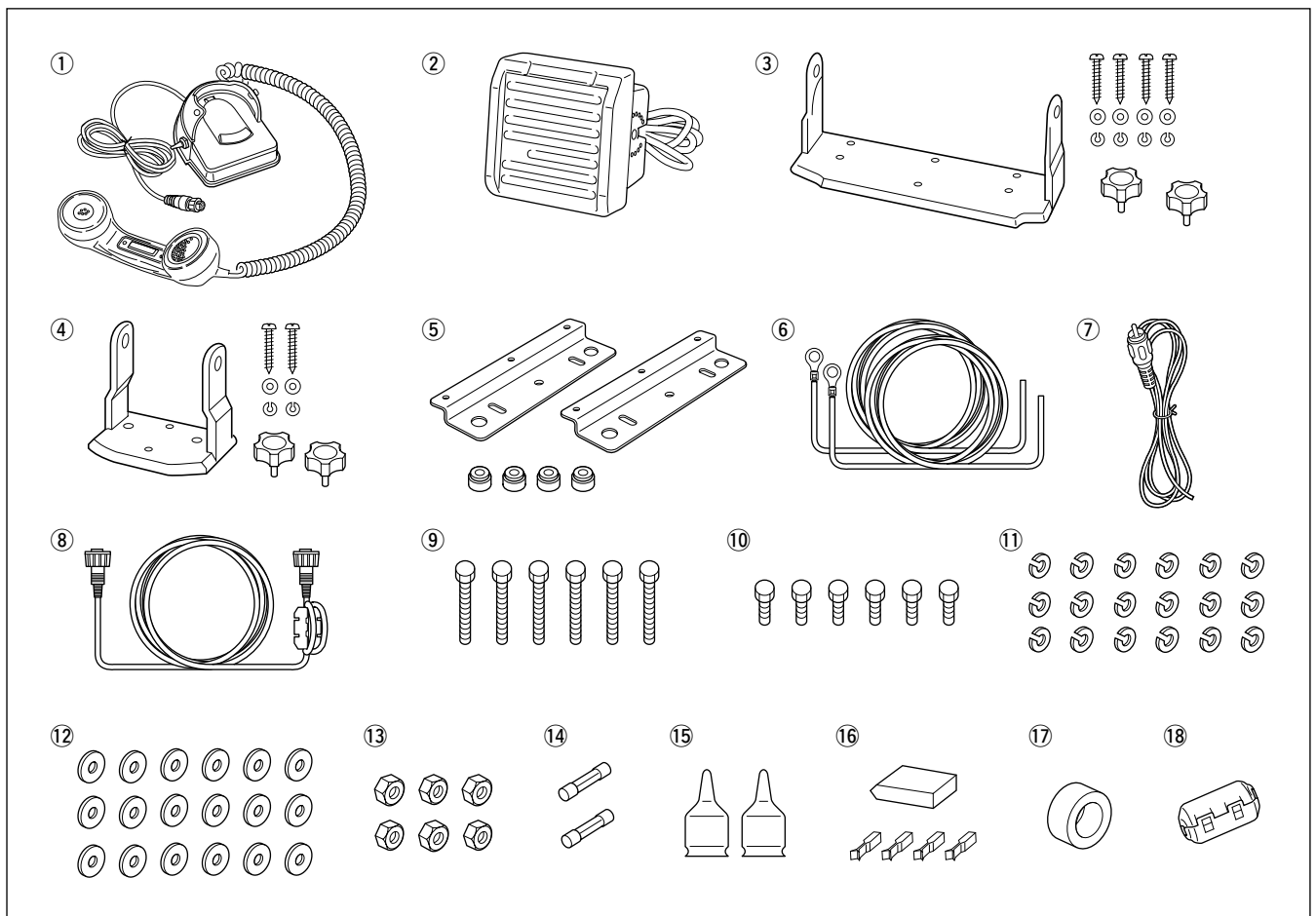


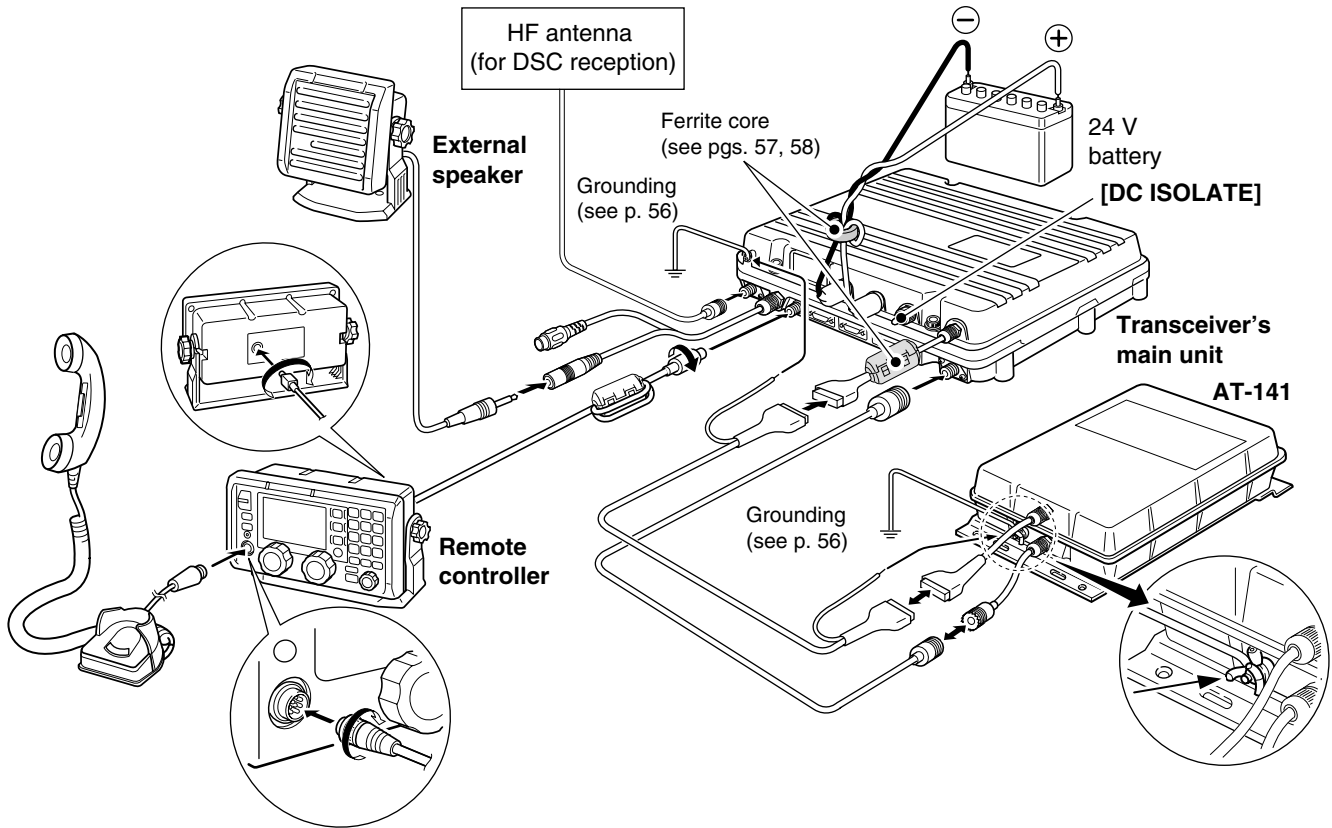
■ Supplied accessories

The following accessories are supplied with IC-M801GMDSS.

① Handset	1	⑩ Hex head bolts (M6×15)	6
② External speaker	1	⑪ Spring washers (M6)	18
③ Mounting bracket kit for remote controller ...	1 set	⑫ Flat washers (M6)	18
④ Mounting bracket kit for speaker	1 set	⑬ Hex nuts (M6)	6
⑤ Mounting angles for main unit	1 set	⑭ Spare fuses (FGB 5 A)	2
⑥ DC power cable (Red and Black)	1 pair	⑮ Weatherproof caps	2
⑦ RCA cable (for GPS connection)	1	⑯ Tuner connector kit	1 set
⑧ Remote control cable (OPC-1466)	1	⑰ Ferrite core (for power cable)	1
⑨ Hex head bolts (M6×50)	6	⑱ Ferrite core (for antenna tuner receptacle)	1

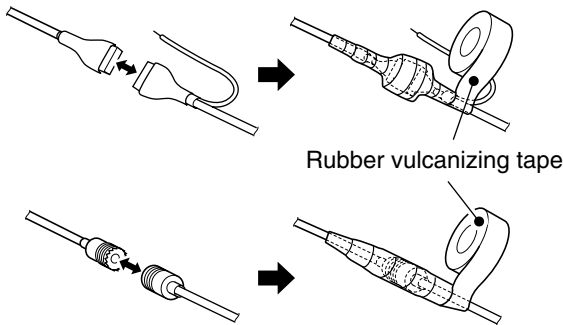


Basic connections



CAUTION:

• After connecting the external speaker, antenna and tuner control cables, cover the connectors with a rubber vulcanizing tape, etc., as shown below, to prevent water seeping into the connector.



• **DO NOT** pull the antenna and control cable receptacles. This may cause cable disconnection (in the tuner unit), inside connector damaged or a bad connection.

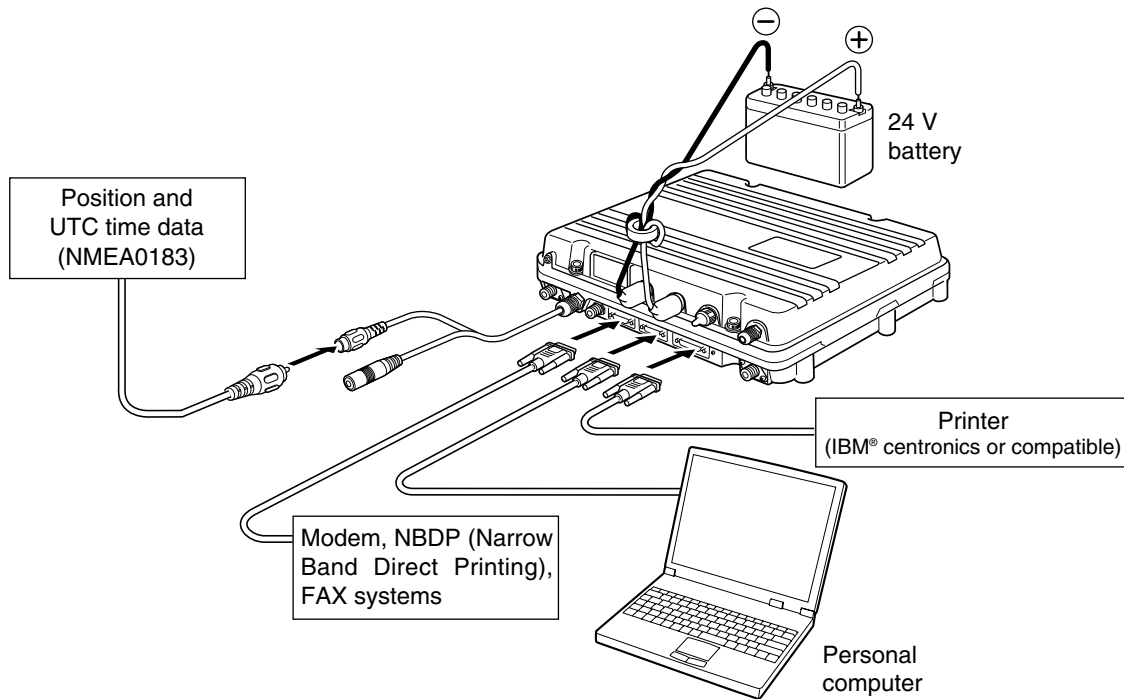
NOTE:

Turn [DC ISOLATE] (on the IC-M801GMDSS main unit) OFF, or charge the battery during anchor, otherwise the battery may be exhausted.
The IC-M801GMDSS has a high-stability oven-heater type crystal oscillator, and the oscillator's heater is connected to the DC power terminals directly, it keeps its temperature to at the specified level even if the transceiver power with the remote controller has turned OFF.

IMPORTANT!: Antenna for DSC reception should be connected, otherwise no DSC call can be received.

IC-M801GMDSS
NOTE: MUST BE USED WITH ICOM AT-141.

■ Advanced connections



CAUTION: Any connected external unit, such as PC, printer, etc., must be properly grounded. We suggest using a wide copper strap. (p. 56)

- ➔ When a PC is connected, the PC being operated at any given time has priority.
- ➔ When a PC is connected, the controller not being operated is inhibited for a specified time after the PC is operated. This time can be programmed by your dealer. The default inhibit time is 5 sec.
- ➔ When a PC is connected, operating the PC automatically updates settings on the controller.

■ Ground connection

The transceiver and antenna tuner MUST have an adequate RF ground connection. Otherwise, the overall efficiency of the transceiver and antenna tuner installation will be reduced. Electrolysis, electrical shocks and interference from other equipment could also occur.

For best results, use 50 or 75 mm (2 or 3 inches) wide copper strap and make the connection as short as possible. Ground the transceiver and antenna tuner to one ground point, otherwise the voltage difference (in RF level) between 2 ground points may cause electrolysis.

⚠ WARNING— When grounding to a metal hull
 Use Zinc anodes to protect the hull from electrolysis.
 Ask your technical dealer, installer or refer to a technical book, etc., for RF grounding details.

⚠ CAUTION: NEVER connect the transceiver to a “positive-grounded ship,” otherwise the transceiver will not function.

Best ground points

- External ground plate
- Copper screen
- Copper foil

Acceptable ground point

- Stainless steel stanchion
- Through mast
- Through hull
- Metal water tank

Undesirable ground points

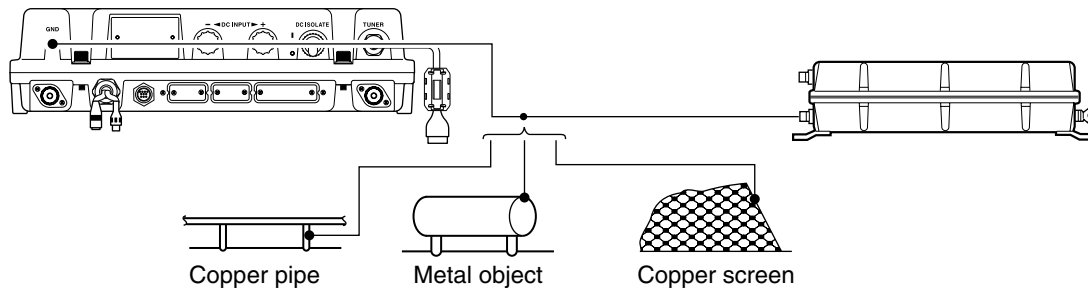
- Engine block
- Ship’s DC battery ground

Un-usable ground points

- (these connections may cause an explosion or electrical shock)
- Gas or electrical pipe
 - Fuel tank or oil-catch pan

See antenna and grounding considerations section (pgs. 73–75) for more details.

Ground system example



■ Power source

The transceiver requires a regulated DC power of 26.4 V and at least 30 A.

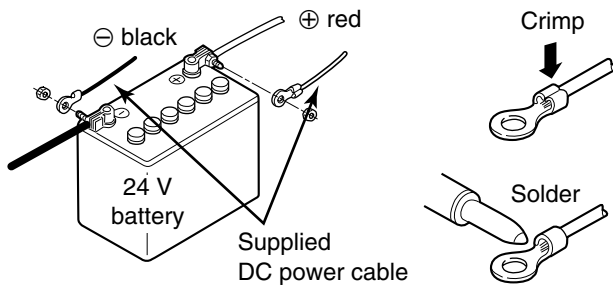
- Direct connection to 24 V battery in your ship through the supplied DC power cable.

⚠ WARNING! NEVER connect the transceiver to a battery using reverse polarity. This will damage the transceiver.

⚠ CAUTION: Before connecting the transceiver main unit to a battery, make sure the transceiver input voltage suits to the battery voltage.

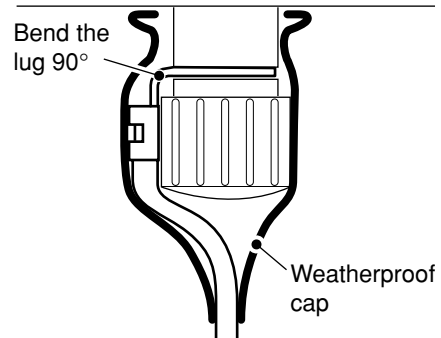
DC power cable connection

NOTE: Use terminals for the cable connection.



• Weatherproof cap attachment

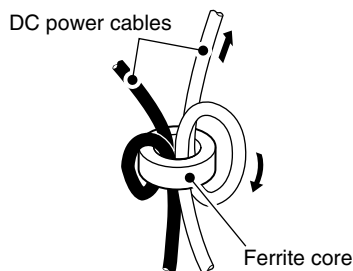
Attach the supplied weatherproof cap for each positive and negative line at the DC power terminal as shown below.



• Ferrite core attachment

The DC power cables should be connected to the transceiver's main unit through the supplied ferrite core as described below.

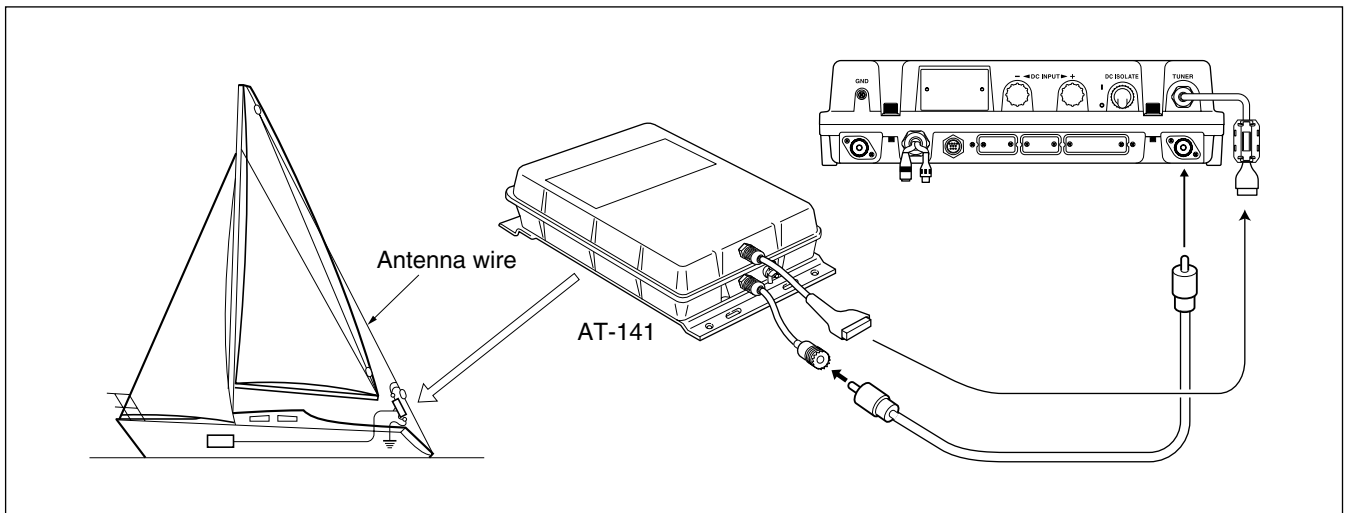
And the ferrite core must be placed as near as possible to the main unit.



■ Antenna

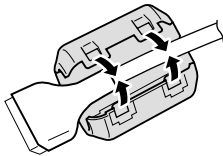
Most stations operate with a whip or long wire (insulated backstay) antenna. However, these antennas cannot be connected directly to the transceiver since their impedance will not be matched with the transceiver antenna connector.

⚠ DANGER: HIGH VOLTAGE!
NEVER touch the antenna element/wire while tuning or transmitting.



• Ferrite core attachment

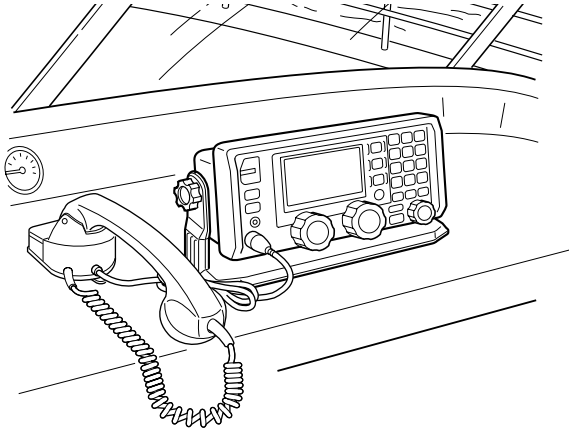
Attach the supplied ferrite core to the antenna tuner receptacle as the illustration below.



■ Mounting

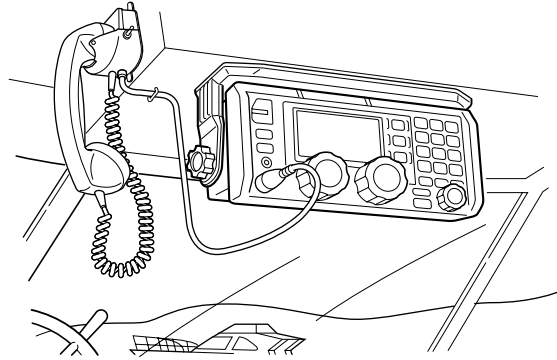
◇ Mounting location

Select a location that provides easy access to the controller for navigation safety, has good ventilation and is not subject to sea spray. The controller should be at 90 degrees to your line of sight when operating it.

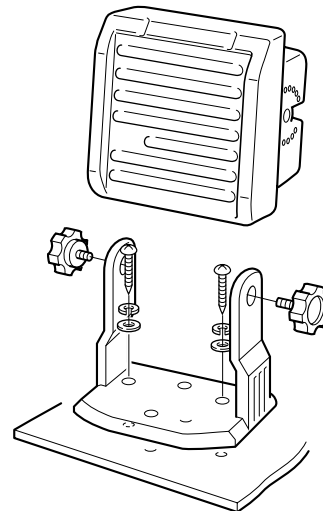
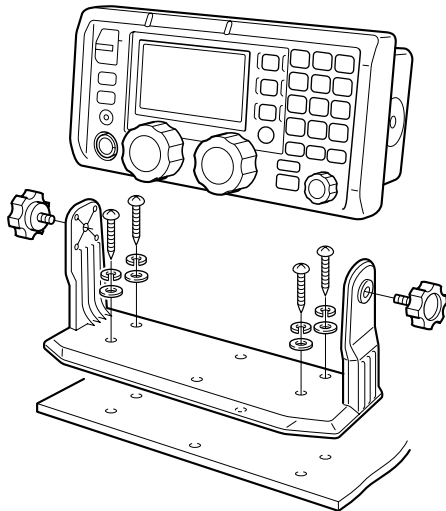


CAUTION: KEEP the transceiver and handset or microphone at least 1 meter away from your ship's magnetic navigation compass.

Check the installation angle; the display may not be easy to read at some angles.

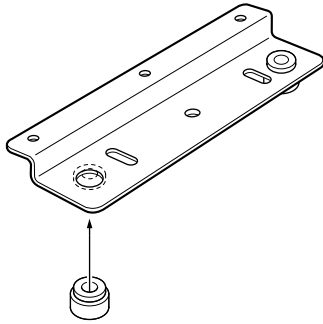


◇ Mounting the controller/speaker

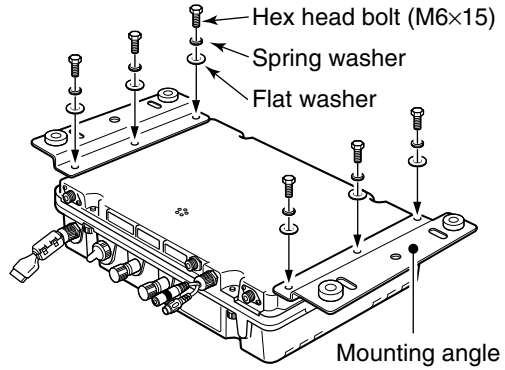


◆ **Mounting angle attachment**

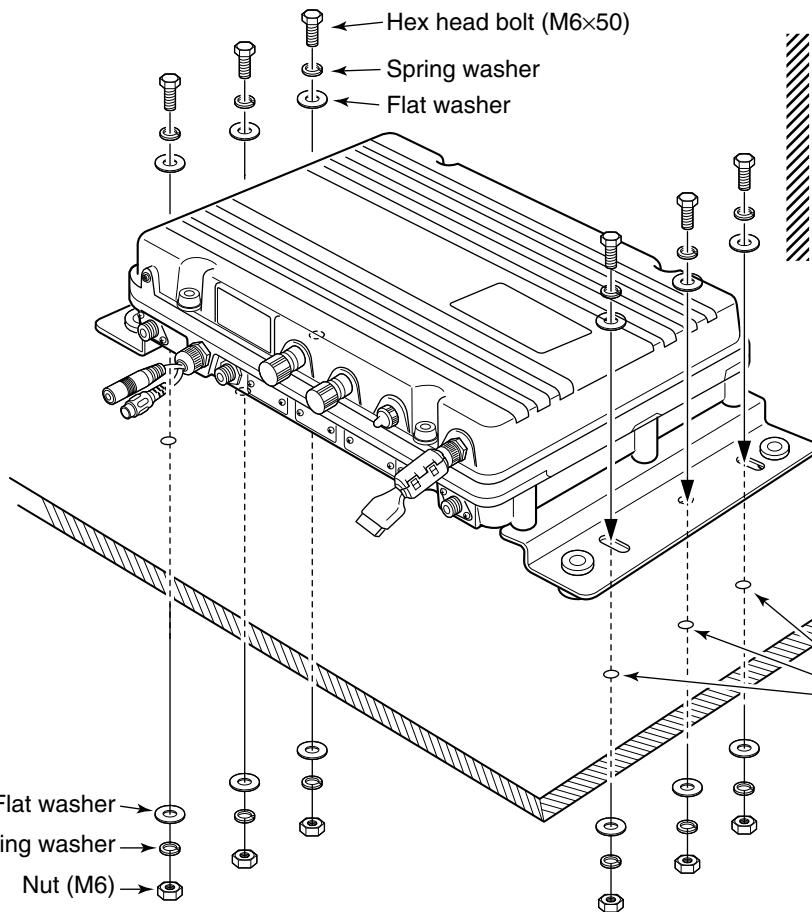
① Attach the supplied rubber feet to the mounting angle, if desired.



② Attach the mounting angles using with the supplied hex head bolts (M6×15), flat and spring washers as illustrated below.



◆ **Mounting the main unit**



⚠ WARNING! NEVER mount the transceiver main unit overhead. The weight of the unit is approximately 8.5 kg, but its apparent weight will increase several fold due to wave shocks or vibration. The unit must be mounted on a flat hard surface only.

Drill six holes of 6 mm (¼ in) in diameter.

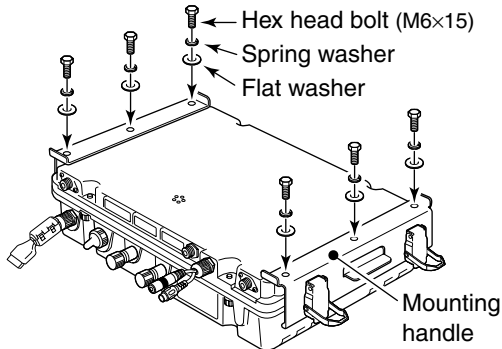
Flat washer →
Spring washer →
Nut (M6) →

■ Using the optional MB-108

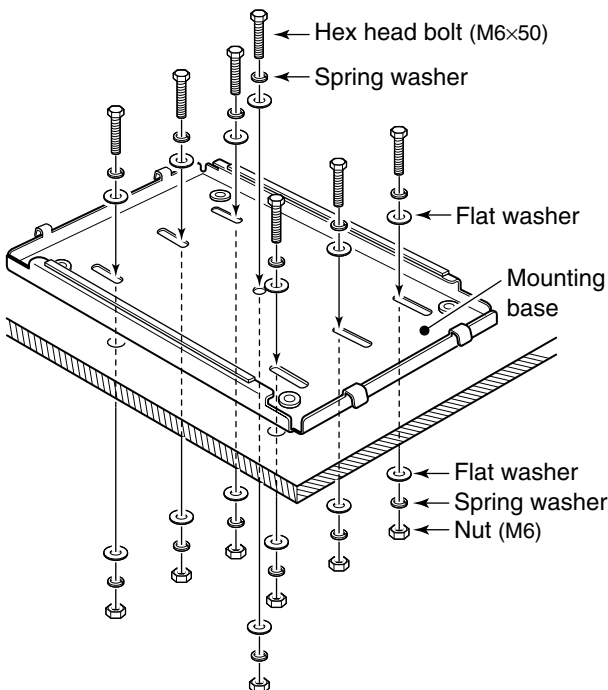
The optional MB-108 mounting bracket is available for mounting the transceiver's main unit. The MB-108 allows you to one-touch attachment/detachment capabilities.

CAUTION! WEAR GLOVES when installing the MB-108.
Edges of the MB-108 may be sharp and may easily cut your fingers, hands, etc.

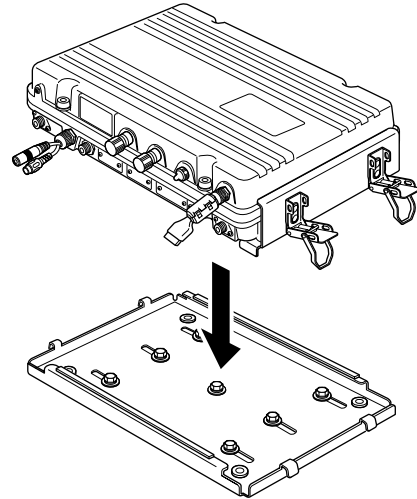
- ① Attach the mounting handles with the supplied hex head bolts (M6×15), spring and flat washers as below.



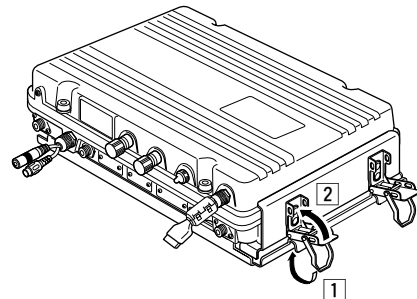
- ② Drill 7 holes of 6–8 mm ($\frac{1}{4}$ – $\frac{5}{16}$ in) in diameter, using the template supplied with the MB-108.
- ③ Attach the mounting base onto a flat surface using with the hex head bolts (M6×50), spring and flat washers, and nuts, supplied with the MB-108, as below.



- ④ Mount the transceiver main unit (mounting handles has attached) onto the mounting base.



- ⑤ Fix the main unit by locking 4 latches on the mounting handles.

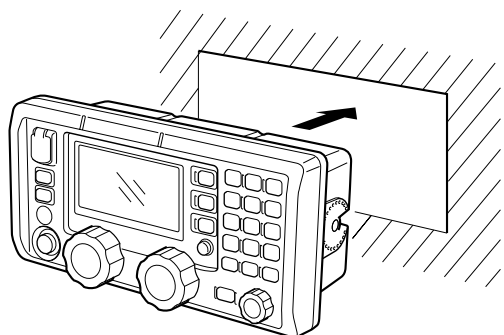


■ Using the optional MB-75

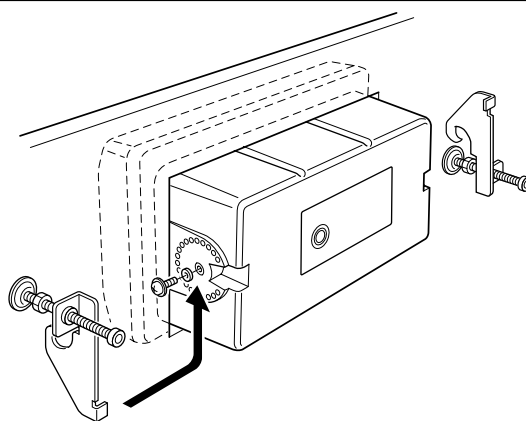
The optional MB-75 flush mount is available for mounting the controller and speaker to a flat surface such as an instrument panel.

CAUTION: KEEP the transceiver and handset or microphone at least 1 meter away from your ship's magnetic navigation compass.

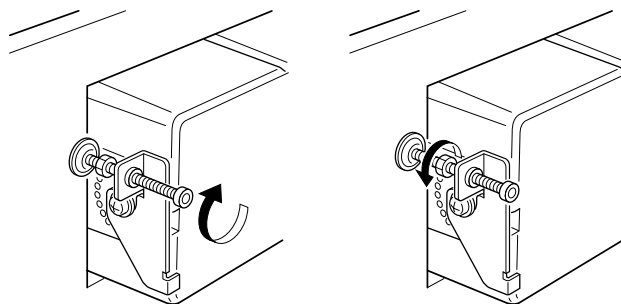
- ① Using the template on the page 69 for the remote controller (RC-25GMDSS), and page 71 for the speaker (SP-24E), carefully cut a hole into the instrument panel (or wherever you plan to mount the controller or the speaker).
- ② Slide the controller or the speaker through the hole as shown below.



- ③ Attach the supplied 2 screws (M5×8) and spacers on either side of the controller or speaker.
- ④ Attach the clamps on either side of the controller or speaker.
 - Make sure that the clamps align parallel to the body.

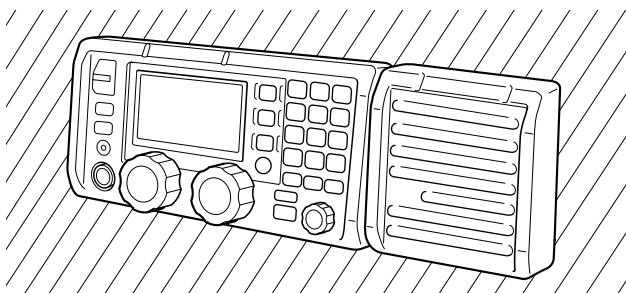


- ⑤ Tighten the end screws on the clamps (rotate clockwise) so that the clamps press firmly against the inside of the instrument control panel.
- ⑥ Tighten the locking nuts (rotate counterclockwise) so that the controller or speaker is securely mounted in position as below.
- ⑦ Connect the control cable then return the instrument control panel to its original place.



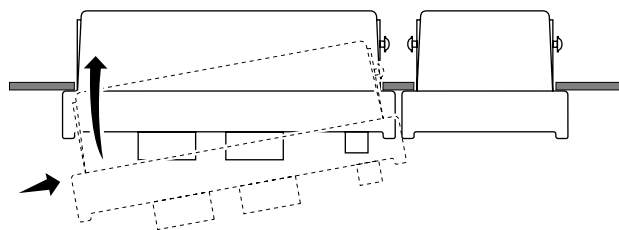
✓ For your reference

When flush mounting the controller and speaker side by side as below, screw and spacer attachment for the facing side will be impossible with the instructions above.



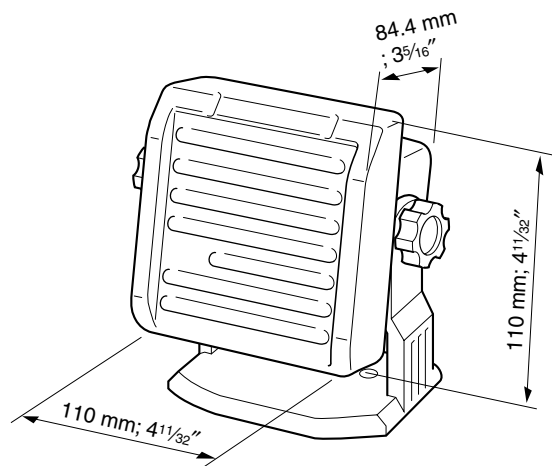
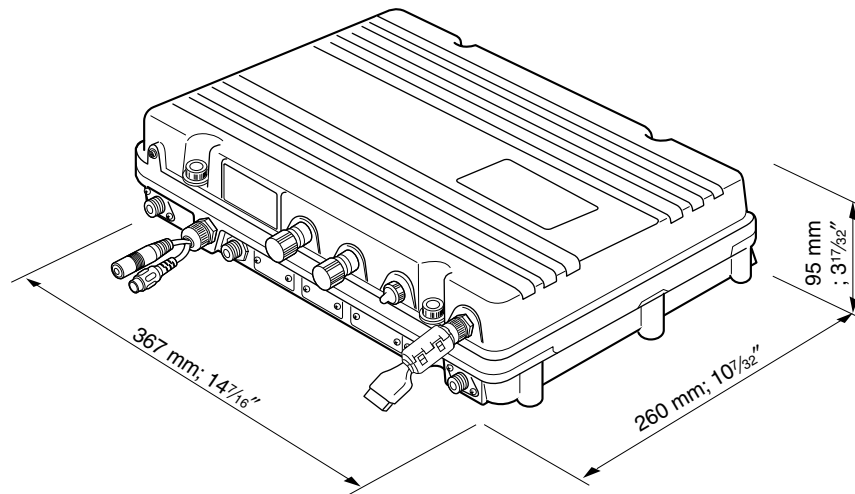
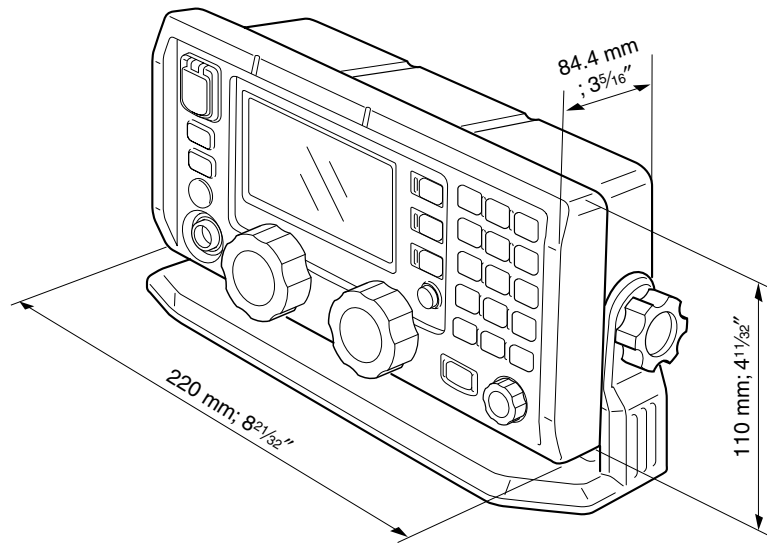
In this case, refer to the instructions at right for reference.

- ① Carefully cut the holes with at least 25 mm (1 in) space between them into the instrument panel.
- ② Install the speaker as instructed above, first.
- ③ Attach the screw and spacer on the speaker side of the controller.
- ④ Slide the controller through the hole as shown below.



- ⑤ Attach the screw and spacer on the other side of the controller, then attach the clamps and follow steps ⑤ to ⑦ as above.

■ Transceiver dimensions



■ Fuse replacement

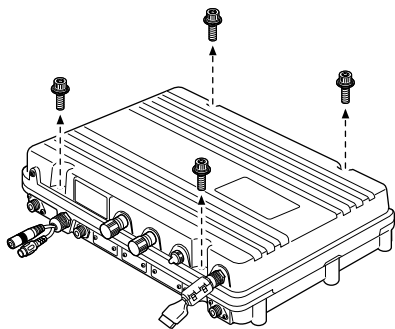
The transceiver has 2 fuses to protect internal circuitry. If the transceiver stops functioning, check the fuses below.

- DC-DC converter unit FGB 5 A
- PA unit FGB 5 A

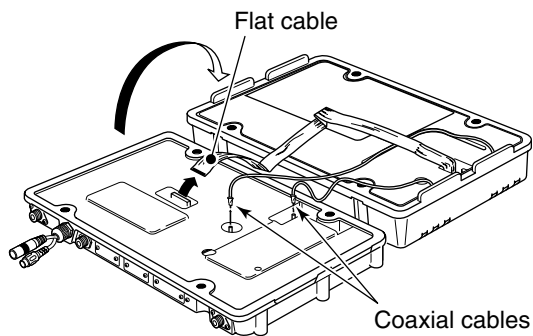
CAUTION: DISCONNECT the DC power cable from the transceiver when changing a fuse.

◇ Fuse replacement

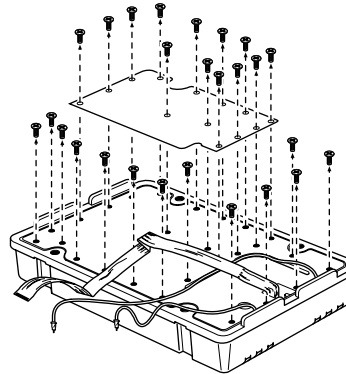
- ① Unscrew 4 cap-bolts from the top case.
 - Use 6 mm (1/4") allen wrench.



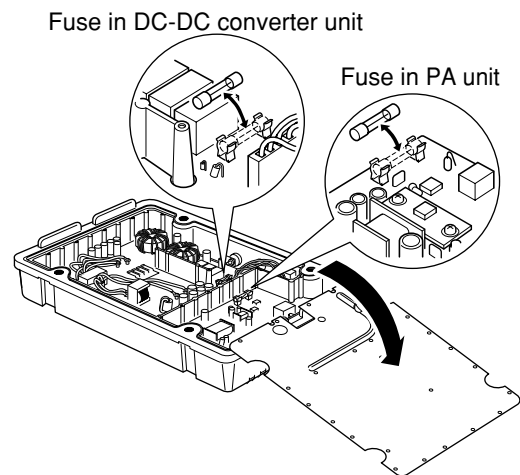
- ② Open the transceiver's main unit, then disconnect 1 flat and 2 coaxial cables as shown below.



- ③ Unscrew 32 screws from the shield covers, then open the covers.

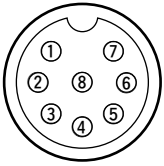


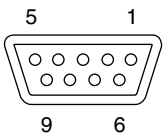
- ④ Replace the circuitry fuse as shown in the diagram below.
 - Use the supplied FGB 5 A fuse.

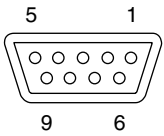


- ⑤ Attach the shield covers, flat cable, coaxial cables and top case to their original position.

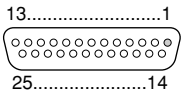
■ Connector information

MICROPHONE	Pin	Pin name	Description	Specification
 <p>Front panel view</p>	1	MIC+	Audio input from the mic element.	Input impedance : 2.4 kΩ
	2	NC	No connection.	
	3	AF1	AF output controlled with [VOL].	
	4	AF2	Ground for AF1.	
	5	PTT	PTT switch input.	When grounded, transmits.
	6	GND	Connected to the ground.	
	7	MIC-	Coaxial ground for MIC+.	
	8	AF-	Coaxial ground for AF1 and AF2.	

AF/MOD	Pin	Pin name	Description	Specification
 <p>Front panel view</p>	1	MOD+	Modulation input from an external terminal unit.	Input impedance : 600 Ω Input level : Approx. 0.77 V rms.
	2	MOD-	Coaxial ground for MOD+.	
	3	AF+	AF detector output for an external terminal unit.	Output impedance: 600 Ω Output level : 0.25–2.5 V rms
	4	AF-	Coaxial ground for AF+.	
	5	SEND	Transmits when grounded.	Output level : –0.5 to 0.8 V Input level : Less than 20 mA
	6	CWK	FSK keying input/output.	When grounded, transmits.
	7	13.6V	13.6 V DC output during power ON.	
	8	ALC	ALC voltage input.	
	9	GND	Ground for digital equipment.	

REMOTE	Pin	Pin name	Description
 <p>Front panel view</p>	1	DCD	Input terminal for carrier detection. (“RS-232C” selection for REMOTE IF. (p. 50))
		NMEA-OUT (-)	Ground for NMEA-OUT (+). (“NMEA” selection for REMOTE IF. (p. 50))
	2	RXD	Input terminal for receive data. (“RS-232C” selection for REMOTE IF. (p. 50))
		NMEA-OUT (+)	NMEA0183 ver. 3.01 data output. (“NMEA” selection for REMOTE IF. (p. 50))
	3	TXD	Outputs transmit data. (“RS-232C” selection for REMOTE IF. (p. 50))
		NMEA-IN (+)	NMEA0183 ver. 3.01 data input. (“NMEA” selection for REMOTE IF. (p. 50))
	4	DTR	Outputs data terminal ready signal. (“RS-232C” selection for REMOTE IF. (p. 50))
		NMEA-IN (-)	Ground for NMEA-IN (+). (“NMEA” selection for REMOTE IF. (p. 50))
	5	GND	Connected to the ground.
	6	DSR	Input terminal for data-set-ready signal.
	7	RTS	Outputs request-to-send data.
8	CTS	Input terminal for clear-to-send data.	
9	NC	No connection.	

■ Connector information (continued)

PRINTER	Pin	Pin name	Description
 <p>13.....1 25.....14 Front panel view</p>	1	STROBE	Outputs a strobe pulse after data output.
	2–9	DATA1–8	Outputs 8-bit parallel data.
	10	ACKNLG	Input port for the connected printer. “Low” pulse signal is applied from the printer during the printer accepts data input.
	11	BUSY	Input port for the connected printer. “High” level signal is applied from the printer during the printer cannot accept data input, such as when off line.
	12–14	NC	No connection.
	15	ERROR	Input port for the connected printer. The printer output becomes “Low” when an printer error, such as no paper, occurs.
	16, 17	NC	No connection.
	18–25	GND	Ground terminals.