

# **Technical Handbook**

**SE 550-08-25-1**

**Part 4**

**Maintenance,**

**Disassembly and Reassembly**

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## 4 MAINTENANCE, REMOVAL AND INSTALLATION OF MODULES

The unit may only be removed, serviced and dismantled by service personnel trained on the SE 550.

### 4.1 Maintenance and cleaning

The SE 550 requires no special care and maintenance. Clean the unit at regular intervals, which depend on the operating and environmental conditions, and check its outer condition. Neither petroleum or solvents may be used to clean the unit.

Remove loose dust with a soft dusting brush. If required, clean the outside of the unit with a slightly moistened lint-free soft cloth. Make sure that no moisture penetrates into the inside of the unit. Dry cleaned moist parts with a dry lint-free cloth.

The connectors must not show any corrosion. If corrosion of the connectors is suspected, plug them in and unplug them several times to remove any oxide residues. Only use contact cleaning agent such as Kontakt 60 for cleaning.

### 4.2 General Notes on Repair

#### (1) Handling PC Boards

Excessive bending of PC boards leads to hair cracks, which are often very difficult to localise. Therefore, handle PC boards with care. Measurement cables must not be soldered onto PC board conductors.

#### (2) Soldering

Soldering on PC boards must be limited to a minimum. A temperature-controlled miniature low voltage soldering arm should be used. The soldering temperature must not be higher than 350 °C.

C-MOS and SMD components should only be soldered by service personnel trained appropriately and acquainted with the soldering techniques involved.

#### (3) C-MOS components and FETs

C-MOS components and field effect transistors may be destroyed by static charges.

This can be prevented with a few precautionary measures:

- Earth tools when carrying out repairs
- Do not remove or install PC boards while the power supply is activated
- Do not apply external control signals without activating the power supply

(4) SMDs

SMDs on PC boards must only be desoldered and soldered in by appropriately trained service personnel using the necessary soldering tools.

The instructions given by the manufacturer/distributor must be observed precisely when handling soldering tools. Only in this way can damage to the surfaces of PC boards be avoided.

(5) Disposal of Devices, Modules and Components

Devices, modules and components that have become useless or have been scrapped must be disposed of properly.

They must not be disposed of in normal domestic refuse!

4.2 General Notes on Repair

(1) Handling PC Boards

Excessive bending of PC boards leads to hair cracks, which are often very difficult to localize. Therefore, handle PC boards with care. Mounting cables must not be soldered onto PC board conductors.

(2) Soldering

Soldering on PC boards must be limited to a minimum. A temperature-controlled miniature low voltage soldering iron should be used. The soldering temperature must not be higher than 350 °C.

C-MOS and SMD components should only be soldered by service personnel trained appropriately and equipped with the soldering techniques involved.

(3) C-MOS components and ESD

C-MOS components and field effect transistors may be destroyed by static charges.

This can be prevented with a few precautionary measures:

- Earth tools when carrying out repairs
- Do not remove or install PC boards while the power supply is activated
- Do not apply external control signals without activating the power supply

### 4.3 Control Unit (Figure 4-1, 4-2)

1. Remove the coding plug (Figure 4-2/3) and the plug of the microphone (2) after undoing the hexagon socket screw (1).
2. Undo the captive hexagon socket screw (1) underneath the coding plug (see also Figure 4-1).
3. Swivel the right side of the control unit by 30 ° and unlatch the control unit to left.
4. Installation: before installing the control unit, the two guide rails (16) along the groove must be slid open. Their positions are defined by holes.

Install the control unit by first of all inserting the pegs in the corresponding side on the left of the front panel. Then carefully plug in the plug. Tighten the hexagon socket screw (1).

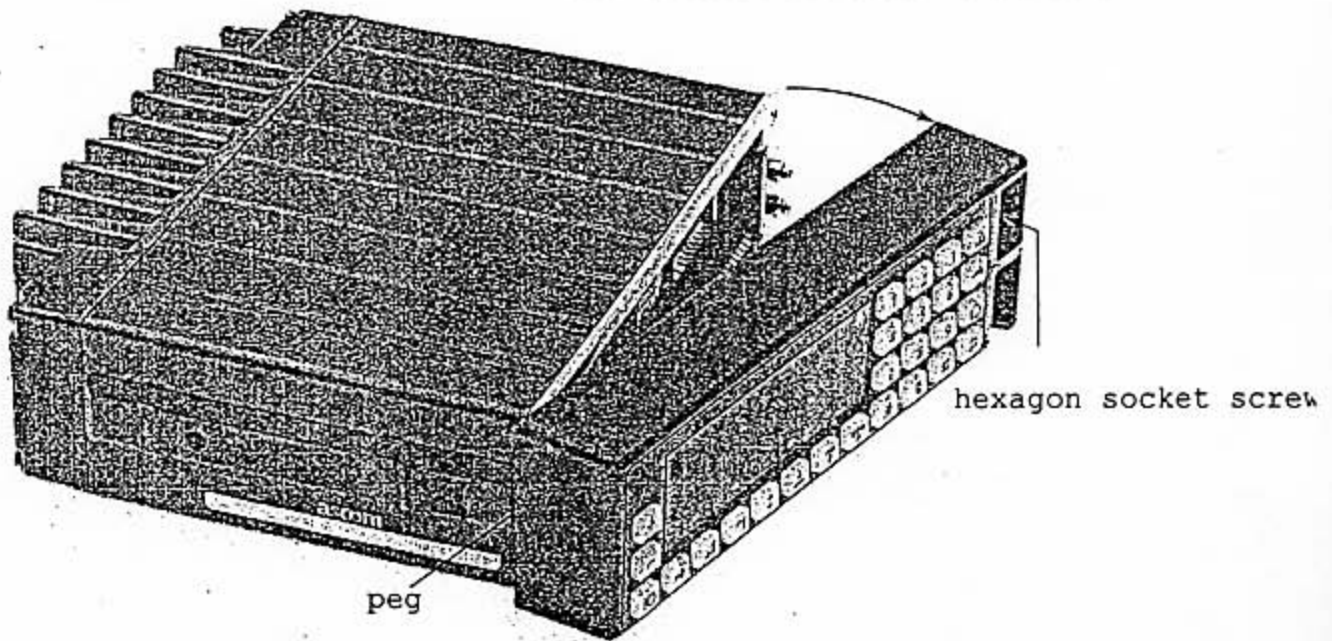


Figure 4-1 Disassembly control unit

#### 4.4 Control Assembly (Figure 4-2)

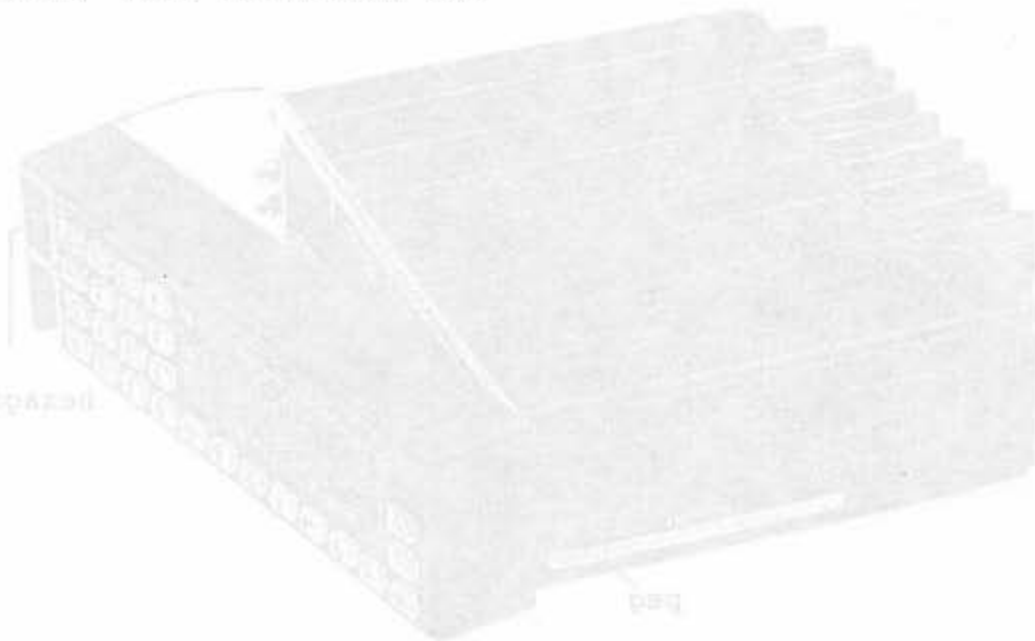
1. Remove the control unit as described in Section 4.3.
2. Unscrew the four countersunk screws (Figure 4-2/17) and carefully pull the control assembly out of the two guide rails in the housing.

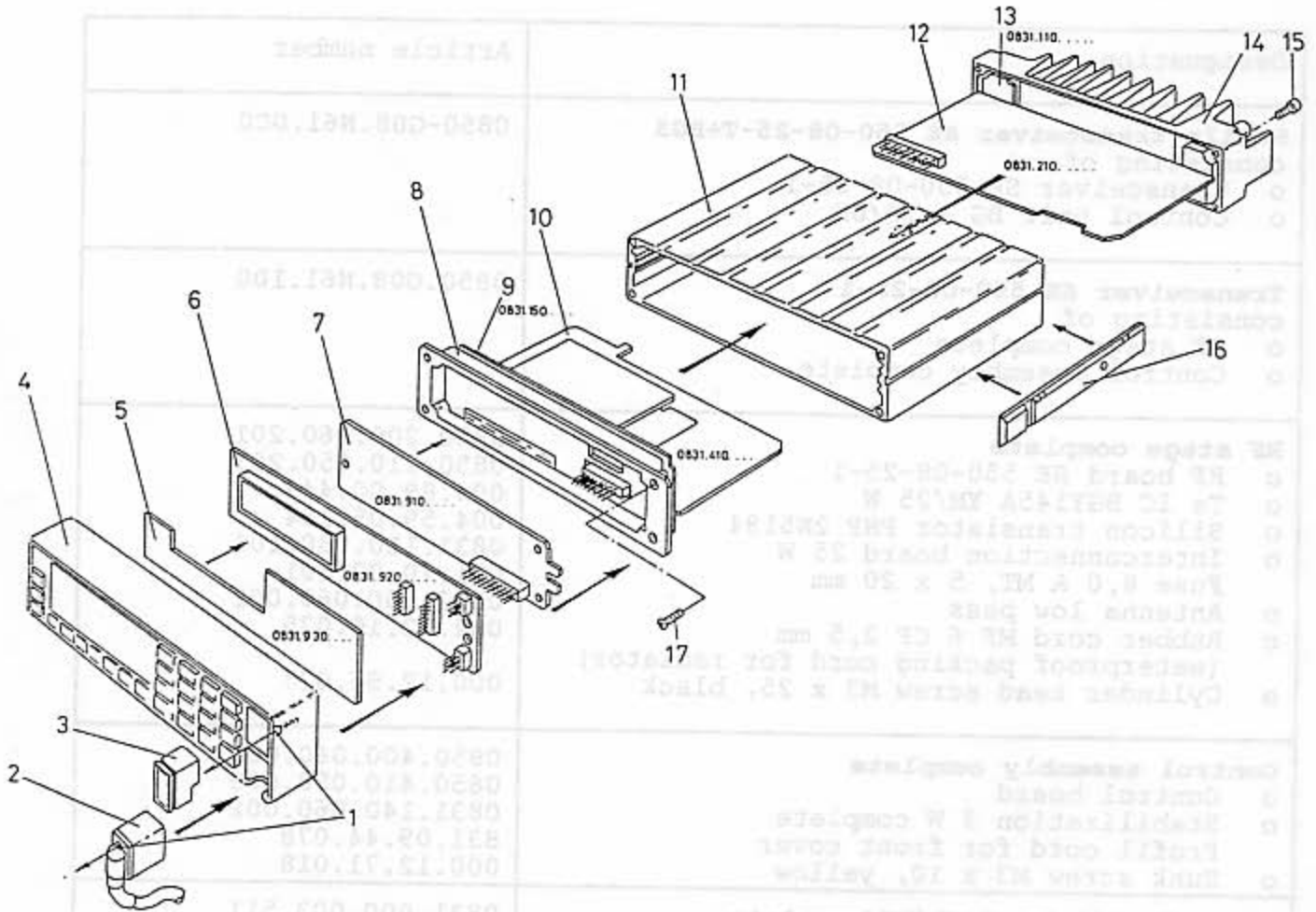
**IMPORTANT:** When reinstalling the RF stage and the control, make sure that the seal ring does not jump out of its groove (although it is stuck in, it is possible that it may be shifted when inserting the screws).  
If necessary, apply a light coating of silicone grease to the seal ring.

3. Install the control assembly in reverse order.

#### 4.5 RF Stage (Figure 4-2)

1. Unscrew the four fillister head screws (Figure 4-2/15) from the rear panel and carefully pull the RF stage out of the two guide rails in the housing.
2. Install the RF stage in reverse order. Pay attention to the "IMPORTANT" note in Section 4.4.





- |   |                            |    |                          |
|---|----------------------------|----|--------------------------|
| 1 | Hex socket head screw (2x) | 10 | Control board            |
| 2 | Microphone connector       | 11 | Casing                   |
| 3 | Coding plug                | 12 | RF board                 |
| 4 | Control unit               | 13 | Interconnection board    |
| 5 | Key board                  | 14 | Rear panel               |
| 6 | Display board              | 15 | Cylinder head screw (4x) |
| 7 | Converter board            | 16 | Guide rail (2x)          |
| 8 | Cover plate                | 17 | Sunk screw (4x)          |
| 9 | Stabilization board        |    |                          |

Figure 4-2 Exploded view



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**4.6 Parts List SE 550-08-25-1**

Designation	Article number
<b>Mobile transceiver SE 550-08-25-T+BG3</b> consisting of <ul style="list-style-type: none"> <li>o Transceiver SE 550-08-25-1</li> <li>o Control unit BG 3-TR/UK</li> </ul>	0850-G08.N61.0C0
<b>Transceiver SE 550-08-25-1</b> consisting of <ul style="list-style-type: none"> <li>o RF stage complete</li> <li>o Control assembly complete</li> </ul>	0850.G08.N61.100
<b>RF stage complete</b> <ul style="list-style-type: none"> <li>o RF board SE 550-08-25-1</li> <li>o Tx IC BGY145A YM/25 W</li> <li>o Silicon transistor PNP 2N5194</li> <li>o Interconnection board 25 W</li> <li>o Fuse 8,0 A MT, 5 x 20 mm</li> <li>o Antenna low pass</li> <li>o Rubber cord MP 6 CP 2,5 mm (waterproof packing cord for radiator)</li> <li>o Cylinder head screw M3 x 25, black</li> </ul>	0850.200.060.201 0850.210.050.201 004.89.00.449 004.59.05.194 0831.110.050.101 001.70.00.801 0832.300.060.002 002.72.10.035 000.12.96.027
<b>Control assembly complete</b> <ul style="list-style-type: none"> <li>o Control board</li> <li>o Stabilization 3 W complete</li> <li>o Profil cord for front cover</li> <li>o Sunk screw M3 x 10, yellow</li> </ul>	0850.400.060.003 0850.410.050.003 0831.140.060.002 831.09.44.078 000.12.71.018
<b>Control unit BG 3-TR/UK complete</b> <ul style="list-style-type: none"> <li>o Coding plug complete</li> <li>o Converter board BG 3</li> <li>o Display board BG 3</li> <li>o Profil cord for front frame</li> <li>o Protective foil for window</li> <li>o Hex socket head screw M3 x 6, black</li> </ul>	0831.000.003.511 0831.000.000.941 0831.910.050.203 0831.920.050.005 831.09.44.079 831.03.44.299 000.12.06.031
<b>Casing</b>	0831.01.38.154
<b>Mounting set complete</b> <ul style="list-style-type: none"> <li>o Bag for universal mounting set</li> <li>o Fuse 8 A, 6 x 25 mm</li> <li>o Interconnector SE 550 complete</li> </ul>	0831.000.060.304 0831.080.060.002 001.70.00.800 831.10.00.800
<b>Loudspeaker 4 Ω/5 W</b>	008.10.00.800



#### 4.7 Transportation, Storage and Packing

Original packaging or normal commercial packing materials should be used when storing, dispatching or transporting equipment.

The storage temperature range is -40 to +80 °C.