

TechniSat®

MultyMedia TS 1



Operating Manual

with integrated
CONAX decoding system and
PCMCIA slot for
insertion of a CI module.

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

Features motor antenna controls and
software update via satellite / antenna.



DVB
Digital Video
Broadcasting

DD DOLBY
DIGITAL
Streaming



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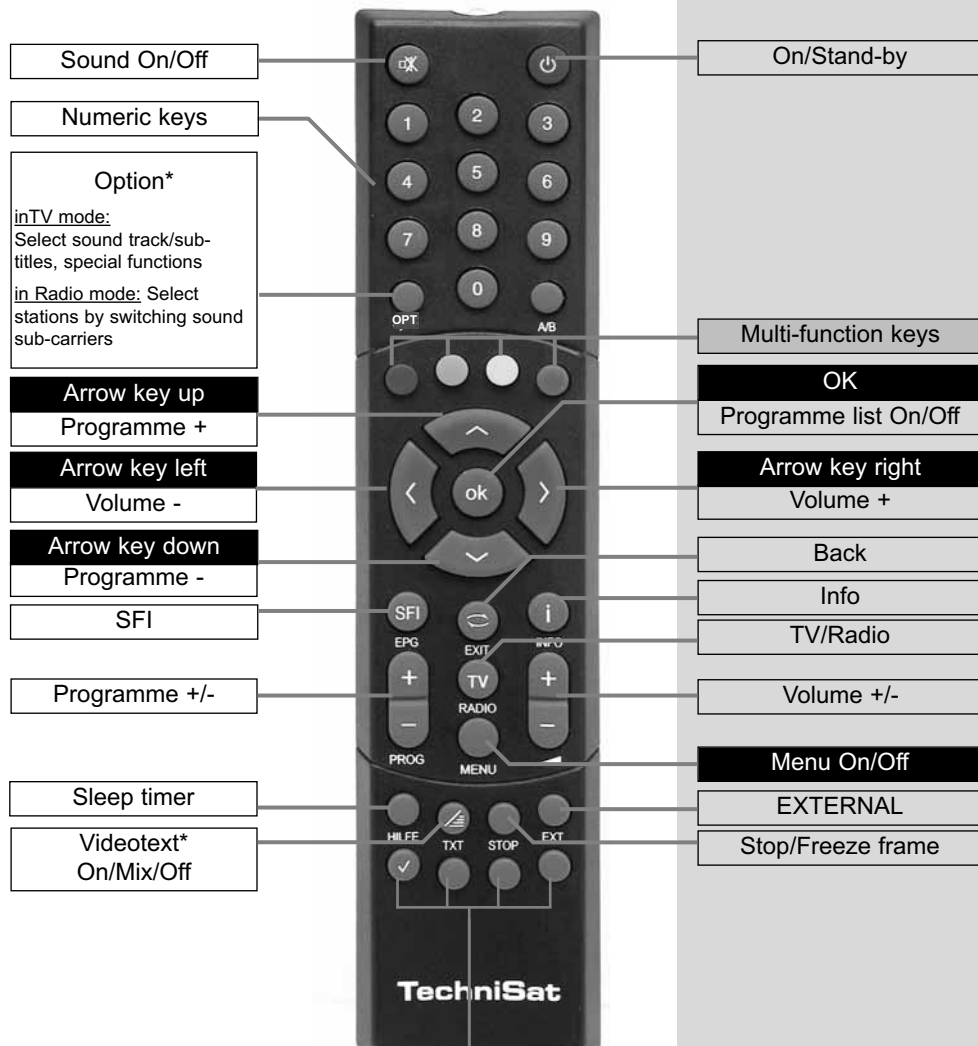
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Your receiver bears the CE symbol and complies with all requisite EU standards.
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Technical Hotline
0180/5005-910* (from Germany only)
*0,12 EUR/min. via the Deutsche Telekom AG network

2 Illustrations

Remote control



Remote control option:

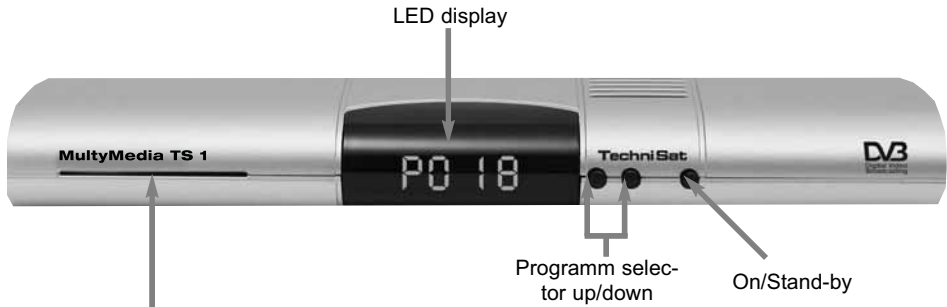
By changing/switching the remote control option, you can use this remote control unit to control two TechniSat receivers and a TechniSat television set using the same coding bedient werden.

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

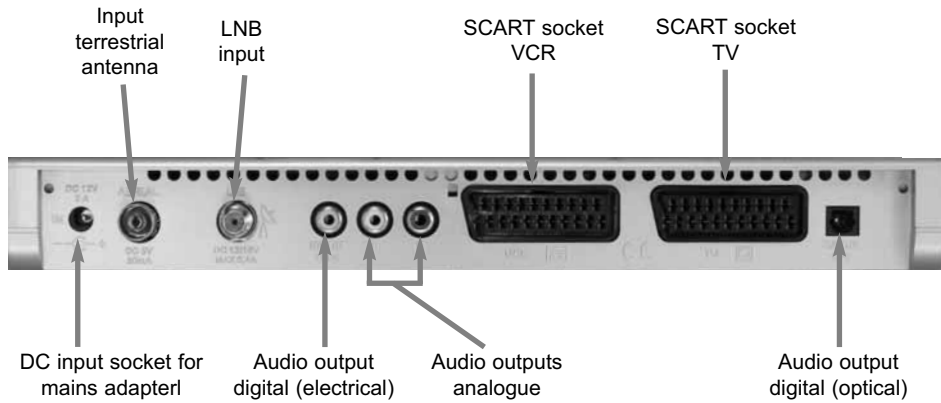
Please note:

To operate **this** receiver, the remote control option selected for the remote control and the remote control code selected in accordance with **Point 6.2.3** must agree.

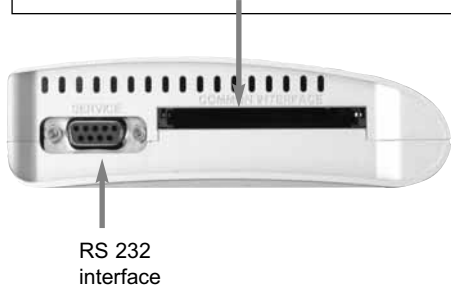
* This function is only available where the corresponding data is broadcast by the channel on the programme slot selected.



Card reader for CONAX Smartcard:
 > Insert the CONAX Smartcard (with the gold chip pointed down and in the direction of insertion) carefully into the card reader as far as is possible.



Inserting the CI module:
 > Follow the instructions given by the manufacturers of the CI module and of the card.
 > Insert the desired Smartcard into the corresponding module.
 > Now insert the CI module carefully into the slot.



Dear customer,

congratulations on your decision to purchase the MultyMedia TS 1 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
MultyMedia TS 1!

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 adapter and connection cable,
 - 1 remote control, 1 operating manual,
 - 1 guarantee card, 2 batteries (1,5V microcells)
 - 1 SCART cable.
- > 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.



Please 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.

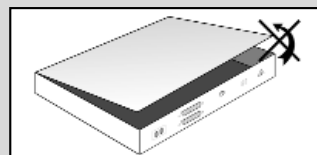
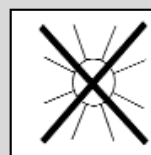
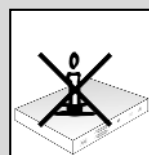
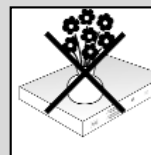
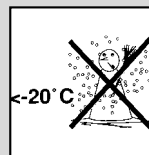
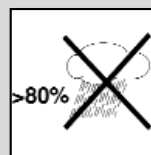
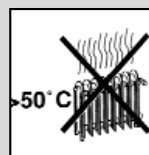
- > To ensure adequate ventilation, place the receiver on a smooth, horizontal surface and do not place any objects on top of the receiver, as ventilation slots are located here to allow heat to be dissipated from the interior of the unit.
- > Do not place any burning objects, such as burning candles, 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

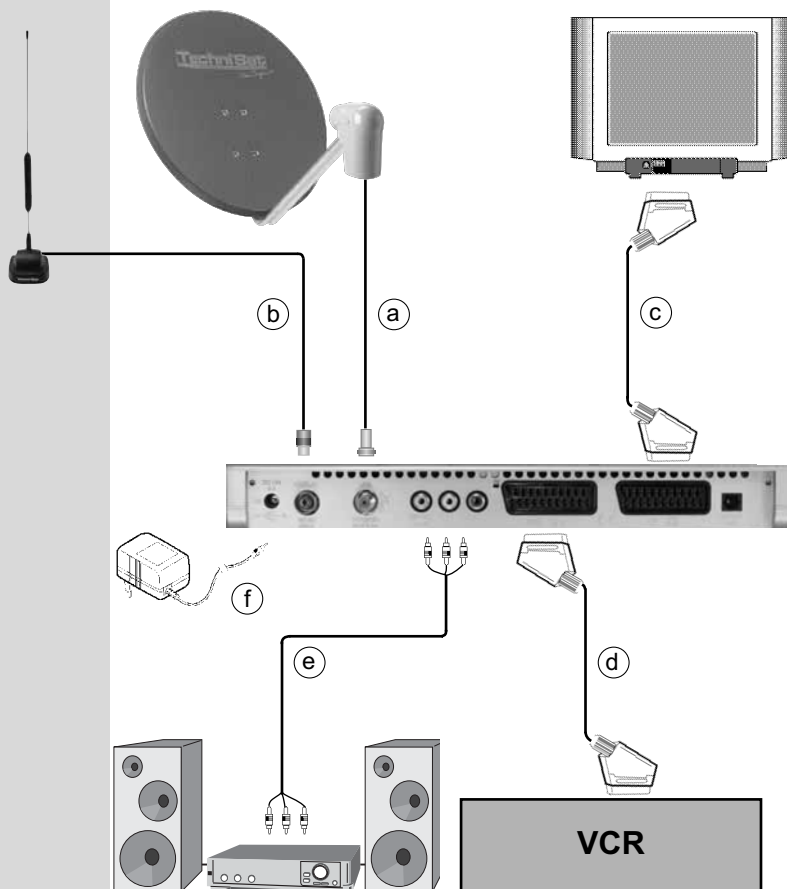
Operating breaks

In case of electrical storms, or in case of extended operating breaks (e.g. while on holiday), the receiver should be disconnected from the mains power supply.



4 Connecting the DVB receiver

- a. Connecting the LNB with the **LNB input** (LNB IN) of the DVB receiver.
- b. Connection of the **terrestrial antenna input** with the DVB-T antenna.
- c. Scart connection of the DVB receiver with the television set.
- d. Scart connection of a video recorder with the **VCR Scart socket** of the DVB receiver.
- e. Connection from the audio outputs to a hi-fi system.
- f. Mains power connection



The following references **a b c** etc. refer to the illustration on page 10.

4.1 External unit

- a** Use a suitable co-axial cable to connect the **LNB input** of the digital receiver with the LNB of your external unit. Please also note Point 6 "Settings".

4.2 Antenna

- b** The cable coming from the terrestrial antenna (indoor or roof-mounted antenna) must be connected to the **Input terrestrial antenna** of the receiver. If possible, you should give preference to using a roof-mounted antenna. Under favourable conditions, an indoor antenna may also be sufficient. **When using an active antenna without an external feed, the antenna feed must be switched on (Point 6.5).**

4.3 Connection to a television set

- c** Use the SCART cable supplied to connect the receiver (**SCART socket TV**) with the television set (SCART socket). If your television set is appropriately equipped, this will be switched to AV mode automatically when the digital receiver is switched on, and is thus switched to receiver operation.

4.4 Video cassette recorder (VCR)

- d** Connect the video recorder to the SCART socket **VCR**. In playback mode the video recorder will supply a switching signal to the digital receiver. This allows the video recorder signal to be fed automatically to the TV set. If your video recorder does not provide a switching current, switch your digital receiver to the external input **AV** using the **EXTERN** key. Press this key again to return to normal operation.

4.5 Hi-fi amplifier

4.5.1 Analogue

- e** 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!).

4.5.2 Digital

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

Depending on the signal provided by each individual channel, sampling rates of 32, 44,1 and 48 kHz are available. In addition, where broadcast, the Dolby Digital signal (AC3) is also available.

4.6 Serial interface (RS 232)

The RS 232 interface is used in conjunction with updating the operating software or pre-programming via a PC.

4.7 Mains power connection

The digital receiver should only be connected to the mains power supply once you have completed making all the connections with the various other components. This will avoid possible damage to the digital receiver or other components.

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

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. To make the settings in each respective step of the installation procedure, the keys on the remote control required for this will be marked.

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

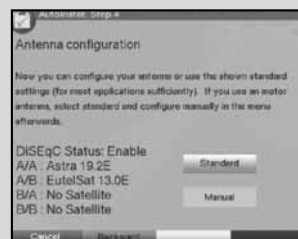
- > When starting the installation assistant, the first selection window to be displayed will be that for the **Operating language**. (Fig. 5-1)
- > Use the **arrow keys up/down** to mark the desired operating (menu) language.
Your selection will automatically be taken over for the setting of your preferred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

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.

Selecting reception signals

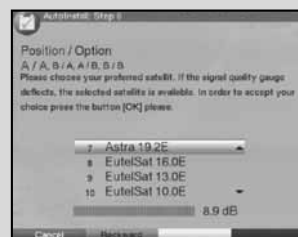
- > Use the arrow keys up/down to mark the line showing the signal source you wish to activate resp. de-activate. (Fig. 5-3)
- > Use the **arrow keys left/right** to activate (**Yes**) resp. deactivate (**No**) the marked signal source.
- > Confirm your selection by pressing the **green** function key.



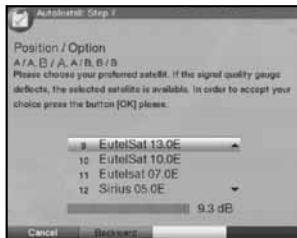
(Fig. 5-1)



(Fig. 5-2)



(Fig. 5-3)



(Fig. 5-4)

Antenna configuration (DVB-S)

If in your selection of signal sources you have selected **Yes** for DVB-S signals, this installation step will allow you to adjust the configuration of your digital receiver to that of your satellite antenna.

If you have selected **No** for DVB-S, continue with the Point **Antenna configuration (DVB-T)**.

- > If you wish to accept the standard antenna setting, press the **green** function key **Accept**. (Fig. 5-4) **Fahren Sie in diesem Fall mit dem Punkt Antennen-Konfiguration (DVB-T) fort.**
- > If the configuration of your reception equipment does not conform to the standard setting, press the **yellow** function key **Change**.

Multytenne

- > If the digital receiver is being operated in conjunction with a Multytenne antenna, use the **arrow keys left/right** to select **on**. The switching positions will be automatically adjusted for the Multytenne. In this case, continue with the point **Accept antenna configuration (DVB-S)**.



(Fig. 5-5)

DiSEqC

- > If you are using DiSEqC components in your receiving equipment, use the **arrow keys up/down** to mark the line **DiSEqC** and use the **arrow keys left/right** to select **on**. (Fig. 5-5). (Additional information on DiSEqC can be found in Chapter 10, Technical terms).
- > Then use the **arrow keys** in the column **Satellite** to mark the switching position you would like to allocate to a different satellite.
- > Press **OK** to open the satellite list.

Position A/Option A

- > Use the **arrow keys up/down** to mark the satellite you are receiving with the DiSEqC setting Position **A/Option A**, and confirm by pressing **OK**. (Fig. 5-6)



(Fig. 5-6)

Position B/Option A

- > Use the **arrow keys up/down** to mark the satellite you wish to receive with the DiSEqC setting Position **B/Option A** and confirm by pressing **OK**. (Fig. 5-7)

Position A/Option B

- > Use the **arrow keys up/down** to mark the satellite you wish to receive with the DiSEqC setting Position **A/Option B** and confirm by pressing **OK**. (Fig. 5-8)

Position B/Option B

- > Use the **arrow keys up/down** to mark the satellite you wish to receive with the DiSEqC setting Position **B/Option B** and confirm by pressing **OK**. (Fig. 5-9)

Accepting antenna configuration (DVB-S)

- > When you have completed the settings for the switch positions, press the **red** function key **Back**. Check the configuration of your satellite antenna once more.
- > If you wish to accept the settings you have made, press the **green** function key **Accept**.

Antenna configuration (DVB-T)

If in your selection of signals to be received you have selected **Yes** for DVB-T, follow this installation step to adjust the DVB-T antenna in its optimum position, using the channel spectrum. In addition, if you are using an active antenna that is not fed with current via an external mains adapter, you can use these instructions to switch the antenna current feed to on.

- > Use the **arrow keys up/ down** to mark the line **Antenna feed**.
- > Use the **arrow keys left/right** to switch the antenna feed **on** resp. **off**.
- > Now position your DVB-T antenna so that the signal level display shows the maximum level for the DVB-T channels available at your location.



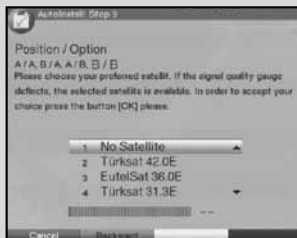
(Fig. 5-7)



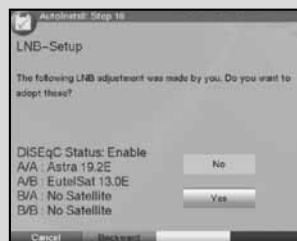
(Fig. 5-8)



(Fig. 5-9)



(Fig. 5-10)



(Fig. 5-11)

Programme search/scan/ ISIPRO

The receiver will check whether a new **ISIPRO programme list** is available for downloading. If a new programme list is available, this can be installed with the aid of the ISIPRO function.

- > Use the **arrow keys up/down** to mark the line **ISIPRO programme list update**. (Fig. 5-10)
- > Confirm by pressing **OK**.
The current programme list will now be downloaded via satellite.
Please note that the programme list update will be carried out only for satellite programmes. If in your selection of signals to be received you have selected **Yes** for DVB-T signals as well, the programme list update will be immediately followed by a programme scan for DVB-T programmes.

If no new ISIPRO programme list is available, or if you do not wish to download this, please perform a programme scan.

- > To do this, use the **arrow keys up/down** to mark the field **All Programmes**, if you wish to scan for free-to-air as well as encrypted programmes, or **All unencrypted programmes**, if you wish to search only for free-to-air programmes.
- > Confirm by pressing **OK**, to start an automatic programme scan. If appropriately activated, the receiver will first scan DVB-S sources, followed by DVB-T sources, for programmes. This procedure may take several minutes. Please note all messages displayed on screen.

Software update

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. 5-11).
The new software for your receiver will now be downloaded.
This procedure may take a few minutes, and should not be interrupted.

Loading SFI data

our digital receiver features an electronic programme guide (EPG) called SFI (**S**ie**F**er**N** **I**nfo). For the data of this electronic programme guide to be displayed, you must first download the SFI data.

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. 5-12)
The SFI data will then be automatically updated the following night, or you can update them manually at any time (see Point 7.15.1).

Ending the installation assistant

- > Confirm the final message of the installation assistant by pressing the **green** function key **Finish**, to return to normal operation. (Fig. 5-13)

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:

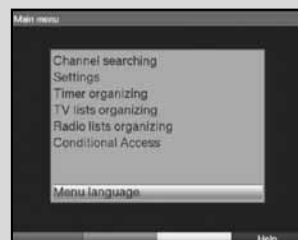
- > Use the **Menu** key to call up the **Main menu**. (Fig. 6-1)
- > Now use the **arrow keys up/down** to mark the menu line **Operating language**.
- > Confirm by pressing **OK**.
The sub-menu **Operating language** will be displayed.
- > Use the **arrow keys up/down** to mark the desired language.
- > Confirm your selection by pressing **OK**.
- > Press the **Back** key to return to the **Main Menu** without making any changes.



(Fig. 5-12)



(Fig. 5-13)



(Fig. 6-1)



(Fig. 6-2)



(Fig. 6-3)

6.2 Basic settings

To make the optimum use of your DVB receiver, you can still make a number of settings in line with your personal preferences.

- > 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 items as indicated. When selecting a menu item, please also note any messages displayed on screen.
The following settings can be made:

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

You can use the remote control unit of your receiver to operate as many as four different appliances all using the same remote control code. If two receivers are operated in the same room, this may lead to accidental malfunctions. To avoid these malfunctions, you should set different remote control options for the two receivers.

- > In this line, press the **SAT1** resp. the **SAT2** key as well as the **OK** key simultaneously.
The remote control code of the receiver has now been changed.

- > If you wish to change the remote control from one receiver to the other while in operation, again press the **SAT1** rssp. the **SAT2** key and the **OK** key 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**.

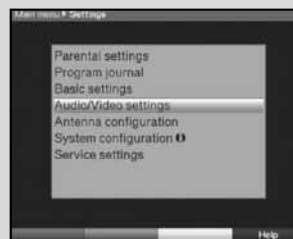
Accept settings

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

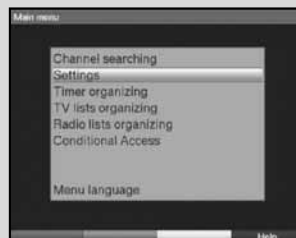
To optimise the digital receiver for use with your television set, you can make further settings in the menu

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.



(Fig. 6-5)



(Fig. 6-6)

When selecting a menu item, please also note any messages displayed on screen. The following settings can be made:

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 signal)

- > 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 **Select 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

- > 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**.
- > For standard recorders use the setting **FBAS**.

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 4.5.2) of your DVB receiver must be connected to the digital input of your Dolby Digital 5.1-channel amplifier.

If a programme is broadcast with Dolby Digital Sound, this will be indicated by the Dolby symbol in the information window when you switch to the programme.

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 7.6.1 of the operating manual.

Accept 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**.

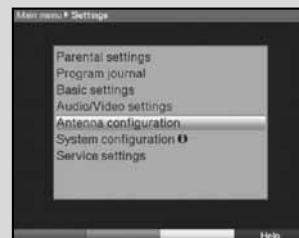
alternatively:

- > 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 staved.

6.4 Antenna settings (DVB-S)

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 (DVB-S)** 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:

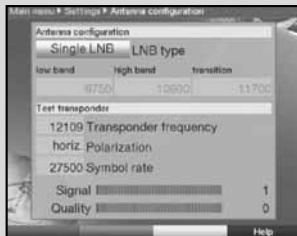
- > Use the **Menu** key to call up the **Main Menu**. (Fig. 6-7)



(Fig. 6-7)



(Fig. 6-8)



(Fig. 6-9)

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

The following settings can be made in this menu:

6.4.1 Multityenne

If the receiver is being operated in conjunction with a Multityenne LNB, you can use this menu item to adjust the switching positions automatically to the Multityenne LNB.

- > In this line, use the **arrow keys left/right** to select **on**, to adjust the switching positions automatically.

6.4.2 Switching DiSEqC on or 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.

6.4.3 Setting the switching matrix

The menu lists the four switching criteria for the DiSEqC control. Your receiver is pre-programmed so that ASTRA at 19,2° East is received on switch setting A/A and Eutelsat at 13° 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.

- > 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 14**.
- > 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 characteristics

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.

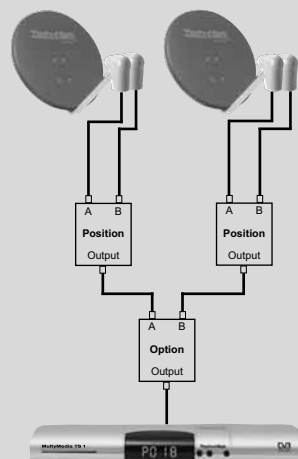
- > Use the **arrow keys left/right** to move the marker to the column **Configuration**.
- > Now, in the line in which you wish to check or change the settings, use the **arrow keys up/down** to mark the field **Continue**.
- > Confirm by pressing **OK**.
A sub-menu will be displayed in which you can make settings related to the LNB, and can set up a test transponder. (Fig. 6-10)

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**, **Multitenne 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.

Example:



(Fig. 6-10)

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.

- > Press the **red** function key **Back** to go back to the setting of switching positions.
The setting you have selected will be accepted and saved automatically.

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 9** of the operating manual.

6.5 Antenna settings (DVB-T)

With the aid of the antenna configuration (DVB-T) you can position the DVB-T antenna optimally using the channel spectrum, as well as switch on the antenna current feed.

- > 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 menu **Settings** will be displayed.
- > Now use the **arrow keys up/down** to mark the line **Antenna settings (DVB-T)**.
- > Confirm by pressing **OK**. The menu **Antenna settings (DVB-T)** will be displayed. (Fig. 6-11)
Adjust the position of the DVB-T antenna so that the level indicator shows the maximum signal strength.

Antenna feed 5V

When using an **active antenna**, you must switch on the antenna current feed (5V/30mA). The antenna will then be supplied via the **Input terrestrial antenna**.



(Fig. 6-11)

-
- > In this line, use the **arrow keys left/right** to switch the antenna feed **on** or **off**.

In case of an overload or a short circuit, the antenna feed will be switched off automatically. In this case you should fix the problem, and then switch on the antenna feed again.

7 Operation

7.1 Switching on and off

Switch the digital receiver on by pressing the **On/Stand-by** key either on the receiver panel or on the remote control.

- > Press this key again to switch the receiver off again.
- > The receiver is now in stand-by mode, and, in as far as this has been activated in Point 6.2.4, the current time will be displayed on the receiver panel. If the current time is not shown, this must still be acquired by the receiver. To do this, switch the receiver on, and set it to reception of a major channel (e.g. ZDF in Germany) for approx. 30 seconds to automatically acquire the time.

7.2 Programme selection

7.2.1 Using the programme keys up/down

- > You can use the **programme keys up/down** either on the receiver panel or on the remote control to move up or down the programme list one programme 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

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.

7.2.3 Using the Navigator (programme list)

- > Press **OK**.
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 8.1) 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)
- > 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.
- > Confirm by pressing **OK**.

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 the screen. (Fig. 7-4)

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

or

- > Switch to a programme that is not blocked.

If under Point 8.3.1 you have selected the setting **Once**, the system will require you to enter the PIN code once when you switch to a blocked programme. To make things easier for you, you need enter the PIN code only once during each operating phase.

If you are using a CONAX Smartcard please also note Point 7.3.2.



(Fig. 7-1)



(Fig. 7-2)



(Fig. 7-3)



(Fig. 7-4)

event (Formula 1) or to switch to different sporty venues (National League football in Germany).

Where a programme provides multifeed 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.
- > Confirm by pressing **OK**.
Your digital receiver will now show the option selected.

7.3.1.2 Selecting starting times/picture

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).

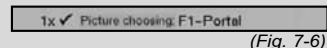
- > To select one of the available starting times, press the **Option** key.
A selection window will be displayed, showing the available starting times. (Fig. 7-9)
- > Use the **arrow keys up/down** to select the desired starting time.
- > Confirm by pressing **OK**.
If the programme is validated for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

7.3.2 CONAX PIN code

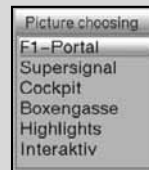
Your digital receiver is equipped with a parental control function that enables you to block access to individual channels (see Point 8.3). In addition, in the case of CONAX-encrypted channels, individual broadcasts that are not suitable for children or adolescents can be blocked by means of a parental control code/symbol. To unblock the specific programme, the **CONAX PIN code** must be entered. This PIN code is stored on the Smartcard. You will receive this together with your card. The **CONAX PIN code** is **not** identical with the **Unit PIN code** of the digital receiver (Point 8.3) and must not be confused with this.

If you switch to a channel on which a blocked programme is being broadcast, a message will be displayed.

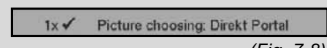
- > Use the **numeric keys** to enter the 4-digit **CONAX PIN code**, in order to view the programme.
- > As soon as the correct entry has been made, the pro-



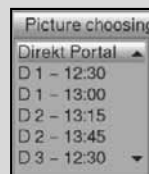
(Fig. 7-6)



(Fig. 7-7)



(Fig. 7-8)



(Fig. 7-9)

gramme will be unblocked, and can be viewed.
If the PIN code is entered incorrectly, you can either enter it again, or press the **Back** key to return to the programme previously selected.

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 again.




7.5 TV/Radio switching

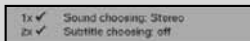
The pre-programming includes both TV and radio programmes.

- > 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.

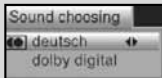
7.6 Selecting a different language (TV mode) resp. station/channel (Radio mode)

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 ().



(Fig. 7-10)



(Fig. 7-11)

7.6.1 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 **Option**. 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.

7.7 Return to last programme previously selected (Back)

- > 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

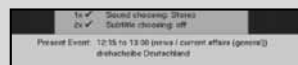
This function allows you to view programme information relating to the programme currently selected.

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

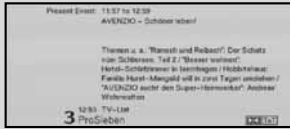
A display will appear on the lower half of the screen, showing the current time, the name of the programme selected, the name of the current programme together with its start and stop times, whenever this information is broadcast by the programme provider.

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.



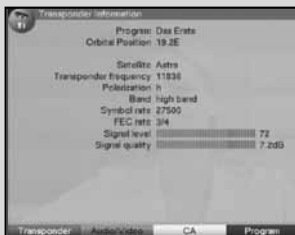
(Fig. 7-12)



(Fig. 7-13)

- > 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.

7.10 Transponder information



(Fig. 7-14)

- > Press the **green** function key (Transponder info) 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/Stop** 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 Sleep timer

- > Press the **Sleep Timer** key repeatedly to set the time at wh the end of which the receiver will be switched off from 15 minutes to 2 hours. When the time period selected has elapsed, the receiver will switch automatically to stand-by mode.

7.13 Videotext

7.13.1 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).

7.13.2 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).
- > 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.

Mixed mode

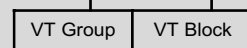
- > Pressing the **Videotext** key again will take you to mixed viewing mode (both the videotext information and the TV picture are displayed simultaneously).
- > Press this key again to return to normal operating mode.

Stop mode

- > Press the **Freeze frame/Stop** 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/Stop** key again to switch the stop mode off again.
- > Press the **Back** key to return to normal operating mode.



(Fig. 7-15)



7.14 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.

7.15 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 the SFI data

The programme information will be updated by your receiver at the updating time you have selected in accordance with Point 8.2 (SFI channel). The receiver must be in stand-by mode for this to be executed.

The downloading procedure will be indicated by a display of the SFI data downloaded so far (e.g. P038 for 38%) on the display panel. If your receiver is switched on at this time, the function will not be executed.

You can also start the downloading procedure manually directly after switching off by pressing the **SFI** key (while the display shows „0000“) During the downloading procedure the volume of data already downloaded will be indicated in the display (e.g. P038 for 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 and added as described in Points 8.2.4.

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

- > Switch on the digital receiver as well as your television set.
- > Press the **SFI** key on the remote control of the digital receiver.

The electronic programme guide will now be displayed on screen (Fig. 7-16). Here the channels you have selected, or those of the factory default settings, will be shown with their current programmes (see also **Point 8.2**). 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.

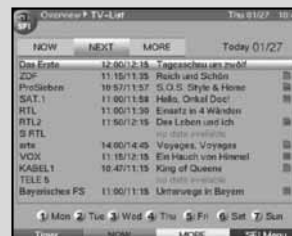


(Fig. 7-16)

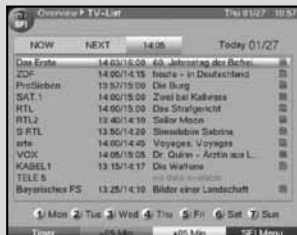
7.15.4 Now (Table with current programme contents)

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.

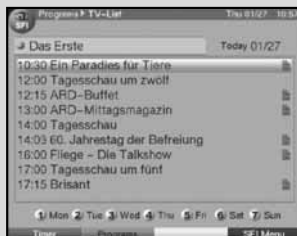
- > Use the **arrow keys up/down** to move the marker one line at a time.
- > Use the **arrow keys left/right** to move through the programme list one page at a time.
The SFI functions (Point 7.15.7) are now available.
- > Press the **yellow** function key to go to the SFI table “**Next**” (see Point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



(Fig. 7-17)



(Fig. 7-18)



(Fig. 7-19)

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.

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"**. (Fig. 7 - 19)

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

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 information

You can display brief information on the marked programme with the help of **SFI Info**. Where additional 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 SFI table.

7.15.7.2 SFI timer programming

The electronic programme guide SFI allows you to programme timer events with the greatest of ease.

- > Use the **arrow keys** resp. the **function keys** to mark the desired programme.
- > 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 7.16).
- > Confirm by pressing **OK**.
For control purposes the menu **Manage timer** will be displayed, with the data of the programme selected. In this you can, if necessary, make changes (see 7.16).
- > 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 beginning of the programme selected, and possibly also switched to the correct channel. If the receiver was switched on by means of the video recorder timer, it will also be switched off again at the end of the timer event. If as video recorder timer is active, this will be indicated by "rEc" in the display. To avoid accidentally interrupting or ending the recording, most of the keys on the remote control are without function in this mode. While in stand-by mode, the active timer is indicated by the colon in the clock time blinking.

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**.
- > To break off an active timer, use the **On/Standby** key to switch the digital receiver off.
- > After that, press the same key again to switch the receiver on, and use all the functions again.

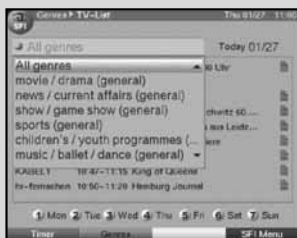
7.15.7.3 SFI programme overview

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. The SFI table „**Now**“ will be displayed.
- > Press the **blue** function key **SFI Menu** to open a selection window.
- > 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. 7-20)
- > 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**.



(Fig. 7-20)



(Fig. 7-21)

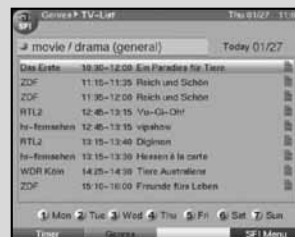
Display SFI overview of other programmes

- > 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. 7-21)
- > Press the **OK** key to display the SFI overview of the marked channel.

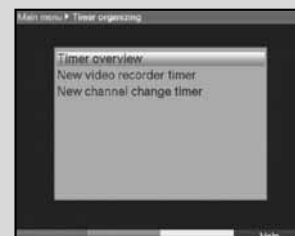
7.15.7.4 SFI overview by programme type (Genre)

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. 7-22)
- > Use the **arrow keys** to select the desired programme type and confirm by pressing **OK**.
An overview of the day will be displayed, listing only programmes of the type selected. (Fig. 7-23)
- > 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**.



(Fig. 7-22)



(Fig. 7-23)

7.15.8 Ending SFI mode

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

7.16 Timer recordings

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. 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 "rEc" 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 the blinking of the colon in the clock time resp. the LED display.

2. 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 video recorder timer option, the receiver and remote control remain fully functional, and will not be switched off at the end of the programme.



(Fig. 7-24)



(Fig. 7-25)

7.16.1 Programming the timer manually

- > 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. 7 - 24)
- > 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. 7 - 25)

To programme a timer, proceed as follows:

Source

- > 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**.

Accepting/saving data into 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.

7.16.2 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.

7.16.3 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 7.16.1.
- > When you have completed the programming, press the **green** function key **Accept** to store the data in memory.

7.16.4 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**.

7.16.5 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 7.16.1.
- > 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 Changing the basic programming

8.1 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 two programme lists, the **Favourites list** and the **Total list**. The Favourites programme list includes 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 Favourites programme list will be displayed.

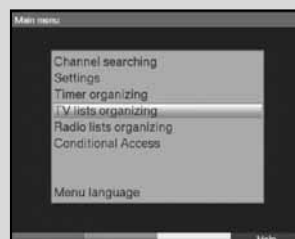
8.1.1 Calling up the programme list manager

To effect changes in the Favourites list, proceed as follows:

- > Press the **Menu** key to call up the **Main menu**. (Fig. 8-1)
- > 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. 8-2)

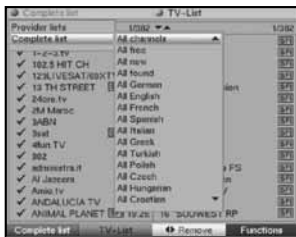
The Favourites list will be shown on the right half of the screen. This is now active, as the currently selected programme is marked. On the left half of the screen you will see the alphabetically sorted Total list. This Total list includes all available programmes.



(Fig. 8-1)



(Fig. 8-2)



(Fig. 8-3)

- > Press the **red** function key to move the marker to the Total list. This is now active.
- > Press the **red** function key again to open a selection window. Here you have the facility to display the Total list sorted in terms of various selection criteria (e.g. all programmes, all free to air, all new, all found, all English language, etc.) or sorted by **Providers**.
- > 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. 8-3)
- > Now use the **arrow keys up/down** to mark the selection criterion you wish to apply to sorting the Total list. For instance, select **All programmes** to display all available programmes in the Total list or **All new** to display only programmes newly found by the last programme search, or **All English** to display only English-language programmes/channels.
- > Confirm by pressing **OK**.
Now, depending on your selection, a programme list will be displayed containing, e.g. all, all new or all English-language programmes. Programmes already included in the Favourites list will be indicated by their programme slot number in the Favourites list.
- > You can switch back and forth between the Total list and the Favourites list by pressing the **red** function key **Programmes** or the **green** function key **TV list**. The currently active list will be marked accordingly in blue.

8.1.2 Adding programmes to the Favourites list

To add a programme from the Total list to the Favourites list, call up the programme list manager as described in Point 8.1.1, and change to the Total list.



(Fig. 8-4)

- > Press the **blue** function key **Functions**.
A selection window listing the available functions will be displayed. (Fig. 8-4)
- > Use the **arrow keys up/down** to mark the line **Add**.
The function **Add** will appear in the Functions menu only if you have marked a programme that is not already included in the Favourites list.
- > 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.

Marking blocks

To add a programme from the Total list to the Favourites list, call up the programme list manager as described in Point 9.1.1, and change to the Total list.

- > Press the **blue** function key **Functions**.
A selection window listing the available functions will be displayed. (Fig. 9-4)
- > 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.

8.1.3 Delete programmes

8.1.3.1 Remove (delete) from the Favourites list

To remove programmes from the Favourites list, call up the programme list manager as described in Point 8.1.1. You will find yourself in the Favourites list.

- > Press the **blue** function key **Functions**.
A selection window will be displayed, listing the available functions. (Fig. 8-5)
- > 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 8.1.2 (**Marking blocks**).



(Fig. 8-5)

- > 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.

8.1.3.2 Delete from the Total list

To remove programmes from the Total list, proceed as described in Point 8.1.3.1. After calling up the programme list manager, press the **red** function key **Programmes** to switch to the Total list, then select the function **Delete**. Programmes deleted from the Total list in this manner will only be available again after a scan has been performed.

8.1.4 Sorting programmes

To sort the order in which the programmes appear in your Favourites list, call up the programme list manager as described in Point 8.1.1. You are now in the Favourites list.

- > Press the **blue** function key **Functions**. A selection window will be displayed, showing the functions available. (Fig. 8-6)
- > 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.



(Fig. 8-6)

- > To sort several programmes simultaneously, mark these as described in Point 8.1.2 (**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.

8.2 Programming the Electronic Programme Guide

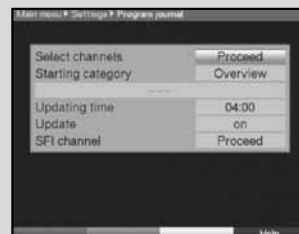
Your receiver provides the facility to receive a data channel with additional SFI data. These make it possible to provide an SFI preview of up to a week.

In case of satellite reception, you will receive this data channel via the ASTRA satellite systems at 19,2° East. To receive the corresponding data channel via DVB-T, this must be available in your DVB-T reception area.

- > 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. 8-7)
- > 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.

8.2.1 Updating

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



(Fig. 8-7)

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**.

8.2.2 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.

8.2.3 SFI channel

- > Press the **OK** key to call up the sub-menu **SFI channel** (Fig. 8-8).

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.

8.2.4 Selecting a programme

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.

- > Use the **arrow keys up/down** to mark the line **Select TV programme** or **Select Radio programme**
- > Press the **OK** key.
Depending on your selection, the Favourites list of TV resp. radio channels will be displayed. The programme currently selected will be marked. (Fig. 8-9)
- > Press the **red** function key to display a selection window.
Here you have the option of selecting the desired programme list type.
- > Use the **arrow keys up/down** to select the desired programme list type (e.g. Favourites list).
- > Confirm by pressing **OK**.
The programme list selected will be displayed.



(Fig. 8-8)



(Fig. 8-9)

-
- > 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 8.1.2 (**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.

8.2.5 Start category

The electronic programme guide offers various forms of displaying information (categories). Use this point to select which category is to be displayed when you call up the SFI.

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.

- > Press **OK** to open the window showing the start categories available
- > Use the **arrow keys up/down** to set the display type to be used when the electronic programme guide is called up.
- > If you select **Genres**, you can then additionally select the preferred genre in the field below.
- > Press **OK** to open the selection window showing the various genres available.
- > Use the **arrow keys** to select the preferred genre (e.g. movies, news, shows, etc.).

Accepting/saving settings

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

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

alternatively:

- > Press the **red** function key **Back**.
- > In the query window displayed, use the **arrow keys left/right** to mark the field **Yes**, if you wish to accept and save the changes, and confirm by pressing **OK**. You will now return to the previous menu.
- > Press the **TV/Radio** key to return to normal operation.
The settings will **not** be saved.

8.2.6 Manual updating of SFI data

To start the updating of SFI data manually, proceed as follows.

- > As described above, call up the menu **Programme guide**.
The receiver will now check automatically whether the data channel used to update SFI data can be received.
 - > If there is reception of the data channel, use the **arrow keys up/down** to mark the field **Start download** and confirm by pressing **OK**.
- or
- > Press the key **On/Standby** to switch the receiver off (stand-by).
 - > Now, while "SFIL" appears in the display, press the **SFI** key.
The receiver will now download the data. This will be indicated by the percentage of SFI data downloaded so far being indicated in the display.
 - > The downloading procedure can be interrupted by switching the digital receiver on (**On/Standby** key).

8.3 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. 8-10)
- > 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. 8-10)

8.3.1 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 the factory default PIN code has not yet been changed you set the pin query mode to **Once**, and have not yet changed the PIN, you will be requested to change the PIN.

- > Confirm the message by pressing **OK**.
The menu **Change Unit PIN** will be displayed.

8.3.2 Changing the unit 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. 8-11)
- > 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**.



(Fig. 8-11)




(Fig. 8-12)

- > 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!

8.3.3 Selecting programmes

- > Use the **arrow keys up/down** to mark the line **Select TV programme** or **Select Radio programme**.
- > Press the **OK** key. The Favourites list selected (TV or radio) will be displayed. The programme currently selected is marked (Fig. 8-12)
- > 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 select the desired programme list type (e.g. Favourites list).
- > 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 8.1.2 (**Marking blocks**) and block access to them by pressing the **yellow** function key.
- > 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.

8.4 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, or DVB-T programmes, 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 9.4), as well as the entire DVB-T range for programmes.

2. Expanded Scan

Select this type of search to scan only a specific selected satellite or a specific frequency resp. channel range for programmes.

3. Manual Scan

Select this type of search to scan a specific transponder of a single satellite resp. a single DVB-T channel for programmes.

4. PID 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 8.1**.

- > To commence searching for programmes, first call up the **Main menu**. (Fig. 8-13)
- > 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. 9-14)
- > Now use the **arrow keys up/down** to select the type of scan you wish to perform, and confirm by pressing **OK**.

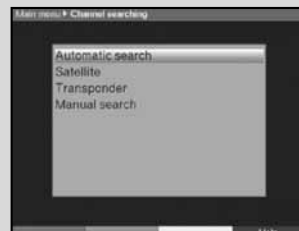
8.4.1 Automatic scan

If this scan is selected, all the satellites listed in the menu LNB settings (Point 6.4 and 9.4) as well as the entire range of DVB-T channels 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. 8-15)

- > 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 **arrow keys up/down** to **Start scan**.
- > Confirm by pressing **OK**.



(Fig. 8-13)



(Fig. 8-14)



(Fig. 8-15)

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



(Fig. 8-16)



(Fig. 8-17)

8.4.2 Expanded scan

To scan a single satellite of a specific frequency or channel range for programmes, select the option **Expanded scan**. (Figs. 8-16 and 8-17) You can decide whether you wish to scan for all programmes, or only for free-to-air programmes.

Selecting a source^{DVB-S, DVB-T}

- > Use the **arrow keys up/down** to mark the top line of the scan menu.
- > Confirm by pressing **OK**.
A selection window will be displayed, showing the two sources available.
- > Use the **arrow keys up/down** to select the source **DVB-S**, to search for satellite programmes, or select **DVB-T** to search for DVB-T programmes, and confirm by pressing **OK**.

Satellite^{DVB-S}

- > Now use the **arrow keys up/down** to move the marker to the line **Satellite** and press **OK**.
- > Use the **arrow keys up/down** to mark the menu line **All Satellites**, to scan all active satellites for programmes, or mark the desired satellite to scan only this for programmes.
- > Confirm by pressing **OK**.

Channel/Frequency scan^{DVB-T}

- > Now use the **arrow keys up/down** to move the marker to the line **Channel scan** resp. **Frequency scan** and press **OK**.
- > Use the **arrow keys up/down** to select whether you wish to perform a **Frequency scan** or a **Channel scan** and confirm by pressing **OK**.
In a channel scan, the reception range is scanned in standardised channels. A channel scan is therefore faster than a frequency scan.

Start channel/Start frequency^{DVB-T}

- > Use the **arrow keys up/down** to mark the line **Start channel** resp. **Start frequency**.
- > Use the **arrow keys left/right** to select the **Start channel** resp. use the **numeric keys** to enter the **Start frequency**.

Stop channel/Stop frequency^{DVB-T}

- > Use the **arrow keys up/down** to mark the line **Stop channel** resp. **Stop frequency**.
- > Use the **arrow keys left/right** to select the **Stop channel** resp. use the **numeric keys** to enter the **Stop frequency**.

Search mode^{DVB-S, DVB-T}

- > Use the **arrow keys up/down** to mark the line **Search mode**.
- > Use the **arrow keys left/right** to decide whether you wish to search only for free-to-air programmes (**Free channels**) or whether you wish to include encrypted programmes in the search (**All channels**).

Start scan/search^{DVB-S, DVB-T}

- > Now mark the field **Start search** and confirm by pressing **OK**.
The search/scan procedure will be started. Please note any messages displayed on screen.
- > You can abort the scan by pressing the **red** function key.

Stop channel/Stop frequency^{DVB-T}

- > Use the **arrow keys up/down** to mark the line **Stop channel** resp. **Stop frequency**.
- > Use the **arrow keys left/right** to select the **Stop channel** resp. use the **numeric keys** to enter the **Stop frequency**.

Search mode^{DVB-S, DVB-T}

- > Use the **arrow keys up/down** to mark the line **Search mode**.
- > Use the **arrow keys left/right** to decide whether you wish to search only for free-to-air programmes (**Free channels**) or whether you wish to include encrypted programmes in the search (**All channels**).

Start scan/search^{DVB-S, DVB-T}

- > Now mark the field **Start search** and confirm by pressing **OK**.
The search/scan procedure will be started. Please note any messages displayed on screen.
- > You can abort the scan by pressing the **red** function key.

Channel^{DVB-T}

- > Use the **arrow keys up/down** to mark the line **Channel**.
- > Use the **arrow keys left/right** to select the **Channel** that is to be searched for programmes.

Search/scan mode^{DVB-S, DVB-T}

- > Use the **arrow keys up/down** to mark the line **Search mode**.
- > Use the **arrow keys left/right** to decide whether you wish to search only for free-to-air channels (**Free Channels**) or whether you wish to search for encrypted programmes (**All Channels**) as well.

Level/signal quality indicator^{DVB-S, DVB-T}

Even while the transponder or channel data are being entered, you can see the signal strength and the signal quality of the transponder resp. channel selected with the aid of the **Level** and **Quality indicator**.

Start scan/search^{DVB-S, DVB-T}

- > Now mark the field **Start search** and confirm by pressing the **OK** key.
The search procedure will be started. Please not any messages displayed on screen.
- > The search/scan procedure can be aborted by pressing the **red** function key.

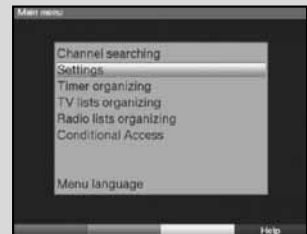
8.4.4 PID search

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. 8-20) differs from the menu **Manual search** only with regard to the menu items **PCR PID**, **Audio PID** and **Video PID**. There is no need to enter the search mode.

- > Proceed as described under Manual search (Point 8.4.3).
- > However, after calling up the manual search, press the **yellow** function key **PID 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.

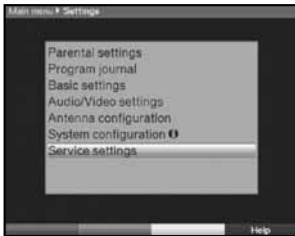
If even the PID search is unable to find the desired programme, you have the facility to generate it.



(Fig. 8-20)

-
- > Confirm the message displayed on screen after the search, using the **arrow keys left/right** to mark the field **Yes** and confirm by pressing **OK**. Programmes generated in this manner will be designated **manual** + consecutive numbers.

8.4.5 After the scan/search



(Fig. 8-21)

You can follow the scanning of the transponders on the screen even while the search procedure is still in progress. After the scan is completed, a message will be displayed on the screen, indicating how many programmes your digital receiver has found, how many of these are new programmes, and how many programmes are encrypted. In addition, a query will be displayed, asking whether the newly found programmes should be sorted into the Favourites list automatically, or added automatically at the end, sorted manually, or whether they should not be accepted. (Fig. 8-21)

Automatic sorting

The newly found programmes will be sorted into the Favourites list in accordance with a pre-programmed list. The order of sorting is determined by the audio language selected under Point 6.3.2, resp. by the country selected in Point 6.2.2.

Automatic - add at end

The newly found programmes will be added at the end of the Favourites list, in unsorted order.

Manual sorting - TV resp. Radio

After selecting the item **Manual sorting - TV** resp.

Manual sorting - Radio you will go directly to the corresponding menu of the programme list manager, and can edit the lists as described in points 8.1.2 - 8.1.4.

Back

The newly found programmes will be added only to the Total list, and not to the Favourites list, you will return to the search menu.

- > Use the **arrow keys up/down** to select the desired item, and confirm by pressing **OK**. Please note any additional messages displayed on screen.
- > Independently of whether you have added the newly found programmes to the Favourites list or not, you can still, as described in Chapter 8.1, add these to their Favourites list manually, sort them and remove them.

8.5 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 desired programmes from the Total list to the Favourites list.

- > Use the **Menu** key to call up the **Main menu**.
- > 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. 8-22)
- > 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. 8-23)

8.5.1 Activating the factory default setting

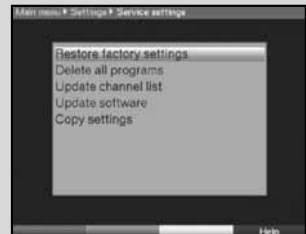
If this function is called up, the factory default setting will be implemented, personal settings will be deleted, and the installation assistant **AutoInstall** will be started.

- > 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 **Abort**.
- > Confirm the entry by pressing **OK**.

8.5.2 Delete all programmes

This function allows you to delete all programme memories completely. Please note that, once this function has been carried out, you must start a programme scan as described in Point 8.4.

- > Use the **arrow keys up/down** to mark the line **Delete all programmes**.
- > Confirm by pressing **OK**.
The query message will be displayed "Do you really want to delete all programmes?".
- > Use the **arrow keys left/right** to mark either **Yes** or **Abort**.
- > Confirm your entry by pressing **OK**.



(Fig. 8-22)



(Fig. 8-23)

8.5.3 Updating the programme list (ISIPRO)^{nur DVB-S}

The ISIPRO programme list updating facility ensures the programme list of your receiver is automatically kept up to date. For this purpose, a current and updated programme list is transmitted at regular intervals via satellite (ASTRA 19,2° East) and can be downloaded by your receiver. Please note that only the programme list for satellite programmes can be updated in this manner.

Should the parameters of the data channel used to download the programme list have changed, you can correct this via a menu. The current transponder data can be obtained from your retailer. Generally, you should not make any changes to this menu under normal circumstances.



(Fig. 8-24)

- > Use the **arrow keys up/down** to mark the line **Update programme list (DVB-S)**.
- > Press **OK** to go to the sub-menu **Update programme list** (Fig. 8-24).
- > Mark the line **Update** so that your receiver can check whether a new programme list is available.
- > Press the **OK** key to switch the automatic programme list updating function to **on**.

Accepting/saving settings

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

- > Press the **green** function key **Accept** to save the changes made, and you will return to the menu **Service settings**.

alternatively:

- > Press the **red** function key **Back**.
- > In the query window displayed, use the **arrow keys left/right** to mark the field **Yes**, if you wish to accept the changes, and confirm by pressing **OK**. You will now return to the previous menu.
- > Press the **TV/Radio** key to return to normal operation. The settings will **not** be saved.

8.5.3.1 Start programme list download manually

To start the update of the programme list manually, proceed as follows:

- > As described above, call up the menu **Update programme list (DVB-S)**. The receiver will now check whether a new programme list is available.

-
- > If a new list is available, mark the field **Start update**, and confirm by pressing **OK**. Your receiver will then re-start, and will display a message confirming the availability of a new programme list (Fig. 8-25).

8.5.3.2 Reject a programme list

- > 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 newer programme list is transmitted.

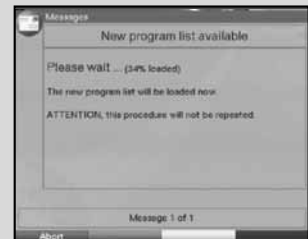
8.5.3.3 Automatic update of programme list

Select this option if you wish to have the changes of the programme list executed automatically, without any manual intervention. The changes will be carried out automatically. New programmes are usually 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 you can follow the progress on screen (Fig. 8-26).



(Fig. 8-25)



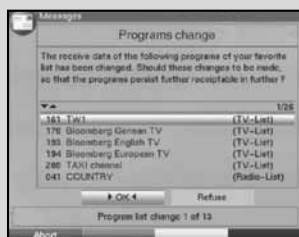
(Fig. 8-26)

8.5.3.4 Updating the programme list manually

When the programme list has been downloaded completely, your programme list will be updated. To do this, the receiver will compare the existing Favourites list with the new programme list. The Favourites list will be updated in several steps. The differences between your Favourites list and the new programme list will be displayed. You can then decide for yourself which changes you wish to accept, and which not. The number of steps to be completed will depend on the extent of changes in the new list, and can thus differ from download to download.

- > To update the new programme list manually, press the **yellow** function key **Manual**.

The download of the programme list will be started, and you can follow progress on the screen (Fig. 8-27).

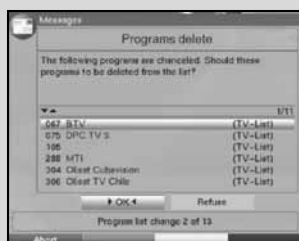


(Fig. 8-27)

Adjusting 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. 8-28). 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.

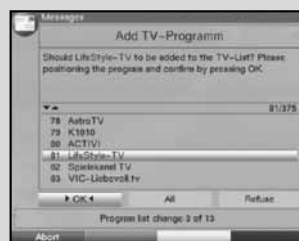


(Fig. 8-28)

Delete 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. 8-29) that are no longer being broadcast, confirm by pressing the **green** function key **Continue**.



(Fig. 8-29)

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 Favourites list, as they are not yet included there.

Accepting programmes individually

- > If you would like to accept the programme displayed (Fig. 8-30) at the suggested position of the Favourites list (TV or Radio), press the **green** function key **Yes**.

or

- > Use the **arrow keys up/down** to move the programme displayed to a different position of the Favourites list, or enter the preferred programme slot number using the **numeric keys**.



(Fig. 8-30)

- > 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 Favourites list, press the **red** function key **Skip**.

8.5.4 Updating software

In addition, you have the facility of updating the operating software of your digital receiver via satellite (ASTRA 19,2° East). To receive the corresponding data channel via DVB-T, this must be available in your DVB-T reception region.

- > Press the **OK** key to go to the sub-menu **Update software** (Fig. 8-31).
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 automatically.
- > If the screen message indicates a new software version is available, and you would like to start the update of the operating software manually, use the **arrow keys up/down** to select the field **Start update** and confirm by pressing **OK**.
- > 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 the sub-menu Software channel. Current transponder data can be obtained from your retailer. Generally, under normal circumstances you should not make any changes in this menu.

Accepting/saving settings

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

- > Press the **green** function key **Accept** to save the changes made, and to return to the menu **Service settings**.



(Fig. 8-31)

alternatively:

- > Press the **red** function key **Back**.
- > In the query window displayed, use the **arrow keys left/right** to mark the field **Yes**, if you wish to accept the changes, and confirm by pressing **OK**.
You will now return to the previous menu.
- > Press the **TV/Radio** key to return to normal operation.
The settings will **not** be saved.

Note:

In order that the new software can be downloaded automatically, the digital receiver must be in stand-by mode, The downloading procedure is indicated by the display “SATL” resp. “SAT0” to “SAT9” on the display panel. Do not interrupt this procedure by switching the receiver on or off.

Independently of whether you have switched the automatic software updating function on or off, each time you switch the receiver off it will check automatically whether a new version of the operating software for your digital receiver is available. If new operating software is available, this will be indicated by an on-screen message the next time you switch on the receiver (Fig. 8-32).

To start the software update, follow the instructions on the screen.

8.5.4.1 Starting a software download manually

To start the update of the software manually, proceed as follows:

- > As described above, call up the menu **Update software**.
The receiver will now establish automatically whether a new version of the software is available.
- > If a new version of the software is available, mark the field **Start update**, and confirm by pressing **OK**.
Your receiver will then proceed to download the software.

8.5.5 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. (Fig. 8-33)

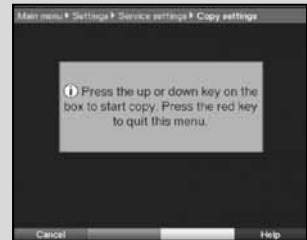
- > To do this, connect the two receivers by means of a null modem cable.
- > Switch on the target receiver.
- > To copy the settings, press any key on the panel of the source receiver.

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

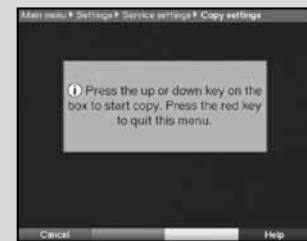
8.6 System configuration

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.



(Fig. 8-32)



(Fig. 8-33)

8.7 Encryption system

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

Manual initialising of CI module

- > Press the **green** function key **CI Reset** to initialise the CI module manually.

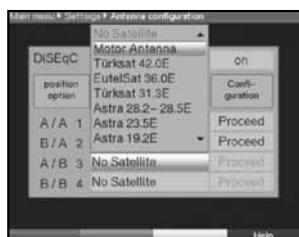
9 Use with a motor antenna (DiSEqC 1.2)

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.

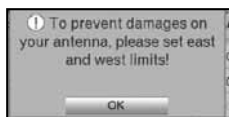
- > Use the **Menu** key to call up the **Main Menu**.
- > Use the **arrow keys up/down** to mark the line **Settings**.
- > Confirm by pressing **OK**.
The menu **Settings** will be displayed.
- > Now use the **arrow keys up/down** to mark the line **Antenna settings (DVB-S)**.
- > Confirm by pressing **OK**. The menu **Antenna settings (DVB-S)** will be displayed. (Fig. 9-1)
- > Use the **arrow keys left/right** to switch the **DiSEqC control** to **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. 9-2)
- > 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. 9-3). Confirm by pressing **OK**



(Fig. 9-1)



(Fig. 9-2)



(Fig. 9-3)

9.1 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.

9.1.1 Deleting existing limits

First, you should delete any limits that may exist.

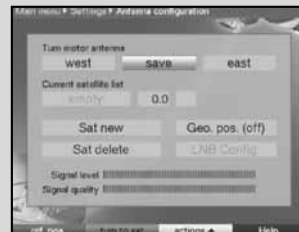
- > Use the arrow keys left/right to mark the column **Configuration**.
- > Now use the **arrow keys up/down** in the line **Motor antenna** to mark the field **Continue**.
- > Confirm by pressing **OK**.
The menu for setting the motor antenna will now be displayed. (Fig. 9-4)
- > Press the **blue** function key **Actions** to open an additional window. (Fig. 9-5)
- > Now use the **arrow keys up/down** to mark the line **Delete limits**.
- > 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. 9-6) by pressing **OK**.

9.1.2 Setting the Easterly limit

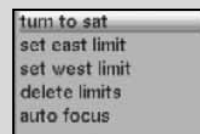
- > To enter the East limit, first use the **arrow keys** to mark the field **Save**.
- > Now press the **arrow key right** to rotate the dish to the maximum **East position** possible, resp. desirable.
- > Press the **blue** function key **Actions** to open the window with the available actions.
- > 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. 9-7) by pressing **OK**.

9.1.3 Setting the Western limit

- > To enter the West limit, first use the **arrow keys** to mark the field **Save**.



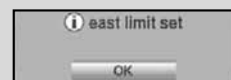
(Fig. 9-4)



(Fig. 9-5)



(Fig. 9-6)



(Fig. 9-7)



(Fig. 9-8)

- > 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. 9-8) by pressing **OK**.

9.2 Geo-Positioning

If you have a suitable motor, and if the geographical coordinates of your location are known, this function can facilitate finding the individual satellite positions. The coordinates for a number of German towns and cities are included in the Annexure (Point 13).

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



(Fig. 9-9)

- > 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. 9-9)
- > 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**) 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 coordinates 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

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

Converting the degrees latitude (DL):

DL	=	50	+	11/60
DL	=	50	+	0,2 (rounded)
DL=		50,2		

9.3 Setting a satellite position

For each satellite position to be added, consecutively work through Points 9.3.1 to 9.3.3. 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 14) for any orbital position desired.

9.3.1 Selecting a satellite position

9.3.1.1 Selecting a pre-programmed satellite position

- > To add a satellite position to the satellite list, use the arrow keys to mark the field **Sat new**.
- > Confirm by pressing **OK**.
A list of the available satellite positions will be displayed. (Fig. 9-10)
- > 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 9.2) is switched to **on**, the dish will now be automatically rotated to the pro-



(Fig. 9-10)

grammed 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 9.3.2.2).



(Fig. 9-11)

9.3.1.2 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. 9-11)
- > Now use the **arrow keys up/down** to mark a user satellite position (User 1 to User 14).
- > 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 9.2) is set to **on**, you can now use the function **turn to sat** (Point 9.4.1) 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 9.3.2.2).

9.3.2 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.

9.3.2.1 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. 9-12)
- > 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. 9-12)

9.3.2.2 Positioning antenna manually

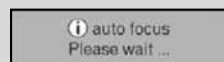
You can determine the optimum position for the desired satellite by monitoring the indicators for signal strength and signal quality. Adjust the dish so that both bar graphs show a maximum value.

- > 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.

9.3.2.3 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.

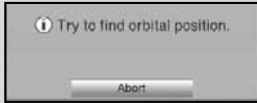
- > Press the **blue** function key **Actions** to open the window listing the available actions.
- > Now use the **arrow keys up/down** to mark the line **Autofocus**.
- > Confirm by pressing **OK**.
- > Press the **yellow** key (Autofocus) to start the autofocus procedure.
The message **Autofocus** will be displayed while the automatic adjustment procedure is in progress.
(Fig. 9-13)



(Fig. 9-13)

9.3.3 Saving a satellite position

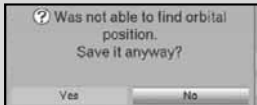
When you have completed the autofocus procedure, you



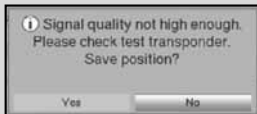
(Fig. 9-14)



(Fig. 9-15)



(Fig. 9-16)



(Fig. 9-17)

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. 9-14)
If this is the case, the following message will be displayed: **Orbital position xx determined. Save satellite ?** (Fig. 9-15)
- > 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. 9-16 and 9-17)
- > To save the satellite position, use the **arrow keys left/right** to mark the field **Yes** and confirm by pressing **OK**.

9.4 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**”.

9.4.1 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.

9.5 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.
- > Use the **arrow keys left/right** to mark the field **OK** in the message displayed, and confirm by pressing **OK**.

9.6 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.

10 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

AV: see SCART

Co-axial cable:

Connection cable between LNB and satellite receiver, as well as between the DVB-T antenna and the receiver, to transmit the signals received, and to provide electrical current to the LNBs and to the DVB-T antenna.

Channel:

Part of a frequency band, allocated according to a specific splitting procedure. A TV channel consists of two frequencies, one for the visual and one for the audio content. Each channel is described in terms of a numeric abbreviation (with the exception of European television channels, which are broadcast in the 40-230 MHz frequency band, and are designated by letters).

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. 10-1).

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.

DVB-T Receiver: see Receiver

External unit or installation:

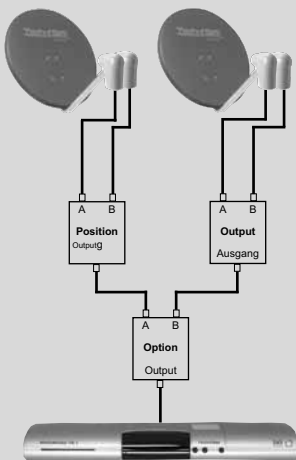
Description used for the entire system of components located outdoors, consisting of the parabolic/offset dish as well as one or more LNBs used to receive signals from one or several satellites.

Frequency:

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

Unit	Description	Oscillations per second
------	-------------	-------------------------

Example:



(Fig. 10-1)

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 fromn 11,70 GHz - 12,75 GHz

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

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

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

OSD:

On **S**creen **D**isplay (messages and menus shown on screen)

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

PID:

Packet **I**dentifier, Packet-ID

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:

The signals received by the DVB-T antenna, resp. received and converted by the LNB cannot be processed by the televi-

sion 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.

Satellite receiver: see 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.

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 Volts.

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

11 Technical data

DVB-S tuner:

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

DVB-T tuner:

Input frequency range	174 ... 230 MHz 470 ... 860 MHz
Tuner input	IEC socket
Input impedance	75 Ohms
Bandwidth	7/8MHz (switchable)
Noise level	<8dB
Demodulation	COFDM
Carrier number	1705/6817
Guard Interval	1/4, 1/8, 1/16, 1/32
Constellation	QPSK, 16-QAM, 64-QAM
Antenna feed	5V/0,03A (double-insulated, switchable)

Card reader:

Type	1 slot card reader for integrated Conax decoding system
------	--

Common Interface:

Type	1 Common Interface slot for CA modules
Power consumption	max. 0,3A/5V

Demultiplexing:

accordance with ISO 13818-1

Video decoding:

Video compression	MPEG-2 und 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
Audio mode	Dual (main/sub), Stereo
Sampling frequencies	32 kHz, 44.1 kHz, 48 kHz

Audio parameters:**Output analogue:**

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

Input analogue:

Input level l/r	0,5 V r.m.s. (nominal)
Input impedance	> 40 kOhm
Volume on switching on	Automatic reproduction of volume level previously set

Output digital:

SP/DIF output	elektrical, cinch socket optical, Toslink Dolby Digital AC3
---------------	---

Video parameters**Output:**

Output level FBAS	1 Vs-s +/- 0.3 dB into 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 in accordance with ETS 300 472 standard
Scanning Teletext data (FBAS) corresponding to ITU-R BT.653-2 lines: 6-22 and 320-335
Soft videotext 1000 pages memory

TV SCART:

Output: FBAS, RGB or S-Video

VCR-SCART:

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

Display:

LED 4-digit, 7-segment display

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 pre-programming

LNB power supply:

LNB current 400 mA max.; double-insulated
LNB voltage vertical <14,0V no load,
> 11,5 V at 400 mA
LNB voltage < 20 V no load,
> 17,2 V at 400 mA
LNB switches off in stand-by mode

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

Programme memory:

Number of programmes Favourites list TV:
999 TV programmes
Number of programmes Favourites list Radio:
999 RADIO programmes

Number of programmes:

Total list TV/Radio: Total of 4000 programmes possible in Total list

DiSEqC:

DiSEqC 1.0 and DiSEqC 1.2

SFI data:

SFI preview: up to 7 days in advance

Timer:

Events: maximum 30 events, one year in advance

Remote control system: RC-5

Subsystem address	8 (SAT 1), 10 (SAT 2)
Modulation frequency	36 kHz
Infrared wavelength	950 nm

Power consumption:

3,2 W	in stand-by mode (clock off)
3,7 W	in stand-by mode (clock on)
7 W	in operation, no LNB
15,5 W	in operation, horizontal polarisation / 400 mA LNB current

Nominal voltage:

12 V Direct Current

Input voltage:

12 V ... 13,5 V Direct Current

General:

Dimensions (WxDxH):	285 mm x 133 mm x 40 ... 43 mm
Weight:	approx. 465 g

12 Trouble-shooting guide

13 Annexure

Problem	Possible cause	Solution
Time not displayed while in stand-by mode	Time not acquired	Switch to major programme e.g. ZDF for approx. 30 seconds Switch on stand-by clock (Point 6.2.4)
No reception when using an active antenna	Antenna feed (5V) not switched on	Switch on antenna feed (Point 6.5)
Receiver cannot be switched on resp. cannot be operated	Receiver blocked	Perform Flash-Reset: Note! All personal settings will be lost. > Disconnect mains power. > Simultaneously press programme up and programme down key on the receiver panel , and keep pressed down. > while programme up and programme down keys are pressed down, reconnect mains power. > Keep keys pressed approx. 5 secs. until display * "FLAS" appears.

13 Annexure

Problem	Possible cause	Solution
Time not displayed while in stand-by mode	Time not acquired	Switch to major programme e.g. ZDF for approx. 30 seconds Switch on stand-by clock (Point 6.2.4)
No reception when using an active antenna	Antenna feed (5V) not switched on	Switch on antenna feed (Point 6.5)
Receiver cannot be switched on resp. cannot be operated	Receiver blocked	Perform Flash-Reset: Note! All personal settings will be lost. > Disconnect mains power. > Simultaneously press programme up and programme down key on the receiver panel , and keep pressed down. > while programme up and programme down keys are pressed down, reconnect mains power. > Keep keys pressed approx. 5 secs. until display * "FLAS" appears.

Problem	Possible cause	Solution
Various programmes not shown correctly in programme list	Incorrect programme list selected	Select other programme list (see Point 7.2.3.1)
Sound OK, no TV picture	Radio mode selected	Switch to TV mode
Satellite programmes such as Pro 7, Sat 1, Neun Live, Kabel 1, DSF and HSE24 show intermittent interference	Interference from cordless DECT telephones	Increase distance between base station and receiver
Receiver cannot be operated	Defective data stream->receiver blocked	Disconnect mains plug for approx. 5 seconds, then reconnect receiver
Remote control not working	Batteries are spent	Replace batteries
Intermittent appearance of square blocks in the picture. Switches to freeze frame intermittently, no sound. Screen intermittently black, with message "No signal".	Heavy rain or snow	Remove snow from dish antenna
	Antenna incorrectly adjusted	Adjust antenna
	Dish too small for your location	Use larger antenna
	Obstacle between dish and satellite, e.g. a tree	Mount dish with clear line of sight
No picture, no sound, display on	Short circuit in LNB connection	Switch receiver off. Repair short circuit, switch receiver on again
	Defective or missing cable connection	Check all cable connections
	Defective LNB	Replace LNB
	Incorrect external unit set at receiver	Correct setting (see Point 6.4)
	Antenna incorrectly adjusted	Adjust antenna
No picture, no sound, display not on	No mains power	Check mains adapter and plug
No reception of programmes that were received previously	Antenna defective or not correctly adjusted	Check antenna
	Programme now being broadcast on a different channel/transponder	Perform a search/scan (see Point 8.4)
	Programme no longer being broadcast	None
Satellite antenna cannot be rotated	Motor not DiSEqC 1.2 compatible	Use suitable motor

Co-ordinates of selected German cities (1)		
City/town	Degrees longitude (E)	Degrees latitude (N)
Aachen	6,1	50,8
Augsburg	10,9	48,4
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
Chemnitz	12,9	50,8
Cottbus	14,3	51,8
Daun	6,8	50,2
Dippach	10,1	51,0
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
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
Fuerstenberg	14,7	52,1
Fuerth	11,0	49,5
Gera	12,1	50,9
Goerlitz	15,0	51,2
Göttingen	9,9	51,5
Greifswald	13,4	54,1
Halle/Saale	12,0	51,5
Hamburg	10,0	53,6
Hannover	9,7	52,4
Heidelberg	8,7	49,4
Heilbronn	9,2	49,2
Hildesheim	10,0	52,2
Hof	11,9	50,3
Karlsruhe	8,4	49,0

Co-ordinates of selected German cities (2)		
City/town	Degrees longitude (E)	Degrees latitude (N)
Kassel	9,5	51,3
Kiel	10,1	54,3
Koblenz	7,6	50,4
Köln	7,0	51,0
Krefeld	6,6	51,3
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
München	11,6	48,1
Neubrandenburg	13,3	53,6
Neumünster	10,0	54,1
Nürnberg	11,1	49,5
Oberhausen	6,9	51,5
Oldenburg/Holsn.	10,9	54,3
Oldenburg	8,2	53,2
Osnabrück	8,1	52,3
Passau	13,5	48,6
Potsdam	13,1	52,4
Regensburg	12,1	49,0
Rostock	12,1	54,1
Saarbrücken	7,0	49,2
Salzgitter	10,4	52,1
Salzwedel	11,2	52,9
Schwerin	11,4	53,6
Solingen	7,1	51,2
Stuttgart	9,2	48,8
Trier	6,7	49,8
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
Wuppertal	7,2	51,3
Würzburg	9,9	49,8
Zwickau	12,5	50,7

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Notes

Notes

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

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).

TV/Radio switching

- > Press the **TV/Radio** key to switch between TV and radio mode.

