User's Guide

DVB Satellite Receiver

for mobile applications

UFD 545

Order No. 260 497

KATHREIN

Antennen · Electronic

Foreword

Dear customer,

This User's Guide is designed to help you to use the extensive functions of your new satellite receiver most effectively.

We have made every effort to make the instructions as clear and understandable as possible and to keep them as short as necessary. We have added a small glossary of terms at the end of the User's Guide to facilitate understanding of certain technical expressions that do not lend themselves to translation. And to make sure you find what you are looking for, we have also included an index at the back.

We wish you the very best reception and great pleasure with your new DVB satellite receiver.

Your

KATHREIN Team

Should you, contrary to all expectations, experience problems with your receiver, please contact your dealer or our Hotline.

Tel: #49 (0)8031/18 47 00

Fax: #49 (0)8031/18 46 76

Important information

The channel allocations of the satellites and transponders are subject to frequent change. Consequently, in such cases, it may be necessary to readjust the channel settings even though the channels are preset at the factory corresponding to the latest channel allocations. You can obtain the information necessary for resetting the channels from SAT 1 video text, the Internet or corresponding TV and satellite magazines.

Contents

Contents

Contents

Safety Information

Important information on operation

In the following section you will find important information on operation, the place of installation and connection of the receiver.

Please read this information carefully before you start up your receiver.

Longer periods of absence/thunderstorms

Always switch off the receiver with the power switch at the front left in the event of longer periods of absence and during a thunderstorm. This also applies to any other devices that may be connected to the receiver.

If timer programming is set make sure the receiver is switched on in good time before the set recording time.

Mains lead

Take particular care to ensure that the power supply cable is not damaged. Never operate the device with a defective mains lead.

Cleaning

Disconnect the receiver from the power supply before you clean it. Use a soft dry cloth for this purpose. Only clean the surface of the casing.

Never open the casing. Contact with parts on the inside of the receiver poses a risk of electric shock.

Playing children

Make sure that children do not insert objects into the ventilation slots. This is a source of danger and fatal injury by electric shock, and may cause a short-circuit.

Repair

Only have qualified service personnel carry out repairs or adjustments to your receiver. Unauthorized opening up of the receiver and attempts at repair will invalidate the guarantee.

Unauthorized tampering with the device can jeopardize the electrical safety of the receiver.

The manufacturer shall not be liable for accidents to the user as the result of the receiver being opened up.

Connections

Incorrect connection can lead to problems in operation or cause defects in the device.

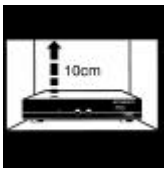
Safety Information

Important information on setting-up location and assembly

Setting-up location

All electronic devices generate heat. The rise in temperature, however, is within a safe range. Sensitive surfaces of furniture and veneers can over time discolour slightly due to the constant effects of heat. The feet of the receiver may also discolour when in contact with treated surfaces. If necessary, place the receiver on a suitable base.

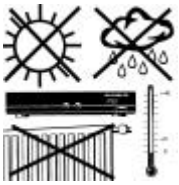
Ventilation



The heat generated in this receiver is adequately dissipated. Nevertheless, never install the receiver in a cabinet or on a shelf with insufficient ventilation. Never cover or close off the cooling slots on the device.

Never place objects on the receiver and maintain a minimum clearance of 10 cm above the device to ensure the heat is carried off effectively.

Moisture, sunlight, heat



Protect the receiver from moisture, dripping and splash water.

Do not place the receiver near a source of heating and never expose it to direct sunlight

Mains voltage

Operate the receiver only with a mains voltage of 230 V/50 Hz or connected to a battery 12 V/24 V DC vehicle electrical system.
First connect the antenna and the television set before connecting the receiver to the mains power supply and switching on.

Earthing

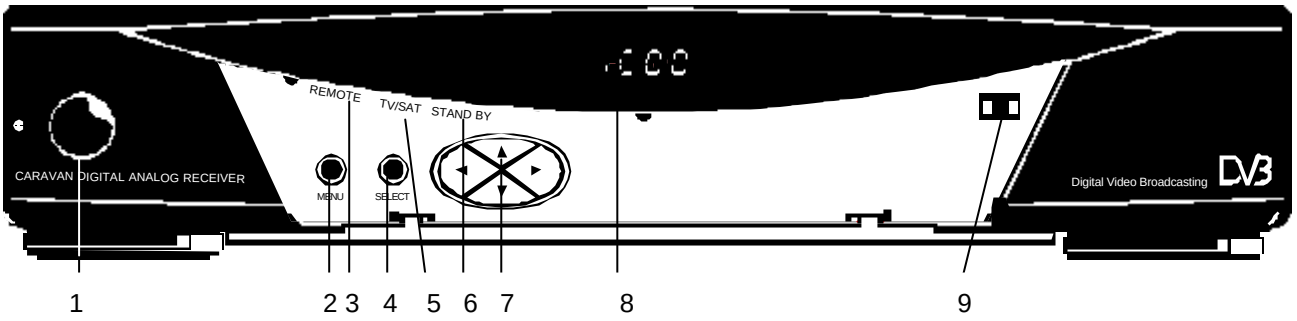
The parabolic antenna must be earthed according to instructions. Corresponding local and/or VDE regulations must be observed.

Controls, Indicators, Displays and Connections

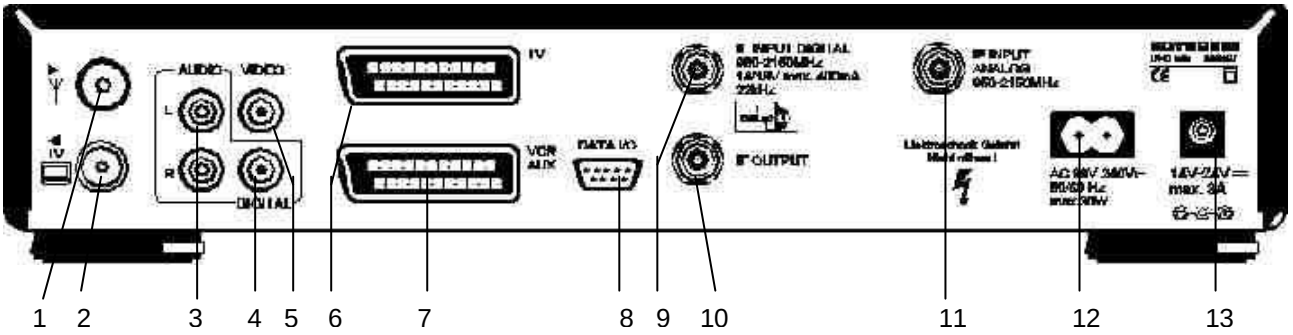
In this section you will find a short description of all controls, indicators, displays and connections. The button symbols used here are also used in the description of the operating steps.

Front view

(panel folded down)



Rear view



Controls, indicators and displays on the front panel

1 ON/OFF switch (with mains disconnection)

2 Menu button to display and exit the menus or submenus

3 Acknowledgement for remote control signal

4 Select button
to confirm a selection

5 Operation indicator

6 Standby indicator

7 Cursor buttons to move through menu and channel lists as well as to set the volume (corresponds to remote control)

8 LED display (four-digit, 7-segment display) to show channel number and time.

9 Press catch for front panel
To open press lightly on upper right side

Controls and connections at the rear

1 Antenna input (terrestrial)

2 Modulator output

3 Audio output
2 Cinch socket outputs, left and right channel

4 Digital sound output (AC3) – Cinch socket output

5 Video output (FBAS)

6 SCART socket TV connection

7 SCART socket VCR/AUX connection

8 DATA input/output socket
Interface for serial data transmission (service)

9 Satellite IF signal input
Output of LNB supply voltage and control signals (22 kHz and DiSEqC 1.1)

10 Satellite IF signal output
Bridged Sat-IF signal

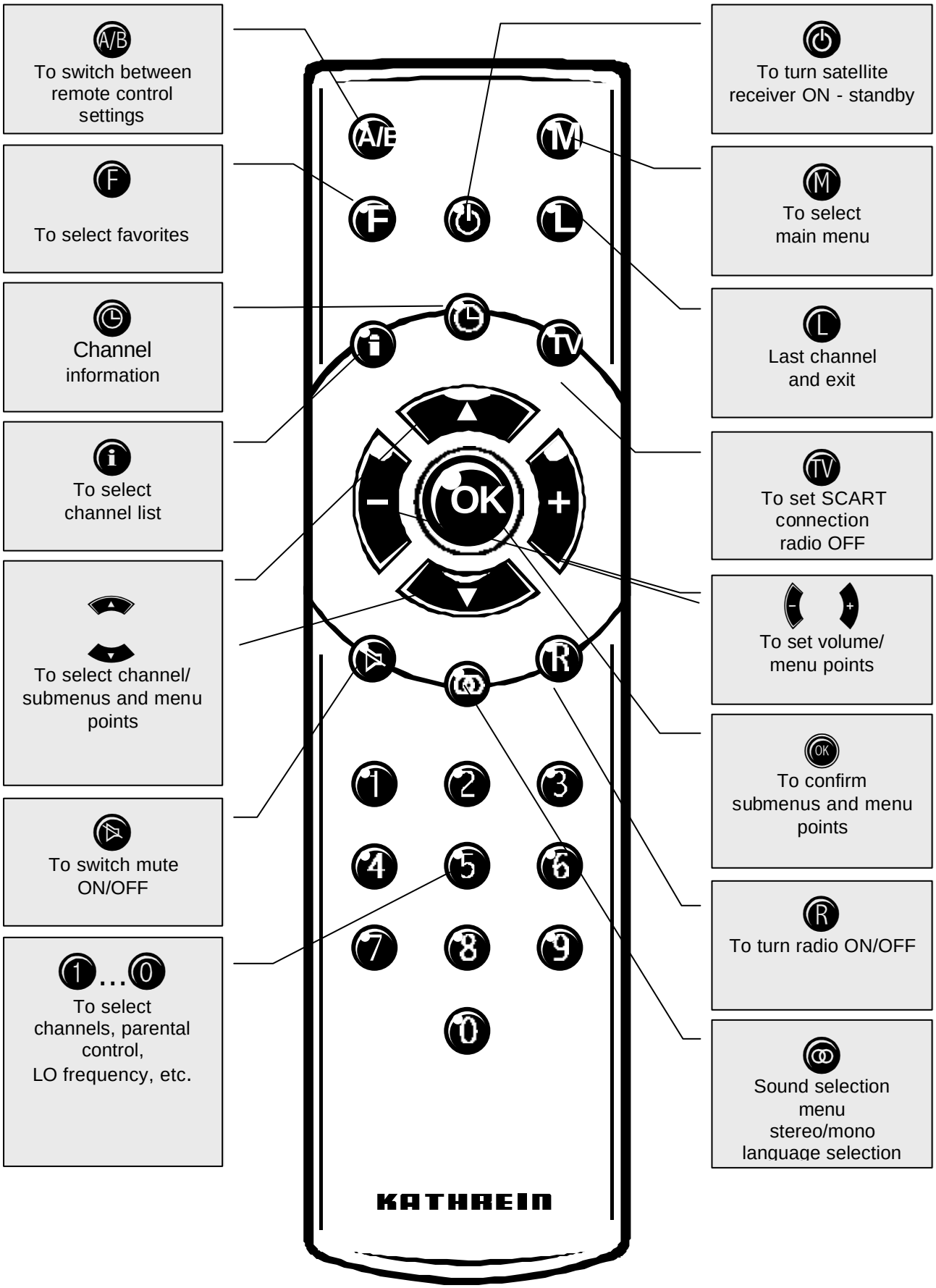
11 Satellite IF input for analogue reception

12 Mains power input 230 V AC

13 DC voltage input 12…24 V

Controls, Indicators, Displays and Connections

Remote control function buttons



Switching over between Remote Control Command Sets

The remote control features 2 command sets, making it possible to operate 2 receivers independently of each other in one room (not together with a twin receiver).

Note

For this purpose, program one receiver on the command set 1 and the second receiver on the command set 2.

- Switch on receiver 1 and receiver 2 off with the power switch.

  ⇒ Press and hold the A/B button.

  ⇒ Enter "**901**" with the number buttons.

- To adopt the code, press the button to switch receiver 1 to standby and then switch off the device at the power switch.

- Switch on receiver 2.

  ⇒ Press and hold the A/B button.

  ⇒ Enter "**902**" with the number buttons.

- To adopt the code, press the button to switch receiver 2 to standby and then back into operation. Now switch on receiver 1 again.

  ⇒ Press and hold the A/B button.

  ⇒ Enter "**903**" with the number buttons.

Note

When carrying out the first two settings, the remote control must be directed at the respective receiver (when switched on).

By pressing the A/B button, you can now switch between the two command sets A and B (toggle function) and alternately operate both receivers.

Command set 1 is always active as the on-delivery setting.

Note

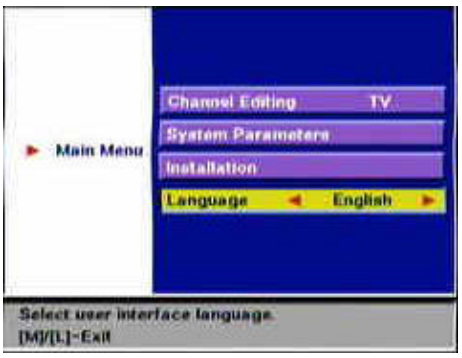
If you are operating only one receiver and the active command set is switched over by mistake so that this receiver can no longer be operated, the remote control can be easily switched back to command set 1 by following the procedure described above.

Notes on Operation

Menu concept

The menu concept is based on logical operating sequences.

Note: *Coloured backgrounds are used to emphasize the selected menus, submenus and menu items as well as the parameters to be set. The menus are to a large extent self-explanatory. You will find information relating to the selected menu point in the information box displayed under the menu.*



Press the M button to select the main menu and press the ▲▼ buttons to select the submenus.

Press OK to access the submenus.

The items in the submenus are selected by pressing the ▲▼ buttons.

The settings allocated to specific menu items are executed either by pressing the -/+ buttons or the number buttons.

Press L or M to exit the main menu, submenus and menu items.

Button functions

i is a changeover button (main channel list or favourite list) with menu function.

Press L to exit the setting.

TV is a changeover button. Identifier self-deleting.

@ is a switch-on button with menu functions. Press the button again to exit.

⏲ is a switch-on button with menu functions. Press the button again to exit.

F is a switch-on button with menu functions. Press the button again to exit.

R is a function selection button. Press once again to change function.

⏥ is a function selection button. Press once again to change function.

Alphanumeric entries

Use the number buttons to enter the channel and satellite names. They produce numbers and letters in the name fields of the corresponding menus. Position the bar cursor on the name field. The first position automatically assumes a dark background. You can now also enter letters with the number buttons by pressing the corresponding button several times. For example, Q, Z and — are additionally allocated to the "1" button (see table on next page).

Notes on Operation

Alphanumeric assignments of number buttons on the remote control

Button	*1 X*	*2 X*	*3 X*	*4 X*
1	1	Q	Z	-
2	2	A	B	C
3	3	D	E	F
4	4	G	H	I
5	5	J	K	L
6	6	M	N	O
7	7	P	R	S
8	8	T	U	V
9	9	W	X	Y
0	0	SPACE		

Language selection - OSD

To select the language for the on-screen menus press:

M – ▲▼ – menu language – -/+ – English – M

The available languages are German, French, Italian, Spanish, Portuguese, Dutch, Greek and Turkish.

Connection and Startup

The following section is specifically intended for the specialist dealer. You only need to read this section if you are carrying out the installation yourself.

You will find sample configurations in the section "Connection examples".

First carry out all installation work before connecting the receiver to the mains power supply.

Refer to the information provided in the section on "Safety".

To connect the receiver

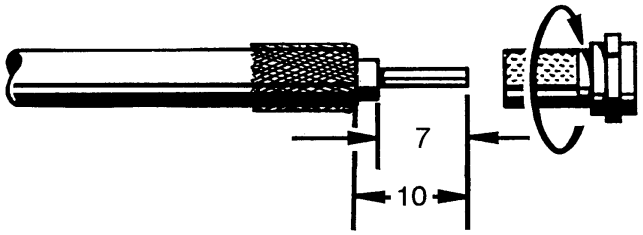
Sat-IF connection

Connect the Sat-IF input of the receiver to the satellite receiving system (satellite dish).

Use a coaxial cable with a standard F connector for this purpose.

If you need to fit the F-connector onto the cable,

- strip the cable insulation as shown in the diagram (you will need to fold back the braid) and
- slide the F-connector onto the cable, then turn it clockwise until it locks.



When fitting the connector make sure that no wires of the shield braid make contact with the inner conductor. This could otherwise cause a short-circuit.

The quality of the reception signal depends on a good connection!

Analogue and digital TV

To ensure you can receive digital and analogue channels, connect the IF OUTPUT socket with the IF INPUT ANALOG socket at the rear of the receiver. Use the coax jumper provided as an accessory for this purpose.

Make sure that your satellite antenna system transmits both the low band as well as the high band for analogue and digital reception. For digital reception, your single satellite antenna (dish) must be equipped with at least one universal LNB.

Presetting of the receiving system

The control signals for conventional receiving systems (satellite dishes) are preset, i.e. 14/18 V for polarization changeover and 22 kHz switching signal for LOW/HIGH band changeover on multifeed reception systems.

The presetting will need to be changed in the installation menu, menu point "DiSEqC" if UFO or tone burst switching matrices are used in the receiving system. Refer to the section "Installation menu, DiSEqC menu“ for this purpose.

It is important that you observe the application information provided for the matrix used.

Connection and Startup

LNB supply voltage

If the feed system (LNB) is powered by an external supply voltage and the LNB supply voltage is not used for switching over polarity (e.g. Kathrein feed system UAS 330), the LNB supply of the receiver must be set to "OFF" (see section "Installation menu, LNB configuration").

Modulator connection

If your TV set is not equipped with a SCART socket, you can connect the receiver by means of a coaxial cable. (See "Technical reference" at the end of this User's Guide.)

For this purpose, connect the modulator output of the receiver to the antenna input of the TV set.

The TV set must be preset to UHF channel 38. The modulator of your receiver "transmits" on this channel (factory setting).

Note

Stereo reproduction is not possible in this configuration! And a decoder for pay-TV cannot be connected!

To use the receiver together with a video recorder, loop through the receiver signal via the video recorder (antenna input and output). The output channel of the video recorder must be selected such that the receiver signal is not adversely affected and vice versa. Refer to the corresponding information provided in the User's Guide of your video recorder. Also refer to the connection examples at the end of this User's Guide!

TV and video recorder connection

- Use a SCART cable to connect the satellite receiver (TV SCART) and TV set.

If your TV set is equipped for stereo output, you can receive the sound in stereo via the SCART connection.

- Also use a SCART cable to connect the satellite receiver (VCR/AUX SCART) and the video recorder.

Audio connection

If you wish to reproduce the sound via a HiFi system, connect a corresponding Cinch cable from the audio Cinch sockets on the receiver to the input sockets on your HiFi system.

If your HiFi system features a digital input or you have a digital Dolby system, you can connect it to the digital output.

Inserting batteries in the remote control

Remove the cover on the battery compartment on the underside of the remote control.

- Insert the two supplied batteries in the remote control. Ensure correct polarity of the batteries, the + and – markings are indicated inside the battery compartment.
- Slide the cover back into the casing and lock in position.

Used batteries are special waste! Therefore do not throw batteries into the household waste but rather deposit them at a collection depot for old batteries!

Switching on for the First Time

The first steps

Connect the receiver to the mains power supply or vehicle electrical system. Use the supplied connection cable for this purpose. Never connect both cables at the same time!

Switch on the receiver by pressing the power button at the front of the unit.

You will see "**- - - -**" in the LED display.

The operation indicator LED lights red, the receiver is now in standby mode.

Switch on your TV set.

Select an AV channel number on the TV set or select channel 38 if the modulator output is connected.

Switch on the receiver by pressing the button on the remote control.

The orange LED at the front end of the receiver flashes every time a button on the remote control is pressed.

You will see the first factory preset channel on your TV screen. An information bar indicating the channel provider, the time, the timer settings, the channel status and the channel title will be displayed in the bottom section of the screen provided the corresponding data are transmitted. The number of the channel memory appears in the LED display.

The red standby indicator goes out.

You can now receive the TV and radio channels preset at the factory and select them by pressing the buttons. Press the and buttons to select radio channels. Press the or button to return to TV channels.

Refer to the section "Channel lists – TV/radio" for information on how to set up and save other TV and radio channels.

The reception status last set always reappears when the receiver is switched on.

If the message "bad or no signal" appears on the screen in addition to an on-screen display indicating the channel last received, you will need to check the system installation and/or the receiver settings. If this problem only applies to individual channel slots, the problem may be due to an interruption in the transmission signal or a fault in the receiving system (cable or satellite system).

In this case, first check the connection configuration and then check whether the basic settings of your receiver are correct for your system. In the case of doubt, have a specialist do this for you.

Factory setting of the receiver

Your receiver is preprogrammed to receive the ASTRA and HotBird satellites. You will normally need to make no further settings. To receive both satellite systems or other satellites you will require a multifeed arrangement with at least two LNBs in front of the satellite dish if you are not connected to a communal or party system. Please ask your dealer.

Before you change the basic settings of your receiver, note down the settings in the form provided at the end of this User's Guide. In this way, you will be able to restore the original settings at any time.

OSD On-Screen Displays

Important on-screen displays

The receiver functions are controlled by a microprocessor and extensive software. The following explanations are intended to improve understanding of all procedures and to minimise the risk of mistakes.

TV channel identifier

The channel identifier is displayed for several seconds every time the channel is changed or by pressing the OK button.

The **I** indicates that a channel is received even if no picture can be seen (e.g. radio). The film symbol indicates a TV channel with the selected channel shown next to it and whether video text is received. The current time, start time and end time of the current programme are shown on the next line provided these data are transmitted. The **+** in the third line stands for the channel selection from the main channel list. If the favourite list is selected, you will see the "apple" symbol at this point. This is followed by the set sound reproduction mode (depending on the direction of the symbolized sound waves, mono left, mono right or stereo can be set, the digit indicates the number of sound channels). The channel title is shown in the box on the right.

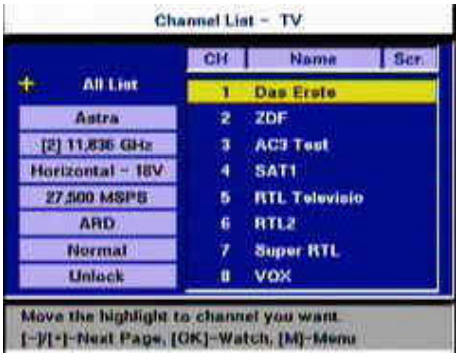
Radio channel identifier

The identifier for the set radio channel has the same configuration. A music note at the top left indicates that this is a radio channel. Programme times and text are displayed only if the corresponding data are transmitted with the signal.

Error message

"Bad or no signal" indicates that there is a fault in the reception system or in the receiver settings or the transponder is not transmitting. Instead of the **I**, the channel identifier shows a satellite antenna together with the message "bad or no signal". Check the SAT-IF connection and the LNB configuration. As an aid, refer to the list of service settings provided at the end of this User's Guide.

TV channel list



Press the i button to show the channel list. A **+** for the main channel list or the "apple" symbol is indicated at the top left. The list can be changed by pressing the button again. Information relating to the received satellites, the polarization, the symbol rate, scrambling, favorite or standard channel and the parental control is provided in the column below the symbol. The column on the left contains information relating to the channel, the channel provider and whether the channel is normally scrambled. The required channel can be selected with the bar cursor and confirmed by pressing the OK button.

Radio channel list

See above. The same applies to the radio channel list.

Channel selection

This section describes how you select analogue and digital TV channels with your receiver and how you can set the required volume.

This description of the functions assumes that the receiver has been connected correctly.

If you wish to connect the receiver yourself, please read the section "Connection and start-up" beforehand.

Selecting a TV channel

Reception status – digital

The following information describes how to select digital reception of other channels and shows what the on-screen displays look like.

After switching on the receiver, simply press the buttons in order to select other TV channels in their ascending or descending order in the channel memory.

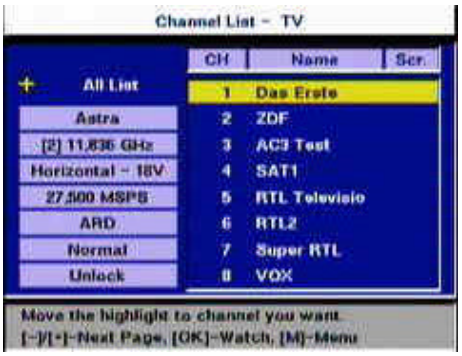
Every time you press the button, an on-screen display shows you the selected channel together with the time, the programme start and end times as well as the channel title in the information box provided these data are transmitted together with the signal.

By pressing the OK button, you can leave this information box permanently displayed or switch it off by pressing the button once again.

You will receive the "channel scrambled" message for scrambled channels.

A further option of selecting a different channel is to press the i button. The TV channel list is now displayed. In the left column it will provide information relating to the received satellites, the transponder and its transmission frequency, the polarization, the symbol rate and the scrambling of digital channels. The right side shows the channel number, the channel broadcaster and the type of reception signal (analogue/digital).

By pressing the buttons you jump to the next channel and by pressing the buttons you jump to the neighbouring page.



Confirm your selection by pressing the OK button.

Press the L button to exit the channel list and remain in the channel already set.

If you have now selected an analogue channel, as confirmation, the plain white display for this type of transmission will appear (see below).

Channel selection

Reception status - analogue

You can, of course, select other channels by pressing the buttons while receiving an analogue channel. The selection of analogue channels is indicated by the information bar being displayed briefly in white, e.g.:

TV 59 DER KINDERKA STEREO

By pressing the button, you can see the selected channel in the same form.

Press the button to see the channel list indicated in white in the display. It shows the memory location, the channel name and the reception type "A" or "D" (analogue or digital). By pressing the buttons and the buttons you can jump to the next page in the same way as with the digital channels.

Press the button to select the required channel and press the button to exit the channel list and remain in the channel already selected.

If you have now selected a digital channel, as a confirmation, the coloured display for this type of transmission will appear.

Selecting a TV channel by number entry

You can select a different TV channel during a current TV channel by entering the channel location number. Use the number buttons to for the purpose of entering the channel location number.

Example

You wish to select the TV channel "DSF". This channel is stored under the channel location number 015. (The order of TV channels is defined in the channel memory and therefore only serves as an example here.)

To select this channel, press the numbers and one after the other. The receiver waits for about 3 seconds for entry of the next number.

Follow the same procedure for all other channels – i.e. also channels with three-digit channel location numbers. You do not have to enter leading zeros.

Switching over to radio channel

You can switch over from a TV channel to a radio channel.

Press the button on the remote control for this purpose.

The receiver switches over to the channel location of the radio channels last set.

You can return to the TV channel by pressing the same button or . The corresponding display relating to the received channel, i.e. as when selecting the TV channels, appears on the screen. The LCD display shows a small "**r**" together with the channel location number.

The screen will be blanked out after several seconds.

Channel selection

Reception status - radio

After switching over the receiver, simply press the ▲▼ buttons to select other radio channels in their ascending or descending order in the channel memory.

Every time you press the button, an on-screen display shows you the selected channel together with the time, the programme start and end times as well as the channel title in the information box provided these data are transmitted together with the signal.

By pressing the OK button, you can leave this information box permanently displayed or switch it off by pressing the button once again.

A further option of selecting a different channel is to press the i button. The radio channel list is now displayed. In the left column it will provide information relating to the received satellites, the transponder and its transmission frequency, the polarization, the symbol rate and the scrambling of digital channels. The right side shows the channel number, the channel broadcaster and the type of reception signal (analogue/digital). By pressing the ▲▼ buttons you jump to the next channel and by pressing the -/+ buttons you jump to the neighbouring page.

Confirm your channel selection by pressing the OK button, press the L button to exit the channel list and remain in the channel already set.

Selecting a radio channel by number entry

You can select a different radio channel during a current radio channel by entering the channel location number. Use the number buttons 1 to 0 for the purpose of entering the channel location number.

Example

You wish to select the radio channel "DLR-Berlin". This channel is stored under the channel location number 015. (The order of radio channels is defined in the channel memory and therefore only serves as an example here.)

To select this channel, press the numbers 1 and 5 one after the other. The receiver waits for about 3 seconds for entry of the next number.

Follow the same procedure for all other channels – i.e. also channels with three-digit channel location numbers. You do not have to enter leading zeros.

Timer Settings

You can use the timer for recording a programme with a video recorder on time. Seven timers are available which you can set to different channels as well as start and end times.

To access the timer setting, press M to enter the main channel menu, ▼▲ to go to system parameters, followed by OK and ▼▲ to local time / timer and OK. You now see the display shown below.

Press the ▲▼ buttons to move the cursor to the timer you require and confirm it by pressing OK. Press L to exit the timer again.

Incorrect time settings will be rejected.

You can select and set

- the channel type, TV or radio,
- the channel location number with channel name,
- the start time (date, month, year, hour, minute)
- the stop time and
- the timer status (inactive/once/daily/weekly)

for seven timers. You must enter leading zeros for the time settings.

Use the -/+ and the number buttons to make the required setting.

The current time that you must re-enter appears under the start time. If no other setting is entered, the end time will be set automatically to the same date and one hour after the start time.

Finally confirm the settings by pressing M or L three times.

Sound Settings

All setting options apply to analogue and digital TV modes as well as radio mode.

Setting the volume

Make sure that the volume of the TV set is set to the room volume.

Set the required volume level by pressing the buttons on the remote control of the receiver. A bar indicator with 31 segments is displayed on the screen to show the set volume. The same procedure also applies to analogue reception.

Stereo and two-channel sound reproduction

(for radio and digital TV reception only)

Modulator connection

Stereo sound is not possible if the receiver signal is reproduced via the modulator.

The channel identifier that you can display by pressing the OK button shows the set sound reproduction. (Depending on the direction of the symbolized sound waves – under the displayed time – mono left, mono right or stereo can be set. The digit indicates the number of transmitted sound channels). The channel title is shown in the box on the right.

Press the button to call up the menu for sound and language selection. You can now make the required settings, e.g. language selection, provided the corresponding data are contained in the reception signal. Press the button once again to exit the menu.

Mute

Press the button on the remote control to mute the sound. This symbol appears on the screen.

Press the button again to restore the sound. The standard volume display bar is then shown for several seconds.

Although you can change the channel while in mute mode, it will remain muted until this mode is cancelled or you correct the volume.

Channel Lists – TV/radio

The channels/channels set at the factory can be changed in the channel set-up menu. Select the menu by pressing the M button, the ▲▼ buttons as well as -/+ for TV or radio and OK. If stored, a password must be additionally entered.

Due to the associated on-screen displays, all settings and editing must be made from a digital channel slot.

Selecting TV and radio channels last received

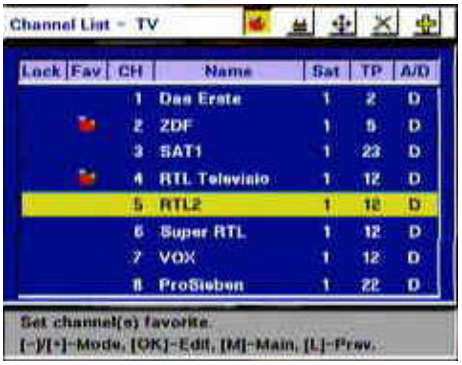
Press the F button to show on the screen the four channels you last received.

The arrows correspond to the cursor buttons ▲▼-/+. The allocated channel can then be selected by pressing these buttons.

If you call up this function from an analogue channel, the display will appear on a white screen background. The background will be blue when this function is selected from a digital channel.

Favourite channels

You can arrange and sort your favourite digital TV and radio channels, e.g. all German-language channels or channels that have no commercial breaks. These channels are identified by the "apple" symbol in the TV or radio channel lists.



Select the "apple" symbol by pressing the -/+ buttons, confirm your selection with OK and the line with the current channel will be highlighted by a coloured bar in the list.

The bar can be shifted page-by-page or line-by-line by pressing the -/+ and ▲▼ buttons.

You can now mark the highlighted line with the "apple" symbol by pressing the OK button.

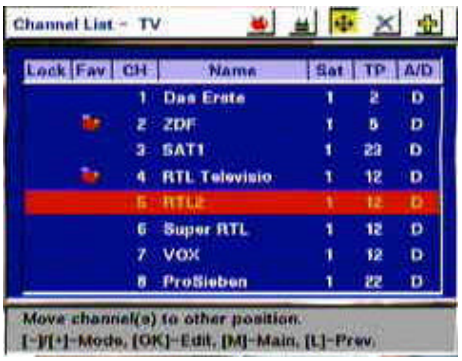
The symbol can be cancelled by pressing the OK button once again.

Press the M button 3 times to return to the TV screen. Confirmation is given that your changes have been saved and the information display of the channel currently received appears for several seconds on the screen.

Press the i button twice to call up the favourites list. You can now select your preset favourite channels by pressing the -/+ or ▲▼ buttons and OK.

Channel Lists – TV/radio

To sort the channels



You can sort TV and radio channels as required. The channels are sorted by shifting the entries in the "TV" or "radio" channel lists.

Press the main menu button (M) to access the main menu:

Select "channel list" by pressing the ▲▼ buttons.

With the -/+ buttons you can now choose whether you wish to edit the TV or radio list and confirm your selection with (OK).

You now see the required channel list on the screen.

Press the -/+ buttons to select the item "✣", confirm your selection with (OK) and the line with the current channel will be highlighted by a coloured bar in the list.

The bar can be moved page-by-page or line-by-line with the -/+ and ▲▼ buttons.

The highlighted line can now be defined by pressing the (OK) button and shifted to the required position with the -/+ and ▲▼ buttons and saved in the corresponding channel slot by pressing (OK).

Press the (M) button 3 times to return to the TV screen. Confirmation is given that your changes have been saved and the information display of the channel currently received appears for several seconds on the screen.

To delete a channel

Basically follow the same procedure for sorting in order to delete a channel.

Press the main menu button (M) to access the main menu:

Select "channel list" by pressing the ▲▼ buttons.

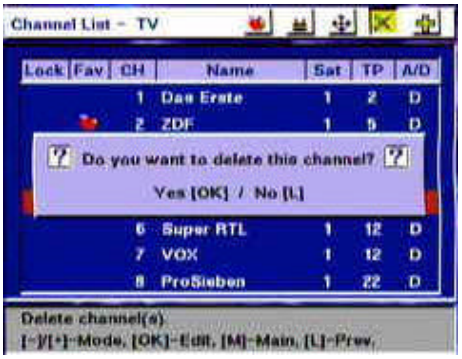
With the -/+ buttons you can now determine whether you wish to edit the TV or radio list and confirm your selection with (OK).

You now see the required channel list on the screen.

Press the -/+ buttons to select the item „✗ “, confirm your selection with (OK) and the first line in the list will be highlighted by a coloured bar.

The bar can be moved page-by-page or line-by-line with the -/+ and ▲▼ buttons.

The highlighted line can now be prepared for deletion by pressing the OK button. The control programme now asks: "Do you want to delete this channel":



Confirm you required selection by pressing the corresponding button.

Press OK to delete the channel slot. If necessary, you can now continue to delete the next channel slot.

Press the L button 4 times to return to the TV screen. Confirmation is given that your changes have been saved and the information display of the channel currently received appears for several seconds on the screen.

To add a channel

Basically follow the same procedure for sorting in order to add a channel.

Press the main menu button M to access the main menu:

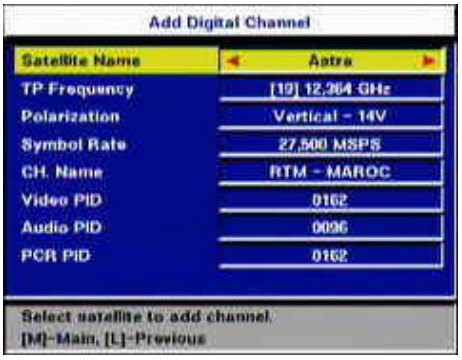
Select "channel list" by pressing the ▲ ▼ buttons.

With the - + buttons you can now choose whether you wish to edit the TV or radio list and confirm your selection with OK.

The screen now shows the menu for adding a channel.

Press - or + to select the position "✚" and confirm your selection with OK.

A new menu is now displayed were you can enter the details of the new channel.



The first line in the list is highlighted by a coloured bar.

Press the ▲ ▼ buttons to move the bar vertically to the required position.

Press the - + buttons or the number buttons to edit the relevant position, i.e. to make the necessary entries (see Page 12).

It is possible to set

- the received satellite,
- the transponder, the transponder frequency,
- the polarization and
- the symbol rate.

Only alphanumeric and decimal entries are accepted at the positions

- name,
- video PID (channel identification),
- audio PID,
- PCR PID (PCR = channel clock reference) and
- audio PID dig.

Incorrect PID entries are indicated with the

displayed message **Invalid parameter**

Press the L button 3x to return to the TV screen. Confirmation is given that your changes have been saved and the information display of the channel currently received appears for several seconds on the screen.

The new channel is added to the end of the existing channel list.

You can obtain the necessary PIDs from relevant TV and satellite magazines as well as from SAT 1 video text. Refer to section "Notes on operation" for information on how to make alphanumeric entries.

Never change the PIDs without good reason as they affect the identification of the reception signal.

To add an analogue channel

Analogue TV channels always occupy one transponder. Follow the same procedure as for setting up an analogue transponder (see section "Analogue transponder").

Analogue channel lists

When receiving analogue channels, press i to select the channel list which is displayed in white. To identify the required channel move the arrow on the left side of the list line-by-line by pressing the - + buttons and page-by-page by pressing the ▲ ▼ buttons.

The indicated channel is selected by pressing OK and the information bar is briefly displayed in white.

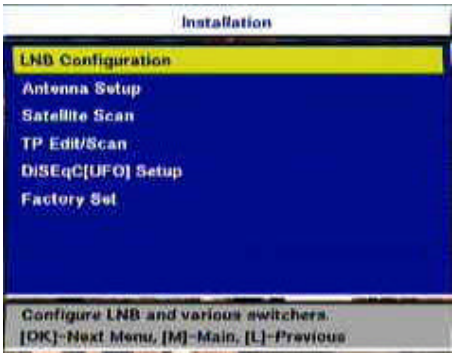
Adding/Removing Satellites

To set up satellites

New satellites, can, of course, be included in the LNB configuration.

Due to the associated on-screen displays, all settings and editing must be made from a digital channel slot.

For this purpose, you must know the orbital position of the satellites in order to align the antenna (satellite dish). The menu point "antenna settings" in the installation menu can be used as an aid for the purpose of aligning the antenna.



After accessing the main menu Ⓜ and the submenu "Installation" – press the ▲▼ and OK buttons (plus password) to select "LNB configuration".

Select this setting with OK, you can now enter or select a new satellite.

Bear in mind that your system must be set up accordingly!

In the next step, press ▲

▼ to go to, e.g. the entry "User1".

After pressing the − or + buttons, the on-screen display shown opposite appears.

Confirm by pressing OK.

You now see the message:

Changes being saved
Please wait

You can now make the entries corresponding to your receiving system at the necessary positions with the buttons ▲,▼ and − or + and then exit the menu by pressing Ⓛ 3 times. The new satellite data are saved simultaneously.

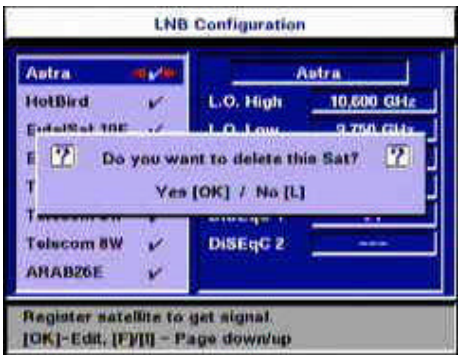
Use the number buttons on the remote control to make the alphanumeric entries. Refer to section "Notes on operation" for information on the exact procedure.

Adding/Removing Satellites

To enter a satellite name

You can change the satellite name in the LNB configuration menu using the number buttons. Refer to section "Notes on operation" for information on the exact procedure.

To remove satellites



To remove a satellite, select the "LNB configuration" menu, move the cursor bar with or and confirm by pressing the or button. You will now be asked whether you wish to remove the satellite and you can either confirm with or cancel with .

Current Channel Overview

This function cannot be selected in analogue mode!

The button symbolizes the channel overview. By pressing this button an overview will be displayed indicating the channels being transmitted by the currently received transponder together with the time and duration (see on-screen display) provided these data are transmitted together with the Electronic Programme Guide (EPG), e.g. ARD and ZDF. An abbreviation of the channel title is indicated in the column on the right and in more detailed form in the two bottom lines. In the column on the left, you can

use the buttons to set the cursor on a channel that is to be selected by pressing the button. Press to switch off the on-screen display.

By pressing the buttons you can shift the time scale so that you can view the further progression of the programme in time.

Password

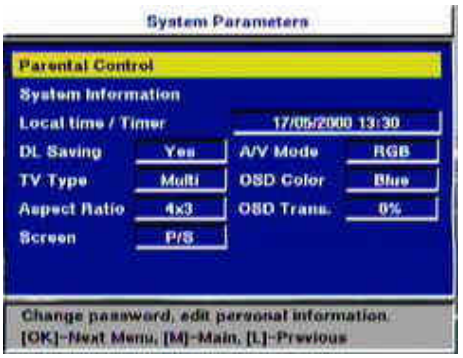
You can prevent your satellite receiver being used by unauthorized persons by means of a password. In this way, you can ensure your reception settings are not changed by other persons. At the same time, you can activate the parental control function to lock out various channels.

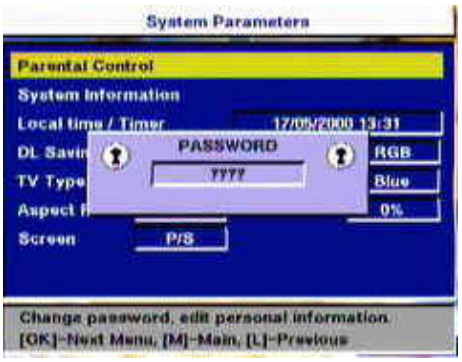
Keep your password in a safe place so that you always have access to your channels should you ever forget it.

Factory setting

The password protection function is inactive in the factory setting.

Entering a password

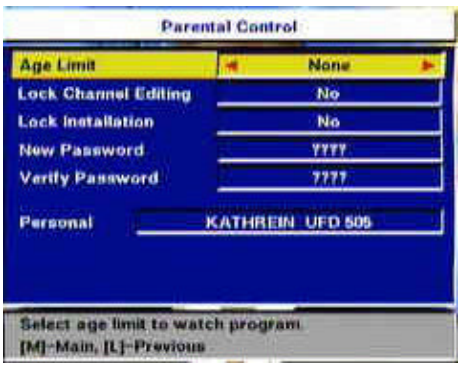




Call up the main menu by pressing the Ⓜ button:

In this menu, press the ▲▼ buttons to select "system parameters" and confirm by pressing OK.

Now press the ▲▼ buttons to select the "parental control" function and confirm by pressing OK. You may be asked to enter a password.



You can carry out the following settings in this on-screen display:

Age limit: This setting is only effective if the corresponding lock-out signals are sent together with the transmission.

Lock list: Yes/No. With this option you can lock or unlock the editing function for channel lists.

Lock installation: Yes/No. With this option you can lock or grant access to the installation menu.

Enter new password: **Here you can enter your (new) password with the aid of the number buttons.**

Confirm password: **Here you enter your (new) password once again with the number buttons to serve as a confirmation.**

Personal: Here, enter the receiver identification which the receiver displays when switched on. This may be a useful function to recognize the receiver in the case of theft. See section "Notes on operation" for information on how to use the number buttons on the remote control for alphanumeric entries. The factory setting is "UFD 545".

You have now completed all settings for securing and identifying your satellite receiver.

Password

Parental control

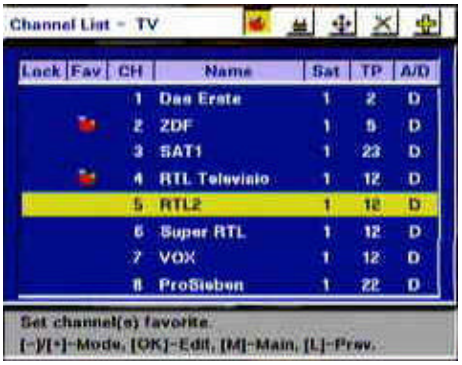
In a similar way to identifying your favourite channels with the "apple" symbol, you can set the parental control to prevent unauthorized access for children. Locked channels are identified by the "padlock" symbol in the "TV" or "radio" channel lists.

Press the main menu button Ⓜ to access the main menu:

Here select "channel list" by pressing the ▲▼ buttons.

With the aid of the -/+ buttons you can now choose whether you wish to edit the TV or the radio list and confirm your selection with OK.

You will now see the required channel list on the screen.



Press the -/+ buttons to select the "padlock" symbol, confirm your selection with OK and the line indicating the current channel will be highlighted in the list by a coloured bar.

With the -/+ and ▲▼ buttons you can move the bar page-by-page or line-by-line.

Now press the OK button to mark the highlighted line with the "padlock" symbol.

Press the Ⓜ button twice to confirm the change in the channel list memory. After pressing the Ⓜ button again, the receiver will require a password to be entered providing no password has yet been entered. (Enter a four-digit code.)

On conclusion, the originally received channel appears and the information display for several seconds.

You can cancel the symbol again by pressing the OK button in the same line.

Bear in mind that some programmes can be received on different channels or in analogue and digital. You will need to set the lock in all possible cases!

Operation from the Front Panel

Should you have misplaced your remote control or if the batteries are discharged, you can operate your receiver from the front panel.

Operation in exceptional cases

There are six buttons on the front panel.

The ON/OFF button, menu, select and the cursor buttons with horizontal and vertical arrows.

Use the ON/OFF button to switch your receiver on and off.

Press the menu button to access the same way as the button.

The vertical arrow buttons have the same function as the buttons and lead to the submenus.

The horizontal arrow buttons have the same function as the buttons.

The select button has the same function as the button.

Since there are no number buttons, you will not be able to call up functions that are locked by a password.

Setting System Parameters

You should not change the following settings without good reason as they represent factory settings or operational settings that are adapted to your receiving system.

New settings are only required when changes are made to the reception system.

The selected menus, submenus and menu points as well as the parameters to be set are highlighted by a colour bar. The menus are to a large extent self-explanatory. Information relating to the respective menu point is provided in the box displayed under the menu.
The main menu consists of the following submenus:

- Channel lists
- System parameters
- Installation and
- Menu language

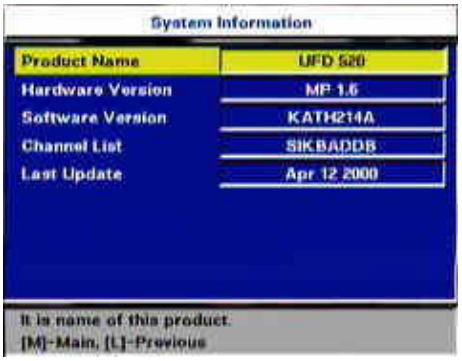
System parameters

Select the "system parameters" menu by pressing the menu button Ⓜ, the ▲▼ button in the main menu and Ⓞ. Press the ▲▼ buttons to select the menu points.

Parental control

The basic settings that can be implemented here are described in the section "Password" under "Setting parental control".

System information



Under the menu point "System information" you will find factory settings which cannot be changed and are intended for service purposes only. Press Ⓞ or Ⓛ to return to the "system parameters" submenu.

Local time/timer

As the factory setting, the receiver indicates "UTC" (United Time Coordinate, formerly Greenwich Meantime) that is transmitted together with the data stream.

It may be necessary to correct summer time to ensure the timers switch at the correct times.

You can correct the time yourself with the aid of the number buttons.

For this purpose, move the cursor bar with the ▼ button to the menu point "local time/timer". The first digit in the entered time assumes a black background. You can now correct the date and time setting with the number buttons. After each entry, the cursor moves forward by one position. Press Ⓜ twice to end the entry. The receiver saves the new setting.

After this setting, do not switch off the receiver with the power switch but rather first with the remote control otherwise the settings will be lost.

Setting System Parameters

Timer menu

See section "Timer settings".

Summer time

See above. Changeover in spring and autumn.

Confirm by pressing  twice.

TV type

Using the  buttons, here you can set whether your television set is a

- PAL
- Multi-standard or
- NTSC set

Confirm by pressing  twice

Picture format

Using the  buttons, here you can select the picture format for your TV set. Either

- 4 : 3 format or
- 16 : 9 format

Confirm by pressing  twice

Screen

Using the  buttons, here you can select the type of screen format

- Standard (P/S) = standard format for 4:9 TV sets or
- Wide (letterbox display off) – the wide picture format is imposed on the 4:9 TV set in this setting.

Confirm by pressing  twice.

A/V mode

Using the  buttons, here you can select the type of video signal applied at the SCART socket. Select the signal that your TV set can process.

Refer to the operating manual of your TV set!

- Composite colour signal – basic band signal (colour/picture/blanking/synchronous signal)
- RGB – Red/Green/Blue signal or
- Y/C – S-VHS signal (luminance/chrominance)

Confirm your selection by pressing  twice.

Setting System Parameters

Mod.typ

Here you can set the PAL variant corresponding to your TV set.

Refer to the operating manual of your TV set!

The factory setting is PAL-G.

Mod.Ch

In this position you can set the "transmit channel", on which your TV set is to receive the receiver signal when it is connected to the receiver by means of a coaxial cable.

In the event of disturbances caused by terrestrial stations, set this channel, while observing the TV screen, such that the receiver signal is reproduced without disturbances. Rule of thumb: A spacing of at least one channel should be maintained between the interference channel and receiver channel.

The factory setting is channel 38 UHF.

OSD colour

Use the  buttons to select the background colour of the on-screen displays.

Confirm by pressing  twice

OSD-Trans

Use the  buttons to select the transparency of the background colour.

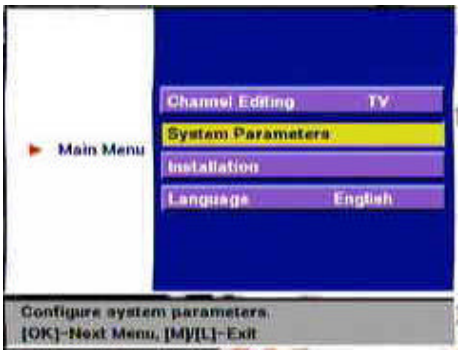
Confirm by pressing  twice

Installation Menu

You should not change the following settings without good reason as they represent factory settings or operational settings that are adapted to your receiving system.

New settings are only required when changes or expansions are made to the reception system.

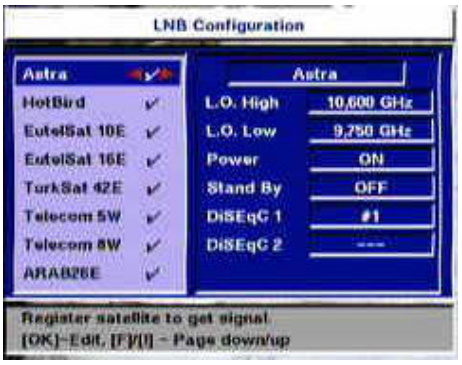
The main menu consists of the following submenus:



Select the "Installation" menu with the menu button (M), the ▲▼ buttons in the main menu and (OK). If set, you must also enter the password. Select the menu points with the ▲▼ buttons .

LNB configuration

The first submenu is the "LNB configuration". Press (OK) to open this menu.



Normally, you should not make any changes in this submenu. Before making any changes, however, you should make a note of the settings in the form provided at the end of this User's Guide.

Your receiver is set at the factory to the satellites of the ASTRA and HotBird systems.

The other basic settings are shown in the illustration opposite.

Oscillator frequency L.O.

Satellite receiver systems consist of the parabolic antenna (satellite dish) with the actual receiving system mounted in front of it (LNB – Low Noise Block Converter or LNC - Low Noise Converter) which converts the HF signals of the satellite to a lower frequency so it can be processed by a satellite receiver.

The satellite transmission frequencies are within the following ranges:

10.7…11.7 GHz	Low-band analogue transmission
11.7…12.75 GHz	High-band digital transmission
	(valid for ASTRA satellites at 19.2° E)

The reception frequency of the receiver, however, is in the range from 950 to 2150 MHz. The high frequencies are therefore stepped down with the aid of the oscillator frequency (LO frequency / LO = Local Oscillator of the LNB) to a lower frequency. Various oscillator frequencies are used for this purpose depending on the satellite frequency range and the type of system.

For ASTRA and Eutelsat receiver systems, this frequency is normally 9.75 GHz (9750 MHz) for the lower frequency range (low-band) and 10.6 GHz (10600 MHz) for the upper frequency (high-band). Older receiver systems still operate in the low-band range with a 10 GHz oscillator frequency.

The receiver generates its required frequency by subtracting the oscillator frequency from the satellite transmission frequency stored for each channel. You only need to set the oscillator frequencies that your receiver system actually uses.

Therefore, before changing the LO frequency make sure that this is at all necessary.

The oscillator frequencies shown at the top of the picture are the as-delivered settings.

Changing the oscillator frequency

Move over to the right-hand side in the LNB configuration menu by pressing OK, the setting for LO High will be highlighted in colour. Using the number buttons, you can now enter a frequency matching your system. The same also applies for the

LO Low setting. Press the ▲ ▼ buttons to go to this setting.

Press L 4x to exit the menu. At the same time, the receiver will confirm that the values have been saved.

If a setting is incorrect, you will see the following message on the screen:

Bad or no signal

Operation

Factory setting "ON".

Normally, the supply voltage should always be switched on.

For communal or party systems, you must check whether the supply voltage must be switched off!

Standby

Under this menu point the supply voltage for the LNB in receiver standby mode can be switched on and off. It can be switched off for individual and communal systems.

The factory setting is "OFF".

Receiving two satellites

If your receiver is connected to a multifeed antenna that is also aligned with the HotBird satellites for instance, you will need to change the receiver settings for the DiSEqC signal. The same, of course, also applies to other satellites. (DiSEqC = Digital Satellite Equipment Control).

Different control signals are required for the purpose of selecting the satellite signals. To date, the LNB supply voltages 14/18 V and the 22 kHz signal (superimposed on the LNB supply voltage) have been sufficient for signal selection in the majority of applications. With these four switching signals it is possible to switch between horizontally and vertically polarized signals as well as between satellites (multifeed reception).

However, additional control signals are now required for LNB activation and signal selection in view of the expansion of the frequency range to 12 GHz (high-band range) and for receiving more than two satellites.

The "DiSEqC" control signal is responsible for this task. This signal represents a special modulation of the already existing 22 kHz signal.

Installation Menu

DiSEqC-setting

The precondition for this setting is that you have made no changes in the DiSEqC (UFO) setup, refer to the section "DiSEqC (UFO) Setup".

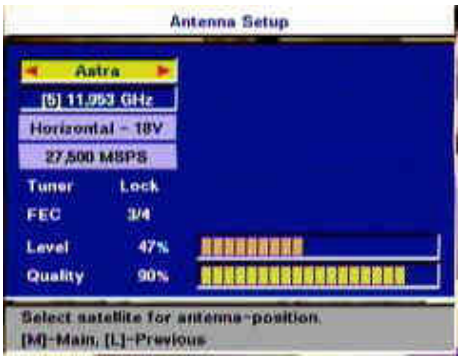
When you are in the LNB configuration menu (see above), press the buttons to move the coloured bar to the "HotBird" position, press the or button and by pressing confirm that you wish to add a satellite. The transponder data are now stored and a tick appears after "HotBird" to confirm the setting. You can now set the DiSEqC signal. It serves the purpose of switching between the two aligned satellites. Press the buttons to go to the DiSEqC-1 setting.

Set #1 for ASTRA and #2 for HotBird. Both positions are already preprogrammed. Cascade switches can be set under DiSEqC 2. Refer to the instructions for your receiving system. Factory setting: "---".

Press 4 times to exit the menu. At the same time, the receiver will confirm that the set parameters have been saved.

If a setting is incorrect, you will see the following message on the screen: "Bad or no signal".

Antenna settings



This menu is intended solely for service purposes and, if need be, i.e. if no measuring instrument is available, it can be used to align the antenna (satellite dish).

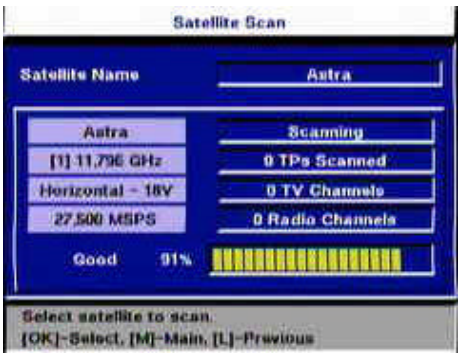
The satellite can be defined in the first line and the transponder in the second.

The polarization of the received signal and the transmitted symbol rate are shown in the next line.

The bar displays provide an indication of the strength (relative level) of the signal and its quality. However, no conclusions relating to the quality of the antenna system or of the cable connection can be derived from this signal.

Satellite scan

In the satellite scan menu you can instruct the receiver to scan for channels on the satellite. Use the or button to set the required satellite. Start the search scan by pressing .



The signal quality and the scan progress are indicated during the scan.

The message

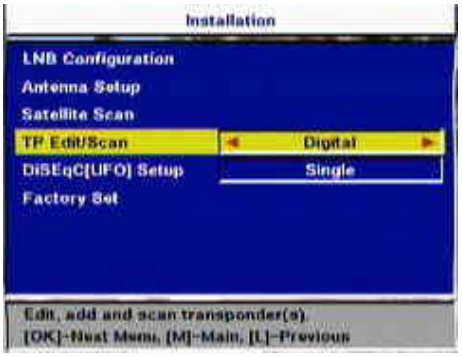
Scan completed
Press [OK] button

appears at the end of the scan. All new channels are added to the existing channel list.

The scan does not include analogue channels.

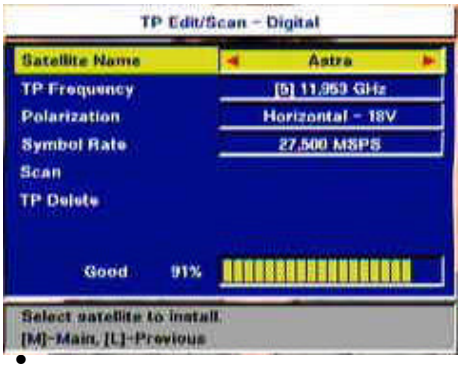
You can interrupt the search scan by pressing the L button.

TP setup/scan



In this menu you can scan through the transponders for specific channels, e.g. when new channels are offered in the package of a specific broadcaster. You can obtain this information from the corresponding video text or TV and satellite magazines. You can choose between "analogue" and "digital".

Digital transponder



The following settings are possible in the "digital" submenu (select positions with ▲▼):

- Required satellite with - or +
- the frequency of the transponder with number buttons,
- the polarization with - or + button,
- the symbol rate with number buttons and
- scan mode for freely receivable or free-to-air and unscrambled channels.

The bar diagram indicates the signal strength.

Start the scan by pressing OK in the "scan" position.

You will now see the message:

Scan active
Press L-button to cancel

If the scan is successful you will see the message

Success

If the scan is unsuccessful

Error

Installation Menu

All new channels are added to the existing channel list.

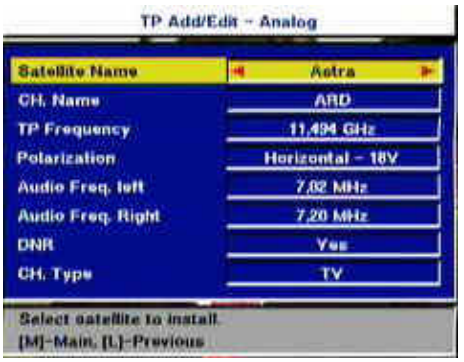
Under the menu item "Delete TP" you can remove the transponder from the channel memory by pressing OK. You will be requested to confirm that you wish to remove the transponder before it is deleted.

Analogue transponder

In order to set a new analogue channel, you must first select the "analogue" submenu by pressing +/- and confirm your selection with OK.

Bear in mind that the outdoor unit must be correspondingly set up for a new satellite (see section "LNB configuration").

The frequencies and polarization are listed in SAT 1 video text, on the internet, in the corresponding TV and satellite magazines or our leaflet "Satellite channels and footprints". For cable connections, observe the information provided by the operator.



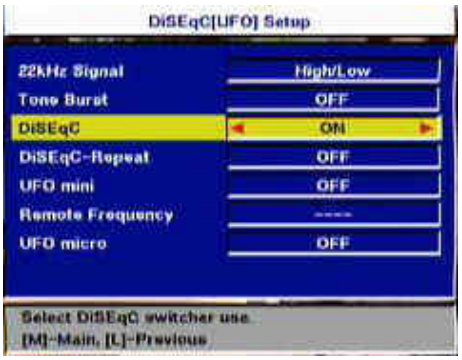
Now press the +/- button to select the required satellite and, using the number buttons, enter the channel name (see section "Notes on operation").
Move the cursor bar by pressing the ▲▼ button to select all menu items.
Use the number buttons to make the relevant entries or change the entries with the +/- button. Dynamic noise reduction DNR is normally activated.

Press M twice to exit the menu and the new channel will be added automatically to the end of the channel list. You will then see the message:

Changes being saved
Please wait

Installation Menu

DiSEqC (UFO) setup



You should only make changes in this menu when the receiver is to be connected to another receiving system with different features or if changes have been made to the receiving system.

Therefore, take particular note of the information relating to your Sat-IF system. Before making any changes, you should make a note of these settings on the form provided at the end of this User's Guide.

Press the menu buttons M, ▲ ▼ and OK to open the DiSEqC menu.

22 kHz signal

In this menu point you can determine whether the 22 kHz signal is to be used to switch over between the low and high frequency range of a satellite or between 2 satellite positions.

Tone-burst and DiSEqC-signal

A DiSEqC control signal is necessary if more than four control criteria are required in a receiving system.

Which of the setting options, i.e. tone burst or DiSEqC is required depends on the components of the receiving system.

Therefore refer to the description of the components (switchover matrices) of the receiving system.

Tone burst

Under this menu point, the 22 kHz signal can be set as follows:

Switching statuses of setting:		
22 kHz Signal —> High/Low and **Tone Burst —> Pos. A/B:**		
Low	22 kHz	OFF
High	22 kHz	ON
Pos. 1	Tone Burst	0
Pos. 2	Tone Burst	1

Switching statuses of setting:		
22 kHz Signal —> Pos. A/B and **Tone Burst —> Opt. A/B**		
Pos	Tone Burst	22 kHz
1	0	OFF
2	0	ON
3	1	OFF
4	1	ON

Switching statuses of setting:		
22 kHz Signal —> Pos. A/B and **Tone Burst —> High/Low**		
Low	Tone Burst	0
High	Tone Burst	1
Pos. 1	22 kHz	OFF
Pos. 2	22 kHz	ON

DiSEqC

If the receiver is connected to a DiSEqC switchover matrix, you will need to set this menu point to ON.

The switching criteria and the input assignments of the DiSEqC switching matrix must be maintained. Therefore, refer to the description of the switching matrices or contact the installer of the receiving system.

DiSEqC repeat

The DiSEqC command must be repeated if the receiver is operated (cascaded) together with a receiving system with two or more series connected DiSEqC switching matrices.

In this case, switch the menu point "DiSEqC repeat" to 1 or 2.

Factory presetting: OFF

UFO mini

The input frequency of the receiver is fixed in a "user-controlled processing system". The signals from the "user-controlled processing system" are transmitted on this frequency. The reception parameters for channel selection are transferred to the receiving system by means of a DiSEqC command and set accordingly.

The relevant setting that needs to be selected depends on the type of "user-controlled processing system".

The setting should be made according to the data provided in the installation instructions for the "user-controlled processing system".

Remote frequency

If you have set the UFO mini menu point to "ON" or "OFF", you will need to set the transmission frequency under this menu point.

Refer to the installation instructions of the "user-controlled processing system" for the set transmission frequency.

It is therefore important that you refer to the information provided in the installation instructions of the "user-controlled processing system".

UFO micro

The setting under this menu point is also designed for operation of the receiver together with a processing system.

Control and communication between the receiver and the Kathrein UFO micro system takes place on the return of the coaxial cable.

ON must be set under the UFO micro menu point if the receiver is operated together with a UFO micro receiving system.

During installation, the receiving system then assigns a special address to the receiver so that the control instructions that are sent from the receiver to the receiving system for signal selection are also recognized by this system.

A remote frequency need not be set in this operating mode as it is defined by the

Installation Menu

UFO micro system as part of the addressing procedure.

The previously allocated address must be deleted if the receiver is to be used with different receiving systems. This can be done in the Reset menu point.

The original factory setting is then allocated to the receiver. It must then be reset to ON. The receiver will then receive a new address from the new system.

The preprogramming is not deleted under "Reset".
Presetting: OFF

Factory setting

Under this menu point, you can reset all the settings to the factory setting by pressing OK.

The factory settings need not necessarily correspond to the settings required for your system!

After the reset, it may be necessary to repeat all settings.

Analogue Settings

As a rule, you will not need to change the analogue channels. With the advent of TV digitisation scarcely any new analogue channels will come on air. The relevant channel data are already set at the factory or are stored during the search scan.

Two menus displayed in white are available for tuning purposes.

Video menu

Press the M button to open the video menu. Use the ▲▼ buttons to select the subpoints. Press the OK button to save your settings.

Name

The name of the set-up channel is entered here. You can also change this name yourself. See section "Notes on operation/alphanumeric entry" for instructions on how to do this.

Frequency

The 5-digit frequency is entered in the range from 10700 to 12747 MHz with the number buttons 0 … 9. You can set the optimum reception frequency in steps of 1 MHz by pressing the - + buttons (recommended when the picture experiences interference due to weak signals).

Polarity

Under this menu point, the vertical or horizontal polarization is set by means of a switching voltage (14 or 18 V) by pressing - or +.

Band

Here you can select the transmission band, i.e. the C-band 3.6…4.2 GHz or the KU-band 10.7…12.75 GHz. Your receiving system must, of course, be equipped for receiving these bands.

Low threshold

It may be necessary to change the low threshold setting only if reception conditions are poor. The standard setting is "1".

Observe the picture while changing the setting with the - or + buttons and set it to the least possible interference.

Contrast

Use the - or + buttons to set the contrast to a high level of picture brightness.

Analogue Settings

Decoder

Set the corresponding decoder mode if a decoder is connected to the VCR/AUX socket. Refer to the operating instructions of the decoder for corresponding information.

Press the − or + buttons to select the relevant type of modulation

- MAC,
- PAL or
- Canal+.

The factory setting is "OFF".

HDP mode

With HDP mode set to OFF, the receiver will generate a replacement video signal (blue picture) if no signal is received in analogue mode. This substitute signal must be switched off as the automatic positioner HDP 160 can evaluate only the video signal actually received during the automatic satellite scan and setting procedure.

Press buttons − or + to select "ON" or "OFF".

The factory setting is "OFF".

Startprog

Indicates the start channel and therefore the satellite, with which the HDP is to carry out automatic positioning of the antenna. You can determine the channel by pressing − or +.

Check the region where you are located and whether the antenna is suitable for this region before starting the automatic setting procedure of your satellite antenna. For this purpose, we have provided a leaflet with this User's Guide indicating the frequencies and footprints of the ASTRA and HotBird satellites as well as Türksat.

Audio menu

Press the M button twice to open the audio menu. Use the ▲▼ buttons to select the required subpoints.

Audio mode

In audio mode you can select the required sound signal by pressing the − or + button

- stereo,
- mono left or
- mono right.

The basic setting is "STEREO“.

Analogue Settings

Modulator connection

Stereo reproduction is not possible if the receiver signal is routed via the modulator. These settings will then be ineffective.

Frequency left/right

Here you can select between two sound carriers, e.g. for commentary channels or films broadcast in different languages. The required settings are entered by pressing the  or  buttons and the number buttons.

The basic setting is "7.02 MHz“ and "7.20 MHz“

Bandwidth

Here you can select the reception bandwidth of the analogue audio receiver as various transponders have different transmission bandwidths to which the receiver must be tuned.

The following settings are possible:

- 130 kHz,
- 180 kHz,
- 280 kHz,
- 300 kHz and
- 400 kHz.

The basic setting is "130 kHz“.

DNR

This setting is the dynamic noise reduction for the audio signal. The effect is similar to that of the Dolby system on cassette recorders. You can select between "ACTIVE" and "INACTIVE".

The basic setting is "ACTIVE".

De-emphasis

De-emphasis compensates the transmitter pre-emphasis. This feature is a type of noise suppression function. The possible settings are:

- 50 µs,
- 75 µs,
- J17 and
- NO DEEMP.

The basic setting is "75 µs“.

Video Recorder Connection

The connection diagram provided at the end of this User's Guide and the description of the video recorder will show you how you should connect your video recorder to the receiver.

Recording

In order to make a VCR recording, the satellite receiver must be switched on or the timer must be preprogrammed (see section "Timer settings" on the next page).

Playback

For VCR playback, the satellite receiver must be set to "standby" so that the signal route is switched through from the VCR/AUX SCART socket to the TV SCART socket.

You must set the SCART socket of the Sat receiver to "VCR" with the TV button for your TV set to automatically play back the picture of the video recorder.

In this setting, the picture of the video recorder is switched through to the TV set during playback.

If you set "SAT" by pressing the TV button, the Sat receiver will have priority.

In the "TV" setting, the video signal of the TV set has priority.

Analogue Decoder Connection

Since you can receive analogue channels with the receiver UFD 545, it can also be connected to a decoder for analogue pay-TV channels.

Note

No further setting is required on decoders that require a video signal and supply a switching signal.

The video signal route of the receiver must be set to external for decoders that do not supply a switching voltage (refer to section "Video menu").

Also take note of the instructions provided with the decoder!

Use a SCART cable to connect the decoder to the VCR/AUX SCART socket.

Modulator reception

A decoder cannot be used if satellite reception is transmitted via the modulator output of the DVB receiver!

Data Transfer from Receiver to Receiver

Your receiver is able to accept data from another receiver via the RS232C socket. For this purpose, the two receivers are mutually connected via a zero modem cable. The transmitting receiver is the master, the receiving receiver the slave.

Preparation

The master and slave are first switched to standby mode and then disconnected from the mains by pressing the power switch.

The data sockets (Item 8, rear of receiver, Page 9) of both receivers are connected with the zero modem cable.

The master is then switched on again.

Transferring channel list

Simultaneously press the ← button (arrow left) and SELECT under the front panel of the master to transfer the channel list.

The slave can now be switched on. The transfer procedure begins.

While loading, the display of the master shows "t001 t002 .. t00n“ while the slave correspondingly shows "r001 r002..r00n“.

The LED display shows "----" during block transfer.

The loading procedure was successful if both receivers show the message "Succ.".

Transferring operating software

Follow the same procedure as described above for the purpose of transferring operating software.

Start transfer of the operating software by simultaneously pressing the → button (arrow right) and SELECT under the front panel of the master.

While loading, the display of the master shows "t001 t002 .. t00n“ while the slave correspondingly shows "r001 r002..r00n“.

The LED display shows "----" during block transfer.

The loading procedure was successful if both receivers show the message "Succ.".

Should transfer problems occur, "F * * *" will appear in the master display where * stands for a numerical value. In this case, check the cable connection and start a new transfer attempt.

The data transfer from receiver to receiver as described above must only be carried out with devices of the same type as otherwise malfunctions or total loss of the operating software may occur.

On no account must the receivers be switched off or the connection interrupted during data transfer. This may otherwise result in data loss, malfunctions or total failure of the operating system.

*In all cases wait until the "Succ." or "F * * *“ message appears on the display.*

Technical Reference

Technical features

The receiver UFD 545 is equipped with the following features:

- Reception of all digital TV channels (free-to-air receiver)
- Reception of all analogue television and radio channels
- Reception of all radio channels (free-to-air receiver)
- Bridged Sat-IF input
- Modulator output, channel 21-69
- Video text processing for TV set
- 1800 channel memory slots for TV and radio
- Satellite reception frequency range from 950 MHz to 2150 MHz
- Freely selectable oscillator frequencies, therefore suitable for all feed systems
- Timer programmable for 7 events (once/daily/weekly)
- Power switch with mains disconnection
- Automatic settings for date and time via DVB data stream
- On-screen displays (OSD) in 9 languages (German, English, French, Italian, Spanish, Dutch, Portuguese, Greek, Turkish)
- 4-digit LED display
- 22 kHz programmable control signal
- DiSEqC 1.1 and tone burst control signal
- Operation with UFOmini and UFOmicro
- Defeatable LNB supply voltage
- Connection socket for data copying function RS232
- Channel list sorting functions
- Picture format recognition 4:3 and 16:9 with selectable output format
- Mute feature
- Volume adjustment
- Radio button
- Infrared remote control
- 2 SCART sockets (TV and VCR/AUX connection)
- Additional audio outputs via Cinch sockets
- HF level display for digital signals

Technical Reference

Technical data

HF features		
	Sat-IF frequency range	2 x 950 to 2150 MHz
	Input level range	
	analogue	48 to 78 dBµV
	digital	43 to 83 dBµV
	IF frequency	479.5 MHz
	Receiving threshold (Eb/No dig.)	
	analogue	4.8 dB
	digital	6 dB
	Sat-IF input	F-socket with bridge output
	Input impedance	75 Ω
	UHF modulator output	Channels 21 - 69
Video		
	Modulation, FEC, demultiplexer	DVB-S-Standard
	Video resolution	CCIR 601 (720 x 576 lines)
	Frequency range	20 Hz to 5 MHz
	Input data rates	2-45 MSymbols/s
	Video decoding	MPEG-1/2-compatible
	Bit rate	1.5-15 MB/s
	Output voltage	1 V_{pp} / 75 Ω
	S/N	53 dB typ.
Audio		
	Audio decoding	MPEG-1/2, Layers 1 and 2
	Bit rate	32/44.1/48 kb/s
	Frequency range	40 Hz to 15 kHz
	Output voltage	typ. 770 ± 50 mV at 10 kΩ (TV-SCART and Cinch)
	S/N	>65 dB
Power supply		
	Mains voltage	230 V ±10%, 50 Hz
	Electrical system/battery	12…24 V
	Power intake	<30 W
	Power consumption in standby	<9 W
	LNB voltage supply	0, +14 V (vert.), +18 V (hor.)
	LNB supply current	400 mA max.
	Control signals	22 kHz square-wave 0.6 V_{pp} tone burst
		DiSEqC 1.1
		UFOmicro
		UFOmini
Connections		
	TV connection	SCART socket, 21-pin
	VCR/AUX connection	SCART socket, 21-pin
	Audio output	2x Cinch socket
	Audio digital	Cinch socket
	Data interface for service purposes	RS 232 Sub D 9-pin
	Antenna input	
	Modulator output	
General		
	Device dimensions (W/H/D)	335 / 63 / 280 mm
	Weight	approx. 2.4 kg
Temperature range		
	Ambient temperature	+5 °C to +40 °C

CE

Technical Reference

Accessories

1 Infrared remote control

2 Batteries 1.5 V, type: LR 03, size: AAA (Micro)

1 SCART cable

1 Power lead

1 On-board voltage connection cable

1 Coaxial jumper for connection between IF output and IF input analogue

1 Set of operating instructions

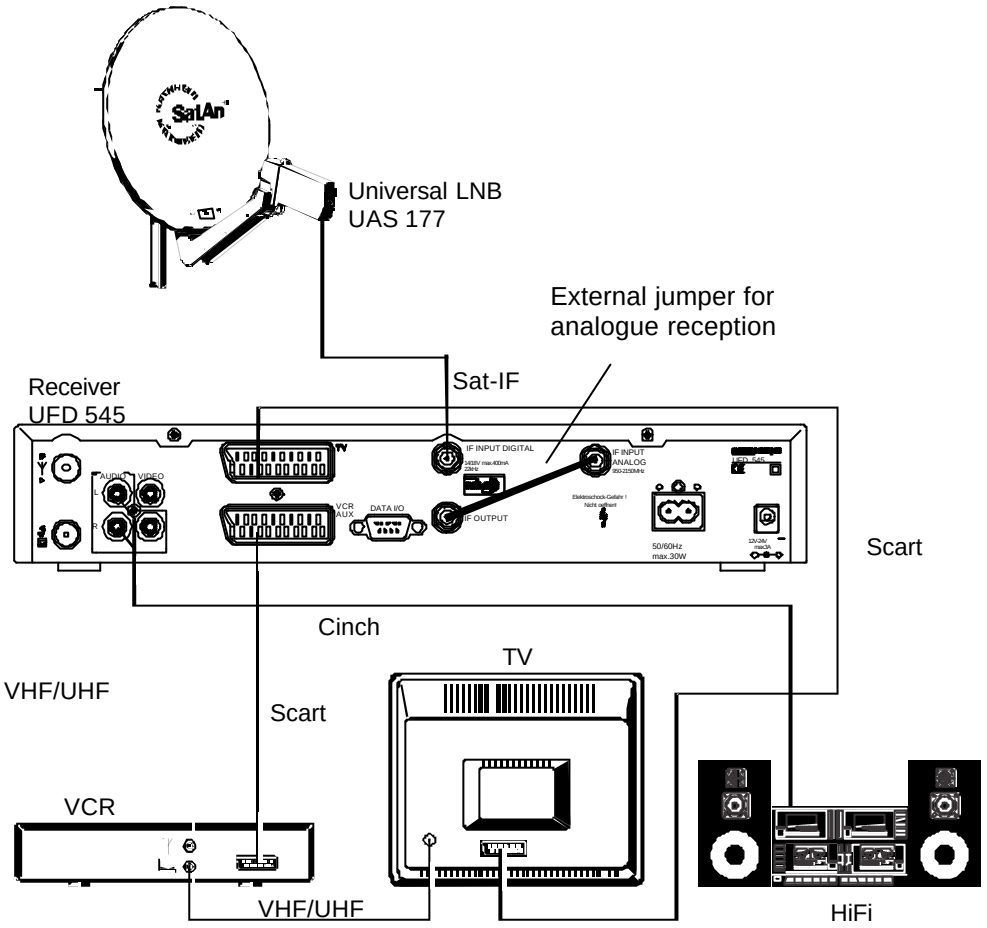
1 Leaflet (satellite footprints)

SCART socket assignments

Signal	Pin No.	TV	VCR/AUX
Audio output, right	1	X	X
Audio input, right	2		X
Audio output, left	3	X	X
Audio earth	4	X	X
Blue earth	5	X	X
Audio input, left	6		X
Blue signal	7	X	X
Switching voltage	8	X	X
Green earth	9	X	X
Data signal	10		
Green signal	11	X	X
Data signal	12		
Red earth	13	X	X
Data earth	14		
Rot Signal	15	X	X
Blanking signal	16	X	X
Video earth	17	X	X
Blanking signal earth	18	X	X
Video output	19	X	X
Video input	20		X
Connector shield	21	X	X

Connection examples

Connection arrangement 1:

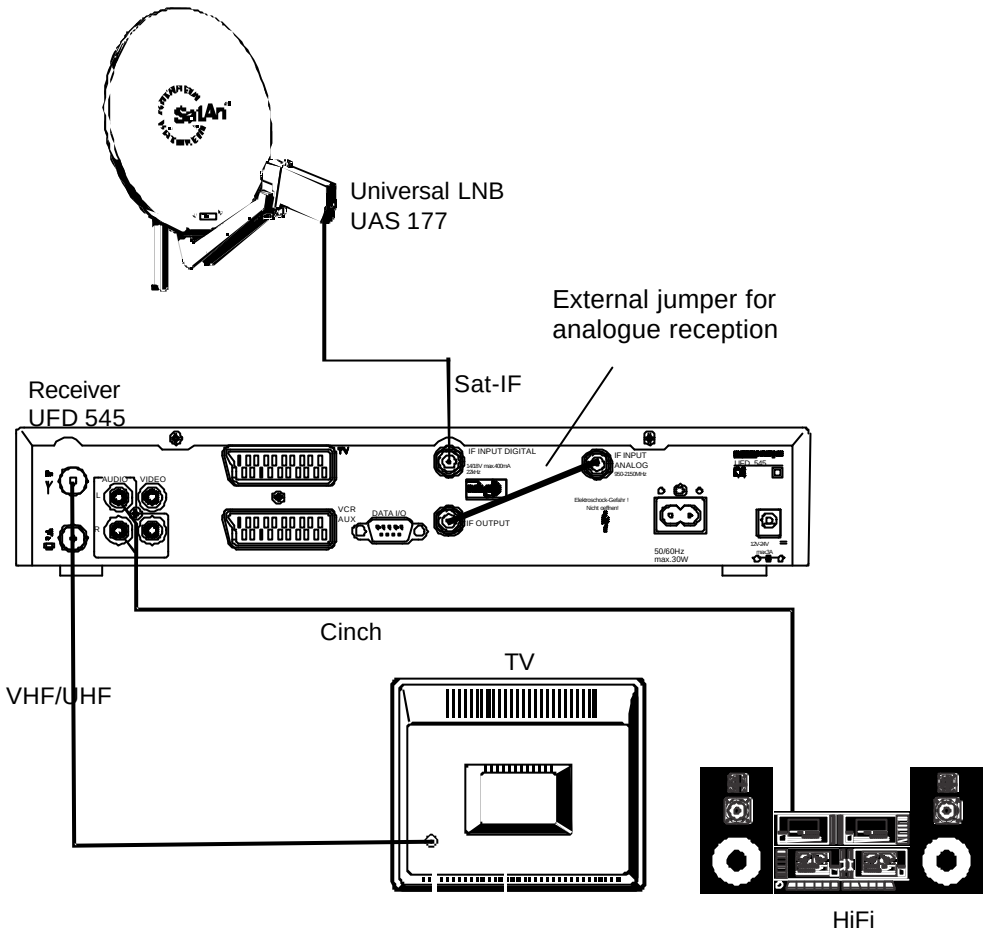


Connection of the DVB-S receiver to a TV set, a VCR and a HiFi system for receiving and recording digital satellite TV and radio channels.

The connection requires two SCART cables and one Cinch cable. If your TV is equipped for stereo, the stereo sound can also be reproduced via the stereo speakers of your TV set.

Video playback takes place via the modulator of the VCR and the antenna input of the TV set.

Connection arrangement 2:



Connection of a TV set without a SCART socket to the modulator output of the receiver. The signal is looped through via the video recorder to facilitate VCR operation.

Glossary, Abbreviations

Audio output	Receiver sound output
AV channel slot	Preferential channel location of TV set for SCART input
Decoder	Unscrambling unit for pay-TV
DiSEqC	Control system between receiver and LNB, multi-switch
DVB	Digital video broadcasting
Eb/No [dB]	Power density per unit of information
Eb/No ratio	Digital signal-to-noise ratio
LED display	Receiver display
LNB	Low noise block converter
Mute	Mute circuit
OSD	On-screen display
PAL	Analogue television standard (pay-TV)
Pay-TV	Pay-TV (e.g. DF1, Premiere)
PCMCIA	Standard of internal decoder interface for pay-TV
PIN	Personal identification number
Receiver	Receiver
RGB	Video signals made up of 3 individual colour signals (red, green, blue)
Satellite-IF signal	Receiver input signal
SCART cable	21-pin connecting cable
Standby	Standby
S-VHS	Super video home system (video recorder standard)
Symbol rate	Transmitted data rate of satellite signal
Timer function	Clock function for preprogrammed switch-on and switch-off times
Transponder	See glossary of technical terms
VCR connection	Video recorder connection
Viterbirate	See glossary of technical terms

Glossary of Technical Terms

DiSEqC

DiSEqC (**Di**gital **S**atellite **Eq**uipment **C**ontrol) is a communication system between the Sat receiver (master) and the peripheral Sat components (slaves), such as LNBs, multi-switch, motorized antenna systems.

This is a single master/multi-slave system, i.e. there is always only one master in the Sat system. All activities emanate from the master.

DiSEqC components

When DiSEqC switchover matrices are cascaded, the master receiver must send out the DiSEqC signal several times so that all DiSEqC multi-switches in the cascade receive their commands.

Nowadays, DiSEqC components (slaves) must be retrocompatible, i.e. they must also respond to the analogue switching criteria of receivers which are only equipped with the control signals H/V and 22 kHz.

A DiSEqC switchover matrix operates with analogue switching criteria until the DiSEqC command is received from the master. All analogue switching criteria are then ignored.

DVB MPEG-2

DVB is the abbreviation for digital video broadcasting. DVB-S refers to the type of transmission (S=satellite). MPEG is the abbreviation for Moving Picture Experts Group, a working group which draws up internationally valid standards for the digital compression of video together with audio. MPEG-2 has been promoted to the standard for the compression of digital TV signals. MPEG-2 operates at a data rate of up to 100 MBit/s.

Eb/No ratio

The Eb/No ratio is a measure for the signal-to-noise ratio of the digital signal. This value is not identical to the C/N value as known from analogue reception technology. As a rule, reception is no longer possible at Eb/No levels below 5 dB.

FEC

FEC is the abbreviation for Forward Error Correction. The FEC error rate corresponds to the viterbirate.

PID

The PID number (Package IDentification) is an identification number for video signals and audio signals in the digital data stream of DVB MPEG-2 signals. The receiver uses the PID number to establish distinct allocation of the video and audio data transmission. PID-PCR is the identification number for the synchronisation signal. PID-PCR is normally identical to PID video. In the case of multi-language channel transmissions, by means of manual entry of the audio PID, it is possible to allocate another language to the TV broadcast. After entering the PID, the digital receiver automatically selects audio data from the data stream identified by the PID number and allocates these data to the video signal.

Channel package

The channel package of a digital transponder mostly contains several TV and radio channels. Each channel package has a fixed allocation with regard to the transponder transmit frequency, the polarization (horizontal or vertical), the symbol rate and the viterbirate or error rate.

Glossary of Technical Terms

Symbol rate

The symbol rate describes the amount of data transmitted per second. The symbol rate is measured in MSymbols/s and is equal to the number of symbols that are received per second.

Transponder

A transponder is a satellite transmitter which transmits TV and radio signals. A satellite has several transponders.

Analogue transponders transmit only one TV channel and possibly several radio channels on their transmit frequencies.

Digital transponders simultaneously transmit several TV and several radio channels on their transmit frequencies. When a channel provider broadcasts several TV channels via a digital transponder this is referred to as the channel package of the channel provider. The terms "digital transponder" and "channel package" therefore have the same meaning.

Video bit rate

The video bit rate describes the quantity of data of the digitised video signal that is transmitted per second.

Viterbirate

The viterbirate (code rate, error rate) characterizes the type of error protection used by the channel provider. The DVB standard stipulates the following values: 1/2 - 2/3 - 3/4 - 4/5 - 5/6 6/7 - 7/8.

Service

OSD language

○ German

○

Picture format

○ 4:3

○ 16:9

LNB supply

Operation: ○ ON ○ OFF

Standby: ○

Satellite 1

Satellite: _____

LO1: ○ 9750 _____

LO2: ○ 10600 _____

Satellite _____

Satellite 2

Satellite: _____

LO1: ○ 9750 _____

LO1: ○ 10600 _____

Satellite _____

Satellite 3

Satellite: _____

LO1: ○ 9750 _____

LO1: ○ 10600 _____

Satellite _____

DiSEqC menu

22 kHz: ○ High/low ○ PosA/B ○ OFF

Tone burst: ○ High/low ○ PosA/B ○ Opt.A/B ○ OFF

DiSEqC ○ ON ○ OFF

DiSEqC repeat ○ ON ○ OFF

UFOmini ○ ON ○ OFF

Remote frequency _____MHz

UFOmicro ○ ON ○ OFF

Other settings

○ ○ ○

○ ○ ○

Index

Index

Notes

Notes

Notes

Notes

998.6252/0800/ZWT/PF Subject to technical modifications

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