ReceiverSystem

TValueRadio

PCI TV/radio card

Handbook (English)

31.05.01

CE - Declaration

We:

TerraTec Electronic GmbH · Herrenpfad 38 · D-41334 Nettetal

hereby declares, that the product:

TValue Radio,

which this declaration refers to, agrees with the following standards or normative documents:

1. EN 50081-1

2. EN 50082-1

The following operating conditions and application environments are assumed:

Residential areas, business and trading areas as well as small companies

This declaration is based on: The test report(s) EMV test laboratory

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The Package Contents.

Please, check the contents of the package before we go into detail. The following things should at least be in the package:

- the TV card
  (including adapter for the antenna connection of radio and TV)
- an audio connecting cable to the sound card
  (two mini-jack connectors at each end)
- a CD with drivers and software
- a brief introduction for installing the card (quick reference)
- a registration card
- a service dispatch note
- this online handbook:-)

If something is missing, please, contact us. For information about this please read in chapter “The Service at TerraTec.” on page 58.

A Warm Welcome.

It is nice that you have decided to buy TerraTecs TValue radio. This package you have before you will extend your PC to the most comfortable TV qualities. Watch your favorite TV programs while conveniently reading Teletext and getting your personal program information over the Internet by the touch of a button.

Whether in the freely adjustable window or full screen, just relax while watching a completely calm and flicker-free playback of the TV picture on your PC monitor. With the multi-channel preview "Zappingjunkies" you can spare your fingers and nerves while getting an overview of all available channels at the same time.

The capturing of video sequences or still pictures can be easily carried out by hand with the TV software that is included - pre-installed compression algorithms (CoDecs) for picture and sound can be easily integrated for saving valuable disk space.

The integrated videotext decoder does not only bring the desired panels terrifically fast onto the screen, the contents can be saved in image and text form and / or further edited, too.

The pleasant station scan with automatic station description, as well as the wide-ranging connection possibilities of external equipment we would prefer to deal with at a later point. Nevertheless, we warmly invite you to enjoy the following pages of this handbook – hopefully even experienced users will still get one or two other useful tips.

Many thanks for now and have lots of fun while browsing.

... Your TerraTec team.

Key Features.

Here is a summary once again of the most important technical features...

- Brooktree 8 x8 chip set of the company Conexant
- Support of radio@mp3 - for receiving MP3 files via the remote TV signal (you can find the necessary software on the CD-ROM enclosed)
- High speed Teletext – Teletext without waiting times
- Capturing of individual pictures and video sequences
- Freely scalable TV picture up to full screen size
- Multi-channel preview for all channels available
- SVHS and video input for external video sources
- 24 months guarantee

System Requirements

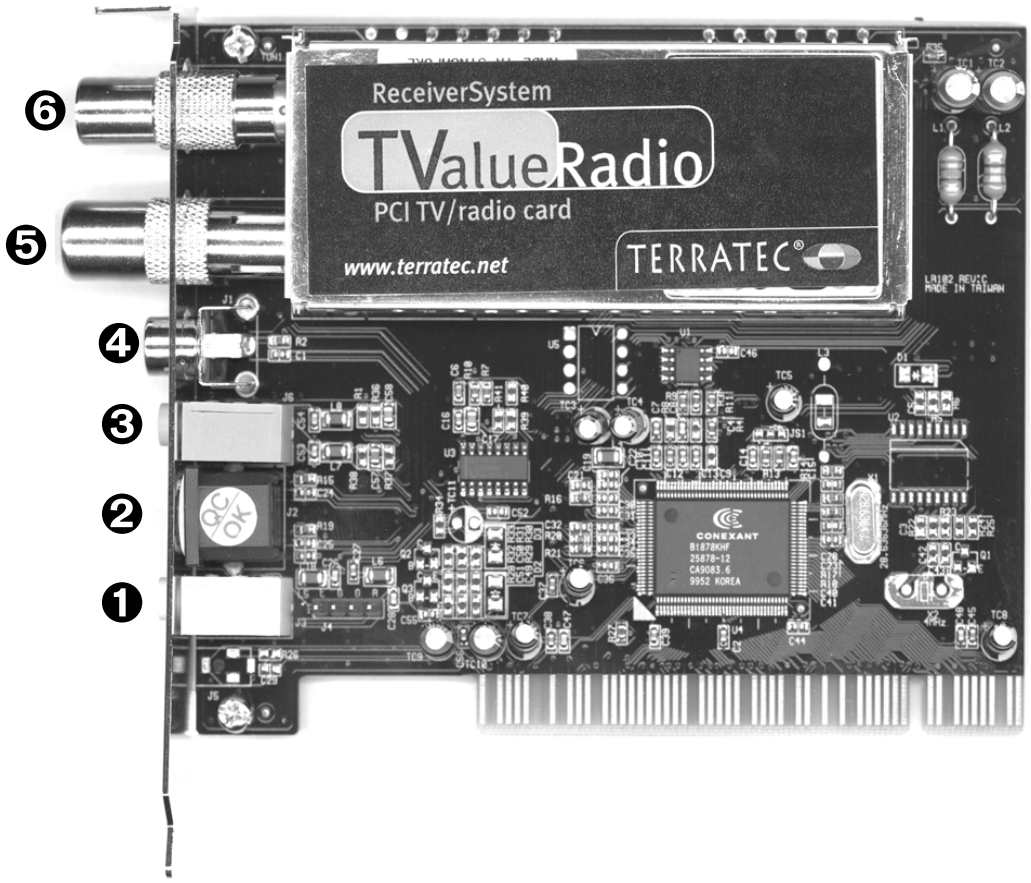
Your system should at least fulfill the following requirements to be able to work with the TValue radio.

- Pentium 200 MHz or higher
- Windows 98SE, Windows ME or Windows 2000
- 1 free PCI 2.1 expansion slot*
- Active boxes
- Sound card (if you want to capture the image and sound)
- A free Interrupt (IRQ)
- CD ROM drive (for installing the driver/software)
- 1 PCI or AGP VGA graphics card with DirectDraw drivers and Video-Overlay- support

Note: If you have more than 4 PCI Slots, please make sure that you use a so-called "Master" slot. You should be able to get the information from the documentation of your main board.

This is what it Looks Like: The Construction of the TV Card

So this is what the TValue Radio looks like. However, it might be the case, that the circuit board of the TV card is slightly different than the illustration seen below. During the production process and accompanying detail improvements, visible changes are also partially carried out - so don't be shocked.



❶ Audio Out

❷ SVHS In

❸ Audio In

❹ Video-In (FBAS)

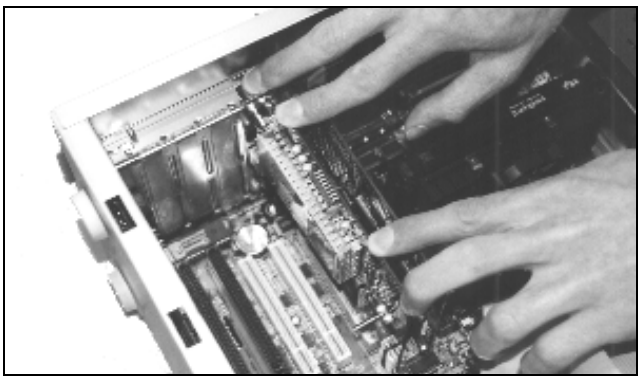
❺ Antenna connection TV

❻ Antenna connection Radio

Off into the Computer ... the Installation of the Card.

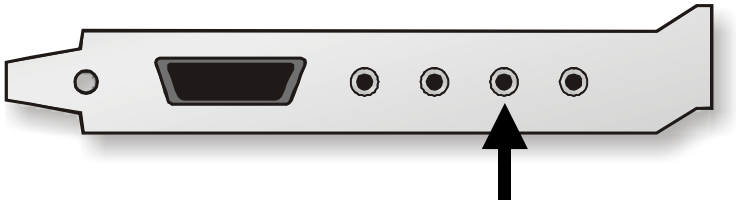
We now come to the installation of the hardware. Please first take a little time to read through the complete paragraph once at your leisure before proceeding, step by step

1. Turn off your computer and all attached peripherals such as the printer and monitor. Leave the power cable connected for the time being, so that your computer is grounded.
2. Touch the metal plate on the back of your system, to ground yourself and to free static electricity. Then remove the power cable.
3. Remove the housing of your PC.
4. Look for a free PCI expansion slot. Please observe the following when choosing the expansion slot: If possible, TV-cards should not be inserted into a PCI expansion slot that is connected to an AGP- graphics card (usually the first PCI expansion slot), because this is always allocated to the same Interrupt (IRQ) as the AGP-expansion slot, too. Otherwise, both cards would lie on one interrupt, which can lead to system crashes or loss of performance in practice! The numbering of the PCI expansion slots (PCI-Slots) should be described in the manual of your main board. If you have more than 4 PCI slots, please make sure that you use a so-called “master” slot. You should be able to refer the documentation of your main board for the necessary information.
5. Now carefully take the card out of the packing and hold it with one hand on the edges, while keeping the other hand resting on the metal surface of the PC if possible. This ensures that the electrostatic charge of your body completely flows onto the computer thus preventing your TV card from being damaged.
6. Align the rear mounting of the TV card with the expansion slot so that the connection strip of your card is exactly above the base of the expansion slot (see the following illustration).

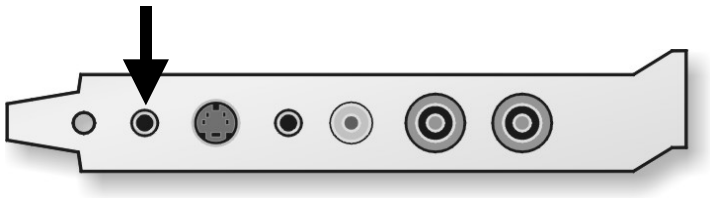


7. Carefully put the TV card into the expansion slot. When doing this, make absolutely sure that you create a good and complete contact.
8. Fasten the TV card with a suitable screw.
9. If you have a sound card, it is practical to connect the line-in of the sound card with the audio output of the TV card. Firstly, you only then need one loudspeaker set for your PC and secondly, you can capture both sound and image at the same time.

You normally connect the audio output of the TV card to the line-in input of the sound card. For this there is a jack plug cable also supplied. You still have to make a few settings to the audio mixer of the sound card, so that you can hear and also capture the TV/Video sound later. Lots of sound cards also have their own audio mixer software for this purpose, with which you can carry out various settings regarding the playback and recording. You should refer to the relevant documentation of your sound card for information for use. We will deal again later with the settings of the TV software. The position of the line In input of the sound card can vary from model to model.



TV speaker out / Line in the sound card



The sound makes the music - connect the audio output of the TV card with the input of your sound card.

10. Finally reassemble the housing.
11. Now connect the antenna cable that would normally be connected to the antenna input of your television, with the enclosed adapter piece on the antenna connection of the TV card.
12. Then you can finally reconnect the power cable and all other device cables. Make sure that your loudspeakers are set to a low volume.
13. Now switch your computer on again... energy!

Installation of the Drivers and Software

Important System Settings for Operating the TV Card

Before we go on to the actual driver and software installation we would like to still give you some important information and settings for the optimal performance of your TV card:

- Your graphics card should be set to a color depth of 16, i.e. 65536 colors so that the TV image can be faithfully reproduced. You can set the color depth, with which your card works via **System control › Display**. You should find more detailed information about the settings of your graphics card in the corresponding manual.
- The TV card mixes the TV/Video-data via the PCI-Bus into the graphics card memory of your graphics card. To do this it is necessary to directly access the hardware of the graphics card. This takes place via a DirectX driver within Windows. Therefore, your graphics card must be provided with such a driver for the correct display. If you are unsure whether your graphics card driver supports DirectX, you should first get the most current driver for your graphics card and afterwards install the latest DirectX version. The latest version of DirectX at the time when the CD was pressed can be found in directory **`\DirectX`** of the CD enclosed.

Installation under Windows98™ SE

Now after having installed the hardware into your system, the corresponding drivers for your operating system must be installed. Please have your Windows CD ready during the installation, because some system components will still be updated or added.

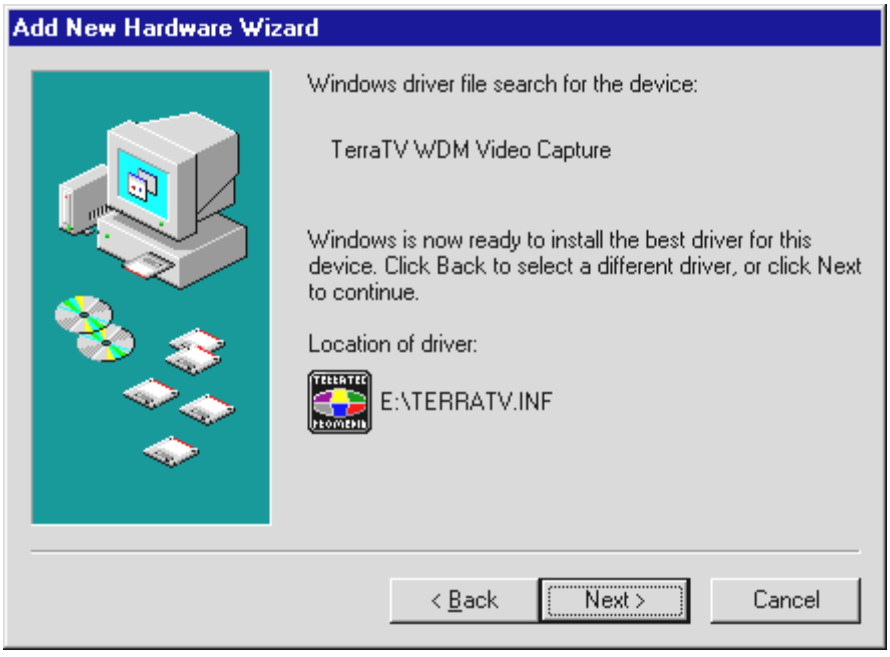
Please proceed as follows for installing the drivers:

14. Switch on your PC and let Windows start up.
15. Insert the enclosed CD into your CD-ROM drive.
16. After the start up, the TV card is detected as a "PCI multimedia video device". Confirm this message via the "Next" button.

17. Now select by mouse click the option “Search for the best driver for the device (recommended)“ and confirm your selection via the "Next" button.
18. Activate the control box before the menu option "CD-ROM drive". Confirm this setting via the "Next" button.

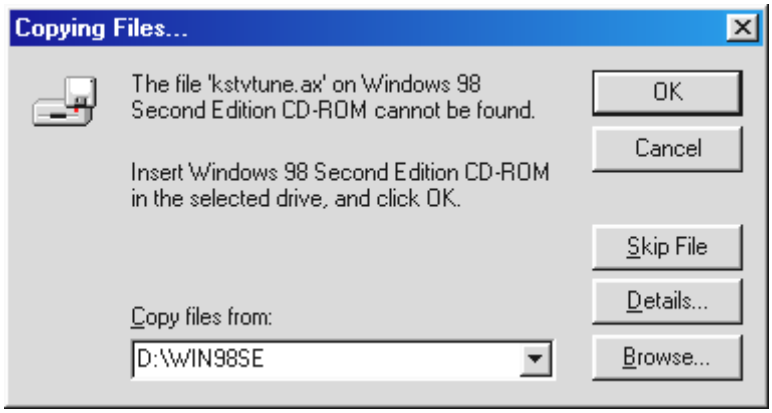
19. Windows now displays that the TV card was found for the driver. Confirm this message via the "Next" button.

20. After that, Windows copies and installs all necessary driver files.

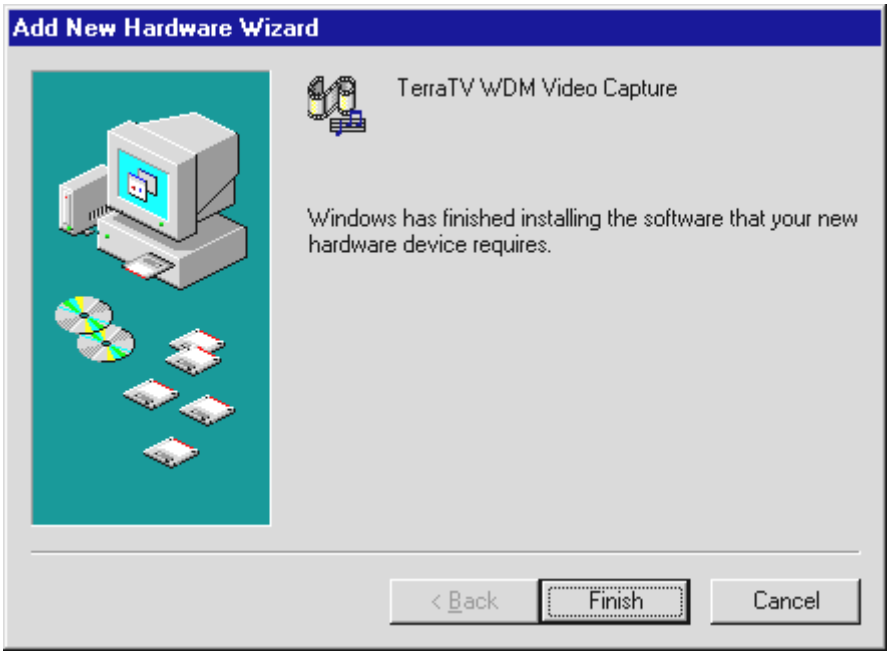


21. During the installation, the operating system prompts you to insert the CD of the Windows installation because some system components must still be updated. Please insert the corresponding CD for this and close the window with "OK".

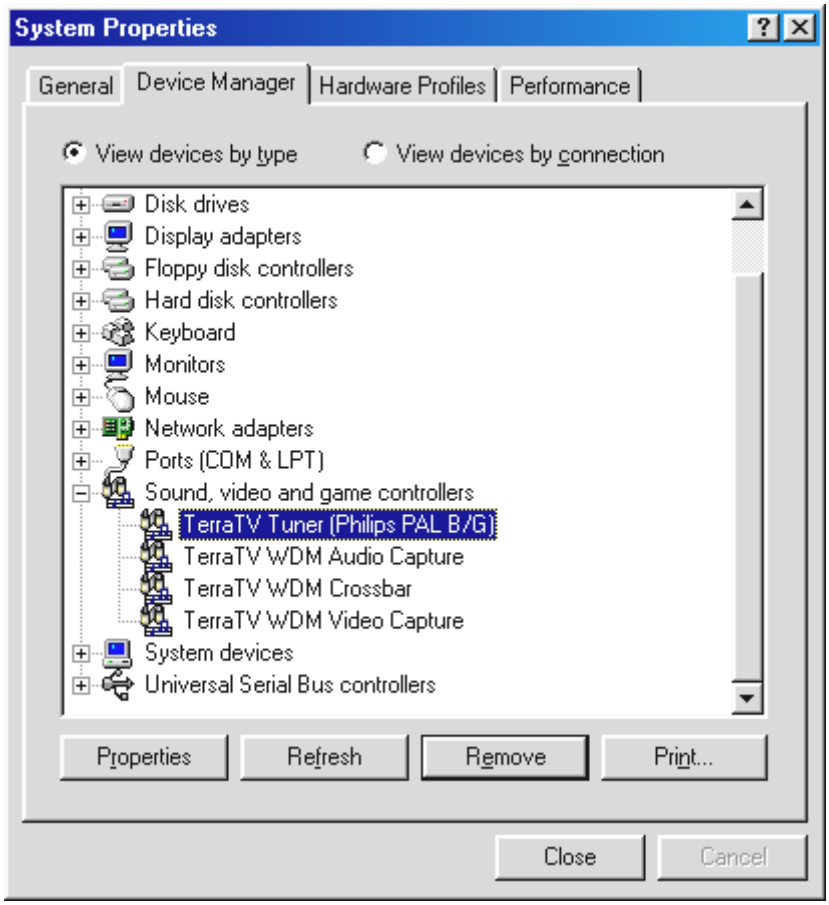
22. Now specify the path to your Windows CD.



23. At the end of the installation, Windows displays that all drivers were installed for this device. Confirm this message via the “Finish” button, to activate the drivers for the system.



24. Wow - ready! Now your device manager should look as follows...



You access the Device Manager via "Start" › "Settings" › "System Control" › "System" under the register card "Device Manager".

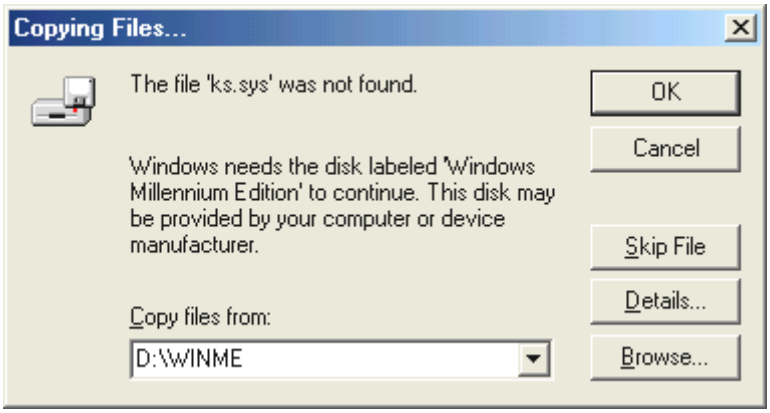
Installation under Windows ME™

After having now installed the hardware in your system, the corresponding drivers must still be installed for your operating system. Please have your Windows CD ready during the installation, because some system components will still be updated or added.

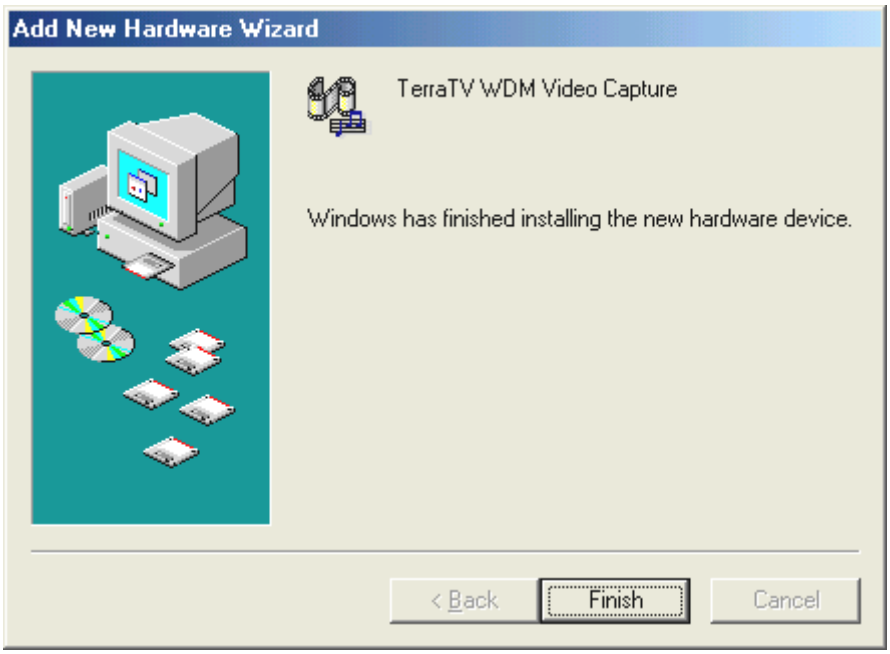
Please proceed as follows for installing the drivers:

1. Switch on your PC and let Windows start up.
2. Insert the enclosed CD into your CD-ROM drive.
3. After the start up, the TV card is detected as a "PCI multimedia video device". Now select by mouse click the option “Automatic search for a better driver (recommended)“ and confirm your selection via the "Next" button.

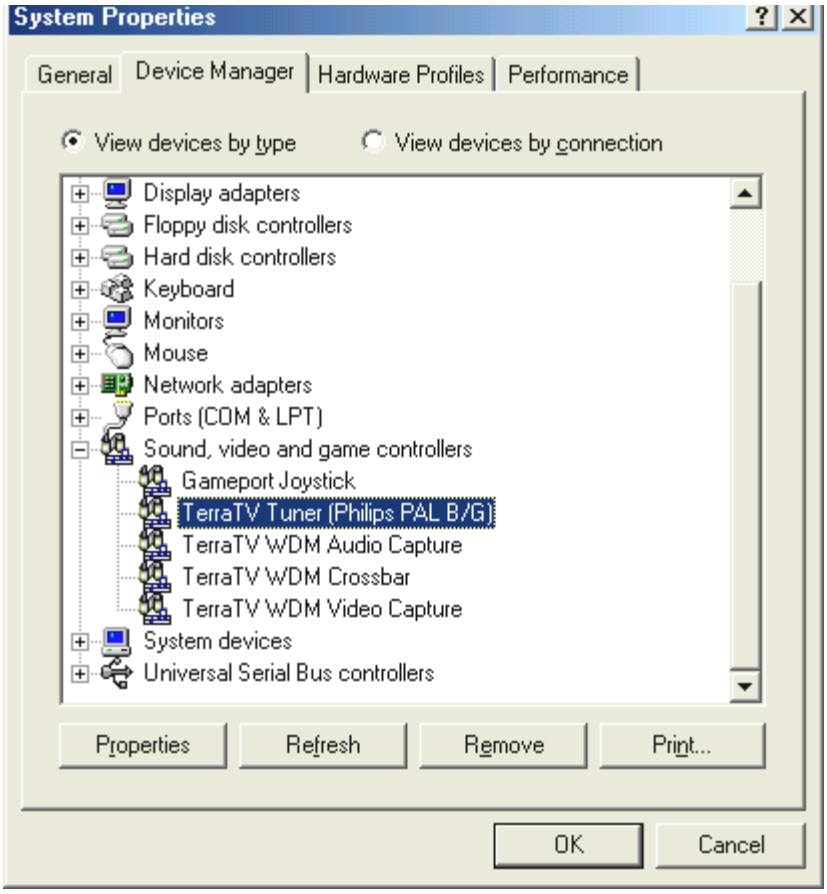
4. During the installation, the operating system prompts you to insert the CD of the Windows installation because some system components must still be updated. Now specify the path to your Windows CD.



5. At the end of the installation, Windows displays that all drivers were installed for this device. Confirm this message via the “Finish” button, to activate the drivers for the system.



6. Wow - ready! Now your device manager should look as follows ...



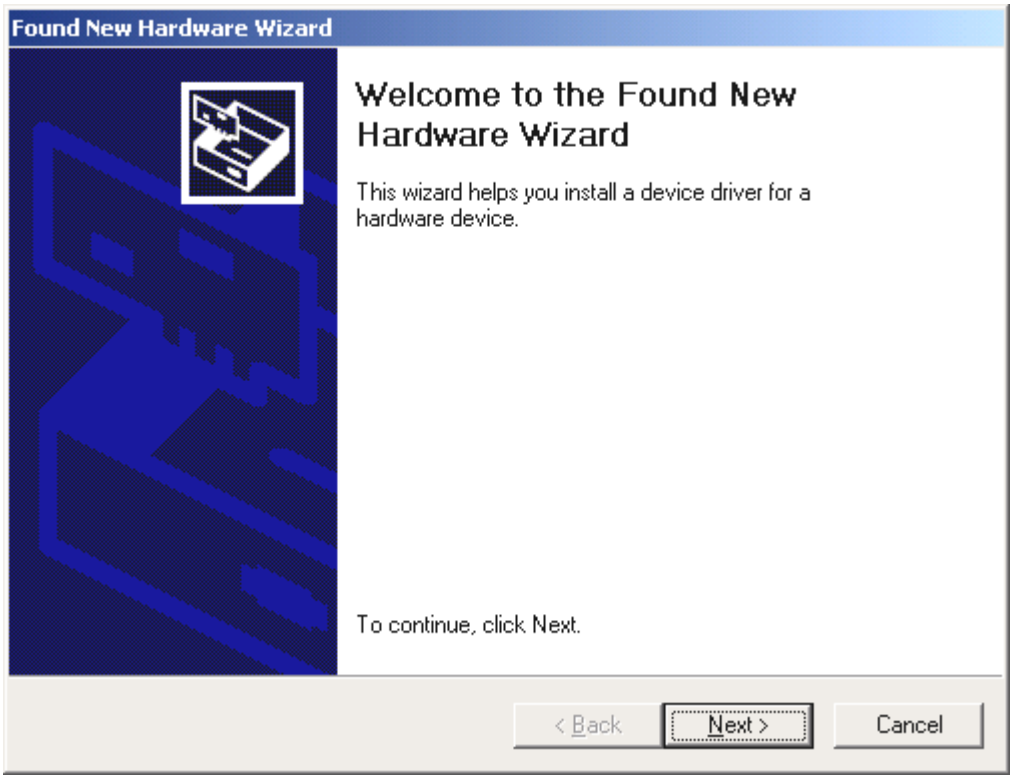
You access the Device Manager via "Start" › "Settings" › "System Control" › "System" under the register card "Device Manager".

Installation under Windows2000™

After having now installed the hardware in your system, the corresponding drivers must still be installed for your operating system. You will notice during the installation that Windows indicates the missing signature of the drivers. The signing informs the system that the Microsoft driver referred to has been tested for its compatibility. However, since it will still take some time until the drivers of all hardware manufacturers have been correspondingly signed, we recommend setting Windows 2000 to “Ignore” signing the drivers (“System Control” › “System” › “Hardware” › “Sign Drivers”).

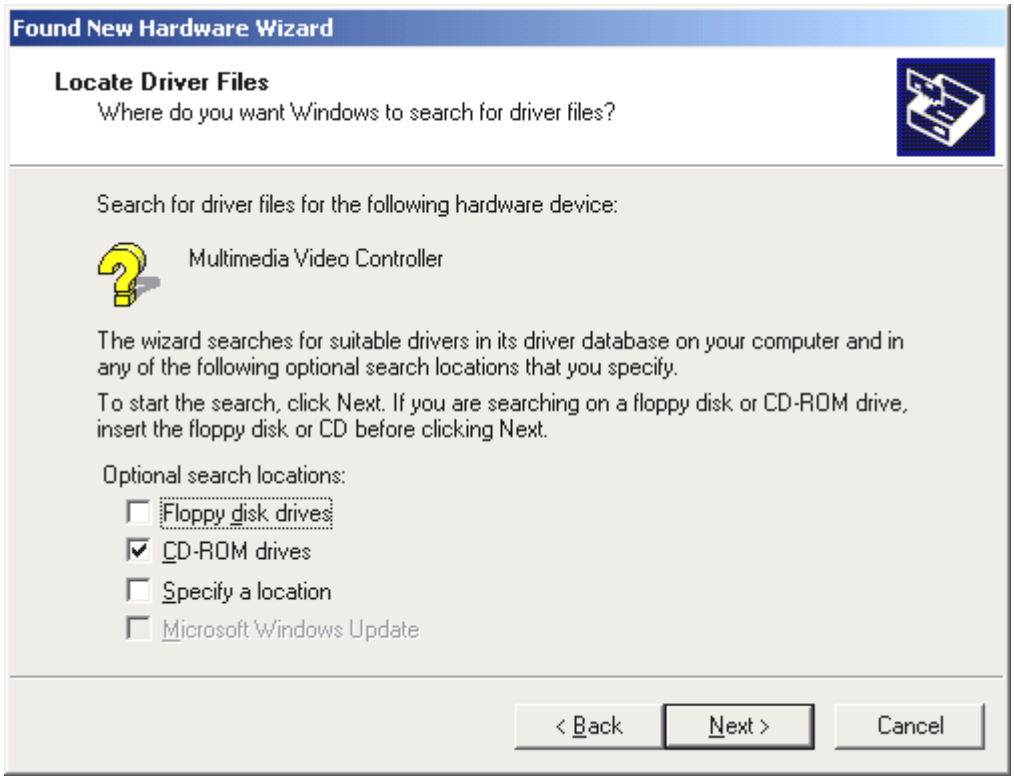
Please proceed as follows for installing the drivers:

1. Switch on your PC and let Windows start up.
2. Insert the enclosed CD into your CD-ROM drive.
3. After the start up, Windows detects that a new hardware component has been installed.

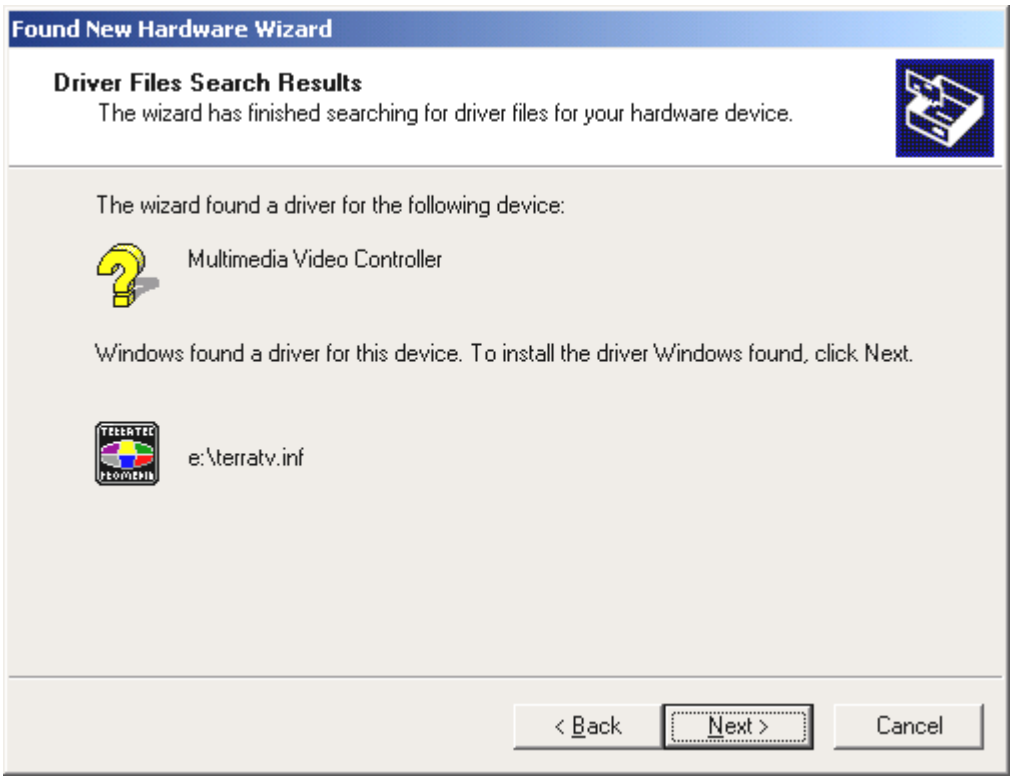


4. Your TV card is identified as a “Video controller for Multimedia”. Now select by mouse click the option “Search for a suitable driver for my device (recommended)” and confirm your selection via the “Next” button.

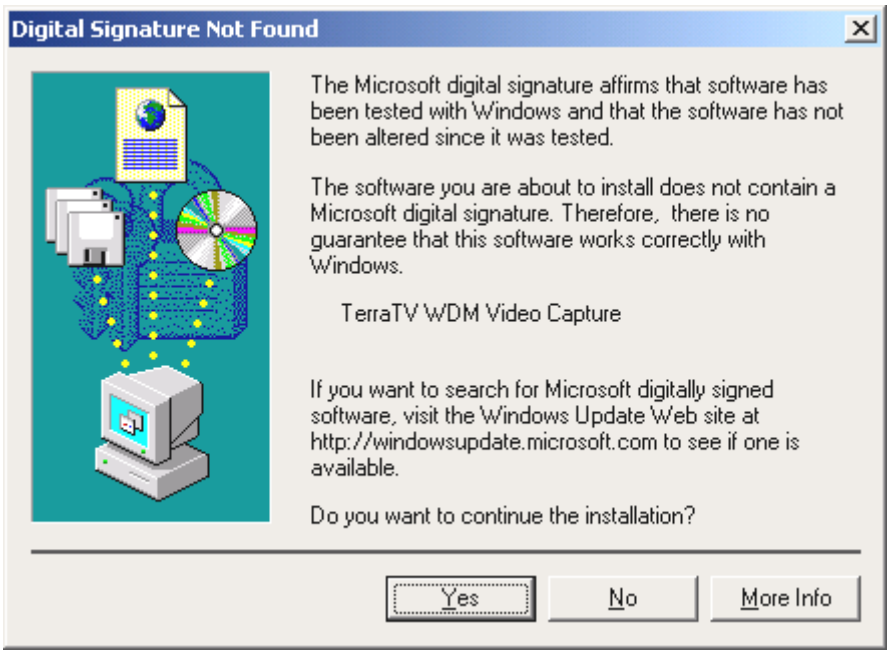
5. Activate the control box before the option “CD-ROM drives” and confirm the setting via the “Next” button.



6. Windows now displays that the driver for the TV card has been found. Confirm this message via the “Next” button. Windows then copies and installs all the necessary driver files.

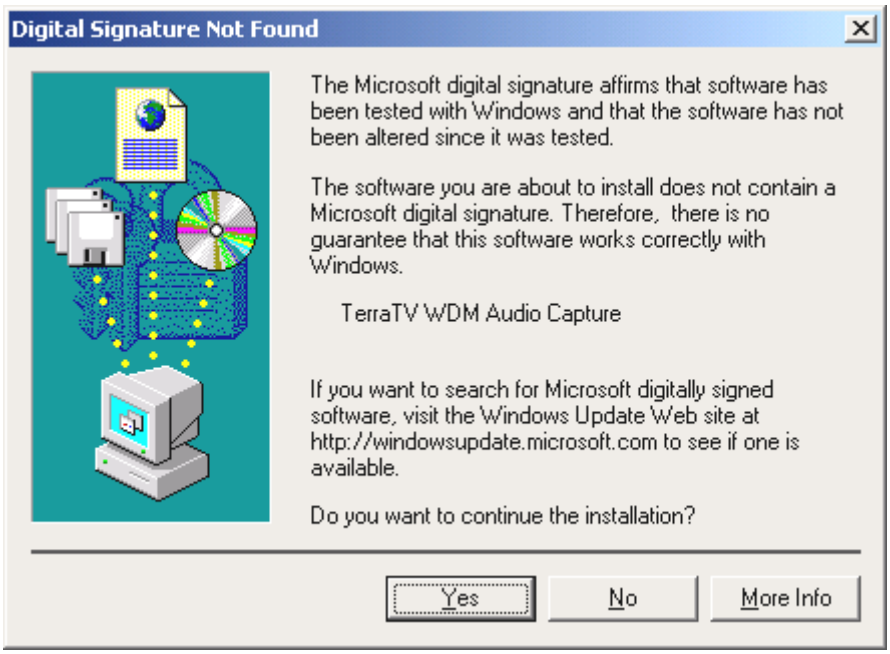


7. Now the warning message shown below is displayed, because a digital signature of the TerraTec driver is missing. You can close the window with “Yes” without hesitation. The function of your operating system or that of the TV card will not be adversely affected in any way whatsoever.

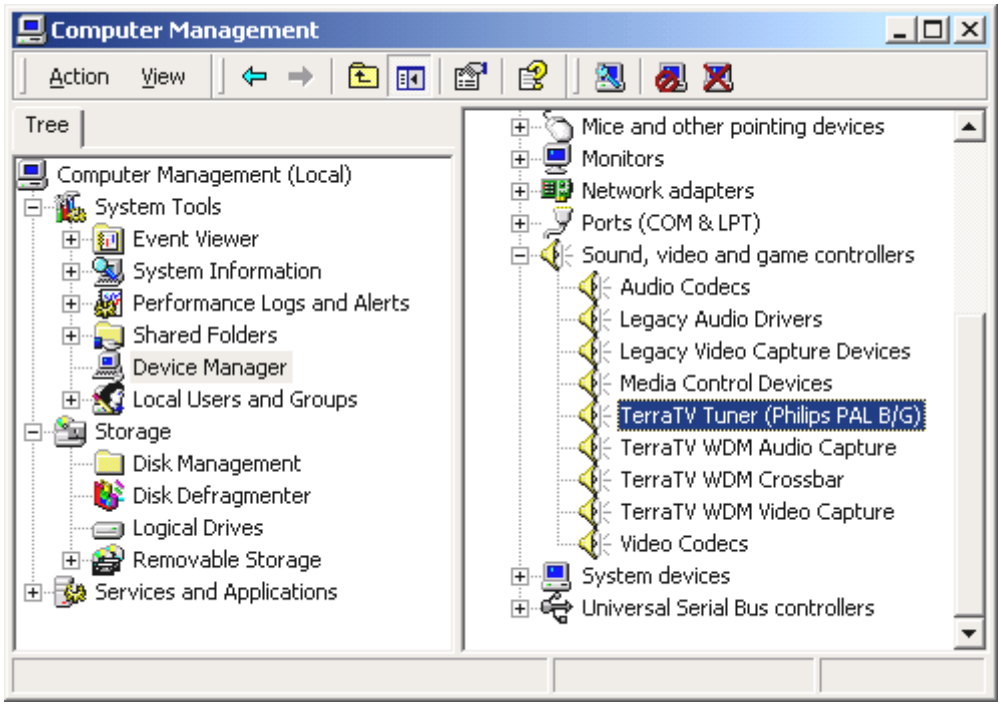


8. Please click on “Finish” to close the assistant for installing new hardware.

9. Now 3 further queries follow due to the missing digital signature of the drivers (“TerraTV WDM Audio Capture”, “TerraTV Tuner (Philips PAL B/G)”, “TerraTV WDM Crossbar”). Please also close this window by clicking on “Yes”.



10. Wow - ready! Now your computer management should look as follows ...



You access the Device Manager via "Start" › "Settings" › "System Control" › "Computer Management", "System" under the entry "Device Manager".

Installation of the Radio and TV software

After having now successfully installed the drivers, only the software needs to be installed in order to use the functions of your TV card, too.

If you insert the enclosed CD-ROM into your drive, as a rule, the auto-starter opens automatically. Here, you can comfortably call the installation of the software. If the auto-starter does not open automatically, you can do this manually, too. To do this, call the file **`Autorun.exe`** from the main directory of the CD.

In the same way please also install the software for the RDS – Radio Receiver ActiveRadio.

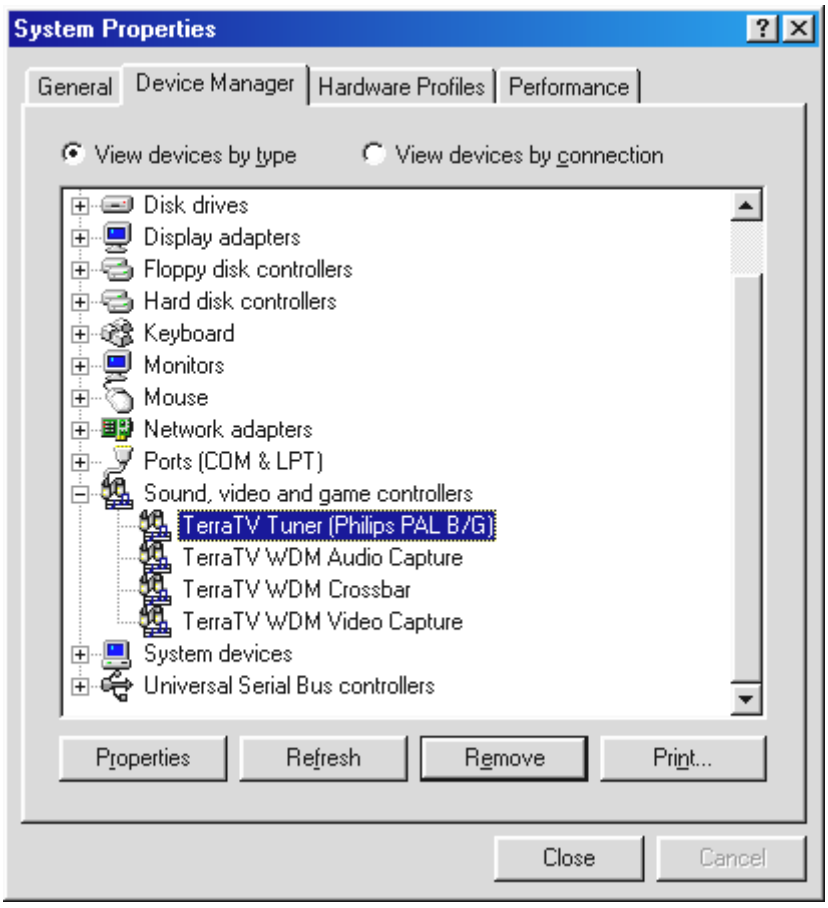
After you have called the setup of the TV software via the auto-starter, please follow the instructions on the screen and everything will be Ok.

Update? Tidy up the System? The Deinstallation.

If you should install a newer version of the software or driver, it is advisable to remove the old versions of your system beforehand. This applies to the TV software as well as to the drivers.

Deinstallation of the Drivers under Windows 98 SE / ME

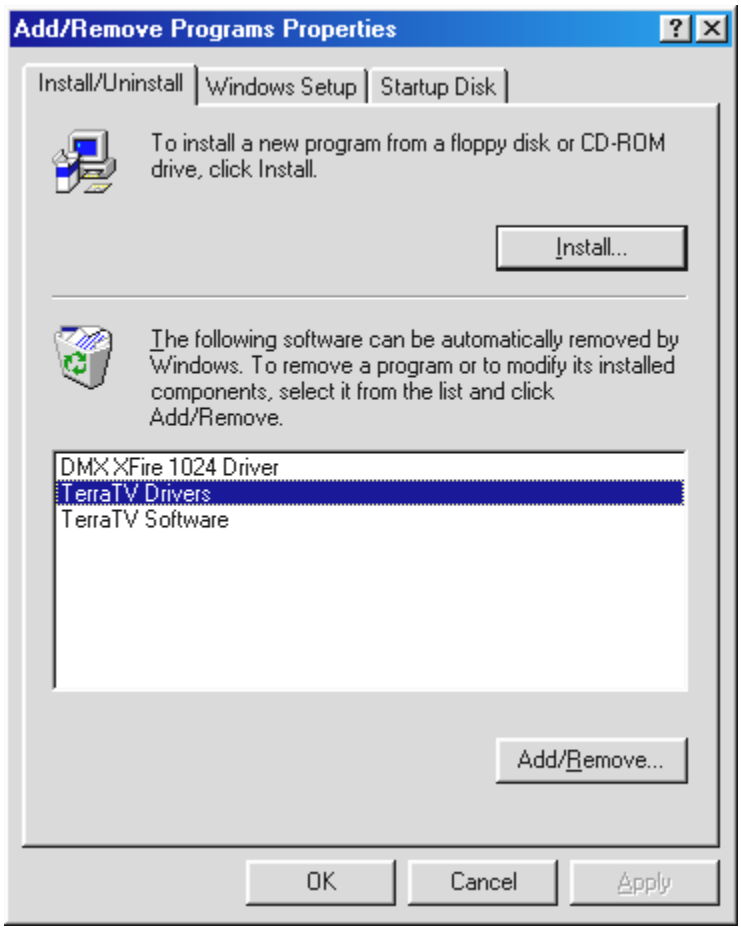
To remove the driver from your system call the "System Control" and in the "Device Manager" the entry “TerraTV WDM Audio Capture” by marking the entry and clicking on remove. Now remove the “TerraTV WDM Video Capture” entry in the same way, too. The remaining TerraTV entries should also have disappeared now.



Now click on "Remove"...

You access the Device Manager via “Start” › “Settings” › “System Control” › “System” under the Register Card “Device Manager”.

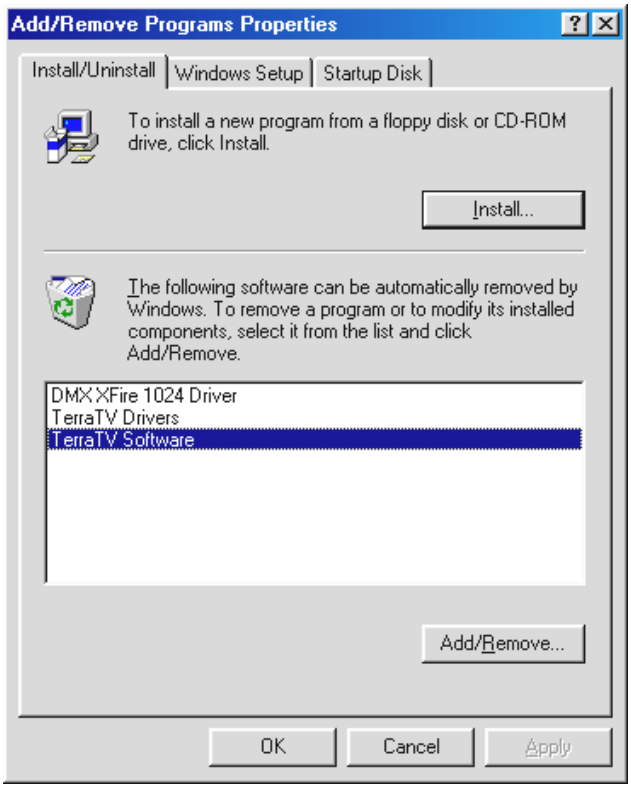
To remove the driver files once and for all, please open the software area in the system control and mark the option “TerraTV Drivers” and click on “Add/Remove”.



Now click on "Add/Remove"...

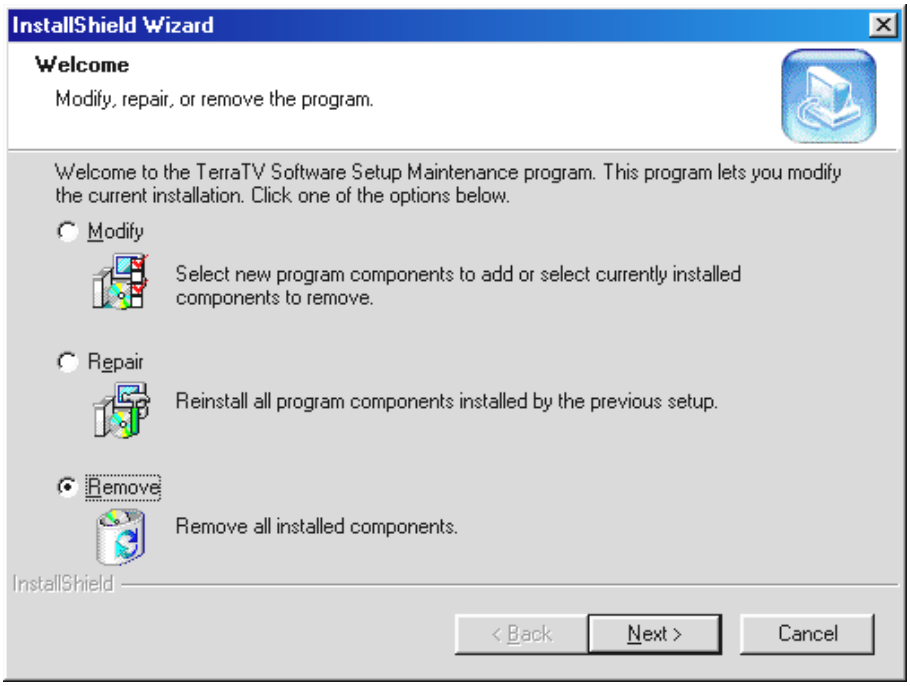
Deinstallation of the Software under Windows 98 SE / ME

To remove the TV software, please open the software area in the system control and mark the option “TerraTV Software” and click on “Add/Remove”.



Now click on "Add/Remove"...

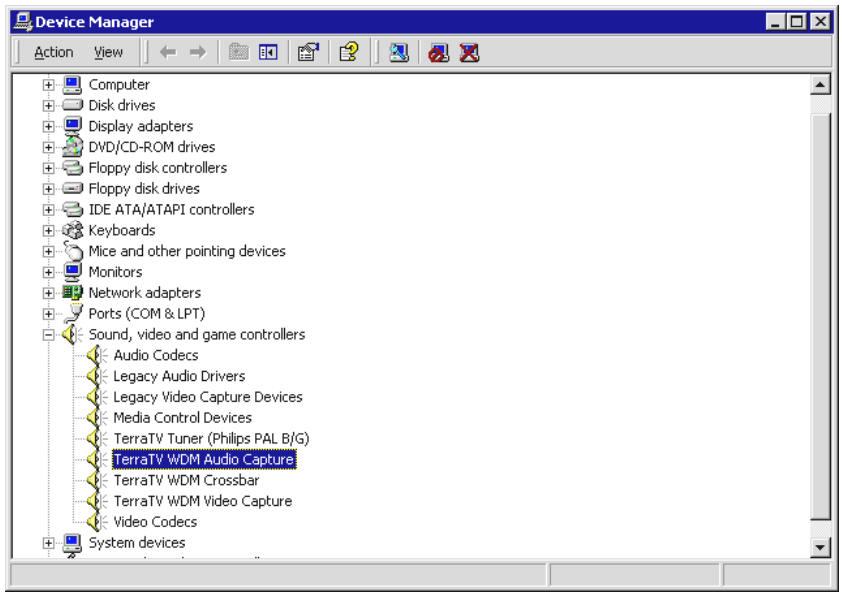
After you have chosen the language, only still choose the option “Remove”, “Next” and then you are ready.



Now click on "Remove” and “Next” ...

Deinstallation of the Drivers under Windows 2000

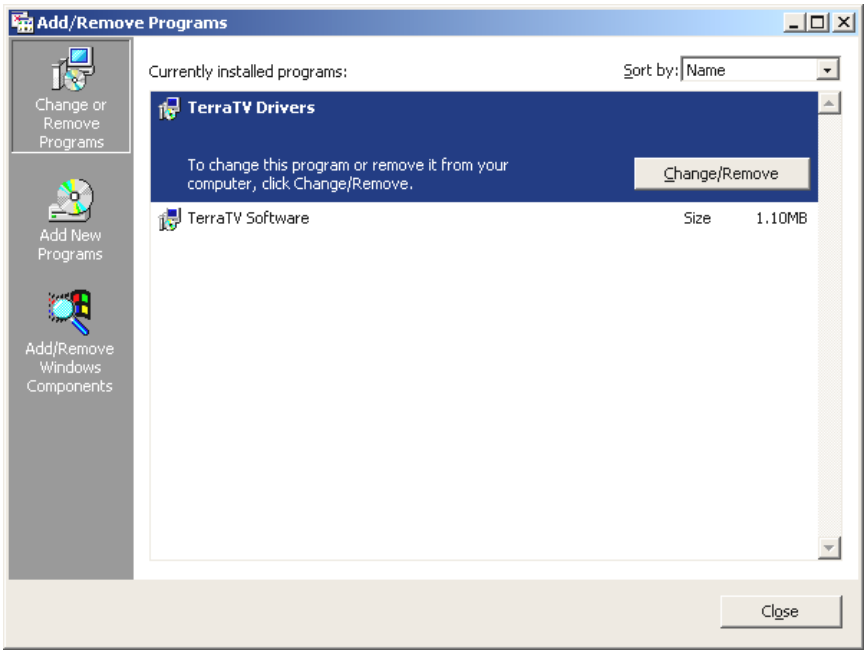
To remove the drivers from your system, please call the "System Control" and remove the entry "TerraTV WDM Audio Capture" in the "Device Manager" by marking the entry and clicking "Remove". Now remove the "TerraTV WDM Video Capture" entry in the same way, too. The remaining TerraTV entries should also have disappeared now.



Now click on "Remove" ...

You access the Device Manager via "Start" › "Settings" › "System Control" › "System". Click here on the register card "Hardware" and on the button "Device Manager...".

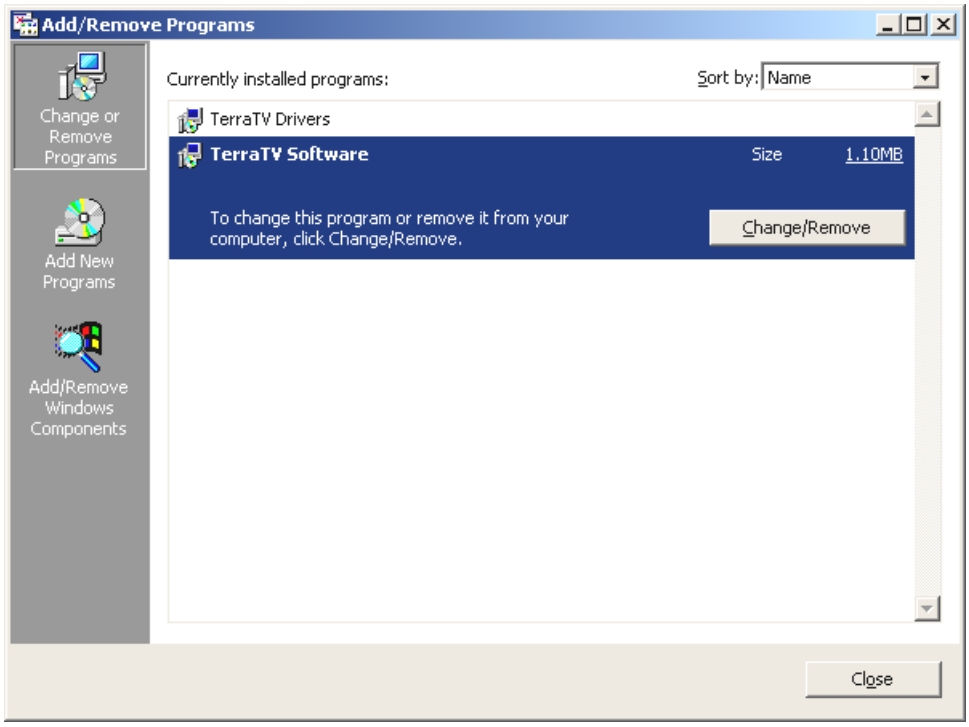
To remove the driver files once and for all, please open the software area in the system control and mark the option "TerraTV Drivers" and click on "Add/Remove".



Select the entry "TerraTV Drivers" ...

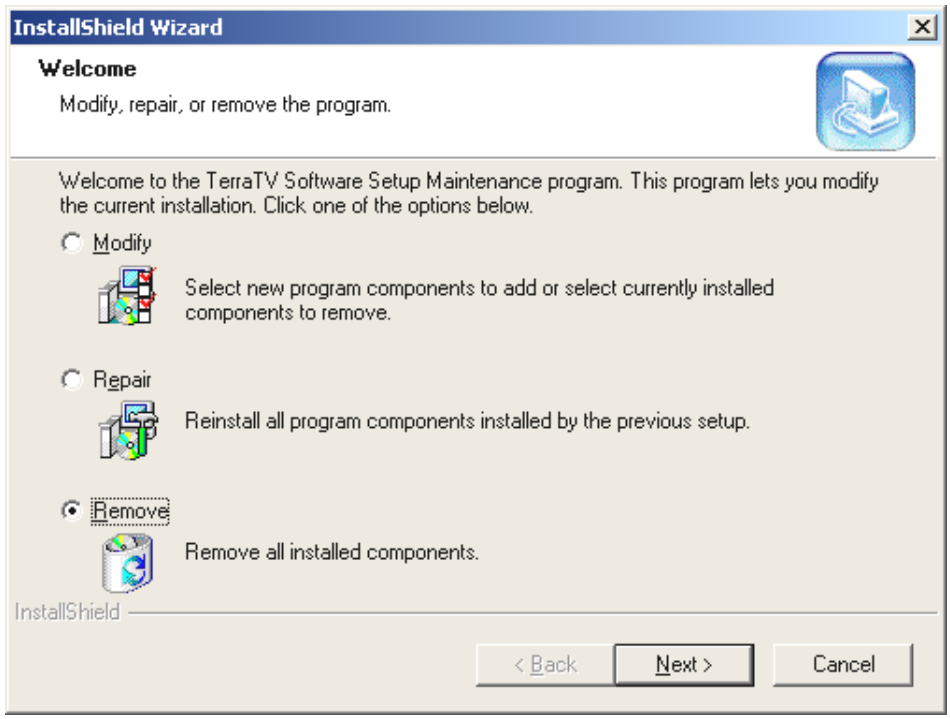
Deinstallation of the Software under Windows 2000

To remove the TV software, please open the software area in the system control and mark the option “TerraTV Software” and click on “Add/Remove”.



Select the entry "TerraTV Software“ ...

After you have chosen the language, only still choose the option “Remove”, then “Next” and you are ready.



Now click on “Remove” and “Next” ...

What? Where? The Connections of the TV Card

You can connect different devices with different signals to your TV card - in this chapter we would like to deal with the individual sockets of the TV card in turn and their connection possibilities. For this we will give you a few technical details as well as some concrete application examples, too. Let's go ...

Which connection of your device to which connection of the TV card you can or must use depends on the type of design of device that you want to connect. Therefore first check the outputs that your device has. For this reason look at the following illustrations ...

TV-antenna-Out

› TV-antenna-In

Video-Out / Composite

› Video-In

SVHS-Out

› SVHS-In

Radio-antenna output

› Radio- antenna-In

Scart-Out

Video:

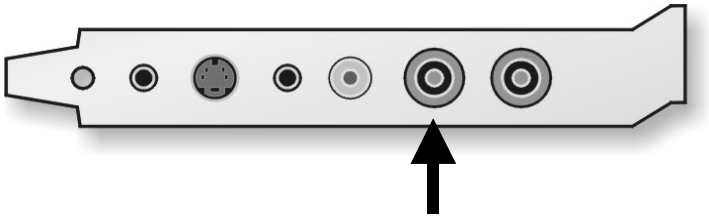
› Video-In

› SVHS-In

Audio:

› Audio-In

The TV Antenna-In.



You can connect an antenna signal to the tuner of the TV card via this connection. You can connect devices such as a simple indoor antenna to the cable connection or the antenna output of your video recorder or SAT-receiver.

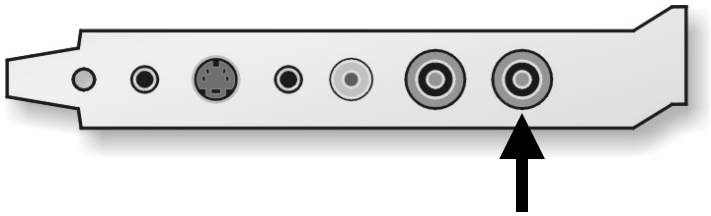
Here is the antenna output of a video recorder.

Such a plug is connected to the TV card.

To set the transmitter later in the software please read page 42 in the chapter “

The Station Scan." Next. You will learn how to capture the TV-channel on page 54 in the chapter “Creating Video Sequences ...”.

The Radio antenna Input.

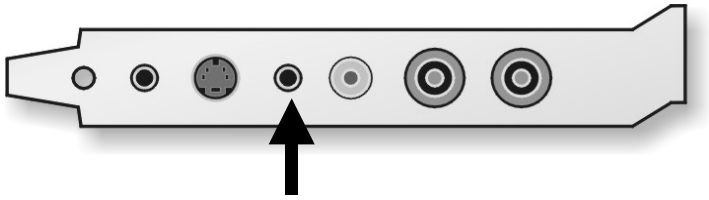


You can connect an antenna to the radio tuner of the TV card via this connection. For example, you can connect an indoor antenna, your house antenna or your cable connection here.

Such a plug is connected to the TV card.

To adjust the transmitter in the software later or to record from a radio station, please read more in the chapter “The Radio-Software.” on page 67.

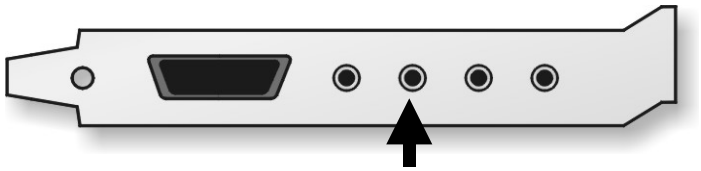
The Audio Input.



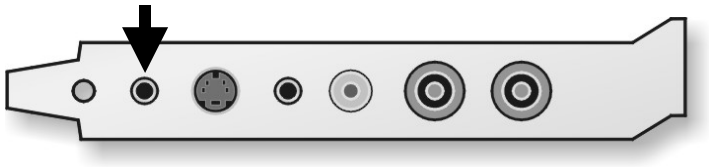
The TV card has an additional line-input so you can continue using the line In-input of your sound card for other line-devices. With the TV software you can later select which audio signal is transmitted to the line input of your sound card. This can be either the sound of the television station, the radio station or the external line device. You can read how this is exactly done on page 46 in the chapter, "The Audio Settings.".

The Audio Output.

If you have a sound card, it is practical to connect an audio input (usually line-In) with the audio output of the TV card. On the one hand then, you only need a loudspeaker set for your PC and on the other hand you can capture sound and image together in this way. There is a jack cable provided for this purpose with this TV card.



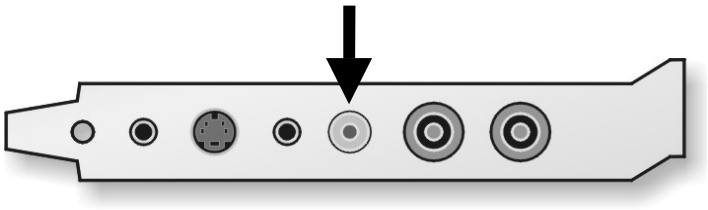
TV Speaker Out / Line In the sound card



Now you still have to carry out a few adjustments to the sound mixer of the sound card so that you can later hear and capture TV/Video-sound, too. Lots of sound cards also have some sound mixer software for this, in which you can make various adjustments to the audio playback and capturing. You should be able to refer to the user instructions of the relevant documentation of your sound card.

We will deal later again with the necessary settings of the TV software. The position of the Line In-input of the sound card can vary from model to model. In the following section you will read how to send the line input of your sound card with another external line-signal – so stick at it...

The Video Input (FBAS).

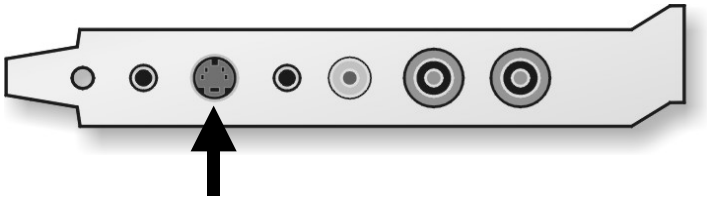


You can connect devices with a video output to this socket of the TV card. External devices, which have a Video-Out socket (also frequently described as a "Composite"), can be connected to the Video-In socket of the TV card via a cinch/cinch cable.

Use this cable for the connection of a device to a video out-socket.

You will learn how to capture still images or video sequences from this input of the TV card from page 42.

The SVHS Input



You can connect devices with an SVHS-output to the TV card via this socket. External devices that have an SVHS-Out socket can be connected to the TV card via an interconnecting cable, which has a masculine SVHS-plug on both sides. (See the following illustration)

SVHS/SVHS cable

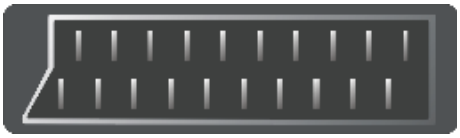
You will learn how to capture still images or video sequences from this input of the TV card from page 42.

Important: Please note that sound is neither transferred via the video input (FBAS) nor via the SVHS input. This means that if you connect external devices to the TV card via these inputs, you also need another cable for the sound. So connect the audio output of these devices to the Line-In or to your sound card.

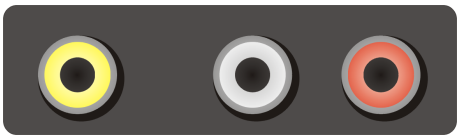
And what about a SCART Output?

The SCART connection on a receiver, video recorder or on another device combines various functions. Unfortunately it can happen that a SCART connection might externally match the other one, but it does not support the same functions. However, it should be possible to refer to the relevant documentation of the device to be used for exact specifications. Fortunately the video and sound signals to be output are the same in most cases.

As you can clearly see from the appearance of the socket, you have to use an adapter for the connection to the TV card.



Scart-adapter - plug



Scart-adapter – cinch output

The adapter required must have a scart plug on the one side that you insert into the external device and three cinch-plugs on the other side. The three cinch-plugs then carry out the output signals of the video, audio on the left and on the right.

Important: Some SCART adapters provide an additional SVHS output, which you can also connect to the TV card.

Important: There are some adapters that are not designed for feeding a signal to the SCART device and not for reproducing a signal (as required for the TV card). Please take this into account when purchasing such an adapter. To be able to work more, there are models with which the signal direction can be changed or which are simultaneously supported in two directions. You can find such adapters at a specialist dealer for about € 15,-.

Y-cable

To be able to connect the right and left audio cable to the Line-In input of your sound card or to the audio input of the TV card, you then need a Y-cable (see illustration).

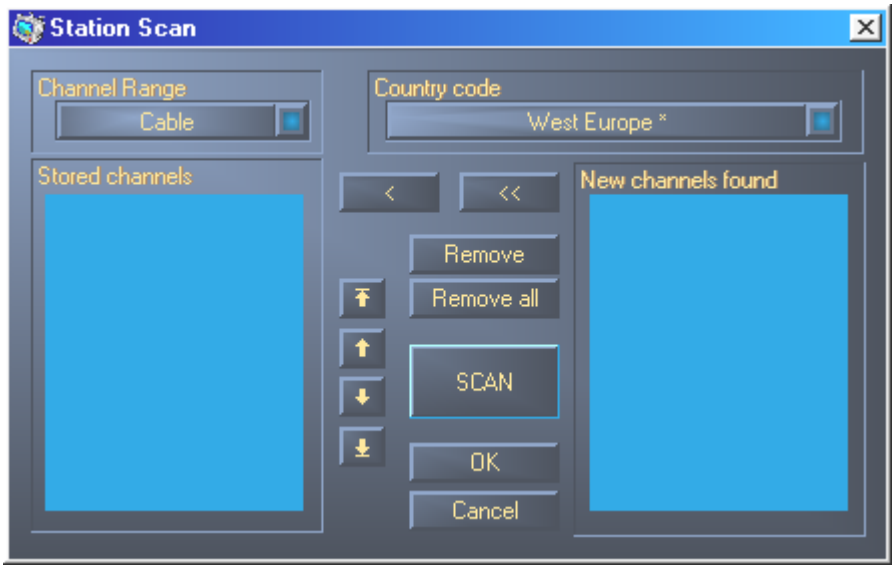
You carry out the connection of the SCART- video output to the video input of the TV card as already described in the chapter entitled “The Video Input (FBAS).” on page 32 or in the chapter entitled “The SVHS”.

The TV software

Now let us study the central control unit of your card, the TV software. Here you can conveniently adjust all settings and use the extensive functions. In the following we would like to explain to you the individual windows and their details step by step.

The Station Scan.

When you have successfully installed the drivers and the TV software for the first time, you see the following dialog.



This is an automatic station scan whose functions you have probably already been able to enjoy on you living room television. However, before sending the tracker-dog off, please check the following settings.

The Scan Range.

Here you define which frequencies are to be scanned for TV channels. If you have connected the TV tuner input of your TV card to an indoor antenna, house antenna or other similar devices, please select “antenna”. If you have connected the tuner to your cable connection, then respectively select “cable” – who would have thought of that! The third setting “All frequencies“ extends the scan range to the complete frequency spectrum. Select this setting if you miss some familiar stations, or if you have also connected your video recorder or satellite receiver, for instance, via the TV antenna connection and it was not found during the scanning of the stations.

The Country Settings.

With this setting you can define the specific scan area of the country for the “Cable“ or “antenna”. Please set this to the country where you are located. This setting does not have anything to do with the language of your Windows system. If you do not find your country in the list, e.g. Germany, then simply select “West Europe *”, because the TV standard is identical in many European countries.

To start the scanning please press “SCAN”.

When the scanning process has finished, all the channels found appear in the right hand part of the window under “New channels found”. These can now be individually transferred to your channel list (“Channels saved”), in which you select the entry required and then press [‹], or you can transfer the entire list by clicking on [‹‹]. You can individually remove the channels by

pressing the button “Remove” or you can remove all channels from the program list by pressing, “Remove all”. To rename the name of a channel mark the entry with a click, wait for half a second and then click a second time – now you enter the required name. You probably know a similar process from the Windows Explorer.

You can determine the position of a channel within your list with the arrow symbols next to the entries or directly with the mouse – to do this keep the left mouse button pressed when marking a channel and drag the entry onto the position required.

Everything Ok? Great ... to close the dialog, please select “OK“.

The Remote Control.

This window represents the remote control of your TV software. Via this you have direct access to all the essential settings.

Now let's look at the individual buttons ...

The Selection of the Input Sources ...

If you click on this button, then a bar opens out with the channels that were set previously, which you set via the station scan. You can select a channel with the mouse, or sequentially browse with the arrow (Up) and arrow (Down).

With these two buttons you select one of the external video sequences, either the SVHS or the video-input.

You can learn how to connect devices to these processes in the chapter "The Video Input (FBAS)." on page 32 or in the chapter "The SVHS".

Setting for Displaying the Video Image ...

This button activates or deactivates the display of the video image.

If you have activated this option, then the page ratio of height and width of the video image can be freely selected. Otherwise, the ratio is firmly set at 4:3.

With this button you switch the display of the video image to the full screen mode. In the full screen mode you can display the remote control by pressing the left mouse button. When you press a second time it disappears again.

The display is automatically faded out after approximately 2 seconds. If you move the mouse, then it appears again.

You also have the option to display the context menu with the right mouse button. Please read more about this on page 48 in the chapter “The Full-screen.”.

This button activates the multi-channel preview. With this function you can easily get an overview of the channels of your set TV station that are currently being offered – for more about this please see page 49, under “Multi-Channelpreview.”.

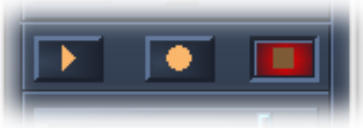
The Teletext ...

With this button, select whether the Teletext window should be displayed or not.

The number of the page currently selected is displayed here. You can also click in this field with the mouse and directly enter a number. After confirming with Enter, the page is changed accordingly.

To make navigation within the depth of the Teletext easier, you can directly branch back to the information page 100 via this field, or you can branch to page+1 with the right arrow and to page-1 with the left arrow. With the up arrow and down arrow you can browse through the sub-pages of a page. These can only be selected if the current sub-pages of the page are available.

The function of this button is “Fullscreen” or return to the window mode.



Here you have direct access to the video recorder functions of the TV software. You are probably already familiar with the symbols from your video recorder or from other devices. You start capturing with the middle button. You can adjust the settings for capturing under the enhanced settings settings. But we will deal more with that later. If you want to stop capturing, click on the right button. Look at the result and start the playback with the play-button on the left.

You can switch the audio signal to mute here.

With this button you can fade the window in or out with the enhanced settings.

More about this on page 40.

This button opens the audio settings.

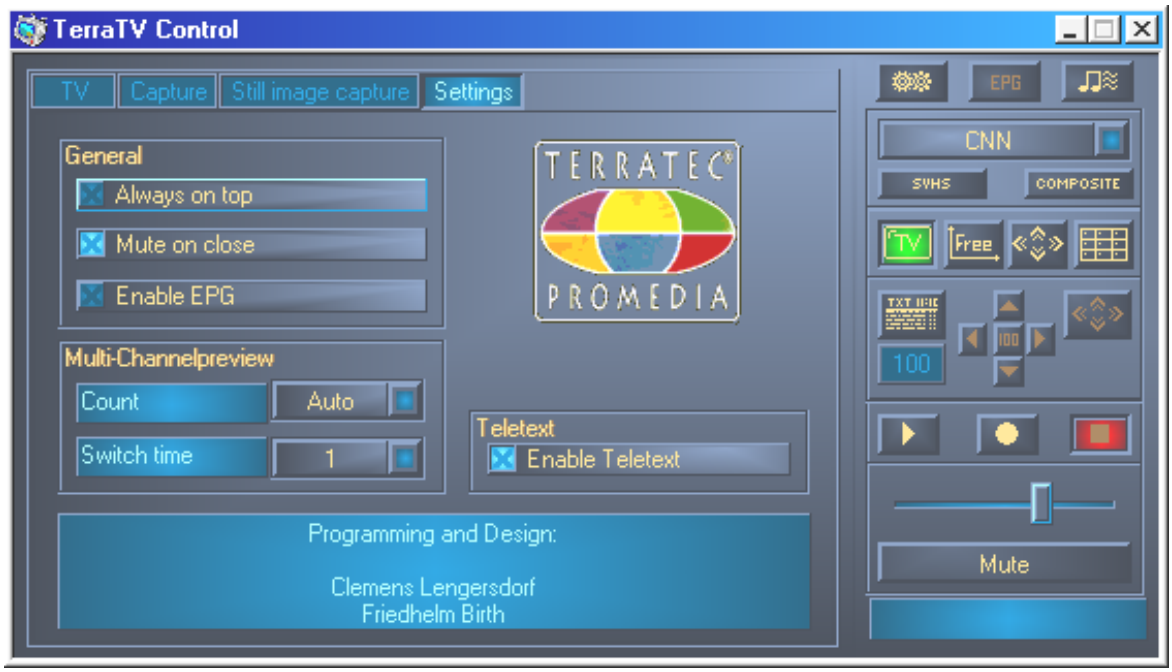
More about this on page 46.

In this line you obtain different status information. In this case for example, via the sub-pages of the current Teletext page – unfortunately there are none there.

You can find out about the functions of the EPG button in the chapter “The Electronic Program Guide (EPG)” on page 52.

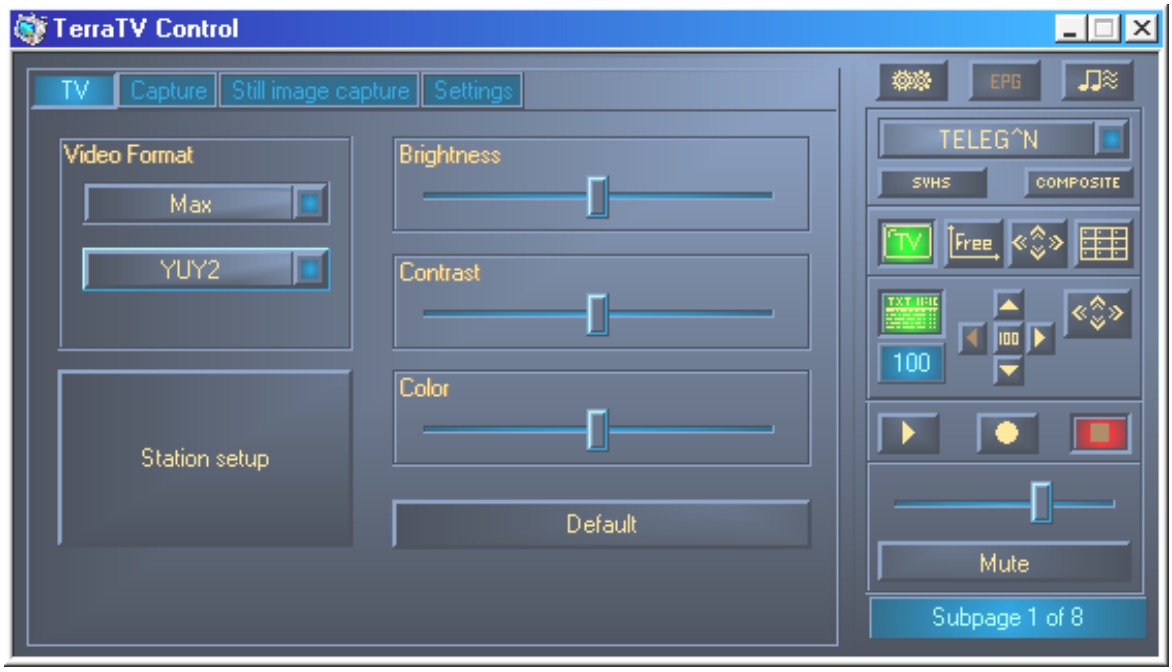
The Enhanced Settings.

After you have opened out the dialog for the enhanced settings, your TV software looks like the following ...



Here you now see the various register cards whose contents we now want to deal with little by little.

The Register Card “TV”



Video Format. Here you can select the color format and the resolution of the video display. Please note that this setting only applies to the display and not for the capturing. Set the resolution above in which the settings correspond to the following resolutions.

"1/16" › 160 x 120 image dots

"1/8" › 240 x 180 image dots

"1/4" › 320 x 240 image dots

"1/2 *" › 640 x 240 image dots

"Max" › 640 x 480 image dots

The asterisk: The setting 1/2 is something quite special insofar as it concerns a complete resolution horizontally but only a frame vertically.

About the background: A complete video image always consists of two frames, which are each brought onto the screen with a vertical line offset, making up the complete video image. Therefore, this means that a frame consists of 640 dots horizontally and 240 dots vertically. In this way the 1/2 setting reproduces exactly one frame. With this setting you can prevent the so-called paling fence or comb effects. This phenomenon can be seen when reproducing fast movements in which both frames form a low offset. If only one frame is reproduced, this error is avoided.

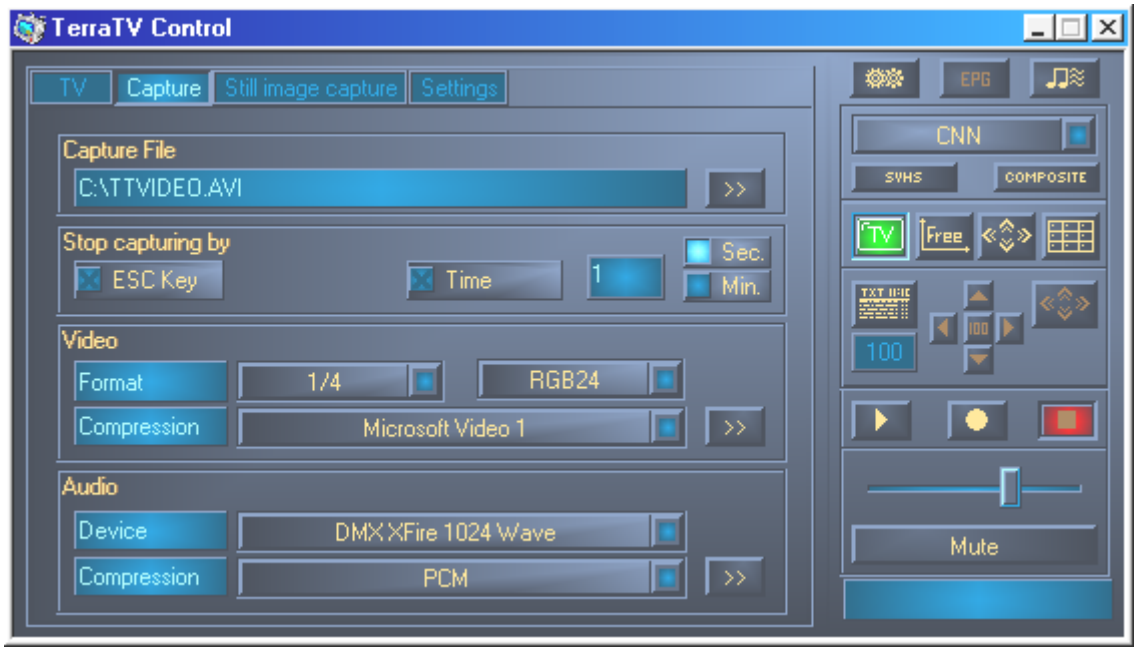
Of course you can also view all these resolutions in fullscreen. With "1/16" the image is displayed in grid points. In the case of low resolutions less data is transferred and therefore your system is less loaded. If you are working in a spreadsheet calculation and you want to follow the latest reports of a news broadcast in the small window, you have the opportunity to use a lower resolution. However, it is recommended to use a higher resolution, if you want to enjoy the daily soap opera in fullscreen.

Under the resolution options you can find settings for the color format of the display. You probably will notice that after changing to the RGB settings, the image is no longer displayed so fluently. This is caused through the fact that the native color format of the video signal is YUV and therefore first has to be converted to an RGB format. Furthermore, the data volume is higher in RGB format because it is an uncompressed format. In the case of RGB555 it is with 16-bit and in the case of RGB24 with 24-bit color depth.

Station Scan. You can find details about this on page 42.

Image Settings. With the controllers “Brightness”, “Contrast” and “Color” you can influence corresponding parts of the video image. With the button “Standard settings“ you reset the settings. Please note that contrary to the setting for the resolution, the image settings affect the recording.

The Register Card “Capture”



Capture File. Here you set in which file the video files are to be saved, which you capture or what the name of the file should be. In the case of several captures the files are automatically numbered.

Stop capturing by. As you can tell from the name, you can determine here how you want to stop a video capture: by pressing the ESC key and/or after a set time has elapsed. If none of the options have been selected, stop the capture via the stop key on the remote control.

Video. In this area you determine the options for the video file that is created during the capture (“Format”). Once the resolution below (see below) and the color format are set with the setting RGB555 the file is processed with a color depth of 16 and with RGB24 it is processed with a depth of 24 bits. Your video sequences correspondingly need more memory storage in the RGB24 color format.

The Resolutions ...

"1/16" › 160 x 120 image dots

"1/8" › 240 x 180 image dots

"1/4" › 320 x 240 image dots

"1/2 *" › 640 x 240 image dots

"Max" › 640 x 480 image dots

The asterisk: The setting 1/2 is something quite special insofar as it concerns a complete resolution horizontally but only one frame vertically.

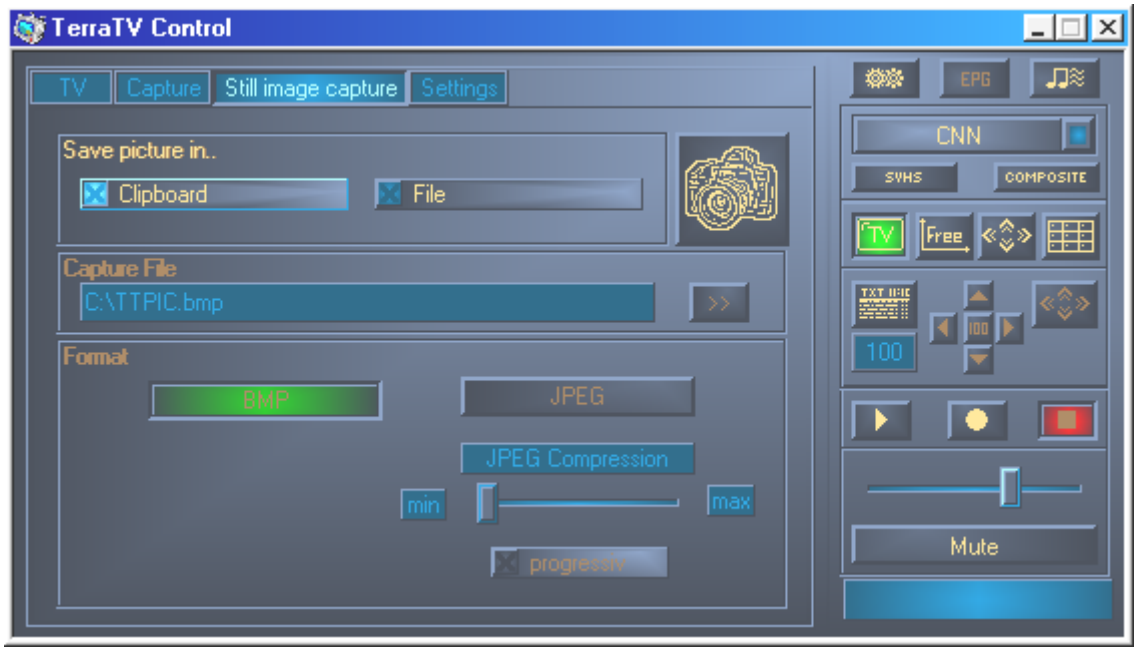
About the background: A complete video image always consists of two frames, which are each brought onto the screen with a vertical line offset, making up the complete video image.

Therefore, this means that a frame consists of 640 dots horizontally and 240 dots vertically. In this way the 1/2 setting reproduces exactly one frame. With this setting you can prevent the so-called paling fence or comb effects. This phenomenon can be seen during the reproduction of fast movements in which both frames form a low offset. If only one frame is reproduced this error is avoided.

Under the option “Compression” select a so-called Video CoDec for more space-saving storage of the video pictures. You will find more about this topic in the chapter “Creating Video Sequences ...” on page 54. Special settings concerning the selected audio compression can be accessed via the button “[>>]”.

Audio. Here you can adjust the audio settings for capturing your video sequences. First select your “capturing device“, which stands for the capturing driver of your sound card. If you have several sound cards in the system, please make sure that the correct driver is selected here. You have to connect the audio output of the TV card to an output of your sound card in order to be able to capture the TV sound. You can find out how this works by reading page 9 in the chapter entitled “Off into the Computer ... the Installation of the Card.”. Under “Compression” you can also activate a “miniaturizer” for the audio part. Special settings concerning the selected audio compression can be accessed via the button “[>>]”.

The Register Card “Still image capture“



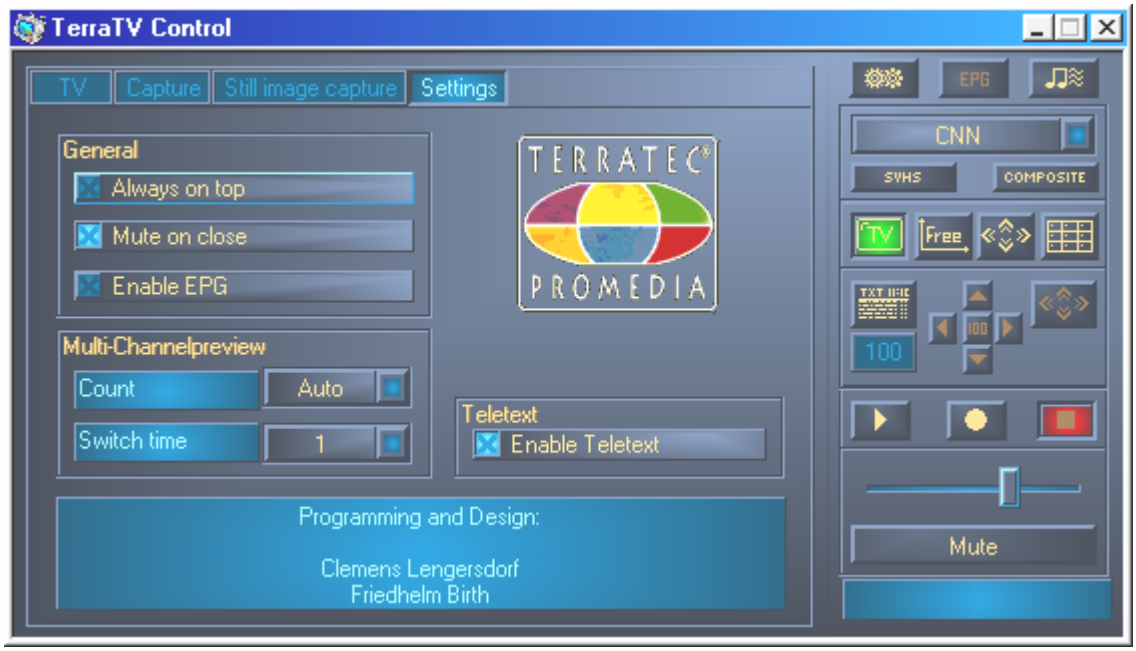
Save picture in.. Defines where a still image capture is saved. Who would have ever thought that? Possible options here are the “Clipboard”, so that you can continue using the image directly in other applications (mostly via the menu “Edit” and “Add”), or you can have the image stored directly as a file on the hard disk.

Capture File allows you to select the file, in which the still image captures are to be saved via the button “[>>]” if you want to store these directly onto the hard disk.

“Format” allows you to select the format of the individual images for saving. Here you have the options of “BMP” and “JPEG” format. BMP is an uncompressed format, which means that all information is stored for each image dot. “JPEG”, on the other hand, compresses information by means of complicated algorithms in order to require considerably less storage space on the hard disk. With the slide regulator you adjust the relation between quality and size. Here “max” means the greater possible reduction “min”, on the other hand, means the best possible quality. If you have activated the checkbox “progressive” and later view the JPEG-file created with the Internet Explorer, you will notice that the image first seems little blurred and builds itself up gradually. During the early days of the Internet the time needed to build up even small graphics files was very long due to the bandwidths that were still low. With this option of the JPEG files you can therefore get a very fast impression of the image in order to interrupt the loading process if required. In the case of high-resolution files, which are intended for publication in the Internet, this is still practical.

If you click on the field with the picture of the camera, a still image capture is made. STRG+C would be the corresponding keyboard abbreviation for this.

The Register Card “Settings“



General. If you select the option “Always on top”, the remote control does not disappear behind another window or behind applications, but instead it stays on. This setting only applies to the remote control. You can separately select such an option for the Teletext or Video window.

The option “Mute on close” ensures that the sound of the current TV channel continues, even if you close the TV software.

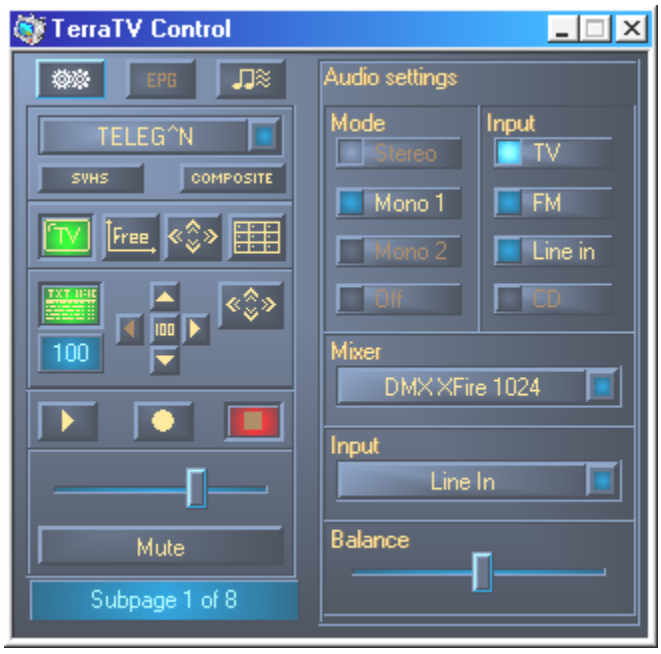
The option “Enable EPG” enables or disenables the “EPG” button on the remote control. Since this function is currently only available for Germany and requires Internet access, you should disenable the function if you do not have access to this.

Multi-Channelpreview. Under the option “Count” you define the number of stations that are to be simultaneously shown – from 2 x 2 to 10 x 10. With the option “Auto”, the actual TV software sets a sensible value, depending on the number of stations in your station list. Furthermore, with the “Switch time” you set the time interval in seconds, after which time the preview changes to the next station.

Teletext. Here you can enable or disenable the complete Teletext functionality. The button of the remote correspondingly loses and gains control of its function for displaying Teletext. If you still have a slow PC and the TV-reproduction does not appear fluid, it can be helpful to disenable the Teletext function and thereby give your PC a bit more power for the TV reproduction.

The Audio Settings.

If you click on the cute note symbol on the remote control, then the setting dialog for the audio features flaps open.



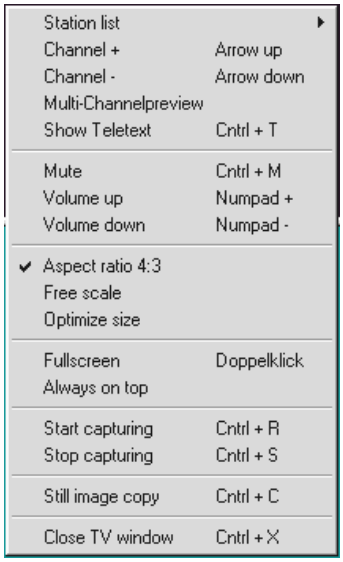
Under the **Mode** option, you can set the mode of the audio playback of the TV-tuner. Since the TValue radio for the TV part only supports mono, the remaining options are displayed in gray.

With **Input** you define which audio signal is relayed to the input of the sound card. “TV” for the sound of the RV picture, “FM” for the radio part of the card or Line In for the Audio input of the TV card.

Via **Mixer** (which sound card) and **Input** (which input of the sound card) you define the mixer interface, which is to control the volume of the TV software. The controller for volume and balance is a remote control of the Windows mixer functions of the sound card as it were.

The Video Window.

You activate the video window via the button  . With the context menu of the right mouse button you can directly access the basic functions even without remote control.



Via the “Station list” you directly select the channel from your personal list. With “Channel +” and “Sender –“ you can wildly hop through the channels up and down.

“Mute” switches the TV volume off. “Volume up” and “Volume down” increase or reduce the volume. If the entry “Aspect ratio 4:3” is ticked, then the aspect ratio in the picture mode remains stable and the picture does not become distorted even when enlarging or reducing the picture with the mouse.

With “Free scale” on the other hand, you can freely compress or stretch the picture as you please.

“Optimize size” not only resets the aspect ratio to 4:3, but it also adjusts the size of the window of the resolution set. “Fullscreen” switches on the video display to the ... you’ve guessed it, ... full-screen.

“Always on top” ensures that the video image does not disappear behind the windows of other applications.

With “Start capturing” or “Stop capturing” you control the capturing of a video sequence. You can learn how to adjust the necessary settings on page 54.

“Still image capture” provides you with a still image for the clipboard, or an image file on the hard disk – Details about this are on page 44.

With “Close TV window” you fade out the video window.

The Fullscreen.

With the  symbol on the remote control you change the display of the video picture to the fullscreen. If you do not move the mouse, the mouse pointer is automatically faded out after a short interval of time. With a left mouse click you bring the remote control into the picture and with another click it disappears again. However, you also have direct access to the most important functions via the context menu, which you activate with the right mouse button.

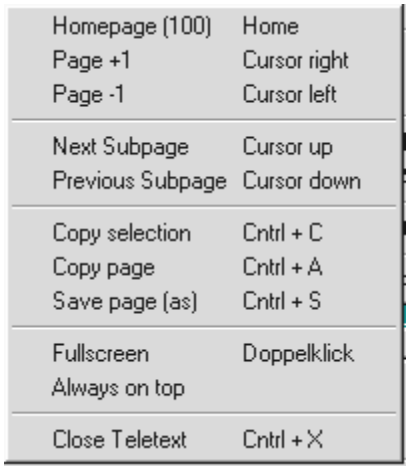
Multi-Channelpreview.

Via the button  of the remote control you can fade in the multi-channelpreview in the video window, thereby obtaining an overview of the channels from your channel list quickly and conveniently. Actually the tuner or your TV card can only be set to one frequency, i.e. only to one channel at the some time. To be able to give you the desired overview, the TV software proceeds as follows: the display of the video window is divided into a raster of 5x5 frames (default setting), where the respective “live” picture of a channel is sequentially faded in from your list. If the fixed time has passed (presetting 2 seconds) then the last moved picture is frozen and the next channel of the list in the next frame is faded in. The settings just described can be varied via the setting dialog. Here you can define the number of frames / channels for preview and the time until changing again to the next channel. (See page 45). Now if you click with the mouse in one of these frames, the channel stays in the “live” view. If you double click, the channel is displayed in fullscreen. Of course, you can also view the multi-channelpreview in fullscreen.

The Teletext.

With the  button of the remote control you can – as you already know from the video window – activate the display of the Teletext window. As soon as you have chosen a channel, irrespective of whether the Teletext window is active or not, the supply of tables is selected in advance in the background and stored intermediately. Via this intermediate storage (we also speak of a cache) it is possible for you to have the lowest waiting times when changing the tables. Since Teletext is purely text information, you do not have to worry at all about valuable disk space. You can also fade in the Teletext window, even though you have changed the display of the TV picture (that means the video window) to fullscreen. In this way, for instance, you can fade in subtitles via the page 150 with some channels and programs.

Besides the navigation via the remote control (see page 37), you can also directly enter the number of pages via the keyboard. However, to do this the Teletext window must be selected. A really special thing is that you can also directly pass over the number of a page with the mouse (the pointer becomes a hand with extended forefinger) and by a click on the left mouse button you can directly branch there. If you press the right mouse button in the window of the Teletext display, then a context menu appears, which we now want to deal with in more detail.



Via the “Homepage (100)“ you branch directly to page 100. On this page you find an overview of the Teletext offer of the current channel.

With “Page + 1” and “Page – 1” you change to the next or previous page number. With “Next Subpage” and “Previous Subpage” you select the respective subpage.

You can also select the current page with the mouse areas – in the same way as word processing. If you now select “Copy selection”, the area marked is copied into the clipboard as text information and can be further processed in other applications. “Save page” transfers the contents of the entire page into the clipboard. Or you can save the information directly via “Save page (as)” as a text file (TXT).

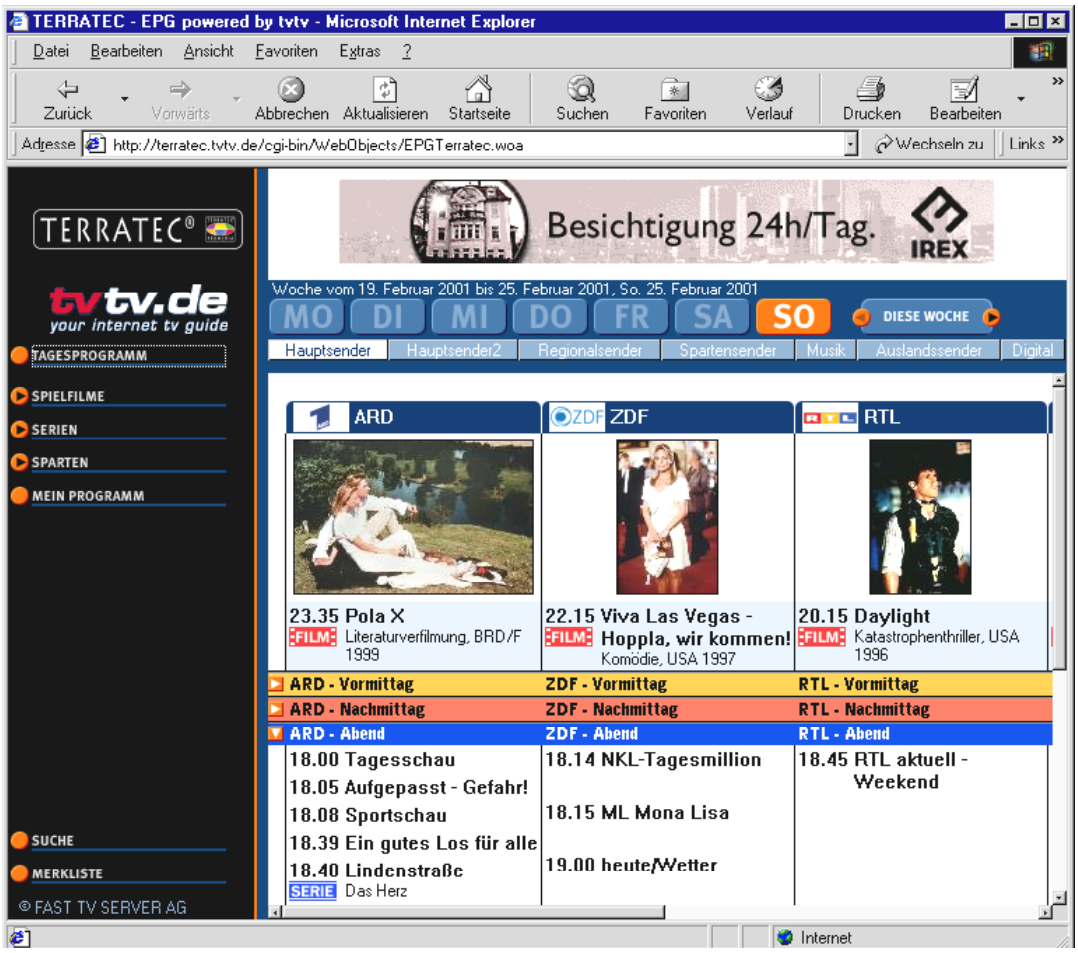
The “Fullscreen” changes the Teletext window in the fullscreen display mode.

“Always on top” ensures that your Teletext does not disappear behind the windows of other applications.

“Close Teletext” closes the window.

The Electronic Program Guide (EPG)

With the EPG button of the remote control you can activate the so-called EPG. Hidden behind this smart name is an extensive Internet-television magazine. Here you can compile your own personal channel list, according to TV cult serials, emotional movie classics or even scan for the brutal soap opera of your fancy.



This is what it can look like when you click on the EPG button on a nice Sunday evening ...

With your personal profile the EPG becomes your individual TV magazine that makes a pre-selection according to your preferences and settings and only displays the channel information, which interests you. You can find more information in the actual EPG. To come directly to these pages, you can enter the address **http://terratec.tvtv.de** in your browser.

The EPG is unfortunately only available for Germany. We hope, that we will be able to offer support for other countries in the future.

Since EPG is an Online-offer, you must be connected to the Internet to use it. Please bear in mind that costs arise with this, the EPG itself is free of charge.

The Software used.

Working with Still Images.

You can use still images in many ways. On the one hand you can save individual pictures from a current TV program as a memory, in connection with a video camera to prepare digital photos or to create a small cartoon film with your camera. The TV software provides you with the necessary functions you need.

If, you still want to edit your individual pictures afterwards, for printing documents, to mount in a photomontage or the like, it is advisable to work with the BMP format, because with this you can save the maximum picture information. (See page 44)

In this case you should also make sure that you use one of the higher resolutions, so that the pictures do not stretch through slight enlargement, thereby looking very grainy. On the whole you should bear in mind that the video resolution from the area of the TV and video recorder never have such high-resolution as you are used to with digital cameras. But it is sufficient for use in the home.

However, if your material is primarily meant for publication in the Internet, then you should use the JPEG format. Admittedly, you do not have 100 percent picture information owing to the compression of the various picture information in favor of storage space, but it is exactly the small file size and the resulting short downloading time in the area of online, which people like. If you still want to edit the pictures with other software anyway, before you put this in the Internet, even in this case it is also advisable to work again with BMP format, in order not to have to lose unnecessary quality to begin with. Almost all current image-processing programs support JPG format for saving, so that it is better to carry out the “reduction” only at the end. (Details about the settings of the JPG Formats can be found on page 44)

If you want to produce a cartoon film as just mentioned, in which you mount pictures of a small plasticine figure, for example, you could do this in the following way. You should preferably use a camera with a tripod for the shooting, in order to fix the detail. Now connect the video output (VHS or SVHS) to the video input of the TV card, select the corresponding input via the remote control. Now define the file and file name via the “Settings”, “Still image capture” “Capture file..” - in this case it is practical to select a file name corresponding to the scenes that you want to mount (for example “Scene1- Entrance – the door goes on the picture”). Now you must select the resolution via “Settings“, “Capture”, “Format”, which should also have the final video file (after mounting the individual pictures). Since the video file must be created with an extra program, it is wise to use the BMP format, so that no picture information is lost. Now bring the video window into the foreground and change to fullscreen – you should also be able to see from your “small” set what the picture looks like when you want to capture it. Now change the respective position of your figure, take a still image capture via STRG+C, change the position, press STRG+C and etc. etc. ... . Later when you look in the file with the individual pictures, you will find that all the necessary photos are nicely numbered (Scene1- Entrance – the door goes picture1.bmp”, “Scene1- Entrance – the door goes picture2.bmp” ...). It can be as simple as that.

Now you must join the individual pictures to become video sequences so that the pictures now learn to really run. You can find a selection of free software titles with which you can manage this on the enclosed CD-ROM. Please refer to the respective documentation to find out exactly how to do this.

Creating Video Sequences ...Your Hard Disc as a Video recorder

Of course, with the aid of the TV software you can also save moving pictures on your hard disk in a similar way as you would with a standard video recorder. To do this you have direct access on the remote control to "Capture", "Replay" and "Stop". As you can quite probably imagine, the capturing of video sequences demands large volumes of data. Large volumes must be transferred via the PCI-Bus and then finally saved on the hard disk. This means that the system requirements should not be ignored. However, fortunately there are a few screws that you can turn in order to be able to attain the optimum results with your system.

Resolution. Of course the resolution set for the capture plays a very fundamental role. The more image dots captured means that the resulting data volume is greater. Therefore, before capturing the picture, it is better if you already think firstly about the aim for which you want to save the sequences and how you want to further process them. If you want to archive news programs daily then you should use a lower resolution. If, however, you want to digitalize your own video recordings, then the best possible resolution should be used.

Audio. If you want to digitize material from an external video recorder or from other recording devices, then if necessary go back to the video picture separated from the audio signal for digitizing and join the two signals together again during the editing. In this way you reduce the data volume, which has to be saved on the hard disk in one go.

Preview. You will notice that the TV software will advise you to deactivate the preview in the case of high resolutions. This is due to the fact that data must also of course be transferred via the PCI bus to the graphics card for displaying the picture and to prevent risk to the capture, due to this additional load, it is safer to follow this advice.

Compression. To limit the space, which the video files need, you can select a compression for the picture as well as the image under capture settings. These compression algorithms do not directly belong to the TV software, but instead they are a part of your Windows system. Some are already embedded within the Windows version package. Others can be separately installed independently. Others in turn are automatically installed with different software (as for example with the Windows Mediaplayer). Actually in this case we speak about so-called CoDecs, which stand for coder/decoder. This means that if you include a specific process when creating your video files (coding), you must also be able to play these back later, (decoding). Consequently, if you have created a sequence using a compression, you cannot play this back on a system where no software has been installed for the decoding. Furthermore, you must note, that such integration, particularly if the video and audio signal must be compressed, means additional work for the processor. Normally we can say, that the more effective the compression is the more complicated it is for the processor. Within the last few years

a great deal has been done, primarily through developments that were speeded up through the MOTION PICTURE EXPERT GROUP, in short MPEG. It was possible to develop a compression that was able to save a terrific amount of space while providing excellent quality, known primarily through MP3 audio and MPG video files. Nevertheless, the CPU must still do quite a bit in order to be able to manage everything in realtime. Therefore, it is best to be able to first work with uncompressed files and then to test out the various compressions in order to find out the best one. As a rule, there are numerous options, by which you can adjust the relation between quality and economy of space. Of course, the question: "What do I actually want to do?" rings relatively loudly here: – you can work more relaxed, the more you know your aim. ;-)

Here's another small tip: If you have a system which can easily perform these tasks or you just want to grapple with the various CoDecs available in more detail, then we urge you to contact the Webseite CoDec Central (**www.codeccentral.com**). Here you can find out about all the useful details concerning this subject, including a few links for downloading such CoDecs free of charge.

Data storage space. If you do not work with uncompressed data, then naturally the data volume needed on the hard disc is even greater. Furthermore, the color depth selected under Settings / Capture / Format can be of help: with RGB555, i.e. 16-bit color depth, you create smaller files than with the RGB24 i.e. 24-bit. However, if you intend to continue editing the clips later, thus changing them from the originals (by adding a color filter, changing the saturation or the like) then it is recommendable to have the file available as raw material with real colors, i.e. 24-bit – the better the raw material is, the more flexible you can then work.

Playback of the Clips. When you have finished capturing your clips and you want to play them back via the Play-button of the remote control, it can happen that the playback jams a little or does not react on some systems. In this case, please fade out the video window and start the playback again.

The Radio-Software.

With the ActiveRadio software you can operate the radio receiver completely independently and record the radio stations – instantly or controlled by a timer. The software is available in two versions, whereby the only difference between these is the interface. One has a color depth of 16 (4-bit) and on the other has 65536 colors (16-bit). However, the range of functions is the same. To be able to record the radio signal with an application, you should first make sure that you have connected the TV card to your sound card (see page 31 in the chapter "The Audio Output.") and then adjust the audio output of the radio station (as described already on page 46 in the chapter "The Audio Settings."). Please refer to all other piquant details from the convenient Online-help, which you call via the F1-key. When you do this, please make sure that the RDS functions of the software are not available for the TValue Radio.

Interesting Internet Offers.

CoDec Central

http://www.codeccentral.com - (English) Codec Central, Information all about CoDecs with the main emphasis concerning video streaming in the Internet

Free CoDecs

Ligos Technology
http://www.ligos.com – (English) – the manufacturer of the Indeo Video-CoDecs. This is provided in the current version for downloading free of charge.

Morgan Multimedia
http://www.morgan-multimedia.com – (English) - Manufacturer of the MM MJPEG Video-CoDecs. This is provided in the current version for downloading free of charge. The range of functions is complete. Only the period of use is limited.

HuffYUV

http://www.math.berkeley.edu/~benrg/huffyuv.html – (English) - a project of another Video CoDec. This CoDec aims at high-quality recordings.

Microsoft

http://www.microsoft.com/windowsmedia - Microsoft has provided a program for creating so-called ASF-files free of charge. Microsoft is trying to establish this format in addition to the MPEG formats. The technology applied is very similar but it is really worth taking a look at it.

Free Programs for Video Editing.

Aist

www.aist.com - (English) - Homepage of the manufacturer of the video editing software "Xone", which you can also find on the CD-ROM enclosed. It is not only nice to look at – it powerfully combines this suite, the standard functions, which is expected of an editing solution with extra features such as the native OpenGL – support of the hardware accelerator of your graphics card. Lots of other functions round off the picture.

Virtual Dub

http://www.virtualdub.org - (English) - a top grade freeware tool, which provides innumerable functions, extra programs, filters etc. and impressively runs even on a small system. It is something more for freaks or similarly minded people, but the possibilities are excellent.

AVI_IO

http://www.nct.ch/multimedia/avi_io/ - (English) – is particularly powerful for managing and processing very large AVI-files.

ReelCap

http://www.reelware.com/reelcaphome.htm - (English) - another capture program, simple but effective.

The Service at TerraTec.

“Rien ne va plus – nothing works anymore” is not nice, but it can happen sometimes even with the best systems. In such a case, the TerraTecTeam is standing by to give you advice and help.

Hotline, Mailbox, Internet.

In the event of a serious problem – which you cannot solve alone with the expert help of this handbook, your neighbor or your dealer – then please contact us directly.

The first way is via the Internet if possible: On the pages **http://www.terratec.net/** you can always find current answers for frequently asked questions (FAQ) as well as the latest driver. This is also available for you via our mailbox system. The phone number is: **+49-(0) 2157-8179-24** (analog) and **+49-(0) 2157-8179-42** (ISDN).

If the possibilities mentioned above do not help you any further, then please call our Hotline. You can also contact us online. To do this, call the page **http://www.terratec.net/support.htm**. In both cases, please have the following information ready at hand:

- your registration number,
- this documentation,
- a printout of your configuration files,
- the handbook of your motherboard,
- a screen printout of your BIOS configuration.

In addition, it is also helpful for our technicians, if you are sitting at your computer during the phone call in order to be able to directly try out some tricks. When you contact our support team, please always note down the name of the corresponding employee. You need this name, in case there is a fault and your card must be sent back.