Assembly Instructions

English

Grundig SAT Systems

Terrestrial FM amplifier

HRM 325

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Contents

1 Safety regulations

- Assembly, installation and servicing should be carried out by authorised electricians.
- Switch off the operating voltage of the system before beginning with assembly or service work or pull out the mains plug.
- Do not perform installation and service work during thunderstorms.
- Install the system so it will not be able to vibrate…
  - in a dust-free, dry environment
  - in such a manner that it is protected from moisture, fumes, splashing water and dampness
  - somewhere protected from direct sunlight
  - not within the immediate vicinity of heat sources
  - in an ambient temperature of -20 °C to +50 °C.
- Ensure that the head-end station is adequately ventilated. Do not cover the ventilation slots.
- Beware of short circuits
- No liability is accepted for any damage caused by faulty connections or inappropriate handling.
- Observe the relevant standards, regulations and guidelines on the installation and operation of antenna systems.
- Earth the SAT receiver in accordance with DIN EN 50083-1 / 60728-11 and VDE 0855 (earthed, equipotential bonding rail).
- **For further information please read the assembly instructions for the head-end station used.**

Take action to prevent static discharge when working on the device.

Electronic devices should never be disposed of in the household rubbish. In accordance with directive 2002/96/EC of the European Parliament and the European Council from January 27, 2003 which addresses old electronic and electrical devices, such devices must be disposed of at a designated collection facility. At the end of its service life, please take your device to one of these public collection facilities for proper disposal.

2 General information

2.1 Scope of delivery

1 HRM 325 cassette
1 Distance adapter set
1 CD (assembly instructions)

2.2 Meaning of the symbols used

 Important note
—> General note
• Performing works

2.3 Technical specifications

The requirements of the following EU directives are met:
73/23/EEC, 89/336/EEC
The product fulfils the guidelines and standards for CE labelling.

HF input:

Input frequency range:	87.5 … 108.0 MHz

HF-Output:

Output frequency range:	87.5 … 108.0 MHz	
Output level:	max. 100 dBµV	
Output impedance:	75 Ω	
Level adjustment:	9 … 20 dB	
Amplification:	43 dB ± 1.5 dB	
Noise level:	6 … 9 dB	
Traps:	Quantity:	6
	Tuning range:	87.5 … 108.0 MHz
	Attenuation:	typ. 15 dB

2.4 Description

This cassette is for the reception of FM radio programmes. The signals within the frequency range of 87.5 … 108 MHz are amplified by approx. 43 dB. FM signals can be supplied to the cable network via the FM amplifier. This involves sending the FM signals via an IEC socket to the FM amplifier. To eliminate interference, up to 6 different input frequencies can be lowered with tuneable traps. The amplified HF signals are supplied to the cable network via the HF output of the FM amplifier and the HF output collector of the head-end station.
The output level can be set at the HF output collector of the head-end station.
The software version of the control unit appears on the two-line LC display after switching on the head-end station.
The cassette is intended for operation in the following head-end stations:

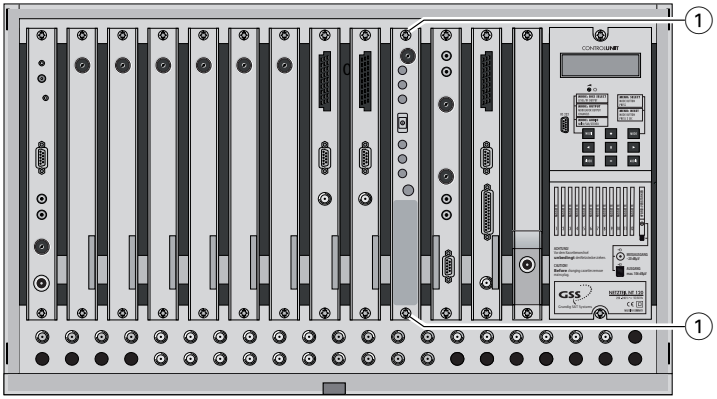
- STC 1200
- STC 316
- STR 19-8
- PST 19-1

3 Installation

3.1 Installing the cassette in the head-end station

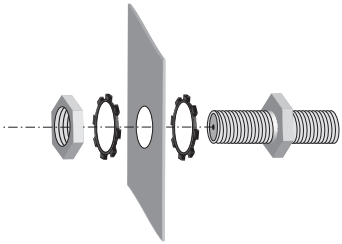
– Ensure the head-end station is mounted so it will not be able to vibrate. Avoid, for example, mounting the head-end station onto a lift shaft or any other wall or floor construction that vibrates in a similar way.
– Before installing or changing a cassette unplug the power cable from the mains power socket.

- Remove the fastening screws (1) of an unoccupied slot from the bracket of the head-end station.
- Insert the cassette in this slot and push it into the housing.
- Align the cassette and apply slight pressure to connect it to the connections of the board and the HF bus bar.
- Fasten the cassette with the (1) screws.



3.2 EMC regulations

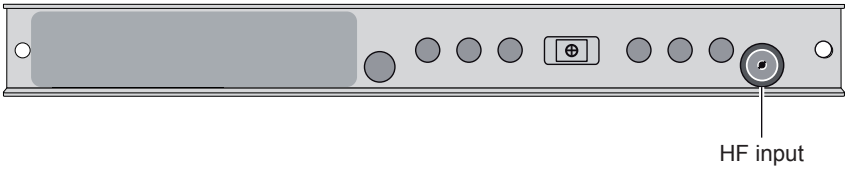
To comply with the current EMC regulations, it is necessary to connect the lines leading in and out of the head-end station using cable terminals.
When mounting the cassette in an STR 19-8 head-end station which is installed in a 19″ cabinet, make sure the connections leading in and out for the 19″ cabinet are made using cable terminals.



- Insert the required number of cable terminals in the openings provided in the head-end station or in the 19″ cabinet.
  —> Cable terminals are not included in the scope of delivery.

Tighten the nut on the cable terminals until the teeth on the lock washer have penetrated the exterior coating and a good connection is made between the housing and cable terminal.

3.3 Connecting the cassette

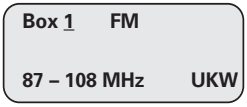


- Connect the HF input cable to the "**HF input**" of the cassette.

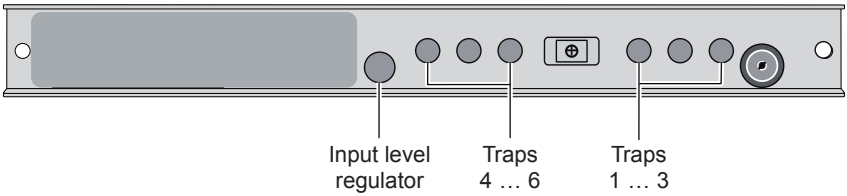
4 Setting the cassette

In order to prevent interference, too high signal levels, e. g. of local transmitters, can be reduced by absorption circuits.

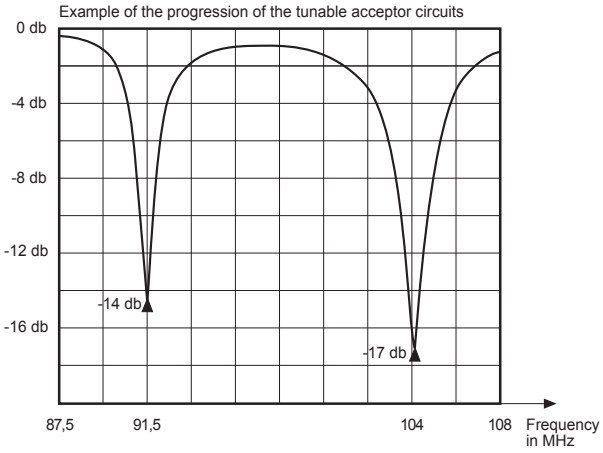
- Switch on the head-end station.
  —> The display shows the following indication for the FM amplifier.



- Connect a spectrum analyser to the HF output of the head-end station.
- Set "**input level regulator**" to the mechanical centre.



- If necessary tune the absorption circuit groups "**Traps 1 … 3**" and "**Traps 4 … 6**" to the frequencies to be lowered.
  —> You can lower 3 interfering frequencies each with the absorption circuit groups "**Traps 1 … 3**" and "**Traps 4 … 6**". If the adjustment range of an absorption circuit, for example from group "**Traps 1 … 3**" is inadequate, you can lower the frequencies even further with an absorption circuit that is tuned to the same frequency from group "**Traps 4 … 6**".



- When all of the signals are appropriately adjusted, use the "**input level regulator**" to increase the input level so that it is short of the intermodulation intervention point.

5 Final procedures

After installing the head-end station, upgrading accessories or installing cassettes it is necessary to tighten all cable connections, cable terminals and cover screws in order to maintain compliance with current EMC regulations securely.

- Securely tighten the cable connections using an appropriate open-ended spanner.
- Measure the output levels of the other cassettes and tune them to a uniform output level using the appropriate level controls or software dependent on the head-end station used. Please regard the assembly instructions of the respective head-end station.
  —> In order to prevent interference within the head-end station and the cable system, the output levels of the digital cassettes must be set lower by 8 dB compared to analogue cassettes.
- Mount the front cover (s. assembly instructions of the head-end station).

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