ReceiverSystem

TerraTValue

PCI TV-Card

Version BT878

Manual (english)

GARANTIE
2
YEARS
WARRANTY

26.08.99

CE Declaration

We:

TerraTec Electronic GmbH, Herrenpfad 38, D-41334 Nettetal, Germany

hereby declare that the product:

ReceiverSystem TerraTValue

to which this declaration refers is in compliance with the following standards or standardizing documents:
1. EN 55022

2. EN 50082-1

The following are the stipulated operating conditions and environmental conditions for said compliance:

Residential, business and commercial environments and small-company environments.

This declaration is based on:

Test report(s) of the EMC testing laboratory

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INTRODUCTION

With the receiver system TerraTValue you have taken the next step towards a new multimedia future. Watch your favorite television station while comfortably reading teletext, and, at the same time, let Intel® Intercast® Technology show you selected Internet sites. These can now be transmitted over your television signal. Of course, the necessary software is included.

The performance of the included 32-bit applications ensures the completely stable, flicker-free display of the TV picture on your PC monitor. The view of the display screen can be freely adjusted up to a size of 768 x 576. If that's not enough, use the full-screen mode for maximum screen area without distracting menus or tool bars. Are you looking for an interesting program? The mosaic function can give you a hand by displaying an overview of up to 100 stations simultaneously for fast navigation through the station jungle.

Forget about tiresome manual station selection. The TV software's scan function automates the installation of stations without manual intervention. The integrated capture function lets you make compressed recordings of running programs from a connected video camera or VCR. The degree of compression is user-definable.

The included teletext software features high-speed display and very convenient handling. Forget about long waits and keying in page numbers. Simply navigate the world of teletext with your mouse. An internal buffer of the teletext software directly loads all available teletext pages for the program currently running, so that these are available to you at the touch of a button.

TerraTValue proves itself to be connection-friendly through a coaxial antenna connection (just like you are used to from your house antenna), a video-in for a video camera or VCR and a SVHS input for high-grade SVHS components. The no fuss connection of a video camera or webcam to TerraTValue makes it ideal for video conferencing via the Internet.

Key features

- Brooktree 878 chipset
- Intel® Intercast® Technology – Receiving Internet sites via TV signals
- High-speed teletext – teletext without delay
- Recording of stills and video sequences
- TV screen scalable up to full screen size
- Multiple-station preview of up to 100 stations simultaneously
- SVHS and video inputs for external video sources
- Win95/98 compatible
- Ideal for Internet video conferencing
- 2 year warranty

System Requirements

- Pentium 90 MHz
- Windows 95 or 98
- 1 free PCI 2.1 master slot
- Active speakers or a sound card
- 1 free interrupt
- CD-ROM drive (to install the drivers and software)
- 1 PCI VGA card with Direct Draw drivers and Video Overlay support

If your PC and equipment do not meet these requirements, the TerraTValue will not operate correctly.

Package Contents

- TerraTValue Card
- External Audio Cable (for connecting to the Line-in input of a sound card)
- TerraTValue CD-ROM with drivers, TerraTValue Software, Intel® Intercast® Viewer, MS Netmeeting, Videotext Software, DirectX 6.0, Acrobat Reader

HARDWARE OVERVIEW
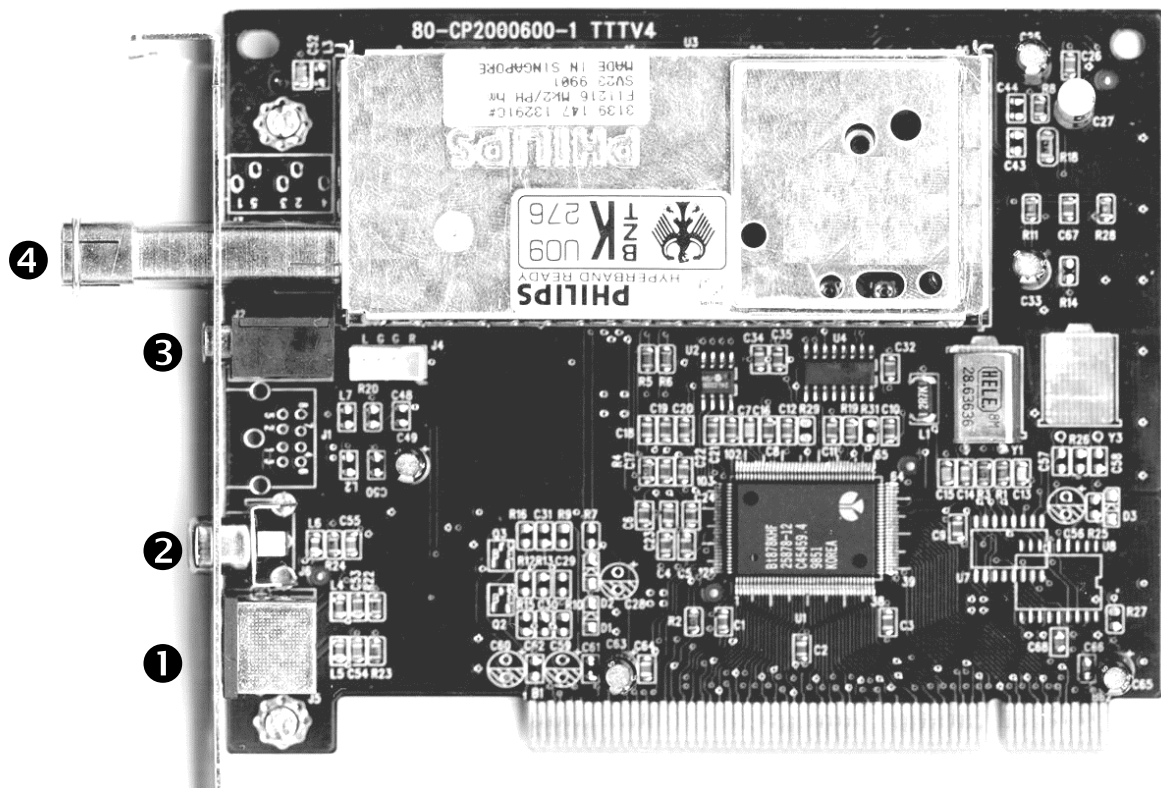
❶ SVHS-In   ❸ Audio-Out

❷ Video-In   ❹ Antenna Terminal

INSTALLING THE HARDWARE

Install the hardware as follows:

1. Switch off your PC and all connected peripheral devices, such as printer, monitor and so on. Leave the AC cord connected for the time being, so that your computer is still grounded.

2. Touch the metal chassis at the rear of the PC to ground yourself and discharge static. Now unplug the cord from the AC mains socket.

3. Now remove the your PC's casing.

4. Look for a free PCI expansion slot. When selecting the PCI slot, note that TV cards should not be plugged into PCI slot 1 in conjunction with an AGP graphics card, because PCI slot 1 is always assigned the same interrupt as the AGP slot. This would give both cards the same interrupt, which can lead to crashes during operation! The numbers assigned to the PCI slots are listed in your mainboard manual.

5. Carefully remove the card from its packaging and pick it up by the edges with one hand while your other hand is touching a metal part of the PC. This will ensure that your body is completely discharged through your computer and the TV card is not damaged.

6. Align the holder at the rear of the TV card in the expansion slot in such a way that the card's connectors are directly aligned with the slot's socket (refer to the following illustration).
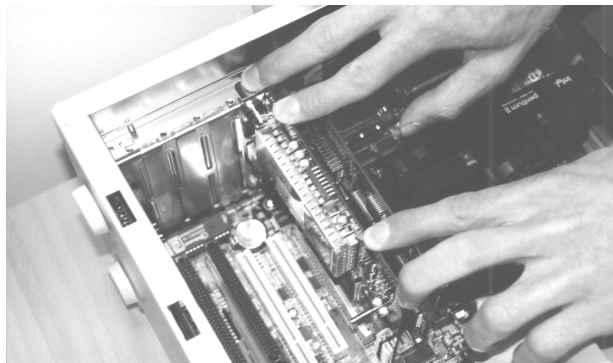
7. Push the TV card firmly into the slot, ensuring good contact.

8. Fasten the TV card with an appropriate screw.

9. If a sound card is installed, connect the TV card to it using the supplied jack-jack cable. Plug one end into the audio output of the TV card and the other end into the Line-In terminal on the sound card (refer to the following illustration).

fig. 1:   Connect the output of the TV card to the input of the sound card as shown in this illustration.

If you connect the TV card to the sound card, be sure to read the section called ***Important Settings for Sound Card Owners*** on page 14!

10. Replace the cover of your PC case.

11. Using the supplied adapter, connect the antenna cable (which you would normally connect to the antenna input terminal on your television) to the antenna terminal on the TV card. Reconnect the mains and all other cables. Make sure that your speakers are set to low volume. Start your computer.

Windows 98 Installation

Step – 1

1. Install the TerraTValue hardware and start Windows 98.

2. During startup, place the provided TerraTValue CD into your CD-ROM drive.

3. After Windows 98 has started, the TerraTValue is detected as a **PCI Multimedia Video Device**. Confirm the message by clicking the **Next** button.

4. Using the mouse, select the **Search for the best driver for the device. (Recommended)** option and confirm your choice by clicking **Next**.

5. Enable the check box next to **CD-ROM drive**. Confirm this setting by clicking **Next**.

6. Windows 98 now informs you that it has found the driver for the TerraTValue. Confirm the message by clicking the **Next** button. Windows 98 then copies and installs all of the required driver files.

7. When the installation is complete, Windows 98 informs you that all drivers for the device have been installed. Confirm the message by clicking the **Next** button.

STEP – 2

1. When the first part of the installation is complete, Windows 98 finds a second device called **TerraTValue – Audio Section**. Confirm the message by clicking the **Next** button.

2. Using the mouse, select the **Search for the best driver for your device. (Recommended)** option and confirm your choice by clicking **Next**.

3. Enable the check box next to **CD-ROM drive**. Confirm this setting by clicking **Next**.

4. Windows 98 now informs you that it has found the driver for the **TerraTValue – Audio Section**. Confirm the message by clicking the **Next** button. Windows 98 then copies and installs all of the required driver files.

5. When the installation is complete, Windows 98 informs you that all drivers for the device have been installed. Confirm the message by clicking the **Next** button. This concludes the installation of the drivers.

UNINSTALLING THE DRIVERS

The easiest way to uninstall the drivers is to use the **Uninstall** utility which you can find in the `\Drivers\Uninstall` directory of your TerraTValue CD or at our Internet site at `www.terratec.net`. Uninstall the drivers as follows:

1. To uninstall the TerraTValue drivers, run the **Uninstall** utility.

2. Click the **Uninstall** button.

3. Once all drivers have been uninstalled, a message is displayed informing you that the uninstallation was successful. Confirm the message by clicking the **Exit** button.

4. This concludes the uninstallation of the TerraTValue drivers.

Windows 95 Installation OSR-1 / OSR-2

1. Install the TerraTValue hardware and start Windows 95.

2. During startup insert the TerraTValue CD provided in your CD-ROM drive.

3. After Windows 95 has started, the TerraTValue is detected as a **PCI Multimedia Video Device**. Confirm the message by clicking the ***Next*** button.

Enter as the installation path, for example E:\Drivers. Confirm by clicking OK. If necessary, enter the installation path again. If your CD-ROM drive is designated by another letter, you will have to adjust the path accordingly (for example, `G:\Drivers, Z:\Drivers`).

Installing the TV Software

TerraTValue includes high-quality, 32-bit TV software, which provides a colorful spectrum of features and makes the operation of the individual TV functions more convenient. Install the TV software as follows:

5. Start the ***TerraTValue Autostarter*** by placing the ***TerraTValue CD*** into your CD-ROM drive or by running the `Autorun.exe` file located in the main directory of the CD.

6. Select the language to be used for the installation.

7. To install the TerraTValue software, click the ***TV software*** button. Follow the instructions of the installation program. After installation you will find the TerraTValue software and the online user manual in the program group ***TerraTValue***.

IMPORTANT SYSTEM SETTINGS FOR OPERATING THE TV CARD

Observe the following items to ensure that the TV card provides optimal performance:

- The color depth for your graphics board should be set to a minimum of 16 bits or 65536 colors so that the TV image can be displayed in true-to-life color. You can change the color depth setting for your graphics board under **Control Panel ⋯⫶ Display**. For questions regarding the configuration of the color depth, refer to the manual provided with your graphics board.

- The TV card blends the TV/Video data directly into the memory of your graphics board through the PCI bus. This requires direct access to the hardware of the graphics board. Because direct access under Windows is only possible through a DirectX driver, your graphics board must be equipped with a DirectX driver that supports Video Overlay. Video Overlay refers to the blending of the TV data into the graphics board memory. If you are not sure whether your graphics board driver supports DirectX, acquire the newest drivers for your graphics board and then install the newest version of DirectX. The DirectX 6.0 drivers are provided in the `\DirectX` directory of the TerraTValue CD!

- If you own a mainboard with VIA or SIS chipset, you should check certain settings in your system BIOS. If you do not know what chipset is installed on your mainboard, refer to your mainboard manual or try to locate large, obvious chips on your mainboard and compare their labels with the following list.

Important:
You might find that the chipset on your mainboard matches one of the chipsets listed in the following but that the corresponding setting is not available in your BIOS. In this case, try to activate the corresponding options by acquiring a BIOS update. Another way of accessing the corresponding settings is by using the TweakBIOS utility, which you can download from the Internet. This tool allows you to enable hidden BIOS settings.

Chipset	Note:
VIA VT82c598 MVP	Set the **CPU to PCI Write Buffer** option to **disabled**. You can find this setting in your BIOS under the **PnP/PCI-Configuration** item.
VIA VT82c598 MVP3	Set the **CPU to PCI Write Buffer** option to **disabled**. You can find this setting in your BIOS under the **PnP/PCI-Configuration** item.
SIS 5582	Set the **Peer Concurrency** option to **disabled**. You can find this setting in your BIOS under the **Chipset Features Setup** item.
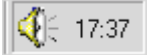
IMPORTANT SETTINGS FOR SOUND CARD OWNERS

If you have connected the Audio output of the TV card to the Line-In input of your sound card using the provided jack-jack cable, you will have to make certain settings in the mixer for the sound card so that you can hear and record the TV/Video tone.

fig. 2: Connect the TV and sound card as illustrated here.

To do so, proceed as follows:

1. Double-click the ***volume control icon*** illustrated here which is found on the ***taskbar***.

2. Be sure that the ***Mute*** option under the ***Line-In*** slider is not checked and that the Line-In slider is not at the bottom of its range.

3. Select the ***Options\Properties*** menu item.

4. Set the ***Adjust volume for*** option to ***Record***. Confirm your choice by clicking ***OK***.

5. Now enable the check box below the ***Line-In*** slider and set the Line-In slider to its middle position. By checking the check box below Line-In, you define the Line-In input of your sound card as a recording input source. This is required if you want to record a video sequence with sound!

Close Volume Control to complete the sound card configuration.

On the Search for Connections – The Connection of External Devices to the TV Card

In this chapter, you will learn everything you need to know about connecting external devices such as VCRs, video cameras and satellite receivers. Generally, you can connect external devices to TerraTValue through the antenna, video or SVHS inputs.

Which connection you can or should use depends on the type of device you want to connect. So, first of all, check to see which outputs your device has. Refer to the following illustration:

| *Antenna Out* | *Video-Out* | *SVHS-Out* | *Scart-out* |

Compare your device to the illustration shown to figure out your connection possibilities. To connect the device follow one of the following segments. They will provide you with detailed information on how to proceed with the connection process!

Connecting an External Device with Antenna Out

You can connect external devices with antenna out to the antenna in of the TV card by using a standard 75 ohm antenna cable (see illustration 3).
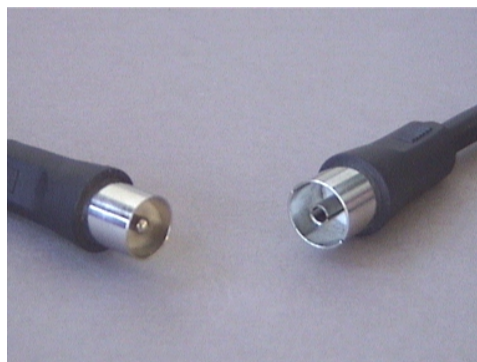
fig. 3:   75 ohm antenna cable

CONNECTING AN EXTERNAL DEVICE WITH VIDEO-OUT

External devices that have a Video-Out port can be connected to the Video-In port of TerraTVValue using a cinch/cinch cable (see the following illustration).

fig. 4: Use this cable to connect a device with a Video-Out port.

Proceed with the cable connection as follows:

1. Plug in the cinch cable with one end in the video out of the external device and the other end in the video in of the TV card.

2. Under the menu point ***Options\Video Source*** in the TV software choose the setting ***Composite*** , so that the video picture of the external device will be shown. You can also set the video source ***Composite*** , by clicking on the ***V***-interface which is shown on the left side of the symbol bar in the TV software.

NOTE!
*When attaching a cinch cable, please read the segment **Attention! - Connecting Audio to the TV Card** at the end of this topic.*

CONNECTING AN EXTERNAL DEVICE WITH SVHS-OUT

External devices that have a SVHS-Out port can be connected to the TV card by using a connector cable with male plugs on both ends. (see the following illustration)

fig. 5:   SVHS/SVHS cable

Proceed with the cable connection as follows:

1. Plug in the SVHS cable with the one end in the SVHS-Out of the device you want to connect and the other end in the SVHS-In of the TV card.

2. In the TV software under the menu point **Options\Video Source** choose the setting **SVideo**, so that the video picture of the external device is shown. You can also set the video source SVideo, by clicking on the **S**-button shown to the left side of the TV software's symbol bar.

NOTE!
When attaching a SVHS cable, please read the segment **Attention! - Connecting Audio to the TV Card** *at the end of this topic.*

CONNECTING AN EXTERNAL DEVICE WITH SCART OUT

If you want to connect a device that has a scart out, you will need a special adapter cable to make the connection to the TV cable.
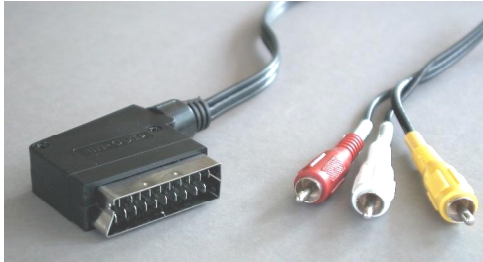
Scart cable

The cable you will need must have a scart port on one side which you plug into the external device. The other side will have three male cinch plugs (see illustration left). The three cinch plugs will carry the left and right audio signals as well as the video signal.

For you be able to connect the left and right audio cables with the Line-In input of your sound card, you will need

the other two cinch connectors and a y-cable (see illustration).

y-cable

cinch connectors

Proceed with the connection to the TV card as follows:

1. Connect the cinch plug for video with the *Video-In* of the TV card.

2. Connect the scart cable's *left audio* and *right audio* to the two *cinch connectors* and the *y-cable*.

3. Plug in the y-cable's jack plug to the *Line-In* input of your sound card.

4. In the TV software under the menu point *Options\Video Source* choose the setting *Composite*, so that the video picture of the external device is shown. You can also set the video source composite by clicking on the *V*-button on the left side of the symbol bar in the TV software.

NOTE!
*When attaching a scart cable, please read the following segment **Attention! - Connecting Audio to the TV Card**.*

Important!

*When purchasing an appropriate cable, you must pay attention its signal direction. There are cables for feeds into the VCR (Video-In), and there are cable types for feeds out of the VCR (Video-Out). Use a cable with the signal direction Video-Out! Preferably, you should buy a model that allows you to switch from in to out. Appropriate cables can be found at specialty stores for around EUR 15.*

ATTENTION! -CONNECTING AUDIO TO THE TV CARD

In attaching external devices through the Video-in or SVHS-In ports, you should note, that only video signals (and not sound) can be transmitted over these two ports. For this reason, you will need a second cable connection, which goes from the audio-out ports of the external device to the Line-In input of your sound card. If you don't set up this connection, it won't be possible to record a video sequence with sound from the external device.

The audio connection can be made most easily using an audio extension cord, which you can find in any electronics store (see the following illustration). In addition, you will need a so-called y-cable, an extension cable which has two cinch plugs on one end and a mini-jack plug on the other.
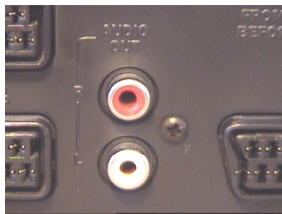
Audio Out   *Audio Extension Cord*   *Y-Cable*

Proceed with the installation of the audio connection as follows:

1. Plug in the two male cinch plugs of the audio extension cord to the audio-out ports of the external device.

2. Connect the two female cinch plugs of the audio extension cord with the y-cable.

3. Plug the mini-jack plug of the y-cable into the Line-In input of your sound card.

Important!
Make sure this audio connection is complete if you want to record a video sequence with sound from your external device. Also, take a look at the topic Important Settings, to be sure that your sound card is correctly installed for the recording of a video sequence with sound.

THE TV SOFTWARE IN DETAIL

The 32-bit TV software of TerraTValue provided here offers you full control over all integrated functions. Install channels automatically through channel scan, shoot stills that are then immediately saved as bmp files or directly record completely compressed video sequences in real time. So that everything is always in the right picture, you can choose between several predefined view modes. Set the 4:3 and 16:9 views in the window mode of the TV software, or set the full-screen mode, so that you can just sit back and relax. The mosaic gives you a quick overview of all the installed channels and is for that reason an ideal navigational help in the station jungle.

THE SURFACE OF THE TV SOFTWARE

In the following illustration you see the surface of the TV software with a description of the individual interfaces and their functions:
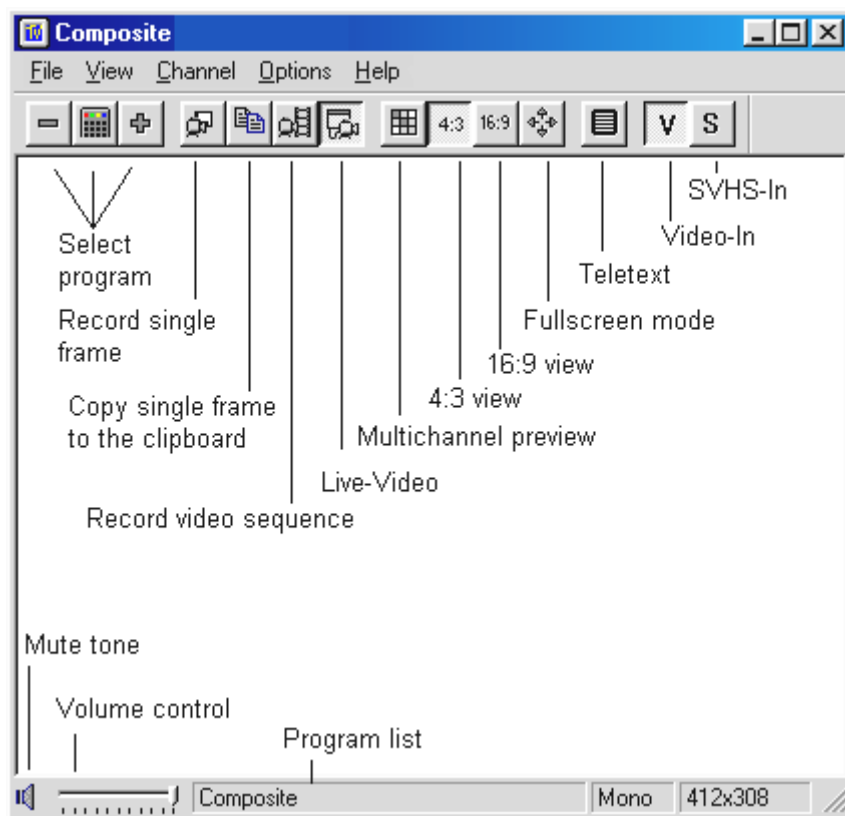
fig. 6: The Surface of the TV Software

Important!
The loudspeaker symbol and the volume control affect the master controller in the mixer of your sound card, and this will possibly be switched to mute!

Shortcut Keys in the TV Software

The most important functions of the TerraTValue software can also be accessed with the touch of a button. Use the following keys or key combinations to carry out the individual functions:

Function	Keys
Previous Channel	Cursor Down
Next Channel	Cursor Up
Turn Volume Up	Page Up
Turn Volume Down	Page Down
Record Single Frame	Ctrl+A
Record Video Sequence	Ctrl+Y
Full-screen Mode	F12
Switch from Full-screen to Normal View	Esc
Hide Menu Bars	Esc

Touch of a Button – The Functions of the Right Mouse Button

If you click on the surface of the TV software with the right mouse button, a context menu appears which allows you to quickly access a few practical functions of the TV software.
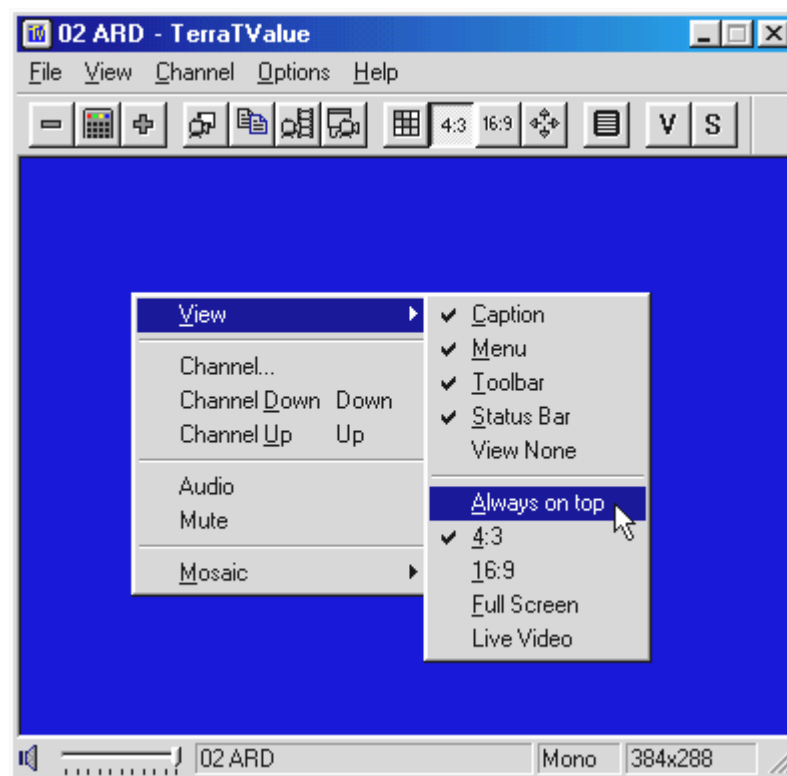
fig. 7:   This menu opens when you click on the surface of the TV software with the right mouse button.

Quick Access – The Channel List in the Status Bar

The channel list, which you can open with a simple mouse click in the status bar of the TV software, represents a very quick navigational possibility for everyday use.
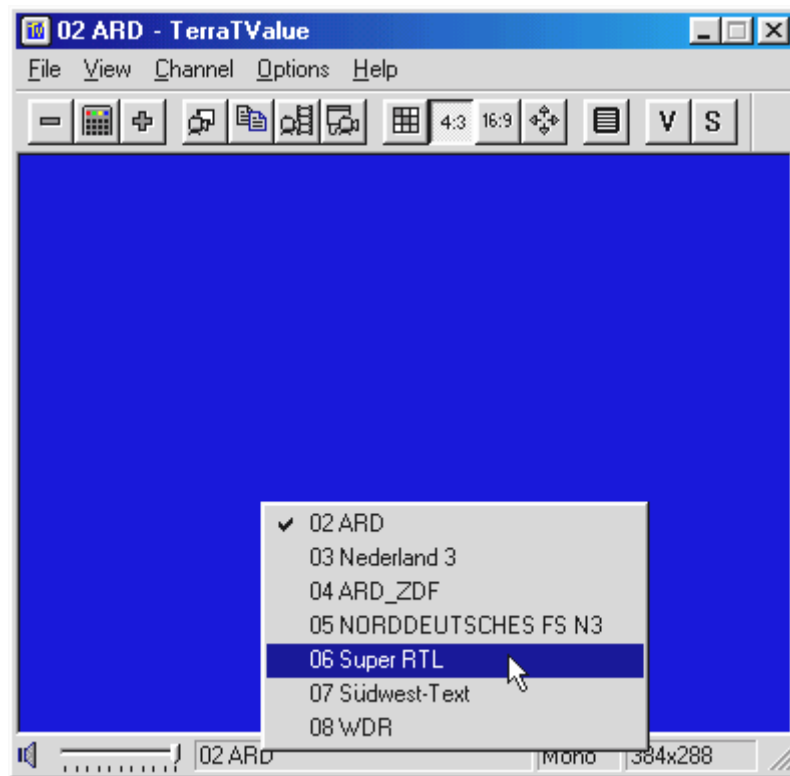
fig. 8: The Channel List in the Status Bar

EDITING CHANNEL SETTINGS

Through the Channel Scan window you have the option of changing your channel settings at any time. You can, for example, assign a channel name or fine tune the channel if it does not have optimal picture quality. To change the channel settings, do the following:

1. Open the Channel Scan window under the menu point **Channel\Channel Scan**.

2. With a mouse click, choose a station from the station list.

3. Click on the **Edit** button.

4. Enter a name for the channel and/or improve poor picture quality with the fine-tune slider.
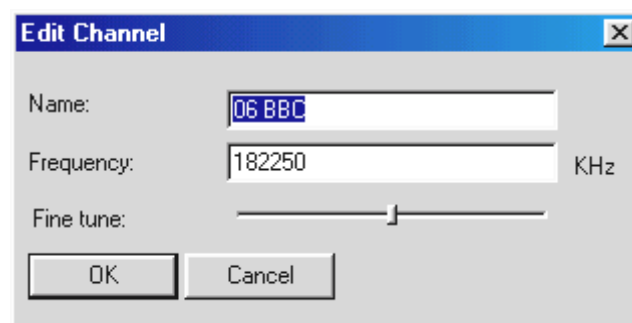
fig. 9:   Enter the channel settings in this window .

5. Confirm your entry by hitting **OK**.

ADDING STATIONS MANUALLY

If, for example, some stations were not found during the Channel Scan, or if you want to set a channel yourself, you can do this too through the Channel Scan window. To add a station manually, proceed as follows:

1. Open the **Channel Scan window** under the menu point **Channel\Channel Scan**.

2. Click **Add**.

3. Enter the station's name and the **channel** or the **frequency** of the station and confirm your entry by hitting **OK**.
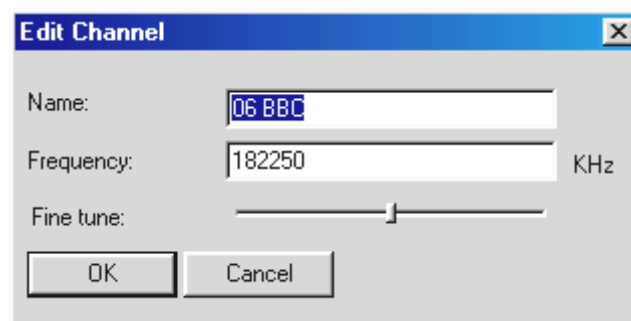
fig. 10: Enter the channel settings in this window.

You can now find the station you just added in the station list along with all the other stations.

THE "FILE" MENU

The Menu Point "New Teletext Window"

Through this menu point you can call up a new teletext window of the teletext software. You can also do this through the symbol bar interface shown here.

The Menu Point "Save As"

After you have shot a frame, you can save it as a bmp file through this menu point. As long as this point cannot be chosen.

The Menu Point "Exit"

This menu point closes the TV software.

THE "VIEW" MENU

The Menu Point "Caption"

Through this option you can hide and show the TV software's captions.

The Menu Point "Status Bar"

Through this option you can hide and show the status bar of the TV software.

The Menu Point "View None"

This very useful function hides all of the TV software's window frames that might possibly disturb you . Use this function in conjunction with the menu point *Always on Top*! Those who prefer to use the keyboard can also reach the function *Video None* by pressing the *Esc key*.

The Menu Point "Always on Top"

If this menu point is activated, then the TV picture will always be in the forefront and cannot be covered by other windows. This is a very practical feature if you want to watch TV and work with another application simultaneously.

The Menu Point "4:3"

With this option you switch the 4:3 side ratio on and off. If you make the TV window larger or smaller while this side ratio is activated, the TV picture will always be shown in a 4:3 format. The 4:3 format corresponds to the normal television format.

The Menu Point "16:9"

With this option you switch the 16:9 side ratio on and off. If you make the TV window larger or smaller while this side ratio is activated, the TV picture will always be shown in a 16:9 format.

The Menu Point "Full screen"

Through this option you can activate the full screen mode, in which the TV picture extends over the entire screen surface of you monitor. This mode is excellent for watching television. To exit full screen, press the Esc key or double click on the TV picture with your mouse. The full screen mode can also be activated with the symbol bar button shown.

The Menu Point "Live Video"

This option is important, if you have captured a single frame. That's when the TV picture freezes and shows you the recorded still. In order to show the TV picture live once again, simply click on the *Live Video* interface shown here.

THE "CHANNEL" MENU

The Menu Point "Channel... "

Through this menu point you can call up the channel list, from which you can pick a particular station to view. The channel list is very practical to use if you drag its window next to the TV software. Then changing the channel is only a mouse click away. In this way, you can zap through all the stations without having to confirm your choice each time.

The Menu Point "Channel Scan"

Through the menu point Channel Scan you can do an automated station search, manually set or fine tune the stations.

The Menu Point "Video Device"

With the help of this menu point you can choose a driver for recording. Normally the entry *TerraTVValue: MSVideo: Brooktree PCI Video Capture* should be selected here, which allows you to receive a television signal. If you own a webcam with its own record driver, however, this record driver will also be displayed. Choosing this driver then allows you to use the TV software as a surface for the webcam. After you have finished, remember to reset the driver. Otherwise, you will not be able to receive a TV signal.

The Menu Point "Channel Up"

With this menu point you can switch to the next channel.

The Menu Point "Channel Down"

This menu point switches you to the previous channel.

The "Options" Menu

The Menu Point "Video Source"

Through the menu point Video Source you can set the video source displayed by the TV software. The video source selection is always important if you want to record something from an external VCR or video camera. Additionally, this menu point allows you to set a few picture parameters such as brightness and contrast as well as set the television standard.
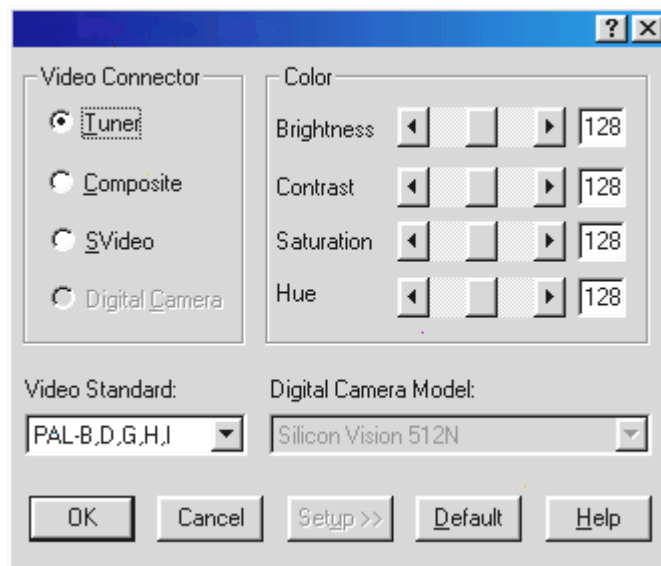
fig. 11: Choose the video source, picture parameters and television standard in this window.

The following settings are available as video sources:

Tuner   This setting displays the signal shown by the TV software, which is fed in through the antenna in of TerraTValue.

Composite   If you have set **Composite**, the TV software displays the signal coming through the Video-in port.

SVideo   With the setting **SVideo**, the TV software displays the signal coming through the SVHS-In port.

Under the option **Color** you can influence the picture parameters of the TV picture. The possibilities for adjustment:

Brightness   Through this controller you can determine the brightness of the TV picture.

Contrast   This controller lets you regulate the TV picture's contrast.

Saturation   This controller steers the color saturation of the TV picture.

Hue   This controller allows you to manipulate the TV picture's hue.

NOTE!

The option Video Standard makes it possible for you to choose different television standards. This only makes sense, for example, if you have an NTSC VCR or camera connected to the TV card. Then you can choose the setting NTSC under the option Video Standard, so that the delivered signals can be processed correctly. Make sure that a change in the setting from PAL B,D,G,H,I only occurs under the conditions mentioned. Otherwise the TV signal reception will be limited.

The Menu Point "Video Format"

Through the menu point Video Format you can determine the size of the picture to be recorded and the number of bytes that are to be used per pixel.
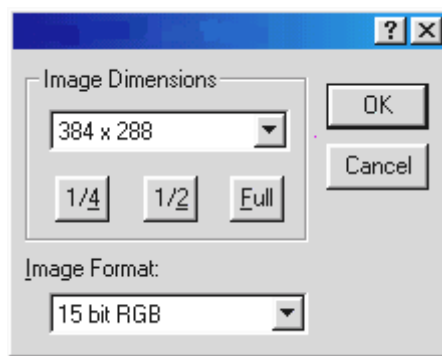
fig. 12: In this window, determine the size and number of bytes used for recording.

The setting Image Dimensions

Through the point *Image Dimensions* you can choose from three resolutions for the capturing of frames and recording of video sequences:

Resolution	Result Single Frame	Result Video Sequence
192 x 144	OK	OK
384 x 288	OK	Depending on your system/hard drive capability, it is possible that dropped frames can occur. For more information, please read the topic *Attention! – Recording Parameters of Video Sequences* in this online manual.
768 x 576	OK	Using this resolution always results in dropped frames. This is because the incoming amounts of data of around 17 MBytes are more than any hard drive currently available can process.

The Setting Image Format

Through this menu point you can determine how many bytes per pixel are used when capturing a frame or recording a video sequence. Be careful, however. The more bytes you set to save a pixel, the greater the data yield and the bigger the resulting file will be!

Image Format	What it Means for the Recording
32-Bit RGB	4 bytes are saved per pixel
24-Bit RGB	3 bytes are saved per pixel
15-Bit RGB	2 bytes are saved per pixel
BTYUV	Low data yield through compression
YUV9	Low data yield through compression
YUV12	Low data yield through compression

NOTE:

Recordings of video sequences made with the BTYUV, YUV9 and YUV12 image formats can only be played back on systems, on which the TV card's drivers are installed. This is because these image formats work in conjunction with special compression formats which are matched to the television hardware. When you prepare a video sequence for use on your system, you can easily fall back on these special compression formats. If you want to give your video clips to other PC users, however, then you should use a RGB format!

The Menu Point "Capture Single Frame"

Through this menu point you can capture a single frame of the displayed TV/video picture. The size of the recorded picture is determined by the parameters set under *Options\Video Format* . After you have captured a frame, you can save it as a bmp file by going under the menu point *File/Save As... .*

To display the TV/video picture live again after you have captured a frame, simply press the *Live Video* key in the symbol bar, which is shown here on the left. You can also use the key combination *Ctrl+A* to capture a frame.

The Menu Point "Copy to Clipboard"

After you have captured a single frame, you can copy it onto the Windows clipboard by going to the menu point **Copy to Clipboard**. From there, the frame can be pasted into any number of other applications. Pasting can be done by using the key combination **Ctrl-V** or the menu point **Edit\Paste**.

The Menu Point "Video Recording Settings"

This menu point allows you to choose from numerous settings which will have an effect on the recording of a video sequence. You can find more information on this menu point in the topic **Attention! – Recording Parameters of Video Sequences**.

The Menu Point "Compression"

This menu point allows you to choose from numerous compression settings which will have an effect on the recording of a video sequence. You can find more information on this menu point in the topic **Attention! – Recording Parameters of Video Sequences**.

The Menu Point "Record Video"

This menu point starts the recording of a video sequence. You can stop recording the video sequence at any time by hitting the **Esc** key or clicking with the mouse on the TV screen. You can find more information on this menu point in the chapter **Attention! – Recording Parameters of Video Sequences** found in this online help..

The Menu Point "Mosaic"

The TV software's mosaic offers you a quick overview of up to 100 television stations. To do this, the mosaic flips through all the stations and captures one frame from every channel. These frames are listed one after the other and can then be activated with a mouse click. Once you have found an interesting station, you can maximize it **by doubleclicking**.

Start   This menu point starts the mosaic.

Best Fit   Scales the momentary recording up or down to the optimal size. This point can only be chosen while the mosaic is being displayed.

Clear   Delete allows you to exit the mosaic. This point can only be chosen while the mosaic is being displayed.

Setup   Through Setup you can determine the number and also the size of the momentary recordings. In addition, you can enter whether or not the external inputs Video-In and SVHS-In should also be displayed in the mosaic.
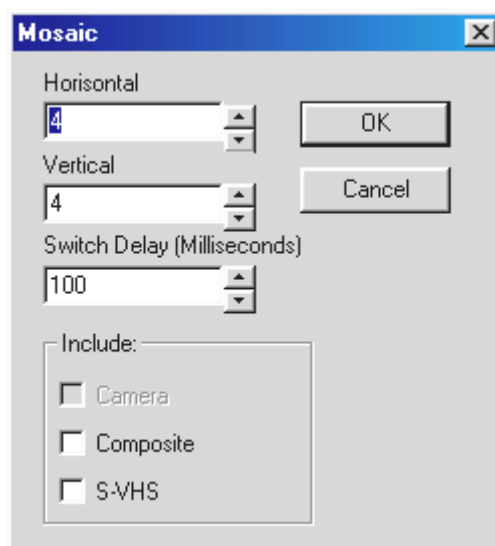
fig. 13:   Mosaic Setup.

UNINSTALLING THE TV SOFTWARE

It is very easy to uninstall the TV software. You might have to uninstall the software, for example, if you receive a new version or if you have difficulty operating the TV card:

1. Call up the **control panel** and doubleclick on the **software** symbol.

2. Choose **TerraTVValue Software** from the displayed list.

3. You will be asked to confirm that the software should be uninstalled. Respond with yes.

4. After the uninstall you can install the new TV software or reinstall the existing software.

Attention! – Recording Parameters of Video Sequences

There are four important factors you should take into consideration when recording a video sequence. These factors could have a decisive effect on the amount of data recorded and the quality of your recording. The deciding factors are:

a.) The video format of the television picture you want to record

b.) The number of frames per second to be recorded

c.) The set compression factor during the recording

d.) The chosen quality of the sound recording.

By knowing the individual factors and their combinations, you will be able to produce optimal results while keeping your data yield low. Therefore, you should carefully read the following segment.

The Big Picture – Important Information about the Video Format

Before you start recording anything, you should determine first of all the video format of the video material you plan to record as well as the number of bytes that should be saved per pixel. Both parameters can be set under the menu point **Options\Video Format**. The chosen video format and the number of bytes used have a decisive effect on the data amounts. The bigger the set video format is, the more data is accrued! The more bytes per pixel, the more data!

Current systems, depending on their power, have the capability of recording video sequences with a maximum video format of up to 352 x 288 pixels without dropping frames. Dropped frames occur when the data accrued while recording a video sequence can no longer be processed by the hard drive. In this case, the record function jumps over a few frames and thereby reduces the amount of data, so that your hard drive can process the information. If the record function has skipped some frames, the dropped-frame statistics will be displayed for you after you are done recording.

If the displayed statistics show too many dropped frames, you will not have a very fluid result. The recorded file will end up being very jumpy and is then, for all practical purposes, not useful. If you have dropped frames when using a 384x288 video format, you should try reducing the video format to 192x144 or read the following segment on the number of frames per second to be recorded and determining compression!

Under the menu point ***Options\Video Format*** you will find another very important parameter for recording video sequences. The setting Image Format lets you determine how many bytes to use to save one pixel of the TV picture. As before, the more bytes per pixel you have, the greater the data yield when recording. For that reason, take a close look at the following table:

Image Format	What it means for the Recording
32-Bit RGB	4 bytes per pixel in the TV picture are saved
24-Bit RGB	3 bytes per pixel in the TV picture are saved
15-Bit RGB	2 bytes per pixel in the TV picture are saved
BTYUV	Low data yield through compression
YUV9	Low data yield through compression
YUV12	Low data yield through compression

NOTE:

Recordings of video sequences made with the BTYUV, YUV9 and YUV12 image formats, can only be played back on systems, on which the TV card's drivers are installed. This is because these image formats work in conjunction with special compression formats matched to the television hardware. When you prepare a video sequence for use on your system, you can easily fall back on these special compression formats. If you want to give your video clips to other PC users, then you should use a RGB format!

Setting the Video Format for Video Sequence Recording

1. Choose the menu point **Options\Video Format** an.

2. **Image Dimensions** allows you to choose the video format you want to use for video sequence recording. For best results, choose the video format ***192 x 144*** or ***384 x 288*** .

3. **Image Format** also allows you to choose how many bytes to be saved per pixel from the TV picture (see the above table).
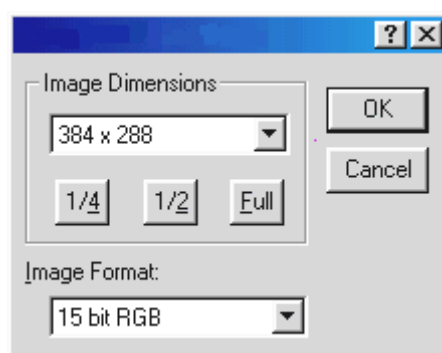
4. Confirm your choice with the ***OK*** button.

fig. 14: In this window you can determine the video format and the number of bytes per pixel.

Less is often More – The Number of Frames per Second to be Recorded

A video sequence consists of a fast succession of single frames. For our eyes to perceive a fluid movement, 15 frames must be shown per second. This holds true as well when recording video sequences. At least 15 frames per second must be recorded to achieve a fluid end result. If you choose more frames per second to be recorded, the data yield increases while recording. This might mean you will have to set a smaller video format with higher frame rates. Otherwise, you will overstep the amount of data your hard drive can handle.

Setting the Frames per Second to be Recorded

You can set the frames to be recorded per second under **Options\Video Recording Settings**. Generally, we recommend you leave the preset frame rate of 15 frames per second, as a higher frame rate will not necessarily lead to a more fluid end result! Additionally, we recommend you lower the frame rate to 15 frames/second, if you start experiencing dropped frames at higher frame rates.
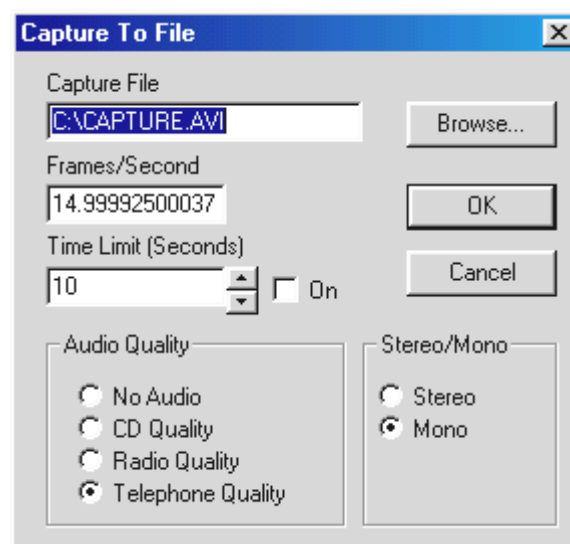

fig. 15: In this window you can enter some parameters for video sequence recording.

More or Less - Determine the Compression

In the previous two segments you learned that the amount of data received while recording a video sequence is determined by the size of the video format and the number of frames. The bigger the video format and the greater the number of frames per second, the more data accrued. But how can you reduce the amount of data when recording a video sequence?

The answer lies in the different compression processes available to you. Some of them are Windows Standard compression processes. Others are installed with the TV card's drivers and are optimally prepared for working together with TerraTValue.

Setting the Compression Process

1. To set the compression process click on the menu point **Options\Compression**.

2. Now you can choose a compression process from the list displayed. Depending on the version of Windows you are using or the capabilities of the installed video support, you will find a number of compression processes in this list. Experiment with the different processes offered and their settings to find the optimal balance between amount of data and picture quality that is right for you.

3. Confirm your choice with the **OK** button.

Important!

You can achieve excellent compression with the compression processes Brooktree ProSumer Video (32) and Brooktree YUV 411 Raw. Files that are recorded with these processes can only be played back on a system where they are installed or one that supports these two compression processes. If you want to play back the produced video sequence on several different systems, then you should choose another compression process. Cinepak Codec and Intel Indeo are examples of compression processes that are supported on all systems.

THE RIGHT SOUND – THE AUDIO PARAMETERS FOR VIDEO SEQUENCE RECORDING

When recording video sequences with sound, different sound qualities can be set. You can choose the sound qualities:

- CD Quality
- Radio Quality
- Telephone Quality
- No Audio

for the recording. Be aware that the data yield increases depending on the sound quality you choose! The selection of sound quality also lets you influence the incoming amounts of data. This allows you to aim for optimal results according to how you plan to use the recording. For example, if you want to record a video sequence with sound for use on the Internet, then the quality of the sound recording is secondary. More important is having a file as small and compact as possible, and you can only achieve that with the sound quality **Telephone** or **No Audio**.

Another factor in recording sound is the possibility of choosing between stereo and mono. Please keep in mind, that when you choose **Stereo** there is always **twice as much data** coming in than with the mono setting!

The following tells you how to change the set sound quality:

1. Choose the menu point **Options\Video Recording Settings**.

2. Determine the quality of the sound to be used when recording a video sequence. Do this by choosing the option **Audio Quality**. Keep in mind that the amount of data increases with better quality.

3. Confirm your choice with the **OK** button.
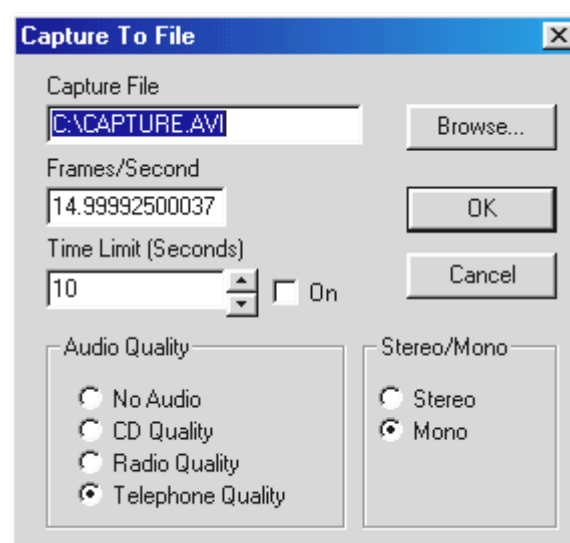
fig. 16: Choose the sound quality in this window.

In Detail - More Video Recording Settings

You can select two other settings for video sequence recording. One is the selection of a file name for saving the video sequence and the other a time frame after which the record function should automatically turn off. To set these, proceed as follows:

1. Choose the menu point *Options\Video Recording Settings*.

2. Go to the option *Record Video*. Enter the name of the file to be created and where it is to go.

3. Under the option *Time Limit (Seconds)* define a time interval after which the record function should turn itself off. It's important that the control box *On* is activated, because otherwise the time limit will not be activated.

4. Confirm your settings with the *OK* button.

Attention Trap – Recording a Video Sequence

Now that you have learned in the previous segments all about the settings available for recording a video sequence, you can practice your newly applied knowledge:

1. First of all, go under the menu point *Options\Video Source* and set the signal source from which you want to record the video sequence. There, you can choose *Tuner*, if you want to record a video sequence from a running television program or, depending on the type of connection, *Composite* or *SVideo*, respectively, if you want to record from an external device. If you are not sure as to what type of connection your VCR/camera requires, refer to the topic *Connecting External Devices* in this online manual for further information.

2. If necessary, set all parameters such as the number and size of the frames to be recorded, the number of bytes per pixel, the compression process to be used and the sound quality of the recording. If you are not sure about which settings to use, please read the topic *Attention– Recording Parameters for Video Sequence Recording*. At first, you can simply keep the preset settings and play with different possibilities later.

3. Begin recording the video sequence with the key combination *Ctrl-Y* or by pressing the record video sequence interface which is shown here to the left.

4. While the recording is in process, you will be able to see the lapsed time in the TV software's status bar. Pressing the *Esc* key or clicking with the mouse on the television screen will stop the recording.

5. As long as you have not changed any of the standard settings, you will be able to find the newly produced recording in the main directory of your C drive - the hard drive. You can play back this recording by simply double clicking on the file.

Troubleshooting - Video Sequence Recording

1. The recorded video sequence seems jumpy.

In this case, there are several possible solutions:

- Lower the video format to be recorded through the menu point**Options\Video Format**

- Lower the set number of frames per second through the menu point **Options\Video Recording Settings**

- By going through the menu point **Options\Compression** set the compression process to **Brooktree ProSumer Video (32)**

Be sure to read the topic **Attention Trap – Recording Parameters of Video Sequences** in this online manual.

2. A very high dropped-frame rate is displayed.

- The possible solutions to this problem are the same as with the first point.

3. No sound is being recorded with the video sequence.

For any sound to be recorded, the output of the TV card has to be connected with the input of the sound card. If the TV card's output is connected to the sound card's input with the connector cable provided, you should try double clicking on the **volume control icon** in the **taskbar**. There, choose the menu point **Options\Properties**. Set the **Adjust volume for** option to **Record** and confirm your choice by clicking on **OK**. Now activate the control box under the Line-In slider and set the slider to the middle position. Now you should be able to record with sound.

Say Cheese - Recording a Single Frame

1. First, go to the menu point **Options\Video Source** and set the signal source from which you want to record the frame. There, choose **Tuner,** if you want to record a video sequence from a running television program or choose **Composite** or. **SVideo** respectively, depending on connection type. For example, do you want to record from an external VCR or camera? If you have questions regarding your VCR or camera connection, please see the topic **Connecting External Devices** in this online manual.

2. Determine the size of the frame by going to the menu point **Options\Video Format** .

3. Use the key combination **Ctrl-A** to shoot the frame or use the appropriate interface from the symbol bar shown here on the left.

4. When you have finished shooting your single frame, you can save it directly as a bmp file by going to the menu point **File/Save As** .

5. Press the Live-Picture key from the symbol bar to display the television picture live once again.

ALWAYS INFORMED – THE TELETEXT SOFTWARE

The teletext software offers you actual functions for the world of teletext. Save interesting teletext pages such as stock tips and recipes directly or print them out. Through the integrated teletext caching, all pages are loaded in the background and can be accessed at the touch of a button.

THE SURFACE OF THE TELETEXT SOFTWARE

Here you see the surface of the teletext software, including a description of the individual interfaces.
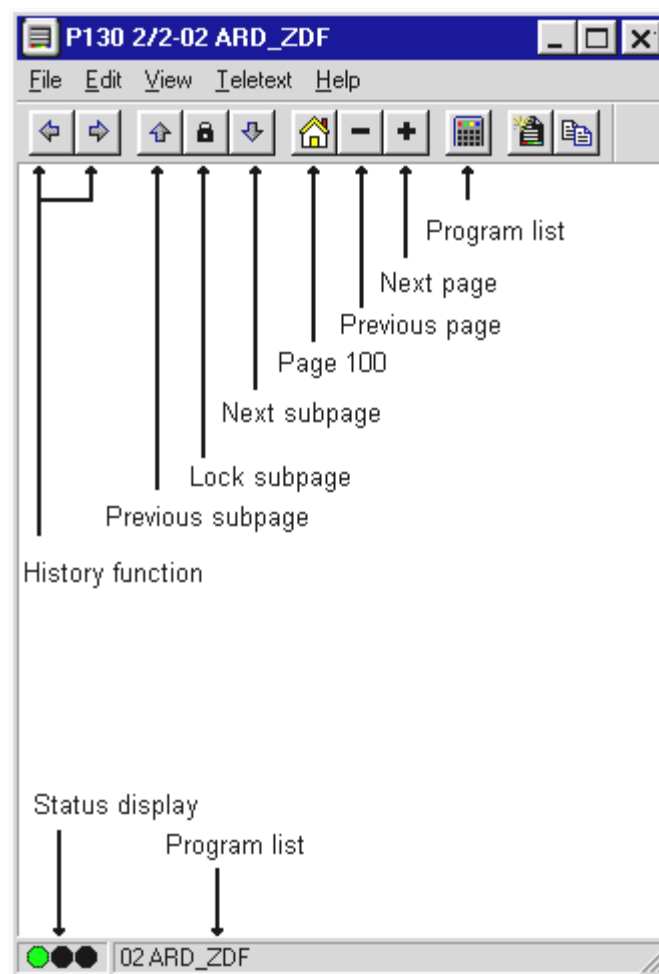
THE SYMBOL BAR OF THE TELETEXT SOFTWARE

History function

Through these two interfaces you can page through the most recently read teletext pages, whether forward and back. This history function is also accessible through the menu point Teletext/History Forward and History Back respectively. These buttons are grayed out until you have used the Plus or Minus buttons further to the right to scroll through the pages.

Controlling Subpages

Some teletext pages consist of several subpages. Normally, these are scrolled through at a fixed interval. Because of this, it can happen that you are not able to read the entire contents of the subpages. In that case, simply use:

The button **Lock Subpage**, which stops the current subpage

This button to scroll to the previous subpage

This button to scroll to the next subpage.

Rummaging Around – The Navigation Tools

This button allows you to scroll downwards through the teletext pages.

With this button you can scroll upwards through the teletext pages.

This button brings you back to page 100.

Channels Tool

This button allows you to set another channel. Alternatively, you can set the channel by clicking with your mouse in the status bar of the teletext software.

fig. 17: Click on the status bar with the left mouse button to open this list.

The "File" Menu

The menu point "New window"

This menu point opens a new teletext window for you. This function is practical, for example, if you want to compare the teletext contents of different channels with one another.

The menu point "Open"

Use this menu point to open up saved teletext pages.

The menu point "Save"

This menu point allows you to save interesting teletext pages directly to the hard drive. To do this, the teletext software uses its own or an ASCII-compatible format.

The menu point "Save As"

Lets you save teletext pages directly as txt files or in the teletext-software format.

The menu point "Print"

Prints out the teletext page currently displayed to your printer.

The menu point "Print Preview"

This menu point allows you to check the set parameters found under Print without actually printing anything.

The menu point "Print Setup"

Lets you configure your printer's settings.

The menu point "Recent file"

Opens the most recently opened teletext file. In this way, you have quick and easy access to the teletext contents you viewed last.

The menu point "Close"

Closes a file that was first saved using the menu point Save.

The menu point "Exit"

Exits the teletext software.

The "Teletext" Menu

The menu point "Channels"

Pulls up a list for setting a new station.

The menu point "Teletext Caching"

Lets you set up the buffer for the teletext pages. Teletext caching saves all the teletext pages to the background allowing you to then access them at the touch of a button.

The menu point "Reveal"

The menu point **Teletext/Reveal** means that additional normally-hidden data (in fig. 18: that would be the VPS times) are displayed or not. In fig. 19:, *Reveal* is disabled.

fig. 18: When Reveal is disabled the VPS times are displayed.

fig. 19: When the Reveal function is activated, no additional data is displayed.

The menu point "Lock Subpages"

This menu point is especially practical when a teletext page consists of several subpages. Normally the individual pages scroll through automatically according to a set interval. To lock the current subpage, simply activate the menu point Lock Subpage.

The menu point "History Back"

This menu point allows you to flip back through the teletext subpages.

The menu point "History Forward"

This menu point allows you to flip forward through the teletext subpages.

The menu point "Index Page"

This menu point brings you back to the Index Page 100.

The menu point "Next Page"

This menu point lets you flip forward through the teletext pages.

The menu point "Previous Page"

This menu point lets you flip back through the teletext pages.

The menu point "Error List"

The menu point Error List lists any errors that may have occurred while you were working with the teletext pages.

Status / Error List - Teletext Decoding

The three status lights have the following meanings.
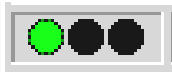
Green: The teletext is being decoded or is decoded

Yellow: The teletext cannot be decoded

Red: No teletext signal is being received

Clicking inside this field opens an error log in which you can view past occurring errors.

The TerraTec Hotline

If you still have problems or questions, please review all of the instructions in this documentation first.

If you are certain that you can't solve your problem without assistance, please call our hotline.

Our friendly support team is available from Monday through Friday from 1 p.m. to 8 p.m. Central European Time under the number +49 (0) 2157 817914.

Please have the following information handy to ensure that your call is processed quickly:

- Your registration number
- The quickreference
- A printout of your configuration files
- The manual of your motherboard
- A screenshot of your BIOS configuration

If possible, call from within reach of your running computer. Please also note the name of the support team member who answers your call, as you will need it if you have to return a defective card.

If you live in one of the countries below, please call the corresponding Hotline number:

U.K. or Ireland	Benelux	U.S.A.
+44 (0)1600-772333	+31 (0)43 3654758	+1 (949) 487-3774
Monday through Friday	Monday through Friday	Monday through Friday
9 a.m. - 5 p.m. (local time)	3 p.m. - 6 p.m. (local time)	10 a.m. - 5 p.m. (pacific time)

For all the other countries, please call +49 2157 817914.

Our friendly support team is available from Monday through Friday from 1 p.m. to 8 p.m. (CET).

Another source of help is our Internet support page:

`http://www.terratec.net/support.htm`

It is also useful to keep all of the information relevant to your computer handy when using this resource. Providing detailed information about your problem increases the chances of getting quick assistance.

FAQ

Question 1:

Your computer crashes when you use the TV software and can only be revived with a restart.

Answer 1:

- First, check in the device manager under 'computer' to see if TerraTValue is on the same interrupt as another slot card. This can lead to your computer crashing, especially if TerraTValue is on the same interrupt as a graphics card. In this case, reassign the interrupts and cards so that no more overlap exists.

- If you are using an AGP graphics card, do not operate TerraTValue in the PCI slot 1, as this one is always assigned the same interrupt as the AGP slot. This leads to interrupt overlap and possible computer crashes. In this case, it is better to install the TerraTValue in another PCI slot. You will find the PCI-slot numbering in your motherboard's manual.

Question 2:

When starting the TV software, you receive the error message "372 Initialization of the device server - Driver not found?"

Answer 2:

- This error message indicates that the TerraTValue drivers are either not installed or not installed properly. In this case, uninstall the program. Do this by going to our home page or to your installation CD in the directory \Drivers\Uninstall. Restart your system. After restarting your computer you should be able to reinstall your drivers.

Question 3:

When starting your computer the error message "No suitable DirectX Provider - Overlay channel disabled?" appears.

Answer 3:

- This error message appears when your graphic card's installed drivers do not conform to DirectX. In this case, you should purchase and install the current driver for your graphics card. If this does not work, try installing the newest version of DirectX. Afterwards, you shouldn't have any problem running the software. More information on this problem can be found under Point 5 of this FAQ.

- If you keep getting this error message, ask your graphics card manufacturer if your graphics card's drivers support DirectX 5.0 or higher and the Video Overlay function.

Question 4:

Why do I need a DirectX graphics card driver with Video Overlay support?

Answer 4:

- As with all the current TV cards with Brooktree 848 or 878 chips, the TV data provided through TerraTValue is integrated through the PCI bus into the graphics card memory without going through the CPU. This integration is called Video Overlay. Without this function the CPU would be responsible for writing all the data into the graphics card memory. This would make simultaneously watching television and working in other applications impossible, as the system would be completely overwhelmed. Because Video Overlay works directly with the graphics card, it is necessary to have a DirectX graphics card driver to integrate the television data. For this reason, a DirectX graphics card driver with Video Overlay support is necessary for the smooth operation of TV cards.

Question 5:

What is the maximum resolution at which TerraTVValue can digitalize video sequences?

Answer 5:

- As with most common TV cards with Brooktree 848 or 878 chips, the TerraTVValue can digitalize video sequences with a maximum resolution of 768x576 pixels. The amount of data that comes with this video format, however, blows any possibility of having momentary access to your hard drive. For this reason, dropped frames are common with this resolution. With the dropped frames, your TV card's driver is trying to control the data yield just enough so that your hard drive is able to process it. It does this by leaving out just enough frames to make the data mass manageable. This, of course, has a dramatic effect on the final results. The more dropped frames there are, the more the final recorded video sequence will appear to jerk. In this case, only setting a smaller video format **(Options\Video Format)** will help. Current systems can record video sequences fluidly with a maximum video format of 384x288 pixels!

Question 6:

The mouse pointer freezes when working with the TV software.

Answer 6:

- So far, this has only happened when TerraTVValue is configured with another slot card on the same interrupt. If this is the case, then you should simply be able to configure TerraTVValue or the other card to another interrupt. In part, this must happen over the BIOS, as you will need to assign concrete values to the PCI slots. Do this through the point PCI Configuration. First, ascertain which cards are in which PCI slots. You can figure this out by looking directly at your mainboard. There, the individual PCI slots are labeled one after the other. If you know which slot card is in which PCI slot, you can set these to a certain interrupt value by assigning a value to the PCI slots in the BIOS. You can find more information on this in your mainboard's manual.

Question 7:

When starting the TV software, you receive the message "The file TV.EXE is linked to: Export - OLEAUT32.DLL:420"

Answer 7:

- In this case, you are probably working with an older version of Windows 95, which works with older DLL files. These are responsible for the exchange of data between applications. The TerraTVValue software needs these files for a dynamic exchange of data to take place. To remedy this problem, simply install Internet Explorer from the TerraTVValue driver/software CD. The necessary files will then be updated during installation, and afterwards, calling up the TV software should not be cause for any problems.

Question 8:

How much data accrues when recording video sequences?

Answer 8:

- This question cannot be answered in general terms. The following facts must be considered:
  The larger the video format to be recorded, the more data that is involved. The higher the number of frames per second, the more data. As the screen resolution and the number of frames per second can be set relatively freely, the accruing data yield is determined by these factors. With the TV software's standard settings, one minute uses up about 50 MB of the hard drive.

Question 9:

Won't the radio software still run after updating to a new driver version?

Answer 9:

- In this case, please download the new radio software version 2.52 from our home page. This version supports the current TV-card drivers.

Question 10:

How do I connect my TV card with Linux?

Answer 10:

- You can find information on this on the Internet at
  `http://www.thp.uni-koeln.de/~rjkm/linux/terra/terra.html`.

Question 11:

When recording video I get picture but no sound.

Answer 11:

- For a video sequence to be recorded at all, the output of the TV card has to first be connected to the Line-In input of your sound card. To do this, use the jack-jack cable supplied with your TerraTVValue package. Once this is secured, you just need to tell your sound card that it should record sound from the Line-In input. Do this by double clicking on the volume control icon on the taskbar and then choose the menu point **Options\Properties**. Set the **Adjust volume for** option to **Record** and confirm your settings by clicking **OK**. Activate the control box under the Line-In slider and set that slider to the middle position. You are now completed the sound card configuration and can now exit the mixer. Now you should have no problems recording a video sequence with sound.

Question 12:

Can I connect a SAT-LMB (SAT decoder) directly to TerraTVValue?

Answer 12:

- No, the TV card needs a separate SAT receiver.

Question 13:

Does TerraTValue have a video-out?

Answer 13:

- No, generally TV cards do not have video-out. If you want to produce video material from your system, you will have to use a graphics card with video-out.

Question 14:

No stations were found during the channel scan.

Answer 14:

- In this case, you are probably using TerraTValue with a satellite receiver. With satellite receivers, it sometimes happens that they do not broadcast on one channel but rather between two different channels. This can have a negative influence especially with receivers with adjustable channel.
Download the current TV software from our home page and try the channel scan again. If this version does not find any stations, then set All Frequencies as you region and try the channel scan again. With All Frequencies the channel scan searches all possible frequencies and should in any case come up with something.