ReceiverSystem

CINERGY 1200 DVB-T

TV Tuner & Video Recorder

Manual (English)

Version: 1.3 Version: 05.07.04

CE Declaration

We:

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

hereby declare that the product:

receiver system TerraTec Cinergy 1200 DVB-T,

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

1. EN 55022 Class B

2. EN 55024

The following are the stipulated operating 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

Contents

Welcome!

We're pleased that you have chosen a TerraTec receiver system and would like to congratulate you on this decision. With the TerraTec Cinergy 1200 DVB-T you've purchased a sophisticated product representing the state of the art of PC/TV technology. We're convinced that our product will prove extremely useful to you and provide you with a great deal of entertainment.

The manual provided tells you in complete detail all about the ReceiverSystem TerraTec Cinergy 1200 DVB-T and how to use it correctly.

Superior picture clarity. TerraTec's Cinergy 1200 DVB-T offers your eyes a needle-sharp TV picture that is always comfortably calm. Digital technology provides you with TV reception at a quality level you would expect from a DVD.

Comprehensive software equipment. From current video drivers for Microsoft's WDM technology and a powerful TV software with numerous settings and recording functions, to useful bundled software programs, the Cinergy software package is both highly functional and comprehensively designed. We hope you enjoy your ReceiverSystem TerraTec Cinergy 1200 DVB-T and would like to suggest that you browse this hopefully entertaining manual when you get the chance. In addition to the important information about its technology, we have outlined a number of typical applications wherever appropriate. We're convinced that even experienced users will profit from this guide.

Thanks for your attention—enjoy!

...your TerraTec Team

Key features

- Digital TV and radio reception via antenna (DVB-T)
- Philips SAA 7146 chipset
- Philips DVB-T tuner
- MPEG-2 and PVA recording
- Dolby Digital (AC3) support
- Time shifting of live programs
- EPG—electronic program guide for the scheduling of TV and radio recording sessions
- High-speed teletext

System requirements

- 1.0 GHz Intel Pentium or AMD Athlon CPU
- 1 free PCI 2.1 slot (with busmaster support)
- 128 MB RAM
- 100 MB free hard drive space for a complete software installation
- Sound card with DirectX support
- AGP graphics card with DirectX and video overlay support
- CD or DVD drive (to install drivers/software)
- DirectX 9.0 or higher
- Windows 2000 or Windows XP
- Digital antenna reception (DVB-T)

System recommendations

- 1.5 GHz Intel Pentium or AMD Athlon CPU
- 1 free PCI 2.1 slot (with busmaster support)
- 256 MB RAM
- 100 MB free hard drive space for a complete software installation
- Sound card with DirectX support
- AGP graphics card with DirectX and video overlay support
- CD or DVD drive (to install drivers/software)
- DirectX 9.0 or higher
- Windows XP
- Antenna reception (DVB-T)

Scope of delivery

- TerraTec Cinergy 1200 DVB-T PCI TV card
- TerraTec Cinergy 1200 DVB-T CD-ROM with drivers and bundled software
- Online manual on CD-ROM
- Service request form
- Registration documents

Hardware at a glance

The following is an overview of the PCI card and its terminals.
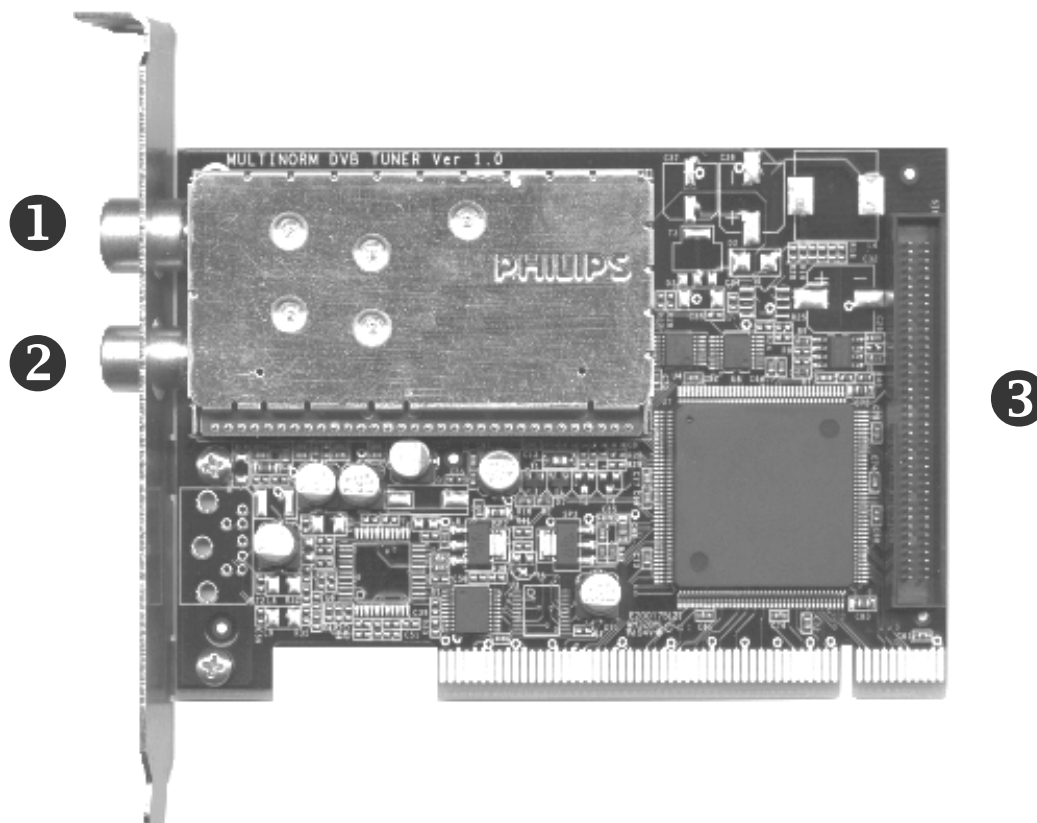
1. Input—connect the antenna cable here.

2. Output—the signal from the antenna cable is sent here.

3. Feature connector—connection for possible future enhancements.

Installing the hardware and drivers

The subsequent sections provide step-by-step instructions on installing and configuring the card, accessories and software.

Installing the TV card

1. Switch off your PC and all connected peripheral devices such as your printer and monitor. Leave the AC power cable 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 and to discharge static. Now unplug the cord from the AC socket.

3. Remove the cover from the case of your PC.

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 very frequently is assigned the same interrupt as the AGP slot. This would give both cards the same interrupt, which can lead to crashes or performance impairment during operation! The numbers assigned to the PCI slots are listed in your motherboard manual.

5. Carefully remove the card from its packaging and pick it up by the edges with one hand while your other hand ideally is touching a metal part of the PC. This will ensure that your body is completely discharged via your computer without damaging the TV card.

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 in line with the slot's socket.

7. Push the TV card firmly into the slot, ensuring good contact.

8. Fasten the TV card with an appropriate screw.

9. Reinstall the cover of your PC case.

10. Reconnect the antenna cable, the AC power cable as well as all other cables. Make sure that your speakers are set to low volume.

11. Switch your computer on again to begin installing the software.

Driver installation under Windows 2000

If you have not already done so, place the TerraTec Cinergy 1200 DVB-T installation CD into your CD-ROM drive.

1. The next time you start your computer, Windows 2000 will recognize a new multimedia controller and will launch the hardware installation wizard. Click "Next".

2. In the appearing dialog window, select the "Search for a suitable driver for my device (Recommended)" item. Click "Next".

3. Select the option "CD-ROM drives" and deselect all other sources. Click "Next".

4. Windows 2000 will automatically find the correct driver on the TerraTec Cinergy 1200 DVB-T installation CD. Confirm by clicking "Next".

5. In the following dialog box, Windows will inform you that the digital signature was not found for the TerraTec Cinergy 1200 DVB driver. Click "Continue".

6. Conclude the installation by clicking "Finish".

This completes the installation of the drivers and you can now start installing the application programs.

Driver installation under Windows XP

If you have not already done so, place the TerraTec Cinergy 1200 DVB-T installation CD into your CD-ROM drive.

1. The next time you start your computer, Windows XP will recognize a new "multimedia controller" and will launch the hardware installation wizard. Next, select "Install the software automatically [Recommended]" and click "Next".

2. Windows XP will automatically find the correct driver on the TerraTec Cinergy 1200 DVB-T installation CD.

3. In the following dialog box, Windows XP will inform you that the TerraTec Cinergy 1200 DVB driver did not pass the "Windows Logo test". Click "Continue".

4. Conclude the installation by clicking "Finish".

This completes the installation of the drivers and you can now start installing the application programs.

The TV software

Installation and removal

Once the installation of the drivers is complete, continue with the installation of the TV software.

A menu that will assist you with the installation of the bundled applications will appear automatically when you insert the included driver and software CD.

Start by installing the Cinergy Digital TV application.

In addition to the TV application (Cinergy Digital), DVD playback software must be installed, as parts of this technology are also required to display digital TV.

First steps

The most important work has now been accomplished—the fun begins in a few moments. Launch the TV software via the desktop icon or start menu entry.

Now click on the "Configuration" button and select the tab "Codec". Make sure that "Cyberlink Video/SP Decoder" is selected.

Predefined channel lists can be found in the application. However, since new stations are going on the air and existing stations are being discontinued all the time, we recommend starting with a channel search. Please see the "Channel search" chapter for instructions. For the time being, however, one of the existing channel lists—generally the "DVB-T-CCIR" list—will be sufficient.

All of the configuration work should now be complete and nothing else should be standing between you and your TV/radio enjoyment. Take some time to get to know the software and become acquainted with the advantages of digital TV on your PC.

The main window
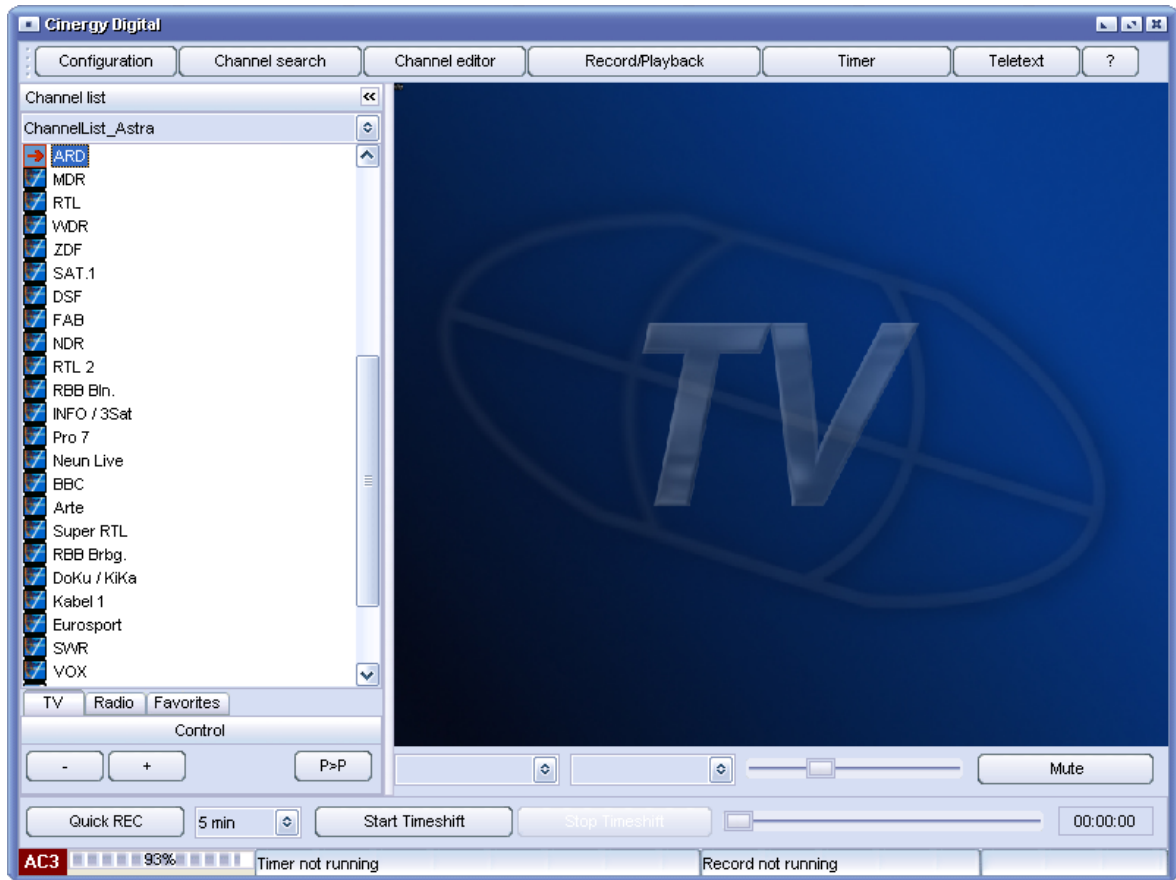
The main window of the Cinergy Digital application is now your PC-based TV.

Channel list

Various predefined channel lists can be found here. Select the list corresponding to your region from the menu at the top left.
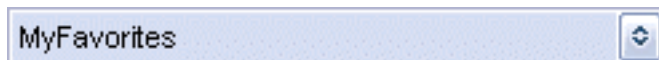
Each channel list contains the TV and radio stations that can be received separately. The desired category can be selected conveniently at the bottom of the channel list.

Individual stations in the radio and TV categories are grouped in so-called bouquets. These are packages containing the stations of a specific provider. The bouquets and their stations are displayed in a tree structure similar to that of the Windows Explorer. Double-click a bouquet to open it and display the stations it contains. Double-click a station to watch it.

BOUQUET 1	Bouquet
BOUQUET 2	TV stations (unencrypted)
BOUQUET 3	Radio stations (unencrypted)
BOUQUET 4	TV or radio stations (encrypted)
STATION 1	Active TV or radio station
STATION 2	Current selection
STATION 3	
STATION 4	
STATION 5	
STATION 6	
STATION 7	
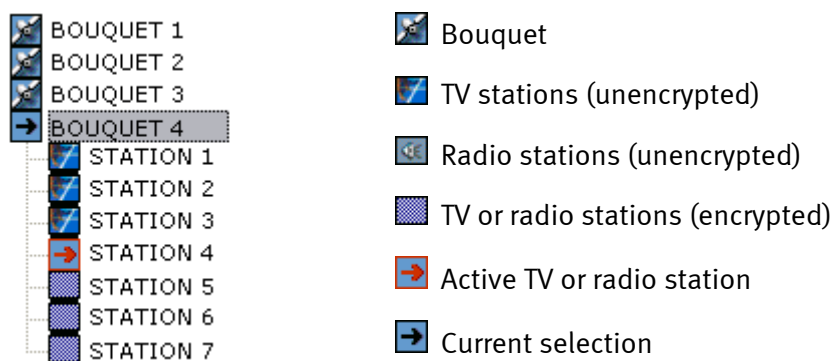
In addition to the radio and TV categories, the Cinergy Digital application also lets you put together a list of your personal favorites. This list may contain both TV and radio stations. Use the Channel Manager to compile your list of favorites (see the "Channel Manager" chapter). You can also create multiple lists of favorites—one for each member of the family, for example. To select a list, open the "Favorites" category at the bottom of the channel list. The menu above the channel list contains the available favorites lists that you can select with a click.

Additional functions can be found below the channel list that will make navigating the world of digital TV easier.

[+]   [-]

Zap through the channels with ease using these buttons.

[P>P]
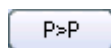
This button switches to the previous station to make switching back and forth between neighboring stations easy.

The application also contains program- and station-specific functions such as audio track and viewing angle selection.

|	
00 - French	
00 - French	
01 - English	Timeshift

Use the audio track selector at the left to choose the language in which you would like to view the program. The viewing angle selector calls for a more detailed explanation: Imagine that a station is transmitting a concert. A number of different cameras were used when filming the concert, for example one directly in front of the stage and another further back in the auditorium. The viewing angle selector lets you choose your preferred vantage point. Select the desired view using the controls to the right of the audio track selector. Please note that not all stations support this feature.

The TV application automatically senses the available features and displays the relevant options in a selector list below the TV picture. The volume control and mute are located to the right of these options.

Press Alt+E for detailed program information, or Alt+I for concise information.

Unfortunately, not all stations support this function.☹

Quick REC
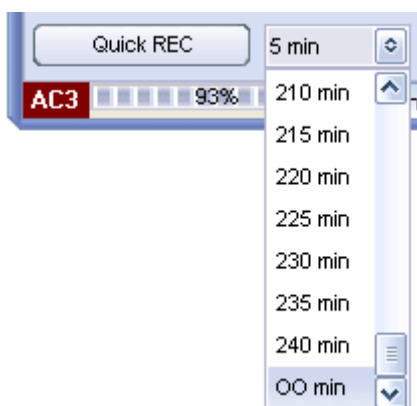
Use the "Quick REC" function to make spontaneous recordings of the current program. The settings for the recording format can be configured in the "Options - Media" menu (for more information, please see the "Options" chapter.). Use the selector box next to the "Quickrec" button to limit the recording time. The "oo min" entry stands for unlimited recording length. All recordings can later be viewed with the "Recording/Playback" function.

Timeshift—time-delayed viewing

Use the timeshift function to take a break at any time during a program.

Click "Start Timeshift" to mark the beginning of the pause in the program you are currently viewing. When you return to your PC, click "Start Timeshift" again to continue viewing where you left off. The time you missed will have been recorded to your hard drive during the pause. When playing back a program recorded with timeshifting, you can not only pause the program, but also cue and review it with the slider at the right. The time display at the right provides information about the position in the timeshift file in relation to the start.

Signal strength display

The signal strength display is located at the bottom left of the main window. High quality TV receptions should be possible with a signal strength of around 60%. In the case of poor reception, please ensure that the cable is in good condition.

The main buttons

| Configuration | Channel search | Channel editor | Record/Playback | Timer | Teletext | ? |

Use the buttons at the top edge of the main window to access various parts of the Cinergy Digital application.

Configuration

The configuration of the Cinergy Digital application should be your first stop after installing the software. Here you will find four tabs—General, Media and Codec—which are described below:

General
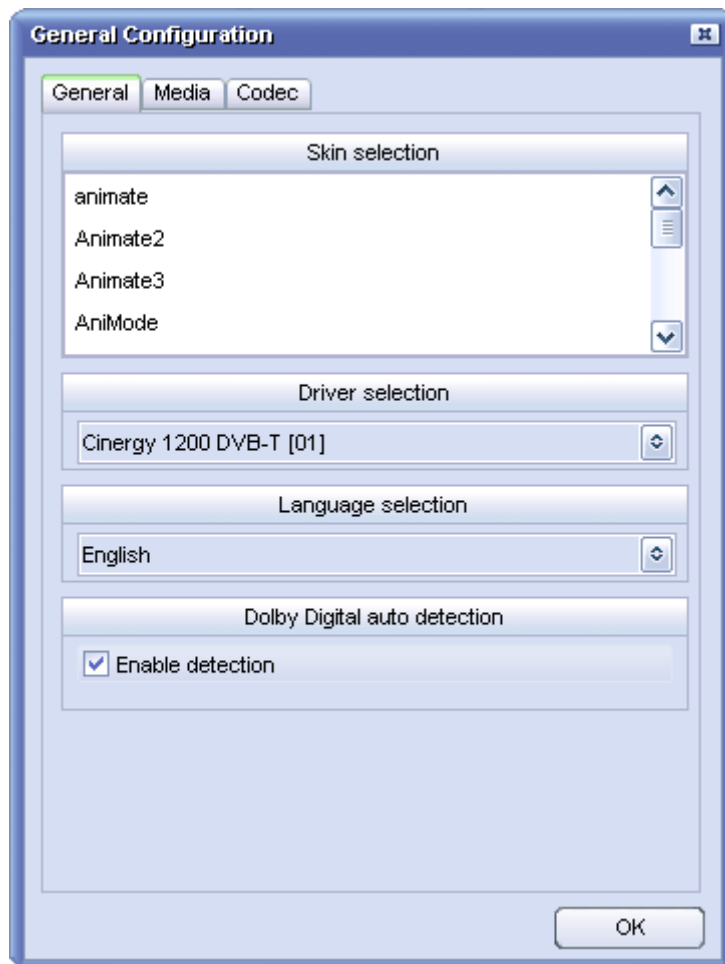
Skin selection—lets you modify the appearance of the Cinergy Digital application. A variety of skins are available to choose from. Double-click the name of a skin to change the appearance of the application.

Driver selection—Here you can see whether the Cinergy Digital application has recognized the driver of the Cinergy 1200 DVB-T. This can be used to check whether the card was correctly installed.

Language selection—Here you can change the application's language during runtime.

Dolby Digital auto detection—Enable and disable Dolby Digital detection here. As a rule, Dolby Digital auto detection is only needed if you have high-quality speakers in your system and a multi-channel sound card or a digital connection between your sound card and an amplifier with Dolby Digital support. Activating Dolby Digital auto detection increases the time required to change channels, however. Dolby Digital reception is indicated at the bottom left of the main window.

Media
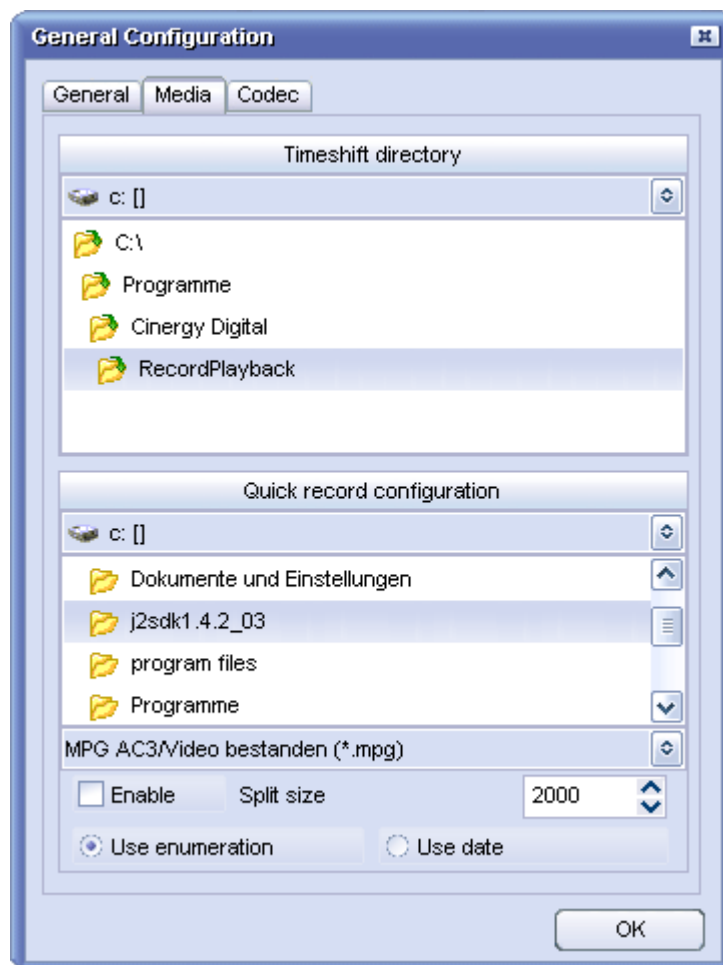
Use the "Media" tab to specify where the Cinergy Digital application should store your recordings by default.

Timeshift directory—To enable timeshifting, the program being watched must also be recorded. Choose the hard drive partition and folder that you would like to use for the timeshift recording file here. This file will be deleted automatically as soon as you leave timeshift mode.

Quick record configuration—Choose the location here for quick recordings, i.e. recordings that you make spontaneously with a single click in the main window. In addition to the location, you can also specify the format of the recordings and whether the recording can be split into multiple files of a given size (in MB).

(For more information on recording formats and file splitting, see "Recording and playback".)

Finally, you can specify how quick recordings will be named.

- Use enumeration—Your recordings will be named according to the station and a number that increments up.
- Use date—Your recordings will be named according to the station, date and time.

While digital TV is transmitted in a compressed format, you should nevertheless ensure that you have enough room for your recordings in the location you specify.

Codec
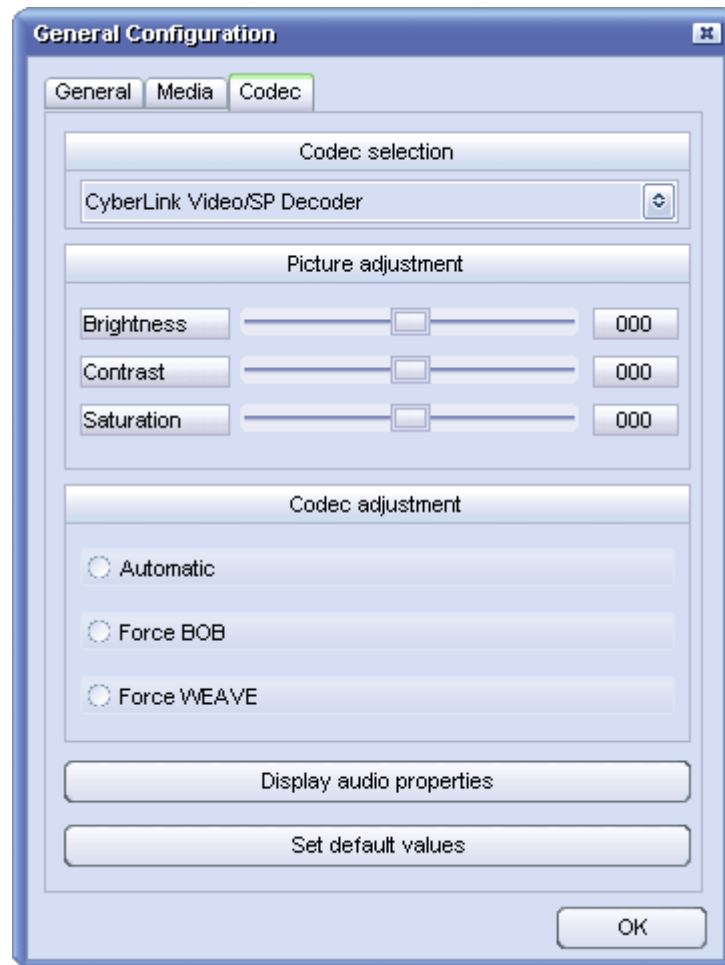
Digital TV is broadcast in the compressed MPEG-2 format which is also used on DVDs. The decoder of the included DVD playback software is used for this purpose. (The decoder converts compressed images to a format that the PC can display.)

Codec selection—Select "Cyberlink Video/SP Decoder". The included "Cyberlink PowerDVD" must be installed for this purpose, of course.

Picture adjustment—If you are not satisfied with your TV picture, use the Brightness, Contrast and Saturation sliders to adjust it for a more natural display. Click the "Set default values" button to return the controls to their default settings.

Note: You may have additional codecs that were found and considered usable by your system. Playback, especially with regard to Dolby Digital audio (AC3), can only be guaranteed for the codec of the included DVD playback software (PowerDVD).

Channel search
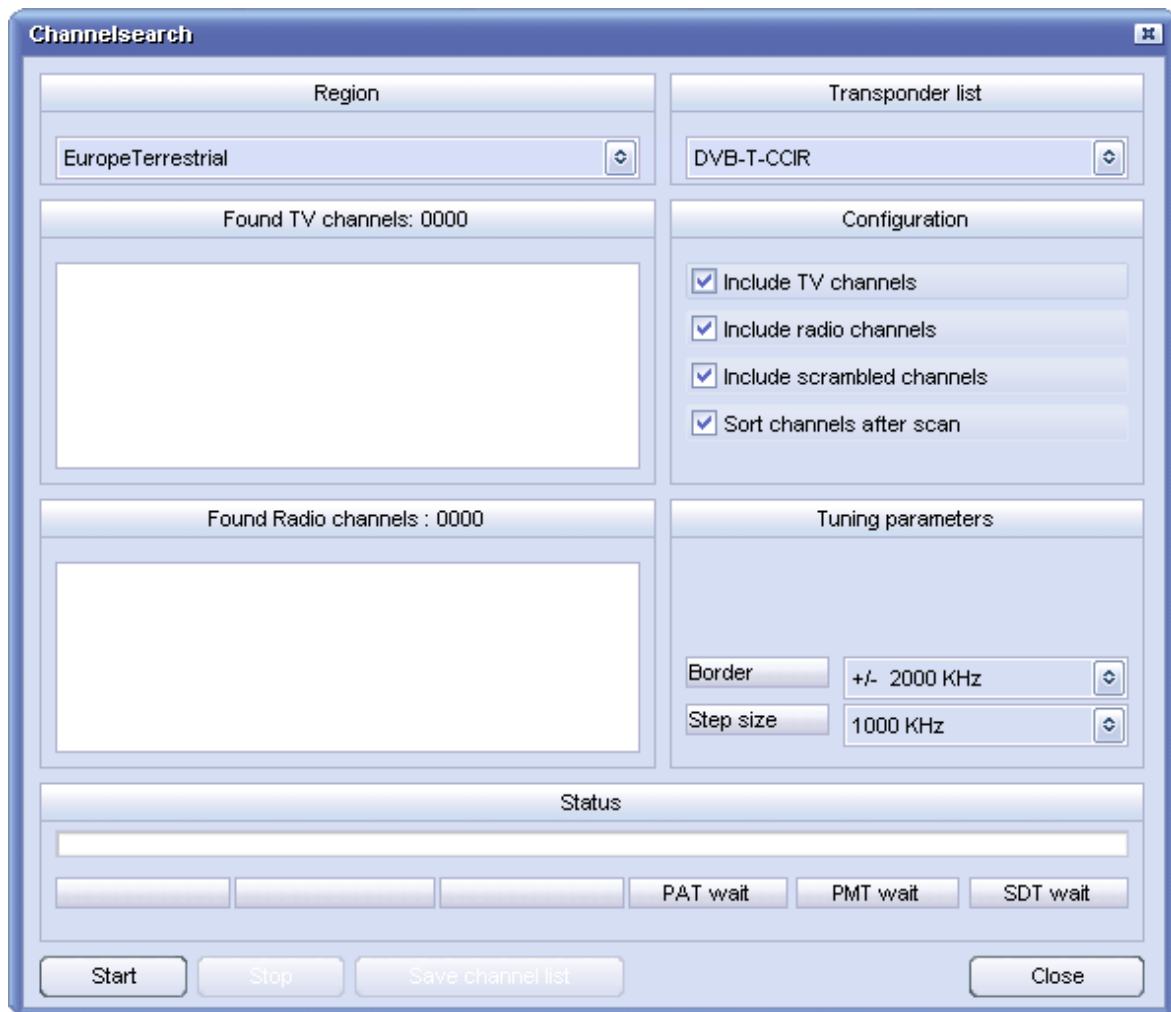
Before starting the channel search, please select the "Region" and the "Transponder list". Under "Configuration", specify the station categories you would like to include in your search and whether the found stations should then be sorted alphabetically.

We recommend not changing the "Tuning parameters" to ensure that you find all available stations.

If you do not want a comprehensive search, you have the option of restricting it here. If you only intend to search for a certain polarity, then select it in the "Polarity" field. The borders indicate the range above or below the frequencies in the transponder list that should be included in the search. Narrowing the definition of the range will speed the search operation. Searching will not always be successful without a certain tolerance, however. Finally, the "Step size" field specifies the steps with which the frequency range should be searched.

Once all of the settings have been made, start the search. This may take several minutes, but as a rule it is only necessary to perform this operation once. The status bar at the bottom of the window provides information on the progress of the search.

After the channel search has completed successfully, save the results of the search in a new channel list which you will be able to open from the main window. To modify this channel list, simply open it in the Channel Manager and change it as required.

Channel Manager
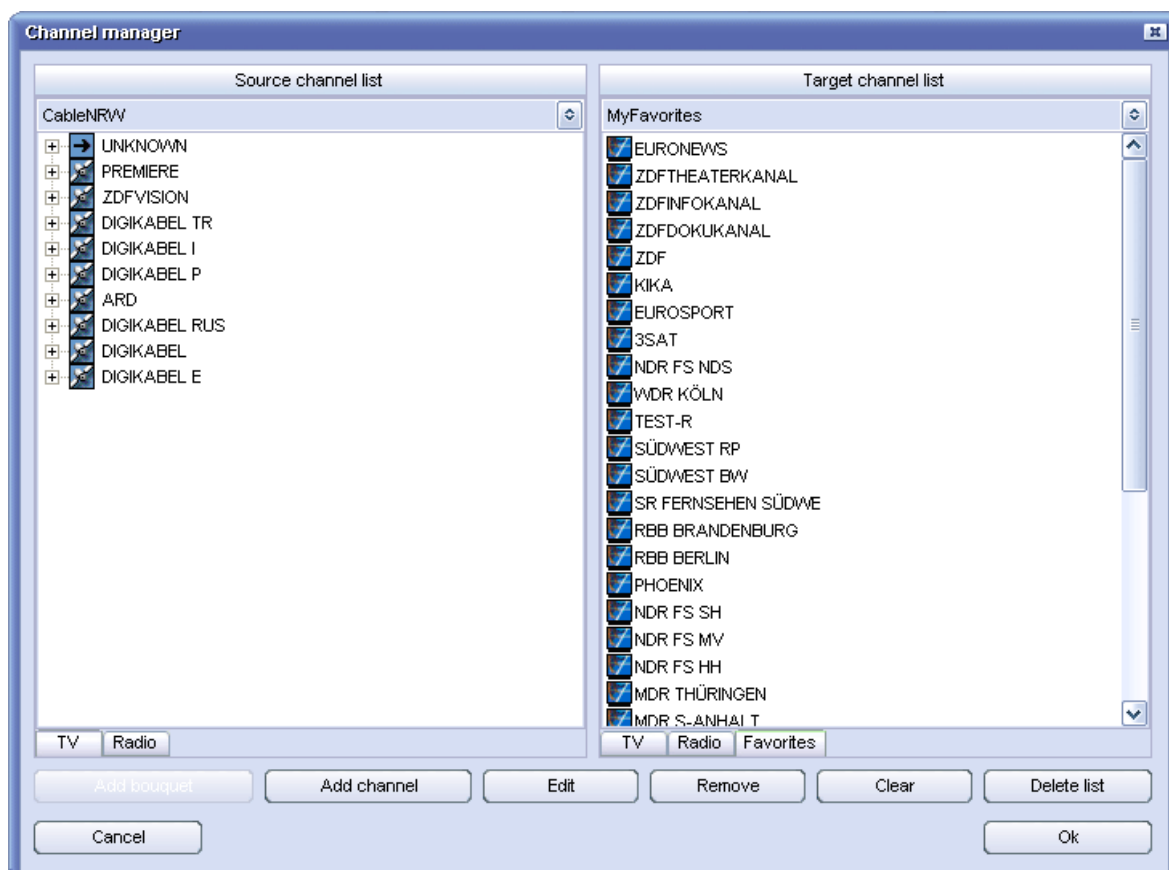
Use the Channel Manager to manage the available stations. Here you can edit channel lists or create new lists of favorites.

To edit an existing channel list, open it on the right-hand side as a target channel list—the current source channel list cannot be edited. The selection window at the top right contains all available channel lists. You now have the option of manually adding channels or bouquets, or to edit or remove stored channels and bouquets. New bouquets provide the option of individually categorizing your stations. Simply drag and drop the stations from one bouquet to another or import channels from an open source channel list to your target list. To save the channel list, click "OK" to close the Channel Manager. Save the channel list under a new name to add it to the main window as a new entry.

Stations can also be added manually in the Channel Manager. This is only necessary if a station was not found during a channel search. First, select a bouquet and add the new channel. In the next step you can name and define the station. The following overview will assist you in setting up new stations manually.

Channel editor

Channel/Bouquet name
DAS ERSTE

Frequency
409998000

Symbolrate
6900000

Scrambling
FREE

AudioPID
102

VideoPID
101

ServiceID
28106

NetworkID
1

Channel mode
Mode TV

Carrier   Locked

Test channel

Close and abort channel edit   Ok

Frequency:

The frequency field indicates the frequency through which channels are broadcasted. Unlike with analog television, with digital television several different channels can be transmitted on a single frequency.

Symbol rate:

The symbol rate indicates the speed at which the data is transmitted. The receiver must be synchronized to this speed.

Scrambling:

Specify whether the new station is scrambled or can be received freely.

AudioPID and VideoPID:

The DVB signal is sent in the form of packets. These packets carry an unambiguous 13-digit ID number—the so-called PID (Packet Identifier). The appropriate values are required to receive the necessary packets and correctly generate the picture, audio, teletext, etc.

NetworkID:

The NetworkID is a number between 0 and 8191 which is the identifier of a station chain. This number is used when associating EPG data, for example.

ServiceID:

The ServiceID associates program and control information with the station.

Channel mode:

Specify whether the new station is a TV or radio station.

Once you have made all of the settings, click "Test channel" to see whether you have entered everything correctly. Green "Carrier" and "Locked" fields indicate that the station is being received correctly. Save your settings with "OK".

Finally, you have the option of setting up your own personal "Favorites" list. Select the "Favorites" category in the target channel list. All existing "Favorites" lists are displayed at the top. You can also import TV and radio stations from the various channel lists to a "Favorites" list. Simply select the desired station from the source channel list and drag and drop it in the target channel list with the mouse. You can also move stations within the "Favorites" list this way. Sort them as you see fit and save the list when exiting the Channel Manager. The "Favorites" lists are stored separately from the channel lists and can also be found in the main window in the "Favorites" category.

Recording and playback
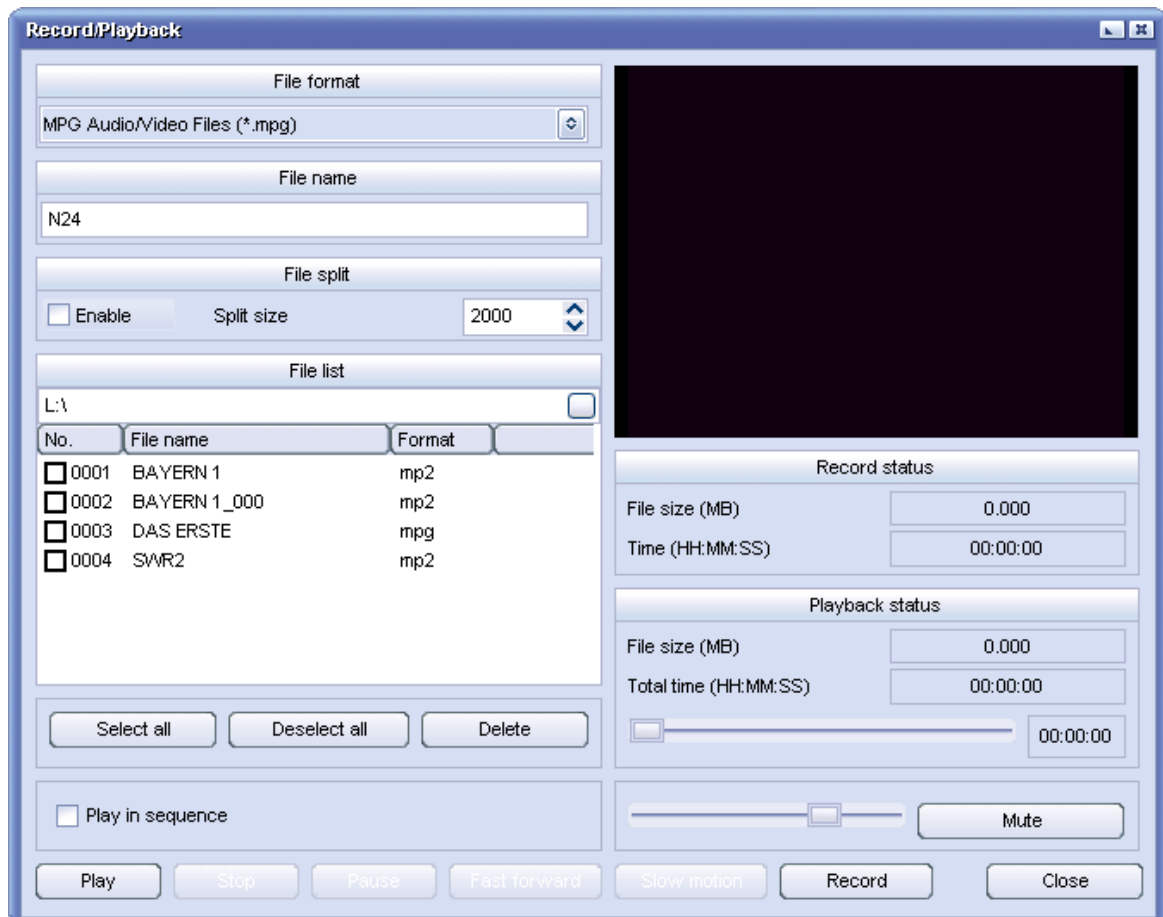
The "Record/Playback" window is intended for recording with individual settings. You can also play back recordings here.

File format

Before you record, select the file format in which you would like to save the program. You can choose between the following options:

- PVA—the native format (MPEG), in which the program is broadcast. These recordings can only be played back by the Cinergy Digital application, not by DVD playback software. The format is supported by many freeware and shareware applications, however.

- PVA (including AC 3 audio track) corresponds to the above format, but with an AC-3 (5.1 surround or stereo) audio track instead of MPEG audio—provided the program was broadcast with such an audio track. These recordings can only be played back by the Cinergy Digital application, not by DVD playback software. The format is supported by many freeware and shareware applications, however. If Dolby Digital audio is not available, the regular MPEG audio will be recorded.

- MPG—MPEG-2 is a commonly-used file format that is also suitable for DVD playback software.

- MPG (including AC 3 audio track)—corresponds to the above format, but with an AC-3 (5.1 surround or stereo) audio track instead of MPEG audio—provided the program was broadcast with such an audio track. These recordings can also be viewed using DVD playback software. The included DVD playback application supports both AC3 stereo as well as 5.1 surround sound. Please note that not all DVD playback applications support this function. If Dolby Digital audio is not available, the regular MPEG audio will be recorded.

- MP2—is intended for audio recording only and stores recordings in MPEG 1/2 Audio Layer II format.

File name

Be sure to give your recordings informative file names—it's very easy to lose your overview of your video archive otherwise.

File split

When making longer recordings, it may be practical to automatically split the program into several files of a specified size during recording. This is especially important if you are not using the NTFS file system, as the FAT and FAT-32 file systems only support file sizes of up to 4 GB.

Click "Enable" to activate this function and specify a file size in MB under "Split size".

After all, sometimes size does matter!

While digital TV is transmitted in a compressed format, that doesn't mean that you can't fill the largest hard drive with video material.

The bit rate—one could also say the quality—with which stations broadcast their programs can vary widely. Movies are frequently broadcast at a higher bit rate than an afternoon talk

show, for example. Movies are generally broadcast at a bit rate of around 3.5 Mbps. For example, if you take a 90-minute movie and add another 30 minutes for commercials, you end up with a file of:
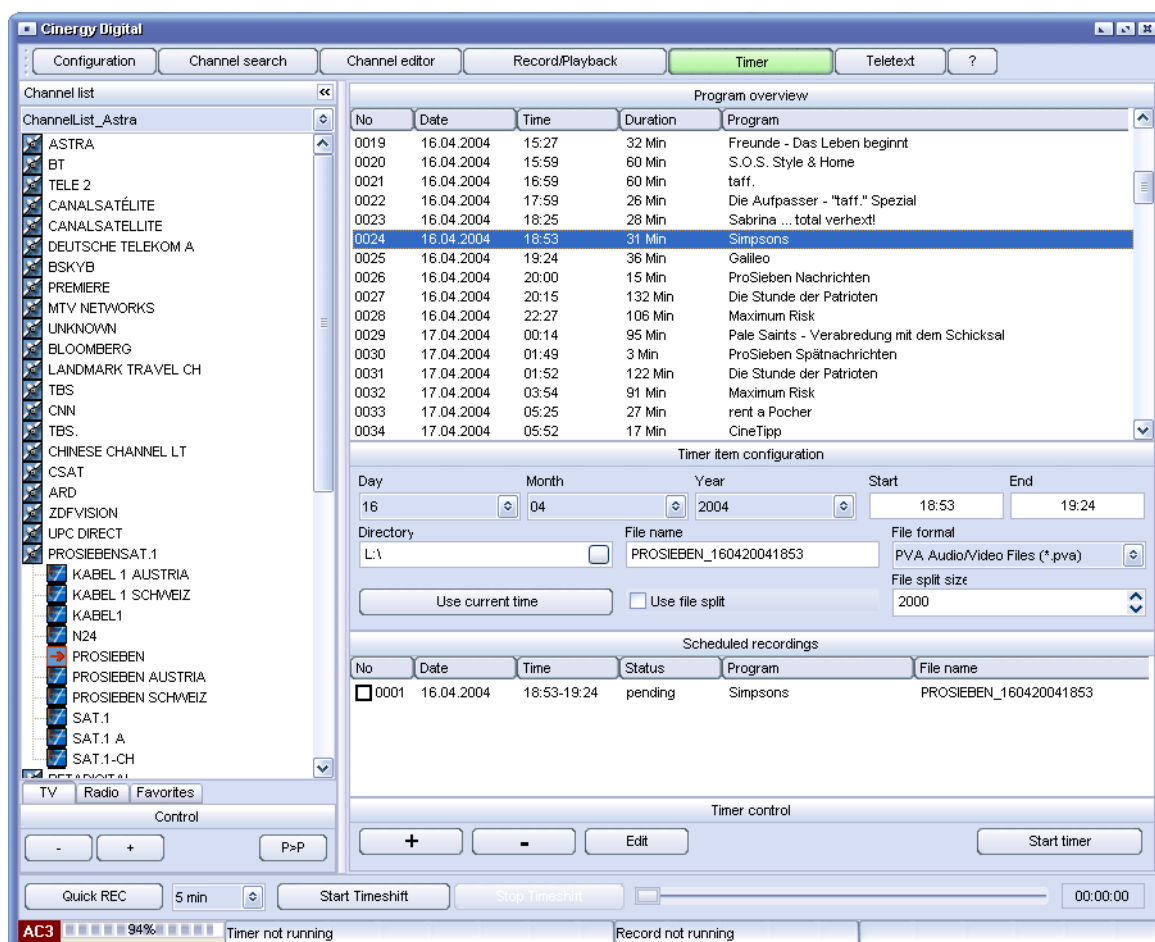
120 (movie plus commercials in min.) x 60   = 7,200 seconds

7,200 (seconds) x 3.5 (Mb)   = 25,200 Mb

25,200 (Mb) / 8   = 3,150 MB

3,150 (MB) / 1024   = 3.7 GB (well, approximately, anyway)

Timer

Click the "Timer" button while watching a station to collect information on the current program. If you are watching a station that does not broadcast program information, the upper part of the "Program overview" will remain empty.

Once you have found a program that you would like to record in the "Program overview" area, proceed as follows:

Click the program to select it.

Check the time settings in the "Timer item configuration" and correct the start or end times to accommodate possible changes to the broadcast. Here you can also select the format of the

recording and enable file splitting if desired. (For further information, please see "Recording and playback")

The "Use current time" button is intended for timer recordings of programs for which no program information has been broadcast. It uses the current time as the start time and sets the end time to 5 minutes later.

When all of the entries are correct, click "+" and enable timer-controlled recording by clicking "Start timer".

Should it become necessary to change an entry because of possible changes to the start or end time, select the entry and click the "Edit" button. A dialog box will appear in which you can edit the timer options. Confirm your changes by clicking "Save".
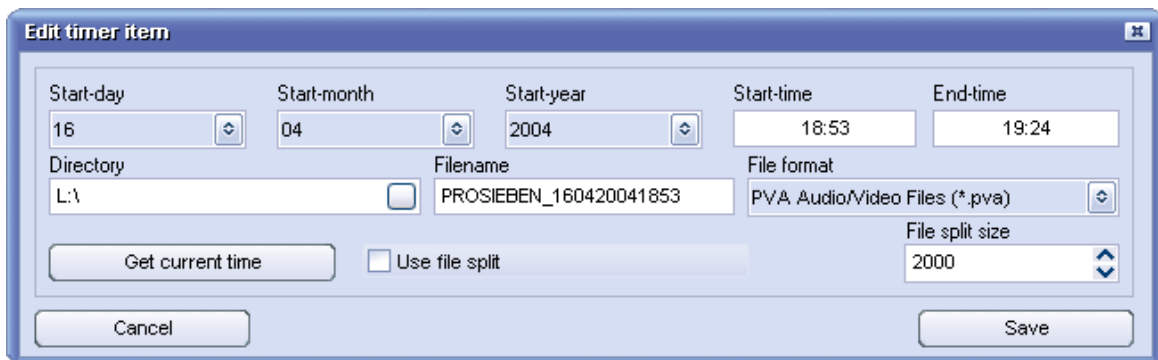
DVB teletext
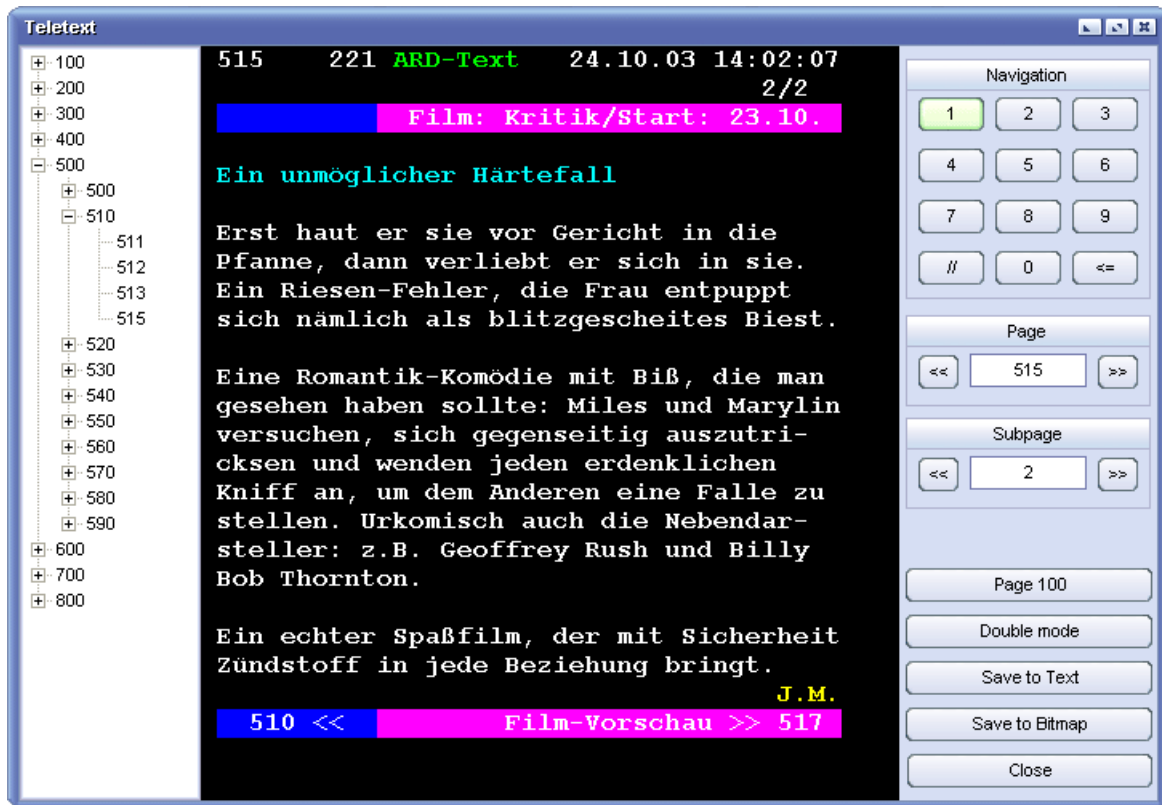
Click the "Teletext" button in the main window to activate teletext. The Cinergy Digital teletext application supports fast navigation through the pages of individual TV stations.

The received teletext pages will gradually appear on the left-hand side of the window in a tree structure with various levels that you can navigate as you would the Windows Explorer.

The middle of the teletext window contains the usual teletext view. Unlike the teletext on your TV, however, you can display pages by simply clicking on their numbers.

The right-hand side of the window contains the navigation area. Here you can select page numbers with your mouse. The results of your clicking will appear in the "Page" field. The "#" button clears the entire field, while the "<=" button clears the field one digit at a time. Use the "<<" and ">>" buttons next to the "Page" field to navigate back and forward one page at a time.

The "Page 100" button takes you directly to the teletext starting page. The "Double mode" button enlarges the view of the page. The "Save to text" and "Save to bitmap" buttons store the current page in the desired format. "Close" exits the teletext application.

Service at TerraTec.

Nothing seems to work!—This can happen even on the best systems. If this happens to you, the TerraTec team is happy to offer its service and support.

Hotline and Internet

In case of a serious problem—where you can neither solve the problem on your own nor with the guided help found in this manual, nor with the help of your dealer—please contact us directly.

If possible, try our Internet support system first: under **http://www.terratec.com/** you will always find current answers to frequently asked questions (FAQ) and the latest drivers.

If these options do not provide the necessary help, please contact our phone hotline or contact us online. To do so, visit us at **http://supporten.terratec.net/**. In either case, please have the following information handy:

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

In addition, it would be helpful to our technicians if you are at your computer during the phone call so that you can carry out our tips and tricks directly. Please do not forget to write down the name of the respective support technician if you contact our Support Team.

You will need this name if a defect is present and your card needs to be mailed to us.

Broken?!

Before you send the card back, be sure to contact us! Make a note of the name of your support contact and follow these simple instructions:

- Please fill out the service request form provided with your card clearly and completely. The more clearly and detailed you describe the problem, the faster we will be able to help. Cards sent in without a description of the problem cannot be processed and will be returned to you at your expense.

- Be sure to include a copy of your purchase receipt (not the original) with the package. If we do not receive a copy of a receipt, we will assume that the warranty for the product has expired and will bill you for the repair.

- Please use a sufficiently strong and padded mailing package. We recommend using the original package. Remember that the card is a sensitive electronic component.

Be sure to include enough postage—we will cover for the postage for the return to you.