

Techni'Sat[®]

DIGITAL

DIGIT MF4-S e



Operating Manual

With integrated CONAX decoding system and PCMCIA interface for insertion of a CA module.

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

With motor-driven antenna facility and software update via satellite.

DVB
Digital Video
Broadcasting

DOLBY
DIGITAL



SihFern
INFO



DiSEqC 1.2

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Your unit carries the CE logo, and complies with all relevant EU standards.
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*0,12 EUR/Min. via the Deutsche Telekom AG network

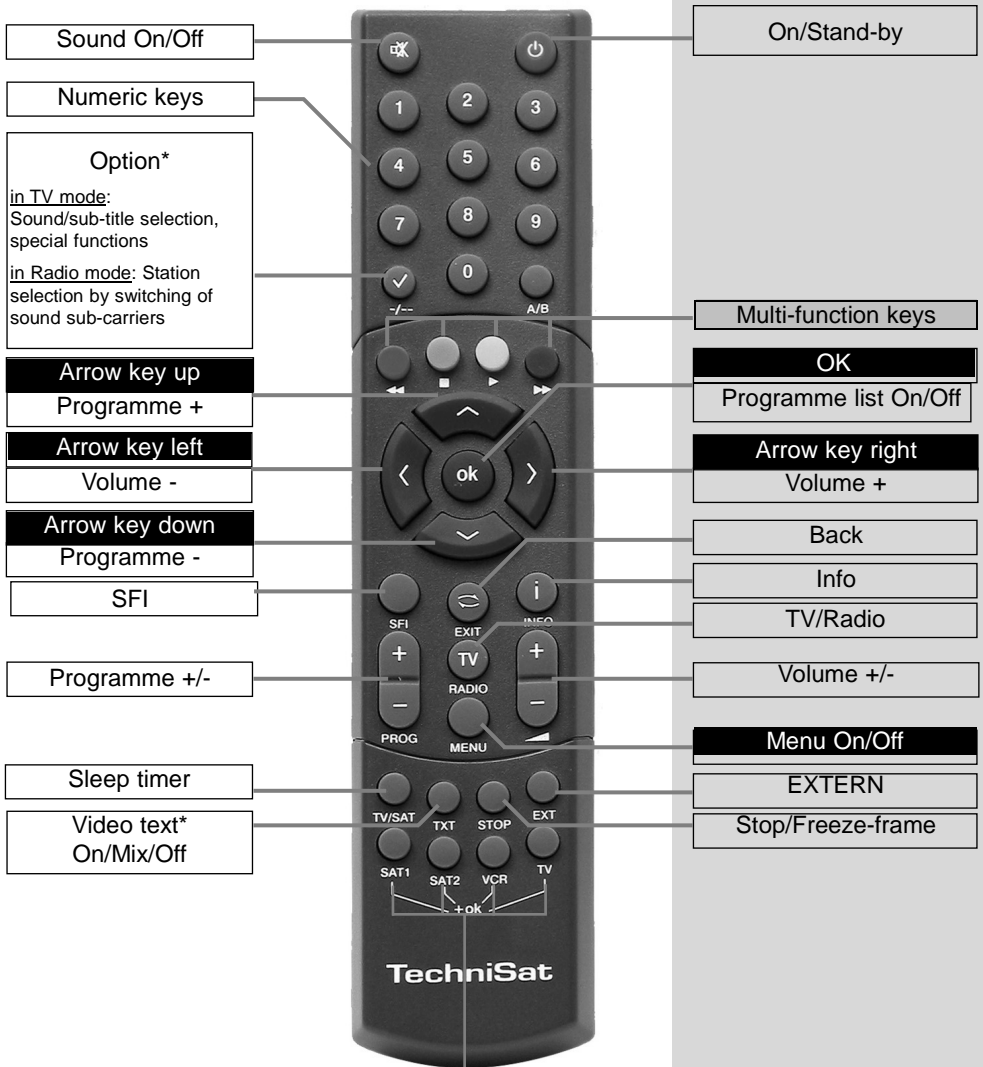
Note !

If you should ever have to send in your unit, please use only the following address:

TechniSat Teledigital AG
Service-Center
Löderburger Str. 94
D-39418 Stassfurt, Germany

2 Illustrations

Remote control



Remote control option:

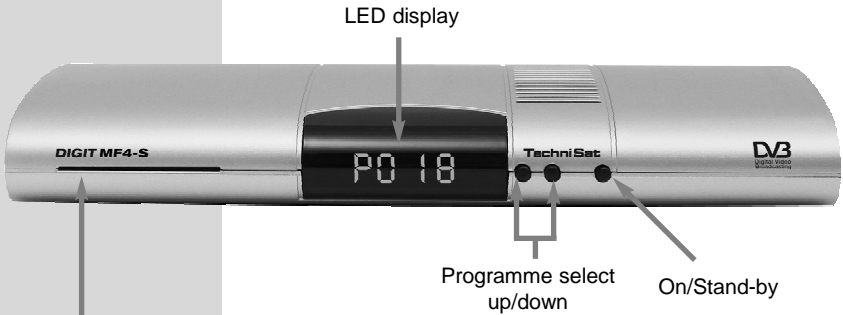
By switching the remote control options you can use this remote control unit to operate two receivers, one television set as well as a video recorder, using the same coding.

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

Please note:

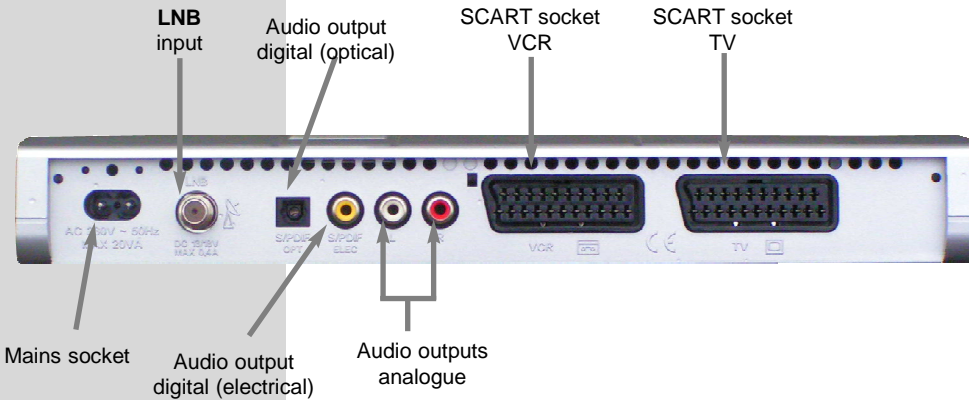
To operate **this** receiver, the remote control option of the remote control unit selected here and the remote control code must be identical.

* This function is only available if the appropriate data is being broadcast on the selected programme slot.



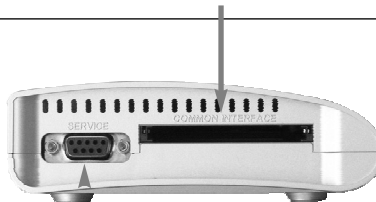
Card reader for CONAX Smartcard:

> Insert the CONAX Smartcard (gold-coloured chip at the bottom, and in the direction of insertion) carefully into the card reader as far as it will go.



Inserting the CA module:

- > Please follow the instructions of the manufacturer of the CA module and card.
- > Insert the desired Smartcard in the appropriate CA module.
- > Now insert the CA module carefully in the slot provided.



Please read this first

- > Before you begin operating your receiver, please first check whether the package contains all the components that should be included.
The following are supplied:
 - 1 digital receiver, 1 mains power cable,
 - 1 remote control, 1 operating manual,
 - 1 guarantee card, 2 batteries (1,5V micro-cell)
 - 1 SCART cable.
- > Insert the batteries provided in the battery compartment of the remote control, observing the polarity indicated.
- > Before connecting your digital receiver, please first read the safety notes in **Chapter 3**.
- > **Chapters 4, 5 and 6** describe how to connect the digital receiver to the external unit (dish, **LNB**, ...), to the television set, VCR, etc., and how to make the appropriate settings. These settings need be made only once, and will only need to be adapted if your external unit changes, or if additional appliances are connected.
- > **Chapter 7** describes all the functions necessary for daily operation of the receiver, e.g. programme selection.
- > In **Chapter 8** you will find information on how to set new programmes, or how to change the order of programmes.
- > **Chapter 9** describes the settings required if you are operating a motorised rotating antenna.
- > Technical terms used in the operating manual are explained in **Chapter 10**.
- > Technical data and specifications can be found in **Chapter 11**.
- > A trouble-shooting guide to help you overcome problems can 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 displayed along the bottom of the screen in the shape of coloured bars. These coloured bars represent different functions in the individual menus, which can be implemented by pressing the appropriate coloured key ("multi-function key") on the remote control. The "function keys" are only active when a brief description is displayed in the appropriate field. Key descriptions and terms that appear on 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, hand back to outlet where purchased).



Safety advice

by For your own protection, please read the safety instructions carefully before commencing operation of your new unit.

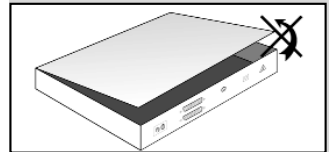
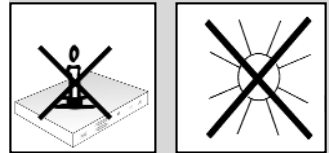
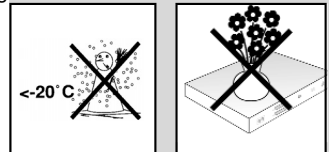
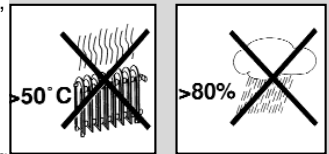
The manufacturer accepts no responsibility for damage caused by inappropriate operation, or by non-compliance with safety precautions.

- > 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 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



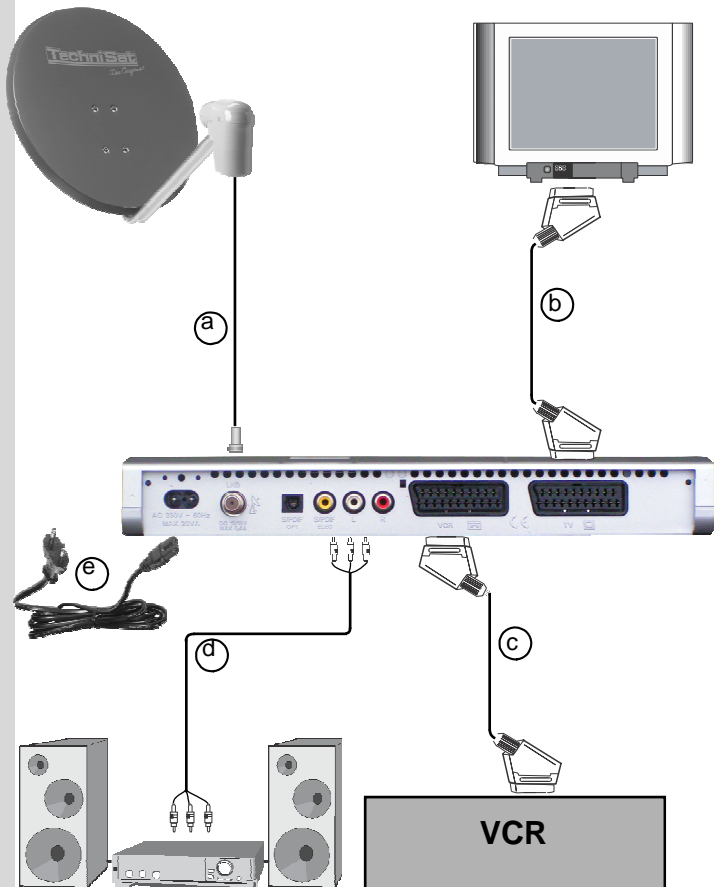
When not in operation

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

- Connect the **LNB** with the **LNB input (LNB IN)** of the DVB receiver.
- Establish a **Scart** connection between the DVB receiver and the television set.
- Connect a video recorder, using a **Scart** connection, to the **VCR Scart socket** of the DVB receiver.
- Connect the audio outputs to a Hi-fi set.
- Mains power connection



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 **LNB input** of the digital receiver with the **LNB** 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 **Auto Install**. 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.

Audio language

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

Country selection

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

Screen Format

In this installation step you can adjust the screen format .

- > If you wish to accept the setting, select the preferable option and confirm by pressing **OK**

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**. 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 **Modify**.

DiSEqC

- > If you have DiSEqC components in your receiving installation, confirm by pressing yellow field. (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**.

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**.

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 the **green** button.

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 the **green** button.

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 **green** button "Accept".

Software Update

When you choose ISIPRO Program list, 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**. The new software for your unit will now be downloaded. This procedure may take several minutes.

Channel search/ ISOPRO

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**.
- > 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 8.5.3.

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 channels**, if you wish to scan for both free-to-air and encrypted programmes, or **All unencrypted channels**, 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.

Regional programmes

- > Accept by pressing **OK**.

Software update

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

Load SFI data Installation Complete

- > Confirm the final message 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 Menu language

This menu item gives you the opportunity to set the menu language according to your personal preference.

To change the operating language, proceed as follows:

- > Press the **Menu** key to call up the **Main Menu**.
- > Use the **arrow keys up/down** to mark the menu line **Menu language**.
- > Confirm by pressing **OK**.
The sub-menu **Menu 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.
- > Now use the **arrow keys up/down** to mark the line Basic Settings.
- > Confirm by pressing **OK**. The menu **Basic Settings** will be displayed.
- > 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 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**.

6.2.2 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.

6.2.3 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.

6.2.4 IRC 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.

6.2.5 Quick start

- > In this line, use the **arrow keys left/right** to set the mode of the **Quick start** 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.

6.2.6 Auto standby

- > Confirm by pressing **OK**.
- > 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.

6.3 Sound settings

To optimise your digital receiver for use with your television set, you may make further settings in the menu **Sound 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.
- > Now use the **arrow keys up/down** to mark the line **Sound Settings**.
- > Confirm by pressing **OK**. The menu **Sound Settings** will be displayed.
- > 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 :

6.3.1 Picture settings

- > 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 TV SCART mode

- > Use the **arrow keys left/right right** to set the parameter according to your TV set, to **FBAS**, **RGB** or **S-Video**. For standard sets, select **FBAS**.

6.3.3 Video scaling

- > In this line, use the **arrow keys left/right** to select your preferred **Video scaling setting**.

6.4 Antenna configuration

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 configuration** 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.

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

- > 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 menu **Settings** will be displayed.
- > Now use the arrow keys up/down to mark the line **Antenna configuration**.
- > Confirm by pressing **OK**. The menu **Antenna configuration**

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

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 LNB can be addressed if the DiSEqC control is switched off, the menu is restricted to the configuration of a single LNB.

6.4.2 Setting the switching matrix

Four switching criteria for the DiSEqC control are indicated in the menu.

You 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 set tings 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**.

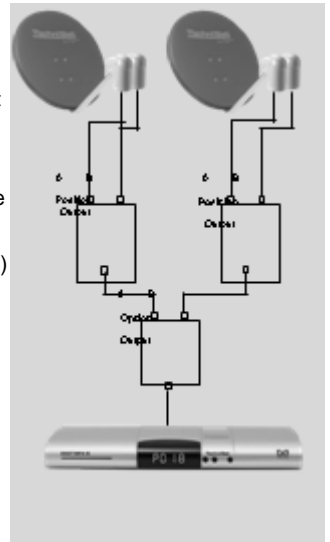
A table will be displayed, allowing you to select from various satellites.

- > 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 11**.

- > Confirm by pressing green button/ "Accept" button. 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 LNB settings/LNB 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 proceed **Continue**.
- > Confirm by pressing **OK**.
A sub-menu will be displayed, allowing you to adjust **LNB** settings or to set up a test transponder.

The following settings can be made:

LNB Type

- > In this line, use the **arrow keys left/right** to enter the type of **LNB** you are using. The options available are **Single LNB**, **Quatro LNB**, **Multytenne LNB**, **SatCR LNB**, **SatCR LNB (PN)**, **DisiCon 1 LNB**, **DisiCon 2 LNB**, **DisiCon 4 LNB**, **C-Band LNB**, **Circular LNB** and a **User LNB** for manual entry of **LNB** 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 LNB

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

LOF low band

LOF (Local oscillator frequency) is the frequency at which an LNB converts the frequency received into the so-called 1. Intermediate frequency, which then can be received and interpreted by the digital receiver. So-called Universal LNBs 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 your LNB.

LOF high band

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

Transition LOF low/high

> In this line, use the **numeric keys** to enter the frequency at which the **LNB** 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 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.
- > 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 market 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.

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.

- > 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.

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

7.2.5 Information box

Every time you switch programmes, an information box will be displayed briefly showing the programme slot as well as the name of the programme selected. In addition, other programme characteristics will be indicated, for example **TV** 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 Receiving encrypted programmes

Your receiver is equipped with an integrated CONAX decoding system as well as with a Common Interface. This allows you to receive encrypted programmes. To do this, you must first insert either a CONAX Smartcard into the integrated card reader, or insert a CI module including a valid Smartcard in the slot provided:

- > Insert the **CONAX/Cryptworks** Smartcard in the card slot of the integrated card reader.
- or
- > Insert a **CI module** into the slot.
- > Insert the Smartcard in the card slot of the CI module. Ensure that the gold-coloured chip of the Smartcard is located upper- most on the card in the direction of insertion.
- > If an encrypted programme is now selected, your digital receiver will automatically check the card reader as well as the interface, and will display the programme in unencrypted form provided the appropriate valid Smartcard or an appropriate CI module containing a valid Smartcard for this programme has been inserted.

7.3.1 Special functions

On some programme slots you will be advised of the availability of specific special functions. For instance, on multi-feed channels, in the case of sports broadcasts, you can sometimes choose different games (e.g. National League soccer), select different sound tracks (e.g. stadium/commentary) or select different camera angles (Formula 1).

In addition, some programme providers allow you to select the desired starting time for a movie you have selected.

7.3.1.1 Multi-feed options

Some programmes provide a multi-feed option. This function allows you, for example, in the case of sports broadcasts to select freely the camera angle you prefer (Formula 1 racing), or to switch to various games being played at different locations (e.g. National League soccer). Where a programme provides multi-feed options, this will be indicated on screen.

- > To select one of the available options, press the **Option** key.
 - A selection window will be opened, displaying the options available.
 - > Use the **up/down arrow keys** to select the desired option.
 - > Confirm by pressing **OK**.
- Your digital receiver will now switch to the selected option.

7.3.1.2 Select starting time/picture

Some channels provide the option of selecting specific movies to be shown at varying starting times. These movies are available around the clock, and at various selectable starting times. Where a channel provides a selection of starting time/picture, this will be indicated on screen by a message.

- > To select one of the starting times available, press the **Option** key. A selection window will open, displaying the available starting times.
- > Use the **arrow keys up/down** to select the desired starting time, and confirm by colored button. Provided the programme has been validated for the starting time selected, you can view it at the desired time.

7.3.2 CONAX PIN Code

Your digital receiver is equipped with a parental control feature, which blocks access to specific selected programmes (see Point 8.3). In addition, in the case of CONAX-encrypted broadcasts, individual programmes not suitable for viewing by children can be given a prior block by means of a parental control code. In order to decode the specific programme for viewing, the **CONAX PIN code** must

be entered. This PIN code is stored on the Smartcard. You will be advised of the code when you receive the card. The **CONAX PIN code** must therefore **not** be confused with the **Unit PIN code** of the digital receiver (Point 8.3).

If you switch on a channel that is currently broadcasting a pre-blocked programme, a message will be displayed.

- > To view the programme, use the **numeric keys** to enter the 4-digit **CONAX PIN code**.
- > As soon as the code has been correctly entered, the programme can be viewed normally.

If the code has been entered incorrectly, you can enter the PIN code again, or press **Back** to exit from the menu.

7.4 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 v** to decrease the volume.
- > Press the **Sound on/off key** to mute the sound, press the key again to switch sound back on again.

7.5 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 Selecting a different language (TV mode) resp.

station (Radio mode)

If a programme is broadcast in **several languages**, or with **multi-channel sound**, or if **several radio programmes** are available on a specific radio slot, this information will be displayed on screen. You may then proceed as follows to select a different language or a different sound channel:

- > Press the key **Option**. A list will now be displayed on screen, indicating the languages resp. radio programmes currently available.
- > Use the **arrow keys up/down** to mark the desired language, resp. the desired radio programme, 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 ().

7.6.1 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 7.6.1, 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 **Option** 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.

7.7 Return to last programme selected

- > Pressing the **Exit** 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.

7.8 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.

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.

7.9 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. 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.

7.10 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.
- > 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.

7.11 Freeze frame

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

7.12 Sleep timer

- > Press the **Sleep Timer (TV/SAT)** 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.

7.13 Video text

7.13.1 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 6.3.2.)

7.13.2 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.
- > 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.

7.14 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.

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.

7.15 Electronic Programme Guide SFI (S iehF ernl 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 re-select programmes, which will be selected automatically when the programme/show starts
- programme timer functions
- search for and select programmes according to type (genre).

7.15.1 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.

7.15.2 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.

7.15.3 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. 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.

7.15.4 Now (table with current programme contents)

The first SFI table to be displayed is the “**Now**” table 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 7.15.5)
- or
- > Press the **TV/Radio** key to return to normal operation.

7.15.5 Next

- > Use the **yellow** function key to call up the table “**Next**” (following programmes).
- > All the SFI functions are available.
- > Press the **yellow** function key to go to the SFI table “**More**” (Point 7.15.6)

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.

7.15.6 More

- > Pressing the **yellow** function key again while the SFI table “**Next**” is displayed will take you to the SFI table “**More**”. 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** colored 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**".

7.15.7 SFI functions

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

7.15.7.1 SFI Information

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.

7.15.7.2 SFI timer programming

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.

7.15.7.3 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.
- > 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.
- > 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.
- > 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.

7.15.7.4 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.
- > 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.
- > 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.

7.15.8 Terminating SFI

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

7.16 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 7.15.7.2.

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.

7.16.1 Manual programming of timers

- > Press the **Menu** key to display the **Main Menu**.
- > Use the **arrow keys up/down** to mark the item **Time organiser**.
- > Confirm by pressing **OK**. The sub-menu **Timer Overview** will be displayed.
- > 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.

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

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

7.16.2 Timer overview

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

- > To go to the menu **Timer organiser**, call up the menu **Time overview** 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.

7.16.3 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 green function key **Modify** to go to the settings of the marked timer. Make the changes as described in Point 7.16.
- > When you have completed the programming, press the **Green** function key **Accept** to accept the data into memory.

7.16.4 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**.

7.16.5 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 **green** function key **New** to go to the entry window allowing you to programme a new timer event. Complete this in accordance with Point 7.16.
- > 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 **green** 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.

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.

8.1.1 Calling up TV list organiser

To customise the Favourites list, proceed as follows:

- > Press the **Menu** key to call up the **Main Menu**.
- > Use the **arrow keys up/down** to mark the line **TV list organiser**, in order to work on the TV list, or **Radio list organiser**, in order to work on the radio list.
- > Confirm by pressing **OK**.
The programme list management required to work on the respective TV or Radio list will be displayed. TV or Radio 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 **blue** function key to move the marker to the Total list. This is now active.
- > Press the **blue** 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/List**.
- > Use the **arrow keys up/down** to select the desired programme list (e.g. Total list).

- > Confirm by pressing **OK**.
An additional selection window will now be displayed.
- > 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.
- > 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 TV 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 TV list and the TV list 1 and 2.
The currently active list will be indicated by a blue marker.

8.1.2 Adding programmes to TV list

To accept programmes from the TV list into the TV list 1 and 2, call up the TV list management as described in Point 8.1.1, and go to the TVlist.

- > Press the **blue** function key **Functions**.
A selection window showing the available functions will be displayed.
- > Use the **arrow keys up/down** to mark the item **Add**.
- > Confirm by pressing **OK**.
- > 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 TV list 1 and 2.

8.1.3 Deleting programmes

8.1.3.1 Removing (deleting) from the TV list

To remove programmes from the TV list, call up the programme list management as described in Point 8.1.3. The TV list will be displayed and active.

- > Press the **blue** function key **Functions**.
A selection window showing the available functions will be displayed.
- > Use the **arrow keys up/down** to mark the line **Remove**.
- > Press the **yellow** function key **Remove**.

- > To remove several programmes simultaneously, mark these as described in 8.1.3 (**Marking blocks of programmes**).
- > When you have completed marking the desired programmes in this manner, press the **yellow** function key **Remove**.
- > 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 All channels list, and can be added to the TV list again at any time.

8.1.3.2 Deleting from the All channels

To remove programmes from the All channels, 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 TV list, then select the function **Delete**.

8.1.4 Sorting programmes

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

- > Press the **blue** function key **Functions**. A window showing the available functions will be displayed.
- > Use the **arrow keys up/down** to mark the line **Sort**.
- > Now press the **yellow** function key **Sort**. A double arrow will appear next to the programme selected.
- > Now use the **arrow keys up/down** to mark the programme you wish to place at a different position in the list.
- > 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 8.1.4 (**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.
- > 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

8.2.1 Select TV programmes

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

8.2.2 Starting 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.

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 unauthorized 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.
- > 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.

8.3.1 Change 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.
- > 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 PIN enquiry Mode

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

8.3.3 Select TV /Radio programmes

- > Press the **OK** key. The TV list of the category currently selected (Radio or TV) will be displayed. The programme currently selected is marked.
- > Press the **Opt** 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. TV 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.

8.4 Channel 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 search

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

2. Satellite search

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

3. Transponder search

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

4. Manual search

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 free, and how many of them are encrypted programmes. New programmes are stored in the **Total list**, and can then be included in the **Favorites list** in accordance with **Point 8.1**.

- > In order to scan for programmes, first call up the **Main Menu**.
- > Use the **arrow keys up/down** to mark the line **Scan**.
- > Confirm by pressing **OK**.
The sub-menu **Scan** will be displayed.
- > 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 search

When using this option, all the satellites set in the menu LNB 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.

- > Press the **OK** key to decide whether you wish to scan only for free-to-air programmes (**Free channels**) or whether you wish to include encrypted programmes (**All channels**).
- > To confirm, press the **green** function key **Start search**.
This scanning procedure may take more than 15 minutes. Please also note any messages displayed on screen.

8.4.2 Satellite search

To search a single satellite for programmes, select the option **Satellite**.

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 channels**) or whether you wish to scan for encrypted programmes as well (**All channels**).
- > Confirm by pressing the **green** function key **Start search**.
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.

8.4.3 Transponder

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

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
- > In this line use the **numeric keys** to enter the desired frequency.

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.

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

Search mode

- > Use the **arrow keys up/down** to mark the line **Search mode**.
- > Use the **OK** key to decide whether you wish to search only for free-to-air programmes (**Free channels**) or whether you want to include encrypted programmes in the scan (**All channels**).
- > Confirm by pressing the **green** function key **Start search**.
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.

8.4.4 Manual search

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 differs from the menu **Transponder** 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**.

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, 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 TV list by manually.

Sort automatically:

New channels are added to the channel list which is then sorted. Previous order will be changed

Append automatically:

New Channels are appended to the channel list. Existing channels remain unchanged.

Sort manually-TV

Sort manually-Radio:

Direct assignment of new channels to channel list position.

Back:

Return to search dialogue. All previously found channels can be organised using dialogues' TV list organiser' and 'Radio lists organiser'.

Sorted

The programmes found will be sorted into the Favorites list in accordance with a pre-programmed list. The order of listing the programmes will be determined by the audio language set.

Unsorted

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

No

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

- > Use the **arrow keys left/right** to decide whether you wish to accept the programmes in 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 Favorites list automatically, these can be added to the Favorites 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**.
- > Now use the **arrow keys up/down** to mark the menu line **Settings**.
- > Confirm by pressing **OK**.
The sub-menu **Settings** will be displayed.
- > Use the **arrow keys up/down** to mark the menu line **Service settings**.
- > Confirm by pressing **OK**.
The sub-menu **Service settings** will be displayed

8.5.1 Restore factory setting

- > Use the **arrow keys left/right** to mark either **Yes** or **No**.
- > Confirm by pressing **OK**.

8.5.2 Delete all channels

This function serves to delete the entire channels memory.

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

8.5.3 Updating the channel list (ISIPRO)

The ISIPRO channel updating feature allows you to keep the channel list of your receiver up to date automatically. To achieve this, a current channel 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 channel 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 channel list**.
- > Press the **OK** key to go to the sub-menu **Update channel list**.
- > To ensure that your receiver will check automatically to see whether a new channel list is available, mark the line **Update**.
- > Switch the automatic channel 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**.

Your receiver will restart itself, and will indicate the presence of a new programme list by means of a message on screen.

- > 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.

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 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. 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**.

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, 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**.

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 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**.

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.

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**.
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 (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. To start the software update, follow the instructions 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

8.7 Condition access

This menu point takes you to the sub-menus for the CONAX /cryptworks Smartcard used, and for the CI module. You can view information related to the Smartcard or the CI module used by selecting the Smartcard or the CI interface, by pressing the **arrow keys**, then confirm by pressing **OK**.

Manual Initialisation of the CI module

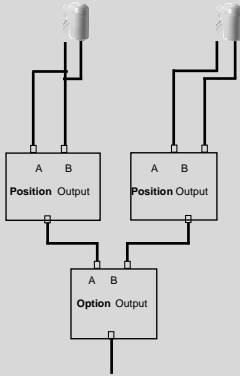
- > You can initialise the CI module manually by pressing the **green** function key **CI Reset**.

9 Operation with a rotating antenna (DiSEqC)

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 configuration** as described in Point 6.4, 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 **Motor antenna**.
- > Use the **arrow keys up/down** to mark the line **Motor antenna**, and confirm by pressing **OK**.
- > Confirm the message regarding the setting of easterly and westerly limits by pressing **OK**.

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 **LNB** and satellite receiver, used to transmit the signals received, and to supply current to the **LNB**.

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 be 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.

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 LNBs, 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 LNB:

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

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

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

Intermediate frequency:

The range of frequencies broadcast by a satellite cannot be transmitted via any cable. The LNB 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 (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 LNB 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 LNB. In Universal LNBs it is used to switch to the High range.

Operating current:

The LNB 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 LNBs or a V/H LNB.

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 LNB, 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 LNB:

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

Service voltage:

LNBs are supplied with power by means of the coaxial cable, to achieve this the receiver supplies either 14 or 18 volt power

Interim frequency:

The frequency range broadcast by the satellite cannot be transmitted via a cable. Therefore the LNB converts the signal to the interim frequency range of 950 to 2150 MHz.

This makes it possible for the digital receiver to receive and process the signal.

11 Technical data

DBS tuner:

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

Card reader:

Type	1 slot card reader for integrated CA system
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Common Interface:

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

Demultiplexing:

in accordance with ISO
13818-1

Video decoding:

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

Audio decoding:

Audio compression	MPEG-1 & MPEG-2 Layer I and II
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 levels l/r	0, 5 V r.m.s. (nominal)
Input impedance	> 40 kOhms
Volume at switching on	Automatically sets to previously selected volume

Output digital:

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

Video parameters:**Output:**

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

Video text

Teletext filtering in accordance with ETS 300
 472 Standard

Scanning Teletext data (FBAS) in accordance with ITU-R
 BT.653-2 lines: 6-22 and 320-335
Soft video text 800 pages memory

TV SCART:

Output: CVBS, RGB or S-Video

VCR-SCART:

Input: CVBS; RGB or S-Video
Output: CVBS 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 f. operating software and
 pre-programming

LNB power supply:

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

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

Programme memory/Satellite positions:

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

Number of programmes:

Total list TV/Radio: Total of 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

Subsystem address 8 (SAT 1), 10 (SAT 2)

Modulation frequency 36 kHz

Infra-red wavelength 950 nm

Power supply:**Mains power adapter:****Power requirement:**

3.0 W in stand-by mode (clock off)
 3.4 W in stand-by mode (clock on)
 10.5 W in operation, **LNB** off
 18 W in operation, horizontal polarisation / 400 mA **LNB** power

Nominal voltage:

230 V / 50 Hz AC

Input voltage:

180 V... 250 V / 50 Hz AC

General:

Dimensions (WxDxH): 285 mm x 133 mm x 40 ... 43 mm

Weight: approx. 490 g

Problem	Possible cause	Solution
Current time not displayed while unit is in stand-by mode	Time not acquired	Switch to major programme for approx. 30 secs.
Receiver cannot be switched on, or cannot be operated	Receiver blocked	Perform Flash Reset: Note! All personal settings will be lost. > Disconnect mains plug. > Simultaneously press programme up/down key on receiver and keep pressed down. > While programme up/down key is pressed, reconnect mains plug. > Keep keys pressed down for approx. 5 secs. until message * "FLAS" appears.

Problem	Possible cause	Solution
Various programmes not shown in programme list	Incorrect programme list selected	Select other programme list (see Point 7.2.)
Sound OK, no TV picture	Radio mode selected	Switch to TV mode
Programmes such as Pro 7, Sat 1, TM3, Kabel 1, DSF and HOT temporarily show interference	Interference from cordless (DECT) telephones	Increase distance between phone base station and receiver
Receiver cannot be operated	Data stream defective -->receiver blocked	Disconnect mains power for approx. 5 secs., then reconnect and switch receiver on again
Remote control not working	Batteries spent	Replace batteries
Square blocks appear temporarily in picture. Image freezes temporarily, no sound, screen occasionally black with message "No Signal".	Heavy rain or snow	Remove snow from dish
	Antenna incorrectly positioned	Adjust antenna position
	Dish too small for location	Adjust antenna position
	An obstacle between dish and satellite (e.g. a tree)	Mount dish with unobstructed line of sight
No picture, no sound, display on	Short circuit in LNB connection	Switch receiver off, eliminate short circuit, switch unit on again
	Defect in, or missing cable connection	Check all cable connections
	Defective LNB	Replace LNB
	Incorrect external unit selected at receiver	Correct setting (see Point 6.4)
	Antenna incorrectly positioned	Adjust antenna position
No picture, no sound, display off	No mains power	Check mains cable and plug
No reception of programmes previously received	Antenna defective, or incorrectly	Check antenna
	Programme being broadcast on another 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

For daily use

Switching on and off

- > Switch the digital receiver on by pressing the **On/Standby** key, either on the unit or on the remote control.
- > Press this key again to switch the receiver off again.

Programme selection

Using the programme up/down keys

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

Using the numeric keys

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

1				for programme slot 1
1,	then 4			for programme slot 14
2,	then 3,	then 4		for programme slot 234

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

If you wish to enter a number consisting of only one or two digits, you can speed up the selection process by keeping the key pressed down a little longer on the last digit.

Using the programme list

- > Press **OK**.
- > 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 up or down the list one line at a time.
- > Use the **arrow keys left/right** to move through the list one page at a time.

Volume control

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

TV/Radio switching

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