

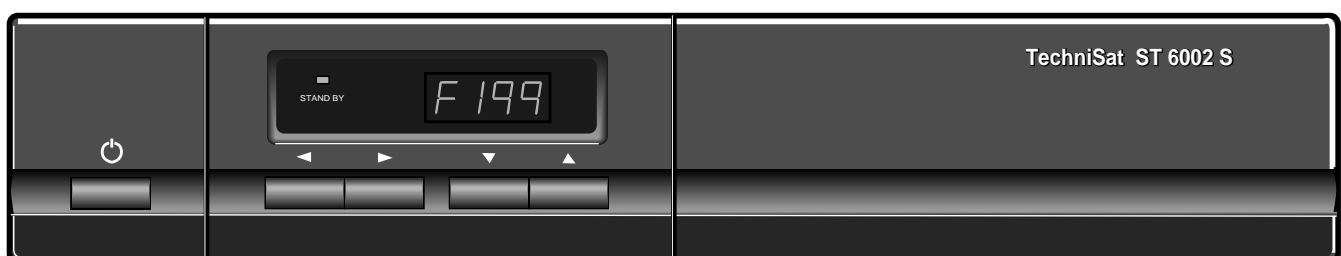
TechniSat®

ST 6002 S

OPERATING INSTRUCTIONS

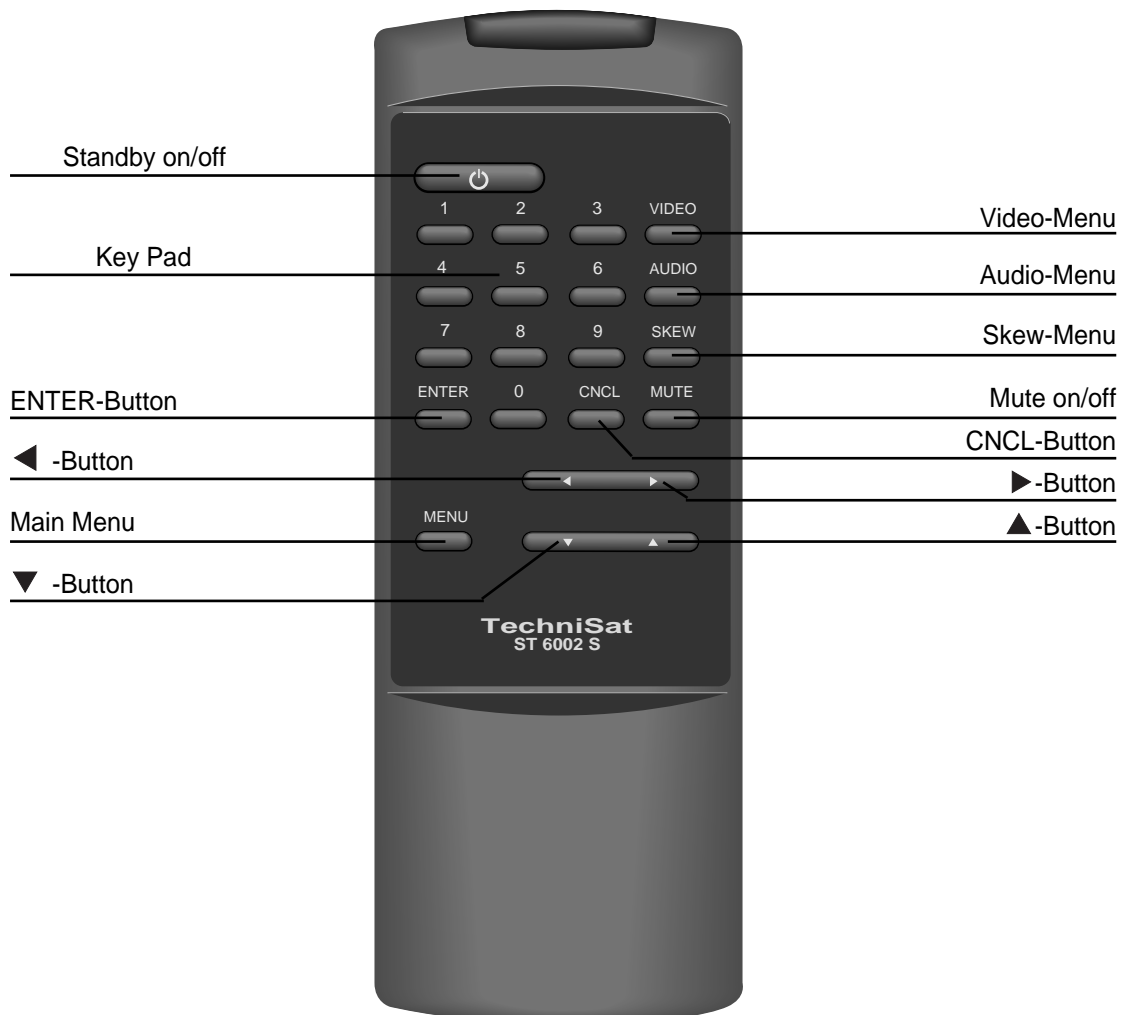
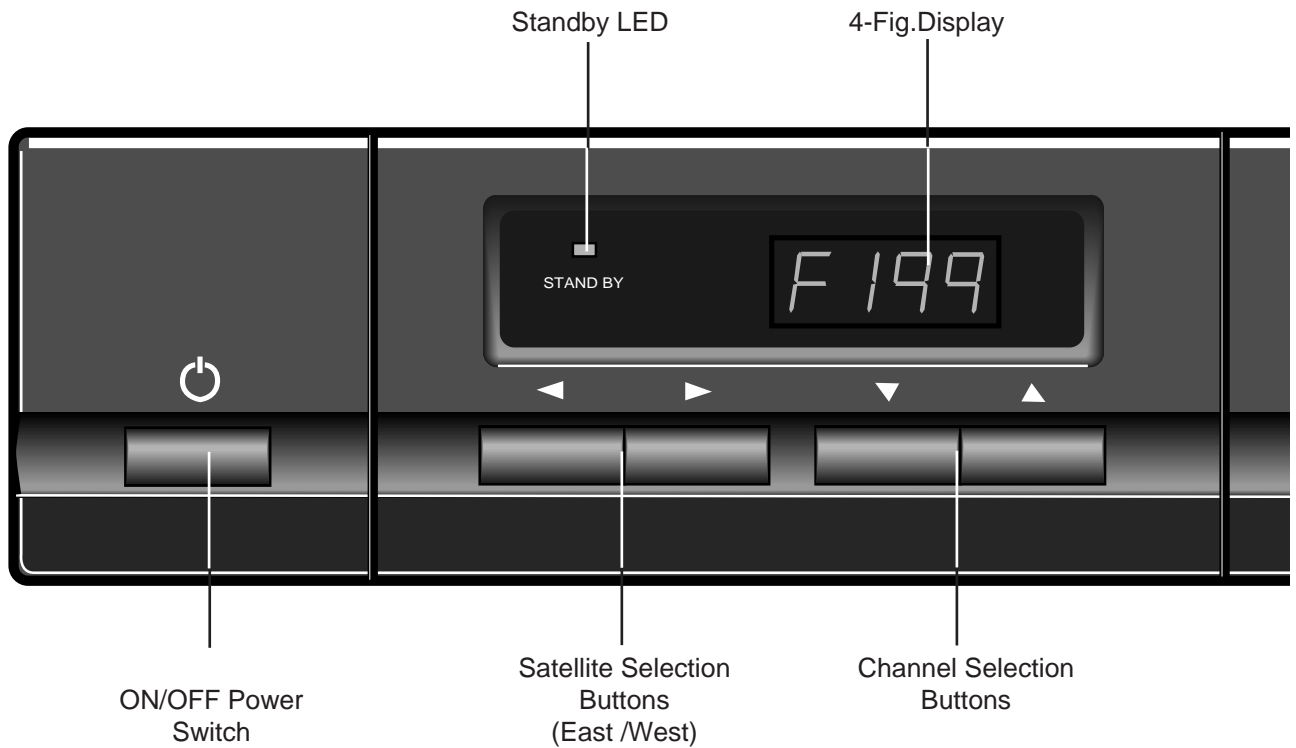
Satellite Receiver

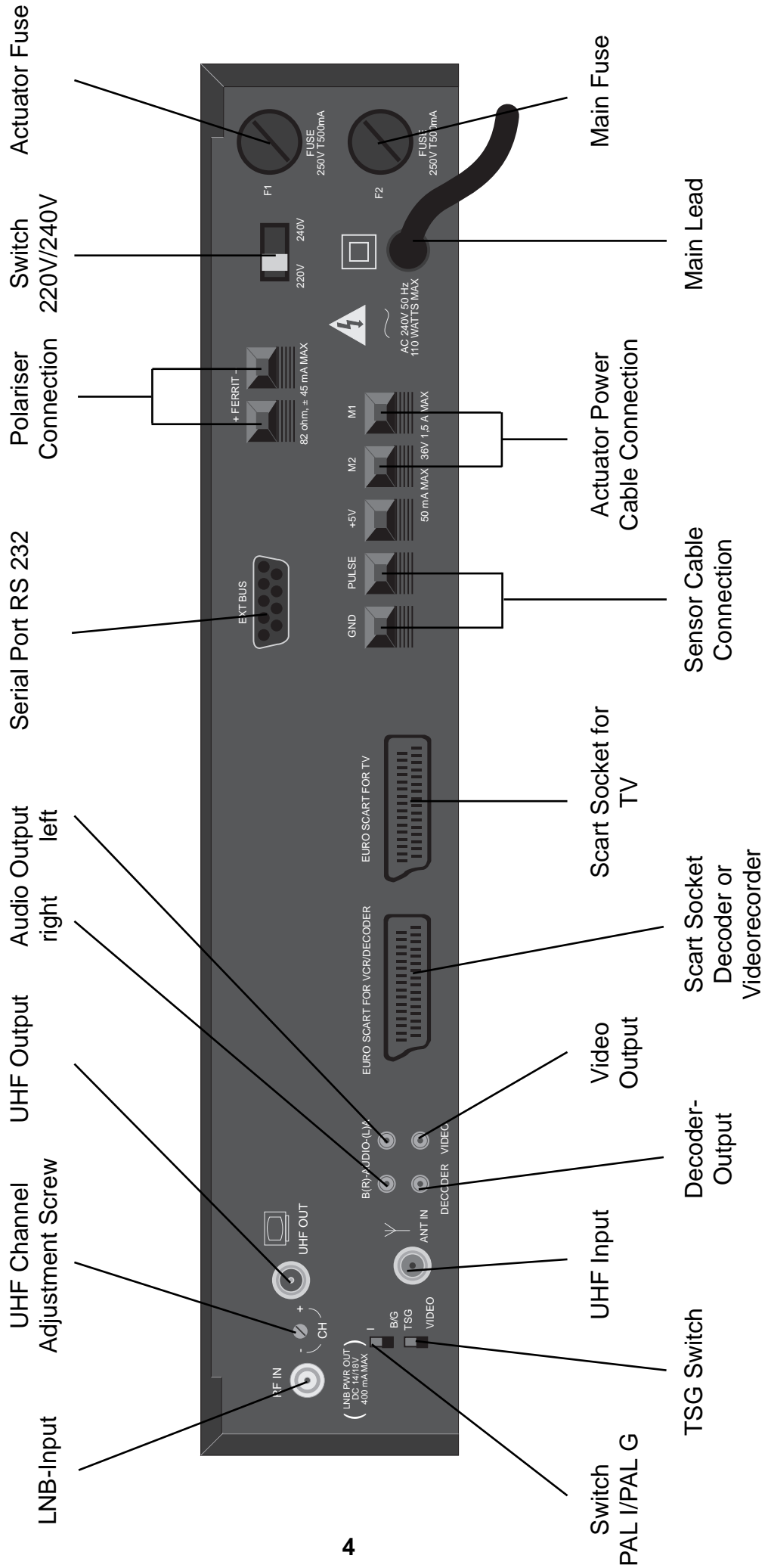
TechniSat ST 6002 S Stereo



Contents	Seite
2 Diagram : Front Panel, Remote Control Back Panel	3
3 Important Safety Instructions	6
4 Main Features of the ST 6002 S	7
5 Breif Introduction	8
5.1 Installation	8
5.1.1 Connection of the outside unit and television	8
5.1.2 Setting up the receiver	9
5.2 Operation	10
6 Installation	11
6.1 Installation of the outside unit	11
6.1.1 General	11
6.1.2 Basic programming / Initial Set-Up	13
6.1.3 Setting the east / west limits	14
6.1.4 Programming of satellite positions	15
6.1.5 Automatic location of satellites	17
6.1.6 External programming	19
6.1.7 System options	20
6.2 Connecting a video recorder or decoder	22
6.3 Menu overview: System menu	23
7 Operation	24
7.1 General	24
7.2 Direct operation	25
7.3 Menu operation	26
7.3.1 Channel selection	26
7.3.2 Satellite selection	27
7.3.3 Setting the timer	28
7.3.4 Setting the clock	29
7.3.5 Alignment - dish position	30
7.3.6 Parental channel lock	31
8 Programming	31
8.1 General	31
8.2 Changing the channel sequence	32
8.3 Expanding the programme range of a satellite	33
8.4 Programming the channels of a new satellite	34
8.5 Changing the channel name	35
8.6 Changing channel parameters	37
8.6.1 Video-Menu	37
8.6.2 Audio-Menu	38
8.6.3 Skew-Menu	39
8.7 Menu overview: main menu	40
9 Channel Programming	41
10 Technical Specifications	45

2 Diagram: Front Panel, Remote Control, Back Panel





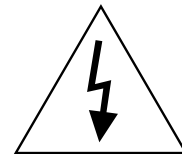
3. Safety Instructions

In the interest of safety, please read and observe the following instructions before using your new ST 6002 S.

This sheet and the following pages concerning installation and operation should be retained for future reference.

Installation:

The procedures described in this manual should be followed carefully.
NOTE: Always connect the LNB before connecting to the mains supply.
Failure to do this may cause damage to the appliance.



Ventilation:

Vents on the top and side panels are provided for necessary ventilation. The appliance should not be placed in a position where the free passage of air would be severely restricted. In addition, for the same reasons as above the ST 6002 S should not be placed on a soft base.

Water and moisture:

Ensure that the appliance does not come into contact with any dampness or moisture - RISK OF ELECTRIC SHOCK (and/or damage to the ST 6002 S)!

Heat:

Do not install the ST 6002 S in the immediate proximity of a heat source (radiator, oven etc.).

Care and Use:

Power Source:

Connect the ST 6002 S to a power supply which matches the requirements of the appliance (220 - 240 V/50 Hz).

Safe Connection to the Mains:

The mains leads should be routed so that they are not likely to be walked on or pinched by items placed against them.

When not in use:

If the ST 6002 S is left unattended or unused for long periods of time be sure to unplug the mains connector. The memory is still stored and the internal clock is supplied by an inbuilt battery.

Unplug the ST 6002 S from the mains when:

- the mains lead or mains connector is damaged
- the ST 6002 S has been exposed to rain or water
- a solid object or liquid substance has entered the appliance via the air vents
- there is a noticeable change in the performance of the ST 6002 S, not operating as normal
- the ST 6002 S has been dropped or the outer casing has been damaged

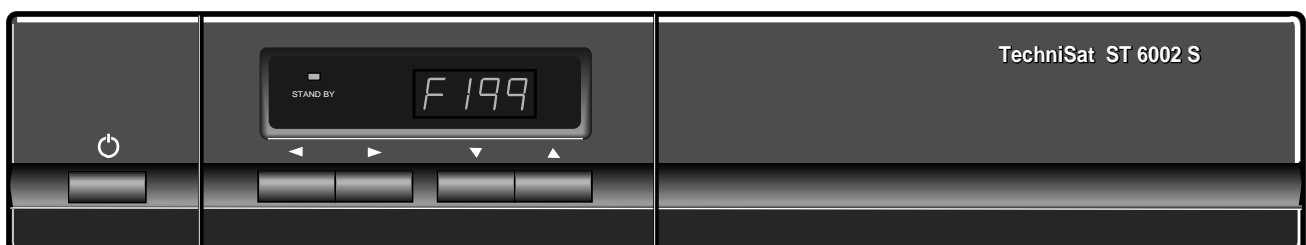
NOTE:

Servicing and repairs must only be carried out by trained service staff.

4 Features of the ST 6002 S:

The ST 6002 S has the following features:

- 200 preprogrammed channel places
- OSD (On-Screen-Display)
- Infra-red remote control for all functions
- Timer function for 8 settings
- Integrated dish positioner
- 50 storable satellite positions
- Autofocus
- Panda Wegener compatible noise reduction
- Volume control
- Adjustable video bandwidth
- Switchable modulator PAL G/I
- Free selection and storing of audio and video parameters
- Scart connection for TV or VCR
- Scart connection for decoder or VCR with 4 output signals
- Short-circuit proof LNB-input
- Preprogramming for connection of a triple band LNB (11 GHz, DBS, 12 GHz)
- Input frequency range 950 - 2050 MHz



5 Brief Introduction

We have condensed the most important steps for the installation and use of the ST 6002 S. More detailed information can be found in chapters 6 - 10 of this manual.

It is essential that a high quality outside unit with Triple-Band-LNB is used. If another kind of LNB is used, the procedure is the same, but you will not be able to receive all satellites.

5.1 Installation

5.1.1 Connection of Outside Unit and TV

Connect your ST 6002 S to the LNB of the outside unit using suitable coaxial cable (eg. TechniSat coxsat 1750).

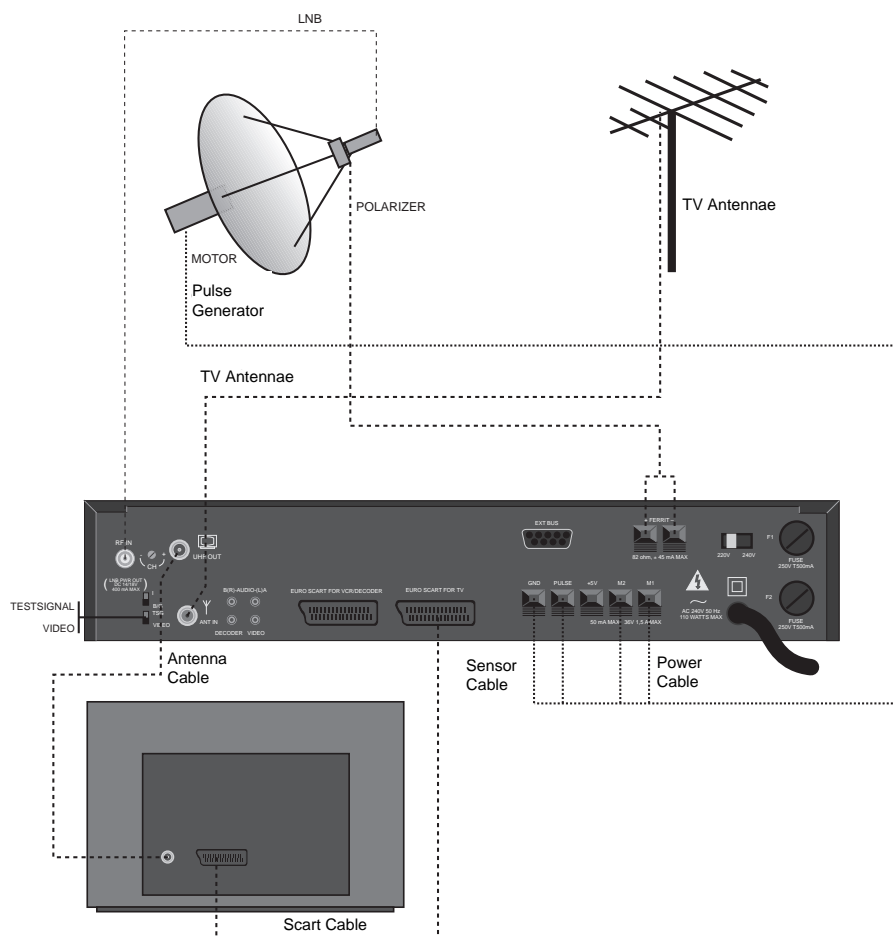
Connect the actuator power cable to the M1/M2 sockets and the actuator sensor cable to the "Pulse" and "GND" sockets.

The polariser should be linked via the "Ferrite +/-" sockets.

To connect your television to the ST 6002 S you should use a euroscart cable. The TV set should be set correspondingly to AV.

Alternatively, you can connect the appliance to your TV at the UHF/VHF input socket via UHF antenna cable. If this connection is made you should first of all switch to "TSG" on the back panel of the ST 6002 S and tune your TV set to channel 36, at which point the test signal (two vertical white stripes) will appear on the screen. Then return the switch to "Video" on the back panel.

NOTE: The satellite receiver is preset to channel 36. If channel 36 is already occupied by a terrestrial channel it is possible to alter the output channel in the range from 35 - 44. This can be done using



5.1.2. Installation of the Receiver

F Taste auf der Fernbedienung
R Taste am Receiver

Function	Button	R FB	TV Picture	Display on the receiver	
Basic Programming	⏻	R	no satellite	F 001	
	⏻	F			
	press simultaneously		Basic Programming	F 001	
	ENTER 3 x	F	System Menu	F 001	
Setting East/West Limits Note: Make sure the dish is not moved too far around	ENTER	F	Position 5000		
	Hold down until west limit is reached	F	Position 5439 (Example)		
		F	Position 5409		
	Hold down & move 30 Impulses back		■■■■		
	◀	F	West limit		
	ENTER	F	West limit 5409		
	Hold down until east limit is reached	F	Position 4821 (Example)		
	Hold down & move 30 Impulses back	F	Position 4851■■■■		
		F	East Limit		
	ENTER	F	East Limit 4851		
Satellite Programming	▲	F	Sat programming	CH 01	
	Enter	F	Sat: 19,2o ASTRA	CH 01	
		F	Position 4851	CH 01	
	Hold until the satellite is received	F	Position 5120 (Eg.)■■■	CH 01	
		F	Position	CH 01	
		F	Position 5120	CH 01	
	ENTER	F	Position 5125 (Eg.)	CH 01	
	CNCL	F	System-Menu	CH 01	
	Autolocation	ENTER 3 x	F	Sat: 60o Intel 604	CH 01
			F	Sat: 16o Eutel II-F3	CH 01
ENTER 2 x		F	Search 16o Eutel II-F3	CH 05 (Eg.)	
▲		F	Sat: 13o Eutel II-F1	CH 05 (Eg.)	
ENTER 2 x		F	Search 13o Eutel II-F1	CH 04 (Eg.)	
usw.					

If a satellite cannot be found:				
Sat programming	▲ CNCL	F	System-Menu	F 113 (Bsp.)
		F	Sat programming	F 113
	ENTER	F	Sat 27,5w Intel 601 (Example)	CH 01
	▲	F	Position 5204 (Eg.)	CH 01
	▶ hold until a satellite is received	F	Position 5402 (Eg.)	CH 01
	▲	F	Position ■■■■	CH 01
	▶	F	Position 5402 (Eg.)	CH 01
	ENTER	F	Position 5406 (Eg.)	CH 01
If all Satellites have been programmed	▶ 2 x	F	Sat 27,5w Intel 601	CH 01
		F	Sat 45w PanAmSat	CH 01
	CNCL 2 x	F	“Programme of the Satellite”	F 1 2 7 (E g .) last programmed-
	001	F	“Programm PRO 7	F 001

5.2. Bedienung

	▲ ▼				
Channel Selection	◀ ▶	R	19,2o ASTRA 003	F 003 (Eg.)	
		F	19,2o ASTRA 003		
	or				
	or	001	F	19,2o ASTRA 001	F 001
	or	01	F	19,2o ASTRA 001	F 001
	or	1	F	19,2o ASTRA 001	F 001
Volume Control	MENU	F	Menu	F 005	
	ENTER	F	005 ARD 1 Plus	F 005	
	press	F	061 RADIOROPA	F 005	
	ENTER	F	19,2o ASTRA 061 RADIOROPA	F 061	
Mute	Mute	F	Mute	F 006 (Eg.)	
		F	Vol.: ...	F 006 (Eg.)	
Time Display		F	Vol.:	F 006 (Eg.)	
		F	Mute	F 006 (Eg.)	
Set Timer	ENTER	F	19,2o ASTRA 007	F 007	
	MENU	F	19:15 Nord 3	F 007	
	2 x	F	Menu	F 007 (Eg.)	
	ENTER	F	Set Timer	F 007	
	ENTER	F	Time 1 aus	F 007	
	ENTER	F	Channel 007	F 007	
	005 oder	▶ 2 x	F	Channel 005	F 007
		▼	F	Month 09/1992	F 007
		▶	F	Month 10/1992	F 007
		▼	F	Day 08/Thurs	F 007
		▶ 2 x	F	Day 10/Sat	F 007
		▼	F	Start 19:01	F 007
	2015 oder	▶ press	F	Start 20:15	F 007
		▼	F	Stop 19:03	F 007
	2200 oder	▶ press	F	Stop 22:00	F 007
		▼	F	Type single	F 007
		▶	F	Type daily	F 007
			F	Date 10. 10, 1992	F 007
			F	Date 17. 10, 1992	F 007
		ENTER	F	Zeitpunkt 1 ein	F 007
	CNCL 2 x	F	“Channel 007”	F 007	
		F	10	F 007	

6. INSTALLATION

6.1. Installation of Outside Unit

6.1.1. General

The following instructions assume that the system has been installed correctly so that all the satellites can be received.

ATTENTION: The ST 6002 S has been programmed for use with a Triple-Band-LNB. With this you can receive all three frequency bands (11 GHz, DBS and 12 GHz). If you use a Dual-Band-LNB please pay attention to the changed input frequencies in the 12 GHz band (preprogramming pages 40 - 44).

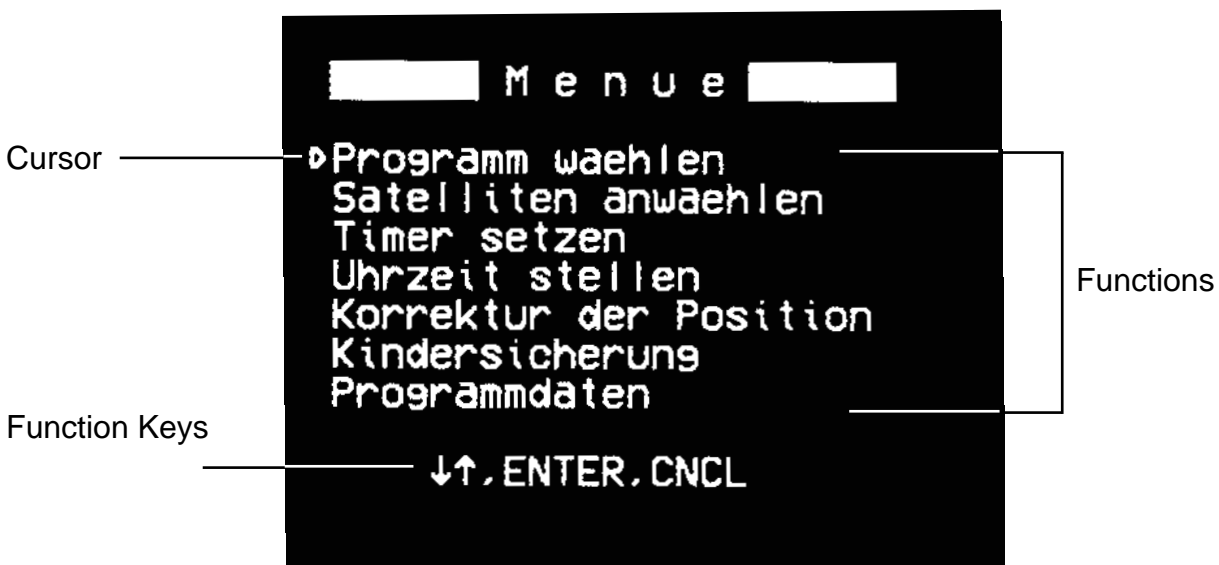
Input frequency for Dual-Band-LNB in 12 GHz band
=

Input frequency for Triple-Band-LNB minus
725 MHz

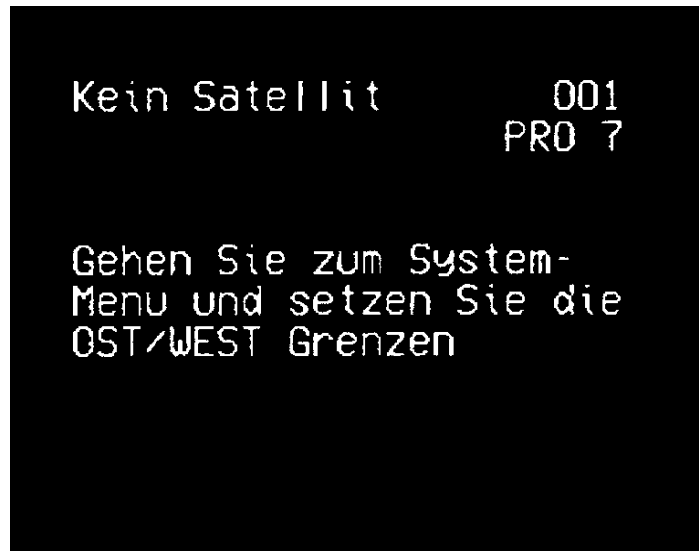
IMPORTANT: If you press any button whilst the dish is moving, the movement will stop immediately. Where possible avoid this when programming satellites and when using the automatic satellite search. Otherwise, satellites that have already been saved could be deleted.

The receiver ST 6002 S has many functions. For ease of use and so that it is not necessary to use a different button for each function the receiver uses "On Screen Display" and function keys. In this way related functions are condensed into "Menus". An arrow shows which function is in use. Underneath each menu the various keys which may be used are shown. By using the CNCL key you can leave each menu without saving the alterations.

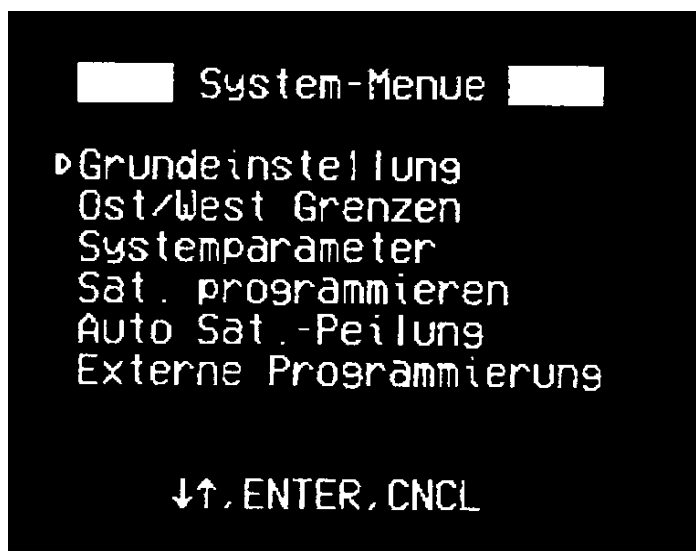
EXAMPLE -



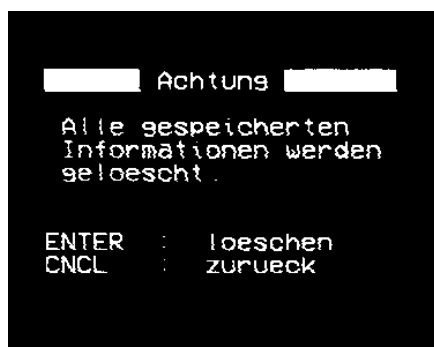
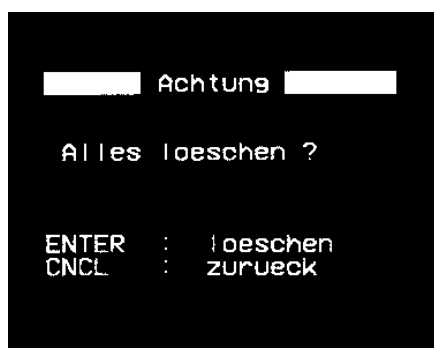
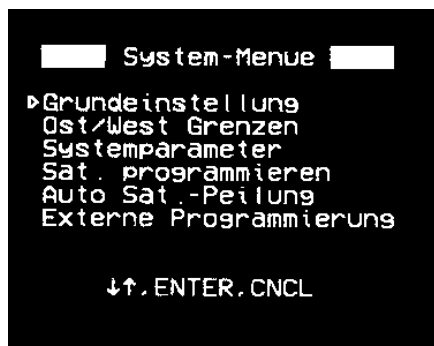
Switch on the receiver using the mains power switch (on the appliance). The following menu appears on the TV screen:



To go to the System Menu switch the receiver into stand-by mode using the remote control unit (⏻). Now hold down the ▲ ▼ buttons on the front of the receiver simultaneously for a few seconds. The System Menu will appear on the screen on a blue background. An arrow appears next to Basic Programming. By pressing the ▲ ▼ buttons on the remote control, this arrow can be moved up and down.



ATTENTION: If you press the CNCL button when the System Menu is on the screen the receiver is in the normal operation mode (see chapter 7). To recall the System Menu follow the procedure outlined above.



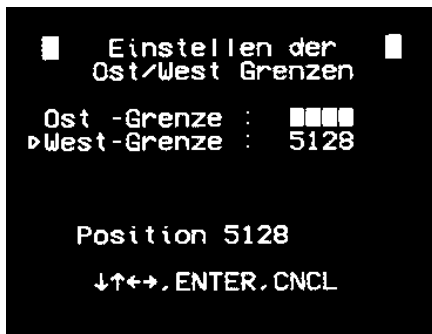
6.1.2 Basic Programming / Initial Set Up

Initially to program the receiver you have to carry out a Master Reset. Therefore, move the cursor ▲ ▼ to the option "Master Reset" on the System Menu and press ENTER.

After the first press a red warning screen appears. This will disappear when you press ENTER twice more and your receiver is then set.

ATTENTION: The preprogramming of the receiver is not affected by the cancellation procedure. This data is in the memory and cannot be deleted.

After the third press the message "All memory cleared" will appear and you will immediately return to the System Menu. This time the arrow is pointing to "Set Dish Limit".



6.1.3 Setting the East/West Limits

Choose the option ▲ ▼ "Set Dish Limit" and press ENTER. Then move the cursor to "Position 5000".

First move the dish west by pressing > on either RCU or on front panel until the desired west limit is obtained. (Whilst the dish is being moved the position no's will be displayed on the screen.)

Move the cursor using ► to "West Limit" and press ENTER. This limit is automatically stored.

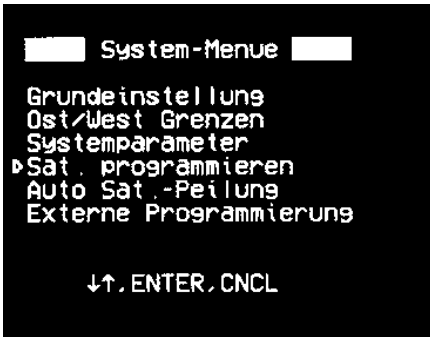
Now return to "Position" and move the dish to the east by pressing ◀ on either RCU or front panel until the desired east limit is obtained. Move the cursor using ▼ to "East Limit" and press ENTER. Once again this limit is automatically stored.

NOTE: The message "Jack Error" will appear on the screen if the actuator is not connected properly.

Press CNCL to return to System Menu.

6.1.4 Programming of Satellite Positions

Choose the option "Program Satellite " from the System Menu and press ENTER to display a table of parameters.



Move cursor to "Sat" and use the ◀ ▶ keys to select the desired satellite i.e. ASTRA 19.2 E. Then move cursor to "Channel" and select a known frequency i.e. 1250 MHz Eurosport.



Now move the cursor to "Position" and move the dish using the ◀ ▶ buttons until you receive the desired channel. Then move the cursor to "Pos" and press ▶ button on RCU to transfer the position no. By pressing ENTER the receiver will search for the position of best reception (Autofocus) which is then stored automatically.



```

▷Sat . : 27.5w Intel 601
Kanal . : 01
Freq . : 1016.00MHz
LNB . : LNB1
Polar . : Horz
Skew . : -45
Posi . : ■■■■

Position 4913

↓↑←→.ENTER.CNCL

```

Return the cursor to "Sat" and use the ◀ ▶ buttons to select the satellite which you wish to store next. Repeat the same procedure as described above. All satellites can be stored by this method.

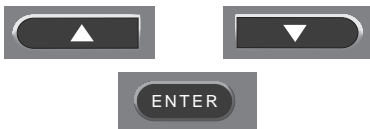
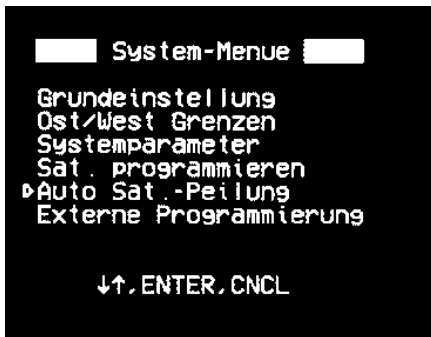
NOTE: Not all satellite channels are transmitting continuously. Additionally, it may also be necessary to alter the "Skew" values depending on the polariser type (refer to later section on "Changing Channel Parameters").

Programming of Future Satellites

1. If you wish to store a new satellite which is not already pre-set, you can choose an already stored channel with a frequency which is nearest to the frequency of a channel on the new satellite. The polarisation and LNB type must also be taken into account. After entering the required data, move the cursor to "Position" and move the dish using the ◀ ▶ keys until you receive the desired channel.

2. Now move the cursor to "Sat" and select a satellite which is not already stored (Spare 1-32). The channel selected previously can no longer be viewed. Move the cursor to "Pos" and press ▶ followed by ENTER on RCU. The satellite is now stored. To store the channels on this satellite it is necessary to follow the procedures set out in the section on "Channel data".





Automatic Location of Satellites

1. Choose the option "Auto location" on the System Menu. The use of this function requires that ASTRA has already been stored and that a TechniSat actuator is connected to the St 6002 S. Note only satellites with a comparatively strong signal can be stored by this method.

2. Start with Eutelsat 16 E. Press the ▼ ▲ buttons until this satellite appears in the display. Then press ENTER and confirm by pressing ENTER again. If the satellite is stored successfully the following message is displayed for about 3 seconds:

"Satellite peaked ... dish position stored"



3. Repeat the same procedure for Eutelsat 13,10 E, and then for satellites further west of ASTRA. If you do not find a satellite using this method, program it manually as described before.

4. After you have stored all satellites west of ASTRA, program those which are further east of ASTRA.
Press CNCL to return to System Menu



6.1.6. External Programming

It is possible to transfer data between two ST 6002 S or between a personal computer and the ST 6002 S. To do this you require a cable with two RS 232 connectors. If you wish to exchange data with a personal computer you require in addition the appropriate software (disc). Prerequisite is that the computer has a RS 232 serial port. Both the cable and the software can be ordered from TechniSat.

Select "Interface ext-link" from the System Menu. (To return to the System Menu first switch the appliance into stand-by mode using RCU, and then press the ▼ ▲ buttons on the front panel simultaneously for a few seconds.)

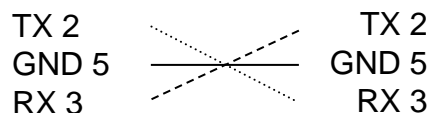
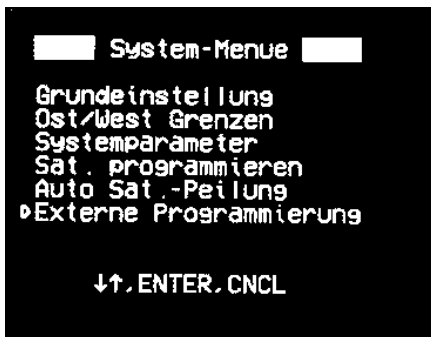
Connect both appliances with the appropriate cable as shown below:

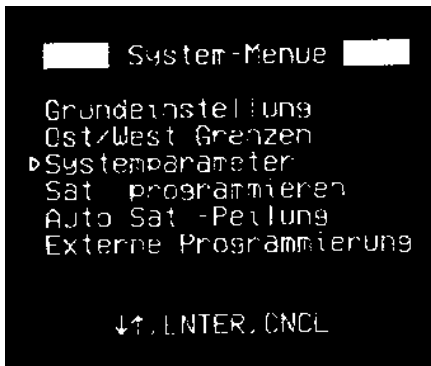
To transfer data from one ST 6002 S to another, select "Master" on the programmed receiver and "Slave" on the receiver you wish to programme.

Point the remote control at both receivers and press ENTER to initiate the data transmission.

Press CNCL to leave this menu.

NOTE: External programming via a computer is described in a separate software manual.





6.1.7 System Options

Move the cursor to the menu option "Change System Options" and press the ENTER button. Choose the appropriate LNB by pressing the ◀ ▶ buttons on the RCU according to the following table:

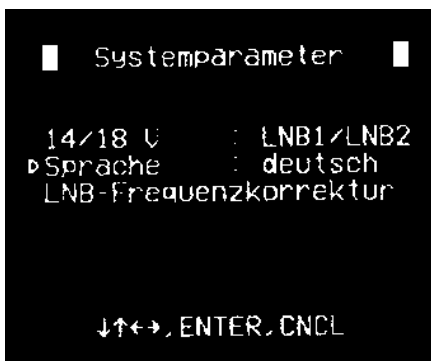
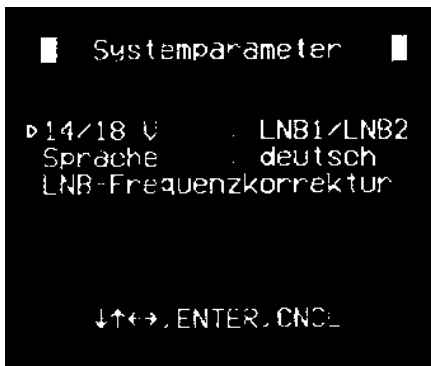
Vert / Horz: LNB with 14/18 V polarisation switch (V/H-LNB)

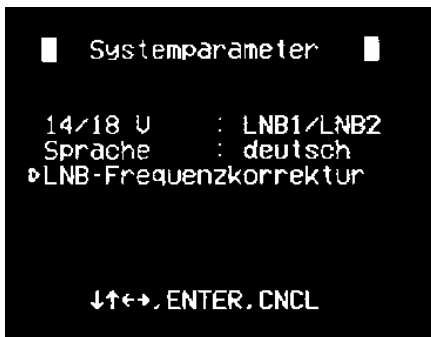
LNB1/LNB2: LNB with 14/18 V frequency range switch (Dual/Triple-Band-LNB)

Fixed 18 V: for other applications

Next you can select the on screen graphic language option, either English, German or French, once again using the ◀ ▶ keys on the RCU.

Press CNCL to return to the System Menu.





Frequency shift

It is possible to tune in the receiver to the frequency of the LNB should it not be supplying the exact IF-frequency:

1. Select a channel which is already stored, and which is transmitting in the 11GHz range. Switch the receiver into stand-by mode and call up the System Menu by holding down the ▼ ▲ buttons on the front panel simultaneously

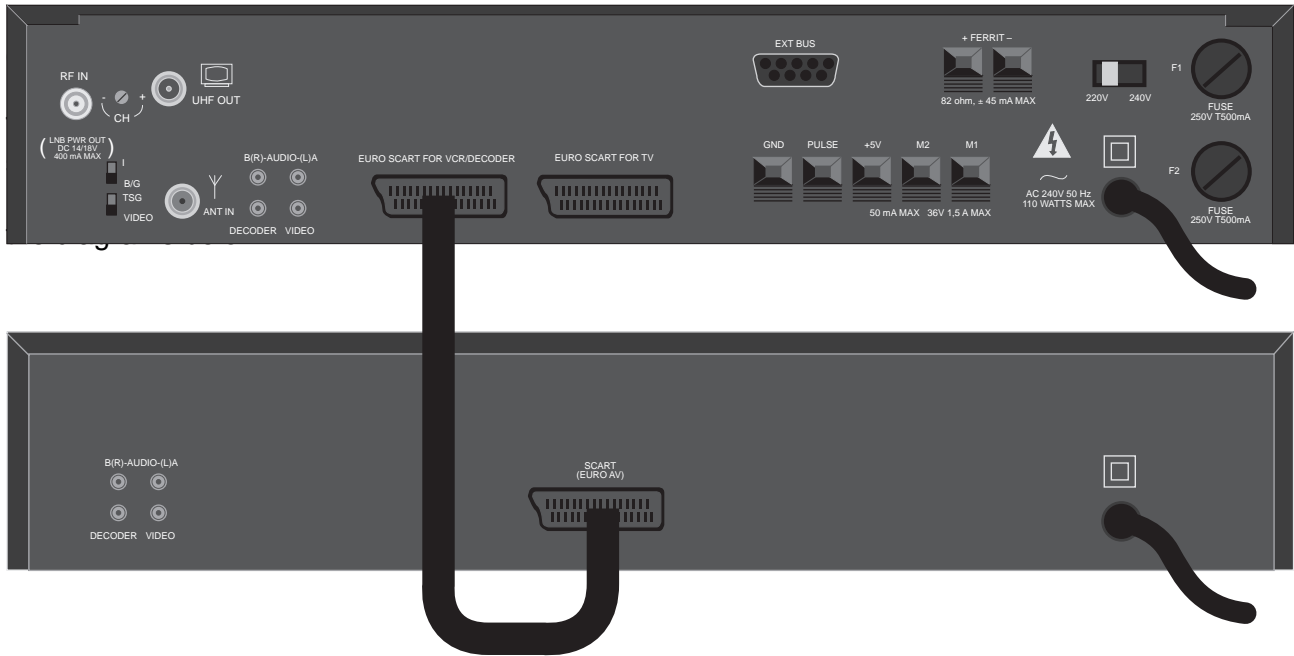
2. First select the option "Change system options", then "Global shift LNB". The blue background disappears and you can view the selected channel.

3. Tune the frequency up or down using the ◀ ▶ buttons (AFC +/-15, 0.25MHz steps). Once you have achieved the best picture quality you can store the frequency shift by pressing ENTER.

NOTE: This affects all 11GHz channels

4. You can also alter the 12GHz range. First select a 12GHz channel and proceed as above. Press CNCL to leave System Menu

6.2. Connecting a Videorecorder or Decoder

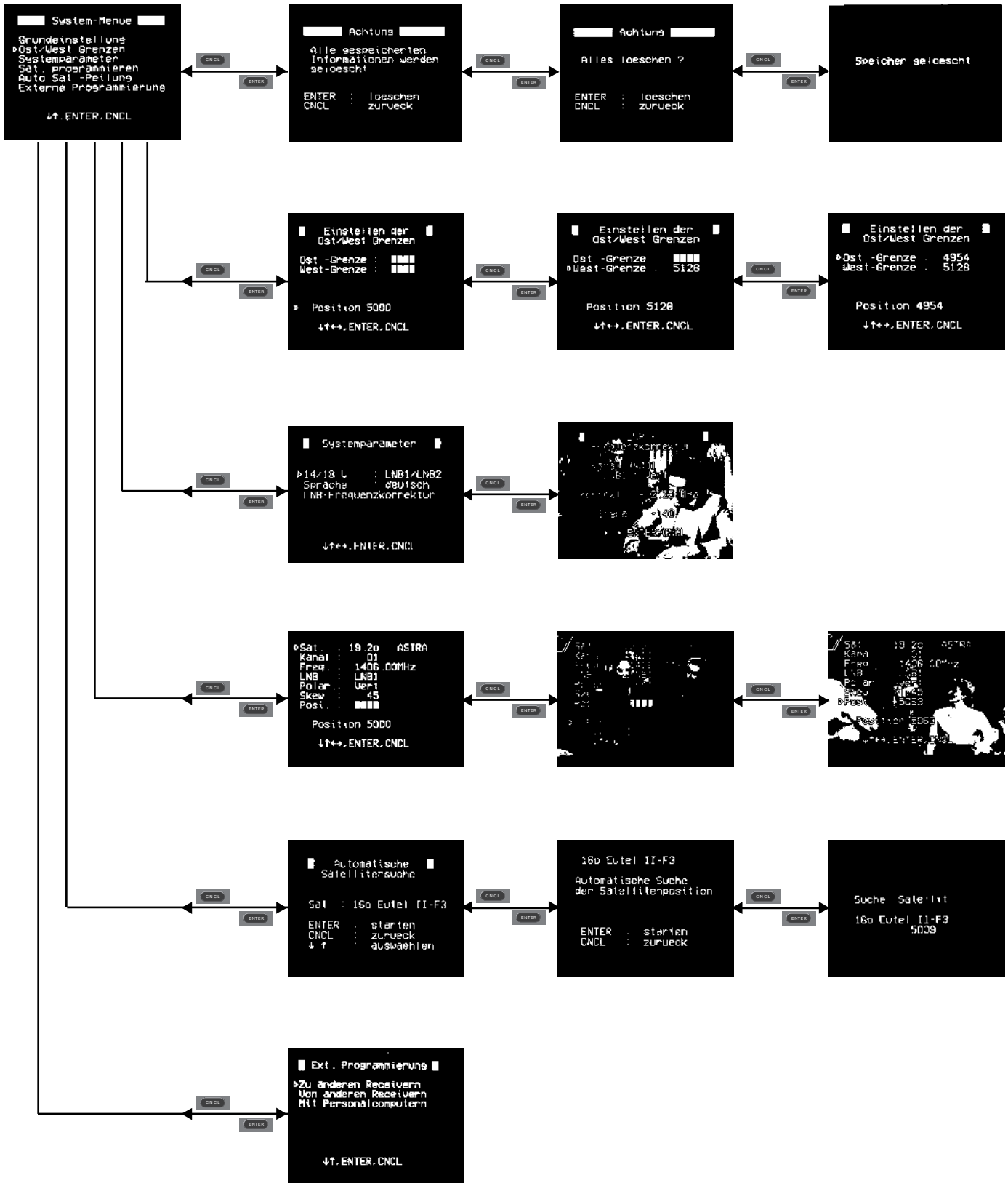


Connection of a decoder

The coded reception signal is sent from the “VCR/Dec” scart socket to the decoder. The decoded signal is sent back to the receiver and can be picked up at the TV scart socket or at the UHF output connection. Therefore connect the decoder at the “VCR/Dec” scart socket as shown above.

The output signals for a decoder can also be picked up at the audio/video phono sockets.

6.3 Menu Overview: System Menu



7. Operation

7.1. General

The receiver ST 6002 S has many functions. For ease of use and so that it is not necessary to use a different button for each function the receiver uses "On Screen Display" and function keys. In this way related functions are condensed into "Menus". An arrow shows which function is in use. Underneath each menu the various keys which may be used are shown.

EXAMPLE:



7.2. Direct Operation

You can select the desired channel via the Key Pad. Simply select the channel number (see the program tables). The channel number will appear on the receiver display and also on the screen. When you choose a 3-fig. channel number the receiver goes directly to the desired channel. If a 1- or 2-fig. number is selected, the receiver waits initially for a further number. If this is not selected after a few seconds it will directly go to the 1- or 2-fig. channel.

Example: Input 004 the receiver goes directly to channel 4 and the screen will show the satellite programme number and programme name

 Input 04 the third place of the screen display flashes for about 3 seconds and then goes to programme 4

When the desired channel is from another satellite, the receiver will automatically turn to the new position. If this satellite has not been stored, a message will appear.

In addition to this there is the possibility to use the ◀ ▶ keys to select the previous or next channel. If in doing this the limits of the satellite are reached, the following message appears on the screen:



This message stays on the screen for a few seconds. The channel will only be selected if you press ENTER and the dish will then move to the desired satellite.

With the ▼ ▲ keys on the RCU you can adjust the volume.

Every time you press ENTER, the name of the satellite, channel number and time will appear on the screen.

With the keys ◀ ▶ on the receiver you can choose other satellites and with the keys ▼ ▲ on the receiver you can change channels. In this way you can operate the receiver without the RCU.

7.3. Menu Operation

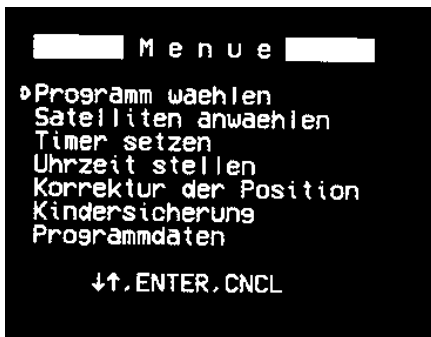
7.3.1. Channel Selection

Move the cursor to "Channel selection" and press ENTER. Use the ▼ ▲ keys to move the cursor to the desired channel and press ENTER.

Stored channels are marked with a quaver.

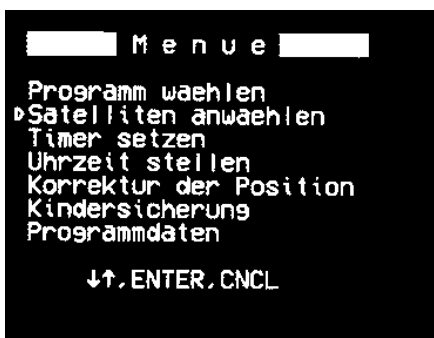
It is also possible to enter the channel no. directly, 3 digits ie. 009 Eurosport

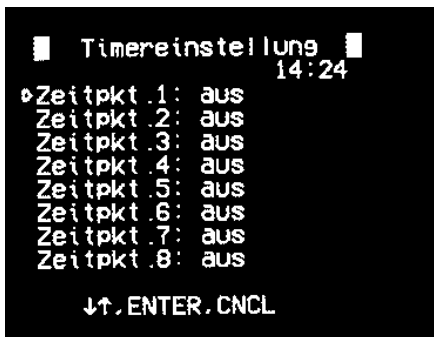
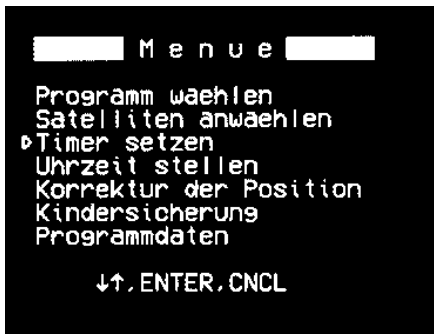
NOTE: To view any particular channel you simply have to select the channel no. It is not necessary to select the relevant satellite first.



7.3.2. Satellite Selection

Choose the option "Satellite selection" from the menu and press ENTER. A list of all the satellites will appear, those which are stored being marked with a quaver. Move the cursor to the desired satellite and press ENTER. Now the dish moves until the position is reached. Non-stored satellites can not be accessed.





7.3.3 . Setting the Timer

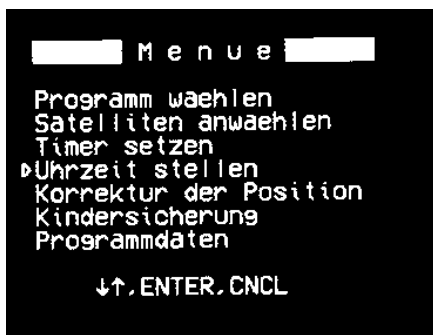
1. Move the cursor to "Program timer events" and then press ENTER. Select Event 1 and press ENTER.
2. Use the ▼ ▲ buttons to move the cursor to "Channel" and with the ◀ ▶ buttons select the required channel. The name of the respective satellite is automatically called up. You also have the option of entering the channel no. directly via the key pad.
3. Move the cursor accordingly from "Month", to "Day", "Start" and "Stop", entering the data as above using the ▶ keys. You can also enter the data for the "Start" and "Stop" fields directly via the key pad ie. enter 2245 for 22.45
4. Finally, in the "Type" field you can enter whether it is a single, daily or weekly recording. In the case of daily or weekly recordings you must in addition enter the last day on which the recording is to be made

By pressing ENTER the information will be stored and you will return to the previous menu. The entered time period is now labelled with "on". In this manner it is possible to program up to 8 different record time settings. If overlapping times are entered, the receiver picks this up and does not accept them. To delete a record time slot press CNCL.

NOTE: having programmed a record time setting you should not switch off the receiver at the mains, otherwise a recording is not possible. To switch the ST 6002 S on and off use only the stand-button.

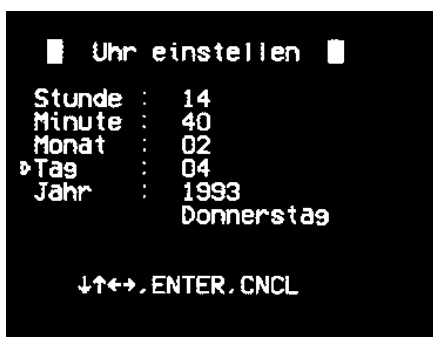


7.3.4. Setting the Clock

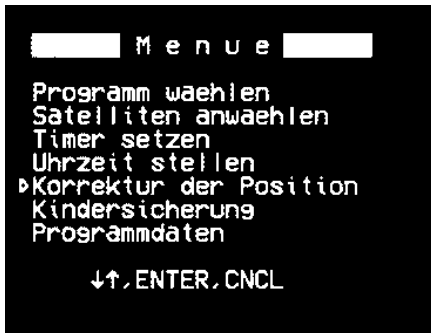


Move the cursor to “Internal clock adjustment” and then press ENTER. Use the position keys to move the cursor to the appropriate line and keep pressing the ► keys until the required data appears. Then press ENTER to start the clock. To return to the main menu press CNCL.

The clock continues to function once the receiver has been switched off at the mains. A special battery is built in to the receiver with a guaranteed long life.



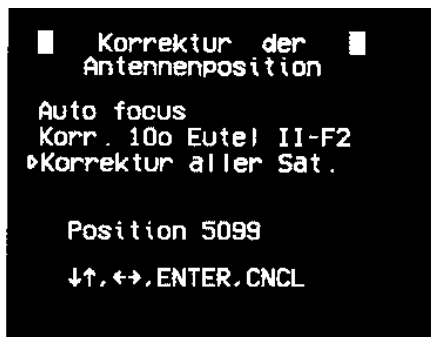
7.3.5. Alignment Dish Position



a) If you wish to shift all satellite positions, eg. after a storm has influenced the dish position, first choose a satellite with a less powerful signal. Then move the dish using the ◀ ▶ buttons until you receive an optimum picture.

Set the cursor to “Shift all satellites” and press ENTER. The shift which is made to the present satellite position will be used to automatically correct the other satellite positions.

b) The “Auto focus” function is designed to shift the present satellite position to achieve optimum reception for all available channels on a particular satellite. Simply move the cursor to “Auto focus” and press ENTER; the dish will move automatically to the position of best reception.



7.3.6. Parental Channel Lock

It is possible to deny access to channels which you only wish to be called up via the remote control. Operating the appliance using the buttons on the front panel is no longer possible:



a) Having selected the appropriate channel select the option "Parental channel lock" and press ENTER. The message "Channel locked" will appear on the screen. On the receiver display the channel indicator F*** will be replaced by L***. In addition, the receiver automatically moves on to the next channel.

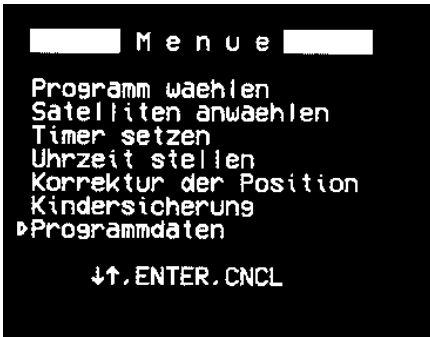
Now it is only possible to call up a blocked channel by direct entry of the channel number via the key pad.

b) To lift the block you must first call up the blocked channel. Then press the MENU button and move the cursor once again to "Parental channel lock". By pressing ENTER the block on the channel is lifted and the message "Channel unlocked" is displayed.

8. Programming

8.1. General

All channels that are known at this time have been stored in the ST 6002 S. However, as new satellites and channels frequently can appear, it is possible for you to receive and store these yourself. To do this you need to obtain the appropriate publication that reports on all such developments.



8.2 Channel Data

Changing the channel sequence

You can use this function to put the channels in the order which you prefer. To transfer the present channel move the cursor to "Channel data" and press ENTER. Now select the option "Copy channel data" and enter the channel number you wish to move the channel to.

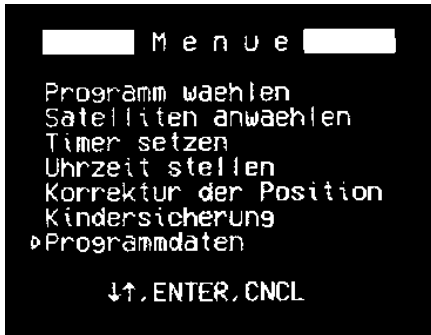
NOTE: The data of the channel you wish to move to will be overwritten. This can be avoided by making use of a free channel as an intermediate channel ie. Ch 044:

EXAMPLE: Preprogramming: Desired Programming:

Ch 001: Pro 7 Ch 001: RTL Plus
Ch 002: RTL Plus Ch 002: Pro 7

Proceed as follows:

Ch 001 to Ch 044 Pro 7 on Ch 001 & 044
Ch 002 to Ch 001RTL Plus on Ch 002 & 001
Ch 044 to Ch 002Pro 7 on Ch 002
& RTL Plus on Ch 001



8.3 Expanding the Programmable Range of a Satellite

Only a certain number of channels are available to each satellite unless you choose to extend them eg. ASTRA Ch1-61 & 199-200

(16 channels have been set aside for Astra 1C)

NOTE: A full listing of the preprogrammed channels and the respective satellites is available at the back of this manual.

1. For example, should you wish to store a new radio station on channel 62, first of all select channel 61, press MENU and choose "Channel data", then "Copy channel data".

2. Move the cursor to "Channel" and select channel 62. When you press ENTER, the data of channel 61 will be copied to channel 62, so that channel 62 is now available to ASTRA. The former data of channel 62 is erased.

3. Now you can tune the new radio station by changing the parameters (Video/Audio/Skew)

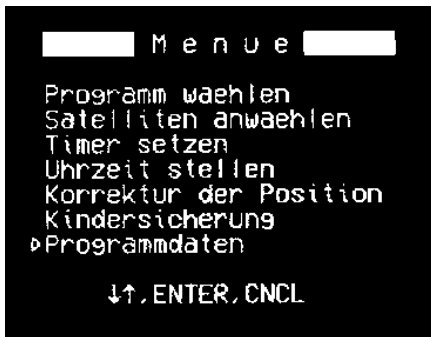
8.4 Programming The Channels of new Satellites

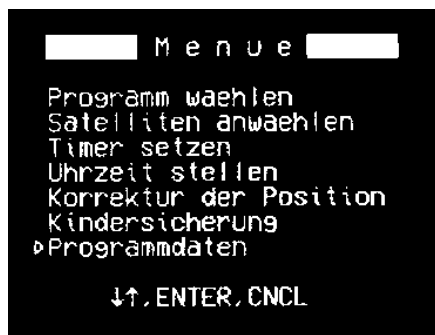
1. First program the new satellites as described in the section on "Programming of Future Satellites".

2. Select an already stored channel whose parameters are similar to the ones of the new channel. Move the cursor to "copy channel data" and press ENTER. Move the cursor to "sat" and select the new satellite e.g. "Spare 1".

3. Now move the cursor to "Channel" and choose the one you wish to use for the new satellite. Then press ENTER.

NOTE: The former data of the channel you copy to will be erased. Then alter the parameters accordingly in order to receive the new channel (Video/Audio/Skew).





8.5 Changing the Channel Name

Select the channel whose name you wish to alter.

Once again select "Channel data" followed this time by "Change Channel Name".



You can alter the name of the channel using the ▲ ▼ buttons to select both characters and numbers. Move the cursor using the ▲ ▼ keys. The maximum number of characters which can be entered is ten.

The new name of the channel can be stored using the ENTER button.



```
■ Programmdaten ■  
  aendern  
  
Sat : 10o Eutel II-F2  
Kanal : 133  
  
Name: Hig Star 1  
      ↑  
  
↓↑↔.ENTER.CNCL
```

```
■ Programmdaten ■  
  aendern  
  
Sat : 10o Eutel II-F2  
Kanal : 133  
  
Name: High Life ↑  
  
↓↑↔.ENTER.CNCL
```



8.6 Changing Channel Parameters

8.6.1. Video Menu:



To change the present video parameters first press the VIDEO button on the RCU. The video menu appears on the screen. Now you can change the following parameters:

- "IF tune" - IF (950 - 2050 MHz) which can be keyed in directly
- "B/W" - Video bandwidth, 18/27 MHz selectable. Switch to narrow (18 MHz) for reception of weak signals.
- "Level" - You can alter the video level (1 - 4) to change the channel brightness.
- "Video-Pol" - You only change the video polarisation to "inverted" for C-band reception or for some special decoders.
- "Decoder" - If you wish to connect a decoder to your ST 6002 S, switch to "External". Then the coded reception signal will be sent from the VCR/Dec. scart socket to the decoder. The decoded signal will be sent back to the receiver and can be picked up at any output.
If you have chosen "External", you can select between 4 different decoder signals depending upon the decoder being used.
You can also switch to "External" if you wish to thru-loop the playback of a video recorder to your TV.

If you wish to store the changes, leave the video menu using ENTER. If not, press CNCL.

NOTE:

The respective signal strength is also displayed on the screen. The weaker the signal is, the greater the negative value.

8.6.2 Audio Menu

To call up this menu press the AUDIO button. The following parameters can be changed:



- "B/W" - The audio bandwidth can be switched between 150, 280 or 350 MHz.
- "De-Emph" - You can choose between 50us, J17 and Wegener.
- "Pair" - If you switch it on, you can choose only the most common audio subcarrier freq. pairs (e.g. 7.02/7.20) as Audio A & B frequencies. This simplifies the programming of stereo programmes.
- "Mode" - Select either mono or stereo.
- "Audio A" - You can enter the Audio A frequency either by using the ◀ ▶ buttons or by keying it in directly.
- "Audio B" - This parameter only appears if "Stereo" is selected.

To store audio parameters which have been changed, leave this menu using ENTER.



8.6.3 Skew Menu

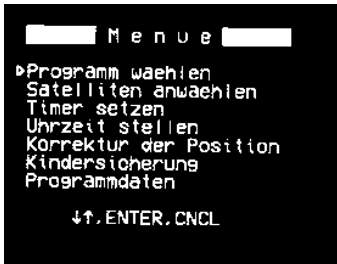


- "Skew" - If you wish to fine tune the polarity, you can alter the current of the polariser from -45 mA to +45 mA until you receive a picture of optimum quality. The display of the signal strength may also help you.
- "Format" - Vertical:
vertical or right circ. polarisation
Horizontal:
horizontal or left circ. polarisation
- "LNB" - LNB1 = 11 GHz frequency range
LNB 2 = DBS and 12 GHz frequency range

If you have connected a V/H-LNB, only the format switch is activated. To store the present data, press ENTER.

8.7 Menu Overview: Main Menu

MENU



VIDEO



AUDIO



SKEW



Channel Programming:

Ch.Nr.	Programme	ZF MHz	A	B	MODE	Audio ZF	Demph.	V-Pgl	Dec-VIDEO	Dec. MODUS	Polar	Satellite	LNB-Sp.
1	PRO 7	1.406	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
2	RTL	1.229	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
3	SAT. 1	1.288	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
4	DSF	1.523	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
5	ARD 1 PLUS	1.494	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
6	3 SAT	1.347	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
7	NORD 3	1.582	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
8	SPORTKANAL	1.214	7,02	7,20	MONO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
9	EUROSPORT	1.259	7,20	7,02	MONO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
10	MTV Europe	1.421	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
11	PREMIERE	1.464	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
12	SKY ONE	1.318	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
13	SKY NEWS	1.377	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
14	CNN Int.	1.627	6,50	7,02	MONO	280	50 µS	1	NO	D-4	VER	ASTRA	11 Ghz 14V
15	RTL 4 VERONIQUE	1.391	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
16	LIFESTYLE, CHILDR.CH.	1.273	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
17	TELECLUB	1.332	6,50	7,02	MONO	280	50 µs	1	NO	D-3	Hor	ASTRA	11 Ghz 14V
18	FILMNET	1.362	7,02	7,20	MONO	150	Panda/Weg.	1	NO	D-2	Hor	ASTRA	11 Ghz 14V
19	MTV Europe	1.538	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
20	n-tv	1.641	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
21	Cinemania	1.656	7,02	7,20	MONO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
22	CNC	1.686	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
23		964	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
24		979	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
25		994	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
26		1.008	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
27		1.023	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
28		1.038	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
29		1.053	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
30		1.067	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
31		1.082	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
32		1.097	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
33		1.112	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
34		1.126	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
35		1.141	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
36		1.156	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
37		1.171	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
38		1.186	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
39	Sky Movies Plus	1.436	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
40	Movie Channel	1.479	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
41	Sky Sports	1.509	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
42	TV Asia/Sky Mov. G.	1.597	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
43	JSTV / Child.Ch.	1.568	7,02	7,20	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
44	TV 3 Schwed.	1.244	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
45	TV 3 Daenemark	1.612	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
46	TV 3 Norw.	1.671	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
47	TV 1000	1.303	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
48	UK Gold	1.553	6,50	7,02	MONO	280	50 µs	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
49	NDR 2	1.582	7,38	7,56	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
50	SWF 3	1.494	7,38	7,56	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V

Ch.Nr.	Programme	ZF MHz	A	B	MODE	Audio ZF	Demph.	V-Pgl	Dec-VIDEO	Dec. MODUS	Polar	Satellit	LNB-Sp.
51	POWER FM	1.421	7,38	7,56	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
52		1.332	7,38	7,56	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
53	RADIO LUX. INT.	1.391	7,38	7,56	STEREO	150	Panda/Weg.	1	NO	D-4	Hor	ASTRA	11 Ghz 14V
54	SKY RADIO	1.318	7,38	7,56	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
55	STAR SAT RADIO	1.406	7,38	7,56	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
56	DTSCH. WELLE II	1.229	7,56	6,50	MONO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
57	DTSCH. WELLE I	1.229	7,38	7,56	MONO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
58	DLF III	1.288	7,92	7,74	MONO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
59	DEUTSCHLANDF.II	1.288	7,74	7,92	MONO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
60	DEUTSCHLANDF.I	1.288	7,38	7,56	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
61	RADIOROPA INFO	1.406	7,74	7,92	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 Ghz 14V
62	SAT 1	1.475	6,65	7,02	MONO	280	50 µs	3	NO	D-4	Hor	KOP	11 Ghz 14V
63	3 SAT	1.525	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	11 Ghz 14V
64	ARD 1 Plus	1.625	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	11 Ghz 14V
65	RTL	1.675	6,65	7,02	MONO	280	50 µs	3	NO	D-4	Hor	KOP	11 Ghz 14V
66	ARTE	1.549	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	KOP	11 Ghz 14V
67	Vox	1.600	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	KOP	11 GHz 14V
68	PRO 7	1.809	7,38	7,56	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	12 Ghz 18V
69	DSF	1.942	7,38	7,56	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	12 Ghz 18V
70	n-tv	1.774	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	KOP	12 Ghz 18V
71	Premiere	1.841	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	KOP	12 Ghz 18V
72	West 3	1.908	6,65	7,02	MONO	280	50us	3	NO	D-4	Ver	KOP	12 Ghz 18V
73	Bayern 3	1.975	6,65	7,02	MONO	280	50us	3	NO	D-4	Ver	KOP	12 Ghz 18V
74	StarSat Radio	1.475	7,38	7,56	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	11 GHz 14V
75	RTL Radio	1.675	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	11 GHz 14V
76	Buchm. Infos	1.675	7,74	7,92	MONO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	11 GHz 14V
77	Radio Melodie	1.809	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	12 GHz 18V
78	ISS	1.809	7,89	8,00	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	KOP	12 GHz 18V
79	Klassik Radio	1.841	7,38	7,56	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	KOP	12 GHz 18V
80	RADIOROPA-INFO	1.908	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	KOP	12 GHz 18V
81	FM-Test-U-Musik	1.975	7,68	7,83	MONO	150	Panda/Weg.	3	NO	D-4	Ver	KOP	12 GHz 18V
82	FM-Test-U-Musik	1.975	7,83	7,68	MONO	150	Panda/Weg.	3	NO	D-4	Ver	KOP	12 GHz 18V
83	Spor. Überspiel.	975	6,60	7,02	MONO	280	50 µs	3	NO	D-4	Hor	Intelsat 602	11 GHz 14V
84	RETE 4	1.011	6,60	7,02	MONO	280	50 µs	3	NO	D-4	Hor	Intelsat 602	11 GHz 14V
85	Italia 1	1.137	6,60	7,02	MONO	280	50 µs	3	NO	D-4	Hor	Intelsat 602	11 GHz 14V
86	Canale 5	1.173	6,60	7,02	MONO	280	50 µs	3	NO	D-4	Hor	Intelsat 602	11 GHz 14V
87	IRIB TV2	990	6,80	7,02	MONO	280	50 µs	3	NO	D-4	Ver	Intelsat 602	11 GHz 14V
88	IRIB TV1	1.155	6,80	7,02	MONO	280	50 µs	3	NO	D-4	Ver	Intelsat 602	11 GHz 14V
89	TRT 4	972	6,80	7,02	MONO	280	50 µs	3	NO	D-4	Hor	Intelsat 604	11 GHz 14V
90	TRT 3	1.136	6,80	7,02	MONO	280	50 µs	3	NO	D-4	Hor	Intelsat 604	11 GHz 14V
91	TRT 1	1.650	6,80	7,02	MONO	280	50 µs	3	NO	D-4	Hor	Intelsat 604	11 GHz 14V
92	TRT 2	1.685	6,80	7,02	MONO	280	50 µs	3	NO	D-4	Hor	Intelsat 604	11 GHz 14V
93	Bayern Journal	1.010	6,65	7,02	MONO	280	50 µs	3	NO	D-4	Ver	Intelsat 604	11 GHz 14V
94	TRT Radio	1.136	8,28	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Hor	Intelsat 604	11 GHz 14V
95	Holiday Radio	1.650	8,28	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Hor	Intelsat 604	11 GHz 14V
96	Holiday Radio	1.685	8,28	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Hor	Intelsat 604	11 GHz 14V
97	Spor. Überspiel.	1.525	6,65	7,02	MONO	280	50µs	3	NO	D-4	Hor	Kop.2	11 GHz 14V
98	Wir in Niedersachsen	1.875	6,65	7,02	MONO	280	50µs	3	NO	D-4	Hor	Kop.2	12 GHz 18V
99	Nord Live	1.942	6,65	7,02	MONO	280	50µs	3	NO	D-4	Hor	Kop.2	12 GHz 18V
100	Schaltst. Berlin 3	1.908	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver	Kop.2	12 GHz 18V
101	Schaltst. Berlin 3	1.975	6,65	7,02	MONO	280	Digital	3	NO	D-4	Ver	Kop.2	12 GHz 18V
102		1.554	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F3	11 GHz 14V
103	Antena 3 TV	972	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V
104	Tele 5 Espana	1.095	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V
105	CanalPlusEsp.	1.180	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V

K.Nr.	Programm	ZF MHz	A	B	MODE	Audio ZF	Demph.	V-Pgl	Dec-VIDEO	Dec. MODUS	Polar	Satellit	LNB-Sp.
106	RTP Internac.	1.575	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V
107	TV 7 (Tunesienne)	1.659	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V
108	Business-TV	1.772	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F3	12 GHz 18V
109	Onda C.Musica	972	7,20	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V
110	SER 40 Pricipales	972	7,38	7,56	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V
111	SER Convencional	972	7,74	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V
112	TV-Ton	972	7,92	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Ver	Eutelsat II-F3	11 GHz 14V
113	Eurosport	972	7,20	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Hor	Eutelsat II-F1	11 GHz 14V
114	RTL 2	1.095	6,65	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F1	11 GHz 14V
115	TRT/Red Hot Dutch	1.180	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F1	11 GHz 14V
116	mbc	1.554	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	Eutelsat II-F1	11 GHz 14V
117	SuperChannel	987	7,20	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Ver	Eutelsat II-F1	11 GHz 14V
118	TV 5 Europe	1.080	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F1	11 GHz 14V
119	DW-Fernsehen	1.163	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F1	11 GHz 14V
120	Euronews	1.575	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F1	11 GHz 14V
121	TV 5 Europe	1.659	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F1	11 GHz 14V
122	WISEUROPE	1.772	6,60	7,20	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F1	12 GHz 18V
123	Neuapost. Kirche	1.819	6,65	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F1	12 GHz 18V
124	TV Sport	1.834	5,80	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F1	12 GHz 18V
125	Dtsch.Welle	1.163	7,02	7,20	MONO	150	Panda/Weg.	3	NO	D-4	Ver	Eutelsat II-F1	11 GHz 14V
126	VOA-Europe	1.163	7,38	7,56	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	Eutelsat II-F1	11 GHz 14V
127	TVE 1	1.080	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F2	11 GHz 14V
128	TVE int.	1.149	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F2	11 GHz 14V
129	ON	1.596	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat II-F2	11 GHz 14V
130	RAIUNO	972	6,60	7,02	MONO	350	J17	3	NO	D-4	Ver	Eutelsat II-F2	11 GHz 14V
131	RAIDUE	1.095	6,60	7,02	MONO	350	J17	3	NO	D-4	Ver	Eutelsat II-F2	11 GHz 14V
132	Show TV	1.575	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F2	11 GHz 14V
133	Star 1	1.617	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver	Eutelsat II-F2	11 GHz 14V
134	Rad. Point of Sale	1.617	7,38	7,56	STEREO	150	Panda/Weg.	3	NO	D-4	Ver	Eutelsat II-F2	11 GHz 14V
135	RTV Beograd	1.178	6,65	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat I-F4	11 GHz 14V
136	ITN / WTN	1.510	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat I-F4	11 GHz 14V
137	E.P.T.-ET 1	1.554	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat I-F4	11 GHz 14V
138	RIK Nikosia	1.594	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor	Eutelsat I-F4	11 GHz 14V
139	Radio Beograd	1.178	7,02	7,20	MONO	150	Panda/Weg.	3	NO	D-4	Hor	Eutelsat I-F4	11 GHz 14V
140	TV 4 Swed.	1.457	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	linksdr.	Tele x	12 GHz 18V
141	TV 5 Nordic	1.725	6,50	7,02	MONO	280	50µs	3	NO	D-4	linksdr.	Tele x	12 GHz 18V
142	Radio Sweden Int.	1.457	7,38	7,02	MONO	150	Panda/Weg.	3	NO	D-4	linksdr.	Tele x	12 GHz 18V
143	NorNet	969	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor.	Intelsat 512	11 GHz 14V
144	TV Norge	1.016	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor.	Intelsat 512	11 GHz 14V
145	TV3 Israel	1.013	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver.	Intelsat 512	11 GHz 14V
146	TV2 Israel	1.174	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver.	Intelsat 512	11 GHz 14V
147	TV1 Israel	1.595	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver.	Intelsat 512	11 GHz 14V
148	Radio Limelight	1.016	7,56	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Hor.	Intelsat 512	11 GHz 14V
149	Radio NordseeInt.	1.016	7,74	7,02	MONO	150	Panda/Weg.	3	NO	D-4	Hor.	Intelsat 512	11 GHz 14V
150	M 6	1.772	5,80	6,40	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2B	12 GHz 18V
151	France 2	1.814	5,80	6,40	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2B	12 GHz 18V
152	Canal Plus	1.898	5,80	6,40	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2B	12 GHz 18V
153	TF 1	1.940	5,80	6,40	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2B	12 GHz 18V
154	Canal J	1.982	5,80	6,40	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2B	12 GHz 18V
155	Rad. Mosquetaire	1.772	6,40	7,25	STEREO	280	J17	3	NO	D-4	Hor	Telecom 2B	12 GHz 18V
156	Europe 1	1.772	6,85	8,20	STEREO	280	J17	3	NO	D-4	Hor	Telecom 2B	12 GHz 18V
157	Resonances	1.898	6,40	8,20	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2B	12 GHz 18V
158	RMC	1.898	6,85	8,20	STEREO	280	J17	3	NO	D-4	Ver.	Telecom 2B	12 GHz 18V
159	MCM Euro musique	1.796	5,80	6,40	MONO	280	J17	3	NO	D-4	Hor.	Telecom 2A	12 GHz 18V
160	Planete	1.838	5,80	6,40	MONO	280	J17	3	NO	D-4	Hor.	Telecom 2A	12 GHz 18V

K.Nr.	Programm	ZF MHz	A	B	MODE	Audio ZF	Demph.	V-Pgl	Dec-VIDEO	Dec. MODUS	Polar	Satellit	LNB-Sp.
161	Cine Cinetti	1.880	5,80	6,40	MONO	280	J17	3	NO	D-4	Hor.	Telecom 2A	12 GHz 18V
162	Canal Plus	1.772	5,80	6,40	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2A	12 GHz 18V
163	France 2	1.814	5,80	6,40	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2A	12 GHz 18V
164	Canal Plus	1.898	5,80	6,40	MONO	280	J17	3	NO	D-4	Ver.	Telecom 2A	12 GHz 18V
165	RTL	997	0,00	0,00	STEREO	Digital		3	NO	D-1	Ver.	TV-SAT	12 GHz 18V
166	SAT.1	1.073	0,00	0,00	STEREO	Digital		3	NO	D-1	Ver.	TV-SAT	12 GHz 18V
167	3 sat	1.150	0,00	0,00	STEREO	Digital		3	NO	D-1	Ver.	TV-SAT	12 GHz 18V
168	ARD Eins Plus	1.304	0,00	0,00	STEREO	Digital		3	NO	D-1	Ver.	TV-SAT	12 GHz 18V
169	MCM	977	0,00	0,00	STEREO	Digital		3	NO	D-1	Ver.	TDF	12 GHz 18V
170	Canal plus franz.	1.054	0,00	0,00	STEREO	Digital		3	NO	D-1	Ver.	TDF	12 GHz 18V
171	arte	1.131	0,00	0,00	STEREO	Digital		3	NO	D-1	Ver.	TDF	12 GHz 18V
172	Antenne 2	1.284	0,00	0,00	STEREO	Digital		3	NO	D-1	Ver.	TDF	12 GHz 18V
173	RAISAT	1.419	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Hor	Olympus	12 GHz 18V
174	Brightstar	1.016	6,60	7,02	MONO	280	50µs	3	NO	D-4	Hor.	Intelsat 601	11 GHz 14V
175	Bravo	1.055	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Hor.	Intelsat 601	11 GHz 14V
176	Parliamentary Ch.	1.095	6,65	7,02	MONO	280	50µs	3	NO	D-4	Hor.	Intelsat 601	11 GHz 14V
177	Childrens Ch.	1.135	6,65	7,02	MONO	280	50µs	3	NO	D-4	Hor.	Intelsat 601	11 GHz 14V
178	Kindernet/Discovery	1.175	7,02	7,20	STEREO	150	Panda/Weg.	3	NO	D-4	Hor.	Intelsat 601	11 GHz 14V
179	BBC World	995	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
180	CNN	1.155	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
181	EBU	1.470	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
182	Bright Star	1.515	6,60	7,02	MONO	280	50µs	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
183	SSVC TV	1.562	6,65	7,02	MONO	280	50µs	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
184	BBC for Europe	995	7,02	7,20	MONO	150	Panda/Weg	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
185	BBC Foreign 2	995	7,20	7,02	MONO	150	Panda/Weg	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
186	BBC Foreign 3	995	7,38	7,02	MONO	150	Panda/Weg	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
187	BBC (tsch.slow.)	995	8,10	7,02	MONO	150	Panda/Weg	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
188	CNN Radio	1.155	6,30	7,02	MONO	150	Panda/Weg	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
189	BFBS	1.562	7,02	7,20	MONO	150	Panda/Weg	3	NO	D-4	Ver.	Intelsat 601	11 GHz 14V
190		1.479	6,60	7,20	MONO	280	50us	3	NO	D-4	Hor	PanAmSat	11 GHz 14V
191	Galavision	1.515	6,20	6,80	MONO	280	50us	3	NO	D-4	Hor	PanAmSat	11 GHz 14V
192	DigitalServices	1.560	0,00	0,00	MONO	Digital		3	NO	D-1	Hor	PanAmSat	11 GHz 14V
193		1.596	6,20	6,80	MONO	280	50µs	3	NO	D-4	Hor	PanAmSat	11 GHz 14V
194		1.639	6,20	6,80	MONO	280	50µs	3	NO	D-4	Hor	PanAmSat	11 GHz 14V
195	NHK	1.675	6,20	6,80	MONO	280	50µs	3	NO	D-4	Hor	PanAmSat	11 GHz 14V
196	NHK	1.675	6,20	6,80	MONO	280	50µs	3	NO	D-4	Hor	PanAmSat	11 GHz 14V
197		1.000	6,20	6,80	MONO	280	50µs	3	NO	D-4	Hor	PanAmSat	11 GHz 14V
198		960	6,20	6,80	MONO	280	50µs	3	NO	D-4	Hor	PanAmSat	11 GHz 14V
199		1.229	7,38	7,02	MONO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 GHz 14V
200	RADIOROPA-INFO	1.406	7,74	7,92	STEREO	150	Panda/Weg.	1	NO	D-4	Ver	ASTRA	11 GHz 14V

02.93

Panda/Weg = Panda/Wegener kompatibel

10 Technical Specifications

Tuner

Input frequency:	950-2050 MHz
Input impedance:	75 Ohm
Input level:	-60dBm to -30dBm
Input Connector:	F-Type
LNB Power:	+18/+14V DC 400mA max. short circuit protected
Bandwidth:	27 MHz, 18 MHz
Gain Control:	AGC
Tuning:	PLL frequency synthesized

Video Output

Deemphase:	CCIR REC: 405-1, 625 Lines
Bandwidth:	5 MHz
Ed Rejection:	40 dB min.
Level:	1 Vss an 75 Ohm/1 Vpp into 75 Ohm
Output Connector:	Scart, Cinch
Level Control:	four levels

Decoder Output

	d1 non de-emphasized,unfiltered, unclamped, B/B
	d2 de-emphasized,unfiltered, unclamped, B/B
	d3 de-emphasized,filtered unclamped, Video
	d4 de-emphasized,filtered, clamped, Video
Bandwidth:	10.5 MHz
Output level:	d1 0,4Vss an 75 Ohm d2-d4 1 Vss an 75 Ohm/ d1 0,4Vp-p into 75 Ohm d2-d4 1Vp-p into 75 Ohm
Output Connector:	Scart and Phono
Output Impedance:	75 Ohm

Audio

Frequency Range:	5.0 bis/to 8.8 MHz adjustable
Mode:	Mono/Stereo selectable
Bandwidth:	150/ 280/ 350 kHz switchable
Deemphase:	50µS/ J17/ Panda Wegener kompatibel
Frequency response:	20 Hz bis/to 15 kHz +/- 2dB
Output level:	3 Vss an 600 Ohm: 50µS/WP 2 Vss an 600 Ohm: J17/ 3 Vp-p by 600 Ohm: 50us/WP 2 Vp-p by 600 Ohm: J17
Output connector:	Scart, Cinch (L,R)
Level control:	8 steps and mute
Stereo Audio 4 Pairs:	7.02 & 7.20, 7.38 & 7.56, 7.74 & 7.92, 8.10 & 8.28
10 Mono Audio choices:	6.50, 6.65, 7.02, 7.20, 7.38, 7.56, 7.74, 7.92, 8.10, 8.28

HF Modulator

UHF Channel 35-44, preset to channel 39, Pal G, 1 switchable

output level:	75 +/-4dBµV
output connector:	IEC Male
Ant. input connector:	IEC Female

Polarizer

V/H Typ:	+14V/+18V max. 400mA
Ferrit- Polariser:	+/-45mA an/by 82 Ohm

Others

Supply voltage:	220V 50Hz, 240V 50Hz (Option)
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Technical specifications are subject to change without notice!

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