WinTV-DVB
WinTV-NEXUS

Installations and
Reference Manual
from

Hauppauge!®

English

WinTV-DVB
WinTV-NEXUS

Installation and Reference Manual

English

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M-DVB-NEXUS--V2.09-ENG

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Table of contents

Introduction

This manual describes the installation and use of the **WinTV NEXUS-s** and **WinTV-DVB-c**. With the **WinTV-NEXUS-s** you can receive Satellite TV and Radio stations to your P.C, from your satellite antenna. With the **WinTV-DVB-c** you can receive Cable TV and Radio stations on your P.C, if you are located in a Cable area. Both can also be used with dataservices so welcome to the world of Digital TV.

Note: This manual cover the installation under the operating systems Microsoft® Windows® 98/Me/2000 and XP. The software needed is located on the root drive of the CD-ROM. This software cannot be installed under Microsoft® Windows® 95 or NT4.0, because it is based on the WDM (Windows Driver Model). The software for Windows 95 and Windows NT4.0 is located in the folder \DVBs123b.

Minimum System Requirements

To use the **WinTV-DVB** / **NEXUS** card, you will need the following:

- PC with Pentium Processor, (Pentium 233 or higher recommended)
- Free bus-master PCI Socket (PCI specification 2.1)
- 32MB RAM / 32MB harddisk space (minimum)
- PCI or AGP Graphic card, running at a minimum resolution of 800 x 600 Pixel, in either 'High Colour' (16 Bit) or 'True Colour' (24 or 32 Bit)
- Active speaker or soundcard/speaker combination
- CD-ROM Drive (only required for software installation)
- Microsoft® Windows® 98/Me/2000/XP
- DirectX 7 or higher
- Microsoft Internet Explorer 5.5

In addition, you need a connection to a digital ('combo' or 'high-band') satellite system. If this system incorporates a switch box, this switch box needs to be DiSEqC (Digital Satellite Equipment Control) compatible. The physical connection on the **WinTV-NEXUS** card is a single F-Connector.

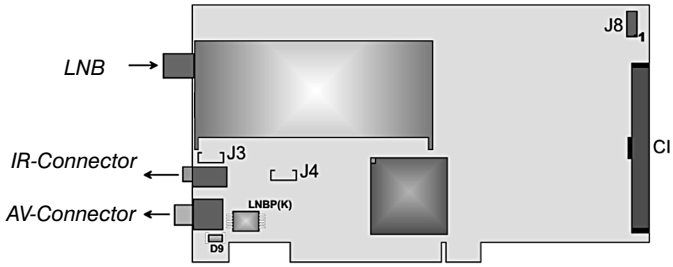
Furthermore you need a connection to a satellite reception antenna or to a satellite reception system which can receive digital satellite signals (DVB satellite).

Preparation of the computer

Before working on the hardware of the computer, switch off the computer but leave it plugged in. You should first discharge any body static. To do this, you can touch a grounded part of the computer chassis such as the metal surface of the power supply.

The manufacturer disclaims any warranty for damages caused by direct or indirect installation of a component by an unqualified person. Please consult a computer specialist, if you are unable to install the card yourself. Switching on the computer during installation can be dangerous and cause damage to the **WinTV-DVB** / **NEXUS** card and your health.

Connections of the WinTV-NEXUS card



LNB.....F-Connector socket, signal input from your digital satellite system.

IR-Connection .....Connection for the IR receiver.

AV-Connection.....Connection for the the AV cable.

J3 .....Internal audio socket; CD-ROM Audio output, for connection to the internal port of soundcard (CD-ROM Audio in)

J4 .....Internal audio socket; CD-ROM Audio input, for connection to the analogue Audio-output of CD-ROM-drive.

J8 .....Reserved for future extensions

CI .....Connection for the optional Common Interface module

The **WinTV-NEXUS-s** card comes with one A/V cable supplied, which has at an end a round DIN plug and at the other end 4 Cinch and a jack plug connection.

Connect the DIN plug of the A/V cable with the AV connection of the **WinTV-NEXUS-s** card.

The A/V cable has the following connections:

3,5mm connector	- Stereo Audio Line Out
Black Cinch	- S/PDIF digital audio-output
Yellow Cinch	- Composite Video-output
Red Cinch	- Audio right channel
White Cinch	- Audio left channel

3,5mm Connector

Connect the 3,5mm jack plug with the " **LINE In**" input of the sound card. Alternatively you can connect the internal audio output **J3** on the **WinTV-NEXUS-s** card with the internal input of the sound card. The cable needed for it is not provided. The external connection to the "**LINE in**" on the sound card should not be used if the **J3** connection is being used.

Black Cinch

Digital audio output S/PDIF, for the connection to a digital audio input device

Yellow Cinch

Composite video output (TV Out) for the link of a television set.

Red Cinch

Audio output (right channel).

White Cinch

Audio output (left channel).

Link to a television set

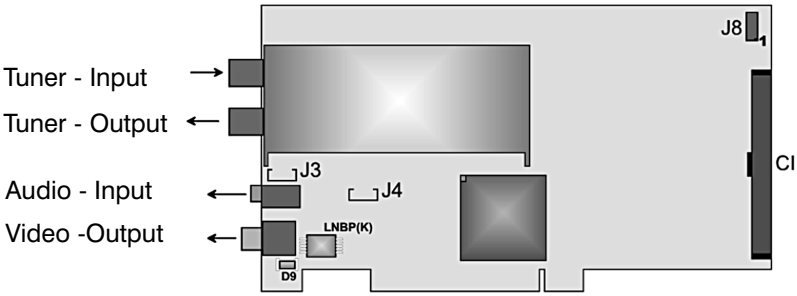
To connect the **WinTV-NEXUS** to a television set you need a cable which has a Euro Scart plug on one end and three Cinch plugs on the other. Pay attention to the correct Signal direction of the cable: the signal must go from the Cinch plugs toward Scart plug. That is displayed either with arrows on the Chinch to plugs, or on the Scart plug is " video in " is printed. Connect the yellow, red and white Cinch plug according to the colors with the three Cinch sockets on the A/V cable of the **WinTV-NEXUS** card.

Remote maintenance

Connect the infrared receiver with the IR input of the **WinTV-NEXUS** card. Place the infrared receiver so that the infrared eye of the remote handset can see the infrared receiver.

Check that the 2 AAA batteries are fully inserted into the remote handset.

The remote handset is active or is queried if the Digital TV application is started. No special software is needed for the operation of the remote handset.



Connectors of the WinTV-DVB-c Board

Tuner-Input.....TV-Input for a connection to Cable - TV

Tuner-Output.....Loop-through of the TV-Signal

Audio-Output .....External Audio-Output 3,5mm Jack, analog audio signal, either connect this Output with the enclosed Audio Loop Cable into the Line-In of the Soundcard or directly into the active loudspeakers.

Video-Output.....For a connection to a Video-Input (i.e. SCART) on a television, so you can also see the picture on TV (optional).

J3 .....Internal Audio-Output, analog audio signal, so you can connect an internal Soundcard (optional). An alternative in using your external connection.

J4 .....No Function

J8 .....Reserved for future expansions

CI .....Connection for the optional Common-Interface

Installation of the WinTV-DVB / NEXUS card

After you have prepared your computer, you can begin with the installation of the **WinTV-DVB** / **NEXUS** card.

1. Make sure that Windows 98, Me or 2000 is installed correctly, before you insert the **WinTV-DVB** / **NEXUS** card.

2. Shut down Windows and switch off the computer.

3. Remove the housing cover of the P.C. If necessary, check in your computer manual, as you must remove the housing cover.

4. Select a free bus-master PCI card slot. In most computers all PCI slots are bus master enabled.

5. If necessary, remove the backplate of the selected empty PCI slot location.

6. Insert the **WinTV-DVB** / **NEXUS** card into the PCI slot location and press firmly down until the card is fully inserted and sits correctly.

7. Fasten the card with the retaining screw and replace the housing cover of the computer.

8. Connect your satellite reception antenna with the upper (outside) or single connection of the **WinTV-DVB** / **NEXUS** card.

Now you can install card for driver and application software for the **WinTV-DVB** / **NEXUS.**

Installation of the WinTV-DVB / NEXUS Driver

1. Make sure that the **WinTV-DVB** / **NEXUS** card is inserted into your computer as described in the previous section.
2. Switch the computer on.
3. When Windows starts, it will detect the new hardware automatically and requests you to install the driver files. Insert the **WinTV-DVB** / **NEXUS CD-ROM** into your CD-ROM Drive (where x is the driver letter of the CD-ROM drive) and select the **Saa714n.inf**. Follow the on-screen instructions to

complete the installation. You may need the Windows CD-ROM for the completion of the installation.

4. The computer should be re-started to continue the installation.

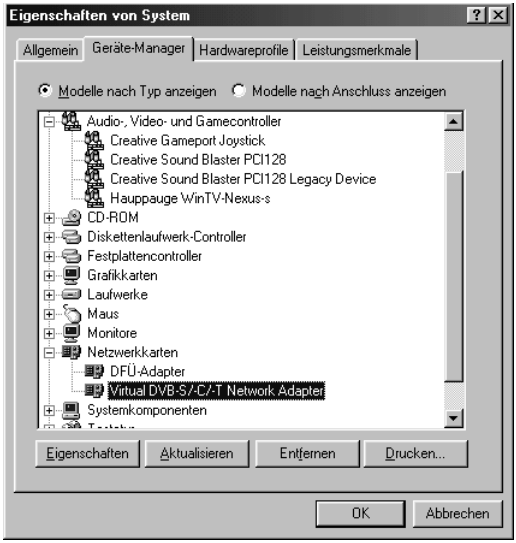
Installation of the WinTV-DVB / NEXUS application

1. Make sure that the **WinTV-DVB** / **NEXUS** driver is installed correctly as described in the previous section.
2. Make sure that the **WinTV-DVB** / **NEXUS CD-ROM** is in the CD-ROM drive.
3. If you then click on start and run.....
4. And then type in **X:\SETUP.exe** (where x is the driver letter of the CD-ROM drive) and click on ***OK***.
5. Follow the on-screen instructions to complete the installation.

The installation program will check that Internet Explorer version 5.5 and Direct X 7 is installed and will install them if necessary.

Checking the driver under Windows 98/Me

To check that the driver has been installed correctly go to the device manager. Go to **Start** / **Settings** / **Control Panel** / **System** / **Device manager** - Symbol.

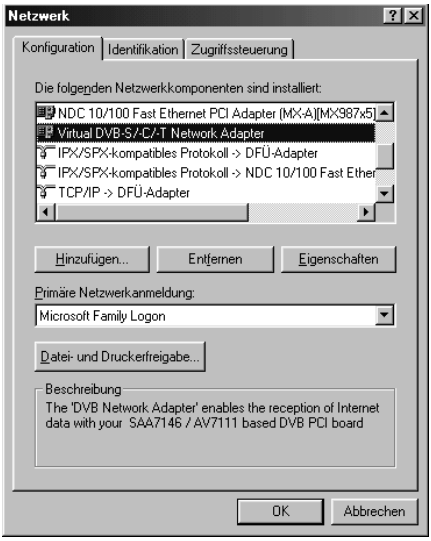


The **WinTV-DVB** / **NEXUS** is located twice in the device manager under:

1. The "Sound Video and Game controllers " as **Hauppauge WinTV-NEXUS-s** or **Hauppauge WinTV-DVB**.
2. The "Networking" as **Virtual DVB-s/-c/-t Network Adapter.**

Checking the Network settings

Go to Start / **Settings** / **Control Panel** / **System** / **Network** Symbol.

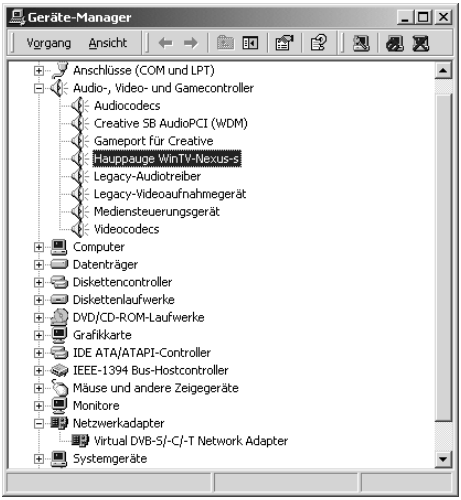


Highlight the entry **Virtual DVB-s/-c/-t Network Adapter** and click on the ***properties tab***.

Select the option **Bindings**. Only the TCP/IP protocol can be selected for the **Virtual DVB-s/-c/-t Network Adapter.** If any others are also selected then de-select them by removing the check box and click on ***OK***.

Checking the driver under Windows 2000/XP

To check that the driver has been installed correctly go to the device manager. Go to **Start** / **Settings** / **Control Panel** / **System** / **Hardware** and click on the ***Device manager*** - Symbol.

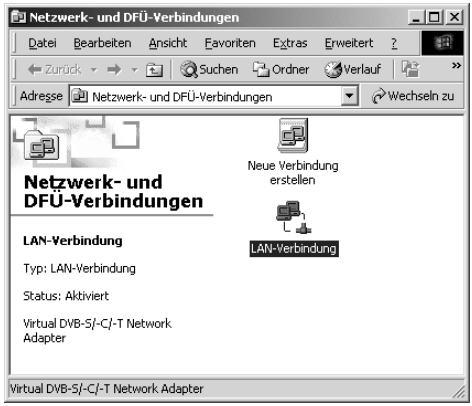


The **WinTV-DVB** / **NEXUS** is located twice in the device manager under:

1. The "Sound Video and Game controllers " as **Hauppauge WinTV-NEXUS-s** or **Hauppauge WinTV-DVB**.
2. The "Networking" as **Virtual DVB-s/-c/-t Network Adapter.**

Checking the Network settings

Go to **Start** / **Settings** / **Control Panel** / **System** and double click on the ***Network*** Symbol.



Using the mouse right click on the LAN connection **Virtual DVB-s/-c/-t Network Adapter** and select **Properties:**

Only the **TCP/IP** protocol and **Client for Microsoft Networks** can be selected for the **Virtual DVB-s/-c/-t Network Adapter.** If any others are also selected then **de-select** them by removing the check box and click on ***OK***.

The WinTV-DVB / NEXUS Application Program

Overview

After the installation of the **WinTV-DVB** / **NEXUS** driver and application software two application programs can be selected by going to **Start** / **Programs** and ***"Hauppauge WinTV-NEXUS***".

The **WinTV-DVB** / **NEXUS** application program offers the following functionality:

Digital TV: Enables the reception and playback of DVB TV and Radio programs and allows you to view VIDEOTEXT pages.

DVB Data: Allows you to receive IP based DVB data broadcast. You can create profiles for the reception of different data services.

The Digital TV-Application

The Digital TV application has all of the Menu controls easily available for ease of use and optimal functionality. You can also re-size the application Window and display the TV picture in a small window. The program list is displayed alphabetically and you can create a favorite list of your favorite channels. Using the small picture Icons located around the TV window allows you to watch and record to your hard disk.

The application window contains the following controls on the left hand side :

- The menu for calling additional dialog windows
- The program list
- The control panel program adjustment
- The name and information of the current channel
- The recording control

On the right hand side :

- The television picture
- The current program information

In the title border of application the display surfaces for the TV picture are displayed:

- The TV picture (possibly 16:9-Mode, total window, frame)
- The application window (minimize, maximizing, close the application)

Note: Almost all control elements display dialog help windows (or Tooltips). These are small assistance texts, which are automatically displayed if you position the mouse over the control element for one second with out moving. You may have to click on the control border of the application before using the Tooltips as it need to be the active application (e.g in the foreground).

Control Menu

The control menu border contains symbols that allow you to Scan for Channels and other configuration options.

From Left to right they allow you to:

- Transponder Scan
- LNB/Satellite configuration (for the **WinTV-NEXUS-s**)
- CI (Visible only if a Common Interface module is connected)
- Playback of audio/video files
- Adjustments of general type
- Display to the on-line assistance

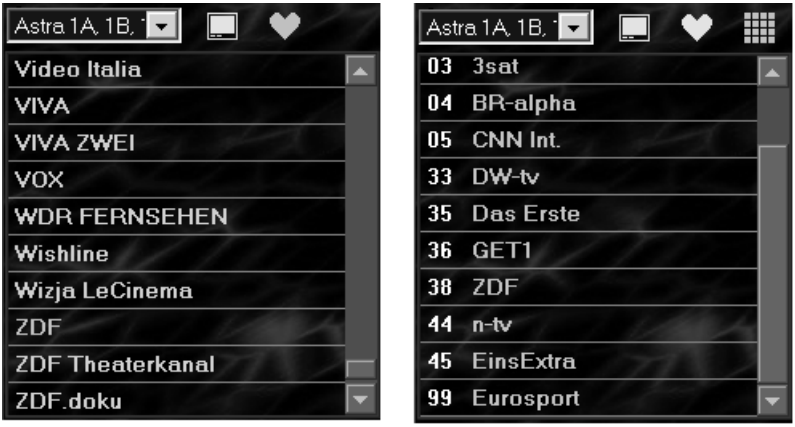
Program list

The available programs are displayed in the program list.

You can determine the display parameters of the list using the following options:

- Satellite (or Satellites), which programs should be displayed
- Channel list of TV or radio programs
- Display of the entire or favorite list (in each case for TV or radio)
- Favorites displayed as normal list or as a matrix

The matrix symbol will only appear when the favorite list is displayed:



If the programs are displayed as a list, select the program that you want to watch by clicking on the name of the channel.

During the display of your program favorites as a matrix, you can click on a program number to stop the program being stored there.

The name of the program is stopped being displayed underneath the program list.

Additionally you can use the **channel change** buttons in the control panel of the program underneath the program list as well as the remote control handset or keyboard shortcuts.

Note: If the program list is empty when you first start the application you have to go to the LNB/Satellite configuration to carry out a transponder search. In order to delete unwanted programs permanently from the list, you select the search dialogue and remove the appropriate channel.

Favorite

Digitally TV allows you to select and assign TV and radio channels to a favorite list. Two of these lists exist, one for TV and one for radio. Since both are completely independent, both television and radio stations are able to be stored in separate spaces.

Note: The two favorite lists (TV / radio) can only be amended (programs added and removed), if the program list is displayed and not when the matrix is displayed.

You can add a channel to the favorite list by:

- Clicking with right hand mouse button on the channel to add to the list.
- Select a space in the matrix.
- If the space is already used (Shown in red) select an alternative.

After storing the program in the list it appears coloured and the program number is displayed.

You can Remove a TV or a radio program from the favorite list by:

- Clicking with right hand mouse button on the coloured channel that you want to remove from the list.
- Select one of the delete options offered below the appearing matrix.

Note: If you would like to delete all TV or radio favorites, display this as a list on the display and click the with the right hand mouse button on the favorite symbol.

Modifying the program number of the favorite list:

- Remove the program as described above from the favorite list.
- Take the same program again into the favorite list

Program Adjustments

You can make changes to the application using the control panel underneath the program list.

Sender selection

From the up-to-date channel list you can:

- Change to the next program
- Change to the previous channel
- Recall the last station

Program Info

The i-symbol allows to you to display information about the current program that you currently watching. This information contains start time of the current and next program and information about the actual program. This information is displayed only when broadcasted.

Teletext

If a television station has Teletext (videotex) broadcasted, the Teletext symbol appears and can be selected to display the teletext pages.

Volume

This slider bar allows you to increase or reduce the volume level. Clicking on the ***speaker symbol*** will **Mute** / **start** the sound volume.

Hint: When the sound is on mute the speaker symbol is highlighted and when it is not muted it is not colored.

Audio

Under the volume control the current audio channel is displayed. This occurs either in form of the language or the PID, if no direct language information is present. If either the language or PID is available this display remains empty.

If a program has several different audio channels transmitted, the desired language can be selected.

Display Window

The TV picture is displayed according to the window size in aspect ratio 4:3 or 16:9. By selecting the switching surfaces in the title border you have the option of selecting the following modes:

16:9-Mode

If a transmission is broadcasted in pure 16:9-Format three additional options appear:

- 16:9 as direct output.
- 16:9 as 4:3 with black border (broad picture, Letterbox).
- 16:9 on 4:3-Format zoom (panorama, CANCCan CAN)

Full screen mode (frame)

By clicking this symbol you change to full screen mode view for a maximized TV picture with a border. In order to return to the normal display mode you can either ***double click*** with the **mouse** or press you the ***ESC key***.

Full Screen Mode

By clicking this symbol you change to full screen mode view for a maximized TV picture. In order to return to the normal display mode you can either ***double click*** with the **mouse** or press you the ***ESC key***.

Always on top mode

Selecting this icon will display the TV picture as the foreground application on the desktop (you will always see the picture if using other applications). This can also be used when re-sizing the TV window.

Keyboard control

The remote control can be used for controlling the TV and Radio application. In addition the computer keyboard can be used.

Note: If keyboard entries do not work then you must click on the digital TV (on the title border) or **ALT+TAB** combination keys to make the TV digital the active window. In the frame and full screen window mode all keys specified do not have any effect.

Keys	Action	Function
+ - Plus Minus	CH+ CH-	Next / Previous channel
ENTER L	---	LNB / Satellite List
LEFT RIGHT	VOL- VOL+	Volume lower / higher
M	MUTE	Mute ON / OFF
Q	---	Switches on 16:9
A	---	Always on Top
F ESC	FULLSCREEN	Fullscreen ON / OFF
W ESC	---	No Title MODE ON / OFF
V ESC	RESERVED	Show Teletext pages
T	TV	Show TV List
R	RADIO	Show Radio List
---	MINIMIZE	Minimize TV / Maximize TV
I	---	Program-Info ON / OFF
---	---	Recording start/stop
0 ... 9	0 ... 9	Select favorites

With the Teletext window displayed you can use the numbered keys on the IR remote control 0-9 to select the pages. Alternatively you can also use the CH+, CH- as well.

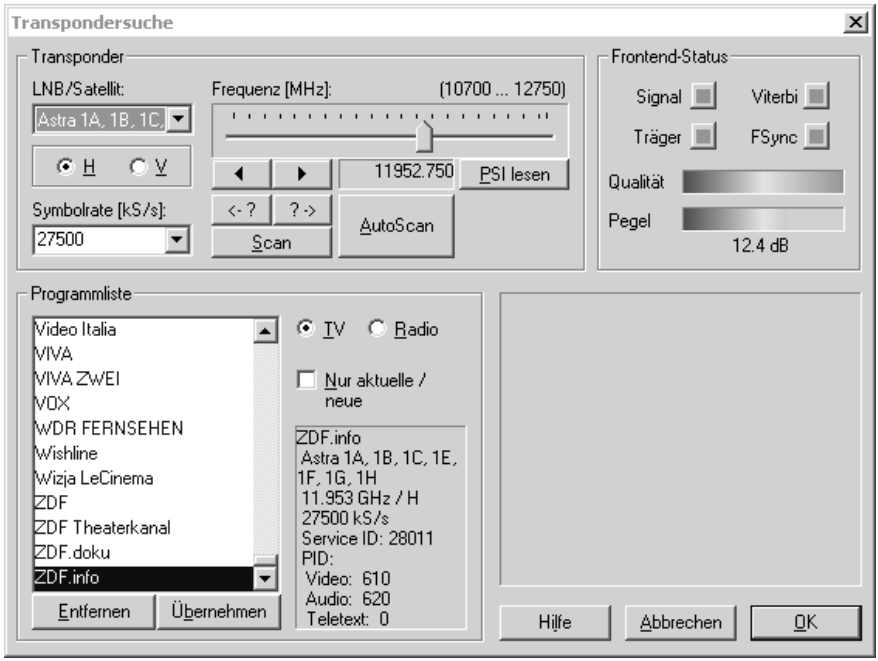
Note: All TV programs which are selected and displayed as favorites will be coloured in the matrix, and can be selected by using the key TV (or T). The same applies to the RADIO key (or R).

Transponder search for the WinTV-NEXUS-s

The dialog window **transponder search** allows you to search for channels and **add** / **update** the channel list for any new channels that are being broadcasted.

After the transponder search has finished and you will be returned to the main application window after clicking on ***OK***. The updated channels in the program list are added to the channel list (if this was not done before by clicking on store list). Clicking on ***Abbrechen (cancel)*** will abort any changes that you have made and transfer you back to the main application window.

Clicking on ***OK*** once will add the new channels to the program list.



LNB/Satellite.....Selection of the LNB or the satellite. Select the satellite here, on which channels you would like to Scan.

H / V.....Select polarization plane here (horizontal or vertical).

SymbolRate.....Selection or input of the symbol rate. The input of the symbol rate needs to be correct for the WinTV-NEXUS-s card, in order to detect the appropriate transponder.

Frequency.....Adjustment of the transponder frequency. The transponder frequency can be selected with the sliding control or gradually with the arrow keys.

<-? | ?->.....Searches for the preceding or next transponder on the basis of the up-to-date stopped frequency. The search takes place on the selected satellite with the adjusted polarization and symbol rate.

PSI Read.....This reads the program-specific information of the DVB signal, which is broadcasted on the transponder by the satellite operators and added to the program list and updated accordingly.

Scan.....The Scan function allows you to search for DVB channels over the entire frequency range on a satellite position. The search takes place on the selected satellite with the adjusted polarization and symbol rate.

AutoScan.....The autoscan option starts the automatic fast scanning of the frequency range of the selected satellite.The values for the selected polarization and symbol rate do not effect the scanning process.

If certain channel are not found try using the Scan option or <-?|?->

Frontend-Status

Signal .....It displays whether a DVB signal is detected.

Carrier .....It displays whether a carrier signal is detected.

Viterbi .....Displays whether the Viterbi Decoder is locked.

FSync.....Displays whether the DVB synchronization was detected.

Level .....Display estimated signal level in dB.

Quality .....Display the bit error rate in four steps (greater than 10-1, 10-2,10-3 or 10-4).

When a DVB transponder is detected the indication areas: **Signal, Carrier, Viterbi and FSync** are highlighted.

Program List

Displays the current program list. Current available programs blue, detected or updated programs are green. Individual or several programs can be highlighted. The last program in the list is appears in the preview window. Encoded programs are marked by a (#) symbol.

RemoveTV / Radio:

Delete the highlighted programs from the program list.

New / Updated only:

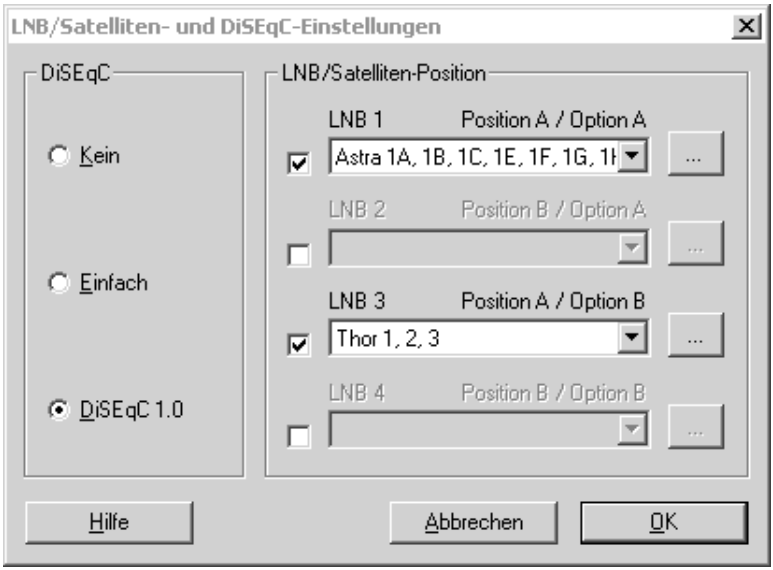
This switched between the display view of the program list of TV or Radio.

Select this small box, if only new or updated programs are to be listed are after a Scan.

DiSEqC/LNB/Satellite configuration

You can use this dialog for making the adjustments for DiSEqC, LNB and satellite for your satellite system.

Click on ***OK***, in order to apply the change and **close** the dialog window or on ***abbrechen*** to abort the adjustments.



DiSEqC- adjustments for WinTV-NEXUS-s

The DiSEqC adjustments (digital Satellite equipment control) are of importance if you attach the **WinTV-NEXUS-s** card to a satellite system, where the reception is on several orbital positions, and where unification of the individual antenna signals is made by DiSEqC Switch box or DiSEqC Multi-changer.

No DiSEqC

Select this option, if the **WinTV-NEXUS-s** card is attached directly to an individual antenna, where only one orbital position is to be received.

Simple DiSEqC

Select this option if the **WinTV-NEXUS-s** card is connected to a shift box with "Tone Burst" control (also called as "Mini-DiSEqC" or "Simple DiSEqC"). You have the option to select between two antenna signals (orbital positions).

DiSEqC Version 1.0

Select this option if the **WinTV-NEXUS-s** card is connected to Level 1.0 a shift box or multi-toggle with DiSEqC-control. You can select between four options. The specific settings can be found from the documentation of the DiSEqC shift box or DiSEqC multi-toggle, respectively.

LNB/Satellite position

Depending which DiSEqC settings have been selected will determine which of the available four LNB and different position/options are assigned. They are activated by selecting the appropriate small box. Subsequently, the satellite is to be selected from the list, to which the appropriate LNB is aligned. Further adjustments are accessible by clicking the switching surface [...] (signal tone output test)

Signal tone output test

Click on ***[...]***, in order to make a signal tone output test and if necessary further adjustments for the selected satellite.

You can modify the frequency, symbol rate and polarization. The modifications become effective only after selecting ***OK***. Abort closes the dialog window. Additionally the LNB settings can be modified.

Transponder

Select a transponder for the test. Frequency, symbol rate, polarization and the display of the signal strength are updated automatically.

Frequency

Adjustment of the transponder frequency. Input the desired transponder frequency in mc/s here.

Symbolrate

Input of the symbol rate. The **WinTV-NEXUS-s** needs the input of the symbol rate in kS/s of the appropriate transponder to detect a signal.

Polarization (H/V)

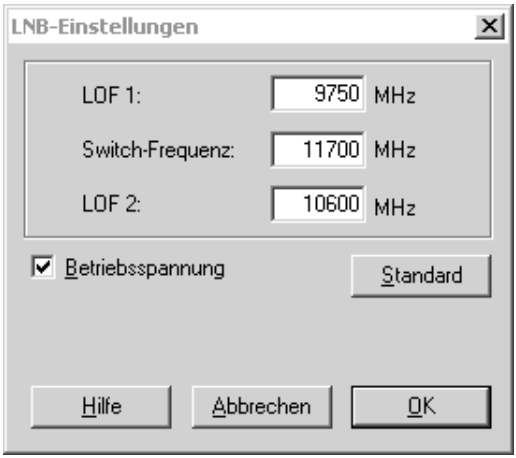
Select the polarization plane (horizontal or vertical).

Signal strength

A status beam displays the signal strength of the received transponder. This should be as high as possible, in order to guarantee a perfect reception.

LNB configuration for WinTV-NEXUS-s

The local oscillator frequency of the transponder frequencies of usual television satellites is usually within the range of 10GHz or higher. During the transfer of such high frequencies, the absorption losses are excessive in the coax cable and at the antenna in the LNB (Low Noise block, sometimes also called LNC - Low Noise converter). Therefore, a conversion to a lower frequency range is necessary. Sat ZF (950 to 2150MHz). This is also the incoming frequency range of digital satellite receiver (like the **WinTV-NEXUS-s** card).



LOF 1

Local Oscillator Frequency(ies).

The LOF indicates, around which amount the incoming frequency is transferred. The **WinTV-NEXUS-s** needs the input of this value, in order to be able to process the actual incoming frequencies. The LOF is imprinted on the LNB. Digital suited universal LNB has two LOF, one for the Low band (also 11-GHz-Band) and one for the High-band (also 12-GHz-Band). Switching between the two LOF takes place thereby by means of 22-kHz- Signal. LOF 1 is the local oscillator frequency for the Low band.

LOF 2

For High-Band, with Universal-LNB

See also LOF 1.

Switch

Indicates, for universal LNBs, the changeover frequency between the Low and High band (by means of 22kHz-Signal).

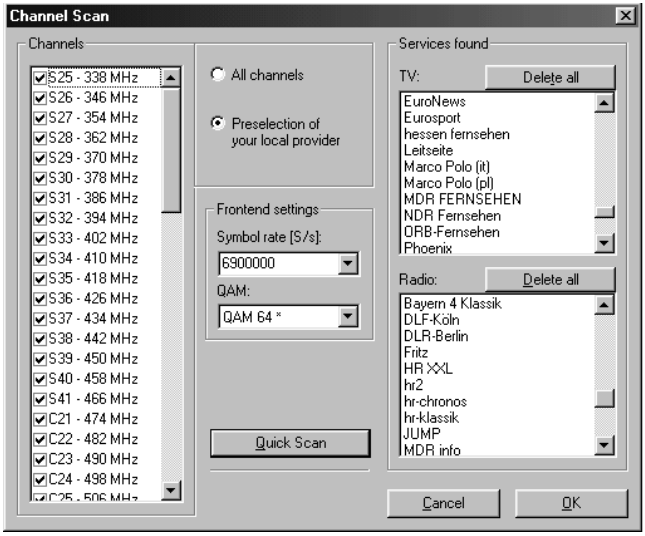
Operating voltage

Indicates whether the LNB is to be supplied with current. This should be always activated.

Standard

Re-establishes the preset default value

Channel Search for the WinTV-DVB-c



Channels

List of channels that are to be scanned. Only the channels that are check-marked will be scanned.

All Channels

Lists all of the channels.

Preselection of your local Provider

Lists the channels, which are only provided by the local provider.

Symbol Rate (S/s)

Input of the Symbolrate. **WinTV-DVB-c** needs the symbolrate, to detect the corresponding channel. The default is 6900000.

QAM

QAM is the process of channel coding that is found in the cable network. The standard is 64.

Quick Scan

Click on **Quick Scan**, to start the channel search for the channels that are listed with the given symbolrate and QAM. The channels that are found will be then listed on the right side under **Services Found**, they will then be sorted, given TV Channels and Radio Channels.

After completion of the channel search click on ***OK***, so that the channels are saved.

Using the WinTV-DVB-c only digital Radio- and TV- Channels are receivable!. Please inform yourself about the availability of digital channels at your cable network provider.

Recording / Playback

Recording

Digitally TV offers two possibilities of recording radio or television broadcasts on the fixed disk:

The programmable timer and the record function. While you must open the appropriate dialog window for the use of the first mentioned functionality, recording can be started directly by the program surface and is thus the best way to record current programs spontaneously.

The recorded file is stored with the options date and time-of-day with automatically generated file names (can be renamed if necessary after termination of the recording in the Windows Explorer) on the fixed disk.

The status beam displays recorded time and the space still available (Tooltips supplies the exact values of the number). The estimated recording duration (in minutes or hours) and the current file format (the Tooltip reveals the file names) are also available.

If the recorded file achieves the indicated max. file size, a new file is begun automatically and the recording is continued. The status beam is set back to the beginning, while all other displays are not.

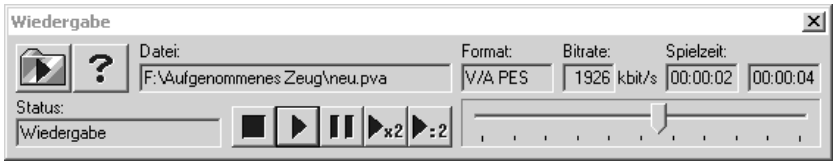
The recording is started and stopped by means of pressing the yellow button. When the button is flashing the recording is in progress and you cannot change to another channel, you must stop the recording before changing to another channel.

The data rates of the audio and video stream are up to several Mbit/s requiring a fast and large fixed disks. During the recording of a video stream with a typical data rate of 4 Mbit/s you need approx. 30 MByte for one minute, for one hour 1.8 GByte storage space.

Open the playback dialog window, in order to display the recorded Audio-and video files. If you selected in the recording options as standard format MPG, the playback dialog cannot be used for playing. You will need to use software of a third provider to playback the files.

Dialog window playback

The dialog window playback serves for playing recorded audio/video stream.



File open

 **[ALT+O]**

Before playback you must open a file for playback. You will be requested for the selection or input of the file name. If you want to open another file, click again on this icon.

Control Keys

(The alternative key assignment is indicated in square brackets.)

 **[ALT+S]**

This key stops current playback.

 **[ALT+P]**

This key starts playback. In addition a file must be opened to playback

 **[ALT+A]**

This key allows the playback to be paused. The video remains visible as fixed image. By pressing this key again the video will start to move again.

 **[ALT+F]**

Fast playback (only for video or Audio):The file is played with double rate.

 **[ALT+L]**

Slow playback (only for video or Audio):The file is played with half rate.

Control displays

The scale displays the current position during playback related to the entire file length.

The playing position can be changed by shifting the control knob manually. If playback in the desired place should not begin after few seconds with this maneuver, shift the position of the automatic controller a little further.

Additional displays:

- The current status
- File and format - path, name and format of the opened file
- Bit rate
- Play time - previous play time and total period

Note: Note that the video and audio streams are stored in MPEG-2 format on your hard drive. The recording process will require a transfer rate of up to several MBit/s. For example, you may need 30 MBytes free for the recording of a video stream of 4 MBit/s, for approximately one minute. Extrapolating this figure means that you will need 1.8GB for 1 hour of video.

General adjustments

In this dialog window you find a set of tab options, with whose assistance various adjustments can be made. Click on ***OK*** applies the modifications (you may need to re-start the digitally TV), by aborting rejects the changes (excluding timer dates already set).

Video

This tab enables the non-standard adjustment of the picture parameters to brightness, contrast and colour intensity.

16:9

This determines the standard output mode for transmissions, which are broadcasted in pure 16:9 format.

They have the selection between:

- 16:9 as Raw output
- 4:3 Letterbox (broad picture)
- 4:3 Pan scan

DirectDraw

The options offered here are in connection with the graphics card of your computer.

The standard option auto should be selected here, because then the best mode available is selected automatically.

Only for problems with the image representation should auto be switched off, in order to stop the mode manually. The following modes are available:

- Overlay operation supplies the best quality and should be always selected, not if another application is already using overlay

- Distances of the TV picture in the image mode on up to screen resolution (relatively good quality), in the complete window and frame mode 800 x of 600 pixels)
- To Inlay representation with of the TV picture (800 x of 600 pixels, black edges with higher screen resolutions)

If the video picture is represented as overlay operation and your graphics card supports the BOB mode, activating this control small box can lead to an improvement of the image quality.

When switching on of the software scaling on software Scaler transfers the picture scaling in the OVERLAY mode of the DirectDraw. Activating this control small box is not recommended however, since the image quality leaves remaining artifacts every now and then.The adjustment is meaningful only if your graphics card can output the OVERLAY video picture on a secondary monitor or a television screen over a binary output.

According to standard digitally TV the reception signal is the PAL standard. If you are however in a Area where the television broadcasts in NTSC standard o activate this small control box.

Note: Note that on modification of these options you must re-start the digital TV application for the changes to take effect.

Layout

This allows you to determine the display characteristics for digitally TV. You can determine whether your program lists displays the encoded channels (marked by #) or does not display them (do not appear in channel list).

You can also display the program list in alphabetical order by selecting the small box.

The digital TV application supports several languages and the required language can be selected from the list.

The application surface can be changed by selecting one of the different surface number to change the colour of the application interface (from 1 to 8).

Note: Note that on modification of these options you must re-start the digital TV application for the changes to take effect.

Recording options

This option allow you to change the way how the TV and radio stations are recorded.

For files which can be recorded you can determine the recording format, in which the files are to be written on the fixed disk,:

- PVA: Recording of the files in the PES Audio/Video format (standard for digitally TV)
- MPG: PS Audio/Video format (MPEG-2)
- PSV: PES video format, record only the picture
- MP2: MP2-Audio-Format, record on the audio

This adjustment is relevant only for TV recordings, radio programs are always recorded in the MP2 format.

Note: For the recording format you should only select MPG only if you would to play back the files using a third-party software. You cannot use the digitally TV application to playback the files.

Determine the maximum size of a file within a range from 1 Mb to 4 GB, which can be recorded. With achieving the indicated maximum size during recording a new file is opened automatically and the recording is continued. Default folder: You can select the location of the folder where you want to record the files.

Timer

The timer function enables you to record a channel using while not sitting at the computer (similar to a VCR).

The following definitions apply:

- Start of the recording (time-of-day)
- End of the recording (time-of-day)
- Start of the recording (date)
- Station and channel tobe recorded

After selecting the options that you want to use click the apply button to confirm the selection.

Note: A programmed recording can only be started if the computer is switched on and digital TV is not opened. Additionally the starting time must differ from the end time. Different programmed recording dates may not overlap themselves.

The programmed recordings are entered into the task planner of Windows (with Windows 98 under **start** / **programs** / **accessories** / **system programs** / **planned processes**). There you can delete tasks already programmed.

Info

Under this column you find product specific information about your DVB hardware and software.

DVB-Teletext

The window DVB Teletext is a simple videotex Browser. DVB Teletext can be called only then in the DVB TV & radio application, if the broadcaster is sending videotext pages. It is activated using the Teletext symbol in the control border ' menu ' (page 19). If you stop a TV program with videotex in DVB TV & radio, then DVB Teletext in the background stores all incoming videotex pages.

The operation of the application is controlled by the surfaces arranged at the right edge of window:

COPY:
Copies the current page into a file.

PRINT:
Prints the current page out.

HOLD:
Freezes the current page so that additional text reception is ignored.

???:
Displays hidden text (eg: the punch-line of a joke).

100:
Requests page 100 (usually the index page).

SAVE:
Stores the current page as HTML document.

FORWARD:
Goes to a page previously visited after clicking on the Back button.

BACK:
Goes back to a page previously visited.

PAGE:
Allows you to enter a page number manually and move the page number up and down by the value of one, per click, of the buttons.

SUBPAGE:
Allows you to enter a sub-page number manually and move the sub-page number up and down by the value of one, per click, of the buttons.

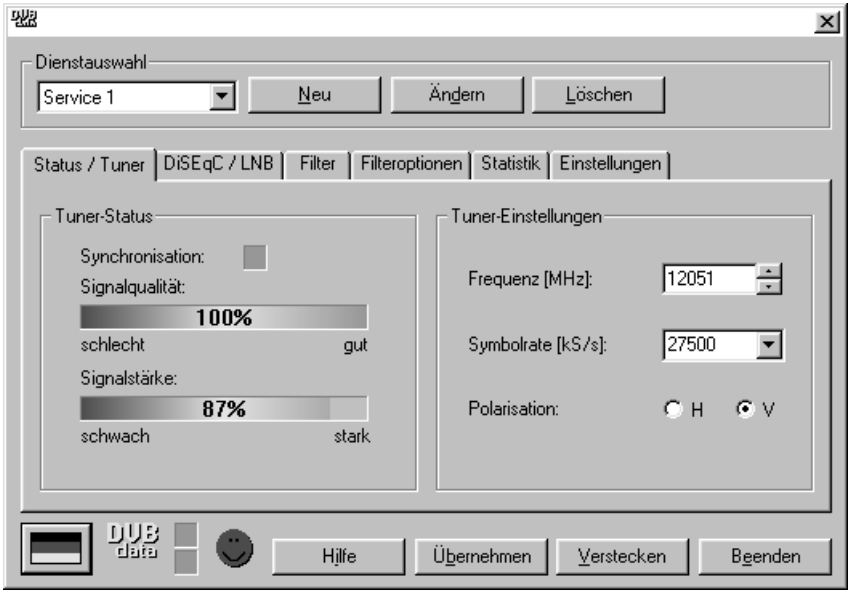
CLOSE:
Terminates the DVB Teletext application.

The page number of the received page, as well as the time information coded in the teletext, is displayed in the same toolbar.

DVB Data services for the WinTV-NEXUS-s

With the **WinTV-NEXUS-s** Data Application you can use any IP-based DVB data services. These may include Web/News-Broadcast Services (Web-Casting), Multicast-Streaming Services or File Transfer Services.

Data broadcasts being received by the **WinTV-NEXUS-s** card will be treated in the same manner as if received by a network card. This is why the reception of arbitrary IP-based DVB data services is possible, as is integration with the Windows network architecture, and thus, compatibility to other Internet applications.



Almost all control elements - also in called dialog windows - have so-called Tooltips. These are small assistance texts, which are displayed automatically, if you move the mouse over the control element and approx. one second stop. Possibly you must click before hand on the title border of the application window or the dialog window concerned, in order to get it into the foreground.

The front-end is the input section of the **WinTV-NEXUS-s** card - consisting of tuner, demodulator, LNB voltage supply control and DiSEqC Signal.

On the tab Status/Tuner and DiSEqC/LNB all settings and adjustments are made which are necessary for the receipt of a DVB signal.

Filters are used, in order to extract from the DVB signal the information relevant for the DVB Data service. The parameters needed for the use of a DVB data service (frequency, symbol rate, polarization, PID, IP or MAC address).

Control settings

Selecting the flag key allow you to change the language used in the data application.

The changes only take effect after clicking on the Apply button. Selecting the **Hide** button will make the application move to the task bar. Double clicking on the ***smiley symbol*** around the program window will make the application appear again.

Reception status

The following symbol enables a permanent check of the reception status of the tuners.

The upper small box symbolizes the signal quality which will become lower if the signal degrades. The colour corresponds gradually to (colorless, red, orange, yellow, lightgreen) with the appropriate display in the bar status / tuner, which represents the accurate values.

The smiley can display the following statuses:

RED: No DVB signal, front-end is not synchronized, no data reception

DARK GREEN:

DVB signal detected, front-end is synchronized. On the set filters no data is received

LIGHT GREEN:
DVB signal detected, front-end is synchronized. On the set filters data is received.

Services

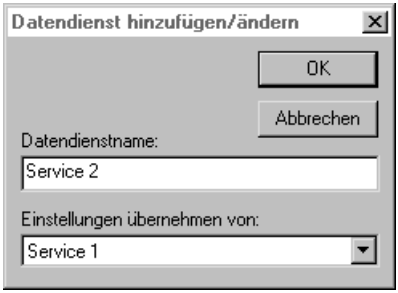
A Service is, in the context of the **WinTV-NEXUS-s** card, a data application (and a set of any necessary parameters to receive a DVB data service). With the selection of a service, all adjustments are made in such a way that the appropriate DVB data service can be used. The parameters need-ed for the use of a DVB data service (frequency, symbol rate, polarization, PID, IP or MAC address) should be given to you by the provider of the service.

Service alert

The selection of a service is achieved simply by opening the 'Service selection' list field and clicking on an entry. The last service selected is remembered when running this program again. The three buttons: New, Change and Remove provide the administration of the services.

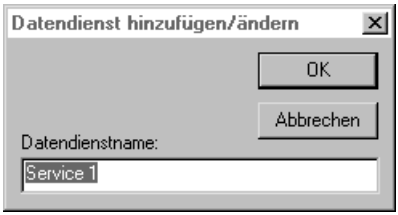
Service add

A new data service can be added by clicking on the ***New button***. In the '**Name of data service**:' box you can type the name for the new service. The parameters of this new data service will be taken from the parameters of an existing service of your choice. Once having added a new data service, the parameter can then be modified and set with the ***stop button***.



Service modify

Clicking on the Change button opens the dialogue box called: 'Change data service'. This allows you to change the name given to an existing service. Clicking on ***OK*** sets the new name and deletes the old name. Clicking on Cancel discards this change.

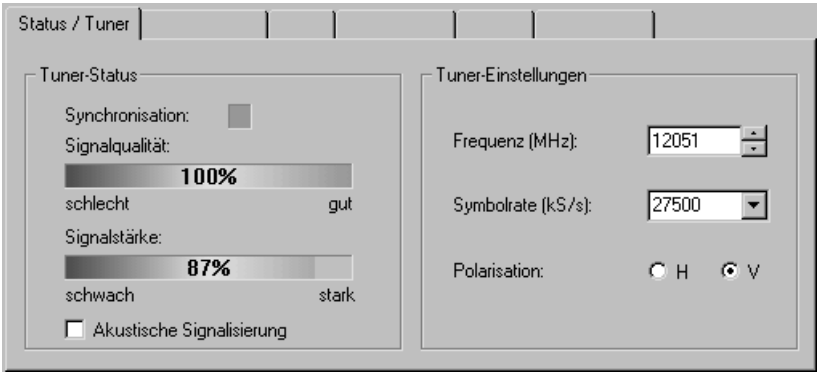


Service delete

Clicking on the ***Remove button*** deletes the current service from the 'Service selection' list with all its associated parameters.

Status/Tuner settings

The State / Tuner tab shows different parameters for reception. Details of each of these are given in the two tables below:



Tuner-Status

Synchronization:

It indicates whether a DVB signal is detected.

Signal quality:

This displays the quality of the received signal. A value of 100 % shows a faultless reception. (Bit fault rate better than 10 -4)

Signal strength:

The level of the received signal as a percentage. With the aid of this value, the alignment of the satellite dish can be more easily optimized.

Acoustic signalization:
The acoustic signalization option gives a verbal output of the signal level through the sound card.This option is present to further aid the alignment of the satellite dish.

Tuner Adjustments:

Frequency .....This allows you to set the transponder frequency.

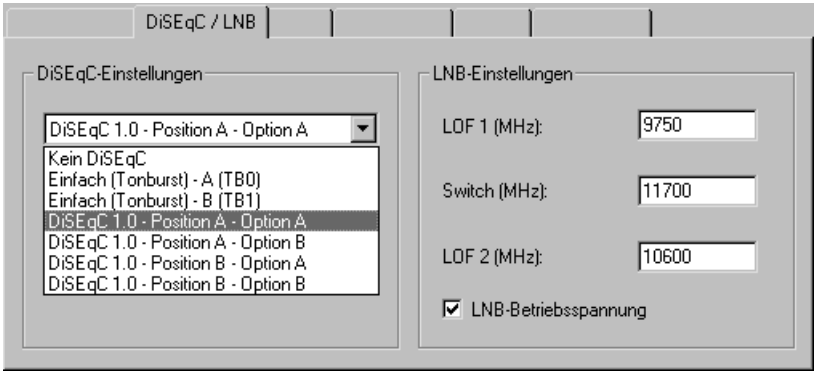
Symbolrate.....This allows you to set the symbol rate that is being broadcast. The provider of the service should give the symbol rate.

H / **V**.....This option allows you to specify the polarization of the broadcast.

QAM.....This setting is only applicable to DVB-c (cable) cards and is given by the cable operator.

Settings DiSEqC/LNB

Adjustments made in the DiSEqC / LNB tab are for matching the settings of the **WinTV-NEXUS-s** card to your satellite system. Modifications should only be necessary after initially setting up the card.



Diseqc-Settings

The DiSEqC (digital Satellite equipment control) adjustments are of importance if you attach the **WinTV-NEXUS-s** card to a satellite system, where the signal is expected on several orbital positions and where unification of the individual antenna signals is made by a DiSEqC switch box or DiSEqC multi-changer.

No DiSEqC.....Select this option if the **WinTV-NEXUS-s** card is connected directly to the LNB of single satellite dish. This will only receive one orbital position.

Simple DiSEqC.....Select this option if the **WinTV-NEXUS-s** card is connected to a shift box with "Tone Burst" control (also called as "Mini-DiSEqC" or "Simple DiSEqC"). You have the option to select between two antenna signals (orbital positions).

DiSEqC 1.0.....Select this option if the **WinTV-NEXUS-s** card is connected to a shift box or multi-toggle with DiSEqC-control. You can select between four options. The specific settings can be found from the documentation of the DiSEqC shift box or DiSEqC multi-toggle, respectively.

LNB-Settings

The transponder frequency of usual television satellites is usually within the range of 10GHz or higher. During the transfer of such high frequencies, the absorption losses are excessive in the coax cable and at the antenna in the LNB (Low Noise block, sometimes also called LNC - Low Noise converter).

Therefore, a conversion to a lower frequency range is necessary. Sat ZF (950 to 2150MHz). This is also the incoming frequency range of digital satellite receiver (like the **WinTV-NEXUS-s** card).

LOF 1 .....Local Oscillator Frequency. This indicates what amount of the incoming frequency is transferred. The WinTV-NEXUS-s card needs this value, in order to be able to process the actual incoming frequencies. The LOF is imprinted on the LNB. Digital suited universal LNBs have 2 LOF, one for the Low band (also 11GHz-Band) and one for the High band (also 12GHz-Band). Switching between the two LOF takes place by means of a 22kHz-Signal. LOF 1 is the local oscillator frequency for the Low band.

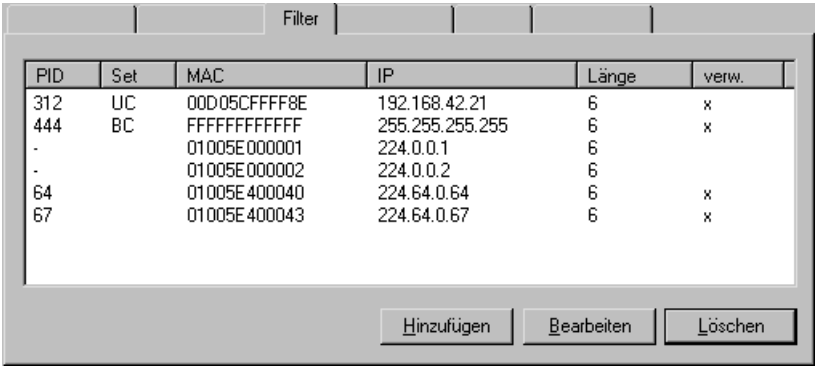
LOF 2 .....LOF 2 is the local oscillator frequency for the High band. See also LOF 1.

Switch.....Indicates, for universal LNBs, the frequency between Low and High band change over (by means of 22kHz-Signal).

LNB-Power.....This indicates whether the LNB is to be supplied with current. Should be always activated.

Filter settings

The filter tab serves for configuring the filters and for displaying the filter parameters. Administering the filters is possible by means of clicking on the buttons: Add, Edit and Del. The modification of Multicast PID only becomes effective after clicking on Set.



PID .....The PID separates, from the multiplicity of the (Packet-Identifier) DVB signal, an individual packet stream. This allows the reception of the desired radiated DVB data service from the service provider.

def. Multicast PID.If a provider transfers a multicast of DVB data services with the same PID, the value should be entered here. Otherwise the input field should remain empty.

Set.....This displays whether a filter is set (in use). UC = Unicast filters; BC = Broadcast filters; MC = Multicast filters. The filter can be only set by the WinTV-DVB-s data application, if the use is permitted (shown in the field: use) and a valid PID (field PID) was entered.

MAC.....The MAC address is a means continuing the differentiation of the package stream selected on the basis the PID. Thus, the only packet with the correct address reaches the Windows network layers. With multicast DVB data services the MAC address can be calculated from the IP address. In this case, the input of the IP address is sufficient.

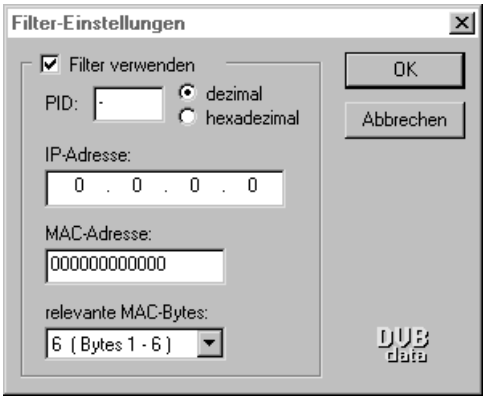
IP.....The IP address is for setting the allocation of filters to Client applications and the address input with multicast filters.

Length .....Number of bytes of the MAC address, those into the filtering to be included (normally 6, with 0 only on the PID one filters).

View .....It displays whether a filter is to be used

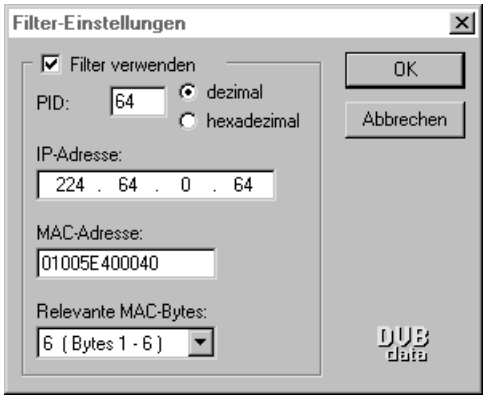
Filter Add

The dialog filter allow you to add a new filter in the input field. The default needs to be changed and selecting OK applies the changes. Selecting Cancel abort with out making any changes.



Filter modify

Modification of an existing Filter setting can be achieved by either clicking on Edit or double clicking on the PID of the filter in the filter list. The filter settings box is generated whereby the parameters can then be modified. Click on OK to set these modifications or Cancel to reject the changes.

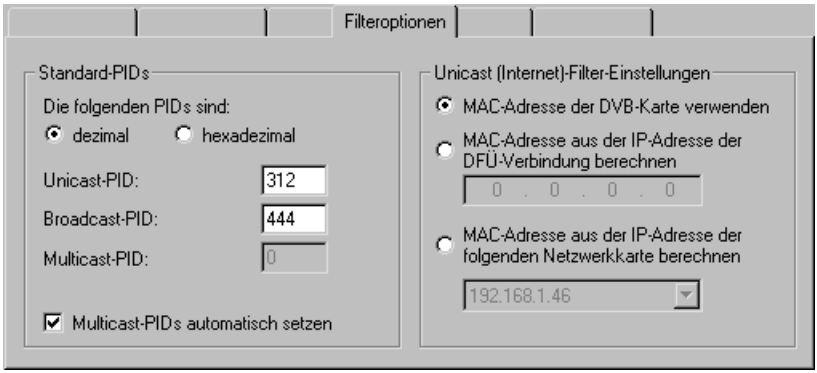


Filter delete

The key delete allows you to remove the selected filter from the list of the available filters and delete all appropriate parameters.

Filter option

The tab filter options offers the possibility to adjust the parameters of the Unicast, Broadcast and multicast filters. All modifications will only take effect after re-starting the application.



Standard-PIDs/Unicast-PID:

The Unicast PID is the preset value for the PID, with which the Unicast data is transmitted. The PID is determined by the service provider. If the field con-

tains a valid PID (16... 8190), the filter list (tab card filter) the Unicast filter is added automatically and activated with these PID. On which MAC address the filter is set, determines under Unicast filter settings selected option.

Broadcast-PID

The Broadcast PID is the preset value for the PID, with which the Unicast data is transmitted. The PID is determined by the service provider. If the field contains a valid PID (16... 8190), the filter list (tab card filter) the Broadcast filter is added automatically and activated with these PID. Leave the field empty, if your service provider does not Broadcast data.

Multicast-PID

If a provider transfers all multicast data streams with the same PID, then it is meaningful to enter this PID here. The data application is then able to set multicast filters during request automatically with the correct PID. Otherwise the input field should remain empty (0).

Multicast-PIDs automatically set

With this control small box a new procedure for the PID determination can be switched on. By this the PID does not have to be similar any more for all multicast data streams or for each multicast data stream to be entered manually. If the small box is activated, during request of a multicast filter the PID from the multicast IP address is calculated and the filter is entered and set into the filter list. The automatic determination of the PIDs for multicast data services should only be switched on, even if the data service provider applies the procedure ("Recommendation for AUTOMATIC channel setup using IP multicast group addresses").

Unicast (Internet)-Filter-settings:

MAC address of the DVB card

If this option field is activated, the filter for Unicast (internal) data becomes set on the MAC address of the **WinTV-NEXUS-s** card. This is present procedure used by most data service providers in order to address the Unicast data.

MAC address from the IP address of the Dial up connection

If this option field is activated, the MAC address of the filter for Unicast applies - data from the IP address of the Dial-up connection determines the MAC address. Select this option if using a dial up connection (modem, ISDN

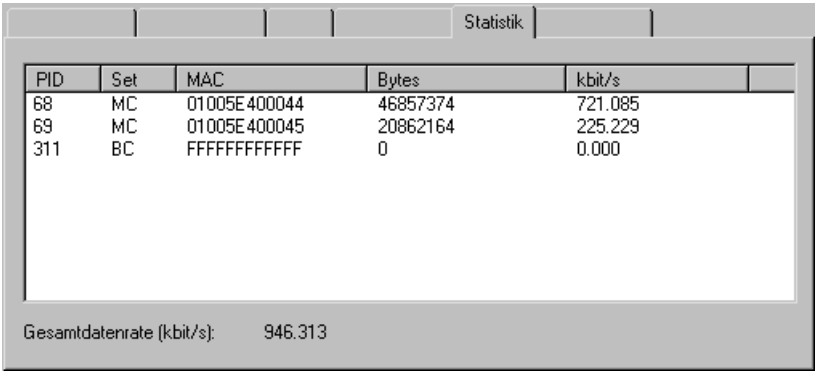
card). In the case of modification of the IP address of the Dial up connection the filter is updated automatically.

Calculate MAC address from the IP address of the following network card

If this option field is activated, the MAC address of the filter for Unicast data is taken from the IP address of the selected network card. Select this option, if you are connected with the InterNet by means of network card and your data service provider applies this procedure for the MAC Addressing

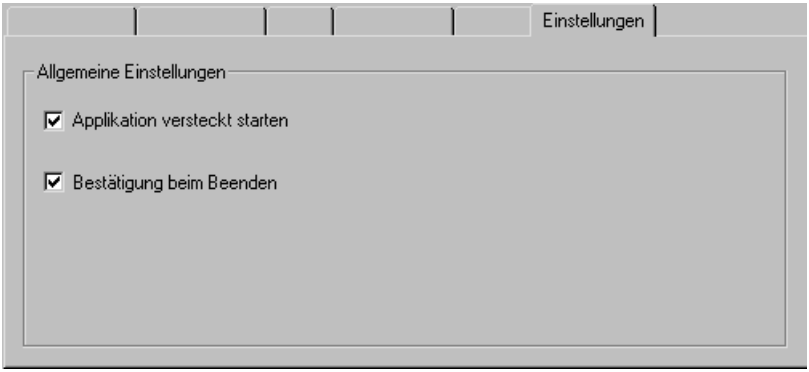
Filter-Statistics

The tab statistics displays the throughput of the set filters in kBit/s.



Setup settings

The setup settings allows you to modify the the general options of the data application and the changes only take effect after re-starting the application.



Acknowledgement with closing

This option allows you to notify you when you close the application which would stop you from accidentally closing the application.

Hide Start

A small control box is available which will start the data application in hide mode when started. In order to bring it to the display, you must double click on the smiley in the Windows Task bar.

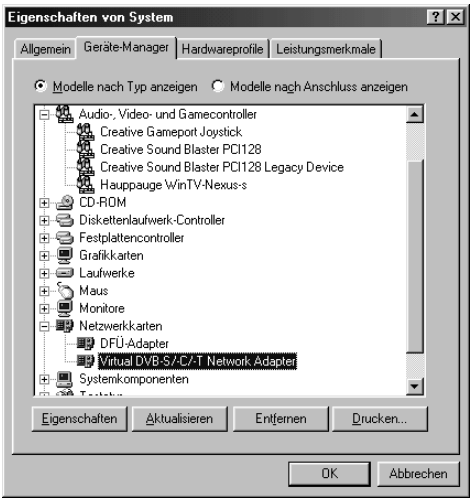
DVB Data services with WinTV-DVB-c

A DVB-Databroadcast is not possible using the **WinTV-DVB-c** momentarily. This is why we decided not to list the description for the Databroadcast Application.

Trouble Shooting

Many errors are caused by the incorrect installation of the **WinTV-NOVA-t pci** driver. We must first check the device manager to see if the driver has been installed correctly (Win98/Me):

Open the device manager (**start** / **settings** / **control panel** / **system** / **device manager**)



The **Hauppauge WinTV-DVB** / **NEXUS** must be entered once in the category "**Sound Video & Game controllers**" and the Virtual DVB adapter in the "**Network adapters**" category. If any of these entries are missing, please read the following paragraph: " **the Hauppauge WinTV-DVB** / **NEXUS driver is not installed in the device manager** ".

Problem: the "Hauppauge WinTV-NEXUS-s" or "Hauppauge WinTV-DVB" is not installed in the device manager:

If you do not answer all of the questions correctly when installing the **WinTV-DVB** / **NEXUS** card and do not restart the computer following the installation of the driver, the **WinTV-DVB** / **NEXUS** driver is not merged correctly into the system. In this situation the device is possibly entered under other / unknown devices in the device manager. That can also occur if you re-install Windows with the **WinTV-DVB** / **NEXUS** card inserted in a PCI slot. Highlight the entry PCI Multimedia DEVICE and click on remove and then click ***OK***. If you then

click on the “Refresh“ button Windows then detects a Plug & Play **WinTV-DVB** / **NEXUS** card. Now if you insert the **WinTV-DVB** / **NEXUS CD**, the **WinTV-DVB** / **NEXUS** drivers will be installed. After the installation of the driver, the entry in the Networking section in Device Manager " Virtual DVB adapter " must be present and under the “sound video and game controllers the **WinTV-DVB** / **NEXUS** should be listed.

Error message: Open Device failure message

This error message will appear when starting the Digital TV application if the driver has not been installed correctly. Please check that the driver has been installed correctly in the device manager and remove and re-install if needed.

Note: you can use the program **DVBclear.exe** on the installation CD to remove the driver and Inf files after using the add/remove programs in the control panel to remove the application.

Problem: The entry Virtual DVB-s/-c/-t Network Adapter in the device manager has a yellow mark next to it

The **WinTV-DVB** / **NEXUS card’s** driver was not mapped correctly to the hardware and should be resolved by removing the Virtual **DVB-s**/**-c**/**-t** in the device manager and re-starting the computer to install it again.

Problem: No channels are found

1. Please check that the satellite antenna is connected correctly to the card.
2. Check that the **Virtual DVB-s**/**-c**/**-t Network Adapters**. is not bound to **Client for Microsoft Networks** in the **TCP**/**IP Protocol** in the adapter properties.
3. If you have any third-party Firewall software like Zonealarm installed then it may beblocking the channel from being scanned. Add the card to the allowed devices in the security settings of the application.
4. Consider the DiSEqC settings if the **WinTV-NEXUS-s** card is used with a Multiswitch system. Check the "LNB/Satellite” settings under the “DiSEqC configuration”. Try selecting the different options of “DiSEqC Level 1.0" and click on ***OK*** for the change to take effect.
5. Please ensure that your Satellite LNB is a Digital “Universal LNB”. If you are using a Multi-switch (for several users) then this must also be a

Universal LNB. If you do need to change to a Universal LNB then you will also need to change the Multi-switch as well if one is being used.

Problem: The picture is discoloured

1. Check in the computers BIOS SETUP fora setting called "Latency Timer". You can change this value to 32, 64, 96.
2. Change your VGA card display to 16 Bit (High Color).

Problem: After installing the WinTV-DVB / NEXUS you cannot access a Novell Netware Server

You need to check the bindings for the TCP/IP protocol by going to (Start / settings /control panel / Network) and select the properties for the **"Virtual DVB-s/-c/-t Network Adapter"**. Please ensure that only TCP/IP is selected for Bindings and not IPX/SPX Protocol.

Problem: No sound

WinTV-NEXUS-s: the sound is carried from the AV-cable of the **WinTV-NEXUS-s** card using the 3,5 mm connection to the “Line-In” on your sound card.

WinTV-DVB-c: the sound is carried from the line-out cable to the “Line-In” of the soundcard.

You must also check that the “Line In” is not muted in the windows volume control panel by going to:

start / **program** / **accessories** / **entertainment** / **volume control** / **options** / **properties**

If you then make sure that “**Line-In**” is selected in the playback window and click on ***OK***, you may see that it is selected for mute which you should remove.

Problem: no Video output to a TV set

Please ensure that you have the correct SCART cable for the Video In link on your TV set.

Contact-Support

For the software updates and trouble shooting tips, please visit our website:

www.hauppauge.co.uk