TechniSat
DIGITAL
DAS ORIGINAL

Operating manual

HDTV 32 Plus / HDTV 40
HDTV 40 Plus / HDTV 46

TFT-LCD TV set with integrated hard disk and integrated Twin-HD Multi reception tuner. With CONAX card reader and two PCMCIA interfaces for the inclusion of CI modules. To receive both free and encoded (e.g. VIACCESS, CONAX, IRDETO, SECA etc.) SD and HD programs.
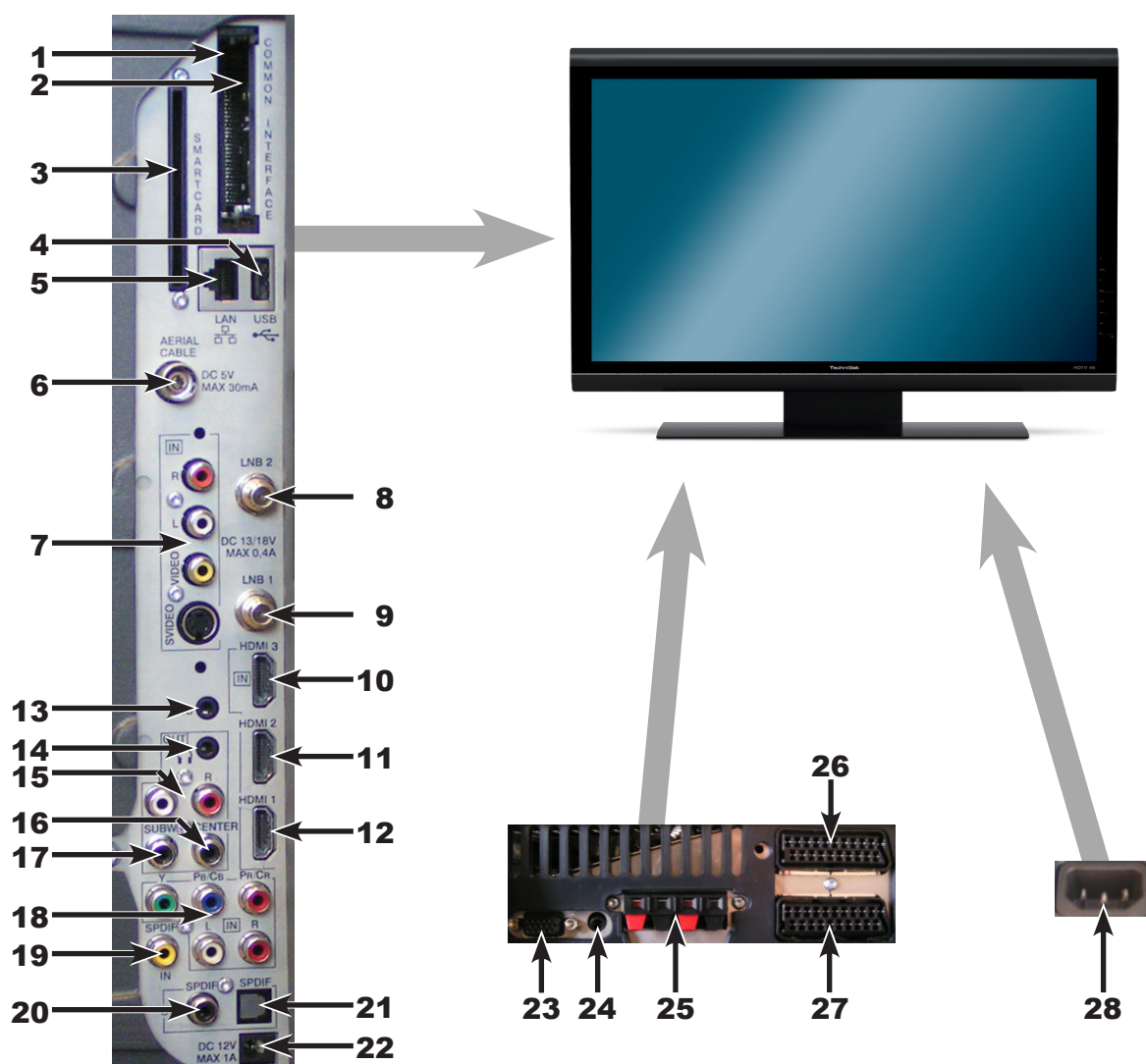
1

Integrated
video recorder
PVR

TIME SHIFT

DVB
Digital Video
Broadcasting

DOLBY
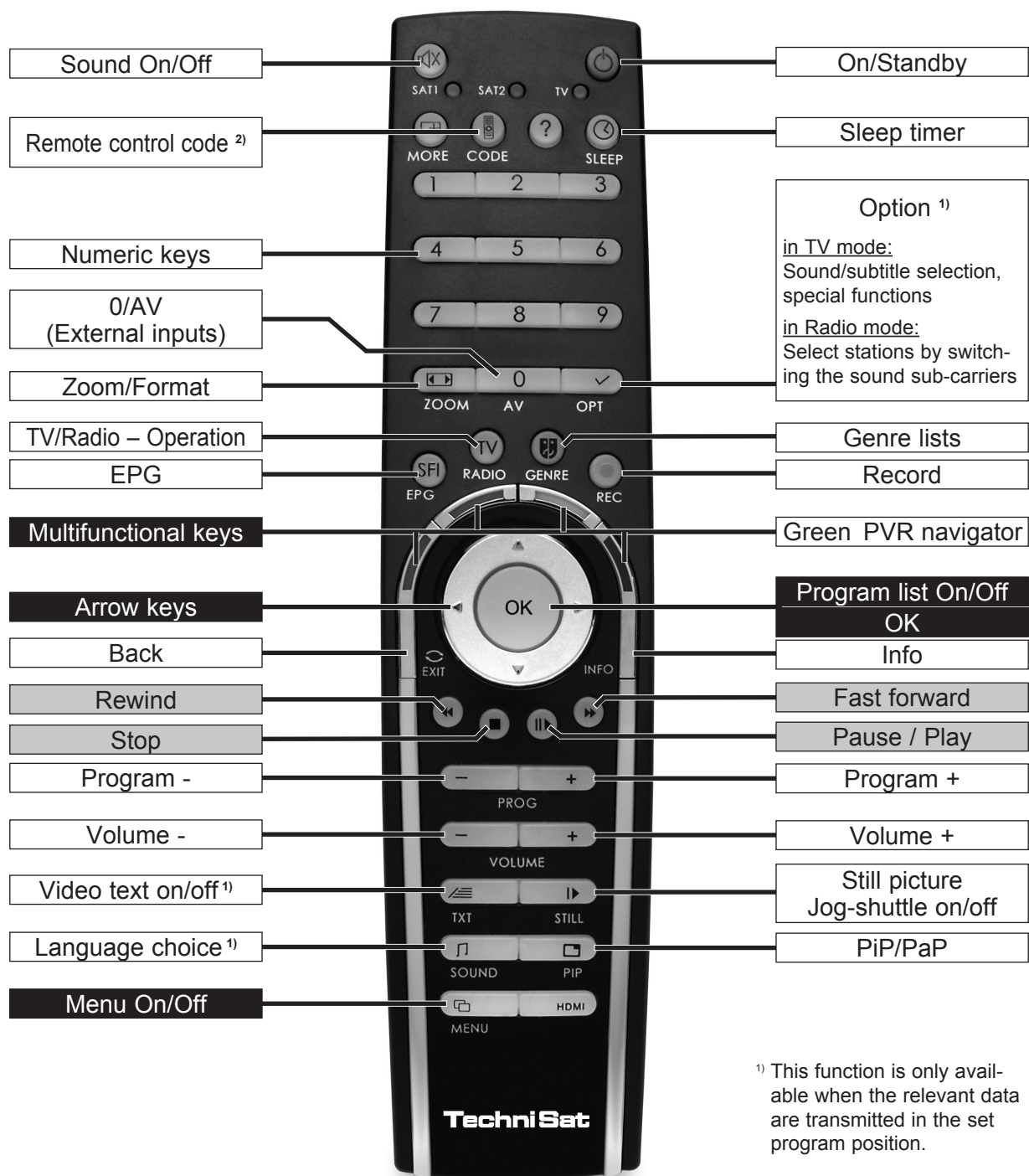DIGITAL
Streaming

HDMI
HIGH DEFINITION MULTIMEDIA INTERFACE

3.0 ▶ 3.1

SiehFern
INFO
PLUS

1 Illustrations

Device connections

1 Common Interface Slot 1
2 Common Interface Slot 2
3 Card reader
  (Golden chip of the
  Conax Smartcard facing
  forward and apply in the
  direction of insertion.)
4 USB socket
5 Network socket (LAN)
6 Antenna socket
  (DVB-C, DVB-T, analog)
7 Video-, S-Video- and
  audio input
8 LNB input 2 (DVB-S)
9 LNB input 1 (DVB-S)

10 HDMI Socket 3
11 HDMI Socket 2
12 HDMI Socket 1
13 Microphone input
  (Jack socket 3.5 mm)
14 Headphone input
  (Jack socket 3.5 mm)
15 Audio output (R,L)
16 Center output
17 Subwoofer output
18 Component inputs (Y,
  Pb/Cb, Pr/Cr and Audio)
19 Audio input digital
  (SPDIF electric)

20 Audio output digital
  (SPDIF optical)
21 Audio output digital
  (SPDIF optical)
22 DC 12 V output
  Switchable voltage ext.
  Amplifier
23 VGA socket
24 Audio input (VGA/DVI)
  (Jack socket 3.5 mm)
25 Loudspeaker socket
26 SCART socket (AV1)
27 SCART socket (AV2)
28 Network socket

Remote control

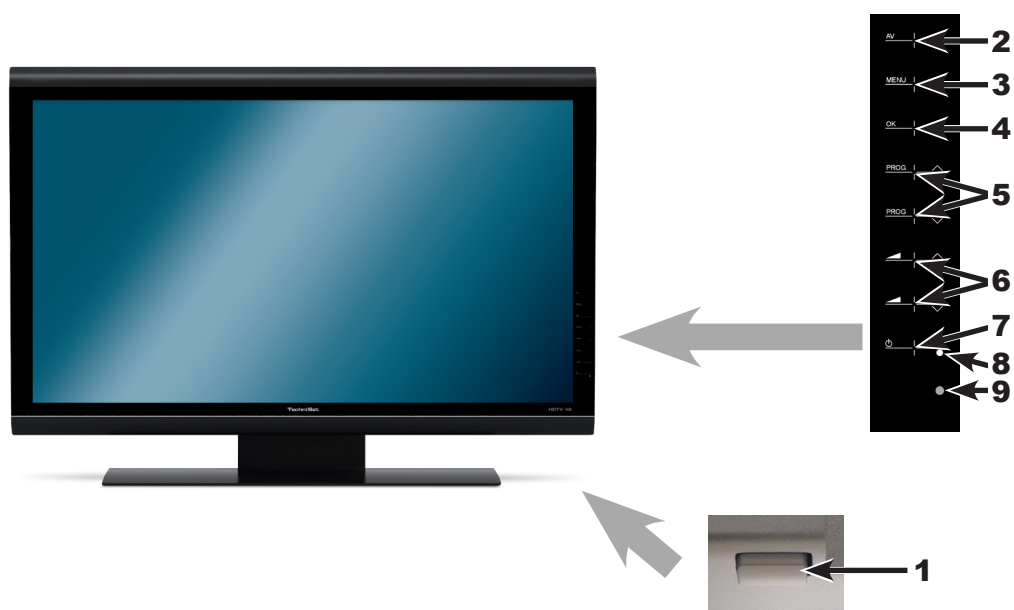|	
Sound On/Off	On/Standby
Remote control code ²⁾	Sleep timer
	Option ¹⁾
Numeric keys	in TV mode: Sound/subtitle selection, special functions
0/AV (External inputs)	in Radio mode: Select stations by switching the sound sub-carriers
Zoom/Format	
TV/Radio – Operation	Genre lists
EPG	Record
Multifunctional keys	Green PVR navigator
Arrow keys	Program list On/Off OK
Back	Info
Rewind	Fast forward
Stop	Pause / Play
Program -	Program +
Volume -	Volume +
Video text on/off ¹⁾	Still picture Jog-shuttle on/off
Language choice ¹⁾	PiP/PaP
Menu On/Off	

¹⁾ This function is only available when the relevant data are transmitted in the set program position.
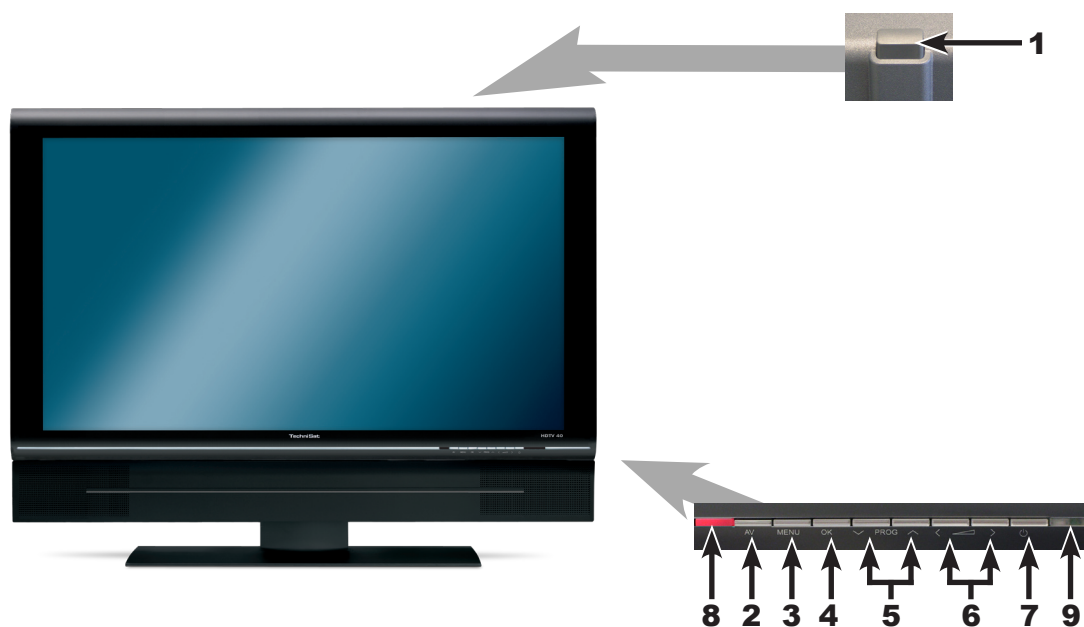
²⁾ Remote control option:
By switching the remote control option, this remote control unit can be used to control two Technisat receivers and one Technisat television set with the same coding. While the button is pressed, the currently set remote control code is indicated by flashing of the relevant LED.

> To implement the remote control option, press and hold the **Remote control code** button and subsequently press the OK button as often it takes for the LED of the desired remote control options (**SAT1**, **SAT2** or **TV**) to briefly flash.

Device buttons HDTV 46

Device buttons HDTV 32/40

1	Power switch	**4**	OK	**7**	On/Standby
2	AV	**5**	Program +/–	**8**	LED
3	Menu	**6**	Volume +/–	**9**	IR receiver

Contents

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3 Please read this first

- Before commencing operation of the unit, please check that the package contains all the components that should be included. The following should be included:
    - 1 LCD TV set,
    - 1 remote control,
    - 1 instruction manual,
    - 1 brief overview
    - 1 guarantee card,
    - 2 batteries (1.5V microcell),
    - 1 power supply cable.

3.1 Intended use

- Connection to mains voltage 230V/ 50Hz.

- The TV set is only intended for receiving and transmitting visual and audio signals.

- The set is exclusively designed to be connected to audio and video devices, aerials and computers, which meet DIN standards and have the CE marking.

- The use is intended for private and business purposes in dry areas and under supervision.

- Any other form of use is expressly prohibited.

3.2 Manufacturer's declaration

The TV set meets the following requirements

- The EU directive 2006/95/EC (Low Voltage Directive)
    - EN 60065

- The EU directive 2004/108/EC (EMC Directive)
    - EN 55013, EN 55020, EN 60555-2

and possesses the CE marking.

3.3 Important notes

Please pay attention to the following notes, to avoid any potential safety risks, or damage to the device and the data on the hard disk, as well as contributing to protect the environment.

3.3.1 LCD screen

The screen you have acquired meets the highest quality requirements and has been verified and classified with regard to pixel errors in accordance with ISO 13406-2.

3.3.2 Data on the hard disk

We recommend that before submitting the TV set for maintenance via your specialist dealer that a backup copy of the data located on your HDTV 32, HDTV 40 or HDTV 46 PVR should be made.
The retrieval of data does not come under the scope of maintenance and repair work.
TechniSat accepts no liability for any loss or damage of data during repair.

3.3.3 Transport

The device should only be transported when positioned upright. When doing so, do not handle the HDTV via the loudspeakers.

3.3.4 Safety

For your own protection, please read the safety instructions carefully before commencing operation of your new unit. The manufacturer accepts no liability for damage caused by inappropriate operation, or by non-compliance with safety precautions.

- The device includes a permanently integrated hard disk.
  No provision is made for any modification not authorized by TechniSat and if this is performed, this will mean that TechniSat can no longer pledge that the device continues to conform to the legal requirements (e.g. laws on device and product safety, laws concerning the electromagnetic compatibility of devices). The 'CE marking' shall also become inapplicable. In the event of resale of the modified unit, the modifying party shall indemnify the manufacturer as appropriate. In addition, the TechniSat guarantee shall no longer be applicable and warranty rights may also be rendered null and void.

- The unit may only be operated in a temperate climate.

- Do not place any burning objects, such as burning candles, on top of the unit.

- When the TV set has been exposed to cold conditions following delivery or while in transit, do not switch on immediately; await temperature equalization.

- Do not subject the unit to water spray or droplets, and do not place any objects filled with liquid, e.g. vases, on top of the unit. If water infiltrates into the device, immediately unplug from the mains and notify the service department.
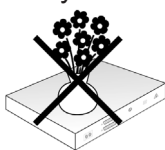
- Do not place the TV set within narrow shelves or cabinets, allow at least 10 cm ventilation distance for the device.

- To allow internal heat to dissipate from the device, the device incorporates ventilation slits. Ensure these ventilation slits are not covered by any objects, such as e.g. newspapers, tablecloths etc.

- Do not operate any sources of heat near the unit, which could cause it to heat further.
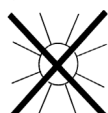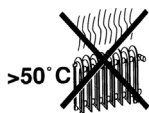
- Do not place any objects through the ventilation slits.

- During storms, extended periods of non-use or absence, the mains plug and all antenna plugs should be disconnected. Overvoltage may damage the device.

- In the event of any device defect, odor or smoke developing, significant malfunctions, damage to the power cord or casing, as well as when any liquid infiltrates, immediately unplug from the mains and notify the service department.

- In the event of a power cut, the TV set should be switched off using the power switch.

- During extended absence, the TV set should be switched off. This will extend the lifespan of the panel and also save energy.

- **Never open the unit housing!**
  Touching any parts carrying high voltage may be fatal!

- Any necessary repairs should be carried out only by qualified service personnel.

3.3.5 Operation

Via a so-called "On Screen Display" the control of the TV is simplified and the number of remote control keys reduced.

All functions are displayed on the screen, and can be operated with a few keys.

Related functions are combined in a "MENU". The function selected is highlighted.

The "function keys" red, yellow, green and blue are indicated by colour bars in the bottom line. These colour bars represent different functions in the various menus, which will be activated by pressing the appropriate coloured key (multifunction key) on the remote control. The "function keys" are only active when a brief description is displayed in the appropriate field.
Key names and terms that are displayed in the OSD menu are printed bold in this **operating** manual.

Help: Where available in the menues, pressing the **blue** function key will cause a help text to be displayed, pressing again will remove the text from the screen.

3.3.6 Power consumption in standby mode and in operation

The power consumption of the device, whether in standby or operational mode, depends on the settings made, the functions used and the units that are switched on / off, such as e.g. the CI module or USB storage media.

Accordingly, the power consumption during operation can be reduced, e.g. by only switching on the CI module and USB storage media when these actually need to be used.

Also pay attention to the stated points as well as the technical data (Point 16).

3.3.7 Maintenance and cleaning

The casing should only be wiped using a slightly dampened dry cloth.

Do not use any cleaner spray or aggressive chemical cleaning agent for the casing, to avoid damaging the top quality surface.

Use a dry cloth or the LCD panel cleaning set to clean the screeen when the device is switched off.

3.3.8 Disposal

The packaging for your unit consists entirely of recyclable material. Please sort the items appropriately for disposal using the "Dual System" ♺.

At the end of its useful life span, this device may not be disposed of in your regular domestic refuse bin. It must be taken to a recycling collection point for electrical and electronic equipment.

The ⌧ symbol on the product, the operating manual or the packaging will indicate this:

The materials can be recycled or reused according to their labelling.
By ensuring that valuable raw materials are reused you can make an important contribution towards protecting our environment.

Please ask your local authority about available disposal facilities.

Please note that spent batteries (from the remote control) as well as electronic components should not be disposed of in your household refuse, but should be disposed of in accordance with your local regulations (special waste, handing back to outlet where purchased).
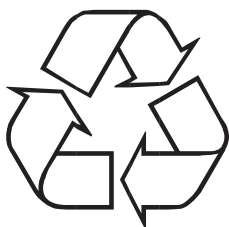
3.4 Remote control / Battery changing

> Open the lid of the battery compartment on the rear side of the remote control by applying light pressure to the marked position and slide the lid in the direction of the arrow.

> Insert the supplied batteries, taking care to ensure the correct polarity (visible indication in the battery compartment).

> Close the battery compartment again.

3.5 Wall-mounting

With the aid of a suitable wall attachment, e.g Technisat HD-Mount 32 (Art.No.: 2020/2732) for HDTV 32 Plus respectively TechniSat HD-Mount 40 (Art.No.: 2020/2740) for HDTV 40, HDTV 40 Plus and HDTV 46 you can mount your device on a wall that is suited for the purpose. When doing so, you must dismantle the rest foot.

3.5.1 Removing rest foot

Note with the HDTV 32/40 that you must remove the loudspeaker cable from the terminal clamps, before you take out the rest foot.

> Place the device with the screen side on a level surface.
Be careful to ensure when doing so that no pressure is applied to the panel and that this is not damaged.

> Loosen and remove the marked screws.
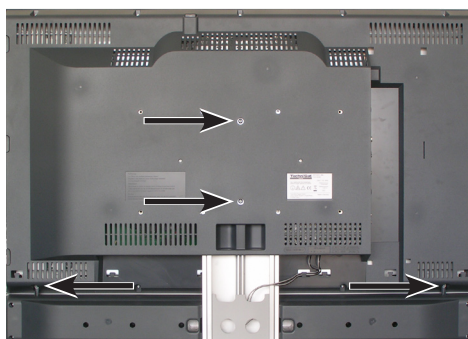
HDTV 40
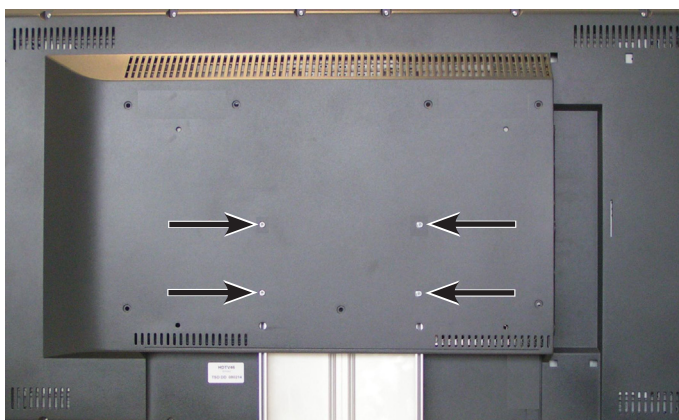
HDTV 46

> Now carefully remove the rest foot from the underside of the device.

For the HDTV 32/40, when wall-mounting and wishing to use with the device loudspeakers reassembled onto the device, you will need a special additional profile.
HDTV 32 Plus: HD-Mount Adapter HD-Vision 32 Plus Artnr. 0004/3240
HDTV 40: HD-Mount Adapter 40" Artnr. 0002/3240
HDTV 40 Plus: HD-Mount Adapter 40" Plus Artnr. 0006/3240

3.6 Removable loudspeakers ^(not available with HDTV 46)

Your TV set is equipped with removable loudspeakers. These can be taken off:

- When you wish to mount the loudspeakers onto the additional profile (see Point 3.5.1) during wall-mounting.

- When you connect the device to a HiFi or Surround-sound system (see Point 4.6) and you would prefer not to use the device loudspeaker.

3.6.1 Removing loudspeaker

> Remove the cable of the loudspeaker from the terminal clamps.
> To do so, press down the spring contact and pull out the cable.

> Now loosen the fixing screws of the loudspeaker using a suitable screwdriver and take this out.

Since the HDTV 46 does not have its own device loudspeaker for audio output this unit must be connected to a loudspeaker system or a stereo/surround-sound system. The audio outputs are present for this purpose (see Point 1; Nos. 14, 15, 20 and 21) as well as the loudspeaker outputs (Point 1; No. 25).
Furthermore TechniSat has developed a wireless Loudspeaker system in two versions, which is using the Cinch-audio- outputs (point 1, No. 15) and the USB connector (Point 1; No. 4) for the control and the power supply of the wireless transmitter.
These systems are available under the following designations:
HDTV wireless bookshelf Loudspeaker system
silver art. no. 0046/0500
platinum art. no. 0046/0505
black art. no. 0046/0516
HDTV wireless floor standing Loudspeaker system
silver art. no. 0046/1500
platinum art. no. 0046/1505
black art. no. 0046/1516
The wireless loudspeaker system is also usable with the HDTV 32 Plus, the HDTV 40, the HDTV 40 Plus and other devices of consumer electronics. Further information is available in the manual of the wireless Loudspeaker system.

4 Connections

a Connection of the cable junctions (digital and/or analog) or the DVB-T antenna with the antenna input of the TV set.

b Connection/s of the satellite antenna with the **LNB input 1**/**LNB input 2**. (**Please note:** For operation with an antenna signal, the LNB must always be connected to **LNB input 1**.)

c **SCART** connection of the TV set to a video recorder.

d Connecting the TV set with a DVD player via an **HDMI** cable, a **Cinch component cable** or a **SCART** cable.

e Connecting the analog or digital **Audio output** with a **Hifi-stereo** or **Surround-sound** **system**.
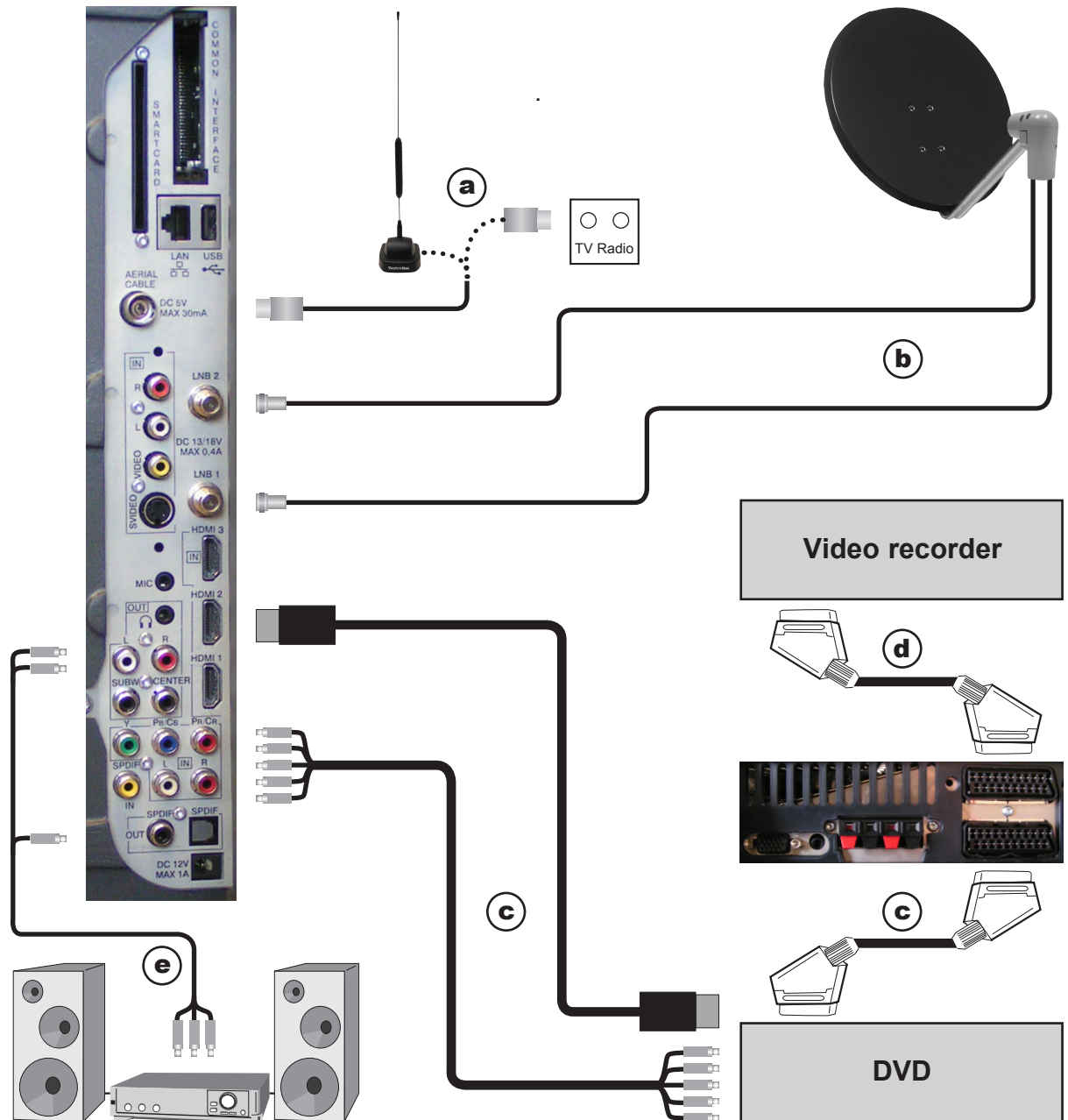
The references mentioned below, i.e. **a b c** etc. refer to the illustration on page 20.
To gain access to the side sockets of the device you must firstly remove the cover.

> To do so, push both the **engagement** hooks lightly upwards and pull away the cover to the rear.

Engagement hook

> To hide the connecting cable guide it on the rear side of the rest foot behind the removable plastic holder.

4.1 Antenna/cable connection (analog and digital)

a Connect the antenna input of the LCD TV set either using a **terrestrial antenna** or with the **wall socket** of the cable or antenna connection.

Please note:
Receiving both DVB-T and DVB-C signals at the same time can lead to receiving problems for some cable and DVB-T programs.

4.2 Satellite antenna

4.2.1 Operation with 2 antenna signals

To be able to utilize the full fuctional range of the device you should use it with two separate antenna signals/connections, which are identically set up.

b Connect the **LNB inputs 1 and 2** of the device using a suitable coaxial cable with your external unit.
Note also Point 8.5 (DVB-S antenna inputs).

4.2.2 Operation with 1 antenna signal

In exceptional cases, you may also use the device with only one antenna signal. This will mean, however, that the recording and PiP-/PaP functions are only functional to a limited extent. (see Points 6.11 and 7.1)

b Connect the **LNB input** 1 of the device using a suitable coaxial cable with your external unit.

4.3 DVD player

c   Either connect your DVD player via:
- an HDMI connecting cable with an **HDMI connection**

or via

- an DVI/HDMI connecting cable with an **HDMI connection** and additionally via an audio connecting cable with an **Audio** input **(VGA/DVI)** or **digital audio input (SPDIF electric)**.

or via

- a SCART cable with a **SCART** socket

or via

- a Cinch cable with the **component** inputs of the LCD TV set.

4.4 Video recorder

d   Connect the **Scart socket** of the LCD TV set via a SCART cable with the **Scart socket** of your video recorder.

4.5 S-VHS video recorder / Video camera

If you wish to play back the signals from an S-VHS video recorder or a video camera via your TV set, then connect the devices with the Video/S-Video inputs on the rear side of the device to the left.

4.6 Hi-Fi / Surround amplifier

d To achieve the best possible sound quality, you may connect the digital device to a Hi-Fi/ Surround amplifier.

4.6.1 Analog

e   To do this, use a suitable cable to connect the cinch sockets Audio R and Audio L of the TV set **analog audio outputs** with an input of your Hi-Fi amplifier (e.g. CD or AUX; **Note!** The phono input is not suitable!).

4.6.2 Digital

e   Should your amplifier include a compatible electric or optical input (SPDIF) you may connect the **audio output socket digital** (**electric** or **optical**) with the input of your amplifier.

Depending on the station selected, sampling rates of 32, 44.1 and 48 kHz are available. In addition, if broadcast, the Dolby Digital signal (AC3) is available at this output.

4.7 Subwoofer / Center

Connect the existing active subwoofer / center loudspeaker using a suitable Cinch cable with the subwoofer or center output.

4.8 SPDIF input

Connect the electrical SPDIF output e.g. of a DVD player using a suitable cinch cable with the **SPDIF input** of the TV. This will allow you, provided the TV set is connected via the **Audio output digital** (**electric** or **optical**) with a Hi-Fi/Surround amplifier, to route the sound of the connected device to the **Audio output digital** (**electric** or **optical**) and thus enjoy it in digital quality and with Dolby surround sound. The proviso here is, however, that the desired video source, to which the relevant device is connected, has been selected for this function as described in Point 8.3.9.

4.9 USB socket

The USB socket is used for updating the operating system and preprogramming via PC or USB device as well as for the playback of images (JPG) and music (MP3) via a USB storage medium as well as copying the contents recorded from the hard disk and images and musical extracts from or on the hard disk.
In addition, the transmitter for a remote loudspeaker can also be operated and configured via the USB socket.

4.10 Network socket (RJ45)

You can integrate HDTV into your existing network via the network socket. This will allow you, with the help of the TechniSat Mediaport, to copy PVR recordings, MP3 and JPG files onto your PC as well as the integrated hard disk.
Note here also Point 8.4.4 Network settings.

4.11 Headphones

When wishing to use a set of headphones, please connect it via the **headphone socket** on the rear side of the device to the left.

4.12 PC

If your PC incorporates a DVI output we recommend connecting the PC via a DVI-HDMI cable with the HDMI socket on the TV set. Otherwise please use a VGA cable and connect the PC with the VGA socket of the device.

> With the help of the **0/AV** button of the remote control, subsequently switch the TV set to **VGA** or **HDMI playback**.
> When connecting via a DVI-HDMI cable, the switchover should be automatic.

It is advisable, before connecting the PC to the TV set, to configure the resolution of the graphics card such as to ensure the format conforms to a type supported by the TV set.

The optimal result (a full-screen image at the best possible resolution) can be obtained when you operate the panel at its original resolution (1920*1080). The precise parameters can be found in the technical data (Point 16). Your TV set will transmit this resolution to the PC via DDC. Unfortunately, it is not guaranteed that the driver of the graphics card will accept the same.

To set a specific resolution for your graphics card, please read the instruction manual for the operation system of your PC. With Windows, this setting is usually found via the
Start menu -> Settings -> Control Panel -> DIsplay -> Settings.

Please note that due to the many graphics cards available it is impossible to rule out potential compatibility problems between the graphics card used and the HDTV which means that e.g. certain resolutions cited in the technical data may be either unusable or only usable to a limited extent.

4.13 Mains power connection

The LCD TV set should only be connected to the mains (**230 V / 50 Hz**) when the device has been completely fitted with the relevant components. This helps to avoid damage to the device or other components.

5 Initial installation

When you have read through the safety instructions and have connected the HDTV as described in Chapter 4, switch on the unit as described in Chapter 6.

When switching on the device for the first time the starting window of the installation assistant **AutoInstall** will automatically appear. Use the installation assistant to quickly and simply make the most important settings on your TV set.

In the starting window of the installation assistant, you can interrupt the initial installation by pressing the **red** function buttons.

During the individual installation steps, you can confirm the settings made using the **green** function keys, whereupon you will reach the following installation step.

By pressing the **red** function keys, you may return to the respective previous installation step, allowing you to correct input mistakes at any time.

The initial installation procedure described here serves merely as an example. The exact initial installation procedure will depend on the settings you select.
Please therefore follow the instructions displayed on screen closely.

Operating language

The installation assistant starts with the selection of the **control language**.

> Use the **arrow keys** to mark the desired control language.
> Based on this selection, the preferred audio language is also set.

> Confirm by pressing the **green** function key.

Country selection

> Using the **arrow keys** select the country in which the unit is being used.
> Based on your selection, the time will be set automatically including summer/winter time settings.
> In addition, based on this setting, the programs will be automatically sorted in the installation assistant as well as based on a station search.

> Press the **green** function key **Confirm**, to confirm the selection and proceed to the next installation step.

Selection of the received signals

> Using the **arrow keys up/down**, select the available received signals.
> **DVB-S**   for digital satellite programs;
> **DVB-C**   for digital cable programs;
> **DVB-T**   for digital terrestrial programs;
> **Analog CT** for analog terrestrial and cable programs;
> **FM Radio** for VHF radio broadcasts.

> Use the **right/left arrow keys** to indicate whether the marked receiving signal is available at your location (**Yes**) or not (**No**).

> To confirm the settings made, press the **green** function key **Confirm**.

Antenna signals (DVB-S)

Here, select the number of DVB-S antenna connections you have made to the TV set.
(If the source is DVB-S, as described in the "**Selection of the received signals**" section, and deactivated, instead of this page, the installation assistant goes directly to the page "**Antenna settings (DVB-T)**".)

> Use the **right/left arrow keys** to mark whether you have connected **one** or **two** antenna signals.

> Use the **green** function key to confirm your selection and proceed to the "**antenna configuration (DVB-S)**".

Antenna configuration (DVB-S)

In this installation step, you can configure the setting of your device to the congifuration of your satellite antenna.
(If the source is DVB-S-, as described in the "**Selection of the received signals**" section is deactivated, instead of this page, the installation assistant goes directly to the page "**Antenna settings (DVB-T)**".)

> If you wish to confirm the **standard** antenna setting **press** the **green** function key to confirm.
> In this case proceed from the point "**Antenna settings (DVB-T)**".

> If the configuration of your reception installation does not conform to the standard setting, press the **yellow** function key **Change**.
> The settable antenna configurations now appear, which can be adjusted to suit your receiving equipment in accordance with Point 8.5 "**Antenna settings (DVB-S)**".

> Once you have reached the desired configuration, press the **green** function key **Confirm**.
> A display of the satellites now set appears on the display for verification.

> To **confirm the** setting, press the **green** function key or to cancel, press the yellow function key **Modify**.

Antenna settings (DVB-T)

If you use an active DVB-T antenna, which lacks its own power supply or where you do not wish to use this latter, the amplifier of the active antenna can be powered via your TV set using the coaxial cable. Set the **Antenna feeder** to **on** in this case.
In addition, a channel spectrum with the signal levels of the channels is also displayed in this step. Using this spectrum you can set up your DVB-T antenna for optimal reception.
(If the source is DVB-T as described in the "**Selection of the received signals**" section, and deactivated, instead of this page the installation assistant goes directly to the page "**Search** station".)

> Using the **right/left arrow keys**, you may switch the power supply **on** or **off**.

> Confirm the setting by pressing the green function key **Confirm**.

Channel search

> To carry out a station search, use the **up/down arrow keys** to mark the field **All stations**, when you wish to freely look for both receivable and encoded programs, o**r All uncoded stations**, when you wish to only find free view programs.

> By pressing the **green** function key **Start**, the station search commences. During the station search, the tuning range you select is automatically searched for by programs. This procedure may take several minutes. Please note any messages displayed on screen.

Updating Software

Now your device checks, whether any new operating software is available. If new software is available, you can download a new software update.

> Use the **arrow keys left/right** to select the field **Update**, and confirm by pressing **OK**.

Note that after the new software has been downloaded, it is processed within the device. During this process, the screen is switched off and the LED lights up green and orange in turn. This process takes some minutes to complete.

Loading EPG files (if available)

Your TV set possesses an electronic EPG program journal. So that files can be presented using this electronic program journal, they must firstly be downloaded.
In this process, your HDTV starts up, once the applicable software updating is complete, automatically with the loading of the EPG files. This procedure can take up to 30 minutes.

> If you do not wish to wait for the EPG data to be downloaded, you can skip this procedure. To do this, press the **yellow** function key **Skip**. The EPG files are then based on the specified period in Point 8.7.2 automatically updated or you may update them manually at any time (Point 8.7.6).

Terminating the installation assistant

> Confirm the concluding note of the installation assistance by by pressing the **green** function key **Close**, to revert to normal operation.

6 Operation

6.1 Switching the TV set on and off

6.1.1 Switching on when plugged into the mains

> Switch on the TV set by pressing the **power switch** on.
> The TV set now goes through an initialization process, during which it cannot be operated. This process may, depending on the extent of the material recorded on the hard disks, last a few seconds.

6.1.2 Switching on from standby mode

> Switch on the TV set by pressing the **On/Standby** button on the remote control/ device

or

> by pressing the **Program** buttons **+/–** on the remote control/device

or

> by pressing a number key from **0** to **9** on the remote control

or

> by switching on a device attached to an external input (only with the Autostart function activated, see Point 8.3.6).
> The operating status is signaled by the green LED indicator.

6.1.3 Switching off into standby mode

> Switch on the device by pressing the **On/Standby** button on the Remote control/ device

or

> by switching off a connected device (only with the Autostop function activated, see Point 8.3.7).

If, during the test, the **On/Standby** button is pressed again, the device will switch itself on again. For this reason, you need not wait until the end of the test to switch the device back on.

Once the test is complete, the device completely reverts to Standby, the LED now lights up red. The device is now in standby mode and can be completely switched off using the power switch.

If the test detected a new operating software or program list in the DVB-S control, this will be displayed the next time the device is switched on. The new software or program lists can then be directly downloaded. Here, follow the on-screen directions.

6.1.4 Switching off when plugged into the mains

> By pressing the **Power switch** the device is completely switched off.
> Note that in this case neither the automatic updating of software nor that of the EPG files or any timer can be implemented.

Note that the device should only be completely switched off when in Standby mode. This helps avoid any loss of data and possible damage to files or the hard disk.

The device memorizes the last switching status, whether "On" or "Off", which was activated with the remote control or the device buttons.
If the device was switched off with the power switch while in operation, it will revert immediately to full operation when switched on with the power switch.

If the event of a power cut during active operation, the device must be switched off using the power switch, to ensure that it is not inadvertently switched on again, when the power comes back on.

6.2 Selecting a program

6.2.1 Using the program up/down keys

> Using the **Program buttons +/–** on the remote control/device, you can move up or down one program slot.

6.2.2 Using the numeric keys

> You may use the **numeric keys** to enter the desired program number.

For example:

1			for program slot **1**
1,	then **4**		for program slot **14**
2,	then **3**,	then **4**	for program slot **234**
1	then **2**,	then **4**, then **5**	for program slot **1245**

When entering a program number consisting of several digits you have approx. 3 seconds after pressing each number to complete the entry.
If you wish to only enter a one, two or three digit number, you can accelerate the switching process by pressing and holding the last number, but also by pressing the **OK** button.

6.2.3 Using the program list:

> Press the **OK** key.
The program list is displayed on screen. In TV mode, only TV programs will be shown, and only radio programs when in Radio mode. The program currently selected is marked.

6.2.3.1 Selecting programs

> Now you can use the **arrow keys** or the **Numeric keyboard** to mark your desired programs.
You can use the **arrow keys up/down** to move the marker around the list one line at a time and the **arrow keys right/left** to move the marker up or down one page at a time.
The marked program will be already shown in the preview window.

> Additional information on the current broadcast is available by pressing the **INFO** button.

> by pressing the **OK** button, you leave the Navigator and the marked program shown on the same screen.

6.2.3.2 Selecting a list

Your HDTV is equipped with several program lists, designed to make it easier for you to find a program. You can select your **List of favorites** or display the list of programs in **alphabetical** order or sorted according to their **genres**.

> Press the **OK** key.
  The active program list will be displayed.

> Now you can use the **Option** button to open a window with the program list types (**List of favorites**, **Overall list** and **Genre lists**).
  The active type of program list is marked.

> Use the **arrow keys up/down** to select the type of program list, e.g. **Overall list** and confirm with **OK**.
  The overall list, alphabetically sorted, is displayed with all programs included.

> As described under Point 6.2.3.1, mark the program you would like and confirm with **OK**.

6.2.4 Selection of a local program

During the initial installation, you made your choice of preferred regional programs. Now set one regional program, whereupon a note will appear stating that further regional programs remain to be selected.

> Press the **Option** button, to open a new window.

> Use the **up/down arrow keys** to select the desired regional program and confirm with **OK**.
  The selected regional program will be set and will now be considered the regional program.

6.2.5 Calling up blocked programs

If a program is selected that has been blocked by the parental control function, the message **Unit PIN** will be displayed on screen.

> Use the **Numeric keyboard** to enter your device PIN code.
  The desired program can now be viewed.

or

> Switch to a program that is not blocked.

You have made the setting If as shown in Point 8.8.1, , the device **will** ask you to enter the device PIN code when accessing a saved program. To facilitate user convenience, the device PIN code need only be entered once during any control session.

Note Point 6.5.4 when using a Smartcard.

6.2.6 Return to the last program selected

> Pressing the **Back** key on the remote control will take you back to the last program previously selected.

> Pressing the button again will revert to the previously set program.

6.2.7 TV/Radio switching

> Switch to radio operation using the **TV/Radio** button.
> The device switches to the last radio program listened to.
> Here, also pay attention to the setting of the Radio background image as described in Point 8.4.1.4.

> By pressing the **TV/Radio** button again, the device reverts to TV operation and the last viewed TV program is set.

6.3 AV source

> To select devices that are connected to a SCART socket, to a component input, the HDMI inputs, the VGA socket or the AV socket of the TV set, press the **AV** button. The screen now shows the pop-up window for the **AV source** with the existing available AV sockets.

> Using the **up/down arrow keys**, select the desired source.

TV	internal receiver: TV operation
Radio	internal : Radio operation
EuroAV 1	external device to SCART socket 1
EuroAV 2	external device to SCART socket 2
HDMI 1	external device to HDMI input 1
HDMI 2	external device to HDMI input 2
HDMI 3	external device to HDMI input 3
VGA	external device to VGA input (PC)
Video / S-Video	external device to AV sockets (Cinch or S-Video)
YUV	external device to component input

> Confirm with **OK**, to switch to the selected input.

> To revert back to TV operation, press the **AV** button again and use the **up/down arrow keys** to select the **TV** line or press the **TV/Radio** button.

The external sources can also be recorded in the list of favorites as described in Point 10 and subsequently retrieved as described in Points 6.2.1 - 6.2.3 as well as Point 6.2.6.

Please note:
It is not possible to operate a device respectively via the Video Cinch socket and the S-Video socket at the same time!

6.3.1 Audio playback from external sources

With this device, it is also possible to play back the audio signal of all external sources via the device loudspeaker and the audio outputs of the HDTV, without the HDTV screen having to be switched on. The provision here is, however, that the source, for which the playback of sound is desired, as described in Point 10.2 is recorded in the radio list of favorites. Note also the setting of the radio background screen in Point 8.4.1.4.

> Switch to radio operation as described in Points 6.2.7, 6.3 or 6.16.

> Select the program position as described in points 6.2.1 - 6.2.3, from where the desired external source is located.
> The external source is now played back and the screen switches on, provided it is set as shown in Point 8.4.1.4.

6.4 Program / source information

6.4.1 Information box

After each program change, an infobox appears on screen for the period set in accordance with Point 8.4.1.3.

Within the infobox, the program position, the name of the set program, the track of the current broadcast as well as the currently active program list and the actual time are all displayed.

In addition, further program details are displayed.
For example:

TxT for video text
16:9 for 16:9 broadcasts
○ for encoded programs
🔒 for child safety protected programs
▭▭ for Dolby Digital broadcasts
↗ for subtitles
▭▭ for mono broadcasts

In addition, a superimposed status bar (yellow) is shown, which displays the elapsed broadcast time of the current broadcast. When the end of the status bar turns red, the current broadcast has finished.

In addition, as soon as broadcast, the EPG genre and the FSK age statement (Voluntary Self-Regulation of the Film Industry) are displayed.

6.4.2 Display time and program information

With this function, you can view program information on the program being viewed.

> Press the **Info** key to display information on the program currently selected.

Now a superimposed section appears in the bottom half of the screen with the actual time as well as the information detailed in Point 6.4.1.

6.4.3 Additional program information

As soon as broadcast, you can receive further program information on the programs currently running.

> By pressing the **Info** button twice, the infowindow expands and further information on the program currently being shown appears.

> Extended info text can be scrolled line by line **up/down** using the **arrow keys** or **left/right** in sheets.

> Where this information is broadcast, pressing the Info key once more will display information on the following program.

> Press the **INFO button one more time,** to hide the display again.

6.4.4 Channel / Transponder / Source info

> Firstly press the **OK button**, to return to the navigator.

> Use the arrow keys **or** the Numeric keyboard to mark the **program** position, for which you would like the information displayed.

> By pressing the yellow **Status** function key, you access the transponder, **channel** or source info.
> Note that files from external sources can only be displayed, when the relevant source has been recorded in the list of favorites (see Point 10.2) or you have substituted it in the overall list based on the request of the navigator(see Point 6.2.3.2).

> If you have requested info from a DVB-S, DVB-C or DVB-T program, you can now switch between the various display points using the **function keys**.
> In this process, the colors of the **function keys** indicate the following information:

> **Red** Shows information on the transponder / channel, on which the set program will be shown.

> **Green** Indicates the display of audio, video and PID files of programs.

> **Yellow** Shows the encoding system used by a program, or the encoding system used, in the case that an encoded program is being shown.

> **Blue** Calls up the program data.

> By pressing the **TV/Radio** button, you can revert to normal operation.

6.5 Receiving encoded programs

Your device is equipped with an integrated CONAX encoding system as well as a "Common Interface" for the recording of two CI modules. These will allow you to receive encoded programs. To do so, you must first either insert a CONAX smart card into the integrated card reader or insert a CI module with a valid Smartcard into the slot intended for that purpose:

> Insert the **CONAX** Smartcard into the card slot of the integrated card reader. (golden chip facing the front when in the position of insertion)

or

> Insert a CI module with the upper side showing to the rear into the slot.

> Insert the Smartcard into the card slot of the CI module.
   Be careful to ensure that the gold-colored chip of the Smartcard is evident on the rear side when in the position of insertion.

> If an encoded program is now selected, your TV set automatically verifies the CI slot as well as the card reader and shows the program in unencoded form, provided a valid Smartcard for this program is present in the card reader or a matching CI module is present in the CI slot with a valid Smartcard included.

Special functions

For specific program positions, particular special functions are offered. Via these multifeed channels, for example, you can select various types of sports broadcasts (e.g. the Bundesliga football), change the sound channels (e.g. stadium/commentary) or the camera angles (Formula 1).
In addition, you can select the desired start time for your choice of film on certain channels.

6.5.1 Simultaneous reception of two encrypted programs

With your TV set, it is also possible to receive two different encoded programs at the same time with only one CI module and just one valid Smartcard.
However, this is only possible when you use a "Dual-Decrypt" set-up CI module (see details of the CI module manufacturers), whereby both desired programs are broadcast over the same channel or transponder (see Points 6.4.4 and 17) and the CI Dual-decoding based on Point 8.4.5.1 is correctly selected.

6.5.2 Optional channels

Certain programs give you the chance to try optional channels. These functions make it possible for you, e.g. for a sports broadcast, to freely select from a variety of different camera angles (Formula 1) or to switch between different sporting venues (Bundesliga football). If a program is available via optional channels, this will be indicated in the **s**creen selection via the infobox.

> To select one of the possible options, press the **Option** button.
   A pop-up window then appears, with the options available to you.

> Using the **up/down arrows**, choose the desired option.

> Confirm by pressing **OK**.
   Your TV set now shows the desired option.

6.5.3 Selecting start time

On certain channels, you have the chance to select certain films with different start times. This means these films can be started at your desired time all around the clock. If a program is available via optional channels this will be indicated in the **screen selection** via the infobox.

> To select a possible start time, confirm using the **Option** button.
> A pop-up window appears with the available start times.

> Using the **up/down arrow keys**, select the desired start time.

> Confirm by pressing **OK**.
> Provided the broadcast for the set start time is activated, you will be able to view it at the desired time.

6.5.4 Smartcard PIN code

In addition, for encoded programs, you can bar broadcasts unsuitable for children using a child protection identifier. To access the desired broadcast, the **PIN code** for the **Smartcard** has to be entered. This PIN code is stored on the relevant Smartcard and you will receive this together with your card. Here, it is important not to mix up the **Smartcard PIN code** with the **device PIN code** for the TV set (Point 8.8.2). If you switch to a program, on which a previously saved broadcast is being transmitted, a notification will appear.

> To access the broadcast, use the **Numeric keyboard** to enter the 4 digit **Smartcard PIN code**.
> As soon as the correct entry has been made, the broadcast will be accessible.

6.6 Volume control

After the TV set has been switched on, the sound will be transmitted at the input volume set via the **Sound adjustment menu** (Point 8.2.1).

> The volume of your TV set can be adjusted using the rocker **Volume +** key to make it louder and the **Volume –** key to make it softer.
> This setting will not be saved when the device is switched off.

6.6.1 Sound muting

> By pressing the **Sound** button **on/off**, the sound will be muted and come back on again if the button is pressed again.

6.6.2 Headphone volume

> While the sound is muted, you can use the **Volume +** and **Volume –** keys to adjust the headphone volume.

6.7 Selection of another language/sound option

If a broadcast is transmitted in multiple languages or with several sound channels, this will be indicated in a sound **Selection notice** above the infobox. You may then proceed as follows to select a different language or a different sound channel:

> Press the key **Language Select**.
> A list appears on screen of the currently transmitted languages.

> Using the **arrow keys up/down**, mark the desired language and confirm with **OK**.
> You may now listen to the program in the language selected.

Note that the sound selection process will mean the preferred audio language can be set for the respective station. That means that even after the station has changed in the meantime or the device has been switched off, when this station comes back on again, the previously selected sound option will be installed again, provided it is relevant for the station being broadcast.

Your TV set can also be used to receive mono broadcasts.

> Use the **arrow keys right/left** to select Mono channel 1 ▣, Mono channel 2 ▣ and Stereo ◉ when the sound selection has been called up.

6.7.1 Dolby Digital (AC3 Mode)

When switching on a broadcast, which is transmitted in Dolby Digital Sound, the Dolby symbol appears in the infobox ▣. If you have not activated the **Dolby Digital AC3** function (Point 8.2.8), your device should be manually switched to AC3 operation as follows:

> Press the key Language Select.
> Where available, a list of the currently available languages and **Dolby Digital** (**AC 3**) will be displayed on screen.

> Using the **up/down arrow keys**, mark the **Dolby Digital** line and confirm with **OK**.
> You can now enjoy Dolby Digital sound for this program.

Note that the sound selection process will mean the preferred audio language can be set for the respective station. That means that even after the station has changed in the meantime or the device has been switched off, when this station comes back on again, the **Dolby Digital** (**AC 3**) sound option can be installed, provided it is relevant for the station being broadcast.

If you would like your device to reproduce Dolby Digital broadcasts automatically, proceed to make the settings as described in Point 8.2.8 for automatic AC3 reproduction.

6.8 Subtitles

When switching to a broadcast which is transmitted with subtitles, the subtitle symbol appears in the infobox ⟳.
If you have not activated the **Subtitles** function (Point 8.2.10), subtitles can be manually activated as follows:

> Press the **Option** button several times if necessary.
As soon as transmission starts, a list of the currently broadcast subtitled languages appears on screen.

> Using the **up/down arrow keys**, mark the desired subtitle language and confirm with **OK**.
Now the subtitles are displayed in the lower edge of the screen. If you would like your device to automatically broadcast programs with subtitles, set your device to automatically receive subtitles as described in Point 8.2.10.

6

6.9 Video text

Your TV set can show video text information on programs, which include video text data. This is indicated to you by the symbol in the TxT infobox.

6.9.1 Switching Video text on/off

> Select the program, for which you want to see the Video text.

> Press the **Video text** key to switch on the video text display.
As soon as the selected broadcaster transmits the video text information, this appears with the page 100 (diagram).

> Pressing the **Video text** button again will revert the system to TV operation.

6.9.2 Choice of page

> Use the number keys **0** to **9** to enter the 3-digit choice of page.
Your entry will be displayed in the top left hand corner of the screen. Since the video text pages cannot all be transmitted at the same time, several seconds may be required, until your device displays the pages on your TV screen.

or

> Use the **red** or **green** keys to page forward or backward one page at a time.

> By pressing the **yellow** function key, the video text group displayed in the yellow field is accessed.

> By pressing the **blue** function key, the video text block displayed in the blue field is accessed.

6.9.3 Video text subpages

Many video text pages also comprise several subpages. These are displayed in the form of two lines separated by a diagonal slash (current subpage/number of subpages) in the video text image and/or via the display of the current and available subpages on the lower edge of the screen. As soon as a new subpage becomes available, this is automatically shown.

> To show a specific subpage, confirm using the **OK** button.
The automatic updating of subpages stops and the subpage line at the bottom of the

screen becomes active. The already memorized subpages are illustrated using the subpage figure.

> Using the **right/left arrow keys**, select the desired subpage or enter the desired subpage in four digits using the **Numeric keyboard**.

> To quit the desired illustration of the subpages, press **OK**.

6.9.4 Showing video text and TV images at the same time

> By pressing the **PiP/PaP** button, the video text is reduced to the right half of the screen, and the TV picture shrinks to the left half of the screen.

> Press the **PiP/PaP** button again, to revert to the normal video text view.

6.9.5 Exit Video text

> By pressing the **Video text** button, the video text fades out and the TV picture fades back in.

> If nothing has changed in terms of programming, once the Video text button is pressed again, the **Video text** appears with the last selected page.

6.10 Format changeover / Zoom

TV broadcasts are transmitted in various image formats (e.g. 16:9 or 4:3). To view TV pictures at optimal size on your LCD TV set, you can preselect the permanent aspect ratio (Point 8.1.3.8) or the automatic format recognition function (Point 8.1.3.9). In addition, you can adapt the image format during normal and playback operation manually based on the broadcast e.g. recording.

By pressing the **Zoom/Format** button, you can switch among the various predefined formats (**original**, **optimal**, **always 16:9**, **full zoom** and **stretch**) as well as accesssing user-defined settings, which allow you to set up the image as you wish. The set image format will be shown on the lower screen edge.
When the user-defined setting is selected, an additional window also appears as well as the format display.

To adapt the image based on your wishes the following possibilities are available:

Red function key	Increase image height
Green function key	Reduce image height
Yellow function key	Increase image width
Blue function key	Reduce image width
Arrow key	Used to move the image **up** (only for increased image height)
Arrow key	Used to move the image **down** (only for increased image height)
OK button	To implement zoom
Arrow key left to restore image settings	

> To mask the format changeover, press the **Back** button.

6.11 PiP-/PaP function

Your TV possesses a PiP function, as well as the PaP function.

Please pay attention to the following points:

- In PiP-/PaP operation, the only selectable broadcasts and external sources are those located in at least one list of favorites.

- Devices with only one tuner can only illustrate one program ond one external source simultaneously.

- The PiP-/PaP operation only allows access to broadcasts and external sources, which have been recorded in at least one list of favorites.

- For technical reasons, it is not possible to display two broadcasts, which are transmitted in HD Format.

6

PiP

With the PiP function (**PiP** = **P**icture **i**n **P**icture = Image in Image), a small image is superimposed over the main image on screen.

PaP

With the PaP function (**PaP** = **P**icture **a**nd **P**icture = Image and Image), two images of equivalent size are displayed next to each other.

6.11.1 Accessing PiP-/PaP functions

> By pressing the **PIP** button, this activates the PiP or PaP function.
  Now, the actual main image, which could be either a TV program, an external source or the playback of a hard disk, is superimposed as a small PIP image in the top right corner or slightly reduced in size and moved to the right edge of the screen. The most recently viewed TV program is shown as the main image. In PiP-/PaP mode, the sound of the main image is always reproduced.
  Whether pressing the **PIP** button activates the PiP or PaP mode depends on the setting made as described in Point 8.4.5.2 concerning the PiP-/PaP mode.

6.11.2 Exchange PiP-/PaP images

> By pressing the **Back** button both the images are exchanged. The PiP-/PaP becomes the main image and vice versa.

6.11.3 Implementing PiP-/PaP functions

To implement the PiP or PaP functions, there are two ways. These can be distinguished by specifying whether, on exiting the PiP-/PaP mode, the main image or the PiP-/PaP image should be shown on the screen.

> By pressing the Taste **PIP** the main image is now faded out and the PiP-/PaP image is shown as the new main image.

> Press the **TV/Radio** button, to fade out the PiP-/PaP image and show the main image on the full screen.

6.12 Freeze frame

> Press the **Freeze frame** key, and the TV picture will be frozen, and displayed as a still picture. During this process, the sound will be played back as normal.

> Pressing this button multiple times will unfreeze the image and normal TV playback will then continue.

6.13 EPG program journal

Your TV set possesses an electronic EPG program journal. This allows you to show the program information for single or multiple digital programs on screen and very rapidly gain an overview of the broadcasts currently being shown or the broadcasts of the day or the following days.

The EPG functions allow you to:

- Display information on program contents on your screen

- Pre-select programs, which will be selected automatically when the program/show starts

- Record timer functions

- Search broadcasts based on the program type (genre)

- Search broadcasts based on freely selectable search terms.

6.13.1 Downloading EPG data

The program information will be loaded by your HDTV at the update time set in accordance with Point 8.7.2. The pre-requisite for this is that your device must be in stand-by mode at this time. If, at this time, your unit is in standby mode or switched off, this function will not be active.

The duration of the downloading procedure will depend on the number of programs included. programs can be shown a maximum of seven days in advance. Based on the volume of data involved, the more programs are included, the shorter is the period for which preview information can be included in the electronic program guide.

You can decide for yourself which digital programs are to be included in the "electronic program guide." These may, as described in Points 8.7.4 and Point 10.5, be recorded or removed. Point 8.7 also describes how you can start the reading of the EPG file manually.

6.13.2 Interrupting the download procedure

> Interrupt the reading process by pressing the **On/Standby** button.

6.13.3 Display electronic program guide

> Press the EPG (**SFI**) key on the remote control of the TV set.
The Electronic Program Guide then appears on the screen. The channels you have selected, or those of the factory default settings, will be shown with their current programs. You can now also use the EPG function to obtain information on the contents of various programs. In addition, you may use the EPG functions available to set a particular program, to pre-select a program, or to set a timer for a program.

6.13.4 Now (table with current program contents)

First the "**Now**" EPG table will be displayed showing the programs currently being broadcast. The bar to the right of the program name indicates the elapsed time of the current program. The program currently selected is marked.

The EPG functions (Point 6.13.7) are available to you.

> By pressing the **up/down arrow keys**, you can move the marking line by line and/or left and right with the appropriate arrow keys.

> Press the **yellow** function key to go to the EPG table "**Next**" (see Point 6.13.5)

or

> By pressing the **OK** button, the marked program is set and the user exits from the EPG.

or

> By pressing the **TV/Radio** button, you can revert to normal operation or set the marked program.
> The program that was recorded by the EPG, is now shown again.

6.13.5 Next

> If the EPG-table "**NOW**" is switched on, you can call up the EPG-table "**Next**" (following programs) by pressing the **yellow** function key.

The EPG functions (Point 6.13.7) become available.

> By pressing the **up/down arrow keys**, you can move the marking line by line and/or left and right with the appropriate arrow keys.

> By pressing the **yellow** function key you can call up the EPG table "**More**" (see point 6.13.6)

or

> by pressing the **green** function key to access the previous EPG table "**Now**".

or

> Press the **TV/Radio** key to return to normal operation.

6.13.6 More

> Pressing the **yellow** function key again while the EPG table "**Next**" is displayed will take you to the EPG table "**More**".
> In this table, an additional time window is shown in the track line. In this time window, the time of the displayed EPG table is indicated.

The EPG functions (Point 6.13.7) are available to you.

> By pressing the **yellow** function key multiple times, the time will be displayed in the relevant yellow field in the lower edge of the screen and by pressing and holding the **yellow** function key, it will advance one page forward.
> A clock is displayed to give you a better overview.

> By pressing or pressing and holding the **green** function key the respective displayed time in the green field moves forward one page.

The individual days of the week are displayed along the bottom of the screen. If information relating to the following days is available, the appropriate fields will be marked.

> To obtain a preview for a specific day, either press the **numeric key** corresponding to the day of the week.

> With the number key "**0**", you can access the PVR navigator.

> Press the **Back** key to return to the table "**Next**".

> Using the **TV/Radio** button you can return to normal operation.

6.13.7 EPG functions

To execute the following **EPG** functions, call up the SFI as described in Point 6.13.3.

6.13.7.1 EPG-Info

Using the **EPG i**nfo, you can displayed detailed info on the marked broadcast. ★If detailed information is available, this is indicated next to the appropriate program.

> Use the **arrow keys** or the **function keys** to mark the desired program.

> Press the **EPG** button, to display the detailed info on the broadcast.

> You can scroll or page through lengthy information text using the **arrow keys**.

> Press the **Back** key to return to the previous table.

6.13.7.2 EPG timer programming

The EPG electronic programme guide allows you to program timer events with particular ease.see point 6.14
Moreover, using this functiuon, you can also apply the timer to program multifeed broadcasts, e.g. from the Premiere Sport Portal. The timer function for multifeed broadcasts can only be programmed in the EPG program overview (see Point 6.13.7.3).

Please note

- For EPG timer programming, please note the settings made based on Point 6.14.4 for Timer delay and after-run settings.

- See point 6.14.2 for operating this device while the timer is active.

- See Point 6.14.3 for cancelling a current Timer setting

- For manual timer programming, as well as changing or cancelling a timer, see Point 6.14.1.

6.13.7.2.1 Hard disks (PVR-) timer

> Use the **arrow keys** or the **function keys** to mark the desired program.

> Press the **Record** button, to program a **hard disk timer** for the marked broadcast (see Point 7.1.2).

6.13.7.2.2 Change station-, wake-up and VCR timer

> Press the **Option** button once, to program station **change timer** (see Point 7.1.2).

> By pressing the **Option** button multiple times, the timer type can be changed to a **wake-up timer**.

> Press the **Option** button a third time, to change the timer type to a **VCR timer**.

6.13.7.2.3 Timer menu

> Press the **red** function key **Timer** to open a selection window.

> Use the **arrow keys up/down** to mark the required **Timer** type (see Point 7.1.2).

> Confirm by pressing **OK**.
The **Time overview,** showing the data relating to the programme selected, will be displayed, so that you can check on the correctness. In this menu you can make corrections if necessary (see point 8.1.2.3).

> Return by pressing the **Back** button to the previous table.

6.13.7.2.4 Cancel an EPG timer event

> If you would like to cancel a timer event programmed via the EPG, proceed as described previously, to mark the appropriate programme.

> Press the **red** function key **Timer**, to open the pop-up window.

> Use the **up/down arrow keys** to mark the **Cancel timer line**.

> Confirm by pressing **OK**.

or

> Cancel a Timer in accordance with Point 6.14.1.3.

6.13.7.3 EPG program overview

You can use the EPG program overview to display a table with the whole days listing for an individual program. To do this, proceed as follows:

> For an accessed EPG table "**Now**", press the **green** function key, to change directly to the program view

or

> Press the **blue** function key **EPG Menu** to open a selection window.

> Use the **up/down arrow keys** to mark the **Program** line.

> Confirm with **OK**.
The daily overview of the set program is now displayed.

> Use the **arrow keys** to move the marker to the desired program or time.

  The EPG functions (Point 6.13.7) become available.

The individual days of the week are displayed along the bottom of the screen. If information relating to the following days is available, the appropriate fields will be marked.

> To obtain a preview for a specific day, either press the **numeric key** corresponding to the day of the week.

> By pressing the **green** function key, you revert to the EPG overview.

> Using the **TV/Radio** button you can return to normal operation.

Display EPG overview for other programs

> Press the **yellow** function key **Program**.
  A list appears with all the programs contained in the currently selected list of favorites (see Points 6.2.3.2 and 10).

> You can now use the **arrow keys** to mark the desired program.

> Press the **OK** key to display the EPG overview of the program selected.

6.13.7.4 Overview based on program type/genre

If you are interested in specific types of programs, you can view program information sorted by specific categories, or genres, e.g. movies, sport, etc.

> Access the EPG table "**Now**" by pressing the **SFI** button.

> Press the **blue** function key, to access the **SFI** menu.

> Use the **up/down arrow keys** to mark the entry for **Genre** and confirm with **OK**.

> Now press the **yellow** function key **Genres**, to open the genre list.

> Use the **up/down arrow keys** to select the desired type of program and confirm with **OK**.
  The list for the day will be displayed showing only programmes of the type selected.

> Using the **arrow keys**, you can move the marker to the desired broadcast.

  The EPG functions (Point 6.13.7) become available.

The individual days of the week are displayed along the bottom of the screen. If information relating to the following days is available, the appropriate fields will be marked.

> To obtain a preview for a specific day, either press the **numeric key** corresponding to the day of the week.

> Using the **TV/Radio** button you can return to normal operation.

6.13.7.5 EPG search

If you wish to receive information concerning a specific program, you can search for this automatically. To do so, you simply enter the track or the program or part of the title. The EPG then searchs the files for this program.

> Open the source selection by pressing the **OK** button.

> Press the **blue** function key **EPG Menu** to open a selection window.

> Use the **up/down arrow keys** to mark the search **Line**.

> When you confirm with the **OK** button, the menu of the EPG search is opened.

6.13.7.5.1 No search term stored

If no search term has been stored, the menu of the EPG search appears with a virtual keyboard. The track of the program, which was marked when accessing the EPG search, is now entered into the search screen.

> Now you may either transfer to look for programs with exactly this track by pressing the **green** function key (the EPG data will be searched for programs with this track and any found will be displayed) or, as described in Point 6.13.7.5.3, you can enter the search term manually.

Here, you can access the EPG information on programs, as described in Point 6.13.7.1, or implement the EPG timer programming as described in Point 6.13.7.2.

6.13.7.5.2 No search term stored

If a search term is stored, the EPG search screen will appear as follows.

> If you want to search based on a previously input search term, mark this using the **up/down arrow keys**.
In the right half of the screen, the abbreviated search results are now displayed.

> Press **OK** to open the detailed search results.

Here, you can access the EPG information on programs, as described in Point 6.13.7.1, or implement the EPG timer programming as described in Point 6.13.7.2.

6.13.7.5.3 Manually entering the search term

> Access the EPG search menu as described in Point 6.13.7.5. In order to manually enter a new search term, the **virtual keyboard** will be required.

Provided no search term has been stored in the search selection, the virtual keyboard will be displayed immediately after the menu has been accessed.
For one or multiple stored search terms, the menu appears automatically with the search results. In this case, choose the **New Search** option as described in Point 6.13.7.5.2.

> Now, you can manually enter the complete track or part of track of a program as a search term.

> To delete individual letters of the track already displayed or the entire title, touch the **red** function key **Cancel**, several times if required.

> Now enter the track or part of track as a search term using the **virtual keyboard.**

   During this process, the buttons of the following remote control functions are assigned:

Arrow keys:	The marked portion moves.
OK:	The marked line is transferred to the search term and added there.

Yellow function key:	The keyboard switches between upper/lower case as well as symbols.
Red function key:	The last line of the search term is deleted.
Green function key:	The search term entered is transferred and the search commences.
Blue function key:	You quit the search term entry without confirming and return to the search screen.

6.13.7.5.4 Processing search term

> To amend a stored search term, firstly access the EPG search as described under Point 6.13.7.5.

> Now use the **arrow keys** to mark the search term, which you wish to amend.

> To process the search term, press the **green** function key **Process**.
The **Virtual keyboard** now appears, along with the selected search term.

> Now process the search term, as specified in Point 6.13.7.5.3.

6.13.7.5.5 Cancel Search Term

> To cancel a stored search term, firstly access the EPG search as described under Point 6.13.7.5.

> Using the **arrow keys**, mark the search term, which you wish to cancel.

> Press the **red** function key **Delete**.
The following query appears.

> To delete the search term from the search screen, mark the field **Yes** using the **right/left arrow keys** and confirm with **OK**

6.13.8 Ending EPG

> By pressing the **TV/Radio** button, you can revert to normal operation.

6.14 Timer management

The HDTV possesses the following listed timer functions:

1. Hard disk timer
This function allows your TV set to be switched on and off, in order to record desired programs on the hard disk, e.g. when you are outside.
If the device has been switched on via the hard disk timer, the LCD panel remains off.

2. Video recorder timer
The video recorder timer means your TV set can be switched on and off, in order to record a desired program on an external recording device, such as a video or DVD recorder, e.g. when you are out. Be careful to note that you must also program your video/DVD recorder in this case in order to record your program.
If the device has been switched on via the video recorder timer, the LCD panel remains off.

3. Program change timer

If your HDTV is in normal operating mode, it will switch to the programmed program slot at the time selected.

Unlike when setting with the hard disk or video recorder timer, the device remains fully usable, is not switched on at the start of the program and will not be switched off afterward either.

This time type facilitates programming changes.

4. Wake-up timer

The wake-up timer, unlike the program change timer, starts in Standby mode and only switches on the device at the specified start time of the selected program. The device remains operable as usual.

To set the timer manually, or modify or delete present timer settings, make timer settings or cancel an active timer, proceed as described in the current point.

> First press the **Menu** button**,** to access the **Main menu.**

> Use the **up/down arrow keys** to mark the **Timer line.**

> By pressing the **OK** button, you can access management of the timer menu.

6.14.1 Access timer overview

> Access the menu for timer management, as described in Point 6.14.

> Mark the **Timer overview** entry using the **up/down arrow keys**.

> Confirm by pressing **OK**.
> The timer menu appears with the data of all programmed timers. Here, you can modify or delete timers or enter manual settings.

alternatively:

> Access the EPG, as described in Point 6.13.3.

> Press the **red** function key to open the Timer menu.

> Mark the entry **Timer overview** and confirm with **OK**.

6.14.1.1 Manual programming of timers

> Access the **Timer overview** as described in Point 6.14.1.

> Using the **up/down arrow keys**, mark the **empty timer line** in the overview.

> by pressing the **green** function key **New**, a window opens showing the various timer types.

> Using the **up/down arrow keys**, mark the timer type, see Point 6.14, for which you wish to program a timing event.

> By confirming with the **OK** button, you proceed to the input screen for programming events.

To program an event, proceed as follows:

Program list

> Use the **arrow keys** to mark the upper line of the menu.

> Press the **OK** key.

> Use the **up/down arrow keys** to choose within the now-open pop-up window **t**he desired list (**TV**, **Radio** or **external**) and confirm with **OK**. Provided the lists **TV lists 2**, **TV lists 3**, **Radio lists 2** o**r** **Radio lists 3** are included as programs, see Point 10, the relevant lists will also be available for selection.

Program/source

> Now press the **up arrow key**, to move the marked line one line up.

> By pressing the **OK** button, the program/source of the list you previously selected will now be displayed.

> Now mark the desired program or source using the **Numeric keyboard** (program position entry) and/or using the **arrow keys**. You can use the **arrow keys up/down** to move the marker around the list one line at a time and the **arrow keys right/left** to move the marker up or down one page at a time.

> by pressing the **OK** button the program or source is recorded into the timer.

Date

> Use the **arrow keys** to mark the column **date**.

> Use the **numeric keys** to enter the date (in 4-digit format) on which the timer event is to take place.

Start

> Mark the **Start** of the field using the **right arrow key**.

> In this line, use the numeric keys to enter the **starting** time for the timer in four digits.

Stop time for hard disks and video recorder timer

> Repeat the steps as described in "Start" to enter the stop time.

Repeat

> Use the **arrow keys** to mark the column **Rep.**

> Press the **OK** key.
  A pop-up window appears with various playback options.
  1×   Timer active once

  T Daily repeat

  1 W   Weekly repeat.

  1-5   Repeat only on weekdays

  6-7   Repeat only on weekends.

> Use the **arrow keys up/down** to select the desired function.

> Press **OK** to accept the setting.

Accepting data into memory

> When you have completed the programming, press the **green** function key **Accept**, to transfer the data to memory.

6.14.1.2 Changing timer programming

> To change an existing timer setting, **access** the timer overview as described in Point 6.14.1 and mark the **Timer** to be amended with the **up/down arrow keys**.

> by pressing the **green** function key **Change**, you access the settings for the marked timer and can now change them, as previously described in Point 6.14.1.1.

6.14.1.3 Delete timer programming

> To cancel an existing timer setting, access the **Timer overview** as described in Point 6.14.1 and mark the timer to be amended with the **up/down arrow keys**.

> Press the **yellow** function key **Delete**.
A message is displayed on screen: **Do you really want to delete this Timer?**

> Use the **arrow keys right/left** to mark the field **Yes**.

> To delete the timer setting, confirm by pressing **OK**.

6.14.2 During the timer operation

During the timer operation, the properties of the device depend as much on the programmed timer type as on the operating mode before the timer start.

6.14.2.1 Program change timer

The program change timer is only started when the device is switched on (not during Stand-by operation), whereupon at the set period, the program can easily be changed. The device remains operable as usual.

6.14.2.2 Wake-up timer

The wake-up timer, unlike the program change timer, starts also in Standby mode and switches on the device at the specified start time of the selected program. The device remains operable as usual.

6.14.2.3 Video recorder timer

When this timer starts from Standby mode, the screen is switched on when the **On/Standby** button is pressed and the program can be viewed on the screen.
To suspend the Video recorder timer, proceed as described in Point 6.14.3. Due to the Video recorder timers, certain buttons on the remote control (e.g. menu access) are not usable.

6.14.2.4 Hard disk timer

If the timer starts when in standby mode, the screen is switched on by pressing the **On/Standby** button. The subsequent properties of the device depend on whether one or two hard disk timers are running. Due to the hard disk timer, certain buttons on the remote control (e.g. menu access) are not usable.

Two hard disk timers running

When you have two hard disk timers running, a pop-up query window initially appears to ask which recording should be played back.

> Using the **up/down arrow keys** mark the desired recording and confirm with **OK**. Now a pop-up window appears to ask whether the playback of the recording should start at the actual live or start position or whether the recording should be ended.

Start

> Use the **up/down arrow keys** to select the **Entry start recording** at **Start** and confirm with **OK** to start playback at the start position of the recording. The device is now in timeshift operation, see Point 7.1.3.

Live

> Use the **up/down arrow keys** to mark the **start of the live recording point** and confirm by pressing the **OK** button. The sound and images of the program are now directly played back.

End

> Use the **arrow keys up/down** to select the entry **End recording** point and confrim by pressing **OK**. In this case, the recording will be stored.

A running hard disk timer

Now a pop-up window appears to ask whether the playback of the recording should start at the actual live or start position.

Start

> Use the **up/down arrow keys** to select the **Entry start recording** at **Start** and confirm with **OK** to start playback at the start position of the recording. The device is now in timeshift operation, see Point 7.1.3.

Live

> Use the **up/down arrow keys** to mark the **start of the live recording point** and confirm by pressing the **OK** button. The sound and images of the program are now directly played back.

Current program

> Select this point with the **up/down arrow keys** and confirm with **OK**, to switch to the current program.

6.14.3 Interrupting the timer operation

When interrupting a timer, you must specify whether the hard disk or video recorder time will be interrupted.

6.14.3.1 Interrupting a video recorder timer

If the device started the timer on Standby operation, the screen must first be switched on by pressing the **On/Standby** button.

> Press a key on the **Numeric keyboard**.

The following query appears.

> Using the **right/left arrow keys**, mark the field **Yes**.

> Confirm with the **OK** button.

6.14.3.2 Interrupting a hard disk timer

If the device started the timer on Standby operation, the screen must first be switched on by pressing the On/Standby button.

> Access the PVR navigator when two current hard disk timers are running by pressing **OK** and with one running hard disk timer by pressing the OK button and subsequently the green function key.

> Use the **up/down arrow keys** to select the recording, which you want to end, and confirm with OK.

> By pressing the **Stop** button, a pop-up screen appears to ask whether the portion of the program already stored should be saved (**Save**), discarded (**Discard**) or whether the recording should be continued (**Back**).

> Use the **up/down arrow keys** to select the desired entry and confirm with **OK**.

6.14.4 Timer settings (lead time or follow-up time)

During the EPG timer programming, see Point 6.13.7.2, the TV set receives the data of the selected program automatically from the EPG data. This means precise information concerning the start and end times of the program is transmitted. However, it frequently happens that the selected program often finishes slightly earlier or starts somewhat later than specified. In this case, the recorded program will not include either the beginning or the end. To avoid this problem, you can specify extra lead time or follow-up times by specifying these figures in minutes. The timer will then start earlier than the lead time and end following the input follow-up time, as specified in the EPG data.

>Access the menu settings as described in Point 6.14.

> Use the **up/down arrow keys** to mark the timer settings line and confirm with **OK**.

> Use the **up/down arrow keys** to mark the timer lead time or follow-up time line.

> Use the **number keys** to specify the lead or follow-up time in minutes. Be careful to ensure that the entry must be in two digits. For example:
> **0**, followed by **5** for **5** minutes lead time or follow-up time

> Press the **green** function key **Accept** to store the changes made, and to return to the previous menu.

alternatively:

> Press the **red** function key **Back**.

> If you wish to accept the changes, use the **arrow keys left/right** to click on the field **Yes**, and confirm by pressing **OK**.

6.14.5 Exit timer management

> Press the **Back** key to return to the Main Menu.

or

> Press the **TV/Radio** key to return to normal operation.

6.15 Sleep timer

The sleep timer allows you to adjust the turn off time of your device.

> To activate the sleep timer, press the **Sleep timer** button.
The currently set remaining operation time then appears in the top right corner of the screen ⊚ 01:00 to be checked.

> You can now adjust the remaining operation time via the sleep timer by pressing the **Sleep timer** button several times within the range 15 minutes to 2 hours.

6.16 Function selection

> Press the **blue** function key, to open the Navigation menu (**NAV menu**).

> Using the **up/down arrow keys**, mark the function that you want to access.

TV	Internal receiver and external connections.
Radio	Internal receiver and external connections.
PVR	PVR navigator: Access to the TV-PVR recording (Point 7.2).
Music	Access MP3 titles stored on the internal hard disk or on a connected USB device as well as radio PVR recordings stored on the internal hard disk (Point 6.17).
Image	Access to the JPG files stored on the internal hard disk or on a connected USB device (Point 6.18).

> Confirm with **OK**, to select the marked function.

6.17 MP 3 playback

You can use your TV set to play back files, which are stored in MP3 format on one among your USB storage devices connected to the USB socket or on the internal hard disk. The USB device should be formatted using the file system FAT 32. Consult Point 7.3.2 on how to copy files from a USB device onto the hard drive.

> During normal operation, press the **blue** function key to open the NAV menu.

> Use the **up/down arrow keys** to mark the music line and confirm by pressing the OK button. **OK**
The music navigator now appears, with the start view in accordance with point 8.4.3. Here, USB devices are shown by the symbol ⇤ and the internal hard disk ⊘.
Existing folders are viewed with symbols ▬, ♫▬ MP3 files and playlists.
Use the **up/down arrow keys** to select either the hard disk or the USB device

first, from which you wish to play the MP3 files and confirm with **OK**.

> Use the **up/down arrow keys** to now mark either the folder or the playlists, which contain the desired MP3 files.

> By confirming with OK, the marked folder/playlist will be opened.

> Use the **up/down arrow keys** to select from the list of JPG files, which you would like to play on the playback list.

> Start the playback by pressing the **OK** button.
The navigator then shows the playback screen and the selected file is played back. Thereafter the other files located on the same source medium, resp. in the selected playlist, will be played automatically.

6.17.1 Track information

> By pressing the **Info** button, further information concerning the selected track is displayed, provided this is contained in the ID3 tag of the title.

> Press this button again, to fade the information out.

6.17.2 Track hop

> Press the **arrow keys up/down** to skip to the previous or next title/track.

6.17.3 Pause

> By pressing the **Pause / Play** button, the playback is paused (**Pause**).

> Press the key again to resume playing the file from the position at which it was stopped.

6.17.4 Track search forwards/backwards

> By pressing the forward or rewind button several times, you can shift **Back** or **Forward** from the current MP3 title.
In the process, the individual search speeds will be shown in the following table.

> During this process press ▶▶▶▶ or ◀◀◀◀ the keys **Fast Forward**or **Rewind** which will allow you to jump forward or backward **10 minutes**.

> To stop playback, press the **Pause / Playback** button.

Display	Playback mode
▶▶	Fast forward 4-times speed
▶▶▶	Fast forward 16-times speed
▶▶▶▶	Fast forward 64-times speed
◀◀	Rewind 4-times speed
◀◀◀	Rewind 16-times speed
◀◀◀◀	Rewind 64-times speed

6.17.5 MP3 playback modes

In addition to the regular playback mode, the following additional functions are available:

- Random play of all titles of the folder selected

- Repeat all titles

- Repeating a title

> The various playback modes can be accessed using the **Option** button.
> The various playback modes are displayed in the top right corner of the playback screen as follows:

Function	On-screen display
Normal playback of all titles of the folder selected	▶ 123
Random play of all titles of the folder selected	↻? 123
Playback of all titles of the folder selected	↻ 123
Repeating a title	↻ 1

6.17.6 Switching folder levels

> First, during playback operation, go back to the folder screen by pressing the **Back** button.

> To move from a folder to the next higher level, use the **arrow keys** to mark the topmost line, which is indicated by the symbol ⇧, and confirm by pressing **OK**.

or

> press the **Back** button in the accessed Navigator.

6.17.7 MP3 playback lists

6.17.7.1 Create MP3 playback lists in the device

You can create a playback list (Playlist), to facilitate playback of the MP3 files or radio recordings of your choice.

> Choose an MP3 or a folder with MP3 files as described in Point 6.17, which you wish to include in the playlist.

> Press the **green** function key **PLS +**, to insert the file or folder into the playlist.

6.17.7.2 Creating external MP3 playback lists

It is also possible to create playback lists e.g. on the PC and subsequently copy these, as described in Point 7.3.2.1 (Copying music), to the hard disk of the HDTV. The important provisos here are:

- The MP3 file/folder structure of the title/s, which are to be recorded as part of a playlist, must be identically present on both the PC and the HDTV.

- The playlists must be created with related entries of the working directory. That means that the entry should only include the MPS track or folder, in which the MPS track is found. (No drive letters)

-       The entries must not include "\". Since the majority of programs used to create playlists, however, do contain these in the entries, you must check these using a wordprocessing program. If "\" is present, then this must be replaced by "/". (e.g. by using the search and replace function of the wordprocessing program)

-       The playlists must be stored in the format "pls" or "m3u".

6.17.7.3 Playing back playlists

>   Access the Music navigator, as described in Point 6.17.

>   To switch to the playback list display, press the **Option** button and use the **up/down arrow keys** to mark the **Playback lists** line.

>   Confirm by pressing **OK**.
        Now all the playlists present are displayed.

>   Use the **up/down arrow keys** to select the playback list 🔳 of the titles which you wish to play, and confirm with **OK**.

>   Now use the **arrow keys** to mark the title, with which you want playback to commence.

>   By pressing the OK button, playback now starts with the marked title.

6.17.7.4 Deleting tracks from the Playlist

>   Access the playback list display, as described in Point 6.17.7.3.

>   Use the **up/down arrow keys** to select the 🔳 Playback list, which you would like to edit and confirm with **OK**.

>   To delete a title from the Playlist, use the arrow keys to mark it and Press the **green** function key **PLS –**.

Be careful to note that only playlists with tracks in the pls format can be deleted.

6.17.7.5 Deleting playlists

>   Access the playback list display, as described in Point 6.17.7.3.

>   Now use the **up/down arrow keys** to mark the playback list/s 🔳, that you would like to delete.

>   By pressing the **green** function key **PLS delete**, the complete playlist is deleted.

Be careful to note that in the Music navigator, only playlists with tracks in the pls format can be deleted. In the Manage music menu, as in Point 7.3.2.3, you may delete pls playlists as well as m3u playlists.

6.17.8 Stop/end MP3 playback

>   In order to stop playback, press the **TV/Radio** button.
        You will return to normal operating mode.

6.18 Viewing pictures

Your TV set is equipped to display files in JPG format that are available either stored on the internal hard drive or from a device connected to the USB socket, as described in Point 7.2.2.4. The USB device should be formatted using the file system FAT 32. Consult Point 7.3.2 on how to copy files from a USB device onto the hard drive.

> In normal operation, press the **blue** function key.
> The **NAV menu** is opened.

> Use the **up/down arrow keys** to mark the **Images** line **OK**.

> Confirm by pressing **OK**.
> Now, the image navigator appears in the start display set as in Point 8.4.3. Here, USB devices are shown with the symbol ⤺ and the internal hard disk by ⌘. Existing folders are viewed with symbols ∎, JPG files and playlists ▥.

> Use the **up/down arrow keys** to select, as applicable, the hard disk or USB device, from which you wish to view the JPG files and confirm with **OK**.

> Use the **up/down arrow keys** to now mark the folder or playlist, which contains the desired JPG files, and confirm with **OK**.

> Use the **arrow keys up/down** to select from the list the JPG file you wish to view, and confirm by pressing **OK**.

6.18.1 Show next/previous picture

> Press the **arrow keys up/down** to skip to the previous or next image.

6.18.2 Rotate image

> By pressing the **Forward** or **Rewind** keys, the image can be rotated in a clockwise or counterclockwise direction.

6.18.3 Switching folder levels

> First, during playback operation, go back to the folder screen by pressing the **Back** button.

> To move from a folder to the next higher level, use the **arrow keys** to mark the topmost line, which is indicated by the symbol ⬆, and confirm by pressing **OK**.

or

> Press the **Back** button in the accessed Navigator.

6.18.4 Slideshow

You have the chance to show images as part of a slideshow. This function allows pictures to be shown automatically one after the other on the screen.

6.18.4.1 Starting slideshow

> Access the image navigator as described in Point 6.18.

> Use the **up/down arrow keys** to select, as applicable, the hard disk or the USB device, from which you wish to view the JPG files and confirm with **OK**.

> Use the **up/down arrow keys** as applicable to now mark the folder or playlist, which contains the desired JPG files, and confirm with **OK**.

> Use the **up/down arrow keys** to select from the list of JPG files for those you wish to include on the playback list.

> By pressing the **yellow** function key **Slideshow** all images of a folder or playlist are automatically shown, commencing with the marked image.

6.18.4.2 Pause

> By pressing the **Pause / Play** button you can pause the playback.
  This will be indicated with the word **Pause** on screen.

> Restart the playback by pressing the button again.

6.18.4.3 Show next/previous picture

> Press the **arrow keys up/down** to skip to the previous or next image more swiftly.

6.18.4.4 Adjusting image changeover speed

> By pressing the **right/left arrow key** you can adjust the image changeover speed from **5** to **100** seconds.

Please note, that for large files and short changeover speed, it may be impossible to entirely show the picture within the changeover time. If the image changeover time is too short for the file size, the image will be displayed once the reading process has finished.

6.18.4.5 Rotate image

> By pressing the **Forward** or **Rewind** keys the image can be rotated in a clockwise or counterclockwise direction.

6.18.4.6 End slideshow

> Press the **Stop** button to end the Slideshow and reactivale the Navigator.

or

> To revert to normal operation press the **TV/Radio** button.

6.18.5 JPG playback lists

6.18.5.1 Creating JPG playback lists

You can create a playback list (Playlist) to facilitate playback of the JPG files of your choice.

> Access the image navigator as described in Point 6.18.

> Where appropriate first use the **arrow keys up/down** to mark the folder containing the desired image files which you wish to add to the playlist 🖼, and confirm by pressing **OK**.

> Use the **up/down arrow keys** to select from the list of JPG files, which you would like to play on the playback list ▣

> Press the **green** function key **PLS +**, to add the JPG file to the playback list ▣.

or

> Use the **up/down arrow keys** to mark a folder, which contains JPG files, and press the **green** function key **PLS +**, in order to include the entire content of the folder into the Playlist.

In this way, put together a playlist based on your own preferences.

6.18.5.2 Playing back playlists

> Access the image navigator as described in Point 6.18.

> To switch to the playback list display, press the **Option** button and use the **up/down arrow keys** to mark the **Playback lists** line.

> Confirm by pressing **OK**.
Now all the playlists present are displayed.

> Use the **up/down arrow keys** to select the playback list ▣ of the images which you wish to view, and confirm with **OK**.

Use the **arrow keys up/down** to select from the list the JPG file you wish to view and confirm by pressing **OK**.

6.18.5.3 Deleting tracks from the Playlist

> Access the playback list display, as described in Point 6.18.5.2.

> Now use the **up/down arrow keys** to mark the playback list/s ▣ that you would like to edit.

> To delete a title from the Playlist, use the arrow keys to mark it and press the **green** function key **PLS -**.

6.18.5.4 Deleting playlists

> Access the playback list display as described in Point 6.18.5.2.

> Now use the **up/down arrow keys** to mark the playback list/s ▣ that you would like to delete.

> By pressing the **green** function key **PLS delete** the complete playlist is deleted. Playlists may also be deleted in the image management menu as shown in Point 7.3.2.

6.18.6 Stop/end image display

> To stop playback and revert to normal operation press the **TV/Radio** button.

7 Hard disk operation

The HDTV is equipped with a permanently integrated hard disk device. Thanks to the hard disk and the PVR function (**PVR** = **P**ersonal **V**ideo **R**ecorder) you no longer need to use any external equipment for recording (e.g. Video or DVD recorders). The recording capacity depends on the data volume of the materials broadcast and also on the size of the hard disk. Any modification unauthorized by TechniSat is prohibited and will lead to all warranty being void.

Hard disk recordings of programs from sources of DVB-S, DVB-C, DVB-T and Analog CT as well as external sources EuroAV 1, EuroAV 2 and Video/S-Video can be handled. In the process, provided they are broadcast, additional sound channels in additional to the normal audio and video data, as well as recorded video text and subtitle data, can be recorded. These features can be accessed during the subsequent playback, as described in Points 6.7, 6.8 and 6.9.

7.1 Recording

The following recording modes are available to you, to record broadcasts onto the hard disk.

1. Immediate recording
Choose this recording option, to record the program currently being shown at the touch of a button.

2. Timer-controller recording
This function allows your TV set to be switched on and off, in order to record desired programs on the hard disk, e.g. when you are outside. To do so, you can program the timer manually or automatically using the EPG function.

3. Timeshift recording
The timeshift recording function allows delayed viewing of programs. This allows you to watch what has been already recorded as the recording process continues.

Please note, that if the device is connected to a satellite unit, you should always use the HDTV with two separate DVB-S antenna connections, in order to have access to all the recording facilities during DVB-S operation. This allows you to use the following combinations of recording and playback:

- Record a program and playback another program or watch a favourite hard disk recording at the same time.

- Record two programs at the same time, even when they are being received by different receivers.

- Record two different programs at the same time and playback a program that has already been recorded.

If only a **DVB-S antenna connection** is available for connecting the HDTV, the recording and playback scope will be limited.

- Record a program and at the same time, play back another program from the **Same** receiving area or a favourite hard disk recording.

- Record two programs at the **Same** time from the same recording area.

- Record two different programs from the **Same** receiving area at the same time and playback a program that has already been recorded.

7.1.1 Immediate recording

7.1.1.1 Starting recording manually

Option 1:

> Switch on the program/source, of which you would like to make a recording.

> Press the **Record** button in order to record the program in question. While the recording is proceeding, the program is still shown on the screen. At the start of the recording, a note will be indicated to you at the top right of the screen as well as in the Infobox.

> To pause the playback of the current program at a particular point, press the **Pause / Play** button.
While the recording proceeds in the background, a still image appears on the screen.

> To proceed with the playback of the program from this point, press the **Pause / Play** button again.
You will now view the program with a time delay relative to the live broadcast (**Timeshift**), while the recording of the program in question continues.

Option 2:

> If you have to interrupt the viewing of a program, e.g. during a telephone call or similar, you can pause the playback by pressing the **Pause / Play** button and start the recording of the program at the same time.
While the recording starts in the background, a still image appears with a note in the top right corner of the screen, as well as in the Infobox on the screen.

> To proceed with the playback of the program from this point, press the **Pause / Play** button again.
You will now view the program with a time delay relative to the live broadcast (**Timeshift**), while the recording of the program in question continues.

7.1.1.2 Ending recording manually

> First select as applicable the recording to be ended, by accessing the Navigator through **OK**, marking the recording using the **arrow keys** and confirming with **OK**.

> Now press the **Stop button**.
The query is displayed "**Would you like to store or discard the recording?**".

> Use the **up/down arrow keys** to select **Store**, to store the recording on the hard disk, or **Discard** if you do not wish to store the program.

> Confirm your selection by pressing **OK**.

7.1.1.3 Ending recording automatically

Option 1:

> Press the **On / Standby** button.
> Now a query appears which should indicate the running recording.

> Use the **up/down arrow keys** to mark the line containing the desired action and confirm with **OK**.
> The TV set now records the actual program completely or up to the selected time period and subsequently reverts to standby mode (Standby), the screen is then switched off directly after the selection.

> If you switch the TV set on before the end of the recording, proceed as described in Point 6.14.2.4.

Option 2:

> Press the **Record** button.
> A window will be displayed on screen, showing the functions

> Use the **up/down arrow keys** to mark the line, which contains the desired action, e.g. **+1 hour**, and confirm with **OK**.
> The TV set will now record the programme(s) being broadcast on the channel selected for the time period selected, and will then automatically stop recording

7.1.2 Timer recordings

Using the hard disk timer, you can automatically record programs to the hard disk, e.g. when you are absent.
You may either programme the timer by means of the EPG function as described in Point 6.13.7.2, or manually as described in Point.6.14.1.1

Note when operating the HDTV while using a hard disk timer also Point 6.14 as well as Point 6.14.2.

Please note!!!
Please ensure that the device has acquired the time. This will be displayed during operation in the Infobox. Should this not be the case, allow your device to remain for approx. 30 seconds on e.g. ZDF or the station switched on in accordance with Point 8.3., so that the time is read.

7.1.3 Timeshift function

The timeshift function can be used to facilitate playback and recording being implemented at the same time. This allows **time-delayed TV viewing**. This means you can watch the beginning of the recording and thus skip precorded sections (e.g. commercial breaks). At the same time, the live signal of the broadcast is still being recorded. (see following examples)

Example: Skipping commercial breaks
Would you like to watch a program without having annoy-ing commercial breaks?
With the PVR function, you can skip over any commer-cial breaks recorded quite easily.

Time	14:00	15:00	16:00	17:00	18:00	19:00

PVR recording: Trans-mission | W | Trans-mission | W | Trans-mission | W | Trans-mission   W Commercial break

PVR playback: Trans-mission
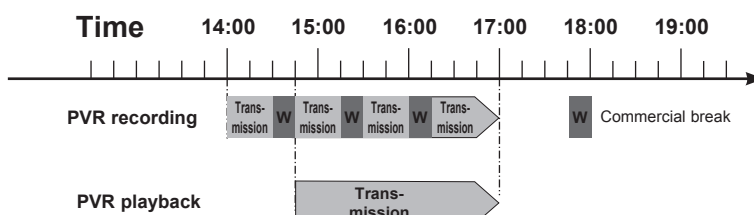
Example: Time-delayed playback
You missed the start of the Formula 1 race. No problem!
The PVR shows you the race in time-delayed format, while it continues to record.

Time	14:00	15:00	16:00	17:00	18:00	19:00

PVR recording: Start / Formula 1 / Stop

PVR playback: Start / Formula 1 / Stop
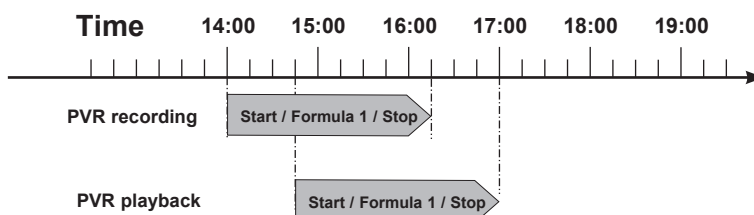
Starting timeshift function

> Press the **Pause / Play** button.
The playback of this broadcast is stopped and, at the same time, the recording of the current program commences. While the recording starts in the background, a still image appears with a note in the top right corner of the screen, as well as in the Infobox on the screen.

> To proceed with the playback of the program from this point, press the **Pause / Play** button again. You will now view the program with a time delay relative to the live broadcast (**Timeshift**), while the recording of the program in question contin-ues.

> To go to a particular point of the current recording, the **Playback**, **Pause** and **Jog shuttle** functions are available as well as fast forward/rewind, as described in Point 7.2.

> by pressing the **Info** button, the Infobox will be shown with a progress bar, which shows the elapsed recording time as well as the time delay with the live broadcast.

7.1.4 Setting markers while recording

> By pressing the **Record** button during a current recording, a window with the available functions will be opened.

> Use the **arrow keys up/down** to mark the line **Set mark** confirm by pressing **OK**.
> A marker will now be set at the current position. Continue in thiis manner to set markers at all desired places.
> Marking can be done automatically or manually during a recording (Point 7.2.5) and in the manage hard disk menu (Point 7.3.1.3) provided the automatic program marking function is activated (Point 8.4.2.3).

7.2 Playback

Access to your hard disk recordings can be made through the hard disk or PVR navigator.

7.2.1 Viewing hard disk recordings

> During normal operation, press the **Stop** key to open the PVR navigator. Based on whether you are in TV or radio operation, a list appears with all the TV or radio recordings contained on the hard disk. The marked recording will be already shown in the preview window.

> Now use the **up/down arrow keys** to mark the recording, which you would like to view.

> Start the playback by pressing the **OK** button.
> Within a short time, the Infobox appears with the overall recording duration and the actual position as well as other useful information (see Point 6.4.1).

7.2.1.1 Record one/two program/s and watch one current recording at the same time

While one or two recording/s are proceeding, you can play back a current hard disk recording.

> Access the PVR navigator when two current recordings are running by pressing **OK** and with one running recording by pressing the OK button and subsequently the **green** function key.

> Now use the **up/down arrow keys** to mark the recording, which you would like to view.

> Start the playback by pressing **OK**.

7.2.2 Pause / still image

> To pause the playback of a recording (Still image), press the **Pause / Play** button during the playback. Appears **Pause II** the indication.

> To restart the playback of the program from this point, press the **Pause / Play** button again.

7.2.3 Fast forward and rewind

To access a specific part of a recording, your PVR possesses fast forward and rewind functions.

> During playback press the fast forward or rewind button. The indication **Forward ▶▶** or **Rewind ◀◀** appears.
> The recording will now be spooled at 4 times the normal speed in the chosen direction.

> If you press the Fast forward or rewind button again, the search speed increases to **16-times**.
> The indication **Fast Forward ▶▶▶** or **Rewind ◀◀◀** appears.

> If you press the Fast forward or rewind button again, the search speed increases to **64-times**.
> The indication **Fast Forward ▶▶▶▶** or **Rewind ◀◀◀◀** appears.

> By pressing the **Fast forward** or **Rewind button**, you can jump **Backward** or **Forward** by **10 minute steps**.

> Once the desired section of the recording is reached, you can press the Pause / Play button again to revert to normal playback operation.

7.2.4 Jog shuttle function

In addition, your TV set features a so-called jog-shuttle function which allows you to go to a specific place in your recording very quickly and precisely. This can be used as follows:

> While in playback mode, press the key **Jogshuttle on/off** (Freeze frame),to go to the jog-shuttle mode.
> The playback of the recording will be stopped (Freeze frame). The symbol "▶II" will be displayed.

7.2.4.1 Fast forward and rewind

> By pressing the **right/left arrow keys** several times if necessary, you can change the speed and direction of playback.
> In the process, the playback modes will be shown in the following table.

Display	Playback mode
▶II	Pause
I▶	Slow motion
▶	Playback
▶▶	Fast forward 4-times speed
▶▶▶	Fast forward 16-times speed
▶▶▶▶	Fast forward 64-times speed
◀◀	Rewind 4-times speed
◀◀◀	Rewind 16-times speed
◀◀◀◀	Rewind 64-times speed

> By pressing the **right or left arrow keys ▶▶▶▶** or **◀◀◀◀** during the on-screen note you can jump forward or back by 10 minutes.

7.2.4.2 Slow motion

> By pressing the **right arrow key** once, the recording will be played back in slow motion and the indication "I▶" will be displayed.

7.2.4.3 Single image stepping

> Press the **arrow key up** or **down** to display the next frame in a forward direction in a **backward**/**reverse** direction.

7.2.4.4 Create image

> By pressing the **Record** button a single image can be transferred to the hard disk. By creating images in this way you can, as described in Point 6.18, access and also manage as described in Point 7.3.2.

7.2.5 Setting markers

> As described before, go to the place in your recording at which you wish to insert a marker.

> Press the **Record** key to set a marker at the selected spot.
Continue in this manner to set markers at all desired places. Marking can be done automatically or manually during a recording (Point 7.1.4) and in the Manage hard disk menu (Point 7.3.1.3), provided the automatic program marking function is activated (Point 8.4.2.3).

7.2.6 Jump to marked points

During the playback of the recording, you can jump directly to marked points, which you have previously made as described in points 7.1.4, 7.2.5 or 7.3.1.3.

> By pressing the **Option** button during playback, a window with the marking present will be opened.

In addition, the mark "Current" will appear. This indicates the actual playback position within the recording.

> As soon as you use the **up/down arrow keys** to highlight a mark, the playback commences from that point.

> By pressing the **OK** button, the window is closed and you revert to normal playback operation at the marked place.

7.2.7 Ending playback

> Press the **Stop** button, to end the playback. The playback is ended and your TV set reverts back to normal operation. In this process, your TV set "notices" the point in the recording at which playback has been ended. When you restart the playback of this recording, it automatically recommences from the place you previously ended.

7.3 Manage hard disk

> Access the **Main menu** by pressing the Menu button.

> Use the **up/down arrow keys** to mark the hard disk line.

> Confirm by pressing **OK**.
> The manage hard menu **Program** will be displayed.

> Use the **arrow keys up/down** to move the marker within the menu, and to change the individual items as indicated.

7.3.1 Manage recording

In this menu, you have the chance to process, delete and protect your recordings against children viewing.

> Press the **OK** button to go into the **Manage recording submenu**.
> A list appears with the recordings contained on the hard disk.

> Use the **up/down arrow keys** to mark the desired recording.

7.3.1.1 Deleting

> To delete the marked recording, now press the **red** function key **Delete**.

> Use the **right/left arrow keys** to mark OK in the query box that appears, to delete the recording or the field **Cancel** to cancel the process.

> Confirm your selection by pressing **OK**.

7.3.1.2 Child protection

Recordings that are unsuitable for children and young people can be stored. These recordings can then only be played back when a 4 digit PIN is entered. In order for the child protection function to be active, this must, as described in Point 8.8, be switched on.

> To store the marked recording, press the **green** function key. The selected recording us then stored with the child protection symbol showing.

7.3.1.3 Processing

> By pressing the **yellow** function key **Process** you access the menu for processing of the marked hard disk recordings.

> This is played back in a preview window (1). In addition, the markings during this recording (2) are shown. By default, these markings are shown at the **Start** and **End**. In addition, a yellow progress bar (3) is indicated, which shows the actual playback position and the overall recording duration. In addition, a red bar (4) is also displayed. This shows the actual recorded portion between two marks.

> In order to jump to a portion of the recording designated by a mark, mark the recording at the desired point using the **up/down arrow keys** and confirm with **OK**.

7.3.1.3.1 Jumping to the preferred portion of the recording

> Using the **Forward**, **Rewind**, **Pause/play** and **Jog-shuttle** buttons (see Points 7.2.2 - 7.2.4) you can access preferred portions of your recordings.

7.3.1.3.2 Functions

> By pressing the **green** function key **Menu** you can open a window with the functions available for processing the recording.

7.3.1.3.3 Placing marks

> As described before, go to the place in your recording at which you wish to insert a marker.

> Press the **green** function key **Menu** to open the function window.

> Use the **up/down arrow keys** to **position the line mark**.

> Press the **OK** button to set a marker at this point in the recording. Marks can be set manually or automatically, as described in points 7.1.4 and 7.2.5, provided the automatic program marking function (Point 8.4.2.3) is activated.

7.3.1.3.4 Deleting marks

> Use the **up/down arrow keys** to mark a marked point, which you wish to delete.

> Press the **Green** function key **Menu**, to open the function window.

> Use the **up/down arrow keys** to **position the line mark**.

> To delete the mark, confirm by pressing **OK**.
> Only the marks (position marks) will be deleted with no effect at all on the recording – it will remain completely unaffected.

7.3.1.3.5 Jump to marked points

At the touch of a button you can jump to a point marked by a mark.

> Use the **up/down arrow keys** to mark a marked point, to which you wish to jump.

> Press the **green** function key **Menu** and use the **up/down arrow keys** to jump to the line mark.

> To jump to this mark, confirm by pressing **OK**.

7.3.1.3.6 Renaming marks

> Use the **up/down arrow keys** to mark a marked point, which you would like to rename.

> Press the **green** function key **Menu** and use the **up/down arrow keys** to mark the line rename marks.

> To open the virtual keyboard, confirm by pressing **OK**.

> Now use the **virtual keyboard** to enter the desired names. In the process, the buttons of the remote control are configured to the following functions:

Arrow keys:	The marked portion moves.
OK:	The marked letters will be included in the names and placed behind them.
Yellow function key:	The keyboard switches between upper/lower case as well as symbols.
Red function key:	The last letter of the name is deleted.
Blue function key:	You quit the input name process without making any change and return to the record processing menu.
Green function key:	The input name is confirmed.

> After pressing the **green** function key, a query appears, asking whether the name should be confirmed. Use the **arrow keys left/right** to select the field **OK**, and confirm the names by pressing **OK**.

7.3.1.3.7 Deleting portions

Your PVR gives you the chance to delete specific portions of an existing recording (e.g. commercial breaks).

Please note:
The deleted portions will be irretrievably removed from the hard disk in the process.
To delete a portion, proceed as follows:
The beginning and the end of the section that is to be removed must be indicated by two markers.

> To do this set a marker at the beginning and at the end of the section to be extracted with one **marker each**, as described under setting markers.
> The **Start** and **End** marks already present can also be used for this purpose.

> Now use the **arrow keys up/down** to set the marker indicating the beginning of the section to be deleted. The section to be deleted will now be indicated in **red** on the progress indicator as well as in the overview of existing markers.

> Now press the **green** function key **Menu** and use the **up/down arrow keys** to mark the area **To be deleted**.

> Press **OK** to display a query window.
> This contains information on the portion to be deleted.

> To confirm deletion of the portion, use the **right/left arrow keys** to indicate the field **OK** and confirm with **OK**.

7.3.1.3.8 Copying portions

This function allows you to copy a section of a recording. A new recording is generated, consisting only of this section. The recording from which this section is copied remains in memory unchanged.
To copy a section, proceed as follows:
The beginning and the end of the section that is to be copied must be indicated by two markers.

> To do this set a marker at the beginning and at the end of the section to be extracted with one **marker each**, as described under **Setting markers**.
> The **Start** and **End** marks already present can also be used for this purpose.

> Now use the **arrow keys up/down** to set the **Marker indicating** the beginning of the section to be copied.
  The section to be copied will now be indicated in **red** on the progress indicator as well as in the overview of existing markers.

> Now press the **green** function key menu and use the **up/down arrow keys** to mark the area to be copied.

> Press **OK** to display a query window.
  This contains information on the portion **To be copied**.

> To confirm the copying of the portion, use the **right/left arrow keys** to indicate the field **OK** and confirm with **OK**.
  The marked section will now be copied to a new recording. Depending on the size of the section, this may take several minutes.

7.3.1.3.9 Splitting a recording

This function allows you where, for instance, two successive programs were recorded as a single recording, to split these into two individual recordings. Each recording will be split at the point indicated by the relevant markers.
Recordings can be split as follows:

> Set a marker at the beginning of the section to be separated, as described under **Set marker**.

> Now use the **arrow keys up/down** to mark the marker from which the total recording is to be split.

> Now press the **green** function key **Menu** and use the **arrow keys up/down** to mark the line split recording.

> Press **OK** to display a query window.
  This will show information relating to the two recordings to be created by the split.

> To actually divide the recording, use the **right/left arrow keys** to indicate the field **OK** and confirm with **OK**.

7.3.1.3.10 Renaming recordings

Your PVR removes information from the broadcast data stream concerning the name of the broadcast programs. If a single recording includes several programs, all the names of the stored programs are compiled and stored internally.
To rename a recording, proceed as follows:

> Press the **green** function key **Menu** and use the **up/down arrow keys** to mark the line rename recordings.

> By confirming with OK, a list appears with the possible titles.

> Use the **up/down arrow keys** to select the title that you wish to assign and confirm with **OK**.

> Use the **arrow keys left/right** to select the field **OK** in the subsequent query window, and confirm by pressing **OK**.

> If you would like to rename the recording with your choice of name, simply mark a **New entry** instead of the displayed names using the **up/down arrow keys**.

> By pressing the **OK** button, the virtual keyboard is superimposed, which which you may, as described in the **Renaming marks** section, enter new names.

7.3.1.3.11 Enlarge video

To faciliate finding the desired portion of a recording, you can increase the size of the video picture of the recording.

> Press the **green** function key **Menu** and use the **up/down arrow keys** to mark the line **Expand video**.

> By confirming with **OK**, an expanded version of the video screen is shown.
> Now you can reach the desired portion of the recording, as described in Point 7.3.1.3.1.

> To make the video image smaller again, proceed in the same way, except for marking the line **Reduce video size**.

7.3.2 Managing music/pictures

With your TV set, as described in Points 6.17 and 6.18, you can play back MP3 and JPG files. To copy the relevant files to your hard disk, connect a USB device, as shown in Point 4, on which MP3 or JPG files are contained, with the USB socket of the TV set.

Please be note that you can only manage MP3 files in the **Copy music** and only JPG images in the **Copy images**.

> Call up the menu **Manage hard drive** as described in Point 7.3.

> Use the **up/down arrow keys** to mark the line **copy music** or **copy images**, to manage the relevant files.

> Confirm by pressing **OK**.

   In the menu, which is divided into two, the left half (internal data storage) shows the files, folders and playlists stored on the hard disk. The right side (external data storage medium) shows the files, folders and playlists that are included on the connected USB device.

> Use the **green** function key **External** to switch to the USB device or the red function key **Internal** to the hard disk.
> The first file or first folder of the list is marked.

Individually marking

> Now use the **arrow keys** to mark the file, playlist or folder which you wish to copy, move or delete.
> For files, the functions display or access are also available.

> Proceed with the marking process as described in Points 7.3.2.1 - 7.3.2.3, to copy, move or delete the files, playlists or folders.

Marking in blocks

To mark several files/playlists simultaneously, proceed as follows:

> First use the **arrow keys** to mark a file/playlist that you wish to copy, move or delete.

> Press the **OK** key to go to the selection mode. The recording will be marked with a cross on the left side.

> Using the **arrow keys**, the subsequent or previous files/playlists can also be marked.>

> After you have proceed to mark the desired files in this way, proceed as described in Points 7.3.2.1 and 7.3.2.3, to copy or delete the recordings.

Please note that the marking of folders in blocks is not possible! To copy, move or delete several folders at the same time, you can use the function Selective marking.

Selective marking

With this function, multiple folders and/or files/playlists can be marked, to copy, move or delete them all at once. In this process, unlike when marking in blocks, the selected folders, files and playlists need not be in consecutive order adjacent to each other.

> Press the **blue** function key **Functions** in order to open the selection window showing the available functions.

> Use the **arrow keys** to mark the line Select and confirm by pressing the OK button.

> Now use the arrow keys to mark the file, playlist or folder, which you wish to copy, move or delete.

> Finally press the **yellow** function key **Select**.
  The file, playlist or folder will be marked with a cross on the left side.

> Repeat the last two steps, to mark the desired files, playlists and/or folders and then proceed as described in Points 7.3.2.1 - 7.3.2.3, to copy, move or delete the files, playlists and/or folders.

7.3.2.1 Copying

The **Copying function** allows you to create a copy of the marked file/playlist or the marked folder on the hard disk or on the USB device. The original file or folder remains intact.

> Mark the **Files**, **Playlists or Folders**, as described under **Individually marking**, **Marking in blocks** or **Selective marking**, which you wish to move onto the hard disk or USB device.

> Press the **blue** function key **Functions** to open a window showing the functions available.

> Use the **up/down arrow keys** to mark the line **Copying** and confirm with **OK**.

> To delete the marked files, playlists or folders, now press the **yellow** function key **Delete**. A **Copy** is now made of the marked files, playlists or folders.

7.3.2.2 Moving

The moving function will move the marked files/playlists or the marked folder from the source medium (e.g. a USB device) to the target medium (e.g. the hard disk). The moved files/playlist or the moved folder is subsequently located only on the target medium.

> Mark the **Files**, **Playlists or Folders**, as described under **Individually marking**, **Marking in blocks** or **Selective marking**, which you wish to move onto the hard disk or USB device.

> By pressing the **blue** function key **Functions**, the function window opens.

> Use the **up/down arrow keys** to mark the line Moving and confirm with **OK**.

> To delete the marked files, playlists or folder, now press the **yellow** function key Delete.
> The marked files, playlists or folder are now moved to the other device.

7.3.2.3 Deleting

To delete files or a folder, proceed as previously:

> Mark the **Files, Playlists or Folders**, as described under **Individually marking, Marking in blocks** or **Selective marking**, which you wish to delete from the hard disk or USB device.

> By pressing the **blue** function key **Functions**, the function window opens.

> Use the **arrow keys up/down** to mark the line **Delete** and confirm with **OK**.

> To delete the marked files, playlists or folder, now press the **yellow** function key Delete.
> The marked files, playlists or folder are now deleted.

7.3.2.4 Sampling MP3 files/Show pictures

To **Play** an MP3 file in this menu or view a JPG file, the functions **Play** or display are available to you.

> Use the **arrow keys** to mark the relevant file.

> Press the **blue** function key **Functions** to open a window showing the functions available.

> Use the **up/down arrow keys** to mark the line **Play** or **Display** and confirm with **OK**.

> By pressing the **yellow** function key, the file currently marked will be played or displayed.

7.3.3 Copying recordings

This function allows you to export recordings from the internal hard drive to an external USB device, e.g. another hard drive.

> Call up the menu **Manage hard drive** as described in Point 7.3.

> Use the **up/down arrow keys** to mark the line **Copying recordings**.

> Confirm by pressing **OK**.
> The menu **Copy recordings** will be displayed.

> On the left half of the screen you can see the recordings available on the internal hard drive. The right half of the screen shows the contents of the USB device.

Individually marking

> Using the **arrow keys**, you can mark the recording, which you wish to export, delete or view in the preview window.

> Proceed with the marking, as described in Points 7.3.3.1 - 7.3.3.3, to copy or delete a file or to start up the preview window.

Marking in blocks

To mark several recordings simultaneously, proceed as follows:

> First use the **arrow keys** to mark a recording, which you wish to copy or delete.

> Press the **OK** key to go to the selection mode. The acceptance is marked with a cross on the left side.

> Using the **arrow keys**, the subsequent or previous recordings can also be marked now.

> After you have proceed to mark the desired files in this way, proceed as described in Points 7.3.3.1 and 7.3.3.3, to copy or delete the recordings.

Selective marking

With this function, multiple recordings can be marked, in order to copy or delete them in one go. In this process, unlike when marking in blocks, the selected recordings need not be in consecutive order adjacent to each other.

> Press the **blue** function key **Functions**, in order to open the selection window showing the available functions.

> Use the **arrow keys** to mark the line Select and confirm by pressing the OK button.

> Use the **arrow keys** to select the recording, which is to be copied or deleted.

> Finally press the **yellow** function key **Select**. The acceptance is marked with a cross on the left side.

> Repeat the last two steps, in order to mark the desired recordings and subsequently proceed as described in Points 7.3.3.1 or 7.3.3.3, to copy or delete the recordings.

7.3.3.1 Exporting

The **Export** function creates a copy of the marked file on the USB device. The original file remains intact.

> Mark, as described under **Individual marking, Marking in blocks** or **Selective marking** the recording/s, which you wish to delete from the hard disk or the USB device.

> Press the **blue** function key **Functions** to open a window showing the functions available.

> Use the **arrow keys up/down** to mark the line **Export** and confirm by pressing **OK**.

> To copy the marked files, now press the **yellow** function key **Export**.
> The marked files will now be copied to the USB device, and will then be displayed in the right half of the menu.
> Please note that this procedure may take quite some time, depending on the size of the recordings.

7.3.3.2 Preview

This function allows you to start the playback of a file in a small preview window.

Use the arrow keys to mark the file you would like to preview.

> Press the **blue** function key **Functions** to open a window showing the functions available.

> Use the **arrow keys up/down** to mark the line **Preview** and confirm by pressing **OK**.

> To start the preview of the marked file, you must now press the **yellow** function key **Preview**.

7.3.3.3 Deleting

You can also delete a file on the internal hard drive resp. on the USB device while working in this menu.

> Use the **green** function key **External** to switch to the USB device or the red function key **Internal** to switch to the hard disk as applicable. The first file on the list is marked.

> Mark, as described under **Individual marking, Marking in blocks** or **Selective marking** the recording/s which you wish to delete from the hard disk or the USB device.

> Press the **blue** function key **Functions** to open a window showing the functions available.

> Use the **arrow keys up/down** to mark the line **Delete** and confirm with **OK**.

> To delete the marked files, now press the **yellow** function key **Delete**.
> A query message will be displayed, asking "**Do you really wish to delete the selected files**".

> To carry out the deletion operation, use the **arrow keys** to select the field **Yes**, or to cancel, select **No**, and confirm with **OK**.

7.3.4 Hard disk information

> Access the **Hard disk** menu, as described in Point 7.3 and mark the point **Hard disk information**.

> By pressing the **OK** button, a window appears with information about the integrated hard disk.

7.3.5 Hard disk maintenance

> Access the **Hard disk** menu, as described in Point 7.3 and mark the point **Hard disk disk maintenance**.

> Press the **OK** button, to get an overview of the contents of the hard disk and the number of recordings contained.

7.3.5.1 Verification of the hard disk

> To start the process of checking the hard disk, use the **right/left arrow keys** to mark the field **Test**.

> Press the **OK** key.
> A query box opens, whether to proceed with the test or not.

> Use the **arrow keys left/right** to select the field **OK**, and confirm by pressing **OK**.
> The test process is not started and may take several minutes, depending on the extent to which the hard disk is filled and on the number of recordings contained. Subsequently, you will receive the test results displayed on screen.

7.3.5.2 Formatting the hard disk

When formatting the hard disk, the file system will be renewed. This may become necessary, when the process of testing the hard disk reveals any error.

Note!
When formatting the hard disk, all information is deleted, which means that all recordings contained will be wiped.

> To format the hard disk, use the **right/left arrow keys** to mark the field **Format**.

> Press the **OK** key.
> A query box opens, whether to proceed with the Formatting or not.

> Use the arrow **keys left/right** to select the field **OK**, and confirm by pressing **OK**.
> The formatting is now started and may take a few minutes to complete.

Please note!
The device may only be operated with the integrated hard disk. Otherwise, this may lead to the device being damaged. With this in mind, do not open up the device and do not attempt to replace the hard disk, since this will void any warranties.

7.3.6 Quitting hard disk management

> Return by pressing the **Back** button to the previous menu level.

or

> Press the **TV/Radio** key to return to normal operation.

7

8 Settings

With the help of the OSD menu, all the device settings can be made using only a few buttons on the remote control. This means e.g. you can adjust image, sound and basic settings on the HDTV or those in the electric EPG journal, the child protection function and other special functions. Moreover, antenna settings can also be changed and the signal strength is also indicated.

> Access the **Main menu** by pressing the **Menu** button.

> Use the **up/down arrow keys** to mark the line **Settings**.

> Confirm by pressing **OK**.
> The menu **Settings** will be displayed.

8.1 Image settings

In the image settings menu, you can adapt images from any source based on your own individual wishes.
Note, that certain settings are not applicable to all sources.

> Access the **Settings menu**, as described in Point 8.

> Use the **up/down arrow keys** to mark the line Image settings and confirm with OK.
> The menu basic **settings** will be displayed.

8.1.1 Select source

Since the image settings can be set individually for each source, you must first select the source, for which you wish to change the settings.

> Using the **up/down arrow keys**, mark the line **Source**.

> by pressing the **OK** button, a window opens with the various sources.

> Now use the **up/down arrow keys** to mark the source, from which you would like to adjust the image settings.

> Confirm by pressing **OK**.
> The image settings menu with the available entries will now be adapted to the selected source.

8.1.2 Access previously set image values

For the various image values, there are two determined settings, which you can access. The image settings can subsequently be adapted as you like, as described in the following point

> Press the **yellow** function key **Image mode**.
> A window now opens to select the image mode.

> Use the **up/down arrow keys** to mark the selected image mode.

> By pressing the **OK** button, the values of the marked image mode are accessed.

8.1.3 Manually adjusting image values

8.1.3.1 Light control

Here choose whether the adjustment of the background light should be done automatically based on the brightness of the surroundings (**Auto 1** or **Auto 2**) of the image content (**Dynamic**) or whether this should be processed **manually**.

> Use the **up/down arrow keys** to mark the line **Light control**.

> Set the light control using the **right/left arrow keys** to **Auto 1**, **Auto 2**, **Dynamic** or **Manual**.

8.1.3.2 Background lighting

This functions helps you adjust the display background lighting to the surrounding brightness and is only adjustable, when you have selected **Manual** in Point 8.1.3.1.

> Mark the line Background lighting using the **up/down arrow keys**.

> Use the **right/left arrow keys** to adjust the intensity of the background lighting of the LCD panel.

8.1.3.3 Color temperature

This point allows you to adjust the color temperature of the LCD panel.

> Mark the line **Color temperature** using the **up/downarrow keys**.

> Using the right/left arrow keys select the **Color temperature 6500 K**, **7900 K**, **9300 K** or **10000 K**.

8.1.3.4 Contrast

Increase the level of contrast, when the image looks "flat". Reduce the contrast when the details in the bright parts of the image are no longer clearly visible.

> Mark the line **Contrast** using the **up/down arrow keys**.

> Asjust the contrast using the **right/left arrow keys**.

8.1.3.5 Brightness

Increase the brightness, when details in dark parts of the image are no longer perceivable, and reduce it when black objects appear gray.

> Mark the line **Brightness** using the **up/down arrow keys**.

> Using the **right/left arrow keys**, adjust the level of brightness to suit your wishes.

8.1.3.6 Colors

> Using the **up/down arrow keys**, mark the line **Colors**.

> Use the **right/left arrow keys** to adjust the color intensity.

8.1.3.7 Brilliance

Using the brilliance setting, you can select between three different characteristic curves for the control of the LCD panel. Through these three curves, various different brilliance settings of the image can be made. In order to select which brilliance level suits you best for an existing image, since the differences between the settings are best perceived in this way.

> Using the **up/down arrow keys**, mark the line **Brilliance**.

> Use the **right/left arrow keys** to set the brilliance to **Setting 1**, **2** or **3**.

8.1.3.8 Aspect ratio

With this setting, you can decide how broadcasts that are transmitted in a 4:3 format should be shown (that is the conventional TV format) on your 16:9 widescreen TV set.

Original

With the **original** setting, you can achieve an undistorted portrayal, true to the original. Naturally, you will see black lines to the left and right of the picture.

Optimal

The **optimal** setting offers you a compromise. Here, the image is expanded to remain true to the original format, which involves certain image information being taken from the top and bottom. However, it generally does not affect the broadcast services in this area, which can still transmit most important images, since conventional TV sets never show the entire image for other technical reasons. In this setting, narrow black lines remain to the left and right.

Optimal 16:9

In the **optimal 16:9** setting, the the narrow 4:3 image is expanded to fit the entire width of the screen. Moreover, the image, as in the optimal setting, is cut off slightly at the top and bottom. This means the image is not so strongly distorted, as in the stretch setting, despite using the entire width of the screen.

Full zoom

In the **full zoom** setting, you can enjoy an undistorted portrayal of the 4:3 image over the entire area of the screen. However, this involves a relatively large portion of the image being cut off at the top and bottom edges.

Stretch

The **stretch** setting zooms the actual narrow image to the full width of your 16:9 device. As a result, the black lines are eliminated, but the geometry of the image shown is distorted.

> Using the **up/down arrow keys**, mark the line **Aspect ratio**.

> Use the **right/left arrow keys** to set the original, **optimal**, **optimal 16:9**, **full zoom** or **stretch** settings for the aspect ratio.

8.1.3.9 Format recognition (not with VGA)

With this setting, you can decide in which way the automatic recognition function of 16:9 broadcasts should be implemented.

Generall speaking, the image source will indicate whether the broadcast is transmitted in a 4:3 or 16:9 format. In the **Signalling setting**, the playback of the program based on the relevant image format can subsequently be correctly implemented.

However, errors in signalling may occur. If so, your TV set will assume that the program is transmitted with a 4:3 format. A 16:9 broadcast without signalling will then be shown with black bars to the left and right as well as upper and lower bars, (if you have selected the stretch option, however, the bars appear only to the top and bottom). If there is no signalling for a 16:9 broadcast, you have the chance to increase the size of the image accordingly using the zoom function (see Point 6.10). When you choose the setting with **black bars**, also in the event of a lack of signalling, there is automatic recognition of a 16:9 broadcast due to the black bars. The TV set will then automatically switch after a short period to the 16:9 portrayal itself.

Unfortunately, there are also broadcasts which do not signal 16:9 broadcasts because they wish to include advertising in the black lines to the top and bottom. Therefore the automatic function soon detects whether the bars are really black or whether they contain image information depending on the case. In this case, it is advisable to either select the **Signalling** option instead of the setting with the **black bars**, and use the zoom function to manually adjust to the desired portrayal.

For the very unlikely situation that a 4:3 broadcast is signalled as a 16:9 one, the format recognition function can be optionally switched **off**

> Using the **up/down arrow keys** mark the line **Format recognition**.

> Use the **right/left arrow keys** to set the format recognition to **black bars** or **Signalling** or switch this off, when you do not wish to use the format recognition function.

8.1.3.10 Extended settings

In addition to the means of image adjustment already explained, you can find further methods of adjustment in the sub-menu further settings.

> Use the **arrow keys up/down** to mark the line **Further settings**.

> Open the **Further setting**s by confirming with **OK**.

8.1.3.10.1 Contrast enhancement

In addition to the contrast setting, you have, via the contrast enhancement mode, an additional opportunity to improve the contrast of the device

> Use the **up/down arrow keys** to mark the line **Contrast enhancement**.

> Activate the contrast enhancement using the **right/left arrow keys** or switch this **on** (**off**).

8.1.3.10.2 Image definition

The soft setting is advisable, when MPEG objects (building blocks) are distracting from the view (The image is transmitted at too low a data rate). For analog sources, the setting strong can lead to an enhancement of the image. The setting **Extra** is especially recommended for HDMI sources. Otherwise, we recommend the **Normal** setting.

> Using the **up/down arrow keys**, mark the line **Image definition**.

> Use the **right/left arrow keys** to set the image definition to **Soft**, **Normal**, **Strong** or **Extra**.

8.1.3.10.3 Noise cancellation

With the noise cancellation function, the visual impression when watching sources affected by image noise (e.g. an old film) improved. This function is achieved by wiping effects during movements.

> Using the **up/down arrow keys**, mark the line **Noise cancellation**.

> Use the **right/left arrow keys** to set the value of the noise cancellation to **Low**, **Medium**, **Strong** or **Extra** or switch the function **off**.

8.1.3.10.4 Movement compensation (not with VGA)

The movement compensation function prevents disturbing jerking movements (especially caused by camera shake) during the playback of film material. Unlike TV cameras, which shows 50 frames a second, film cameras show only 24 images. When filming fast movements, that is too few. With this in mind, the movement compensation function compensates with movement analysis through a complicated calculation process during the time between images.

> Use the **up/down arrow keys** to mark the line **Movement compensation**.

> Use the **up/down arrow keys** to switch the movement compensation function **on** or off.

8.1.3.10.5 Color space ^(only for HDMI)

For the three HDMI inputs, you can also select the color space option, to adjust the way in which the playback is shown on screen.

> Using the **up/down arrow keys**, mark the line **Color space**.

> Using the **right/left arrow keys**, select the desired **Color space setting RGB-expanded (DVI-PC)** or **RGB-normal (DVI-Video)**.

8.1.3.10.6 Overscan ^(not with VGA)

In TV technology, not all the image content is shown on the screen. Instead, the image is shown in a slightly expanded form, which involves certain rings being cut out of the image content. This is done to avoid disturbances caused by stripes, which can affect the actual image content, by causing the visible section of the image to be moved off the screen. This method is known as overscan. With this point, you have the chance to select between the two overscan options **5 % (Action safe)** and **10 % (Title safe)** or to switch off the function.

> Mark the line **Overscan** using the **up/down arrow keys**.

> Using the **right/left arrow keys**, select the desired **Overscan setting,** either **5 % (Action safe)** or **10 % (Title safe)** or switch **off** the function completely.

8.1.3.10.7 Quit further settings

> Press the **Back** button, to quit the **Further settings** and return to the image settings menu.

Note, that the settings made in this submenu, when leaving the image settings menu, can be retained or discarded as described in Point 8.1.4.

8.1.4 Quit image settings

To quit the **Image settings** menu, the following options are available:

> Press the **green** function key to **Confirm**.
  A query box now appears, asking whether the changes previously made should only be confirmed for the currently selected source or for all sources.

> Mark the line which contains the desired option using the **up/down arrow keys** and confirm with **OK**.

Alternatively

> Press the **Back** button.
  A query box now appears, asking whether you would like to apply the changes made only for the actual source selected, for all sources or cancel.

> Mark the line, which contains the desired option, using the **up/down arrow keys** and confirm with **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.2 Sound settings

In the sound settings menu, you can adjust the tone of the loudspeaker/audio outputs and the headphone connection. Likewise, you can adjust the volume when the TV is switched on and select the preferred audio and subtitle language. In addition, you can select the loudspeaker system used and the loudspeaker controls for the audio outputs, the microphone as well as the relay switching function for external amplifiers and also make subwoofer settings.

> Access the settings menu, as described in Point 8.

> Use the **up/down arrow keys** to mark the line **Sound settings**.

> Confirm by pressing **OK**.
  The **Sound settings** menu will be displayed.

8.2.1 Switch-on volume

> Using the **up/down arrow keys**, mark the line **Switch-on volume**.

> Use the **right/left arrow keys** to set the volume, which will be transmitted by the device when it is switched on.

8.2.2 Height ratio

> Using the **up/down arrow keys**, mark the line **Height ratio**.

> Using the **right/left arrow keys**, adjust the height ratio to suit your wishes.

8.2.3 Low sounds (Bass)

> Mark the line **Low sounds** using the **up/down arrow keys**.

> Set the low sounds using the **right/left arrow keys**.

8.2.4 Bass volumes

As well as the low sounds, you can adjust the bass volume of the low sounds.

> Mark the line **Bass volumes** using the **up/down arrow keys**.

> Use the **right/left arrow keys** to set the desired bass volume.

8.2.5 Balance

> Using the **up/down arrow keys**, mark the line **Balance**.

> Use the **right/left arrow keys** to adjust the Balance.

8.2.6 Surround sound

> Mark the line **Surround sound** using the **up/down arrow keys**.

> Use the **right/left arrow keys** to switch the surround sound **on** or **off**.

8.2.7 Automatic volume limiting

The automatic volume limiting function means that differing sources can be played back via the internal loudspeaker at the same volume. This avoids the need to have to adjust the

volume, when switching to another channel or input. In addition, the volume of commercials, which tend to be shown at a higher volume, can be reduced within a short time.

> Mark the line **Autom. volume limiting** using the **up/down arrow keys**.

> Use the **right/left arrow keys** to switch the automatic volume limiting function **on** or **off**.

8.2.8 Dolby Digital

Various movies are broadcast in Dolby Digital format. If you have a Digital channel amplifier, you can, if available, enjoy 5.1 channel Dolby Digital sound or Dolby Digital stereo sound with specific movies. The only requirement is that the digital output Audio Out Digital (see Point 4.6.2) of your TV set must be connected with the digital input of your Dolby Digital Amplifier or Dolby Digital 5.1 channel amplifier.

If a broadcast is transmitted in Dolby Digital Sound, this will be automatically transmitted in Dolby Digital Format, provided the Dolby Digital function is activated.

If the function is not activated, Dolby Digital sound can also be switched on manually. Please also note Point 6.7.1 of the operating manual.

> Use the **up/down arrow keys** to mark the line **Dolby Digital**.

> Use the **arrow keys right/left** to switch the automatic broadcast of the Dolby Digital Format **on** or **off**.

8.2.9 Headphone settings

In this submenu, you can adjust settings for the headphone operation.

> Use the **up/down arrow keys** to mark the line **Headphone settings**.

> The **Headphone settings** open when you confirm with **OK**.

8.2.9.1 Switch-on headphone volume

> Using the **up/down arrow keys**, mark the line **Switch-on volume**.

> Use the **right/left arrow keys** to set the volume, which will be transmitted through the headphone output of the device when it is switched on.

8.2.9.2 Height ratio

> Using the **up/down arrow keys**, mark the line **Height ratio**.

> Using the **right/left arrow keys**, adjust the peak of the headphone output to suit your wishes.

8.2.9.3 Depths

> Use the **up/down arrow keys** to mark the line **Depths**.

> Set the depths using the **right/left arrow keys**.

8.2.9.4 Balance

> Using the **up/down arrow keys**, mark the line **Balance**.

> Use the **right/left arrow keys** to adjust the Balance.

8.2.9.5 Audio mode

> Mark the line **Audio mode** using the **up/down arrow keys**.

> Use the **right/left arrow keys** to set the headphone audio mode to **stereo**, or just **left** or **right**.

8.2.9.6 Quit headphone settings

> Press the **back** button, to quit the **Headphone settings** and return to the sound settings menu.

Note, that the settings made in this submenu can be either discarded or retained when leaving the **Sound settings** menu, as described in Point 8.2.12.

8.2.10 Language settings

In this submenu, you can make settings for your preferred audio and subtitle languages.

> Use the **up/down arrow keys** to mark the line **Language settings**.

> The **Language settings** menu opens when you confirm with **OK**.

8.2.10.1 Audio language 1

Here, set the preferred audio language for digital programs. This will be transmitted immediately the device is switched on or automatically engaged when switching to another program.

> Using the **up/down arrow keys**, mark the line **Audio language 1**.

> By pressing the **OK** button a window opens with den selectable languages.

> Use the **arrow keys** to select the preferred language and confirm this by pressing the **OK** button.

8.2.10.2 Audio language 2

Set the audio language for digital programs, which will then be engaged automatically when the 1st. language is not available.

> Using the **up/down arrow keys**, mark the line **Audio language 2**.

> Open the window for the selectable languages by pressing the **OK** button.

> Use the arrow keys to select the second preferred language and confirm this by pressing the **OK** button.

Note that after the audio language has been chosen, in accordance with Point 6.7, this language is then selected as the priority and only after the resetting of the set audio language based on Point 6.7 will it become automatically selectable again.

8.2.10.3 Subtitle language 1

Here, set the preferred language for subtitles. After the setting, the subtitles will, if sent, be immediately displayed at the bottom edge of the screen. With the setting set to **None**, you can switch off the automatic showing, and then when desired, manually adjust this as described in Point 6.8.

> Using the **up/down arrow keys**, mark the line **Subtitle language 1**.

> By pressing the **OK** button a window opens with the selectable languages.

> Use the **arrow keys** to select the preferred language and confirm this by pressing the **OK** button.

8.2.10.4 Subtitle language 2

Here, set the subtitle language, which will be automatically shown when subtitle language 1 is not available.

> Using the **up/down arrow keys**, mark the line **Subtitle language 2**.

> Open the window for the selectable languages by pressing the **OK** button.

> Use the **arrow keys** to select the preferred language and confirm this by pressing the **OK** button.

8.2.10.5 Quit language settings

> Press the **Back** button, to quit the **Language settings** and return to the sound settings menu.

Note, that the settings made in this submenu can be either discarded or retained when leaving the sound **Settings menu**, as described in Point 8.2.12.

8.2.11 Extended settings

In this submenu, you can make settings for the loudspeaker type, loudspeaker transmission channel, subwoofer and microphone. Likewise, you can also switch the functions for the external amplifier, the loudspeaker volume at the audio output (see Point 4.6) and the remote loudspeaker on or off.

> Use the **up/down arrow keys** to mark the line **Extended Settings**.

> Open the further settings by confirming with **OK**.

8.2.11.1 Loudspeaker type

> Mark the line **Loudspeaker** using the **up/down arrow keys**.

> Select the loudspeaker type used (**internal**, **external**, **remote**, **side**) with the **right/left arrow keys**.

8.2.11.2 Loudspeaker broadcast channel

This Point is only available, when the loudspeaker type, as described in Point 8.2.11.1, has been set to remote.

> Use the **arrow keys up/down** to mark the **Input loudspeaker channel**.

> Use the **right/left arrow keys** to set a loudspeaker transmission channel from **1 – 8**.

Note that this setting must also be made for remote loudspeakers, as described in the instructions for the loudspeaker.

Also note that WLAN network in the vicinity and the broadcasts of the remote loudspeaker may interfere with each other under certain circumstances. In the event of interference from a WLAN network or during remote loudspeaker operation, please select another channel.

8.2.11.3 Subwoofer volume

If you have connected an active subwoofer to the HDTV, as in Point 4.7, you can adjust the volume of the subwoofer based on this Point.

> Now use the **arrow keys up/down** to mark the line **Subwoofer volume**.

> Use the **right/left arrow keys** to set the desired Subwoofer volume.

8.2.11.4 Subwoofer limit frequency

If you have connected an active subwoofer to the HDTV in accordance with Point 4.7, you can also adjust the maximum frequency at this point, which should be transmitted from the subwoofer output.

> Now use the **arrow keys up/down** to mark the line **Antenna settings**.

> Use the **right/left arrow keys** to set the limit frequency of the subwoofer.

8.2.11.5 Loudspeaker control Line-Out

This point allows you to select, whether the loudspeaker control should also be applied to the audio outputs or not. When the loudspeaker control function is activated and the HDTV is connected to an amplifier, you need not use any other remote control, but the majority of control settings can be made using the remote control of the HDTV.

Note, that when a remote loudspeaker is used, this Point must be activated, since the sound would otherwise be transmitted at maximum volume. When selecting the remote loudspeaker in accordance with Point 8.2.11.1, this Point will be automatically activated.

> Move the marker using the **up/down arrow keys** to the line **Analog decoder**.

> Using the **right/left arrow keys**, switch **off** the volume control function.

8.2.11.6 External amplifier

> Use the **up/down arrow keys** to mark the line **External amplifier**.

> Using the **right/left arrow keys**, switch the Loudspeaker relay system **on** or **off**. When this function is activated the sound is muted, a relay connected to socket 22 (see Point 1 Figures) is switched on.

8.2.11.7 Microphone

> Using the **up/down arrow keys**, you can select the line **Microphone** and then with the **right/left arrow keys**, **activate** or **deactivate** the microphone input (Socket 13 in Point 1).

8.2.11.8 Microphone volume

> Provided you have connected the microphone as shown in Point 8.2.11.7, you can now mark the entry for **Microphone volume** using the **up/down arrow keys**.

> Use the **right/left arrow keys** to set the desired volume.

8.2.11.9 Quit further settings

> Press the **Back** button, to quit the **further settings** and return to the sound settings menu.

Note, that the settings made in this submenu can be either discarded or retained when leaving the **Sound settings** menu, as described in Point 8.2.12.

8.2.12 Quit sound settings

To quit the **Sound settings** menu, the following options are available:

> Press the **green** function key to **Confirm**.
> The changes made are not stored and you return to the menu settings.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.3 Basic settings

In the basic settings you can select the country in which the device will be operated, manually select the time difference relative to GMT or the station from which the date and time should be read. Likewise, you can also select the source via which the autostart-/auto stop function should be implemented as well as switching the same on or off. In addition, you can copy the quick start and AV functions and activate the S/PDIF input.

> Access the **Menu settings** as described in Point 8.

> Use the **up/down arrow keys** to mark the line **Basic settings**.

> Confirm by pressing **OK**.
  The menu **Basic settings** will be displayed.

8.3.1 Country

In this line, specify the country in which the device will be operated. Based on this setting, when searching, the programs will be sorted into the order of showing in the program lists. In addition, this setting is also used to set the time difference relative to GMT and the time corresponding to summer and winter time.
Note, that when setting the country, the channel roster for the DVB-C, DVB-T and Analog CT receivers are also adapted and therefore there may be circumstances where stations already included in the program lists can no longer be shown. In such cases, please, as described in Point 9, implement a search operation.

> Use the **up/down arrow keys** to mark the line **Country**.

> Open the country list by pressing the **OK** button.

> Choose the country in which the device will be operated using the **arrow keys** or marking the **user-defined** entry, so that the time difference from GMT, as described in Point 8.3.2, can be manually adjusted.

> Confirm your selection by pressing **OK**.

8.3.2 Time zone

In this line, choose the time difference relative to GMT(**GMT = G**reenwich **M**ean **T**ime), which reflects that at the location in which the device will be used. For Germany, set winter time to **GMT+1** and summertime to **GMT+2**.
Note that this setting must be adjusted with every change between winter and summer time.

> Using the **up/down arrow keys**, you can mark the line **Time zone**, provided the **user-defined** setting has been selected as described in Point 8.3.1.

> Open the window for the selectable Time zones by pressing the OK button.

> Use the **arrow keys** to select the relevant time zone, and confirm this by pressing **OK**.

8.3.3 Date/time

Certain programs broadcast to your data stream have incorrect GMT times. In this case, you can select the program position in this line, whereupon the synchronization of the date and time should follow when the TV set is switched on, to avoid possible false readings of data.

> Use the **up/down arrow keys** to mark the line **Date/time**.

> Open the program list by pressing the **OK** button.

> Using the **arrow keys**, select the program, based on which the synchronization should follow and confirm your selection with **OK**.

8.3.4 Quick start

If the quick start function is activated, your HDTV will start more swiftly from Standby mode. **Note however**, that with the quick start function activated, the power consumption when in standby mode increases (see Point 16 Technical Data).

> Mark the line **Quick start** using the **up/down arrow keys**.

> Activate or deactivate the auto start function using the **right/left arrow keys**. If the function is activated, there follows a note that the power consumption in standby mode is increased when this setting is used.

> Confirm this note by pressing the **OK** button.

8.3.5 Source Autostart/Autostop

Choose the source, based on which the autostart and/or auto stop function will be activated.

> Use the **up/down arrow keys** to mark the line **Source autostart/stop**.

> Open the source selection by pressing the **OK** button.

> Use the **up/down arrow keys** to select the source and finally confirm with **OK**.

8.3.6 Autostart

When this function is activated, your TV set, provided it is in operation, will be placed in Standby mode when the signal to another selected source is switched off, as described in Point 8.3.5 (e.g. when the DVD player is switched off).

> Use the **arrow keys up/down** to move the marker to the **Autostart** entry.

> Activate or deactivate the auto start function using the **right/left arrow keys**.

8.3.7 Autostop

When this function is activated, your TV set, provided it is in operation, will be placed in Standby mode when the signal to another selected source is switched off, as described in Point 8.3.5 (e.g. when the DVD player is switched off).

> Use the **up/down arrow keys** to mark the line **Autostop**.

> **Activate** or **deactivate** the auto stop function using the **right/left arrow keys**.

8.3.8 Copying AV

Provided this function is active, the signals from the SCART in the selected direction will be transferred to another specific SCART socket. This can allow you to e.g. transfer signals from a DVD player connected to SCART socket AV1 to SCART socket AV2, to record the same on a video recorder connected to the SCART socket AV2.

> Use the **up/down arrow keys**, you can mark the line **Copying AV**.

> Use the **right/left arrow keys** to set the desired copy direction or **Deactivate** the function.

8.3.9 S/PDIF-video source

This point allows you to determine to which analog external input the S/PDIF input (Socket 19 in Point 1) should be assigned. If this external input is selected during TV or radio operation, instead of the analog audio signal of the external input, only the digital signal of the S/PDIF input will be used, in order to play back the sound via the device loudspeaker. Likewise, the audio signal of the S/PDIF input also remains available on the S/PDIF-outputs (Sockets 20 and 21 in Point 1), so that this may be connected to a Stereo or Surround sound amplifier, provided this is connected in accordance with Point 4.6.

> Use the **up/down arrow keys** to mark the line **SPDIF sound for video source**.

> By pressing the **OK** button a list opens of the selectable external sources.

> Use the **up/down arrow keys** to select the external source, to which you wish to assign the S/PDIF input.

> Confirm your choice by pressing the **OK** button.

Please note, that the external sources HDMI 1, HDMI 2 and HDMI 3 are not selectable, since the sound over HDMI is already transmitted digitally and when an HDMI source is selected, the S/PDIF outputs automatically become available.

8.3.10 Quit basic settings

To quit the **Basic settings menu**, you have the following choices:

> Press the **green** function key **Confirm**.
  The changes made are not stored and you return to the menu **Settings**.

Alternatively

> Press the **Back** button.
  A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.4 Special functions

To set the special functions described in the following section, proceed as follows:

> Press the **Menu** key to display the **Main menu**.

> Use the **up/down arrow keys** to mark the line **Settings** and confirm with **OK**.

> Use the **up/down arrow keys** to mark the line **Special functions** and confirm with **OK**.
> The menu **Special functions** will be displayed.

8.4.1 OSD settings

In this submenu, you can adjust the font size e.g. of the EPG (Point 6.13) of the expanded program information (Point 6.4.3). You can also select whether you would like to the OSD to be transparent and for how long the infobox should be shown after a change of program. In addition, you can switch the radio background picture on or off.

> Use the **up/down arrow keys** to mark the line **OSD**.

> Open the **OSD settings** by confirming with **OK**.

8.4.1.1 Font size

> Use the **up/down arrow keys** to mark the line **Font size**.

> Using the **right/left arrow keys**, select between the **normal** setting and **small**. This selection then applies e.g. to the expanded program information (Point 6.4.3) or the EPG (Point 6.13).

8.4.1.2 Transparent OSD

> Mark the line **Transparent OSD** using the **up/down arrow keys**.

> **Activate** or **deactivate** the Transparency function using the **right/left arrow keys**.

8.4.1.3 Display time Information Banner

This point allows you to select for how long the infobox should be displayed after a change of program. In addition, the LCD panel is also activated at this time, when the station during radio operation or the title during MP3 operation (Point 6.17) is changed, provided that as in Point 8.4.1.4, the radio background image is set to "**auto**".

> Move the marker with the **up/down arrow keys** to the entry marked **Display time information banner [s]**.

> Use the number keys on the **Numeric keyboard** to input the desired display time between **1** and **15** seconds.

8.4.1.4 Radio background image

This function allows the image to be switched off when in radio or MP3 mode. This considerably reduces both the strain on the screen and the power consumption.

Off: Off: The picture will be switched off when in radio and/or MP3 playback mode as in Point 8.4.1.3 after the set display time and also remains switched off after a program/track change.

Auto: The picture will be switched off when in radio and/or MP3 playback mode as in Point 8.4.1.3 after the set display time and for a program or track change, it will be displayed for likewise the set display time.

On: The image remains on whether in radio mode or MP3 mode.

> Use the **up/down arrow keys** to mark the line **Radio background image**.

> Using the **right/left arrow keys**, select the desired Funktion (**Off**, **Auto**, **On**).

8.4.1.5 Quit OSD settings

To quit the **OSD** settings menu, the following choices are available:

> Press the **green** function key **Confirm**.
> The changes made are now stored and you can return to the **Special functions** menu.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu button**.

8.4.2 PVR settings

In this submenu, you can set the time, after which the hard disk should be switched off, once there has been inactivity of the disk (e.g. no PVR recording/playback or image/music playback). In addition, you can select whether hard disks including radio programs as part of the recorded data should additionally be saved as an MP2 file. These can easily be converted to other audio formats after being stored on a PC, with this and similar programs.

> Use the **up/down arrow keys** to mark the entry **PVR**.

> Open the **PVR settings** by confirming with **OK**.

8.4.2.1 Storage format for radio recordings

In this line, you can decide, for hard disk recordings carried out during radio operation, whether a "normal" recording (**PVR**) or simultaneously also an MP2 file of the recording (**PVR + MP2**) should be created.

> Use the **up/down arrow keys** to mark the line **Storage format for radio recordings**.

> Using the **right/left arrow keys**, select the storage format **PVR** or **PVR + MP2**.

8.4.2.2 Switching off hard disk

> Use the **up/down arrow keys** to mark the line **Switching off hard disk**.

> By pressing the **OK** button, a window opens with the various switch-off times.

> Use the **up/down arrow keys** to select the desired switch-off time (**5s**, **1 min**, **2 min**, **5 min** or **10 min**) or switch the 'switch-off hard disk' function off/on.

> Confirm by pressing **OK**.
> If your hard disk is subsequently inactive for the set duration, it will switch itself off automatically.

8.4.2.3 Automatic broadcast marking

This functions allows automatic markers to be inserted during a hard disk recording (PVR recording), provided a change in the broadcast occurs during the recording. These markers will be designated in line with the titles of the broadcasts. This makes it easier, when playing back or processing a PVR recording to find the start of a program. The required data (program change and program title) are taken from the data stream of the broadcaster. Should there be a situation where a marker is incorrectly designated or placed, this function will lead to an incorrect program title in the data stream or may result in the program change being signalled too early or too late.

> Mark the line **Autom. Program marking** using the **up/down arrow keys**.

> Use the **right/left arrow keys** to switch the automatic program marking function **on** or **off**.

8.4.2.4 Quit PVR settings

To quit the **PVR settings** menu, the following choices are available:

> press the **green** function key **Confirm**.
> The changes made are now stored and you can return to the **s**pecial functions menu.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.4.3 Media playback settings

Within this submenu, you can select the start directory of the media playback of music and that of images. After access to the media playback, the media playback of music or images commences in the selected directory.

> Use the **up/down arrow keys** to mark the entry **Media playback**.

> The **Media playback settings** menu opens when you confirm with **OK**.

8.4.3.1 Music start directory

> Use the **up/down arrow keys** to mark the line **Music start directory**.

> By pressing the **OK** button, open the selection list to show the available options.

> Use the **up/down arrow keys** to select the desired entry and confirm with **OK**.

Device overview　　With this setting, the image navigator starts from the main directory of the hard disk of that of the externally connected device (see Point 4.9) with the drive selection

Last used　　If this setting is selected, the image navigator starts in the folder from which the last playback of a JPG file was made.

8.4.3.2 Start directory images

> Using the **up/down arrow keys**, mark the line **Start directory images**.

> By pressing the **OK** button, open the selection list to show the available options.

> Use the **up/down arrow keys** to select the desired entry and confirm with **OK**.

Device overview　　With this setting, the image navigator starts from the main directory of the hard disk of that of the externally connected device (see Point 4.9) with the drive selection

Last used　　If this setting is selected, the image navigator starts in the folder from which the last playback of a JPG file was made.

8.4.3.3 Quit Media playback settings

To quit the **Media playback** settings menu, you have the following choices:

> Press the **green** function key **Confirm**.
> The changes made are now stored and you can return to the **Special functions menu**.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.4.4 Network settings

In the Network settings menu, you can select the DHCP setting as well as entering the IP address and subnet mask.

> Use the **up/down arrow keys** to mark the line **Network settings**.

> Open the **Network settings** by pressing **OK**.

8.4.4.1 IP mode

> Use the **up/down arrow keys** to mark the line **IP mode** and using the **right/ left arrow keys**, select between the following settings:

DHCP-Client If your TV set is connected via a router with your PC, this setting should be chosen. The TV set now receives the IP address and subnet mask assigned to the connected router.

Static With this setting, the DHCP function is switched off. This means that the IP address and subnet mask must be manually configured to the existing IP address and subnet set up of your network. The IP address and subnet mask of the TV set can be manually configured, as described in Points 8.4.4.2 and 8.4.4.3.

8.4.4.2 IP address

If the DHCP function is set to **Static**, the IP address must be manually configured. When setting the **DHCP server**, you can also configure this, however, this is not a must.

> Use the **up/down arrow keys** to set the marker to Entry of **IP address**.

> Use the **Numeric keyboard** to enter the relevant numbers.

8.4.4.3 Subnet mask

You must configure the subnet mask manually, when the DHCP function is set to **Statistical**. Is this setting is made on the **DHCP server,** you can also configure this in the same way.

> Use the **up/down arrow keys** to mark the line **Subnet mask**.

> Use the **Numeric keyboard** to enter the relevant numbers.

8.4.4.4 Quit network settings

To quit the **Network settings** menu, the following options are available:

> Press the green function key to confirm.
> The changes made are now stored and you can return to the **Special functions** menu.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.4.5 Various settings

In this submenu, you can select the PiP-/PaP mode as well as video text mode. Likewise, you can also switch off the CI duel decoding or assign the CI plug-in positions of this function. In addition, you can, provided it is being used, switch the function of the analog decoder on or off.

> Use the **up/down arrow keys** to mark the line **Various**.

> Open the submenu by confirming with **OK**.

8.4.5.1 CI dual decoding

The CI dual decoding feature allows you to receive two different encrypted programmes simultaneously, using only one CI module and only a single valid Smartcard.

> Use the **arrow keys up/down** to select the line **CI Dual decoding**.

> Using the **right/left arrow keys**, set the CI plug, in which the CI module for Dual decoding is situated.
> For selection, the settings **CI1**, **CI2**, **CI1 + CI2**, **auto**, for automatic recognition and off, to switch the CI dual decoding function **off**. Please also note Point 6.5.1 here.

8.4.5.2 PiP-/PaP mode

> Use the **up/down arrow keys** to mark the line **PiP/PaP mode**.

> Using the **right/left arrow keys**, select whether after pressing the **PiP/PaP** button during normal operation you would like to use the **Image in image** function or the **Divided screen**.
> Please also note Point 6.11 here.

8.4.5.3 Video text mode

Many program-makers send video text in various video text modes. Generally speaking, level 1.5 is usually transmitted. In addition, various program-makers support the more graphically demanding HiText Level 2.5.

> Use the **up/down arrow keys** to mark the line **Video text mode**.

> Using the **right/left arrow keys**, select desired video text mode (**Level 1.5** or **Level 2.5**).
> In normal cases you should select the **HiText Level 2.5** mode. If the Level 2.5 mode is chosen and you access the video text of a program, that is only transmitting Level 1.5 file, this data will also be shown correctly.

8.4.5.4 Analog decoder

Should you possess an analog decoder, which can decode encoded programs, this should be connected to the SCART socket AV2, as described in Point 4, and in this Point also choose the **EURO-AV2** setting.

> Move the **marker up** and **down** to the line **Analog decoder** with the arrow keys.

> Use the **right/left arrow keys** to set the desired setting.

8.4.5.5 Quit various settings

To quit the **Various settings** menu, the following choices are available:

> Press the **green** function key **Confirm**.
> The changes made are now stored and you can return to the **s**pecial functions menu.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.4.6 Quit special functions

> Return as described in Points 8.4.1.5, 8.4.2.4, 8.4.3.3, 8.4.4.4 or 8.4.5.5 from the respective submenu back into the special functions menu.

> Now press the **Back** button, to switch respectively one menu level upwards or to use the **Menu** button to revert to normal operation.

8.5 Antenna settings (DVB-S)

> Access the **Main menu** by pressing the **Menu** button.

> Use the **up/down arrow keys** to mark the line **Settings**.

> After confirming with **OK**, the settings menu appears.

> Using the **up/down arrow keys**, mark the line **Antenna settings (DVB-S)**.

> Confirm by pressing **OK**.
> The **Antenna settings** menu appears **(DVB-S)**.

8.5.1 Multi-tenna

If the TV set is operated with a Multytenne LNB, you can set up the complete configuration in terms of the switching positions and LNB properties by automatically activating this function on the Multytenne LNB.

> Use the **up/down arrow keys** to mark the line **Multi-tenna**.

> Use the **arrow keys right/left** to switch automatic set-up of the Multytenne **on** or **off**.

8.5.2 Switching DiSEqC on or off

DiSEqC (**Di**gital **S**atellites **Eq**uipment **C**ontrol) is a digital control signal for controlling and switching DiSEqC-suitable components via the antenna lead. If your satellite unit features DiSEqC components, as well as all distributors and switches, you must switch on the DiSEqC control:

> Use the **up/down arrow keys** to mark the line **DiSEqC**.

> **Activate** or **deactivate** the DiSEqC function using the **right/left arrow keys**. As only one LNC can be addressed if the DiSEqC control is switched off, the menu is restricted in this case to the configuration of a single LNB. When you switch off the DiSEqC, an additional query window appears, asking whether you wish to delete the program of DiSEqC-positions 2 to 4.

> Using the **right/left arrow keys**, select **Yes** or **No** and confirm with **OK**.

8.5.3 Antenna signals

Your TV set possesses two DVB-S tubers (receiving stations). These can be used to record a program and watch another at the same time. In order that you are able to gain the full scope in terms of using the functions of your TV set, when recording and playing back in DVB-S operation, you should always use two separate antenna connections (antenna signals) with identical layouts. Please also note Point 7.1.

> Use the **up/down arrow keys** to mark the line **Antenna signals**.

> Using the **right/left arrow keys**, set the number of antenna signals to **2**, when connecting your TV set to two separate antenna connections or to **1**, when there is only 1 antenna connection available.

To utilise all the recording facilities of your TV set, you should ensure it is connected via two independent DVB-S antenna connections. This allows you to use the following combinations of recording and playback:

- Record a program and play back another program from the same receiving area or a favourite hard disk recording.

- Record two programs at the same time, even when they are being received by different receivers.

- Record two different programs (even from different receiving areas) at the same time and play back a prerecorded program.

If only a **DVB-S antenna connection** is available for connecting the TV set, the recording and playback scope will be limited.

- Record a program and **at the same time**, play back **another program** from the same receiving area or a favourite hard disk recording.

- Record two programs **at the same time** from the same recording area.

- Record two different programs **from the same** receiving area at the same time and playback a program that has already been recorded.

Please note, that the limitations associated with the recording or playback of a DVB-S antenna signal only apply for purely DVB-S operations. In both cases, (connection to one or two DVB-S antenna connections), of course existing DVB-C-, DVB-T- and analog TV programs as well as analog external sources can be recorded or shown.

8.5.4 Setting the switching matrix

In the antenna settings menu (DVB-S), four switching criteria are implemented for the DiSEqC control. Your device is pre programmed so that the satellite ASTRA 19,2 East is received on switch setting A/A and Eutelsat 13,0 East on setting B/A of a multi-switch. Should your receiving installation be configured differently, or should you receive other satellites, you can adjust the settings of your TV set to your receiving unit as follows.

> Use the **arrow keys in** the column **Satellite** to select the DiSEqC switch position (1-4), to which you wish to allocate a satellite (e.g. **A/B 3 No satellite**), and mark this line.

> Press the **OK** key.
  A table will be displayed, allowing you to select from various satellites.

> Use the **arrow keys** to mark the desired satellite.
  Using the **up/down arrow keys** the marker is moved to show a respective line, while the **left/right arrow key**s are used to move sideways to indicate a list. If the satellite you are looking for is not included in the list, please select a reserve position, designated **User 1** to **User 11**. To configure a rotating unit, select the entry **Motorized antenna** and subsequently proceed as detailed in Point 8.5.6.

> Confirm by pressing **OK**.
  The marked satellite is inserted into the previously marked Position. If a list for the selected satellite program is already contained in the preconfigured works program, a query screen now appears, asking whether you would like to transfer this into your TV and radio lists.

> Mark the field **Yes**, to confirm the program or **No**, to cancel the confirmation and confirm both with **OK**.
  The confirmed program can be sorted as described in Point 10 or again removed.

Process this menu in this way until its details match those of your receiving unit. For any switching criteria not required select the setting **No Satellite**.

Please note, as specified previously, when you remove a satellite or replace one satellite with another, which is present for the programs in TV and/or radio lists, a query box opens, asking whether this program should be deleted.

> Check the field **Yes** to delete the program or **No** to keep the program in the list and confirm your selection with **OK**.

8.5.5 Additional LNC settings/LNC properties

When you have completed setting the switching matrix of your DVB-S module in accordance with your receiving unit, you should check the remaining settings for the reception installation, and adjust the settings where necessary.

> Use the **arrow keys right/left** to mark the column **Configuration**.

> In the line on which you wish to check or adjust the settings, use the **arrow keys up/down** to mark the field **Continue**.

> Confirm by pressing **OK**.
A sub-menu will be displayed, allowing you to adjust LNC settings or to set up a test transponder.

8.5.5.1 LNC Type

> Use the **arrow keys up/down** to mark the line **LNB Type**.

> Use the **arrow keys right/left** to select either **Single LNB**, **Quatro LNB**, **Multi-tenna LNB**, **SatCR LNB**, **DisiCon 1 LNB**, **DisiCon 2 LNB**, **DisiCon 4 LNB**, **C-Band LNB**, **Circular LNB** and **User LNB**.

If you switch away from the **SatCR LNB**, a note appears on the screen. Now, in order to switch to the next LNB type, this note must first be confirmed.

> After you have confirmed the note by pressing the OK button, you can subsequently select the LNB type again, as previously described.

8.5.5.2 User LNB

8.5.5.1 If you have selected the **User LNB** from LNB Type you can conduct further settings:

LOF low

LOF (**L**ocal **O**scillator **F**requency) is the frequency at which an LNC converts the frequency received into the so-called 1st intermediate frequency, which can then be received by the DVB module. So-called Universal LNCs work with 2 LOFs, in order to cover the entire reception range from 10.7 to 11,8 GHz (low-band) and 11.7 to 12.75 GHz (high-band).

> Using the **arrow keys**, mark the Entry **LOF low**.

> Enter the LOF of the high band of your LNB using the **Numeric keyboard**.

LOF high

> Using the **arrow keys**, mark the Entry **LOF high**.

> Enter the LOF of the high band of your LNB using the **Numeric keyboard**.

Transition LOF Low/High

In addition, as well as LOF low and LOF high, you must also enter the frequency, at which the LNB of LOF low changes to LOF high.

> Using the **arrow keys**, mark the Entry **LOF trans**.

> In this line, use the **Numeric keyboard** to enter the frequency at which the LNC makes the transition from the Low Band to the High Band.

8.5.5.3 SatCR LNB

If you have selected the LNB Type **SatCR LNB** under point 8.5.5.1, you need to assign the TV set two subscriber frequencies.
The frequencies supported by SatCR LNB/SatCR multiswitches can be extracted from the connection of the LNBs/multiswitch or made through a SatCR scan.

Please pay attention to the following points:
When using a SatCR LNB or a SatCR multiswitch, the number of antenna signals (Point 8.5.3) must be set to **1**.

If only a single subscriber frequency is entered, for DVB-S operations, such as recording programs, and watching another program at the same time, as well as the PiP/PaP functions will not be available.

If a SatCR multiswitch is used for multiple satellite positions, these satellites can be selected as described in Point 8.5.4. Subsequently, these satellites must be assigned the same subscriber frequency for channels 1 and 2, as applied to the first satellites.

The same subscriber frequency may not be assigned to multiple different devices.

Open setup

> Using the **arrow keys**, mark the entry **Setup**.

> Press the **OK**-key to open the SatCR LNB Setup.

SatCR Scan

Should you be unfamiliar with the frequencies supported by the SatCR LNB or the SatCR Multiswitch units, you can carry out a SatCR scan

> Mark the **SatCR-Scan** entry using the **up/down arrow keys**.

> Start the search for the supported frequencies by pressing the **OK** button.

Subscriber frequency/Channel

> Move the market using the **up/down arrow keys** into the line **Channel 1**.

> Use the **Numeric keyboard** to enter the subscriber frequency in four digits.

> Repeat both these steps for **channel 2**.

Note that for **Channel 1** and **Channel 2** separate frequencies must be set.

8.5.5.4 Test transponder

For the various satellites test transponders are already pre-programmed so that with the request for the LNB properties on the lower edge of the screen, the signal level as well as the signal quality for both antenna inputs is displayed.
If you would like to display the signal level and quality for another transponder, you can set this up as described in the following. You can find the corresponding data in the channel lists in trade magazines (e.g. Infosat) or the Internet.

Transponder frequency

> Use the **arrow keys up/down** to mark the line **Transponder frequency [MHz]**.

> In this line, use the **Numeric keyboard** to enter a frequency on which digital programmes are broadcast.

Polarisation

> Use the **up/down arrow keys** to mark the line **Polarisation**.

> Using the **right/left arrow keys**, set the Polarisation level (**H**orizontal or **V**ertical) of the transponder.

Symbol rate

The symbol rate indicates the volume of data being transmitted per second. This could be, for example, 27500 (27500 symbols per second).

> Use the **up/down arrow keys** to mark the line **Symbol rate [kBd]**.

> Enter the appropriate symbol rate using the **Numeric keyboard**.

Signal level/quality

In the lower area of the screen, the signal level and signal quality of both antenna inputs are shown.

8.5.6 Operation with a rotating antenna (DiSEqC 1.2)

Your TV set is equipped for use in conjunction with a rotating antenna. You may control a suitable motor by means of the co-axial cable, using the DiSEqC control (DiSEqC-Level 1.2).

Note that for the control of a rotating antenna, the DiSEqC signal must be switched on as described in Point 8.5.2.

> Access the **Antenna settings** menu **DVB-S** as described in Point 8.5, and choose, as described in Point 8.5.4, the relevant switch position for the **Motor antenna** entry. If the HDTV is connected directly to a motor antenna (without Multi or DiSEqC switches between), the motor antenna should be selected in switch position 1.

> Confirm the selection of the motor antenna by pressing the **OK** button.
A note now appears for the setting of east and west boundary limits, to avoid damag-

ing the satellite unit due to obstacbles (e.g. chimney, house wall etc.).

> Confirm the note with the **OK** button.

> Subsequently switch to the **Configuration** column using the **right arrow key**.

> By confirming with the **OK** button, the menu for **Setting the motor antenna** appears.

8.5.6.1 East and West limits

To avoid mechanical damage to the satellite dish or the LNB by physical obstacles, you must first set the maximum degree of rotation to both East and West. If there are any obstructions (e.g. walls, chimneys) in the rotating radius of the dish, this must definitely be considered when setting the East-West limits.
If there are no obstructions in the rotating radius of the dish, set the limits so the dish can be rotated a little beyond what is required for the outermost satellite you wish to receive.

8.5.6.1.1 Deleting existing limits

First you should delete any limit values that may have been stored.

> Access the **Menu** for **Setting the motor antenna**, as described in Point 8.5.6.

> Press the **blue** function key **Actions** to open an selection window.

> Now use the **arrow keys up/down** to mark the line **Delete limits**.

> To delete the limits, press the **OK** button.

> Confirm the following remark with **OK**.

8.5.6.1.2 Setting the Eastern limit

> To enter the Eastern limit, first use the **arrow keys** to mark the field **Save**.

> Now use the **arrow key right** to turn the dish to the maximum possible, or the maximum desired East position.
To do so, press and hold the button for as long as it takes, until the desired position is reached.

> To open the window listing the available actions, press the **blue** function key **Actions**.

> Now use the **arrow keys up/down** to mark the line **Set East limit**.

> To set the east limit, press the **OK** button.

> Confirm the following note with **OK**.

8.5.6.1.3 Setting the Western limit

> To enter the Western limit first use the **arrow keys** to mark the field **Save**.

> Now use the **arrow key left** to turn the dish to the maximum possible, or the maximum desired **West position**.
> To do so, press and hold the button for as long as it takes, until the desired position is reached.

> To open the window listing the available actions, press the **blue** function key **Actions**.

> Now use the **arrow keys up/down** to mark the line **Set West limit**.

> To set the west limit, press the **OK** button.

> Confirm the following note with **OK**.

8.5.6.2 Geo-positioning

If the geographical co-ordinates of your location are known, and you have a suitable motor, this function will simplify finding individual satellite positions. The co-ordinates for some German cities are listed in the Annexure (Point 19).

Note! Only switch on the geo-positioning mode if your DiSEqC motor supports this function.

> Access the menu for **Setting the motor antenna**, as described in Point 8.5.6.

> Use the **arrow keys** to mark the field **Geo. Pos.**

> Confirm by pressing **OK**.
> The menu used to **Enter** the location will be displayed.

8.5.6.2.1 Geo-positioning

> Using the **up/down arrow keys**, mark the lne **Geo positioning**.

> Using the **right/left arrow keys**, **activate** the **Geo positioning** function.

8.5.6.2.2 Geographic length

> Now use the **arrow keys** to mark the left field **E** or **W** in the line f**or geographic length**.

> In this field use the **OK** key to indicate whether the value entered refers to longitude East (**E**ast) or longitude West (**W**est).

> Now confirm with the **right arrow key**, to mark the field for the entry of the geographical longitude.

> Use the **number keys** to enter the geographical latitude of your location. Note here Point 8.5.6.2.4 concerning the entry of the geographical longitude/latitude.

8.5.6.2.3 Geographic latitude

After the entry of the longitude the marking jumps automatically into the left field of the geographic latitude **N** or **S**.

> In this field use the **OK** key to indicate whether the value entered refers to a northerly degree of latitude (**N**) or a southerly one (**S**).

> Now confirm with the **right arrow key**, to mark the field for the entry of the geographical longitude.

> Use the number keys to enter the geographical latitude of your location. Note here Point 8.5.6.2.4 concerning the entry of the geographical longitude/latitude.

> Press the **Back** key to return to the Motor antenna settings.

8.5.6.2.4 Entry of the geographic longitude/latitude

The geographic longitude/latitude of your location must be entered as a decimal value to one decimal place. As the co-ordinates are often stated in degrees, minutes and seconds, these must be converted to decimal values as follows:

- The figure for degrees remains unaffected by the calculation.

- The minutes are divided by 60, and rounded to one decimal place. The result of this division is added to the degrees.

- The seconds are not taken into consideration at all, as they do not affect the first decimal place.

Conversion of degree latitude (lat):

Lat = **50** + **11/60**
Lat = **50** + **0.2** (rounded)
Lat = **50.2**

In this example, you will now have to enter the figure **Rounded to one decimal place** (**50.2**) in the menu for the entry of location in the field of the geographical latitude.
The decimal value of the degrees in longitude will be calculated in the same manner.

8.5.6.3 Setting a satellite position

For each satellite position to be entered, work through Points 8.5.6.3.1 to 8.5.6.3.5. When programming satellite positions, we recommend you start with the satellite that has the most Easterly orbital position. Continue by adding the other satellites, working your way through in a Westerly direction, until you have reached the satellite with the most Westerly orbital position. Your TV set is pre-programmed at the factory for the most commonly used satellite positions. In addition, you can configure user-defined satellite positions (User 1 to User 11) for every possible orbital position.

8.5.6.3.1 Selecting a pre-programmed satellite position

> To accept a satellite position in your satellite list, use the **arrow keys** to mark the field **Sat new**.

> by pressing the **OK** button, a list appears with the existing available satellite positions.

> Now use the **arrow keys up/down** to mark a satellite position you would like to record into the current satellite list.

> Press **OK** to accept the selection.

With the **Geo-positioning function set to On** (Point 8.5.6.2), the dish will now automatically be rotated to the programmed satellite position. The rotation procedure will be indicated by a blinking display "**turn**".

If the **Geo-positioning function is switched Off**, (Point 8.5.6.3.3) you will have to turn the dish manually to the desired satellite position.

8.5.6.3.2 Setting a user-defined satellite position (User satellite)

> To add a user satellite position to the current satellite list, use the **arrow keys** to mark the field **Sat new**.

> Press the OK button, to open the list of available satellite positions.

> Now use the **arrow keys up/down** to mark a user satellite position (**User 1** to **User 11**).

> Confirm the satellite positions by pressing **OK**.

> Using the **arrow keys** now mark the panel **LNB-Config.** for the adjustment of a test transponder.
In this menu, enter the data for the test transponder, as described in Point 8.5.5.4.

> When you have completed setting the test transponder, press **Back** to return to the menu for **Setting the rotating antenna**.

> Now use the **arrow keys** to mark the field right next to the current satellite list, to enter the orbit position of the user satellites.

> Use the **numeric keys** to enter the orbital position of the user satellite. The marking now jumps to the field for the selection between east and west longitude **E** or **W**.

> Press the **OK** key appropriately to indicate whether this is a westerly (**W**) or an easterly (**E**) orbital position.

If the **Geo-positioning function is switched On** (Point 8.5.6.2), you can now use the function **Turn to sat** (Point 8.5.6.6) to turn the dish to the programmed user satellite position.

If the **Geo-positioning function is switched Off**, (Point 8.5.6.3.3) you will have to turn the dish manually to the desired satellite position.

8.5.6.3.3 Positioning antenna manually

To direct the antenna to the desired satellite or to determine whether you can receive the desired satellite at the desired position, a test transponder is available for each satellite. It is only by displaying the signal strength and quality via the test transponder that enables the exact positioning of the dish antenna.

> To change the test transponder, mark the LNB- config field with the **arrow keys**.

> Confirm with **OK** and implement the settings as described in Point 8.5.5.4.

> Subsequently press the back button, to return to the menu for **Setting the motor antenna** and to allow rotation to the desired satellite.

> Now use the **arrow keys up/down** to mark the field **Save**.

> Now use the **arrow keys right** (field **East** is marked) or **left** (field **West** is marked) to turn the dish to the desired position. In each case keep the key pressed down until the desired position is reached.

As soon as the dish has completed the rotational movement, the TV set automatically checks the orbit position and shows this, where possible, in the lower portion of the menu.

8.5.6.3.4 Automatic fine adjustment (Autofocus)

Before saving a satellite position, we recommend you perform an automatic focussing procedure. In this procedure the dish is set to optimum reception based on measured signal strength.

> To open the window listing the available actions, press the **blue** function key **Actions**.

> Now use the **arrow keys up/down** to mark the line **Autofocus**.

> The autofocus function is started by confirming with **OK**.
> While the automatic adjustment is in progress, a corresponding message Autofocus will be displayed.

8.5.6.3.5 Saving a satellite position

When the autofocus procedure has been completed, you must still save the satellite position to memory.

> Use the **arrow keys** to mark the field **Save**.

> Press the **OK** key.

Satellite position fixed

When the orbit position, to which the dish is directed, corresponds with that of the stored satellite and programs for the selected satellite have been included in the preconfigured works program, a query screen now appears, asking whether you would like to include this in your TV and radio lists.

> Using the **right/left arrow keys** mark the panel **Yes**, if you wish to accept the pre-configured programme of the selected satellite into the TV and radio lists and then confirm with **OK**.

For satellite positions not yet fixed

> If it has not yet been possible to ascertain the orbital position then the following query will appear.

> To save the satellite position, use the **arrow keys left/right** to mark the field **Yes** and confirm by pressing **OK**.

> Using the **arrow keys** mark the **Yes** panel in the subsequently appearing window if you wish to accept the pre-configured programs of the selected satellite into the TV and radio lists and then confirm with **OK**.

Satellite position cannot be fixed

If on checking the test transponder does not identify a pre-programmed satellite position, or if the signal received is too weak, a corresponding message will be displayed.

> To save the satellite position, use the **arrow keys left/right** to mark the field **Yes**,and confirm by pressing **OK**.

> Confirm the following message again by pressing the **OK** key.

8.5.6.4 Current satellite list

The satellite positions saved are included in the satellite list. A position not yet saved is marked in this list with a "*****".

> To turn the dish to a position included in the satellite list, use the **arrow keys** to mark the field **Current satellite list** and confirm with **OK** to start the update.

> Use the **up/down arrow keys** to select the desired Position and confirm with **OK**. The dish will now be turned to the position selected. The rotating procedure will be indicated by the blinking display "**turn**" in the menu.

As soon as the dish has completed the rotational movement, the TV set automatically checks the orbit position and shows this, where possible, in the lower portion of the menu.

8.5.6.5 Deleting a satellite position

To delete a satellite position from the current satellite list, proceed as follows:

> Use the **arrow keys** to mark the field **Current satellite list**.

> Press **OK** to open the current satellite list.

> Use the **up/down arrow keys** to select the Satellites that you wish to delete and confirm with OK.

> Use the **arrow keys** to mark the field **Delete sat** and confirm by pressing **OK**.

> Mark the field **OK** and **press OK**.
> If the satellite programs to be deleted are contained in the TV and/or radio lists, a query box opens asking whether this program should be deleted.

> Check the field **Yes** to delete the program or **No** to keep the program in the list and confirm your selection with **OK**.

8.5.6.6 Manually start automatic rotation process

In order to rotate the antenna to a selected satellite position, your TV set includes the function **Turn to Sat**.

> Press the **yellow** function key **Turn to sat** to turn the antenna to the satellite position selected.

As soon as the dish has completed the rotational movement the TV set automatically checks the orbit position and shows this, where possible, in the lower portion of the menu.

8.5.6.7 Reference position

When installing the external installation, the motor must be in the reference position (**0**°). You can thus return the motor to this position (**0**°) at any time using the function "**Turn to reference position**".

> Press the **green** function key **Ref. position** to turn the atenna automatically to the reference position.

8.5.7 Quit antenna settings (DVB-S)

> Provided a submenu of the **Antenna settings menus DVB-S** has been accessed, you can return to the **Antenna settings DVB-S** menu by clicking the back button several times if necessary.

To quit the **Antenna settings DVB-S menu,** you have the following choices:

> Press the **green** function key to **Confirm**.
> The changes made are not stored and you return to the menu settings.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.6 Antenna settings (DVB-T)

To enable optimal positioning of the DVB-T antenna, your TV set includes a signal strength indicator of the entire channel spectrum.

> Press the **Menu** key to display the **Main menu**.

> Now choose the menu option Settings by selecting the same using the **up/down arrow keys**.

> Confirm by pressing **OK**.
> The menu **Settings** will be displayed.

> Using the **up/down arrow keys**, mark the entry **Antenna settings (DVB-T)**.

> By pressing the OK button the **Antenna settings (DVB-T)** menu is accessed.

> Now position your antenna such that the level display of the receivable channels at your location shows the maximum figures.

8.6.1 Antenna feeder

When using an **active antenna** without external power supply it is necessary to switch on the Antenna feeder (5 V/100 mA). This will allow the antenna to be powered via the antenna input connection, provided the antenna can accept a feeder via the coaxial cable.

> Use the **right/left arrow keys** to switch the Antenna feeder on or **off**.

8.6.2 Quit antenna settings (DVB-T)

> Press the **Green** function key to **Confirm**.
> The changes made are not stored and you return to the menu settings.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them and press **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8.7 Programming the electronic program guide

Your device is capable of receiving data channels with additional EPG files. This gives you a preview of EPG data up to a week in advance.
To receive the data channel in question, this must be made available within the receiving area by the network operator.

> Press the **Menu** key to display the **Main menu**.

> Use the **arrow keys up/down** to mark the line **Settings**.

> Confirm by pressing **OK**.
  The sub-menu **Settings** will be displayed.

> Use the **arrow keys up/down** to mark the line **Program guide**.

> Confirm by pressing **OK**.
  The menu **Program guide** will be displayed.

8.7.1 Updating

> To switch the automatic updating on or off, mark the line **Updating** using the **up/down arrow keys**

> **Activate** the **Updating** using the **right/left arrow keys**.

If you do not wish to receive the additional data, or if you are unable to receive the data because of your location, you can switch off the data reception function:

> Use the **right/left arrow keys** to set the EPG updating to off, to switch off the data receiving function.

Note:
So that the new EPG files can be automatically loaded, the device must be in Standby operation. The loading process is indicated with a violet illuminated LED.

8.7.2 Updating time

> Mark the line **Updating** time using the **up/down arrow keys**.

> Use the **Numeric keyboard** to set the time at which the automatic download of the EPG files should take place.

8.7.3 EPG channel

Should the data channel parameters for the loading of EPG lists concerning satellite or DVB-C or DVB-T have changed, you can correct this from this menu. Current transponder/channel data can be obtained from your specialist retailer. Generally, though, you should not make any changes in this menu.

> Mark the line **EPG channel** using the **up/down arrow keys**.

> Press the **OK** button, to access the **EPG channel** submenu. The current received data is now displayed for you.

8.7.4 Selecting TV broadcaster / Radio broadcaster

You have the chance to record the desired program in the EPG electronic program guide, as described in this Point or also in Point 10.5, or to cancel.

> Mark the line **Selecting TV broadcaster or radio broadcaster** using the **up/down arrow keys**.

> Confirm by pressing **OK**.
> A window now appears for selecting TV or radio programs.
> In the program guide included broadcasters are marked with the EPG Logo 👁.

8.7.4.1 Selecting program list

As well as in the list of favorites, programs, including those from the overall list and the provider list, can be recorded in the electronic program guide.

> by pressing the **red** function key, this opens the window of **Categories** of the selection of program list types.
> The currently active program list is marked.

> Use the **arrow keys up/down** to select a type of program list, e.g. **Overall list** and confirm with **OK**.
> The overall list, alphabetically sorted, is displayed with all programs included.

8.7.4.2 Selecting programs

To facilite recording programs in the electronic program guide or removing them from the same, programs can be marked individually or in blocks.

Individually recording or removing

> Using the **arrow keys** and/or **Numeric keyboard** you can mark the broadcaster which you want to record in the electronic program guide or remove from the same.

> Now press the **yellow** function key 👁.
> Next to the marked broadcasters the EPG.Logo is now displayed or removed respectively 👁.

Recording or removing in blocks

To mark multiple broadcasters at the same time, proceed as follows:

> First use the **arrow keys** and/or **Numeric keyboard** to mark a broadcaster, for which you wish to activate the child protection function or remove from the system.

> Press the **OK** key to go to the selection mode. The broadcaster is marked with a cross on the left side.

> Using the **arrow keys** the subsequent or previous broadcaster can also be marked.　　　Now press the **yellow** function key 👁.
> Next to the marked broadcasters, the EPG. Logo is now displayed or removed respectively 👁.

8.7.4.3 Quit broadcaster selection

> Press the key **Back** to return to the **Programm guide** menu.

8.7.5 Start category

The electronic program guide includes the following types of portrayal:

Overview
This form of presentation provides a quick overview of all programs included in the electronic program guide.

Programs
This form of display provides a table with the current day's programs of a single channel.

Genres
If you are interested in specific types of programs, you can view program information sorted by specific categories, or genres, e.g. movies, news, etc.

Last used
When using this setting, each time you call up the EPG the presentation form last used will be displayed.

> Mark the line **Start** category using the **up/down arrow keys**.

> Open the selection of presentation forms by pressing the **OK** button.

> Choose the desired presentation form, by marking this with the **arrow keys on/off** and confirming with **OK**. If you have chosen the start category of **Genres**, you may additionally select the Genre.

> Use the **up/down arrow keys** to mark the next line.

> Open the selection of Genres by pressing the **OK** button.

> Use the **up/down arrow keys** to select the desired Genre and confirm this with **OK**.

8.7.6 Starting updating manually

> To download the EPG files, use the **up/down arrow keys** to mark the field **Start download**.

> Start the process by pressing the **OK** button.
> A notice now appears with the percentage completion of the already downloaded EPG files.

8.7.7 Interrupting downloads

> If the reading process was manually started using the **Program guide**, (Point 8.7.6), this can be interrupted by pressing the **OK** button.

> If the reading operation commenced automatically while in Standby operation, this can be interrupted by switching on (via the **On/Standby** button) the TV set.

8.7.8 Quitting programming of the electronic program guide

To quit the **Program guide** menu, the following choices are available:

> Press the **green** function key **Confirm**.
> The changes made are not stored and you return to the menu **Settings**.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys**, mark **Yes**, when you wish to store the changes or **No**, when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

8

8.8 Parental control

Your TV set is equipped with a parental control function. This allows you to protect important functions (e.g. calling up the main menu) from unauthorised access. In addition, programmes and hard disk recordings that you have blocked can, in future, only be selected by first entering a four-digit PIN code (unit PIN). Hard disk recordings, which are made from a blocked program, automatically have this block applied. To work on the **Parental control** menu, proceed as follows:

> Press the **Menu** key to display the **Main menu**.

> Use the **up/down arrow keys** to mark the line Settings and confirm by pressing the OK button.

> Now mark the line **Child protection** using the **up/down arrow keys** and confirm by pressing **OK**.

8.8.1 PIN query mode

Note that this setting can only be made for the device PIN and must not be confused with the Smartcard-PIN code. See also Point 6.5.4.

> Use the **up/down arrow keys** to mark the line **PIN query mode**.

> In this line, use the **arrow keys left/right** to set the mode of the Child protection to **on** or **off**.

When you set the PIN query mode to **ON** and have not yet changed the device PIN, you will be asked to change the PIN. For this, proceed as described in Point 8.8.2.

8.8.2 Changing PIN

The device PIN Code is set to a default setting of **0000** at the factory. To change the device PIN code, proceed as follows:

> Using the **up/down arrow keys**, mark the line **PIN change** and confirm with **OK**.
An input window now appears.

> First use the **Numeric keyboard** to enter the current device PIN. The marker then jumps to the next line – **Enter new PIN**.

> Here, use the **Numeric keyboard** to enter the new device PIN code. The marker then jumps to the next line – **Repeat new PIN**.

> Use the **Numeric keyboard** to enter the new PIN code again, in order to confirm it.

Note!
Do not forget your unit PIN code. If you do forget it at some point, please consult your retail specialist!

8.8.3 Selecting TV broadcaster / Radio broadcaster

You may mark a desired program for child protection or remove the child protection marking, as described in this Point or also in Point 10.6.

> Mark the line **Selecting TV broadcaster** or **Radio broadcaster** using the **up/down arrow keys**.

> Confirm by pressing **OK**.
A window now appears for selecting TV or radio programs. Through the child protection function, blocked programs are marked with a padlock 🔒.

8.8.3.1 Selecting program list

As well as those in the list of favorites, programs, including those from the overall list and the provider list, can be blocked.

> Pressing the **red** function key opens the window of **Categories** of the selection of program list types. The currently active program list is marked.

> Use the **arrow keys up/down** to select a type of program list, e.g. **Overall list** and confirm with **OK**.
The overall list, alphabetically sorted, is displayed with all programs included.

8.8.3.2 Selecting programs

To facilitate recording programs in the Child protection function or removing them from the same, programs can be marked individually or in blocks.

Individually recording or removing

> Using the **arrow keys** and/or the **Numeric keyboard**, you can mark broadcasters, for which you wish to apply blocking through the child protection function.

> Now press the **yellow** function key 🔒.
Next to the marked broadcasters, the padlock is now displayed or removed respectively 🔒.

Recording or removing in blocks

To mark multiple broadcasters at the same time, proceed as follows:

> First use the **arrow keys** and/or the **Numeric keyboard** to mark a broadcaster, for which you wish to activate the child protection function or remove from the system.

> Press the **OK** key to go to the selection mode. The broadcaster is marked with a cross on the left side.

> Using the **arrow keys** the subsequent or previous broadcaster can also be marked.

> Now press the **yellow** function key 🔒.
Next to the marked broadcasters, the padlock is now displayed or removed respectively 🔒.

8.8.3.3 Quit broadcaster selection

> Press the key **Back** to return to the **Child protection** menu.

8.8.4 Quit child protection menu

To quit the **Child protection** menu, the following choices are available:

> Press the **green** function key to **Confirm**.
> The changes made are not stored and you return to the menu **Settings**.

Alternatively

> Press the **Back** button.
> A query box now appears, asking whether the changes made should be stored or not.

> Using the **right/left arrow keys** mark **Yes** when you wish to store the changes or **No** when you wish to discard them.

> Confirm your selection by pressing **OK**.

Alternatively

> To revert directly to normal operation, without retaining the changes, press the **Menu** button.

9 Station search

To receive all available or new programmes, there are various options for performing a pro-gramme scan.

1. Automatic scan
Choose this search option, to search the entire receiving area of the TV for programs.

2. Extended Scan
Choose this search option, to search only one receiving area (FM Radio, Analog CT, DVB-S, DVB-C or DVB-T) for programs.

3. Manual scan
Choose this search option, to search through one channel, one frequency or one transpond-er for an analog program or for digital programs or with program-specific PID numbers for a program.

Access broadcaster search

> To commence searching for programs first call up the **Main menu** by pressing the key **Menu**.

> Mark the line **Broadcaster** search using the **up/down arrow keys**.

> Confirm by pressing **OK**.
> The sub-menu **Broadcaster** search will be displayed.

9.1 Automatic scan

During the station search, the receiving range you select is automatically searched for by programs.

> Access the **Broadcaster** search menu, as described in Point 9.

> Mark the entry manual search using the **up/down arrow keys**.

> The manual search menu is opened by confirming with **OK**.

> Mark the individual receiving areas (**DVB-S**, **DVB-C**, **DVB-T**, **Analog CT** or **FM Radio**) with the **up/down arrows**.

> Switch to the receiving area, in which you wish to search, using the **right/left arrow keys** on **Yes**.
> The receiving areas marked with **No** are not searched during the automatic search process.

> Use the **arrow keys up/down** to mark the line **Search mode**.

> Use the **right/left arrow keys** to set the desired search mode (via **All broad-casters** or only **Free broadcasters**).

9.1.1 Starting automatic search

> To start the search process, press the **green** function key **Search**.
> The duration of the search depends on the selected receiving areas. Please also note any messages displayed on screen.

9.1.2 During the automatic search

Already during the search process, detail of the search process can be seen on ths screen.

The following are shown:

1   Which frequency area or source has just been searched.

2   The number of TV and radio programs detected up to this point.

3   Which frequency was just searched.

4   The most recently detected program.

5   The overall search progress.

6   The number of transponders/channels already searched.

> You may abort the scan at any stage by pressing the **red** function key.

9.1.3 After the automatic search

After the search process, a notification appears on screen with details of how many programs your TV set has found, how many of these are new arrivals and how many of them are encoded. The query also appears, whether you would like to include the programs in your main list of favorites automatically, manually or not at all.

Automatic sorting
The programs found are sorted by a pre-programmed list into the main list of favorites. The order of the programs is determined by the audio language selected in Point 8.2.10.1 and by the country selected in Point 8.3.1.

Automatic addition
The newly found programs are unsorted automatically and added to the end of the main list of favorites.

Manual sorting- TV/manual sorting- radio
Here, you can access the Manage TV lists or radio lists menu directly. Process these lists as described in Point 10 of the instruction manual.

Back
The newly found programs are included in the overall list.

> Use the **up/down arrow keys** to select the desired method and confirm with **OK**.
> Please note any messages displayed on screen.

Irrespective of whether you have included the programs found in your list of favorites, you can process the list of favorites manually, as described in Point 10.

9.2 Extended Scan

To restrict the search for programs to one receiving area, choose the **Expanded search** option.

> Access the **Broadcaster** search menu, as described in Point 9.

> Mark the entry **Expanded search** using the **up/down arrow keys**.

> The **Expanded search** menu is opened by confirming with **OK**.

Source

> Use the **up/down arrow keys** to mark the topmost line.

> Open the list of different sources by pressing the OK button.

> Use the **up/down arrow keys** to select, whether you wish to search for analoge programs (**FM Radio or Analog CT**) or digital programs (**DVB-S**, **DVB-C** or **DVB-T**).

> Confirm your choice by pressing the **OK** button.

Based on the source you have selected, the subsequent input options and thus the input menus will be decided. These will be described in the following points.

9.2.1 FM Radio (Expanded search for analog radio programs)

When searching for **FM radio** programs, you need not use any expanded settings.
> When proceeding with this search, proceed directly as described in Point 9.2.6.

9.2.2 Analog CT (Expanded search for analog TV programs)

When conducting an expanded search for the source **CT Analog**, you have the option of selecting a search scope. Based on this search scope, the channel rosters for the broadcaster search will be set.

Broadcaster scope

> Use the **up/down arrow keys** to mark the line **Broadcaster** scope.

> Press the **OK** key again to display the selection table showing all the active Broadcaster areas.

> Use the **up/down arrow keys** to select the broadcaster area, within which the device will operate and confirm with **OK**.
> For Germany, select the broadcasting area of **Western Europe**.

> Subsequently, proceed with Point 9.2.6.

9.2.3 DVB-S (Expanded search for digital satellite programs)

Satellite

> Use the **up/down arrow keys** to mark the line **Satellite**.

> By pressing the **OK** button a window opens with the configured satellites, see Point 8.5.

> Use the **up/down arrow keys** to select the entry **All satellites**, to search through all configured satellites or one single satellite, to only search for this program.

> Confirm your choice by pressing the **OK** button.

Scan mode

> Use the **arrow keys up/down** to mark the line **Search mode**.

> Use the **right/left arrow keys** to decide whether you wish to only receive freely available programs (**Free broadcasters**) or also encoded programs (**All broadcasters**).

> Subsequently, proceed with Point 9.2.6.

9.2.4 DVB-C (Expanded search for digital cable programs)

Searching methods

> Mark the topmost line using the **up/down arrow keys**.

> Open the selection of different search methods by pressing the **OK** button.

> Use the **up/down arrow keys** to choose between the **Channel search**, **Frequency search** and **Network search**.

> Confirm by pressing **OK**.

Start channel <small>only with channel and network searches</small> / Start frequency <small>only with frequency search</small>

> Using the **up/down arrow keys**, mark the line **Start channel** or **Start frequency**.

> Using the **right/left arrow keys**, select the channel in which you wish to start the search or enter the desired frequency using the **Numeric keyboard**.

Stop channel <small>only with channel and network searches</small> / Stop frequency <small>only with frequency search</small>

> Use the **up/down arrow keys** to mark the line **Stop channel** or **Stop frequency**.

> Using the **right/left arrow keys**, select the channel in which you wish to start the search or enter the desired frequency using the **Numeric keyboard**.

New symbol rates

Under this line, you can see a row of symbol rates. Only these symbol rates are taken into account during a search operation.

> Use the **up/down arrow keys** to mark the line **Symbol rates**.

> Open the input by pressing the **OK** button.

> Now use the **Numeric keyboard** to enter an symbol rate, which should be included into the list.
> If the input is done properly, this **Symbol rate** will be included in the list.

Delete symbol rate

> Use the **up/down arrow keys** to mark the entry **Delete**.

> By pressing the **OK** button, you can delete the existing symbol rates in the last position in each case.

Scan mode

> Use the **arrow keys up/down** to mark the line **Search mode**.

> Use the **right/left arrow keys** to decide whether you wish to only receive freely available programs (**Free broadcasters**) or also encoded programs (**All broadcasters**).

> Subsequently proceed to Point 9.2.6.

9.2.5 DVB-T (Expanded search for digital antenna programs)

Searching methods

> Mark the topmost line using the **up/down arrow keys**.

> Open the selection of different search methods by pressing the OK button.

> Use the **up/down arrow keys** to choose between the **Channel search**, **Frequency** search and **Network search**.

> Confirm by pressing **OK**.

Start channel only with channel and network searches/ Start frequency only with frequency search

> Using the **up/down arrow keys**, mark the line **Start channel** or **Start frequency**.

> Using the **right/left arrow keys**, select the channel in which you wish to start the search or enter the desired frequency using the **Numeric keyboard**.

Stop channel only with channel and network searches/Stop frequency only with frequency search

> Use the **up/down arrow keys** to mark the line **Stop channel** or **stop fre-**

quency.

> Using the **right/left arrow keys**, select the channel in which you wish to start the search or enter the desired frequency using the **Numeric keyboard**.

Scan mode

> Use the **arrow keys up/down** to mark the line **Search mode**.

> Use the **right/left arrow keys** to decide whether you wish to only receive freely available programs (**Free broadcasters**) or also encoded programs (**All broadcasters**).

> Subsequently proceed to Point 9.2.6.

9.2.6 Starting expanded search

> To start the search process, press the **green** function key **Search**. Based on the search process chosen, this may take over 15 minutes to complete. Please also note any messages displayed on screen. After the search is complete, a notification appears on the screen.

9.2.7 During the expanded search

Already during the search process, detail of the search process can be seen on ths screen. The following are shown:

1 Which frequency area or source has just been searched.

2 The number of TV and radio programs detected up to this point.

3 Which frequency was just searched.

4 The most recently detected program.

5 The overall search progress.

6 The number of transponders/channels already searched.

> You may abort the scan at any stage by pressing the **red** function key.

9.2.8 After the expanded search

After the search process, a notification appears on screen with details of how many programs your TV set has found, how many of these are new arrivals and how many of them are encoded. The query also appears, whether you would like to include the programs in your main list of favorites automatically, manually or not at all.

Automatic sorting
The programs found are sorted by a pre-programmed list into the main list of favorites. The order of the programs is determined by the audio language selected in Point 8.2.10.1 and by the country selected in Point 8.3.1.

Automatic addition
The newly found programs are unsorted automatically and added to the end of the main list of favorites.

Manual sorting TV/ manual sorting radio

Here, you can access the Manage TV lists or radio lists menu directly. Process these lists as described in Point 10 of the instruction manual.

Back

The newly found programs are included in the overall list.

> Use the **up/down arrow keys** to select the desired method and confirm with **OK**. Please note any messages displayed on screen.

Irrespective of whether you have included the programs found in your list of favorites, you can process the list of favorites manually, as described in Point 10.

9.3 Manual scan

If a program is not found following the automatic or expanded search, it may be necessary to conduct a **Manual search** for this program.

> Access the **Broadcaster** search menu, as described in Point 9.

> Mark the entry **Expanded search** using the **up/down arrow keys**.

> The manual **Search menu** is opened by confirming with **OK**.

Source

> Use the **up/down arrow keys** to mark the topmost line.

> Open the list of different sources by pressing the **OK** button.

> Use the **up/down arrow keys** to select, whether you wish to search for anal-oge programs (**FM Radio** or **Analog CT**) or digital programs (**DVB-S**, **DVB-C** or **DVB-T**).

> Confirm your choice by pressing the **OK** button.

The further methods of carrying out a manual search depend on the selected source. The various methods are described in the following points.

9.3.1 FM Radio (Manual search for an analog radio program)

Frequency

> Use the **up/down arrow keys** to mark the line **Frequency**.

> Use the **right/left arrow keys** to set the desired frequency.

Forced mono

If it is difficult to receive a broadcaster, meaning there is audible noise interfering with the sound, switching to mono operation may reduce or even completely resolve this noise prob-lem.

> Use the **up/down arrow keys** to mark the line **Forced mono**.

> Use the **right/left arrow keys** to switch the function Forced **Mono on** or **off**.

Program name

> Use the **up/down arrow keys** to mark the line **Program name**.
> To alter the program name, press the **OK** button.
> Now use the **virtual keyboard** to enter the desired names. In the process, the buttons of the remote control are configured to the following functions:

Arrow keys: The marked portion moves.

OK: The marked letters are included in the names and placed behind.

Yellow function key: The keyboard switches between upper/lower case as well as symbols.

Red function key: The last letter of the name is deleted.

Blue function key: You quit the input of the name, without confirming this and return to the manual search menu.

Green function key: The input name is confirmed.

Level / Deviation

In the lower area of the menu, the **Level** is indicated to you. This level indicates the strength with which the broadcaster is transmitting at the set frequency. In addition, the deviation of the set frequency from the broadcast frequency of the program is also displayed.

Storing

> To store the settings, press the **green** function key to **Confirm**.
> A query screen appears, asking whether the program should be included in the list of favorites.
> Using the **right/left arrow keys**, select the **Yes** to include the program in the list of favorites and confirm with **OK**.
> With the selection **No**, the program is only stored in the overall list and can, as described in Point 10.2, be recorded in the list of favorites.

9.3.2 Analog CT (Manual search for an analog TV program)

> Access the **Manual search** menu, as described in Point 9.3.

TV standard

> Use the **up/down arrow keys** to mark the **TV standard** line.
> Open the selection of TV standard by pressing the **OK** button.
> Choose the TV standard applicable for the received channel (**B/G**, **D/K**, **I(+)** or **L(L')**) and confirm with **OK**.
> In Germany, the **B/G** standard is used.

Channel/Frequency

To set the desired broadcaster, you can select between the channel and the frequency input.

> Press the **yellow** function key **Channel** or **Frequency**, in order to switch between the channel and frequency input.

> Use the **up/down arrow keys** to mark the line **Channel** or **Frequency**.

> Using the **right/left arrow keys**, select the desired channel, then or enter the desired frequency using the **Numeric keyboard**.

Fine tuning

Using the Fine tuning, you can set broadcasters, whose broadcast frequency is too close to that of the previously set channels. A very fine adjustment to correct the frequency for the optimal image and the best possible sound is done automatically.

> Use the **up/down arrow keys** to mark the line **Fine tuning**.

> Perform fine tuning with **right/left arrow keys** until you find your choice of broadcaster without signal interference.

Forced mono

If it is difficult to receive a broadcaster, meaning there is audible noise interfering with the sound, switching to mono operation may reduce or even completely resolve this noise problem.

> Use the **up/down arrow keys** to mark the line **Forced mono**.

> Use the **right/left arrow keys** to switch the function **Forced mono on** or **off**.

Program name

> Use the **up/down arrow keys** to mark the line **Program name**.

> To alter the program name, press the **OK** button.
  A virtual keyboard appears for the input of the name.

> Now use the **virtual keyboard** to enter the desired names. In the process, the buttons of the remote control are configured to the following functions:

Arrow keys:	The marked portion moves.
OK:	The marked letters are included in the names and placed behind.
Yellow function key:	The keyboard switches between upper/lower case as well as symbols.
Red function key:	The last letter of the name is deleted.
Blue function key:	You quit the input of name, without confirming this and return to the manual search menu.
Green function key:	The input name is confirmed.

Level / Deviation

In the lower area of the menu the **Level** is indicated your level. This level indicates the

strength with which the broadcaster is transmitting at the set frequency. In addition, the deviation of the set frequency from the broadcast frequency of the program is also displayed.

Storing

> To store the settings, press the **green** function key to **Confirm**.
> A query screen appears, asking whether the program should be included in the list of favorites.

> Using the **right/left arrow keys**, select the Entry **Yes** to include the program in the list of favorites and confirm with **OK**.
> With the selection **No** the program is only stored in the overall list and can, as described in Point 10.2, be recorded in the list of favorites.

9.3.3 DVB-S (Manual search for digital satellite programs)

> Access the **Manual search** menu, as described in Point 9.3.

Satellite

> Use the **up/down arrow keys** to mark the line **Satellite**.
> Press the **OK** key to display a table showing all the configured satellites.
> Use the **arrow keys up/down** to mark the selected satellites.
> Confirm by pressing **OK**.

Transponder frequency

> Use the **up/down arrow keys** to mark the line **Transponder frequency**.
> Use the **Number keys** to enter the transponders, which you wish to search.

Polarisation

> Use the **up/down arrow keys** to mark the line **Polarization**.
> Use the **arrow keys right/left** to enter the polarisation (**h**orizontal or **v**ertical) of the transponder.

Symbol rate

> Use the **up/down arrow keys** to mark the l**ine Symbol rate**.
> Enter the appropriate symbol rate using the **Numeric keys**.

Modulation

> Move the marker with the **arrow keys up/down**to the line **Modulation**.
> Open the selection of modulation forms by pressing the **OK** button.
> Use the **up/down arrow keys** to select the modulation form (**DVB-S** or **DVB-S2**), in which the broadcaster being sought is included.

Scan mode

> Use the **arrow keys up/down** to mark the line **Search mode**.

> U **right/left arrow keys** to decide whether you wish to only receive freely available programs (**Free broadcasters**) or also encoded programs (**All broadcasters**).

> Subsequently proceed with Point 9.3.7.

9.3.4 DVB-C (Manual search for digital cable programs)

> Access the **Manual search** menu, as described in Point 9.3.

Channel frequency

> Use the **up/down arrow keys** to mark the line **Channel frequency**.

> Using the **Numeric keyboard** enter the frequency corresponding to the channel being sought.

Symbol rate

> Use the **up/down arrow keys** to mark the line **Symbol rate**.

> Enter the appropriate symbol rate using the **Numeric keyboard**.

Modulation

> Use the **up/down arrow keys** to mark the line **Modulation**.

> Use the **left/right arrow keys** to enter the modulation (**QAM 16**, **QAM 32**, **QAM 64**, **QAM 128** or **QAM 256**) of the channel.

Scan mode

> Use the **arrow keys up/down** to mark the line **Search mode**.

> Use **the right/left arrow keys** to decide whether you wish to only receive freely available programs (**Free broadcasters**) or also encoded programs (**All broadcasters**).

> Subsequently proceed with Point 9.3.7.

9.3.5 DVB-T (Manual search for digital antenna programs)

> Access the **Manual search** menu as described in Point 9.3.

Channel

> Use the **up/down arrow keys** to mark the line **Channel**.

> Use the **right/left arrow keys** to set the desired channel.

Scan mode

> Use the **arrow keys up/down** to mark the line **Search mode**.

> Use the **right/left arrow keys** to decide whether you wish to only receive freely available programs (**Free broadcasters**) or also encoded programs (**All broadcasters**).

> Subsequently proceed with Point 9.3.7.

9.3.6 PID search (DVB-S/DVB-C/DVB-T)

The PID search is intended to assist when search for a targeted digital program, using program-specific PID numbers.

> First enter the relevant data for DVB-S, DVB-C or DVB-T-PID searches, as described in Points 9.3.3, 9.3.4 or 9.3.5. The selection of the search mode need not be concerned with.

> Press the **yellow** function key **PID Scan** to open the input window for the PID numbers.

> Then use the **arrow keys** to mark the lines **PCR-PID**, **Audio-PID** and **Video-PID** und enter the corresponding PID numbers with the Numeric keyboard.

9.3.7 Manual search/PID search starting DVB-S, DVB-C or DVB-T

> To start the search process, press the **green** function key **Search**. Please also note any messages displayed on screen.

9.3.8 During the manual search/PID search

Already during the search process, detail of the search process can be seen on ths screen. The following are shown:

1 Which frequency area or source has just been searched.

2 The number of TV and radio programs detected up to this point.

3 The most recently detected program.

4 Which frequency was just searched.

5 The overall search progress.

6 The number of transponders/channels already searched.

> You may abort the scan at any stage by pressing the **red** function key.

9.3.9 After the manual search/PID search

After the search process, a notification appears on screen with details of how many programs your TV set has found, how many of these are new arrivals and how many of them are encoded. The query also appears, whether you would like to include the programs in your main list of favorites automatically, manually or not at all.

Automatic sorting

The programs found are sorted by a pre-programmed list into the main list of favorites. The order of the programs is determined by the audio language selected in Point 8.2.10.1 and by the country selected in Point 8.3.1.

Automatic addition
The newly found programs are unsorted automatically and added to the end of the main list of favorites.

Manual sorting- TV/ Manual sorting- radio
Here, you can access the Manage TV lists or radio lists menu directly. Process these lists as described in Point 10 of the instruction manual.

Back
The newly found programs are included in the overall list.

> Use the **up/down arrow keys** to select the desired method and confirm with **OK**. Please note any messages displayed on screen.

Irrespective of whether you have included the programs found in your list of favorites, you can process the list of favorites manually, as described in Point 10.

If no programme is found as a result of the PID search, a query message will be displayed, asking whether this programme should be generated.

> If you wish to generate this program, use the **arrow keys left/right** to select the field **Yes**, and confirm by pressing **OK**. The program will now be generated, and will be added at the end of the Favourites list.

9.4 Quit broadcaster search

> Press the back button, to go **Back** to the **Broadcast** search menu.

or

> Press the **Menu** button, to return to normal operation.

10 Program management

This chapter describes how you can edit your lists of favourite programs based on your wishes. This function is also required to sort new found programs into the program list after a program scan has been performed.

In this regard you should know the following: Your TV set is equipped with two programme lists, the Favourites list and the Total list.
The Favourites program list includes all the programs you have accepted into the list according to the procedure described below.
In the Total list are all the TV programs or radio programs that come up in the search results after a search. This also contains programs, which you have not recorded in the list of favorites.

In addition, this chapter describes how you can delete programs or record them in the electronic program guide as well as the use of the child protection function.

10.1 Accessing program management

> Press the **Menu** key to display the **Main menu**.

> Use the **arrow keys up/down** to mark the line Manage **TV lists**, in order to work on the TV list, or **Manage Radio lists**, in order to work on the radio list.

> Confirm by pressing **OK**.
> The programme list management required to work on the respective Favourites list (TV or Radio list) will be displayed. The Favourites list will be displayed on the right half of the screen. The alphabetically sorted Total list will be displayed on the left half of the screen. The Total list includes all available programs.

10.1.1 Select a Favourites list

> By pressing the green function key **Favorites list**, you can switch from the Overall list or provider list to the list of favorites.

> By pressing the green function key several times, you will reach the selection of the list of favorites.

> Use the **up/down arrow keys** to select the list of favorites that you wish to process and confirm with **OK**.
> The relevant list of favorites will now be displayed.

10.1.2 Select Total list

> Press the **red** function key to move the marker to the Total list. This is now active.

> Pressing the **red** function key Overall list again will open a selection window. Here you have the option of sorting the Overall list according to various selection criteria (e.g. all channels, all free to air, all new, all found, all HDTV etc.) as well as by provider, languages, satellites or genres.

> Use the **arrow keys up/down** to select the desired programme list from (e.g. Languages.)

> Confirm by pressing **OK**.
  An additional selection window will now be displayed.

> Now use the **arrow keys up/down** to specify the selection criterion according to which the Total list is to be sorted.
  Select e.g. **All German**, to select only the German language channels Note that the display of all channels of a single language only shows channels, which were previously found at least once in a search (see Point 9).

> Confirm by pressing **OK**.
  Now the program list will be displayed according to the selection previously made. programs, which are already in the Favourites list are marked with the appropriate favourites programs place.

10.2 Adding programs to the Favourites list

To accept programmes from the TV or radio lists into the Favorites list, call up the program manager as described in Point 10.1, and go to the Total list. Programmes already included in the Favorites list are indicated by the corresponding program position number.

> Use the **arrow keys** and/or the **Numeric keyboard** to specify a program, which you would like to include in the list of favorites.

> Press the **blue** function key **Functions**.
  A selection window showing the available functions will be displayed.

> Use the **arrow keys up/down** to mark the item ▶ **Add**.

> Confirm by pressing **OK**.

> Press the **yellow** function key ▶ **Add** to accept the marked program into the Favourites list.

Marking in blocks

To mark several programs simultaneously, proceed as follows:

> Press the **OK** key to go to the selection mode.

> You may now use the **arrow keys up/down** and/or the Numeric keyboard to mark the previous or following programmes as well.

> When you have completed marking the desired programs in this manner, press the **yellow** function key ▶ **Add** to add the marked programs to the Favourites list.

10.3 Deleting programs

10.3.1 Removing (deleting) from the Favourites list

To remove programs from the list of favorites, access the program management menu as described in Point 10.1 and select the relevant **Favourites list**.

> Using the **arrow keys** and/or the **Numeric keyboard**, mark a program, which you wish to delete from the list of favorites.

> Press the **blue** function key **Functions**.
A selection window showing the available functions will be displayed.

> Use the **arrow keys up/down** to mark the line ◀ **Remove**.

> Confirm by pressing **OK**.

> Press the **yellow** function key **Delete**.

> To delete multiple programs at the same time, mark them as described in Point 10.2 (**Marking in blocks**).

> After you have marked the desired program in this way, press the **yellow** function button ◀ **Delete**.

The programs deleted in this manner will, however, remain in the Total list, and can be added to the Favourites list again at any time.

10.3.2 Deleting from the Total list

> To delete programs from the **Overall list**, access the **TV lists** or **Radio lists management** menu, as described in Point 10.1 and switch them to the Total list or Provider list.

> Using the **arrow keys** and/or the **Numeric keyboard**, mark a program which you wish to delete from the Total list.

> Press the **blue** function key **Functions**.
A selection window showing the available functions will be displayed.

> Use the **up/down arrow keys** to mark the line **Delete**.

> Confirm by pressing **OK**.

> Press the **yellow** function key **Delete**.
A query window then appears, asking whether you really wish to delete the program.

> To confirm deletion of the program, mark the field **Yes**.

> Confirm by pressing the **OK** button.

> To delete multiple programs at the same time, mark them as described in Point 10.2 (**Marking in blocks**).

> After you have marked the desired program in this way, press the **yellow** function button **Delete**.
A query window then appears, asking whether you really wish to delete the program.

> To confirm deletion of the program, mark the field **Yes**.

> Confirm with the **OK** button.

10.4 Sorting programs

To sort the order of programmes in a Favourites list according to your preferences, call up the programme list manager as described in Point 10.1.

> Using the **arrow keys** and/or the **Numeric keyboard** mark the program which you would like to position elsewhere in the list.

> Press the **blue** function key **Functions**.
  A selection window showing the available functions will be displayed.

> Use the **arrow keys up/down** to mark the line **Sort**.

> Confirm by pressing **OK**.

> Now press the **yellow** function key **Sort**.
  A double arrow will appear next to the programme selected.

> You can now use the **arrow keys** and/or the **numeric keys** to place the marked program at the position in the program list where you would like it to be.

> Press the **OK** button to enter the new position of the programme into memory.

> To remove several programs at the same time, mark these as described in Point 10.2 (Marking in blocks).

> Now press the **yellow** function key **Sort**.
  A double arrow will appear next to the block of programs selected.

> Now you can move the marked program with the **arrow keys** and/or the **Numeric keyboard** to the desired place in the Program list, and confirm with **OK**.

10.5 EPG

You have the chance to record the desired program in the EPG electronic program guide, as described in this Point or also in Point 8.7.4, or to remove it from the same.

> Access the program management as described in Point 10.1 and select the list of favorites.
  In the program guide, included broadcasters are marked with the EPG Logo ⬤logo.

> Using the **arrow keys** and/or the **Numeric keyboard** you can mark the broadcasters, which you want to record in the electronic program guide or remove from the same.

> Press the **blue** function key **Functions**.
  A selection window showing the available functions will be displayed.

> Use the **arrow keys up/down** to mark the line ⬤ **Program guide**.

> Confirm by pressing **OK**.

> Now press the **yellow** function key ⬤ **Program guide** Next to the marked broadcasters, the EPG. Logo is now displayed or removed respectively ⬤.

> To record or delete multiple programs at the same time, mark them as described in Point 10.2 (Marking in blocks).

> After you have marked the desired program in this way, press the **yellow** function button ☜ **Program guide**.

10.6 Parental control

You may mark desired programs for child protection or remove the child protection marking, as described in this Point or also in Point 8.8.3.

> Access the program management as described in Point 10.1 and select the list of favorites.
  Through the child protection function, blocked programs are marked with a padlock 🔒.

> Using the **arrow keys** and/or the **Numeric keyboard** mark a program which you wish to block or unblock.

> Press the **blue** function key **Functions**.
  A selection window showing the available functions will be displayed.

> Use the **up/down arrow keys** to mark the line **Child protection** 🔒.

> Confirm by pressing **OK**.

> Press the **yellow** function key 🔒 **Child protection**.

> To delete multiple programs at the same time, mark them as described in Point 10.2 (**Marking in blocks**).

> After you have marked the desired programs in this way, press the **yellow** function button 🔒 **Child protection**.

10.7 Quit Program Management

> Press the **Back** button, to go back to the **Main menu**.

or

> Press the **Menu** button, to return to normal operation.

The changes previously made will be automatically saved in both cases.

11 System configuration

With this menu option, you can view specific device data, such as the actual software version on the TV and in the DVB module. In addition, the MAC address of the device as well as the last EPG updating is also shown.

> Press the **Menu** key to display the **Main menu**.

> Choose the menu option **Settings**, by marking the same using the **up/down arrow keys**.

> By pressing the **OK** button, confirm your selection and return to the submenu settings.

> Use the **arrow keys up/down** to mark the menu line System configuration.

> Confirm by pressing **OK**.
  The Electronic Program Guide then appears on the screen.

> Press the key **Back** to return to the **Settings menu**.

or

> press the key **Menu** to return to Normal operation.

11

12 Service settings

You can revert to the original default settings pre-programmed at the factory at any stage. In addition, if you find that the program list is outdated because of changes made by the program providers, you may delete the program list completely, and then perform a new program scan.

Please note that after you have deleted the list, you must then start a program scan, and must then copy the desired programs from the Total list to the Favourites list.

> Press the **Menu** key to display the **Main menu**.

> Select the Settings menu option, by marking this with the **arrow keys on/off** and confirming with **OK**.
The sub-menu **Settings** will be displayed.

> Use the **arrow keys up/down** to mark the menu line **Service settings**.

> Confirm by pressing **OK**.
The sub-menu **Service settings** will be displayed.

12.1 Default settings

After this function is called up, the default factory programming will be implemented again, all own settings will be deleted, and the installation assistant **AutoInstall** will be started.

> Using the **up/down arrow keys**, mark the line Activate default settings.

> Press the **OK** key.
The message will be displayed: "**Do you really want to activate the default setting?**".

> Use the **arrow keys right/left** to mark **Yes** or **No**.

> Confirm by pressing **OK**.

12.2 Delete all programs

This function serves to delete the entire program memory.

> Use the **up/down arrow keys** to mark the line Delete all programs and confirm by pressing the OK button.
The message will be displayed: "**Do you really want to delete all programs?**".

> Use the **arrow keys right/left** to mark **Yes** or **No**.

> Confirm by pressing **OK**.

Please note that after you have deleted the list, you must then start a program scan, and must then copy the desired programs from the Total list to the Favourites list.

13 Operating language (Menu language)

This menu item gives you the opportunity to set the menu language according to your personal preference. To change the operating language, proceed as follows:

> Press the **Menu** key to display the **Main menu**.

> Use the **arrow keys up/down**, to mark the menu line **Operating language**.

> Confirm by pressing **OK**.
  The sub-menu **Operating language** will be displayed.

> Use the **arrow keys up/down** to mark the desired language.

> Store this selection in memory by pressing **OK**.

> Press the **Back** key to return to the **Main Menu** without making changes.

14 Encoding system

Under this menu option, you can access the submenu for the plugged in Smartcard as well as the CI module.

> Press the **Menu** key to display the **Main menu**.

> Choose the menu option **Encoding system**, by marking the same using the **up/down arrow keys**.

> Confirm by pressing **OK**.
  The sub-menu **Encoding system** will be displayed.

> By using the **up/down arrow keys** to select a CI module (1. and 2. Entry) or the Smartcard (3. Entry) and confirming with **OK**, you can access information concerning the CI module used or the inserted Smartcard.

> The **arrow keys** can be used to navigate within the submenus and settings can be made.

> Open a Point and confirm a setting by pressing the **OK** button.

> Press the key **Back** to return to the respective previous menu level.

Manually initializing the CI module

> By pressing the **green** function key **CI Reset** when in the accessed **Encoding system menu**, you can initialize the CI module manually.

13

14

15 Software update via USB interface

You can update the software of the device via the USB interface. To enable the software update via the USB interface, you must first download the current software from the Technisat homepage (www.technisat.de).

To enable updating of the TV set via the USB interface, you require an appropriately configured USB Flash Stick.

> Format this USB Flash Stick with the **FAT32** file system.

> Now copy the software file **HDTV_xxxx-yyyy.tpad** onto the stick.

> If you only wish to implement one update, now copy the additional file **singleupdate** onto the USB Flash Stick. If you wish to implement multiple updates with this USB Flash Stick instead of this file, copy the **autoupdate** file onto the USB Flash Stick.
> Please note: The files **singleupdate** or **autoupdate** must have <u>no</u> file suffix!

Please note!!!
The USB Flash Stick should not contain multiple **tpad** Software files. The files "**autoupdate**" and "**singleupdate**", likewise, should not be located on the same USB Flash Stick.

> Now switch the TV set to Standby mode and insert the USB Flash Stick into the USB socket. Now you can switch on the TV set.
> After a few seconds, the indication "**A USB device has been connected.**" will appear on the screen.
> Subsequently, the screen is switched off and after a few additional seconds, the indication "**Software Updating, please wait a moment.**" as well as a progress bar appear.
> **Note** that after the new software has been loaded from the USB Flash Stick, this is prepared within the device. During this process, the LED fluctuates between green and orange. This process may last a few minutes. Subsequently, the TV screen reappears, the TV set can now be switched to Standby and the USB Flash Stick removed.

Should the USB update not start, please go through all steps one more time or try a different USB Flash Stick.

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Please note!!!
The update must not be interrupted at any time by taking the USB Flash Stick out or cutting the power supply, since this may cause the device to malfunction.

16 Technical data

LCD panel

Diagonal	82 cm (HDTV 32)
	102 cm (HDTV 40)
	117 cm (HDTV 46)
Panel type	16:9 TFT LCD
Resolution	1920 × 1080
Brightness	500 cd/m^2
Contrast ratio	2000:1
Reaction time	8 ms
Angle of view	178° V / 178° H

Image

Still picture	yes
Manual zoom	yes
Automatic format changeover	4:3/16:9
Adjustable formats	original, optimal, optimal 16:9, full zoom and stretch

Sound

Mono/Stereo/Dual channel sound	yes
RMS Output in W	2 × 15
Number of loudspeakers	4 (not with HDTV 46)

Control

Masking / Menu

Installation assistant	yes
OSD menu navigation	yes
Clock	yes
Program information	yes
DVB subtitles	yes
Video text subtitles	yes
Menu languages	German, English, French, Spanish,Italian, Turkish, Polish,Turkish, Portuguese, Russian, Greek, Czech, Hungarian, Dutch, Swedish,

Timer

Hard disk recording (PVR)	yes
Channel change	yes
Video recorder	yes
TV Switch-off (Sleep timer)	yes
TV Switch-on (Wake-up timer)	yes

Channel search / station memory

Automatic	yes
Expanded	yes
Manual	yes
PID	yes

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Program memory	5000 (Overall list) / up to 2000 favorites for TV and radio

Others

Child protection	yes
PaP (Image in image)	yes
PaP (Image and image)	yes
PaT (Image and Text)	yes
JPG playback	yes
MP3 playback	yes
TTS	yes

Video text

Top text	yes
Megatext (1000 pages)	yes
HiText Level 2.5	yes (switchable on/off)

Sockets HDMI 1 / HDMI 2 / HDMI 3

Connector	HDMI Typ A

Video

TMDS Protocols	DVI 1.0 and HDMI 1.3
Encoding	RGB or YCbCr
Sampling Modes	4:4:4 or 4:2:2
Supported resolutions z. B.	640 × 480p @ 59,940 / 60Hz 4:3
	720 × 480p @ 59.940 / 60Hz 4:3 / 16:9
	720 × 576p @ 50Hz 4:3 / 16:9
	1280 × 720p @ 50 / 59.939 / 60Hz 16:9
	1920 × 1080i @ 50 / 59.939 / 60Hz 16:9
	1920 × 1080p @ 23.976 / 24 / 25 / 29.97Hz 16:9
	1920 × 1080p @ 30 / 50 / 59.939 / 60Hz 16:9

Audio

Streams	1
Channels	2
Bits per sample	16
Sampling rates	32.0, 44.1, 48 KHz

Socket – SCART sockets (AV 1/AV 2)

Input	Video
	S-Video (only AV 1)
	RGB (only AV 2)
	Audio R/L
Output	Video
	Audio R/L
Switching voltage function	0…2 V TV aus
	4.5…7 V Aspect ratio 16:9
	9.5…12 V Aspect ratio 4:3
Input signal level	R: 0.7 Vss/75 Ohm
	G: 0.7 Vss/75 Ohm
	B: 0.7 Vss/75 Ohm

Input level L/R	0.5 V r.m.s. (nominal)
Audio input impedance	> 40 kOhm

Socket - Component input

Input signal level	Y: 1.0 Vss/75 Ohm
	Pr: 0.7 Vss/75 Ohm
	Pb: 0.7 Vss/75 Ohm

Socket - S-Video input (Hosiden) (Hosiden)

Input signal level	Y: 1Vss/75 Ohm
	C: 0.3Vss/75 Ohm
Audio R/L	Cinch

Socket - Video Input

Video	Cinch
Audio R/L	Cinch

Socket - VGA input

Supported resolutions	640 × 400p @ 60Hz
	640 × 480p @ 60Hz
	720 × 400p @ 60Hz
	800 × 600p @ 56 and 60Hz
	1024 × 768p @ 60Hz
	1280 × 720p @ 60Hz
	1280 × 768p @ 60Hz
	1280 × 1024p @ 60Hz
	1360 × 768p @ 60Hz
	1920 × 1080p @ 60Hz
Supported bus types	DDC1, DDC2
Supported protocols	DDC2B, E-DDC, DDC/CI via VESA E-DDC

Socket USB port

Type	USB 2.0 (EHCI), compatible with USB 1.0 (OHCI) Transfer rate of up to 480 Mbit/s (2.0), up to 12 Mbit/s (1.0)
Function	Software update via USB Stick; Recording, MP3 and JPG management via USB stick/external hard disk

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Socket Analog audio output

Right	Cinch
Left	Cinch
Subwoofer	Cinch
Center	Cinch

Socket - Digital audio output

SP/DIF Electrical output	Cinch
SP/DIF Optical output	Toslink

Socket- Digital audio input

SP/DIF Electrical input	Cinch

Socket- Headphone jack

Type	3.5 mm jack (stereo)

Socket- Microphone jack

Type	3.5 mm jack (stereo)

Socket- DC jack (12V relay)

Type	DC jack
Power supply	12 V DC / <1 A
Short-circuit proof	yes
Switchable	yes

Analog UHF/VHF/CATV tuner

Input frequency range	46 – 860 MHz
Channels	E02-E12/E21-E69 / S01-S41
Input impedance	75 Ohms
Tuner input	IEC jack (female)
Standards	BG stereo, DK mono, L, L´, I, NICAM

Analog FM tuner

Input frequency range	87.5 MHz….108 MHz
Input impedance	75 Ohms
Tuner input	IEC jack (female)

DVB-S tuner

Input frequency range	950 …. 2150 MHz	
Input level range	–65 dBm … –25 dBm	
DBS-S tuner input	2 × F socket	
Loop through	yes, switchable, Input 1 to Input 2	
Input impedance	75 Ohms	
AFC gain range	± 3 MHz	
Demodulation	DVB-S:	Shaped QPSK
	DVB-S2:	8psk, QPSK
Symbol rate	DVB-S:	DVB-S2: … 45 Mbaud/s, SCPC/ MCPC 10 … 31 Mbaud/s (8PSK) 10 … 30 Mbaud/s (QPSK)
FEC	Viterbi and Reed-Solomon	
Viterbi rates	1/2, 2/3, 3/4, 5/6, 7/8 automatic Adjustment	

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Roll-off Factor	35 %

LNC power supply:

LNB Current	2 × 400 mA max
	Short-circuit proof
LNC voltage vertical	< 14 V no load,
	> 11.5 V at 400 mA
LNC voltage horizontal	< 20 V no load,
	> 17.2 V at 400 mA
LNC switched off in standby mode	

22 kHz modulation

22 kHz	yes
Amplitude	0.6 V +/– 0.2 V

DiSEqC

DiSEqC-Level	1.0 and 1.2 as well as SatCR s

DVB-C tuner

Input frequency range	47 – 862 MHz
Input level range	47 – 70 dBµV
Input impedance	75 Ohms
Tuner input	IEC jack (female)
Noise figure	< 8 dB
Demodulation	16 / 32 / 64 / 128 / 256 QAM
FEC	Reed-Solomon
Symbol rate	1 … 7 Mbaud

DVB-T tuner

Input frequency range	174 … 230 MHz/470 … 860 MHz
Input impedance	75 Ohms
Tuner input	IEC jack (female)
Noise figure	< 8 dB
Max. input level	–32 dBm

Antenna feeder

Power supply	5 V DC / <0,1 A double insulated
Demodulation	COFDM
Mode of transmission	2k/8k
Bitrate	4 Mbit/s … 32 Mbit/s

Video decoding:

Video compression	MPEG-2 and MPEG-1
	compatible up to MP@ML (main profile @ main level)
	MPEG-4 (H2.64)
	compatible up to high profile level
Video standard	PAL / SECAM / NTSC

Audio decoding

Audio compression	MPEG -1 & MPEG-2 Layer I and II

Audio Mode	Dolby Digital (AC3), Stereo, Dual (main/sub)
Sampling frequencies	32 kHz, 44.1 kHz, 48 kHz

Common Interface

Type	2 Common Interface Plug for CI module
Power consumption	max. 0.3 A / 5 V

Card reader

Type	1 slot card reader for integrated Conax system

EPG files

Automatic updating	yes
EPG Preview	Maximum 7 days
Category	Overview/program and genre details
Start category	yes (adjustable)
Preview image	yes
Program search	yes

Hard disk

Hard disk type	3.5 inch, S-ATA
Hard disk control	intended for 160 to 500 GB
Number of recordings	999 (max.)
Max. recording duration	26 hours per recording

Remote control

System	RC-5
Modulation frequency	36 kHz
Infra-red wavelength	950 nm

Power supply

230 V / 50 Hz Rated voltage

Power consumption HDTV 32
Normal operation	148 W
Radio mode (when LCD panel switched off)	< 43 W
Standby (with quick start activated)	< 40 W
Standby	< 0.2 W

Power consumption HDTV 40
Normal operation	183 W
Radio mode (when LCD panel switched off)	< 45 W
Standby (with quick start activated)	< 40 W
Standby	< 0.6 W

Power consumption HDTV 46
Normal operation	254 W
Radio mode (when LCD panel switched off)	< 48 W
Standby (with quick start activated)	< 40 W
Standby	< 0.6 W

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General

HDTV 32 Plus
Weight in kg: approx. 27,0
Dimensions (W × H × D) in cm: 81,0 × 70,0 × 20.0 (With rest foot)
                                                        81,0 × 63,0 × 11,5 (Without rest foot)

HDTV 40
Weight in kg: approx. 33,0
Dimensions (W × H × D) in cm: 100,5 × 77,5 × 20,0 (With rest foot)
                                                        100.5 × 71.5 × 11.5 (Without rest foot)

HDTV 40 Plus
Weight in kg: approx. 36,0
Dimensions (W × H × D) in cm: 100,5 × 78,5 × 20,0 (With rest foot)
                                                        100.5 × 73,0 × 11.5 (Without rest foot)

HDTV 46
Weight in kg: approx. 38,5
Dimensions (W × H × D) in cm: 113.5 × 78.0 × 20.0 (With rest foot)
                                                        113.5 × 71.5 × 11.5 (Without rest foot)

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17 Technical terms

Antenna cable / Coaxial cable

Connecting cable between the antenna and the antenna input of the TV set, for the transmission of received signals as well as for supplying the power of an active DVB-T antenna.

External installation

Connecting cable between the modulator of the satellite receiver and the antenna input of the television set, used as an alternative if no SCART socket is available.

AV

Audio-**V**ideo is an umbrella term for devices used to record and playback image and sound signals.

Standby

A state in which the TV set consumes very little power but is not fully switched off, and can be switched back on using the remote control.

CE

The manufacturer declares that the TV set complies with the guidelines of the European Union.

Data compression/MPEG1/MPEG2/MPEG4

The transfer of current television standard data (625 lines and 50 Hz screen refresh rate requires a digital data flow of 216 MBit/.
This would require bandwidths which are neither present terrestrially via cable or satellite. For this reason, the total volume of data transmitted is reduced by means of a compression algorithm. For Europe, MPEG-1 has been accepted as the international standard for data compression. MPEG-2 is an expanded version of MPEG-1. Due to the exceptionally high volumes of data required for the portrayal of high resolution images, the MPEG4 standard was created as a further progression from the MPEG2 standard.

DHCP

Dynamic **H**ost **C**onfiguration **P**rotocol. With the help of a relevant server, the DHCP function allows the dynamic assignment of IP addresses and further configuration parameters of the devices connected within the network (e.g. computers, TVs receivers, radios etc.).

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DiSEqC

Digital **S**atellite **Eq**uipment **C**ontrol: A digital control signal for controlling DiSEqC-capable components of the external unit via an antenna connection. The following example shows how existing systems can integrate with DiSEqC components.

DVB
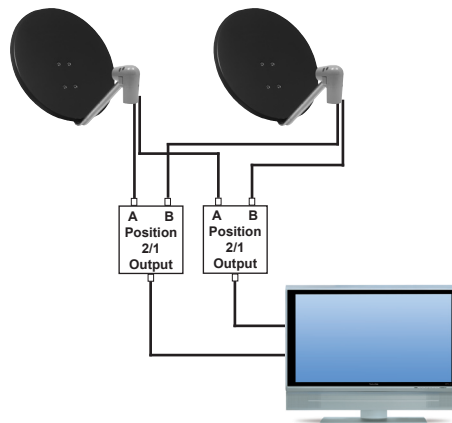
Digital **V**ideo **B**roadcasting: A universal digital transmission technology used for pictures, graphics, sound and text, i.e. for data in any shape or form, and in any possible, always appropriate quality.

EPG

Electronic **P**rogram **G**uide = electronic program guide.
The electronic program guide is an additional function of many DVB receiving units. These can transmit program information sent by transmitters, if present, graphically onto the screen for the user and hence allow an overview of current programs to be seen. In TechniSat devices, this program guide is designated with SFI or EPG and includes further additional functions. See here SFI/EPG.

Fine tuning (Broadcaster fine tuning)

The image is optimized when there are transmission problems on the sender side. It also influences the image quality of the video text.

Hard disk

Hard disks are a component of computer technology. They contain digital data stored in magnetic form. In this device, the hard disk is used to record programs. Via digital recording, quality losses are eliminated and all the information transmitted by the broadcaster can be storedes.
In addition, the hard disk can also be used to store images (JPG) and music tracks (MP3). Here be careful and note the relevant points of the instruction manual.

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Frequency

The physical size is expressed in terms of oscillations per second.
The unit is the Hertz (Hz).

Unit	Description	Cycles per second
1 Hz	1 Hertz	1
1 kHz	1 Kilohertz	1,000
1 MHz	1 Megahertz	1,000,000
1 GHz	1 Gigahertz	1,000,000,000

Frequency range

a) Satellite or LNB:
11 GHz range from 10.70 GHz – 11.70 GHz, 12 GHz range from 11.70 GHz – 12.75 GHz
b) TV set/Receiver:
Intermediate frequency or 1.IF 950 to 2150 MHz

HDMI

A **H**igh **D**efinition **M**ultimedia **I**nterface is an interface for the transmission of high resolution digital video data as well as digital audio data.

Interlace

With interlace (interlaced timing), in half an image, only the odd lines (lines 1, 3, 5, …) and in the next half image only the even lines (lines 2, 4, 6, …) are drawn. This method is the basis of all contemporary video standards.

ISIPRO

The ISIPRO function is a TechniSat in-house service, through which the program list of your TV set can be automatically kept up to date. To achieve this, a current programme list is broadcast at regular intervals via satellite (ASTRA 19.2° East), and can be downloaded by your TV set.

Channel

The frequency range within which a broadcaster (DVB-C, DVB-T, Analog CT) operates.

Coaxial cable

A connecting cable between LNB and TV set, for the transmission of received signals, for power supply to the LNB/s as well as the transmission of DiSEqC control signals.

LNB/LNC

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Low **N**oise **B**lockconverter = Receiver at the focal point of the satellite antenna, converter of the frequency range of satellites into the intermediate frequency of the digital receiver/TV set.

LOF

Local oscillator frequency; stated in MHz or GHz; varies depending on the LNB and the frequency range received.
Reception frequency of the digital receiver/TV set = Broadcast frequency of the satellite – LOF.

Menu

Overview screen display in a tree structure of the setting and storage of many device functions, which can be operated using only a few keys.

Network switch

A network switch serves to divide up the available bandwidth of the network connecting cord connected to the same (input) to all over connected network connection cords (output) of the switch.

OSD (On Screen Display)

On **S**creen **D**isplay = Superimposed on the screen.

Polarization plane

To better utilise the available frequency range, satellites are configured so that neighbouring transponders broadcast with opposite polarisation (horizontal and vertical or laevo-rotatory and dextro-rotatory). To receive both polarisation planes you require either two Single LNCs or a V/H LNC.

Progressive

TV sets normally establish their images on a line by line basis, where they unitially write all even and then all odd lines (interlaced timing). For progressive scan, first of all, all lines are stored and then progressively read out as a full image. This means a line structure is no longer visible, and helps prevent line flicker.

Router

A router works in a similar way to a network switch, but also includes aspects such as the DHCP function IP addresses and further configuration parameters, which manage and distribute in network connected devices (e.g. computers, TV sets, receivers, radios etc.).

Satellite

Description of a satellite, usually stating name and orbital position,
Examples:

ASTRA	19.2° East
EUTELSAT	13.0° East

SCART

Connector to TV sets, video recorders, satellite receivers and other consumer electronic devices for the transmission of audio (sound) and video (image) signals (AV).

SFI/EPG

See-TV Info or S**FI plus** is a TechniSat in-house expansion of the electronic program guide EPG. Here, the broadcast information is editorially prepared and can be loaded by your TV set at any time. Please also note Point 6.13 EPG of the instruction manual.

Sleep timer

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Internal clock relay of the device. After a previously specified time (max. 120 minutes), the device switches itself to Standby mode.

Software update:

Digital television is a new medium, providing not only improved sound and picture quality, but also the option of providing interactive services. These new services are constantly being developed and improved by providers. To utilise these services, it may be necessary to occasionally update the software of the TV set.

Standby

See Standby.

Symbol rate

The symbol rate indicates the volume of data being transmitted per second. This could be, for example, 27500 (27500 symbols per second).

Timer

Electronic clock relay for switching the device on, off and changeover, for example when starting hard disk recordings.

Transponder

Located on the satellite, used to process one or more programs. That means: It receives the signal from the ground station amplifies it, and transmits it back to earth.

Universal LNC:

Used to receive the ranges FFS (10.70 – 11,70 GHz), BBS (11.70 – 12.50 GHz) and FFS High Band (12.50 – 12.75 GHz).
The entire range is divided into two Bands:
Low Band: 10.70 – 11.80 GHz; LOF 9750 MHz
High Band 11.70 – 12.75 GHz; LOF 10600 MHz

USB

Universal **S**erial **B**us = Interface for the digital transmission of various data.

Supply voltage

LNBs and active DVB-T antenna are powered via the coaxial cable with electricity, which means the device requires a voltage of 14 volts (vertically) or 18 volts (horizontally) or 5 volts (DVB-T feeding voltage).

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Video text

Video text is an additional free of charge information service from the majority of broadcasters and can be shown on the screen.

Intermediate frequency

The frequency range transmitted by the satellite cannot be transmitted by cable and is therefore converted by the LNB to the intermediate frequency range from 950 to 2,150 MHz. This

makes transmission possible, and allows the TV set to process the signal.
1. IF = intermediate frequency

18 Trouble-shooting guide

Problem	Possible cause	Solution
No reception of programs previously received	DVB-S-/DVB-T antenna mis-aligned or defective	Check antenna
	Active DVB-T antenna receives no supply voltage	Connect power cord or switch on power supply (see Point 8.6)
	Programs are transmitted from another transponder/channel	Perform scan (see Point 9)
	Program no longer being broadcast	None
	When using a SatCR system, one of the connected devices is not correctly set up	Check the settings of all connected devices (see Point 8.5.5.3 as well as the connections to other devices)
Temporary appearance of square blocks in picture. Unit switches temporarily to freeze frame, no sound. Screen temporarily black, with message "no signal".	Heavy rain or snow	Clear snow from dish
	Antenna positioned incorrectly	Adjust antenna position
	Dish too small for location	Use larger antenna
	Obstacle located between dish and satellite (e.g. a tree)	Mount dish with free line of sight
	Another subscriber is using the same SatCR-Subscriber frequency	Check subscriber frequency with the connected party and if necessary change the subscriber frequency (see Point 8.5.5.3)

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Problem	Possible cause	Solution
No picture, no sound, LED lights up	Short circuit in LNC connection	Switch off unit, repair short circuit, switch unit on again
	Defective or missing cable connection	Check all cable connections (see Point 4)
	Defective LNC	Replace LNC
	False external unit set in the TV set	Correct setting (see Point 8.5)
	Antenna positioned incorrectly	Adjust antenna position
Antenna cannot be rotated	Motor not DiSEqC 1.2 compatible	Use suitable motor
Second encrypted program cannot be viewed.	Both the selected programs are not found on the same transponder	Choose two programs, which are found on the same transponder/channel (see Points 6.2 and 6.4.4)
	CI dual decoding not switched on	Switch on CI dual decoding (see Point 8.4.5.1)
	The CI module used is not compatible with "Dual Decrypt"	Use a CI module with "Dual Decrypt" capability
Remote control not working	False TV remote code set	Correct the remote control code setting (see Point 1)
	Batteries spent	Replacing batteries (see Point 3.4)
	Batteries are inserted incorrectly	Remove batteries and re=insert them, taking care to ensure correct polarity (see Point 3.4)

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Problem	Possible cause	Solution
Var. programs are not displayed in the program list	Wrong program list selected	Select other program list (see Point 6.2.3.2)
Programs such as DSF and Tele 5 are partially distorted	Interference from cordless "DECT telephones"	Increase the distance between the telephone receiver and the TV set
Sound OK, no TV image	Radio operation selected and radio background picture switched off	Check setting (see Points 6.2.7 and 8.4.1.4)
Image not completely visible or distorted	False picture format / Zoom selected	Check picture format / zoom in the menu (see Point 8.1.3.8)
		Check zoom setting (see Point 6.10)
No picture, no sound, LED not lit up	No mains power	Check power cable, plug and switch
No image via HDMI	The set HDMI resolution is not supported by the TV set	Correct the HDMI resolution. To correct the device, connect a SCART cable if necessary
No sound via HDMI, Image OK	False HDMI sound format selected	Check HDMI sound format
No sound or false sound audible	Dolby Digital is active or false audio language has been selected	Check setting in the menu (see Point 8.2.8 as well as Points 8.2.10.1 and 8.2.10.2)
		Check Dolby Digital- / Language selection (see Point 6.7)
Text may e.g. in the Infobox or EPG detailed info become difficult to read at times	The font size is set to "small"	Correct font size setting (see Point 8.4.1.1)

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Problem	Possible cause	Solution
The Infobox is only shown for a very short time after the program change or it takes a very long time to disappear	The display time of the infobox is incorrectly set	Set the desired display time (see Point 8.4.1.3)
The device cannot be controlled, nor switched on or off	Defective data stream-->unit blocked	Switch off the device at the mains, wait around 5 seconds and subsequently switch device back on
USB device is not recognized	USB device is formatted in an incorrect file system	Format USB device with the FAT32 file system
No further hard disk recordings possible	Hard disk is full	Delete current recording/s
Deletion of hard disk recordings is not possible	File system of the hard disk is damaged	Check hard disk (Point 7.3.5.1)
Hard disk recordings are not displayed	File system of the hard disk is damaged	Check hard disk (Point 7.3.5.1)
PC receives no connection from the device	Incorrect network settings	Check network settings (see Point 8.4.4)
	Network cable incorrectly connected	Check network connection