

Operating Manual

DIGITAL- Satellite-Receiver

Features integrated decoding system
plus PCMCIA interface to accommodate a CI module.

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



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* Only with devices with this equipment

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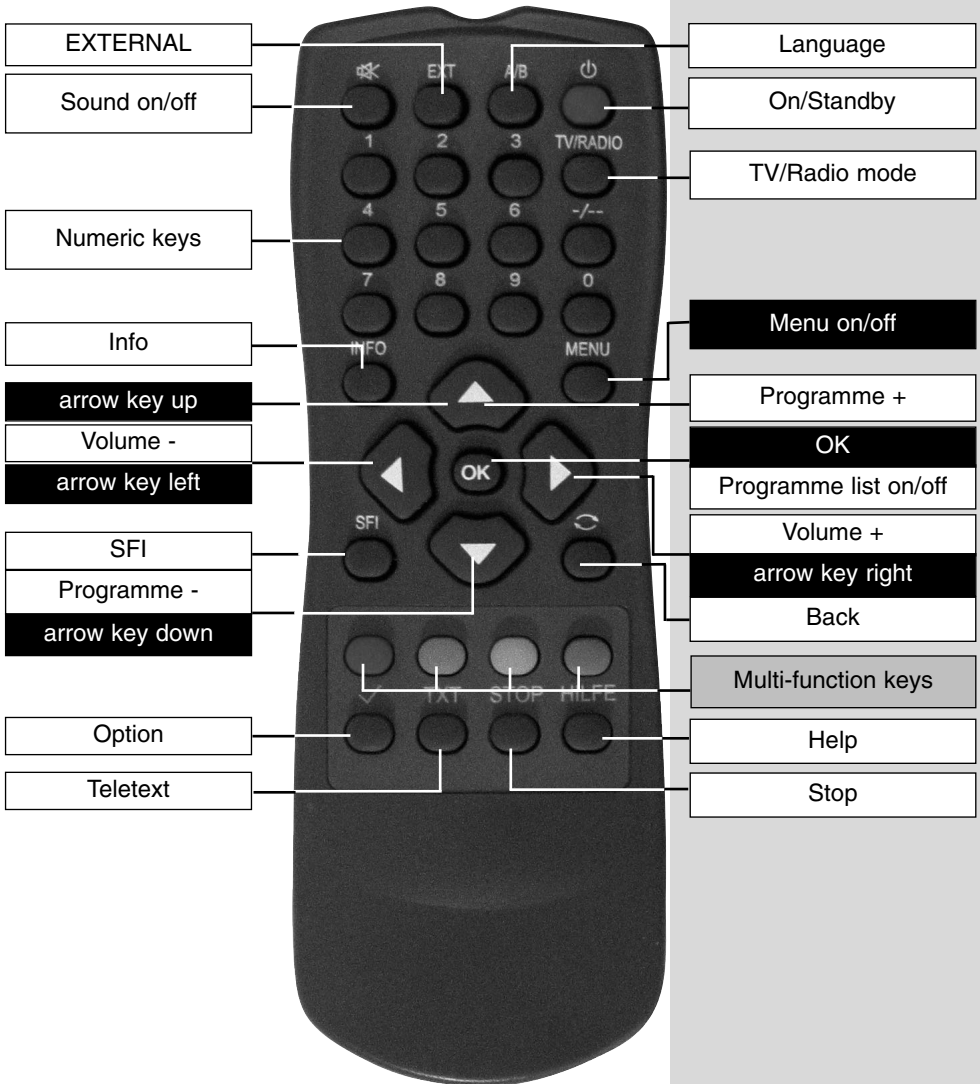
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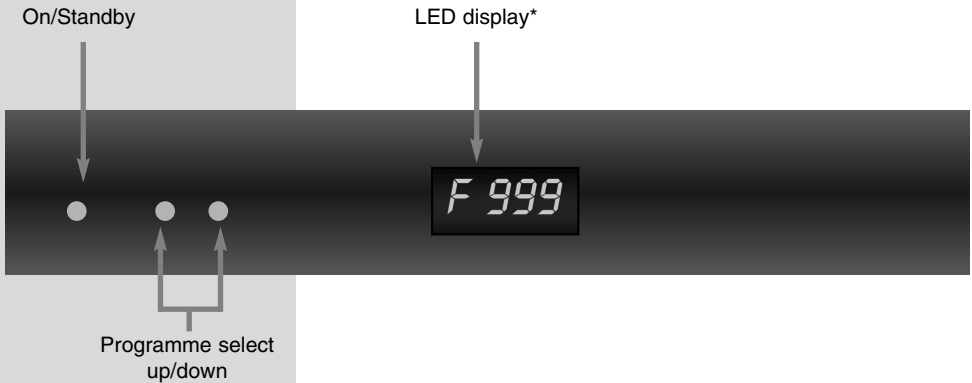
Your appliance carries the CE logo and complies
with all relevant EU standards.
Subject to change without notice, not responsible for printing errors.
Correct as at 03/03

* Only with devices with this
equipment

2 Illustrations

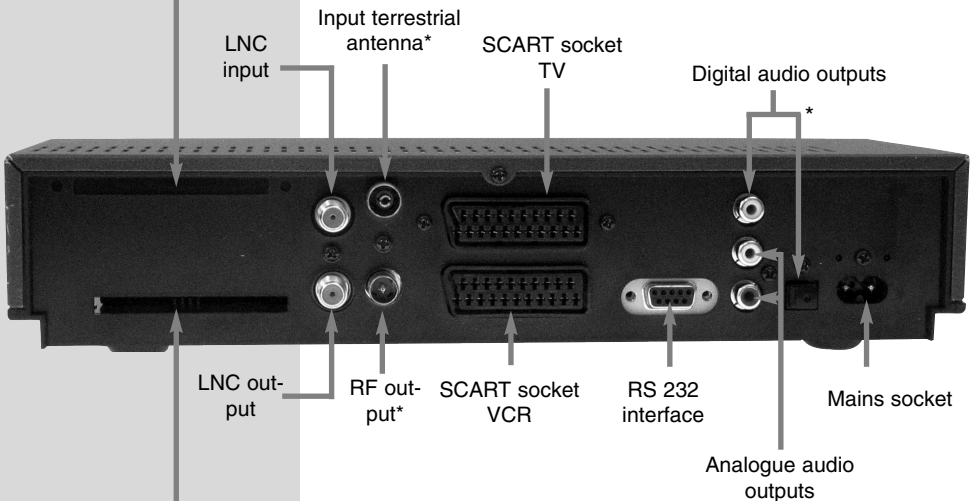
Remote control





Card reader for Smartcard:*

> Insert the Smartcard (gold chip face down, and in the direction of insertion) carefully into the card reader, as far as it will go.



Inserting the CI module:*

> Please follow the instructions of the CI module and card manufacturer.

> Insert the smart card selected in the appropriate CI module.

> Now insert the CI module carefully in the slot provided.

* Only for receivers equipped with this feature

Dear customer,

congratulations on your decision to select this digital receiver .
This operating manual will help you to fully utilise the comprehensive functions of your new digital receiver.

We have made the operating instructions as easy to understand and as brief as possible.

This is a digital receiver of the new generation. We wish you many years of enjoyment with your digital receiver!

Your
Service Team

3 Please read this first

- > Before you set up your unit for operation, please first check that the package contains all the components that should be there. The following are supplied as standard:
 - 1 digital receiver, 1 mains power cable, 1 remote control unit, 1 operating manual, 1 guarantee card, 2 batteries (1,5V AAA size).
- > Insert the batteries provided in the battery compartment of the remote control unit. Note the correct polarity when inserting the batteries.
- > Before connecting the digital receiver, please first read the safety notes in **Chapter 3**.
- > **Chapters 4, 5 and 6** describe connection of the receiver, and adjusting it to the external installation (dish antenna, LNC, etc.), to the television set, VCR, etc. These settings need only be made once during initial installation, and need only be adjusted or changed when there are any changes in your equipment, i.e. if a different external unit is connected, or additional appliances are connected.
- > **Chapter 7** describes all the functions necessary for day-to-day operation, such as programme selection or volume adjustment.
- > **Chapter 8** contains information on how to add new programmes, and how to change the programme order.
- > **Chapter 9** describes the settings necessary for the operation of a rotating antenna unit.
- > Technical terms used in the operating manual are explained in **Chapter 10**.
- > Technical data may be found in **Chapter 11**.
- > Assistance in finding and eliminating problems can be found in the trouble-shooting guide in **Chapter 12**.

Important notes on operation

The use of a so-called "On Screen Display" simplifies the operation of the digital receiver, and reduces the number of keys required on the remote control unit. All functions are displayed on the screen, and can be controlled by a few key-strokes. Related functions are grouped together in a "MENU". The selected function is highlighted in a different colour. The lower line of the display shows coloured bars representing the red, green, yellow and blue function keys. These coloured bars represent different functions in the various menus, which can be executed by pressing the appropriate colour-coded key ("multi-function key") on the remote control unit. The function keys are only active when a brief description is displayed in the appropriate field.

The descriptions of keys and terms that appear in the OSD menu are printed in bold type in this operating manual.

Help function:

Where available in the menu, pressing the **blue** function key will cause a help text to be displayed, pressing again will return to normal operation.

Note on disposal

The packaging of your unit consists entirely of recyclable material. Please sort the components appropriately, and dispose of them via the "Dual System", or your equivalent recycling system. Please note that spent batteries from the remote control unit, as well as electronic components in general, should not be disposed of in your domestic refuse. For appropriate disposal, consult your specialist retailer, or consult your local authority).

Safety notes

For your own protection you should read the notes on safety precautions carefully before commencing operation of your new unit. The manufacturer bears no responsibility for damage caused by non-observance of the safety precautions, or by inappropriate handling.

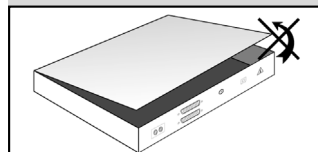
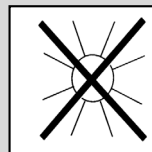
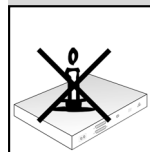
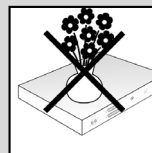
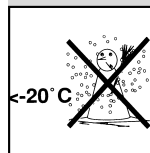
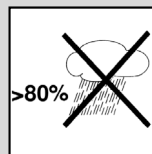
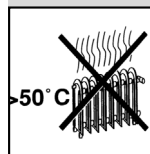
- > To ensure adequate circulation of air, place the unit on a smooth horizontal surface and do not place any objects on top of the unit. The top cover contains air slits which permit heat to escape from the interior of the unit.
- > Do not place any burning items, such as burning candles, on top of the unit.
- > Do not place any containers filled with liquid, such as vases, on top of the unit, and ensure the unit remains dry, i.e. it must not be subjected to water spray or droplets.
- > The unit may only be operated in a temperate climate.
- > Do not open the cover of your unit! You are in danger of receiving an electric shock. If it becomes necessary to open the unit, this should only be done by trained personnel.

In the following cases you should disconnect the unit from the mains power and consult a specialist repair service:

- > the mains cable or the mains plug are damaged
- > the unit has been exposed to humidity, or liquid has entered the casing
- > in case of severe malfunction
- > in case of significant external damage

When not in use

The unit should be disconnected from the mains power supply if it will not be operated for an extended period (e.g. when you are away on holiday), or during an electric storm.



4 Connections

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

4.1 Mains power connection

The digital receiver should only be connected to the mains power supply after it has been completely connected with all other components in the system. This serves to avoid the digital receiver or other components being damaged or destroyed.

- a** When you have completed making all the connections, use the mains cable supplied to connect the receiver to a mains power outlet 85-288 V/50-60 Hz.

4.2 External unit

4.2.1 Single operation

- b** Use a suitable coaxial cable to connect the **LNC input** of the digital receiver to the LNC of your external unit. Please also note Point 6 "Settings".

4.2.2 Operation with an additional receiver in a single-receiver installation

- c** If you wish to operate an additional unit in a single-receiver installation (e.g. an analogue receiver or an ADR receiver), you can connect the LNC input of the additional receiver with the **LNC output** of the DVB receiver by means of a suitable coaxial cable. In order for the additional receiver to receive the satellite signal, your DVB receiver must remain in Standby mode at all times. When the DVB receiver is switched on, this will take over the priority control over the LNC.

4.3 Connection to a television set

When you have completed connecting your digital receiver to the television set as described in this chapter, it may be necessary to adjust the digital receiver to the television broadcast standard of your TV set before proceeding with further settings.

See also Point 6.3.5 (**Video system**).

4.3.1 On SCART cables

In order to enjoy the optimum picture quality you should connect the digital receiver to your television set by means of a SCART cable.

Proceed as follows:

- d** Connect the receiver (**SCART socket TV**) and the television set (SCART socket) by means of a SCART cable. If your television set is appropriately equipped, this will be switched automatically to AV, and thus to satellite reception, when the digital receiver is switched on.

4.3.2 On RF cables*

If your television set is not equipped with a SCART socket, the digital receiver must be connected to the antenna input of the television set. In this case, sound can only be reproduced in mono mode.

Proceed as follows:

- e** Use a suitable TV connection cable to connect the receiver (**RF output**) to the antenna input of the television set.
- f** The cable coming from the terrestrial antenna must be connected to the **Terrestrial antenna input** of the digital receiver.

You must now set the television set to the output channel of the digital receiver. Select a free programme slot on the television set, and tune it to Channel 38 (if necessary, refer to the operating manual of the television set).

If you cannot obtain a clear picture on Channel 38, this channel or a neighbouring channel may already be tuned to a channel being received via the antenna. You can confirm this by briefly removing the antenna cable from the **Terrestrial antenna input** socket of the digital receiver. If you then temporarily receive a better picture, you should select a different channel in the range of 21 to 69 for the digital receiver.

Setting the UHF output channel

To set an optimum UHF output channel, call up the menu **Audio/Video Settings**, as described in 6.3., and select the field **UHF output channel**. Then proceed as described under 6.3.7.

4.4 Video cassette recorder (VCR)

- g** Connect the video recorder to the SCART socket **VCR**. When set to Play, the video recorder will deliver a switching signal to the digital receiver. The video recorder signal will thus be provided automatically to the TV set.
If your video recorder does not provide a switching signal, press the key **EXTERN** to set your digital receiver to the external **AV** input. Press this key again to return to normal operation.

* Only for receivers equipped with this feature

4.5 Hi-fi amplifier

4.5.1 Analogue

To enjoy the best possible sound quality, you can 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 to an input of the hi-fi amplifier (e.g. CD or AUX; please note that the Phono input is not suitable!).

4.5.2 Digital

If your amplifier is equipped with an appropriate electrical or optical input socket, connect the socket **AUDIO OUT DIGITAL electrical** resp. **AUDIO OUT DIGITAL optical*** with the electrical resp. optical input of your amplifier. Sampling rates of 32, 44.1 and 48 KHz are provided, depending on the broadcasting station.

In addition, this connection will reproduce the Dolby Digital signal (AC3), where available.

4.6 Serial interface (RS 232)

The RS 232 interface is used to update the operating system, and to facilitate pre-programming by means of a personal computer.

5 Getting started: initial installation

When you have read the safety notes, and have connected the unit as described in Chapter 4, you can proceed to switch on the receiver as described in Chapter 7. When switching on the unit for the first time, the Start window with the **AutoInstall** installation assistant (*Fig. 5-1*) will be displayed. The installation assistant will guide you through the most important settings of the digital receiver quickly and in an easy-to-follow manner.

The keys on the remote control required to make the appropriate step in the installation are marked.

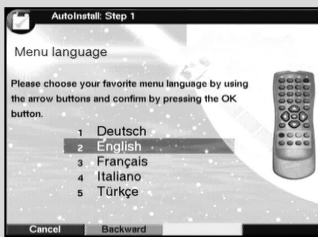
You can break off the initial installation procedure at any time by pressing the **red** function key. Pressing the **green** function key takes you back to the previous step of the installation procedure. This allows you to correct any entries made in error.

If the initial installation is not carried out at all, or is interrupted, your unit will start operation with its standard pre-programmed settings.



(Fig. 5-1)

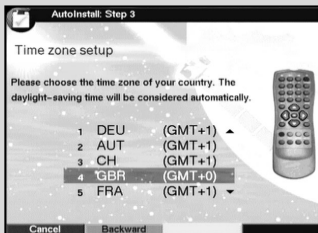
* Only for receivers equipped with this feature



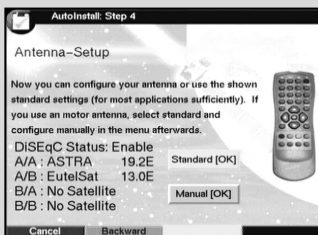
(Fig. 5-2)



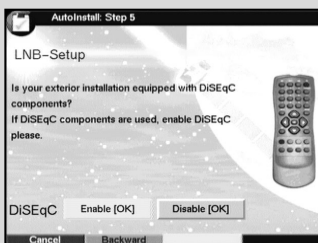
(Fig. 5-3)



(Fig. 5-4)



(Fig. 5-5)



(Fig. 5-6)

The initial installation procedure described hereinserves **only as an example**. The exact initial installation procedure will depend on the settings you wish to make. Please follow closely any instructions that appear on the screen.

Menu/OSD language:

- > Press **OK** to display the selection window for the **Menu/OSD language**. (Fig. 5-2)
- > Use the **arrow keys up/down** to select the preferred OSD language.
- > Confirm by pressing **OK**.

Audio language

- > Use the **arrow keys up/down** to select the preferred audio channel language. (Fig. 5-3)
- When the installation assistant has been completed, your language selection here will be used to sort the programmes in your Favourites list.
- > Confirm by pressing **OK**.

Country/Time Zone

- > Use the **arrow keys up/down** to select the time zone of the country in which you are located. (Fig. 5-4)
- The time on the receiver clock will be set automatically based on your selection.
- > Press **OK** to confirm, and to proceed to the antenna configuration.

Antenna configuration

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

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

DiSEqC

- > If you are utilising DiSEqC components as part of your reception installation, click on to the field **Activate** and confirm by pressing **OK** (Fig. 5-6). (Additional information on DiSEqC may be found in Chapter 10: Technical Terms.)

Position A/Option A

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

Position B/Option A

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

Position A/Option B

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

Position B/Option B

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

With the next step you can check again on the configuration of your antenna.

- > If you wish to confirm this setting, use the **arrow keys up/down** to select the field **yes**, and confirm by pressing **OK**. (Fig. 5-11)

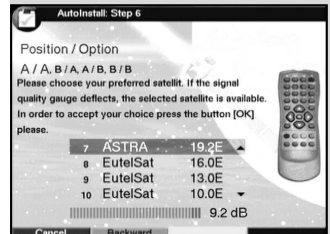
Updating the software (Pre-condition: Astra 19,2° reception)

When you have completed the settings for the antenna configuration, the digital receiver will check on whether there is an updated version of the software for your unit available via satellite. If a new version of the software is available, you can process a software update automatically. Use the **arrow keys right /left** to select the field **Update**, then confirm by pressing **OK**. (Fig. 5-12). The new software for your unit will now be downloaded. This procedure can take several minutes.

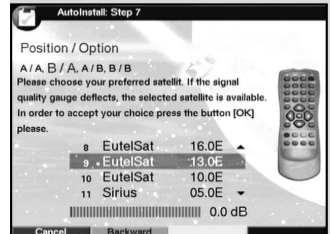
Searching/scanning for channels/stations

When the software version has been checked, and updated if necessary, you can proceed to the programme search.

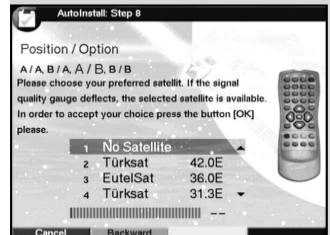
- > Use the **arrow keys up/down** to mark the field **All Programmes**, if you want to search for both free-to-air and encrypted programmes, or **All unencrypted Programmes**, if you want to search only for free-to-air programmes. (Fig. 5-13)
- > Press the **OK** key now to confirm, and an automatic programme scan will be carried out. All the satellites selected in the antenna configuration step will be scanned for programmes. This procedure may take several minutes. Please note any messages displayed



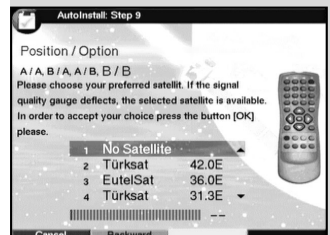
(Fig. 5-7)



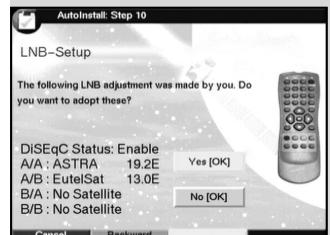
(Fig. 5-8)



(Fig. 5-9)



(Fig. 5-10)



(Fig. 5-11)

on the screen.

After the Search

When the programme search has been completed, the number of transponders, programmes and new programmes found will be displayed. In addition, you will be asked (Fig. 5-14), whether you want to accept the programmes found automatically in the TV or Radio list. If you wish to accept the programmes automatically, you can then decide whether they should be transferred to the Favourites list in **sorted** or **unsorted** form.

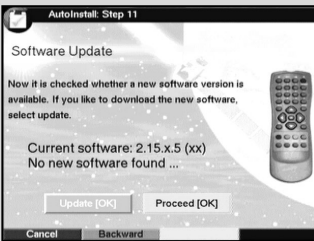
In the case of a **sorted** acceptance of programmes found, these will be sorted into the Favourites according to a pre-programmed list. The order in which programmes are listed will depend on the audio channel language selected in the installation step **Audio language**. If German was selected as the audio language, the sorting order can additionally be differentiated according to the appropriate country (Germany, Austria or Switzerland) selected during the installation step **Country**.

If the programmes are accepted in **unsorted** form, the newly found programmes are simply added in unsorted order at the end of the Favourites list.

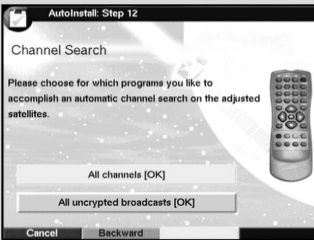
- > Use the **arrow keys right/left** to select the preferred type of sorting, and confirm by pressing **OK**.

Exiting the installation assistant

- > Confirm the final message of the installation assistant (Fig. 5-15) by pressing **OK**, to return to normal operation.



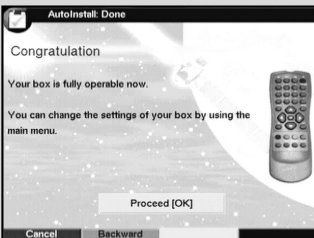
(Fig. 5-12)



(Fig. 5-13)



(Fig. 5-14)



(Fig. 5-15)

6 Settings

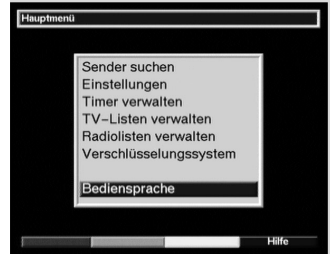
Now that you have completed connecting your new digital receiver, and have commenced operation, you can, if you wish, further optimize the settings of the digital receiver for your personal preferences.

6.1 Menu language

Under this menu item you have the option of setting the menu language according to your personal preference.

To alter the OSD language proceed as follows:

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

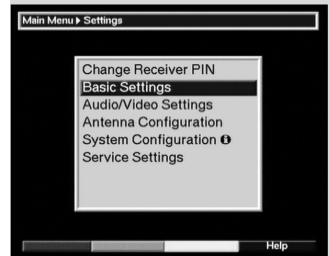


(Fig. 6-1)

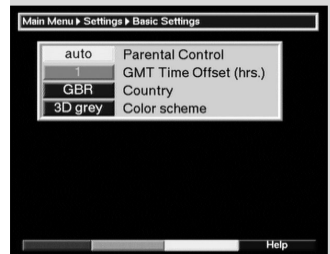
6.2 Basic settings

To optimize the performance of your DVB receiver, you must still set this to your personal preferences.

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



(Fig. 6-2)



(Fig. 6-3)

6.2.1 Parental control function

Your receiver is equipped with a parental control (child-proof lock) function. This can be used to protect important functions (e.g. calling up the main menu) from unauthorized access. In addition programmes to which you have blocked access as described in Points 8.1.6 and 8.2 can only be selected after entering a four-digit PIN code (Unit PIN).

- > In this line you can use the **arrow keys right/left** to set the parental control mode to **Always** or **Auto**.

Always

When the setting **Always** is selected, the Main Menu as well as the programmes selected in terms of Points 8.1.6 and 8.2 are permanently blocked, regardless of the programme being broadcast.

Auto

When the setting **Auto** is selected, access to the Main Menu is not blocked. The programme lock block is only activated when one of the selected channels carries a programme with an age restriction.

When using a Smartcard please note Point 7.3.1.3 !

6.2.2 Time difference to GMT (hours)

Your receiver is equipped with a clock. This is synchronised to **Greenwich Mean Time** via satellite signals. If you have selected the option **None** under the heading **Country** (Point 6.2.3), you will simply need to correct the time to correspond to your local time by using the **arrow keys right/left**. For Germany, this difference is +1 hour, and +2 hours for Daylight Savings Time.

6.2.3 Country

This function provides for automatic adjustment for summer and winter time. Using the **arrow keys right/left**, enter your home country in the line **Country**.

- > Press the **Back** key to return to the menu **Settings**, or press the **Menu** key to return to normal operation. The settings are automatically stored in memory.

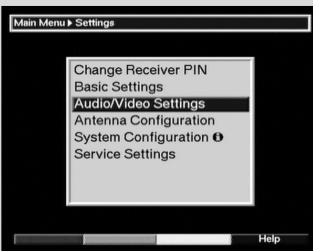
6.2.4 OSD Setting (schematic)

In this line, use the **arrow keys right/left** to select one of the colour presentation options for the OSD: **3D Sand**, **3D Blue** or **3D Grey**.

6.3 Audio/Video settings

In order to optimize the performance of your digital receiver in conjunction with your television set, you may wish to make further settings in the menu **Audio /Video Settings**.

- > Press the **Menu** key to call up the **Main Menu**.
- > Use the **arrow keys up/down** to select the line **Settings**.
- > Confirm by pressing **OK**. The sub-menu **Settings** will be displayed. (Fig. 6-4)
- > Now use the **arrow keys up/down** to select the line **Audio/Video Settings**.



(Fig. 6-4)

- > Confirm by pressing **OK**. The menu **Audio/Video Settings** will be displayed. (Fig. 6-5)
- > You can use the **arrow keys up/down** to move the marker around within the menu, and change the individual settings as indicated. When selecting a menu item please also note any messages displayed on screen.

The following settings can be adjusted:

6.3.1 Picture format TV set


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

6.3.2 Language (Audio signal)

Use the **arrow keys right/left** to select your preferred language. If the language is available from the provider, this language will be automatically selected.

6.3.3 Language (Sub-titles)

Sub-titles can be displayed on your screen using this DVB receiver. If the function Sub-titles is switched on, and the language selected is being broadcast, these will be automatically displayed.

If the function is not switched on, sub-titles can also be displayed manually. Sub-titles are indicated by the symbol  shown in the information box. Please also note Point 7.13 of this operating manual.


6.3.4 TV SCART mode

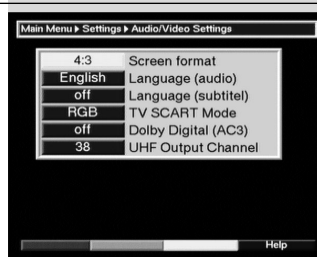
Use the **arrow keys right/left** to select the appropriate setting for your TV set, **CVBS** or **RGB**. The standard setting is **CVBS**.

6.3.5 Video system*

Use the **arrow keys right/left** to select the appropriate broadcast standard for your television set. The options available are **PAL BG**, **PAL I**, **PAL DK**, **SECAM BG** and **SECAM DK**.

6.3.6 Dolby Digital (AC3)

A number of movies are transmitted in the Dolby Digital format. This is indicated after a programme has been selected by the Dolby logo  in the information box. If you have connected a Dolby Digital 5.1 channel amplifier to the system, you can enjoy movies in 5.1 channel Dolby Digital sound where available.



(Fig. 6-5)

* Only for receivers equipped with this feature

To enjoy this feature, you must simply connect the Audio Out Digital output (see Point 4.5.2) of your DVB receivers with the digital input of your Dolby Digital 5.1 channel amplifier. Where a programme is broadcast in Dolby Digital sound, this will be indicated by the Dolby logo being displayed in the information window when the programme is selected. If the function Dolby Digital (AC3) is switched on, these programmes will automatically be reproduced in Dolby Digital format. If the function is not enabled, Dolby Digital sound can also be switched on manually. Please refer to Point 7.5.1 of this operating manual.

6.3.7 UHF output channel*

To set a suitable UHF output channel, proceed as follows:

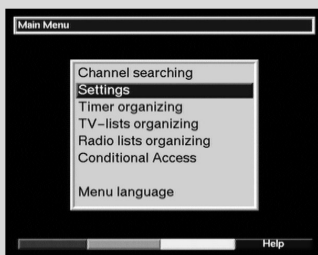
- > Select a free UHF channel in the range of 21 to 69 on your television set.
- > Then, using the **arrow keys right/left** set the new output channel of your digital receiver. The digital receiver will now transmit on the UHF channel indicated on the display. If you are not able to obtain interference-free reception on this channel, repeat the procedure until you have found a suitable channel.
- > When you have found an optimum UHF channel, remember to store this in the memory of your television set.
- > If your television set is equipped only with an automatic programme scan, you will first have to set a random UHF channel on your digital receiver, and then start the automatic scan function of your television set. If necessary, repeat this procedure until you have found a suitable channel, then store this in the memory of your television set.
- > Finally, it may be necessary to perform some fine tuning of the channel on your television set.

6.4 Antenna configuration

Once you have completed setting the digital receiver to your individual preferences, you can proceed, if necessary, to adjust the digital receiver settings to your antenna. The menu **Antenna Configuration** contains the satellites that have been selected in the installation assistant. If the installation assistant was interrupted, the satellite positions ASTRA and EUTELSAT are pre-programmed.

Should you wish to receive other satellites, or if you are using a different type of LNC, you can adjust your digital receiver to the appropriate data as follows:

- > Press the **Menu** key to call up the **Main Menu**. (Fig. 6-6)
- > Use the **arrow keys up/down** to select the item **Settings**.



(Fig. 6-6)

* Only for receivers equipped with this feature

- > Confirm by pressing **OK**.
The menu **Settings** will be displayed. (Fig. 6-7)
- > Now use the **arrow keys up/down** to select the line **Antenna Configuration**.
- > Confirm by pressing **OK**. The menu **Antenna Configuration** will be displayed. (Fig. 6-8)

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

6.4.1 Switching DiSEqC on or off

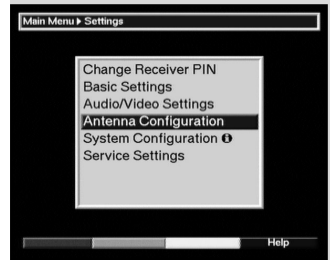
DiSEqC (**D**igital **S**atellite **E**quipment **C**ontrol) is a digital switching signal used to control DiSEqC-compatible components via the antenna cable. If your external installation incorporates DiSEqC components, you must switch on (enable) the DiSEqC control:

- > In this line, use the **OK** key to select **DiSEqC on or off**.
As only one LNC can be addressed if the DiSEqC control is switched off, the menu is restricted to the configuration of a single LNC.

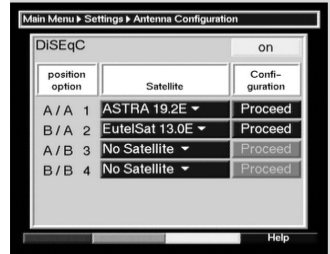
6.4.2 Setting the switching matrix

The menu lists the four switching criteria of the DiSEqC control. Your receiver is pre-programmed so that ASTRA will be received on the position A/A and Eutelsat on the position B/A of a multiswitch. If the switching matrix of your receiving installation is set up differently, or if you are receiving other satellites, proceed as follows to adjust your digital receiver to the requirements of your receiving installation.

- > Use the **arrow keys** to select a DiSEqC switch position (1-4) you wish to allocate to a particular satellite (e.g. **A/B 3 No Satellite**), by simply marking this line.
- > Confirm by pressing **OK**.
A selection table listing various satellites will be displayed.
- > Use the **arrow keys up/down** to mark the appropriate satellite.
The **arrow keys up/down** will move the marker up or down one line at a time, the **arrow keys right/left** will move forward or backward one page at a time.
If the satellite you seek is not included in the list, please select one of the reserve slots, designated **User 1** to **User 14**.
- > Confirm by pressing **OK**. The satellite selected will now be added to the menu **Antenna Configuration** at the position previously marked.

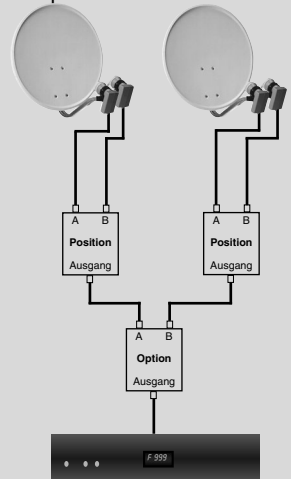


(Fig. 6-7)



(Fig. 6-8)

Example:



Continue to work through the menu **Antenna Settings**, until the entries in this menu comply with those of your receiving installation. In the case of switching criteria which you do not require, set the entry to **No Satellite**.

6.4.3 Additional Settings/LNC properties

Now you have adapted the switching matrix of your digital receiver to the configuration of your receiving installation, you should continue to check the other settings for your receiving installation, and to correct settings where necessary.

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

The following settings may be made:

LNC Type

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

Test Transponder

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

Transponder frequency

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

Polarisation

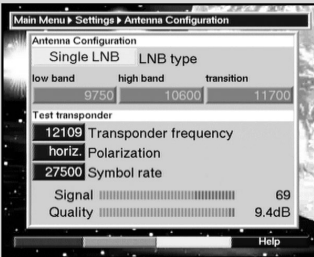
Use the **arrow keys up/down** to enter the appropriate polarisation plane (**horizontal** or **vertical**).

Symbol rate

The symbol rate indicate the volume of data transmitted per second. This could, for example, be 27500 (27500 symbols per second). Use the **numeric keys** to enter the appropriate symbol rate.

User LNC

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



(Fig. 6-9)

LOF low band

LOF (Local oscillator frequency) is the frequency an LNC utilizes to convert the frequency received into the so-called 1. intermediate frequency, which can, in turn, be received and interpreted by the digital receiver. So-called Universal LNCs are equipped with 2 LOFs, to cover the entire receiving range from 10.7 to 11,8 GHz (low-band) and from 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 LNC.

LOF high band

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

Transition LOF low/high

- > In this line, use the **numeric keys** to enter the frequency at which your LNC changes from low band to high band.
- > Press **OK** to accept the setting.

Signal/Quality

If you have entered the parameters of the test transponder correctly, these lines will indicate the signal strength and quality.

6.4.4 Rotating antenna

If you are operating 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 this operating manual.

7 Operation

7.1 Switching on and off

- > You can switch on the digital receiver by pressing the **On/Standby** key either on the receiver front panel, or on the remote control.
- > Press the same key again, either on the receiver front panel or on the remote control, to switch the receiver off again.
- > The receiver is now in standby mode, and the display* on the receiver will show the time.
If the current time is not shown, this must still be downloaded to the unit. To do this, switch the receiver on, and set it to a major channel, such as ZDF in Germany, that broadcasts a time signal, for about 30 seconds to download the time automatically.

* Only for receivers equipped with this feature

7.2 Programme selection

7.2.1 Using the Programme up/down keys

- > You can move through the list one slot at a time, up or down, by using the **Programme keys up/down** either on the receiver or on the remote control.

7.2.2 Using the numeric keys

- > Use the numeric keys to enter the programme number you wish to view.

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 multi-digit programme numbers you have approx. 3 seconds after pressing the key to complete your entry.

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

7.2.3 Using the programme list

- > Press **OK**.
The programme list will now be displayed. In TV mode only the TV programmes will be displayed, and in radio mode only the radio programmes will be displayed. The programme currently selected is marked/highlighted. (Fig. 7-1)
- > Use the **arrow keys up/down** to mark the desired programme.
- > Press the **yellow** function key **Preview** to view a preview of the programme highlighted.
- > Press **OK** to view the highlighted programme.
- > Use the **arrow keys up/down** to move the marker around the list one line at a time.
- > Use the **arrow keys right/left** to move the marker around the list, backward or forward, one page at a time.

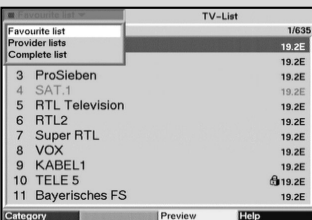
7.2.3.1 Selecting a list

To facilitate finding programmes your receiver is equipped with several programme lists. You may select your **Favourites list** (see Point 8.1), or display the alphabetically sorted **Complete list** or sort the list by **Providers**.

- > Press **OK** to display the active programme list.



(Fig. 7-1)



(Fig. 7-2)

- > Now use the **red** function key to open a window showing the types of programme list available (**Favourites List, Providers and Complete list**). The active programme list type will be highlighted. (Fig. 7-2)
- > Use the **arrow keys up/down** to select, e.g. the programme list type **Complete list**.
- > Confirm by pressing **OK**.
The alphabetically sorted Complete list, which includes all programmes, will be displayed. (Fig. 7-3)
- > Use the **arrow keys up/down** to mark the programme you wish to view.
- > Confirm by pressing **OK**.



(Fig. 7-3)

7.2.4 Calling up blocked programmes

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

- > Use the **numeric keys** to enter your PIN code. You can now view the programme selected.

or

- > Switch to a programme that is not blocked.

If you have selected the option **Always** under Point 6.2.1, the message requiring entry of the code will appear each time you switch to a blocked programme. However, to make your life a little easier, the PIN code only needs to be entered once in each operational cycle.

If you have selected the option **Auto**, only the programme currently running will be unblocked. The parental control will be active again for the next programme broadcast, and the PIN code will also have to be entered again.

If you are using a Smartcard please note Point 7.3.1.3.

7.2.5 Information box

Each time the programme is changed, an information box will be displayed briefly (Fig. 7-5) showing the programme slot and programme name. In addition, symbols will indicate other programme characteristics, such as **txt** for teletext, **16:9** for a 16/9 format programme, **A/B** for various audio channels (e.g. movie with soundtrack in various languages, or various radio programmes), **ST** for sub-titles and **ENC** for encrypted programmes.



(Fig. 7-4)



(Fig. 7-5)

7.3 Reception of encrypted programmes*

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

- > Insert the valid Smartcard in the card slot of the integrated card reader*.
- or
- > Insert a CI module in the slot* provided.
- > Insert the Smartcard in the card slot of the CI module. Ensure that the gold chip is located on the upper side of the card, in the direction in which it is inserted.
- > If an encrypted programme is selected, your digital receiver automatically checks on the card reader and the slot, and will display the programme in unencrypted form provided you have a valid smart card for this programme, resp. an appropriate CI module containing a valid smart card.

Manual Initialising of the CI module*

- > You can initialise the CI module manually in normal operation by holding down the **red** function key for some time.

7.3.1 Special functions*

If you have a valid Smartcard, you can receive encrypted programmes. Insert the Smartcard, with the gold chip located on the lower surface, and pointing in the direction of insertion, pushing it carefully as far as it will go into the card reader located on the back panel.

Certain programme slots provide specific special functions. Multi-feed channels allow you, for instance, in the case of sports broadcasts to choose from various venues (National League soccer), or you can select different sound channels (stadium vs. TV commentary), or you can choose from several camera positions available at a single event (Formula 1 racing).

In addition, you can select the preferred starting time for your movie selection.

* Only for receivers equipped with this feature

7.3.1.1 Multifeed options*

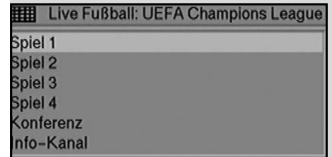
Some programmes provide a facility for multifeed options. This function allows you, for instance, to select your own preferred camera angle in the case of coverage of sports events (Formula 1), or to switch to various sports venues (National League soccer).

Where a programme provides multifeed options, this is indicated on screen (Fig. 7-6).

- > Press the **Option** key to select one of the options available.
A selection window will be displayed, showing the various options available. (Fig. 7-7)
- > Use the **arrow keys up/down** to select the desired option.
- > Confirm by pressing **OK**.
Your digital receiver will now select the chosen option.

A small rectangular box containing a checkmark and the text "Camera".

(Fig. 7-6)



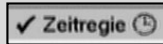
(Fig. 7-7)

7.3.1.2 Time management*

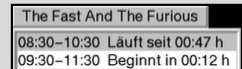
Some channels provides the facility of time management. This means that movies are available around the clock with various starting times to suit your preference.

Where a programme provides the time management facility, this will be indicated on screen (Fig. 7-8).

- > To select one of the possible starting times, press **Option**.
A selection window indicating the available starting times will be displayed. (Fig. 7-9)
- > Use the **arrow keys up/down** to select the preferred starting time.
- > Confirm by pressing **OK**.
If the programme has been enabled for the starting time selected, you may view it at this time.



(Fig. 7-8)



(Fig. 7-9)

Parental Control*

The entry of a PIN code allows you to view programmes with restricted access for children even during the daytime, without compromising the basic tenet of parental control. In Germany, for a programme to be accessible to children and teenagers, the programme must be coded with an age group release which is part of the television self-control programme monitored by the state youth authorities. To view a pre-blocked programme you must enter the 4-digit Smartcard PIN code. You will obtain this PIN code together with your Smartcard.

* Only for receivers equipped with this feature

Enter PREMIERE PIN (P 16) ???? ?

(Fig. 7-10)

7.3.1.3 Smartcard PIN-Code*

Your digital receiver is equipped with a parental control function that allows you to block individual programmes as well as access to the main menu (see Points 6.2.1 and 8.1.6).

In addition programmes not suitable for viewing by children are pre-blocked by means of an age group code. This parental control for programmes is permanently active, and cannot be de-activated as described in Point 8.1.6. To unblock a particular programme, you must enter the **Smartcard PIN code**. This PIN code is stored on the Smartcard. You will receive it when you receive the card.

The **Smartcard PIN code** is thus **not** the same as the **Receiver PIN code** of the digital receiver (Point 8.2) and should not be confused with this.

As soon as you have inserted a Smartcard in the card reader slot, only the **Smartcard PIN code** will be active.

If you switch to a channel currently broadcasting a pre-blocked programme, or if you attempt to call up the main menu, a message will be displayed. (Fig. 7-10)

- > To view the programme, or to call up the main menu, use the **numeric keys** to enter the 4-digit **Smartcard PIN code**.
- > As soon as the correct code has been entered, you will be able to view the programme or to access the main menu.
If the PIN code has been entered incorrectly, you can repeat the entry, or you can exit the menu by pressing **Back**.

7.3.1.4 Changing the Smartcard PIN code*

Should it become necessary to change the **Smartcard PIN code**, please contact the appropriate Hotline.

7.4 Volume control

You have the facility to adjust the volume of your digital receiver. This makes operating the receiver even more convenient, since you can access all important functions from a single remote control, and will rarely have to use the remote control of your television set. When the digital receiver is switched on it will reproduce sound at the volume level last set.

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




* Only for receivers equipped with this feature

7.5 Selecting a different language

If a programme is broadcast in several languages, or with various soundtracks (A/B) in the information box), proceed as follows to select a different language or sound channel:

- > Press the **Language Select** key. A list of languages currently broadcast will be displayed on screen (Fig. 7-11).
- > Use the **arrow keys up/down** to select the desired language.
- > Confirm by pressing **OK**.

You can now listen to the programme in the desired language. Your digital receiver can also receive mono broadcasts.

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



(Fig. 7-11)

7.5.1 Dolby Digital (AC3 mode)

If a programme is broadcast in Dolby Digital sound, this will be indicated by the Dolby logo in the information window when you switch to the programme. If the Dolby Digital (AC3) function has been enabled as per Point 6.3, this programme will automatically be reproduced in this format.

If you have not switched on the function **Dolby Digital (AC3)**, switch your receiver to AC-3 mode manually as follows:

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

You can now enjoy the programme in full 5.1 channel Dolby Digital sound. If you would like your receiver to recognise and reproduce Dolby Digital broadcasts automatically, you should set your receiver to automatic AC3 reproduction as described in Point 6.3.

7.6 TV/Radio switching

The pre-programming setup contains not only television programmes, but radio programmes as well.

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

7.12 Teletext

7.12.1 Using the teletext decoder of your television set

Where broadcast by the provider, teletext will be transferred to your television set. To operate the teletext function, use the remote control of your television set. Should you experience problems with your television set, such as an overlap of teletext and picture content, you should set your digital receiver to **CVBS mode** (Point 6.3.4).

7.12.2 Using the internal teletext decoder

As an alternative, you can utilize the integrated TOP teletext decoder to display information. The TOP teletext system groups together all text pages in groups and blocks according to subject matter, which makes the system more manageable.

- > Select the programme on which you wish to view teletext information.
- > Press the **teletext** key to switch on the teletext (Fig. 7-15).
- > Use the **numeric keys** to enter the teletext page you wish to view. Your entry will be displayed in the upper left corner of the screen. When you have entered the desired teletext page, your receiver will search for this page.
Since not all teletext pages can be transmitted simultaneously, it may take a few seconds for your unit to find the page and display it on your television screen. All teletext providers utilize page 100 for their index.
- > Use the **red** resp. **green** keys to move forward or back one page at a time.
- > Press the **yellow** function key to call up the teletext group indicated in the yellow field.
- > Press the **blue** function key to call up the teletext block indicated in the blue field.

Mixed mode

- > Pressing the key **teletext** again will switch the screen display to mixed mode (simultaneous display of the **teletext** information as well as of the TV picture). Press this key again to exit from mixed mode.


Stop mode

- > Press the **Stop** key; the message Stop will be displayed in the top left corner of the teletext window. This will prevent the automatic continuous paging of the teletext sub-pages. Press the **Stop** key again to exit the Stop mode.
- > Press **Back** to return to normal operation.



(Fig. 7-15)

7.13 Sub-titles

Where sub-titles are available, this will be indicated by the symbol  in the information window. If you have enabled the function **Sub-titles** (in accordance with Point 6.3), these will automatically be displayed, provided they are available in the language selected.

If the sub-titles are only available in other languages, or are broadcast via teletext, you can enable these manually as follows.

- > Press the **Language Select** key (you may have to press it several times) until the heading **Sub-titles** display a table listing the sub-title languages being broadcast, and/or the teletext pages on which the sub-titles are being broadcast.
- > Use the **arrow keys up/down** to mark the desired language or teletext 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 broadcast, and the settings are not stored in memory if you switch to another channel.

7.14 Electronic Programme Guide SFI

Your digital receiver provides an electronic programme guide. This allows you to view the programme information relating to one or more programmes on your screen.

You can very quickly obtain an overview of programmes currently being broadcast, or you can view all the programmes being broadcast today, or on the following days.

The SFI functions allow you to:

- display information relating to programme contents on your screen
- mark programmes you wish to view, which will be automatically selected when the programme begins
- programme time events
- search for and set programmes according to the programme type or category.

7.14.1 Downloading SFI data

The programme information is updated by your receiver at the times set in accordance with Point 8.4.3 (SFI Channel). The only proviso is that the receiver must be in standby mode.

The download procedure is indicated by the message **SFLd** in the display*. If your receiver is switched on at this time, the function will not be carried out.

* Only for receivers equipped with this feature

You can also initiate a manual download procedure immediately after switching the receiver off (while the display* shows "oooo") by pressing the **SFI** key. During the download procedure the message **SFLd** will appear briefly in the display, followed by an indication of the percentage of SFI data already transferred, e.g. **038P** for 38%).

The duration of the download procedure will depend on the number of programmes that need to be updated. The maximum period in advance for which data is available is seven days. Based on the limit on total data that can be stored, this time-frame will be reduced the more programmes are listed in the electronic programme guide.

You can decide for yourself, which programme should be listed in the electronic programme guide. These can be added to the list as described in Point 8.1.5.

7.14.2 Interrupting the download

The download procedure can be interrupted by switching on the digital receiver (**On/Standby** key). The SFI data obtained during the previous update remains available.

7.14.3 Viewing the Electronic Programme Guide

- > Switch on both the receiver and your television set.
- > Press the **SFI** key on the remote control of your digital receiver.
The electronic programme guide will now be displayed on screen (Fig. 7-16). The programmes you have selected, or which were listed as part of the default setting, are shown here with their current programmes being broadcast. You can now use the SFI function to obtain information on the contents of various programmes. You can also use the SFI functions to select a particular programme, to pre-select it for later viewing, or to add it to the timer programming.

7.14.4 Now (Table of current programme contents)

The SFI table "**Now**" (Fig. 7-16) listing current programmes will be displayed first. The yellow bar to the right of the programme name indicates the time elapsed of the current programme. The programme currently being viewed is highlighted.

- > Use the **arrow keys up/down** to move the marker one line at a time. Use the **green** resp. the **yellow** function key to move the marker one page at a time.
 - > The SFI functions (Point 7.14.3) are now available.
 - > Press the **arrow key right** to move to the SFI table "**Next**" (See Point 7.14.5)
- or
- > Press the **TV/Radio** key to return to normal operation.



(Fig. 7-16)

* Only for receivers equipped with this feature



(Fig. 7-17)

7.14.5 Next

- > Use the **arrow key right** to display the table "Next" (following programmes) (Fig. 7-17). The SFI functions (Point 7.14.3) are available.
- > Press the **arrow key right** to move to the SFI table "More" (Point 7.14.6)
- or
- > Press **Back** to return to the previous SFI table "Now"
- or
- > Press the **TV/Radio** key to return to normal operation.

7.14.6 More




(Fig. 7-18)

- > While the SFI table "Next" is displayed, press the **arrow key right** to display the SFI table "More". (Fig. 7-18)
An additional time window will be displayed in the title line of this table. This window will show the time of the SFI table displayed.
- > Press the **arrow key right** to display the starting time of the next programme to begin in the time window.
- > Press the **arrow key right** several times to page on to the programme which is the next to begin. Holding down the **arrow key right** will allow you to page forward 15 minutes at a time.
Pressing the **arrow key left** will correspondingly allow you to page backward through the tables. The individual days of the week are displayed along the lower border of your screen. If information is available for the following days, the corresponding fields will be highlighted.
- > To obtain a preview for a specific day, press the appropriate number corresponding to the day of the week on the **numeric keys**
- or
- > Press **Back** to return to the table "Next".

7.14.7 SFI Functions

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

7.14.7.1 SFI Information

Use the **SFI Information** to obtain brief information on the programme or channel selected. Where SFI information is available, this will be indicated by  next to the corresponding programme.

- > Use the **arrow keys** resp. the **function keys** to highlight the desired programme.

-
- > Press the **SFI** key to display the information. Lengthy text passages can be scrolled one line at a time by using the **arrow keys up/down** or use the **green** or **red function keys** to move backward or forward one page at a time.
 - > Press **Back** to return to the previous table.

7.14.7.2 Marking a programme

- > Use the **arrow keys** or the **function keys** to mark/pre-select the desired .
- > Confirm by pressing **OK**. The programme will be automatically marked, and will be selected when the broadcast begins.
- > Press **Back** to return to the previous table.

7.14.7.3 Recording a programme (Timer operation)

The function Record serves to switch your digital receiver on and off for the selected programme, so that this can be recorded even in your absence. Please note that you must also programme your video recorder to make a recording.

- > Use the **arrow keys** to mark the desired programme.
- > Press the **OK** key twice to highlight the line in red and to accept the data for this programme directly into the timer memory.

or

- > Press the **red** function key (**Timer/VCR**) to open a selection window.
- > Use the **arrow keys up/down** to mark the line **Record**.
- > Confirm by pressing **OK**.
The timer menu showing the data of the selected programme will be displayed for monitoring purposes. If necessary, you can make alterations or corrections at this stage (see 7.15).
- > Press **Back** to return to the previous table.

The appropriate line will be highlighted in red. Your receiver will be switched on at the starting time of the programme selected. If the unit was switched on by means of the timer, this will be indicated by "**rec**" in the display*. Most of the functions of the remote control are disabled at this stage to avoid any accidental interruption of the recording.

In standby mode the active timer will be indicated by the blinking of the colon in the time display.

* Only for receivers equipped with this feature

Aborting timer operation

If you wish to delete a timer event programmed by means of the SFI, proceed as described in Point 7.15. To abort an active timer, switch the digital receiver off by pressing the **On/Standby** key.

Then press this key again to switch the receiver on, and proceed to operate it normally.

7.14.7.4 SFI Programme overview

The SFI programme overview function allows you to display the full daily programme of an individual channel. Proceed as follows:

- > Press the key **SFI**.
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 overview for today of the programme selected will be displayed. (Fig. 7-19)
- > Use the **arrow keys up/down** to move the marker to the appropriate programme or starting time.
The individual days of the week are displayed along the lower border of your screen. If information is available for the following days, the appropriate fields will be highlighted.
- > To display the programme contents for a specific day, press the **numeric key** corresponding to the desired day of the week.

Displaying SFI overview for other programmes

- > Press the **green** function key **Programmes**.
A list of SFI programmes will be displayed. (Fig. 7-20)
- > Now use the **arrow keys** to mark the desired programme.
- > Press the **OK** key to display the SFI overview of the marked programme.

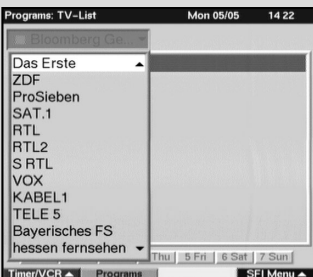
7.14.7.5 SFI overview by programme type (genre)

If you are particularly interested in certain types of programme, you can have the programme information displayed according to certain genres such as 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**.

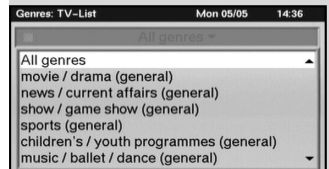


(Fig. 7-19)



(Fig. 7-20)

- > Use the **green** function key **Genres** to open a window showing the programme genres available. (Fig. 7-21)
- > Use the **arrow keys** to select the desired programme category, and confirm by pressing **OK**. An overview of the day's programmes conforming to this category will be displayed. (Fig. 7-22)
- > Use the **arrow keys up/down** to move the marker to any specific programme.
- > Use the **arrow keys right/left** to move the marker to programmes with a later starting time. The individual days of the week are shown along the lower border of the screen. If information is available for any of the following days, the corresponding fields will be highlighted.
- > To display the programme contents of a specific day, press the appropriate **numeric key** corresponding to the day of the week.



(Fig. 7-21)



(Fig. 7-22)

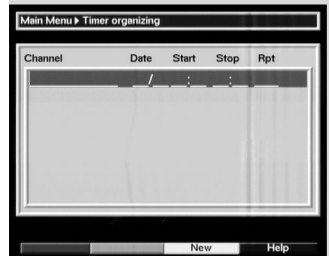
7.14.8 Exiting SFI

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

7.15 Timer

In addition to the SFI timer programming facility, you may also programme the timer manually.

- > Press the **Menu** key to call up the **Main Menu**.
- > Use the **arrow keys up/down** to mark the line **Timer organizing**.
- > Confirm by pressing **OK**. The sub-menu **timer organizing** will be displayed. (Fig. 7-23)



(Fig. 7-23)

7.15.1 Programming the Timer

- > Press the **yellow** function key **New** to access the timer programming, in order to programme a new event. (Fig. 7-24)

To programme the timer proceed as follows:

Source

- > Use the **arrow keys** to mark the column **Source**.
- > Press **OK** to enter the desired source (**TV** or **Radio**).

Channel

- > Use the **arrow keys** to mark the column **Channel**.
- > Press **OK**. Depending on the previous setting, either the TV or the radio programme list will now be displayed.
- > Use the **arrow keys** to mark the desired programme.
- > Press **OK** to accept this into the timer programming.



(Fig. 7-24)

- > Use the **arrow keys up/down** to move the marker around the list one line at a time.
- > Use the **arrow keys right/left** to move the marker backward or forward in the list one page at a time.

Date

- > Use the **arrow keys** to mark the column **Date**.
- > Use the **numeric keys** to enter the date on which you wish to record a programme.

Start

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

Stop

- > Repeat the steps as described under “Start” to enter the stopping time.

So that all timer events can be accommodated, there should be an interval of at least one minute between the stopping time of one timer event and the starting time of the next timer event! Should there be an overlap between two timer events, these will be highlighted in red.

Repeat (optional)

- > Use the **arrow keys** to mark the column **Rep**.
- > Press **OK**.
A selection window will be displayed, offering various suggested repeating intervals.
 - 1x** Timer used once only
 - D** Daily repeat
 - 1 W** Repeat once weekly
 - 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.

Type

- > Use the **arrow keys** to mark the column **Type**.
- > In this line, press **OK** to enter the desired status.
 - 1. VCR**
Your digital receiver will be switched on and off for the programme selected.
If the receiver was switched on by the timer, this will be indicated by “**rEc**” on the display*. Most of the functions of the remote control will be de-activated to prevent an accidental interruption of the recording. In standby operation the active timer will be indicated by a blinking colon in the time display.

* Only for receivers equipped with this feature

2. Reminder

If your receiver is in normal operational mode, it will switch to the pre-selected programme slot at the pre-set time. In contrast to the VCR setting, the controls remain fully functional, and the receiver will not be switched off at the end of the programme.

Transferring data into memory

- > When you have completed programming, press the **yellow** function key **Transfer** to transfer the data into memory.
If under **Channel** you have selected an encrypted programme, or a programme that is blocked as per 8.1.6, you will first have to enter the PIN code before the data can be transferred to memory.

7.15.2 Changing timer programming

- > To change an existing timer setting, use the **arrow keys up/down** to mark the setting. Press the **yellow** function key **Change** to move to the settings of the marked timer. You can now effect the changes as described in Point 7.15.1.

7.15.3 Deleting timer programming

- > To delete an existing timer setting, use the **arrow keys up/down** to mark the setting.
- > Press the **green** function key **Delete**.
The message will be displayed: "Do you really want to delete this timer?"
- > Use the **arrow keys right/left** to mark **Yes**.
- > To delete the timer entry, confirm by pressing **OK**.
- > Press the **TV/Radio** key to return to normal operation.

Note!!!

Ensure that the standard time has been read into the receiver. This will be shown on the display* when the unit is in standby mode. If this is not the case, switch the receiver to a major channel such as ZDF for approximately 30 seconds, to read the current time automatically.

The time should now be shown on the display when the receiver is set to standby mode.

* Only for receivers equipped with this feature

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 according to your preferences. This function is also required to sort newly found programmes into the list after a search has been carried out.

In this regard you should know the following: your receiver is equipped with two programme lists, the **Favourites list** and the **Complete list**. The Favourites programme list includes all the programmes you have placed there, using the procedure as described below. The Complete list contains all programmes.

This chapter also describes how you can delete programmes, or restrict access to programmes by means of the parental control feature. When calling up a programme list by pressing **OK** the Favourites programme list will be displayed.

8.1.1 Calling up the Navigator

To manage the Favourites list, proceed as follows:

- > Press the **Menu** key to call up the **Main Menu**. (Fig. 8-1)
- > Use the **arrow keys up/down** to mark the line **TV lists organizing**, to work on the TV list, or **Radio lists organizing**, to work on the radio list.
- > Confirm by pressing **OK**.

The appropriate Navigator will be displayed, allowing you to work on the Favourites list (TV or radio list). (Fig. 8-2)

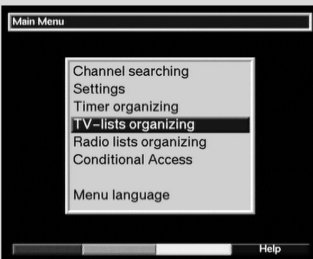
The Favourites list will be displayed on the right half of the screen. This is currently active, as the programme currently selected is highlighted in blue. The alphabetically sorted Complete list will be displayed on the left half of the screen.

This Complete list includes all available programmes. > Press the **red** function key to move the marker to the Complete list. This is now active.

> Press the **red** function key again to open a selection window. You are given the option of sorting the Complete list according to various selection criteria (e.g. all programmes, all free-to-air, all newly found, all English-language programmes, etc.) or sorted by **Providers**.

Use the **arrow keys up/down** to select the preferred programme listing (e.g. Complete list).

- > Confirm by pressing **OK**. An additional selection window will be displayed. (Fig. 8-3)



(Fig. 8-1)



(Fig. 8-2)



(Fig. 8-3)

> Now use the **arrow keys up/down** to mark the selection criterion according to which the Complete list is to be sorted. Select e.g. **All Programmes**, to indicate all available programmes in the Complete list or **All new**, to indicate only the newly found programmes of the last programme search or **All English**, to indicate only English-language programmes.

> Confirm by pressing **OK**.

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

> Press the **red** function key **Programmes** resp. the **green** function key **TV List** to switch between the Favourites list and the Complete list. The currently active list is indicated by a blue marker.

8.1.2 Adding programmes to Favourites list

To accept programmes from the Complete list into the Favourites list, call up the Navigator as described in Point 8.1.1, and switch to the Complete list.

> Press the **blue** function key **Functions**.

A selection window will be displayed, indicating the available Navigator functions. (Fig. 8-4)

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

> Confirm by pressing **OK**.

> Use the **arrow keys up/down** to mark a programme that you wish to include in the list.

> Press the **yellow** function key **Add** to add the marked programme to the Favourites list.

Marking blocks of programmes

To mark several programmes simultaneously proceed as follows:

> Press **OK** to access the Selection mode.

The marked programme will be indicated by a cross at the left side of the entry.

> Use the **arrow keys up/down** to mark the following and/or previous programmes as well.

> When you have marked all the programmes you wish to select, press the **yellow** function key **Add**, to include the marked programmes in the Favourites list.

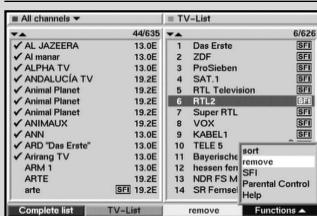
8.1.3 Deleting programmes

8.1.3.1 Removing (deleting) from the Favourites list

To remove programmes from the Favourites list, call up the Navigator as described in Point 8.1.1. You will move to the Favourites list.



(Fig. 8-4)



(Fig. 8-5)

- > Press the **blue** function key **Functions**. A selection window indicating the Navigator functions will be displayed. (Fig. 8-5)
 - > Use the **arrow keys up/down** to mark the line **Remove** and confirm by pressing **OK**.
 - > Use the **arrow keys up/down** to mark a programme that you wish to remove from the list.
 - > Press the **yellow** function key **Remove**. The following message will be displayed: "Remove programme(s) from the list?"
 - > Use the **arrow keys right/left** to mark **Yes** or **No**.
 - > Confirm your entry by pressing **OK**.
 - > To remove several programmes simultaneously, mark these as described in 8.1.2 (**Marking blocks of programmes**).
 - > When you have completed marking the programmes you wish to remove in this manner, press the **yellow** function key **Remove**. The message will be displayed "Do you really want to delete the programme(s)?"
 - > Use the **arrow keys right/left** to mark **Yes** or **No**.
 - > Confirm your entry by pressing **OK**.
- The programmes deleted in this manner remain in the Complete list, and can be added to the Favourites list again at any time.

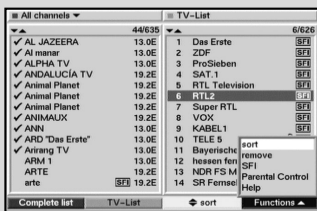
8.1.3.2 Deleting from the Complete list

To remove programmes from the Complete list, proceed as described in Point 8.1.3.1. However, after calling up the Navigator, press the **red** function key **Programmes**, and move to the Complete list first before selecting the function **Delete**.

8.1.4 Sorting programmes

Call up the Navigator as described in Point 8.1.1 to sort the programme order of the Favourites list according to your personal preference. The Favourites list will be active.

- > Press the **blue** function key **Functions**. A window will be opened, indicating the Navigator functions available. (Fig. 8-6)
- > Use the **arrow keys up/down** to mark the line **Sort** and confirm by pressing **OK**.
- > Use the **arrow keys up/down** to mark the programme you wish to move to another place in the list. Now press the **yellow** function key **Sort**. A double arrow will be displayed next to the programme selected.
- > You can now use either the **arrow keys up/down** or the **Numeric keys** to move the marked programme to the desired position in the list.



(Fig. 8-6)

- > Press the **yellow** function key **Sort** to save the programme at the new position.
- > To sort several programmes simultaneously, mark these as described in 8.1.2 (**Marking blocks of programmes**).
- > Now press the **yellow** function key **Sort**. A double arrow will be displayed next to the block of programmes selected.
- > You can now use either the **arrow keys up/down** or the **Numeric keys** to move the block of programmes to the desired list position.
- > Press the **yellow** function key **Sort** to save the block of programmes at the new position.
- > When you have completed configuring the programme list according to your preference in this manner, press the **Menu** key to return to normal operation.

8.1.5 Programming the electronic programme guide

To improve the readability, you can also configure the electronic programme guide SFI to conform to your favourite programmes. To add programmes to the electronic programme guide, or to delete them from the guide, call up the Navigator as described in Point 8.1.1. You are now in the Favourites list.

Please note:

The more programmes are added to the electronic programme guide, the longer it will take to update the SFI data! Also, the more programmes are added, the less likely it is that the full preview period of seven days for the electronic programme guide can be accommodated in the limited memory space available.

- > Press the **blue** function key **Functions**.
A selection window will be displayed, indicating the Navigator functions available.
- > Use the **arrow keys up/down** to mark the line **SFI**.
- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to mark a programme that you wish to include in the electronic programme guide.
- > Press the **yellow** function key **SFI** to accept the marked programme into the electronic programme guide.
- > To add several programmes to the electronic programme guide simultaneously, mark these as described in 8.1.2 (**Marking blocks of programmes**).
- > When you have completed marking the desired programmes in this manner, press the **yellow** function key **SFI**, to add the marked programmes to the electronic programme guide.
- > Press the **Menu** key to return to normal operation.


You can now initiate the updating procedure manually:

- > Use the **On/Standby** key to switch off the receiver (Standby).
- > Now, while the display* shows "oooo", press the key **SFI**.
The receiver will now perform an update. This will be indicated by the message **SFLd** appearing briefly in the display*, followed by a progressive indication of the percentage of SFI data already downloaded.
- > The updating procedure may be interrupted by switching on the digital receiver(Key **On/ Standby**).

8.1.6 Blocking programmes (Parental control)

You have the facility to block access to programmes. A blocked programme can only be viewed on the screen if you first select the programme, and then enter your personal receiver PIN code or the Smartcard PIN code. Before selecting the programmes you wish to block, you must activate the parental control function as described in Point 6.2.1.

To block access to a programme, call up the Navigator as described in Point 8.1.1. This will take you to the Favourites list.

- > Press the **blue** function key **Functions**.
A selection window will be displayed indicating the available Navigator functions.
- > Use the **arrow keys up/down** to mark the line **Parental control**.
- > Confirm by pressing **OK**.
- > Now use the **arrow keys up/down** to mark the programme you wish to block.
- > Block access to the programme by pressing the **yellow** function key. The parental control symbol  will be displayed next to the programme selected.
- > To block access to several programmes simultaneously, mark these as described in 8.1.2 (**Marking blocks of programmes**) and block them by pressing the **yellow** function key.
- > When you have completed configuring the programme list according to your personal preference in this manner, press the **Menu** key to return to normal operation.
- > To remove the block on individual programmes, proceed as described above. Mark the desired programme and remove the parental control symbol by pressing the **yellow** function key.

Note! You cannot unblock pre-blocked programmes that are not coded for viewing by children, and are pre-blocked by the provider!

* Only for receivers equipped with this feature

8.2 Changing the receiver PIN code

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

To change the receiver PIN code proceed as follows:

- > Use the **Menu** key to call up the **Main Menu**.
- > Use the **arrow keys up/down** to mark the line **Settings**.
- > Confirm by pressing **OK**.
The sub-menu **Settings** will be displayed.
- > Use the **arrow keys up/down** to mark the line **Change Receiver PIN**.
- > Confirm by pressing **OK**.
- > Use the **numeric keys** to enter the current receiver PIN code (**Default setting 0000**) (Fig. 8-7).
- > Use the **numeric keys** to enter the desired new receiver PIN code.
- > Repeat the entry of the code.
- > When you have changed the receiver PIN code as described here, press the **Menu** key to return to normal operation.

Note! Ensure that you do not forget the receiver PIN code. If you do forget it, please consult your specialist retailer!

8.3 Searching for programmes

As mentioned previously, your digital receiver is pre-programmed for reception of the ASTRA and EUTELSAT satellites. To receive new programmes, or programmes broadcast by other satellites, there are various options of conducting a programme search.

1. Automatic Search

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

2. Satellite Search

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

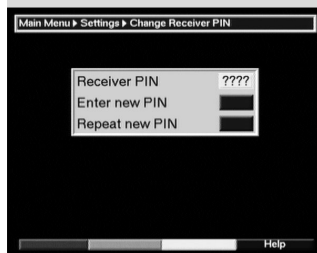
3. Transponder Search

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

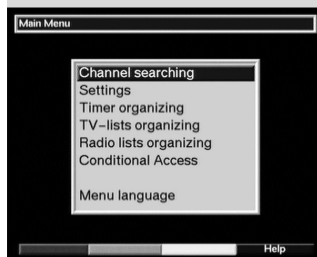
4. Manual Search

Select this type of search if you want to search for a specific programme using programme-specific PID numbers.

When the search has been completed, a message will be displayed on your screen indicating how many programmes your digital receiver has found, how many of these are new, and how many programmes are encrypted. New programmes are stored in the **Complete list**, and can be transferred to the **Favourites list** as described in **Point 8.1**.



(Fig. 8-7)



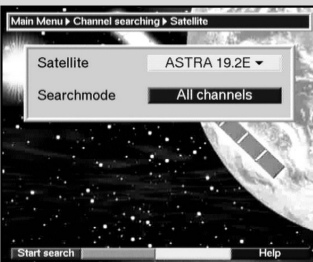
(Fig. 8-8)



(Fig. 8-9)



(Fig. 8-10)



(Fig. 8-11)

- > To perform a programme search, call up the **Main Menu**. (Fig. 8-8)
- > Use the **arrow keys up/down** to mark the line **Channel searching**.
- > Confirm by pressing **OK**.
- > The sub-menu **Search** will be displayed. (Fig. 8-9)
- > Now use the **arrow keys up/down** to select the type of search you wish to perform. Confirm by pressing **OK**.

8.3.1 Automatic Search

In the case of this type of search, all satellites included in the menu LNC Settings (Points 6.4 and 9.4) will be searched for programmes. You can decide whether you wish to search for all programmes (free-to-air and encrypted) or only for free-to-air programmes. (Fig. 8-10)

- > Decide by pressing **OK** whether you wish to search only for free-to-air programmes (**Free Programmes**) or whether you also want to include encrypted programmes (**All Programmes**).
 - > Confirm by pressing the **red** function key **Start Search**.
- The search may take more than 15 minutes. Please note any messages displayed on screen.

8.3.2 Satellite Search

To scan a particular satellite for programmes, select **Satellite Search** (Fig. 8-11). You can decide whether you want to search for all (free-to-air and encrypted) programmes, or only for free-to-air programmes.

- > Press **OK** again to display the selection table of active satellites.
- > Use the **arrow keys up/down** to mark the line **All**, to search all active satellites for programmes, or mark the desired satellite to search only this one for programmes.
- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to mark the field **Search mode**.
- > Decide by pressing **OK** whether you want to search only for free-to-air programmes (**Free Programmes**) or whether you want to include encrypted programmes (**All Programmes**).
- > Press the **red** function key to confirm **Start Search**. The search will commence. Please note any messages displayed on screen.
- > You can terminate the search procedure by pressing the **red** function key.

8.3.3 Searching on a transponder

You can search a specific transponder (see Point 10: Technical Terms) for available programmes. To do this, you will have to enter the appropriate transponder data (Fig. 8-12).

Satellite

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

- > Use the **arrow keys up/down** to select the line **Satellite**.
- > Press **OK** to display a table listing the active satellites.
- > Now use the **arrow keys up/down** to mark the appropriate satellite.
- > Confirm by pressing **OK**.
The satellite selected will now be displayed in the line Satellite.

Transponder frequency

- > Use the **arrow keys up/down** to select the line **Transponder frequency**.
- > Enter the appropriate frequency by means of the **numeric keys**.

Symbol rate

The symbol rate indicates the volume of data transmitted per second. A typical figure might be 27500 (27500 symbols per second).

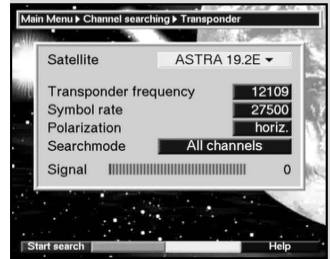
- > Use the **arrow keys up/down** to mark the line **Symbol rate**.
- > Use the **numeric keys** to enter the desired symbol rate.

Polarisation

- > Use the **arrow keys up/down** to mark the line **Polarisation**.
- > Use the **OK** key in this line to enter the polarisation plane (**horizontal** or **vertical**) on which the desired programme is broadcast.

Search mode

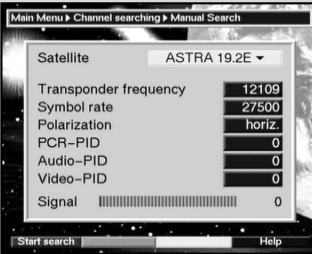
- > Use the **arrow keys up/down** to mark the line **Search mode**.
- > Press the **OK** key to decide whether you wish to search only for free-to-air programmes (**Free Programmes**) or whether you wish to include encrypted programmes in the search (**All Programmes**).
- > Press the **red** function key to confirm **Start Search**.
The search will commence. Please note any messages displayed on screen.



(Fig. 8-12)

- > The search procedure can be terminated by pressing the **red** function key.

8.3.4 Manual Search



(Fig. 8-13)

If a particular programme is not found by means of the automatic or transponder search procedures, it may be necessary to enter the unique PID number for this specific programme. These numbers can be found in the Internet, or must be obtained from the appropriate programme provider. The menu (Fig. 8-13) differs from the menu **Transponder search** only in terms of the menu points **PCR-PID**, **Audio-PID** and **Video-PID**. There is no need to enter the search mode.

- > Proceed as described under Transponder Search.
- > Then use the **arrow keys up/down** to mark the lines **PCR-PID**, **Audio-PID** and **Video-PID** using the **numeric keys** to enter the appropriate numbers.

8.3.5 After the Search



(Fig. 8-14)

You can follow the progress of the search procedure on screen even while the search on the transponders is still in progress. When the search has been completed, the number of transponders, programmes and new programmes found will be displayed. In addition a message will be shown (Fig. 8-14), asking you whether you want to add the newly found programmes automatically to the TV or Radio list. If you decide to accept the programmes automatically, you can then decide whether these should be added to the Favourites list in **sorted** or **unsorted** form.

Sorted

The newly found programmes are sorted into the Favourites list according to a pre-programmed schedule. The order in which programmes are placed depends on the audio language selected in Point 6.3.2 as well as on the country selected in Points 6.2.2 and 6.2.3.

Unsorted

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

No

The newly found programmes are not added to the Favourites list. They will still appear in the Complete list.

- > Use the **arrow keys right/left** to select whether you want to accept the programmes in **sorted** or **unsorted** form.
- > 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 added the newly found programmes to the Favourites list automatically, these can still be added to the Favourites list manually at any time as described in Chapter 8.1.

8.4 Service settings

You can revert to the factory default settings at any time. In addition, if you feel that the many changes made by programme providers over time have made the programme list completely obsolete, you can decide to delete this completely, followed by a new programme search. Please note that if you delete an existing programme list you must then perform a search, and then copy the desired programmes from the Complete list to the Favourites list.

- > Use the **Menu** key to call up the **Main Menu**. (Fig. 8-15)
- > Now use the **arrow keys up/down** to mark the menu line **Settings**.
- > Confirm by pressing **OK**. The sub-menu **Settings** will be displayed. (Fig. 8-16)
- > Now use the **arrow keys up/down** to mark the menu line **Service Settings**.
- > Confirm by pressing **OK**. The sub-menu **Service Settings** will be displayed. (Fig. 8-17)

8.4.1 Restore Factory Settings

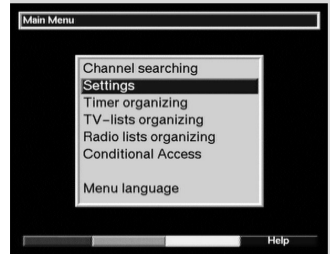
When this function is called up, the factory default setting is reset, all your personal settings are deleted, and the **Autoinstall** installation assistant will be started.

- > Use the **arrow keys up/down** to mark the line **Restore Factory Settings**.
- > Confirm by pressing **OK**. The message "Are you sure you want to activate the default setting?" will be displayed.
- > Use the **arrow keys right/left** to select **Yes** or **Abort**.
- > Confirm by pressing **OK**.

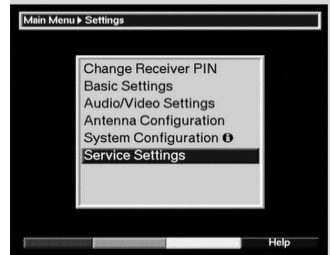
8.4.2 Delete all programmes

This function allows you to delete all programmes from memory.

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



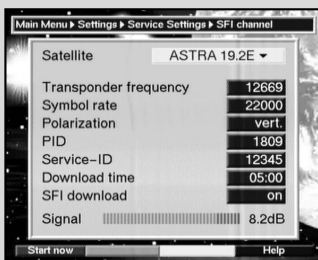
(Fig. 8-15)



(Fig. 8-16)



(Fig. 8-17)



(Fig. 8-18)

8.4.3 SFI Channel

Your receiver has the facility to receive a data channel via the ASTRA satellite systems (19° East) carrying additional SFI data. These facilitate a SFI (programme guide) preview for up to a week in advance.

- > Press **OK** to call up the sub-menu **SFI Channel** (Fig. 8-18).
- > To receive the data channel, mark the line **SFI Update**.
- > Press **OK** to select **On**.
- > Use the **numeric keys** to set the time at which the automatic download of SFI data is to be carried out in the line **Update time**.
- > To initiate the updating of SFI data manually, press the **red** function key **Start now**.

If you do not wish to receive the additional data, or are unable to receive it because of your location, the reception of data can be switched off:

- > To switch off the reception of data, set **SFI update** to **off**. This means that only the programme information provided by the individual channels will be available.

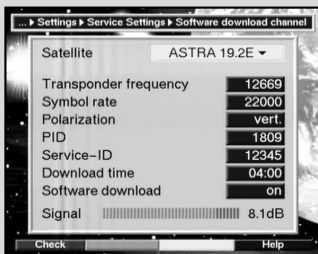
If the parameters of the data channel used to download the SFI list have changed, you can correct that in this menu. The current transponder data can be obtained from your specialist retailer. Generally, no changes should be made in this menu.

8.4.4 Updating Software

You also have the facility of updating the operating software of your digital receiver via satellite (ASTRA 19° East).

- > Press **OK** to display the sub-menu **Software download channel** (Fig. 8-19).
- > To perform a software update, mark the line **Software download**.
- > Set the software update function to **on** by pressing **OK**.
- > In the line **Download time**, use the **numeric keys** to set the time when the software update is to be carried out.
- > To initiate the update for the operating software manually, press the **red** function key **Test**.
- > Press the **Menu** key to return to normal operation.

If the parameters of the data channel used to download the software updates have changed, you can correct this manually in this menu as described under Point 8.3.4 (manual programme search). The current transponder data can be obtained from your specialist retailer. Generally you should not make any changes in this menu.



(Fig. 8-19)

Note:

This function should not be performed if you have made changes in the menus “Basic Settings” and “LNC Configuration”, as these changes would revert to the default settings when this function is activated, and would have to be re-programmed.

For the new software version to be downloaded automatically, the digital receiver must be in standby mode. The downloading procedure is indicated by “SATL” in the display. Ensure that this procedure is not interrupted by switching the receiver on or off while the download is in progress.

Depending on whether you have switched the automatic software update function on or off, the receiver will check automatically each time it is switched on whether a new version of the operating software for your digital receiver is available. If a new version of the operating software is available, this will be indicated by a message (Fig. 8-20) displayed on screen.

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

8.4.5 Copy settings

You have the facility to copy all the settings of the programme list, antenna settings, etc. of your digital receiver from your receiver to another digital receiver of the same type, and using the same operating software version. (Fig. 8-21)

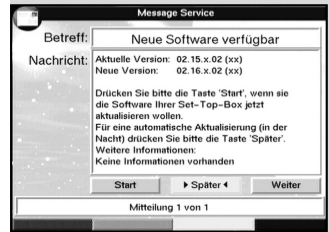
- > Use a null modem cable to connect the two receivers.
- > Switch on the receiver to which the settings are to be transferred.
- > To copy the settings, press one of the keys on the panel of the source receiver.

The settings of this source receiver will now be transferred to the other, receiving, receiver. Please note any messages displayed on screen.

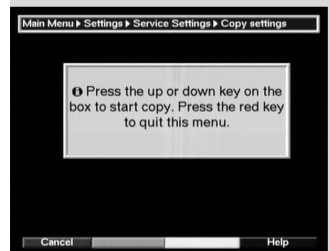
8.5 System configuration

Use this menu item to view the specific data relating to your receiver.

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



(Fig. 8-20)



(Fig. 8-21)

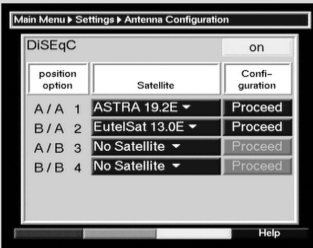
8.6 Conditional Access*

Use this menu item to access the sub-menus relating to the Smartcard being used, as well as to the CI module. Use the **arrow keys** to move to the lines **Smartcard*** or **CI slot***, and confirm by pressing **OK** to view information on the Smartcard or the CI module used.

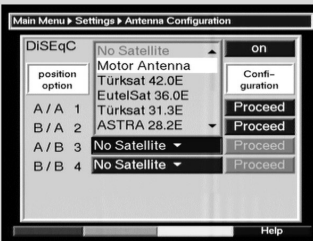
9 Operation in conjunction with a rotating antenna (DiSEqC 1.2)

Your digital receiver is equipped for operation in conjunction with a rotating antenna installation. The DiSEqC control function (DiSEqC-Level 1.2) allows you to control a suitable motor via the coaxial cable connection.

- > Call up the menu **Antenna Settings** as described in Point 6.4 (Fig. 9-1) and set the **DiSEqC Control** (Point 6.4.1) to **On**.
- > Now use the **arrow keys up/down** to select the DiSEqC position (e.g. A/B 3) to which you wish to allocate the motorized rotating antenna.
- > Press **OK** to display a selection window for the **Satellite** resp. for the **Motor antenna**. (Fig. 9-2)
- > Use the **arrow keys up/down** to mark the line **Motor antenna** and confirm by pressing **OK**.
- > Read the note on setting Eastern and Western limits (Fig. 9-3) and confirm by pressing **OK**.



(Fig. 9-1)



(Fig. 9-2)

To prevent damages on your antenna, please set east and west limits!

OK

(Fig. 9-3)

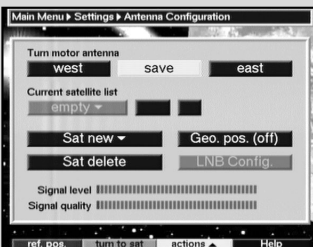
9.1 Eastern and Western limits

To avoid mechanical damage to the dish antenna or the LNC by obstacles in its path, the maximum rotating range in both easterly and westerly direction must be set. If there are any obstacles (e.g. a wall, chimney, etc.) within the rotating radius of the antenna, this must be considered when setting the rotating limits. If there are no obstacles to consider, you should set the limits so that they extend a little beyond the positions of the most easterly and westerly satellite positions you wish to receive.

9.1.1 Deleting existing limits

At the outset, you should delete any existing limit settings.

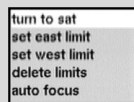
- > Use the **arrow keys right/left** to mark the column **Configuration**.
- > In the line **Motor antenna** use the **arrow keys up/down** to mark the field **Proceed**.
- > Confirm by pressing **OK**.
The menu relating to settings for the motor antenna will be displayed. (Fig. 9-4)



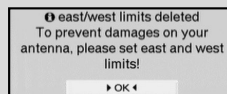
(Fig. 9-4)

* Only for receivers equipped with this feature

- > Press the **yellow** function key **Actions**, to open an additional window. (Fig. 9-5)
- > Now use the **arrow keys up/down** to mark the line **Delete limits**.
- > Confirm by pressing **OK**, to transfer the action selected to the green function key.
- > To delete the limits, press the **green** function key **Delete lim..**
- > Confirm the message displayed by pressing **OK**. (Fig. 9-6)



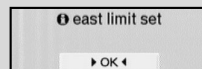
(Fig. 9-5)



(Fig. 9-6)

9.1.2 Setting Eastern limit

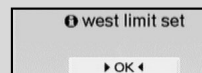
- > To set the Eastern limit, use the **arrow keys** to mark the field **Store**.
- > Now press the **arrow key right** to rotate the antenna dish to the maximum possible (or imaginable) **Easterly position**.
- > Press the **yellow** function key **Actions** to open a window showing the actions available.
- > Now use the **arrow keys up/down** to mark the line **Set East limit**.
- > Confirm by pressing **OK**.
- > To set the Easterly limit, press the **green** function key **East limit**, read the message displayed on screen (Fig. 9-7) and confirm by pressing **OK**.



(Fig. 9-7)

9.1.3 Setting the Western limit

- > To set the Western limit, use the **arrow keys** to mark the field **Store**.
- > Now press the **arrow key left** to rotate the antenna dish to the maximum possible (or imaginable) **Westerly position**.
- > Press the **yellow** function key **Actions**, to open a window showing the actions available.
- > Now use the **arrow keys up/down** to mark the line **Set West limit**.
- > Confirm by pressing **OK**.
- > Press the **green** function key **West limit**, read the message displayed on screen (Fig. 9-8) and confirm by pressing **OK**.



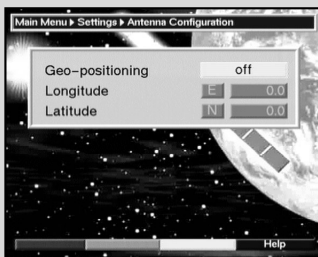
(Fig. 9-8)

9.2 Geo-positioning

If you have a suitable motor, and know the geographic coordinates of your location, this function will facilitate finding the individual satellite positions.

Note! Switch on the geo-positioning feature only if your DiSEqC motor supports this function.

- > Call up the menu **Antenna configuration** as described above.



(Fig. 9-9)

- > Use the **arrow keys** to mark the field **Geo.Pos.**
- > Confirm by pressing **OK**. A menu allowing you to enter the coordinates of your location will be displayed. (Fig. 9-9)
- > Press the **OK** key to switch the geo-positioning function **On** or **Off**.
- > Use the **arrow keys** to select the field used to enter **geographic longitude**.
- > Use the **numeric keys** to enter the geographic longitude.
- > Now press the **arrow key left**.
- > In this field, press **OK** to indicate whether the value refers to longitude East (**E**) or West (**W**).
- > Now use the **arrow keys** to select the field used to enter **geographic latitude**.
- > Use the **numeric keys** to enter the geographic latitude.
- > Now press the **arrow key left**.
- > In this field, press **OK** to indicate whether the value refers to latitude North (**N**) or South (**S**).
- > Press **Back** to return to the LNC settings.

The coordinates of your location must be entered as a decimal value, correct to one decimal place. As the coordinates are usually stated in degrees, minutes and seconds, these must be converted to a decimal value as follows:

The full degree value is not affected by the calculation. The minutes are divided by 60, and rounded to one decimal place. The result of this division is added to the degree value. Seconds are not considered for the calculation, as they do not influence the first decimal place.

Example: Coordinates of Daun/Germany

Latitude	50°	11'	(45")	N
Longitude	06°	50'	(10")	E

Converting the degrees latitude (LA):

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

To enter the geographic latitude in the menu, use the value rounded to one decimal place (**50,2**).

The same method is used to calculate the decimal value of the longitudinal position.

9.3 Setting the satellite position

Proceed by systematically working through Points 9.3.1 to 9.3.3 for each satellite position that is to be set. When programming the satellite positions, we recommend that you begin with the satellite in the most easterly position. Then add each additional satellite in geographic order, working in a westerly direction, until you have reached the most westerly position.

Your digital receiver is pre-programmed at the factory for the most popular satellite positions. In addition, you can configure user-defined satellite positions for any orbital position of your choice (User1 to User14).

9.3.1 Selecting a satellite position

9.3.1.1 Selecting a pre-programmed satellite position

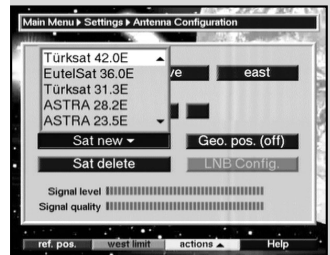
- > To add a satellite position to the satellite list, use the **arrow keys** to mark the field **Sat new**.
- > Confirm by pressing **OK**.
A list will be displayed showing the available satellite positions. (Fig. 9-10)
- > Now use the **arrow keys up/down** to mark a satellite position that you wish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

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

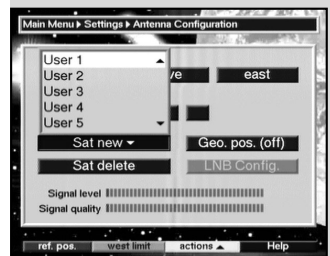
If the **Geo-Positioning** function is **Off**, you will have to rotate the dish antenna manually (Point 9.3.2.2) to the desired satellite position.

9.3.1.2 Setting a user-defined satellite position

- > To add a user satellite position to the satellite list, use the **arrow keys** to mark the field **Sat new**.
- > Confirm by pressing **OK**.
A list will be displayed showing the available satellite positions. (Fig. 9-11)
- > Now use the **arrow keys up/down** to mark a user satellite position (User1 to User14).
- > Press **OK** to display the menu used to set a test transponder. In this menu, set the parameters for the test transponder as well as for the LNC used as described in **Point 6.4.3**.



(Fig. 9-10)



(Fig. 9-11)

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

If the **Geo-positioning** function is set to **On** (Point 9.2) you can now rotate the antenna dish to the programmed user satellite position by using the function **Turn to Sat** (Point 9.4.1).

If the **Geo-positioning** function is set to **Off**, you will have to rotate the antenna manually to the desired satellite position (Point 9.3.2.2).

9.3.2 Adjusting the satellite antenna

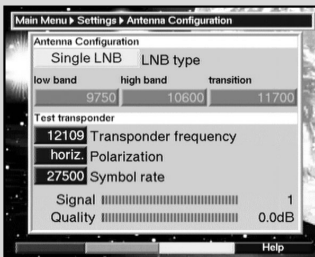
To be able to point the antenna at a particular satellite, and to confirm whether you are receiving the correct satellite at the position set, a test transponder has been set up for each satellite.

The exact positioning of the antenna is only made possible by the indicator showing the signal strength and quality of the test transponder.

9.3.2.1 Configuring the test transponder and LNC

To change the parameters of the test transponder concerned, proceed as follows:

- > Use the **arrow keys** to mark the field **Current Satellite List**.
- > Press **OK** to open the satellite list.
- > Use the **arrow keys up/down** to mark the satellite position for which you wish to change the data.
- > Confirm by pressing **OK**.
- > Now use the **arrow keys** to mark the field **LNB Config**, and press **OK**.
The menu LNC settings will be displayed. (Fig. 9-12)
- > In this menu, enter the data relating to the test transponder as well as to the LNC being used, as described in **Point 6.4.3**.
- > Press **Back** to return to the settings for the motor antenna.



(Fig. 9-12)

9.3.2.2 Manual positioning of antenna

You can establish the optimum position of the antenna by working according to the indication of signal strength and signal quality. Adjust the antenna so that the maximum values are achieved on both bar graphs.

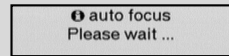
- > Now use the **arrow keys up/down** to mark the field **Store**.

- > Now use the **arrow key right** (field East will be marked) resp. **left** (field West will be marked) to rotate the antenna to the desired position. Keep the appropriate key depressed until the desired position is reached.

9.3.2.3 Automatic detail adjustment (Autofocus)

Before storing the satellite position in memory you should perform an automatic focussing procedure. This will set the antenna to optimum reception in terms of measurable parameters.

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



(Fig. 9-13)

9.3.3 Storing a satellite position

Once you have completed work on the function Autofocus, you must still store the satellite position in memory.

- > Use the **arrow keys** to mark the field **Store**.
- > Press **OK**.

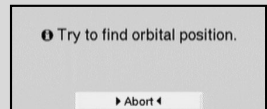
The test transponder set will now check whether a signal is being received at this position. It will also check whether the position corresponds with one of the pre-programmed positions. (Fig. 9-14)

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

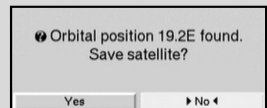
- > To store the satellite position, use the **arrow keys right/left** to mark the field **Yes** and confirm by pressing **OK**.

If the test transponder procedure does not recognize a pre-programmed position, or if the signal received is too weak, appropriate messages will be displayed on screen. (Figs. 9-16 and 9-17)

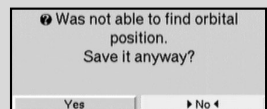
- > To store the satellite position in memory, use the **arrow keys right/left** to mark the field **Yes** and confirm by pressing **OK**.



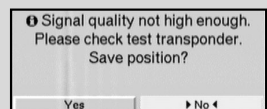
(Fig. 9-14)



(Fig. 9-15)



(Fig. 9-16)



(Fig. 9-17)

9.4 Current satellite list

The satellite positions stored in memory are shown in the satellite list. Any positions not yet stored in memory are marked with an “*”.

- > To adjust the antenna dish to a position on the satellite list, use the **arrow keys** to select the field **Current Satellite list**.
- > Confirm by pressing **OK**.
- > Use the **arrow keys up/down** to select the desired position.
- > Confirm by pressing **OK**.
The antenna dish will now be rotated to the selected position. The rotating procedure will be indicated by a blinking display “**rotating**” in the menu.

9.4.1 Selecting a satellite position

To rotate the antenna to the position determined in the satellite list, your digital receiver is equipped with the function **turn to Sat**.

- > Press the **yellow** function key **Actions** to open the window displaying the available actions.
- > Use the **arrow keys up/down** to select the line **turn to Sat**.
- > Confirm by pressing **OK**.
- > Pressing the **green** key **turn to Sat** will rotate the antenna to the selected satellite position.

9.5 Deleting a satellite position

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

- > Use the **arrow keys** to mark the field **Current Satellite list**.
- > Press **OK** to open the current satellite list.
- > Use the **arrow keys up/down** to select the satellite you wish to delete.
- > Confirm by pressing **OK**.
- > Use the **arrow keys** to mark the field **Sat delete**.
- > To delete the satellite selected, press **OK** and confirm the message displayed by again pressing **OK**.

9.6 Reference position

When installing the external installation the motor must be set to the reference position (**0°**). You can therefore rotate the motor to this position (**0°**) at any time by means of the function “**Go to reference position**”.

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

10 Technical Terms

Antenna cable:

Cable used to connect the modulator of the satellite receiver to the antenna input socket of the television set. Used as an alternative where no SCART socket is available

External installation:

Term used to describe those components of the total system located outdoors, consisting of the parabolic or offset dish antenna, as well as one or several LNCs, used to receive signals from one or more satellites

AV: see SCART

Data compression/MPEG1/MPEG2:

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

This would require enormous bandwidths which are simply not available, neither via satellite nor via terrestrial reception. Therefore the data is compressed in order to achieve a reduction in the data volume. For Europe, MPEG-2 has been laid down as the world-wide standard for data compression. MPEG2 is an expanded version of MPEG1

Deemphasis:

Adaptation of the audio frequency band to the broadcast signal, this is determined by the broadcast parameters of the satellite

DiSEqC:

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

DVB:

Digital Video Broadcasting: A digital universal broadcast technology used to transmit pictures, graphics, sound and text, i.e. data in any imaginable form, in appropriate quality.

Frequency:

A physical term, indicates the number of vibrations per second, expressed in terms of the unit Hertz (Hz)

Frequency range:

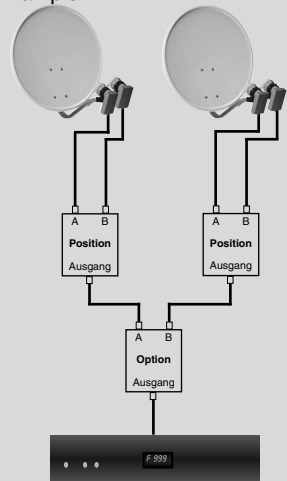
a) Satellite respectively LNC:

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

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

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

Example:



(Fig. 10-1)

Coaxial cable:

Cable used to connect the LNC to the satellite receiver, used to transmit the signal received as well as to provide power to the LNC.

LNB/LNC (Low Noise Block Converter):

Receiving unit located at the focus of the parabolic dish antenna, converts the frequency range of the satellite to the intermediate frequency of the digital receiver.

LOF:

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

Modulation at 22 KHz:

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

Modulator:

Switch in the satellite receiver or the video recorder, used to connect the television set via antenna cable

Parabolic dish antenna:

Dish antenna made of aluminium or coated synthetics, has a parabolic shape to focus and concentrate the electromagnetic waves broadcast by the satellite in a focal point

Polarisation plane:

To improve utilization of the available frequency range, satellites broadcast neighbouring programmes using opposite polarisation (horizontal and vertical or laevo-rotatory and dextro-rotatory, i.e. left-turning and right-turning). To receive both planes you require either two Single LNCs or a V/H-LNC.

Receiver: see Satellite receiver**Satellite:**

The satellite is usually described in terms of its operator and its orbital position,

ASTRA	19° East
EUTELSAT	13° East

Satellite receiver:

The signals received and converted by the LNC cannot be processed by the television set. The signals are processed by the satellite receiver in such a way that its outputs provide audio and video signals (AV) which can be interpreted by the television set.

SCART:

Type of connector used on television sets, video recorders, satellite receivers and other home electronics components to transmit audio and video signals (AV).

Software Update:

Digital television is a new medium that provides improved sound and picture quality as well as the facility to provide interactive services.

These new services are constantly being developed and improved by the providers. To utilize the services, it may occasionally be necessary to update the software of the digital receiver.

Transponder:

Located on the satellite, serves to process one or several programmes. It receives the signal from the ground station, amplifies it, and broadcasts the signal back to earth.

Universal LNC:

Used for reception of the frequency 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

Operating voltage:

LNCs are supplied with power via the coaxial cable. To this end, the receiver provides a voltage of 14 or 18 Volts

Intermediate Frequency:

The frequency range broadcast from the satellite cannot be transmitted via cable. It is therefore converted by the LNC to an intermediate frequency range of 950 to 2150 MHz. This allows the signal to be transmitted, and processed in the digital receiver.

1. IF = 1st Intermediate Frequency

11 Technical Data

DBS Tuner:

Input frequency range	950 2150 MHz
Input level range	- 65 dBm ... - 25 dBm
DBS Tuner input	F - socket
Input/output impedance	75 Ohms
Output for 1.1F	950 ... 2150 MHz (loop through)
AFC capture range	+/- 3 MHz
Demodulation	Shaped QPSK
Symbol rate	1 ... 45 Mbaud/s, SCPC/ MCPC
FEC	Viterbi and Reed-Solomon
Viterbi rates	1/2, 2/3, 3/4, 5/6, 7/8, automatic adaptation
Roll-off Factor	35 %

Demultiplexing:

in accord. with ISO 13818-1

Card reader:*

Type	1 Slot card reader for integrated CA system
------	---

Common Interface:*

Type	1 Common Interface slot for CI modules
------	--

Power consumption	max. 0,3A/5V
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Copy protection:*	Macrovision 7.1
--------------------------	-----------------

* Only for receivers equipped with this feature

PLL Modulator:*	UHF, Channel 21 ... 69
Antenna input	47 ... 862 MHz
Antenna output	47 ... 862 MHz
Video decoding:	
Video compression	MPEG-2 and MPEG-1 compatible Up to MP@ML (main profile @ main level)
Video standard	PAL / 25 Hz
Active screen area	720 pixels x 576 lines
Picture format	4 : 3 / 16 : 9
Picture material 16:9	Automatic adaptation for 16:9 TV sets (via SCART) Letterbox filtering for 4:3 TV sets
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
Crosstalk	< - 65 dB
Input analogue:	
Input level l/r	0,5 V r.m.s. (nominal)
Input impedance	> 40 kOhms
Volume on operating	Automatic use of last volume level set
Output digital:	
SP/DIF output	electrical, cinch socket optical*, Toslink
Video Parameters:	
Input:	
Input level CVBS	1 Vs-s +/- 0.3 dB into 75 Ohms
Input level RED	0,7 Vs-s +/- 0.1Vp-p into 75 Ohms
Input level GREEN	0,7 Vs-s +/- 0.1Vp-p into 75 Ohms
Input level BLUE	0,7 Vs-s +/- 0.1Vp-p to 75 Ohms
Teletext filtering	corresp. to ETS 300 472 standard
Scanning teletext data	(CVBS) corresp. to ITU-R BT.653- 2 lines: 6-22 and 320-335
TV SCART:	
Output:	CVBS or RGB
VCR SCART:	
Input:	CVBS
Output:	CVBS

* Only for receivers equipped with
this feature

Serial interface RS 232:

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

LNC Power supply:

LNC power	400 mA max.; short-circuit proof
LNB voltage vertical	<14,0V no load, > 11,5 V at 400 mA
LNB voltage horizontal	< 20 V no load, > 17,3 V at 400 mA
	LNC switched off in standby mode

22 kHz modulation:

22 kHz, Amplitude 0.6 V +/- 0.2 V

Programme memory/Satellite positions:

No. of programmes Favourites list TV:	999 TV programmes
No. of programmes Favourites list :	999 radio programmes

Number of programmes:

Complete list TV/Radio:	A total of 4000 programmes can be accommodated in the Complete list
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DiSEqC:

DiSEqC 1.0 and DiSEqC 1.2

SFI data:

SFI preview:	maximum 7 days in advance
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Timer:

Events:	maximum 30 events, one year in advance
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Remote control system: RC-5

Sub-system address	10 (SAT 2)
Modulation frequency	36 kHz
Infrared wavelength	950 nm

Power Supply:**Mains power unit:****Power requirement:***

21 W/ 20 W/ 19 W	in operation, horizontal Polarisation / 400 mA LNC Power requirement
11,5 W/ 10 W/ 9,5 W	in operation excl. LNC
6 W/ 5,5 W	in standby mode

Mains power voltage:

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

General:

Dimension (WxDxH):	305 mm x 135 mm x 65 mm
Weight:	0,8 kg

* Depends of the receiver type

12 Trouble-shooting guide

Problem	Possible cause	Solution
Various programmes not shown in programme list	Wrong programme list selected	Select another programme list (see Point 7.2.3.1)
Sound on, no TV image	Set to radio mode	Switch to TV mode
Programmes such as Pro 7, Sat 1, TM3, Kabel 1, DSF and HOT show intermittent interference	Interference by cordless telephones (DECT)	Increase distance between base station and receiver
Receiver cannot be operated	Data stream defective-->receiver blocked	Disconnect mains plug for approx. 5 seconds, then re-connect receiver
Remote control not working	Batteries are spent	Insert new batteries
Picture shows intermittent square blocks. Temporary frozen frame, no sound. Screenblack at times with message "No signal".	Severe rain or snow	Remove snow from dish
	Antenna incorrectly positioned	Adjust antenna position
	Antenna may be too small for location	Use larger dish
	Possible obstacle between antenna and satellite, e.g. tree	Mount antenna with clear line of view
No picture, no sound, display* operative	Short circuit in LNC connection	Switch off unit, eliminate short circuit, switch unit on again
	Cable connection defective or not present	Check all cable connections
	LNC defective	Fit new LNC
	Incorrect external installation set on 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 connectors
No reception of programmes previously viewed	Antenna defective or incorrectly positioned	Check antenna
	Programme now broadcast on another transponder	Perform search (see Point 8.3)
	Programme no longer being broadcast	None
Antenna cannot be rotated	Motor not DiSEqC 1.2 compatible	Use suitable motor

* Only for receivers equipped with this feature

Problem	Possible cause	Solution
Time not displayed* while in standby mode	Time not downloaded	Switch to e.g. ZDF for 30 seconds
Receiver cannot be switched on, or cannot be operated	Receiver blocked	Perform Flash reset: Caution! All personal settings will be lost. <ul style="list-style-type: none"> > Disconnect mains plug. > Press standby and programme up keys on receiver simultaneously, and keep them depressed. > With standby and programme up keys still pressed down, reconnect the mains plug. > Keep keys depressed for approx. 5 seconds until message* "FLAS" appears.
No reception of encrypted programmes*	Smartcard not inserted	Insert valid Smartcard correctly
	Smartcard not activated	Contact Hotline to activate Smartcard

* Only for receivers equipped with this feature

For daily use

Switching on and off

- > Switch on the digital receiver by pressing the **On/Standby** key, either on the receiver or on the remote control.
- > Press this key again to switch the receiver off.
- > The receiver is now in standby mode, the display* on the receiver shows the time.

Programme selection

Using the programme up/down keys

- > Use the **programme keys up/down** either on the remote control or on the receiver 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 approximately 3 seconds 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 switching procedure by keeping the key depressed a little longer on the last digit.

Using the programme list:

- > Press **OK**.
- > You can now use the **arrow keys up/down** to mark the desired programme.
- > Press the **yellow** function key **Preview** to display a preview of the marked programme.
- > Press **OK** to switch to the marked programme.
- > Use the **arrow keys up/down** to move the marker by one line at a time within the list.
- > Use the **arrow keys right/left** to move the marker around the list one page at a time.

Volume control

- > You can regulate the volume of your digital receiver: press the key **Volume +** to increase the volume, and **Volume -** to decrease it.
- > Press the key **Sound on/off** to switch the sound on or off (mute).

* Only for receivers equipped with this feature

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