

# TechniSat<sup>®</sup>

DIGITAL

## THE ORIGINAL

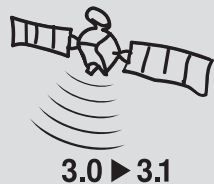
Operating manual

# DIGITAL Receiver DIGIT 4 S



for reception of free-to-air satellite  
programmes

Motor drive control and software updates via satellite



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Your unit carries the CE symbol and complies with all relevant EU standards.

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Technical Hotline

0180/5005-910\*

\*0,12 EUR/Min. in Germany, via the network of Deutsche Telekom AG

Note !

If you need to send the unit in to the manufacturer, please use the following address:

TechniSat Teledigital AG

Service-Center

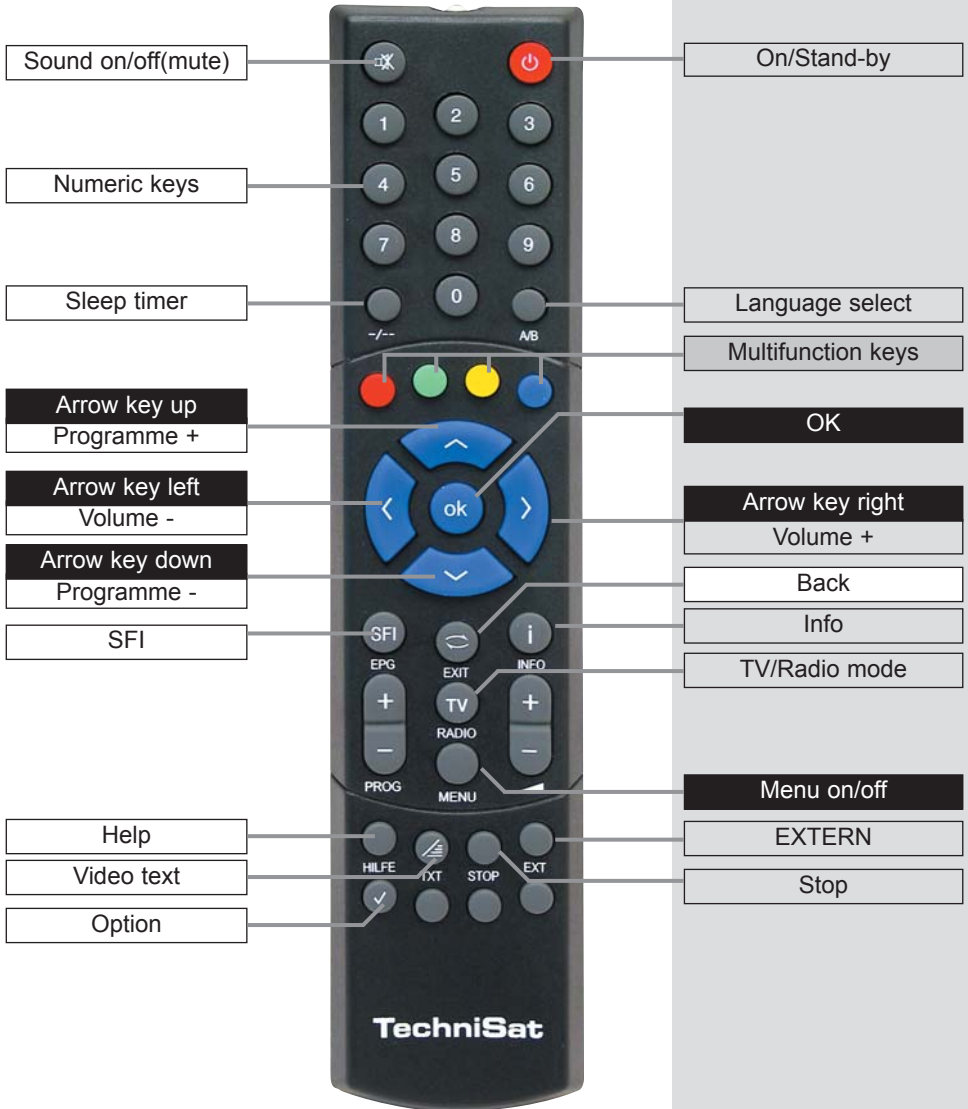
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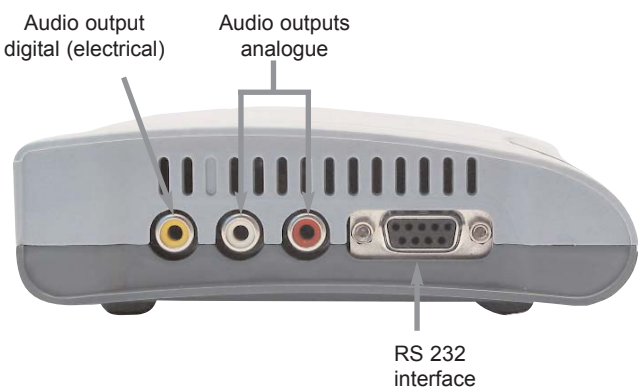
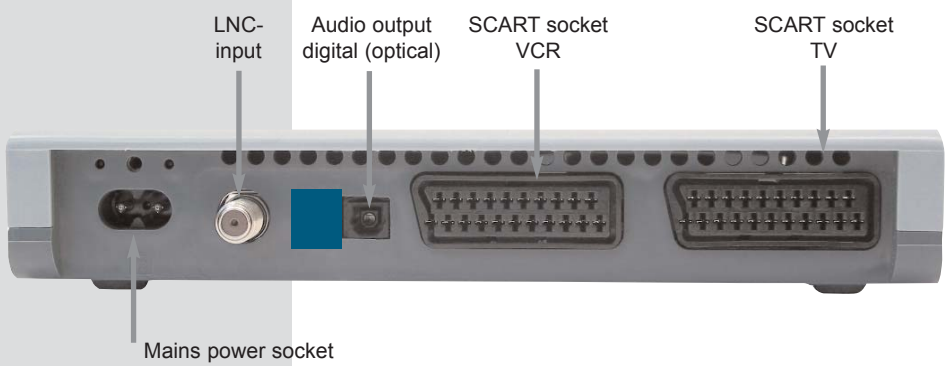
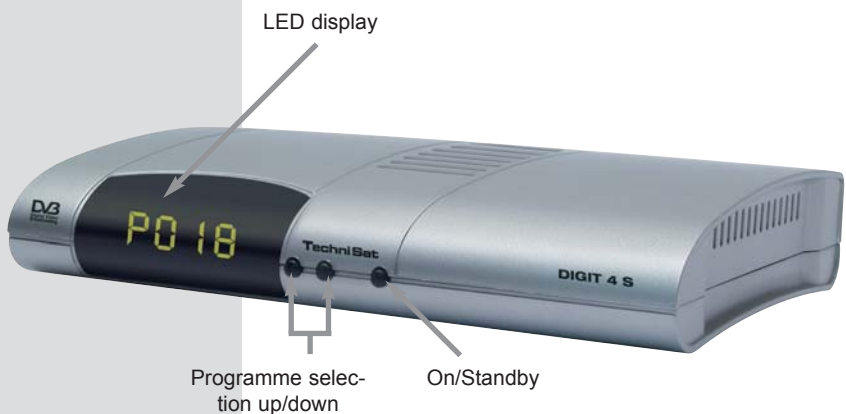
D-39418 Stassfurt/Germany

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## 2 Illustrations

### Remote control





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**Dear customer,**

thank you for selecting the TechniSat DIGIT 4 S digital receiver, and congratulations on your new acquisition.

The operating manual is designed to help you make optimum use of the comprehensive functions of your new digital receiver.

We have tried to keep the operating instructions as clear and simple as possible, while at the the same time keeping them concise and yet comprehensive.

The range of functions of your receiver is currently being expanded by software updates. This may mean that occasionally operating steps will be added that are not yet described in this manual, or there may be cases where the operation of existing functions is changed. For this reason we recommend that you should visit our Internet homepage from time to time, as you can download the latest and most current version of the operating manual from there.

We wish you many years of viewing enjoyment with your TechniSat DIGIT 4 S digital receiver !

Your

Service Team

---

### 3 Please read this first

- > Before commencing operation of the unit, please check that the package contains all the components that should be included.  
The following should be included:  
1 digital receiver, 1 mains power cable,  
1 remote control, 1 operating manual,  
1 guarantee card, 2 batteries (1,5V micro-cell).
- > Insert the batteries supplied in the battery compartment of the remote control unit, ensuring correct polarity as indicated.
- > Before connecting the digital receiver, please first read the security instructions in **Chapter 3**.
- > **Chapters 4, 5 and 6** describe how you must connect your digital receiver, and how to set it in accordance with the external installation (dish, LNC, ...), connecting it to the television set, VCR, etc. These settings are made once only, and need only be adjusted if there are changes to your external unit, or if additional components are to be connected.
- > **Chapter 7** describes all the functions required for everyday operation, such as programme selection.
- > In **Chapter 8** you will find information on how to set new programmes, or how to change the order of programmes in the list.
- > **Chapter 9** describes the settings required when operating a rotating antenna motor.
- > Technical terms used in the operating manual are explained in **Chapter 10**.
- > Technical data may be found in **Chapter 11**.
- > A trouble-shooting guide may be found in **Chapter 12**.

#### Important operating instructions

Operation of the digital receiver is simplified by the use of so-called "On Screen Displays", this also serves to reduce the number of keys required on the remote control unit. All functions are displayed on the screen, and can be operated with a few keys. Related functions are combined in a "MENU". The function selected is highlighted in colour. The "function keys" red, yellow, green and blue are indicated by colour bars in the bottom line. These colour bars represent different functions in the various menus, which will be activated by pressing the appropriate coloured key (multifunction key) on the remote control. The "Function keys" are only active when a brief description is displayed in the appropriate field. Key names and

terms that are displayed in the OSD menu are printed bold in this operating manual.

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

### Disposal advice

The packaging for your unit consists entirely of recyclable material. Please sort the items appropriately, and sort them for disposal via your local waste disposal system. Please note that spent batteries (from the remote control) as well as electronic components should not be disposed of in your household refuse, but should be disposed of in accordance with your local regulations (special waste, handing back to outlet where purchased).



### Safety advice

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

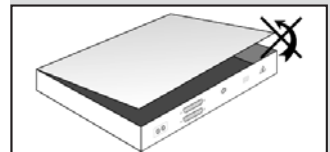
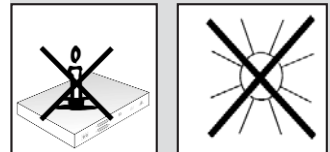
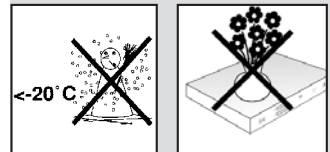
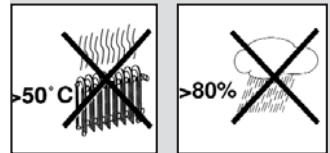
- > To ensure adequate ventilation, place the unit on a smooth horizontal surface, and do not place any objects on the upper surface of the unit. This surface has ventilation slots that ensure heat can escape from the interior of the unit.
- > Do not place any burning objects, such as burning candles, on top of the unit.
- > Do not subject the unit to water spray or droplets, and do not place any objects filled with liquid, e.g. vases, on top of the unit.
- > The unit may only be operated in a temperate climate.
- > Never open the unit housing! You are in danger of receiving an electric shock. Any necessary repairs should be carried out only by qualified service personnel.

**In the following cases, you should disconnect the unit from the mains power supply, and consult a qualified technician:**

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

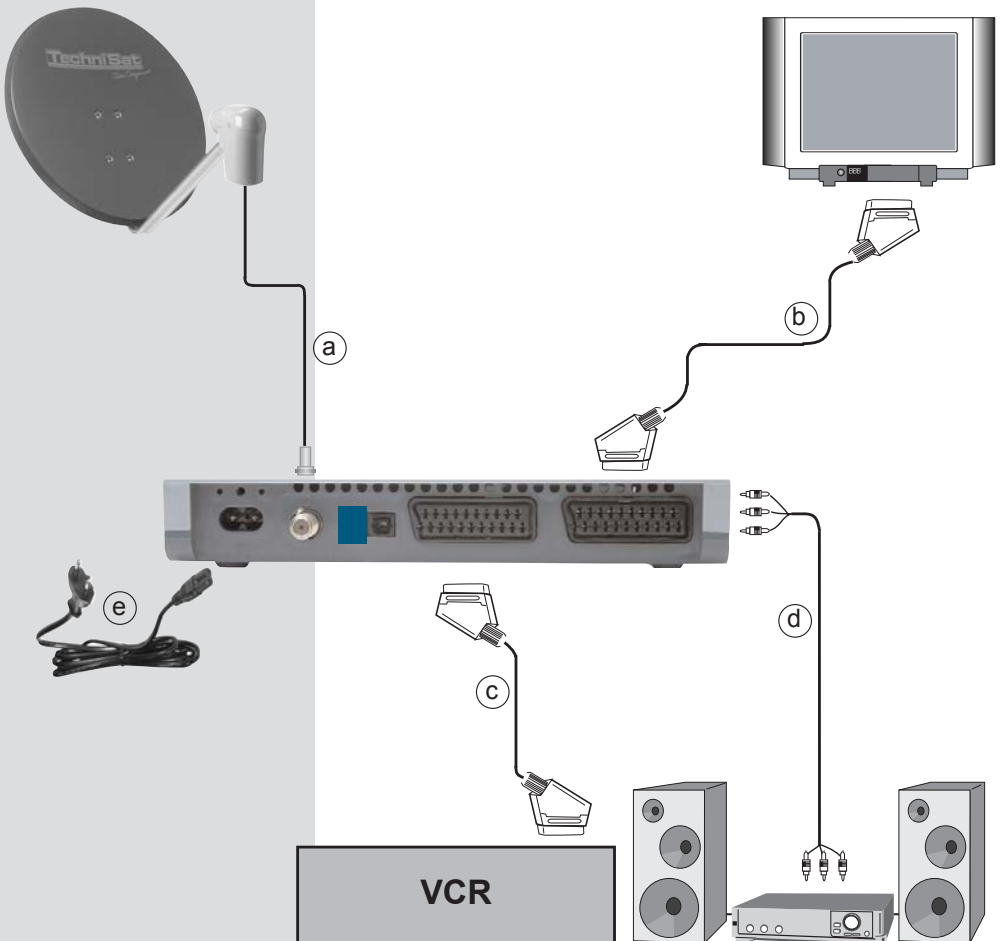
### When not in operation

During an electrical storm, or when the unit will not be used for a lengthy period of time (e.g. while you are on holiday), disconnect the unit from the mains power supply.



## Connecting the DVB receiver to a satellite installation

- a. Connection of the LNC to the **LNC input** (LNC IN) of the DVB receiver.
- b. Start connection between the DVB receiver and the television set.
- c. Start connection from a video player to the **VCR Scart socket** of the DVB receiver.
- d. Connection of the audio outputs with a hi-fi installation.
- e. Mains power connection



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## 4 Connections

The references mentioned below, i.e. **a b c** etc. refer to the illustration on page 10.

### 4.1 External installation

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

### 4.2 Connection to a television set

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

### 4.3 Video cassette recorder (VCR)

- c** Connect the video recorder to the SCART socket marked **VCR**. In Playback mode, the video recorder will supply a switching signal to the digital receiver, thus supplying the video recorder signal automatically to the television set.  
If your video recorder does not supply a switching signal, use the **O/AV** key to switch your digital receiver to the external input **AV**. Pressing this key again will return you to normal viewing operation.

## 4.4 Hi-Fi amplifier

### 4.4.1 Analogue

- d** To achieve the best possible sound quality, you may connect the digital receiver to a Hi-Fi amplifier. 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).

### 4.4.2 Digital

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

Depending on the station selected, sampling rates of 32, 44.1 and 48 kHz are available.

In addition, if broadcast, the Dolby Digital signal (AC3) is available at this output.

## 4.5 Serial interface (RS 232)

The RS 232 interface is used for operating system updates as well as for pre-programming via a personal computer PC.

## 4.6 Mains power connection

The digital receiver should only be connected to the mains power supply once the unit has been completely connected to all other components in the system. This helps to avoid damage to the digital receiver or other components.

- When you have made all the connections, use the mains power cable supplied to connect the receiver with the mains power socket (230 V/50-60 Hz).

## 5 Initial installation

When you have read through the safety instructions, and have connected the receiver as described in Chapter 4, switch on the unit as described in Chapter 7. When switching on the unit for the first time, a start window will be displayed, with the installation assistant **AutoInstall**. (Fig. 5-1). Use the installation assistant to quickly and simply make the most important settings on your digital receiver.

To make the settings in each step of the installation, the remote control keys required are highlighted.

You can abort the initial installation at any time simply by pressing the **red** function key. Press the **green** function key to go back to the previous step in the installation procedure. Thus any entries made in error can be quickly corrected. If you do not implement the initial installation, or if it is not completed, the receiver will commence operation with a standard pre-programmed configuration.

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

### Operating language:

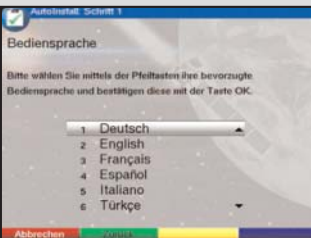
- > Press the **OK** key to open the display window for the **Operating language**. (Fig. 5-2)
- > Use the **up/down arrow keys** to select the desired operating language.
- > Confirm by pressing **OK**.

### Audio language

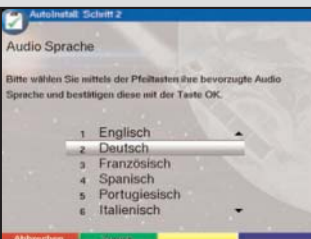
- > Use the **up/down arrow keys** to select the preferred audio language. (Fig. 5-3)
- Once the installation assistant has been completed, the sorting of programmes in the Favourites list will be made in accordance with your selection.
- > To accept the selection, confirm by pressing **OK**.



(Fig. 5-1)



(Fig. 5-2)



(Fig. 5-3)

## Country selection

- > Use the **arrow keys up/down** to select the time zone corresponding to your country of residence. (Fig. 5-4)  
The time will be set automatically depending on your selection.
- > Confirm by pressing **OK**, to accept your selection, and proceed to the antenna configuration.

## Antenna configuration

In this installation step you can adjust the setting of your digital receiver to the configuration of your antenna.

- > If you wish to accept the standard antenna setting, use the **arrow keys up/down** to mark the field **Standard** and confirm by pressing **OK**. (Fig. 5-5)  
In this case continue with the item "**Updating Software**".
- > If the configuration of your receiving installation does not correspond with the standard setting, mark the field **Manual** and confirm by pressing **OK**.

## DiSEqC

- > If you have DiSEqC components in your receiving installation, mark the field **Activate** and confirm by pressing **OK** (Fig. 5-6). (Additional information on DiSEqC can be found in Chapter 10, Technical Terms).

## Position A/Option A

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

## Position B/Option A

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

## Position A/Option B

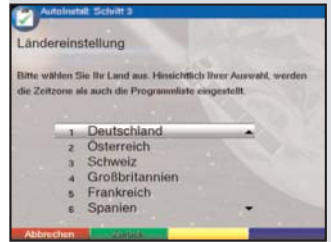
- > Use the **arrow keys up/down** to mark the satellite you wish to receive at the DiSEqC setting Position **A/Option B** and confirm by pressing **OK**. (Fig. 5-9)

## Position B/Option B

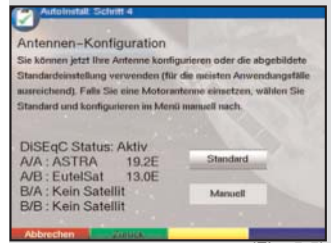
- > Use the **arrow keys up/down** to mark the satellite you wish to receive at the DiSEqC setting Position **B/Option B** and confirm by pressing **OK**. (Fig. 5-10)

In the next step, you should check on the correct configuration of your antenna.

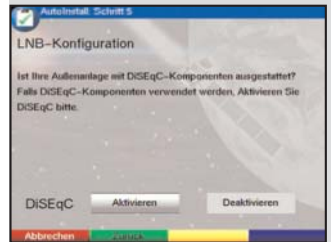
- > If you wish to accept the settings entered, use the **arrow keys up/down** to mark the field **Yes**, and confirm by pressing **OK**. (Fig. 5-11)



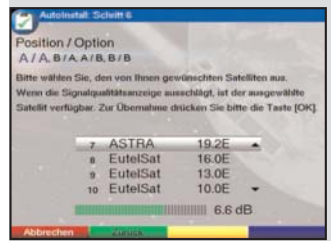
(Fig. 5-4)



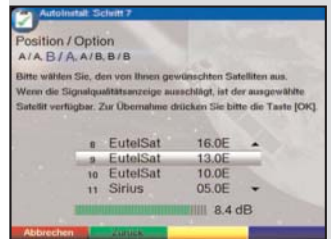
(Fig. 5-5)



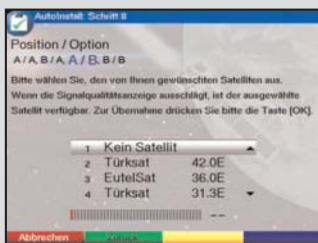
(Fig. 5-6)



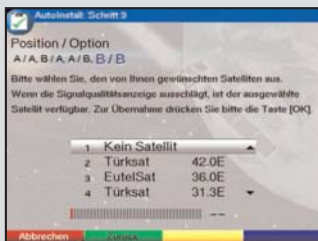
(Fig. 5-7)



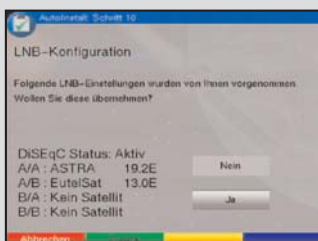
(Fig. 5-8)



(Fig. 5-9)



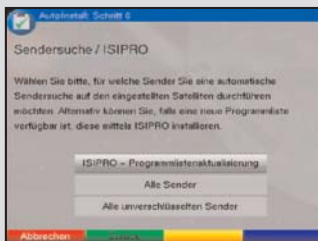
(Fig. 5-10)



(Fig. 5-11)



(Fig. 5-12)



(Fig. 5-13)

## Updating Software

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

- > Use the **arrow keys left/right** to select the field **Update**, and confirm by pressing **OK**. (Fig. 5-12)  
The new software for your unit will now be downloaded. This procedure may take several minutes.

## Searching for programmes / ISIPRO

When checking whether new software is available for the receiver, the system will also in addition check whether a new **ISIPRO programme list** is available. 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. 5-13)
- > Confirm by pressing **OK**.  
The current programme list will now be downloaded via satellite. Please note any additional on-screen messages, as well as the explanation at Point 9.5.3.

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

- > To do this, use the arrow keys up/down to mark the field **All**, if you wish to scan for both free-to-air and encrypted programmes, or **All free**, if you wish to scan only for free-to-air programmes.
- > Confirm your selection by pressing **OK**, an automatic programme scan will be started. All the satellites included in the antenna configuration will be scanned for programmes. This procedure may take several minutes. Please note any messages displayed on screen.

## Terminating the installation assistant

- > Confirm the final message (Fig. 5-14) of the installation assistant by pressing **OK**, this will return you to normal operation.

## 6 Settings

You have now made all the necessary connections and commenced operation of your new digital receiver. If necessary, you can now proceed to optimise the settings of the digital receiver according to your preferences.

### 6.1 Operating language

This menu item gives you the opportunity to set the menu

language according to your personal preference.

To change the operating language, proceed as follows:

- > Press the **Menu** key to call up the **Main Menu**.  
(Fig. 6-1)
- > Use the **arrow keys up/down** to mark the menu line **Operating language**.
- > Confirm by pressing **OK**.  
The sub-menu **Operating language** will be displayed.
- > Use the **arrow keys up/down** to mark the desired language.
- > Store this selection in memory by pressing **OK**.
- > Press the **Back** key to return to the **Main Menu**.

## 6.2 Basic settings

To ensure optimum enjoyment from your DVB receiver, you should still make the necessary settings according to your personal preferences.

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

### 6.2.1 Time difference to GMT (hours)

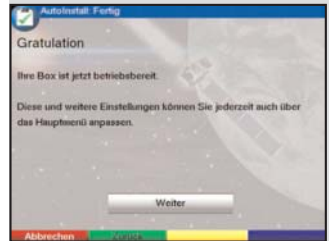
Your unit is equipped with a clock. This is synchronised via satellite with **Greenwich Mean Time**.

If in the category **Country** (Point 6.2.2) you have selected the setting **None**, then you must simply correct the clock time corresponding to your local time using the **arrow keys left/right**. In the case of Germany, the difference is +1 hour in winter, +2 hours in summer.

### 6.2.2 Country

This function enables the automatic change from standard to daylight savings (summer/winter) time.

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



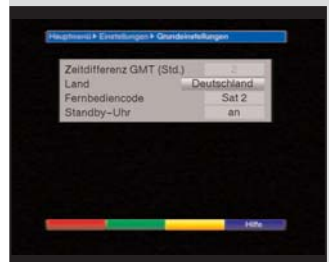
(Fig. 5-14)



(Fig. 6-1)



(Fig. 6-2)



(Fig. 6-3)

### 6.2.3 Remote control code

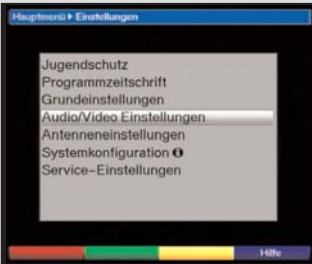
Your receiver may be operated by means of the remote control unit supplied (remote control code SAT2) or with an optional remote control using the remote control code SAT1. In this line you must decide whether you wish to allocate the remote control option **SAT1** or **SAT2** to your receiver.

- > To do this, press down the **OK** key as well as either the **SAT1** or **SAT2** key simultaneously.  
Press the **Back** key to return to the menu **Settings**, or press the **Menu** key to return to normal operation. The settings will be saved to memory automatically.

### 6.2.4 Standby clock

In this line you must decide whether the time should be displayed on the receiver while it is in stand-by mode.

- > In this line, use the **arrow keys left/right** to set the mode of the standby clock to **on** or **off**.
- > Press the **Back** key to return to the menu **Settings**, or press the **Menu** key to return to normal operation. The settings will be saved to memory automatically.

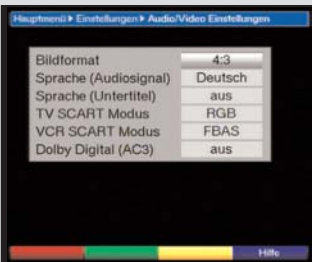


(Fig. 6-4)

### 6.3 Audio/Video settings

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

- > Press the **Menu** key to display the **Main Menu**.
- > Use the **arrow keys up/down** to mark the line **Settings**.
- > Confirm by pressing **OK**.  
The sub-menu **Settings** will be displayed. (Fig. 6-4)
- > 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. 6-5)
- > 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 note any messages displayed on screen. The following settings may be made:



(Fig. 6-5)

#### 6.3.1 Picture format

- > Use the **arrow keys left/right** to set the picture format appropriate for your TV set: **4:3** or **16:9**. This function provides the automatic adjustment of the picture format for your television set.

#### 6.3.2 Language (Audio signal)

- > Use the **arrow keys left/right** to select your preferred

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language in this line. This function will automatically select the preferred language, where available, following a scan.

### 6.3.3 Language (Sub-titles)

Your DVB receiver is equipped to display sub-titles. If the sub-title function is activated, and the language selected is being broadcast, these will be displayed automatically. If the function is not activated, sub-titles can be switched on manually. The availability of sub-titles is indicated by display of the message **Sub-title selection**. 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 according to your TV set, to **FBAS**, **RGB** or **S-Video**. For standard sets, select **FBAS**.

### 6.3.5 VCR SCART mode

In this line, use the **arrow keys left/right** to select the parameter according to your TV set: **FBAS** or **S-Video**. For standard sets, select **FBAS**.

### 6.3.6 Dolby Digital (AC3)

Various movies are broadcast in Dolby Digital format. This is indicated by display of the Dolby logo  in the information window, once the programme has been selected.

If you have a Digital 5.1 channel amplifier, you can, where available, enjoy 5.1 channel Dolby Digital sound with specific movies. The only requirement is that the digital output Audio Out Digital (see Point 4.5.2) of your DVB receiver must be connected with the digital input of your Dolby Digital 5.1 channel amplifier.

If a programme is being broadcast in Dolby Digital sound, this will be indicated by display of the Dolby logo when you switch to the programme. If the Dolby Digital function (AC3) is activated (**on**), these programmes will automatically be reproduced in Dolby Digital format.

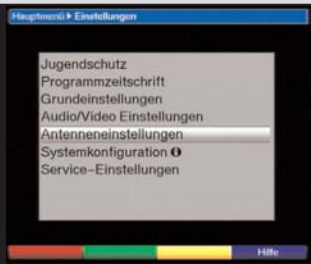
If the function is not activated (**off**), Dolby Digital sound can also be switched on manually. Please also note Point 7.5.1 of the operating manual.

## 6.4 Antenna settings

When you have completed adjusting your digital receiver to your individual preferences, you may, if required, still have to set your digital receiver in accordance with your antenna. In the menu **Antenna settings** you will find the satellites selected by the installation assistant. If the installation assistant was terminated prematurely, the satellite positions ASTRA and EUTELSAT are pre-programmed.



(Fig. 6-6)



(Fig. 6-7)



(Fig. 6-8)

If you wish to receive other satellites, or are using a different type of LNC, adjust your digital receiver as follows for your requirements:

- > Press the **Menu** key to display the **Main Menu**. (Fig. 6-6)
- > Use the **arrow keys up/down** to mark the line **Settings**.
- > Confirm by pressing **OK**. The menu **Settings** will be displayed. (Fig. 6-7)
- > Now use the arrow keys up/down to mark the line **Antenna Settings**.
- > Confirm by pressing **OK**. The menu **Antenna Settings** will be displayed. (Fig. 6-8)

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

#### 6.4.1 Switching DiSEqC on or off

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

- > In this line, use the **OK** key to switch **DiSEqC on or off**.

As only one LNC can be addressed if the DiSEqC control is switched off, the menu is restricted to the configuration of a single LNC.

#### 6.4.2 Setting the switching matrix

Four switching criteria for the DiSEqC control are indicated in the menu. Your receiver is pre-programmed, so that ASTRA will be received at switching position A/A and Eutelsat at switching position B/A of a multi-switch. Should your receiving installation be configured differently, or should you receive other satellites, you can adjust the settings of your digital receiver to your antenna as follows.

- > Use the **arrow keys** to select the DiSEqC switch position (1-4) you wish to allocate to a particular satellite (e.g., **A/B 3 No Satellite**), and mark this line.
- > Confirm by pressing **OK**. A table will be displayed, allowing you to select from various satellites.
- > Use the **arrow keys up/down** to mark the selected satellite. The **arrow keys up/down** will move the marker up or down the list one line at a time, use the **arrow keys left/right** to move back or forward one page at a time. If the satellite you are looking for is not included in the list, please select a reserve position, designated **User 1** to **User 14**.
- > Confirm by pressing **OK**. The selected satellite will

now be added to the menu **Antenna Settings** at the previously marked position.

Now proceed to enter the data in the menu **Antenna Settings**, until the data in this menu corresponds with that of your antenna installation. For any switching criteria not required select the setting **No Satellite**.

### 6.4.3 Additional LNC settings/LNC properties

When you have completed setting the switching matrix of your DVB receiver in accordance with your antenna installation, you should check the remaining settings for the reception installation, and adjust the settings where necessary.

- > Use the **arrow keys left/right** to move the marker to the column **Configuration**.
- > In the line on which you wish to check or adjust the settings, use the **arrow keys up/down** to mark the field **Continue**.
- > Confirm by pressing **OK**.  
A sub-menu will be displayed, allowing you to adjust LNC settings or to set up a test transponder. (Fig. 6-9)

The following settings can be made:

#### LNC Type

- > In this line, use the **arrow keys left/right** to enter the type of LNC you are using. The options available are **Single LNC**, **Quatro LNC**, **DisiCon 1 LNC**, **DisiCon 2 LNC**, **DisiCon 4 LNC**, **C-Band LNC** and a **User LNC** for manual entry of LNC data.
- > Press **OK** to accept the setting.

#### Test transponder

The following items of this menu should only be entered if you wish to check the signal of a 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 being transmitted per second. This could be, for instance, 27500 (i.e. 27500 symbols per second). Enter the appropriate symbol rate using the **numeric keys**.

#### User LNC

If you have entered **User LNC** under the DiSEqC type, additional settings may be made:

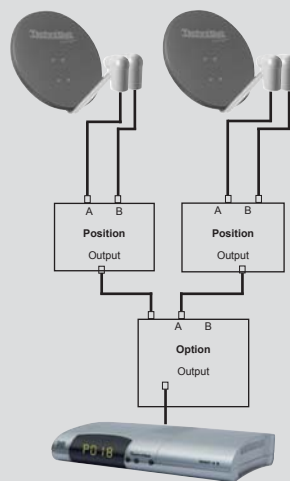
#### LOF low band

LOF (Local oscillator frequency) is the frequency at which an LNC converts the frequency received into the so-called 1.



(Fig. 6-9)

Example:



intermediate frequency, which then can be received and interpreted by the digital receiver. So-called Universal LNCs work with 2 LOFs, in order to cover the entire reception range from 10.7 to 11,8 GHz (low-band) and 11,7 to 12,75 GHz (high-band).

> In this line, use the **numeric keys** to enter the LOF of the Low Band of yourLNC.

### **LOF high band**

> In this line, use the **numeric keys** to enter the LOF of the High Band of yourLNC.

### **Transition LOF low/high**

> In this line, use the **numeric keys** to enter the frequency at which the LNC makes the transition from the Low Band to the High Band.

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

### **Signal/Quality**

Provided you have entered the data for the test transponder correctly, these lines will indicate the signal strength and quality.

## **6.4.4 Rotating antenna**

If you are using the 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.

## **7 Operation**

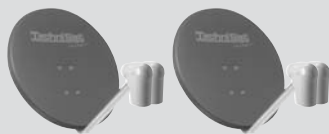
### **7.1 Switching on and off**

- > Switch the digital receiver on by pressing the **On/Standby** key, either on the receiver or on the remote control.
- > Press the same key again, either on the receiver or on the remote control, to switch it off again.
- > The receiver is now in standby mode, and the time will be shown in the display of the receiver (if activated as per Point 6.2.4).  
If the current time is not displayed, this must still be acquired by the receiver. To do this, switch the unit on, and set it to receive a major channel such as ZDF for about 30 seconds, during which time the clock setting will be automatically acquired.

### **7.2 Selecting a programme**

#### **7.2.1 Using the Programme up/down keys**

- > You may use the **programme keys up/down** either on the receiver or on the remote control to switch



up or down one programme slot at a time.

## 7.2.2 Using the numeric keys

> You may 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 approximately 3 seconds after pressing a key to complete the entry.

If you wish to enter a programme number consisting of only one or two digits, you can speed up the switching procedure by holding down the key on the last digit a little longer.

## 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 only radio programmes when in Radio mode. The programme currently selected is marked. (Fig. 7-1)

- > Now use the **arrow keys up/down** to mark the desired programme.
- > Press the **OK** key to display the marked programme.
- > Use the **arrow keys up/down** to move the marker in the list by one line at a time.
- > Use the **arrow keys left/right** to move back and forth in the list one page at a time.



(Fig. 7-1)

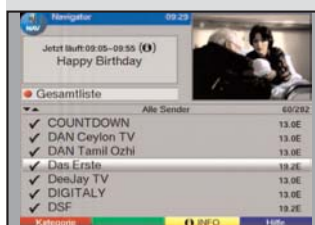
### 7.2.3.1 Selecting a list

Your receiver is equipped with several programme lists, designed to make it easier for you to find a programme. You may select your **Favourites list** (see Point 8.1), or view the alphabetically sorted **Total List**, or view a list sorted by **Providers**.

- > Press the **OK** key. The active programme list will be displayed.
- > Use the **red** function key **Category** to open a window showing the types of programme lists (**Favourites list, Provider lists and Total list**). The active type of programme list is marked. (Fig. 7-2)
- > Use the **arrow keys up/down** to select a type of programme list, e.g. **Total list**.
- > Confirm by pressing **OK**.  
The alphabetically sorted total list will be displayed, containing all programmes. (Fig. 7-3)
- > Use the **arrow keys up/down** to mark the programme you wish to view.
- > Confirm by pressing **OK**.



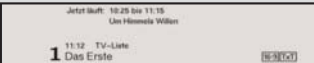
(Fig. 7-2)



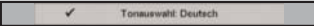
(Fig. 7-3)



(Fig. 7-4)



(Fig. 7-5)



(Fig. 7-6)



(Fig. 7-7)

## 7.2.4 Calling up blocked programmes

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

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

or

> Switch to a programme that is not blocked.

If you have selected the setting **on** under Point 8.3.2, the request for the PIN code will be displayed every time you select a blocked programme. However, to make operation more convenient for you, the PIN code must be entered only once during an operating phase.

## 7.2.5 Information box

Every time you switch programmes, an information box will be displayed briefly (Fig. 7-5) showing the programme slot as well as the name of the programme selected. In addition, other programme characteristics will be indicated, for example **TEXT** for video text, **16/9** for a 16/9 format programme, **ENC** for encrypted programmes. Also, where broadcast, the EPG genre will be displayed, plus any age restriction (FSK = Freiwillige Selbstkontrolle der Filmwirtschaft in Germany).

## 7.3 Volume control

Your digital receiver is equipped for volume control. This makes operation of the receiver more convenient, as you thus have all important functions combined on the remote control of the receiver, and will only rarely have to use the remote control of your television set. When the digital receiver is switched on, sound volume will be set at the level last used.

- > Adjust the volume of your digital receiver using the **Volume +** key to increase the volume, and **Volume -** to decrease the volume.
- > Press the **Sound on/off key** to mute the sound, press the key again to switch sound back on again.



## 7.4 Selecting a different language

If a programme is broadcast in several languages, or with multichannel sound, this information will be displayed (Fig. 7-6) on screen. You may then proceed as follows to select a different language or a different sound channel:

- > Press the key **Language Select**. A list will now be displayed (Fig. 7-7) on screen, indicating the languages currently available.
- > Use the **arrow keys up/down** to mark the desired language, and confirm by pressing **OK**.

You may now listen to the programme in the language selected. Your digital receiver is also equipped to receive monaural

programmes.

- > Use the **arrow keys left/right** to choose between Mono channel 1 () , Mono channel 2 () and Stereo () .

#### 7.4.1 Dolby Digital (AC3 mode)

Where a programme is broadcast with Dolby Digital sound, this will be indicated by the Dolby logo in the information box when you switch to the programme. If you have switched on the Dolby Digital (AC3) function in accordance with Point 6.3.6, this programme will then automatically be reproduced in this format.

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

- > Press the **Language Select** key. Where available, a list of the currently available languages and **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 enjoy Dolby Digital sound for this programme. If you would like your receiver to reproduce Dolby Digital broadcasts automatically, proceed to make the settings as described in Point 6.3.6 for automatic AC3 reproduction.

#### 7.5 TV/Radio switching

The pre-programmed settings include both radio and TV programmes.

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

#### 7.6 Return to last programme selected

- > Pressing the **Back** key on the remote control will take you back to the last programme previously selected.
- > Press the key again to return to the programme previously selected.

#### 7.7 Display time and programme information

This function allows you to see programme information related to the programme currently selected.

- > Press the **Info** key to display information on the programme currently selected (*Fig. 7-8*).

The bottom half of the screen will now show the current time, the name of the channel selected, the name of the current programme being shown, as well as the starting and ending times of this programme, in as far as this data is broadcast by the provider.



(Fig. 7-8)

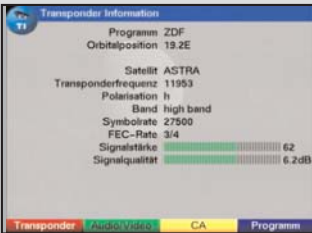


(Fig. 7-9)

## 7.8 Additional programme information

Where available, the programme information function can also provide further information on the currently selected programme.

- > Press the **Info** key twice to open an additional information window (Fig. 7-9) . Additional information on the current programme will be displayed.
- > You can scroll through lengthy information text one line at a time using the arrow keys left/right.
- > Where this information is broadcast, pressing the **Info** key once more will display information on the following programme.
- > Pressing the **Info** key once more will switch off the information display.



(Fig. 7-10)

## 7.9 Transponder information

- > Press the **OK** key to call up the Navigator.
- > Use the **arrow keys** to mark the programme on which you would like to view the data.
- > Press the **Option** key to display the data of the transponder selected (Fig. 7-10).
- > You may use the coloured function keys to also view additional **Audio/Video** information, **Programme** information as well as, where relevant, information on the **encryption system** (CA) in use.
- > Exit from the information function by pressing the **Menu** key.

## 7.10 Freeze frame

- > Press the **Freeze Frame** key to view the current image as a still picture.
- > Press the same key again to return to normal operation.

## 7.11 Sleep timer

- > Press the **Sleep Timer** key once or repeatedly to set the switch-off time of the receiver in the range of 15 minutes to 2 hours. When the selected time has elapsed, the receiver will switch automatically to Standby mode.

## 7.12 Video text

### 7.12.1 Using the video text decoder of your television set

Wherever it is broadcast, video text will be supplied to your television set. To operate the video text display, use the remote control of your television set. If you experience problems

with your television set, such as overlapping of video text and picture content, you should set your digital receiver to **FBAS mode** (Point 6.3.4).

### 7.12.2 Using the internal video text decoder

As an alternative, you may use the integrated TOP video text decoder to display the information. With TOP video text all text pages are automatically divided into groups and blocks, which makes the video text more readable.

- > Switch to the programme on which you wish to view video text information.
  - > Press the **Videotext** key to switch on the video text display. (Fig. 7-11)
  - > Use the **numeric keys** to enter the video text page you wish to view. Your entry will be displayed in the top left hand corner of the screen. Once you have entered the desired video text page, the receiver will search for the appropriate page.
- As not all video text pages can be transmitted simultaneously, it may take a few seconds for your receiver to find the correct page, and to display it on the television screen.

All video text providers use page 100 to show the index to contents.

- > Use the **red** resp. **green** keys to page forward or backward one page at a time.
- > Use the **yellow** function key to display the video text group shown in the yellow field.
- > Use the **blue** function key to display the video text block shown in the blue field.

#### Mixed operation

- > Pressing the **Videotext** key again will switch to mixed operation, i.e. both video text and TV picture will be shown simultaneously on the screen.
- > Press this key again to return to normal operation.

#### Stop paging

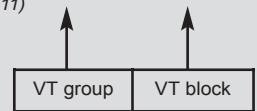
- > Press the **Freeze frame** key, and the upper left corner of the video text window will display the message "Stop". This stops the continued paging through the video text sub-pages. Press the **Freeze frame** key again to disable the Stop operation again.
- > Press the **Back** key to return to normal operation.

### 7.13 Sub-titles

Where sub-titles are broadcast, this is indicated by displaying the message **Select Sub-title**. If you have enabled the **Sub-title** function in accordance with Point 6.3, these will be automatically displayed, with the provision that they are being broadcast in the language selected.



(Fig. 7-11)



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If the sub-titles are only being broadcast in other languages, or are only available via video text, you can switch the display on manually as follows.

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

Please note that these functions are only available when sub-titles are actually being transmitted. This setting will not be retained after switching programmes.

## 7.14 Electronic Programme Guide SFI (**S**ieh**F**ern **I**nfo)

Your digital receiver is equipped with an electronic programme guide. This means that you can display information relating to one or more programmes on your screen.

This enables you to obtain a very quick overview of programmes currently running, or of the day's programmes, or those of the next day.

**The SFI functions allow you to:**

- display information on programme contents on your screen
- pre-select programmes, which will be selected automatically when the programme/show starts
- programme timer functions
- search for and select programmes according to type (genre).

### 7.14.1 Downloading SFI data

The programme information will be updated by your receiver at the update time set in accordance with Point 8.2 (SFI channel). The pre-requisite for this is that your receiver must be in stand-by mode at this time.

The download procedure will be indicated by the message **Load SFI** on the display. If your receiver is switched on and in operation at this time, the function will not be executed.

You may also start the download procedure manually, simply by pressing the **SFI** key immediately after switching off the receiver (i.e. while the display shows "Stand-by"). While the download procedure is in progress, the message **Load SFI** will appear in the display, followed by a record of the volume of SFI data already downloaded (e.g. 38%).

The duration of the downloading procedure will depend on the number of programmes included. Programmes can be shown a maximum of seven days in advance. Based on the volume of data involved, the more programmes are included,

the shorter is the period for which preview information can be included in the electronic programme guide.

You can decide for yourself which programmes are to be included in the electronic programme guide. These can then be added to the list as described in Point 8.1.5.

### 7.14.2 Interrupting the download procedure

The download procedure may be interrupted by switching on the digital receiver (**On/Standby** key). The SFI data downloaded at the previous download will then still be available.

### 7.14.3 Display electronic programme guide

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

The electronic programme guide will now be displayed on the screen (Fig. 7-12). Here, the programmes you have selected, or the programmes included in the factory default settings, will be displayed with their current programmes (see also **Point 8.2**). You can now also use the SFI function to obtain information on the contents of various programmes.

In addition, you may use the SFI functions to select a particular programme, to pre-select a programme, or to set a timer for a programme.

### 7.14.4 Now (table with current programme contents)

The first SFI table to be displayed is the “Now” table (Fig. 7-12) showing the programmes currently broadcast. The yellow bar to the right of the programme name indicates the elapsed time of the current programme. The programme currently selected is marked.

- > Use the **arrow keys up/down** to move the marker through the list one line at a time. To move the marker one page at a time, use the **arrow keys left/right**.
  - > The SFI functions (Point 7.14.3) are now available for use.
  - > Press the **yellow** function key to go to the SFI table “Next” (see Point 7.14.5)
- or
- > Press the **TV/Radio** key to return to normal operation.

### 7.14.5 Next

- > Use the **yellow** function key to call up the table “Next” (following programmes). (Fig. 7-13)
- > All the SFI functions are available (Point 7.14.3).
- > Press the **yellow** function key to go to the SFI table “More” (Point 7.14.6)



(Fig. 7-12)



(Fig. 7-13)

JETZT	DANACH	12.00	Heute 18.03.
Das Erste	12:00/12:15	heute mittag	
ZDF	12:00/12:15	heute mittag	
ProSieben	11:58/12:59	AVENZIO - Schöner leb...	
SAT 1	12:00/13:00	Vaya	
RTL	12:00/13:00	Punkt 12 - Das RTL-Mitt...	
RTL2	11:25/12:25	Big Brother	
S RTL	12:00/12:30	Die drei Bären	
VOX	11:15/12:10	Eine hässliche Familie	
KABEL1	11:16/12:18	Perry Mason	
TELE 5		20 Jahre Stern im Spiegel	
Bayrisches FS	11:45/12:30	BayernTour	
heaven fernsehen	11:50/12:15	Schleswig-Holstein Mag...	

(Fig. 7-14)

- or
- > Press either the **green** function key or the **Back** key to return to the previous SFI table **“Now”**
- or
- > Press the **TV/Radio** key to return to normal operation.

### 7.14.6 More

- > Pressing the **yellow** function key again while the SFI table **“Next”** is displayed will take you to the SFI table **“More”**. (Fig. 7-14)

In this table, an additional time window is shown in the title line. The time of the SFI table is displayed in this window.

- > Press the **yellow** function key to page forward by the time period shown in the **yellow** coloured field.
- > Hold down the **yellow** function key to page forward continuously. A clock is displayed to give you a better overview.

Press the **green** function key in the same way to page backward through the tables.

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

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


or

Press the **Back** key to return to the table **“Next”**.

### 7.14.7 SFI functions

To execute the following **SFI** functions, call up the SFI as described in Point 7.14.3.

#### 7.14.7.1 SFI Information

Use the **SFI Info** to obtain brief information on the marked channel or programme. If SFI information is available, this is indicated by a  next to the appropriate programme.

- > Use either the **arrow keys** or the **function keys** to mark the desired programme.
- > Press the **SFI** key to display the information. You can scroll or page through lengthy information text using the **arrow keys**.
- > Press the **Back** key to return to the previous table.

#### 7.14.7.2 SFI timer programming

The electronic programme guide SFI allows you to programme timer events with particular ease.

- > Use the **arrow keys** or 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 required **Timer type** (see Point 7.15.1.2).
- > Confirm by pressing **OK**. The menu **Manage timer** showing the data relating to the programme selected will be displayed, so that you can check on the correctness. If required, you can make changes in this menu (see 7.15).
- > Press the **Back** key to return to the previous table. The relevant line is marked. Depending on the timer type in use, the receiver will now be switched on at the commencement of the selected programme. If the receiver was switched on by means of the video recorder timer, this will be indicated by the message “rEc” shown in the display. Most of the functions of the remote control are disabled at this stage, to avoid accidental interruption of the recording. In stand-by mode, an active timer is indicated by the colon in the time display blinking, or by the LED.

### Deleting a SFI timer event

- > If you would like to cancel a timer event programmed via the SFI, proceed as described above, to mark 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 abort an active timer, switch of the digital receiver using the **On/Standby** key.
- > Press the same key again to switch the receiver on again, and full functionality will be restored.

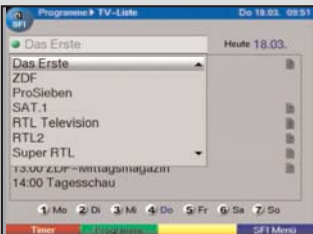
### 7.14.7.3 SFI programme overview

Use the SFI programme overview to display a table with the day’s programmes 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.
- > Use the **arrow keys up/down** to mark the line **Programmes**.
- > Confirm by pressing **OK**. The day’s overview of the programme selected will be displayed. (Fig. 7-15)
- > Use the **arrow keys** to move the marker to the desired programme or time. The individual days of the week will be shown along the lower edge of the screen. If information is available for the following days, the appropriate fields will be marked.



(Fig. 7-15)



(Fig. 7-16)

- > To display the programme contents for a specific day, use the **numeric keys** to enter the number for the appropriate day.

### Display SFI overview for other programmes

- > Press the **green** function key **Programmes**. A list of SFI programmes will be displayed. (Fig. 7-16)
- > You can now use the **arrow keys** to mark the desired programme.
- > Press the **OK** key to display the SFI overview of the programme selected.

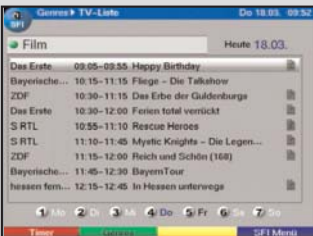


(Fig. 7-17)

### 7.14.7.4 SFI overview by programme type (genre)

If you are interested in specific types of programmes, you can view programme information sorted by specific categories, or genres, e.g. movies, news, etc..

- > Press the **SFI** key. The SFI table "**Now**" will be displayed.
- > Press the **blue** function key **SFI Menu** to open a selection window.
- > Use the **arrow keys up/down** to mark the line **Genres**.
- > Confirm by pressing **OK**.
- > Use the **green** function key **Genres** to open a window showing the programme types available. (Fig. 7-17)
- > Use the **arrow keys** to select the desired programme type, and confirm by pressing **OK**. An overview for the day will be displayed showing only programmes of the type selected. (Fig. 7-18)
- > Use the **arrow keys up/down** to move the marker to the desired programme.
- > Use the **arrow keys left/right** to page through the list a page at a time. The individual days of the week are displayed along the bottom of the screen. If information for the following days is available, the appropriate fields will be marked.
- > To display the programme contents of a specific day, use the **numeric keys** to enter the number corresponding to the day of the week.



(Fig. 7-18)

### 7.14.8 Terminating SFI

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

### 7.15 Timer recordings

Your receiver is equipped with video recorder timers as well as with programme switching timers. In terms of their programming, these timers differ only in that the relevant type of

timer is specified.

You may programme the timers manually as described in this chapter, or by means of the SFI function as described in Point 7.14.7.2.

### 1. Video recorder timer

When you use a video recorder timer, your digital receiver will be switched on resp. off for the programme selected, so that it may be recorder, e.g. on a video recorder, in your absence. Please note that you must programme your video recorder appropriately to record the programme.

If the receiver was switched on by a video recorder timer, this will be indicated by the message "rEc" in the display. In this mode, most of the functions of the remote control are disabled, to avoid an accidental interruption of the recording. In stand-by mode, an active timer will be indicated by a blinking of the colon in the time display resp. in the LED.

### 2. Programme change time

If your receiver is in normal operating mode, it will switch to the programmed programme slot at the time selected. In contrast to the setting for a video recorder timer, the controls remain fully functional, and the receiver will not be switched off at the end of the programme.

## Manual programming of timers

- > Press the **Menu** key to display the **Main Menu**.
- > Use the **arrow keys up/down** to mark the item **Manage timer**.
- > Confirm by pressing **OK**.  
The sub-menu **Manage timer** will be displayed. (Fig. 7-19)
- > 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 in order to programme a new timer event. (Fig. 7-20)

To programme an event, proceed as follows:

### Source

- > Use the arrow keys to mark the column **Source**.
- > Confirm by pressing **OK**.
- > In the selection window that will now be displayed, use the **arrow keys up/down** to select the desired source (**TV** or **Radio**).
- > Confirm by pressing **OK**.  
Depending on the previous setting, either the TV or the radio programme list will now be displayed.
- > Now use the **arrow keys** to mark the desired programme.
- > Use the **arrow keys up/down** to move the marker around the list one line at a time.



(Fig. 7-19)



(Fig. 7-20)

- > Use the **arrow keys left/right** to move around the list one page at a time.
- > Press the **OK** key to accept a programme into the timer memory.

### **Date**

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

### **Start**

- > 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 for "Start" in order to enter the stopping, or ending time (except in the case of programme change timers).

### **Repeat**

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

### **Accepting data into memory**

- > When you have completed the programming, press the **yellow** function key **Accept**, to accept the data into memory.  
If under the heading **Programme** you have selected a programme that is blocked in terms of Point 8.3, you will first have to enter the PIN code before the data can be transferred to memory.
- > Press the **TV/Radio** key to return to normal operation.

### **Timer overview**

The timer overview function gives you an overview of all timer events already 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**.

**If there are overlapping timer events, these overlaps will be marked in red.**

---

## Change 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 yellow function key **Change** to go to the settings of the marked timer. Make the changes as described in Point 7.15.1.2.
- > When you have completed the programming, press the **yellow** function key **Accept** to accept the data into memory.

## Delete timer programming

- > To delete an existing timer setting, use the **arrow keys up/down** to mark the setting.
- > Press the **green** function key **Delete**.  
A 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 setting, confirm by pressing **OK**.

## Programming a new timer event

- > To programme a new timer event, use the **arrow keys up/down** to mark a blank line in the menu **Timer overview**.
- > Press the **yellow** function key **New** to go to the entry window allowing you to programme a new timer event. Complete this in accordance with **Point 7.15.1.2**.
- > Use the **arrow keys up/down** to mark the additional window displayed: **Type**.
- > Confirm by pressing **OK**. A window showing the timer types available will be displayed.
- > 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 **yellow** function key **Accept** to accept the data into memory.

## Please note!!!

Please ensure that the receiver has acquired the time. This will be shown in the display while the unit is in stand-by mode. If this is not the case, leave the receiver switched on to a major programme such as ZDF for approximately 30 seconds, so that the receiver can acquire the current time. Now the time should be shown in the display while the receiver is in stand-by mode (provided this was activated in Point 6.2.4).

## 8 Changing the basic programming

### 8.1 Configuring the Favourites list

This chapter describes how you can change the pre-programming of your digital receiver as well as the Favourites programme list in accordance with your own preferences. This function is also required to sort newly found programmes into the programme list after a programme scan has been performed.

In this regard you should know the following: your receiver is equipped with two programme lists, the **Favourites list** and the **Total list**. The Favourites programme list includes all the programmes you have accepted into the list according to the procedure described below. The Total list includes all programmes.

In addition, this chapter describes how you can delete programmes, block access to programmes via the parental control function, or accept programmes into the EPG. When calling up the programme list via the **OK** key, the Favourites programme list will be displayed.

#### 8.1.1 Calling up programme list management

To customise 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**, in order to work on the TV list, or **Manage Radio lists**, in order to work on the radio list.
- > Confirm by pressing **OK**.

The programme list management required to work on the respective Favourites list (TV or Radio list) will be displayed. (Fig. 8-2)

The Favourites list will be displayed on the right half of the screen. This is now active, with the currently selected programme being marked. The alphabetically sorted Total list will be displayed on the left half of the screen.

The Total list includes all available programmes.

- > Press the **red** function key to move the marker to the Total list. This is now active.
- > Press the **red** function key again to display a selection window. Here you have the option of sorting the Total list according to various selection criteria (e.g. all programmes, all free-to-air, all new programmes, all programmes found, all English programmes, etc.) or sorted by **Provider**.
- > Use the **arrow keys up/down** to select the desired



(Fig. 8-1)



(Fig. 8-2)

programme list (e.g. Total list).

- > Confirm by pressing **OK**.

An additional selection window will now be displayed. (Fig. 8-3)

- > Now use the **arrow keys up/down** to specify the criterion according to which the Total list is to be sorted. 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 most recent scan, or **All English**, to display only English-language programmes.
- > Confirm by pressing **OK**.

Now, depending on your selection, a programme list containing e.g. all programmes, all new or all English-language programmes will be displayed. Programmes already included in the Favourites list are indicated by a check-mark.

- > Press the **red** function key **Programmes** resp. the **green** function key **TV List** you can switch back and forth between the Favourites list and the Total list. The currently active list will be indicated by a blue marker.

### 8.1.2 Adding programmes to the Favourites list

To accept programmes from the Total list into the Favourites list, call up the programme list management as described in Point 8.1.1, and go to the Total list.

- > Press the **blue** function key **Functions**. A selection window showing the available functions will be displayed. (Fig. 8-4)
- > Use the **arrow keys up/down** to mark the item **Add**.
- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to mark a programme you wish to accept into the Favourites list.
- > Press the **yellow** function key **Add** to accept the marked programme into the Favourites list.

### Marking blocks of programmes

To mark several programmes simultaneously, proceed as follows:

- > Press the **OK** key to go to the selection mode. The marked programme will be indicated by a cross on the left of the programme.
- > You may now use the **arrow keys up/down** to mark the previous or following programmes as well.
- > When you have completed marking the desired programmes in this manner, press the **yellow** function key **Add** to add the marked programmes to the Favourites list.



(Fig. 8-3)



(Fig. 8-4)

## 8.1.3 Deleting programmes

### 8.1.3.1 Removing (deleting) from the Favourites list

To remove programmes from the Favourites list, call up the programme list management as described in Point 8.1.1. The Favourites list will be displayed and active.

- > Press the **blue** function key **Functions**.  
A selection window showing the available functions will be displayed. (Fig. 8-5)
- > Use the **arrow keys up/down** to mark the line **Delete**.
- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to mark a programme you wish to delete from the list.
- > Press the **yellow** function key **Delete**.  
The message will be displayed: "Do you really want to delete the programme(s) from the list?".
- > Use the **arrow keys left/right** to select **Yes** or **No**.
- > Confirm by pressing **OK**.
- > To remove several programmes simultaneously, mark these as described in 8.1.2 (**Marking blocks of programmes**).
- > When you have completed marking the desired programmes in this manner, press the **yellow** function key **Delete**.  
The message will be displayed: "Do you really want to delete the programme(s)?".
- > Use the **arrow keys left/right** to select **Yes** or **No**.
- > Confirm by pressing **OK**.

The programmes deleted in this manner will, however, remain in the Total list, and can be added to the Favourites list again at any time.

### 8.1.3.2 Deleting from the Total list

To remove programmes from the Total list, proceed as described in Point 8.1.3.1. However, after calling up the programme list management, press the **red** function key **Programmes** to first switch to the Total list, then select the function **Delete**.

### 8.1.4 Sorting programmes

To sort the order of programmes in the Favourites list according to your preferences, call up the programme list management as described in Point 8.1.1. The Favourites list will be displayed and active.

- > Press the **blue** function key **Functions**. A window showing the available functions will be displayed. (Fig. 8-6)
- > Use the **arrow keys up/down** to mark the line **Sort**.



(Fig. 8-5)



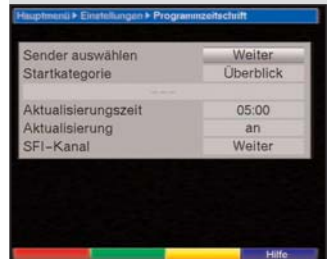
(Fig. 8-6)

- > 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 appear next to the programme selected.
- > Now use either the **arrow keys up/down** or the **numeric keys** to place the programme at the position in the programme list where you would like to place it.
- > Press the **yellow** function key **Sort** to enter the new position of the programme into memory.
- > To sort several programmes simultaneously, mark these as described in 8.1.2 (**Marking blocks of programmes**).
- > Now press the **yellow** function key **Sort**. A double arrow will appear next to the block of programmes selected.
- > Now use either the **arrow keys up/down** or the **numeric keys** to place the programme block at the position in the programme list where you would like to place it.
- > Press the **yellow** function key **Sort** to enter the new position of the programme block into memory.
- > When you have completed configuring the programme list according to your preferences in this manner, press the **Menu** key to return to normal operation.

## 8.2 Programming the electronic programme guide

Your receiver is equipped with the facility of receiving a data channel with additional SFI data via ASTRA satellite system (19°East). This gives you a preview of SFI data of up to a week in advance.

- > 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 various positions as shown. When selecting a menu item, please also note any messages displayed on screen.



(Fig. 8-7)



(Fig. 8-8)

## 8.2.1 Selecting a channel

To obtain a better overview, you can programme the electronic programme guide SFI so that this contains only your favourite programmes.

### **Please note:**

The larger the number of programmes included in the electronic guide, the longer will it take to download the SFI data! In addition, the maximum preview period of 7 days in advance may not be possible if too many programmes are included in the electronic programme guide.

- > Press the **OK** key. The Favourites list of the category selected (Radio or TV) will be displayed. The programme currently selected will be marked. (Fig. 8-8)
- > Switch between the TV and radio lists by pressing the **green** function key.
- > Press the **red** function key to display a selection window. Here you have the option of selecting the desired type of programme list.
- > Use the **arrow keys up/down** to select the desired type of programme list (e.g. Favourites list).
- > Confirm by pressing **OK**. The programme list selected will be displayed.
- > Use the **arrow keys** to mark a programme you wish to include in the electronic programme guide.
- > Press the **yellow** function key **SFI** to include the marked programme in the electronic programme guide.
- > To include several programmes in the electronic programme guide simultaneously, proceed as described in 8.1.2 (**Marking blocks of programmes**).
- > When you have completed marking the desired programmes in this manner, press the **yellow** function key **SFI** to include the marked programmes in the electronic programme guide.
- > Press the **Menu** key to return to normal operation.

You may now start the downloading procedure manually:

- > Use the **On/Standby** key to switch the receiver off (Standby).
- > Now, while "Standby" is shown in the display, press the **SFI** key.  
The receiver will now carry out the downloading procedure. This will be indicated by the message **SFLd** shown in the display, followed by the percentage of SFI data already downloaded.
- > The downloading procedure can be interrupted by switching on the digital receiver (**On/Standby** key).

## 8.2.2 Start category

The electronic programme guide provides various types of presentation (categories).

### Overview

This form of presentation provides a quick overview of all programmes included in the electronic programme guide.

### Programmes

In this form of presentation, a table showing the day's programmes for a single channel is displayed.

### Genres

If you are interested in specific types of programmes, such as movies, news, etc., you can have the programmes displayed by type, or genre.

### Last used

When using this setting, each time you call up the SFI the presentation form last used will be displayed.

- > In this line, use the **arrow keys left/right** to select the form of presentation to be used whenever the electronic programme guide is called up.
- > If you select **Genres**, you can then proceed to use the **arrow keys** to select your preferred genre (e.g. movies, news, shows, sport, etc.).

## 8.2.3 Updating time

- > In the line **Updating time** use the **numeric keys** to set the time at which the automatic download of SFI data is to be carried out.

## 8.2.4 Updating

- > To receive the data channel, mark the line **Update**.
- > Set this to **On** by pressing **OK**.

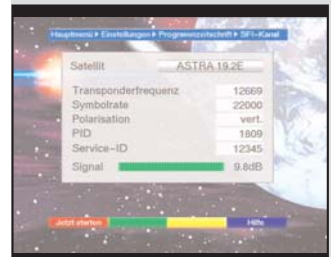
If you do not wish to receive the additional data, or if you are unable to receive the data because of your location, you can switch off the data reception function:

- > Set the line **Update** to **Off** in order to switch off the data reception function.

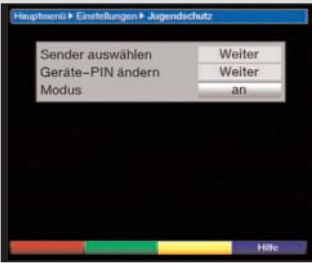
## 8.2.5 SFI channel

- > Press the **OK** key to display the sub-menu **SFI Channel** (Fig. 8-9).
- > To start the updating of SFI data manually, press the **red** function key **Start now**.

If the parameters applicable to the data channel used to download the SFI list have changed, you can use this menu to correct the parameters. The current transponder data is available from specialist retailers. Generally, though, you should not make any changes in this menu.



(Fig. 8-9)



(Fig. 8-10)

## 8.3 Parental control

Your receiver is equipped with a parental control function. This allows you to protect important functions (e.g. calling up the main menu) from unauthorised access. In addition, programmes and recordings that you have blocked can in future only be selected by first entering a four-digit PIN code (unit PIN).

To work on the Parental control menu, 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 around within the menu, and to change the individual positions as indicated. Please note any messages displayed on screen when you select a menu item.



(Fig. 8-11)

### 8.3.1 Changing the unit PIN

The unit PIN is set to a default setting of **0000** at the factory.

- > Press the **OK** key. The menu used for changing the unit PIN code will be displayed. (Fig. 8-11)
- > Now use the **numeric keys** to enter the current unit PIN code. (**Default setting 0000**)
- > Use the **numeric keys** to enter the new unit PIN code.
- > Repeat the entry.
- > When you have completed changing the unit PIN code in this manner, you will automatically be taken back to the parental control menu.

#### **Note!**

Do not forget your unit PIN code. If you do forget it at some point, please consult your retail specialist!

### 8.3.2 Mode


- > In this line, use the arrow keys left/right to switch the parental control On of Off

### 8.3.3 Selecting channels

- > Press the **OK** key. The Favourites list of the category currently selected (Radio or TV) will be displayed. The programme currently selected is marked. (Fig. 8-12)
- > You can switch back and forth between the TV and the Radio list using the **green** function key.



(Fig. 8-12)

- > Press the **red** function key to open a selection window. Here you have the option of selecting the desired type of programme list.
- > Use the **arrow keys up/down** to select the desired type of programme list (e.g. Favourites list).
- > Confirm by pressing **OK**. The programme list selected will be displayed.
- > Now use the **arrow keys** to mark the programme to which you wish to block access.
- > Use the **yellow** function key to block access to the programme. The parental control symbol  will be displayed next to the programme selected.
- > To block access to several programmes simultaneously, proceed as described in 8.1.2 (**Marking blocks of programmes**), and block access by pressing the **yellow** function key.
- > When you have completed configuring the programme list according to your preferences in this manner, press the **Menu** key to return to normal operation.
- > To remove the blocking of individual programmes, proceed as described above. Mark the appropriate programme, and remove the parental control symbol by pressing the **yellow** function key.

## 8.4 Programme scan (search)

as mentioned previously, your digital receiver is pre-programmed for reception of signals from the ASTRA and EUTELSAT satellites. To receive new programmes, or programmes from other satellites, there are various options for performing a programme scan.

### 1. Automatic scan

Select this type of scan in order to search all satellites set in the menu LNC Settings (Point 6.4 and 8.4) for programmes.

### 2. Satellite scan

Select this type of scan if you want to search for programmes only on one specific satellite.

### 3. Transponder scan

Select this type of scan to search on only one specific transponder of a satellite.

### 4. Manual scan

Use this type of scan to search specifically for a particular programme, using programme-specific PID numbers.

When the scan has been completed, a message will be displayed on your TV screen, indicating the number of programmes your digital receiver has found, how many of these are ne, and how many of them are encrypted programmes. New programmes are stored in the **Total list**, and can then be included in the **Favourites list** in accordance with **Point 8.1**.



(Fig. 8-13)

- > In order to scan for programmes, first call up the **Main Menu**. (Fig. 8-13)
- > Use the **arrow keys up/down** to mark the line **Scan**.
- > Confirm by pressing **OK**.  
The sub-menu **Scan** will be displayed. (Fig. 8-14)
- > Now use the **arrow keys up/down** to select the type of scan you would like to perform, and confirm by pressing **OK**.

### 8.4.1 Automatic scan



(Fig. 8-14)

When using this option, all the satellites set in the menu LNC Settings (Point 6.4 and 9.4) will be scanned for programmes. You can also 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**) or whether you wish to include encrypted programmes (**All**).
- > To confirm, press the **red** function key **Start scan**. This scanning procedure may take more than 15 minutes.  
Please also note any messages displayed on screen.

### 8.4.2 Satellite scan



(Fig. 8-15)

To search a single satellite for programmes, select the option **Satellite scan**. (Fig. 8-16)

You may decide to scan for all programmes (free-to-air and encrypted) or only for free-to-air programmes.

- > Press the **OK** key again to display the selection table showing all the active satellites.
- > Use the **arrow keys up/down** to mark the 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**.
- > Use the **arrow keys up/down** to mark the field **Scan mode**.
- > Press the **OK** key to decide whether you want to scan only for free-to-air programmes (**Free**) or whether you wish to scan for encrypted programmes as well (**All**).
- > Confirm by pressing the **red** function key **Start scan**.  
The scan will be started. Please note any messages displayed on screen.
- > You may abort the scan at any stage by pressing the **red** function key.



(Fig. 8-16)

### 8.4.3 Transponder scan

You may scan a specific transponder (see Point 10 Technical Terms) for programmes. To do this, it is necessary to enter the transponder data (Fig. 8-17).

#### Satellite

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

- > To do this, use the **arrow keys up/down** to mark the line **Satellite**.
- > Press the **OK** key to display a table showing all the active satellites.
- > Now use the **arrow keys up/down** to mark the desired satellite.
- > Confirm by pressing **OK**.  
The selected satellite will now be displayed in the line Satellite.

#### Transponder frequency

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

#### Symbol rate

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

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

#### Polarisation

- > Use the **arrow keys up/down** to mark the line **Polarisation**.
- > In this line, use the **OK** key to enter the polarisation plane (**horizontal** or **vertical**), whichever is appropriate for the programme being scanned for.

#### Scan mode

- > Use the **arrow keys up/down** to mark the line **Scan mode**.
- > Use the **OK** key to decide whether you wish to search only for free-to-air programmes (**Free**) or whether you want to include encrypted programmes in the scan (**All**).
- > Confirm by pressing the **red** function key **Start scan**.  
The scan will be started. Please note any messages displayed on screen.
- > You may abort the scan at any stage by pressing the **red** function key again.



(Fig. 8-17)



(Fig. 8-18)

## 8.4.4 Manual scan

If the automatic scan or the transponder scan is unable to locate a particular programme, it may be necessary to additionally enter programme-specific PID numbers for this programme. These numbers may be found in the Internet, or may have to be obtained from the relevant programme provider.

The menu (Fig. 8-18) differs from the menu **Transponder scan** only in the menu items **PCR PID**, **Audio PID** and **Video PID**. There is no need to enter the scan mode.

- > Proceed as described for a transponder scan.
- > In addition, use the **arrow keys up/down** to mark the lines **PCR PID**, **Audio PID** and **Video PID**, and enter the appropriate numbers using the **numeric keys**.



(Fig. 8-19)

## 8.4.5 After the scan

While the scan is still in progress, you can follow the transponder scan on your screen. When the scan is completed, the number of transponders found, the number of programmes and of new programmes found will be displayed. In addition a prompt will be displayed, (Fig. 8-19), asking whether you wish to accept the programmes found automatically into the TV or Radio list. If you decide to accept the programmes automatically, you can also still decide whether these should be added to the Favourites list in **sorted** or **unsorted** order.

### Sorted

The programmes found will be sorted into the Favourites list in accordance with a pre-programmed list. The order of listing the programmes will be determined by the audio language set in Point 6.3.2 resp. by the country selected in Point 6.2.2 and 6.2.3.

### Unsorted

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

### No

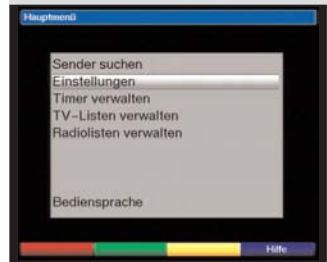
The newly found programmes are not included in the Favourites list, but remain only in the Total list.

- > Use the **arrow keys left/right** to decide whether you wish to accept the programmes in **sorted** or **unsorted** order.
- > Confirm by pressing **OK**. Please note any messages displayed on screen.
- > Press the **Menu** key to return to normal operation.
- > Independently of whether you have accepted the newly found programmes into the Favourites list automatically, these can be added to the Favourites list manually at any time as described in Chapter 8.1.

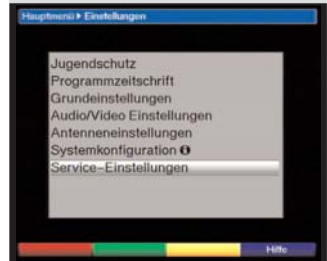
## 8.5 Service settings

You can revert to the original default settings pre-programmed at the factory at any stage. In addition, if you find that the programme list is outdated because of changes made by the programme providers, you may delete the programme list completely, and then perform a new programme scan. Please note that after you have deleted the list, you must then start a programme scan, and must then copy the desired programmes from the Total list to the Favourites list.

- > Press the **Menu** key to call up the **Main Menu**.  
(Fig. 8-20)
- > 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. 8-21)
- > Use the **arrow keys up/down** to mark the menu line **Service settings**.
- > Confirm by pressing **OK**.  
The sub-menu **Service settings** will be displayed  
(Fig. 8-22)



(Fig. 8-20)

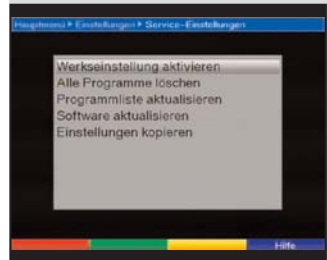


(Fig. 8-21)

### 8.5.1 Activate default setting

After this function is called up, the default factory programming will be implemented again, all own settings will be deleted, and the installation assistant **AutoInstall** will be started.

- > Use the **arrow keys up/down** to mark the line **Activate default setting**.
- > Confirm by pressing **OK**.  
The message will be displayed: "Do you really want to activate the default setting?".
- > Use the **arrow keys left/right** to mark either **Yes** or **Abort**.
- > Confirm by pressing **OK**.



(Fig. 8-22)

### 8.5.2 Delete all programmes

This function serves to delete the entire programme memory.

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



(Fig. 8-23)

### 8.5.3 Updating the programme list (ISIPRO)

The ISIPRO programme updating feature allows you to keep the programme list of your receiver up to date automatically. To achieve this, a current programme list is broadcast at regular intervals via satellite (ASTRA 19,2°East), and can be downloaded by your receiver.

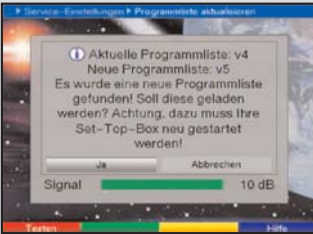
Should the parameters of the data channel used to download the programme list be changed, you can correct the parameters in this menu. The current transponder data may be obtained from your specialist retailer. Generally you should not make any changes in this menu.

- > Use the **arrow keys up/down** to select the line **Update programme list**.
- > Press the **OK** key to go to the sub-menu **Update programme list** (Fig. 8-23).
- > To ensure that your receiver will check automatically to see whether a new programme list is available, mark the line **Update**.
- > Switch the automatic programme list updating function **On** by pressing **OK**.

To start the updating of the programme list manually, press the **red** function key **Test** and confirm the message displayed by pressing **Yes**

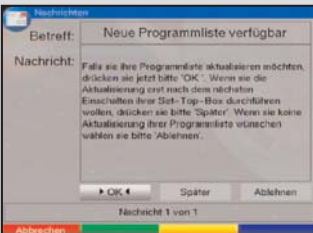
(Fig. 8-24).

Your receiver will restart itself, and will indicate the presence of a new programme list by means of a message on screen (Fig. 8-25).



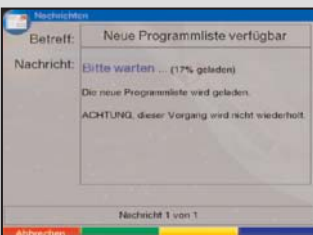
(Fig. 8-24)

- > If you do not wish to download the new programme list immediately, but rather at a later time, mark the field **Later** and confirm by pressing **OK**. The prompt will appear again the next time you switch on the receiver.
- > If you do not wish to download the new programme list at all, mark the field **Reject** and confirm by pressing **OK**. The message will only be displayed again the next time an even more recent programme list is transmitted.
- > To download the new programme list immediately, confirm by pressing **OK**. The download of the programme list will be started, and the progress can be followed on screen (Fig. 8-26).



(Fig. 8-25)

When the download of the programme list has been completed, your programme list will be updated. In this procedure, the Favourites list stored in your receiver will be compared to the new programme list. If this comparison shows you have not yet made any changes in your receiver with reference to the factory-programmed default programme list, then the new programme list will be exchanged completely for the old one. If, however, you have made changes to the programme list, the update of your Favourites list will proceed in several



(Fig. 8-26)

steps. The differences between your Favourites list and the new programme list will be displayed on screen. You can then decide for yourself, which changes you wish to make, and which not. The number of steps to go through depends in each case on the number of changes in the new list, and can therefore differ from one download to the next.

### 8.5.3.1 Adapting programmes

In this step, the programmes in your favourites list are shown where their reception data has changed, or where they are no longer up to date. (Fig. 8-27) These programmes can possibly no longer be received correctly. To ensure that you have continued problem-free reception, we recommend you make the suggested changes.

- > Press the **OK** key to update the reception data of the marked programmes.
- > If you do not wish to update the data of the programmes indicated, use the **arrow keys left/right** to mark the field **Reject**, and confirm by pressing **OK**.



(Fig. 8-27)

### 8.5.3.2 Deleting programmes

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

- > If you wish to delete the programmes indicated as being no longer broadcast (Fig. 8-28), confirm by pressing **OK**.
- > If you would nevertheless like to retain the programmes in your Favourites list, use the **arrow keys left/right** to mark the field **Reject** and confirm by pressing **OK**.



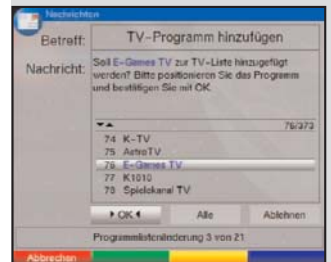
(Fig. 8-28)

### 8.5.3.3 Adding TV resp. radio programmes

In the next step, the programmes of the new programme list will be displayed to you individually. You can add these to your Favourites list, as they are not yet included there.

#### Accepting programmes individually

- > If you wish to accept the programme indicated (Fig. 8-29) at the suggested programme slot in the Favourites list (TV or Radio), confirm by pressing **OK**.
- or
- > Use the **arrow keys up/down** to move the programme to a different position in the Favourites list, or use the **numeric keys** to enter a specific programme slot.
- > To accept the programme indicated at the selected position in the Favourites list, press **OK**.



(Fig. 8-29)

#### Accept all programmes

- > To accept all the new programmes without checking them individually, use the **arrow keys left/right** to mark the field **All** and confirm by pressing **OK**.

The programmes will be added to the Favourites list according to pre-determined criteria.

### Reject programme (do not accept)

- > If you do not wish to accept the programme indicated into the Favourites list, use the arrow keys left/right to mark the field **Reject** and confirm by pressing **OK**. The prompt for the next programme will now be displayed.



(Fig. 8-30)

### 8.5.4 Update software

In addition, your digital receiver is equipped to receive updates of its operating software via satellite (ASTRA 19° East).

- > Press **OK** to go to the sub-menu **Update software** (Fig. 8-30). To perform a software update, mark the line **Update software**.
- > Switch the Update software function to **On** by pressing **OK**.
- > In the line **Update time** use the **numeric keys** to enter the time at which the software update is to be carried out.
- > To start the update of the operating software manually, press the **red** function key **Test**.
- > Press the **Menu** key to return to normal operation.

Should the parameters of the data channel for downloading the software updates have changed, you can correct these manually in this menu, as described under Point 8.3.4 (manual programme scan). Current transponder data can be obtained from your specialist retailer. In general you should not make any changes in this menu.

#### Note:

**The new software can be downloaded automatically only when the digital receiver is in stand-by mode. The downloading procedure is indicated by the display "SATL" resp. "SAT0" to "SAT9". 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, the system will automatically check for the availability of a new operating software version for your digital receiver each time you switch on the receiver. If a new version is available, a corresponding message will be displayed on screen (Fig. 8-31).

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



(Fig. 8-31)

### 8.5.5 Copying the settings

You have the facility to copy all the settings, such as programme list, antenna settings, etc. of your digital receiver (sender) to another digital receiver (receiver) of the same

type, and using the same version of the operating software. (Fig. 8-32)

- > To do this, connect the two receivers by means of a null modem cable.
- > Switch on the (destination, receiving) receiver.
- > To copy the settings, press any operating key on the (source, sending) receiver.  
The settings of the source receiver will now be transmitted to the destination receiver. Please note any messages displayed on screen.

## 8.6 System configuration

Use this menu item to view the specific receiver data (e.g. current software version).

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

## 9 Operation with a rotating antenna (DiSEqC 1.2)

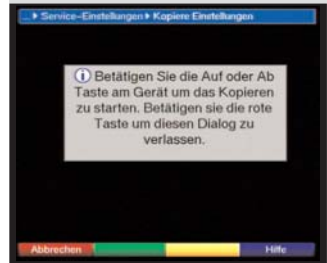
Your digital receiver is equipped for use in conjunction with a rotating antenna. You may control a suitable motor by means of the co-axial cable, using the DiSEqC control (DiSEqC-Level 1.2).

- > Call up the menu **Antenna Settings** as described in Point 6.4 (Fig. 9-1), and switch the **DiSEqC control** (Point 6.4.1) **on**.
- > Now use the **arrow keys up/down** to select the DiSEqC position (e.g. A/B 3) to which you wish to allocate the rotating antenna motor.
- > Pressing **OK** will open a selection window for the **Satellite** resp. the **Antenna motor**. (Fig. 9-2)
- > Use the **arrow keys up/down** to mark the line **Antenna motor**, and confirm by pressing **OK**.
- > Confirm the message (Fig. 9-3) regarding the setting of easterly and westerly limits by pressing **OK**.

### 9.1 Easterly and Westerly limits

To avoid mechanical damage to the antenna dish or the LNC, you must first specify the maximum easterly and westerly limits for the antenna rotation. If there are any obstructions (e.g. walls, chimnies) in the rotating radius of the dish, this must definitely be considered when setting the East-West limits.

If there are no obstructions in the rotating radius of the dish, set the limits so the dish can be rotated a little beyond what is required for the outermost satellite you wish to receive.



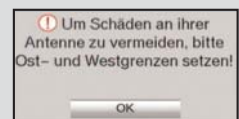
(Fig. 8-32)



(Fig. 9-1)



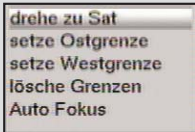
(Fig. 9-2)



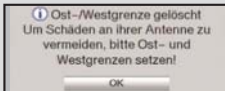
(Fig. 9-3)



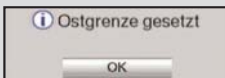
(Fig. 9-4)



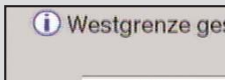
(Fig. 9-5)



(Fig. 9-6)



(Fig. 9-7)



(Fig. 9-8)

### 9.1.1 Deleting existing limits

First you should delete any limit values that may have been stored.

- > Use the **arrow keys left/right** to mark the column **LNC Test**.
- > Now use the **arrow keys up/down** in the line **Rotating antenna**, and mark the field **Continue**.
- > Confirm by pressing **OK**.  
The menu used for setting the rotating antenna will now be displayed. (Fig. 9-4)
- > Press the **yellow** 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 accept the action selected to the **green** function key.
- > To delete the limits set, press the green function key **Delete limits**.
- > Confirm the prompt displayed (Fig. 9-6) by pressing **OK**.

### 9.1.2 Setting the Eastern limit

- > To enter the Eastern limit, first use the **arrow keys** to mark the field **Save**.
- > Now use the **arrow key right** to turn the dish to the maximum possible, resp. the maximum desired **East position**.
- > Press the **yellow** function key **Actions** to open a 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 easterly limit, press the **green** function key (**East limit**) and confirm the following screen prompt (Fig. 9-7) by pressing **OK**.

### 9.1.3 Setting the Western limit

- > To enter the Western limit, first use the **arrow keys** to mark the field **Save**.
- > Now use the **arrow key left** to turn the dish to the maximum possible, resp. the maximum desired **West position**.
- > Press the **yellow** function key **Actions** to open a 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 westerly limit, press the **green** function key (**West limit**) and confirm the following screen prompt (Fig. 9-8) by pressing **OK**.

## 9.2 Geo-positioning

If the geographical co-ordinates of your location are known, and you have a suitable motor, this function will simplify finding individual satellite positions. The co-ordinates for some German cities are listed in the Annexure (Point 13).

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

- > Call up the menu used for setting the rotating antenna, as described above.
- > 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 **OK** key to switch the geo-positioning function **on** or **off**.
- > Use the **arrow keys** to mark the field used to enter the **Geographic longitude**.
- > Use the **numeric keys** to enter the geographic longitude.
- > Now press the **arrow key left**.
- > In this field, use the **OK** key to indicate whether you are entering a position longitude East (**E**ast) or longitude West (**W**).
- > Now use the **arrow keys** to mark the field for entering **Geographic latitude**.
- > Use the **numeric keys** to enter the geographic latitude.
- > Now press the **arrow key left**.
- > In this field, use the **OK** key to indicate whether you are entering a position latitude North (**N**) or latitude South (**S**).
- > Press the **Back** key to return to the LNC settings.

The data relating to your location must be entered as a decimal value, correct to one decimal point. As the co-ordinates are often stated in degrees, minutes and seconds, these must be converted to decimal values as follows:  
The figure for degrees remains unaffected by the calculation.  
The minutes are divided by 60, and rounded to one decimal place. The result of this division is added to the degrees.  
The seconds are not taken into consideration at all, as they do not affect the first decimal place.

Example: Co-ordinates of Daun/Germany (home of TechniSat)

<b>Latitude (deg.)</b>	<b>50°</b>	<b>11'</b>	<b>(45")</b>	<b>N</b>
<b>Longitude (deg.)</b>	<b>06°</b>	<b>50'</b>	<b>(10")</b>	<b>E</b>

Conversion of degree latitude (lat):

<b>Lat</b>	<b>=</b>	<b>50</b>	<b>+</b>	<b>11/60</b>
<b>Lat</b>	<b>=</b>	<b>50</b>	<b>+</b>	<b>0,2</b> (rounded)
<b>Lat</b>	<b>=</b>	<b>50.2</b>		

In the menu used to enter the geographical latitude you



(Fig. 9-9)

would thus enter the value rounded to one decimal place (**50.2**).

The decimal value of the degrees longitude will be calculated in the same manner.

## 9.3 Setting a satellite position

For each satellite position to be entered, work through Points 9.3.1 to 9.3.3. When programming satellite positions, we recommend that you begin with the satellite in the most easterly position, then work your way through all the remaining positions in a westerly direction, finishing off with the most extreme westerly satellite position. Your digital receiver is pre-programmed at the factory for the most commonly used satellite positions. In addition, you can configure user-defined satellite positions (User 1 to User 14) for every possible orbital position.

### 9.3.1 Selecting a satellite position

#### 9.3.1.1 Selecting a pre-programmed satellite position

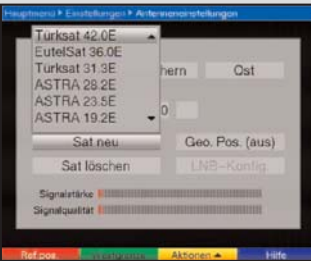
- > To accept a satellite position in the satellite list, use the **arrow keys** to mark the field **Sat new**.
- > Confirm by pressing **OK**.  
A list with all the available satellite positions will be displayed. (Fig. 9-10)
- > Now use the **arrow keys up/down** to mark a satellite position you would like to accept into the satellite list.
- > Press **OK** to accept the selection.

With the **Geo-positioning** function set to **On** (Point 9.2), the dish will now automatically be rotated to the programmed satellite position. The rotation procedure will be indicated by a blinking display “**turn**”.

If the **Geo-positioning** function is switched **Off**, (Point 9.3.2.2) you will have to turn the dish manually to the desired satellite position.

#### 9.3.1.2 Setting a user-defined satellite position (User satellite)

- > To accept a user satellite position into the satellite list, use the **arrow keys** to mark the field **Sat new**.
- > Confirm by pressing **OK**.  
A list showing all available satellite positions will be displayed. (Fig. 9-11)
- > Now use the **arrow keys** to mark a user satellite position (User 1 to User 14).
- > Confirm by pressing **OK**, the menu for setting the test transponder will be displayed. In this menu, enter the data for the test transponder as well as that of the LNC in use, as described in **Point 6.4.3**.



(Fig. 9-10)



(Fig. 9-11)

- > When you have completed setting the test transponder, press **Back** to return to the menu for setting the rotating antenna. The field for entering the orbital position is now active.
- > Use the **numeric keys** to enter the orbital position of the user satellite, and confirm by pressing **OK**.
- > Now press the **OK** key to indicate whether it is a westerly (W) or an easterly (E) orbital position.

If the **Geo-positioning** function is switched **On** (Point 9.2), you can now use the function **Turn to sat** (Point 9.4.1) to turn the dish to the programmed user satellite position.

If the **Geo-positioning** function is switched **Off**, you must turn the dish manually (Point 9.3.2.2) to the desired satellite position.

## 9.3.2 Adjusting the satellite antenna

To direct the antenna to the desired satellite resp. to determine whether you can receive the desired satellite at the desired position, a test transponder is available for each satellite.

It is the display of signal strength and quality provided by the test transponder that makes an exact positioning of the dish antenna possible.

### 9.3.2.1 Test transponder/LNC configuration

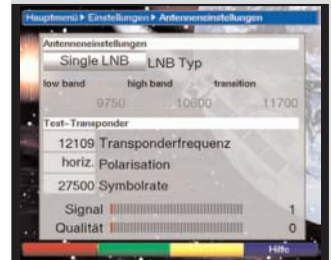
To change the data of a particular test transponder, proceed as follows:

- > Use the **arrow keys** to mark the field **Current satellite list**.
- > Press **OK** 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 **LNC config.** and confirm by pressing **OK**.  
The menu **LNC settings** will be displayed.  
(Fig. 9-12)
- > In this menu, enter the data of the test transponder as well as of the LNC used, as described in **Point 6.4.3**.
- > Press the **Back** key to return to the menu for setting the rotating antenna.

### 9.3.2.2 Positioning antenna manually

The optimum positioning for the desired position can be achieved by means of the indicators for signal strength and signal quality, Position the dish so that the maximum value is shown for both bars.

- > Now use the **arrow keys up/down** to mark the field **Save**.



(Fig. 9-12)

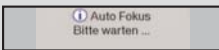
- > Now use the **arrow keys right** (field East is marked) resp. **left** (field West is marked) to turn the dish to the desired position. In each case keep the key pressed down until the desired position is reached.

### 9.3.2.3 Automatic fine adjustment (Autofocus)

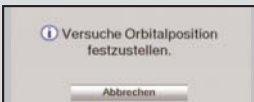
Before saving a satellite position, we recommend you perform an automatic focussing procedure. In this procedure the dish is set to optimum reception based on measured signal strength.

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

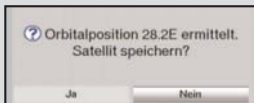
While the automatic adjustment is in progress, the message **Autofocus** will be displayed. (Fig. 9-13)



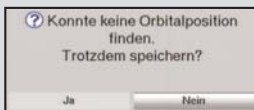
(Fig. 9-13)



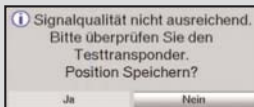
(Fig. 9-14)



(Fig. 9-15)



(Fig. 9-16)



(Fig. 9-17)

### 9.3.3 Saving a satellite position

When the autofocus procedure has been completed, you must still save the satellite position to memory.

- > Use the **arrow keys** to mark the field **Save**.
- > Confirm by pressing **OK**.

The test transponder you have set will now check whether a signal can be received at this position. The system will also check whether the position to be saved is identical to a position available in the pre-programmed satellite position list. (Fig. 9-14)

If this is the case, the following message will be displayed: **Orbitalposition xx found. Save satellite ?** (Fig. 9-15)

- > To save the satellite position, use the **arrow keys left/right** to mark the field **Yes**, then confirm by pressing **OK**.

If on checking the test transponder does not identify a pre-programmed satellite position, or if the signal received is too weak, a corresponding message will be displayed. (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 satellite positions saved are included in the satellite list. Positions not yet saved are marked in the list with a “\*”.

- > To turn the dish to a position included in the satellite list, use the **arrow keys** to mark the field **Current**

---

### **satellite list.**

- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to select the desired position.
- > Confirm by pressing **OK**. The dish will now be turned to the position selected. The rotating procedure will be indicated by the blinking display "**turn**" in the menu.

#### **9.4.1 Addressing a satellite position**

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

- > Press the **yellow** function key **Actions** to open the window showing the available actions.
- > Now use the **arrow keys up/down** to mark the line **turn to sat**.
- > Confirm by pressing **OK**.
- > Press the **green** 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**.
- > Press **OK** to open the current satellite list.
- > Use the **arrow keys up/down** to select the satellite you wish to delete.
- > Confirm by pressing **OK**.
- > Use the **arrow keys** to mark **Delete sat**.
- > To delete the satellite press **OK** and confirm the message displayed by pressing **OK** again.

#### **9.6 Reference position**

When installing the external installation, the motor must be in the reference position (**0°**). You can thus return the motor to this position (**0°**) at any time using the function "**Go to reference position**".

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

## 10 Technical terms

### Antenna cable:

Connecting cable between the modulator of the satellite receiver and the antenna input of the television set, used as an alternative if no SCART socket is available.

### AV: see SCART

### Co-axial cable:

Connection cable between LNC and satellite receiver, used to transmit the signals received, and to supply current to the LNC.

### Data compression/MPEG1/MPEG2:

The volume of data involved in transmitting the current television standard (625 lines, and a picture frequency of 50 Hz results in a figure of 216 MBit/s of digital data.

This would require bandwidths that can currently not provided, whether by satellites nor by terrestrial systems. For this reason, the total volume of data transmitted is reduced by means of a compression algorithm. For Europe, MPEG-2 has been accepted as the international standard for data compression. MPEG-2 is an expanded version of MPEG-1.

### DiSEqC:

**Digital Satellite Equipment Control:** A digital switching signal used to control DiSEqC-compatible components of the external installation via the antenna cable. An example of an installation consisting of DiSEqC components can be seen in (Fig. 10-1).

### DVB:

**Digital Video Broadcasting:** A universal digital transmission technology used for pictures, graphics, sound and text, i.e. for data in any shape or form, and in any possible, always appropriate quality.

### External unit (installation):

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

### Frequency:

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

### Frequency range:

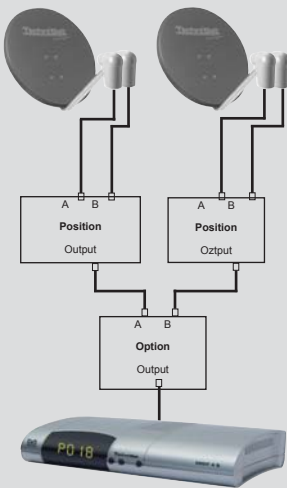
a) Satellite, respectively LNC:

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

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

Unit	Description	Cycles per second
1 Hz	1 Hertz	1
1 kHz	1 Kilohertz	1.000
1 MHz	1 Megahertz	1.000.000
1 GHz	1 Gigahertz	1.000.000.000

Example:



(Fig. 10-1)

---

**Intermediate frequency:**

The range of frequencies broadcast by a satellite cannot be transmitted via any cable. The LNC therefore converts the signal received to an intermediate frequency range in the band 950 to 2150 MHz. This can then be transmitted via cable, and processed in the digital receiver.

1. IF = Intermediate frequency

**LNB/LNC (Low Noise Block Converter):**

Reception unit located at the focal point of the parabolic dish, converts the frequency range of the satellite to the intermediate frequency of the digital receiver.

**LOF:**

Local oscillator frequency; stated in MHz or GHz; varies depending on the LNC and the frequency range received  
Reception frequency of the digital receiver = Broadcast frequency of the satellite - LOF.

**Modulation at 22 KHz:**

Apart from 14/28 Volt switching, this serves to switch between 2 LNC. In Universal LNCs it is used to switch to the High range.

**Operating current:**

The LNC is supplied with power via the co-axial cable. To this end the receiver supplies an operating current of either 14 or 18 Volts.

**Parabolic dish:**

Surface of metal or coated synthetic material, shaped like a parabola, receives electromagnetic waves transmitted by a satellite and concentrates them on a focal point.

**Polarisation plane:**

To better utilise the available frequency range, satellites broadcast neighbouring programmes with opposite polarisation (horizontal and vertical or laevorotatory and dextrorotatory). To receive both polarisation planes you require either two Single LNCs or a V/H LNC.

**Receiver:** see **satellite receiver**

**Satellite:**

Description of a satellite, usually stating name and orbital position,

ASTRA	19° East
EUTELSAT	13° East

**Satellite receiver:**

signals received from the LNC, and then converted, cannot be processed by the television set. They are processed in the satellite receiver so that its outputs carry regular audio and video (AV) signals, which can then be passed on to the television set and processed there.

**SCART:**

Connector standard used for television sets, video recorders, satellite receivers and other home electronics equipment to transmit Audio (sound) and Video (Picture) signals (AV).

### **Software update:**

Digital television is a new medium, providing not only improved sound and picture quality, but also the option of providing interactive services. These new services are constantly being developed and improved by providers. To utilise these services, it may be necessary to occasionally update the software of the digital receiver.

### **Transponder:**

Located on the satellite, used to process one or more programmes. It receives the signal from the ground station, amplifies it, and transmits it back to earth.

### **Universal LNC:**

Used to receive the ranges FFS (10,70 - 11,70 GHz), BBS (11,70 - 12,50 GHz) and FFS High Band (12,50 - 12,75 GHz).

The entire range is divided into two Bands:

Low Band: 10,70 - 11,80 GHz; LOF 9750 MHz

High Band 11,70 - 12,75 GHz ; LOF 10600 MHz

## **11 Technical data**

### **DBS tuner:**

Input frequency range	950 .... 2150 MHz
Input level range	- 65 dBm ... - 25 dBm
DBS tuner input	F - socket
In-/Output impedance	75 Ohms
Output for 1.IF	950 ... 2150 MHz (loop through)
AFC gain range	+/- 3 MHz
Demodulation	Shaped QPSK
Symbol rate	1 ... 45 Mbaud/s, SCPC/ MCPD
FEC	Viterbi and Reed-Solomon
Viterbi rates	1/2, 2/3, 3/4, 5/6, 7/8, automatic adaptation
Roll-off Factor	35 %
<b>Demultiplexing:</b>	in accordance with ISO 13818-1
<b>Video decoding:</b>	
Video compression	MPEG-2 and MPEG-1 compatible Up to MP@ML (main profile @ main level)
Video standard	PAL / 25 Hz
Active image area	720 Pixel x 576 lines
Picture format	4 : 3 / 16 : 9
Picture material 16:9	Automatic adaptation for 16:9 TV sets (via SCART) Letterbox filtering for 4:3 TV sets
<b>Audio decoding:</b>	
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 level L/R 0,5 V r.m.s. (nominal)  
Output impedance 600 Ohms  
THD > 60 dB ( 1 kHz )  
S/N > 60 dB  
Cross-talk < - 65 dB

**Input analogue:**

Input level L/R 0,5 V r.m.s. (nominal)  
Input impedance > 40 kOhm  
Volume at switching on Automatic reproduction at previous level selected

**Output digital:**

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

**Video parameters:**

**Output:**

Output level FBAS 1 Vs-s +/- 0.3 dB to 75 Ohm  
Output level Y 1 Vs-s +/- 0.3 dB to 75 Ohm  
Output level C 1 Vs-s +/- 0.3 dB to 75 Ohm  
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

**Video text**

Teletext filtering corresponds to ETS 300 472  
Standard  
Acquisition Teletext data (FBAS) corresponds to ITU-R  
BT.653-2 Lines: 6-22 and 320-335  
Soft video text 800 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

**LNC power supply:**

LNC power 400 mA max.; double insulated  
LNC voltage vertical <14,0V no load, > 11,5 V at 400

---

LNC voltage horizontal mA  
< 20 V no load, > 17,2 V at 400 mA  
LNC switched off in standby mode  
**22 kHz modulation:** 22 kHz, Amplitude 0.6 V +/- 0.2 V

**Programme memory/Satellite positions:**

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: Overall total of 5000 programmes possible in Total list

**DiSEqC:**

DiSEqC 1.0 and DiSEqC 1.2

**SFI data:**

SFI preview: maximum 7 days in advance

**Timer:**

Events: maximum 30 events, one year in advance

**Remote control system:** RC-5

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

Modulation frequency 36 kHz

Infra-red wavelength 950 nm

**Power supply:**

**Mains adapter:**

**Power consumption:**

3,0 W in standby mode (clock off)  
3,4 W in standby mode (clock on)  
9,5 W in operation, excluding LNC

**Nominal voltage:**

230 V / 50 Hz Alternating current

**Input voltage:**

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

**General:**

Dimensions (WxDxH): 205 mm x 130 mm x 35 ... 38 mm

Weight: approx. 370 g

## 12 Trouble-shooting guide

Problem	Possible cause	Solution
Various programmes not shown in programme list	Wrong programme list selected	Select other programme list (see Point 7.2.3.1)
Sound OK, no TV image	Receiver set to Radio mode	Switch to TV mode
Programmes such as Pro 7, Sat 1, TM3, Kabel 1, DSF and HOT have temporary interference	Interference from cordless "DECT telephones"	Increase distance between base station and receiver
Receiver cannot be operated	Defective data stream-->unit blocked	Disconnect mains power plug for about 5 seconds, then re-connect unit
Remote control not working	Batteries spent	Replace batteries
Temporary appearance of square blocks in picture. Unit switches temporarily to freeze frame, no sound. Screen temporarily black, with message "no signal".	Heavy rain or snow	Clear snow from dish
	Antenna incorrectly positioned	Antenne neu ausrichten
	Dish too small for location	Adjust antenna position
	Obstacle located between dish and satellite (e.g. a tree)	Mount dish with free line of sight
No picture, no sound, display on	Short circuit in LNC connection	Switch off unit, repair short circuit, switch unit on again
	Defective or missing cable connection	Check all cable connections
	Defective LNC	Replace LNC
	Incorrect external unit set in receiver	Correct setting (see Point 6.4)
	Antenna positioned incorrectly	Adjust antenna position
No picture, no sound, display off	No mains power	Check mains plug and cable
No reception of programmes previously received	Antenna defective, or incorrectly adjusted	Check antenna
	Programme being broadcast on a different transponder	Perform scan (see Point 8.3)
	Programme no longer being broadcast	None
Antenna cannot be rotated	Motor not DiSEqC 1.2 compatible	Use suitable motor

Problem	Possible cause	Solution
Time not displayed in standby mode	Time not acquired	Switch to major programme, e.g. ZDF, for 30 seconds
Unit cannot be switched on or operated	Unit blocked	<p>Perform Flash Reset: Note! All personal settings are deleted.</p> <ul style="list-style-type: none"> <li>&gt; Disconnect mains plug.</li> <li>&gt; Press both programme up and programme down key <b>on the unit</b> simultaneously and hold down.</li> <li>&gt; while holding down programme up and programme down keys, reconnect mains power.</li> <li>&gt; Hold keys down for approx. 5 secs. until display* "FLAS" appears.</li> </ul>

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## 13 Annexure

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## For daily use

### Switching on and off

- > Press the **On/Standby** key either on the digital receiver or on the remote control to switch the receiver on.
- > Press the same key again to switch the receiver off again.
- > The receiver is now in standby mode, and the current time will be shown on the unit display.

### Programme selection

#### Using the programme up/down keys

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

#### Using the numeric keys

- > Use the **numeric keys** to enter the desired programme number directly.

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 a programme number consisting of several digits, you have approx. 3 seconds after pressing each number to complete the entry. If you wish to enter a number consisting of only one or two digits, you can speed up the switching procedure by holding the key down on the last digit.

#### Using the programme list:

- > Press the **OK key**.
- > Now use the **arrow keys up/down** to mark the desired programme.
- > Press **OK** to select and view the marked programme.
- > Use the **arrow keys up/down** to move through the list one line at a time.
- > Use the **arrow keys left/right** to move back and forth in the list one page at a time.

#### Volume control

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

## Coordinates of some German cities (1)

City	Degrees longitude(E)	Degrees latitude(N)
<b>Aachen</b>	6,1	50,8
Augsburg	10,9	48,4
<b>Berlin</b>	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
<b>Chemnitz</b>	12,9	50,8
Cottbus	14,3	51,8
<b>Daun</b>	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
<b>Eisenach</b>	10,3	51,0
Emden	7,2	53,4
Erfurt	11,0	51,0
Essen	7,0	51,5
<b>Flensburg</b>	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
<b>Gera</b>	12,1	50,9
Goerlitz	15,0	51,2
Göttingen	9,9	51,5
Greifswald	13,4	54,1
<b>Halle/Saale</b>	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
<b>Karlsruhe</b>	8,4	49,0

## Co-ordinates of some German cities (2)

City	Degrees longitude (E)	Degrees latitude
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

