product range includes the 4 parts of the Users Guide (Part 1: "Installation" / Part 2: "Setup4PC/Server4PC" / Part 3: "DVBViewer TE" / Part 4: "Troubleshooting").

User's guide conventions

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

1. Navigation paths are represented as follows:

"Start" => "Programs" => "TechniSat DVB" => "Setup4PC"

The path shown in this example launches Setup4PC

2. Pay attention to the following:



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



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

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

Documentation Summary

This 4th part of the DVB-PC TV User's Guide is important to any user, which has trouble with the hardware, the software, has problems with the configuration or wants to ask a question that is possibly frequently asked to the support of TechniSat by other customers before. So this document is segmented into the following parts:

Part 1: Trouble checklist

Here you find a compact checklist that you should use for the first part of trouble shooting. This list contains several questions about your reception equipment and your computer system. You will find this information in chapter 2 of this document.

Part 2: Frequently Asked Questions (FAQ)

This part of the documentation contains many questions that were asked before by many customers and so TechniSat has added those questions to this document. You will find this part in chapter 3 of this document.

Part 3: HOWTO

The third part of the User's Guide Part 4 contains a couple of HOWTO documents, which are written by the support of TechniSat to help customers to optimise their system configurations.

Part 4: Additional information

All information, which does not match the classification of the previous chapters, are listed in this part of the document.



If you want to try a hint taken from a FAQ article or do configurations as shown in the HOWTO section, read the entire article **BEFORE** doing anything and if you perform those steps, do nothing except the described ones! You do all configuration steps at your own risk.

Chapter 2: Trouble Checklist

If you can answer all questions with yes, possible there is no problem. If you answer a question with "I don't know" or "no I don't", then try to solve the problem by using this information.

- I'm using an universal LNB with the frequency range between 10,700 MHz and 12,750 MHz
- I don't use DiSEqC 1.2 or USALS (DiSEqC 1.0 is supported)
- I checked all my wiring and reception equipment and all cable connections are operative
- I installed Windows 2000 / XP / Server 2003 / XP x64
- I installed the latest drivers available for all my devices (mainboard, soundcard...)
- I installed the latest hot fixes from Microsoft
- I installed the latest Internet Explorer version
- I installed the latest MediaPlayer version
- I installed the latest DirectX version
- I don't have any hardware/IRQ conflicts

Chapter 3: FAQ

The FAQ contains a number of information, articles and hints all around the hardware, the drivers, Server4PC, DVBCViewer TE and problems that could occur in combination with the TechniSat DVB-PC TV devices.

System requirements

- IBM compatible PC with Pentium III 700MHz or higher
- At least 256MB RAM
- At least 30MB free hard disc space
- SoundBlaster compatible audio card
- 3D graphic card recommended (with hardware overlay support, up to date drivers)
- Supported operating systems:
Windows 2000 Professional/Server (Service Pack 4 required)
Windows XP Home/Professional (Service Pack 2 required)
Windows XP Professional x64 Edition
Windows Server 2003
- Additional requirements:
Internet Explorer 6 or higher
DirectX 9 or higher
MediaPlayer 9 or higher
at least 10GB or more hard disc space necessary for PVR functionality

Additional system requirements for PCI devices

- 1 available PCI slot (do not use the one directly under AGP graphic card, if possible)
If you use a multiple number of PCI cards, you have to calculate with a current of 4A on the 5V rail for each of the used TechniSat DVB-PC TV Stars PCI card.

Additional system requirements for USB devices

- 1 available USB1.1 port (must be connected directly to PC, not by using a USB hub)

Recommended system requirements for HDTV reception

- TechniSat SkyStar 2 TV PCI / AirStar 2 TV PCI / CableStar 2 TV PCI
- IBM compatible PC with Intel Pentium 4 or AMD Athlon XP CPU with 2400MHz or higher
- State of the art AGP or PCI-Express graphic card recommended (with MPEG2 hardware acceleration, hardware overlay support and up to date drivers)
- Recommended operating systems:
Windows 2000 Professional (Service Pack 4 required)
Windows XP Home/Professional (Service Pack 2 required)
Windows XP Professional x64 Edition

1. Installation

1.1 Hardware

- Question: Are there any known compatibility issues in combination with main boards, which are based on the nVidia nForce 4 chipset?
- Answer: Currently it is known, that our PCI cards are not compatible to most mainboards, which are based on the nVidia nForce4 chipset.
- Question: I want to use two DVB-PC TV Stars PCI cards or USB boxes in one computer system at the same time, is this possible?
- Answer: It is possible to use multiple PCI cards and USB boxes within one system simultaneously (based on the use application) since release 4.4.0.
Currently there is one limitation: it is possible to operate one USB box for each USB host controller only.
If you use a multiple number of PCI cards, you have to calculate with a current of 4A on the 5V rail for each of the used TechniSat DVB-PC TV Stars PCI card.
- Question: My DVB-PC TV device is shown with a yellow exclamation mark in the device manager of Windows and won't work. Is it possible to activate/reactivate my DVB-PC TV device?
- Answer: Deactivate all installed network devices in device manager and shutdown your system. Locate the jumper nearby the B2C2 chip and if there is a jumper, set it from open to shorted. After this start the system again and activate all devices, you deactivated before.
- Problem: Sound Blaster incompatibility
- Solution: Change the IRQ settings to solve the IRQ conflict with the DVB-PC device assigned IRQ or try to update the driver for the sound device.
- Question: I have a motherboard with VIA chipset on it. Does it cause any problems?
- Answer: Make sure you installed the latest software patch from the VIA web site to enable full performance of your motherboard chipset. Otherwise the bad PCI performance can cause data loss/ malfunction during operation of the DVB-PC device.
- Question: I have a SMP (simultaneous multi processing), HT (hyper-threading), or DualCore computer system. Does it cause any problems?
- Answer: SMP and HT systems are supported since driver version 4.2.11. If you are using older drivers than 4.2.11 your system will crash. Download the latest drivers from <http://www.technisat.com/> and install the latest drivers and applications.

1.2 Drivers

- Question: Are drivers for Windows XP Professional x64 Edition available for the TechniSat DVB-PC TV Stars?
- Answer: Since release 4.3.2 we also provide drivers for Windows XP Professional x64 Edition.
- Question: I want to install the latest software release on my Windows NT4, Windows 98SE or Windows Me system. Is it still possible?

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- Answer: No, Windows NT4, Windows 98SE and Windows Me are no longer supported by the drivers and software components.
- Question: When I installed the driver 4.2.11, my CPU usage is 8-25%, until I tuned a transponder using Server4PC or DVBViewer TE.
- Answer: Download the latest driver release 4.4.0 from <http://www.technisat.com/> and install this release using the upgrading hints from the FAQ or User's Guide Part 4.
- Problem: I want to start the installation by double-click setup.exe but an error message pops up
- Solutions: The driver not loaded message occurs when the current DVB-PC device driver is installed. The DVB-PC device driver is unable to operate and the "Error Code 10" is shown in the device manager.
This device is either not present, not working properly, or does not have all the drivers installed. (Code 10)
Try upgrading the device drivers for this device.
Regarding the information from the Microsoft Knowledge Base Article 310123, you have to update the driver for this component.
After you did this, another device is failing with Error Code 10.
This problem is caused by old driver versions, which do not support the functions of modern computer systems (e.g. ACPI).
You have to update the drivers for your mainboard, network interface card, soundcard and graphics adapter to the current version to solve the problem, possibly you also have to update your system BIOS. If all described procedures don't work, you have to reinstall Windows without using ACPI. More information about deactivating ACPI in windows installer see Microsoft Knowledge Base Article 299340.
- Problem: DVB Receiver and any network interface card, IP address conflict.
- Solution: You should assign a static IP address of 192.168.238.238/255.255.255.0 to the DVB device.
- Question: I like to install the new software for SkyStar2; on what should I pay attention?
- Answer: Remove the TechniSat software at „Control Panel" => "Add/Remove Programs". Delete the TechniSat software folders "C:\Program Files\DVBViewerTE" and "C:\Program Files\TechniSat DVB" then and uninstall the driver "B2C2 Broadband Receiver" or "TechniSat DVB-PC TV Star" at "Device Manager" and restart your computer. After finishing this procedure, you should install the new software.
- Problem: I installed the hardware and the drivers successful, but the card is not getting any tuner lock. The satellite reception equipment is configured correctly and I can receive channels using a common digital set top box.
- Solution: Install the card into another PCI slot in your system and install the drivers again, after the "New Hardware Found Wizard" started up. There is a chance that the card will work properly after this procedure.

1.3 Software

- Problem: The installation of the software stops and says, that Windows XP Service Pack 2 is required

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- Solution:** Please install the Windows XP Service Pack 2 to your computer. You can download the Service Pack at <http://www.microsoft.com> or via the automatic update function of Windows XP.
- Problem:** The installation of the software stops and says MediaPlayer and DirectX recommended
- Solution:** Please download from Microsoft website the latest version of MediaPlayer and DirectX and install it. Another requirement is the latest version of Internet Explorer 6.
Afterwards you should be able to run the installation process.
- Problem:** Starting setup.exe results in a missing _setup.dll error message
- Solution:** It seems you have had downloaded the software and extracted the zip file without the enclosed path-information. Check configuration of the archive tool used to unzip the downloaded file and reconfigure it.
Unzip and try installation again.

2. Operating

2.1 General

- Problem:** My signal indicator drops from 0 % up to 50 % within a few seconds.
- Solution:** Check the valid function of your receiving equipment (dish & cable). If this is OK please check if your system is installed in ACPI mode. If yes, try to use the DVB card in another PCI slot on your motherboard. You also might try to update your system drivers. If this doesn't solve the problem, you have to disable ACPI. This makes a new installation of the operating system necessary. More information about disabling ACPI during windows installation see Microsoft Knowledge Base Article 299340.

2.2 Server4PC / Data reception

- Problem:** After Windows start up Server4PC indicates "No signal" and I can hear glitches and cracking noise within the sound output of my soundcard.
- Solution:** Server4PC will indicate a tuner lock (green icon) only, if the application has tuned a transponder successfully. If no transponder can be received using the current settings, the indicator will be red. If you select a data profile, which is located on one of the satellites, you are able to receive, the signal indicator will change to green and the cracking noise will vanish.
- Question:** I want to receive a service but do not know the satellite and data settings?
- Solution:** Most known services across Europe are already preconfigured in the software. Just go to system tray, click right and select from the menu the data service you want to receive. That's it. In case the settings have changed you have to contact the customer support of your Internet service provider to get further help and information.

2.3 DVBViewer / Audio/Video Reception

- Problem:** After I switch the current channel to another, the picture seems somehow strange. The aspect ratio is not correct and the position of the video within the display area is not correct.

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- Solution:** We use a fast channel switching method, which is not compatible to some MPEG-2 decoder solutions. Please disable the option "Fast channel switch" at "Settings" => "Options" => "Enhanced". The picture should appear normal now.
- Problem:** During operation I receive the error message "Cannot locate b2c2 mpeg2 filter audio/video ctrl. interface, error: 91000101".
- Solution:** This problem is caused by some faults within the release 4.3.0. The problem is fixed since release 4.4.0. Please remove all installed components and update the driver and software components.
- Problem:** There are shown items in the EPG window, but the EPG info does not show anything, except the current TV station and the system time.
- Solution:** The shown EPG information depends on the system time and date. Check if the system date and time are configured correctly. After the system time is corrected, the EPG should show the correct information.
- Problem:** When I start the DVBViewer TE, sometimes it takes a long time, until the DVBViewer TE shows any channel.
- Solution:** The used MPEG-2 codec takes a while until it is ready to be used. Normally the decoder is ready in a couple of seconds, but sometimes it needs up to 40 seconds to display.
- Problem:** When I choose a HDTV channel in DVBViewer TE, no picture is shown, the video stops and resumes again and again, or large coloured fields are shown in display area.
- Solution:** Check, if your PC matches the system requirements for HDTV reception. If yes, update the chipset and graphics card drivers to the latest version available.
If you are using an onboard graphics adapter, this device might not be able to show HDTV content, upgrade your graphics board to an AGP/PCIe card with MPEG2 hardware acceleration and hardware overlay support.
- Problem:** The video stops from time to time and little squares appears
- Solution:** Please check the quality of the input signal. The minimum satellite signal should be 50- 55 dbμV or the level indicator in Setup4PC or DVBViewer should be minimum 55-65 % for proper TV function. Another possible source of trouble can be your graphic card that must support hardware overlay. Please check the documentation of the graphic card if hardware overlay is supported and make sure latest driver for the graphic device is installed.
If you are using an AirStar 2 PCI Card or AirStar USB box you should check the signal quality and BER using Setup4PC. If the problem is caused by a bad signal quality you should correct the position or alignment of the used antenna.
- Problem:** WinLIRC is configured correctly and the remote control is enabled in DVBViewer, but the remote control won't work with Windows XP SP2.
- Solution:** It is possible, that the Windows Firewall blocks WinLIRC. You can unlock the WinLIRC in "Control Panel" => "Security Center" => "Manage Security Settings for: Windows Firewall", then switch to the "Exceptions" tab. Search the entry "ts_winlirc" and enable the checkbox. Press "OK" to confirm the setting.

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- Problem:** After installation of DirectX9 my DVBViewer doesn't work anymore.
Solution: DirectX9 installation overwrites some needed files and settings. This requires reinstalling the user software again. A new driver installation is not needed. Go to start/settings/control panel/software and remove TECHNISAT DVB RECEIVER. After reboot take your installation CD or downloaded and extracted files. Go to subdirectory INSTALL. Click the SETUP.EXE and follow the instructions given during software installation. Reboot afterwards.
- Question:** I have successfully installed the software logged in as administrator using Windows 2000/XP/XP x64/2003. When I log in as a user with restricted rights, the following error message appears: "The Microsoft Jet database engine cannot open the file 'C:\Program Files\DVBViewer\epg.mdb'. It is already opened exclusively by another user or you need permission to view it's data."
Answer: It is recommended that you are logged in as administrator or the user has administrator rights on the computer.
If you have experience in changing permissions of folders and files, you should add "Full Control" permissions for "Everyone" to this file.
- Problem:** I have some trouble with recorded programs, which contains an AC3 audio track.
Solution: Sometimes AC3 sound causes trouble while played with DVBViewer or other applications. In channel list, there is a checkbox "AC3" for every channel. Check, if this checkbox is checked for the channels with AC3 sound.
- Question:** I want to enter an IP address into the field "Multicast IP Address" of the IP-Settings option of DVBViewer TE, but after I entered the addresses the field remains red. What is the problem?
Solution: The multicast IP-address range is specified in RFC1112. This document specifies the range 224.0.0.0 through 239.255.255.255 for the purpose of IP multicast. Other addresses are not allowed, so the DVBViewer TE is programmed to deny IP addresses which are not reserved for IP multicast.
- Problem:** After I started the multicast transfer, my network slows down.
Solution: Please ensure that you are using a 100MBit/s Ethernet Hub, a 10/100MBit Ethernet switch or a direct cable connection between the streaming server and client.
- Problem:** The multicast does not work properly in my wireless 802.11b/g WLAN
Solution: Sending high data rate IP multicast streams over a wireless LAN might overload the used WLAN. Use a cable connection for IP multicast streaming.
- Problem:** The multicast stream worked fine for a couple of minutes, and then the transfer stopped and the whole network is not accessible.
or
The multicast option does not work after I changed the IP address of my LAN interface without reboot.
Solution: Reboot your machine and try again.

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- Problem:** My DVBViewer TE is not streaming into my local area network and traffic is shown at the "TechniSat DVB-PC TV Star" interface. What's wrong?
- Solution:** Reboot your machine. If the multicast is not sent to the LAN interface, check your LAN connection and if your network components are connected properly and all devices are operable.
- Problem:** I have a TechniSat DVB PCI card or USB box operated with the latest software release and the multicast streaming doesn't work properly. Data are sent to the network, but the VLC is not able to receive the content.
- Solution:** Use Netmeter to check, if there is traffic streamed into your network. If traffic is indicated within your local network on the streaming server, you should do the same on the client PC. The indicated traffic should be similar to the traffic indicated on the server. If the streaming is working, but the stream cannot be received with VLC, you should remove all channels from the channel list and scan for channels and try again.
- Problem:** After the start of DVBViewer TE, the error message "division through zero" appears and the DVBViewer TE is not operable.
or
The picture shown by DVBViewer TE is freezing and sound glitches appear after the installation of a DVD-player software.
- Solution:** It might be possible, that the problems are caused by different MPEG-2 codecs, which are installed on the machines.
- Sonic MyDVD:
To solve the problem, you have to remove the audio filter of Sonic MyDVD. This procedure will be done under the usage of the command line application RegSVR32.exe. Locate the file Impgad.ax and remember the path. Press "Start" => "Run" and enter the following command: `regsvr32.exe /u "<PATH>\Impgad.ax"`
After the procedure is completed, you have to restart you system.
- Problem:** I use multiple TechniSat DVB-PC TV Stars within my computer, but I can open one DVBViewer TE only.
- Solution:** Within release 4.4.0 it is possible to use one instance of DVBViewer TE only. You can select the device you want to use at start up of DVBViewer TE.

3. Other

- Problem:** If I switch to another user using the "Fast User Switching" function of Windows XP
- Server4PC will not appear
- the audio playback of DVBViewer TE will stop
- Solution:** If you switch to another user, the application requested is still running and cannot be started for a second time. You should log off the system and log on with the other user. Then you will get Server4PC and you are able to start DVBViewer TE without any problems
- Question:** I have installed other software (e.g. alternative TV software, unlock or EEPROM tools) and my DVB-PC device is unable to operate (no TV

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- or IP reception, but tuning works). Is it possible to fix the DVB-PC device?
- Answer: You should try installing a clean Windows 2000/XP with the current Service Pack, MediaPlayer9 and DirectX9. Then install the software release 4.4.0 or higher to your system. After this procedure the DVB-PC device should work again. If you altered the firmware of your DVB-PC device by using a tool, you may have damaged the firmware and this procedure won't work. Please note, that after the usage of a tool to modify the firmware of the DVB-PC device, the warranty is void and TechniSat will give no support or replacement.
- Question: I want to develop my own application for TechniSat DVB-PC devices. What do I need?
- Solution: Check the TechniSat website <http://www.technisat.com>. There you'll find a Windows SDK for our DVB-PC device products. No support for the SDK will be available.
- Question: Are there drivers for Linux available?
- Answer: TechniSat doesn't provide drivers, software and customer support for Linux operating systems. There are open source projects existing, which are developing drivers for many DVB cards. <http://www.linuxtv.org> is one of those projects.
- Question: Do you provide BDA drivers for Windows XP Mediacenter Edition?
- Answer: Currently we do not provide BDA drivers. There do exist free mediacenter derivatives, which are working with the TechniSat DVB-PC TV

Chapter 4: HOWTO

This chapter contains a number of small guides.

HOWTO use TechniSat remote TS35, TTS35AI with DVBViewer TE

If DVBViewer TE is already installed you have to remove the application "DVBViewer TE" at "Control Panel" => "Add/Remove Programs" first, please.

Insert the TechniSat DVB-Stars CD into your system, open the Windows Explorer and open the DVBViewer TE directory on the CD. Double-click the "setup.exe" to start the installation.

Choose your preferred language...



Figure 4.1: Select Setup Language

... and click „OK“.

You have to choose "Technisat WinLIRC Remote" at the „Select Components“ menu,

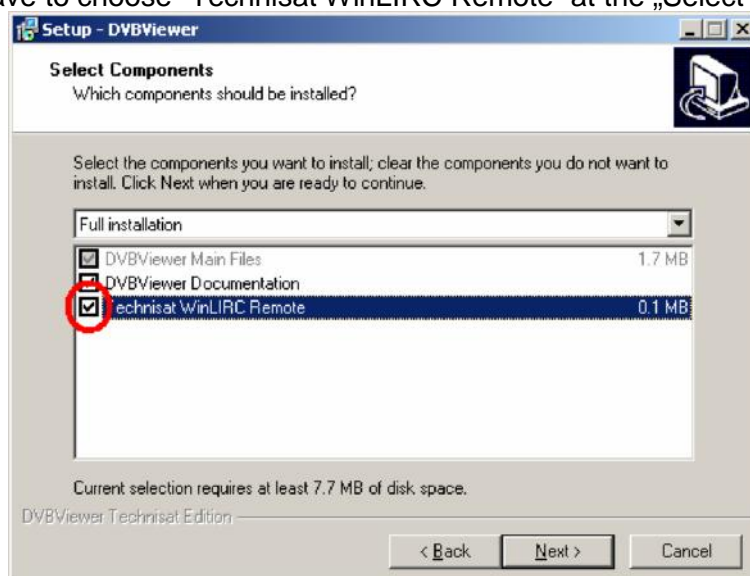


Figure 4.2: Select Components

Finish the installation

This message should appear after the installation of DVBViewer TE.

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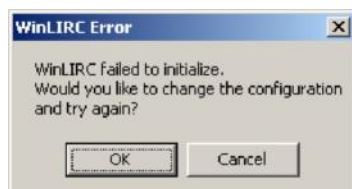


Figure 4.3: WinLIRC

Click „OK“ to enter the WinLIRC Configuration.
Choose the COM-Port of your IR-receiver...

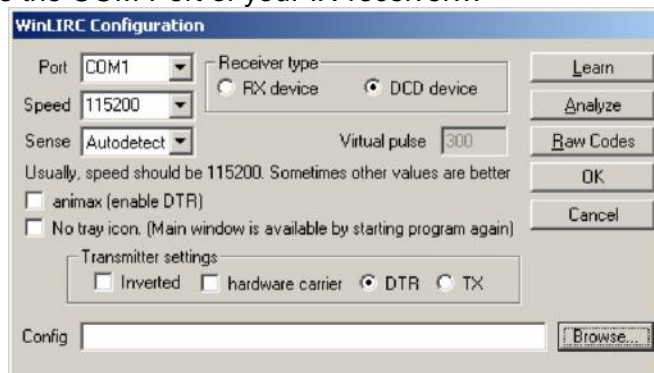


Figure 4.4: WinLIRC Configuration

...and load the „technisat.cf“ configuration file using the „Browse“-button.

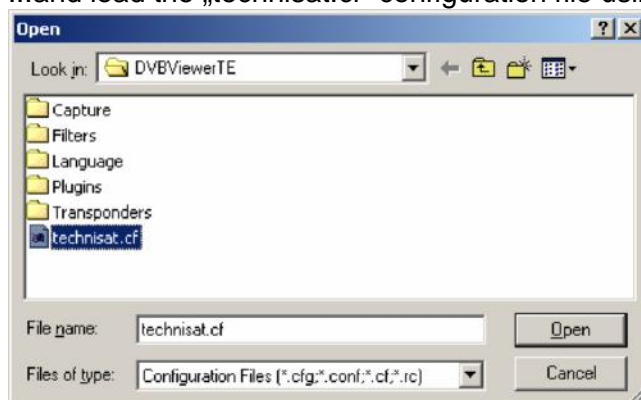


Figure 4.5: Open configuration file

Finish the configuration of WinLIRC using the „OK“-button. WinLIRC should appear in system tray by now.

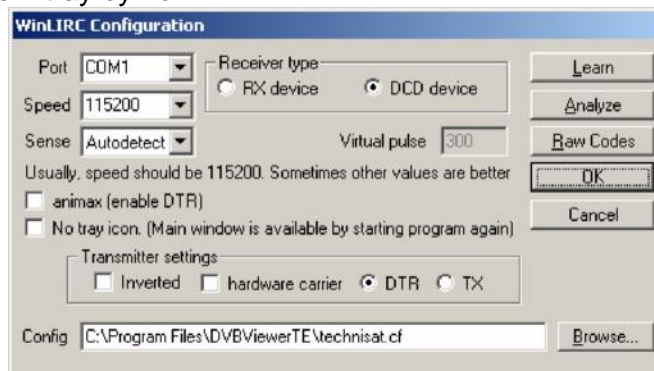


Figure 4.6: WinLIRC Configuration

Open DVBViewer TE and open „Settings“ => „Options...“

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Figure 4.7: DVBViewer TE Options

Here you have to choose „Use WinLIRC“ and press „OK“, the remote should work by now.

If you would like to change the button function of your remote, you might reconfigure this using the register “Control” without any problems.



Figure 4.8 DVBViewer TE Control “WinLIRC”

If you would like to use your own remote, you have to configure WinLIRC manually. You will find more information about the configuration of WinLIRC at the homepage of this project <http://winlirc.sourceforge.net/>

HOWTO use C-band with SkyStar 2

It is possible to receive C-band with the SkyStar 2 PCI/USB. Therefore you must know that C-band uses a different frequency range as the Ku-band.

To receive C-band frequencies, you have to use a C-band LNB (not universal LNB).

You also need a configuration that differs to the configuration used to receive Ku-band. The necessary settings for the reception of C-band are described below.

1. SETUP4PC Settings

You have to add the satellite to your satellite list. Click on “Add” in the satellite list.

The Add Satellite window opens

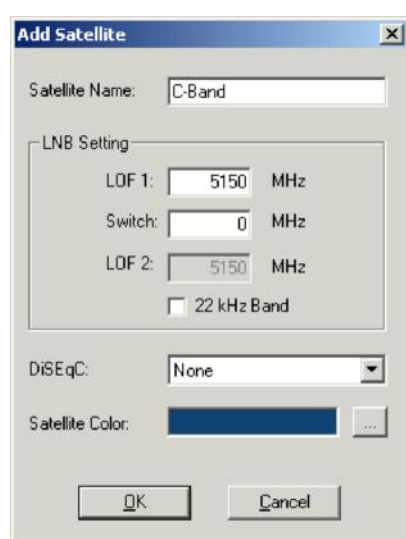


Figure 4.9: Add Satellite

Enter the name of the satellite (e.g. C-band), the LOF 1 value of 5150 MHz and the Switch value of 0 MHz.



It's important that you enter the correct value for those settings. Don't use the default settings otherwise the software can't calculate the correct tuner frequencies for C-band LNB's.

Because of the different type of calculation you have to use different frequencies for a scan. So if you want to do a complete scan for transponders you have to enter the following values as start and end frequency.

- Start frequency: 3400 MHz
- End frequency: 4200 MHz

The channels of the C-band are located between those two frequencies.

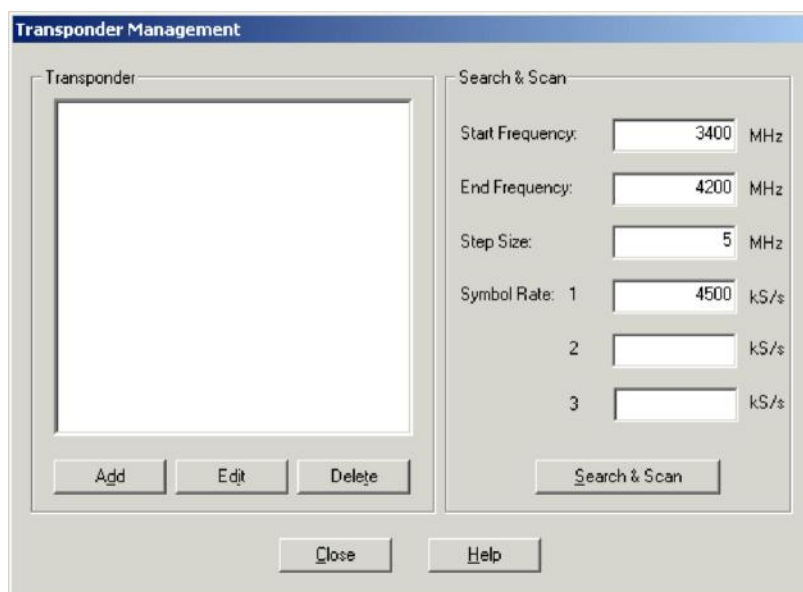


Figure 4.10: Transponder Management

Click on **Search & Scan** to start the scan.

2. DVBViewer TE Settings

The frequency range of the C-band differs to the frequency of other bands that are normally used. So it's necessary to scan in the range of the C-band.

If you want to scan for channels in the TV reception application **DVBViewer TE**, you have to do the following:

Start the application DVBViewer TE. Open the menu "Channellist" and click on the register tab "Channel Scan". Here you have to make some changes to scan in the range of the C-Band.

- Enter the name for your root (Here we used C-band)
- Enter the value of the LOF 1 and LOF 2. Here it is necessary to enter the value 5150 as you can see in the screenshot. Otherwise the software isn't able to recalculate to the correct tuner frequency.
- Enter the value 0 for the SW LOF
- Enter the start frequency of 3400 MHz
- Enter the end frequency of 4200 MHz

Click on the Scan button to start the scan.

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Chapter 4: HOWTO

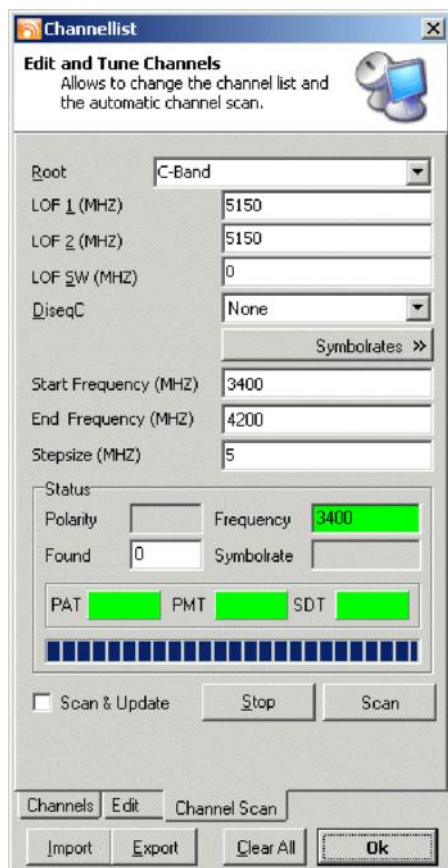


Figure 4.11: Channellist Channel Scan"

Appendix A: Additional information

Technical support / contact:

Germany

Postal address:

TechniSat Digital GmbH
Julius-Saxler-Strasse 3
D-54550 Daun
Germany

Homepage:

<http://www.technisat.de>

Support hotline (german only):

mo-fr from 8:00h to 19:00h

0180-5005910 (0,12 EUR / min)*

Remaining time

0190-151576 (0,62 EUR / min)*

(* conventional german telephone network)

Support email:

service@technisat.de

International

Postal address:

TechniSat Data Services S.A.
11, rue Pierre Werner
L-6832 Betzdorf
Luxembourg

Homepage:

<http://www.technisat.com>

<http://www.technisat.fr>

Support email:

support@technisat.com

Appendix B: Glossary

Band	Part of the radio spectrum occupied by a signal.
BER	Bit Error Rate
Carrier Frequency	Electromagnetic radiation that is modified to represent broadcast information for transfer across distances. See Modulation and Demodulation.
Converter	The device in the satellite dish, which amplifies the radiation from the satellite and converts it to an intermediate frequency (from 950 to 2,150 MHz), before the signal reaches coaxial cable that connects the antenna to the receiver Also-called Universal converter can receive signal from most European satellites.
DBW	Value in decibels of the signal broadcast by the transponder at the center of its footprint. The higher the value, the smaller the dish can receive the signal.
Decibel (dB)	Logarithmic measurement used to indicate increase or decrease in signal quality.
Demodulation	The reconstruction of original signal from radiation that has reached the end user's reception equipment. This commonly occurs at the tuner. See Modulation.
Digital	Broadcasting system based on the mapping of images and sounds to binary data formats. In Europe, the DVB standard is used.
DiSEqC	Device that connects the receiver and other equipment in a satellite receiving system, using coaxial cable to transmit signals to each component.
Dish	The satellite antenna. It is a parabolic surface which reflects the received signal towards the converter. The larger the dish, the better the signal quality.
Down-link	Signal path from satellite transponder to Earth.
DSR (Digital Satellite Radio)	Digital audio broadcasting system used by some German channels. It requires a special receiver.
Dualband	Converter, which is able to receive two different frequency bands at the same time.
Dualpole	"Marconi" converter, which receives both polarities (horizontal and vertical). Users select polarities by means of a voltage change (13 / 18 Volt).
DVB (Digital Video	The digital broadcasting standard for Europe, based on

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Broadcasting)	MPEG-2. Developed by an international consortium, it is available in three flavors: DVB-S for satellite, DVB-C for cable TV and DVB-T for terrestrial.
Encryption	Scheme for scrambling subscriber television or radio.
EPG (Electronic Program Guide)	An on-screen listing that let digital television watchers see such information as time, channel, and content for current and upcoming programs.
FEC (Forward Error Correction)	Bits added to the transmitted data to check transmission errors and allow their correction at user's side. It is written as a fraction: the lower the value (e.g. 2/3 instead of 5/6), the higher the percentage of extra transmitted bits.
Feed	Antenna dish component, which aims the signal reflected by the dish towards the LNB.
Footprint	The area covered by the satellite or transponder signal.
GEO	Geo-stationary Earth Orbit, 36,000 km above the equator. Satellites at this altitude have the same angular rotation velocity as the Earth, meaning their signal can be received continuously at fixed points on the ground.
Geo-stationary Orbit	See GEO.
HDTV	High Definition Television
Intermediate frequency	Frequency band originated from LNB that the receiver can tune. The typical band is 950 - 2,150 MHz.
ISP	Internet Service Provider.
LNB (Low Noise Block converter)	See Converter.
Local Oscillator	Converter component, which shifts the converter received frequency (from 11,000 to 13,000 MHz) to the intermediate frequency band.
MAC	Media Access Control. An addressing scheme for data.
Modulation	The process by which electromagnetic radiation is modified to represent digital or analog input for transfer across distances. In modulation, electromagnetic waves are typically altered as to phase and other characteristics, according to the type of information they convey.
MPEG-2	Digital data compression format, which uses powerful algorithms to greatly reduce the size of final data. Developed by an international research group (the Motion Picture Expert Group-MPEG) it is the system used to compress the digital data for the DVB signals.

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Multi-feed	Two or more converters positioned on the same fixed antenna dish to get signals from two or more satellites whose orbital positions are sufficiently close to each other.
Oscillator	See Local Oscillator.
PID (Packet Identification Code)	A code assigned to a unit of data before it leaves the transmitter, based on such particulars as the program of which the data is apart, and the type of data, e.g., audio, video. The term 'PID' is also used to refer to the unit of data itself. A typical channel comprises several PIDs.
Polarization	Characteristic behavior of the electromagnetic waves. In satellite transmission the polarization can be horizontal or vertical.
Polarizer	Device on end-user equipment, which separates vertically and horizontally polarized waves.
QPSK, QAM	Modulation schemes for satellite and cable TV, respectively. See Modulation and Demodulation.
Sampling	Conversion of analogue signal to numeric data, measuring an electric signal at a predefined pace.
Satellite Chart	A free, public source of information about each orbiting satellite, its channels, polarities, symbol rates, and the like. SatcoDX is an example of an organization that maintains such a chart.
Satellite Database	The database of channels that ships with SkyStar PCI. The factory database includes channels from the Astra satellite, and maybe modified at anytime using Channel Management or by performing a Scan.
Satellite List	The list of satellites available from the satellite database.
SDTV	Standard Definition Television
Symbol	Describes radiation that has been modified to represent digital information. Symbol characteristics such as phase represent particular configurations of binary data. A Carrier Frequency is manipulated into symbol. See also Modulation and Demodulation.
Symbol Rate	The speed at which the satellite sends symbol, or data, expressed in symbols per second. Different modulation schemes use different symbol rates.
Transponder	Device on the satellite, which can receive terrestrial input and transmit it back to the Earth in the form of a broadcast. Each transponder typically handles several channels.
Universal LNB	A converter equipped with two local oscillators. The Low

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Appendix B: Glossary

Band one is at 9,750 MHz; the High Band one is at 10,600 MHz. Using this LNB the maximum frequency in Ku band (12,750 MHz) is shifted to 2,150 MHz.

Up-link

Signal path from the Earth to the satellite transponder.