

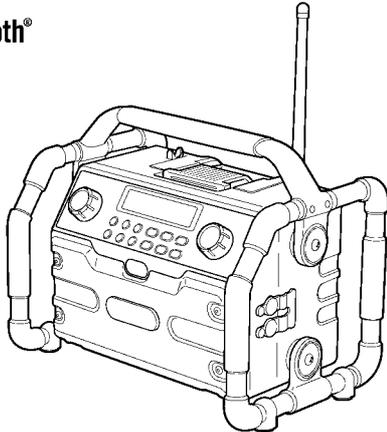
Service Manual

Portable Radio

Model No. **EY37A2**

Europe
Oceania

 Bluetooth®



WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by  in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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1 Warning

Caution:

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70 °F (30 - 40 °C) higher. Please use a soldering iron with temperature control and adjust it to 750 ± 20 °F (400 ± 10 °C). In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F / 600 °C).

2 Specifications

[MAIN UNIT]

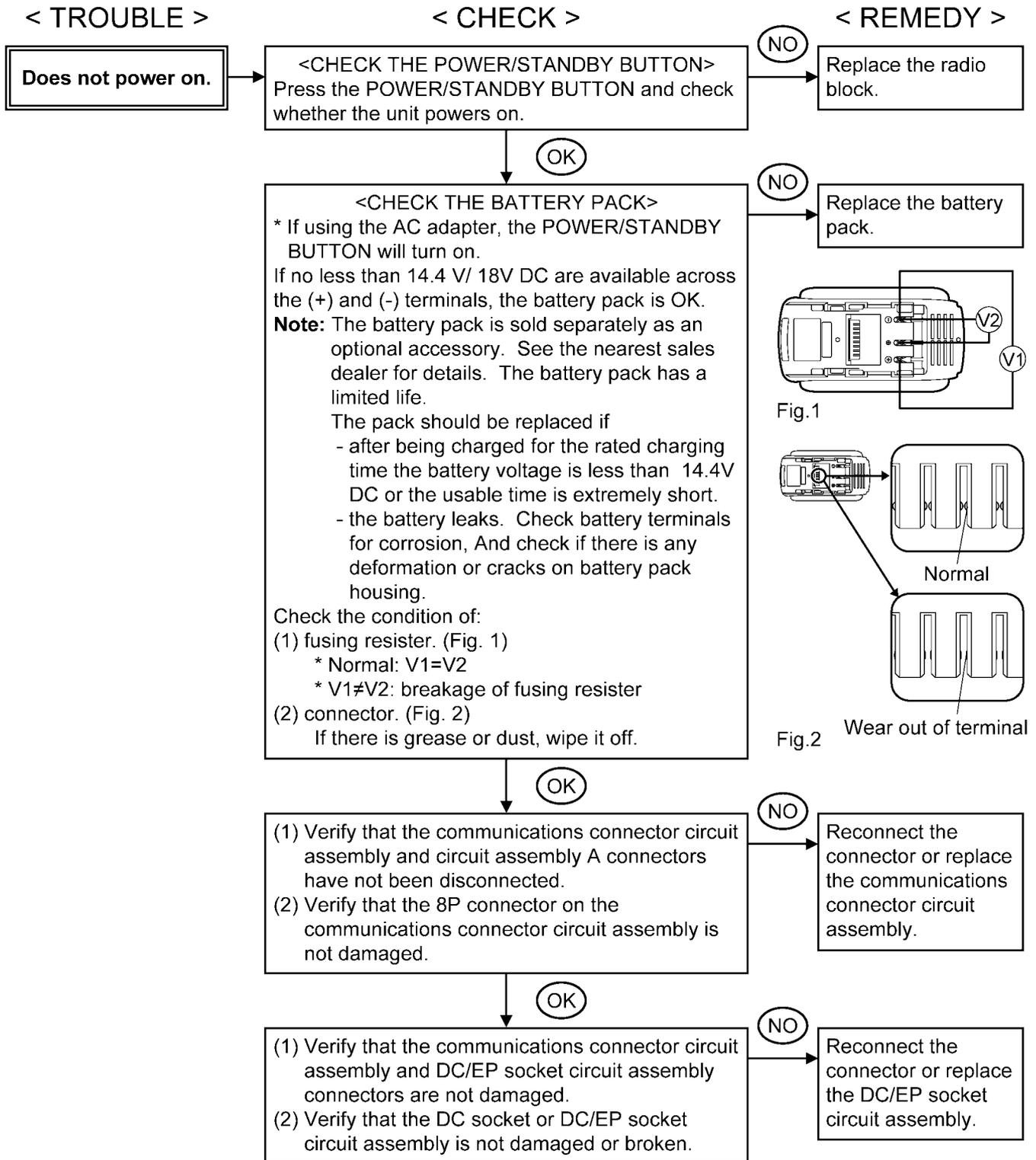
AC power adaptor	DC12 V/1500 mA, center pin positive
Battery	Back up: UM-3 (AA size) × 2
	Main battery: 14.4 V/18 V
Bluetooth® QD ID	58625
Bluetooth® version	4.0
Bluetooth® profiles	A2DP/SCMS-T
Transmission power	Bluetooth® specification power Class 2 (2.5 mW)
Transmission range	Approximately 10 m (varies according to usage conditions)
Supported codec	SBC
Compatible Bluetooth® profile	A2DP
Frequency range	FM 87.5-108 MHz (0.05 MHz/step)
	AM (MW) 522-1629 kHz (9 kHz/step)
Loudspeaker	3.5 inches 8 ohm × 2
Output Power	When using AC power adaptor: 1.7 W × 2 When using 14.4 V battery pack: 2.6 W × 2 When using 18 V battery pack: 4.5 W × 2
Input terminal	3.5 mm dia./Max. 2 V/stereo (AUX IN)
Output terminal	USB: DC OUT 5 V/1 A Headphone: 3.5 mm dia./3 Ω/150 mV/stereo
Antenna system	FM: soft bedded antenna
	AM: bar antenna
Dimension (W × H × D)	344 mm × 280 mm × 239 mm
Weight	4.7 kg (with EY9L51)/4.0 kg (main unit only)
Power consumption	Max. 7 W 0.12 W (Standby mode)

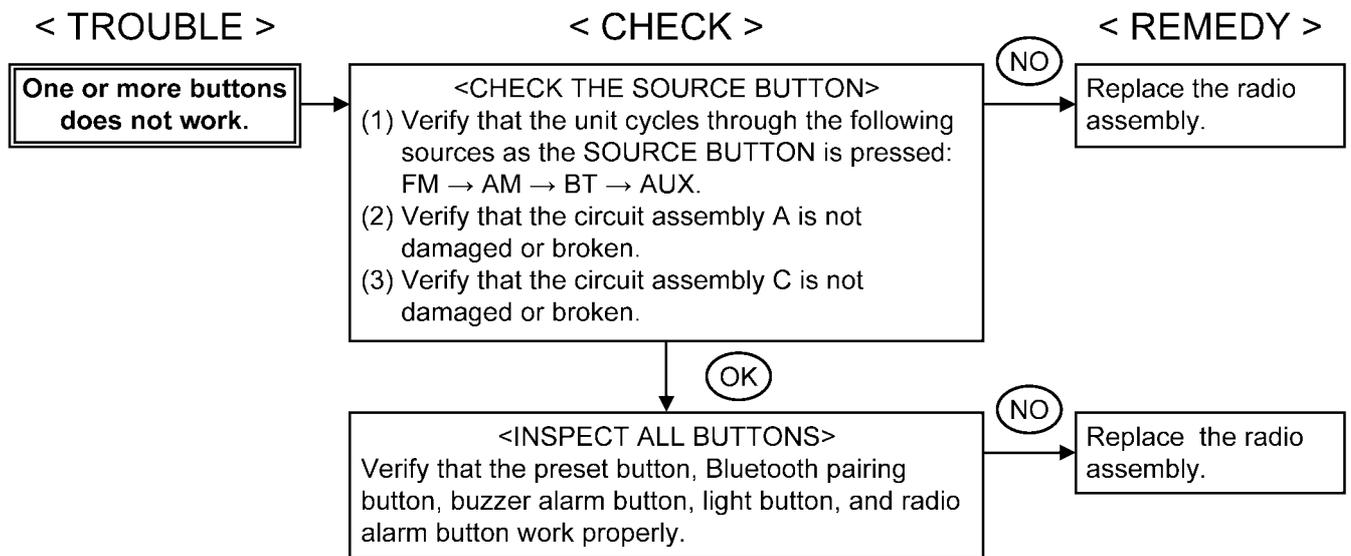
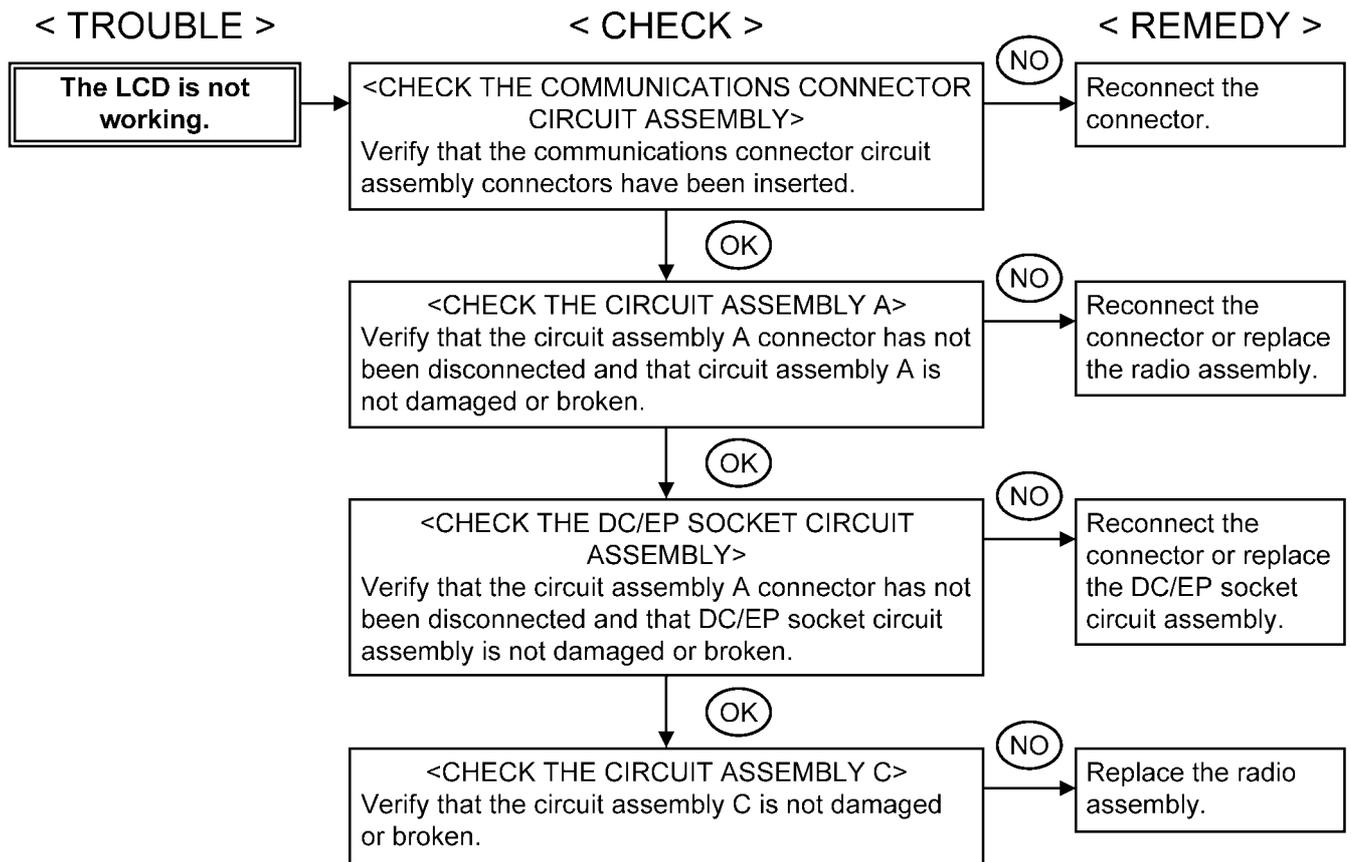
[BATTERY PACK]

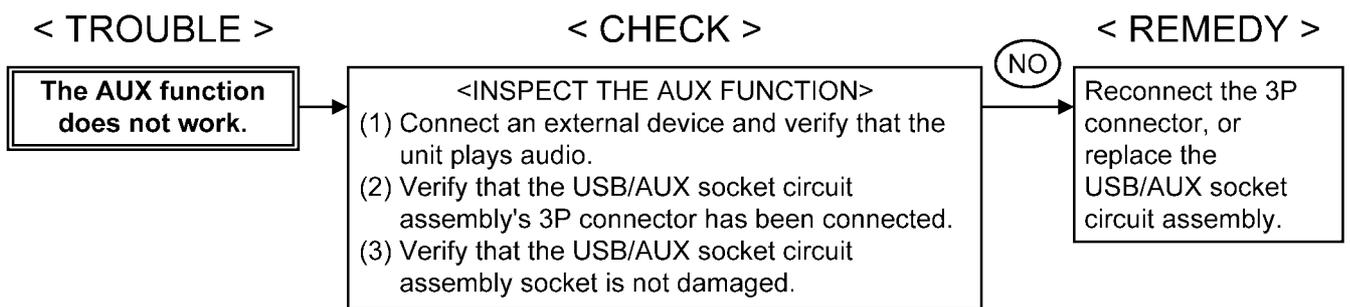
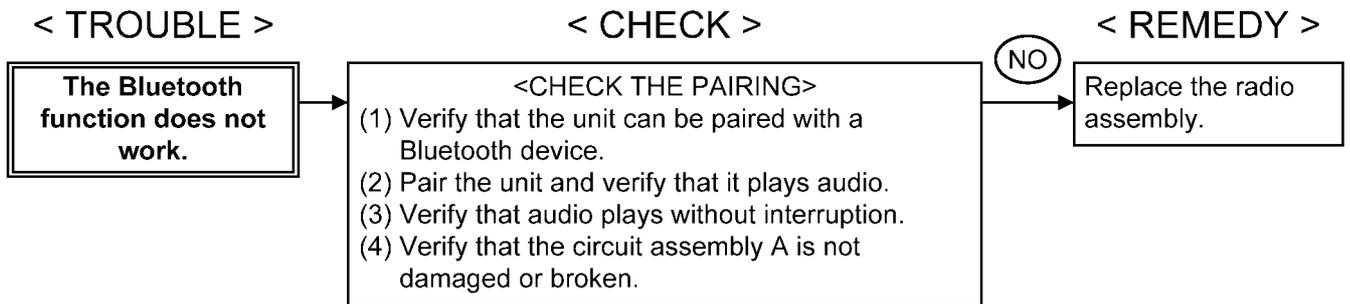
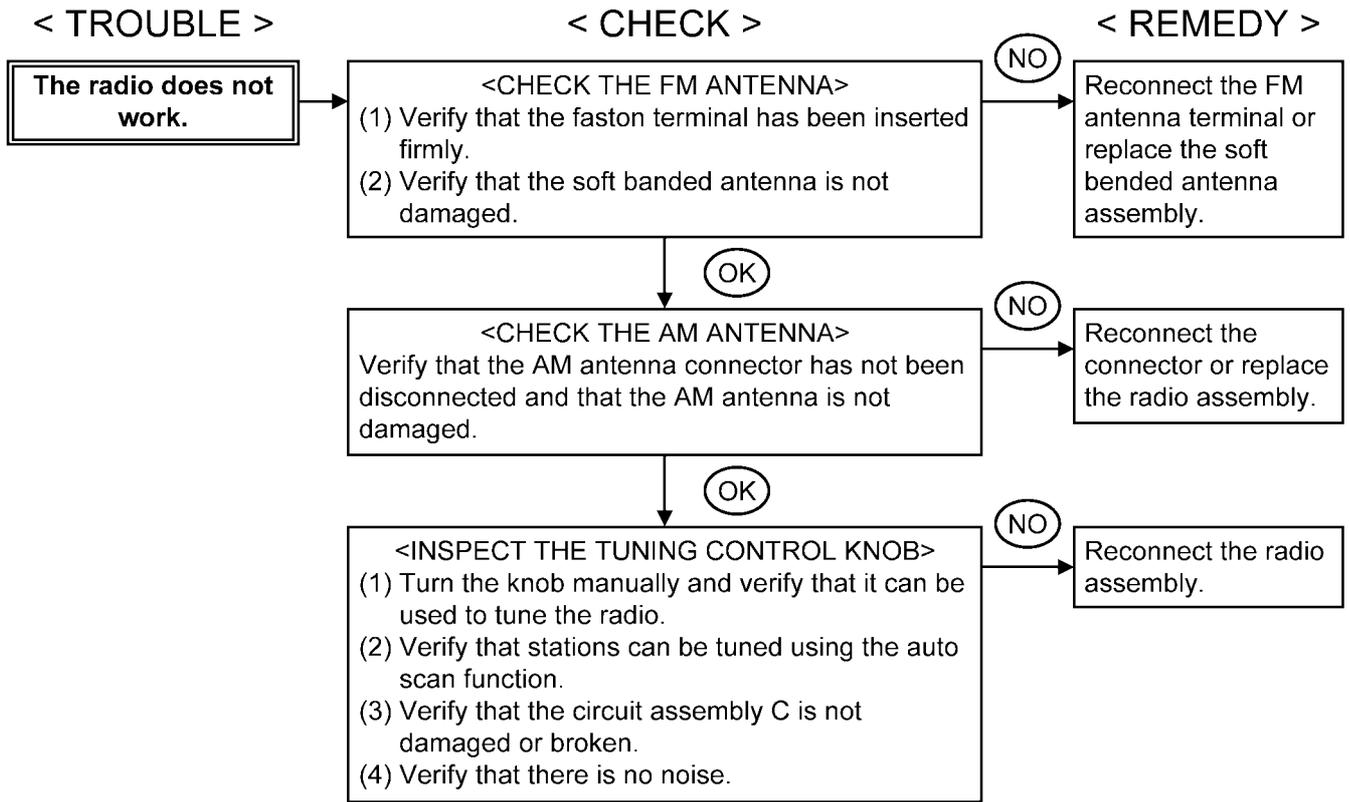
Model No.	EY9L41	EY9L42	EY9L44	EY9L45	EY9L47	EY9L50	EY9L51	EY9L52	
Storage battery	Li-ion Battery								
Motor voltage	14.4V DC (3.6V × 4 cells)		14.4V DC (3.6V × 8 cells)		14.4V DC (3.6V × 4 cells)		18V DC (3.6V × 10 cells)		18V DC (3.6V × 5 cells)
Operating time at 50 W+50 W (FM Received)	Approx. 18 h	Approx. 9 h	Approx. 19 h	Approx. 24 h	Approx. 11 h		Approx. 19 h	Approx. 24 h	Approx. 11 h

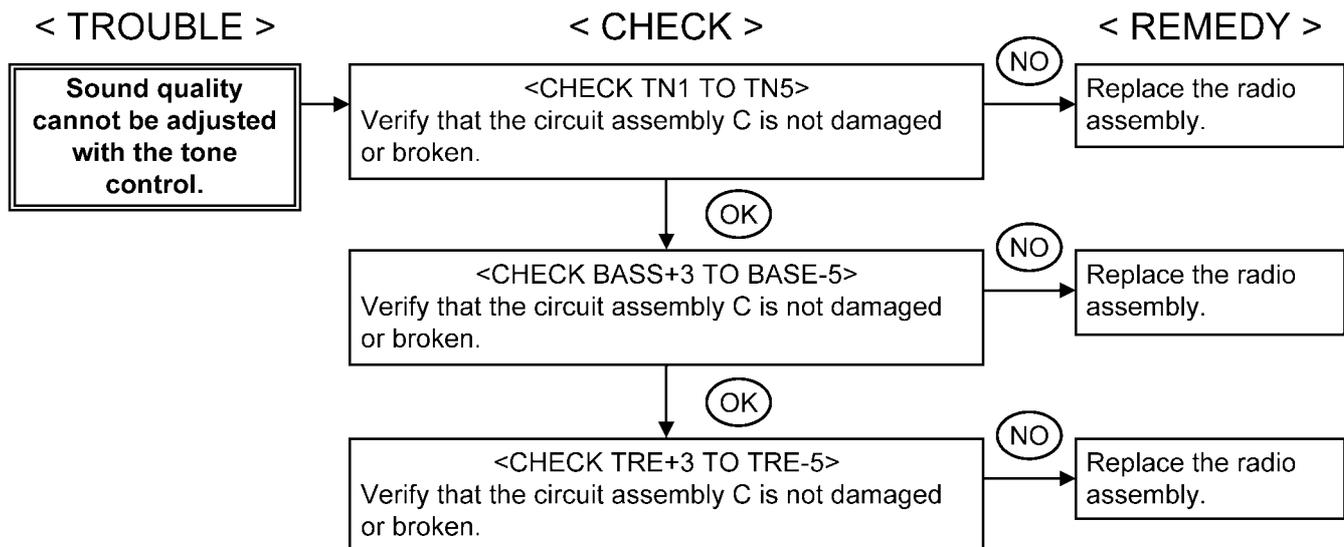
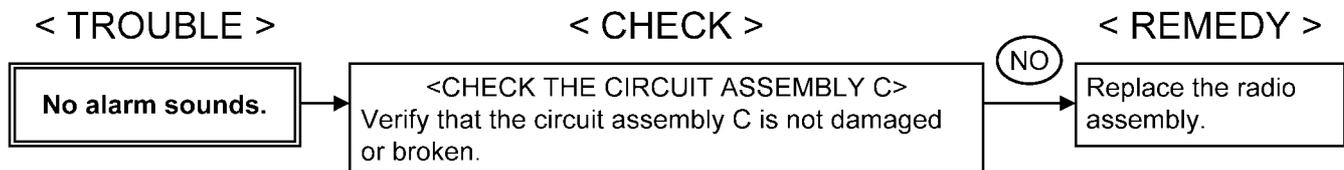
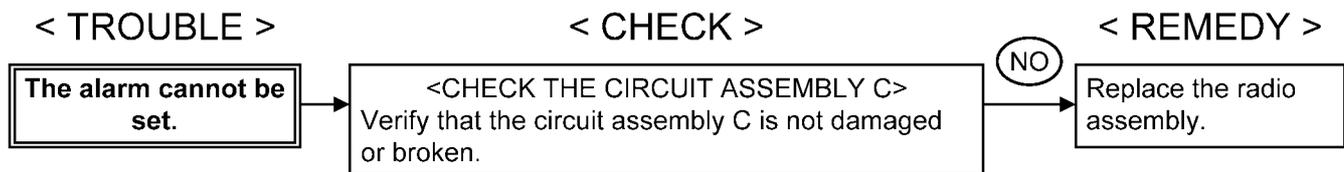
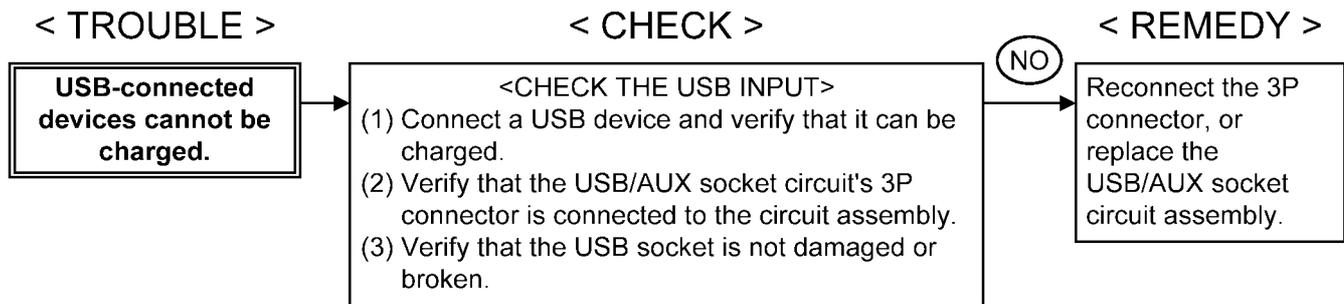
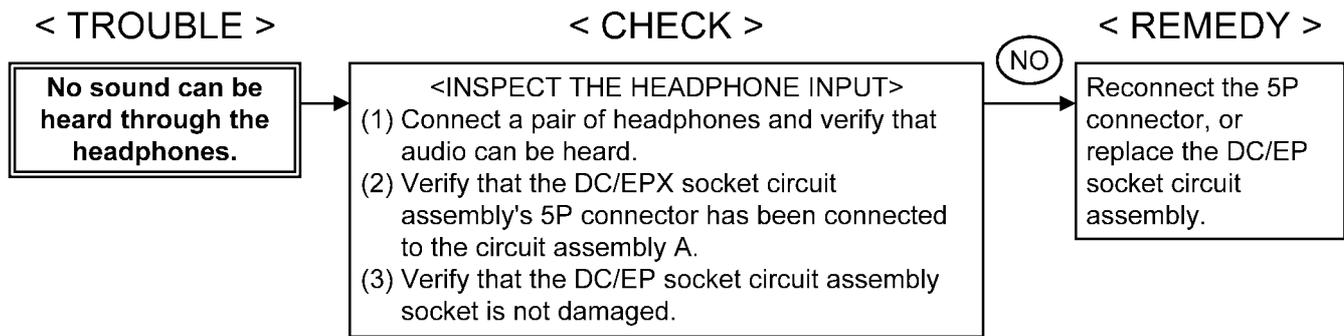
3 Troubleshooting Guide

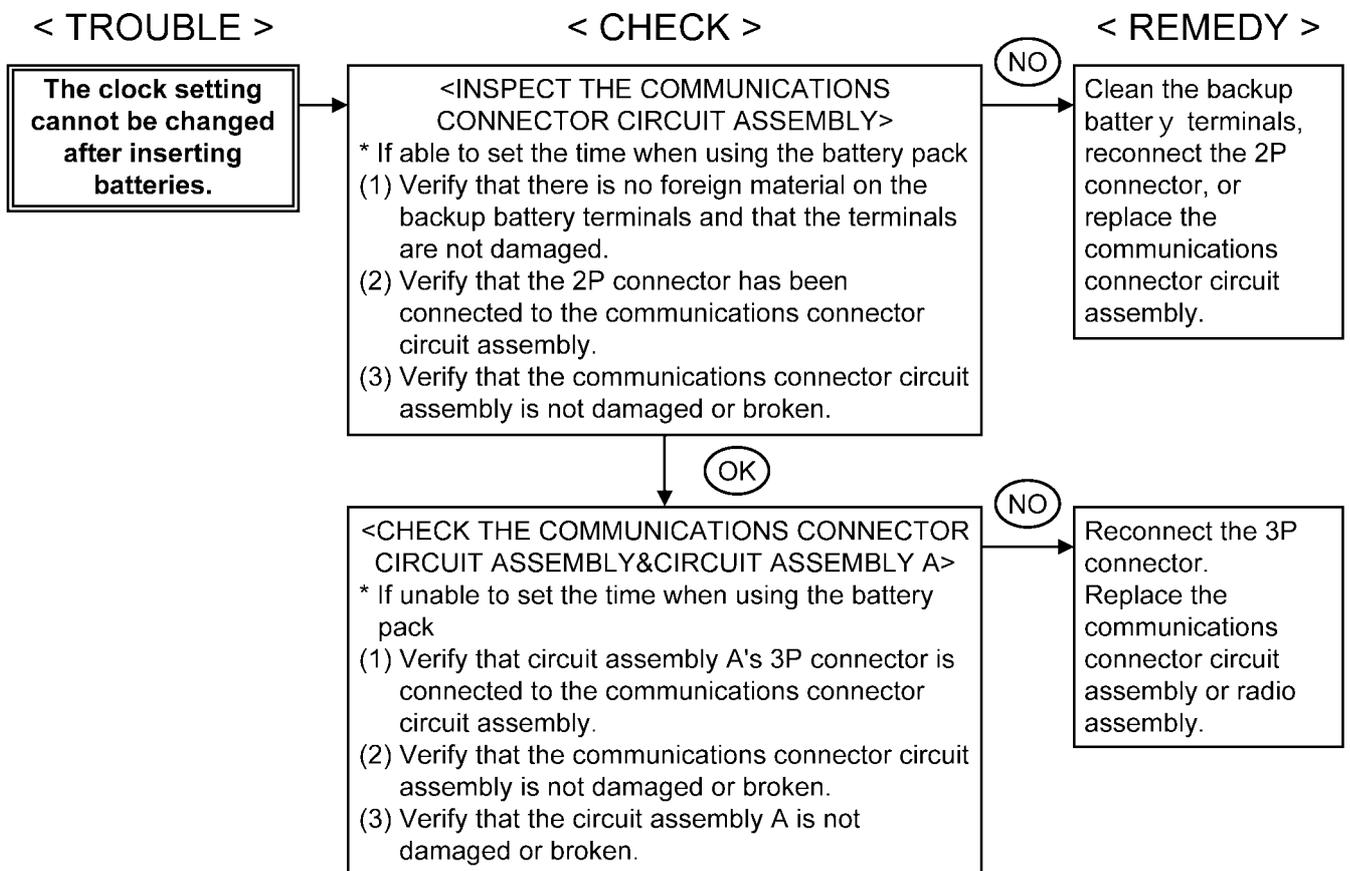
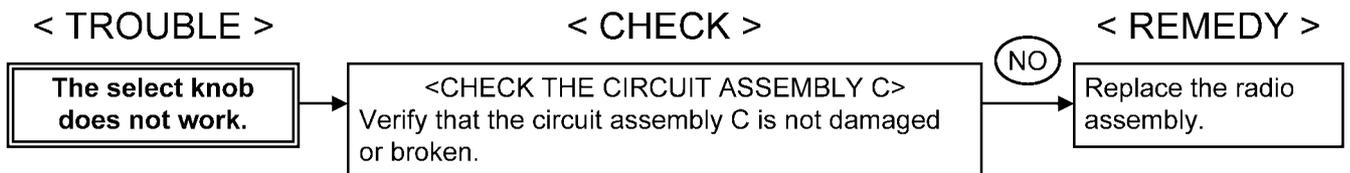
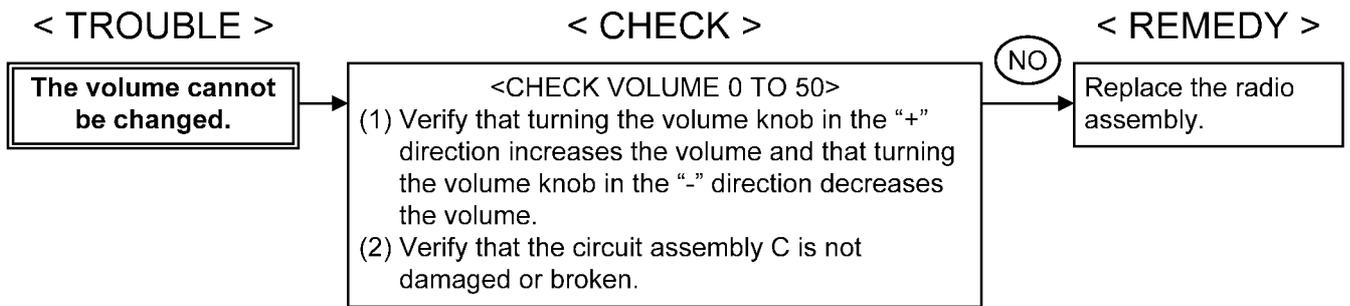
3.1. Troubleshooting Guide











3.2. Trial Operation (after checking Troubleshooting Guide).

3.2.1. Assembly

- Confirm if there is no gap between housing A and B by pinching lead wires.
- There is no dust or deformation on battery terminals.
- Verify that the two backup AA batteries have been inserted in the correct orientation.

3.2.2. Operation

- Press the POWER/STANDBY BUTTON and verify that the unit powers on.
- Verify that the time can be set.
- Verify that the volume increases when the volume knob is turned in the [+] direction and that the volume decreases when the volume knob is turned in the [-] direction.
- Verify that radio stations can be selected manually, with auto-scan, and with the preset buttons.
- Verify that an FM radio broadcast can be switched between stereo and mono.
- Verify that the unit can be paired with Bluetooth devices.
- Verify that the Bluetooth auto-pairing function works.
- Connect an external device to the external input socket and verify that music or other audio can be played.
- Verify that sound quality can be adjusted with the TON, BAS, and TRE functions.
- Verify that the alarm can be switched on and off.
- Verify that the alarm can be set.
- Verify that the snooze function works for the alarm (radio) and alarm (buzzer).
- Verify that the sleep timer setting works for the alarm (radio) and alarm (buzzer).
- Verify that the operation sound can be set.
- Connect a USB device to the USB input terminal and verify that it can be charged.
- Connect a pair of headphones or earphones to the headphone socket and verify that audio can be heard.
Additionally, verify that audio is not played through the unit's speaker while using earphones or headphones.
- Press the light button and verify that the LED turns on, flashes after 10 minutes, and turns off after 1 minute.

3.2.3. Integrity

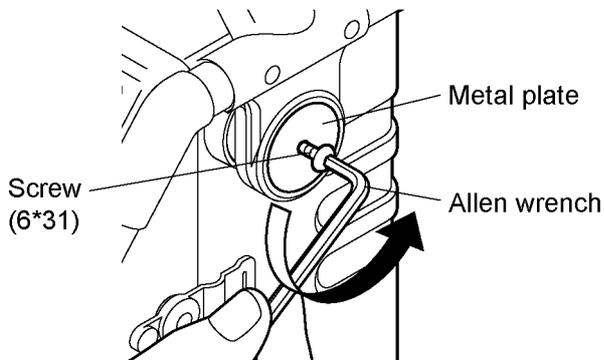
- Turn on the unit, turn the volume knob, and verify that there is no static as the volume increases and decreases.
- Verify that the soft bended antenna is not damaged.
- Verify that there is no dirt, scratching, or other damage on the tool's exterior from the repair process.

4 Disassembly and Assembly Instructions

* To reduce the risk of injury, always remove battery pack before removing/installing the tool.

* To assemble the tool, start with 4-7 and proceed to 4-1

4.1. How to removing the protective flame assembly.



1. Remove the four screws that holding the protective flame assembly.

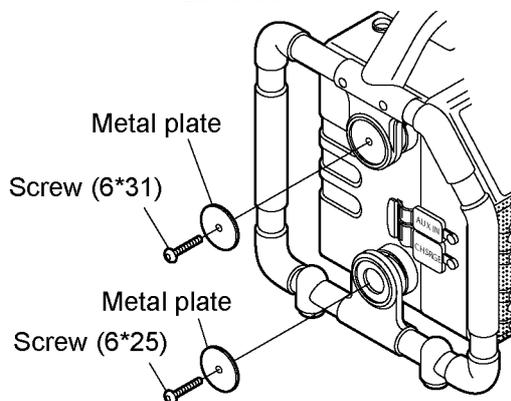
2. Remove four metal plates.

* Assembly precaution.

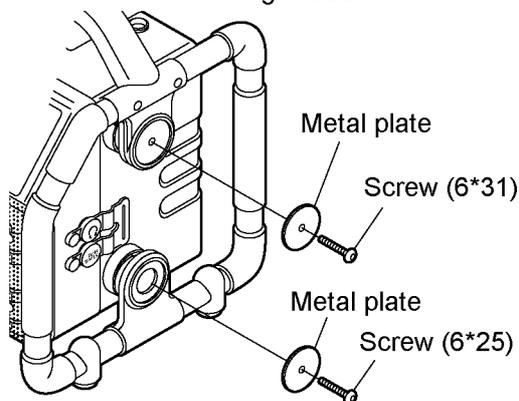
Attach the metal plates so that the side with the burrs faces the protective frame assembly.

When checking for burrs, exercise care not to cut your hand.

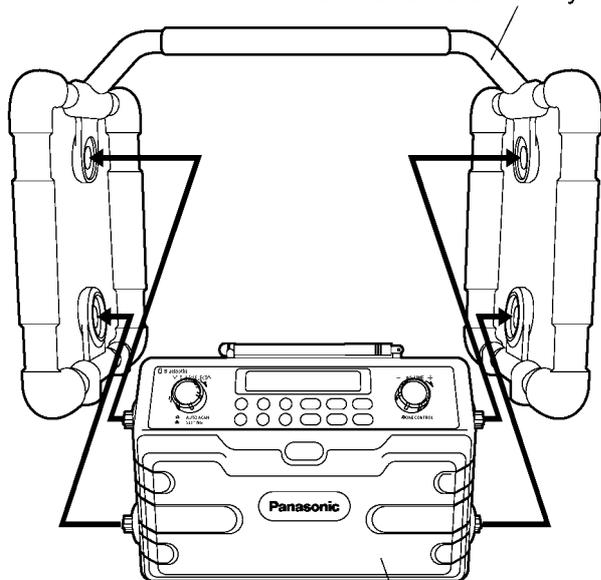
< Left side >



< Right side >

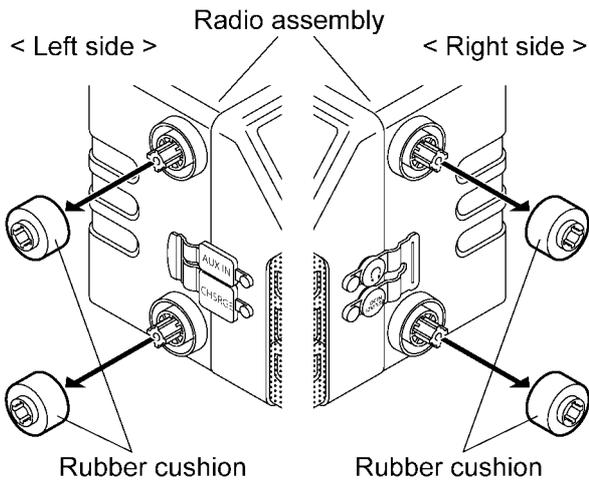


Protective flame assembly



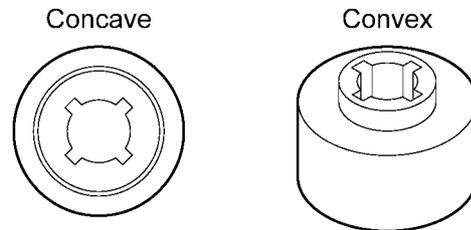
3. Pull apart the protective frame assembly and remove it from the radio assembly.

4.2. How to removing the rubber cushion, knob set assembly and soft banded antenna.



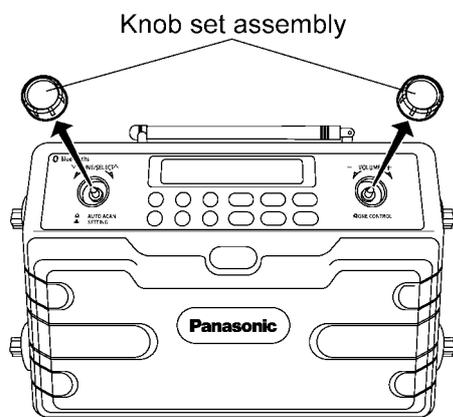
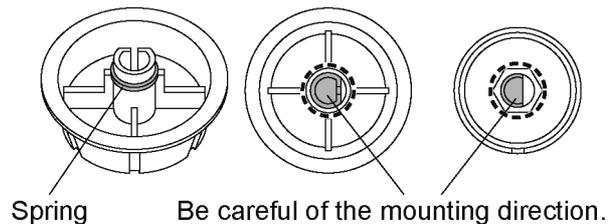
1. Remove the two rubber cushions from each side of the radio assembly.

* Precaution when attaching the rubber cushions.
Orient the rubber cushions so that the side with the indentation faces the radio assembly.



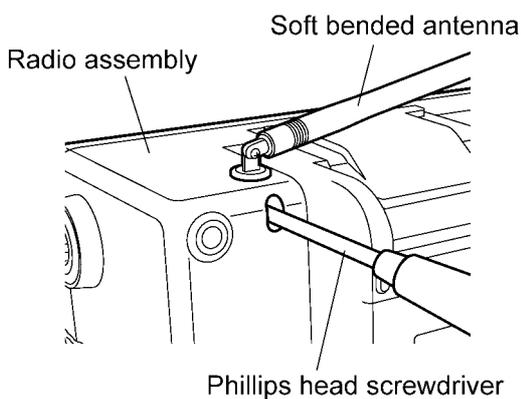
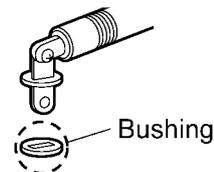
2. Remove the two knobs from radio assembly.

* Precautions when attaching the knob.
Verify that the springs have been attached to the dial assemblies. Exercise care to orient each dial assembly properly relative to the volume shaft.

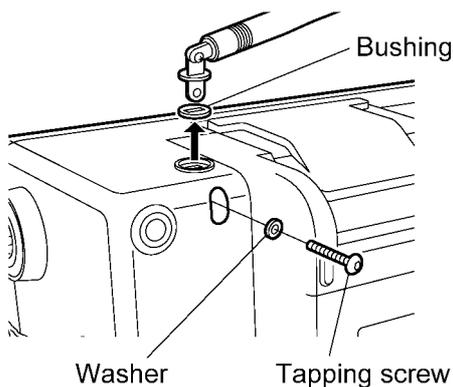


3. Remove the tapping screw and washer that attach the soft banded antenna from the radio assembly and remove the antenna and bushing.

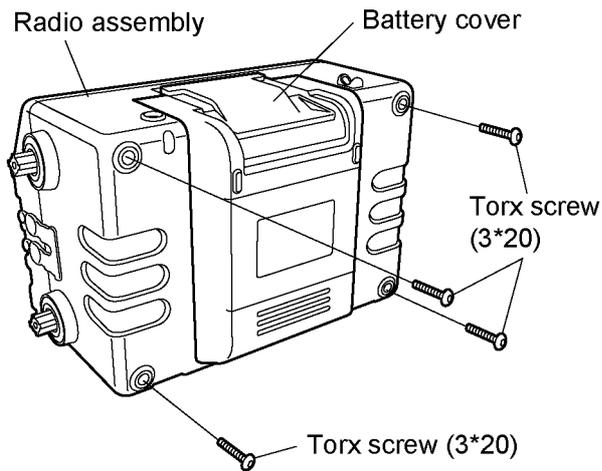
* Precaution when attaching the soft banded antenna.
Exercise care not to forget the bushing when reattaching the soft banded antenna.



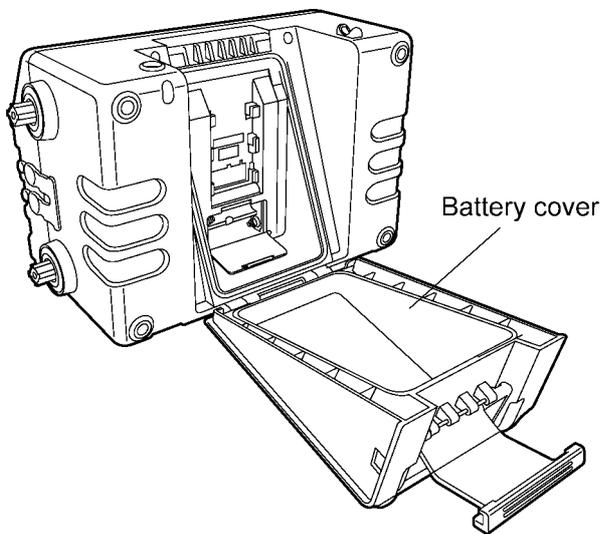
* When attaching the screw that holds the soft banded antenna in place, place the washer on the tapping screw first.



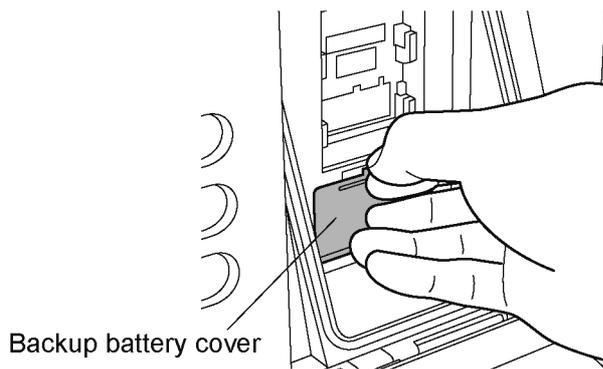
4.3. How to removing the housings.



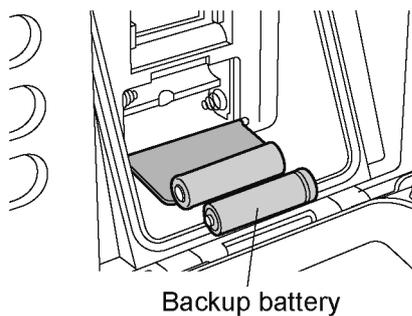
1. Remove the four Torx screws on the back of the radio assembly.



2. Open the battery cover.



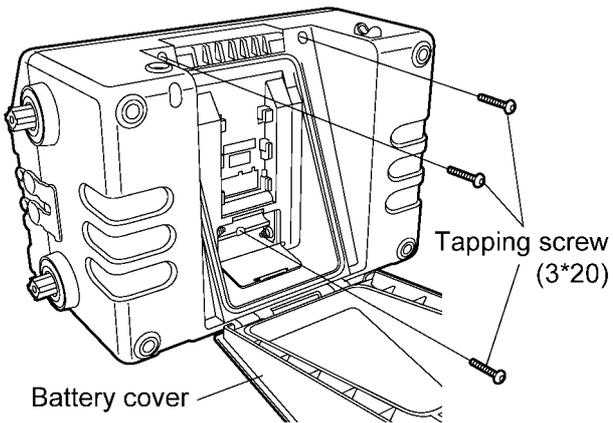
3. Open the backup battery cover.



4. Remove the backup batteries.

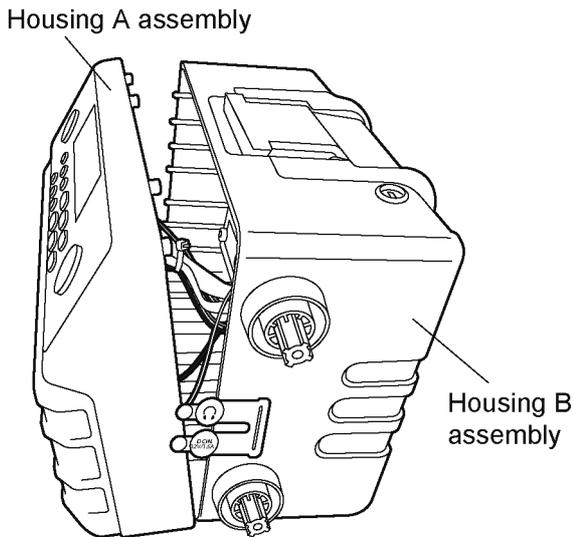
* When the backup batteries are removed, the time and settings will be reset.

5. Remove the three tapping screws.

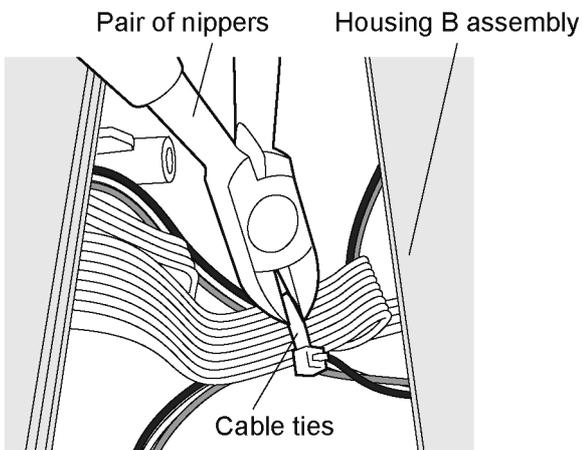


6. Return the battery cover to its original position and remove housing A assembly from housing B assembly.

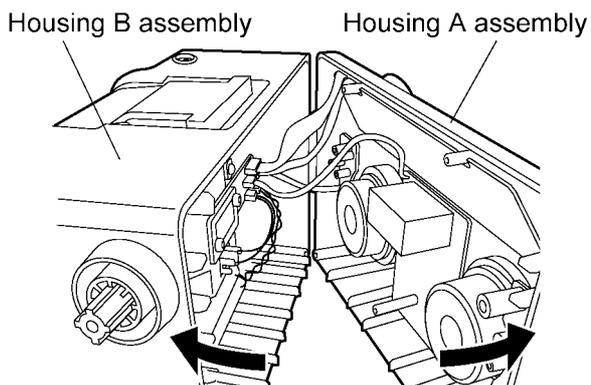
* Exercise care not to break the lead wires, which are connected to housing A assembly.



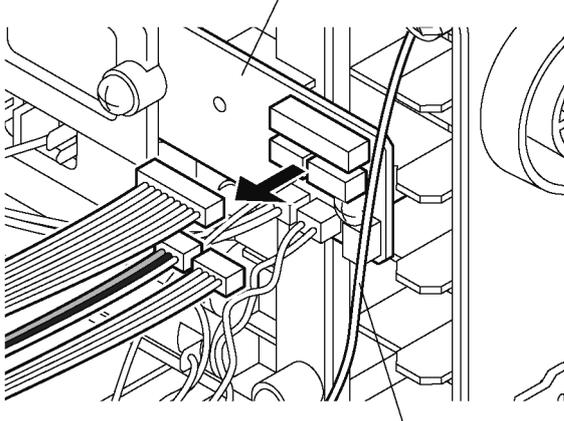
7. Use a pair of nippers to cut off the cable tie that holds the lead wires together.



8. Open the housing A assembly and housing B assembly from the USB/AUX side.

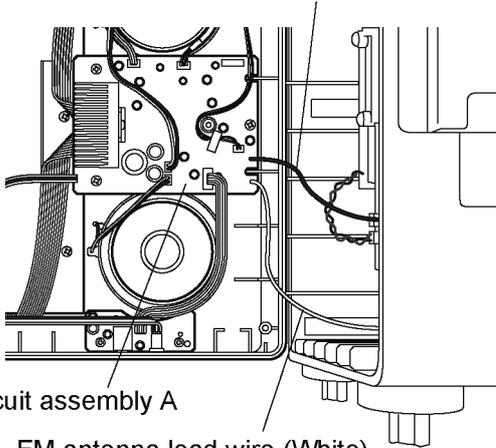


Communications connector circuit assembly



FM antenna lead wire

Grounding lead wire (Black)



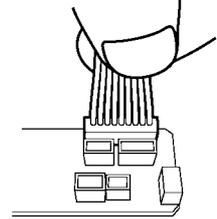
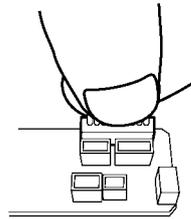
Circuit assembly A

FM antenna lead wire (White)

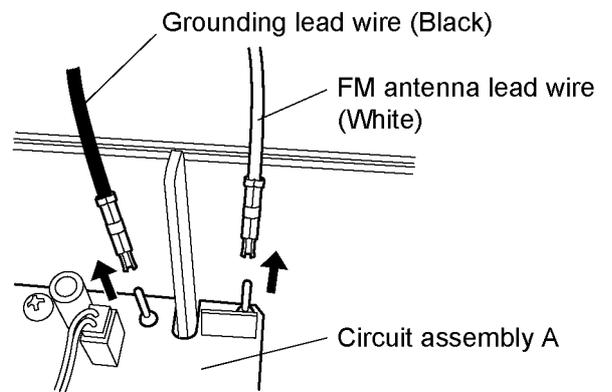
9. Disconnect the two 3P connectors, the 4P connector, and the 9P connector that are connected to the communications connector circuit assembly.

○ Grip the connector at its base and pull it out.

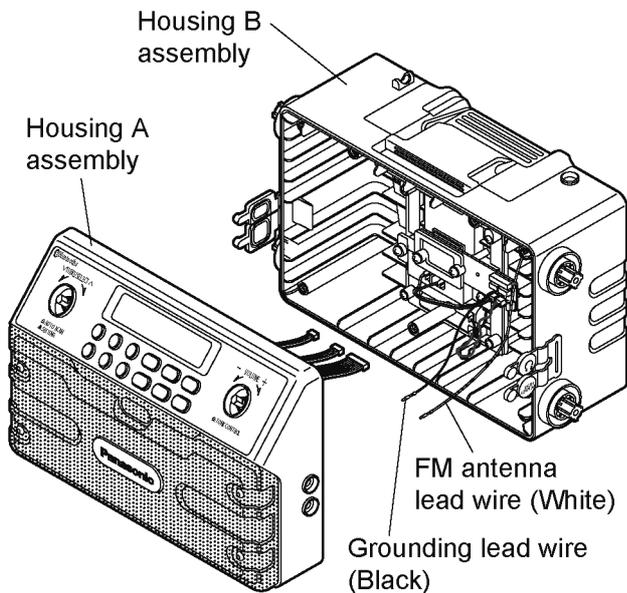
✗ Pulling on the lead wires will not break the wires.



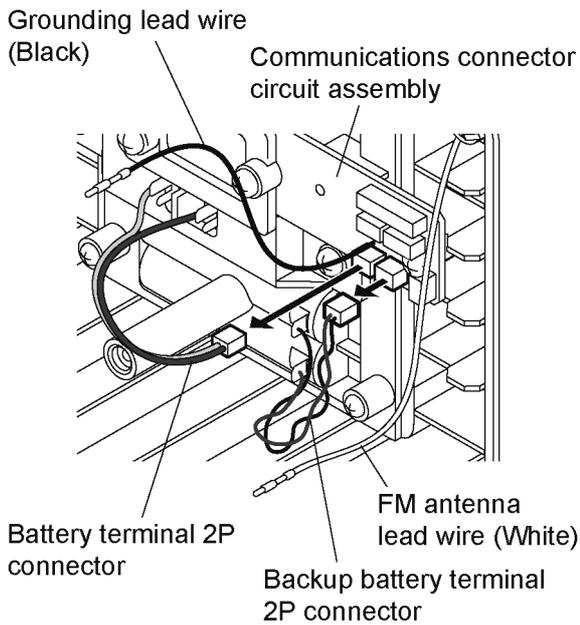
10. Disconnect the FM antenna lead wire (white) and the grounding lead wire (black) from circuit assembly A.



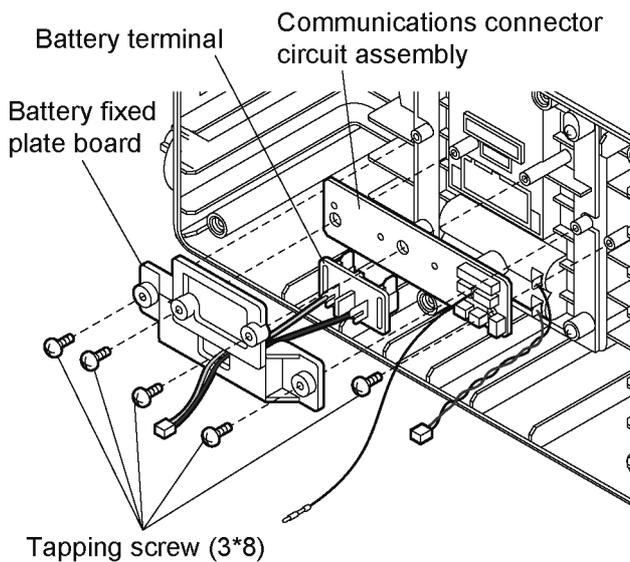
11. Remove the housing A assembly from housing B.



4.4. How to removing the communications connector circuit assembly and battery terminal block.



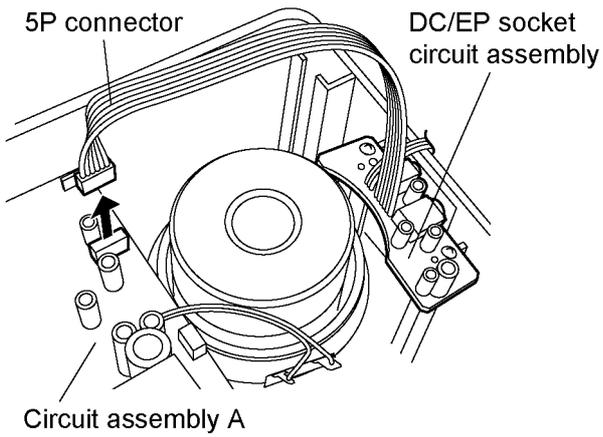
1. Disconnect the battery terminal block 2P connector and the backup battery terminal 2P connector, which are connected to the communications connector circuit assembly.



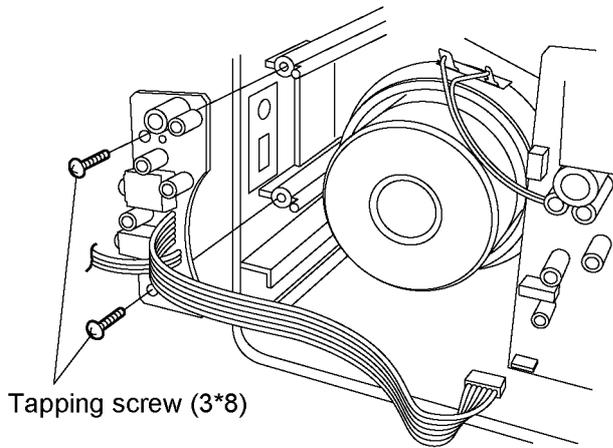
2. Remove the five tapping screws that hold the communications connector circuit assembly and the battery terminal block in place.

3. Remove the battery terminal, battery fixed plate board and communications connector circuit assembly.

4.5. How to removing the DC/EP socket circuit assembly.



1. Disconnect the DC/EP socket circuit assembly 5P connector from circuit assembly A.

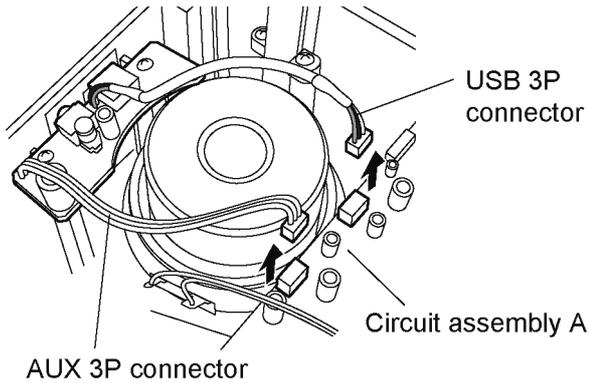


2. Remove the two tapping screws that attach the DC/EP socket circuit assembly.

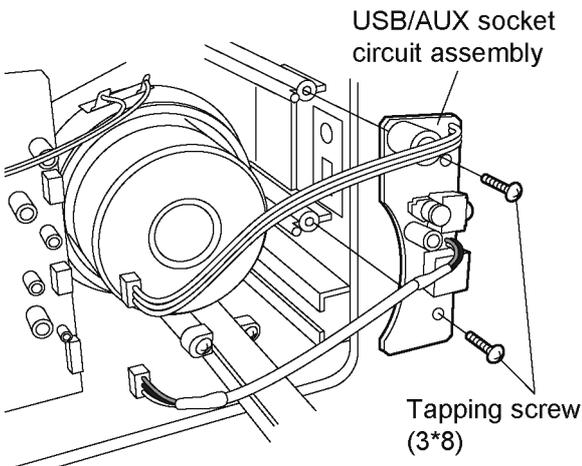
3. Remove the DC/EP socket circuit assembly.

* When reattaching the DC/EP socket circuit assembly, insert the tip of the protruding part of the socket into the hole in the housing A assembly.

4.6. How to removing the USB/AUX socket circuit assembly.



1. Disconnect the USB/AUX socket circuit assembly 3P connector and AUX 3P connector from circuit assembly A.

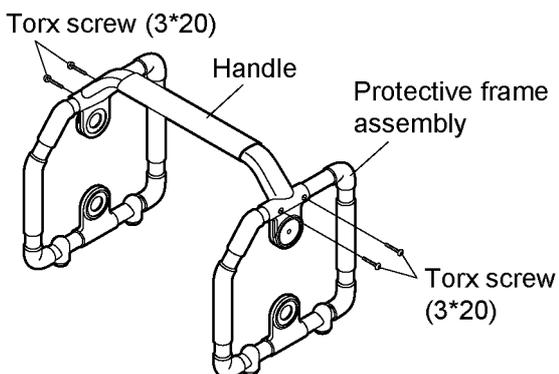


2. Remove the two tapping screws that attach the USB/AUX socket circuit assembly.

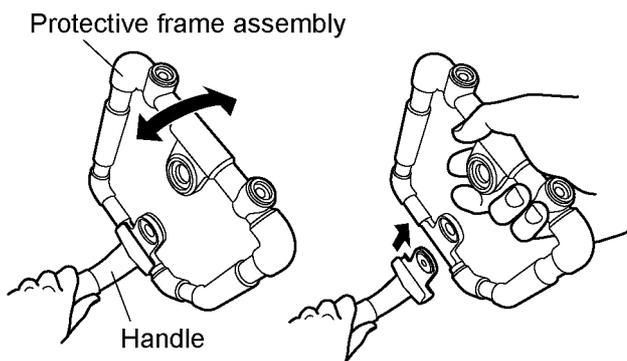
3. Remove the USB/AUX socket circuit assembly from the housing A assembly.

* When reattaching the USB/AUX socket circuit assembly, insert the tip of the protruding part of the AUX socket into the hole in the housing A assembly.

4.7. How to removing the handle from protective flame assembly.



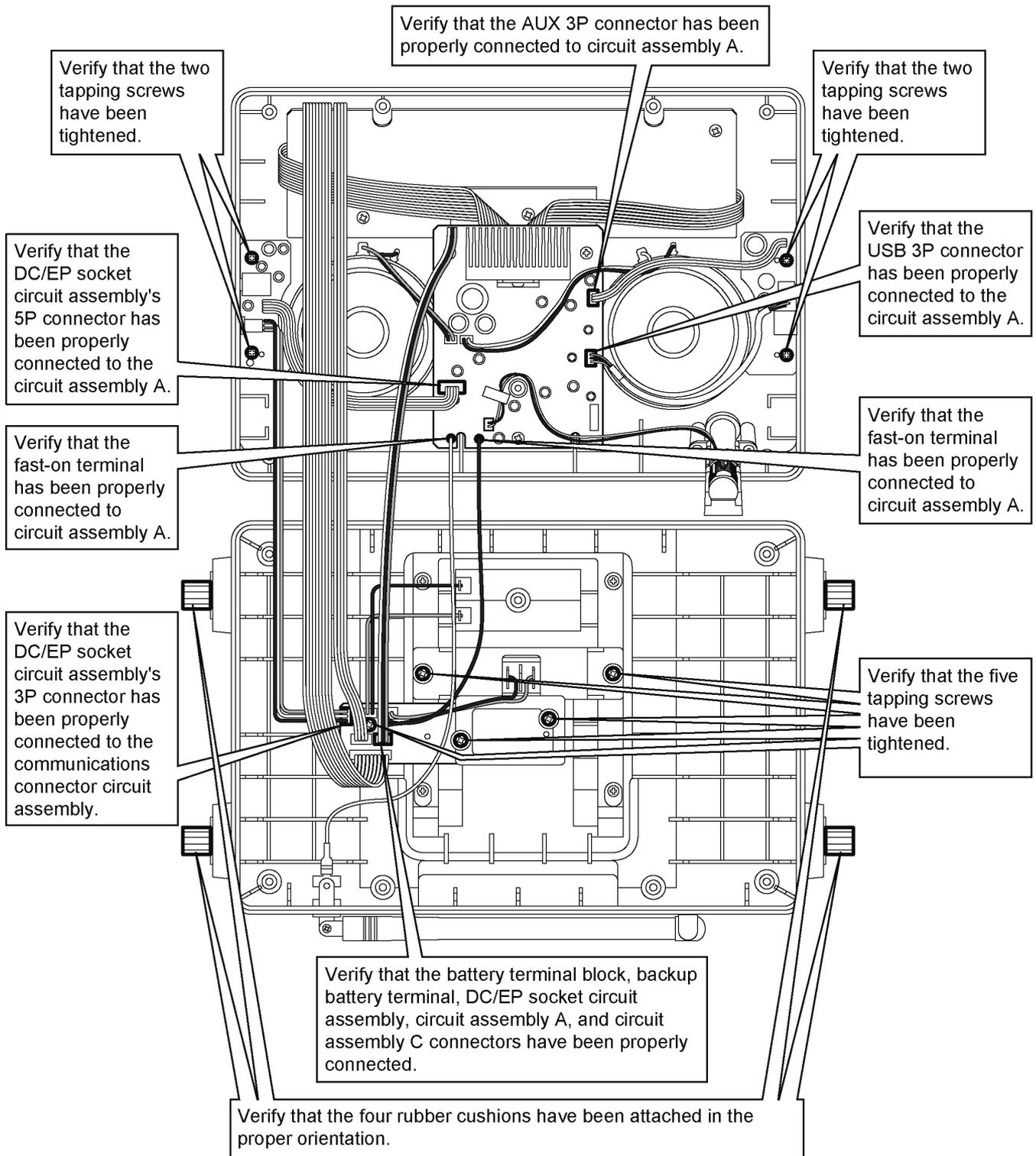
1. Remove the four Torx screws that connect the handle and the protective frame assembly.

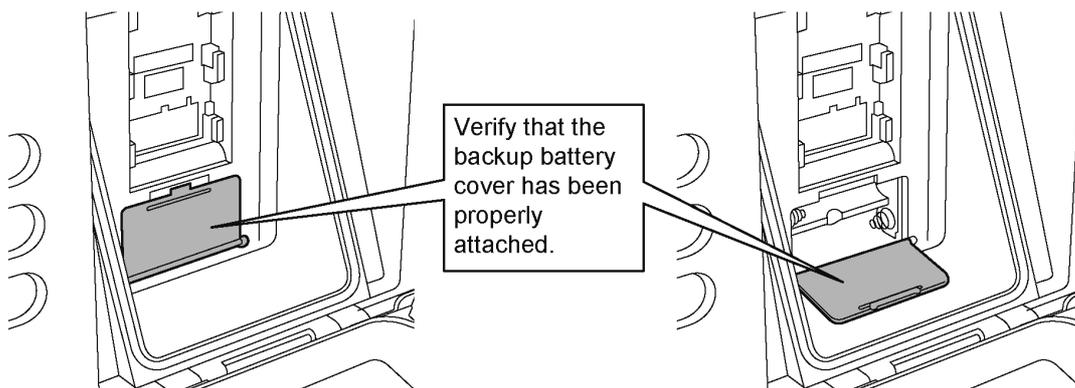
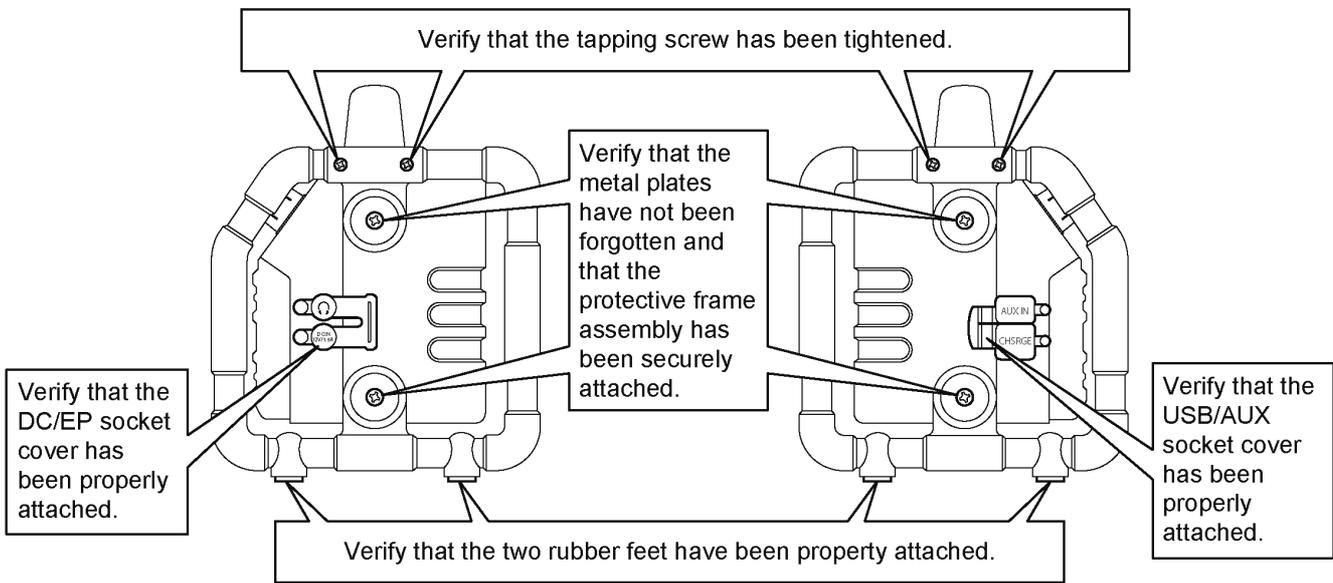
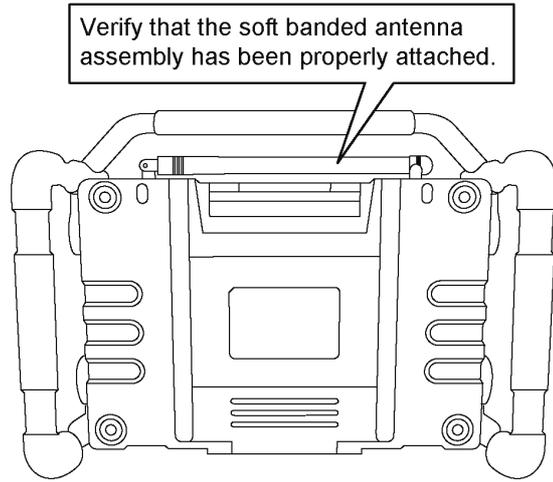
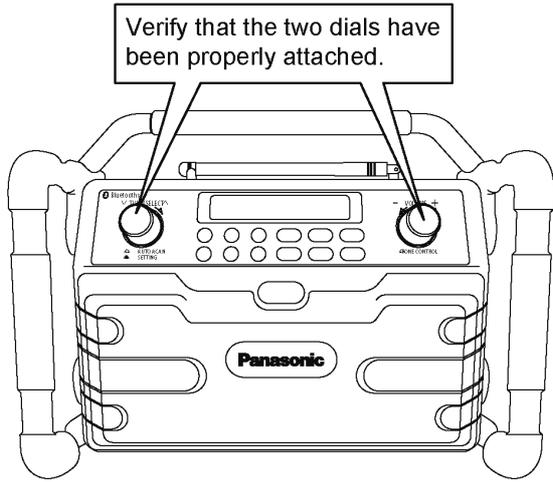


2. While holding the handle in place, move the protective frame assembly to the left and right four or five times and then lift it up to remove it from the handle.

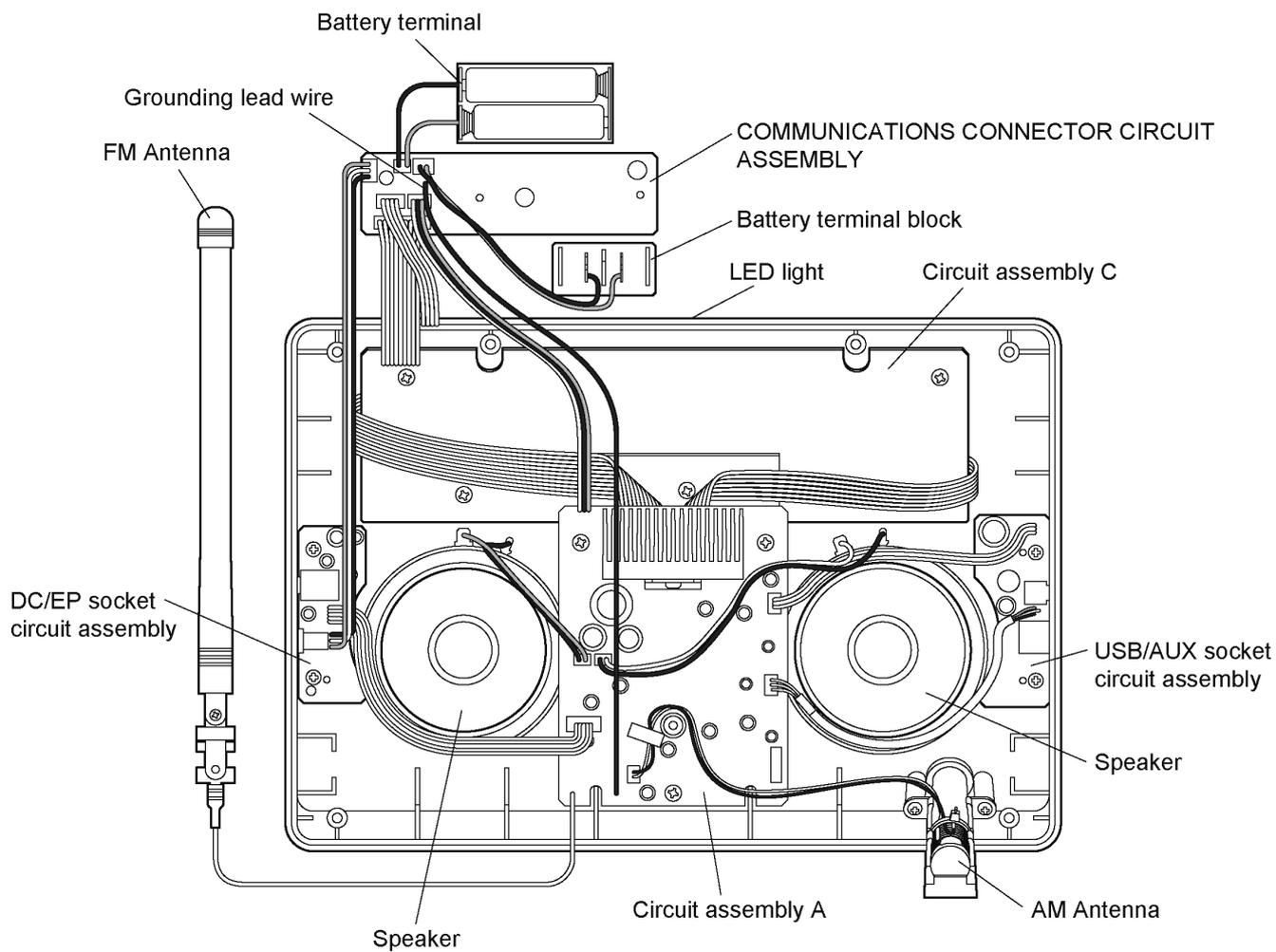
* Exercise care as use of excessive force when removing the protective frame assembly may cause the handle to crack.

4.8. Wiring and Assembly Points.

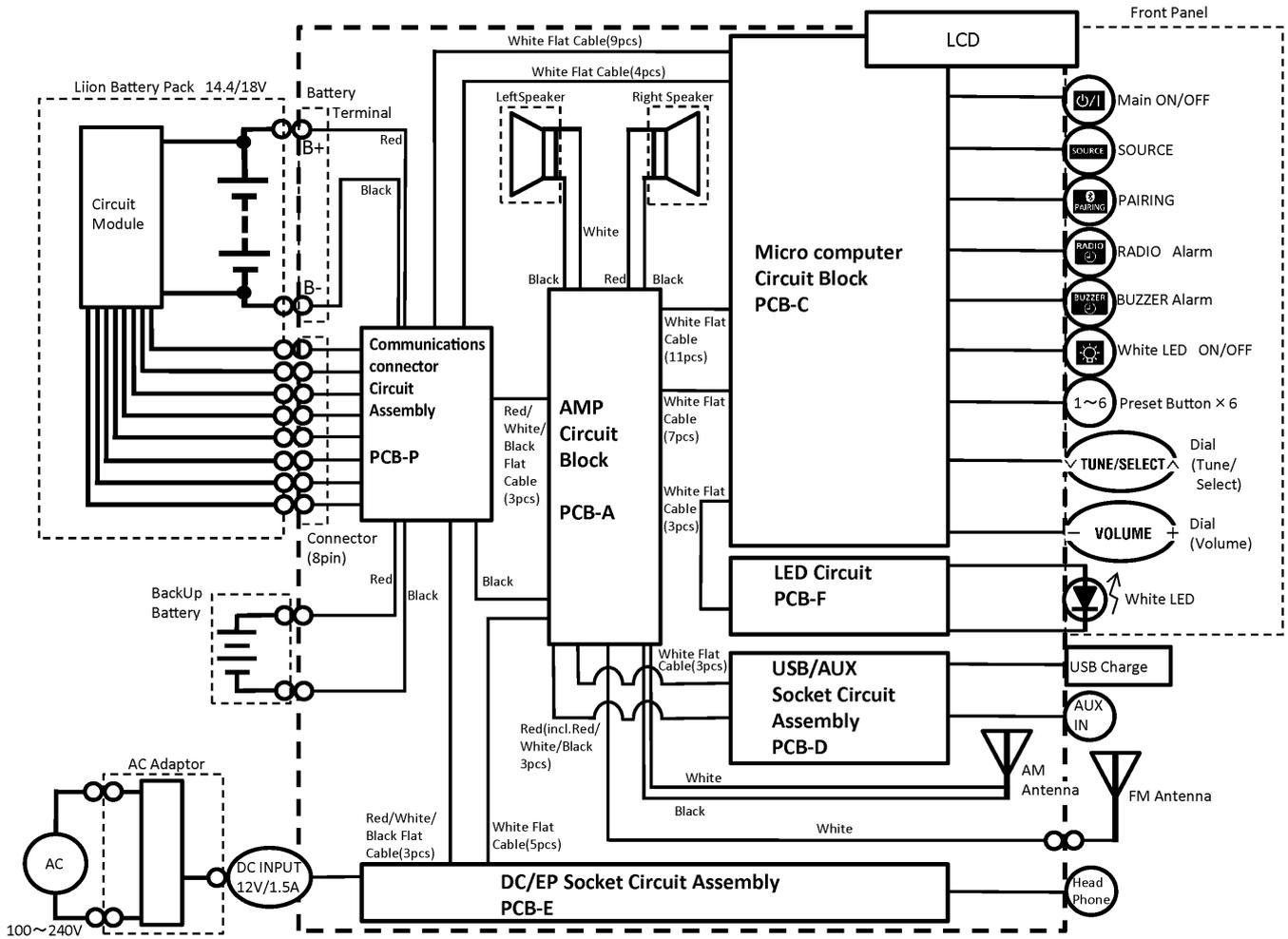




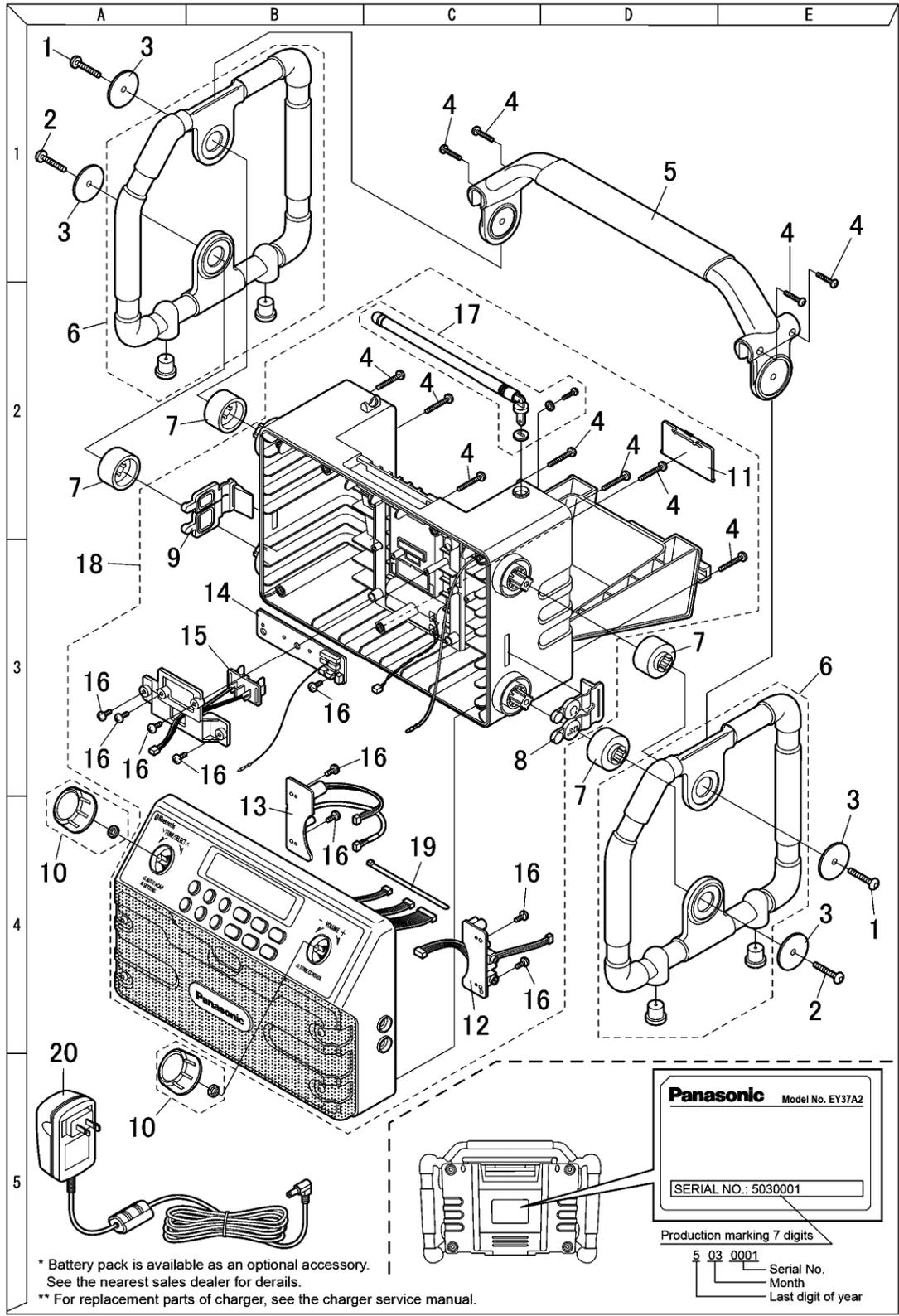
5 Wiring Connection Diagram



6 Schematic Diagram



Model No. : EY37A2 Exploded View



* Battery pack is available as an optional accessory. See the nearest sales dealer for details.
 ** For replacement parts of charger, see the charger service manual.

Panasonic Model No. EY37A2

SERIAL NO.: 5030001

Production marking 7 digits

5 03 0001

Serial No.
 Month
 Last digit of year

Model No. : EY37A2 Parts List

Change	Safety	Ref. No.	Part No.	Part Name & Description	Q'ty	Remarks
		1	WEY37A2K9597	SCREW	2	(6*31), (2PCS/PK)
		2	WEY37A2K9507	SCREW	2	(6*25), (2PCS/PK)
		3	WEY37A2S0207	METAL PLATE	4	
		4	WEY37A2K6127	TORX SCREW	11	(3*20), (4PCS/PK)
		5	WEY37A2K0087	HANDLE	1	
		6	WEY37A2K0097	PROTECTIVE FRAME ASSEMBLY	1	
		7	WEY37A2K0317	RUBBER CUSHION	4	
		8	WEY37A2H3127	DC SOCKET COVER	1	
		9	WEY37A2H3137	USB SOCKET COVER	1	
		10	WEY37A2K4497	KNOB SET ASSEMBLY	1	(2PCS/SET)
		11	WEY37A2K3127	BACKUP COVER	1	
		12	WEY37A2L2147	DC/EP SOCKET CIRCUIT ASSEMBLY	1	
		13	WEY37A2L2167	USB/AUX SOCKET CIRCUIT ASSEMBLY	1	
		14	WEY37A2L2107	COMMUNICATIONS CONNECTOR CIRCUIT ASSEMBLY	1	
		15	WEY37A2L2157	BATTERY TERMINAL ASSEMBLY	1	
		16	WEY37A2K9057	TAPPING SCREW	9	(3*8), (5PCS/PK)
		17	WEY37A2K4347	SOFT BENDED ANTENNA ASSEMBLY	1	
		18	WEY37A2K4008	RADIO ASSEMBLY	1	(for Europe)
		18	WEY37A2K4009	RADIO ASSEMBLY	1	(for UK)
		18	WEY37A2K4010	RADIO ASSEMBLY	1	(for Australia)
		19	WEY0L81L0207	CABLE TIE	1	
		20	WEY37A2K7658	AC ADAPTER	1	(for Europe)
		20	WEY37A2K7659	AC ADAPTER	1	(for UK)
		20	WEY37A2K7650	AC ADAPTER	1	(for Australia)
		-	WEY37A2B8108	OPERATING INSTRUCTIONS	1	