

TechniSat®

DigiCorder S2

Digital Twin Receiver
with
integrated hard drive



Operating manual

With two PCMCIA slots for use with
CI modules.

For reception of free-to-air and encrypted
(e.g. VIACCESS, CONAX, IRDETO, SECA etc.)
satellite programmes.

DVB
Digital Video
Broadcasting

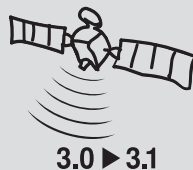
*Integrated
video recorder*

PVR

*TIME
SHIFT*

DOLBY
DIGITAL
Streaming

isipro
Program list update



1 Contents

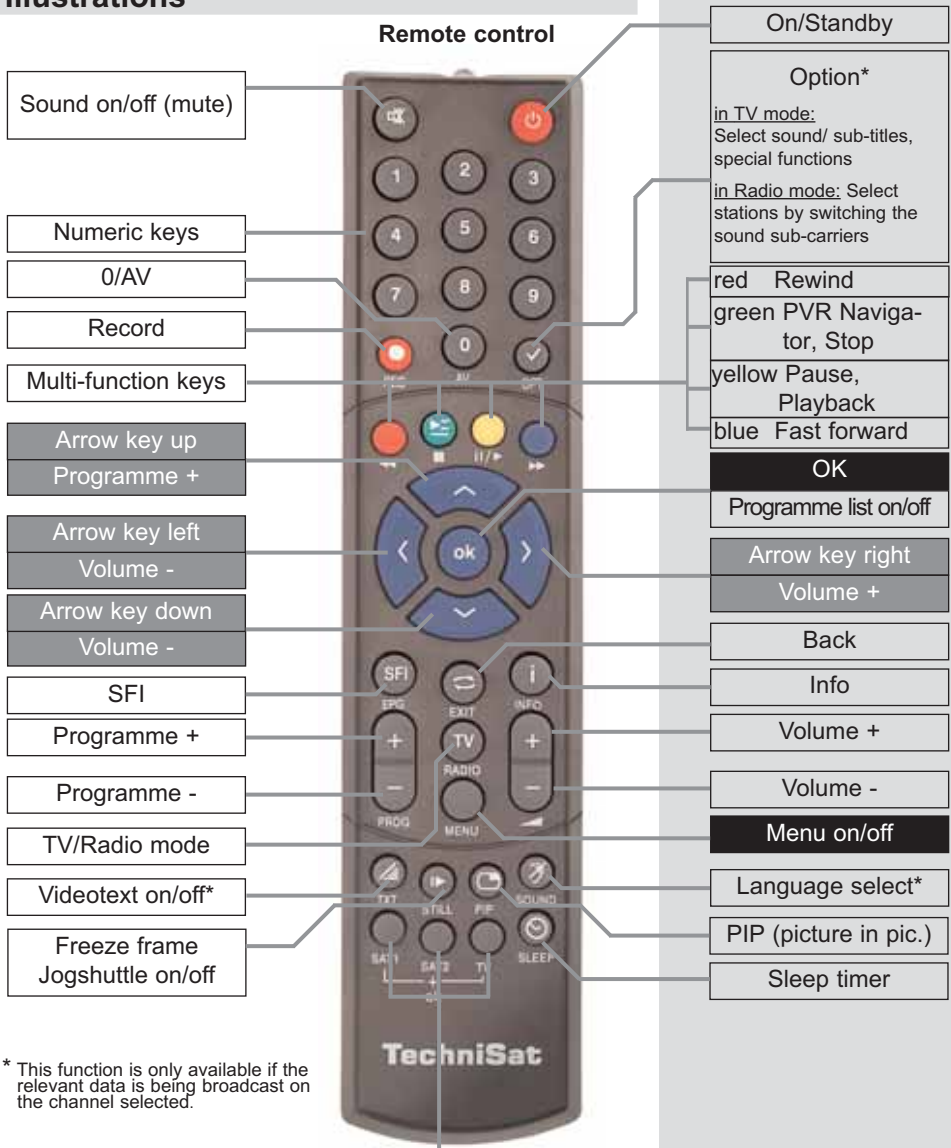
1	Contents	2, 5
2	Illustrations	3
3	Please read this first	9
	Important notes on operation	9
	Disposal notes	9
	Safety notes	10
	Operating breaks	11
	Notes	11
4	Connecting the DVB receiver	12
4.1	Mains power connection	13
4.2	External unit	13
4.2.1	Operation with 2 antenna signals	13
4.2.2	Operation with 1 antenna signal	13
4.2.3	Operation with a rotating antenna	13
4.3	Connection to a television set	13
4.3.1	Via SCART cable	14
4.4	Video cassette recorder (VCR)	14
4.5	Appliance with S-Video input (Hosiden)	14
4.6	HiFi amplifier	14
4.6.1	Analogue	14
4.6.2	Digital	14
4.7	Serial interface (RS 232)	15
4.8	USB socket	15
5	Initial installation	15
6	Settings	18
6.1	Operating language	18
6.2	Basic settings	19
6.2.1	Time difference to GMT (hours)	19
6.2.2	Country	19
6.2.3	Remote control code	19
6.2.4	Standby clock	20
6.3	Audio/Video settings	20
6.3.1	Picture format	21
6.3.2	Language (Audio signal)	21
6.3.3	Language (Sub-titles)	21
6.3.4	TV SCART mode	21
6.3.5	VCR SCART mode IN	21
6.3.6	Dolby Digital (AC3)	21
6.4	Antenna adjustment and settings	22
6.4.1	Switching DiSeqC on and off	23
6.4.2	Antenna signals	23
6.4.3	Setting the switching matrix	23
6.4.4	Additional settings/LNB properties	24
6.4.5	Rotating installation	26
6.5	Special functions	26

6.5.1	Several Favourites lists	26
6.5.2	Display time information banner	26
6.5.3	CI dual decoding	26
7	Operation	27
7.1	Switching on and off	27
7.2	Programme selection	27
7.2.1	Using the programme up/down keys	27
7.2.2	Using the numeric keys	28
7.2.3	Using the Navigator (programme list)	28
7.2.3.1	Selecting a list	28
7.2.4	Calling up blocked programmes	29
7.2.5	Infobox	29
7.3	Receiving encrypted programmes	30
7.3.1	Option channels	30
7.3.2	Selecting starting time	31
7.3.3	Simultaneous receipt. of two encrypted progr.	31
7.4	Volume control	31
7.5	Selecting a different language	32
7.5.1	Dolby Digital (AC3 mode)	32
7.6	TV/Radio switching	33
7.7	Back to last programme selected	33
7.8	Display clock and programme information	33
7.9	Additional programme information	33
7.10	Transponder information	34
7.11	Freeze-frame	34
7.12	Videotext	34
7.13	Sub-titles	35
7.14	PIP function (picture in picture)	36
7.15	Electronic Programme Guide SFI	36
7.15.1	Downloading SFI data	37
7.15.2	Interrupting download	37
7.15.3	Calling up Electronic Programme Guide	37
7.15.4	Now (table with current programme contents)	38
7.15.5	Next	38
7.15.6	More	39
7.15.7	SFI functions	39
7.15.7.1	SFI information	39
7.15.7.2	SFI timer programming	40
7.15.7.3	SFI programme overview	41
7.15.7.4	SFI overview by programme type (Genre)	42
7.15.8	Ending SFI	43
7.16	Sleep timer	43
7.17	Games	43
8	Hard drive operation	43
8.1	Recording	44
8.1.1	Instant recording	45
8.1.2	Timer recordings	47
8.1.2.1	Manual timer programming	48

8.1.2.2	Timer overview	49
8.1.2.3	Change timer programming	50
8.1.2.4	Delete timer programming	50
8.1.2.5	Programme new timer event	50
8.1.3	Timeshift function	51
8.1.4	Setting marks while recording	52
8.2	Playback	52
8.2.1	Playback of recordings	52
8.2.1.1	Playback hard drive recordings	52
8.2.1.2	Pause/freeze-frame	53
8.2.1.3	Fast forward and rewind	53
8.2.1.4	Jogshuttle function	54
8.2.1.5	Setting marks	55
8.2.1.6	Jumping to marks	55
8.2.1.7	Ending playback	55
8.2.2	MP3 playback	56
8.2.2.1	Screen controls	56
8.2.2.2	Display controls	57
8.2.2.3	MP3 playback modes	59
8.2.3	Playback/reproduction of pictures	59
8.3	Managing the hard drive	60
8.3.1	Managing recordings	60
8.3.1.1	Delete	60
8.3.1.2	Parental control	61
8.3.1.3	Editing	61
8.3.2	Managing music/pictures	66
8.3.2.1	Copy	66
8.3.2.2	Move	67
8.3.2.3	Delete	68
8.3.2.4	Sampling MP3 files/show pictures	68
8.3.3	Copy recordings	69
8.3.3.1	Export	69
8.3.3.2	Preview	70
8.3.3.3	Delete	70
8.3.4	Hard drive information	70
8.3.5	Hard drive maintenance	70
8.3.5.1	Checking the hard drive	71
8.3.5.2	Formating the hard drive	71
9	Changing basic programming	71
9.1	Configuring the Favourites list	71
9.1.1	Calling up programme list manager	72
9.1.2	Selecting Favourites list	72
9.1.3	Selecting Total list	72
9.1.4	Adding programmes to Favourites list	73
9.1.5	Delete programmes	74
9.1.6	Sort programmes	75
9.2	Programming the electronic programme guide	76
9.2.1	Updating	76
9.2.2	Updating time	76

9.2.3	Start category	.76
9.2.4	SFI channel	.77
9.2.5	Select TV channel	.77
9.2.6	Select radio station	.78
9.3	Parental control	.79
9.3.1	PIN query mode	.79
9.3.2	Changing the PIN	.80
9.3.3	Select TV channel	.80
9.3.4	Select radio station	.81
9.4	Programme search	.81
9.4.1	Automatic search	.82
9.4.2	Satellite search	.82
9.4.3	Transponder search	.83
9.4.4	Manual search	.84
9.4.5	During the search	.85
9.4.6	After the search	.85
9.5	Service settings	.86
9.5.1	Activate factory default setting	.86
9.5.2	Delete all programmes	.86
9.5.3	Update programme list (ISIPRO)	.87
9.5.4	Update software	.89
9.5.5	Copy settings	.90
9.6	System configuration	.90
9.7	Encryption system	.90
10	Use with a rotating antenna	.91
10.1	East and West limits	.91
10.1.1	Delete existing limits	.91
10.1.2	Set Eastern limit	.92
10.1.3	Set Western limit	.92
10.2	Geo-positioning	.93
10.3	Set satellite position	.94
10.3.1	Select satellite position	.94
10.3.1.1	Select pre-programmed satellite position	.94
10.3.1.2	Set user-defined satellite position	.95
10.3.2	Adjusting the satellite antenna	.95
10.3.2.1	Test transponder/LNB configuration	.96
10.3.2.2	Manual adjustment of antenna	.96
10.3.2.3	Automatic fine adjustment (Autofocus)	.96
10.3.3	Store satellite position	.97
10.4	Current satellite list	.97
10.5	Delete satellite position	.98
10.6	Referenzposition	.98
11	Technical terms	.99
12	Technical data/specifications	.102
13	Trouble-shooting guide	.105
14	Annexure	.107
	Index	.110

2 Illustrations



* This function is only available if the relevant data is being broadcast on the channel selected.

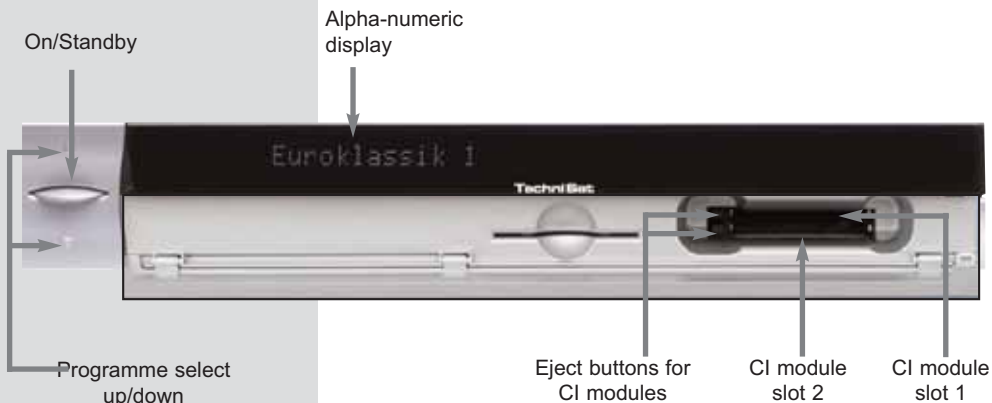
Remote control option:

By switching the remote control option, this remote control unit can control two TechniSat receivers as well as a TechniSat television set, using the same coding.

> To change the remote control option, simultaneously press the selected key (**SAT1**, **SAT2** or **TV**) and **OK!!!**

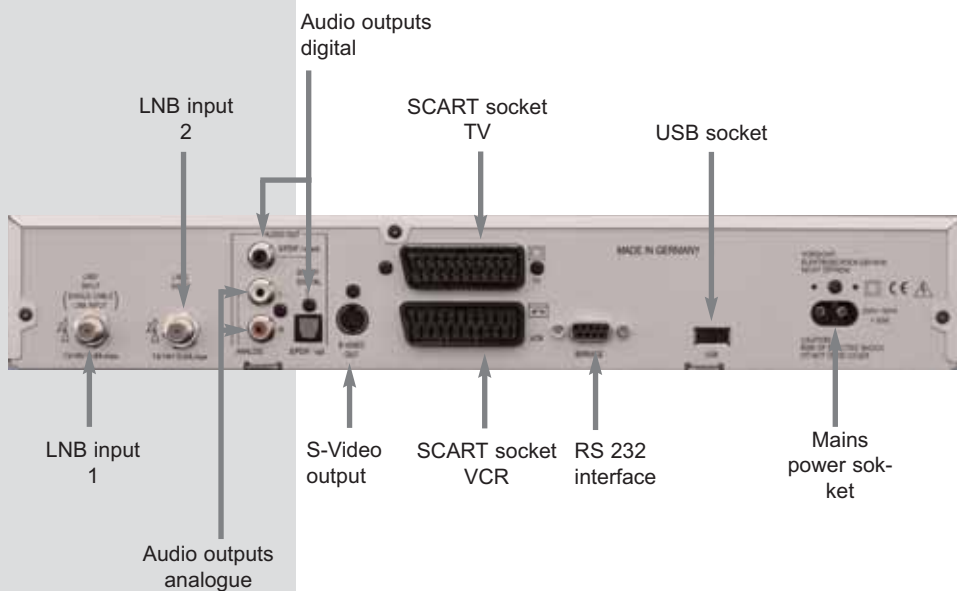
Please note:

In order to operate **this** receiver, the remote control option selected here and the remote control code selected in accordance with Point 6.2.3 must be identical.



Inserting the CI modules:

- > Follow the instructions provided by the manufacturers of the CI module and card.
- > Insert the desired Smartcard into the appropriate CI module.
- > Now carefully insert the complete CI module into the slot provided.



Dear customer,

congratulations on your decision to purchase the DigiCorder S2 digital receiver.

The operating manual supplied is intended to help you utilise the comprehensive functions of your new digital receiver to the fullest extent.

We have kept the operating instructions as brief as possible, and have used terminology that everybody can understand.

The range of functions of your receiver is constantly being expanded in the form of software updates. This means that additional steps in the operation may be added that are not yet described in this operating manual, or the operation of existing functions may be changed. For this reason you should occasionally visit the TechniSat homepage, to download the current version of the operating manual.

We wish you many years of viewing pleasure with your
TechniSat
DigiCorder S2!

Your

TechniSat Team

3 Please read this first

- > Before starting to use your receiver, please check that all the components have been supplied correctly. The following should be included:
 - 1 digital receiver, 1 mains connection cable,
 - 1 remote control, 1 operating manual,
 - 1 guarantee card, 2 batteries (1,5V microcells).
- > Please insert the batteries supplied in the battery compartment of the remote control unit, with attention to the correct polarity as indicated.

Important notes on operation

The use of so-called "On Screen Displays" (OSD) means that operation of the digital receiver is simplified, and the number of keys on the remote control unit reduced. All functions are displayed on screen, and can be controlled by means of a few simple keystrokes. Functions that are logically connected are combined in a "MENU". Any function selected will be indicated in a different colour. The function keys red, yellow, blue and green are indicated by coloured bars at the bottom of the screen. In the various menus, these coloured bars represent different functions, which can be implemented by pressing the appropriate coloured keys (multi-function keys) on the remote control. The function keys are only activated when a brief description is displayed in the appropriate field.

Key names and terms that appear in the OSD menu are shown in black type in this operating manual.

Help: where available, press the **blue** function key in the menus to display a help text; press again to close the help window.

Disposal advice

The packaging material of your receiver consists entirely of recyclable materials. Please sort the components appropriately, and dispose of them in line with your local waste disposal regulations. At the end of its useful life span, this receiver 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 used are recyclable and re-usable in accordance with their labelling. By ensuring that valuable raw materials are used again you can make a valuable contribution towards protecting our environment.

Please contact your local authorities for the location of the nearest recycling collection point.



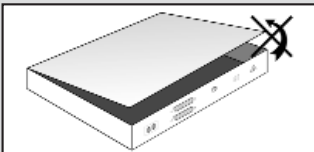
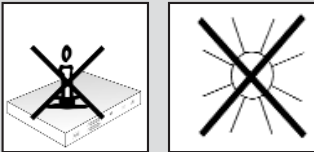
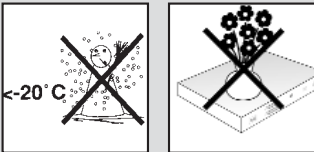
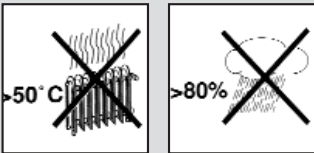


lease ensure that spent batteries removed from the remote control are not disposed of in your regular household refuse, but are correctly disposed either in special bins for problem waste, or at collection points in the retail trade.

Safety notes

For your own protection you should read the safety notes carefully before proceeding to operate your new receiver.

The manufacturer accepts no liability for damage caused by careless and irresponsible handling, or by non-compliance with the safety notes.



- > The receiver is equipped with a fully integrated hard drive. There is no provision for the hard drive to be replaced or exchanged, unless specifically authorised by TechniSat. Any unauthorised replacement of the hard drive will result in TechniSat no longer guaranteeing that the receiver still complies with legal requirements (e.g. appliance and product safety laws, law on the electromagnetic safety of appliances). The „CE approval“ will thus no longer be valid. If an altered product is sold onward, the person who effected the alteration or change becomes the manufacturer in legal terms, and is responsible as such. In addition, the TechniSat guarantee will become null and void, and there may be a loss of warranty rights.
- > To ensure adequate ventilation, place the receiver on a smooth, horizontal surface and do not place any objects on top of the receiver, as ventilation slots are located here to allow heat to be dissipated from the interior of the unit.
- > Do not place any burning objects, such as burning candles, on top of the receiver.
- > Do not subject the receiver to water droplets or water spray, and do not place any objects filled with liquid, such as vases, on top of the receiver.
- > Operate the receiver only in a temperate climate.
- > Do not open the receiver housing under any circumstances! You are in danger of receiving an electrical shock. If it is necessary to effect repairs in the receiver, these should only be carried out by trained and qualified service personnel.

In the following cases you should disconnect the receiver from the mains power, and should consult an expert:

- > the mains cable or the mains plug are damaged
- > the receiver was exposed to liquid, or liquid has run into the unit
- > in case of severe malfunctions
- > in case of significant external damage

Operating breaks

Während eines Gewitters oder bei längeren Betriebspausen (z.B. Urlaub) sollte das Gerät vom Netz getrennt werden und das bzw. die Antennenkabel entfernt werden.
Bevor Sie das Gerät vom Netz trennen, sollten Sie es zunächst in Standby schalten und warten bis im Display die Uhrzeit angezeigt wird bzw. die rote LED leuchtet.

Hinweis

Wir empfehlen vor Abgabe des Receivers zu Wartungszwecken bei Ihrem Fachhändler eine Sicherungskopie der auf Ihrem DigiCorder befindlichen Daten anzulegen.

Die Wiederherstellung von Daten ist nicht Bestandteil der Wartungs- und Reparaturarbeiten.
TechniSat übernimmt keine Gewähr für den Verlust oder die Beschädigung von Daten während der Reparatur.

Ihr Gerät trägt das CE-Zeichen und erfüllt alle erforderlichen EU-Normen.
Änderungen und Druckfehler vorbehalten. Stand 02/06

TechniSat und DigiCorder S2 sind eingetragene Warenzeichen der
TechniSat Digital GmbH
Postfach 560
54541 Daun
www.technisat.de

Technische Hotline
0180/5005-910*

*0,12 EUR/Min. über das Netz der Deutschen Telekom AG

Achtung !

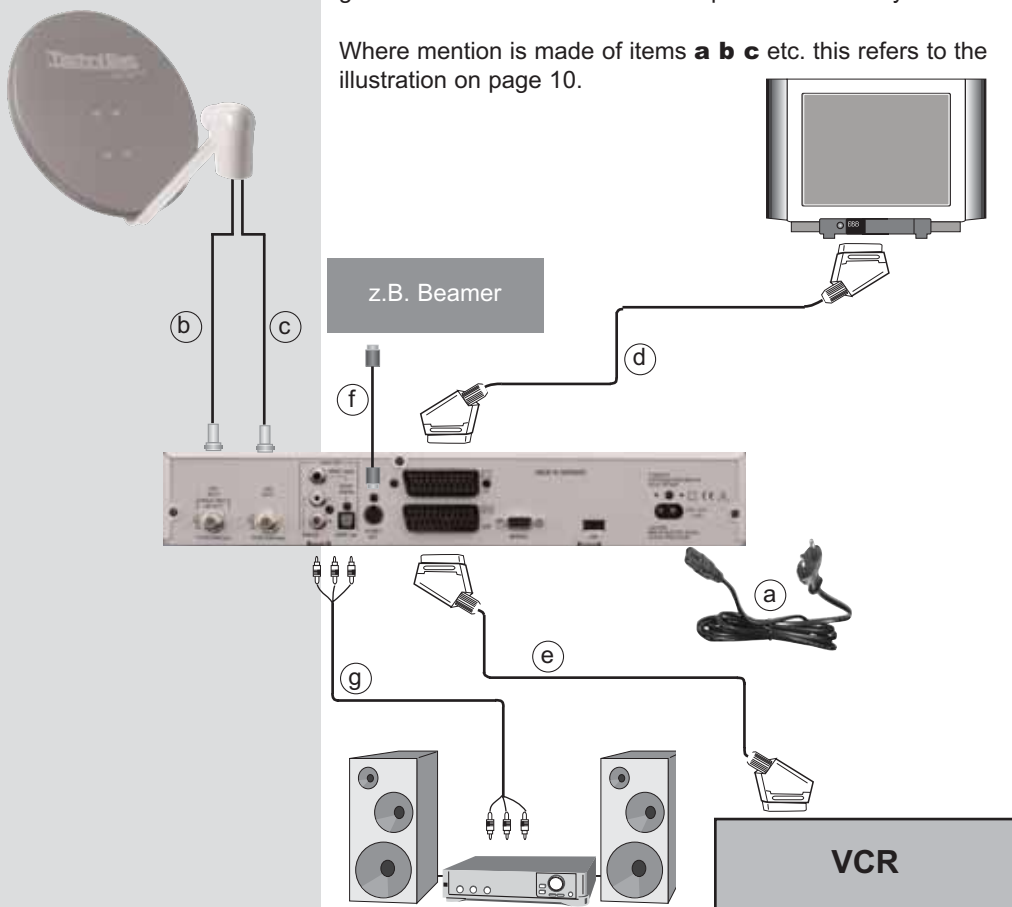
Bitte verwenden Sie für eine eventuell erforderliche Einsendung Ihres Gerätes ausschließlich folgende Anschrift:

TechniSat Teledigital AG
Service-Center
Löderburger Str. 94
39418 Staßfurt

4 Connecting the DVB receiver

- a. Mains connection
- b. Connect the LNB 1 with the **LNB input 1** of the DVB receiver. (Please note: when operating the unit with an antenna signal, the LNB must definitely be connected to the **LNB input 1**.)
- c. Connect the LNB with the **LNB input 2** of the DVB receiver.
- d. Scart connection of the DVB receiver with the television set.
- e. Scart connection of a video recorder with the **VCR Scart socket** of the DVB receiver.
- f. Connection of the **S-Video output** with the S-Video input of an appliance (e.g. beamer).
- g. Connection of the audio outputs with a hi-fi system.

Where mention is made of items **a b c** etc. this refers to the illustration on page 10.



4.1 Mains power connection

The digital receiver should only be connected to the mains power supply when all the cable connections with other components of the system have been made. This helps to avoid damage to the digital receiver as well as to other components.

- a** When you have made all the other connections, use the mains cable supplied to connect the receiver to a mains power outlet 230 V/50-60 Hz.

4.2 External unit

4.2.1 Operation with 2 antenna signals

To utilise the full range of functions of your digital receiver, you should preferably operate it with two separate antenna signals.

- b, c** Use suitable co-axial cables to connect the **LNB inputs 1** and **2** of the digital receiver with your external unit.
Please also note Point 6.4 (antenna settings).

4.2.2 Operation with 1 antenna signal

In exceptional cases you can also operate your receiver with only a single antenna signal. In this case, however, both the recording function and the PIP function will only be available in restricted form.

- b** Use a suitable co-axial cable to connect the **LNB input 1** of the digital receiver with your external unit.

4.2.3 Operation with a rotating antenna

- b** When using a rotating antenna, connect the DiSEqC motor (Level 1.2) with the **LNB input 1**.

4.3 Connection to a television set

When you have connected your digital receiver with your television set, it may be necessary to adjust the signal type or the mode of the Scart socket to your television set.

4.3.1 Via SCART cable

- d** Use a SCART cable to connect the receiver (**SCART socket TV**) with the television set (SCART socket). If your television set is appropriately equipped, it will automatically switch to AV, and thus to satellite operation, when the digital receiver is switched on.

4.4 Video cassette recorder (VCR)

- e** Connect the video recorder to the SCART socket **VCR**. During playback, the video recorder will provide a switching signal to the digital receiver. This will allow the video recorder signal to be routed automatically to the TV set.

If your video recorder does not supply a switching current, use the **O/AV** key to switch your digital receiver to the external input **AV**. Press this key again to return to normal operation.

4.5 Appliance with S-Video input (Hosiden)

- f** Connect the **S-Video output** to an appliance with an S-Video input (e.g. beamer, etc.).

4.6 Hi-Fi amplifier

4.6.1 Analogue

- g** To achieve the best possible sound quality, you can connect your digital receiver to a hi-fi amplifier. To do this, use a suitable cable to connect the cinch sockets **Audio R** and **Audio L** of the digital receiver with an input of your hi-fi amplifier (e.g. CD or AUX; note that the phono input is not suitable!).

4.6.2 Digital

- g** If your amplifier is equipped with a suitable electrical or optical input, connect the socket **AUDIO OUT DIGITAL electrical** resp. **AUDIO OUT DIGITAL optical** with the electrical resp. the optical input of your amplifier.

Depending on the channel, the sampling rates 32, 44,1 and 48 kHz are available.

Also, where broadcast, the Dolby Digital signal (AC3) is available at this output.

4.7 Serial interface (RS 232)

The RS 232 interface serves to update the operating software as well as of the pre-programming in conjunction with a PC.

4.8 USB socket

The USB socket serves to update the operating as well as to transfer data from or to the hard drive.

5 Initial installation

Once you have read the safety notes, and have connected the digital receiver as described in Chapter 4, you can now switch on the receiver as described in Chapter 7. When switching on the receiver for the first time, the starting window of the installation assistant **AutoInstall** will be displayed. The installation assistant allows you to make the most important settings of your digital receiver in the simplest way possible. At each step of the installation there will be an explanation, which settings can be made.

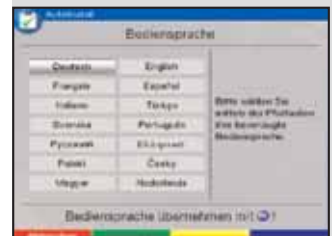
You can interrupt the initial installation by pressing the **red** function key in the starting window of the installation assistant. In the following steps of the installation, you can then confirm the settings made by pressing the **green** function key; you will then be taken to the next step of the installation procedure. If you press the **red** function key you will be taken to the previous step of the installation, thus giving you an opportunity to correct errors at any time.

If the initial installation is not performed, or if it is aborted, the receiver will commence operation with a standard pre-programmed procedure.

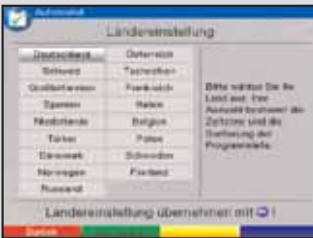
The initial installation process shown here serves merely as an example. The exact process of the initial installation will depend on the settings you select. Please therefore follow all instructions displayed on screen carefully.

Operating language:

- > When starting the installation assistant, the first selection window to be displayed will be that for the **Operating language**. (Fig. 5-1)
- > Use the **arrow keys up/down** to mark the desired operating (menu) language.
- > Confirm by pressing the **green** function key **Accept**.



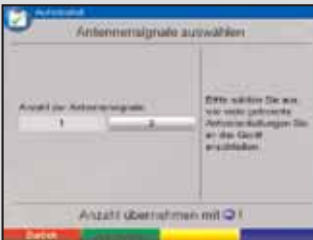
(Fig. 5-1)



(Fig. 5-2)

Country setting

- > Use the **arrow keys** to select the country in which you are located. The selection made here will result in the time zone being set, and will affect the sorting of the programme list. (Fig. 5-2)
- > Confirm by pressing the **green function key Accept** to accept the selection, and to go to the selection of antenna signals.

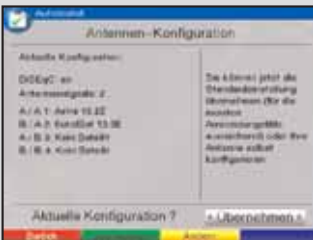


(Fig. 5-3)

Antenna signals

Here you must select how many antenna signals are connected to the receiver.

- > Use the **arrow keys left/right** to select whether you have connected **one** or **two** antenna signals. (Fig. 5-3).
- > Use the **green function key Accept** to confirm and accept the selection, and to go to the antenna configuration.



(Fig. 5-4)

Antenna configuration

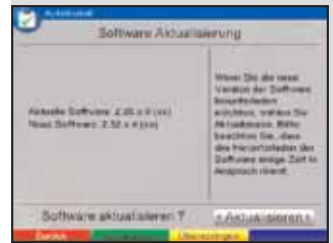
This step of the installation allows you to adjust the setting of your digital receiver to the configuration of your antenna.

- > If you wish to accept the standard antenna configuration, press the **green function key Accept**. (Fig. 5-4) In this case proceed with the point **“Software update”**.
- > If the configuration of your reception installation does not conform to the standard setting, press the **yellow function key Change**.
- > Now proceed to make the antenna settings for your installation, as described in more detail under **Point 6.4**.
- > Press the **red function key Back** to return to the overview of the antenna configuration.
- > Use the **green function key Accept** to confirm and accept the settings, and to go to the software update.

Software updating

When you have completed making the antenna settings, the digital receiver will check whether any new version of the software for the receiver is available via satellite. If a new version is available, you can perform an automatic software update.

- > Press the **green** function key **Update**. (Fig. 5-5). The new software for your receiver will now be downloaded. This procedure may take a few minutes.
- > If you do not wish to download the new software at this time, press the **yellow** function key **Skip**.
- > If now new software is available at the present time, press the **green** function key **Continue**. You will then proceed to the programme search function.



(Fig. 5-5)

Programme/channel search/ISIPRO

You have various options of searching for new channels, resp. of updating the programme list.

You can either use the ISIPRO programme list function to download a new programme list for your receiver from the satellite, or you can perform a programme scan/search.

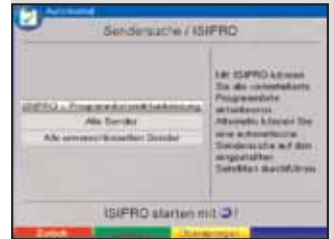
- > To download a current programme list, use the **arrow keys up/down** to mark the line **ISIPRO programme list update**.

(Fig. 5-6)

- > Confirm by pressing the **green** function key **Start**. The current programme list will now be downloaded from the satellite. Please note any messages displayed on screen, as well as the explanations under Point 9.5.3.

If you wish to perform a programme scan, proceed as follows:

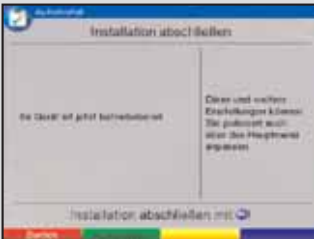
- > Use the **arrow keys up/down** to mark the field **All programmes** if you wish to search for both free-to-air and encrypted programmes, or **All unencrypted** if you wish to search only for free-to-air programmes.
- > Start the scanning procedure by pressing the **green** function key, and an automatic programme scan will be performed. All the satellites included in your antenna configuration will be scanned for programmes. This procedure may take a few minutes. Please note any messages displayed on screen.



(Fig. 5-6)



(Fig. 5-7)



(Fig. 5-8)



(Fig. 6-1)

Loading SFI data

Your digital receiver features an electronic programme guide (EPG) called SFI (**S**ieh**F**ern **I**nfo). For the data of this electronic programme guide to be displayed, you must first download the SFI data from the satellite.

When you have completed the update of your programme list, resp. the programme scan, your receiver will automatically download the SFI data. This procedure can take up to 30 minutes.

- > If you do not wish to wait for the SFI data to be downloaded, you can skip this procedure. To do this, press the **yellow** function key **Skip**. (Fig. 5-7)

The SFI data will then be automatically updated the following night, or you can update them manually at any time (see Point 7.5.1).

Ending the installation assistant

- > Confirm the final message (Fig. 5-8) of the installation assistant by pressing the **green** function key **Finish**, to return to normal operation.

6 Settings

Now that you have connected your new digital receiver, and commenced operating it, you can, if you wish, proceed to optimise its functions for your preferences.

6.1 Operating language

This menu item gives you the opportunity of setting the language used in all the menus according to your preference. To change the operating language proceed as follows:

- > Use the **Menu** key to call up the **Main menu**. (Fig. 6-1)
- > Now 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 select the desired language.
- > Press the **OK** key to store the entry, and to return to the **Main menu**.
- > Press the **red** function key **Back** to return to **normal operation**.

6.2 Basic settings

To obtain the optimum benefit from your DVB receiver, you must still make some settings for your personal convenience and use.

- > Press the **Menu** key to call up 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.
(Fig. 6-2)
- > Use the arrow keys up/down to mark the line **Basic settings**.
- > Confirm by pressing **OK**. The menu **Basic settings** will be displayed. (Fig. 6-3)
- > Use the **arrow keys up/down** to move the marker within the menu, and to change the individual positions as indicated. When selecting a menu item, please also note any messages displayed on screen.
The following settings can be made:



(Fig. 6-2)



(Fig. 6-3)

6.2.1 Time difference to GMT (hours)

Your receiver is equipped with a clock. This is synchronised to **Greenwich Mean Time** via satellite.

If under **Country** (Point 6.2.2) you have selected the setting **None**, you must simply correct the time accordingly relative to your local time, using the **arrow keys left/right**. For Germany, this difference is +1 hour, and + 2 hours in summer.

6.2.2 Country

This function allows the adjustments for the difference to GMT, as well as the change-over from standard to daylight savings (summer) time to be made automatically.

- > Use the **arrow keys left/right** to enter your country (location) in the line **Country**.

6.2.3 Remote control code

At this stage you must decide whether your receiver should be allocated to the remote control option **SAT1** or **SAT2**.

- > To do this, press the **SAT1** resp. **SAT2** as well as the **OK** key on the remote control simultaneously.

6.2.4 Stand-by clock

In this line you can decide whether the current time is to be shown in the display while the receiver is in stand-by mode.

- > In this line, use the **arrow keys left/right** to set the mode of the stand-by clock to **on** or **off**.

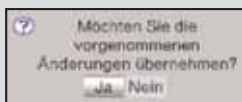
Accepting settings

To accept and store the settings made in this menu, proceed as follows:

- > Press the **green** function key **Accept**. The changes made will be saved, and you will be returned to the menu **Settings**.

alternatively:

- > Press the **red** function key **Back**.
A query message will now be displayed (Fig. 6-4).
- > Use the **arrow keys left/right** to mark the field **Yes**, if you wish to accept the changes made, and confirm by pressing **OK**.
You will now return to the previous menu.
- > Press the **TV/Radio** key to return to normal operating mode. The settings will **not** be saved.



(Fig. 6-4)

6.3 Audio/Video settings

To optimise the digital receiver for use with your television set, you can make further settings in the menu **Audio/Video settings**.

- > Press the **Menu** key to call up 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. (Fig. 6-5)
- > Now use the **arrow keys up/down** to mark the line **Audio/Video settings**.
- > Confirm by pressing **OK**.
The menu **Audio/Video settings** will be displayed. (Fig. 6-6)
- > Use the **arrow keys up/down** to move the marker within the menu, and to change the individual settings as indicated.
When selecting a menu item, please also note any messages displayed on screen. The following settings can be made:



(Fig. 6-5)



(Fig. 6-6)

6.3.1 Picture format

- > Use the **arrow keys left/right** to set the picture format of your TV set appropriately, to **4:3** or **16:9**. This function automatically adjusts the picture format to that of your television set.

6.3.2 Language (Audio signals)

- > In this line, use the arrow keys left/right to select your preferred language. Where an appropriate signal is broadcast, this function will, after a scan, automatically set this language.

6.3.3 Language (Sub-titles)

Your DVB receiver is able to display sub-titles. If the function **Sub-titles** is switched on, and the language selected is being broadcast, these will be displayed automatically.

- > In this line, use the **arrow keys left/right** to select your sub-title language.

If the function is not activated, sub-titles can also be switched on manually. The availability of sub-titles is indicated by display of the message **Sub-titles**. Please also note Point 7.13 of the operating manual.


6.3.4 TV SCART mode

- > In this line, use the **arrow keys left/right** to set the parameter appropriate to your TV set, to the options **FBAS**, **RGB** or **S-Video**. For standard sets use the setting **FBAS**.

6.3.5 VCR SCART mode IN

- > Use the **arrow keys left/right** to set this line in accordance with the output signal of your VCR, to the options **FBAS**, **RGB** or **S-Video**.

6.3.6 Dolby Digital (AC3)

Various movies are broadcast in Dolby Digital format. This will be indicated in the info window after the programme has been selected by the Dolby symbol .

If you have a Dolby Digital 5.1-channel amplifier, you can, where broadcast, enjoy appropriate movies in 5.1-channel Dolby Digital sound. The only requirement is that the digital output **Audio Out Digital** (see Point 4.6.2) of your DVB receiver must be connected to the digital input of your Dolby Digital 5.1-channel amplifier.

Use the **arrow keys left/right** to switch the Dolby Digital function **on** or **off**.

If the Dolby Digital (AC3) function is switched **on**, these broadcasts will automatically be reproduced in Dolby Digital format.

If the function is not switched on (**off**), Dolby Digital sound can also be switched on manually. Please also note Point 7.5.1 of the operating manual.

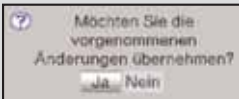
Accepting/storing settings

To store the settings made in this menu, please proceed as follows:

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

alternatively:

- > Press the **red** function key **Back**. A query window will be displayed (Fig. 6-7).
- > If you wish to accept and store the changes, use the **arrow keys left/right** to mark the field **Yes**, and confirm by pressing **OK**. You will now be returned to the previous menu.
- > Press the **TV/Radio** key to return to normal operation. In this case the settings will **not** be stored.



(Fig. 6-7)



(Fig. 6-8)



(Fig. 6-9)



(Fig. 6-10)

6.4 Antenna settings

Once you have set the digital receiver to your own individual preferences, it may still be necessary to adjust the digital receiver to your antenna. The menu **Antenna settings** lists the satellites set in terms of the installation assistant. If the installation assistant was prematurely terminated, the satellite positions ASTRA and EUTELSAT will be pre-programmed. If you also wish to receive other satellites, or if you are using a different LNB, set your digital receiver to the desired data as follows:

- > Use the **Menu** key to call up the **Main Menu**. (Fig. 6-8)
- > Use the **arrow keys up/down** to mark the line **Settings**.
- > Confirm by pressing **OK**. The menu **Settings** will be displayed. (Fig. 6-9)
- > Now use the **arrow keys up/down** to mark the line **Antenna settings**.

Confirm by pressing **OK**. The menu **Antenna settings** will be displayed. (Fig. 6-10)

The following settings can be made in this sub-menu:

6.4.1 Switching DiSEqC on and off

DiSEqC (**D**igital **S**atelliten **E**quipment **C**ontrol) is a digital switching/controlling signal used to control DiSEqC-compatible components via the antenna cable. If your external unit is equipped with DiSEqC components, you must switch the DiSEqC controlling function on:

- > In this line, use the **arrow keys left/right** to switch **DiSEqC on or off**.
As only one LNB can be controlled when the DiSEqC function is switched off, the menu is limited to the configuration of a single LNB.

6.4.2 Antenna signals

Your receiver is equipped with two tuners. This allows you to record one programme while viewing another programme. So that you can enjoy the full benefit of the functions of your twin receiver for both recording and playback, you should definitely use two separate antenna connections (antenna signals). Please also note Point 8.1.

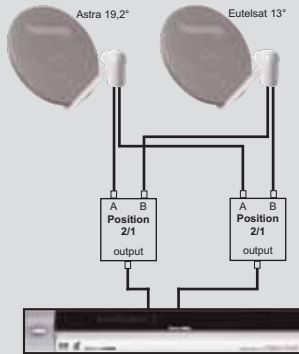
- > In this line, use the **arrow keys left/right** to set the number of antenna signals to **2**, if you are connecting your receiver to two separate antenna connections.
If only one antenna connection is available, then set this item to **1**. This means that while you are recording a programme, you will only be able to view other programmes being broadcast on the same receiving band as the programme being recorded.

6.4.3 Setting the switching matrix

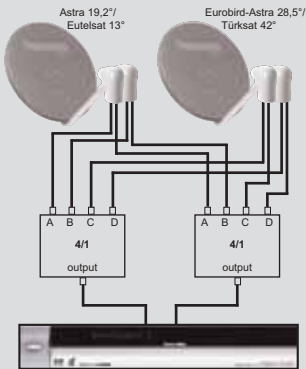
The menu lists the four switching criteria for the DiSEqC control. Your receiver is pre-programmed so that ASTRA is received on switch setting A/A and Eutelsat is received on setting B/A of a multi-switch. If the switching matrix of your receiving installation is set up differently, or if you are receiving different satellites, you can adjust the settings of your digital receiver to those of the receiving installation as follows.

- > Use the **arrow keys** to select a DiSEqC switch position (1-4) to which you wish to allocate a satellite (e.g. **A/B 3 No satellite**), and mark this line.

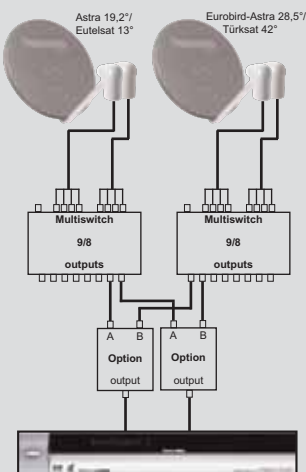
Example 1: 2 satellites (Twin-LNBs)



Example 2: 4 satellites (Twin-LNBs)



Example 3: 4 satellites (Quattro-LNBs)



- > Press the **OK** key.
A selection table listing various satellites will now be displayed.
- > Use the **arrow keys** to mark the desired satellite. Use the **arrow keys up/down** to move the marker up or down one line at a time, or use the **arrow keys left/right** to move the marker backward or forward one page at a time.
If the desired satellite is not included in the list, please use one of the reserve slots, marked **User 1** to **User 13**.
- > Confirm by pressing **OK**.
The marked satellite will now be added to the menu **Antenna settings** at the previously marked position.

You can now adjust the settings in the menu **Antenna settings**, in this manner until the settings in this menu correspond to those of your receiving unit. For any switching criteria that you do not require, use the setting **No satellite**.

6.4.4 Additional settings/LNB properties

Once you have completed adjusting the switching matrix of your DVB receiver to the requirements of your receiving installation, you must still check and, where necessary, correct the other settings for your receiving unit.

- > Use the **arrow keys left/right** to move the marker to the column **Configuration**.
- > Now, in the line in which you wish to check or change the settings, use the **arrow keys up/down** to mark the field **Continue**.
- > Confirm by pressing **OK**.
A sub-menu will be displayed in which you can make settings related to the LNB, and can set up a test transponder. (Fig. 6-11)

The following settings/adjustments can be made:

LNB Type

- > Use the **arrow keys left/right** to enter the type of LNB you are using. The options are **Single LNB**, **Quatro LNB**, **DisiCon 1 LNB**, **DisiCon 2 LNB**, **DisiCon 4 LNB**, **C-Band LNB**, **Circular LNB**, **SatCR LNB** and a **User LNB** for manual entry of LNB data.

If you have selected the **SatCR LNB**, you must then use the arrow keys to mark the line **Setup** and you must then start the setup by pressing the **OK** key. A **SatCR Scan** will now be performed. Please also note any messages displayed on screen.

Test Transponder

The following points of this menu need only be entered if you wish to check a satellite signal of a specific satellite.

Transponder frequency

- > In this line, use the **numeric keys** to enter a frequency on which digital programmes are broadcast.

Polarisation

- > Use the **arrow keys up/down** to enter the desired polarisation plane (**horizontal** or **vertical**).

Symbol rate

The symbol rate indicates the volume of data broadcast per second. This could typically be 27500 (27500 symbols per second).

- > Use the **numeric keys** to enter the correct symbol rate.

User LNB

If you have entered **User LNB** under the heading DiSEqC type, you can make further settings:

LOF low band

LOF (Local oscillator frequency) is the frequency at which an LNB converts the frequency received into the so-called 1. intermediate frequency, which can then be received by the digital receiver. So-called Universal LNBs work with 2 LOFs, in order to convert the full frequency range of 10.7 to 11,8 GHz (low-band) and 11,7 to 12,75 GHz (high-band).

- > In this line use the **numeric keys** to enter the LOF of the low band of your LNB.

LOF high band

- > In this line use the **numeric keys** to enter the LOF of the high band of your LNB.

LOF transition

- > In this line use the **numeric keys** to enter the frequency at which your LNB switches from the low band to the high band.

Signal level/quality

If you have entered the details of the test transponder correctly, the signal strength and quality will be indicated in these lines.



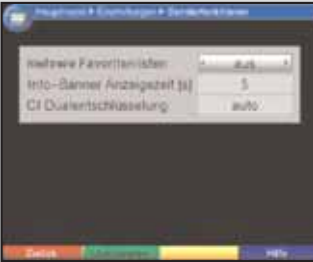
(Fig. 6-11)

6.4.5 Rotating antenna

If you are operating your digital receiver in conjunction with a rotating antenna equipped with a DiSEqC motor (Level 1.2), switch the **DiSEqC control** (Point 6.4.1) **on** and please note **Point 4.2.3** and **Point 10** of the operating manual.

6.5 Special functions

This menu allows you to make the settings for CI dual decoding, as well as for the duration for which the Infobox will be displayed, in addition to the function required to switch several Favourites lists on or off.



(Fig. 6-12)

- > Press the **Menu** key to call up the **Main Menu**.
- > Use the **arrow keys up/down** to mark the line **Settings** and confirm by pressing **OK**.
- > Now use the **arrow keys up/down** to mark the line **Special functions**.
- > Confirm by pressing **OK**.
The menu **Special functions** will be displayed.
(Fig. 6-12)
- > Use the **arrow keys up/down** to mark the entry you wish to change.

6.5.1 Several Favourites lists

- > Use the **arrow keys left/right** to switch the function for several Favourites lists **on** resp. **off**.
If the function is set to **on**, you can configure four Favourites lists (Main list, list B, list C and list D). You will find the factory default programming in the main Favourites list. When the function is switched **off**, only the main Favourites list is active.

6.5.2 Display time Information Banner

- > Use the **numeric keys** to set the desired display time for the Infobox. This can be varied from **1** second to **15** seconds.

6.5.3 CI dual decoding

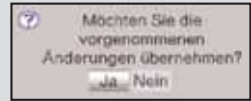
The CI dual decoding feature allows you to receive two different encrypted programmes simultaneously, using only one CI module and only a single valid Smartcard.

- > Use the **arrow keys left/right** to select the CI slot holding the CI module for dual decoding. Select **CI1**, **CI2** or **CI1+CI2**. If you prefer automatic recognition, select **auto**. The setting **off** indicates the CI dual decoding feature is switched off.
Please also note Point 7.3.3.

Accepting settings

To store the settings made in this menu to memory, please proceed as follows:

- > Press the **green** function key **Accept** to store the changes made, and to return to the menu **Settings**.
- alternatively:
- > Press the **red** function key **Back**.
A query will be displayed, as per (Fig. 6-13).
 - > If you wish to accept the changes, use the **arrow keys left/right** to click on the field **Yes**, and confirm by pressing **OK**.
You will now return to the previous menu.
 - > Press the **TV/Radio** key to return to normal operation.
Settings will **not** be saved.



(Fig. 6-13)

7 Operation

7.1 Switching on and off

- > Switch the digital receiver on by pressing the **On/Standby** either on the receiver or on the remote control.
- > Press the key again to switch the receiver off again.
- > The receiver is now in stand-by mode, and (if activated in Point 6.2.4) the display panel will show the current time.
If the time is not shown, this must still be acquired by the receiver. To do this, switch the receiver on, and select a major channel such as ZDF for approx. 30 seconds, to automatically acquire the time.

7.2 Programme selection

7.2.1 Using the programme up/down keys

- > Use the **programme keys up/down** either on the receiver or on the remote control to move up or down the list one programme slot at a time.

7.2.2 Using the numeric keys

> Use the **numeric keys** to enter the desired programme number. For example:

- 1** for programme slot 1
- 1**, then **4** for programme slot 14
- 2**, then **3**, then **4** for programme slot 234
- 1**, then **5**, then **6** then **7** for programme slot 1567

When entering programme numbers with several digits, you have approx. three seconds time after pressing a key to complete the entry.

If you wish to enter a number consisting of only one, two or three digits, you can speed up the entry procedure by keeping the key depressed a little longer on the last digit.



(Fig. 7-1)

7.2.3 Using the Navigator (programme list)

- > Press the **OK** key.
The programme list navigator will be displayed. In TV mode, only TV programmes will be shown, and in Radio mode only radio programmes. The programme currently selected will be marked. (Fig. 7-1)
- > Now use the **arrow keys up/down** to mark the desired programme.
- > Press the **OK** key and the marked programme will be selected.
- > Use the **arrow keys up/down** to move the marker up or down in the list one line at a time.
- > Use the **arrow keys left/right** to move the marker up or down in the list one page at a time.

>7.2.3.1 Selecting a list

To make it easy for you to find programmes, your receiver provides several programme lists. Thus you can choose to select from your **Favourites list/TV list** (see Point 9.1) or to see the alphabetically sorted **Total list** or the list by **Providers**.

- > Press **OK**.
The active programme list will be displayed.
- > Now use the **red function key Category** to open a window with the programme list types (**TV list**, **TV provider lists** and **TV Total list**).
The active programme list type is marked. (Fig. 7-2)
In addition, the entries **Hard drive recordings**, **Music** and **Games** will appear, through which you can, e.g. move to the hard drive navigator (Point 8.2).



(Fig. 7-2)

- > Use the **arrow keys up/down** to select, e.g. the programme list type **Total list** and confirm by pressing **OK**.
The alphabetically sorted Total list, containing all programmes, will be displayed. (Fig. 7-3)
 - > Use the **arrow keys up/down** to mark the programme you wish to view.
 - > Additional information on the current programme can be obtained by pressing the **yellow** function key **INFO**.
 - > Confirm by pressing **OK**.
- or
- > Press the **green** function key **PVR** to go direct to the hard drive navigator.



(Fig. 7-3)

7.2.4 Calling up blocked programmes

If a programme is selected that is blocked by the parental control function, the message **Unit PIN** will be displayed on screen. (Fig. 7-4)

- > Use the **numeric keys** to enter your PIN code.
The desired programme can now be viewed.

or

- > Switch to a programme that is not blocked.

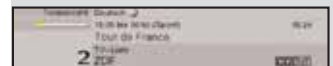
If you have selected the setting **Once** under Point 9.3.1, the system will call for the PIN code once when a blocked programme is selected. Thus, in order to make operation more comfortable for you, you need to enter the PIN code only once during each viewing session.

7.2.5 Infobox

Each time you change programmes, an information box (Fig. 7-5) will be displayed briefly, showing the programme slot and the programme name of the programme selected. In addition, other programme properties will be indicated, such as **TV** for Videotext, **16:9** for a 16:9 format broadcast, **TV** for encrypted programmes, **DD** for Dolby Digital broadcasts, **ST** for sub-titles, **M** for Mono broadcasts. In addition a yellow bar will be displayed indicating the amount of time of that programme that has already elapsed. Also, where available from the provider, the SFI genre as well as the age restrictions, if any, will be shown.



(Fig. 7-4)



(Fig. 7-5)

7.3 Receiving encrypted programmes

Your receiver is equipped with a “Common Interface” for the insertion of two CI modules. These can be used to receive encrypted programmes. To do this, you must first insert a CI module with a valid Smartcard in one of the two slots provided for this purpose:

- > Insert a CI module in one of the slots.
- > Insert the Smartcard in the card slot of the CI module. Ensure that the gold-coloured chip of the Smartcard is on the upper surface, in the direction in which the card is inserted.
- > If you now select an encrypted programme, the digital receiver will automatically check the slot, and will display the programme in decoded form, provided the appropriate CI module, including a valid Smartcard, for this programme is inserted in the slot.

Special functions

Certain special functions are offered on specific programme slots, e.g. Premiere (reception only with a valid subscription !). For instance, multi-feed channels allow you to select various games in the sports category, i.e. different National League games in Germany, or you might be able to select different commentary tracks (e.g. stadium/broadcast), or in some cases different camera viewing angles may be available (e.g. Formula 1 racing).

In addition, on some channels you may be able to select the starting time of a movie you have ordered.

Please also note Point 7.15.7.2 in this regard.

7.3.1 Option channels

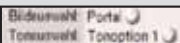
Some programmes provide the opportunity of using so-called option channels. This function allows you, for instance, to select different camera perspectives in the case of a sports event (Formula 1) or to switch to different sporty venues (National League football in Germany).

Where a programme provides channel options, this will be indicated by a message on screen (Fig. 7-6).

- > To select one of the available options, press the key **Option**.

A selection window will be displayed, showing the various options available. (Fig. 7-7)

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



Bildauswahl: Portal
Tonauswahl: Tonoption 1

(Fig. 7-6)



Bildauswahl
Portal
Bundesliga
Wrestling
News

(Fig. 7-7)

- > Confirm by pressing **OK**.
Your digital receiver will now show the option selected.

7.3.2 Selecting a starting time

On some channels you have the option of selecting various starting times for viewing specific movies. These movies can thus be viewed around the clock, at specific starting times. Where a channel provides the facility of selecting starting times, this will be indicated (Fig. 7-8) angezeigt.

- > To select one of the available starting times, press the **Option** key.
A selection window will be displayed, showing the available starting times. (Fig. 7-9)
- > Use the **arrow keys up/down** to select the desired starting time.
- > Confirm by pressing **OK**.
If the programme is validated for the starting time you have set, you can proceed to view this at the desired time.



(Fig. 7-8)



(Fig. 7-9)

7.3.3 Simultaneous reception of two encrypted programmes

Your receiver is able to receive two different encrypted programmes simultaneously, using only a single CI module and a single valid Smartcard. However, this is only possible when using a "Dual-Decrypt" compatible CI module (see specifications given by manufacturer of CI module), and then only if both desired programmes are located on the same transponder.

Please also note the item **CI Dual decoding** in the Special functions Point 6.5.3.

7.4 Volume control

You have the facility to adjust the volume of your digital receiver. This facilitates the easy operation of the receiver, as it means you have all the important functions on a single remote control, and will only rarely have to resort to using the remote control of the television set. When you switch on the digital receiver, sound will be reproduced at the volume level last set.

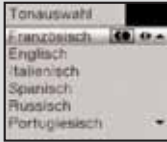
- > To adjust the volume of your digital receiver, press **Volume +** to increase the volume, and **Volume -** to decrease it.
- > To switch the sound off (mute), press the key **Sound on/off** press the key again to switch the sound on gain.

Please note:

The volume of the digital audio outputs cannot be adjusted.

Tonuswahl: Deutsch




(Fig. 7-10)



(Fig. 7-11)

7.5 Selecting a different language

If a programme is being broadcast in several languages, or with several audio channels, this will be indicated by a message displayed on screen (Fig. 7-10). You can then proceed to set a different language or another audio channel as follows:

- > Press the key **Language selection**.
A list indicating the languages currently being broadcast will appear on the screen (Fig. 7-11).
- > Use the **arrow keys up/down** to mark the desired language, and confirm by pressing **OK**.
You can now proceed to listen to the programme in the language selected. Your digital receiver is also capable of receiving mono programmes.
- > Use the **arrow keys left/right** to select Mono channel 1 (), Mono channel 2 () or Stereo ().

7.5.1 Dolby Digital (AC3 mode)

If a programme is being broadcast in Dolby Digital Sound, this will be indicated when you switch to the programme, as the Dolby logo will be displayed in the Infobox. Provided you have enabled the Dolby Digital (AC3) function in accordance with Point 6.3.6, the programme will automatically be reproduced in this sound format.

If you have not switched on the **Dolby Digital (AC3)** function, you can switch your receiver to AC3 mode manually as follows:

- > Press the key **Language select**. If any are being broadcast, a list of the currently broadcast languages as well as **Dolby Digital (AC 3)** will be displayed on screen.
- > Use the **arrow keys up/down** to mark the line **Dolby Digital**.
- > Confirm by pressing **OK**.

You can now listen to the programme in Dolby Digital sound. If you want your receiver to reproduce programmes in Dolby Digital sound format automatically, you should set your receiver to automatic AC3 reproduction as described in Point 6.3.6.

7.6 TV/Radio switching

The pre-programming includes both TV and radio programmes.

- > Use the **TV/Radio** key to switch the digital receiver to radio mode. The receiver will now switch to the last radio programme previously selected.
- > Press the **TV/Radio** key again to return to the last television programme previously selected.

7.7 Return to last programme previously selected

- > Press the **Back** key on the remote control to return to the last programme previously selected.
- > Press the key again to return to the programme previously selected.

7.8 Display clock and programme information

This function allows you to view programme information relating to the programme currently selected.

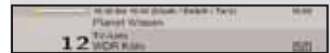
- > Press the **Info** key to display information for the currently selected programme (*Fig. 7-12*).

A display will appear on the lower half of the screen, showing the current time, the name of the programme selected, the name of the current programme together with its start and stop times, whenever this information is broadcast by the programme provider.

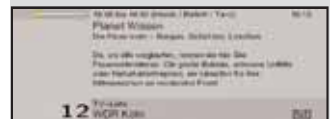
7.9 Additional programme information

Wherever these are provided, you can use the function programme information to obtain additional programme information relating to the programme selected.

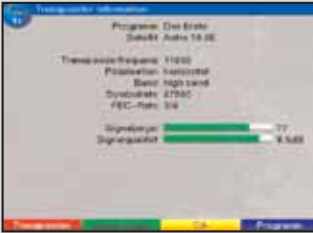
- > Press the **Info** key twice to open an additional information window (*Fig. 7-13*). Additional information relating to the current programme will be displayed.
- > You can move around lengthy information texts one line at a time by using the **arrow keys up/down**, or one page at a time by using the **arrow keys left/right**.
- > Where available, pressing the **Info** key again will bring up the next programme.
- > Press the **Info** key once again to switch off the display.



(Fig. 7-12)



(Fig. 7-13)



(Fig. 7-14)

7.10 Transponder information

- > Call up the navigator by pressing **OK**.
- > Use the **arrow keys** to mark the programme you wish to display.
- > Press the **Option** key to display the data of the transponder selected (Fig. 7-14).
- > In addition, you can use the coloured function keys to display **Audio/Video** information, **Programme** information, and, where available, information on the **Encryption system (CA)** in use.
- > Press the **Menu** key to exit the information function.

7.11 Freeze frame

- > Press the **Freeze frame** key, and the current moving TV picture will be frozen, and displayed as a still picture.
- > Press this key again to return to normal operation.

7.12 Videotext

7.12.1 Using the videotext decoder of your television set

Where broadcast, videotext will be made available to your television set. To operate the videotext options, you must use the remote control of your television set. If there should be any problems related to the display on your television screen, such as an overlapping of videotext contents and picture, you should set your digital receiver to **FBAS mode** (Point 6.3.4).

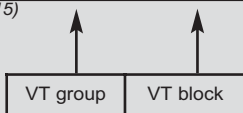
7.12.2 Using the internal videotext decoder

As an alternative, you can also use the integrated TOP videotext decoder to display the information. When using TOP videotext, all text pages are split thematically into groups and blocks, which makes the videotext more readable.

- > Switch to the channel for which you wish to see the videotext information.
- > Press the **Videotext** key to display the videotext (Fig. 7-15).



(Fig. 7-15)



-
- > Use the **numeric keys** to enter the desired videotext page.
Your entry will be displayed in the upper left-hand corner of the screen. Once you have entered the desired videotext page, the receiver will search for the page. As not all videotext pages can be transmitted simultaneously, it may take a few seconds for your receiver to find the page and display it on the television screen. All providers of videotext information use page 100 as their starting page.
 - > Use the **red** resp. the **green** key to move forward or backward one page at a time.
 - > Press the **yellow** function key to call up the videotext group indicated in the yellow field.
 - > Press the **blue** function key to call up the videotext block indicated in the blue field.

Stop mode

- > Press the **Freeze frame** key to display the message „Stop“ in the upper left corner of the videotext window. This will prevent automatic continuous paging through the videotext sub-pages.
- > Press the **Freeze frame** key again to switch the stop mode off again.
- > Press the **Back** key to return to normal operating mode.

7.13 Sub-titles

Where sub-titles are broadcast, this will be indicated by the message **Sub-title select**. If you have switched on the function **Sub-titles** (as per Point 6.3.3), these will be displayed automatically, provided that they are being broadcast in the language selected.

If sub-titles are being broadcast only in other languages, or are broadcast via videotext, you can switch these on manually as follows.

- > Press the **Option** key, if necessary several times, until the entry **Sub-titles** displays a selection table listing the sub-title languages broadcast, and/or the videotext pages used to broadcast sub-titles.
- > Use the **arrow keys up/down** to mark the desired language resp. videotext page.
- > Confirm by pressing **OK**.
The sub-titles will now be displayed.

Please note that these functions are only available where sub-titles are actually being broadcast. Also note that this setting will not be retained when you switch channels.

7.14 PIP function (picture in picture)

Your receiver is equipped with a so-called PIP function. This allows you to view a second, smaller picture (PIP picture) within the larger main picture.

Main picture PIP image



(Fig. 7-16)

- > Press the **PIP** key to switch on the picture in picture mode (Fig. 7-16).
The current main picture, which can be sourced either from a TV programme or from a hard drive recording, will be displayed as a small (PIP) picture in the upper right corner, and the TV programme last viewed will be displayed as the main picture.
The soundtrack of the main picture will always be reproduced when in PIP mode.
- > Press the **Back** key to exchange the two pictures. The PIP picture will be displayed as the main picture, and vice versa.
- > To switch off the picture in picture mode, press the **PIP** key again.

7.15 Electronic Programme Guide SFI (SiehFern Info)

Your digital receiver features an electronic programme guide. This allows you to display programme information related to one or more programmes on your screen.

You can very quickly obtain an overview of the currently running programmes, the programmes of the day or those of the following days.

The SFI functions allow you to:

- display information on programme contents on screen
- mark specific programmes that will then be automatically switched on when the programme begins
- programme timers
- search for and view programmes according to the programme type (genre).

7.15.1 Acquiring (downloading) SFI data

The programme information will be updated automatically by your receiver at the pre-selected updating time (Point 9.2.2), provided the receiver is in stand-by mode at the time. The downloading procedure will be indicated by the message **Load SFI** appearing in the display. If your receiver is switched on at this time, the function will not be executed. You can also, immediately after switching off the receiver (while the display shows the message **Load SFI?**) press the **SFI** key to start the downloading procedure manually. While the download is in progress, the display will show **Loading SFI**, as well as the percentage of SFI data downloaded so far (e.g. 38%).

The duration of the downloading procedure depends on the number of programmes included. Previews can extend as far as seven days in advance. As more programmes are added to the electronic programme guide, the volume of data increases, and the preview period is reduced correspondingly. It is up to you to decide which programmes should be listed in the electronic programme guide. These can be selected as described in Points 9.2.5 and 9.2.6.

7.15.2 Interrupting the download procedure

The downloading procedure can be interrupted by switching on the digital receiver (**On/Stand-by** key). The SFI data of the previous update are then available.

7.15.3 Calling up the Electronic Programme Guide

- > Press the **SFI** key on the remote control of the digital receiver.

The electronic programme guide will now be displayed on screen (Fig. 7-17). If you have selected the starting category **Overview** (Point 9.2.3), the channels you have selected, or those of the factory default settings, will be shown with their current programmes (see also **Point 9.2**). You can now use the SFI functions to obtain information on the contents of the various programmes.

In addition, you can use the SFI functions to switch to a particular programme, to mark it, or to activate it in the timer programming function.



(Fig. 7-17)

7.15.4 Now (Table with current programme contents)

Initially, the SFI table "**Now**" (Fig. 7-17) will be displayed, showing the programmes currently being broadcast. The yellow bar next to the programme name indicates the elapsed time of the current programme. The marker indicates the programme currently selected.

- > Use the **arrow keys up/down** to move the marker one line at a time.
- > Use the **arrow keys left/right** to move through the programme list one page at a time.
The SFI functions (Point 7.15.7) are now available.
- > Press the **yellow** function key to go to the SFI table "**Next**" (see Point 7.15.5)

or

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

7.15.5 Next

- > Use the **yellow** function key to call up the table "**Next**" (next/following programmes) (Fig. 7-18).
- > The SFI functions (Point 7.15.7) are now available.
- > Press the **yellow** function key to go to the SFI table "**More**" (Point 7.15.6)

or

Press the **green** function key resp. the **Back** key to return to the previous SFI table "**Now**"

or

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

JETZT	DANACH	MEHR	PUNKT UHR
Das Erste	14:30-14:35 Tagesschau	...	...
DFP	14:35-14:45 Punkt und Gegenpunkt	...	...
ProSieben	14:57-15:01 Die 70er	...	...
SAT 1	15:00-15:05 Tag 3	...	...
RTL	15:00-15:05 Linsen & Co. - die...	...	...
RTL2	15:00-15:05 akustik - die...	...	...
3 RTL	15:00-15:05 Die Bibel -...	...	...
VOX	14:00-14:05 Substrak -...	...	...
VOX	15:00-15:05 Akustik -...	...	...
KABEL1	15:00-15:05 Die 70er	...	...
VOX	15:00-15:05 Substrak -...	...	...
VOX	15:00-15:05 VOX -...	...	...

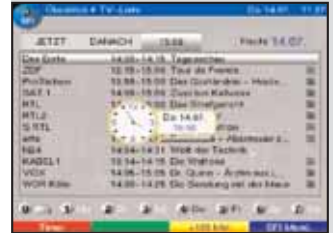
(Fig. 7-18)

7.15.6 More

- > Pressing the **yellow** function key again while the SFI table „Next“ is displayed will take you to the SFI table **“More”**.
An additional time window will appear in the headline of this table. The time relating to the SFI table displayed will be indicated in this window.
- > Press the **yellow** function key to page forward by the time indicated in the **yellow** coloured field.
- > Keep the **yellow** function key pressed down to page through the information continuously. A clock will be displayed to make the information more legible. (Fig. 7-19)
- > Correspondingly, you can page backwards through the tables by keeping the **green** function key pressed down.
The individual days of the week are displayed along the bottom of the screen. If information is available for the following days, the appropriate fields will be marked.
- > To view a preview for a specific day, use the **numeric keys** to enter the appropriate number for the day required.

or

- > Press the numeric key **“0”** to go to the PVR navigator.
- > Press the **Back** key to return to the table **“Next”**.




(Fig. 7-19)

7.15.7 SFI functions

To execute the following SFI functions, call up the **SFI** as described in Point 7.15.3.

7.15.7.1 SFI Info

You can display brief information on the marked programme with the help of **SFI Info**. Where SFI information is available, this will be indicated by the symbol  next to the appropriate programme.

- > Use the **arrow keys** or the **function keys** to mark the desired programme.
- > Press the **SFI** key to display the information.
Lengthy information text can be moved or paged through with the help of the **arrow keys**.
- > Press the **Back** key to return to the previous table.

7.15.7.2 SFI timer programming

You can programme timer events very easily with the aid of the electronic programme guide SFI.

- > Use the **arrow keys** or the **function keys** to mark the desired programme.
- > Press the **Record** key to programme a **Hard drive timer** for the marked programme (see Point 8.1.2).

or

- > Press the **Option** key once to programme a **Channel change timer** for the marked programme (see Point 8.1.2)
- > Press the **Option** key once again to change the timer type to a VCR timer.

or

- > Press the **red** function key **Timer** to open a selection window.
- > Use the **arrow keys up/down** to mark the desired **Timer type** (see Point 8.1.2).
- > Confirm by pressing **OK**.
For control purposes the menu **Manage timer** will display the data relative to the selected programme. If necessary, you can effect any changes here (see 8.1.2).
- > Press the **Back** key to return to the previous table.
The appropriate line is now marked. Depending on the timer type, your receiver will now be switched on at the starting time of the selected programme. If the receiver was switched on by the PVR timer, this will be indicated by
“1PVR Timer” being shown in the display.
In stand-by mode, the active timer will be indicated by a clock symbol next to the time display.

Deleting the SFI timer event

- > If you would like to delete a timer event programmed by means of the SFI, proceed as described above for marking the appropriate programme.
- > Press the **red** function key **Timer** to open a selection window.
- > Use the **arrow keys up/down** to mark the line **Delete timer**.
- > Confirm by pressing **OK**.

Timer settings (pre- and post-run time)

In the case of SFI timer programming, the receiver obtains the data related to the selected programme automatically from the SFI data. Both the starting and the ending time of the programme will be taken over correct to the nearest minute. However, it frequently happens that the selected programme starts a little earlier or a little later than scheduled. In this case the start or the end of the programme may be missing from the recording. To overcome this problem, you can enter a pre- or post-run time for the timer, in steps of one minute at a time. The timer will now start the entered starting time a few minutes earlier, and stop the recording a few minutes later, than the scheduled SFI times, depending on what you have entered.

- > Press the **red** function key **Timer** to open a selection window.
- > Use the arrow keys up/down to mark the line **Timer settings**.
- > Confirm by pressing **OK**. A menu will be displayed, allowing you to enter the pre-and post-run times. (Fig. 7-20)
- > Now use the **arrow keys up/down** to mark the line **Timer pre-run time** resp. **Timer post-run time**.
- > Use the **numeric keys** to enter the desired pre- or post-run time in minutes.
- > Press the **green** function key **Accept**, to store the setting, and to return to the previous SFI table.

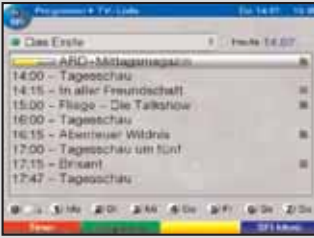


(Fig. 7-20)

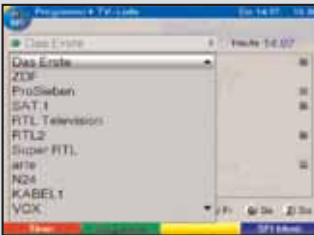
7.15.7.3 SFI programme overview

You can use the SFI programme overview to display a table with the whole day's programme of a single channel. To do this, proceed as follows:

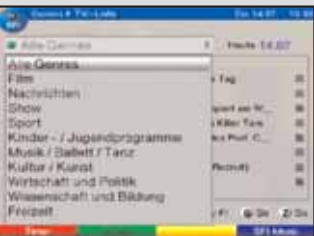
- > Press the **SFI** key. If you have selected the start category **Overview**, see Point 9.2.3, the SFI table „Now“ will be displayed.
- > Press the **blue** function key **SFI Menu**.



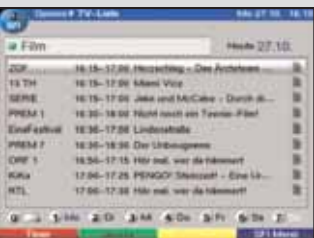
(Fig. 7-21)



(Fig. 7-22)



(Fig. 7-23)



(Fig. 7-24)

> In the selection window, use the **arrow keys up/down** to mark the line **Programmes**.

> Confirm by pressing **OK**.

The day's overview of the selected channel will now be displayed. (Fig. 7-21)

> You can use the **arrow keys** to move the marker to the desired programme or time.

The individual days of the week are displayed along the lower edge of the screen.

If information is available for the following days, the appropriate fields will be marked.

> To display the programme content of a specific day, press the corresponding **numeric key**.

Display SFI overview of other channels

> Press the **green** function key **Programmes**. A list of SFI programmes will be displayed.

> You can now proceed to mark the desired channel using the **arrow keys**. (Fig. 7-22)

> Press the **OK** key to display the SFI overview of the marked channel.

7.15.7.4 SFI overview by programme type (Genre)

If you are interested in specific types of programmes, you can have the programme information displayed by various genres, e.g. movies, news, etc..

> Press the **SFI** key to open the table "Now".

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

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

> Use the **green** function key **Genres** to open a window with the programme types available. (Fig. 7-23)

> Use the **arrow keys** to select the desired programme type and confirm by pressing **OK**.

An overview for the day will be displayed, listing only programmes of the type selected. (Fig. 7-24)

> Use the **arrow keys up/down** to move the marker to the desired programme.

> Use the **arrow keys left/right** to move through the list one page at a time.

The individual days of the week are displayed along the lower edge of the screen.

If information is available for the following days, the appropriate fields will be marked.

-
- > To display the programme content of a specific day, press the corresponding **numeric key**.

7.15.8 Ending SFI mode

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

7.16 Sleep Timer

- > Press the **Sleep timer** key once or several times to set the switching-off time of the receiver in the range of 15 minutes to 2 hours.
At the end of the time selected the receiver will switch automatically to stand-by mode.

7.17 Games

Your receiver is equipped with games you can play on screen, using the remote control.

To start the games, proceed as follows:

- > Press the **OK** key to open the navigator.
- > Press the **red** function key **Category** to open an additional window.
- > Use the **arrow keys up/down** to mark the line **Games** and confirm by pressing **OK**.
A list of the available games will now be displayed.
- > Use the **arrow keys left/right** to select the desired game, and confirm by pressing **OK**.
- > You can now proceed to play the game, using the remote control. Please note any messages displayed on screen.

8 Hard drive operation

Your PVR receiver (**PVR=Personal Video Recorder**) is equipped with an integrated hard disk drive. There is no provision for this drive to be exchanged other than by an authorised TechniSat retailer/technician. Due to the availability of the hard drive, you no longer require an external storage medium (e.g. a video recorder). The recording capacity is dependent on the size of the hard drive and on the volume of data of the broadcast material.

Where these are available from the provider, the recording will include the actual audio and video data, as well as any sub-titles, videotext data and additional sound channels broadcast. These can be called up when you play back the recording, as described in Points 7.5, 7.12 and 7.13.

8.1 Recording

Various recording modes are available for saving recordings to the hard drive.

1. Instant recording

Use this type of recording to record a currently running programme immediately, with just one press of the key.

2. Timer-controlled recording

In the case of this function, your digital receiver will be switched on and off for the recording, so this can be recorded in your absence. To do this, you can either programme the timer manually, or automatically using the SFI function.

3. Timeshift recording

The timeshift recording mode makes it possible to provide timeshift television viewing. While the programme is still being broadcast, you can already view the recording, shifted in time.

Please note!

To utilise all the recording facilities of your receiver, you should ensure it is connected via two independent antenna connections. This allows you to use the following combinations of recording and playback :

Record one programme, and at the same time view another programme being broadcast, or a hard drive recording

Record two programmes simultaneously, even if these are located in different ranges of the transmission band

Record two different programmes simultaneously, even if these are located in different ranges of the transmission band, plus play back and view an existing hard drive recording

If only **one antenna connection** is available for connection to the receiver, only a limited range of recording and playback options is available.

Record one programme, and at the same time view another programme in the same range of the **same reception band**, or view a hard drive recording.

Record two programmes on the **same reception band** simultaneously.

Record two different programmes on the **same reception band** simultaneously, and view an existing hard drive recording

8.1.1 Instant recording

Starting a recording manually

Option 1:

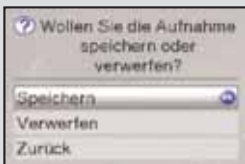
- > Switch on the channel on which the programme is being broadcast that you wish to record.
- > Press the **Record** key to record the programme currently being broadcast. The programme will continue to be displayed on screen while the recording is in progress.
- > To interrupt the display of the current programme at a specific spot, press the **yellow** function key **Play/Pause**. While the recording continues in the background, a still image (freeze frame) will be displayed on screen.
- > To proceed with playing the programme from this spot, again press the **yellow** function key **Play/Pause**. You will now view the programme shifted in time relative to the live broadcast (**Timeshift**), while the ongoing current programme will continue to be recorded in the background.

Option 2:

- > If you have to interrupt viewing a programme, e.g. because of a phone call, etc., you can interrupt viewing of the programme by pressing the **yellow** function key **Play/Pause**, at the same time starting recording of the current programme. While the recording is started in the background, a still image appears on screen.
- > To resume viewing the programme from this spot, again press the **yellow** function key **Play/Pause**. You will now view the programme shifted in time relative to the live broadcast (**Timeshift**), while the ongoing current programme will continue to be recorded in the background.

Ending a recording manually

- > To end the recording procedure, first press **OK**.
- > Now press the **green** function key to go to the PVR navigator.
- > Use the **arrow keys up/down** to mark the current recording, and confirm by pressing **OK**. The programme slot of the current recording will now be selected.



(Fig. 8-1)

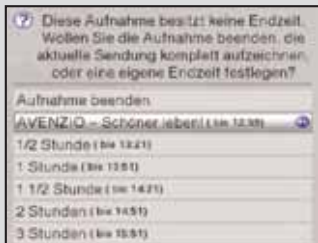
- > Now press the **green** function key **Stop**.
A query will be displayed: "Save or discard the recording?". (Fig. 8-1)
- > Use the **arrow keys up/down** to select **Save** in order to save the recording on the hard drive, or select **Discard**, in order not to save the programme, and confirm by pressing **OK**.

End recording automatically

Option 1:

- > Press the **On/Standby** key.
A query will be displayed on the screen, asking what should be done with the current recording. (Fig. 8-2)
- > Use the **arrow keys up/down** to mark the line with the desired action.

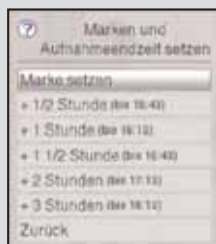
In order to continue recording the current programme until it ends, mark this line.
- > Confirm by pressing **OK**.
The receiver will record the complete current programme, and will then go to stand-by mode.
- > If you switch the receiver on before the end of the programme, a query will be displayed, asking whether you wish to start the current programme at the **Beginning**, or if you wish to continue viewing **Live** or if you wish to switch to the **Current programme**.
- > Use the **arrow keys up/down** to mark the appropriate line, and confirm by pressing **OK**.
If you select **Beginning** the recording will be continued in time-shift mode (Point 8.1.3).



(Fig. 8-2)

Option 2:

- > Press the key **Recording**.
A window will be displayed on screen, showing the functions available. (Fig. 8-3)
- > Use the **arrow keys up/down** to mark the line with the desired action, e.g. **+1 hour**.
- > Confirm by pressing **OK**.
The receiver will now record the programme(s) being broadcast on the channel selected for the time period selected, and will then automatically stop recording.



(Fig. 8-3)

8.1.2 Timer recordings

You can record programmes on the integrated hard drive in your absence, using the hard drive timers. In addition, your receiver is equipped with video recorder timers and channel-switching timers. In terms of their programming, these timer types differ only in name.

You can programme the timers manually as described in this chapter, or using the SFI function as described under Point 7.15.7.2.

1. Hard drive timer

This function will switch the digital receiver on and off, allowing you to make recordings on the hard drive in your absence.

If the receiver is switched on by the hard drive timer, this will be indicated in the display by the message "1PVR Timer". Some of the functions of the remote control (e.g. calling up the main menu) will be deactivated. In stand-by mode, the active timer will be indicated by a clock symbol in the display.

2. Video recorder timer

If the video recorder timer is selected, your digital receiver will be switched on and off for the selected programme, allowing you to make recordings in your absence on an external recording unit, e.g. a video cassette recorder. Please note that you must programme your video recorder accordingly to record the programme.

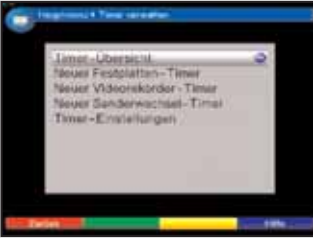
If the receiver is switched on by the video recorder timer, this will be indicated by the message "1VCR Timer" in the display. Some functions of the remote control (e.g. calling up the main menu) will be deactivated. In stand-by mode, the active timer will be indicated by a clock symbol in the display.

3. Channel-switching timer

If your receiver is in normal operating mode, it will switch to the programmed channel slot at the set time.

In contrast to the hard drive or video recorder timer options, the receiver and remote control remain fully functional, and will not be switched off at the end of the programme.

8.1.2.1 Manual programming of timer



(Fig. 8-4)



(Fig. 8-5)

- > Use the **Menu** key to call up the **Main menu**.
- > Use the **arrow keys up/down** to mark the line **Manage timer**.
- > Confirm by pressing **OK**.
The sub-menu **Manage timer** will be displayed. (Fig. 8-4)
- > Use the **arrow keys up/down** to select the type of timer you wish to programme.
- > Press the **OK** key to go to the entry window used for programming a new timer event. (Fig. 8-5)

To programme a timer, proceed as follows:

- > Use the **arrow keys** to mark the upper line of the menu.
- > Press the **OK** key.
- > In the selection window that is now displayed, use the **arrow keys up/down** to select the desired source (**TV** or **Radio**).
- > Confirm by pressing **OK**.
Now, depending on the previous setting, the TV resp. the radio programme list will be displayed.
- > Now use the **arrow keys** to mark the desired programme.
- > Use the **arrow keys up/down** to move around the list one line at a time.
- > Use the **arrow keys left/right** to move backward or forward in the list one page at a time.
- > Press the **OK** key to accept this into the timer.

Date

- > Use the **arrow keys** to mark the column **Date**.
- > Use the **numeric keys** to enter the date (4-digit format) of the timer event.

Start

- > Use the **arrow keys** to mark the column **Start**.
- > In this line, use the **numeric keys** to enter the starting time for the timer.

Stop

- > Repeat the steps as described under „Start” to enter the stopping time (except for channel-switching timer).

Repeat

- > Use the **arrow keys** to mark the column **Rep**.
- > Press the **OK** key.
A selection window will be displayed, showing various repeat options.
 - 1x** Timer on once
 - T** Daily repeat
 - 1 W** Repeat once a week
 - 1-5** Repeat only on weekdays
 - 6-7** Repeat only on weekends
- > Use the **arrow keys up/down** to select the desired function.
- > Confirm and accept the setting by pressing **OK**.

Saving data to memory

- > When you have completed the programming, press the **green** function key **Accept**, to save the data to memory.
If under **Channel** you have selected a channel that is blocked as per Point 9.3, you must first enter the PIN code before the data can be entered into memory.
- > Press the **TV/Radio** key to return to normal operation.

8.1.2.2 Timer overview

The timer overview function gives you an overview of all timer events programmed.

- > To go to the menu **Timer overview**, call up the menu **Manage timer** as described above.
- > Use the **arrow keys up/down** to mark the line **Timer overview**.
- > Confirm by pressing **OK**.

Should there be any overlapping in the programming of multiple timer events, so that these timers cannot be executed correctly, these overlaps will be indicated in red.

8.1.2.3 Changing timer programming

- > To change an existing timer setting, use the **arrow keys up/down** to mark the timer event you wish to change.
- > Press the **green** function key **Change** to go to the settings of the marked timer. Proceed to change these as described under Point 8.1.2.
- > Now use the **arrow keys up/down** to mark the additional **Type** field displayed.
- > Confirm by pressing **OK**.
A window will be opened, displaying the timer types available.
- > Use the **arrow keys up/down** to select the desired type of timer.
- > To accept the timer type, confirm by pressing **OK**.
- > When you have completed the programming, press the **green** function key **Accept** to store the data in memory.

8.1.2.4 Delete timer programming

- > Use the **arrow keys up/down** to delete an existing timer setting.
- > Press the **yellow** function key **Delete**.
A query message will be displayed: "Do you really want to delete this timer ?"
- > Use the **arrow keys left/right** to select **Yes**.
- > To delete the timer entry, confirm by pressing **OK**.

8.1.2.5 Programming a new timer event

- > To programme a new timer event, use the **arrow keys up/down** to mark a free line in the menu **Timer overview**.
- > Press the **green** function key **New** to go to the entry window for programming a new timer event. Now make your settings here in accordance with Point 8.1.2.
- > Use the **arrow keys up/down** to mark the additional field **Type** displayed.
- > Confirm by pressing **OK**.
A window will be opened, listing the timer types available.

- > Use the **arrow keys up/down** to select the desired timer type.
- > To accept the timer type, confirm by pressing **OK**.
- > When you have completed the programming, press the **green** function key **Accept**, to transfer the data to memory.

Note!!!

Ensure that the receiver has acquired the correct time. This is shown in the display while the receiver is in stand-by mode. If this is not the case, switch the receiver to a major channel such as ZDF, etc. for approx. 30 seconds, to acquire the time.

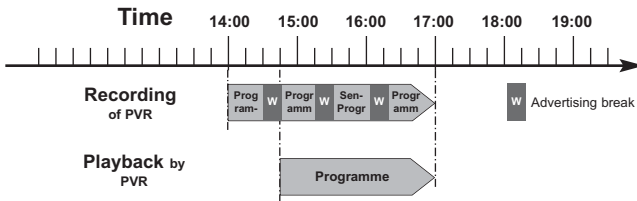
If it was activated under Point 6.2.4, the time should now be shown in the display in stand-by mode.

8.1.3 Timeshift-Funktion

The time-shift function provides the facility of recording and playing back at the same time. This is made possible by **Time-Shift television**. Thus you can already view the beginning of the recording, and can decide to skip over certain passages already recorded (e.g. advertising blocks). At the same time, the live signal of the broadcast will continue to be recorded (see the following examples)

Example: Skipping advertising breaks

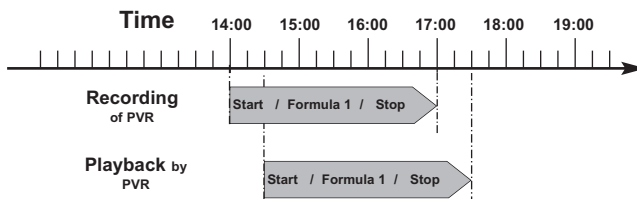
You would like to view a programme without the irritating advertising breaks? The PVR allows you to simply skip over advertising breaks recorded.



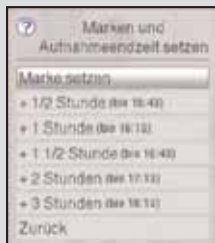
Example: Time-shift playback

You have missed the start of the Formula 1 race? Not a problem!

The PVR will show you the race at a time-shifted time, while continuing to record the event.



- > To go to a specific point in a **currently running recording**, you can use the functions **Play**, **Pause** as well as **Fast Wind** and the **Jogshuttle**, as described in Point 8.2.
- > Press the **Info** key to display the Infobox with a progress bar, showing the playing and recording time elapsed.



(Fig. 8-6)

8.1.4 Setting markers while recording

- > Press the **Record** key to open a window showing the functions available. (Fig. 8-6)
- > 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 this manner to set markers at all desired places. Markers can also be set during Playback mode (Point 8.2.1.5) as well as in the menu Manage hard drive (Point 8.3.1.3).

8.2 Playback function

The hard drive resp. the PVR navigator will provide access to your hard drive recordings.

8.2.1 Playing back recordings

8.2.1.1 Reproducing hard drive recordings



(Fig. 8-7)

- > During normal operation, press the **green** function key to open the PVR navigator. Depending on whether you are in TV or radio mode, a list of all TV or radio recordings available on the hard drive will be displayed (Fig. 8-7). The marked recording will already be played back in the preview window.
- > Use the **arrow keys up/down** to select the recording you wish to play.
- > Confirm by pressing **OK**, to start the playback procedure. The message "**Play ►**" will be displayed briefly.

Recording a broadcast, and at the same time playing an existing recording

In addition, you can play an existing recording from the hard drive simultaneously with a new recording being stored.

- > While a recording is in progress, call up the PVR navigator as described in Point 7.2.3.1.
- > Use the **arrow keys up/down** to mark the recording you wish to play, and start the playback procedure by pressing **OK**.

8.2.1.2 Pause/Freeze frame

- > To stop the playback of a recording (freeze frame) press the **yellow** function key resp. the **Freeze frame** key while the playback is in progress. The message "**Pause ull**" will be displayed.
- > Press the respective key again to continue playback from the same spot.

8.2.1.3 Fast forward and rewind

To allow you to go to a specific point in a recording, your PVR provides fast forward and fast rewind functions.

- > While in Play mode, press the **blue** function key **Fast forward** resp. the **red** function key **Rewind**. The message "**Fast forward >>>**" resp. "**Rewind <<<**" will be displayed. The recording will now be played at **4-times** speed in the desired direction.
- > If you press the **blue** resp. **red** function key again, the speed will be increased to **16-times**. The message "**Fast forward >>>>**" resp. "**Rewind <<<<**" will be displayed.
- > If you press the **blue** resp. **red** function keys yet again, the running speed will be increased to **64-times**. The message "**Fast forward >>>>>**" resp. "**Rewind <<<<<**" will be displayed.
- > By pressing the **blue** resp. **red** function key once more, you can scan forward or backward through the recording in **steps of 10 minutes**.
- > Once you have reached the desired spot in the recording, press the **yellow** function key to go to normal viewing/playback mode.

8.2.1.4 Jogshuttle-Funktion

In addition, your receiver 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/pause). The symbol "▶||" will be displayed.

Slow motion

- > Press the **arrow key right** to view the recording in slow motion speed. The symbol "I▶" will be displayed.

Single frame progress

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

Fast forward and rewind

- > Press the **arrow keys left/right** repeatedly to change the speed and the direction of the playback. The various playback modes will be displayed as indicated in the table below.

Display	Playback mode
▶	Playback
▶▶	Fast forward 4 x speed
▶▶▶	Fast forward 16 x speed
▶▶▶▶	Fast forward 64 x speed
◀◀	Rewind 4 x speed
◀◀◀	Rewind 16 x speed
◀◀◀◀	Rewind 64 x speed
I▶	Slow motion
▶||	Pause

- > If you press the arrow key right or left while the symbols ▶▶▶▶ resp. ◀◀◀◀ are displayed, you will move forward or back by 10 minutes at a time.

8.2.1.5 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.
Markers can also be set during Record mode (Point 8.1.4) as well as in the menu Manage hard drive (Point 8.3.1.3).

8.2.1.6 Jumping to markers

You also have the option in playback mode of going directly to those spots of the recording you have marked as per Point 8.1.4, 8.2.1.5 or 8.3.1.3.

- > Press the **Option** key to open a window (Fig. 8-8) showing the available marks. In addition, the mark „Current“ will be shown. This designates the spot in the recording at which you have opened the window with the list of marks.
- > As soon as you select a mark by using the **arrow keys up/down**, the recording will be played from this spot.
- > Press the **OK** key to close the window and switch to normal playback operation.



(Fig. 8-8)



8.2.1.7 End playback session

- > If you would like to end the playback session, press the **green** function key. Playback mode will be ended, and the receiver will revert to normal operating mode. The receiver will automatically „remember“ the exact spot of the recording at which you have ended playing it.
The next time you start playing this recording, the receiver will automatically continue at the spot where you ended playing it the last time.

8.2.2 Playing MP3 files

8.2.2.1 On-screen controls

Your receiver is capable of playing files in MP3 format that have been stored on the hard drive or on a storage medium attached to the USB port. An external unit should be formatted in filesystem FAT32 format. Point 8.3.2 describes how you can transfer files from a USB device to the hard drive.

- > While in normal operating mode, press the **green** function key to open the PVR navigator.
- > Press the **red** function key **Category** to open an additional window.
- > Use the **arrow keys up/down** to mark the entry **Music** and confirm by pressing **OK**.
If a USB device is connected to the USB port, a further window will be opened, allowing you to select the source.
- > Use the **arrow keys up/down** to select the source from which you wish to play back the MP3 files, and confirm by pressing **OK**.
A list of the MP3 files available on the hard drive will be displayed. The files are indicated by the symbol . Folders available on the hard drive are indicated by the symbol .
- > Where appropriate, first use the **arrow keys up/down** to mark the folder containing the MP3 file you wish to play, and confirm by pressing **OK**.
- > Now use the **arrow keys up/down** to select the MP3 file you wish to play first from the list and confirm by pressing **OK**.
The selected file will now be played. After this, the receiver will automatically play the other files in this folder, resp. on this source medium.

Skipping titles/tracks

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


Pause

- > Press the **yellow** function key to stop the playback operation (**Pause**).
- > Press the key again to resume playing the file from the position at which it was stopped.

Stop

- > To stop the playback operation, press the **green** function key.
You will return to normal operating mode.

Switching folder levels

- > While in playback mode, first press **OK** to activate the navigator again.
- > 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** key.

8.2.2.2 Display control

In order to avoid having to switch on the television set in order to be able to navigate an MP3 playback session, you can also control this via the display on the receiver front panel.

An MP3 file will be indicated on the display with its respective name, e.g. **Sterne.mp3**. A folder will be indicated by a display of square brackets, e.g. **[Popmusic]**. The hard drive will be displayed as **hard drive** and a USB device will be indicated as **USB-device1**, **USB-device2** etc..

- > While the receiver is in stand-by mode, press the **Language select** key.

The receiver will switch itself on, and will automatically call up the navigator in the Music category.

- > Use the **arrow keys up/down** to select the source from which you wish to play back the MP3 files, and confirm by pressing **OK**.
If no USB device is connected to the system, only the internal hard drive of the receiver will be available as a source.
- > Where appropriate, first use the **arrow keys up/down** to select the folder containing the desired MP3 file, and confirm by pressing **OK**.
- > Use the **arrow keys up/down** to select from the list the MP3 file you wish to play first, and confirm by pressing **OK**.
The file selected will now be played. Thereafter the other files located on the same source medium, resp. in the folder selected, will be played automatically.

Skipping titles

- > Press the **arrow up/down** key to skip to the next resp. the previous title.

Pause

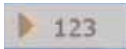

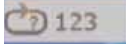

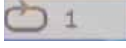
- > Press the **yellow** function key to stop the playback operation (**Pause**).
- > Press the key again to resume playing the file from the position at which it was stopped.

Stop

- > To stop the playback operation, press the **green** function key.
You will return to normal operating mode.

Switching folder levels

- > While in playback mode, first press **OK** to activate the navigator again.
- > To move from a folder to the next higher level, use the **arrow keys** to mark the entry **[..]** , and confirm by pressing **OK**.

Function	Display	Screen
Normal playback of all titles of folder selected	▶ directory	
Repeat all titles of folder selected	↺ directory	
Random play of all titles of folder selected	↺ random play directory	
Repeat all titles	↺ All	
Repeat current title	↺ Title	

or

- > press the **Back** key.

8.2.2.3 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
 - Repeating a title
 - Repeat all titles of the folder selected
 - Repeat all titles
- > The various playback modes can be selected by means of the **Option** key or the **Language select** key.

The various modes are shown on screen resp. on the display panel as follows:

8.2.3 Viewing pictures

Your receiver is equipped to display files in JPG format that are available either on the hard drive or from a device connected to the USB socket. The USB device should be formatted using the file system FAT 32. Consult Point 8.3.2 on how to copy files from a USB device onto the hard drive.

- > While in normal operating mode, press the **green** function key to open the PVR navigator.
- > Press the **red** function key **Category** to open an additional window.
- > Use the **arrow keys up/down** to mark the line **Pictures** and confirm by pressing **OK**.
- > Use the **arrow keys up/down** to select the source from which you wish to view the picture files, and confirm by pressing **OK**.
A list showing the picture files available on the hard drive resp. on the USB device will be displayed. These are indicated by the symbol . Folders located on the hard drive resp. on the USB device will be indicated by the symbol .
- > Where appropriate, first use the **arrow keys up/down** to mark the folder containing the desired picture file, and confirm by pressing **OK**.
- > Use the **arrow keys up/down** to select from the list the JPG file you wish to view, and confirm by pressing **OK**.
The picture selected will now be displayed in large format.


Show next/previous picture

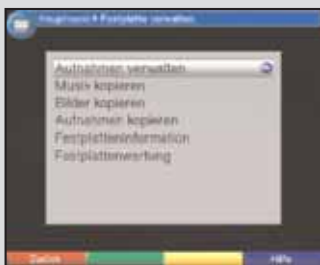
- > Press the **arrow keys up/down** to skip to the next resp. previous picture.

Stop

- > To exit from picture viewing mode, press the **green** function key.
You will return to normal operating mode.

Switching folder levels

- > While a picture is being displayed in large format, first press **OK** to activate the navigator again.
- > 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**.



(Fig. 8-9)

8.3 Managing the hard drive

Press the **Menu** key to call up the **Main menu**.

- > Use the **arrow keys up/down** to mark the line **Manage hard drive**.
- > Confirm by pressing **OK**. The menu **Manage hard drive** will be displayed. (Fig. 8-9)
- > Use the **arrow keys up/down** to move the marker around within the menu, and to change the individual positions as indicated.



(Fig. 8-10)

8.3.1 Managing recordings

In this menu, (Fig. 8-10) you have the facility to manage your recordings.

- > Press the **OK** key to go to the sub-menu **Manage recordings**.
A list of the recordings available on the hard drive will be displayed.
- > Markieren Sie mit den **Pfeiltasten auf/ab** die gewünschte Aufnahme.

8.3.1.1 Delete

- > To delete the marked recording, press the **red** function key **Delete**.
- > Use the **arrow keys left/right** to mark the field **OK** and confirm by pressing **OK** to actually delete the recording.

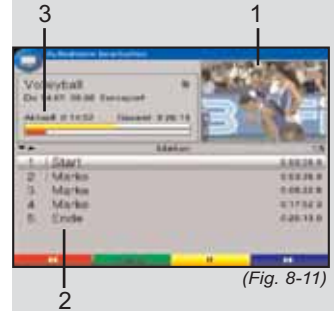
8.3.1.2 Parental control

You can block access to recordings that are not suitable for children or adolescents. These recordings can then only be played and viewed after the four-digit unit PIN code has been entered. The parental control function is only active if it has been switched on as described in Point 9.3.

- > Press the **green** function key to block access to the marked recording. The recording selected will be indicated as blocked by the parental control symbol.

8.3.1.3 Edit

- > Press the **yellow** function key **Edit** to go to the menu that will allow you to edit the marked hard drive recording (Fig. 8-11). This will be displayed in a preview window (1). In addition, the markers set in this recording (2) will be indicated.
The markers **Start** and **End** are set as a standard feature. In addition, a yellow progress bar (3) will be displayed, showing the current playback position and the total duration of the recording.
- > To skip to a marked spot of the recording, use the **arrow keys up/down** to mark the desired marker, and confirm by pressing **OK**.



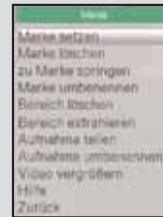
(Fig. 8-11)

Going to any spot of the recording

- > Use the **coloured keys** to go directly to various spots of your choice in the recording.

Functions

- > Press the **green** function key **Menu** to open a window (Fig. 8-12) showing the functions available for editing the recordings.
- > Use the **arrow keys up/down** to select the desired function, and confirm by pressing **OK**.



(Fig. 8-12)

Setting a marker

- > Go as described above to the spot in your recording at which you would like to insert a marker.
- > Press the **green** function key **Menu** to open a window showing the functions available.
- > Use the **arrow keys up/down** to mark the line **Set marker**.
- > Press the **OK** to set a marker at this spot of the recording.

Proceed in this manner to set markers at all desired spots of the recording.

Deleting a marker

- > Use the **arrow keys up/down** to mark a marker you wish to delete.
- > Press the **green** function key **Menu** to open a window showing the functions available.
- > Use the **arrow keys up/down** to mark the line **Delete marker**.
- > Confirm by pressing **OK** to delete the marker.

Skip to marker

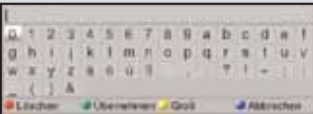
You can simply press a key to jump to a spot or spots in the recording that you have previously marked with a tag.

- > Use the **arrow keys up/down** to select a mark to which you wish to jump.
- > Press the **green** function key **Menu** and use the **arrow keys up/down** to mark the line **Jump to mark**.
- > To jump to this mark, confirm by pressing **OK**.

Renaming a marker

To name a mark, proceed as follows:

- > Use the **arrow keys up/down** to mark a mark/tag that you wish to give a new name.
- > Press the **green** function key **Menu** and use the **arrow keys up/down** to mark the line **rename mark**.
- > Confirm by pressing **OK**, to open the virtual keyboard, in order to enter a new name. (Fig. 8-13)
- > Use the **yellow** function key to alternate between upper and lower case letters.
- > Use the **arrow keys** to mark the first letter resp. the first symbol or figure if the name you wish to enter.
- > Confirm this by pressing **OK**.
The selected letter will now be displayed in the headline of the virtual keyboard.
- > Now use the **arrow keys** to select the second letter of the name, and confirm this by pressing **OK**.
- > If you have entered an incorrect letter or symbol by mistake, you can **delete** this by pressing the **red** function key.



(Fig. 8-13)

- > Enter the complete name in this way.
- > To accept the name, press the **green** function key. A message will be displayed, enquiring whether you really want to accept the name.
- > Use the **arrow keys** to mark the field **OK** and accept the name by pressing **OK**.
- > To exit from the virtual keyboard without accepting the entered name, press the **blue** function key **Abort**.

Deleting a section

Your PVR provides the facility of removing whole sections or topics from an existing recording (e.g. unwanted advertising blocks).

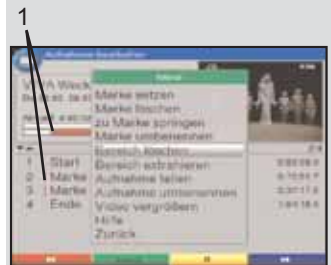
Please note:

The deleted sections are irrevocably removed from the hard drive.

To delete a section proceed as follows:

Both the beginning and the end of the section that is to be removed must be marked by two marks/tags. (Fig. 8-14)

- > To do this, mark the beginning and the end of the section to be removed with one mark each as described under **Setting a mark**.
- > Now use the **arrow keys** to set the mark that indicates the beginning of the section that is to be removed. The section to be deleted is now highlighted in **red** (1) both on the progress indicator and in the overview of marks set.
- > Now press the **green** function key **Menu** and use the **arrow keys up/down** to mark the line **Delete section**.
- > Press **OK** to display a query window. Here, information on the section to be deleted will be displayed.
- > To actually delete the section, use the **arrow keys left/right** to mark the field **OK** and confirm by pressing **OK**.



(Fig. 8-14)

Extracting a section

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 extract a section, proceed as follows:

The beginning and the end of the section that is to be copied must be indicated by two markers. (Fig. 8-14)

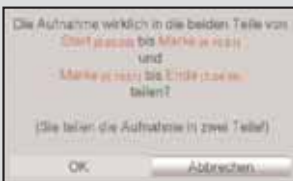
- > To do this set a marker at the beginning and at the end of the section to be extracted with one marker each, as described under **setting markers**.
- > Now use the **arrow keys up/down** to set the marker indicating the beginning of the section to be copied.
The section to be copied will now be indicated in **red** on the progress indicator as well as in the overview of existing markers (1).
- > Now press the **green** function key **Menu** and use the **arrow keys up/down** to mark the line **extract section**.
- > Press **OK** to display a query window.
This will show information relating to the section to be copied.
- > To actually copy the section, use the **arrow keys left/right** to mark the field **OK** and confirm by pressing **OK**.
The marked section will now be copied to a new recording. Depending on the size of the section, this may take several minutes.

Splitting a recording

This function allows you where, for instance, two successive programmes 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. (Fig. 8-15)
This will show information relating to the two recordings to be created by the split.
- > To actually split the recording, use the **arrow keys left/right** to mark the field **OK** and confirm by pressing **OK**.



(Fig. 8-15)

Renaming a recording

Your PVR extracts information on the name of each programme broadcast from the broadcast data stream. If a recording includes several programmes, all the names of the recorded programmes will be noted, and recorded internally.

To rename a recording, proceed as follows:

- > Press the **green** function key **Menu** and use the **arrow keys up/down** to mark the line **Rename recording**.
- > Confirm by pressing **OK**. A list with the available titles will be displayed.
- > Use the **arrow keys up/down** to select the title you wish to use, and confirm by pressing **OK**.
- > A query will be displayed. Use the **arrow keys left/right** to mark the field **OK** and confirm by pressing **OK**.
- > If you wish to give the recording a different, specific name, then use the **arrow keys up/down** to mark the line **New**.
- > If you press the **OK** key, the virtual keyboard will be displayed, and you can enter a new name as described under **Renaming a mark**.

Enlarging a video

To make it easier getting to a specific point on a recording, you can enlarge the video picture of the recording.

- > Press the **green** function key **Menu** and use the **arrow keys up/down** to mark the line **Enlarge video**.
- > Confirm by pressing **OK** to display the video picture in larger format.
- > To again reduce the size of the video picture, proceed as above and mark the line **Reduce video**.

8.3.2 Managing music/pictures

As described in Point 8.2.2. and 8.2.3, you can use your receiver to play music in MP3 format, and to view pictures in JPG format. To copy the appropriate files onto the hard drive, proceed as described in Point 4 to connect a USB device, on which the MP3 files resp. JPG files are stored, to the USB port of the receiver.

Please note:

In the menu Copy music you can only manage MP3 files, while the menu Copy pictures only allows you to manage picture files.



(Fig. 8-16)



(Fig. 8-17)

- > Call up the menu **Manage hard drive** as described in point 8.3
- > Use the **arrow keys up/down** to mark the line **Copy music** resp. **Copy pictures**, in order to manage the appropriate files.
- > Confirm by pressing **OK**.
A menu with two columns will be displayed (Fig. 8-16) resp. (Fig. 8-17), with the left half (set top box) showing the files and folders stored on the hard drive. The column on the right (USB device) shows the files and folders stored on the USB device connected to the receiver.
- > Use the **green** function key **USB devices** to switch to the USB device, or the **red** function key **Set-top-Box** to switch to the hard drive.
The first file resp. the first folder on the list will be marked.

8.3.2.1 Copying

The **Copy** function will effect a copy of the marked file resp. folder to be stored on the hard drive, resp. the USB device. The original file resp. the original folder will remain unchanged.

- > Use the **arrow keys up/down** to mark the file resp. the folder you wish to copy on to the hard drive. resp. on to the USB device.
- > Press the **blue** function key **Functions** to open a window listing the available functions.
- > Use the **arrow keys up/down** to mark the line **Copy** and confirm by pressing **OK**.
- > To copy the marked file resp. the marked folder, now press the **yellow** function key **Copy**.
The marked file resp. the folder will now be copied, and the name will then also appear in the left-hand resp. right-hand column of the menu.

Marking a block

To mark several files simultaneously, proceed as follows:

- > Press the **OK** key to go to the selection mode. The marked file will be marked with a cross on the left-hand side.
- > You can now use the **arrow keys up/down** to also mark the preceding or the following files.
- > Once you have completed marking the desired files in this manner, press the **yellow** function key **Copy** to copy the marked files on to the hard drive.

Please note that it is **not** possible to mark blocks of folders, only files!

8.3.2.2 Moving

The Moving function allows you to move or shift the marked file resp. the marked folder from the source medium (e.g. the USB device) to the target medium (e.g. the hard drive). At the end of this procedure, the file or folder that has been moved will be present only on the target medium, and will be deleted from the source medium.

- > Use the **red** function key **Set-Top-Box** or the **green** function key **USB devices** to go to the source on which the file or folder to be moved is currently stored.
- > Use the **arrow keys up/down** to mark the file or the folder you wish to move.
- > Press the **blue** function key **Functions** to open a window showing the available functions.
- > Use the **arrow keys up/down** to mark the line **Move** and confirm by pressing **OK**.
- > To move the marked file resp. the marked folder, now press the **yellow** function key **Move**.
- > To move several files simultaneously, mark these as described in **Marking blocks** above.

8.3.2.3 Deleting

To delete files resp. folders proceed as follows:

- > Use the **red** function key **Set-Top-Box** or the **green** function key **USB devices** to switch to the source on which the file or folder to be deleted is located.
- > Use the **arrow keys up/down** to mark the file or folder you wish to delete.
- > Press the **blue** function key **Functions** to open a window listing the functions available.
- > Use the **arrow keys up/down** to mark the line **Delete** and confirm by pressing **OK**.
- > To delete the marked file resp. the marked folder, you must now press the **yellow** function key **Delete**. A query message will be displayed, asking whether you really wish to delete the selected files.
- > Use the **arrow keys left/right** to mark the field **Yes** and confirm by pressing **OK**. The data will now be deleted.
- > To delete several files simultaneously, mark these as described in **Marking blocks** above.

8.3.2.4 Sampling MP3 files/showing picture files

The function **sample** resp. **show** is available in this menu in order to sample an MP3 file resp. to show a JPG file. This function can be called up as follows:

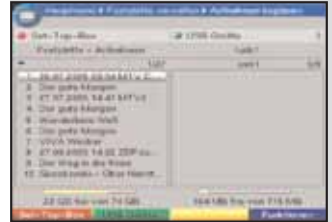
- Use the **red** function key **Set-Top-Box** or the **green** function key **USB devices** to switch to the source on which the file is located that you wish to sample resp. to show.
- > Use the **arrow keys up/down** to mark the file you wish to sample.
- > Press the **blue** function key **Functions** to open a selection window showing the functions available.
- > Use the **arrow keys up/down** to mark the line **Sample** resp. **Show** and confirm by pressing **OK**.
- > Press the **yellow** function key. The marked file will now be played as a sample, resp. shown.

8.3.3 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 8.3.
 - > Use the **arrow keys up/down** to mark the line **Copy recordings**.
 - > Confirm by pressing **OK**.
- The menu **Copy recordings** will be displayed. (Fig. 8-18)

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.



(Fig. 8-18)

8.3.3.1 Exporting

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

- > Use the **arrow keys up/down** to mark the file you wish to copy to 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 file, you must now press the **yellow** function key **Export**.
- The marked file will now be copied to the USB device, and will then be displayed on the right half of the menu. Please note that this procedure may take quite some time, depending on the size of the file.

Marking blocks

To mark several files simultaneously, proceed as follows:

- > Press **OK** to go to selection mode.
The marked file will be indicated by a cross on the left-hand side.
- > You can now use the **arrow keys up/down** to also mark the preceding or the following files.
- > Once you have completed marking the desired files in this manner, press the **yellow** function key **Export** to copy the marked files on to the hard drive.

8.3.3.2 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**.

8.3.3.3 Deleting

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

- > Use the **red** function key **Set-Top-Box** or the **green** function key **USB devices** to switch to the source on which the file or folder to be deleted is located.
- > Use the **arrow keys up/down** to mark the file or folder you wish to delete.
- > Press the **blue** function key **Functions** to open a window listing the functions available.
- > Use the **arrow keys up/down** to mark the line **Delete** and confirm by pressing **OK**.
- > To delete the marked file resp. the marked folder, you must now press the **yellow** function key **Delete**. A query message will be displayed, asking whether you really wish to delete the selected files.
- > Use the **arrow keys left/right** to mark the field **Yes** and confirm by pressing **OK**. Alternatively, select **No** and confirm by pressing **OK** in order to abort the procedure.



(Fig. 8-19)

8.3.4 Hard drive information

- > Press **OK** to display a window showing information on the integrated hard drive.

8.3.5 Hard drive maintenance

- > Press the **OK** key to obtain an overview of the number of recordings as well as the degree to which the hard drive is filled with data. (Fig. 8-19)

8.3.5.1 Checking the hard drive

- > To perform a check of the hard drive, use the **arrow keys left/right** to mark the field **Check**.
- > Press the **OK** key, then confirm the message displayed by pressing **OK** again to start the procedure. The hard drive will now be checked. The result will be displayed once the procedure is completed.

8.3.5.2 Formatting the hard drive

When you format the hard drive, the file system will be replaced. This may become necessary, if an error has been found while checking your hard drive.

Note!

All contents of the hard drive will be erased during formatting, all existing recordings and multi-media files (e.g. MP3's) will be lost.

- > To format the hard drive, use the **arrow keys left/right** to mark the field **Format**.
- > Press the **OK** key, then confirm the message displayed by pressing **OK** again to start the formatting procedure.

Please note !

The receiver may be operated only with the built-in hard drive supplied ex factory. The receiver may be damaged otherwise. You must therefore not open the housing, and must not exchange the hard drive yourself, as this would lead to an immediate voiding of all guarantees.

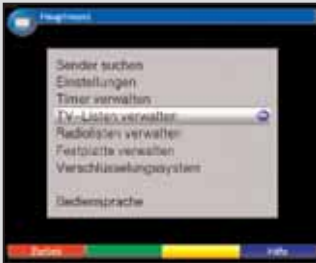
9 Changing the basic programming

9.1 Configuring the Favourites list

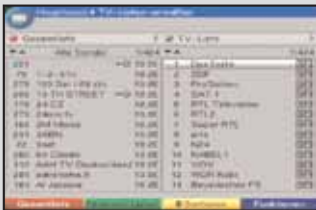
This chapter describes how you may change the pre-programming of your digital receiver as well as the Favourites programme list in accordance with your preferences. This function is also required to sort new programmes into the list after a programme scan.

To work with this function, you should know the following: your receiver features the **Total list** as well as four **Favourites lists**., provided the function enabling several Favourites lists has been switched on as per Point 6.5.1. The Favourites programme lists include all the programmes you have added as described below. The Total list includes all programmes/channels.

This chapter also describes how you can delete programmes, how you can block access to them by means of the parental control function, or how you can add them to the EPG. If you press the **OK** key to display a programme list, the currently active Favourites programme list will be displayed.



(Fig. 9-1)



(Fig. 9-2)

9.1.1 Calling up the programme list manager

To edit the Favourites list, proceed as follows:

- > Press the **Menu** key to call up the **Main menu**. (Fig. 9-1)
- > Use the **arrow keys up/down** to mark the line **Manage TV lists** to work on the TV list or **Manage radio lists** to work on the radio list.
- > Confirm by pressing **OK**.

The programme list manager for the respective Favourites list (TV or radio list) will be displayed. (Fig. 9-2)

The Main Favourites list will be shown on the right half of the screen. This is now active, as the most recently selected programme of the Main Favourites list is marked. On the left half of the screen you will see the alphabetically sorted Total list.

This Total list includes all available programmes.

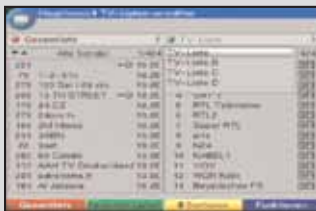
9.1.2 Select a Favourites list

- > Press the **green** function key **Favourites Lists** to switch from the Total or Provider list to the Favourites list.

- > To select a different Favourites list, press the **green** function key **Favourites Lists** again.

A window will be displayed, showing the lists available. (Fig. 9-3) Please also note Point 6.5.1 of the operating manual.

- > Use the **arrow keys up/down** to mark the Favourites list you wish to work on, and confirm by pressing **OK**.

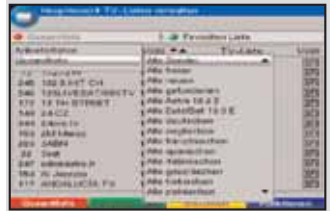


(Fig. 9-3)

9.1.3 Select Total list

- > Press the **red** function key to switch the marking to the Total list. This is now active.
- > Press the **red** function key again to open a selection window. Here you have the option of sorting the Total list according to various selection criteria (e.g. all channels, all free to air, all new, all English language, etc.) or by **Provider** (provider list).

- > Use the **arrow keys up/down** to select the desired programme list (e.g. **Total list**).
- > Confirm by pressing **OK**.
An additional selection window will now be opened. (Fig. 9-4)
- > Now use the **arrow keys up/down** to mark the selection criterion you wish to apply in sorting the Total list. Thus, for example, select **All Channels** to show all available programmes in the Total list, or select **All new** to show only newly found programmes from the latest scan performed, or **All English** to show only English-language channels.
- > Confirm by pressing **OK**.
Now, depending on your selection, a programme list will be displayed showing, e.g. all, all new or all English-language programmes/channels. Programmes already included in the Favourites list are shown with the programme slot number applicable in the relevant Favourites list.



(Fig. 9-4)

9.1.4 Adding programmes to the Favourites list

To add a programme from the Total list to one of the Favourites lists, call up the programme list manager as described in Point 9.1.1, where appropriate select the desired Favourites list, and change to the Total list.

- > Press the **blue** function key **Functions**.
A selection window listing the available functions will be displayed. (Fig. 9-5)
- > Use the **arrow keys up/down** to mark the line **Add**.
- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to mark a programme you wish to add to the list.
- > Press the **yellow** function key **Add** to add the marked programme to the Favourites list.



(Fig. 9-5)

Marking blocks

To mark several programmes simultaneously, proceed as follows:

- > Press the **OK** key to go to the selection mode.
The marked programme will be indicated by a cross on the left hand side.
- > You can now use the **arrow keys up/down** to also mark the following or the preceding programmes as well.

- > When you have completed marking the desired programmes in this manner, press the **yellow** function key **Add** to add the marked programmes to the Favourites list.

9.1.5 Deleting programmes

9.1.5.1 Removing (deleting) from the Favourites list

To remove programmes from the Favourites list, call up the programme list manager as described in Point 9.1.1. Where appropriate, you must still select the desired Favourites list.



(Fig. 9-6)

- > Press the **blue** function key **Functions**. A selection window will be displayed, listing the available functions. (Fig. 9-6)
- > Use the **arrow keys up/down** to mark the line **Remove**.
- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to mark a programme you wish to remove from the list.
- > Press the **yellow** function key **Remove**. The message will be displayed: „Remove programme(s) from the list?“.
- > Use the **arrow keys left/right** to mark **Yes** or **No**.
- > Confirm the entry by pressing **OK**.
- > To remove several programmes simultaneously, mark these as described in Point 9.1.4 (**Marking blocks**).
- > When you have completed marking the desired programmes in this manner, press the **yellow** function key **Remove**. The message will be displayed: “Remove programme(s) from the list?“.
- > Use the **arrow keys left/right** to mark **Yes** or **No**.
- > Confirm the entry by pressing **OK**.

The programmes removed in this manner remain included in the Total list, and can be transferred back to the Favourites list at any time.

9.1.5.2 Deleting from the Total list

To remove programmes from the Total list, proceed as described in Point 9.1.5.1. After calling up the programme list manager, press the **red** function key **Total list** to switch to the Total list, then select the function **Delete**. Please note that programmes deleted from the Total list will also be deleted from all Favourites lists.

9.1.6 Sorting programmes

To sort the order in which the programmes appear in your Favourites lists, call up the programme list manager as described in Point 9.1.1. Where appropriate, you can now select the desired Favourites list.

- > Press the **blue** function key **Functions**. A selection window will be displayed, showing the functions available. (Fig. 9-7)
- > Use the **arrow keys up/down** to mark the line **Sort**.
- > Confirm by pressing **OK**.
- > Now use the **arrow keys up/down** to mark the programme you wish to place at a different position in the list.
- > Now press the **yellow** function key **Sort**. A double arrow will be displayed next to the selected programme.
- > You can now use either the **arrow keys up/down** and/or the **numeric keys** to move the programme to the position in the list where you would like it to be placed.
- > Press the **yellow** function key **Sort** to store the programme at its new position.
- > To sort several programmes simultaneously, mark these as described in Point 9.1.4 (**Marking blocks**).
- > Now press the **yellow** function key **Sort**. A double arrow will be displayed next to the programme block selected.
- > You can now use the **arrow keys up/down** and/or the **numeric keys** to place the marked programme block at the position in the programme list where you would like it to be.
- > Press the **yellow** function key **Sort** to save the programme block at the new position.
- > When you have finished configuring the programme list according to your preferences in this way, press the **Menu** key to return to normal operation.



(Fig. 9-7)

9.2 Programming the electronic programme guide

Your receiver provides the facility to receive a data channel with additional SFI data via the ASTRA satellite systems (19,2° East). These make it possible to provide an SFI preview of up to a week.

- > Press the **Menu** key to call up 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 **Programme guide**.
- > Confirm by pressing **OK**.
The menu **Programme guide** will be displayed.
(Fig. 9-8)
- > Use the **arrow keys up/down** to move the marker within the menu, and to change the individual positions as indicated.
When selecting a menu item, please also note any messages displayed on screen.



(Fig. 9-8)

9.2.1 Updating

- > To receive the data channel, mark the line **Updating**.
- > Press **OK** to select **on**.

If you do not wish to receive the additional data, or if reception is not possible at your location, data reception can also be switched off:

- > To switch off data reception, set the item **Updating** to **off**.

9.2.2 Updating time

- > Use the **numeric keys** in the line **Updating time** to set the time when the automatic download of SFI data is to be effected.

9.2.3 Start category

The electronic programme guide offers various forms of displaying information (categories).

Overview

This form of display provides a quick overview of all channels included in the electronic programme guide.

Programmes

This form of display provides a table with the current day's programmes of a single channel.

Genres

If you are interested in specific types of programmes, you can have the programme information displayed according to specific genres, e.g. movies, news, sports, etc..

Last used

With this setting, the display type last used will be automatically called up next time you call up the SFI.

- > Use the **arrow keys left/right** in the line **Start category** to set the display type to be used when the electronic programme guide is called up.
- > If you select **Genres**, you can then use the **arrow keys** to additionally select the preferred genre (e.g. movies, news, shows, etc.).

9.2.4 SFI channel

- > Press the OK key to call up the sub-menu SFI channel (Fig. 9-9).
- > To start the updating of SFI data manually, press the **green** function key **Start now**.

Should the parameters of the data channel required to load the SFI list have changed, you can correct them in this menu. The current transponder data can be obtained from your local retailer. Generally speaking, you should not normally make any changes in this menu.

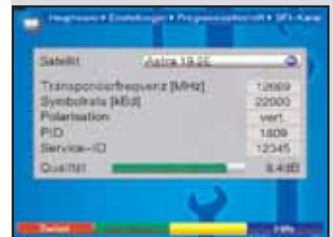
9.2.5 Selecting TV channels/programmes

To obtain a better overview, you can programme the electronic programme guide SFI so that it contains only your preferred channels.

Please note:

The more programmes you include in the electronic programme guide, the longer it will take to download the SFI data! By the same token, as the number of channels included in the electronic programme guide increases, it may not be possible to provide a preview of the maximum of seven days in advance.

- > Press the **OK** key.
The Favourites list of TV channels will be displayed.
(Fig. 9-10)
- > Press the **red** function key to display a selection window.
Here you have the option of selecting the desired programme list type. You can also select one of the various Favourites lists. Refer also to Points 6.5.1 and 9.1.2.



(Fig. 9-9)



(Fig. 9-10)

- > Use the **arrow keys up/down** to select the desired programme list type (e.g. Favourites lists).
- > Confirm by pressing **OK**.
If the option of various Favourites lists was activated under Point 6.5.1, a selection window showing the various Favourites lists will be displayed.
- > Use the **arrow keys** to mark a channel you wish to include in the electronic programme guide.
- > Press the **yellow** function key **SFI** to include the marked channel in the electronic programme guide, resp. to remove it from the programme guide.
- > To include several channels in the electronic programme guide simultaneously, mark these as described in 9.1.4 (**Marking blocks**).
- > When you have completed marking the desired channels in this manner, press the **yellow** function key **SFI** to accept the marked programmes into the electronic programme guide.
- > Press the **Menu** key to return to normal operation.
You can now start the downloading procedure manually:
- > Switch the receiver off using the **On/Stand-by** key (Stand-by).
- > Now, while the message „Load SFI?“ is shown in the display, press the **SFI** key.

The receiver will now perform the download procedure. This will be shown by the message **Loading SFI** as well as an indication of the SFI data already downloaded in the display panel.
- > The downloading procedure can be interrupted by switching the digital receiver on (**On/Stand-by** key).

9.2.6 Selecting radio channels/programmes

Use the same procedure as described in Point 9.2.5 to include radio channels/stations in the programme guide.

9.3 Parental control

Your receiver is equipped with a parental control function. This means that important functions (e.g. calling up the main menu) can be protected from unauthorised use. In addition, recordings and channels that you have blocked can only be accessed by entering a four-digit PIN code (unit PIN). To adjust settings in the menu **Parental control** proceed as follows:

- > Press the **Menu** key to call up 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 **Parental control**.
- > Confirm by pressing **OK**.
The menu **Parental control** will be displayed. (Fig. 9-11)
- > Use the **arrow keys up/down** to move the market within the menu and to change the individual positions as indicated.
When selecting a menu item, please also note any messages displayed on screen.



(Fig. 9-11)

9.3.1 PIN query mode

- > In this line, use the **arrow keys left/right** to set the pin query mode of the parental control function to **Once** or **Never**.

If you set the pin query mode to **Once**, and have not yet changed the PIN, you will be requested to change the PIN. To do this, proceed as described in Point 9.3.2.

Never

If you select the setting **Never** you will never be asked for the PIN. The parental control function is switched off.

Once

If you select the setting **Once** you will be asked to enter the PIN when calling up the main menu or when selecting a blocked channel resp. a blocked hard drive recording. To make matters more convenient for you, you will be asked for the PIN only once in each operating cycle.

9.3.2 Changing the PIN

The unit PIN code is set to **0000** at the factory.

- > Press the **OK** key.
The menu for changing the unit PIN code will be displayed. (Fig. 9-12)
- > Now use the **numeric keys** to enter the current unit PIN code in the line **Unit PIN (factory setting 0000)**.
- > In the line **Enter new PIN** use the **numeric keys** to enter the desired new unit PIN code.
- > Repeat the entry in the line **Repeat new PIN**.
- > When you have completed changing the PIN code in this manner, you will be taken back automatically to the menu Parental control.

Note!

Ensure that you do not forget the unit PIN code. If this does happen, please consult your retailer!




(Fig. 9-12)

9.3.3 Selecting a TV channel

- > Press the **OK** key. The TV Main Favourites list will be displayed.
The programme currently selected is marked (Fig. 9-13)
- > Press the **red** function key to open a selection window. Here you have the option of selecting the desired programme list type.
- > Use the **arrow keys up/down** to open a selection window.

You have the option of selecting the desired programme list type. You can also select on of the various Favourites lists. Also refer to Points 6.5.1 and 7.2.3.1.

- > Use the arrow keys up/down to select the desired programme list type (e.g. Favourites lists).
- > Confirm by pressing **OK**.
The selected programme list will be displayed.
- > Now use the **arrow keys** to mark the channel to which you wish to block access.
- > Block the channel by pressing the **yellow** function key. The parental control symbol  will be displayed next to the programme selected.
- > To block several channels simultaneously, mark these as described in 9.1.4 (**Marking blocks**) and block access to them by pressing the **yellow** function key.



(Fig. 9-13)

- > When you have finished configuring the programme list according to your preferences in this manner, press the **Menu** key to return to normal operation.
- > To reverse the blocking of individual channels, proceed as described above to mark the appropriate channel, and remove the parental control symbol by pressing the **yellow** function key.

9.3.4 Selecting radio stations/programmes

You can use the same method as described in Point 9.3.3 to block access to radio stations.

9.4 Programme search/scan

As mentioned before, your digital receiver is pre-programmed for reception of the ASTRA and EUTELSAT satellites. To receive new programmes, resp. the programmes of other satellites, there are several options provided to perform a programme search, or scan.

1. Automatic Scan

Select this type of search to scan all the satellites set in the menu Antenna settings (Point 6.4 and 10.4) for programmes.

2. Satellite Scan

Select this type of search to scan only a specific selected satellite for programmes.

3. Transponder Scan

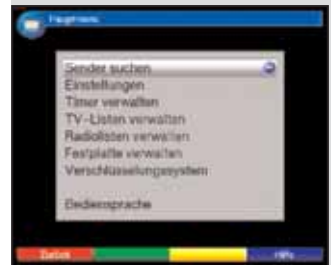
Select this type of search to scan a specific transponder of a single satellite for programmes.

4. Manual Scan

Select this type of search to search specifically for one particular programme, using the programme-specific PID numbers.

When the scanning procedure has been completed, a message will appear on your screen, indicating how many programmes were found by the digital receiver, how many of these are new programmes, and how many are encrypted programmes. New programmes are saved in the **Total list**, and can then be transferred to the **Favorites list** in accordance with Point 9.1.

- > To commence searching for programmes, first call up the **Main menu**. (Fig. 9-14)
- > Use the **arrow keys up/down** to mark the line **Scan channels**.
- > Confirm by pressing **OK**.
The sub-menu **Scan channels** will be displayed. (Fig. 9-15)

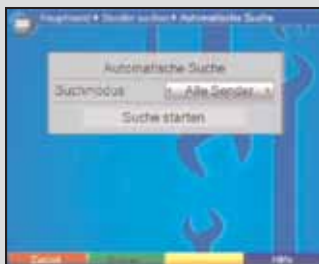


(Fig. 9-14)



(Fig. 9-15)

- > Now use the **arrow keys up/down** to select the type of scan you wish to perform, and confirm by pressing **OK**.



(Fig. 9-16)

9.4.1 Automatic scan

If this scan is selected, all the satellites listed in the menu Antenna settings (Point 6.4 and 10.4) will be scanned automatically for programmes. You can decide whether you wish to scan for all programmes (free-to-air and encrypted) or only for free-to-air programmes. (Fig. 9-16)

- > Press the **OK** key to decide whether you wish to scan only for free-to-air programmes (**Free Channels**) or whether you wish to include encrypted programmes (**All channels**).
- > Confirm by pressing the **green** function key **Start scan**.

Depending on the configuration of your antenna installation, a scan can take 15 minutes or more. Please note any messages displayed on screen.



(Fig. 9-17)

9.4.2 Satellite scan

To scan a single satellite for programmes, select the **Satellite** scan option (Fig. 9-17). Here you can decide whether you wish to scan for all (free-to-air and encrypted) programmes or only for free-to-air programmes.

- > Press the **OK** key again to open the selection table for the active satellites selected in accordance with Points 6.4 and 10.4..
- > Use the **arrow keys up/down** to mark the menu item **All satellites**, to scan all active satellites for programmes, or mark the desired satellite to scan only this satellite for programmes.
- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to mark the field **Search mode**.
- > Decide by pressing the **OK** key whether you wish to search only for free-to-air programmes (**Free Programmes**) or whether you want to include encrypted programmes in the search (**All Programmes**).
- > Now use the arrow keys up/down to mark the field **Start search** and press **OK** to confirm. The scan will be started. Please note any additional messages displayed on screen.
- > You can abort the search by pressing the **red** function key.

9.4.3 Transponder scan

You can scan a specific transponder (see Point 11 Technical terms) for programmes. To do this, it is necessary for you to enter the transponder data (Fig. 9-18).

Satellite

In this line you must enter the satellite on which the desired transponder is located.

- > Use the **arrow keys up/down** to mark the line **Satellite**.
- > Press the **OK** to display a table showing the active satellites, selected in accordance with Points 6.4 and 10.4.
- > Now use the **arrow keys up/down** to mark the desired satellite.
- > Confirm by pressing **OK**.
The selected satellite will now be shown in the line Satellite.

Transponder frequency

- > Use the **arrow keys up/down** to mark the line **Transponder frequency**.
- > In this line, use the **numeric keys** to enter the desired frequency.

Symbol rate

The symbol rate indicates the volume of data transmitted per second. This figure could be shown as, for example, 27500 (27500 symbols per second).

- > Use the **arrow keys up/down** to mark the line **Symbol rate**.
- > Use the **numeric keys** to enter the symbol rate.

Polarisation

- > Use the **arrow keys up/down** to mark the line **Polarisation**.
- > In this line, use the **OK** key to enter the polarisation plane (**horizontal** or **vertical**), on which the desired transponder is broadcast. The signal strength and the signal quality of the transponder selected will be shown graphically at the bottom of the screen.

Search mode

- > Use the **arrow keys up/down** to mark the line **Search mode**.



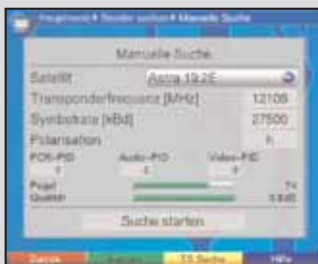
(Fig. 9-18)

- > By pressing the **OK** key, decide whether you wish to scan only for free-to-air programmes (**Free programmes**), or whether you wish to include encrypted programmes in the search (**All programmes**).
- > Use the arrow keys up/down to mark the field **Start search**.
The scan will be started. Please note any additional messages displayed on screen.
- > You can abort the scan by pressing the **red** function key.

9.4.4 Manual search

Should a programme not be found in the course of an automatic search, a satellite search or a transponder search, it may be necessary to enter additional programme-specific PID numbers for this programme. You will need to obtain these numbers on the Internet, or possibly direct from the programme provider concerned.

The menu (Fig. 9-19) differs from the menu **Transponder search** only with regard to the menu items **PCR PID**, **Audio PID** and **Video PID**. There is no need to enter the search mode.



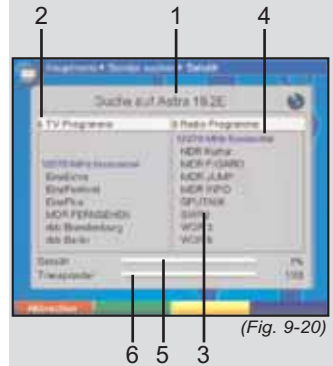
(Fig. 9-19)

- > Proceed as described under Transponder search.
- > Then use the **arrow keys up/down** to mark the lines **PCR PID**, **Audio PID** and **Video PID** and use the **numeric keys** to enter the corresponding numbers.
- > Use the **arrow keys up/down** to mark the field **Start search**, and confirm by pressing **OK**.
The scan will be started. Please note any messages displayed on screen. 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 programme, use the **arrow keys left/right** to select the field **Yes**, and confirm by pressing **OK**.
The programme will now be generated, and will be added at the end of the Favourites list.
- > You can press the **red** function key to abort the search.

9.4.5 During the search

While the search is still in progress, you can follow the scanning of transponders on your screen.

(Fig. 9-20) The following are shown: the satellite currently being scanned (1), the number of programmes found so far (2), the last programmes found (3), the transponder last scanned (4), as well as the progress of the entire scan (5) and the transponder of the satellite currently being scanned (6).



(Fig. 9-20)

9.4.6 After the search

When the search has been completed, a message will appear on screen indicating how many programmes your digital receiver has found, how many of these are new programmes, and how many are encrypted programmes. In addition, a query will be displayed (Fig. 9-21), asking whether you wish to sort the programmes found into the TV or radio list automatically, or whether you want them to be added automatically at the end of the list, or whether you wish to sort them manually.

Automatic sorting

The programmes found will be sorted into the Main Favourites list in accordance with a preprogrammed list. The order of the programmes is determined by the audio language selected in Point 6.3.2 resp. by the country selected in Point 6.2.2.

Automatic addition

The newly found programmes are added to the end of the Main Favourites list in unsorted order.

Manual sorting TV/ manual sorting radio

Here you will go direct to the menu Manage TV lists red. Manage radio lists. Edit these lists as described under Point 9.1 of the operating manual.

Back

The newly found programmes are not added to the Favourites list, and are retained only in the Total list.

- > Use the **arrow keys left/right** to select the desired procedure.
- > Confirm by pressing **OK**. Please note any messages displayed on screen.
- > Press the **Menu** key to return to normal operation. Independently of whether you have transferred the newly found programmes to the Favourites list automatically, these can at any time be added to the Favourites lists manually, as described in Point 9.1.



(Fig. 9-21)



(Fig. 9-22)



(Fig. 9-23)



(Fig. 9-24)

9.5 Service settings

You can at any time access the factory default settings. Also, you can, if the programme list has become obsolete through changes made by the programme providers, delete the programme list completely and perform a new programme scan. Please note that after performing the delete function you must first start a programme scan, and must then transfer the deleted programmes from the Total list to the Favourites list.

- > Use the **Menu** key to call up the **Main menu**. (Fig. 9-22)
- > Now use the **arrow keys up/down** to mark the menu line **Settings**.
- > Confirm by pressing **OK**.
The sub-menu **Settings** will be displayed (Fig. 9-23)
- > Now use the **arrow keys up/down** to mark the line **Service settings**.
- > Confirm by pressing **OK**.
The sub-menu **Service settings** will be displayed. (Fig. 9-24)

9.5.1 Activate factory default setting

If this function is called up, the factory default setting will be implemented, personal settings will be deleted, and the installation assistant **AutoInstall** will be started. Any data on the hard drive (recordings, MP3s, etc.) will be retained.

- > Use the **arrow keys up/down** to mark the line **Activate default setting**.
- > Press the **OK** key.
The query message will be displayed: "Do you really want to activate the default setting?".
- > Use the **arrow keys left/right** to select **Yes** or **No**.
- > Confirm the entry by pressing **OK**.

9.5.2 Delete all programmes

This function will delete all programme memory banks.

- > Use the **arrow keys up/down** to mark the line **Delete all programmes**.
- > Press the **OK** key.
The query message will be displayed: "Do you really want to delete all programmes?".
- > Use the **arrow keys left/right** to select **Yes** or **No**.
- > Confirm the entry by pressing **OK**.

9.5.3 Updating the programme list (ISIPRO)

The ISIPRO programme list updating function ensures that the programme list of your receiver will automatically be kept up to date. To do this, a current programme list is broadcast at regular intervals via satellite (ASTRA 19,2° East) and is available to your receiver for downloading.

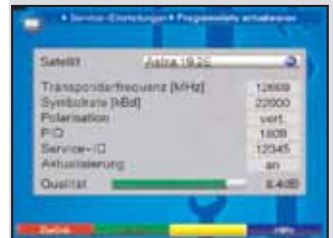
Should the parameters for the data channel used to download the programme list have changed, you can correct them either in this menu or under Point 9.4.4 (manual programme scan. The current transponder data can be obtained from your authorised retailer. Generally, you should not make any changes in this menu under normal circumstances.

- > Press **OK** to go to the sub-menu **Update programme list** (Fig. 9-25).
- > In order for your receiver to check automatically whether a new programme list is available, mark the line **Update**.
- > Switch the automatic programme list updating function to **on** by pressing the **OK** key.
- > To check manually for the availability of a new programme list, press the **green** function key **Test**. If a new programme list is available, a message will be displayed (Fig. 9-26).
- > To download the programme list, mark the field **Yes** and confirm by pressing **OK**. Your receiver will then re-start, and will indicate the availability of a new programme list by displaying a message (Fig. 9-27) on screen.
- > If you do not wish to download the new programme list, press the **red** function key **Reject**. The message will only be displayed again when an even more up-to-date programme list is transmitted.

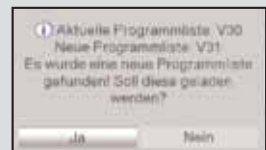
Update programme list automatically

If you would like to have the updating of changes in the programme list performed automatically, without any need for a manual procedure, then you should select this option. The changes will be implemented automatically. Newly found programmes will generally be added to the end of the Main Favourites list.

- > To update the new programme list automatically, press the **green** function key **Automatic**. The download of the programme list will be started, and the progress of the procedure can be followed on screen (Fig. 9-28).



(Fig. 9-25)



(Fig. 9-26)



(Fig. 9-27)

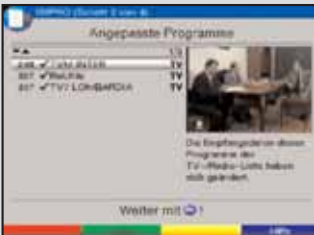


(Fig. 9-28)

Update programme list manually

When the download of the programme list has been completed, your programme list will be updated. To do this, the Favourites list stored in the receiver will be compared with the new programme list. The updating of your Favourites list is accomplished in several steps. In this process, the differences between your Favourites list and the new programme list will be displayed. You can decide for yourself which changes you wish to implement and which not. The number of steps to be taken depends on the extent of changes in the new list, and can thus vary from one download to the next.

- > To update the new programme list manually, press the **yellow** function key **Manual**. The downloading of the programme list will be started, and the progress of the procedure can be followed on screen (Fig. 9-28).

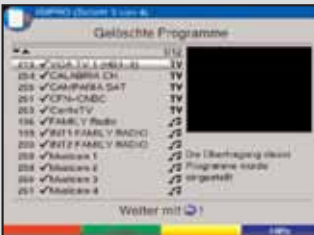


(Fig. 9-29)

9.5.3.1 Adapting programmes

In this step, those programmes of your Favourites list will be indicated the reception data of which has changed, or which are no longer current. (Fig. 9-29). It is possible that these programmes can no longer be received correctly with these data. To ensure continued good reception, you should accept the suggested changes.

- > Press the **green** function key **Continue** to update the reception data of the marked programmes.



(Fig. 9-30)

9.5.3.2 Deleting programmes

In this step you can delete programmes that are still included in your Favourites list, but are no longer being broadcast.

- > If you wish to delete the programmes indicated (Fig. 9-30) that are no longer being broadcast, confirm by pressing the **green** function key **Continue**.

9.5.3.3 Adding a TV resp. radio programme

In the next step, the programmes of the new programme list will be displayed individually. You can add these to your own Main Favourites list, as they are not yet included there. If you have activated the function providing several Favourites lists as per Point 6.5.1, and you would like to add a newly found programme to the other Favourites lists as well, you must accept these individually into each Favourites list as per Point 9.1.

Accepting programmes individually

- > If you would like to accept the programme displayed (Fig. 9-31) at the suggested position of the Favourites list (TV or Radio), press the **green** function key **Yes**.



(Fig. 9-31)

or

- > Use the **arrow keys** to move the programme displayed to a different position of the Favourites list, or enter the preferred programme slot number using the **numeric keys**.
- > To accept the programme displayed at the selected position of the Favourites list, press the **green** function key to select **Yes**.

Accept all programmes

- > To accept and transfer all new programmes without a further check, press the **yellow** function key **Automatic**.
The programmes will be added to the Favourites list in accordance with predetermined criteria.

Reject programme (do not accept)

- > If you do not wish to accept the indicated programme, and all the following programmes into the Main Favourites list, press the **red** function key **No**.

9.5.4 Updating software

In addition, you have the facility of updating the operating software of your digital receiver via satellite (ASTRA 19° East).

- > Use the **arrow keys up/down** to mark the line **Update software**.
- > Press the **OK** key to go to the sub-menu **Update software** (Fig. 9-32).
To perform a software update, mark the line **Update**.
- > Use the **OK** key to set the software update to **on**.
- > In the line **Update time** use the **numeric keys** to set the time at which the software is to be updated.
- > To start the update procedure for the operating software manually, press the **green** function key **Test** and follow the messages displayed on screen.
- > Press the **Menu** key to return to normal operation.

If the parameters of the data channel used for downloading the software updates have changed, you can correct the data in this menu as described under Point 9.4.4 (manual programme search). Current transponder data can be obtained from your retailer. Generally, under normal circumstances you should not make any changes in this menu.

Note:

For the new software to be loaded automatically, the digital receiver must be set to stand-by mode. The downloading procedure will be indicated by the message "Update S" as well as the percentage of data already downloaded. Do not interrupt this procedure by switching the receiver on or off.



(Fig. 9-32)



(Fig. 9-33)

Independently of whether you have switched the automatic updating function on or off, the receiver will check each time you switch it on whether a new version of the operating software for your digital receiver is available. If a new version of the operating software is available, this will be indicated by a message displayed on screen (Fig. 9-33).

To start an update of the software, simply follow the instructions on screen.

When the update of the software has been successfully completed, an appropriate message will be displayed on screen.

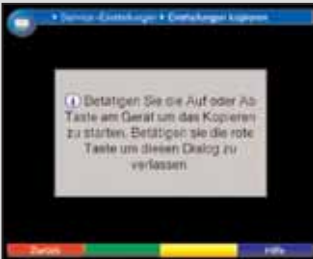
- > Press the **green** function key **Continue** to return to normal operation.

9.5.5 Copying settings

You have the facility to copy all the settings such as programme list, antenna settings, etc. of your digital receiver (source, transmitter) to another digital receiver (target, receiver) of the same type, and equipped with the same version of operating software.

- > To do this, connect the two receivers by means of a null modem cable.
- > Switch on the target receiver.
- > Use the **arrow keys up/down** to mark the line **Copy settings** and confirm by pressing **OK**. A message will be displayed (Fig. 9-34).
- > To copy the settings, press any key on the panel of the source receiver.

The settings of the source receiver will now be transferred to the target receiver. Please note any messages displayed on screen.



(Fig. 9-34)

9.6 System configuration

This menu item allows you to see the specific receiver unit data (e.g. the current software version).

- > Use the **arrow keys up/down** to mark this line in the sub-menu **Settings**.
- > Confirm by pressing **OK**.
- > Press the **Menu** key to return to normal operation.

9.7 Encryption system

Under this menu item you can go to the sub-menus of any CI modules inserted. By confirming with **OK**, you can see information on the CI module used resp. on the Smartcard inserted.

Manual initialisation of the CI module

- > You can manually initialise the CI module by pressing the **green** function key **CI Reset**.

10 Use with a rotating antenna (DiSEqC 1.2)

Your digital receiver is ready for use with a motorised rotating antenna. Using the DiSEqC control (DiSEqC level 1.2) you have the facility to control a suitable motor via the co-axial cable.

- > As described in Point Punkt 6.4, call up the menu **Antenna settings** (Fig. 10-1) and switch the **DiSEqC control** (Point 6.4.1) **on**.
- > Now use the **arrow keys up/down** to select the DiSEqC position (e.g. A/B 3) to which you wish to allocate the motor antenna.
- > Press the **OK** key to open a window allowing you to select the **Satellite** resp. the **Motor antenna**. (Fig. 10-2)
- > Use the **arrow keys up/down** to select the line **Motor antenna** and confirm by pressing **OK**.
- > A note regarding the setting of East and West limits will be displayed. (Fig. 10-3). Confirm by pressing **OK**.



(Fig. 10-1)

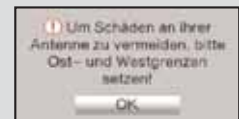


(Fig. 10-2)

10.1 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 obstacles in the rotating field of the dish (e.g. a wall or chimney), these must definitely be considered when setting the East-West limits.

If there are no obstacles in the rotating range of the dish, set the limits so that the dish can be rotated a little further than the most extreme locations of the satellites to be received.

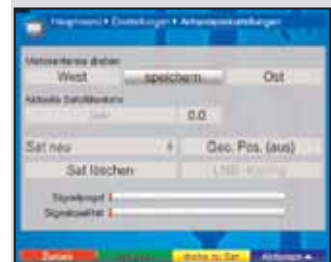


(Fig. 10-3)

10.1.1 Deleting existing limits

First, you should delete any limits that may exist.

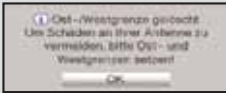
- > Use the **arrow keys left/right** to mark the column **Configuration**.
- > Now use the **arrow keys up/down** in the line **Motor antenna** to mark the field **Continue**.
- > Confirm by pressing **OK**. The menu for setting the motor antenna will now be displayed. (Fig. 10-4)
- > Press the **blue** function key **Actions** to open an additional window. (Fig. 10-5)
- > Now use the **arrow keys up/down** to mark the line **Delete limits**.



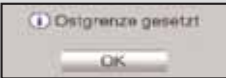
(Fig. 10-4)



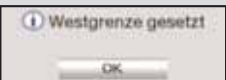
(Fig. 10-5)



(Fig. 10-6)



(Fig. 10-7)



(Fig. 10-8)

- > Confirm by pressing **OK** to transfer the action selected to the yellow function key.
- > To delete the limits, press the **yellow** function key **Delete limits**.
- > Confirm the message displayed (Fig. 10-6) by pressing **OK**.

10.1.2 Setting the East limit

- > To enter the East limit, first use the **arrow keys** to mark the field **Save**.
- > Now press the **arrow key right** to rotate the dish to the maximum **East position** possible, resp. desirable.
- > Press the **blue** function key **Actions** to open the window with the available actions.
- > Now use the **arrow keys up/down** to mark the line **set East limit**.
- > Confirm by pressing **OK**.
- > To set the Eastern limit, press the **yellow** function key **East limit** and confirm the message displayed (Fig. 10-7) by pressing **OK**.

10.1.3 Setting the West limit

- > To enter the West limit, first use the **arrow keys** to mark the field **Save**.
- > Now press the **arrow key left** to rotate the dish to the maximum **West position** possible, resp. desirable.
- > Press the **blue** function key **Actions** to open the window with the available actions.
- > Now use the **arrow keys up/down** to mark the line **set West limit**.
- > Confirm by pressing **OK**.
- > To set the Western limit, press the **yellow** function key **West limit** and confirm the message displayed (Fig. 10-8) by pressing **OK**.

10.2 Geo-positioning

If you have a suitable motor, and if the geographical co-ordinates of your location are known, this function can facilitate finding the individual satellite positions. The co-ordinates for a number of German towns and cities are included in the Annexure (Point 14).

Note! Only switch on the geo-positioning function if your DiSEqC motor supports this function.

- > As described above, call up the menu for adjusting settings of the motor antenna.
- > Use the **arrow keys** to mark the field **Geo.Pos.**
- > Confirm by pressing **OK**. The menu used to enter the location will be displayed. (Fig. 10-9)
- > Use the **arrow keys left/right** to switch the geo-positioning function **on** or **off**.
- > Use the **arrow keys** to select the field for entering the **geographical longitude**.
- > Use the **numeric keys** to enter the geographical longitude.
- > Now press the **arrow key left**.
- > In this field, use the **OK** key to indicate whether the value entered refers to longitude East (**E**ast) or longitude West (**W**).
- > Now use the **arrow keys** to mark the field used to enter the **geographical latitude**.
- > Use the **numeric keys** to enter the geographical latitude.
- > Now press the **arrow key left**.
- > In this field, use the **OK** key to indicate whether the value enter refers to latitude North (**N**) or latitude South (**S**).
- > Press the **Back** key to return to the LNB settings.

The data relating to your location must be entered as a decimal value, correct 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 value for degrees is not affected by the conversion. The minutes are divided by 60, and rounded to one decimal place. The result of this division is added to the value for full degrees.

The seconds are not taken into consideration, as they do not affect the first decimal place.

Example: Co-ordinates of Daun/Germany



(Fig. 10-9)

Degrees latit.	50°	11'	(45")	N
Degrees longit.	06°	50'	(10")	E

Converting the degrees latitude (DL):

$$\begin{aligned} \mathbf{DL} &= \mathbf{50} + \mathbf{11/60} \\ \mathbf{DL} &= \mathbf{50} + \mathbf{0,2} \text{ (rounded)} \\ \mathbf{BDL} &= \mathbf{50,2} \end{aligned}$$

In the menu used to enter the geographical latitude, enter the value, rounded to one decimal place (**50,2**).

The same method is used to calculate the decimal value of the degrees longitude for your location.

10.3 Setting a satellite position

For each satellite position to be added, consecutively work through Points 10.3.1 to 10.3.3. 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 digital receiver is pre-programmed at the factory for the most popular satellite positions. In addition, you can configure user-defined satellite positions (User 1 to User 13) for any orbital position desired.

10.3.1 Selecting a satellite position

10.3.1.1 Selecting a pre-programmed satellite position



(Fig. 10-10)

- > To add a satellite position to the satellite list, use the arrow keys to mark the field **Sat neu**.
- > Confirm by pressing **OK**.
A list of the available satellite positions will be displayed. (Fig. 10-10)
- > Now use the **arrow keys up/down** to mark a satellite position you wish to add to the satellite list.
- > Press the **OK** key to accept the selection.

If the **Geo-positioning** function (Point 10.2) is switched **on**, the dish will now be automatically rotated to the programmed satellite position. The rotating procedure will be indicated by the blinking text display "**turn**".

If the **Geo-positioning** function is switched **off**, you must rotate the dish to the desired satellite position manually (Point 10.3.2.2).

10.3.1.2 Setting a user-defined satellite position (User satellite)

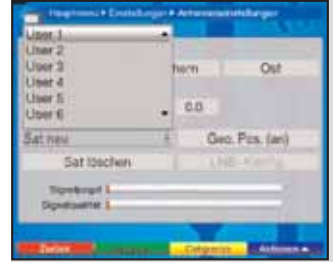
- > To add a user satellite position to the satellite list, use the **arrow keys** to mark the field **Sat new**.
- > Confirm by pressing **OK**.
A list of the satellite positions available will be displayed. (Fig. 10-11)
- > Now use the **arrow keys up/down** to mark a user satellite position (User 1 to User 13).
- > Press the **OK** key to display the menu for setting a test transponder. In this menu, proceed as described in Point 6.4.3 to enter the data of the test transponder as well as of the LNB used.
- > When you have completed setting the test transponder, press the **Back** key to return to the menu for setting the motorised antenna.
The field for entering the orbital position is active.
- > Use the **numeric keys** to enter the orbital position of the user satellite.
- > Now press the **OK** key appropriately to indicate whether this is a westerly (**W**) or an easterly (**E**) orbital position.

If the **Geo-Positioning** function (Point 10.2) is set to **on**, you can now use the function **turn to sat** (Point 10.4.1) to rotate the dish to the programmed user satellite position. If the **Geo-Positioning** function is switched **off**, you must rotate the dish to the desired satellite position manually (Point 10.3.2.2).

10.3.2 Adjusting the satellite antenna

A test transponder has been set for each satellite, to allow you to point the antenna at the desired satellite resp. to determine whether you are able to receive the desired satellite at the position set.

Only once the signal strength and signal quality of this test transponder are displayed can you adjust the antenna precisely.



(Fig. 10-11)

10.3.2.1 Test transponder/LNB configuration

To change the data of the test transponder in question, proceed as follows:

- > Use the **arrow keys** to mark the field **Current satellite list**.
- > Press the **OK** key to open the satellite list.
- > Use the **arrow keys up/down** to mark the satellite position for which you wish to change the data.
- > Confirm by pressing **OK**.
- > Now use the **arrow keys** to mark the field **LNB Config.** and press the **OK** key. The menu **LNB settings** will be displayed. (Fig. 10-12)
- > In this menu, enter the data of the test transponder as well as of the LNB used as described in Point 6.4.3.
- > Press the **Back** key to return to the settings for the motorised antenna.



(Fig. 10-12)

10.3.2.2 Positioning antenna manually

You can determine the optimum position for the desired satellite by monitoring the indicators for signal strength and signal quality. Adjust the dish so that both bar graphs show a maximum value.

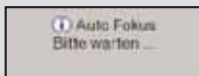
- > Use the **arrow keys up/down** to mark the field **save**.
- > Now use the **arrow keys right** (to mark the field East) resp. **left** (to mark the field West) to rotate the dish to the desired position. In each case keep the key pressed down until the position has been reached.

10.3.2.3 Automatic fine adjustment (Autofocus)

Before saving a satellite position, you should perform the automatic focussing function. In this, the dish is calibrated for optimum reception.

- > Press the **blue** function key **Actions** to open the window listing the available actions.
- > Now use the **arrow keys up/down** to mark the line **Autofocus**.
- > Confirm by pressing **OK**.
- > Press the **yellow** key (Autofocus) to start the auto-focus procedure.

The message **Autofocus** will be displayed while the automatic adjustment procedure is in progress. (Fig. 10-13)

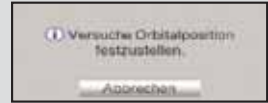


(Fig. 10-13)

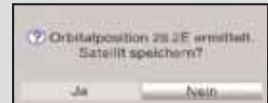
10.3.3 Saving a satellite position

When you have completed the autofocus procedure, you must still save the satellite position in memory.

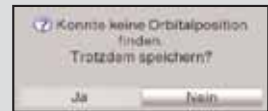
- > To do this, use the **arrow keys** to mark the field **save**.
- > Press the **OK** key.
Now, the set test transponder is used to check whether a signal is being received at this position. It will also determine whether the position to be saved is a position that is already included in the pre-programming. (Fig. 10-14)
If this is the case, the following message will be displayed: **Orbital position xx determined. Save satellite ?** (Fig. 10-15)
- > To save the satellite position, use the **arrow keys left/right** to mark the field **Yes**, and confirm by pressing **OK**.
If during this checking of the test transponder no pre-programmed position is recognised, or if the signal is too weak, appropriate messages will be displayed on screen. (Figs. 10-16 and 10-17)
- > To save the satellite position, use the **arrow keys left/right** to mark the field **Yes** and confirm by pressing **OK**.



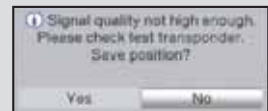
(Fig. 10-14)



(Fig. 10-15)



(Fig. 10-16)



(Fig. 10-17)

10.4 Current satellite list

The saved satellite positions can be found in the satellite list. Positions that have not yet been saved are indicated in this list marked with an “*”.

- > To rotate the dish to a position included in the satellite list, use the **arrow keys** to mark the field **Current satellite list**.
- > Press the **OK** key.
- > Use the **arrow keys up/down** to select the desired position.
- > Confirm by pressing **OK**.
The dish will now be rotated to the position selected. The ongoing rotation will be indicated in the menu by the blinking message “**turn**”.

10.4.1 Turning to a satellite position

To turn the antenna to the position set in the satellite list, your digital receiver is equipped with the function **turn to sat**.

- > 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 **turn to sat**.
- > Confirm by pressing **OK**.
- > Press the **yellow** function key **turn to sat** to turn the antenna to the satellite position selected.

10.5 Deleting a satellite position

To delete a satellite position from the satellite list, proceed as follows:

- > Use the **arrow keys** to mark the field **Current satellite list**.
- > To open the current satellite list, press the **OK** key.
- > Use the **arrow keys up/down** to select the satellite you wish to delete.
- > Confirm by pressing **OK**.
- > Use the **arrow keys** to mark the field **Delete satellite**.
- > To delete the satellite selected, press the **OK** key.
- > Mark the field **OK** and confirm by pressing **OK**.

10.6 Reference position

When installing the external installation, the motor must be set to the reference position (**0°**). You can therefore use the function "Go to reference position" to turn the motor to this position (**0°**) at any time.

- > Press the **green** function key **Ref.pos.** to turn the antenna automatically to the reference position.

11 Technical terms

Antenna cable:

Cable connection between the modulator of the satellite receiver and the antenna input of the television set. Used as an alternative where no SCART socket is available

External unit or installation:

Description used for the entire system of components located outdoors, consisting of the parabolic/offset dish as well as one or more LNBs used to receive signals from one or several satellites

AV: see SCART

Data compression/MPEG1/MPEG2:

To transmit the current television standard (625 lines and 50 Hz image refreshing frequency), one arrives at a digital data volume of 216 MBit/s.

This would require bandwidth that is not available for either terrestrial or satellite transmission. Therefore, the data is reduced to decrease the volume of data. For Europe, MPEG-2 has been determined as the international standard for data compression. MPEG2 is an expansion of MPEG1

DiSEqC:

Digital Satellite Equipment Control: a digital controlling/switching signal for controlling DiSEqC-compatible components of the external installation via the antenna cable. An example of how an installation consisting of DiSEqC components could be constructed is shown in (Fig. 11-1).

DVB:

Digital Video Broadcasting: a universal digital broadcasting technology suitable for pictures, graphics, sound and text, thus for data in any shape or form, and in all possible levels of quality, always appropriate for the content.

Frequency:

Physical measurement, indicates the number of oscillations per second. The unit of measurement is the Hertz (Hz)

Unit	Description	Oscillations 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 resp. LNB:

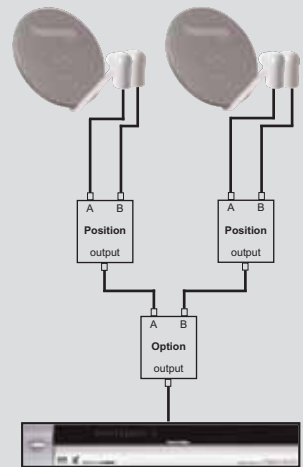
11 GHz range from 10,70 GHz - 11,70 GHz, 12 GHz range from 11,70 GHz - 12,75 GHz

b) Receiver: Intermediate frequency, or 1. IF 950 to 2150 MHz

Co-axial cable:

Connection cable between LNB and satellite receiver, to transmit the signals received, and to provide electrical current to the LNBs.

Example:



(Fig. 11-1)

LNB/LNC (Low Noise Block converter):

Reception unit at the focal point of the antenna, converts the frequency range of the satellite into the intermediate frequency of the digital receiver.

LOF:

Local oscillator frequency: stated in terms of MHz or GHz; varies depending on the LNB and the frequency range received.

Receiving frequency of the digital receiver = broadcasting frequency of the satellite - LOF

Modulation at 22 KHz:

Apart from the 14/18 Volt switching facility, this serves to switch between two LNBs. In the case of a Universal LNB it serves to switch to the High-Band range

Parabolic dish:

Dish made of metal or coated synthetics, with a parabolic shape, to focus the electromagnetic waves broadcast by the satellite at a focal point

Polarisation 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 will require two single LNBs or a V/H LNB.

Receiver: see satellite receiver

Satellite:

Description of the satellite, usually consisting of the name and the orbital position,

ASTRA 19° East

EUTELSAT 13° East

Satellite receiver:

The signals received and converted by the LNB cannot be processed by the television set. They are processed by the satellite receiver so that the audio and video (AV) signals produced at its outputs can be transmitted to the television set.

SCART:

Plug-in connection on television sets, video recorders, satellite receivers and other consumer electronics appliances, used to transmit audio (sound) and video (picture) signals (AV).

Software update:

Digital television is a new medium that provides not only improved picture and sound quality, but also provides the facility of providing interactive services. These new services are continually being developed and improved by the service providers. To use these services, it may therefore be necessary to update the software of the digital receiver.

Transponder:

Located on the satellite, processes one or several programmes there, ie. it receives the data from the transmitting station on the ground, amplifies the signal and broadcasts it back to earth.

Universal LNB:

Designed 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

Supply current:

LNBS are supplied with electrical current via the co-axial cable. To do this, the receiver provides a current of 14 or 18 Volt

Intermediate frequency:

The frequency range transmitted by the satellite cannot be transmitted via cable, and is therefore converted by the LNB to the intermediate frequency range of 950 to 2150 MHz.

This makes transmission possible, and allows the digital receiver to process the signal.

1. IF = intermediate frequency

12 Technical data

DBS tuner:

Input frequency range	2 x 950 2150 MHz
Input level range	- 65 dBm ... - 25 dBm
DBS tuner input	2 x F socket
Input impedance	75 Ohms
Loop Through	internal loop through
AFC capture range	+/- 3 MHz
Demodulation	Shaped QPSK
Symbol rate	2 ... 45 Mbaud/s, SCPC/ MCPC
FEC	Viterbi and Reed-Solomon
Viterbi rates	1/2, 2/3, 3/4, 5/6, 7/8, automatic adjustment
Roll-off Factor	35 %

Demultiplexing:

in accordance with ISO 13818-1

Common Interface:

Type	2 Common Interface slots for CI modules
Power consumption	max. 0,3A/5V

Video decoding:

Video compression	MPEG-2 and MPEG-1 compatible Up to MP@ML (main profile @ main level)
Video standard	PAL / 25 Hz
Active Picture area	720 pixels x 576 lines
Picture format	4:3 / 16:9
Picture material 16:9	Automatic adjustment for 16:9 TV sets (via SCART) Letterbox filtering for 4:3 TV sets

Audio decoding:

Audio compression	MPEG-1 & MPEG-2 Layer I and II, MP3
Audio mode	Dual (main/sub), Stereo
Sampling frequencies	32 kHz, 44.1 kHz, 48 kHz

Audio parameters:

Output analogue:

Output level L/R	0,5 V r.m.s. (nominal)
Output impedance	600 Ohms
THD	> 60 dB (1 kHz)
S/N	> 60 dB
Cross-talk	< - 65 dB

Input analogue:

Input level L/R	0,5 V r.m.s. (nominal)
Input impedance	> 40 kOhms

Volume when switching on Automatically goes to volume previously set

Output digital:

SP/DIF output electrical, Cinch socket
 optical, Toslink
 Dolby Digital AC3

Video parameters:**Output:**

Output level FBAS 1 Vs-s +/- 0.3 dB to 75 Ohms
Output level Y 1 Vs-s +/- 0.3 dB to 75 Ohms
Output level C 1 Vs-s +/- 0.3 dB to 75 Ohms
Output level RED 0,7 Vs-s +/- 0.1Vp-p to 75 Ohms
Output level GREEN 0,7 Vs-s +/- 0.1Vp-p to 75 Ohms
Output level BLUE 0,7 Vs-s +/- 0.1Vp-p to 75 Ohms
S/N weighted > 60 dB

Videotext

Teletext filtering corresp. to ETS 300 472 standard
Scanning Teletext data (FBAS) corresp. to ITU-R BT.653-
 2 lines: 6-22 and 320-335
Soft videotext 1000 pages memory

TV SCART:

Output: RGB, FBAS or S-Video

VCR SCART:

Input: RGB, FBAS or S-Video
Output: FBAS

S-VHS Hosiden socket:

Output Y signal (luminance),
 C signal (chrominance)

Hard drive:

Hard drive type 3,5 inch
Hard drive controller intended for 80 to 250 GB
No. of recordings 999 (max.)
max. duration of recording
per recording 26 hours

Display:

Vacuum fluorescence 16-digit, 5x7 point matrix, 7 mm
 character height

Serial interface RS 232:

Type RS 232, bidirectional
Bit rate 115,2 kBit/s max.
Connector D-SUB socket, 9 pin
Function Update for operating software and
 preprogramming

USB interface:

Type USB 2.0 and USB 1.1 compatible
Bit rate up to 480 Mbit/s (2.0) / up to 12
 Mbit/s (1.1)
Connector 1 USB host connector
Function Update for operating software and
 preprogramming; USB stick; exter-
 nal hard drive;

Connection to PC via host to host cable

LNB power supply:

LNB current 2 x 400 mA max.; double insulated
LNB voltage vertical <14,0V no load, > 11,5 V at 400 mA

LNB voltage horizontal < 20 V no load, > 17,2 V at 400 mA
LNB switched off in stand-by mode

22 kHz modulation: 22 kHz, Amplitude 0.6 V +/- 0.2 V

Programme memory/satellite positions:

No. of programmes Favourites list TV: 2000 TV programmes

No. of programmes Favourites list Radio: 2000 RADIO programmes

Number of programmes:

Total list TV/Radio: Total of 6000 programmes possible in Total list

DiSEqC:

DiSEqC 1.0 and DiSEqC 1.2

SFI data:

SFI preview: maximum 7 days in advance

Timer:

Events: maximum 124 events, one year in advance

Remote control system: RC-5

Sub-system address 8 (SAT 1), 10 (SAT 2)

Modulation frequency 36 kHz

Infra-red wavelength 950 nm

Power supply:

Mains adapter plug:

Power consumption:

< 1 W in stand-by mode (stand-by LED)

< 2,5 W* in stand-by mode (stand-by clock)

14 W Operation (without LNB, without hard drive)

50 W Recording mode / 400mA LNB power, connected USB and 2 CI modules inserted

*) not applicable during SFI update

Nominal voltage:

230 V / 50 Hz alternating current

Input voltage:

180 V... 250 V / 50 Hz alternating current

General:

Dimension (WxDxH): 370 mm x 220 mm x 65 mm

Weight: approx. 2,7 kg

13 Troubleshooting guide

Problem	Possible cause	Solution
Various programmes not shown in programme list	Incorrect programme list selected	Select different programme list (see Point 7.2.3.1)
Sound OK, no TV picture	Set to radio mode	Switch to TV mode
Programmes such as Pro 7, Sat 1, Kabel 1, DSF and 9live show interference	Interference from DECT cordless telephones	Increase distance between base station and receiver
Receiver cannot be operated	Defective data stream-->receiver blocked	Pull mains plug for approx. 5 seconds, then switch receiver on again
Remote control not working	Batteries are spent	Replace batteries
	Incorrect remote control code set	Set correct remote control code (Point 6.2.3)
Intermittent appearance of square blocks in picture. Occasionally switches to freeze frame, no sound. Screen intermittently black with message „No signal“	Heavy rain or snow	Remove snow from dish
	Antenna incorrectly adjusted	Adjust antenna
	Dish too small for location	Use larger antenna
	Obstruction between dish and satellite (e.g. a tree)	Mount dish with unobstructed line of sight
No picture, no sound, display on	Short circuit in LNB connection	Switch receiver off, fix short circuit, switch receiver on again
	Defective or missing cable connection	Check all cable connections
	Defective LNB	Exchange LNB
	Incorrect external unit selected on receiver	Correct setting (see Point 6.4)
	Antenna incorrectly adjusted	Adjust antenna
No picture, no sound, no display	No mains power	Check mains cable and plug connections
No reception of programmes that were previously in order	Antenna defective or not adjusted	Check antenna
	Programme being transmitted on a different transponder	Perform search/scan (see Point 9.4)
	Programme no longer being broadcast	None
Antenna cannot be rotated	Motor not compatible with DiSEqC	Use suitable motor

Problem	Possible cause	Solution
Time not displayed in stand-by mode	Time not acquired	Set to major channel, e.g. ZDF for approx 30 secs.
Receiver cannot be operated	Receiver blocked	<ul style="list-style-type: none"> > Press on/standby key on receiver or remote control for approx. 5 secs.
Receiver cannot be switched on or operated	Receiver blocked	<p>Perform flash reset. Note! All personal settings will be lost.</p> <ul style="list-style-type: none"> > Disconnect mains power. > Simultaneously press standby and programme up key on receiver and keep them pressed down. > While standby and programme up key are depressed, reconnect mains power. > Keep keys pressed down approx. 5 secs. until display * "FLAS" appears.
USB device not recognised	USB device formatted in incorrect file system	Format USB device in file system FAT32
No hard drive recordings possible	Hard drive is full	Delete existing recording(s)
Deleting hard drive recordings not possible	File system of hard drive damaged	Check hard drive (Point 8.3.5)
Second encrypted programme cannot be viewed.	The two programmes selected are not located on the same transponder	Select two programmes located on the same transponder
	CI dual decoding not switched on	Switch on CI dual decoding (see Point 6.5.3)
	The CI module used is not compatible with "Dual Decrypt"	Use a CI module with "Dual Decrypt" capability

14 Annexure

Co-ordinates of selected German cities (1)		
City/town	Degrees longitude (E)	Degrees latitude (N)
Aachen	6,1	50,8
Aalen	10,1	48,8
Augsburg	10,9	48,4
Aschaffenburg	9,2	50,0
Bad Neuenahr-Ahrweiler	7,1	50,6
Bad Reichenhall	12,9	47,7
Baden Baden	8,2	48,8
Bamberg	10,9	49,9
Berlin	13,4	52,5
Beucha	12,7	51,3
Bielefeld	8,5	52,0
Bonn	7,1	50,7
Brandenburg	12,6	52,4
Braunschweig	10,5	52,3
Bremen	8,8	53,1
Bremerhaven	8,6	53,6
Celle	10,1	52,6
Chemnitz	12,9	50,8
Cottbus	14,3	51,8
Darmstadt	8,7	49,9
Daun	6,8	50,2
Dippach	10,1	51,0
Donauwörth	10,8	48,7
Dortmund	7,5	51,5
Dresden	13,7	51,1
Duisburg	6,8	51,4
Düsseldorf	6,8	51,2
Eisenach	10,3	51,0
Elmshorn	9,7	53,8
Emden	7,2	53,4
Erfurt	11,0	51,0
Essen	7,0	51,5
Flensburg	9,4	54,8
Frankfurt/M.	8,7	50,1
Frankfurt/O.	14,5	52,3
Freiburg/Br.	7,9	48,0
Freising	11,8	48,4
Fulda	9,7	50,6
Fürstenberg	14,7	52,1
Fürth	11,0	49,5

Co-ordinates of selected German cities (2)

City/town	Degrees longitude (E)	Degrees latitude (N)
Garmisch-Partenkirchen	11,1	47,5
Gera	12,1	50,9
Görlitz	15,0	51,2
Göttingen	9,9	51,5
Halberstadt	11,0	51,9
Halle/Saale	12,0	51,5
Hameln	9,4	52,1
Hamburg	10,0	53,6
Hamm	7,8	51,7
Hannover	9,7	52,4
Heide	9,1	54,2
Heidelberg	8,7	49,4
Heilbronn	9,2	49,2
Hildesheim	10,0	52,2
Hof	11,9	50,3
Ingolstadt	11,4	48,8
Iserlohn	7,7	51,4
Kaiserslautern	7,8	49,5
Karlsruhe	8,4	49,0
Kassel	9,5	51,3
Kempton/Allgäu	10,3	47,7
Kiel	10,1	54,3
Koblenz	7,6	50,4
Konstanz	9,2	47,7
Köln	7,0	51,0
Krefeld	6,6	51,3
Landau/Pfalz	8,1	49,2
Landshut	12,2	48,5
Leipzig	12,4	51,3
Ludwigshafen	8,4	49,5
Lübeck	10,7	53,9
Lüneburg	10,4	53,3
Magdeburg	11,6	52,1
Mainz	8,3	50,0
Mannheim	8,5	49,5
Minden	8,9	52,3
Mönchengladbach	6,4	51,2
Mühlhausen	8,7	49,3
München	11,6	48,1
Münster	8,9	49,9

Co-ordinates of selected German cities (3)

City/town	Degrees longitude (E)	Degrees latitude (N)
Neubrandenburg	13,3	53,6
Neumünster	10,0	54,1
Nienburg	11,8	51,8
Nordhausen	10,8	51,5
Nürnberg	11,1	49,5
Oberhausen	6,9	51,5
Offenburg	8,0	48,5
Oldenburg/Holsn.	10,9	54,3
Oldenburg	8,2	53,2
Osnabrück	8,1	52,3
Paderborn	8,8	51,7
Passau	13,5	48,6
Plauen	12,1	50,5
Potsdam	13,1	52,4
Ravensburg	9,6	47,8
Regensburg	12,1	49,0
Reutlingen	9,2	48,5
Rostock	12,1	54,1
Saarbrücken	7,0	49,2
Salzgitter	10,4	52,1
Salzwedel	11,2	52,9
Schweinfurt	10,2	50,1
Schwerin	11,4	53,6
Siegen	8,0	50,9
Solingen	7,1	51,2
Speyer	8,4	49,3
Starnberg	11,3	48,0
Stuttgart	9,2	48,8
Trier	6,7	49,8
Tübingen	9,1	48,5
Ulm	10,0	48,4
Weimar	11,3	51,0
Wiesbaden	8,2	50,1
Wilhelmshaven	8,1	53,5
Wismar	11,5	53,9
Wolfsburg	10,8	52,4
Wuppertal	7,2	51,3
Würzburg	9,9	49,8
Zweibrücken	7,4	49,3
Zwickau	12,5	50,7

Index

- AC3**14, 22, 33, 105
- Antenna adjustment13, 16, 22
- Antenna signals16, 23
- Recording3, 13, 23, 30, 40, 44 - 48
.....52 - 56, 61 - 66, 70, 71, 105, 108
- Autofocus99
- AutoInstall15, 88
- Automatic search/scan83
- Operating language**15, 18
- Range63 - 65, 102, 103
- Operating breaks11
- Picture in picture3, 36, 37
- Pictures29, 37, 59, 66, 69
- Picture format21, 104
- CI module**4, 27, 30, 32, 93
- DiSEqC**13, 23, 24, 26, 93, 95, 101, 106, 107
- DiSEqC 1.293, 106, 107
- Dolby Digital14, 22, 30, 33, 105
- Rotating antenna13, 26, 93
- Dual decoding26, 27, 32
- Electronic Programme Guide**18, 37, 38, 78, 79
- Disposal notes9
- Initial installation15
- Remote control code**3, 19, 107
- Hard drive operation44
- Hard drive information71
- Hard drive maintenance71
- Formating72, 108
- Frequency25, 26, 85, 102
- Genre**37, 43, 78
- Geo-positioning95, 97
- Hosiden**14, 105
- Infobox**26, 27, 30, 33, 51, 52
- ISIPRO17, 88
- Parental control**80, 81
- Volume control**32, 114
- LNB4, 12, 13, 23 - 26, 95, 98, 102, 103, 106, 107
- LOF26, 102, 103
- Manual search**83, 85
- MP356 - 59, 66, 69, 104
- MPEG1101
- MPEG2101
- Navigator**3, 28, 29, 34, 39, 44, 46, 53, 56 - 60

O ption channels	31
P ause	3, 46, 52, 54, 55, 57, 58
PIN	30, 50, 61, 80, 81
PIP	3, 13, 36, 37
Polarisation	25, 85, 102
Polarisation plane	25, 85, 102
Programmes, delete	72, 75, 88, 90
Programmes, sort	76
Programme information	34
Programme list management	73, 74, 76
R eference position	101
RS 232	4, 15, 105
S atellite position, setting	96
Satellite search	83, 84
SCART	4, 13, 14, 21, 101, 103, 104, 105
Serial interface	15, 105
SFI	3, 18, 30, 37 - 44, 47, 77 - 80, 106
Safety notes	10, 15
Sleep timer	43
Instant recording	44, 45
Software update	91
Special functions	3, 26, 31, 32
Games	29, 44
Language	18, 21, 32, 36
Freeze frame	3, 35, 36, 46, 54, 107
Stand-by clock	20, 106
Start time selection	31
Symbol rate	25, 85, 104
System configuration	92
T imer	40 - 44, 47 - 51, 106
Timeshift	45 - 47, 52
Transponder	25, 32, 34, 83 - 86, 88, 91, 97, 98, 102, 103, 107
Transponder frequency	25, 85
Transponder information	34
Transponder search	83, 84
TV/Radio switching	33
C lock	19, 20, 31, 34, 39, 106
Universal LNB	102, 103
Sub-titles	21, 30, 36, 44
USB socket	4, 15, 56, 59, 66
E ncryption system	34, 93
Video cassette recorder	14
Videotext	3, 30, 35, 36, 105
F actory/default setting	81, 88
Playback	3, 14, 23, 33, 44, 46, 52 - 61, 70

For daily use

Switching on and off

- > Switch the digital receiver on by pressing the **On/Stand-by** key either on the receiver or on the remote control.
- > Press this key again to switch the receiver off again.
- > The receiver is now in stand-by mode, the current time will be shown in the display.

Programme selection

Using the programme up/down keys

- > Use the **Programme keys up/down** either on the receiver or on the remote control to move up or down by one position in the programme list.

Using the numeric keys

- > Use the **numeric keys** to enter the desired programme number. For example
 - 1** for programme slot 1
 - 1**, then **4** for programme slot 14
 - 2**, then **3**, then **4** for programme slot 234
 - 1**, then **5**, then **6** then **7** for programme slot 1567

When entering programme numbers consisting of several digits, you have approx. 3 seconds time after pressing a key to complete the entry.

If you wish to enter a number consisting of only one, two or three digits, hold down the key for the last digit a little longer to speed up the switching procedure.

Using the programme list

- > Press the **OK** key.
- > You can now mark the desired programme using the **arrow keys up/down**.
- > Press the **OK** key to switch to the programme selected.
- > Use the **arrow keys up/down** to move the marker around the list one line at a time.
- > Use the **arrow keys left/right** to move through the list one page at a time.

Volume control

- > Adjust the volume of your digital receiver by using the keys **Volume +** to increase the volume resp. **Volume -** to decrease the volume.
- > Press the **Sound on/off** key to switch the sound on or off (mute).

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>