TM8100 mobiles
TM8200 mobiles
TM9100 mobiles

Dismantling Instructions and Material Recovery Information

Introduction

Tait Electronics Limited manufactures in Christchurch (New Zealand) and distributes to markets throughout the world, a range of portable, mobile and infrastructure radio products.

Our basic philosophy is to provide clear and concise information on the material content of our products, to enable the safe and economic recycling of those materials, so far as that may be technically possible within any particular market or EU member state's jurisdiction.

Material recovery and recycling processes are developing rapidly. This document indicates as specifically as possible, the material type of each component for which recycling is economically feasible, on the basis of component size. Where a small recycleable component must be removed to separate a large component, that small component's material has also been noted (typically metal fastenings).

Material Categories

Tait products comprise a wide variety of materials. For the purposes of the WEEE Directive, the materials fall into the following categories:

Material category	Recovery and recycling process
Paper/Cardboard	Paper/cardboard materials will most usually have been offered for recycling at the point of final sale. We expect that every jurisdiction will have a capability to recycle all materials within this category.
Metals	Metals includes cabling because of its high value copper content. We expect that every jurisdiction will have a capability to recycle all materials within this category.
Polymers	The majority of polymeric category materials we use are "engineering" polymers for which recycling capability (at the time of writing) may be limited or non-existent. We are optimistic that the polymer industry will investigate recycling of these materials and so enable new Tait products to comply with the WEEE Directive while continuing to use these materials.
Batteries (portable radios only)	The cells in battery packs must be recycled in accordance with the Battery Directive, according to the cell type noted on the package casing. The battery pack casings and other associated materials must be recycled according to the appropriate category and type specified in this Disposal Information
Mixed	Materials in the Mixed category are varied. Typical components include populated printed circuit boards, connectors, switches and the like. Disposal processes do exist, which reduce the volume of these components and enable the small quantities of high value materials that may be present to be recovered. However, these processes may not be available in every jurisdiction.

MMA-00062-01

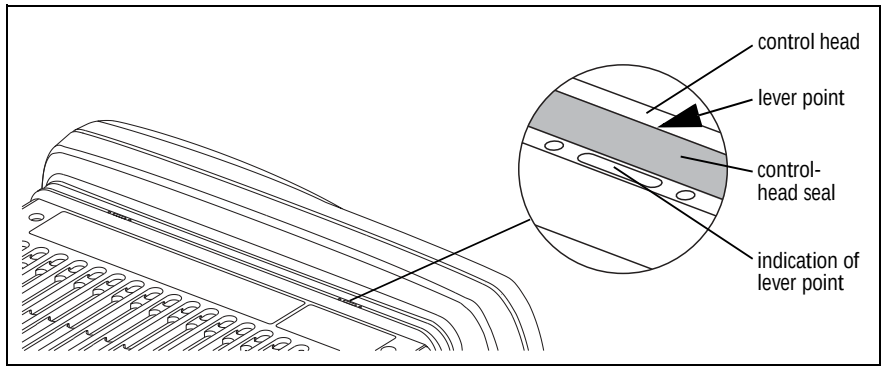
Dismantling Instructions and Material Information

Tools

- 5mm (3/16 inch) flat-bladed screwdriver
- 3mm (1/8 inch) flat-bladed screwdriver
- Torx T20 screwdriver
- Torx T10 screwdriver
- Torx T6 screwdriver (50W/40W radio only)
- 5mm (3/16 inch) socket
- 14mm (9/16 inch) long-reach socket

Removing the Control Head (all mobiles)

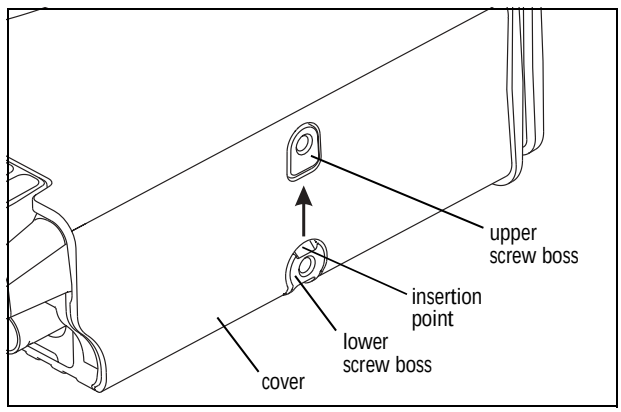
1. On the underside of the radio body, two lever points are indicated on the radio body by a dot-dash-dot pattern (○ ⊂⊃ ○). The lever point is between the control-head seal and the plastic of the control head.



2. At either of the lever points, insert a 5mm (3/16 inch) flat-bladed screwdriver between the control head and the control-head seal.
3. Use the screwdriver to lift the edge of the control head up and off the clip, then repeat in the other position. The control head can now be removed.
4. Disconnect the control-head loom.

Removing the Cover

1. At the upper edge of the lower screw bosses on both sides of the radio body, insert a 1/8 inch (3mm) flat-bladed screwdriver.
2. Push the screwdriver under the cover towards the upper screw boss to release the cover from the upper screw boss.
3. Remove the cover.

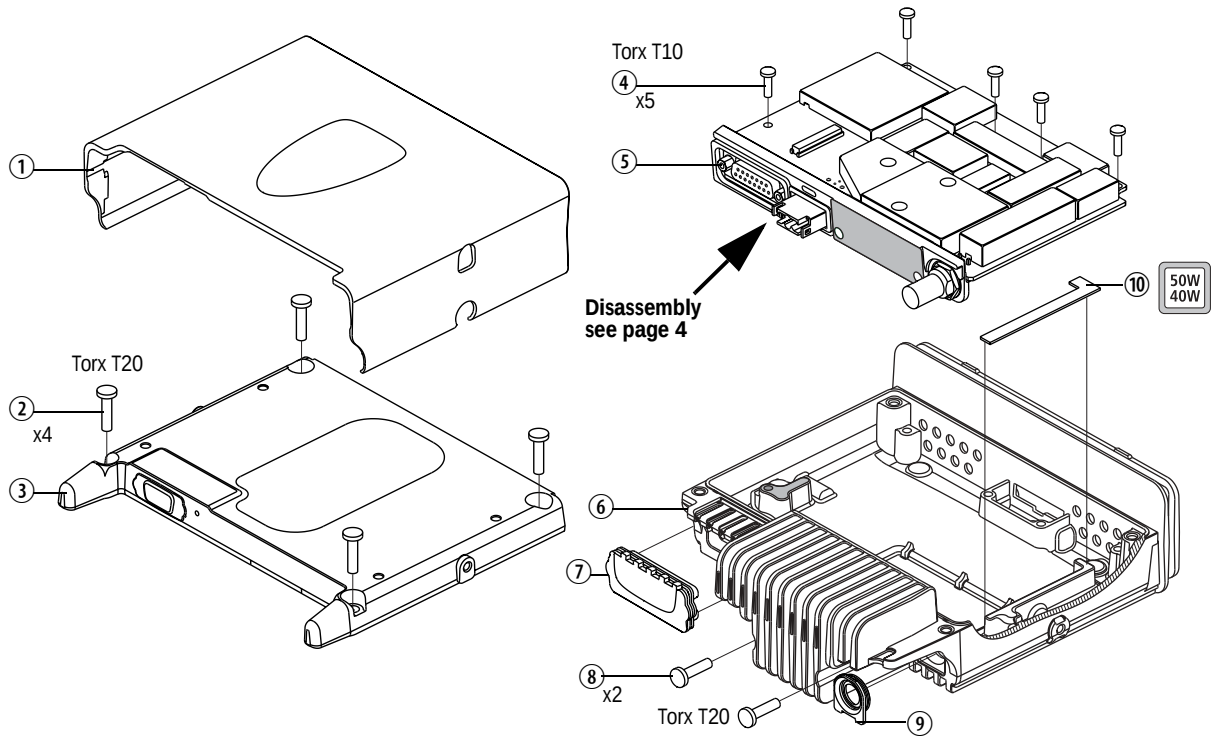


Opening the Radio Body

1. Use a Torx T20 screwdriver to remove the four screws ②.
2. Pemove the lid assembly ③.

Removing the Main-Board Assembly

1. Remove the auxiliary connector bung ⑦ (if fitted).
2. Remove the RF connector seal ⑨ using one of the tabs located at the bottom of the seal. If necessary, lift up the tap using the blade of a small flat-bladed screwdriver.
3. Use a Torx T10 screwdriver to remove the screws ④ connecting the main board to the chassis.
4. Use a Torx T20 screwdriver to remove the screws ⑧ connecting the heat-transfer block to the rear of the chassis.
5. Holding a hand over the chassis to catch the main-board assembly, turn the chassis upside down and tap its fins on the edge of the workbench. This will release the heat-transfer block from the chassis. Disassembly of the main board assembly is described on page 4.

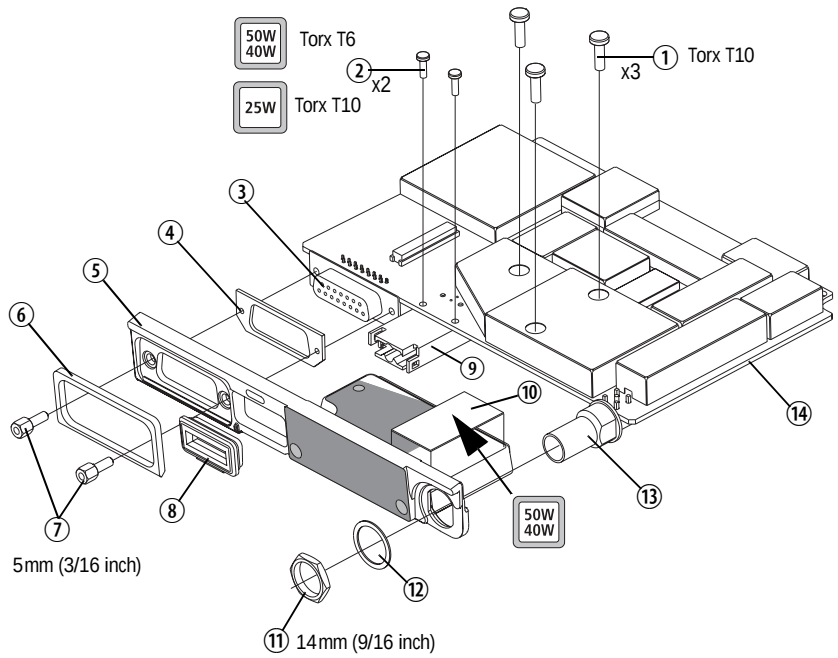


①	cover	**PC + PET**	⑥	chassis	**AlSi12Cu**
②	screw M4x16 (x4)	**Fe**	⑦	auxiliary connector bung	**Si elastomer**
③	lid assembly	**AlSi8CuFe**	⑧	screws M4x16 (x2)	**Fe**
④	screw M3x10 (x5)	**Fe**	⑨	RF connector seal	**Si elastomer**
⑤	main-board assembly	**See page 4.**	⑩	gap pad (50W/40W radio only)	**Not recyclable**

Disassembling the Main-Board Assembly

The figure below shows the 40W/50W configuration.

1. Remove the power connector seal ⑧.
2. Use a torque-driver with a 5mm (3/16 inch) socket to remove the D-range screwlock fasteners ⑦.
3. Use a torque-driver with a 14mm (9/16 inch) long-reach socket to remove the RF connector nut ⑪. Also remove the lock washer ⑫.
4. Use a Torx T10 screwdriver to remove the three screws ① securing the main board ⑭ to the heat-transfer block ⑤.
5. Separate the main board ⑭ from the heat-transfer block ⑤.
6. To remove the power connector ⑨:
   - With the 40W/50W radio, use a Torx T6 screwdriver to undo the two screws ②.
   - With the 25W radio, use a Torx T10 screwdriver to undo the two screws ②.



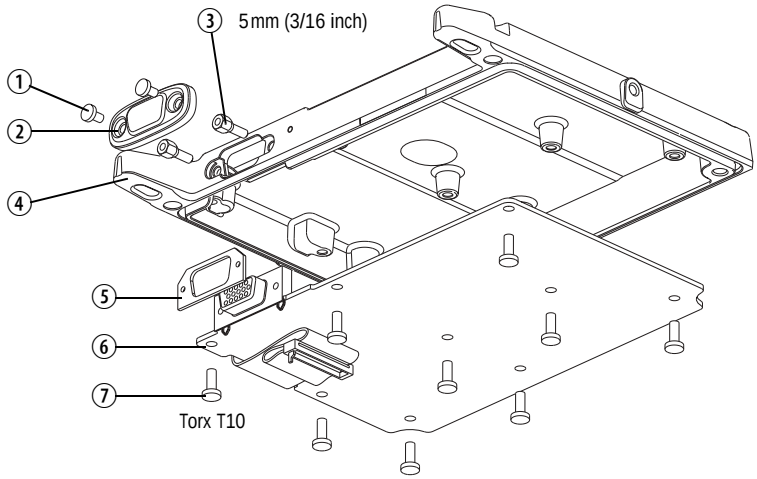
①	M3x10 screw (x3)	**Fe**	⑦	D-range screwlock fastener (2x)	**Fe**
②	50W/40W radios: M2.2x10 PT screw (x2) 25W radios: K30x8 PT screw (x2)	**Fe** **Fe**	⑧	power connector seal	**Si elastomer**
			⑨	power connector	**Mixed**
			⑩	gap pad (50W/40W radio only)	**Not recyclable**
③	auxiliary connector	**Mixed**	⑪	RF connector nut	**CuZn**
④	inner foam D-range seal	**PU foam**	⑫	RF connector lock washer	**Fe**
⑤	heat-transfer block	**AlSi12**	⑬	RF connector	**Mixed**
⑥	outer foam seal	**PU foam**	⑭	main board – heat plate – EMI shields	**Mixed**[a] **Cu101, Sn-plated** **CuZn27Ni18**

a. After removal of heat plate and EMI shields

Removing an Options Board (optional)

The radio may be fitted with an options board in the lid assembly, which may or may not have an external options connector fitted in a provision in the lid assembly.

1. If an external options connector is fitted:
   - Undo the two screws ① and remove the protective rubber cap ② (if fitted).
   - Undo the two D-range screwlock fasteners ③.
2. Undo up to nine screws ⑦ and remove the options board ⑥ from the lid assembly ④.
3. If an external options connector is fitted, a foam seal for the D-range connector ⑤ is fitted to the inside of the lid. Remove the foam seal.



①	screw 4-40x3/15 (x2)	**Fe**	⑤	foam seal for D-range connector	**PU foam**
②	protective rubber cap	**Si elastomer**	⑥	options board (example) – EMI shields (if fitted)	**Mixed**[a] **CuZn27Ni18**
③	D-range screwlock fastener 4-40 (x2)	**Fe**	⑦	screw M3x10, self-tapping (x9)	**Fe**
④	lid	**AlSi8Cu3Fe**			

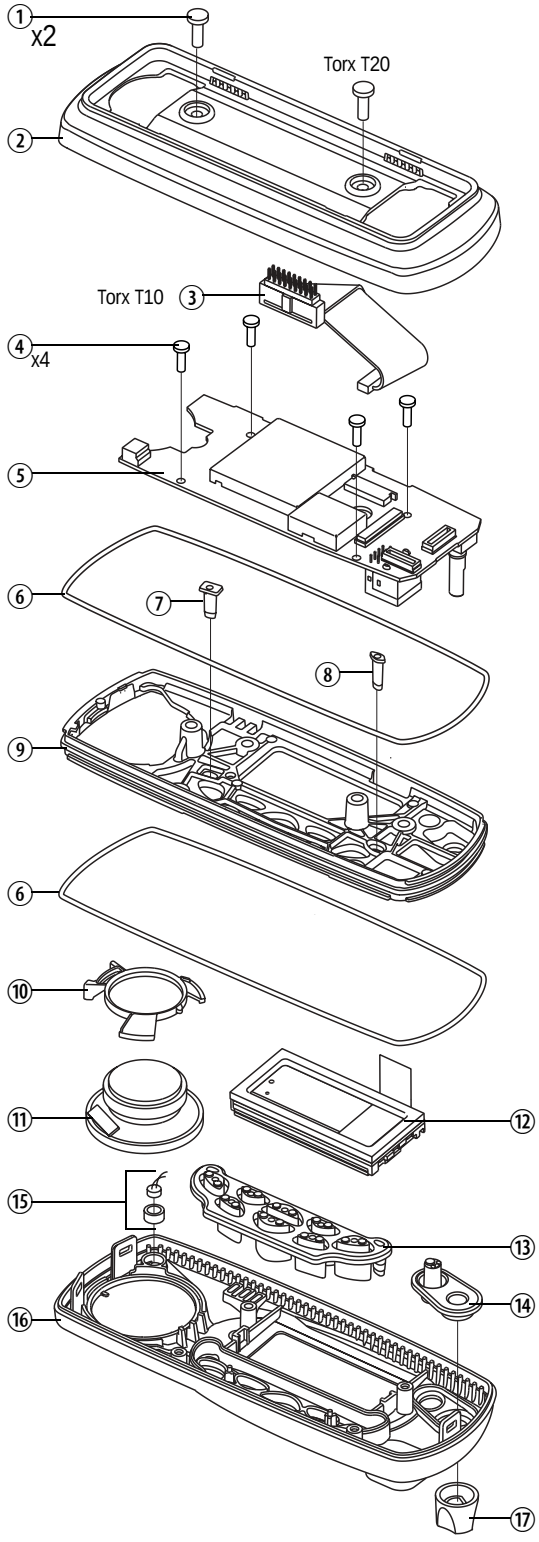
a. After removal of EMI shields

Disassembling the Control Head with Graphical Display (TM8250/TM8255/TM8260/TM9100)

The circled numbers in this section refer to the items in the figure on page 6.

1. Pull off the volume control knob ⑰.
2. Unscrew the two Torx T20 screws ① and remove the adaptor flange ②.
3. Disconnect the control-head loom ③.
4. Disconnect the speaker cable from the speaker connector of the control-head board ⑤.
5. Release the lock of the LCD connector and unplug the loom of the LCD assembly ⑫.
6. Unscrew the four Torx T20 screws ④ and remove the control-head board ⑤.
7. If a concealed microphone ⑮ is fitted, pull the capsule out of its rubber seal when removing the control head-board ⑤.
8. Remove the light pipes ⑦ and ⑧.

9. The space-frame ⑨ clips into three clips of the front panel. Unclip the spaceframe and remove it along with the two seals ⑥.
10. Remove the speaker ⑪ and speaker clamp ⑩.
11. Remove the LCD assembly ⑫, main keypad ⑬, and power keypad ⑭.

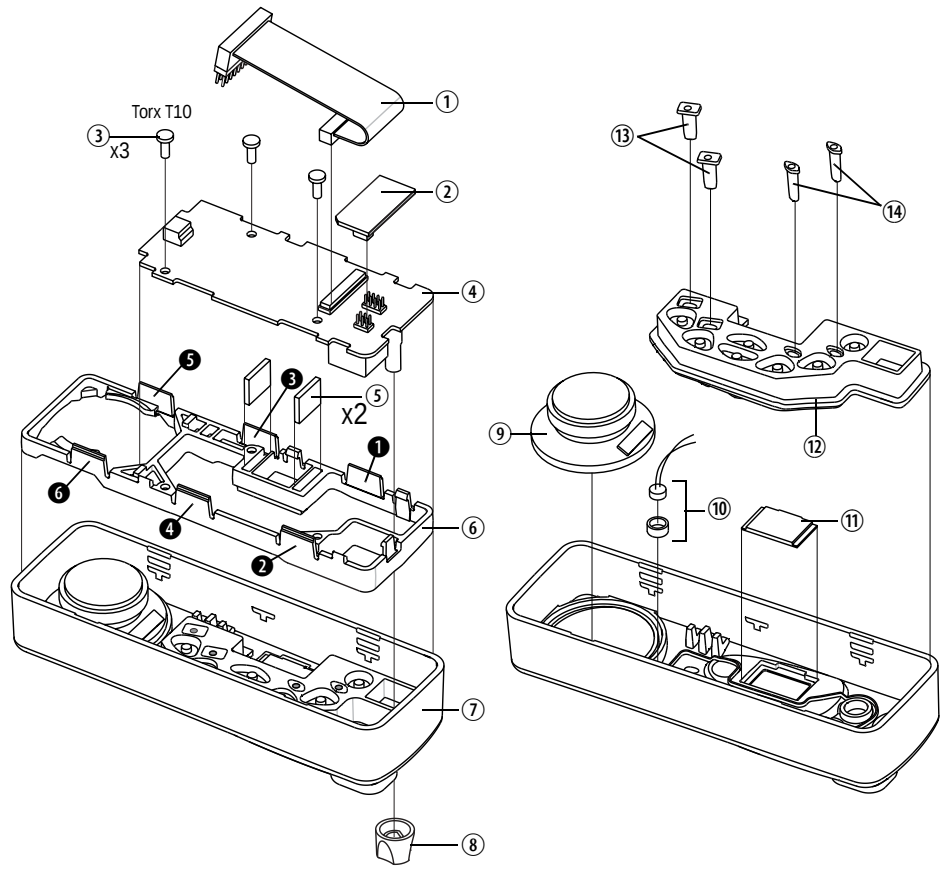


①	M4 x 12 Taptite screw (x2)	**Fe**
②	adaptor flange	**PC + PET**
③	control-head loom assembly with adapter	**Cu + Mixed**
④	3 x 10 PT screw (x4)	**Fe**
⑤	control-head board - EMI shields	**Mixed**[a] **CuZn27Ni18**
⑥	space-frame seal (x2)	**Si elastomer**
⑦	short light pipe	**PC**
⑧	long light pipe	**PC**
⑨	space-frame	**AlSi8Cu3Fe**
⑩	speaker clamp	**Si elastomer**
⑪	speaker	**Mixed**
⑫	LCD assembly (including LCD seal)	**Mixed**
⑬	main keypad	**Si elastomer**
⑭	power keypad	**Si elastomer**
⑮	concealed microphone (optional)	**Mixed**
⑯	front panel assembly	**PC + PET**
⑰	knob for volume-control potentiometer	**PC + PET** [b]

a. After removal of EMI shields
b. Knob contains small steel spring

Disassembling the Control Head with 1-, 2-, or 3-Digit Display (TM8110, TM8115, TM8235)

1. Pull off the volume control knob ⑧.
2. If a concealed microphone ⑩ is fitted, disconnect the microphone leads from the control-head board.
3. Disconnect the speaker cable from the speaker connector of the control-head board.
4. Unscrew the three Torx T10 screws ③.
5. While pressing on the shaft of the volume-control potentiometer, push the clips holding the control-head board away from the control-head board ④. The board will be freed from the space-frame.
6. While pulling upwards on the space-frame ⑥ at the corner where the microphone connector is situated, release the clips labelled ❶ to ❻ in the order: ❶ and ❷, ❸ and ❹, and then ❺ and ❻. To release each clip use a 3/16 inch (5mm) flat-bladed screwdriver to lever the clip out of its recess. Pulling on the space-frame helps release the clips.
7. Remove the elastomeric strips ⑤, speaker ⑨, LCD ⑪, keypad ⑫, lightpipes ⑭ and ⑮, and, if fitted, the concealed microphone ⑩.

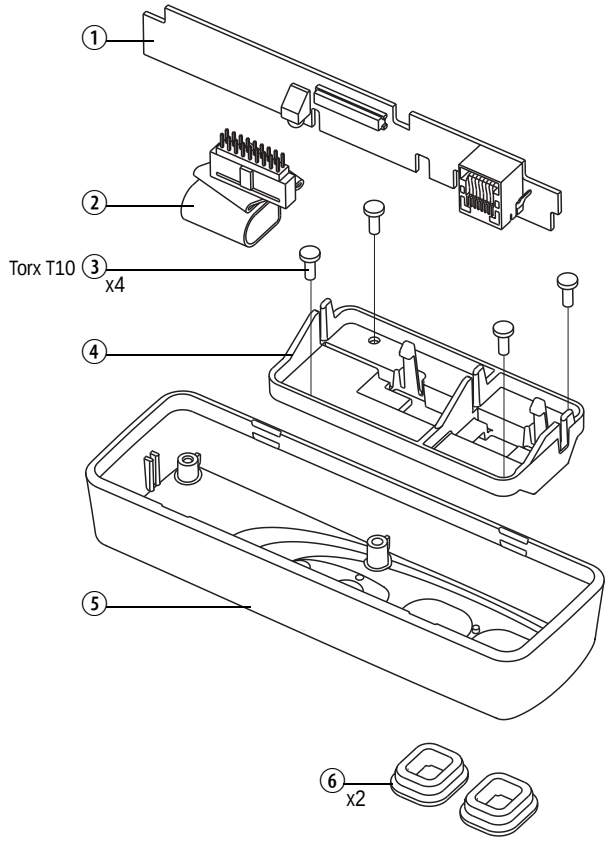


①	control-head loom with adaptor	**Cu + Mixed**	⑧	knob for volume-control potentiometer	**PC + PET** [a]
②	control-head options board (optional)	**Mixed**	⑨	speaker	**Mixed**
③	3 x 8 PT screw (x3)	**Fe**	⑩	concealed microphone (optional)	**Mixed**
④	control-head board	**Mixed**	⑪	LCD	**Mixed**
⑤	elastomeric strip (x2)	**Si elastomer**	⑫	keypad	**SI elastomer**
⑥	space-frame	**PC + PET**	⑬	short light pipe	**PC**
⑦	front panel assembly	**PC + PET**	⑭	long light pipe	**PC**

a. knob contains small steel spring

Disassembling the RJ45 Control Head (TM8252)

1. Release the clip of the PCB bracket ④ and remove the control-head board ①.
2. Disconnect the control-head loom ② from the control-head-board ①.
3. Use a Torx T10 screwdriver to unscrew the four screws ③ and remove the PCB bracket ④.



①	control-head board	**Mixed**	④	PCB bracket	**PC + PET**
②	control-head loom with adapter	**Cu + Mixed**	⑤	front panel	**PC + PET**
③	3 x 8 PT screw (x4)	**Fe**	⑥	RJ45 bung (x2)	**Si elastomer**