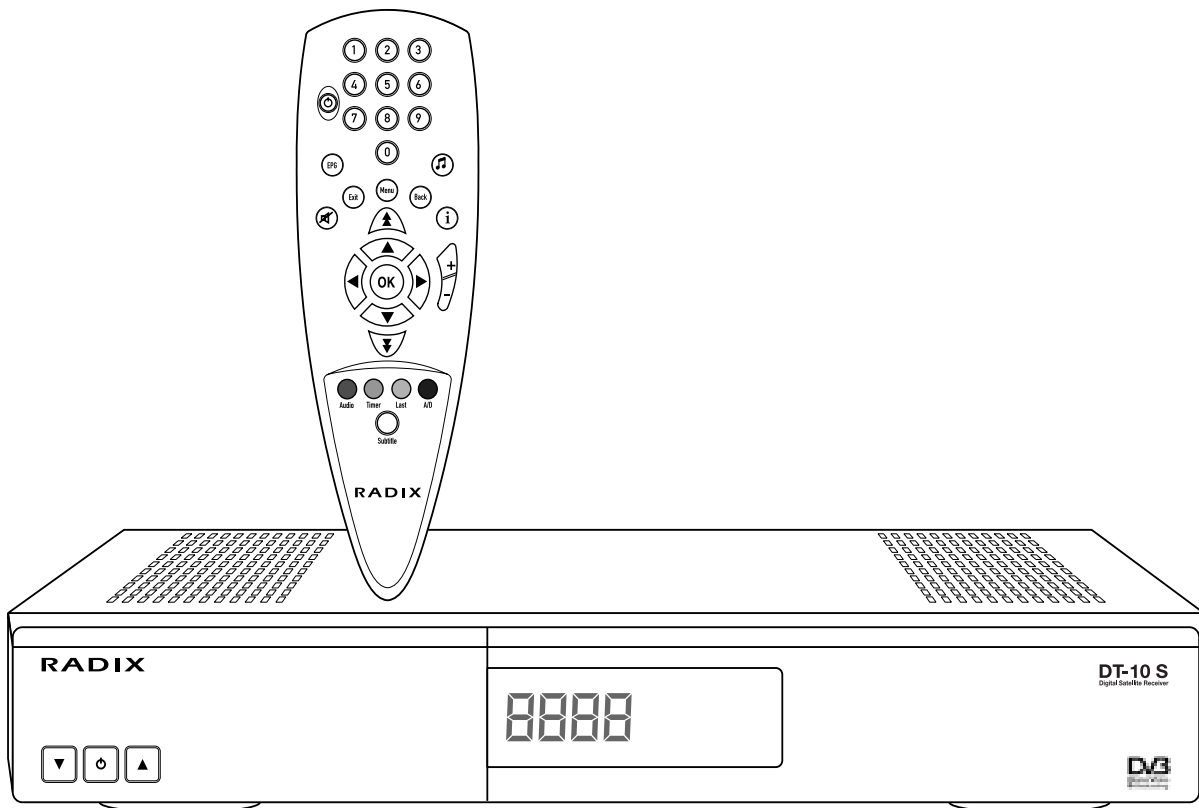


Users Guide

DT-10 S

Digital Satellite Receiver

GB



Read these instructions carefully before using this appliance. • Retain for future reference.
RADIX shall not be liable for damages resulting from improper use of this appliance.

Introduction

1 Introduction

Thank you for purchasing your RADIX digital satellite receiver. All RADIX products are manufactured to the highest standards at our ISO 9002 accredited manufacturing plants.

You naturally want to begin viewing your favourite programmes as quickly as possible - this is why we have designed the menu to fully meet your requirements. To ensure that you get to know your unit properly and that you can use and program all functions, please read these instructions carefully.

If it is necessary to return your receiver, please send it together with all accessories and in its original packaging. Include a copy of your invoice or receipt as well as a detailed description of the problem. Please ensure you affix adequate postage to the package or refer all repairs to an authorised retailer.

Thank you for purchasing your DT-10S digital satellite receiver. In doing so you have chosen an appliance built for the future, allowing you to take advantage of numerous programmes and additional services such as electronic programme guides which will eventually replace conventional analogue transmissions.

We hope you enjoy using this product.

Print:

Users Guide DT-10S

RADIX Electronic Vertriebs-GmbH • D-61381 Friedrichsdorf • F.R. Germany

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Subject to change without notice

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Important Safety Notes

3 Important Safety Notes

This appliance is designed exclusively for receiving satellite signals as described in this guide. It must not be used for any other purpose. Keep the appliance out of reach of children. To avoid injury and to avoid damaging your receiver, please note the following:



WARNING:

**Never remove the cover or any parts of it!
Do not allow liquids or objects to fall into the receiver!**



DANGER:

Do not cover ventilation holes – risk of fire through overheating!



DANGER:

**Only use original spare parts or professionally recommended spare parts.
Failure to do so may result in damage or injury and will cancel the guarantee.**



CAUTION:

**Switch the appliance off during electrical storms or if it not used for long periods.
Disconnect the antenna cable in an electrical storm.**



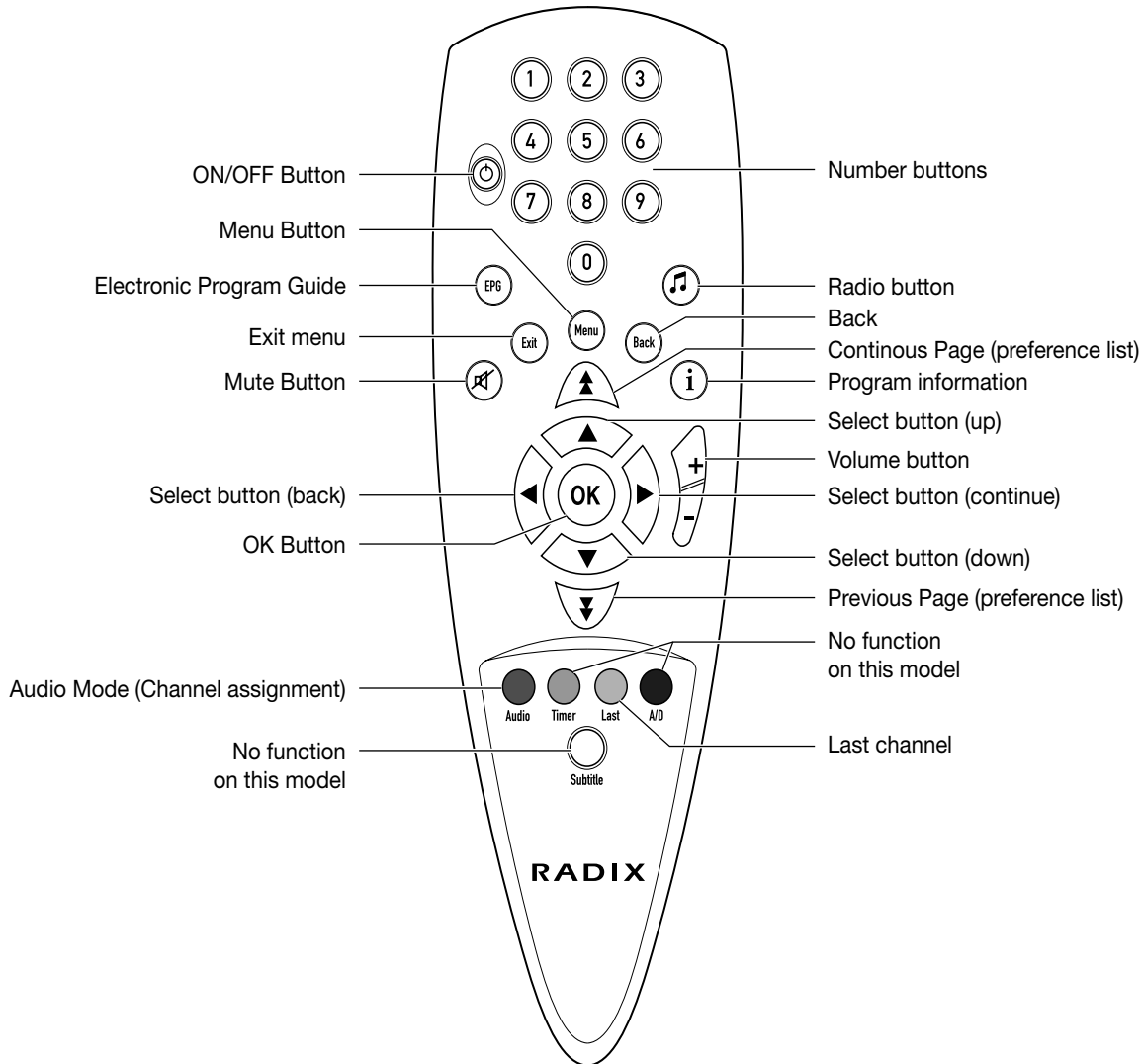
CAUTION:

**To clean the receiver, lightly dampen a cloth with clean water
Do not use any chemicals or detergents!**

Your Receiver and its Functions

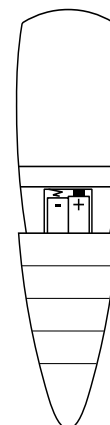
4 Your Receiver and its Functions

4.1 Remote Control



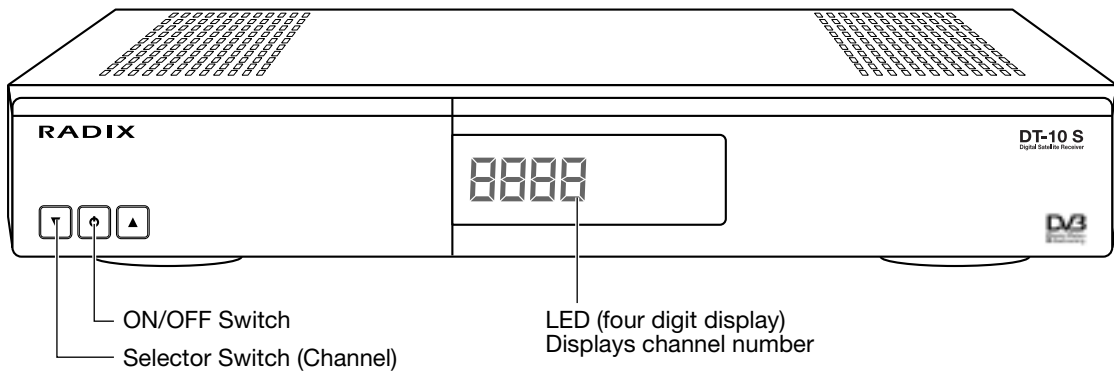
NOTE:

When inserting batteries into the remote control unit, make sure that the polarities match (+/-)!

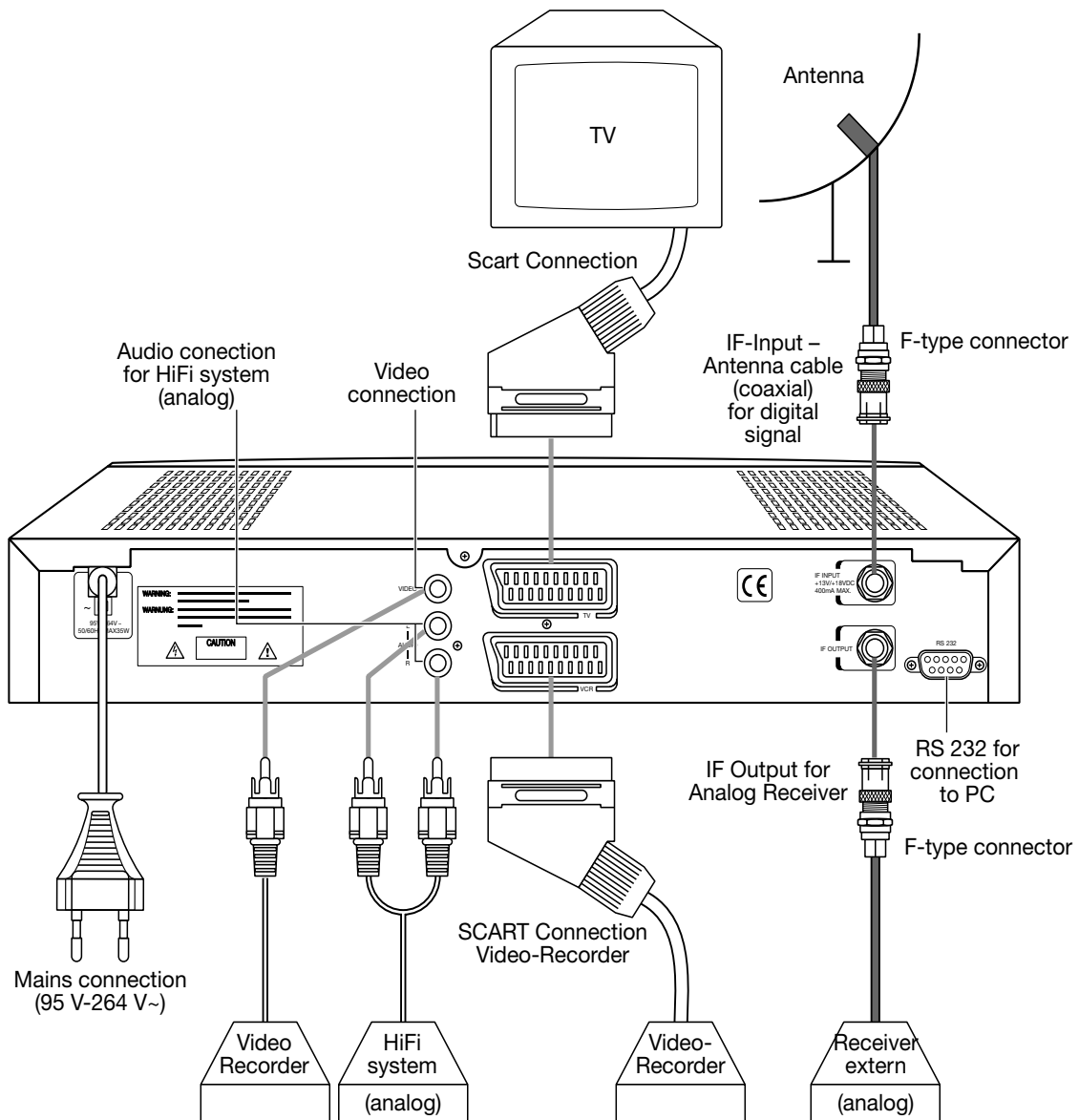


Your Receiver and its Functions

4.2 Connecting the Antenna and Other Devices



Front of Receiver



Rear of unit, connection to other devices

5 Installing Your Receiver



CAUTION:

Do not place the receiver near any heat sources or in strong sunlight.

Protect all cables from damage caused, for example, by sharp edges.

This appliance must only be used with a mains voltage of 230 V ($\pm 10\%$), 50 Hz.



CAUTION:

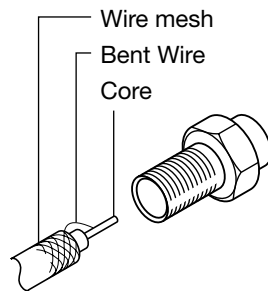
Do not connect the receiver to the mains until you have correctly connected your VCR, TV and any other analogue receiver you may have to the mains.

- Use double shielded coaxial cable for connecting the LNB to the receiver.



CAUTION:

When assembling the F-type connector, make sure that no part of the inner wire-mesh sheath touches the inner core (see diagram below). Failure to do so can cause a short-circuit and damage your receiver.



- Tighten the safety nut on the F-type connector by hand only. Do not over tighten!

The receiver is pre-programmed at our factory to immediately provide you with hundreds of different channels. Of course you can change these channels or replace them completely. In order to take advantage of all of the user guides such as programme, you will need to make a number of settings which are described in the following chapters.

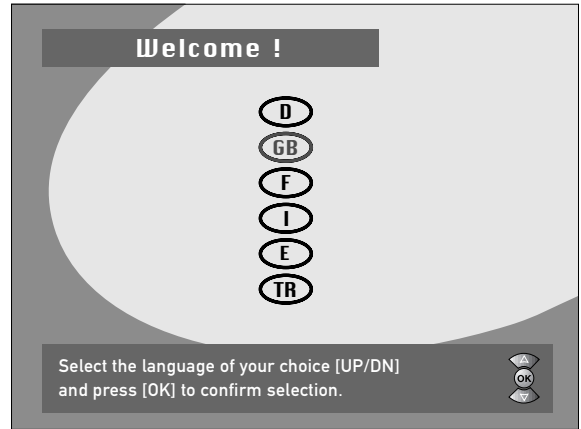
Setting Up Your Receiver

6 Setting Up Your Receiver

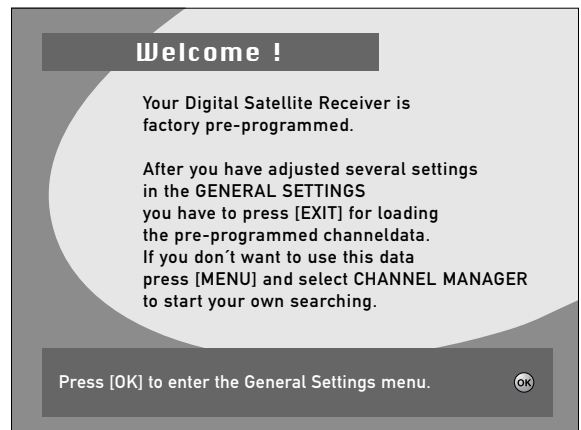
- Switch your television on and set it to receiver-receive (AV or SCART input).
- Press the Power button on your receiver or on your remote control unit.

The ON message appears on the receivers display and the following screen appears.
The Main Menu appears on your TV screen:

- Select the language of your choice.
Instructions on what you need to do and which buttons on the remote control should be used are contained in the orange dialog box.



The following screen tells you how to proceed.



General Settings

When you press OK, the “General Settings” menu appears.

The screen shows you which buttons you can use and which functions are available.

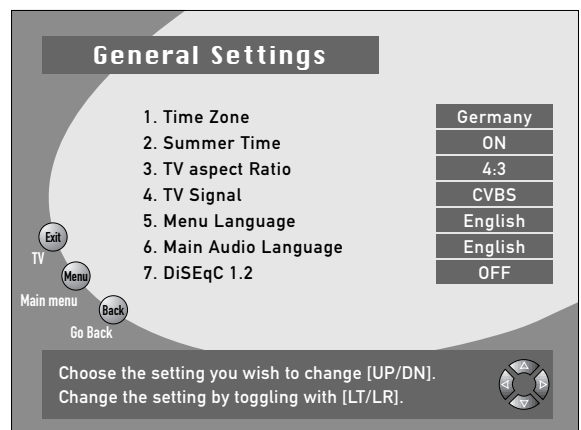
Example:

- “BACK” – return to the previous menu.
- “Exit” – return to the television picture.
- “Menu” – return to the Main Menu.

- Enter your time zone by selecting a country in your time zone under section 1.
- Under item 2, select ON to choose Summer Time or OFF to choose Winter Time.
- Under item 3, specify the TV Aspect Ration of your television set.
- Under item 4 select the optimum video format for your television.
- Under items 5 and 6, select the desired language.
- If your parabolic antenna is fitted with a control motor which can receive and convert the receivers control signal, select “7. DiSEqC 1.2” ON (this is described in more detail in section 9.5 Antenna Control).

CAUTION:

If DiSEqC 1.2 is set to ON, the DiSEqC 1.0 function (A, B, C, D) is no longer assured!



When you have completed these settings, you are ready to begin viewing the pre-programmed channels. To do this you must first activate the factory presets:

- Press the Exit key to download the channel data. After a few moments you will receive a television programme.

If you do not want to use the factory presets, you can open the Main Menu by pressing the Menu key (see Section 9) and make all of the necessary changes yourself.

7 Using your Receiver

7.1 Switching your Receiver On

Press the ON/OFF button on either your receiver or the remote control unit to switch the receiver between on ("ON" or channel number on the display) and Standby modes (dot on display).

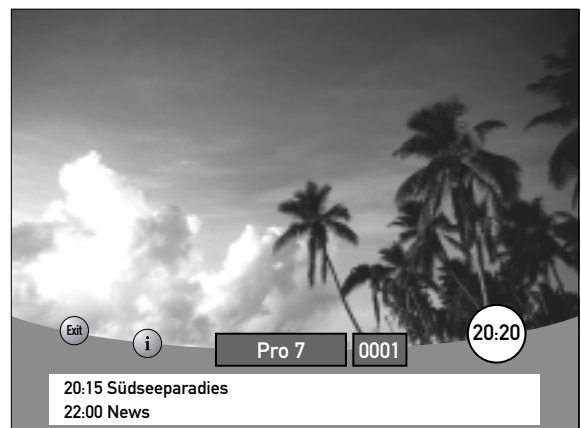
7.2 Selecting a Channel

- Use the number keys to select the channel of your choice or select one from a preference list.

NOTE:

The program number consists of three digits. You can also enter a one or two-digit number (for example 1, 13) and press the OK button to confirm.

- Use the UP button to move up one channel; use the DOWN button to move down one channel.
- Press the LAST button to return to the last channel you viewed.



Each time you change channels, the channel name and number, the time and the current programme as well as the following programme are displayed along with their times for a number of seconds. You can display this information at any time by pressing the INFORMATION button.

7.3 Volume Control / Mute Sound

- Use the volume buttons on the remote control to adjust the volume.



The on-screen display disappears after a few seconds if no changes have been made.

- To turn off the sound, press the MUTE button (see Section 4.1):
- Press the MUTE button again to restore the sound.



Using Your Receiver

7.4 Listening to the Radio

In addition to television programmes, many broadcasters transmit their radio programmes in digital HIFI format.

- Press the RADIO key (see Section 4.1) to toggle between TV and Radio mode.
- Press the Radio key to switch from Radio to TV mode.

7.5 Selecting the Audio Mode

- Press the AUDIO button. Use the UP/DOWN keys to select one of the languages (BL) provided by the broadcaster.
- Press the > button and select one of the following options:

Stereo – sound from right and left
Mono (L) – sound from left only
Mono (R) – sound from right only

- Press the AUDIO button again or press the EXIT button to exit this menu.

NOTE:

The actual purpose of this function is to transmit various language channels to the TV picture. Some programme operators use this option, however, to transmit various radio program. This can cause restrictions on reception.

8 Programme Lists and Information

8.1 Preference Lists

Digital television offers you hundreds of channels and it's easy to lose track of your favourites. To help you find your favourite programmes quickly and easily, you can create preference lists.

Several hundred broadcasters are preset into the receiver at the factory - these are listed in the Complete Video List and the Complete Radio List. In addition to the complete lists, you can also create your own preference lists which you can name as you wish. You can program preference lists easily - the instructions for doing this are contained in section 9.2. To change from one list to another while watching a programme, do the following:

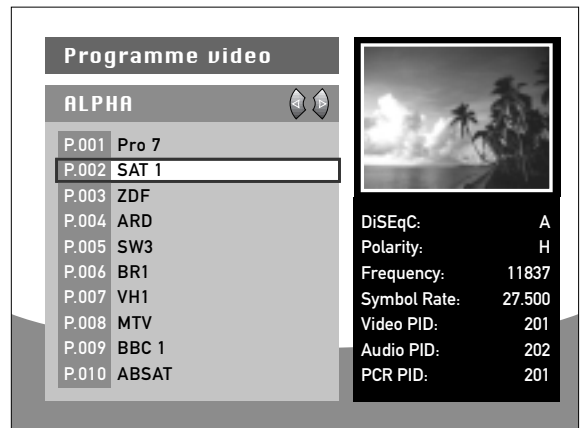
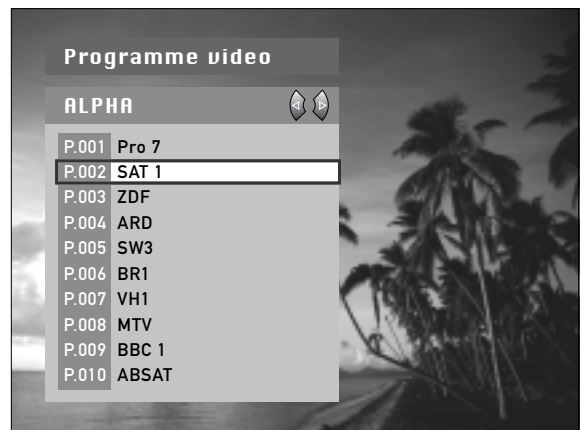
- Press the OK key while watching a programme:
(Press the button again to remove the onscreen display)
- Press the > button to change the programme list.

If one of the programme lists is displayed, the current programme is selected. If you use the UP/DOWN buttons to change the broadcaster, the programme and TV picture also change.

- Press the INFO key while watching a programme and programme list.

Technical information now appears relating to the current broadcaster and the TV screen returns to minimised view.

- Press the INFO key again to return to TV mode.



Using Your Receiver

8.2 Channel Guides and Information on Channel Contents

NOTE:

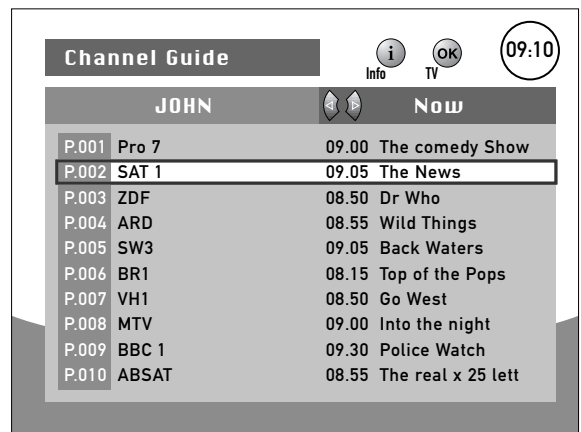
Information on programme content is not broadcast by all TV broadcasters!

8.2.1 Comprehensive Information on Channel Contents

- Press the EPG key while watching a program (EPG: Electronic Program Guide).

In the program guide you see a list containing the entered broadcasters as well as the names and start time of the current program.

- Use the UP/DOWN keys to select the desired program.
- Press the INFO key to obtain more comprehensive information (see Diagram Section 7.2).

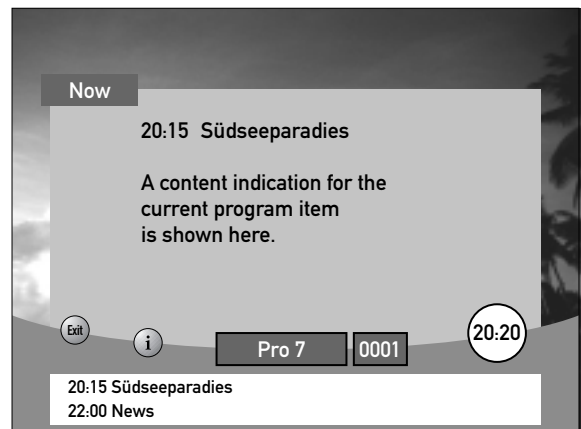


8.2.2 Information on the Content of the Current and Next Program

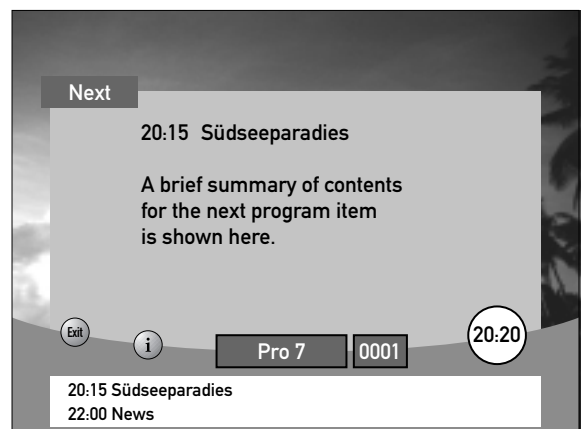
- Press the INFO key while watching a program:

The program name and number, the time as well as the current and next programs are displayed along with start times on the screen (as described in Section 7.2).

- Press the INFO key again to obtain more comprehensive information about the current program.

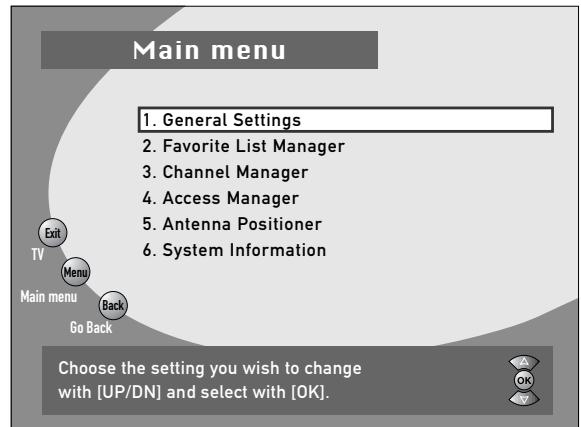


- Press the > key to obtain information this information for the next program.
- Press the INFO or EXIT button to exit this menu.



9 Programming Your Receiver in the Main Menu

If you want to receive additional or other programs to those which were preset, you can program yourself, the new broadcaster yourself. You can also use a variety of service functions ranging from antenna positioning to preference lists and access control.



9.1 General Settings

You already used this menu item when you set up your receiver (Section 5).

You can, of course, change the settings at any time if, for example, you want to adapt the receiver to a new location.

NOTE:

When the changeover between Summer and Winter Time occurs, you must make the appropriate changes under menu item 2.

9.2 Preference Lists

You need to programme a personal list in order to use all of the available functions of your receiver.

There are 5 lists named A to E already installed.

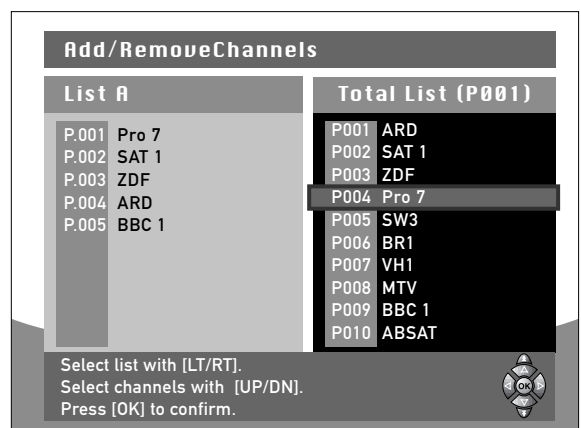
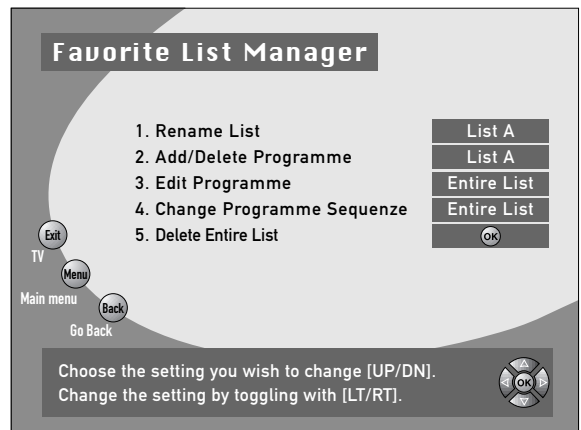
Under point "1. Rename List" specify a name for the list. You should name it according to its contents, for example "News" or "Sport", or according to the person who uses that list – be creative!

Menu item 1 allows you to change the names at any time.

Use "2 Add/Delete Program" to create your list.

- Use the UP/DOWN buttons to select the desired program in the complete video list (right) and confirm your choice with OK.

The program is now included in your personal list. It now has the current list number (three digit) and has a "P" to identify it as a TV program.



Programming Your Receiver

In order to include a radio station in your personal list, switch from the complete video list to the complete radio list using the RADIO button. The procedure is the same as above. Radio programs which have been included in your personal list are identified with an "A".

If you want to delete a program from your list:

- Press the < button to access the personal list and use the UP/DOWN buttons to select the desired program. Press the OK button to confirm that you want to delete the program.

If the name of a station does not match you presets, you can change it using menu item 3 as often as you wish.

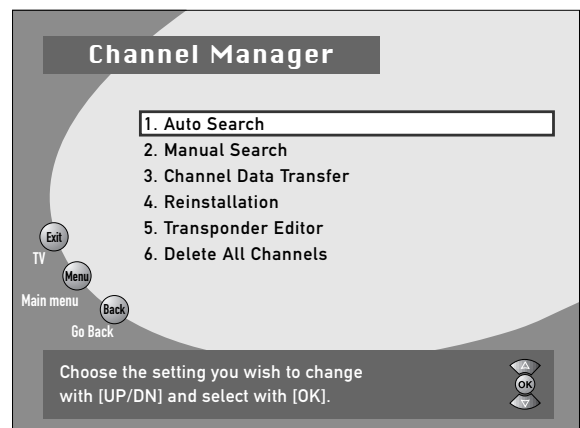
To change the order of the programs in a list, use menu item 4. To do this, select a program and move it to the new position. Confirm the move by pressing OK.

To create space for a new broadcaster, you can move broadcasters you no longer need to the "recycle bin". To do this, use "5 Delete Program from Complete List".

9.3 Channel Manager

Using the program manager you can load new broadcasters into your receivers memory.

In order to make these settings you will need certain information which is available from your local specialist or in specialist magazines.



DiSEqC-Control and 22 kHz-Switch Signal

DiSEqC Settings	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	┌── SAT A ─┐		┌── SAT B ─┐		┌── SAT C ─┐		┌── SAT D ─┐									
Polarisation: Vertical/Horizontal	14 V	14 V	18 V	18 V	14 V	14 V	18 V	18 V	14 V	14 V	18 V	18 V	14 V	14 V	18 V	18 V
LNB Band: 9,75/10,6 GHz	9,75	10,6	9,75	10,6	9,75	10,6	9,75	10,6	9,75	10,6	9,75	10,6	9,75	10,6	9,75	10,6
DiSEqC Sound	A	A	A	A	B	B	B	B	A	A	A	A	B	B	B	B
OPTION:	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2

If no DiSEqC controlled satellite system is used, the "upper/lower band" must be set to "manual". This occurs when you activate/deactivate "22 kHz".

Programming Your Receiver

9.3.1 Automatic Search

During automatic search, certain data is already pre-programmed. Standard satellite systems use Universal-LNBs with a local oscillator frequency of 9750 MHz for the lower band and 10600 MHz for the lower band. The basic setting for this receiver contains this data except the ASTRA and HOTBIRD satellites. You should only change these settings if your satellite system deviates from this or if you specifically want different settings.

While the receiver is searching a progress bar appears on which you can follow the frequency search. In addition, the following information is also displayed:

DF: - Satellite frequency

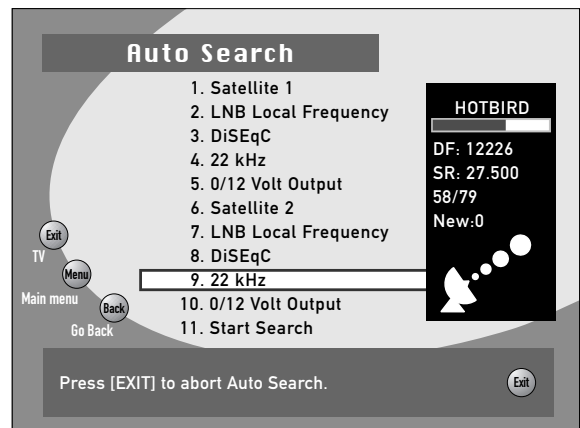
SR: - Symbol rate

.../... - Number of transponders found / possible

New: - Number of stored programmes

If the search fails, check and correct all settings.

Points 5 and 10 "0/12 Volt Output" have no function in this model.



9.3.2 Manual Search

(This menu is presented in two sections which are accessed using the Continue and BACK buttons)

These settings should only be changed by qualified personnel or very advanced users.

Network Search:

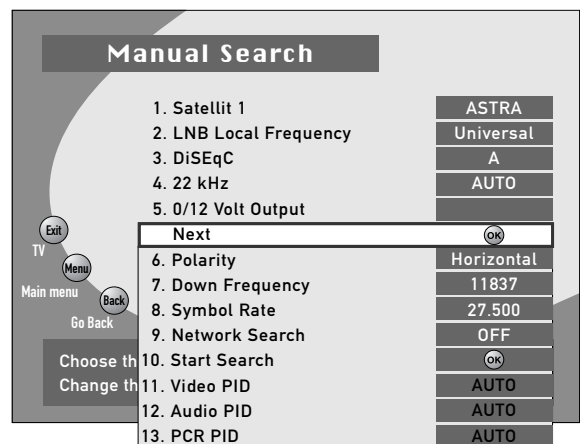
Each transponder offers information for the complete satellite system (Requirement: The provider must keep the list as up-to-date as possible). When you enter a transponder and activate the network search, the receiver automatically searches all transponders which belong to the network. The definition of the network varies according to different satellite operators with the result that all channels on a satellite or only some are examined.

PID (Packed Identifier):

The PID number is the identification for video and audio signals in the digital data flow of DVB MPEG-2 signals.

Due to inadequate labelling, many programs may not be recognised during either automatic or manual searches. In such cases, you can enter the PID numbers to receive these programs.

Point 5 "0/12 Volt Output" has no function in this model.



GB

Programming Your Receiver

9.3.3 Programme Data Transfer

This menu item is included to support specialist retailers. In this way a desired preset can be transferred from a master device to several slave devices. This pre-setting serves the common interests of a group of customers, for example regional or ethnic interests.

Master and slave receivers are linked together using as RS 232 interface.

NOTE:

All receiver functions are locked while the receiver is in data transfer mode. The transfer of data can only be interrupted by removing the mains cable.

9.3.4 Reinstallation

If you changed or deleted the preset data, you can reset the receiver to the factory settings. To do this you will need the password (Section 9.4).

9.3.5 Transponder Editor

You can change, add or delete all satellite data. This function is intended only for servicing purposes and has no effect whatsoever on the operation of your receiver.

NOTE:

If you delete all of the data for a satellite, the satellite itself is also deleted.

9.3.6 Delete all Channels

CAUTION:

When you carry out this function (password needed) all settings are deleted and you will need to reprogram your receiver!

If you want to replace the entire program information, delete all programs. Your receiver now displays the “Welcome” menu as described in Section 6.

9.4 Access Manager

Several functions on your receiver can only be accessed using a password – the factory default is **0 0 0 0**.

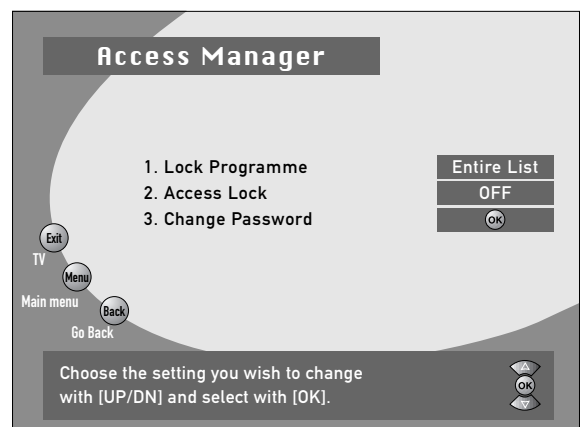
In order to prevent unauthorised access to your receiver, you can protect it with an access lock.

- Under menu item 4, enter the password and activate the access control.

When you do this, you will need to enter the password each time you turn the receiver on.

In order to prevent the viewing of certain programmes, you can activate an programme lock under point 1 which is similar to the access lock. Once this lock has been set, you will need to enter your password each time you change programme in order to remove the lock.

If necessary you can change the password using menu item 3.



Programming Your Receiver

NOTE:

In case of emergency: If you forget your password, your local stockist can request a general password for your receiver from the factory.

9.5 Antenna Control

The following settings require highly specialised knowledge and skills. If in doubt, you should have this work carried out by an experienced professional.

Requirements:

The parabolic antenna must feature a control motor which receives and uses the signal from the receiver. The mechanical settings for the antenna must be carried out correctly so that the satellites orbit can be properly tracked. This is the only way to ensure that the strongest possible signal is received.

In the “General Settings” menu, “7. DiSEqC” must be set to ON.

The satellite receiver “knows” the position of each satellite in relation to each other. As a result, it is sufficient to select and find just one satellite in the “Antenna Positioner” menu and set it to maximum strength and store it. All other known satellites are configured and stored using the calculate command.

You can of course search for new satellites – you must only use menu items 1-4.

In the submenu “1 Set Limits”, the physical limits are set within which the parabolic antenna can move without obstruction.

To do this, move the antenna as far east as possible and this position should be stored using “Set East Limit”. After this, the antenna moves westwards using menu item 1 and the west limit is set. If the structural surroundings change, you can delete the limits and recreate them to match the new surroundings.

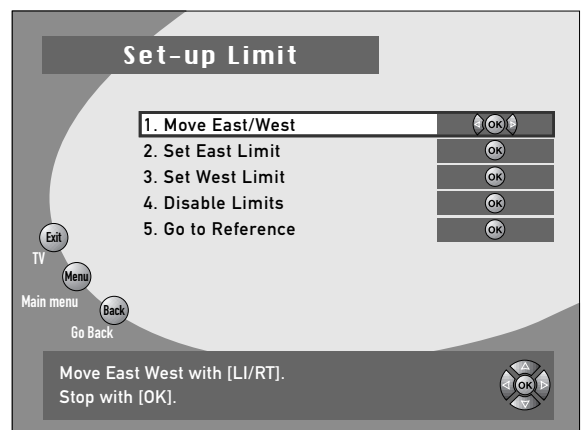
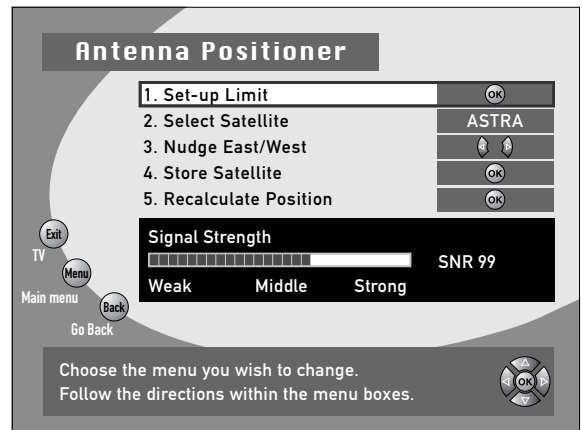
Menu item “5 Reference Position” resets the antenna control motor to the delivery position (dead centre).

NOTE:

If your motor does not have a motor, you can use the Antenna positioner menu to check the signal strength.

9.6 System Information

Use this menu item to get manufacturers information on the software version for your receiver.



GB

Trouble Shooting

10 Trouble Shooting Your digital Receiver

NOTE:

Digital communications involve the simultaneous transfer and processing of large amounts of data. Changing channels may takes longer in comparison to analogue devices.

An hourglass appears on screen with the message “Please Wait” while the receiver changes channel.

Problem	Possible Causes	Solution
Noise, but screen menu available	Satellite system is faulty or incorrectly set up, faulty LNB	Check cables and antenna, set up antenna again, check LNB
	High levels of signal loss in cable	Replace cables or use a signal booster
	Faulty LNB	Replace LNB
	Faulty connection (Water/corrosion damage)	Repair connection
No stereo sound	Wrong cable connecting TV and receiver	Check SCART cable
Remote control does not respond	Batteries exhausted	Replace batteries
	Remote control not pointed at receiver	Hold remote control in correct position

11 Recycling and Disposal

Please dispose of the device, packaging such as polystyrene and all batteries in accordance with your local regulations and recycle wherever possible. Follow all relevant regulations and dispose of the materials at the correct locations. Consult the relevant regulations available from your local environmental protection agency or similar.

Technische Daten • Technical Data • Caractéristiques Techniques Datos Técnicos • Dati Tecnici • Teknik Özellikler

Tuner

IF Input Frequency	920 ~ 2150MHz
IF Loop through output	920 ~ 2150MHz
IF Bandwidth	8/55MHz, automatical switching according to symbol rate
Input Impedance	75ohms
Input Signal level	-65dbm ~ -25dbm
LNB Polarization	
Switching Voltage	13/18VDC@max400mA, Short Circuit Protection
Band Switching	22KHz Tone
I/Q Output	Unbalanced Output, Controlled by AGC Input

Front-End Demodulator

Demodulation Capacity	QPSK Demodulation
Symbol Rate	1 ~ 45Mpsps
Viterbi Decoding Rate	1/2, 2/3, 3/4, 5/6, 7/8, 8/9
Reed Solomon Decoding	FEC : 204, 188, t=8

Transport Demultiplexer

Demultiplex	According to ISO/IEC 13818-1
Max. Input Stream	60MHz(Serial)/7.5MHz(Parallel)
PID Handling Capability	32 PID
SI Filtering	According to DVB-SI spec (ETS 300 468)

Video Decoding Parameters

Video Decoding	ISO/IEC 13818-2 MP@ML
Aspect Ratio	4:3, 16:9, Pan&Scan, LetterBox
Resolution	Max.720 x576

Audio Decoding Parameters

Audio Decoding	ISO/IEC 13818-3 Layer I & II
Operating Mode	Mono, Dual, Stereo, Joint Stereo
Sampling Frequency	32, 44.1, 48KHz

Baseband Video/Audio Output

Video Output Impedance	75ohms
Video Output Level	1Vp_p
Audio Output Impedance	600ohms Unbalanced
Audio Output level	3.0Vp_p With Volume Control

Microprocessor and Main Memories

Microprocessor Type	ST20-C2(STI5512)
Flash ROM	
(for program memory)	512K x 16 bit
DRAM	1M x 16 bit
SDRAM (for decoding)	4M x 16 bit

Data Service Port

Connector	9 Pin D-Female Type
Protocol	RS-232 Asynch
Data Rate	Max 115200 bps

Front Panel

4 Digits LED Display	Channel Numbers Display
3 Buttons	Power, Down, Up
IR Sensor	38KHz

Rear Panel

IF Input	F-Female Type
IF Loop through output	F-Female Type
Cinch Output	AUDIO(Left, Right), VIDEO
2SCART Output	1TV, 1VCR
RS232 Serial Port	9 Pin D-Female Type
Power Cord	Europe Flexible Cord

Remote Control Unit

Type	IR (Carrier Freq. 38KHz)
Battery	2 x 1.5V AA

General Data

Input Power Voltage	AC 95~264V, 50/60Hz
Power Consumption	Max 35Watts
Dimension(W x D x H)	377 x 240 x 69mm
Weight	2.5Kg
Operation Temperature	0 ~ 40 Deg.