

Operating Manual

Kathrein Satellite Receiver UFD 420



Order No.: 260 441

KATHREIN

Antennen · Electronic

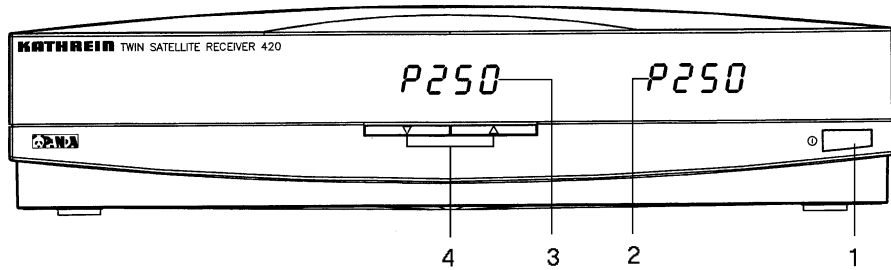
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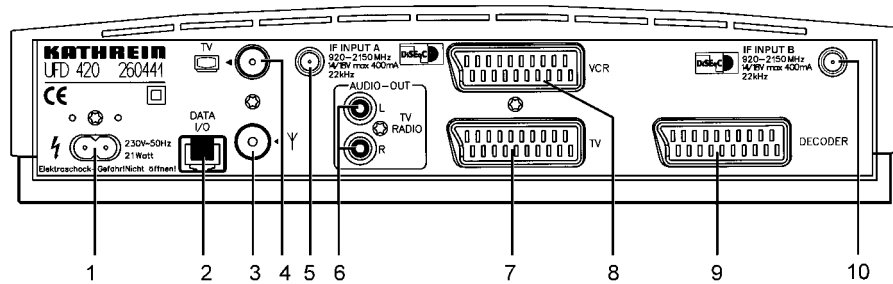
Controls, displays and connections

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.

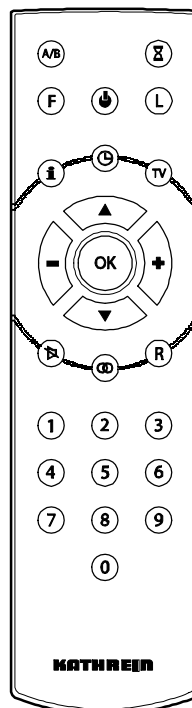
View of front panel



View of rear panel



Remote control handset



Controls, displays and connections

Front panel controls and displays

- 1 *Mains switch (with mains isolation)*
- 2 *LED display for TV (four character 7-segment display)*
To display the selected programme slot from tuner A. Tuner A is assigned to the TV Scart socket. This display is also used to show the setup parameters in the setup mode.
- 3 *LED display for VCR (four character 7-segment display)*
To display the selected programme slot from tuner B. Tuner B is assigned to the VCR Scart socket.
- 4 *Buttons for programme selection*
Step-by-step programme selection (upwards and downwards).
Switchover from TV to radio mode, and switchover from tuner A to B by pressing both buttons simultaneously.

Rear panel controls and displays

- 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*
- 10 *Satellite IF signal input B and output of LNB supply voltage.*

Remote control handset keys




Function 1:
To change over the selecting of programmes from tuner A to tuner B and vice-versa.

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.




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 the programme list is displayed.)



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  press in succession)



Function 1:
Volume control

Function 2:
To alter settings data in setup mode




Function 1:
Stores the chosen settings

Function 2:
Primary key for calling the separate setup menus (e.g. video settings)



Function 1:
Mutes the sound

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



Starts a timer



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



Function 1:
Selection of TV/SAT mode

Function 2:
Call up the menu for video settings (with  press in succession)




Function 1:
Step through the programmes either up or down

Function 2:
Selection of individual menu entries in setup mode



Function 1:
Switchover to radio mode

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



Stereo/Mono- (2 channel) changeover



Numeric keys 0 - 9 for programme selection and frequency entries



to

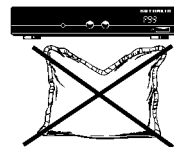
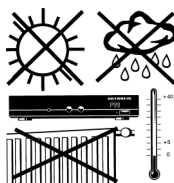
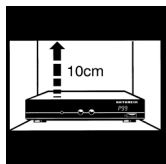
Safety instructions



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.

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..

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. A sample configuration is 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

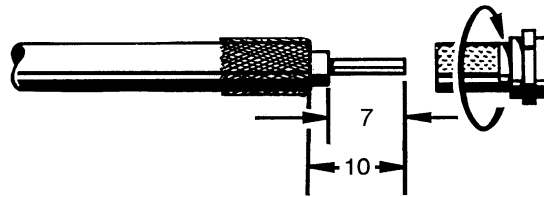
Satellite signal connection

- Connect up both the receiver's Sat IF inputs (for tuner A (5) and tuner B (10)) to the satellite receiving system.

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

If the F connectors are not yet fitted to the cables:

- Insulate the cable as indicated in the following illustration, and
- Carefully screw the F connectors onto the cable ends until they are firmly seated on the cables.



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.

- In this case, pull out the coaxial cable from the antenna input of the video recorder 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, for example, the decoded signal is available at the **TV Scart socket** without further adjustment. This decoded signal is **not available** at the **VCR Scart socket**.

In order that the decoded programme may also be recorded via the video recorder, the signal path must be switched to external.

Note

For setting of "Decoder signal path" see chapter "Programming TV programmes" section: "The video menu – Decoder menu"

Important

On connecting decoders, in general set the video signal path for the corresponding programme slots to "External".

Also comply with the decoder's instructions!

- Connect up 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.
- On the TV set tune in channel 38 to an empty programme slot (receiver's default channel).
Also take note of instructions in 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-pole). 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 pages 24 and 25.



Receiver operation


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

Twin-receiver fundamentals





With its two tuners, the twin receiver allows you to operate the TV set and video recorder simultaneously with different programmes.

The twin receiver is equipped with two 4-character LED displays that allow you to operate the unit with its many options without any difficulty. While the right-hand LED display shows you the programme slot selected for the TV set (tuner A), the left-hand display is assigned to the VCR Scart socket (tuner B) for the video recorder. However, a prerequisite is that both Sat inputs are connected up to the satellite receiving system.

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 else it switches into standby if the unit had been 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 ... and 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.

Tuner selection

A switchover between tuner A (right-hand display “TV”) and tuner B (left-hand display “VCR”) can be made with the  key.

The tuner currently being controlled by the remote control is shown on the OSD (On Screen Display) by a white field after the programme slot indication. In the LED display a dot appears after the P or r.

On Screen display

P 3	P 6
SAT 1	PRO 7

LED display

P 3	P. 6
-----	------

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).

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

Programme display:

TV mode:

Radio mode:

P ...

R ... or r ...

Note

In the radio mode the video signal is turned off blanking out the screen.

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”).

Receiver operation

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.


Note

With the setting "2- or 3-digit programme selection" there is a switch to the desired programme after approximately 3 seconds. Further 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.

Adjusting volume, balance and tone

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

- Use the  (volume) 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.

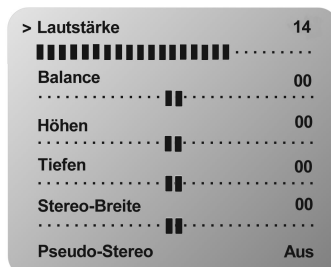





Note

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.



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.

Receiver operation

"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

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

- Press the  key.

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

In the OSD, **Sound off** is displayed for approximately 3 seconds. In the LED display the sound muting is shown by means of 3 dots. After changing programme, the message **Sound off** is displayed again.


- If you press the  key again the sound is turned back on.

Note

Mute is not operative at the VCR Scart socket.

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,
Sound channel 1 → Sound 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 older 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  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

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

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

Receiver operation


The following screen display appears:




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 active menu entry is indicated by means of a flashing cursor (>).

- Change the setting for continuous time display (ON/OFF) using the  keys.
- For entry of date and time use the numeric keys ①...⑨.
Always enter the date and time with 2-figure entries, thus 05.05.98 for the date and 07:05 for the hours and minutes (not 5.5. or 7:05).
- Invalid entries or incorrect values are not accepted and are ignored.

Saving settings and starting the clock


After entering the time press the  key in order 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 (TV or radio mode).

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

The following screen display appears:



In this menu you can make timer settings in order to start the receiver for recordings via a VCR.

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




Receiver operation

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 (>).



- Use the numeric keys for the input 0...9.
- 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 for adjustment.
- Following correct data entry the cursor jumps to the next column.
- Invalid entries or incorrect values are not accepted and are ignored.
- Enter the desired programme slot in the "No." column.
- To enter a radio programme slot press the  key first of all.

Saving settings

- Press the  key in order to save your settings.

The values entered are placed in the topmost line of the display. The other entries 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  key. Enter the new data in the usual manner and save the new entries with key .


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

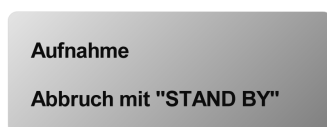
Return to receive mode

- Press the  key in order to return to receive mode.

Note

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

During the recording period, a switchover to tuner B by means of the  key is disabled. If you press this key the following message appears on the screen:



Aufnahme
Abbruch mit "STAND BY"

Receiver operation

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.

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  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)  key 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.

Receiver operation

Programme sorting (inserting), swapping and copying

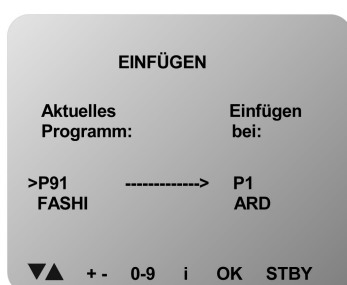
With the function: "Programme sorting (inserting), swapping and copying" you can adapt the programme order in TV- and radio mode to suit your individual requirements.

Example

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

- Press the + keys in succession.

The menu for function "INSERT" programme slot appears.



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 or the keys.
- Move to the right-hand side with the cursor by pressing the key: .
- Select programme slot P003 using the or keys.
- Press the 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 transfer completed, following message appears:

Programme inserted!

The other programme slots are shifted accordingly as a result.

Further programmes can be moved using the same method..

- To switch into the "SWAP" and "COPY" modes press the key once more and twice more respectively.
- Exit from the menu with the key.

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

Operation without remote control













When the satellite receiver is switched on, it always returns to the last mode that it was in prior to being switched off.

If the unit was switched off via its mains switch whilst in **Standby** mode, on switching on again it returns to **Standby** mode.

If you happen to have mislaid the remote control handset, you can switch the receiver on by simultaneously pressing both keys on the front of the unit. By further pressing you can switch between "TV" and "Radio" and between "TV"- (tuner A) and "VCR" (tuner B) operation.


Receiver operation

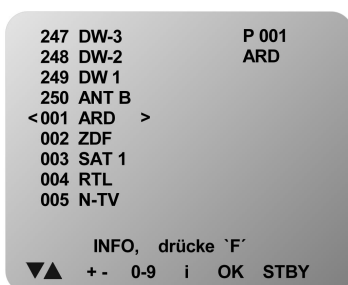
Functional sequence:

Press keys	VCR display	TV display	
 	P 010	P.003	
 	P.010	P 003	
 	P 010	r.001	
 	P.010	r 001	
 	r 005	r.001	
 	r.005	r 001	etc.

Displaying programme overview









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

- Press the  key.




The programme overview appears on the screen.

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 setup and radio settings.

Exit from the menu with keys ,  or .

Stop-watch

By pressing the  key you can start a stop-watch. A further pressing of the key removes the stop-watch from the display again.

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

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 programme 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

- Call up the audio menu: press keys  +  in succession.
- Switch between video and audio menus using the  key or the  key.

Programming TV programmes

- 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  key twice in order to save your settings.
 - Exit from the menu using the  key.

The settings are applicable for the TV- and VCR branch.

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 Programme name: 5-character station identifier Sat-transm. freq.: from 10700...12747 MHz Polarisation: Hor Low / Vert Low / Hor High / Vert High Orbit position: 1 to 4 Video deviation: 16 or 25 MHz Oscillator groups: LO 1 to LO 4 Decoder menu: 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

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 deliver a switching signal (e.g. like Premiere) independently, and switches this signal through to the TV Scart socket:


To ensure that the decoded Pay TV programme is also switched through to the **VCR** Scart socket to permit video recording, the video signal path needs to be switched to external in the decoder menu. The following setting achieves this. The same is applicable for decoders that do not deliver a switching voltage.

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



Setting option:










Video signal path: Internal / External
Audio signal path: Internal / External

- 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

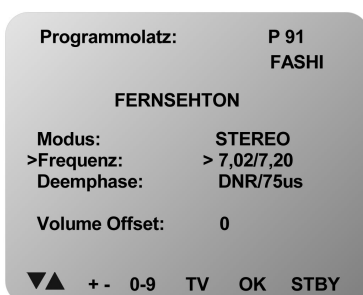
Programme name

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  key move on to the next character.
- Select the remaining characters in the same way.
- Exit from the "Programme name" menu line using key  or .
- Save the programme name now entered by pressing the  key twice.
- Press the  key to be returned to receive mode.
or
- Change to the "Audio menu" with the  key.
or
- Move to the first line using key  and select the next programme slot

The "Audio" menu

The following settings can be made in the audio menu:



Setting option:

Programme slot: 1 to 250

Mode: Mono wide / Mono narrow / Stereo
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.

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
Stereo	7.02 / 7.20 MHz 7.38 / 7.56 MHz 7.74 / 7.92 MHz 8.10 / 8.28 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

Mode	Sound carrier frequencies
Mono (wide) MWD	5.80 MHz 6.50 MHz 6.60 MHz 6.65 MHz 6.80 MHz

Programming TV programmes

Input of the audio carrier frequency via the numeric keys ①...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 initial setting of the volume 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  key (press twice).

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

- Change over to the "Video menu" with the  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.

Programming radio programmes

Programme providers also broadcast radio programmes via the satellites. The "Radio" menu allows you to store new 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 anew.
- Call up the radio menu by pressing the  +  keys in succession.
- Select the desired menu line using keys the  keys.
- For direct numeric input use the keys ...
- or
- Alter the values step-by-step with the  keys.
- Press the  key twice in order to save your settings.
- Exit from the menu with the  key.



Note

Pay attention to the note on memory organisation of TV and radio programmes on page 18.

The "Radio" menu

The following parameters can be selected 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

Modus: 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.

The initial setting for the volume can be saved separately for every programme slot just as in the TV mode.

Setting option with  keys from 0 to -3.

Note

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

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 settings 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 (4)   on the receiver simultaneously and keep 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 TV
OSD-Sprache:	DEUTSCH
LNB-Versorgung:	EIN
-bei stand by:	AUS
Programmwahl:	FREI
OSD:	AUS
LED:	High
Fernbedienung:	26 Tasten
OSZILLATOR MENÜ ...	
DiSEqC MENÜ ...	







  +- 0-9 OK STBY

Setting option:

Modulator: Channel 21 to 69; assign to TV or VCR
OSD language: German / English / French
LNB supply voltage: ON / OFF
in standby: OFF / ON
Programme selection: 1-, 2-, 3-digit, free entry
OSD: On / Off (can be set individually for TV and radio)
LED brightness: Low / High
Type of remote control: 24 keys or 26 keys
Oscillator menu: LO 1 to LO 4 (each 9000 ...12000)
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 ... 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"

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.

Modulator TV / VCR

Here you can assign the UHF modulator to either the TV- or the VCR Scart socket.
Factory presetting: assignment to the TV Scart socket.

An assignment to the VCR Scart socket is recommended if, for example, your video recorder is unsuitable for "VPS" via the Scart input. In this case, connect the video recorder via the UHF modulator and assign the modulator to the VCR Scart socket.

OSD language

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

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

Initial settings

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.

LED brightness

Here you can increase the brightness of the LED display. This may be necessary, for example, if bright light is beaming down on the receiver and the LED displays are no longer easy to read. In this case set the display to "High" setting.

Factory preset: Low

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** - Low Noise Block converter or **LNC** - Low Noise Converter) 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 aid of 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.

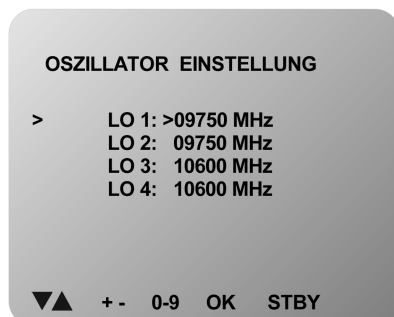
The receiver calculates the frequency onto which it needs to tune by subtracting the oscillator frequency from the satellite transmission frequency stored for each programme.

Initial settings

As a result, you can easily install the UFD 420 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.







Presetting:

LO 1:	Low band	Horizontal
LO 2:	Low band	Vertical
LO 3:	High band	Horizontal
LO 4:	High band	Vertical

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 the line in which you want to alter 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  in 5-digit form, (e.g. 11700).
- Save the settings with the  key (press twice).
- 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 has been developed by Eutelsat in collaboration with Philips.

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



Initial settings

The UFD 420 receiver is equipped with:

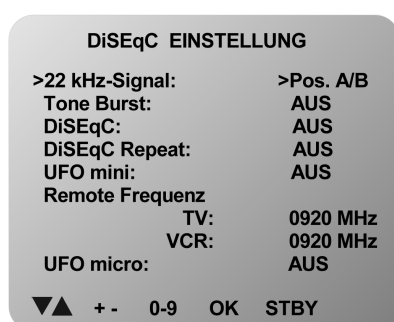
- DiSEqC tone-burst control signal (also termed Simple DiSEqC or DiSEqC)
- DiSEqC 1.1 control signal.

The necessary setting 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):



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
 Remote frequency TV: 920 to 2150 MHz
 VCR: 920 to 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	Freq. range	22 kHz
High/Low	Low	Off
	High	On

or

22 kHz	Orbit Pos.	22 kHz
Pos. A/B	1 and 3	Off
	2 and 4	On

(factory preset)

See also video setup menu, menu lines: **Polarisation and Orbit Position**

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).

Initial settings

Tone burst

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

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

DiSEqC

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

- If the receiver is connected up to a "DiSEqC" switch-over matrix, the menu entry must be set 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 "**Twin**" is dependent on the design of the "subscriber-controlled preprocessing system".

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

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 "**Twin**" 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 for tuner A "**TV**" and tuner B "**VCR**", 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".

Initial settings

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 420 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 the control commands sent to the receiving system for signal selection are also 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  key twice to save your settings.
- Exit the initial setup menu with the  key (press twice).

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

Features

The UFD 420 receiver is equipped with the following features:

- 2 tuners for simultaneous operation of the TV set and video recorder with different programmes
- 250 programme channel memory
- Satellite input frequency range from 920 MHz to 2150 MHz
- Freely selectable oscillator frequencies - therefore 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) 3 languages (German, English and French)
- 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
- 3 Scart sockets for TV-, VCR- and decoder connection
- PLL modulator
- Additional audio outputs via Cinch sockets
- Standby power consumption ≤ 2 watts
- Last-status memory

Specifications

UHF characteristics

Sat IF frequency range	2 x 920 to 2150 MHz
Input level range	48 to 78 dB μ V
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 V _{ss} / 75 Ω
Video deviation	16 / 25 MHz
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 μ s / 50 μ s / J17
Output voltage	
- TV Scart socket + Cinch sockets	1 V _{eff} / into 10 k Ω
- VCR Scart socket	0.77 V _{eff} / an 10 k Ω
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 dB μ V \pm 6 dB μ V

Power supply

Mains voltage	230 V +10%, -15%, 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	1 * 400 mA max.; 2 * 250 mA max.
Control signal	22 kHz 0.6 V _{ss} square-wave DiSEqC 1.1; Tone burst

Connectors

Sat IF input	2 * F sockets 75 Ω
Modulator	
- Input	IEC socket 75 Ω
- Output	IEC plug 75 Ω
TV connection	Scart/Peritel socket, 21-way
VCR connection	Scart/Peritel socket, 21- way
DECODER connection	Scart/Peritel socket, 21- way
Audio output	Cinch sockets
Data interface	Western, 8-way

Specifications

General

Unit dimensions (B/H/D)	310 / 71 / 165 mm
Weight	Approx. 1.4 kg

Temperature range

Ambient temperature	+5 °C ... 40 °C
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Accessories

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

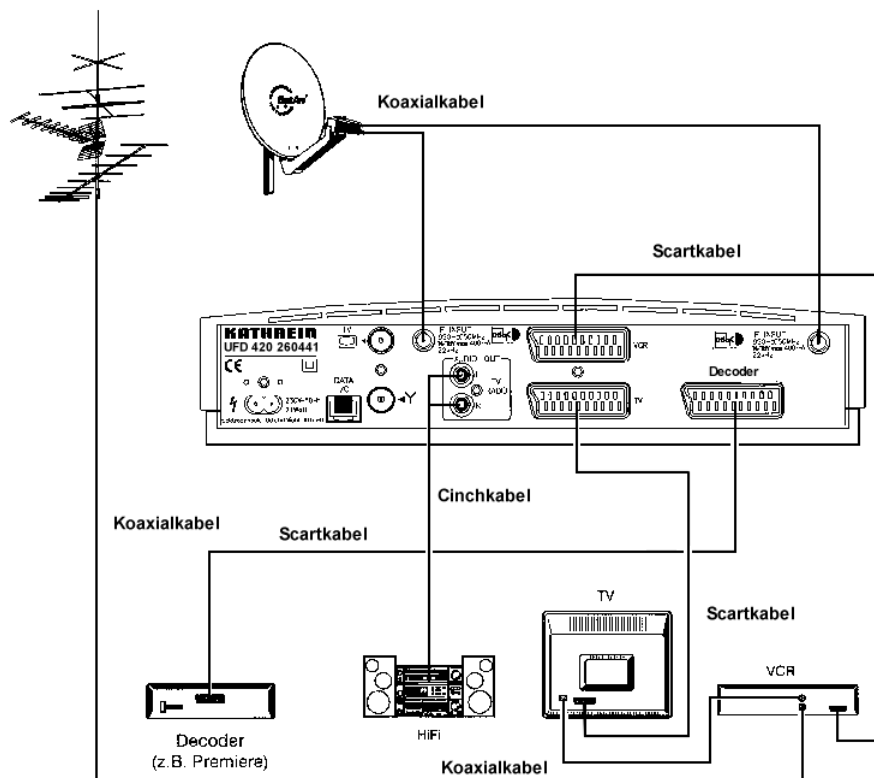


Scart socket designations

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 example

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



Note:

Dear customer,

In the unlikely event that you should experience problems with your receiver please contact your local specialist dealer or our service organisation.

The address of our service organisation is::

ESC

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Bahnhofstraße 108

83224 Grassau. Germany

Telephone: +49-8641/9545-0

Fax: +49-8641/9545-35 and 36

Internet: <http://www.esc-kathrein.de>

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