Operating manual

Kathrein Satellite Receiver
UFD 400

P250

Order No.: 260 467

KATHREIN

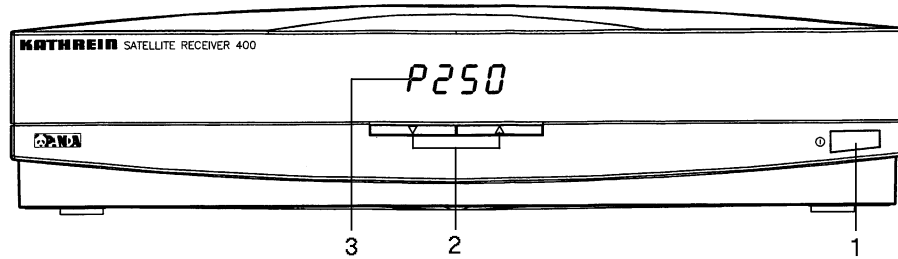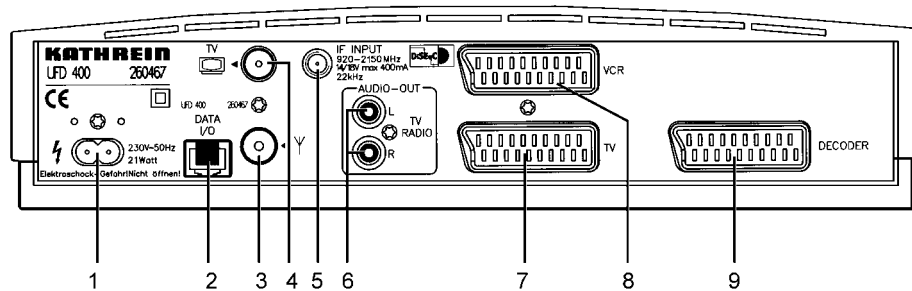Antennen · Electronic

Contents

Controls, displays and connections

This section contains a brief description of all the control elements, displays and connections. The key symbols presented here are also used when describing the operating sequences.
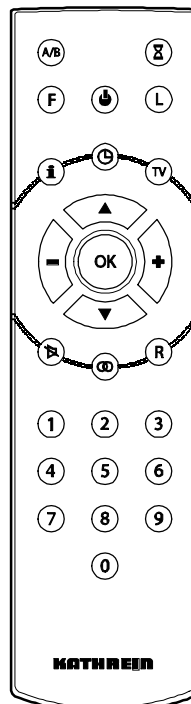
View of front panel

View of rear panel

Remote control handset

Controls, displays and connections

Front panel controls and displays

1   *Mains switch (with mains isolation)*

2   *Buttons for programme selection*
    Step-by-step programme selection (upwards and down-wards).
    Switchover from TV to radio mode by pressing both buttons simultaneously.

3   *LED display (four character 7-segment display)*
    To display the selected programme slot and parameter settings.

Remote control handset keys

(A/B)   *Function 1:*
        Command set changeover

        Function 2:
        To blank out the video signal (in setup mode) This function is to be used if the picture no longer synchronises on adjustment and the picture scrolls.

(F)   *Function 1:*
        Last function. Allows you to switch back to the last programme that was selected

        Function 2:
        Displays the info menu
        (active only if after pressing the key (**i**) the programme list is displayed.)

(**i**) *Function 1:*
         Calls up the TV programme list (or radio programme list in radio mode).
         Function 2:
         Calls up menu for "Programme slot sorting (insertion), swapping and copying"
         (with (ok) press in succession)

(– +)   *Function 1:*
        Volume control
        Function 2:
        To alter settings data in setup mode

(ok)   *Function 1:*
        Stores the chosen settings
        Function 2:
        Primary key for calling the separate setup menus (e.g. video settings)

(🔇)   *Function 1:*
        Sound muting)
        Function 2:
        Calls up the menu for audio settings
        (with (ok) press in succession)

Rear panel controls and connections

1   *Mains input socket* for 230 V/50 Hz

2   *DATA socket*
    a) Connection facility for the URS 200 external infrared sensor.
    b) Connection for the UFP 10 Copy-Programmer for read-in and read-out of the programme data (function b is especially for service, for copying the programme data).

3   *VHF/UHF antenna input* (signal is looped through).

4   *VHF/UHF antenna output*
    (TV signal modulator-output, Ch. 38 is preset)

5   *Satellite IF signal input A and output of LNB supply voltage*

6   *Audio output, left and right channel* (Cinch sockets)

7   *Scart socket, TV connection*

8   *Scart socket, VCR connection*

9   *Scart socket, decoder connection*

(⧗)   Starts a timer

(L)   Last function. Allows you to switch back to the last programme that was selected

(⏻)   *Function 1:*
        On/Off (Standby),
        Attention: No mains isolation results!

        Function 2:
        Return from setup mode into normal operation

(🕓)   Set timer, date and time

(TV)   *Function 1:*
        Selection of TV/SAT mode
        Function 2:
        Calls up the menu for video settings
        (with (ok) press in succession)

(▲ ▼)   *Function 1:*
        Steps through the programmes either up or down
        Function 2:
        Selection of individual menu entries in setup mode

(R)   *Function 1:*
        Switchover to radio mode

        Function 2:
        Calls up the menu for radio settings
        (with (ok) press in succession

(⬤⬤)   Stereo/Mono- (2 channel) changeover

(0)
 to   Numeric keys 0 - 9 for programme selection and frequency entries
(9)

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Safety instructions

The following section contains important information relating to operation, place of installation and connecting-up of the receiver.

Read these notes carefully before putting the unit into operation.

Important notes regarding operation

Extended absence / Thunderstorms

Always switch the unit off via its mains switch during periods of extended absence or at the onset of thunderstorms. This also applies to any other equipment attached.

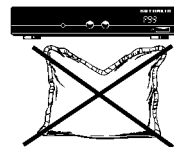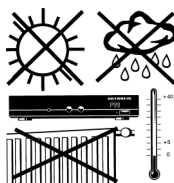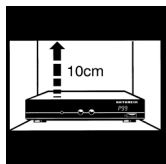However, take account of any possible timer programming, and switch the unit on again in good time prior to the recording time.

Mains lead

Make certain that the mains lead (power supply lead) is undamaged. Never put the unit into operation if the mains lead is damaged.

Cleaning

Withdraw the mains plug before cleaning the unit. Use a dry cloth for cleaning.

Children-at-play

Pay attention that children do not insert objects into the ventilation slots. There is a risk of mortal danger due to electric shock.

Repairs

On no account remove the housing cover since there are dangerous voltages inside the unit that may be contacted. The unit must only be opened by qualified specialists, so allow them to carry out any repairs or adjustments to your receiver. Unauthorised opening entails loss of guarantee.

The electrical safety of the unit can be affected by improper tampering with it.

The manufacturer's liability excludes accidents occurring to the user when the unit is opened.

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Safety instructions

Important notes for siting and installation

Place of installation

Every electronic device generates some heat. The rise in temperature, however, lies within safe limits. Nevertheless, this does not rule out the possibility of slight colour changes to sensitive furniture surfaces and veneers over time due to the constant effect of heat.

In conjunction with treated furniture surfaces, the unit's rubber feet can likewise give rise to changes in colour. Where necessary, place the unit on a suitable pad.

Ventilation

The heat that is generated in this unit is dissipated quite adequately. Never install the receiver in a cabinet, shelf or rack with inadequate ventilation. Never close-off the openings on the unit that are intended for heat dissipation.

Do not place objects on top of the unit. Maintain a clearance of at least 10 cm above the unit so that the heat generated within the unit is convected away without obstruction.

Mains voltage

Run the receiver only from a mains voltage of 230V / 50Hz.
The unit is not to be connected to the mains until after all the installation work has been completed.

Humidity

Protect the unit against humidity, drips and splashes.

Solar radiation/heat

Do not place the receiver close to radiators nor expose it to direct sunlight.

Grounding

The parabolic antenna is to be grounded in accordance with regulations. Here, the relevant German VDE regulations (or equivalent) are to be observed.

LNB supply voltage

If the feeder system (LNB) is supplied with an external supply voltage and the LNB supply voltage is not used for polarity switchover (e.g. Kathrein single-cable feeder system UAS 330), the receiver's LNB supply must be set to "OFF" (refer to section: "Initial settings, LNB supply voltage").
There is a risk that the receiver may suffer damage if the change-over is not carried out.

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Connecting up and putting into operation

The following section is intended specifically for the specialist dealer. If you are not carrying out the installation yourself, there is no need to pay any attention to this section. Sample configurations are to be found in section: "Connection examples"..

Attention   Do not connect the unit to the mains until after the installation work has been carried out properly.

Please note the guidance given in section: "Safety- and Installation Instructions"

Connecting up the unit

Satellite signal connection

- Connect up the receiver's Sat IF input (5) to the satellite receiving system.

For the connection use a coaxial cable with an F-type connecting plug.

If the F connector is not yet fitted to the cable,

- Insulate the cable as indicated in the following illustration, and

- Carefully screw the F connector onto the cable end until it is firmly seated on the cable.
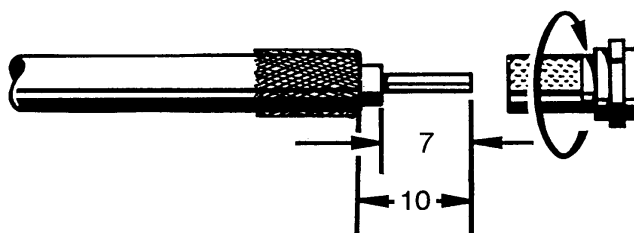
Attention   When fitting the plug, make certain that none of the fine wires of the braided shield makes contact with the inner conductor giving rise to a short-circuit.

Receiving system presets

Presetting carried out for the control signals was for conventional receiving systems, thus 14/18 V for polarity switching and 22 kHz switching signal for satellite selection in the case of multifeed receiving systems.

If DiSEqC or tone-burst switching matrices are to be used in the receiving system, the default setting must be changed in the initial setup menu at menu entry "DiSEqC".
For this, refer to section: "Initial settings, DiSEqC menu".

Also comply with the technical guide for the matrices.

TV and video recorder connection (VCR)

- Connect up the satellite receiver (TV Scart socket) and TV set with a Scart cable.

If your TV set has stereo capability, a Scart connection allows you to receive the sound in stereo.

- Connect-up the video recorder and satellite receiver (VCR Scart socket) again using a Scart cable.

Connecting up and putting into operation

UHF connection

If your TV set does not have a Scart socket, the connection to the TV set is made via a coaxial cable (possibly via the video recorder) .

- In this case, pull out the coaxial cable from the antenna input of the video recorder or the TV (if no video recorder is attached) and connect it to the satellite receiver's terrestrial antenna input (view of rear panel, 3).

- Using an additional coaxial cable, connect-up from the satellite receiver's TV socket (view of rear panel, 4) to the video recorder, and from there to the TV set.

Audio connection

If you want to hear the sound via the hi-fi system, connect the audio Cinch sockets (view of rear panel, 6) and the hi-fi system with a Cinch cable.

Decoder connection

You can also connect-up a decoder to the receiver for Pay-TV programmes.

With decoders that require a video signal and supply a switching signal, such as Premiere decoders and videocrypt decoders, for example, no further setting is necessary.

Important   With decoders that do not supply a switching signal, the video signal path must be set to external at the receiver (see section "The video menu" in chapter "Programming TV programmes").

Also comply with the decoder's instructions!

- Connect the decoder to the decoder Scart socket with a Scart cable.

Mains connection

Now connect the receiver to the mains supply using the mains cable supplied for this purpose.

Inserting batteries into remote control handset

- Remove the cover on the rear of the remote control handset.

- Insert both of the batteries supplied into the remote control handset.
  Make certain that the batteries are inserted with the correct polarity
  The polarity is marked at the bottom of the battery compartment.

- Replace the cover again.

Note   Exhausted batteries are special waste and should not be disposed of with household refuse. Instead, hand them in to a collection centre for used batteries!

Connecting up and putting into operation

Tuning UHF channel / Checking operation

- Switch on the satellite receiver via the on/off switch on the front of the unit. The LED display on the unit shows the last programme slot that was selected.

- Turn on your TV set.

- Tune in an AV programme channel on your TV set if the satellite receiver and TV set are connected by a Scart cable.

- If the UHF connection is via a coax cable, tune in channel 38 to an empty programme slot on the TV set (receiver's default channel).
  Also take note of any instructions in the TV set's operating manual!

Note   If channel 38 is occupied by a terrestrially broadcast programme or the video recorder, adjust your TV set to a spare UHF channel in the range 21 to 69.

- To avoid interference, when setting the UHF output channel try to ensure that there is at least one free channel above and below the channel.

- For tuning of UHF output channel at the satellite receiver refer to "Modulator" in section: "Initial setting".

You can now receive the factory-preset TV and radio programmes. To find out how to tune in additional TV and radio programmes, refer to sections: "Programming TV programmes" and "Programming radio programmes".

External infrared sensor

If the receiver is to be operated from a location that cannot be reached using the remote control handset, (with attachment of a further stereo system in another room, for example), the URS 200 external infrared sensor can be connected up via the data copy I/O connection (Western modular 8-way). You can then also control the receiver from the other room.

Important   **All figures in this manual refer to the on-screen display in German. How to select the OSD in English is described on page 24.**

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Receiver operation

In this chapter, you learn how to select TV and radio programmes using your receiver, how to adjust the volume and how to programme the timer functions.

In describing the functions, it is assumed that the receiver has already been properly connected up by the specialist.

Should you want to undertake the connections yourself, please read the section: "Connecting up and putting into operation" beforehand.

Switching the unit on

Switch the unit on via the mains switch ☐ on the unit. The last programme slot selected appears (TV or radio) or it switches into standby if the unit was switched into standby prior to the last switch-off.

In standby mode a horizontal line appears in the LED display " **–**".

- The ⏻ key on the remote control switches the unit between normal operation and standby.
- You can also turn the unit on using the numeric keys ⓪...⑨ a the channel keys.

Note On switching on via the mains switch, the resulting operating state is always the same as it was prior to switch-off.

Switchover between TV and radio mode

Your receiver allows you to receive TV or radio programmes.

After switching on, the receiver takes on either TV or radio mode (depending on the mode at time of switch-off).
If the receiver is in the radio mode, the LED display and on-screen display begin with "**r..**".

- Press the ⓡ key on the remote control to switch between TV and radio mode.

Note If you happen to have mislaid the remote control handset, you can switch the receiver between **"TV" a**nd **"Radio"** mode by simultaneously pressing both the ▼ ▲ keys on the front of the unit.

Note In the initial setup menu, a continuous on-screen display of the radio programme slot can be selected, independent of the TV setting (see section: "Initial settings, On Screen Displays").

Selecting a programme

- Use the numeric keys ⓪...⑨ to select the desired programme directly.

Example for a three-digit entry ("free" entry – see initial setting):

Selection of programme slot 147

- 1 is entered, programme slot 1 appears
- 4 is entered, programme slot 14 appears
- 7 is entered, programme slot 147 now appears.

or
- Use the keys to step through the programmes in succession.

After the programme changeover, the programme slot and programme name are superimposed on the screen for approximately three seconds.

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Receiver operation

With the setting "2- or 3-digit programme selection" there is a switch to the desired programme after approximately 3 seconds. Digits can be entered during this time. With the setting "free entry" (in the above example) the receiver switches to the corresponding programme slot immediately after each input.

In the initial setup menu, a continuous on-screen display of the programme slot can be selected (see section: "Initial settings, On Screen Displays").

Adjusting volume, balance and tone

- Use the `-( )+` keys to adjust the volume to the desired level.

The volume is adjustable in 21 steps. The volume level set appears on the LED display for approximately 3 seconds. At the same time a bar indicator appears on the screen.
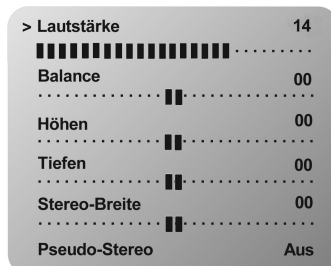
> **Lautstärke   18**
> ∎∎∎∎∎∎∎∎∎∎∎∎∎∎∎ · · ·

Note The settings are not operative on the VCR Scart socket in order not to disturb any recordings.

The on-screen display is removed again after approximately 3 seconds.

Whilst the menu for volume adjustment is overlaid, the Ⓕ key can be used to activate the following menu for balance adjustment, tone adjustment, stereo width and pseudo-stereo.

> **> Lautstärke   14**
> ∎∎∎∎∎∎∎∎∎∎∎∎∎ · · · · · · · ·
> **Balance   00**
> · · · · · · · · · · · ∎∎ · · · · · · · · · · ·
> **Höhen   00**
> · · · · · · · · · · · ∎∎ · · · · · · · · · · ·
> **Tiefen   00**
> · · · · · · · · · · · ∎∎ · · · · · · · · · · ·
> **Stereo-Breite   00**
> · · · · · · · · · · · ∎∎ · · · · · · · · · · ·
> **Pseudo-Stereo   Aus**

Using the keys or the key you can select the particular menu entry and then make changes with the `-( )+` keys.

Note In the menu entry "Stereo Width" the stereo base width can be adjusted independently.

"Pseudo-Stereo" can be used to simulate a "stereo-like" effect with mono programmes, and should thus only be activated with mono reception.

If Pseudo-Stereo has been turned "On", the stereo width can no longer be altered.

Muting the sound

- Press the key.

The sound is muted, allowing you to make a phone call undisturbed, for example.

In the LED display the sound muting is shown by means of 3 dots.

- Press the key again to turn the sound back on.

Note Mute is not operative at the VCR Scart socket.

Receiver operation

Stereo- / Mono- / Channel changeover

TV broadcasts can be transmitted in the two-tone channel method
(e.g. original tone "English" on channel 1, "German" tone on channel 2).

- Press the ⊚ key. Each time you press the key, you switch the sound channel in the order:
  Channel 1 → Channel 2 → Stereo.

The selected channel is shown on the screen and in the LED display. The setting is not saved. After a change in programme the original setting takes effect again.

SAT/TV changeover

Where the satellite receiver and TV set are connected via a Scart cable, many TV sets immediately switchover signal input (on the Scart socket) to video reception when the satellite receiver is turned on. The switching voltage of the TV Scart socket therefore needs to be switched off if you want to view a terrestrially broadcast TV programme.

- Press the ⊺ⱽ key.

The switching voltage on pin 8 of the TV Scart socket is turned off, and it is turned on again by pressing once more.

In TV mode, "**TV mode**" is displayed on the screen, the programme slot indicator in the LED display begins with "**t**...".

In Sat mode, "**Sat mode**" is displayed on the screen, the programme slot indicator in the LED display begins with "**P**...".

Setting date and time

- Press the ⊕ key to call up the menu for date and time setting, and turning the continuous time display on/off.

The following screen display appears:

```
>Zeitanzeige:          >AUS

Datum:                 16.10.98

Uhrzeit:               20:26



▼▲  + -   0-9  TIM  OK  STBY
```

In this menu you can set the date and time and also turn on a continuous time display on the screen.
The bottom menu line shows keys you can use to make the settings.

Making the settings

- Select the menu line using the ⌄⌃ keys.

The selected menu entry flashes.

- Change the setting for continuous time display (ON/OFF) using the
  ⊖⊕ keys.

- For direct numeric entry use the ⓪...⑨ keys.
  Always enter the date in 6-figure form and time in 4-figure form,

or

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- Alter the values step-by-step using the ⊖⊕ keys.

Saving the settings

After entering the time press the (OK) key to start the clock.

Return to receive mode

- Press the ⏻ key to return to receive mode.

or

- Press the ⏲ key to continue with the timer programming.

Timer setting

The unit is in normal mode.

- Press the ⏲ key twice to call up the menu for the timer settings.

The following screen display appears:

| Datum	Start	Stop	Nr.
> --.--	--:--	--:--	P001
14.10.	18:50	18:50	P000
14.10.	18:50	18:50	P000
14.10.	18:50	18:50	P000
14.10.	18:50	18:50	P000

▼▲ + - 0-9 R TIM OK STBY

In this menu you can make timer settings in order to start the receiver simultane-ously with a video recorder (e.g. for recordings).
The bottom menu line shows keys you can use to make the settings.

Meaning of the columns

Date	Switch-on date.
Start	Start-time for automatic switch-on.
Stop	Switch-off time.
No.	Number of programme slot.

Making settings

After calling up the timer menu the cursor is positioned at the input line. The active menu entry is shown by means of a flashing cursor (>).

- For step-by-step input use the ⊖⊕ keys.
  or use the numeric keys ⓪...⑨ for direct input.

- When using the numeric keys for input, the day/month and hour/minute entries must always be entered in two-digit form, thus "**02.01.**" or "**08:05**" (not "2.1." or "8:5"). If one of the columns of the input line already contains a value, the ⊖⊕ keys can also be used to adjust the setting.

Following correct data entry the cursor jumps to the next column.

- To enter a radio programme slot press the ⓡ key first of all.

Saving settings

- Press the (OK) key in order to save your settings.

The values entered are placed in the topmost line of the display. The other entries

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are all shifted down by one line.

Making changes

If you want to alter a stored setting, place the cursor in the appropriate line by pressing the ⑨ key. Enter the new data in the usual manner and save the new entries.

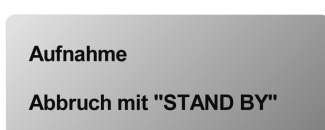To clear a timer that has been set, enter the programme slot as "**00**" and save the entry.

Return to receive mode

• Press the ⏻ key in order to return to receive mode.
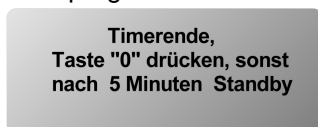
Note

If the timer is active, "**rEC**"is shown on the VCR LED display.

The programme selection keys are disabled during the recording period. If you press this key the following message appears on the screen:

Aufnahme

Abbruch mit "STAND BY"

If the programmed recording time has ended the following message appears:

Timerende,
Taste "0" drücken, sonst
nach 5 Minuten Standby

Press the ⓪ key if you want the receiver to return to normal operation, otherwise the unit switches off after 5 minutes.

The programme number in the timer menu is set to "**00**".

Attention

If the timer is programmed for a recording, the unit may no longer be switched off via the mains switch or else it must be switched on again in good time prior to the scheduled time of recording. Both the time and the timer settings are maintained even if the mains is disconnected.

Tip

When specifying switch-on and switch-off times, add some leeway to the times so that the entire broadcast will still be recorded even if programmes are shifted slightly.

Daily and weekly repeated switch-on

This receiver also allows an optional daily or weekly repeated switch-on.

Daily repeated switch-on

• Enter "00.00" in the *Date* column, and also the switch-on and switch-off times.

Weekly repeated switch-on

• Enter the relevant date of the first switch-on day in the *Date* column, and for the month enter "00".
Example:
12.00: the timer is activated for the first time on the 12th day of the month and weekly thereafter.

Video recorder playback (VCR)

For playback from the video recorder the satellite receiver does not need to be switched on. Standby mode is sufficient to ensure the signal path is switched through from the VCR Scart socket to the TV Scart socket.

Receiver operation

On playback from the video recorder the LED display shows:
-with the receiver switched on-   VCR
-in standby mode-   - VCR.

On playback from the video recorder, you have the possibility of a brief switchover to satellite reception, in order to check the start of a broadcast, for example, without needing to switch off the video recorder.

Press the (TV) key for this.

If you press the key once again, each key-press then switches the TV picture in the following order::
- **VCR**-playback → **Sat**-mode → **TV**-mode -.

Switching back to last programme (swapping)

With the (Last) (L) key and key (F) you can switch back to the previously selected programme and, by a further pressing, switch back again. If you changed programme using the keys, the programme needs to have been set for at least 10 seconds in order for it to switch back to this programme slot. Otherwise it switches back to the programme slot last selected with the programme keys.

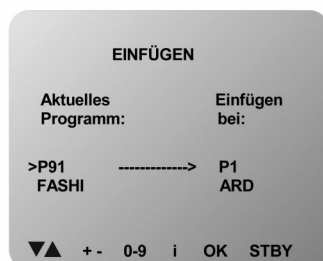## Programme sorting (inserting), swapping and copying

With the function: "Programme sorting (inserting), swapping and copying" you can adapt the programme order in TV- and radio mode to suit your individual requirements.

Example

You want to put the programme from programme slot "P083" into programme slot "P003" (insert).

- Press the (OK) + (i) keys in succession.

The menu for function "Insert programme slot" appears

```
        EINFÜGEN

  Aktuelles            Einfügen
  Programm:            bei:

  >P91    ------------>  P1
   FASHI                 ARD

  ▼▲  + -  0-9  i  OK  STBY
```

Options:
Insert programme slot (sort)
Swap programme slot
Copy programme slot

The cursor flashes at the currently selected programme.

- Select programme slot P083 using the (0)...(9) or the keys.

- Move to the right-hand side with the cursor by pressing the key (-)(+).

- Select programme slot P003 using the (0)...(9) keys or the keys.
- Press the (OK) key twice.
The programme from programme slot 83 is now transferred to programme slot 3 (inserted).

The following message appears on the screen:

> Please wait

When the changeover is completed the following message appears:

> Programme inserted!

Further programmes can be moved in the same manner.

- To switch into the "SWAP" and "COPY" modes press the (i) key once more and twice more respectively.

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Receiver operation

- Exit from the menu with key the ⏻ key.

Radio programmes can be inserted, swapped or copied using the same method in "radio" mode.

Operation without remote control

If you happen to have mislaid the remote control handset, you can switch the receiver between **"TV" a**nd **"Radio"** mode by simultaneously pressing both the ▼ ▲ buttons on the front of the unit.

Displaying programme overview

The unit is in normal mode (TV or radio mode).

- Press the ⓘ key.

The programme overview appears on the screen.

```
247 DW 3              P 1
248 DW-2              ARD
249 DW-1
250 ANT B
<001 ARD  >
002 ZDF
003 SAT 1
004 RTL
005 N-TV

    INFO  UFD 400, drücke ´F´
▼▲  + -  0-9  i  OK  STBY
```
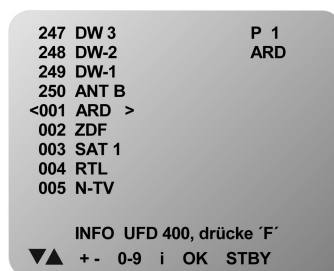
The currently selected programme is identified by **<…>**.

- The ⬍ keys can be used to single-step through the programme list while the (-)(+) keys allow paging in steps of 10.

- Pressing the ⓘ key once results in switchover to the marked programme. On exiting the programme overview with ⏻ key, there is a switch back to the previous programme.

- Pressing the ⓘ key twice results in switchover to the marked programme and exit from the programme overview.

- To exit from the menu without selecting a programme press key ⏻

Info menu

- Press the Ⓕ key whilst the programme list is overlaid.

The Info menu appears with instructions for calling up the setup menus for the initial setup, video and audio settings.

Exit from the menu with keys ⏻, ⓘ or Ⓕ.

Stop-watch

Pressing key ⏱ starts a stop-watch. A further pressing of the key removes the stop-watch from the display again.

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Programming TV programmes

The satellite receiver has already been factory pre-programmed for satellite receiving systems with feed systems (receiving system) which have an oscillator frequency of 9.75 GHz. All of the programmes set up are listed in the table enclosed.

If your satellite receiving system uses a feed system with a different oscillator frequency, the receiver only needs to be matched to the feed system oscillator frequency during the installation.
The procedure for this can be found in section: "Initial settings, Oscillator frequency".

Note on programme memory locations

The receiver has a 250 channel memory that can be assigned with TV or radio programmes in any given manner.

The receiver has been factory pre-programmed according to the programme table with:
150 TV programmes and
100 radio programmes.

Programme memory is organised here so that the TV programmes are located in programme slots from 1 upwards while the radio programmes are located in programmes slots from 250 downwards. See also the following display:

TV-Modus: Anzeige	P 001	P 002	P 003	......	P 248	P 249	P 250
Programmspeicherplätze 1 bis 250	1	2	3	bis	248	249	250
Radio-Modus: Anzeige	r 250	r 249	r 248	......	r 003	r 002	r 001

Since only one sound programme (TV accompanying sound or a radio programme) can be stored in a programme memory, with the factory presetting:

in "TV mode"

on reception of TV programmes in programme slots 151 to 250 the original TV sound is not sent but instead the programmed radio sound

in "radio mode"

on reception of radio programmes from programme slots 101 to 250 the sound of the corresponding TV programme is sent.

The assignment of the programme slots can be changed as desired.

Tuning in TV programmes

To tune in to new TV programmes, the video and audio reception parameters need to be set up accordingly.

The latest programme assignments can be obtained from satellite programme magazines, or called up via the videotext of programme Sat 1 from page 675.

- Select the programme slot that you want to change.

- Call up the video menu by pressing the ⓞⓚ + ⓣⓥ keys in succession.

or

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Programming TV programmes

- Call up the audio menu: press keys (OK) + (🅑) in succession.

- Switch between video and audio menus using
  the (🅑) key or the (TV) key.

- Select the desired menu line using the keys (▲▼).

- For direct numeric input use the keys (0)...(9)

or

- Alter the values step-by-step using the (-)(+) keys.

- Press the (OK) key twice in order to save your settings.

- Exit from the menu with the (⏻) key.

Note   Frequent reference is made to saving the settings in subsequent descriptions. It is always sufficient, however, if you save the settings in the video and audio menus just once before exiting from the programme slot or before exiting from setup mode.

The "Video" menu

The following settings can be made in the video menu:

Programmplatz:	**P 4**
Programmname:	**RTL**
>SAT-Frequenz:	**> 11229 MHz**
Polarisation:	**Ver. Low**
Orbit Position:	**1**
Hub:	**16 MHz**
Oszillator:	**LO 2**
DECODER MENÜ ...	
▼▲ + - 0-9 TV MUTE OK STBY	

Setting option:
Programme slot 1 to 250
5-character station identifier

Transmission freq. from 10700...12747 MHz
Hor Low / Vert Low / Hor High / Vert High
1 to 4
16 or 25 MHz
LO 1 to LO 4
See separate decoder menu

The bottom line shows the keys you can use to make the settings.

Description of menu entries

Satellite frequency

With input via the numeric keys (0)...(9) frequency input is in 5-figure form in the range **10700** to **12747** MHz. With the (-)(+) keys you can attain the optimum receiving frequency by moving in 1 MHz steps (recommended if the picture is grainy due to weak signals).

Polarisation/Oscillator

In menu entry "Polarisation", the voltage level is used (14 or 18V) to set the polarity (vertical or horizontal).

In the "Oscillator" menu entry, the oscillator frequency group LO 1 to LO4 is selected. With the oscillator frequency the high satellite frequency is converted to the satellite IF frequency. This allows troublefree matching to different feed systems.

Frequency range	Polarisation	LNB-voltage	Setting	LO-group	LO-frequency
10.70 – 11.70 GHz	horizontal	18 V	Hor Low	LO 1	9750 MHz
10.70 – 11.70 GHz	vertical	14 V	Vert Low	LO 2	9750 MHz
11.70 – 12.75 GHz	horizontal	18 V	Hor High	LO 3	10600 MHz
11.70 – 12.75 GHz	vertical	14 V	Vert High	LO 4	10600 MHz

For setting of LO frequencies refer to section: "Initial setting".

Programming TV programmes

Orbit Position

In the "Orbit Position" menu entry, division of the satellites into orbit positions 1 to 4 is carried out.

This dividing up is necessary for the signal selection with the 22 kHz, tone-burst or DiSEqC switching signal on reception from two (or more) satellites.

The receiver is pre-programmed in accordance with the following table.

Satellite	Orbit position	Switching signal 22 kHz
Astra 19.2° east	1	Off
Eutelsat 13° east	2	On
Eutelsat 10° east	3	Off
Eutelsat 16° east	4	On

In the pre-programming, position 1 was likewise assigned to all of the other satellites.

Note

In the initial setup menu (DiSEqC menu, menu entry 22 kHz) the particular setting is specified (frequency band *High/Low* or orbit position *Pos A/B*) for which the 22 kHz switching signal is operative.

Default setting in initial setup menu:
22 kHz signal on for "*Pos. A/B*".

Video deviation

The satellites transmit their signals with different video deviation, 16 or 25 MHz. The setting has an effect on the picture brightness.

- Adjust the video deviation to obtain optimum picture brightness.

Decoder menu

You can attach a decoder to the decoder Scart socket for a Pay-TV programme with video signal.

The receiver recognises Pay-TV programmes for which decoders supply a switching signal (e.g. like Premiere) independently, and switches this signal through to the TV- and VCR Scart socket.

For decoders that do not supply a switching voltage the following setting is to be carried out.

- Call up the video setup menu
- Select menu entry "Decoder menu"
- Activate the "Decoder menu".

```
                         P 12
                         PREM          Setting option:

           DECODER EINSTELLUNG

       Signalwege
       >
               Audio: >INTERN          Internal / External
               Video:  INTERN          Internal / External

       ▼▲  + -  TV  MUTE  OK  STBY
```

- Set the video signal path to external,
- Set the audio signal path to external only if audio signal is encoded as well.
- Save the settings with the ⓞⓚ key.

Programming TV programmes

Programme name

In the "Programme name" line (in the video menu) you can enter a 5-character station identifier of your choice.

- Using the ⬍ key select the menu entry: "Programme name".
- Using the ⌐⌐+ keys select the first character.
- With the (OK) key move on to the next character.
- Select the remaining characters in the same way.
- Exit from the menu line using the (OK) key or the ▽ key.
- To save the settings press the (OK) key twice.
- Press the ⏻ key to be returned to receive mode.
  or
- Move to the first line with the △ key and select the next programme slot

The "Audio" menu

The following settings can be made in the audio menu:

Programolatz:	**P 91**
	FASHI
FERNSEHTON	
Modus:	**STEREO**
>Frequenz:	**> 7,02/7,20**
Deemphase:	**DNR/75us**
Volume Offset:	**0**
▼▲ + - 0-9 TV OK STBY	
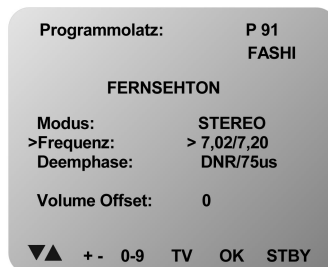
Setting option:
Programme slot 1 to 250

Modus: Mono wide / Mono narrow / Stereo
Frequency:
Sound carrier freq. from 5.00 to 8.98 MHz
De-emphasis: 50 μs / J 17 / dnr,75 μs

Volume offset: 0 to -3

Audio mode

Setting of operating mode: "Mono wide", "Mono narrow" or "Stereo".

LED display indication: **I—I**, **-II-** or **O—O**.

Operating mode "Stereo" and "Mono narrow" is selected on reception of the sound sub-carrier, "Mono wide" is selected on reception of the sound main carrier.

Programming TV programmes

Audio carrier frequency

The following is a list of fixed, pre-programmed audio frequencies that can be selected using the ⊖⊕ keys.

Mode	Sound carrier frequencies		Mode	Sound carrier frequencies
Stereo	7.02 / 7.20 MHz 7.38 / 7.56 MHz 7.74 / 7.92 MHz 8.10 / 8.28 MHz		Mono (wide) MWD	5.80 MHz 6.50 MHz 6.60 MHz 6.65 MHz 6.80 MHz
Mono (narrow) MNR	7.02 MHz 7.20 MHz 7.38 MHz 7.56 MHz 7.74 MHz 7.92 MHz 8.10 MHz 8.28 MHz			

Input of the audio carrier frequency via the numeric keys ⓪...⑨ is in 3-digit form in the range 5.00 to 8.80 MHz. In stereo mode, the frequency is to be entered for the left sound channel. The frequency for the right sound channel then automatically lies 180 kHz above the left sound frequency.

Audio de-emphasis (for sound type " Mono wide" only)

Set the de-emphasis for the best sound impression to "**50 μs**" or "**J17**".

In the "Stereo" and "Mono narrow" audio modes, the de-emphasis "dnr" with "75 μs" is selected automatically.

Stereo, Mono narrow:	**dnr**, **75 μs**
Mono wide:	**50 μs** or **J17**

Volume offset

In this menu entry, you can match the volume's initial setting to the other programmes and save separately for every programme slot. Setting range with ⊖⊕ keys from 0 to –3.

Saving the settings

- Save the settings with the ⊙ᵒᵏ key (press twice).

If you want to make new settings for further programme slots:

- Change over to the "Video menu" with the ⊙ᵗᵛ key.

- Move to the first programme line, "Programme slot", and select the next programme slot.

- Select further programme slots in the same manner.

- To exit the setup menu press the ⊙ key.

Note   You can terminate any setup procedure immediately (also without storing) by returning to normal operation via the ⊙ key..

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Programming radio programmes

Programme providers are continually bringing out new radio programmes for broadcast via the satellites. The "Radio" menu allows you to store these programmes.

The settings for radio programmes in "Radio" mode are carried out in the same way as for the "TV" mode.

Tuning in radio programmes

- Switch from "TV mode" into "Radio mode" using the ⓡ key.

- First select the programme slot that is to be programmed afresh.

- Call up the radio menu by pressing the ⓞᴷ + ⓡ keys in succession.

- Select the desired menu line using the ⌄⌃. keys

- For direct numeric input use the keys ⓪...⑨.

or

- Alter the values step-by-step with the (-)(+) keys.

- Press the ⓞᴷ key twice in order to save your settings.

- Exit from the menu with the ⏻ key.

Note Take account of the note on memory organisation of TV and radio programmes on page 17.

The "Radio" menu

The following settings can be made in the radio menu:

Radioprogramm:	**R 1**
Programmname:	**Ant B**
>SAT-Frequenz:	**>11214 MHz**
Polarisation:	**Hor Low**
Orbit Position:	**1**
Oszillator:	**LO 2**
Modus:	**STEREO**
Frequenz:	**7,38/7,56 MHz**
Deemphase:	**DNR/75us**
Volume Offset:	**0**
▼▲ + - 0-9 OK A/B STBY	

Setting option:
Programme slot: from 1 to 250
Programme name: 5-character station identifier

Sat-transm. freq.:	from 10700 to 12747 MHz
Polarisation:	Hor Low / Vert Low / Hor High / Vert High
Orbit position:	1 to 4
Oscillator:	LO 1 to LO 4
Mode:	Mono wide, Mono narrow, Stereo
Sound carrier freq.:	from 5.00 to 8.98 MHz
Audio de-emphasis:	50 μs / J 17 / dnr,75 μs
Volume offset:	from 0 to -3

The bottom line shows the keys you can use to make the settings.

Radio programmes are transmitted on sound subcarriers only. The setting to be made is therefore either "Stereo" or "Mono narrow". Here the audio de-emphasis is selected automatically as "DNR" and 75 μs.

Settings are carried out in the same way as for the TV programmes.

Note You can terminate any setup procedure immediately (also without storing) by returning to normal operation via the ⏻ key.

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Initial settings

In the initial setup menu, matching of the satellite receiver to the satellite receiving system is carried out.

Important

The receiver has already been factory pre-programmed for standard satellite receiving systems.
Alterations to the initial setting are therefore necessary only if your receiving system deviates from this type of installation or if you happen to want different settings.

The settings in the initial setup menu are generally carried out by the specialist dealer on installation of the satellite receiving system.

To prevent any unintentional alterations in the initial settings, the initial setup menu can be invoked only from the switched-off state.

Calling the initial setup menu

- Switch the unit into standby.

- Press both the programme selection buttons (2) ▼ ▲ on the receiver simultaneously and keep them pressed.

- Switch the unit on via the key on the remote control. ⏻

- Release the ▼ ▲ buttons when "**C 38**" appears on the LED display.
  C 38 is the factory preset UHF output channel. If the UHF channel has already been altered, the appropriate channel selection appears
  (between Ch. 21 and Ch. 69).

The initial setup menu is displayed.

```
>Modulator:          C>38
 OSD-Sprache:        DEUTSCH
 LNB-Versorgung:     EIN
    -bei stand by:     AUS
 Programmwahl:       FREI
 OSD:                AUS
 Fernbedienung:      26 Tasten

 OSZILLATOR  MENÜ ....
 DiSEqC  MENÜ ....

 ▼▲   + -   0-9   OK   STBY
```

Setting option:

Modulator: channel 21 to 69
OSD language: bilingual German / English
LNB supply voltage: Off / On
LNB power supply in standby: Off / On
Programme selection: 1-/ 2-/ 3-digit / free entry
OSD: Off / On (can be set individually
                    for TV and radio)
Type of remote control: 26 or 24 keys.
Oscillator menu: LO 1 to LO 4
DiSEqC menu:
     See separate menu in section "DiSEqC"

The bottom line shows the keys you can use to make the settings.

Settings are made in the initial setup menu in the same manner as in the other menus for the station programming:

- Select menu entries with the ⬍ keys.

- Carry out settings and call up submenus with the ◄► keys
  (and use numeric keys ⓪..⑨ on inputting frequency).

- Press the ⓞⓚ key twice to save your settings.

- Return with the ⏻ key.

Modulator-output channel

The modulator's UHF output channel can be entered in the range from channel 21 to 69.

Default: channel "**38**"

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Initial settings

When making the setting, it should be ensured that there is at least one blank channel above and below the output channel in order to avoid interference.

OSD language-

Here you can select the language for the on-screen displays. The choice available comprises: German and English.

Default: **German**

LNB supply voltage

Here you can turn off the power supply for the feed system if this is implemented by an external power supply and signal selection is likewise not carried out by means of the LNB supply voltage (e.g. Kathrein single-cable feed system UAS 330).

Note   If there are switchover matrices in the receiving system, the LNB supply voltage needs to be turned in all cases..

Default: **ON**

LNB supply voltage in standby

When the receiver is in standby the LNB supply voltage is normally switched off.
If terrestrial signals and satellite signals are combined in the receiving system, and the power supply for the relevant components comes from the receiver, the power supply must also be guaranteed when the receiver is in standby.
In this case switch the power supply in standby to "**On**".

Default: "**Off**".

Programme selection

You have the option of entering the programme number in one-, two-, or three-digit form or in "free" form

Default: "**free**".

Setting	Settable programme slots
One-digit input	Programme slots 1 to 9
Two-digit input	Programme slots 1 to 99
Three-digit input	Programme slots 1 to 250
Free input	Programme slots 1 to 250

Note   If a recording is pre-programmed in the timer for a programme slot ≥100, the timer must be cleared first in order that a change in the programme slot entry can be carried out.

On Screen Displays (OSD)

Here you can select whether the programme slot and programme name are to be displayed continuously, or whether they are to be removed again approximately three seconds after programme changeover..
This setting can be made differently in TV mode and radio mode.

Default: TV mode   "**Off**".

                Radio mode   "**On**".

To call the initial setup menu for radio, the receiver must be switched into radio mode before being switched off. Then call the initial setup menu in the usual way.

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Initial settings

Remote control handset

The receiver contains command sets for Kathrein remote controls with both 24 and 26 keys. The remote control included with the receiver has 26 keys and this is the predefined command set on delivery. Therefore leave this setting unchanged as "26 keys" (factory preset).

Oscillator frequency

The satellites radiate their programmes in a frequency range that satellite receivers are unable to process. In the receiving system (known as the **LNB** - **L**ow **N**oise **B**lock converter or **LNC** - **L**ow **N**oise **C**onverter) this frequency is converted into a lower frequency that can be processed by satellite receivers.

The satellite transmission frequencies lie in the following ranges:

10700 ... 11700 MHz	Low-band
11700 ... 12750 MHz	High-band

The receiver's input frequency range, however, lies in the range: 920...2150 MHz.

Conversion of the higher frequencies into a lower frequency is achieved with the oscillator frequency (LO frequency). Various oscillator frequencies are used for the conversion according to the satellite frequency range and type of system.

For Astra and Eutelsat receiving systems, this is generally 9.75 GHz (9750 MHz) for the lower frequency band (low-band) and 10.6 GHz (10600 MHz). for the upper frequency band (high-band). Older receiving systems still operate in the low-band region with 10 GHz oscillator frequency.

The receiver calculates the frequency onto which it needs to tune by subtracting the oscillator frequency from the satellite transmission frequency stored for each programme.

As a result, you can easily install the UFD 400 on other receiving systems without needing to reprogramme every single programme slot.

You only need to set up the particular oscillator frequencies that your receiving system uses.

On delivery the oscillator frequencies set up are those listed in the picture below.

```
        OSZILLATOR  EINSTELLUNG

  >       LO 1:      09750 MHz
          LO 2:      09750 MHz
          LO 3:      10600 MHz
          LO 4:      10600 MHz




      ▼▲    + -    0-9    OK    STBY
```
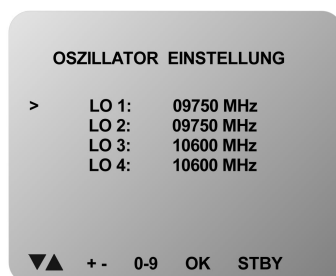
Changing the oscillator frequency

- Call the initial setup menu (see paragraph: "Calling the initial setup menu").

- Using the ⬍ keys move to menu entry "Oscillator menu . . .".

- Call up the "Oscillator selection" submenu using the ⬌ keys.

- Move to line in which you want to alter the oscillator frequency (LO 1... LO 4).

Various fixed pre-programmed LO frequencies can be selected with the ⬌ keys.

- You can enter deviant oscillator frequencies in the range from 9000 MHz to 12000 MHz directly via the numeric keys ⓪...⑨ in 5-digit form, (e.g. 11700).

- Save the settings with the ⓞⓚ key (press twice).

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Initial settings

• Exit from the menu with the ⏻ key.

DiSEqC menu

Fundamentals of the DiSEqC signal (Digital Satellite Equipment Control)

In order to select the satellite signals different control signals are required.
Up until now, the 14/18V LNB supply voltage and the 22 kHz signal (superimposed on the LNB supply voltage) have been sufficient for signal selection for the majority of applications.

With these four control criteria it is possible to switch between horizontally and vertically polarised signals, as well as between two satellites (multifeed reception).

With the extension of the frequency range to the 12 GHz region (high-band region 11.70 – 12.75 GHz) or for reception of more than two satellites, additional control criteria are required for LNB selection and signal selection.

The "DiSEqC" control signal is, in fact, a special form of modulation (pulse-width modulation) of the already existing 22 kHz signal.

The UFD 400 receiver is equipped with:

• DiSEqC tone burst
  (also termed Simple DiSEqC or just DiSEqC)
  and

• DiSEqC 1.1

The setting required is dependent on the components of your receiving system.

Setting options in the DiSEqC menu

• Call the initial setup menu (see paragraph "Calling the initial setup menu").

• Using the ⇕ keys move to menu entry "DiSEqC menu . . .".

• Activate the submenu "DiSEqC menu . . .".using the ⟨-⟩⟨+⟩ keys

The following menu appears (factory preset):

DiSEqC EINSTELLUNG	
>22 kHz-Signal:	Pos A/B
Tone Burst:	AUS
DiSEqC:	AUS
DiSEqC Repeat:	AUS
UFO mini:	AUS
Remote Frequenz:	0920 MHz
UFO micro:	AUS
▼▲ VOL 0-9 STOR STBY	
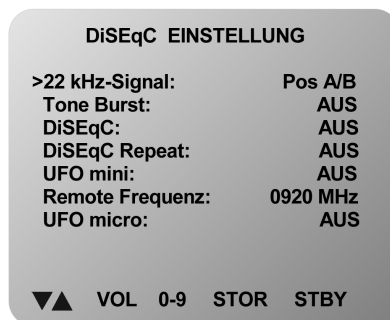
Setting option:

22 kHz Signal:	Off, High/Low, Pos A/B
Tone Burst:	Off, Pos A/B, Opt A/B, High/Low
DiSEqC:	Off, On
DiSEqC Repeat:	Off, 1 or 2
UFO mini:	Off, On, UFO twin 1, UFO twin 2
Remote Freq.:	0-2150 MHz
UFO micro:	Off, On, Reset

The bottom line shows the keys you can use to make the settings.

22 kHz signal

In this menu entry, you specify whether the 22 kHz signal is to be used to switch between a satellite's lower and upper frequency range (low/high) or to switch between two satellite positions (Pos. A/B).

22 kHz High/Low	Freq. range	22 kHz	or	22 kHz Pos. A/B	Orbit Pos.	22 kHz
	Low	Off			1 and 3	Off
	High	On			2 and 4	On

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Initial settings

Tone burst and DiSEqC signal

If more than four control criteria are needed in a receiving system, a DiSEqC control signal is required.

Which of the two setting options is required: "**Tone Burst**" or "**DiSEqC**" depends on the components of the receiving system.

Thus take into account the specifications of the components present in the receiving system (switch-over matrices).

Tone burst

In the "Tone burst" menu entry the following settings of the 22 kHz signal are possible:

Switching states on setting:		
22 kHz signal —> **High/Low a**nd Tone burst —> **Pos. A/B:**		
Low High	22 kHz 22 kHz	**Off** **On**
Pos. 1 Pos. 2	Tone burst Tone burst	**0** **1**

Switching states on setting:		
22 kHz signal —> **Pos. A/B** and Tone burst —> **Opt. A/B**		
Pos	Tone burst	22 kHz
1 2 3 4	**0** **0** **1** **1**	**Off** **On** **Off** **On**

Switching states on setting:		
22 kHz signal —> **Pos. A/B** and Tone burst —> **High/Low**		
Low High	Tone burst Tone burst	**0** **1**
Pos. 1 Pos. 2	22 kHz 22 kHz	**Off** **On**

DiSEqC

Up to 16 inputs can be switched with the "DiSEqC" control signal.

* If the receiver is connected to a "DiSEqC" switch-over matrix, set the menu entry to **"On"**.

Note

For optimal usage it is essential to know the switching criteria and the input assignments of the DiSEqC switching matrices.
Thus take into account the specifications of the DiSEqC switching matrices or get in touch with the installer of the receiving system.

DiSEqC repeat

If the receiver is operated on a receiving system with two or more DiSEqC switching matrices connected in series (cascaded), the DiSEqC command must be repeated.

* In this case set the menu entry "DiSEqC Repeat" to "1" or "2".

Default: **Off**

UFO mini

With a "Subscriber-controlled preprocessing system" the receiver's input frequency is adjusted to a fixed input frequency. The signals are transmitted by the "Subscriber-controlled preprocessing system" on this frequency. The reception parameters for the programme selection are transmitted by "DiSEqC" command to the receiving system and set up there.

Which setting needs to be selected, "**On**" or "**UFO twin 1**" or "**UFO twin 2**", is dependent on the design of the "Subscriber-controlled preprocessing system".

The "UFO mini Twin" design is a special form of the "Subscriber-controlled preprocessing system"

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Initial settings

Note   The setting is therefore to be made according to information in the "Subscriber-controlled preprocessing system" installation guide.

Remote frequency

If you have set "**On**" or "**UFO twin 1**" in menu entry UFO mini, make the setting in this menu entry for the transmission frequency.

The particular transmission frequency that needs to be set in the range 0 to 2150 MHz is given in the "Subscriber-controlled preprocessing system" installation guide".

Note   It is therefore essential to note the installation guide instructions of the "Subscriber-controlled preprocessing system".

UFO micro

The setting in this menu entry is also designed for operation of the receiver on a pre-processing system.

Here control and communication between the receiver and the Kathrein "UFO micro" system is effected via the return path of the coaxial cable.

If the UFD 400 receiver is operated on a "UFO micro" receiving system, an "**On**" setting must be made in menu entry "UFO micro".

A special address is then assigned to the receiver by the receiving system during installation, so that control commands sent by the receiver to the receiving system for signal selection will also be recognised by it.

A remote frequency does not need to be set up in this mode of operation since this is determined by the "UFO micro" system with the addressing.

If the receiver is used on different receiving systems the previously assigned address is to be deleted. This is done in menu entry "**Reset**".

As a result, the receiver is then assigned the factory-preset address once again (virgin address). Following this, the "**On**" setting should be made again. The receiver is then given a new address by the new system.

Note   The pre-programming is not cleared on "Reset".

Default: **Off**

- Press the $\overset{\text{OK}}{\bigcirc}$ key twice to save your settings.

- Exit the initial setup menu with the $\textcircled{\tiny{\textbf{⏻}}}$ key (press twice).

Note   If you exit the menus without saving, the settings will be lost.

Switching over remote control's command set

The remote control handset contains two command sets. This allows two receivers to be operated independently in a room (not in conjunction with a twin receiver).

Note   Switchover is possible for remote controls that have 24 and 26 keys.

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

- Switch on receiver 1. Switch off receiver 2 using the mains switch ⎍ on the unit.

  ⟹ Press the $\textcircled{\tiny{A/B}}$ key and keep it pressed.

  ⟹ Using the numeric keys $\textcircled{0}$...$\textcircled{9}$ enter "**901**".

- To adopt the code, switch receiver 1 into standby using the $\textcircled{\tiny{\textbf{⏻}}}$ key, and then

switch the receiver off using the mains switch ⟨ I ⟩ on the unit.

- Set receiver 2 back into operation.

  ⇒ Press the ⟨A/B⟩ key and keep it pressed.

  ⇒ Using the numeric keys ⟨0⟩...⟨9⟩ enter "**902**".

- To adopt the code switch receiver 2 into standby using the ⟨⏻⟩ key, and then back into operation again. Set receiver 1 back into operation as well.

  ⇒ Press the ⟨A/B⟩ key and keep it pressed.

  ⇒ Using the numeric keys ⟨0⟩...⟨9⟩ enter "**903**".

Note   With the first two settings the remote control must be pointer towards the respective receiver which is switched on.

With the ⟨A/B⟩ key you can now switch between the two command sets A and B (toggle function) and operate the two receivers in alternation.

On delivery command set 1 is always active.

Note   If you are using only one receiver and the active command set has been switched over inadvertently due to maloperation rendering the receiver inoperable, the remote control can be switched back to command set 1 without difficulty. The procedure for this has already been described above.

Note   With remote control handsets that have 24 keys (remote controls of the 200-series receivers from Kathrein) code numbers 001, 002 and 003 are to be entered in place of codes 901, 902 and 903.

Features

The UFD 400 receiver is equipped with the following features:

- 250 programme channel memory

- Satellite input frequency range from 920 MHz to 2150 MHz

- Freely selectable oscillator frequencies, thus suitable for all feed systems

- Radio button

- 4 event, 1-year programmable timer, with daily and weekly repeated switch-on

- Mains switch with mains isolation

- Power failure protection for date and time by lithium battery

- Stereo / Dual tone switchover

- On-screen display (OSD), 2 languages (German, English)

- 22 kHz control signal, programmable

- DiSEqC 1.1 and tone-burst control signal

- LNB supply voltage can be turned off

- Connecting socket for data copying function (read-in and read-out of programme data with the "Copy Programmer")

- Connector available for URS 200 external infrared sensor

- Sort- (insert), swap- and copy function for programme slot

- Audio frequency range 5.0 MHz to 8.8 MHz

- Sound muting

- Volume control and also controls for balance, tone and stereo width

- Dynamic noise reduction (DNR) – Wegener Panda

- Infrared remote control with command set changeover (allowing operation of two receivers in a room)

- 3 Scart sockets for TV-, VCR- and decoder connection

- PLL modulator

- Additional audio outputs via Cinch sockets

- Stand by power consumption $\leq$ 2 Watt

- Last-status memory

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Specifications

UHF characteristics

Sat IF frequency range	920 to 2150 MHz
Input level range	48 to 78 dBµV
IF frequency	479.5 MHz
IF bandwidth	27 MHz
FM threshold	7 dB max.

Video

Frequency range	20 Hz to 5 MHz
Output voltage	1 Vss / 75Ω
De-emphasis	CCIR Rec. 405 / 625 lines
S/N	54 dB typ.

Audio

Subcarrier frequency range	5.0 to 8.98 MHz
Bandwidth	
- Mono wide	280 kHz
- Mono narrow / Stereo	150 kHz
Frequency range	40 Hz to 15 kHz
De-emphasis	dnr 75 µs / 50 µs / J17
Output voltage	1V / into 10kΩ (TV-Scart and Cinch)
Distortion factor	<1.0 % (at 1 kHz)
S/N	>70 dB

Modulator

Standard	CCIR PAL G
Output channel	PLL tuning settable from channel 21 - 69 (presetting channel 38)
UHF output level	71 dBµV ± 6 dBµV

Power supply

Mains voltage	230 V ±10%, 50 Hz
Power consumption	21 W
Power consumption in standby	2 W
LNB supply voltage	0, +14 V (vert.), +18 V (hor.)
LNB supply current	400 mA max.
Control signal	22 kHz square-wave
	0.6 Vss
	DiSEqC 1.1
	Tone burst

Connectors

Sat-IF input	F socket 75Ω
Modulator	
- input	IEC socket 75Ω
- output	IEC plug 75Ω
TV connection	Scart/Peritel socket 21-way
VCR connection	Scart/Peritel socket 21-way
DECODER connection	Scart/Peritel socket 21-way
Audio output	Cinch socket
Data interface	Western 8-way

Specifications

General

Unit dimensions (B/H/D)	310 / 71 / 165 mm
Weight	approx. 1.3 kg

Temperature range

Ambient temperature	+5 °C ... 40 °C

Accessories

Infrared remote control

2x 1.5 V batteries, type: LR 03, size: AAA (micro)

$C\epsilon$

Scart socket assignments

| Signal	Pin No.	TV	VCR	Decoder
Right audio output	1	X	X	X
Right audio input	2		X	X
Left audio output	3	X	X	X
Audio ground	4	X	X	X
Blue ground	5	X	X	X
Left audio input	6		X	X
Blue signal output	7	X	X	
Switching voltage	8	X	X	X
Green ground	9	X	X	X
Data signal	10			
Green signal output	11	X	X	
Data signal	12			
Red ground	13	X	X	X
Data ground	14			
Red signal output	15	X	X	
Blanking signal	16	X	X	
Video ground	17	X	X	X
Blanking signal ground	18	X	X	X
Video output	19	X	X	X
Video input	20		X	X
Connector shielding	21	X	X	X

Connection examples / Service note

The best picture quality is obtained if you connect the satellite receiver, TV set and video recorder by means of Scart cables.
A stereo TV set also allows you to receive the sound in stereo.

Connection of a Sat receiver to a TV set and video recorder with Scart cables, a hi-fi for reception of Sat radio programmes and a decoder for Pay-TV-Programme (e.g. Premiere).
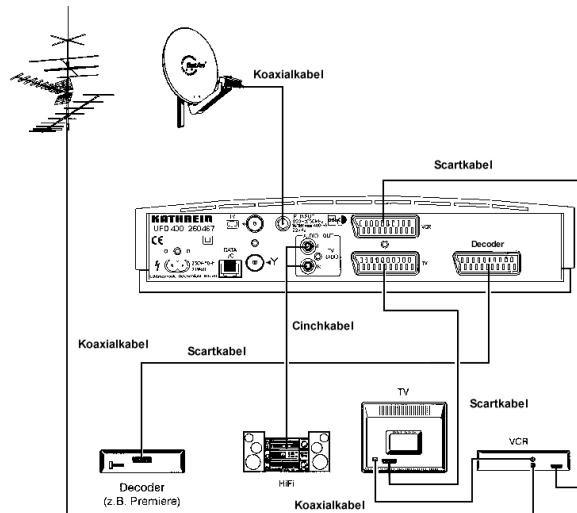
Connection of Sat receiver to TV set and video recorder with coaxial cables.
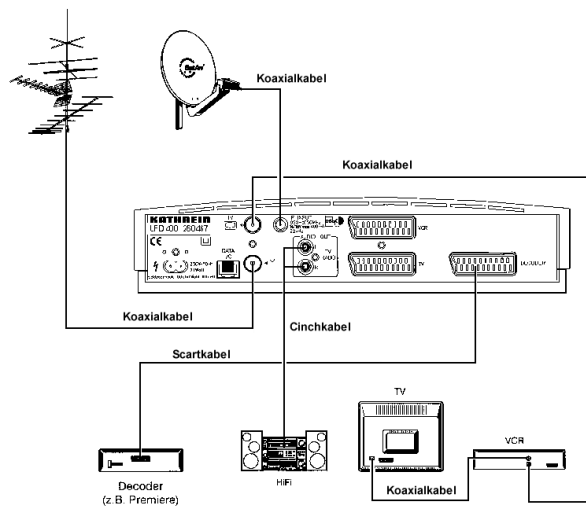
Note

Dear customer

In the unlikely event that you should experience problems with your receiver, please contact your local specialist dealer.

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