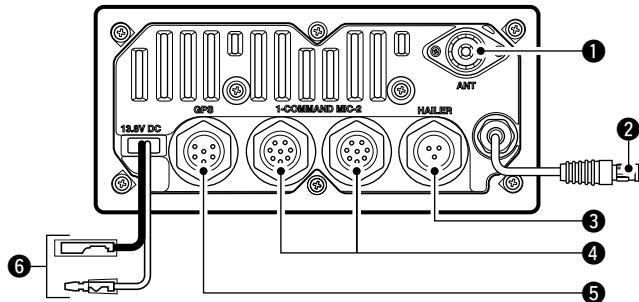


■ Connections



1 ANTENNA CONNECTOR

Connects a marine VHF antenna with a PL-259 connector to the transceiver.

CAUTION: Transmitting without an antenna will damage the transceiver.

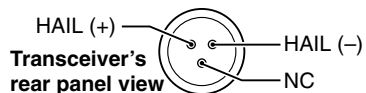
2 MICROPHONE CONNECTOR

Connect the supplied microphone only.

CAUTION: NEVER connect other microphones here, such as the optional HM-157/HM-162, for they may cause damage to the transceiver.

3 HAILER/FOGHORN CONNECTOR

Connects a hailer speaker (30 W nominal at 13.8 V/ 4 Ω).



4 EXTERNAL MICROPHONE CONNECTORS

[COMMAND MIC-1]/[COMMAND MIC-2]

Connects the optional COMMANDMIC™ (HM-157/HM-162.)

CAUTION: NEVER connect other microphone here, such as the HM-134, may cause damage to the transceiver.

5 GPS RECEIVER/EXTERNAL SPEAKER CONNECTOR

Connects a GPS receiver for position and time indications.

- An NMEA0183 ver. 2.0 or 3.01 (sentence formatters RMC, GGA, GNS, GLL) compatible GPS receiver is required. Ask your dealer about suitable GPS receivers.



Transceiver's rear panel view

Connects a PC or navigation equipment (NMEA0183 ver. 3.01 sentence formatters DSC, DSE compatible) for plotting received other ships position data.

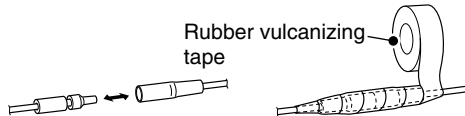
Connects an external speaker.

NOTE: Attach the supplied connector covers to 2, 3, 4 or 5 when they are not in use.

6 DC POWER CONNECTOR

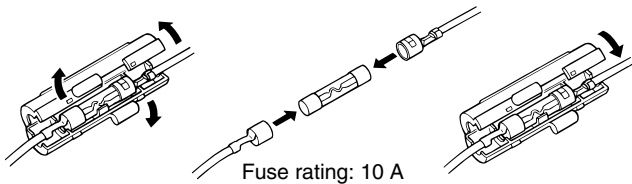
Connects the supplied DC power cable from this connector to an external 13.8 V DC power source.

CAUTION: After connecting the DC power cable, cover the connectors with a rubber vulcanising tape as shown below, to prevent water seeping into the transceiver.



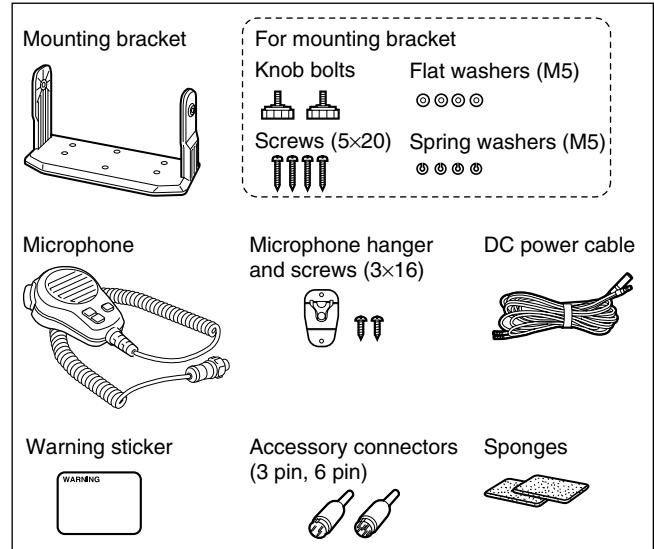
Fuse replacement

One fuse is installed in the supplied DC power cable. If a fuse blows or the transceiver stops functioning, track down the source of the problem, if possible, and replace the damaged fuse with a new, rated one.



Supplied accessories

The following accessories are supplied



Antenna

A key element in the performance of any communication system is an antenna. Ask your dealer about antennas and the best place to mount them.

■ Mounting the transceiver

◆ Using the supplied mounting bracket

The universal mounting bracket supplied with your transceiver allows overhead or onboard mounting.

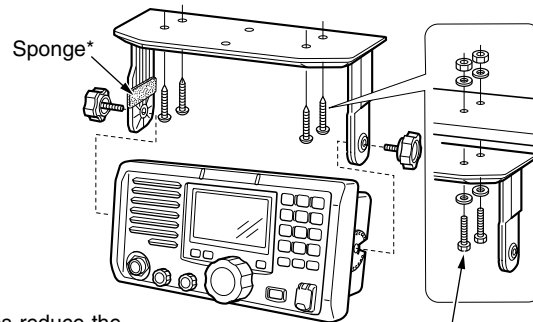
- Mount the transceiver securely with the 4 supplied screws (M5 × 20) to a surface which is more than 10 mm thick and can support more than 5 kg.
- Mount the transceiver so that the face of the transceiver is at 90° to your line of sight when operating it.

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

NOTE:

- Check the installation angle; the function display may not be easy-to-read at some angles.
- When mounting the transceiver on the place that is prone to strong vibration, use the supplied sponges between the transceiver and mounting bracket for reducing the effect of the vibration.

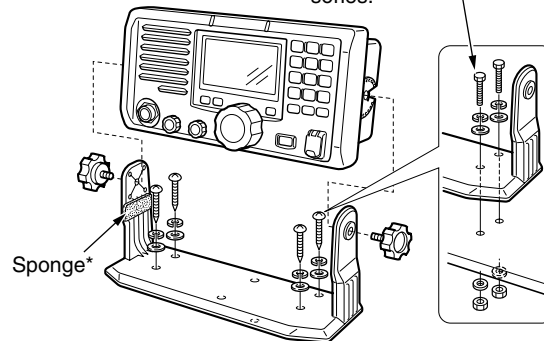
• OVERHEAD MOUNTING



*Sponges reduce the vibration effects. See NOTE at left.

These screws are shown a mounting example only. Not supplied with accessories.

• MOUNTING ON THE BOARD

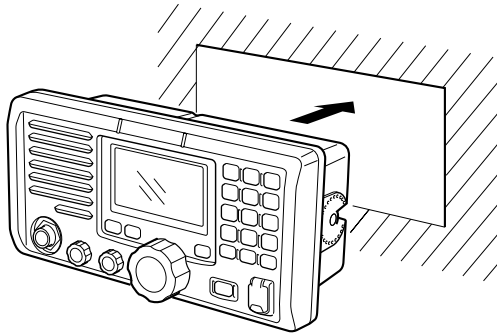


■ MB-75 installation

An optional MB-75 FLUSH MOUNT KIT is available for mounting the transceiver to a flat surface such as an instrument panel.

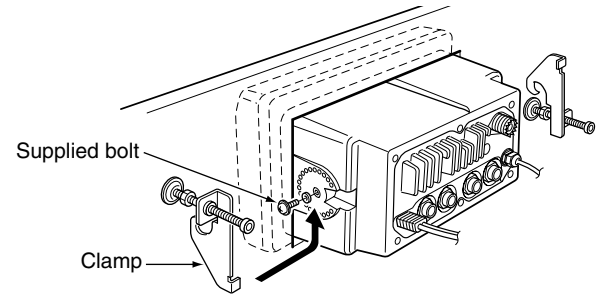
CAUTION: KEEP the transceiver and microphone at least 1 meter away from your vessel's magnetic navigation compass.

- ① Using the attached template, carefully cut a hole into the instrument panel (or wherever you plan to mount the transceiver).
- ② Slide the transceiver through the hole as shown below.

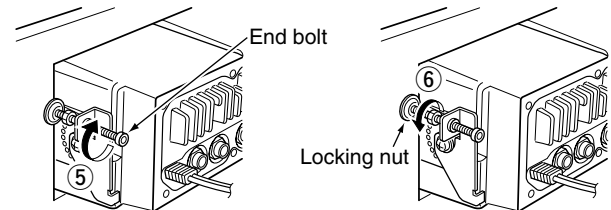


- ③ Attach the 2 supplied bolts (M5 × 8 mm) on either side of the IC-M604.

- ④ Attach the clamps on either side of the IC-M604.
 - Make sure that the clamps align parallel to the IC-M604's body.



- ⑤ Tighten the end bolts 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 IC-M604 is securely mounted in position as below.



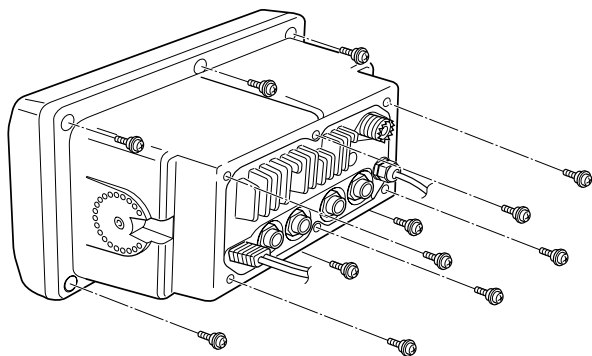
- ⑦ Connect the antenna and power cable, then return the instrument control panel to its original place.

■ Optional unit installation

CAUTION: DISCONNECT the DC power cable from the transceiver before performing any work on the transceiver. Otherwise, there is danger of electric shock and/or equipment damage.

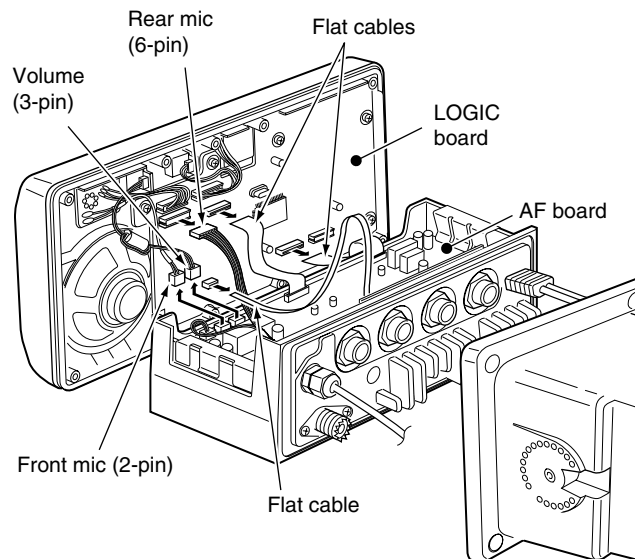
Follow the case opening procedure shown here when you want to install an optional unit.

- ① Remove the 12 screws and open the transceiver.

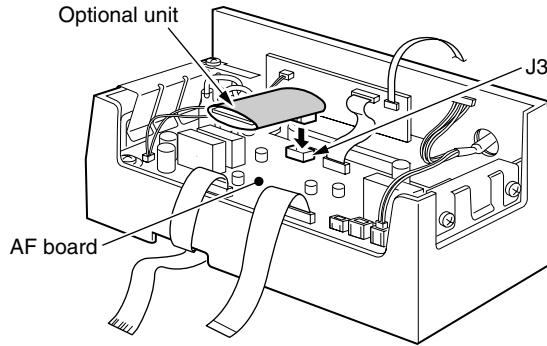


Torque (0.7 N.m)

- ② Turn the transceiver upside down, then disconnect the flat cables and Rear mic control (6-pin) from LOGIC board, and Front mic control (2-pin) and Volume control (3-pin) from AF board.



- ③ Install an optional unit to J3 on the AF board as shown below.

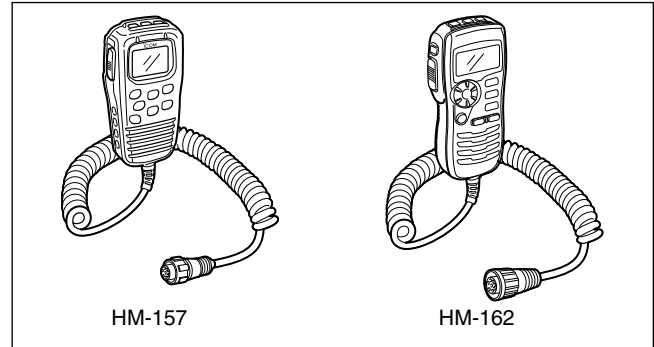


- ④ Assemble the units to their original positions.

CAUTION:

- When re-assembling the case and tightening the screws, you must keep the specified torque (0.7 N.m). Otherwise the transceiver may be damaged (torque too high) or lose waterproof efficiency (torque too low).
- When uninstalling the optional unit, remove it vertically. Wiggling the unit from side to side may damage the optional unit's connector.

■ **HM-157/HM-162 installation**



The optional HM-157 can be connected to the transceiver directly, as well as via the supplied connection cable for longer distance remote operation. The connector of the connection cable can be installed into a cabinet, wall, etc., as a built-in plug.

- The optional HM-162 should be installed to the transceiver using the supplied connection cable.

For longer distance remote operation, the optional extension cable, OPC-999/OPC-1541* (6 m; 20 ft/connecting between transceiver and the connection cable), is available, and up to two OPC-999/OPC-1541* can be added.

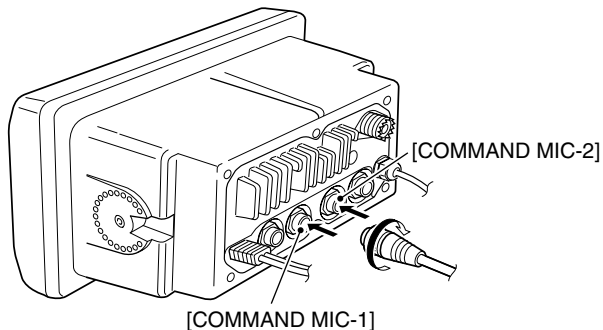
*OPC-999 : For the HM-157

OPC-1541 : For the HM-162

Do not connect the HM-157 to the OPC-1541, and the HM-162 to the OPC-999/OPC-1000.

9 CONNECTIONS AND MAINTENANCE

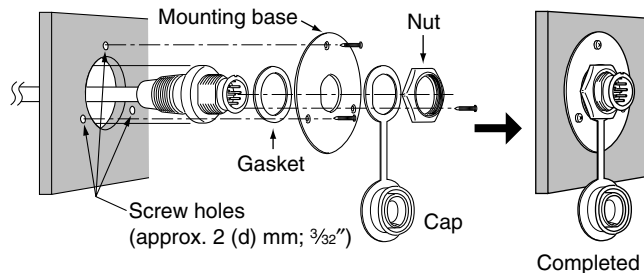
- ① Insert the supplied cable (or HM-157 without the cable) into the [COMMAND MIC-1] or [COMMAND MIC-2] connector and tighten the cable nut as shown below.
 - Up to two COMMANDMIC™s can be connected simultaneously.
 - The HM-157 and HM-162 can be used together.



- ② To use the supplied cable as a wall socket, perform the following steps.
- ③ Using the mounting base as a template, carefully mark the holes where the cable and three screws will be fastened.
- ④ Drill holes at these marks.

- ⑤ Install the mounting base using the supplied screws as shown below.

• HM-157



• HM-162

