

Dismantling Instructions and Material Recovery Information

1 Introduction

Tait Electronics Limited manufactures a range of portable, mobile, and infrastructure radio products in Christchurch, New Zealand, and distributes them to markets around the world. Material recovery and recycling processes are developing rapidly: It is our philosophy to provide clear and concise information about the materials contained in our products in order to facilitate and promote, in all markets or EU member state jurisdictions where such recycling is technically possible, the safe and economic recycling of the materials we use.

This document indicates as specifically as possible the material type of each component for which recycling is economically feasible based on the size of the component. This document also indicates the material type of any smaller components, typically metal fastenings, which must be removed in order to separate a larger component and which are themselves recyclable.

2 Material Categories

Tait products comprise a wide variety of materials. For the purposes of the WEEE Directive, these materials and the associated recovery processes are grouped as follows:

| Material category | Recovery and recycling process |
|-------------------------------------|---|
| Batteries (portable radios only) | Cells in a battery pack must be recycled in accordance with the Battery Directive for the cell type noted on the package casing. Battery pack casings and associated materials must be recycled according to their category and type as specified in this document. |
| Metals | It is expected that every jurisdiction will have the capability to recycle all materials in this category. Because of their high value copper content, cables are included as "metals" |
| Mixed | Various. These components typically include populated printed circuit boards, connectors, and switches, some of which contain small quantities of high value materials. Although disposal processes exist to reduce the volume of these components and to enable the recovery of the high value materials from them, such processes may not be available in every jurisdiction. |
| Paper/Cardboard | It is expected that every jurisdiction will have the capability to recycle all materials in this category. These materials are usually offered for recycling at the point of sale. |
| Polymers | Tait uses mostly "engineering" polymers. At the time of writing, recycling capabilities for these are limited or non-existent. We are optimistic that the polymer industry will investigate the recycling of these materials and so enable new Tait products to comply with the WEEE Directive while continuing to use these materials. |

3 Required Tools

- Pliers, rubber-nose
- Screwdrivers, flat-bladed: 3 mm (1/8 inch) and 6 mm (1/4 inch)
- Screwdrivers, Torx: T6, T10 and T20
- SMA nut driver tool (IPN 355-00003-xx)

4 Dismantling Instructions and Material Information

| To dismantle the ... | See ... |
|----------------------|-------------------------|
| Radio | page 2 |
| Battery | page 10 |
| Multi-charger | page 12 |
| Desktop charger | page 14 |

Dismantling the Radio

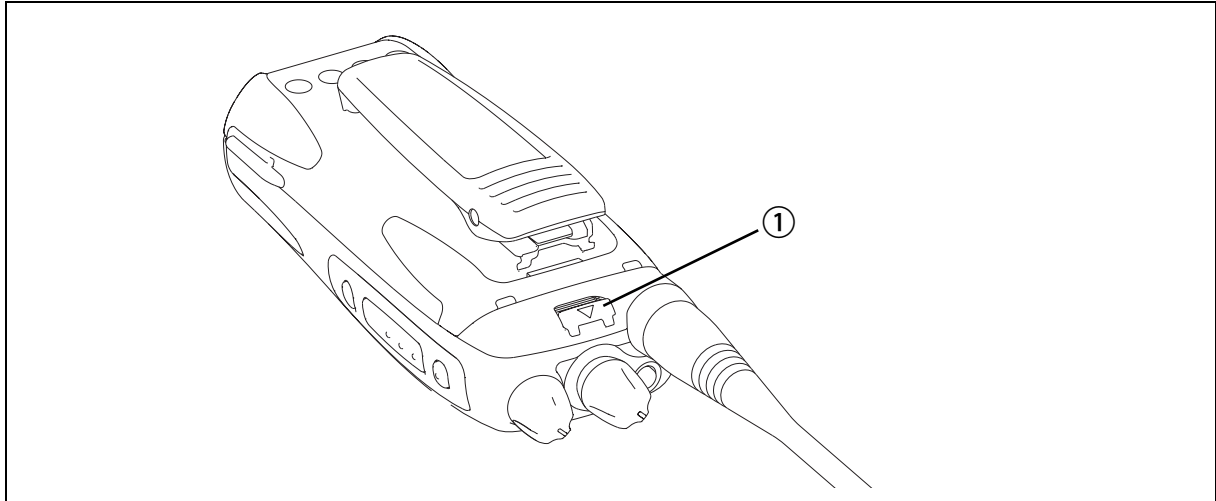


Note Complete all steps in the order shown.

1. Removing the battery from the radio.
2. Removing the chassis from the front panel assembly.
3. Removing the rear panel, battery catch and antenna ring.
4. Removing the main seal and chassis spring.
5. Removing the RF board and internal options board.
6. Removing the battery block connector.
7. Removing the vent patch from the chassis.
8. Removing the control board from the front panel.
9. Removing the top UI assembly and the top UI switch assembly.
10. Removing the flexible accessory board from the front panel.
11. Removing the PTT assembly from the front panel.

Detailed instructions follow.

Removing the battery from the radio



Warning!! **LI-ION BATTERY!** This radio uses a Lithium-ion battery. If the battery is damaged or handled in an unsafe manner, it can cause personal injury and/or damage to property. Read the important safety information in the Li-ion Battery Safety Information document (MPC-00006-xx). The document is on the Product Support CD and on the Tait Technical Support website, www.taitradio.com/technical.

1. Holding the radio firmly, use your thumb to press the battery catch ① upwards. This releases the top edge of the battery.
2. Holding the battery catch open, use your other hand to raise the top of the battery cleanly away from the radio.
3. Lift the two lugs at the bottom edge of the battery from the two slots in the bottom of the front panel.

Refer to the figure on the next page.

Removing the chassis from the front panel assembly

1. If the antenna is fitted, unscrew it from the radio.
2. Use a Torx T6 driver to remove the six screws ① with O-rings ② that secure the chassis ③ to the front panel.
3. Lift the chassis and RF board ④ away from the front panel. Disconnect the FFC cable ⑤ from the control board, which remains attached to the front panel.
4. If an internal options board ⑥ is fitted, also disconnect its FFC cable ⑦ from the control board.

Removing the rear panel, battery catch and antenna ring

1. Use a Torx T6 driver to remove the two screws ⑧ that secure the rear panel ⑨ to the chassis.



Note To avoid dropping the two springs ⑩ that are inside the battery catch ⑪, keep the catch lightly compressed between thumb and forefinger in the following step.

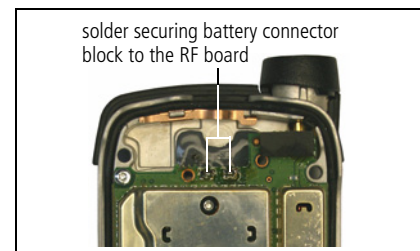
2. Starting at the edge furthest from the SMA connector, lift the rear panel, together with the battery catch, from the chassis.
3. Remove the antenna ring ⑫. It is a tight fit and you may need to lever it off.

Removing the main seal and chassis spring

1. Remove the main seal ⑬ from its groove in the chassis.
2. Remove the curved metal chassis spring ⑭ from the chassis.

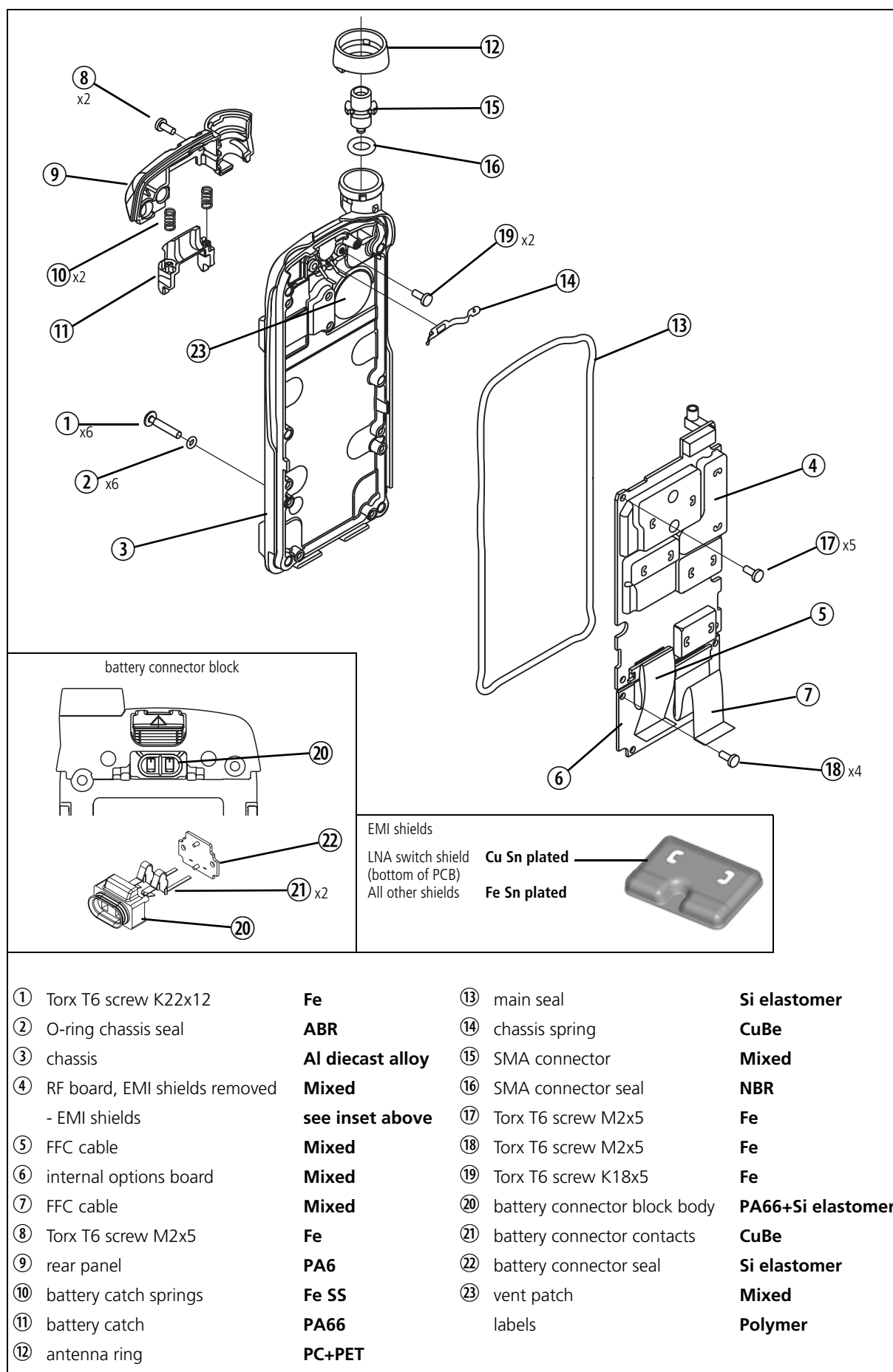
Removing the RF board and internal options board (if fitted)

1. Disconnect the FFC cables from the RF board (and internal options board if fitted).
2. Remove the SMA connector ⑮ from the chassis using the SMA nut driver tool (355-00003-xx).
3. Remove the SMA connector seal ⑯ from the chassis.
4. Use a Torx T6 driver to remove the five screws ⑰ that secure the RF board to the chassis.
5. Desolder the battery connector block from the RF board. While desoldering the connector block, lift the RF board from the chassis.
6. If an internal options board is fitted, use a Torx T6 driver to remove the four screws ⑱ that secure the board to the chassis.



Removing the battery block connector

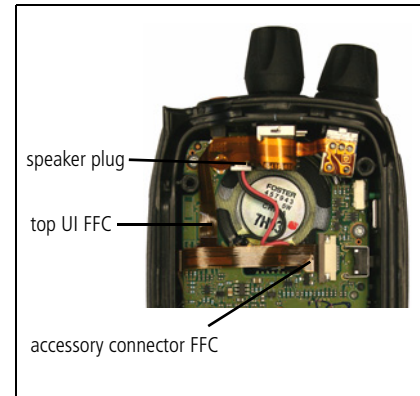
1. Use a Torx T6 driver to remove the two screws ⑲ securing the battery connector block ⑳ to the chassis.
2. Remove the connector block ㉑, contacts ㉒ and seal ㉓ from the chassis.



Refer to the figure on the next page.

Removing the control board from the front panel

1. Disconnect the flexible accessory board (accessory connector) FFC cable from the control board.
2. Disconnect the top UI FFC cable from the control board.
3. Disconnect the speaker plug from the control board.
4. Use a Torx T6 driver to remove the six screws ① that secure the control board ② to the front panel ③.
5. Remove the control board from the front panel. Sidecutters can provide a good grip on one of the metal tabs that protrude through the board from the LCD assembly.



Removing the top UI assembly and top UI switch assembly

1. Remove the channel knob ④, volume knob ⑤ and volume knob friction seal ⑥. To remove a knob, grip it firmly with a pair of pliers. Then pull the knob off in one straight movement.
2. Use the volume/channel nut driver tool (355-00002-xx) to remove the nut ⑦ that secures the channel switch. Match the two teeth on the driver to the two notches in the nut.

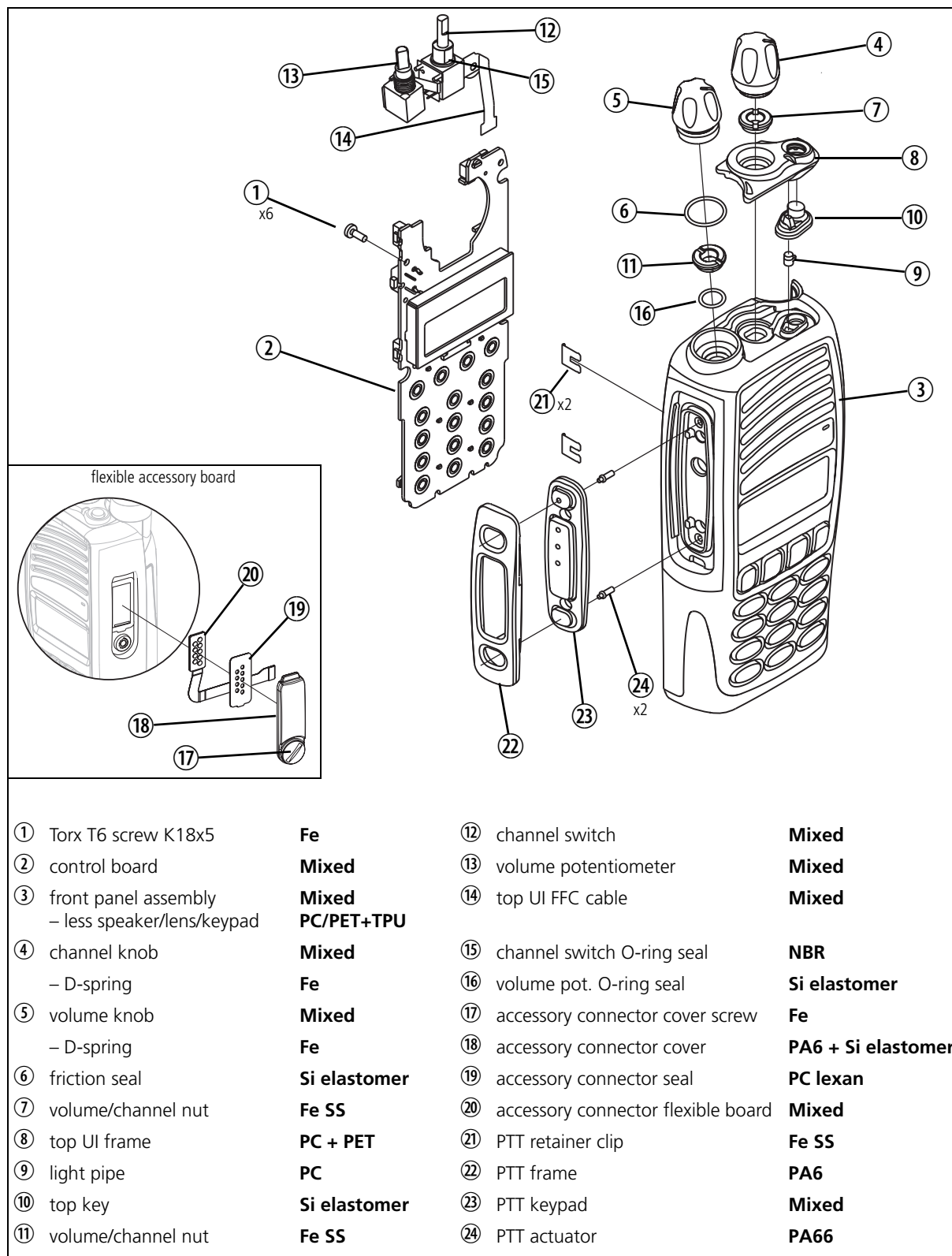


Note Removing this nut may require some force as it is secured with thread-locking fluid.

3. Remove the top UI frame ⑧ and the clear light pipe ⑨.
4. Remove the top key ⑩ from the top UI frame.
5. Use the volume/channel nut driver tool to remove the nut ⑪ that secures the volume potentiometer.
6. Remove the channel switch ⑫ and volume potentiometer ⑬ from the front panel. Desolder them from the top UI FFC cable ⑭.
7. Remove the O-ring ⑮ from channel switch. Remove the volume potentiometer O-ring ⑯ from the outside of the front panel.

Removing the flexible accessory board from the front panel

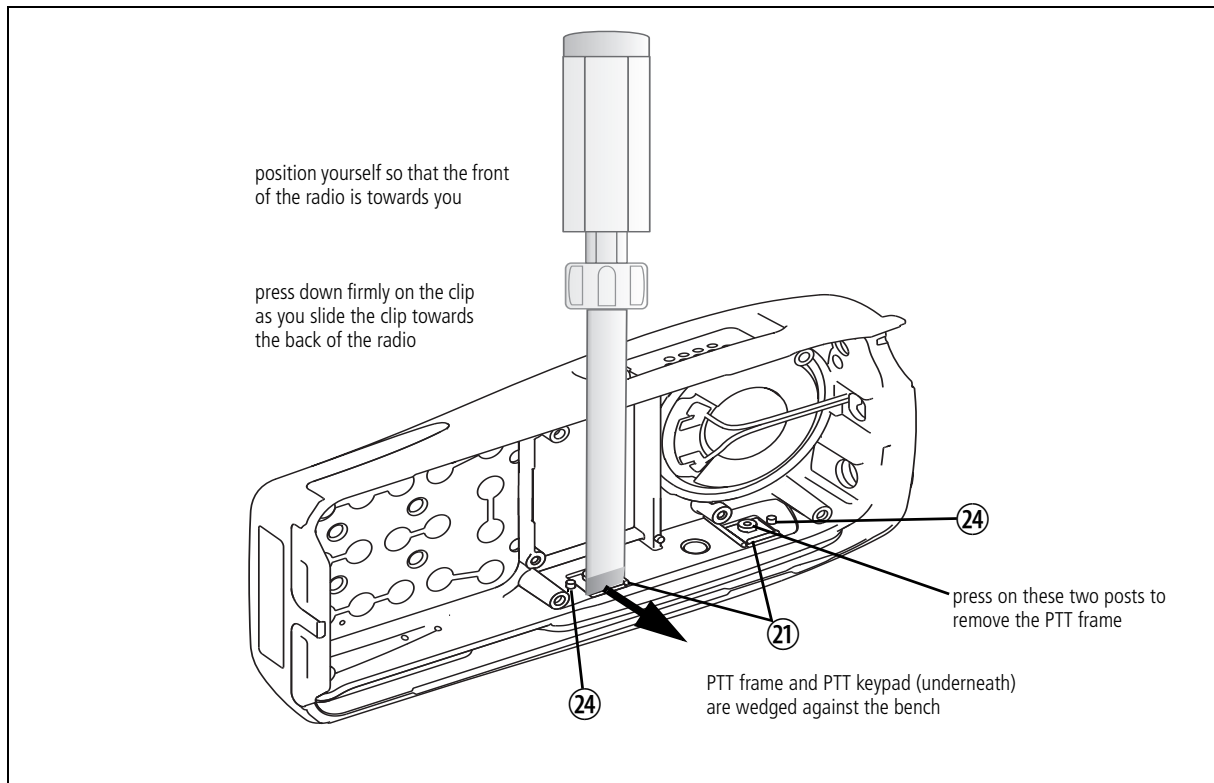
1. Loosen the screw ⑰ that secures the accessory connector cover ⑱ to the front panel. Remove the accessory connector cover.
2. Remove the adhesive seal ⑲ covering the flexible accessory board ⑳.
3. Peel the flexible accessory board off the front panel and withdraw it through the slot in the front panel.



Removing the PTT assembly from the front panel

Refer to the figure below and to the figure on the previous page.

1. Use one of the following methods to remove the two PTT retainer clips ②④:
 - Hold the front panel in your hand. Press your thumb firmly against the PTT frame, on the ridge between the PTT key and a function key. Use your finger to hook the nearest PTT retainer clip from the front panel. Repeat the process to remove the other PTT retainer clip.
 - Complete the following steps:
 - a. Select a flat-headed screwdriver. The head should be as wide as, or slightly wider than, the PTT retainer clips.



- b. Turn the front panel on its side. With the outside of the front panel towards you, steady the PTT keypad between the front panel and the bench.
 - c. Work down into the front panel, using the screwdriver to **press down firmly and directly across the body of a PTT retainer clip**. This applies pressure to the PTT frame, on the ridge between the PTT key and a function key. Do not use the front panel for leverage.



Warning!! RISK OF PERSONAL INJURY! Follow the instructions. Press straight down and do not let the screwdriver slip. Keep your head and neck clear of the screwdriver. If the screwdriver slips, it may cut or stab you.

- d. Maintaining a steady downward pressure on the screwdriver, place your thumb between the screwdriver and the front panel. Use your thumb to apply additional pressure, this time away from your body, towards the outside of the front panel. The PTT retainer clip springs free.
 - e. Remove the other PTT retainer clip in the same way.

2. Remove the PTT frame ② from the front panel. Press down on the two round plastic posts that project from the PTT frame into the front panel.
3. Remove the PTT keypad ③ from the PTT frame.
4. Remove the two green actuators ④ from the PTT keypad.

Removing the speaker, lens and keypad

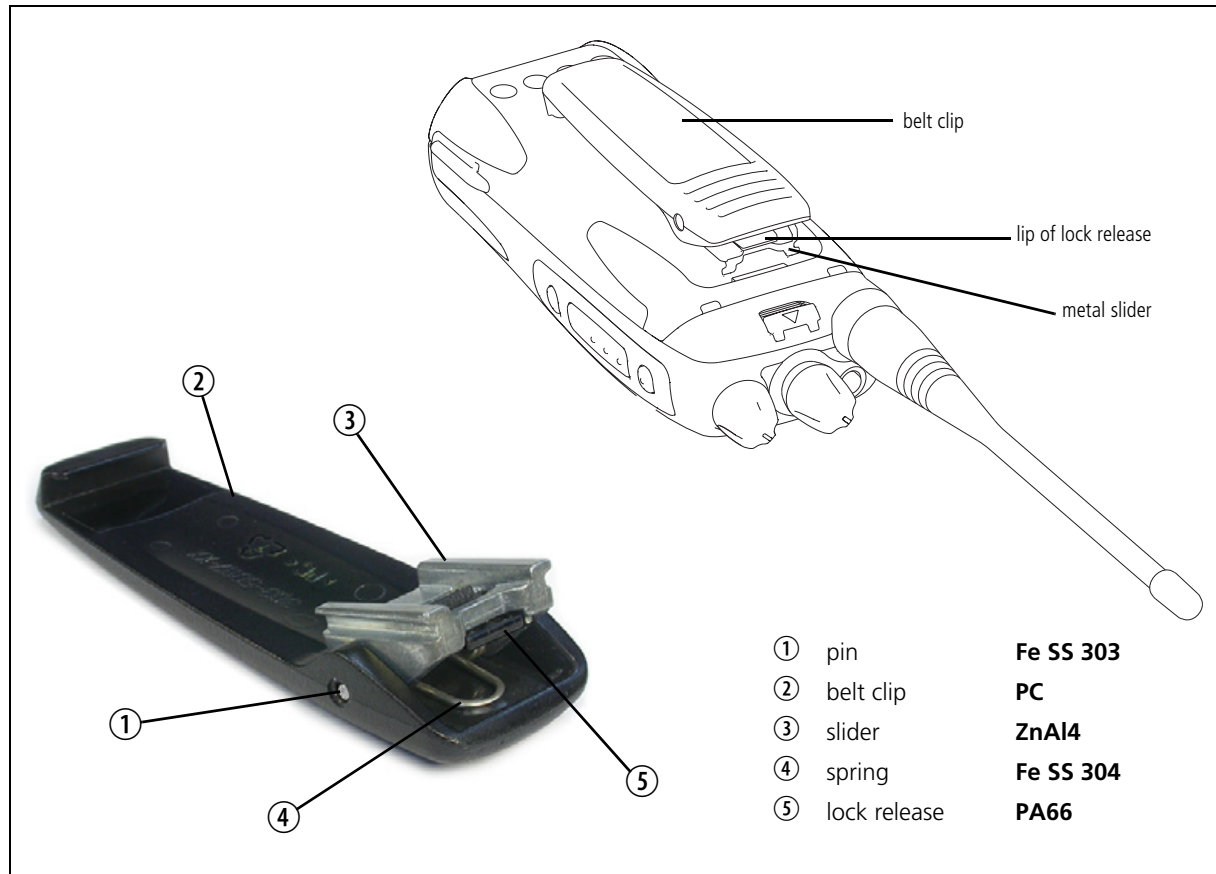
The speaker, lens and keypad are considered integral parts of the front panel. They are secured in place with a strong glue and are extremely difficult to remove.

Dismantling the Battery



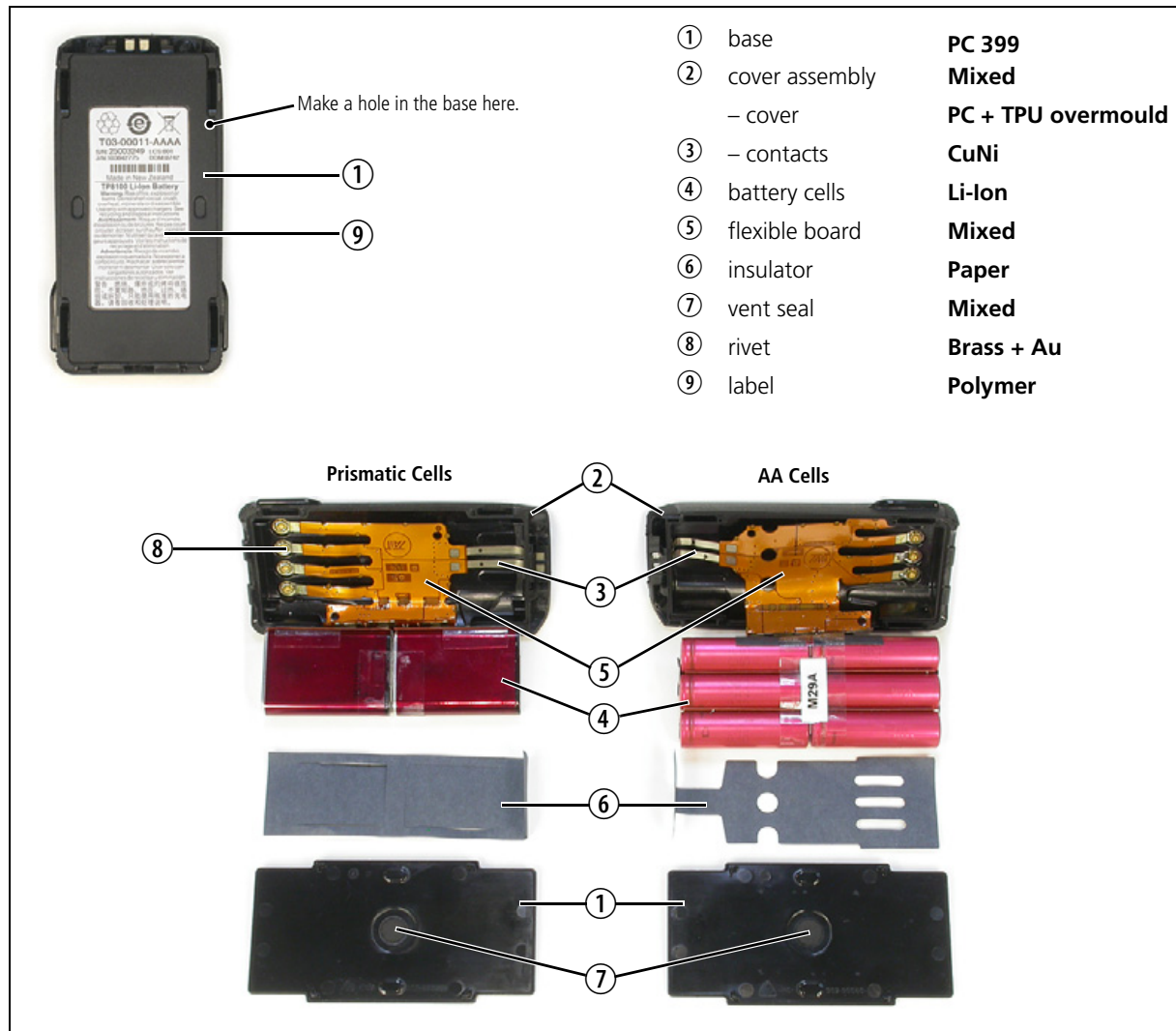
Warning!! **LI-ION BATTERY!** This radio uses a Lithium-ion battery. If the battery is damaged or handled in an unsafe manner, it can cause personal injury and/or damage to property. Read the important safety information in the Li-ion Battery Safety Information document (MPC-00006-xx). The document is on the Product Support CD and on the Tait Technical Support website, www.taitradio.com/technical.

Disassembling the belt clip (if fitted)



1. Remove the belt clip from the battery:
 - a. Insert the flat blade of a screwdriver under the belt clip, between the lip of the lock release and the metal slider.
 - b. Use the screwdriver to keep the lock release away from the metal slider as you slide out the belt clip.
2. Push against the smaller end of the pin ① to unlock it from the belt clip ②. Slide the pin out of the belt clip.
3. Remove the base ③, spring ④ and lock ⑤ from the belt clip.

Opening the battery casing



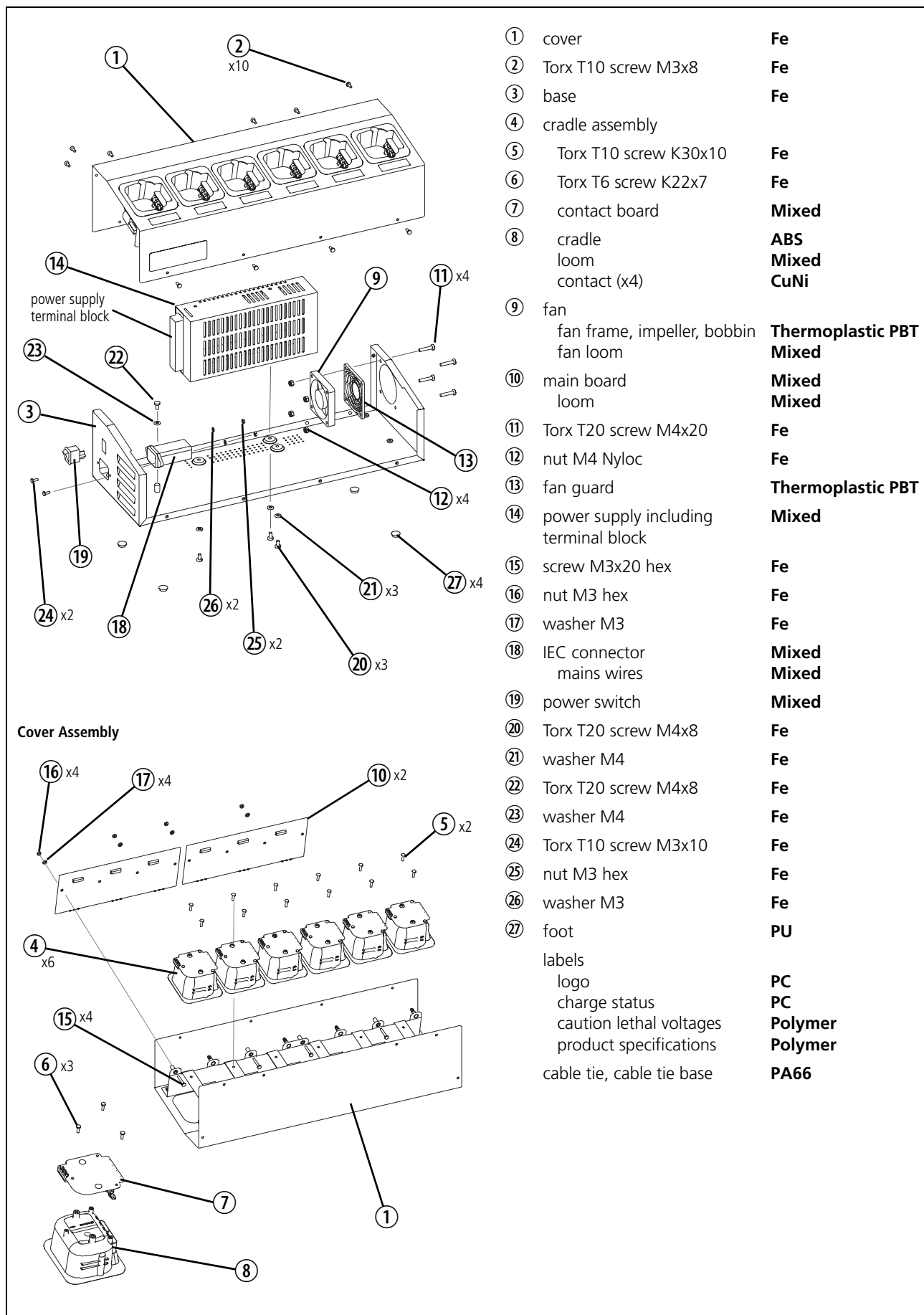
Warning!! We recommend that you discharge the battery before dismantling. While removing the battery pack, do not cause a short-circuit or puncture or damage the cells.

1. Make a hole in the corner of the base ① as indicated above. The hole should be large enough to allow access for a pair of pliers. Do not cut deeper than 1 mm to 2 mm into the battery casing. This is deep enough to open the battery casing without causing damage to other components.
2. Grip the base with the pliers and pull the it up and away from the cover ② to break the ultrasonic weld.
3. The battery pack ④ is glued to the cover. Prise the battery pack from the cover using a suitable tool (such as a flat-bladed screwdriver), taking care not to puncture or damage the cells.
4. Disconnect the flexible board ⑤ from the battery pack. Take care not to cause a short circuit.
5. Remove the flexible board from the cover.



Note Recycle the cells in the battery pack in accordance with the Battery Directive for Li-Ion cells.

Dismantling the Multi-Charger



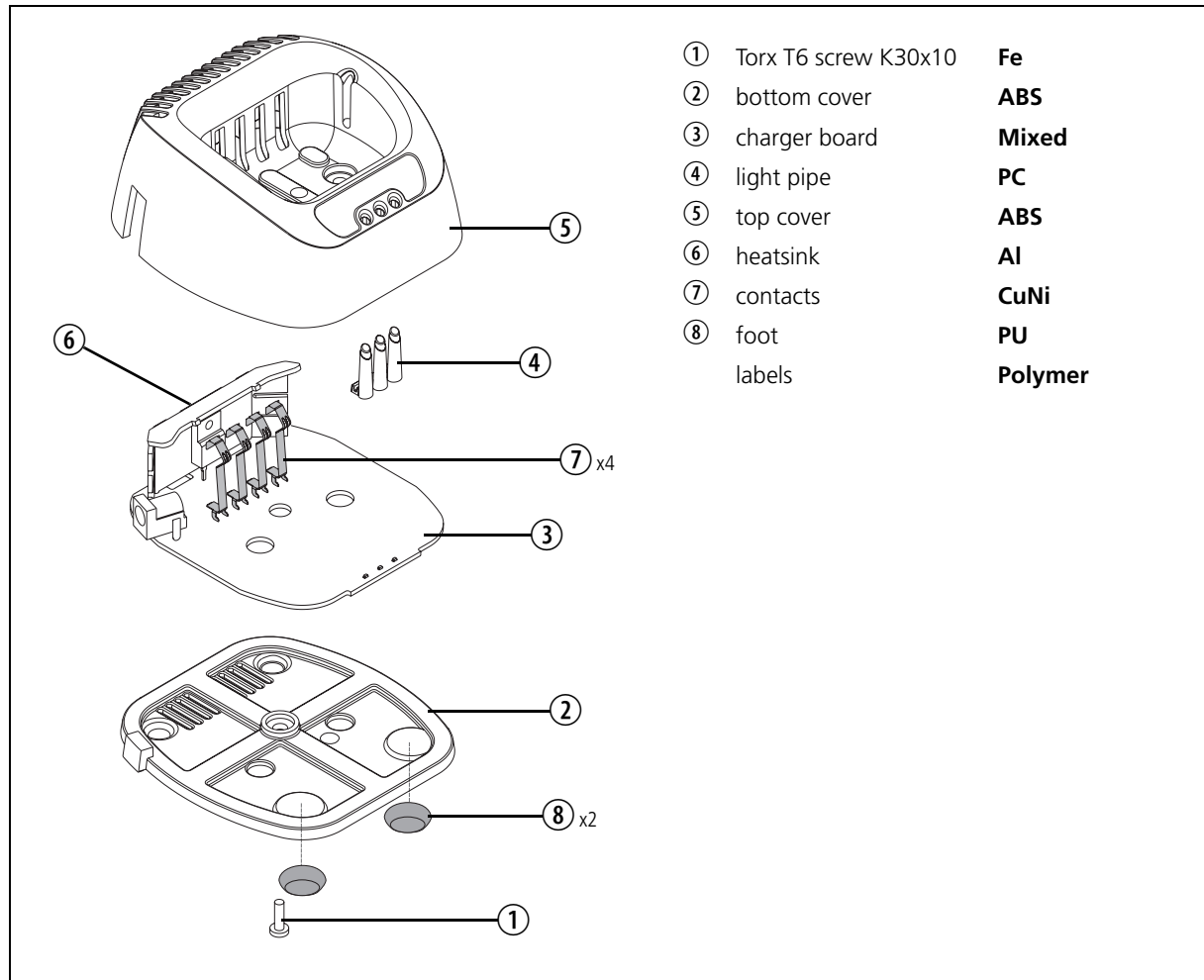


Warning!! HIGH VOLTAGES - MAINS POWER! Disconnect the multi-charger from the power supply before dismantling.

See the figure on [page 12](#).

1. Remove the cover ①:
 - a. Use a Torx T10 driver to remove the four front screws and the six back screws ② that secure the cover.
 - b. Pulling the front and back sides of the cover slightly outwards, lift the cover from the base assembly ③.
2. For each cradle assembly ④:
 - a. Unplug the cradle loom.
 - b. Unscrew the two Torx T10 screws ⑤ that hold the cradle assembly in place.
 - c. Remove the cradle assembly.
 - d. Unscrew the three Torx T6 screws ⑥ securing the contact board ⑦ to the bottom of the cradle ⑧.
 - e. Remove the contact board.
3. Remove the fan ⑨:
 - a. Unplug the fan loom from the main board ⑩.
 - b. Use a Torx T20 driver to remove the screws ⑪ and nuts ⑫ that hold the fan assembly in place.
 - c. Remove the fan guard ⑬ and the fan.
4. Remove the two main boards ⑩:
 - a. Unplug the loom that joins the two main boards.
 - b. Desolder the red and black power cable that connects each of the main boards to the power supply ⑭.
 - c. Remove the four screws ⑮, nuts ⑯ and washers ⑰ that secure the main boards to the charger cover ①.
 - d. Remove the boards.
5. Remove the power supply ⑭:
 - a. Remove the cover from the power supply terminal block.
 - b. Unscrew and remove the seven cables from the power supply:
 - Four red and black cables connect to the main boards.
 - Three mains cables connect to the IEC connector ⑱, the power switch ⑲, and the earth stud.
 - c. Use a Torx T20 driver to remove the three screws ⑳ and washers ㉑ that secure the power supply to the base assembly.
 - d. Remove the power supply.
6. Remove the IEC connector ⑱ and power switch ⑲:
 - a. Use a Torx T20 driver to remove the screw ㉒ and washer ㉓ securing the earth wires to the earth stud.
 - b. Use a Torx T10 driver to remove the two screws ㉔, nuts ㉕ and washers ㉖ securing the IEC connector to the base.
 - c. Remove the IEC connector and the mains cables.
 - d. Remove the power switch from the base ③.

Dismantling the Desktop Charger



1. Use a Torx T10 driver to remove the bottom screw ①.
2. Remove the bottom cover ②.
3. Remove the charger board ③ and light pipe ④ from the top cover ⑤.
4. Remove the heatsink ⑥ from the charger board.