Grundig SAT Systems

SATELLITE TV CONVERTER

STC 1200

ENGLISH

CE

This product conforms with the requirements of the 73/23/EC and 89/336/EC guidlines of the European Council.

The standards EN 50083-1, EN 50083-2 and EN 60065 required for the CE certification are kept to.

Additional Information for Units sold in Great Britain

Units sold in GB are suitable for operation from a 240 V AC, 50 Hz mains supply.

In case this appliance is supplied with a Safety Standard Approved mains lead fitted with a non-rewireable 13 Amp mains plug which, if unsuitable for your socket, should be cut off and an appropriate plug fitted by a qualified electrician. The fuse and fuse holder must be removed from the plug as accidental insertion of the redundant plug into a 13 Amp socket is likely to cause an electrical hazard.

Note: The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13 Amp socket elsewhere.

If it is necessary to change the fuse in the non-rewireable plug, the correct type and rating (5 Amp ASTA or BSI approved BS 1362) must be used and the fuse cover must be refitted. If the fuse cover is lost or damaged the lead and plug must not be used until a replacement is obtained. Replacement fuse covers should be obtained from your dealer.

If a non-rewireable plug or a rewireable 13 Amp (BS 1363) plug is used, it must be fitted with a 5 Amp ASTA or BSI approved BS 1362 fuse. If any other type of plug is used it must be protected by a 5 Amp fuse either in the plug or at the distribution board.

Important:

The wires in the mains lead are coloured in accordance with the following code:

BLUE – NEUTRAL

BROWN – LIVE

As the colours of the wires in the mains lead of your appliance may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows:

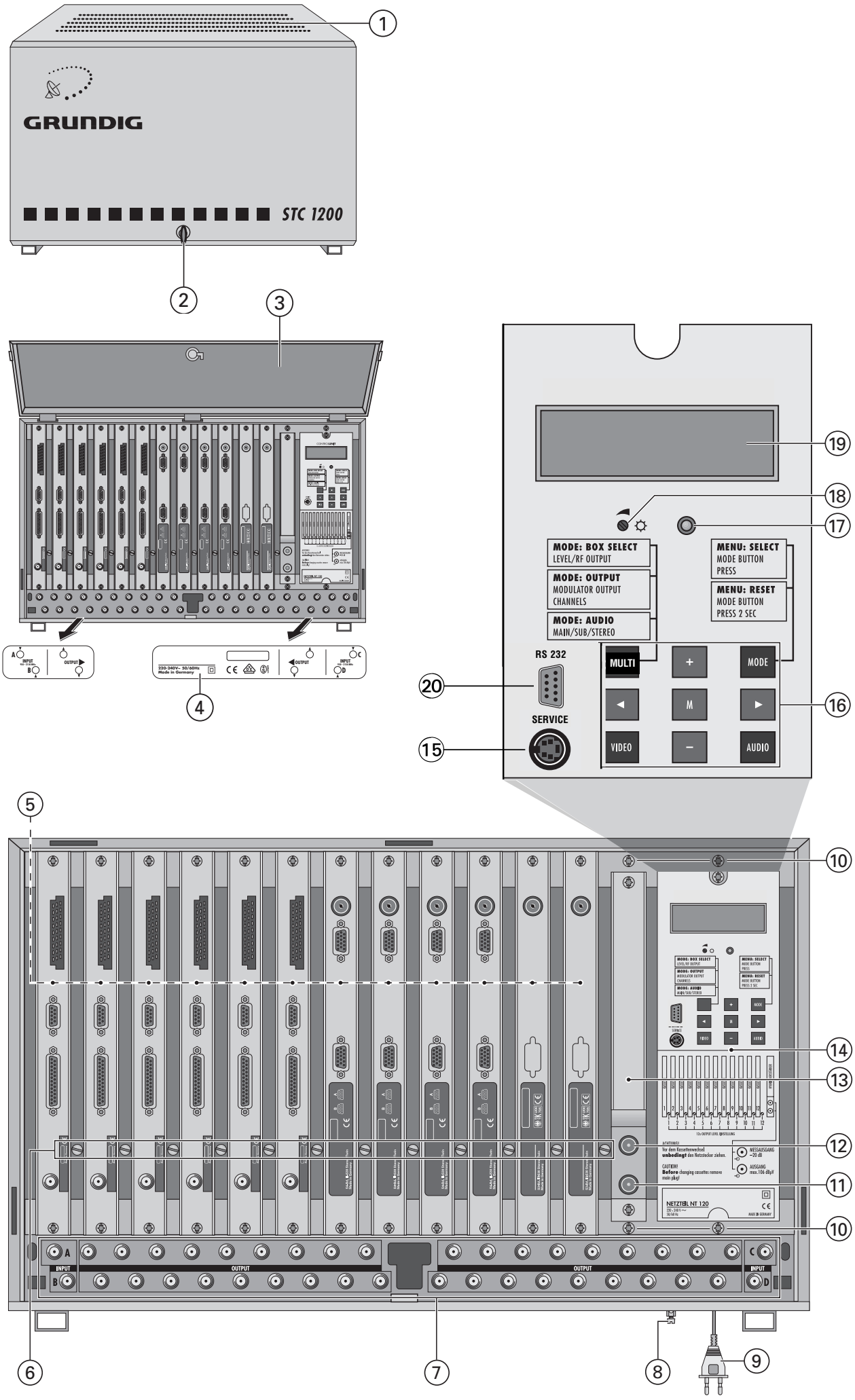
Connect the BLUE coloured wire to plug terminal marked with the letter "N" or coloured black.

Connect the BROWN coloured wire to the plug terminal marked with a letter "L" or coloured red.

In no circumstance must any of the wires be connected to the terminal marked with a letter "E", earth symbol ⏚ , coloured green or green and yellow.

Replacement mains lead can be obtained from your dealer.

Contents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GRUNDIG
STC 1200
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MODE: BOX SELECT
LEVEL/RF OUTPUT
MODE: OUTPUT
MODULATOR OUTPUT
CHANNELS
MODE: AUDIO
MAIN/SUB/STEREO
MENU: SELECT
MODE BUTTON
PRESS
MENU: RESET
MODE BUTTON
PRESS 2 SEC
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Components and connectors

① Ventilation slots

② Key for the door of the head station

③ Unhingeable door; can be removed in upward direction.

④ Type plate

⑤ 12 cassette plug-in locations.

⑥ 12 level controls for the output signal (setting range 0 dB to –20 dB).

⑦ SAT input distributor:
4 inputs **A, B, C, D,** (female F connectors)
9 outputs **per input** (female F connectors)
(passage loss: typ. –16 dB).

⑧ Earth clamp: make the earth connection according to the valid VDE regulations 0855.

⑨ Plug-in mains connector (in the base plate).

⑩ 4 spare screws (for cassette fixation).

⑪ RF output socket: max. 106 dBµV, for feeding the signals into the existing house distribution system (male IEC connector).

⑫ RF measuring output: –20 dB (male IEC connector).

⑬ Hybrid amplifier cassette

⑭ Power supply and control unit

4 supply plugs (+18 V LNC voltage) for the respective RF input A, B, C or D (see page 5, section "Operation with twin LNC's").

The control unit

⑮ **SERVICE** socket (for factory settings only)
Interface provided for PC-controlled programming; input socket for software update.

⑯ **Keys on the control unit**

MULTI key (multi function key)
When in the "OUTPUT" menu, press this key repeatedly until the output channels 1 to 4, 5 to 8 or 9 to 12 are shown in the display. Press once again to return to the "OUTPUT" menu.
When in the "AUDIO" menu, press the **MULTI** key to select the main carrier as well as the "Sub", "Mono" or "Stereo" sound sub-carriers.

MODE key
Select in the menu: go to next menu item (user guide!).
Reset in the menu: press the key a longer time to return from any menu item to the beginning of the menu.

VIDEO key
Direct access to the "Video amplitude" menu item.

AUDIO key
Direct access to the "AUDIO" (audio frequency selection) menu item.

◄ ► keys
When in the "INPUT" and "AUDIO" menus: move the cursor in the display to the left or the right.

+ / **–** keys
Change settings.

M (Memory) key
Store changed settings.

⑰ Operating pilot lamp

⑱ Display brightness control

⑲ Control unit display

⑳ **RS 232** socket (SUB D, 9 pin)
Interface provided for PC-controlled programming; input socket for software update.

General

1 The head station STC 1200 is a modular system for the reception and conversion of analog satellite programmes (radio and TV), digital satellite programmes (radio und DVB TV = **D**igital **V**ideo **B**roadcasting), as well as terrestrial radio and TV programmes.
Users connected to the system can receive independently of each other all analog and digital satellite programmes of the satellite selected.

2 According to the cassette type used, the received satellite signals are converted into band I/III and IV of a standard TV channel, as well as into the special channel ranges and the Hyperband.

The head station can also convert digital satellite signals into a QAM or PAL output signal.

3 As the system is built-up with plug-in modules, it is possible to equip it with up to 12 cassettes. Depending on the equipment variant, up to 24 TV or 48 radio programmes can be processed.

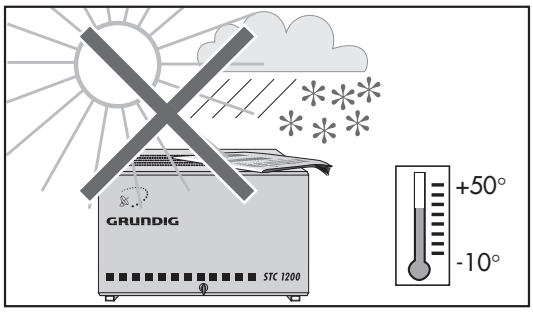
The cassettes comprise a satellite tuner, a demodulator, audio and video processors, as well as a modulator suitable for adjacent channel processing.

4 The central switched-mode mains unit supplies the operating voltage via a contact bar in parallel to the 12 cassette locations. The central control unit is connected via I^2C bus bars (SDA, SCL) with the cassettes. The user is guided by the two-line display on the control unit.

Output channel display

1 To do this, repeatedly press the **MULTI** key when in the "OUTPUT" menu until the display shows the output channels of the cassettes 1 – 4, 5 – 8 or 9 – 12.

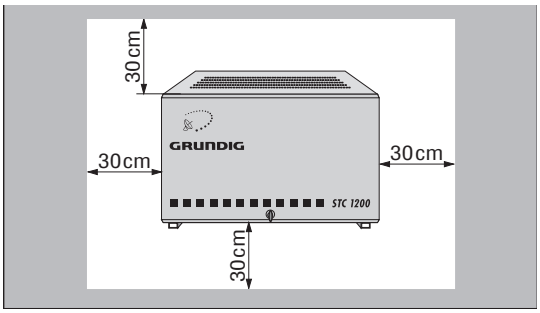
Installation



! Heat build-up will shorten the life of all electrical appliances and is a source of danger

! Heat develops inside the housing of the head station which must be able to escape.
Therefore never cover the ventilation slots in the top and bottom parts of the housing.

! The head station must only be operated in horizontal position.



! If several head stations are installed adjacent to or on top of each other, a minimum distance of approx. 30 cm must be kept in all directions.

! Always make sure that the head station is not exposed to dripping or splashing water.
Recommended place of installation: indoors!

Fixation

i The head station can either be placed on a flat surface or be fixed to a wall by means of the mounting material supplied.

Mounting material:

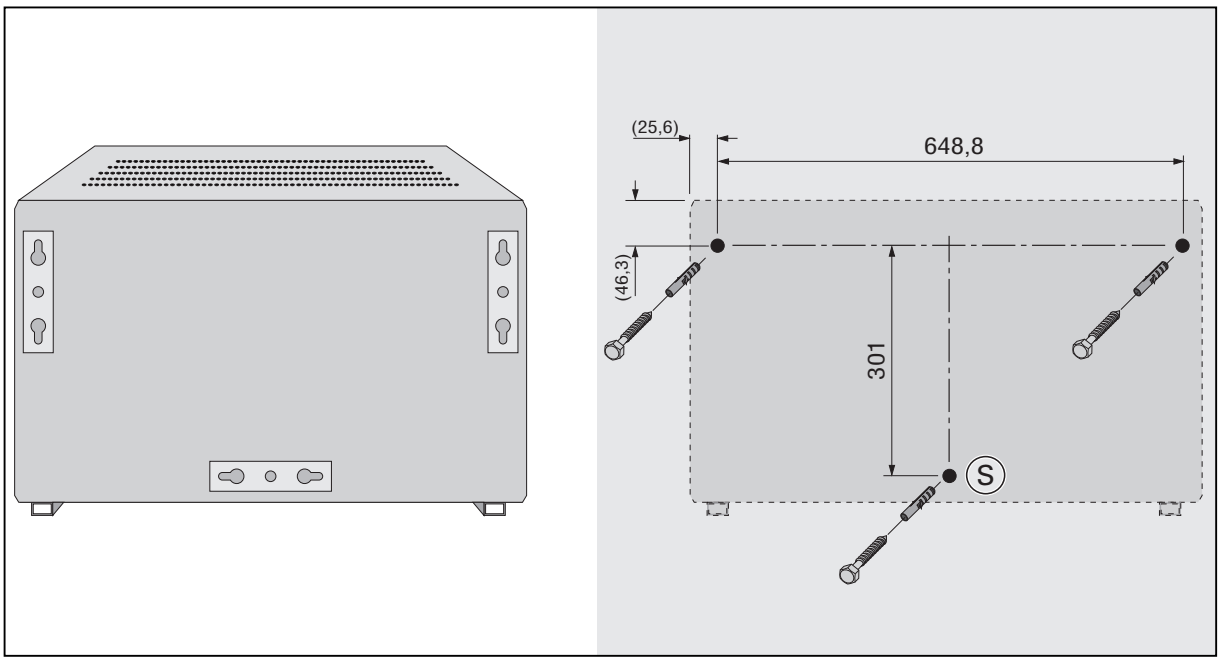
3 plastic pegs, 50 mm x 10 mm Ø
3 hexagon-headed screws, 65 mm x 8 mm Ø

The figures below show the rear side of the head station with the 3 fixing rails, as well as the front side with the measures necessary for a professional fixation to the wall.

1 Drill the holes, insert the plastic pegs, screw in the hexagon-headed screws then hook in the head station.

2 To prevent the head station from being lifted, it is possible to use a safety screw in the centre hole which is accessible from the front side.

! It is absolutely necessary to make sure that the fixation is able to carry the weight (about 50 kg) of the head station.



Connection

! **Before inserting new or replacing existing cassettes, it is absolutely necessary to disconnect the mains plug!**

1 First remove the corresponding fixing screws from the holding frame, then insert the cassettes (e.g from left to right) into the free plug-in locations, and finally fix them with the screws removed beforehand.

i 4 spare screws are fixed to the holding frame.

! **Important note**

To ensure that the central station door closes without any difficulties, the connecting cables from the SAT input distributor to the single cassettes should be pushed into the spaces between the cassettes.

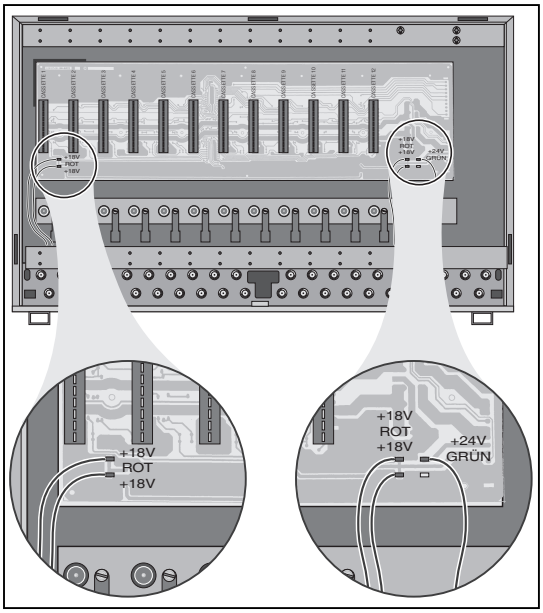
2 When the head station is connected to the mains supply, all cassettes are automatically connected via the plug-in connectors on the contact rail with the required operating voltages supplied by the switched-mode mains unit.

3 It is possible to connect every SAT cassette to one of the 4 input distributors. Each of the 4 input distributors is suited for remote power supply, that is the LNC's can be supplied with the operating voltage of +18 V DC/1 A.

! **Operation with twin LNC's.**

To enable the setting of the vertical polarisation of twin LNC's, it is necessary to remove the corresponding supply plug (+18 Volt LNC voltage) for the RF input concerned (A, B, C or D) on the base plate of the head station before inserting the cassette(s) (see figure below).

If necessary, pull out the cassette(s) before.



4 All output signals of the cassettes are added up in the output collector then passed to the hybrid amplifier.
The hybrid amplifier allows for an output level of max. 106 dBµV. The operating voltage of 24 V DC required for this is supplied by the switched-mode mains unit.

5 The level controls at the front side enable a precise adjustment of the output signals.

6 An additional monitor output (approximately -20 dB) enables the connection of a measuring TV receiver for service or monitoring.

7 It is possible to operate head stations with less than 12 twin or single cassettes, and several head stations can be linked.

8 In the case of service it will suffice to replace the defective cassette with one of the same type; it will be programmed automatically.

! Single cassettes have a higher output level than other cassettes. Adjust this level to that of the other cassettes using the corresponding level control (max. 106 dBµV).

Mains connection

! When installing and before operating the head station, check to see whether the earth connection conforms with the valid VDE regulations 0855.

1 Connect the head station to a mains voltage of 195 . . . 260 V~, 50/60 Hz.

! The head station can only be switched off by pulling the mains plug.

! **Before changing the power supply cassette, first disconnect the mains plug from the wall outlet then disconnect the other plug of the mains cable from the mains unit (on the base plate of the head station).**

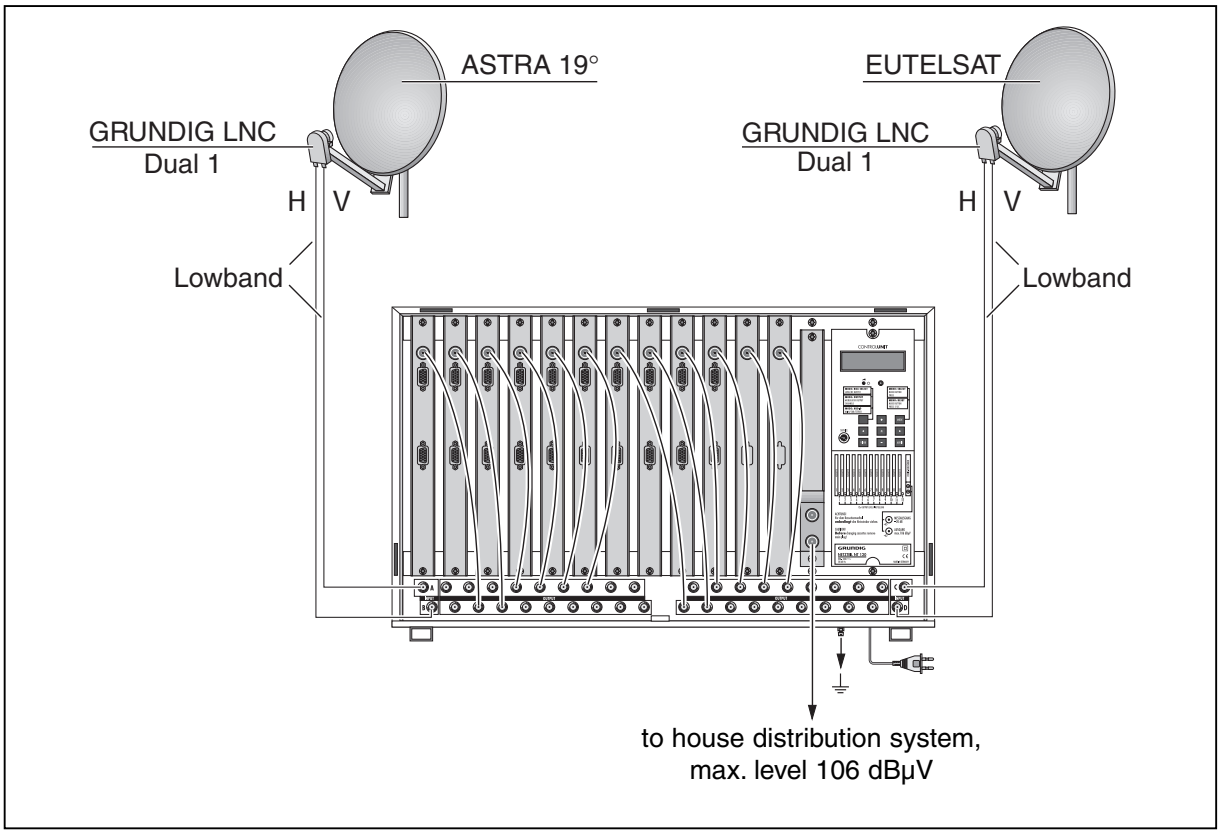
Descrambler retrofit kits

i A retrofit kit is required for connecting a decoder (descrambler), a video recorder (for use in a hotel), or a monitor camera. via a 15-pin Sub-D socket.

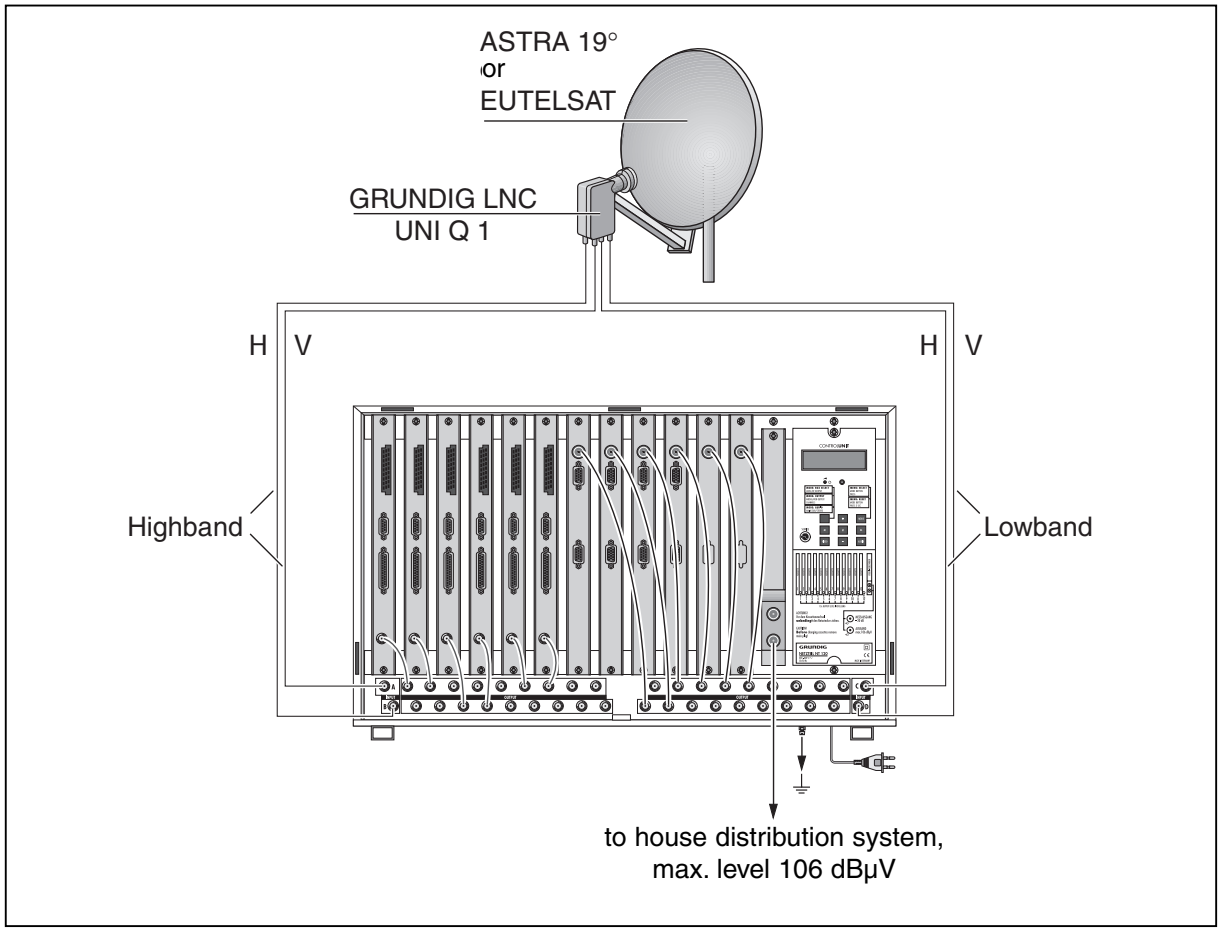
1 DNS 850 C (order nº GAY 4300)

This is the descrambler retrofit kit for the 850 and later series SAT cassette. It is intended for coupling in/out stereo/mono signals.
In addition, it is possible to remotely control this kit by means of a 0/12 V switching voltage. This allows for switching between the signals received from, for example, a monitor camera (e.g. on a playground) and SAT reception. An adapter cable for a EURO-AV connector is supplied.

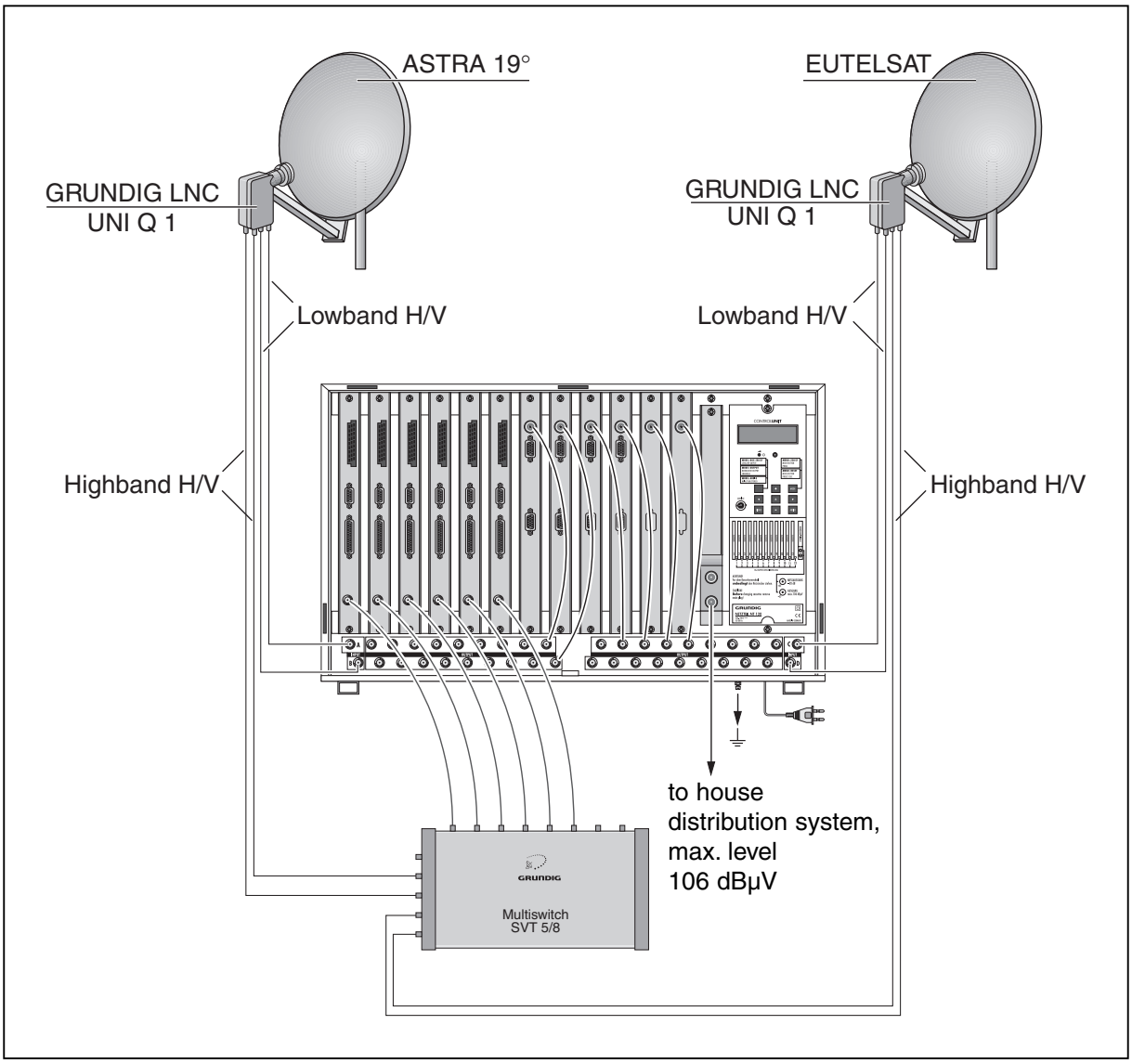
Connection example 1: analog processing of signals from 2 satellites



Connection example 2: analog an digital processing of signals from 1 satellite



Connection example 3: analog and digital processing of signals from two satellites



Technical Data of the Head Station

Cassettes (boxes)	12 plug-in locations for max. 24 output channels
Reception frequency range	950-2150MHz
SAT input distributor	4 RF inputs A, B, C,D, 9 outputs each
Passage loss (9x)	typ. -16 dB
Input/output impedance	75 Ω
Remote supply for SAT converter	18 V/ total current 1A for all 4 input distributors
Output frequency range of the RF collector	45 MHz-860 MHz, depending on the cassette used
Output level of the RF collector	max. 106 dBµV
Setting range of the RF level control	-20 dB
Mains voltage	220 … 240 V~; 50/60 Hz
Power consumption	typ. 180 W (full y equipped, incl. remote supply for LNC's)
Admissible ambient temperature	-20 °C to + 50 °C, (without humidification and dehumidification)
Dimensions W x H x D	700 mm x 410 mm x 310 mm
Weight (when fully equipped)	approx. 50 kg

SAT-cassettes overview for the GRUNDIG head station STC 1200

An explanation of cassette programming is to be found in the operating instructions of the respective cassette.
It follows a list of the currently available cassettes with the most important data. The frequency assignment to the given channels is to be found in the chapter "Channel/Frequency assignment" (at the end of these operating instructions).

Cassette type	Input range of cassette	Output range of cassette	Channel standard
For twin satellite reception			
HRM 331	950-2150 MHz	C2-C4, S3-S24, C5-C12, 48,25 MHz - 327,25 MHz	CCIR
HRM 333 A	950-2150 MHz	C5-C12, S3-S24 119,25 MHz - 327,25 MHz	CCIR
HRM 334	950-2150 MHz	S21-S41 303,25 MHz - 463,25 MHz	CCIR
HRM 335 A	950-2150 MHz	C21-C69 471,25 MHz - 855,25 MHz	CCIR
HRM 341	950-2150 MHz	R1-R5, s2-s21, R6-R12 49,75 MHz - 327,25 MHz	OIRT (Multinorm)
HRM 343	950-2150 MHz	R6-R12, s2-s21 119,25 MHz - 327,25 MHz	OIRT (Multinorm)
HRM 345	950-2150 MHz	C21-C69 471,25 MHz - 855,25 MHz	OIRT (Multinorm)
For radio reception			
HRM 324/2	950-2150 MHz	87,5-108 MHz	
HRM 325	87,5-108 MHz	87,5-108 MHz	
HRM 326/4	87,5-108 MHz	87,5-108 MHz	
For terrestrial reception (CCIR)			
HRM 391	C2-C12, S2-S41, C21-C69 48,25 - 855,25 MHz	C2-C4, S3-S24, C5-C12, 48,25 MHz - 327,25 MHz	CCIR
HRM 393	C2-C12, S2-S41, C21-C69 48,25 - 855,25 MHz	C5-C12, S3-S24 119,25 MHz - 327,25 MHz	CCIR
HRM 394	C2-C12, S2-S41, C21-C69 48,25 - 855,25 MHz	S21-S41 303,25 MHz - 463,25 MHz	CCIR
HRM 395	C2-C12, S2-S41, C21-C69 48,25 - 855,25 MHz	C21-C69 471,25 MHz - 855,25 MHz	CCIR
Converter cassette AV (Audio/Video)			
HRM 834 AV	Audio + Video	C21-C40	CCIR
HRM 836 AV	Audio + Video	S21-S41	CCIR

Cassette type	Input range of cassette	Output range of cassette	Channel standard
For terrestrial reception (OIRT)			
HRM 381	R1-R12, s2-s38, C21-C69 49,75 MHz - 855,25 MHz	R1-R5, s2-s21, R6-R12 49,75 MHz - 351,25 MHz	OIRT
HRM 383	R1-R12, s2-s38, C21-C69 49,75 MHz - 855,25 MHz	R6-R12, s2-s21 119,25 MHz - 327,25 MHz	OIRT
HRM 385	R1-R12, s2-s38, C21-C69 49,75 MHz - 855,25 MHz	C21-C69 471,25 MHz - 855,25 MHz	OIRT
For digital satellite reception (**D**igital **V**ideo **B**roadcasting)			
HDM 303 P	950-2150 MHz	C5-C12, S3-S30 119,25 MHz - 375,25 MHz	CCIR
HDM 305 P	950-2150 MHz	C21-C69 471,25 MHz - 855,25 MHz	CCIR
HDM 314 C	950-2150 MHz	S21-S41 303,25 MHz - 463,25 MHz	QAM
HDM 315 C	950-2150 MHz	C21-C40 471,25 MHz - 623,25 MHz	QAM
HDM 353 P	950-2150 MHz	R6-R12, s2-s27 119,25 MHz - 375,25 MHz	OIRT (Multinorm)
HDM 355 P	950-2150 MHz	C21-C69 471,25 MHz - 855,25 MHz	OIRT (Multinorm)
HDM 374 C	950-2150 MHz	S21-S41 306,00 MHz - 466,00 MHz	QAM
HDM 375 C	950-2150 MHz	C21-C69 474,00 MHz - 858,00 MHz	QAM

i

Calling up the software version of the Control Unit:

Press the **+** and **MODE** keys at the same time and hold them down until the following occurs:
– The display turns dark.
– After approximately 5 seconds appears, for example, "**.**04", the two digits indicating the software index, **.**04 in the example.

GSS Grundig SAT Systems GmbH • Beuthener Str. 43 • D-90471 Nürnberg • http://www.gss.tv