

QUICK REFERENCE GUIDE

■ Installation

◇ Precaution— magnets

△ CAUTION

Magnets are used for the controller's attachment to the main unit.

NEVER hold the whole unit by the controller only when carrying the transceiver. Carry the transceiver holding the main unit. If held by the controller, the main unit may drop off and may result in injury to the person carrying it or damage the transceiver.

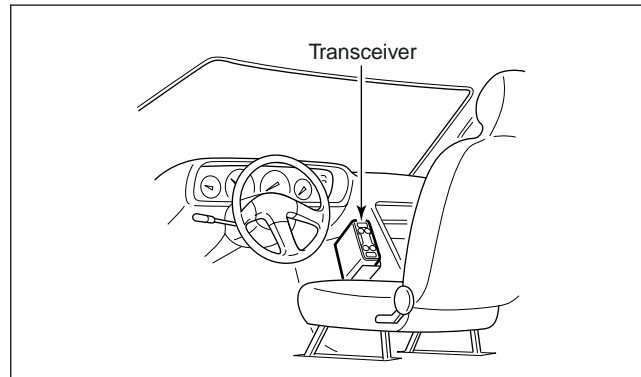
NEVER attach the controller on the main unit's top cover, particularly around the internal speaker grill. It may cause the contents of the CPU and memory device could be deleted.

NEVER put the controller near a clock, television set (CRT type), magnetic compass and any magnetic/IC cards, credit cards, etc. It may cause the product to malfunction, and the content of the magnetic card could be deleted.

Please note that the controller may drop off when a high impact or vibration is applied.

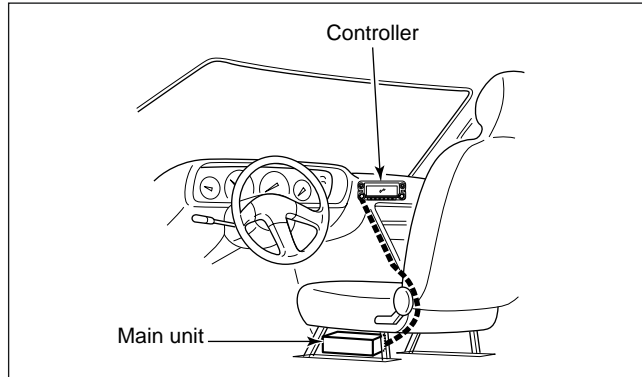
◇ Installation methods

• *Single body installation*



- The supplied mounting bracket can be used for the main unit installation.

• **Remote installation**



- The supplied remote controller bracket and separation cable can be used for installation.
- Optional OPC-440 MICROPHONE CABLE (5.0 m; 16.4 ft) is available to extend the microphone cable.
- Optional OPC-441 SPEAKER CABLE (5.0 m; 16.4 ft) is available to extend the speaker cable.

◇ **Location**

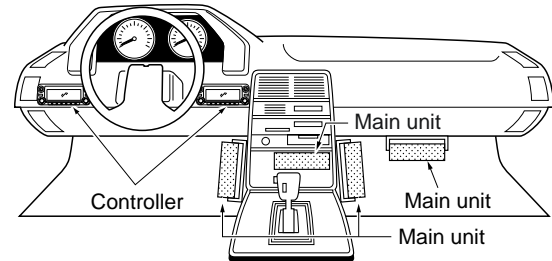
Select a location which can support the weight of the transceiver and does not interfere with driving. We recommend the locations shown in the diagram below.

NEVER place the transceiver or remote controller where normal operation of the vehicle may be hindered or where it could cause bodily injury.

NEVER place the transceiver or remote controller where air bag deployment may be obstructed.

DO NOT place the transceiver or remote controller where hot or cold air blows directly onto it.

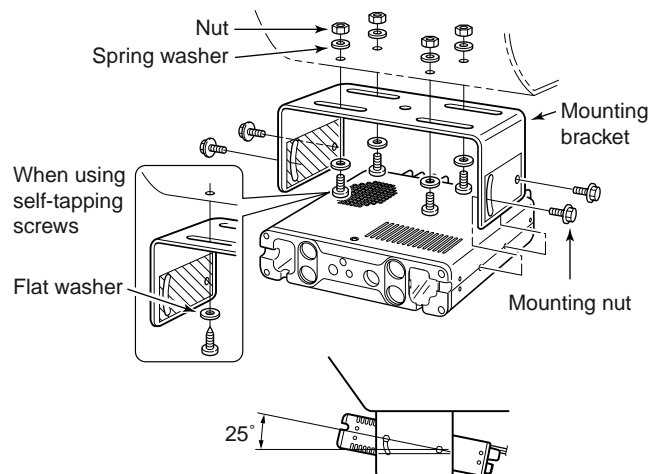
AVOID placing the transceiver or remote controller in direct sunlight.



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◇ Using the mounting bracket

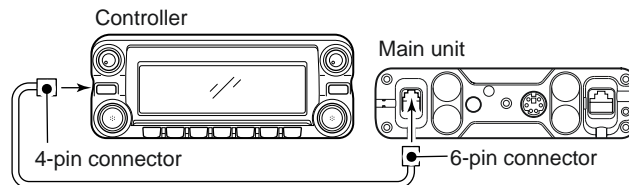
- ① Drill 4 holes where the mounting bracket is to be installed.
 - Approx. 5.5–6 mm (1/4") when using nuts; approx. 2–3 mm (1/8") when using self-tapping screws.
- ② Insert the supplied screws, nuts and washers through the mounting bracket and tighten.
- ③ Adjust the angle for your suitable position.



◇ Controller/Separation cable connection

Two connection cables, controller cable (10 cm; 3.9 in) for single body installation and separation cable (3.4 m; 11.2 ft) for remote installation, are supplied with the IC-2820H.

Connect the controller and the main unit using with the supplied connection cable as follows.

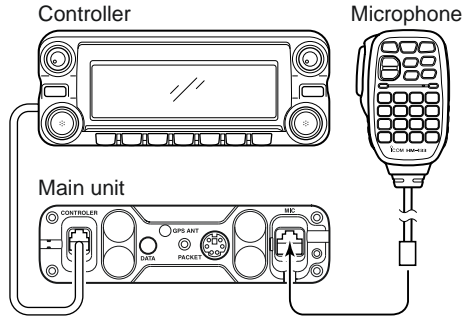


IMPORTANT!— number of pin

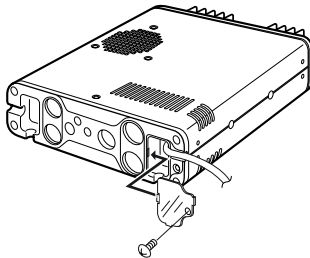
The connectors on the ends of the connection cable have different numbers of pins - one end has 6 pins and the other end 4 pins. You should connect the 6-pin connector to the main unit, and the 4-pin connector to the controller.

◇ **Microphone connection**

A microphone connector is available on the main unit front panel. Connect the supplied microphone connector as illustrated below.

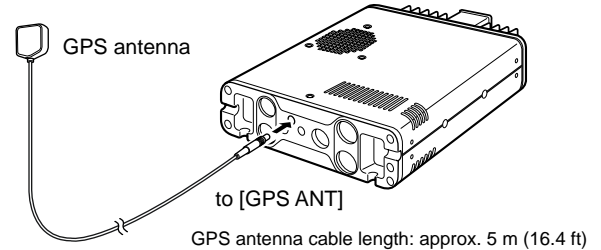


Attach the supplied microphone connector plate after the microphone connection, otherwise the controller will separate from the main unit when the microphone cable is pulled during single body installation.



◇ **Optional GPS antenna connection**

When the optional UT-123 is installed, the GPS antenna supplied with the UT-123 can be connected. Connect the GPS antenna as below.



Mount the GPS antenna onto a convenient flat surface. The GPS antenna includes magnet mount base, therefore, the antenna can be mounted onto a metal roof/wall, etc.

NOTE

When the GPS antenna is connected, only remote installation is allowed. The GPS antenna is not weather-proof construction, therefore, **NEVER** install the antenna in outdoor.

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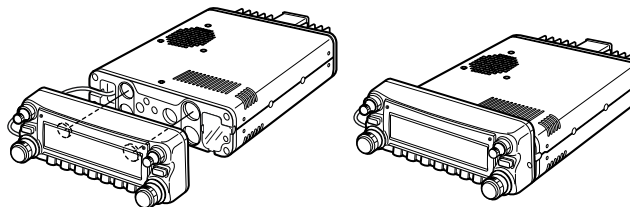
◆ Important notes when using GPS receiver

- The GPS antenna is not weather-proof construction, therefore, **NEVER** install the antenna in outdoor.
- Please do not install the GPS antenna close the TX antenna. The transmit signal may cause GPS receiver malfunction.
- The GPS signal cannot pass through the metal object. When installing GPS antenna inside a vehicle, we recommend to mount under the front or rear glass such as on the dashboard, etc. Please avoid the areas shown in the following:
 1. Do not mount where it will block the driver's view.
 2. Do not mount where the air bags could deploy.
- The Global Positioning System (GPS) is built and operated by the US Defence Department. The Department is responsible for accuracy and maintenance of the system. Any changes that the Department makes may affect the accuracy and function of the GPS system.
- When GPS receiver is activated, please do not cover the GPS antenna with any object.
- The GPS receiver may not work if used in the following locations:
 1. Tunnels or high-rise buildings
 2. Underground parking lot
 3. Under a bridge or viaduct
 4. In remote forested areas
 5. Under bad weather condition (rainy or cloudy day)

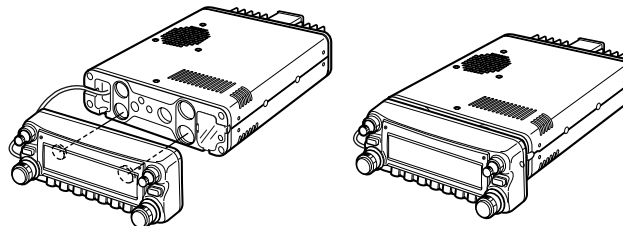
◆ Controller's attachment

You can attach the controller of the IC-2820H by one of 2 methods.

• Example 1

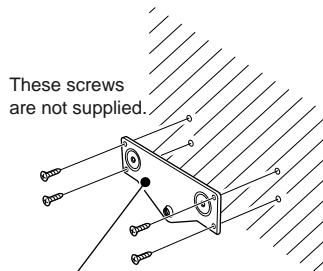


• Example 2



◇ **Remote installation**

The supplied remote controller bracket is used for remote installation.



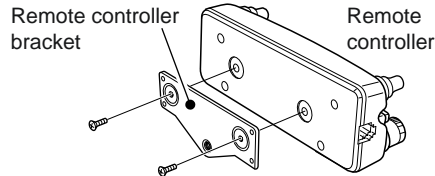
These screws are not supplied.

Remote controller bracket

- Attach the remote controller bracket onto a flat surface using with 4 self-tapping screws (2.6 mm(d)), or double-sticky tape, etc., as at left, then attach remote controller to the bracket.

When installing into your vehicle

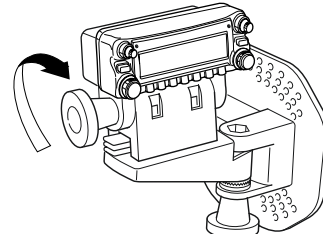
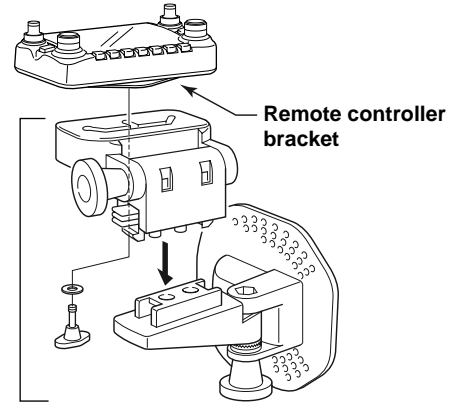
- ① Remove two screws and magnets from the remote controller.
- ② Attach the supplied remote controller bracket as below.



- ③ Attach the remote controller on to the optional MB-65 as below.

Adjust the viewing angle for maximum visibility of the function display.

Optional MB-65



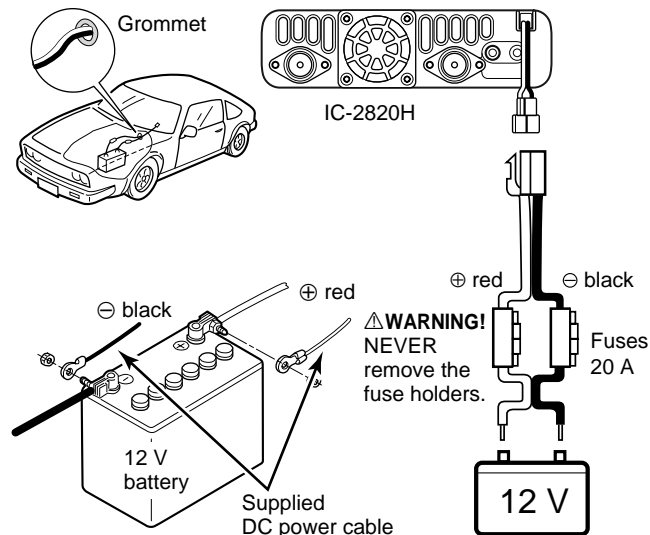
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◇ Battery connection

- ⚠ **WARNING NEVER** remove the fuse holders from the DC power cable.
- **NEVER** connect the transceiver directly to a 24 V battery.
- **DO NOT** use the cigarette lighter socket for power connections. (See p. 10 for details)

Use a rubber grommet when passing the DC power cable through a metal plate to prevent a short circuit.

• CONNECTING TO A DC POWER SOURCE



NOTE:
Use terminals for the cable connections.

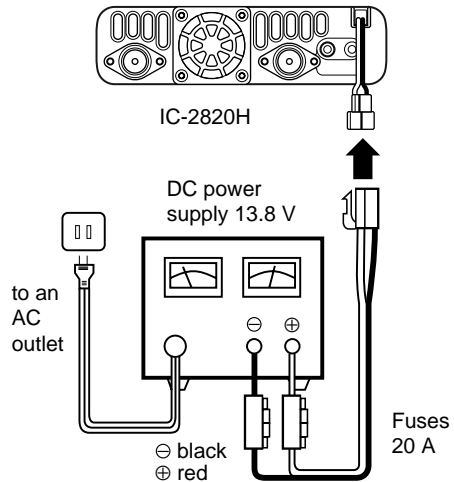


◇ **DC power supply connection**

Use a 13.8 V DC power supply with at least 15 A capacity.

Make sure the ground terminal of the DC power supply is grounded.

• **CONNECTING TO A DC POWER SUPPLY**



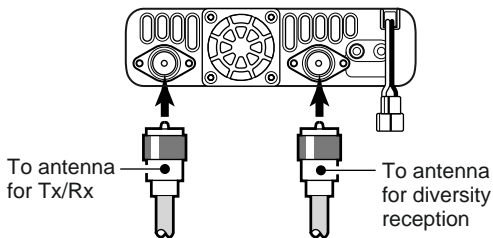
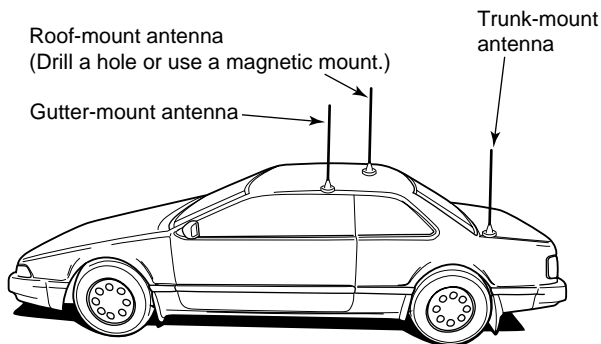
See p. 134 for fuse replacement.

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◇ Antenna installation

• Antenna location

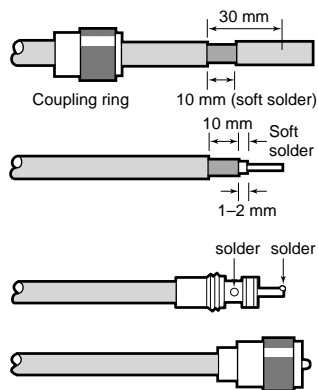
To obtain maximum performance from the transceiver, select a high-quality antenna and mount it in a good location. It is not necessary to use radials on a magnetic mount (“mag mount”) antenna.



• Antenna connector

The antenna uses a PL-259 connector.

• PL-259 CONNECTOR



① Slide the coupling ring down. Strip the cable jacket and tin.

② Strip the cable as shown at left. Soft solder the center conductor.

③ Slide the connector body on and solder it.

④ Screw the coupling ring onto the connector body.
(10 mm \approx 3/8 in)

/// **NOTE:** There are many publications covering proper antennas and their installation. Check with your local dealer for more information and recommendations.