radar's specification. Refer to the following table to confirm your category. The radar category depends on the installed monitor.

Category	Radar type	ANT. rotation speed
CAT 1	FAR-2318, FAR-2328, FAR-2328W, FAR-2338S, FAR-2338SW, FAR-2338-NXT	24 rpm
CAT 1H	Same models as above	42 rpm
CAT 2	FAR-2218, FAR-2228, FAR-2238S, FAR-2238S-NXT	24 rpm
CAT 2H	Same models as above	42 rpm
CAT 3	FAR-2218, FAR-2228, FAR-2238S, FAR-2238S-NXT	24 rpm

For BB type, a monitor unit meeting the category requirements of IMO must be prepared by the user.

1. INSTALLATION

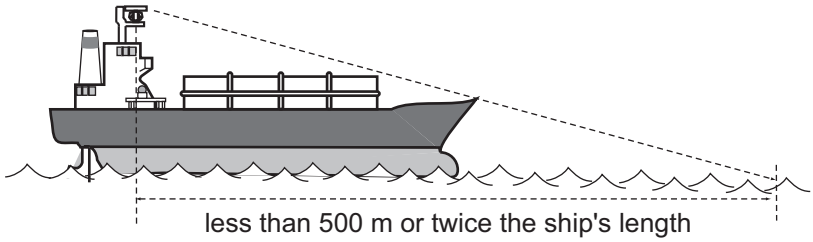
NOTICE

Do not apply paint, anti-corrosive sealant or contact spray to coating or plastic parts of the equipment.
Those items contain organic solvents that can damage coating and plastic parts, especially plastic connectors.

1.1 Antenna Unit (X-band Radar)

1.1.1 Installation Considerations

- The Antenna Unit is generally installed either on top of the wheelhouse or on the radar mast, on a suitable platform. Locate the Antenna Unit in an elevated position to permit maximum target visibility.
- A line of sight from the Antenna Unit to the bow of the ship must hit the surface of the sea in not more than 500 m or twice the ship's length, depending whichever value is smaller, for all load and trim conditions.



- BS/CS broadcast equipment may be subject to interference from radar waves. For BS/CS antenna installation, adjust the height and installation position of the BS/CS antenna to avoid interference from radars.
- Install the Antenna Unit so that any blind sectors caused by objects (mast, etc.) are kept to a minimum. A blind sector must not exist in arc of the horizon from right ahead to 22.5° aft of the beam to either side (see the figure below). Also, individual blind sectors of more than 5°, or the total arc of both blind sectors of more than 20°, must not occur in the remaining arc (Figure 2). Note that any two blind sectors separated by 3° or less are regarded as one sector.

Figure 1

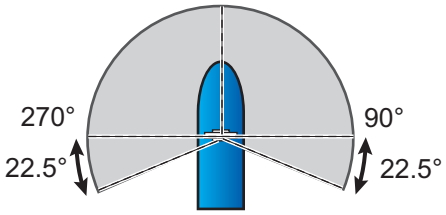
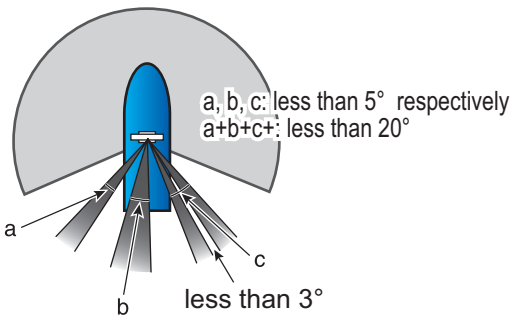
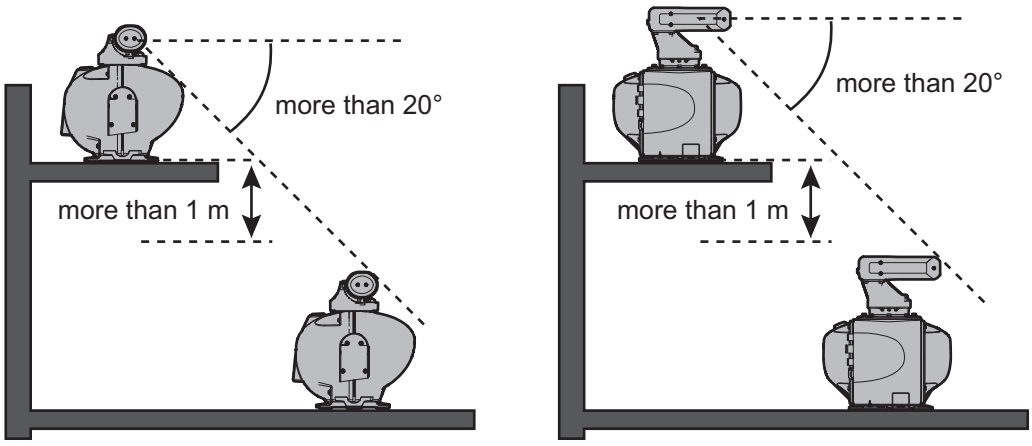


Figure 2



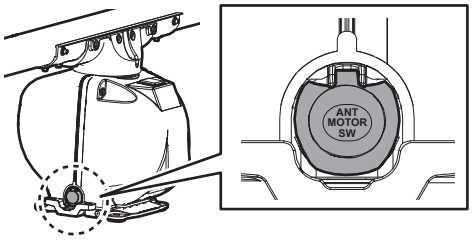
- Do not install the antenna where extreme winds may strike the port and starboard sides of the antenna.

- Install the Antenna Unit away from interfering high-power energy sources and TX radio antennas.
- Keep the lower edge of the Antenna Unit above the safety rail by at least 500 mm.
- Install two Antenna Units as shown in the figure below.

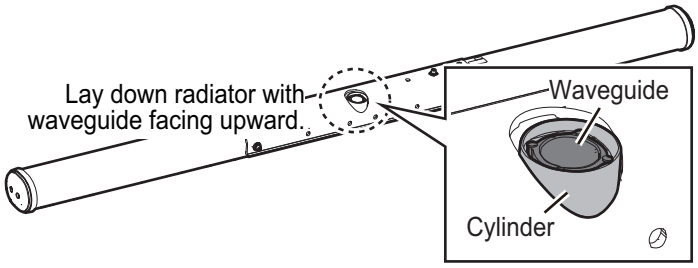


X-band radar S-band radar

- No funnel, mast or derrick shall be within the vertical beamwidth of the Antenna Unit in the bow direction, especially zero degree ±5°, to prevent blind sectors and false echoes on the radar picture.
- It is rarely possible to place the Antenna Unit where a completely clear view in all directions is available. Therefore, determine the angular width and relative bearing of any shadow sectors for their influence on the radar at the first opportunity after fitting.
- Locate the antenna of an EPFS clear of the radar antenna to prevent interference to the EPFS. A separation of more than two meters is recommended.
- A magnetic compass will be affected if the Antenna Unit is placed too close to the compass. Observe the compass safe distances on page ii to prevent interference to a magnetic compass.
- Do not paint the radiator aperture, to ensure proper emission of the radar waves.
- Ground the unit with the ground wire (supplied).
- Deposits and fumes from a funnel or other exhaust vent can affect the aerial performance and hot gases may distort the radiator portion. Do not install the Antenna Unit where the temperature is more than 55 °C.
- Leave sufficient space around the unit for maintenance and servicing. See the Antenna Unit outline drawing for recommended maintenance space.
- For X-band radar, an antenna switch is provided on the chassis to stop the antenna. Make sure the mounting location provides easy access to the switch.



- For X-band radar, if it is necessary to lay down the radiator before you fasten it to the Antenna Unit, lay it down with the waveguide up, to prevent damage to the cylinder that surrounds the waveguide.



- If the de-icer is installed, a two-pole breaker (supplied locally) must also be installed.

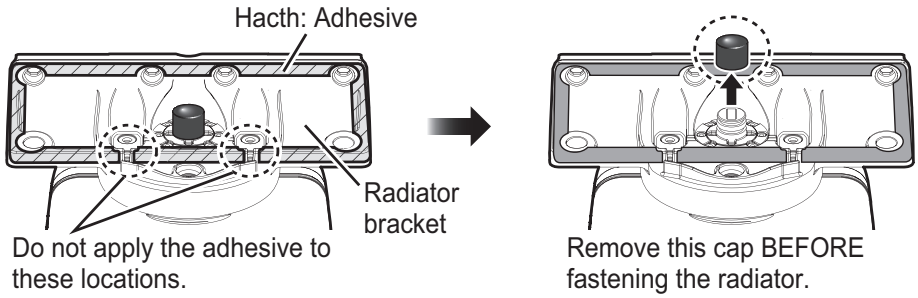
Note: For more information, please refer to IMO SN/Circ.271 "Guidelines for the installation of shipborne radar equipment.

1.1.2 FAR-2x18/2x28/2x38 Radars

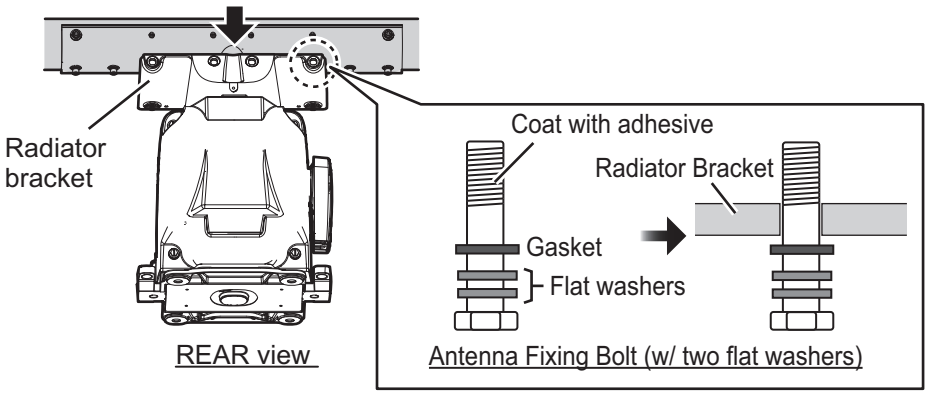
How to assemble the Antenna Unit

The Antenna Unit consists of the antenna radiator and the Antenna Unit chassis, and they are packed separately. Fasten the antenna radiator to the Antenna Unit chassis as follows:

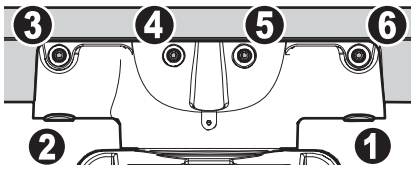
1. Coat the hatched area shown in the figure in step 2 with the supplied adhesive.
2. Remove the protective waveguide cap from the waveguide on the radiator bracket.



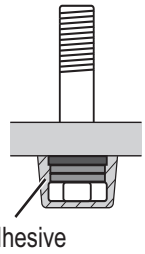
3. Pass the Gasket (03-182-3186, supplied) to six sets of the Antenna fixing bolts (03-182-4188, supplied, w/two flat washers), and then coat the threads of the Antenna fixing bolts with the supplied adhesive. Set the radiator on the radiator bracket.



4. Fasten the antenna radiator to the radiator bracket with the six sets of Antenna fixing bolts. **Fasten the bolts in the order shown in the figure to the right**. The torque must be 15.0 N•m.



5. Coat the Antenna fixing bolts fixed at step 4 with the supplied adhesive as shown in the right figure.



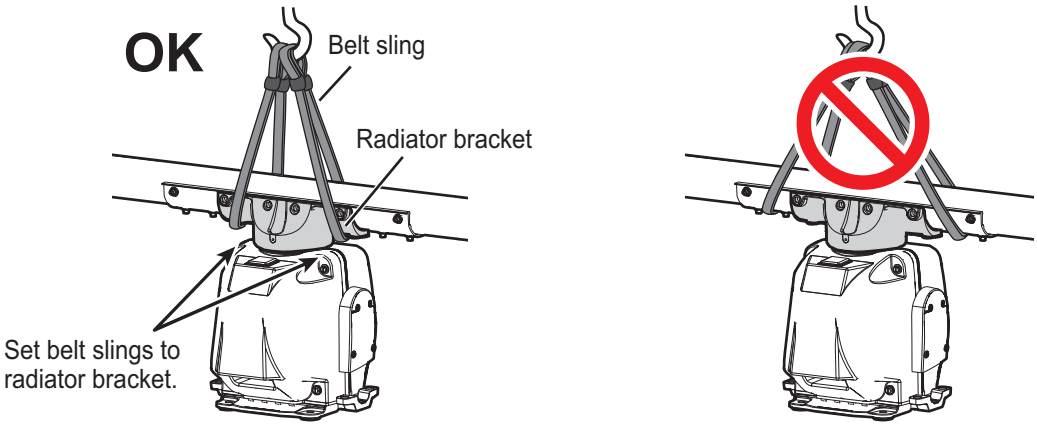
How to hoist the Antenna Unit

The Antenna Unit may be assembled before hoisting it to the mounting platform. Attach lifting belt slings to the "Radiator Bracket", NOT the antenna radiator, as shown in the figure below.

Also, hoist the Antenna Unit slowly. Hoisting swiftly may cause a damage to the antenna radiator or damage the radiator chassis.

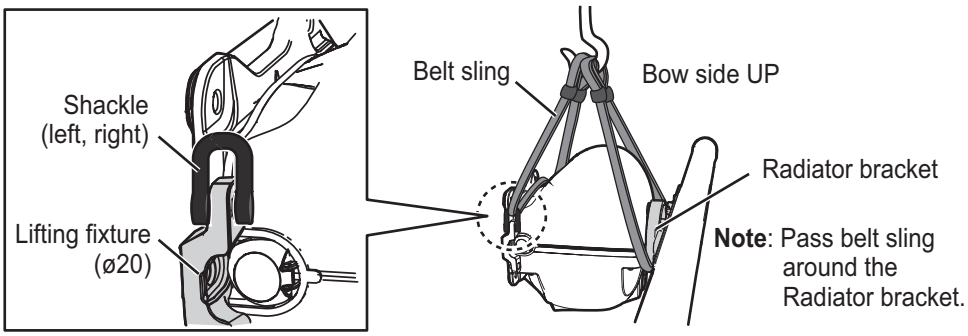
There are two methods to hoist the Antenna Unit.

- **Upright hoisting**



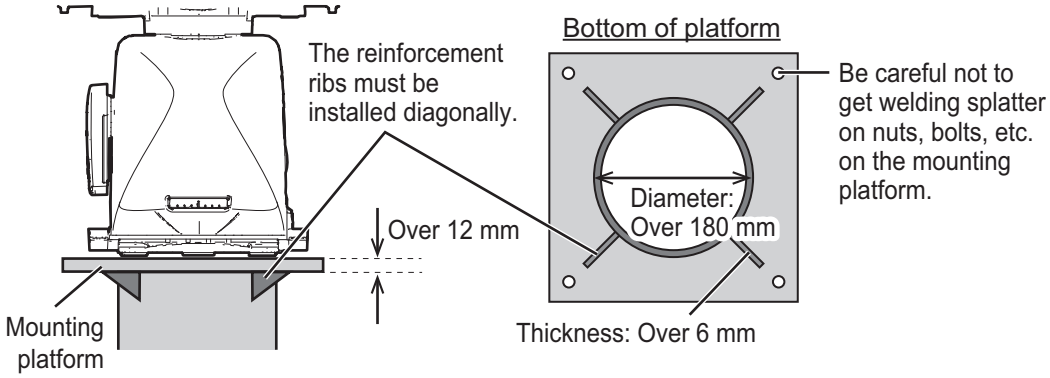
- **Sideways hoisting**

  Fasten belt sling to a shackle, pass belt sling around radiator bracket and fasten other end of belt sling to other shackle.

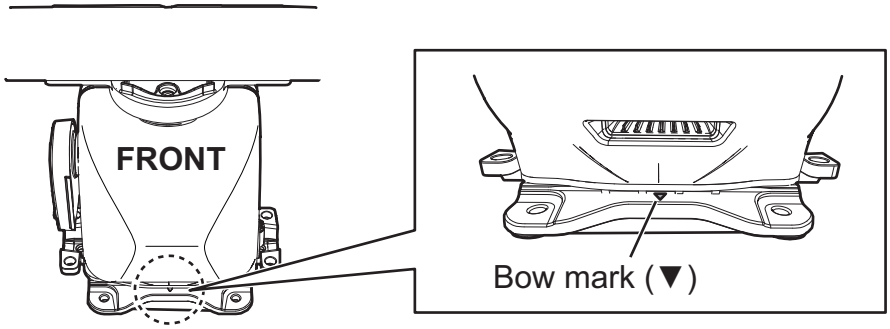


How to fasten the Antenna Unit to the mounting platform

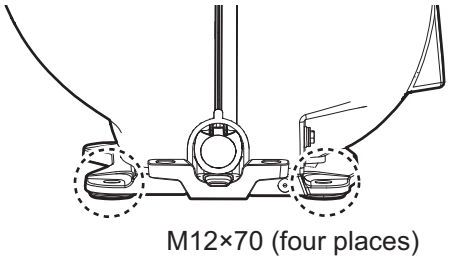
1. Construct a suitable mounting platform referring to the outline drawing at the end of this manual.
   Note: The mounting platform must be flat, level and firmly secured.
   - The diameter of the mast for fixing the Antenna Unit platform must be over 180 mm.
   - The thickness of the Antenna Unit platform must be over 12 mm.
   - The reinforcement rib must be installed diagonally.



2. Referring to the outline drawing at the back of this manual, drill four mounting holes (ϕ15 mm) in the mounting platform.
3. Place the Antenna Unit on the platform, then orient the unit so the bow mark on its base is facing the ship's bow.
   Note: When the Antenna Unit is placed on the platform, make sure that the platform is not inclined.



4. Insert four sets of hex bolts (M12×70) attached the seal washers to the mounting holes of the antenna chassis, referring to the installation guide (C3900Y01) at the back of this manual. Lift the antenna chassis slightly then insert the bolts attached the insulation sheets.

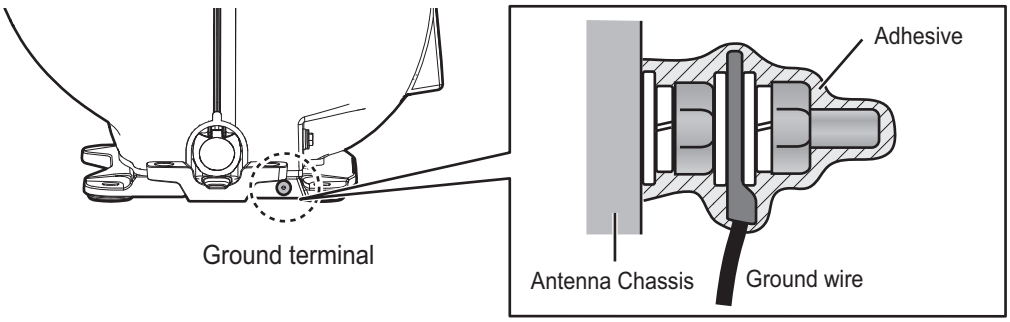


   Note: DO NOT insert the bolts from the underside of the platform. The cover cannot be opened.
5. Adjust the direction of the Antenna Unit so the bow mark on its base is facing the ship's bow.
6. Fasten the Antenna Unit to the mounting platform with four sets of hex bolts (M12×70), nuts, flat washers and seal washers. Insert the bolts from the topside

of the platform. The torque must be 49 N•m. For how to fasten double nuts, see the installation guide (C3900Y01) at the back of this manual.

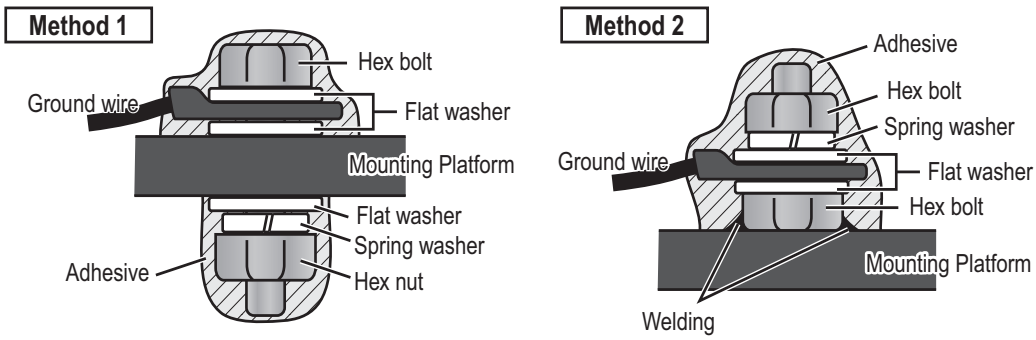
7. Using a hex bolt (M6×25), nut (M6) and flat washer (M6), establish the ground system on the mounting platform. The location must be within 340 mm of the ground terminal on the Antenna Unit. Connect the ground wire (RW-4747, 340 mm, supplied) between the grounding point and ground terminal on the Antenna Unit. Coat the hardware of the ground system with the supplied adhesive.

Antenna chassis side



Mounting platform side

Arrange a ground terminal as close as possible to Antenna Unit. There are two methods to connect the ground wire for mounting platform side.



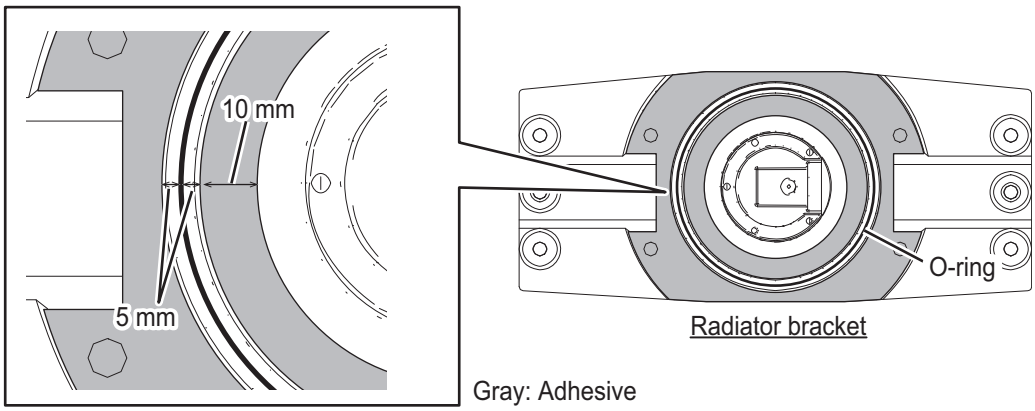
1.1.3 FAR-2258 Radar

How to assemble the Antenna Unit

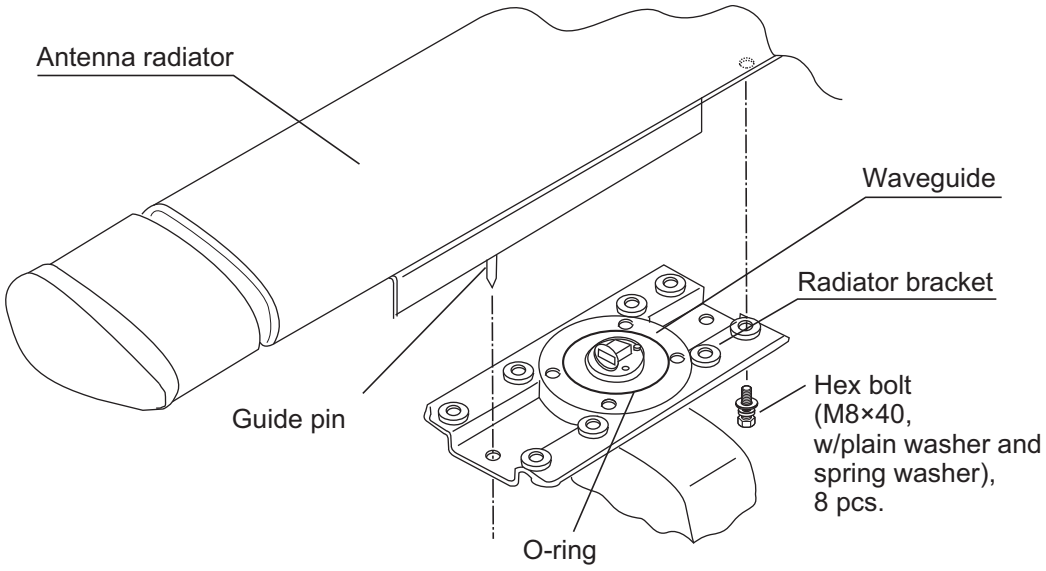
The Antenna Unit consists of the antenna radiator and the Antenna Unit chassis, and they are packed separately. Fasten the antenna radiator to the Antenna Unit chassis as follows:

1. Attach the supplied two guide pins to the underside of the antenna radiator.
2. Remove the protective waveguide cap from the waveguide on the radiator bracket.

3. Coat the grayed area shown below with the supplied adhesive.



4. Grease the O-ring and set it to the O-ring groove of the radiator flange.
5. Set the supplied spring washers and flat washers then coat the adhesive to the threads of the supplied hex. bolts M8×40.
6. Set the antenna radiator to the radiator bracket.



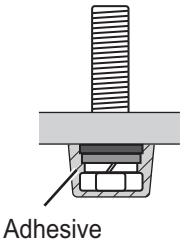
7. Remove the two guide pins (inserted at step 1), and then tighten fixing bolts. The torque must be 15 N•m.

⚠ CAUTION

Be sure to remove the guide pins.

Injury may result if the guide pins loosen and fall.

8. Coat hex bolts M8×40 with the supplied adhesive and use them to loosely fasten the antenna radiator to the Antenna Unit chassis.

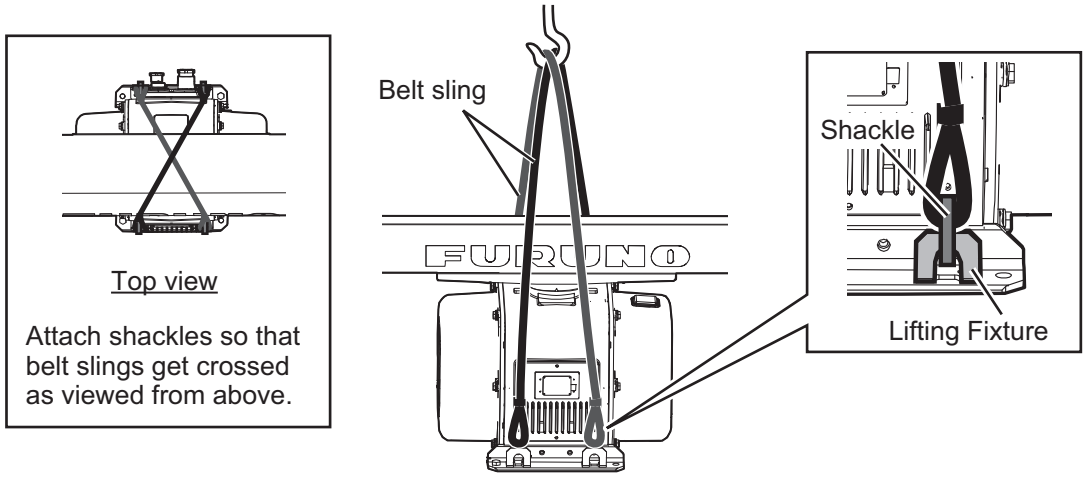


How to hoist the Antenna Unit

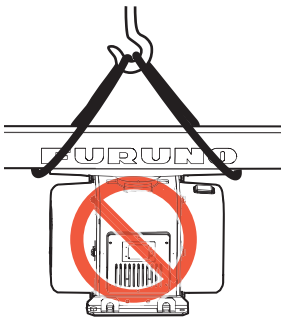
The Antenna Unit may be assembled before hoisting it to the mounting platform. Do one of the following to hoist the Antenna Unit. Attach shackles (ϕ20, local supply) to the lifting fixtures to use belt slings. After the Antenna Unit is securely placed, remove the shackles.

Also, hoist the Antenna Unit slowly. Hoisting swiftly may cause a damage to the antenna radiator or damage the radiator chassis.

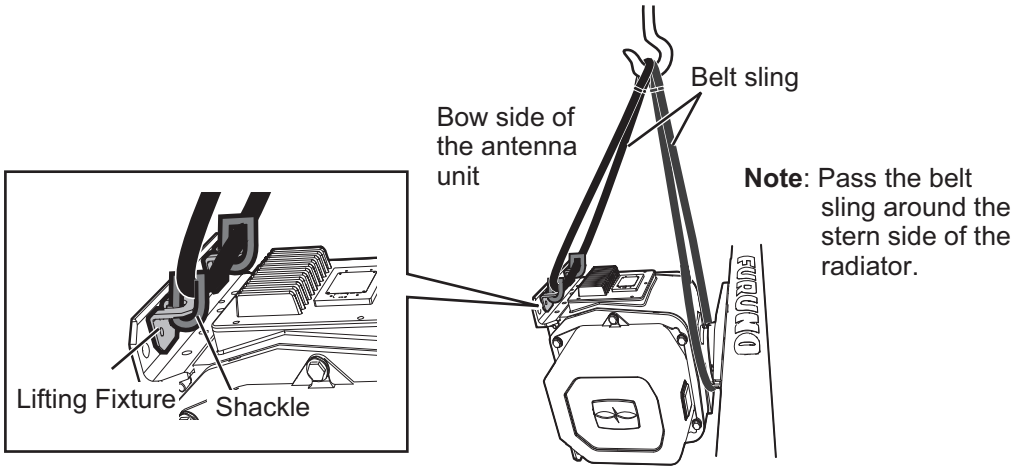
- **Upright hoisting**



Note: Do not hoist the Antenna Unit by hanging belt slings around the radiator directly.

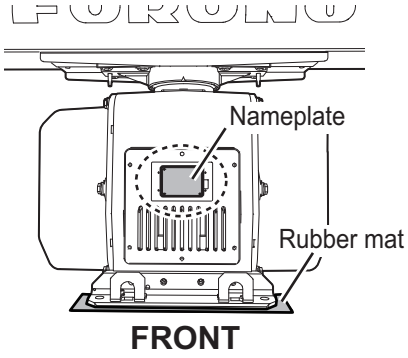


- **Sideways hoisting**
  Fasten one belt sling to both shackles, and pass the other belt sling around the stern side of the radiator.

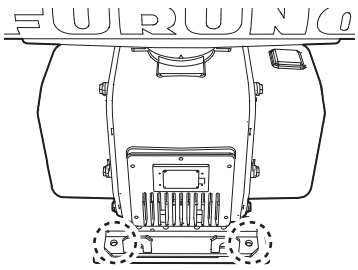


How to fasten the Antenna Unit to the mounting platform

1. Construct a suitable mounting platform referring to the outline drawing at the end of this manual.
   Note: The mounting platform must be flat, level and firmly secured.
2. Lay the rubber mats (supplied) on the mounting platform.

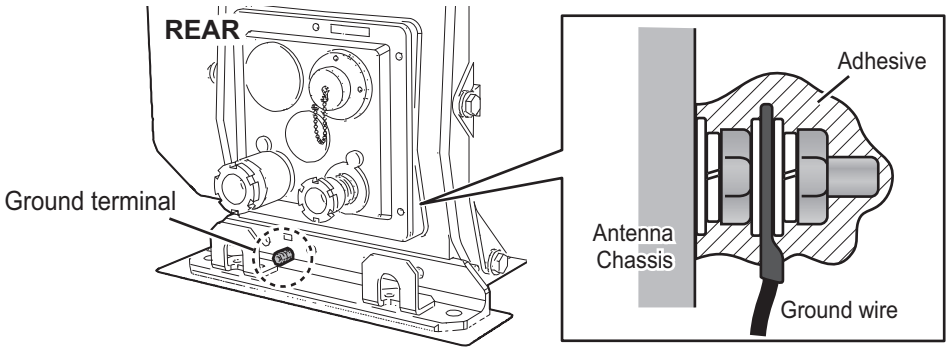


3. Place the Antenna Unit on the supplied rubber mats, then orient the unit so the nameplate on the scanner box is facing the ship's bow.
   Note: When the Antenna Unit is placed on the platform, make sure that the platform is not inclined.
4. Insert four sets of hex bolts (M12×60) attached the seal washers to the mounting holes of the antenna chassis.
5. Adjust the direction of the Antenna Unit so the nameplate is facing the ship's bow.
6. Fasten the Antenna Unit to the mounting platform with four sets of hex bolts, nuts, flat washers and seal washers. The torque must be 49 N•m.
   Note: For how to fasten the double nuts, see the installation guide (C3900Y01) at the back of this manual.



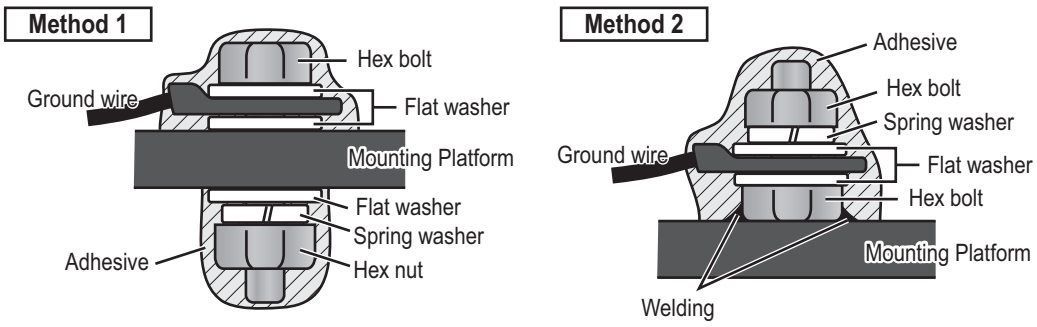
7. Using a hex bolt (M6×25), nut (M6) and flat washer (M6), establish the ground system on the mounting platform. The location must be within 340 mm of the ground terminal on the Antenna Unit. Connect the ground wire (RW-4747, 340 mm, supplied) between the grounding point and ground terminal on the Antenna Unit. Coat the hardware of the ground system with the supplied adhesive.

Antenna chassis side



Mounting platform side

Arrange a ground terminal as close as possible to Antenna Unit. There are two methods to connect the ground wire for mounting platform side.

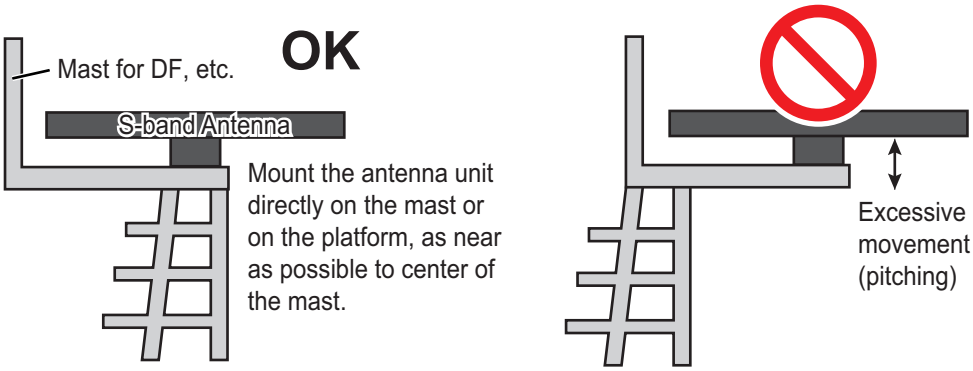


1.2 Antenna Unit (S-band Radar)

For installation considerations regarding the Antenna Unit, see section 1.1.1.

1.2.1 Installation precaution for S-band Antenna Unit

Due to the S-band radiator length, there may be excessive stress placed on the radiator caused by vibrations, rolling and general ship movement. To prevent damage to the Antenna Unit and radiator, do not install the antenna near the end of a platform. If there is no other location available, reinforce the platform before installing the Antenna Unit.

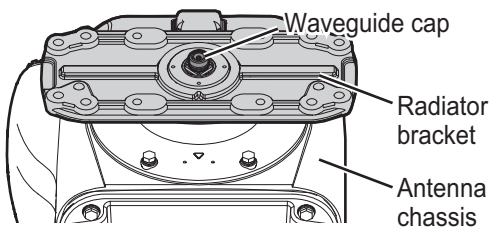


1.2.2 FAR-2x38S Radars

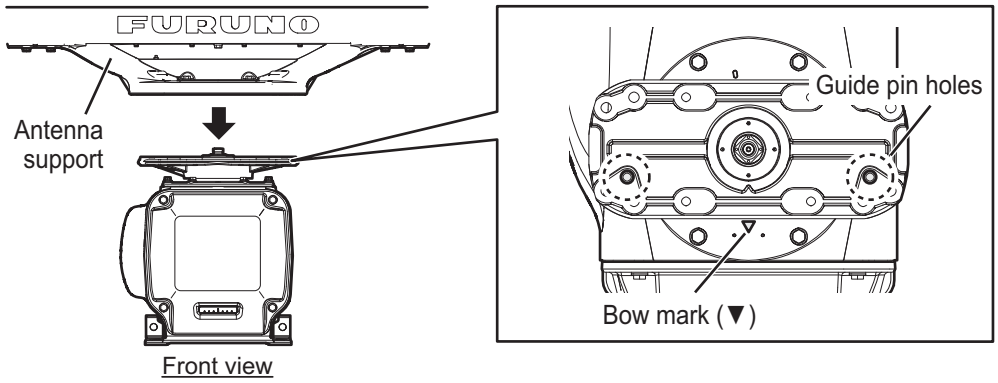
How to assemble the Antenna Unit

The Antenna Unit consists of the antenna radiator (w/antenna support) and the antenna unit chassis, and they are packed separately. Fasten the antenna radiator to the Antenna Unit chassis as follows:

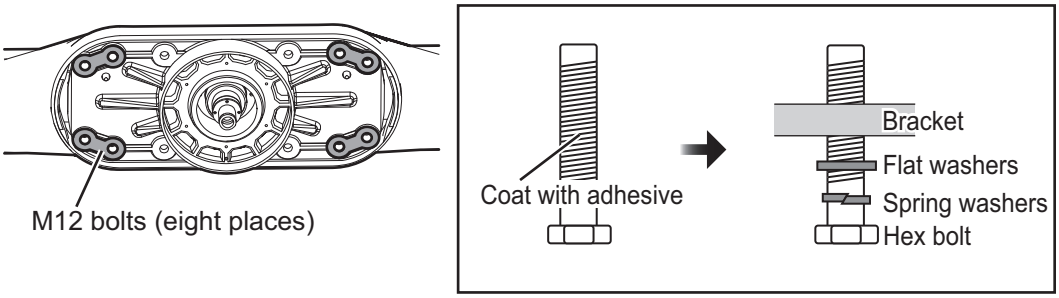
1. Remove the protective waveguide cap from the waveguide on the radiator bracket.



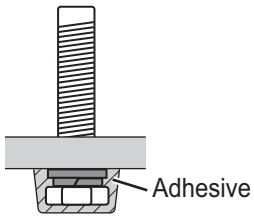
2. Set the radiator on the radiator bracket (w/antenna support) so the guide pins of the antenna support fit into the guide pin holes on the radiator bracket. (Orient the logo of the radiator to the side with bow mark on the bracket. If reversely oriented, the radiator cannot be set to the bracket.)



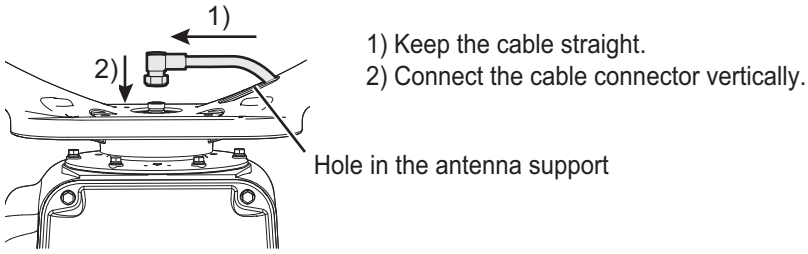
3. Coat the threads of eight hex bolts (M12×50, supplied) with the supplied adhesive.
4. Fasten the antenna radiator to the radiator bracket from the bottom of the bracket with the eight hex bolts, spring washers and flat washers. The torque must be 49 N•m.



5. Coat the bolt heads fastened at step 4 with the supplied adhesive as shown in the figure to the right.



6. Connect the coaxial cable from the Antenna Unit to the rotary joint. The torque must be 25 N•m.

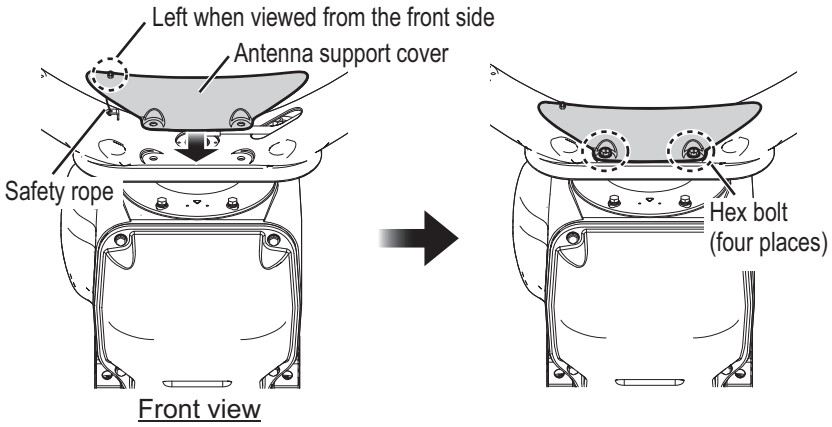


Note 1: The coaxial cable connector must be connected vertically.

Note 2: The coaxial cable must be horizontal and must not contact the antenna support hole.

Note 3: If the coaxial cable is long, bend the cable some distance from the connector. Insert surplus cable into antenna support. Connect the cable to the rotary joint, taking care that the threads of the cable and rotary joint are aligned.

7. Coat the hex bolts (M12×40, 4 pcs.) for the support cover with the supplied adhesive).
8. Fasten the support cover with the hex bolts, spring washers and flat washers. The torque must be 20 N•m.



Note 1: Make sure the safety rope does not contact the antenna support cover.

Note 2: Set the screw for the safety rope to come to the left when viewed from the front side of the antenna.

How to hoist the Antenna Unit

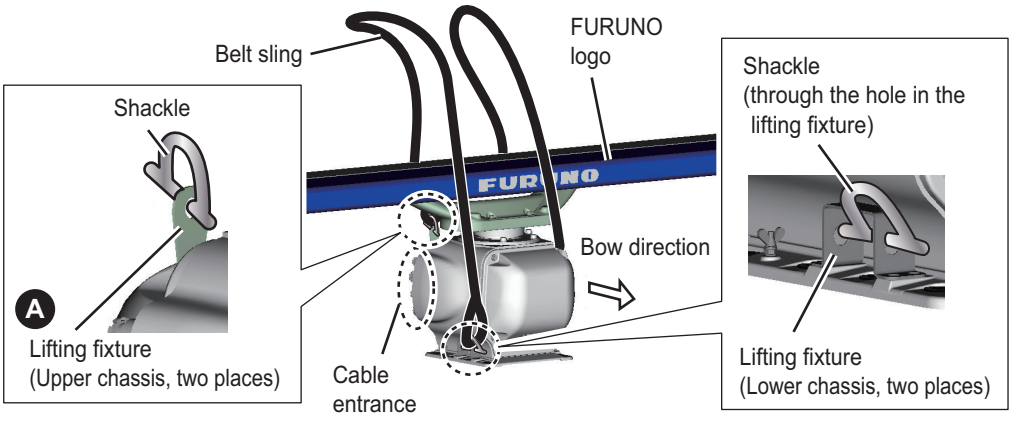
The Antenna Unit may be assembled before hoisting it to the mounting platform. Orient the FURUNO logo of the radiator to the bow side of the antenna unit. Hoist the antenna unit with belt slings (approx. 4 m) and shackles of hole diameter ϕ20 mm (supplied locally with required quantities according to hoisting).

Also, hoist the Antenna Unit slowly. Hoisting swiftly may cause a damage to the antenna radiator or damage the radiator chassis.

There are two hoisting methods as follows.

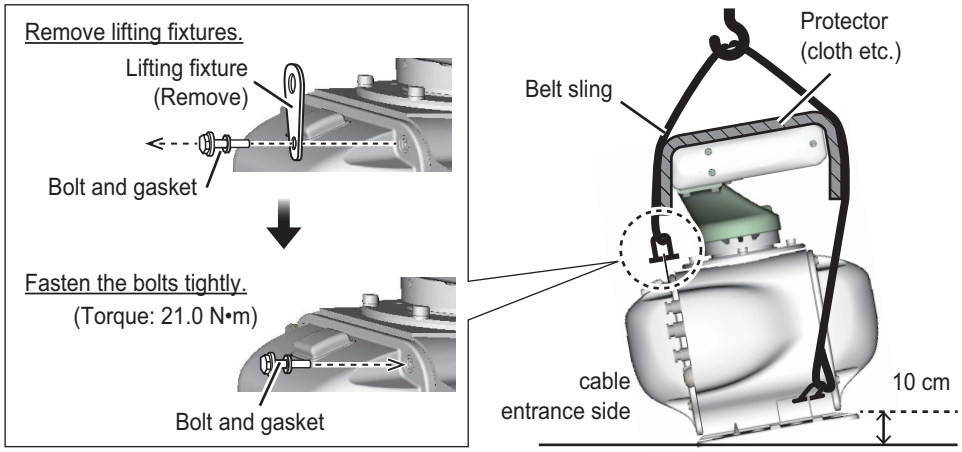
- **Upright hoisting**
  Th antenna unit is positioned upright.

1. Pass both ends of two belt slings through four shackles. Attach the shackles to the lifting fixtures (A, B, 4 places) of the chassis as shown in the figure below.



2. Lift while tilting the antenna unit so that the front and rear loads of the belt slings are even. The tilt angle should be about 10 cm on the opposite side with entrance side as the fulcrum point. Also, protect the parts where the tilted antenna unit and the belt slings come into contact (dashed area) with cloth to prevent

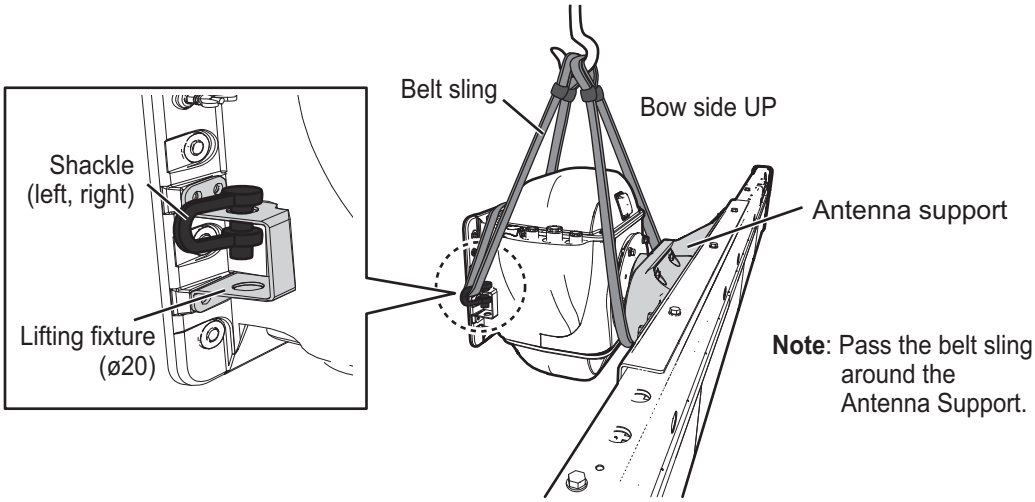
scratches.After the antenna unit is hoisted in place, remove the all shackles and the lifting fixtures at the upper chassis (A, two places).



Note: If you forget to remove the lifting bracket, water may enter the antenna.

- **Sideways hoisting**

  The antenna unit is positioned sideways with mast installed etc.
  Place the antenna so that the bow side faces upward. Attach two shackles to both ends of a belt sling, and pass through the stern side of the antenna support as shown in the figure below. Fasten the shackles to the lifting fixtures (B, two places), and hoist the chassis.s
  For landscape hoisting, the lifting fixtures (A, two places) at the upper chassis are not used.
  After the antenna unit is hoisted in place, remove the all shackles and the lifting fixtures at the upper chassis (A, two places), referring to the description in the "Upright hoisting" on page 1-12.

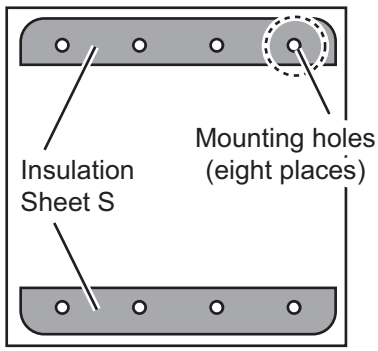


How to fasten the Antenna Unit to the mounting platform

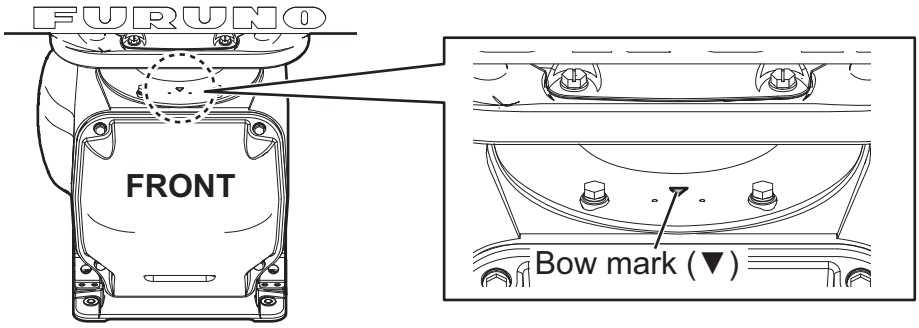
1. Construct a suitable mounting platform referring to the outline drawing at the back of this manual.
   Note: The mounting platform must be flat, level and firmly secured.
   - The diameter of the mast for fixing the Antenna Unit platform must be over 250 mm.
   - The thickness of the Antenna Unit platform must be over 15 mm.

- The reinforcement ribs must be installed diagonally shown in the following figure.

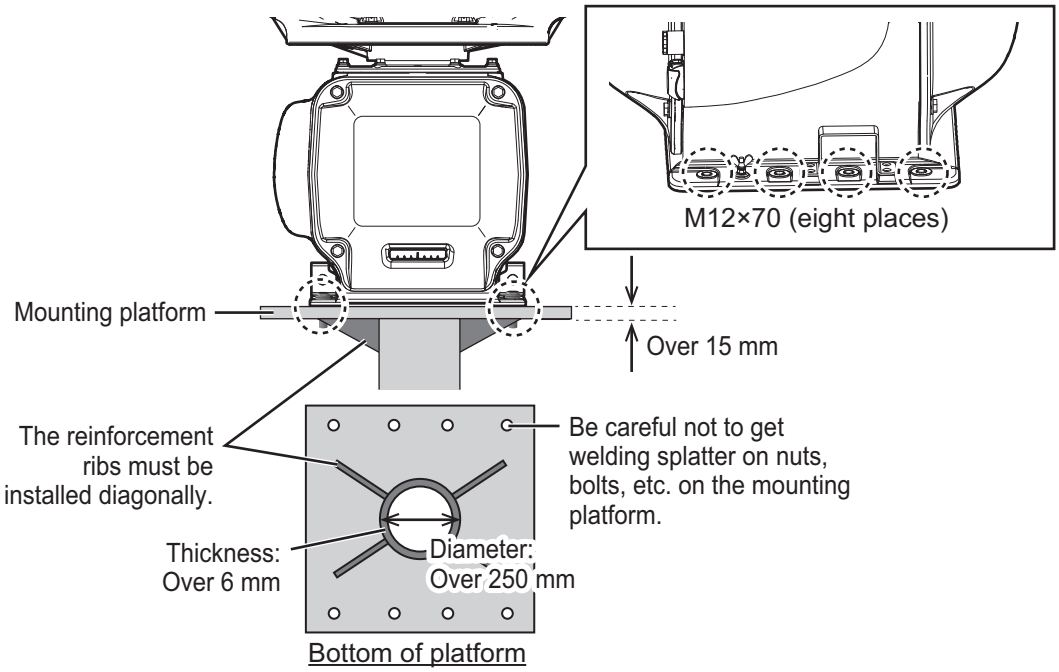
2. Referring to the outline drawing, drill eight mounting holes (ϕ16 mm) in the mounting platform.
3. If two insulation sheets (type: 03-183-3106) are supplied in the installation materials, place these sheets as aligned with eight mounting holes. If the insulation sheets are not supplied, go to next step because the sheets have been attached on the antenna unit already.



4. Place the Antenna Unit on the mounting platform, then orient the unit so the bow mark on its base is facing the ship's bow.
   Note: When the Antenna Unit is placed on the platform, make sure that the platform is not inclined.

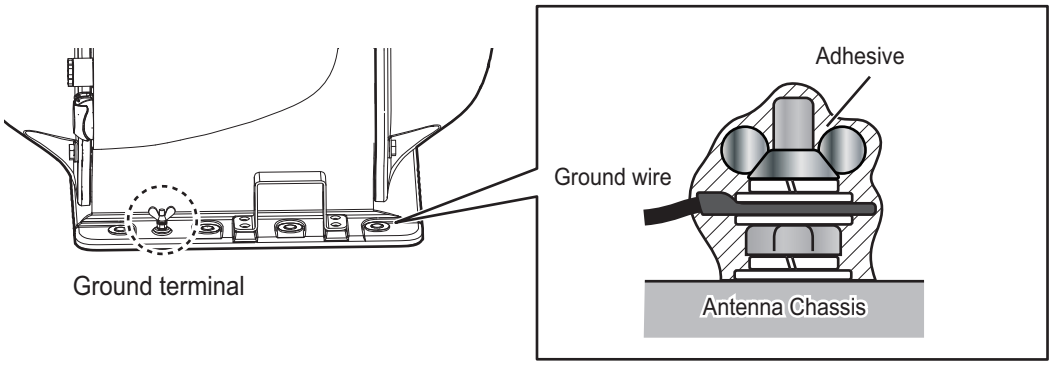


5. Fasten the Antenna Unit to the mounting platform with M12×70 hex bolts, nuts, flat washers, spring washers and seal washers (supplied). The torque must be 49 N•m. Fasten the double nuts, referring to the installation guide (C3900Y01) at the back of this manual.
   Note: The bolts can also be inserted from the underside of the platform.



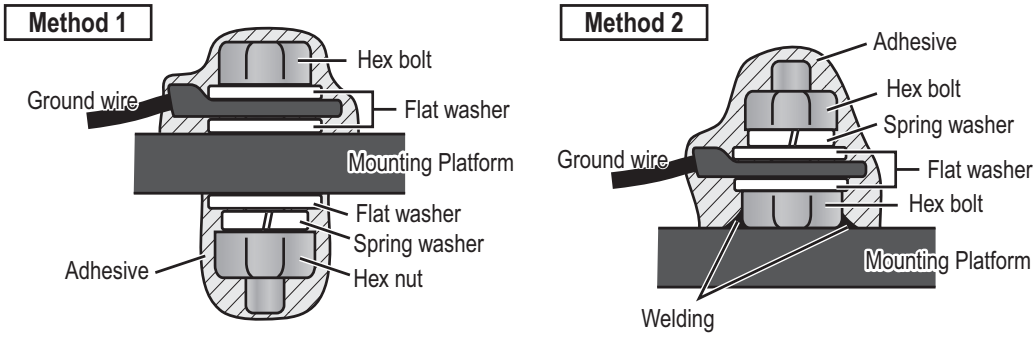
6. Using a hex bolt (M6×25), nut (M6), spring washer (M6) and flat washer (M6), establish the ground system on the mounting platform as shown in the following figure. The location must be within 340 mm of the ground terminal on the Antenna Unit. Connect the ground wire (RW-4747, 340 mm, supplied) between the grounding point and ground terminal on the Antenna Unit. Coat the hardware of the ground system with the supplied adhesive.

Antenna chassis side



Mounting platform side

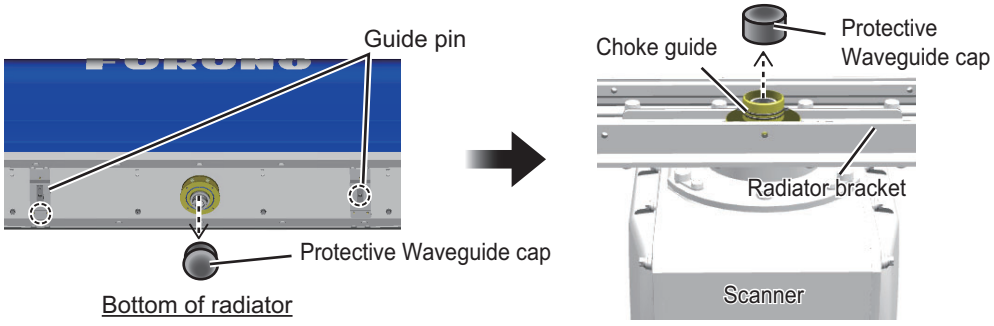
Arrange ground terminal as close as possible to Antenna Unit. There are two methods to connect ground wire for mounting platform side.



1.2.3 FAR-2268DS Radar

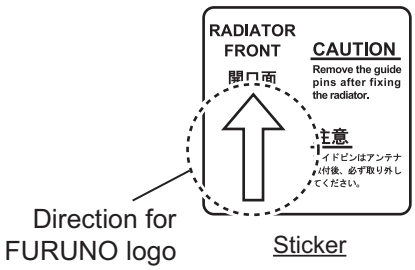
How to assemble the Antenna Unit

1. Screw the two supplied guide pins in the radiator, and remove the protective waveguide caps from the choke guide and radiator.

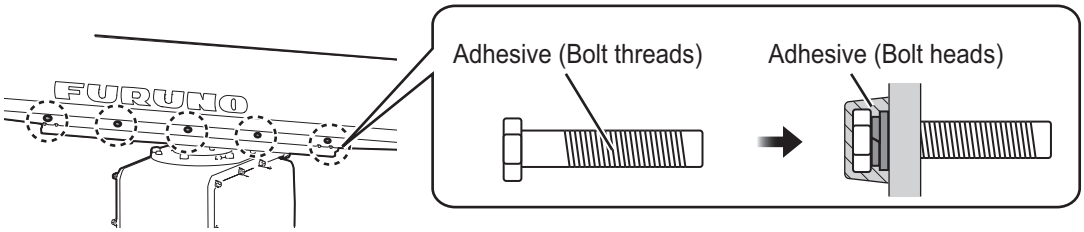


2. Grease the two supplied O-ring and set it to the groove on the choke guide.

3. Orient the FURUNO logo of the radiator to the side with the sticker on the bracket. If reversely oriented, the radiator cannot be set to the bracket. Set the radiator so the guide pins fit into the guide holes on the radiator bracket.



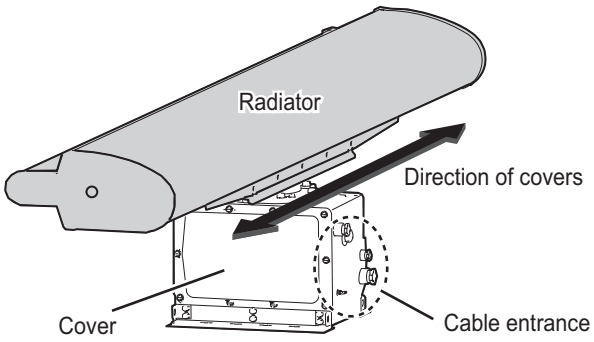
4. Attach the spring washers and the flat washers to the hex bolts and then coat the threads of ten hex bolts (M10×25, supplied) with the supplied adhesive. Fix loosely the radiator to the radiator bracket with the hex bolts. Remove the guide pins.
   Note: If the guide pins remains on the antenna unit, they may fall down and lead to an accident over time.
5. Tighten the 10 hex bolts (torque: 36.5 N•m) and then coat the bolt heads with the supplied adhesive.



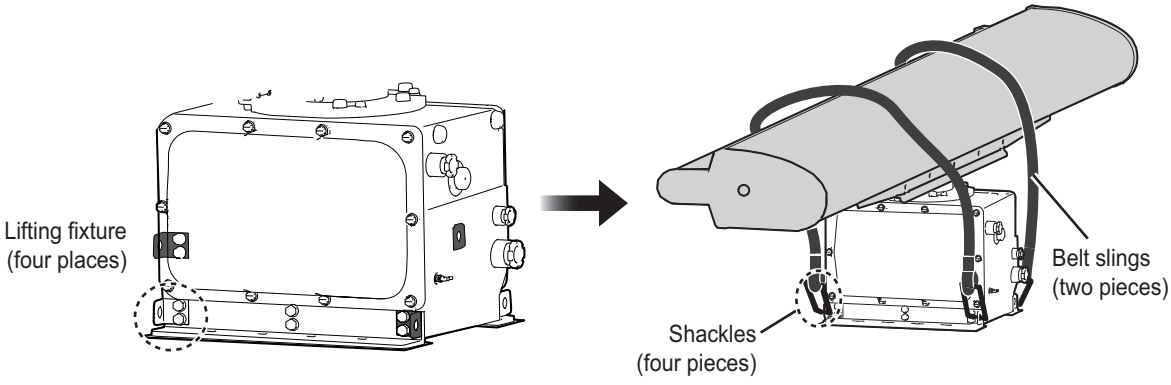
How to hoist the Antenna Unit

Attached four shackles (locally supplied) with two belt slings (approx. 4 m, locally supplied) to the lifting fixtures (ϕ20) on the chassis, and then hoist the antenna unit. After the antenna unit is hoisted in place, remove the shackles.

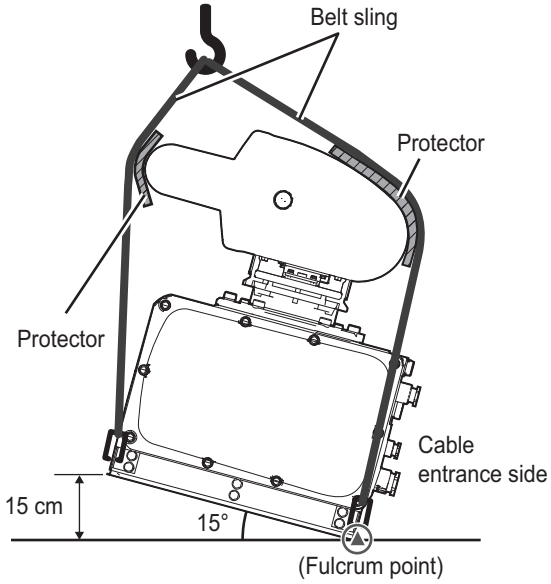
1. Subject the orientation of the radiator parallel to the direction of both covers of the antenna unit.



2. Attach four shackles to both sides of two belt slings. Attach the shackles to the four lifting fixtures on the chassis so that the belt slings passes over the radiator.



3. Lift while tilting the antenna unit so that the front and rear loads of the belt slings are even. The tilt angle should be about 15 cm (about 15°) on the opposite side with the cable entrance side as the fulcrum point (▲). Also, protect the parts where the tilted antenna unit and the belt slings come into contact (dashed area) with cloth to prevent scratches.

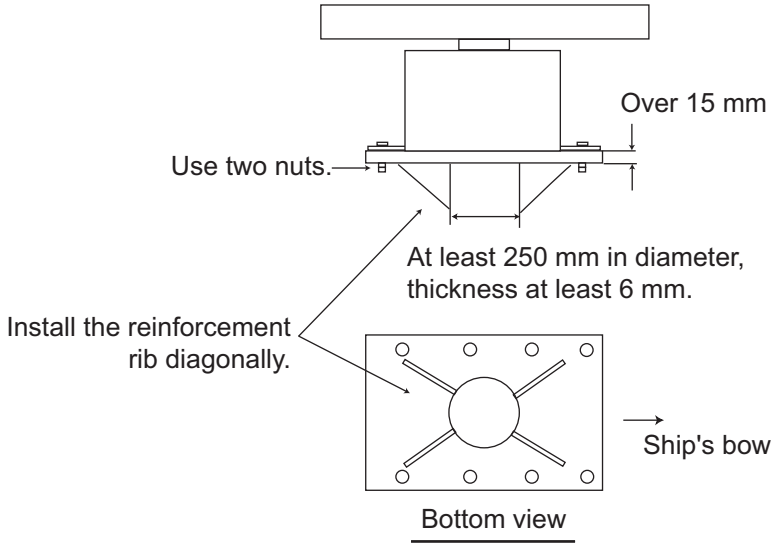


How to fasten the Antenna Unit to the mounting platform

Note: The antenna is made of cast aluminum, which is subject to electrolytic corrosion if the mounting platform is steel or iron. To prevent electrolytic corrosion, use the supplied seal washers and corrosion-proof rubber mat.

Fix the antenna unit to the mounting location, referring to the procedure below.

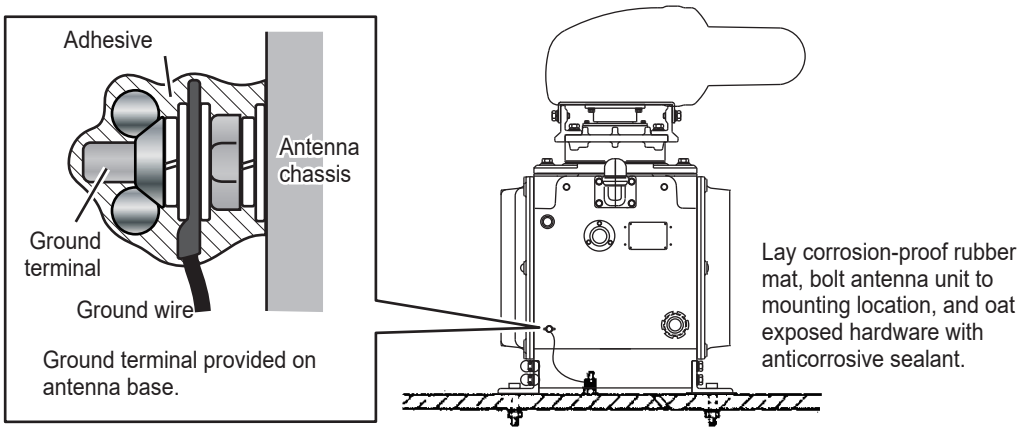
1. Referring to the antenna outline drawing, prepare a mounting platform. Drill eight fixing holes of 15 mm in diameter in the mounting platform or the deck.
   - The diameter of the mast for the mounting platform must be over 250 mm.
   - The thickness of the platform must be over 15 mm.
   - Install the reinforcement rib diagonally.

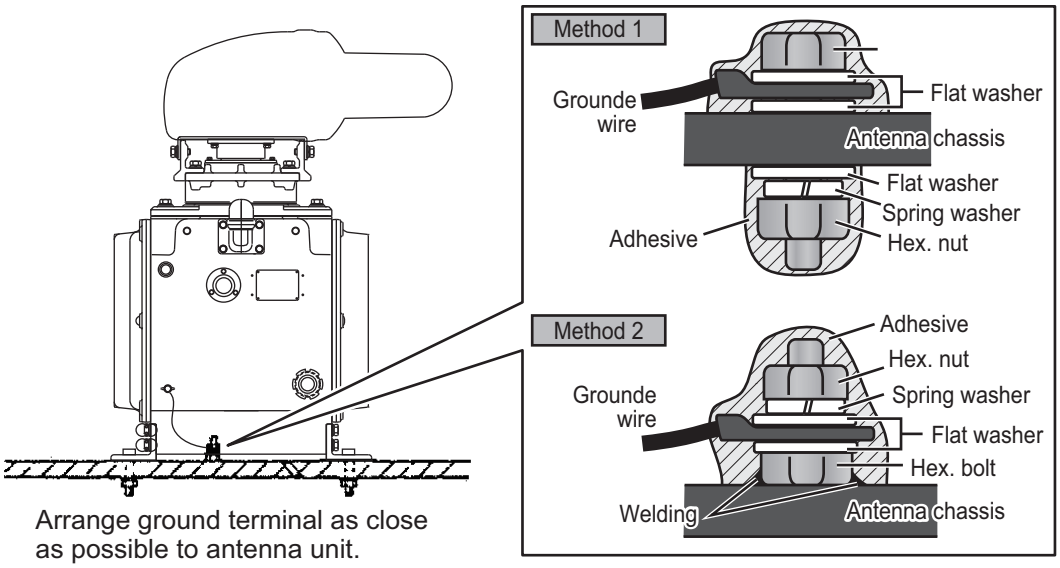


2. Lay the corrosion-proof rubber mat (supplied) on the mounting platform, aligning the holes on the rubber mat with the fixing holes on the mounting platform.
3. Lay the antenna unit on the rubber mat, orienting it so the cable gland is directed toward ship's bow.
4. Fix the antenna base to the mounting platform with four M12x70 hex bolts, nuts, washers and seal washers (supplied). The torque must be 63.5 N•m. For fasten-

ing the double nuts, see the installation guide (C3900Y01) at the back of this manual.

5. Arrange the ground point at a location on the mounting platform that is within 300 mm from the ground terminal on the antenna unit. Fasten the ground wire (RW-4747, 340 mm) there, using the M6x25 hex bolt, nut and washers.
6. Connect the other end of the ground wire to the ground terminal on the antenna unit.
7. Coat the ground terminal, ground point on the mounting platform and fixing bolts on the antenna unit with adhesive (supplied).

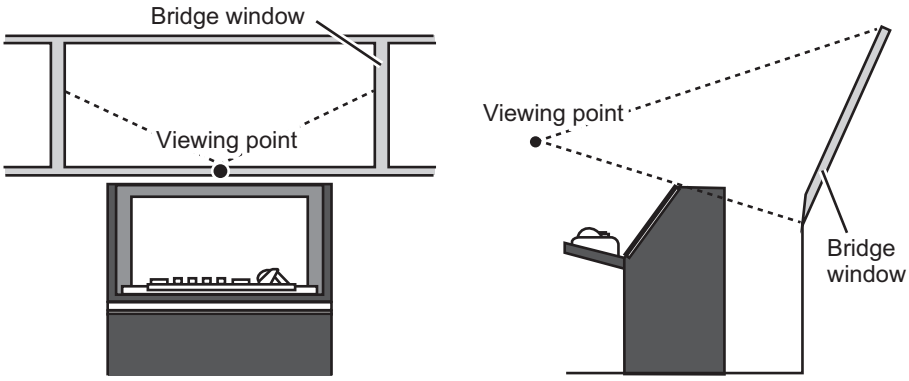




1.3 Monitor Unit

See the operator's manual for MU-190 (OMC-44670), MU-231 (OMC-44690), MU-270W (OMC-44930) or MU-190HD (OMC-44570) for the installation procedure. Keep in mind the following points when selecting a location.

- Locate the monitor unit where no framing is installed immediately in front of the monitor.
- Locate the monitor where the display is easily visible in all ambient lighting conditions.



1.4 Control Unit

The Control Units can be installed on a desktop or flush mounted in a console.

Installation considerations

Keep in mind the following points when selecting a location.

- Select a location where the Control Unit can be operated easily.
- Locate the unit away from heat sources because of heat that can build up inside the cabinet.
- Locate the equipment away from places subject to water splash and rain.
- Leave sufficient space at the sides and rear of the unit to facilitate maintenance.
- Determine the location considering the length of the signal cable between the Control Unit and the Processor Unit.
- A magnetic compass will be affected if the Control Unit is placed too close to the magnetic compass. Observe the compass safe distances in the SAFETY INSTRUCTIONS to prevent interference to the compass.

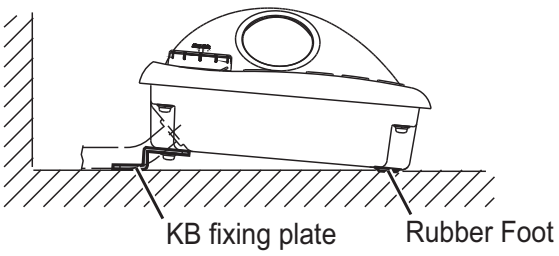
1.4.1 Desktop installation

For desktop installation, the unit can be laid flat or tilted.

How to mount the unit tilted

<RCU-014/015/016>

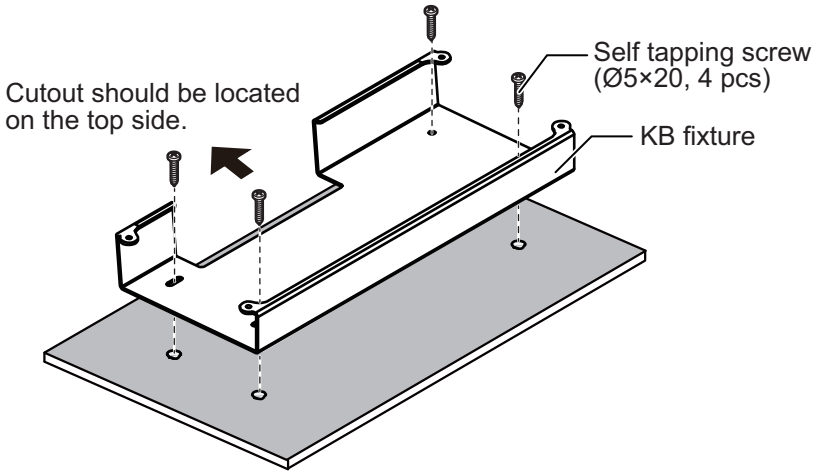
1. Fit the KB fixing plate (in FP03-09850 for RCU-014, in FP03-09860 for RCU-015/016) to the bottom of the Control Unit.
2. Attach the rubber foots (three for RCU-014, two for RCU-015/016) to the bottom of the Control Unit as shown in the following figure.
3. Install the Control Unit at the desired location with self-tapping screws (local supply).



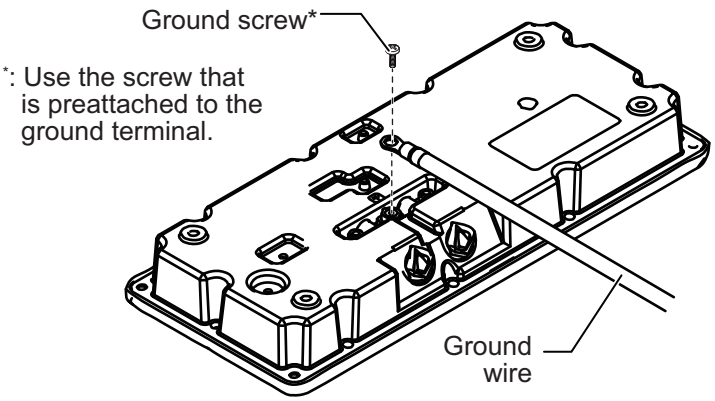
<RCU-031>

The Control Unit can be mounted with the KB fixture, which mounts the unit at an angle.

1. Drill four pilot holes in the mounting location for mounting screws, referring to the outline drawing at the back of this manual.
2. Secure the KB fixture (supplied) to the mounting location, using four self tapping screws (ϕ5×20, supplied).
   Note: Secure the KB fixture so that the cutout is located on the top side.

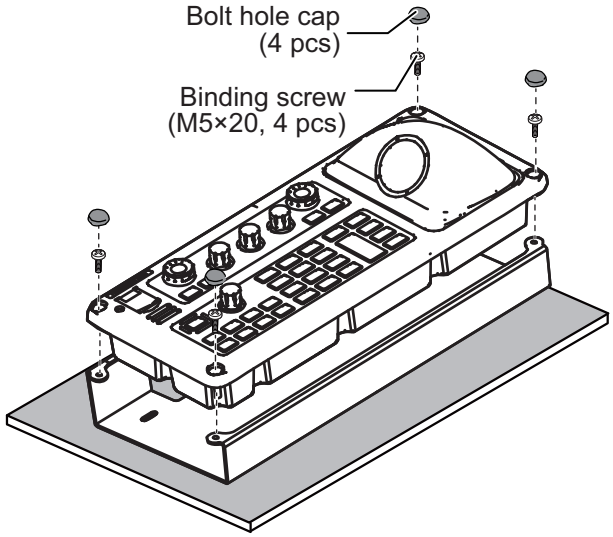


3. Attach a ground wire (IV-1.25sq, supplied locally) to the ground terminal at the bottom of the unit.



4. Secure the Control Unit the KB fixture, using four binding screws (M5×20, supplied).

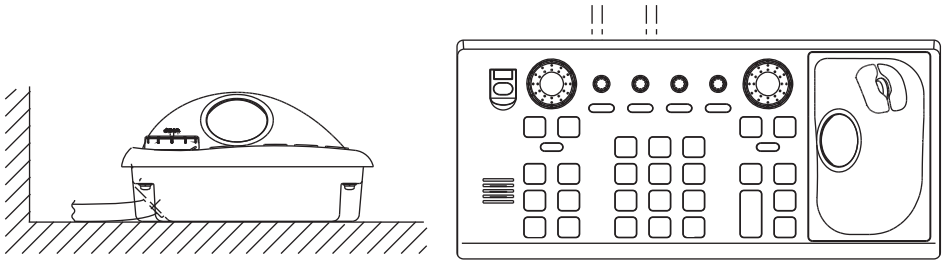
5. Attach four bolt hole caps (supplied).



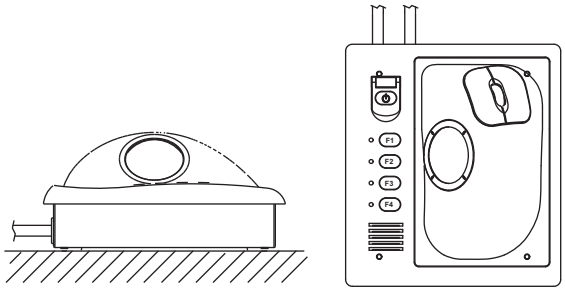
How to mount the unit flush with mounting surface

<RCU-014/015/016>

1. Drill four mounting holes of 5 mm diameter referring to the outline drawing at the back of this manual.
2. Fix the Control Unit with four screws (M4) from the underside of the desktop. (The M4 screws with a sufficient length for the thickness of the desktop should be provided locally.)



Control Unit RCU-014

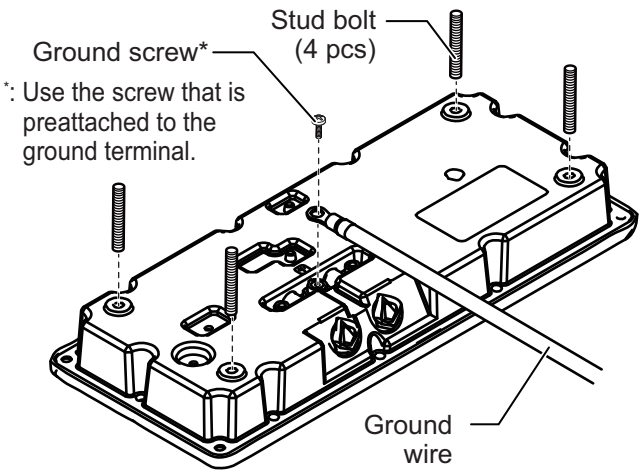


Control Unit RCU-015/RCU-016

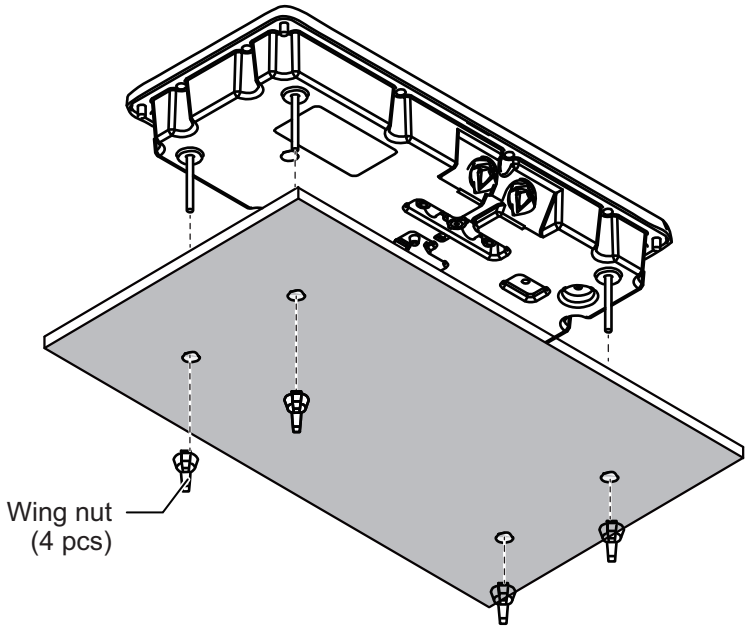
<RCU-031>

1. Drill four pilot holes in the mounting location for stud bolts (M4×50), referring to the outline drawing at the back of this manual.
2. Attach a ground wire (IV-1.25sq, supplied locally) to the ground terminal at the bottom of the unit.

3. Insert four stud bolts (M4×20, supplied) to the bolt holes at the bottom of the unit.
   Note: Insert the stud bolts manually. If you insert the stud bolts using a tool, the unit may be damaged.
4. Set the unit to the mounting location so that the stud bolts on the bottom of the unit are inserted to the pilot holes.



5. Fasten the four wing nuts (supplied) to the stud bolts from the rear side of the mounting surface.



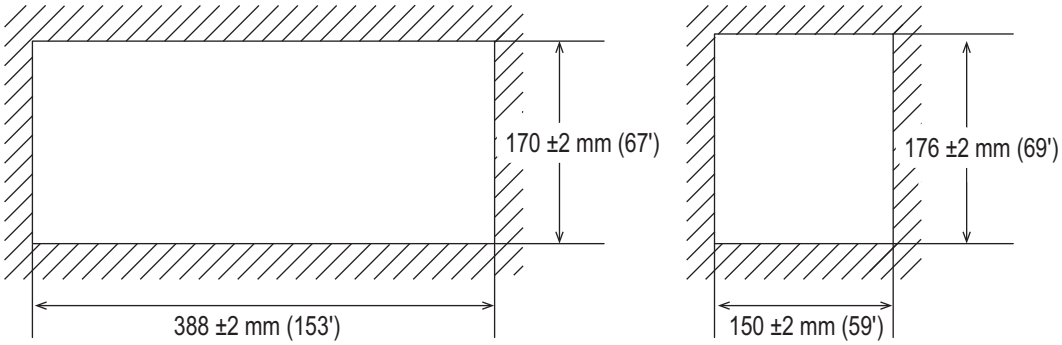
1.4.2 Flush mount Installation

Note: For flush mounting in a panel, the mounting surface must be flat. Do not install the unit on an uneven surface.

Flush mount, fixed at rear (for RCU-014/015/016)

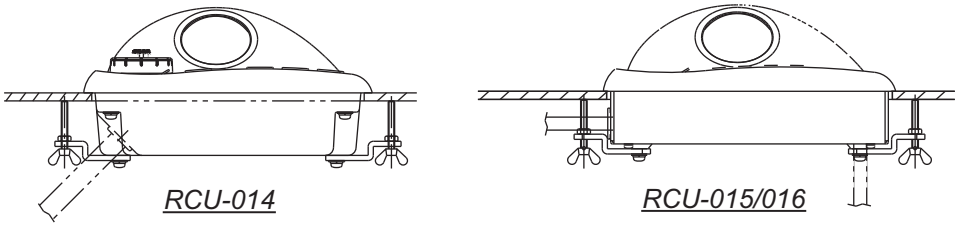
Use the optional flush mount kit FP03-09870 to mount the Control Unit to a console panel. See the outline drawing at the back of this manual.

1. Prepare a cutout in the location as shown in the figure as below.



RCU-014 RCU-015/016

2. Set the Control Unit to the cutout.
3. Attach the flush mount fixtures to the Control Unit with four screws from the rear side.
4. Screw the wing screw to each mounting plate and then insert hex. bolt to each wing screw.
5. Fasten each wing screw and then fasten the hex. nuts as shown in figure below.



RCU-014 RCU-015/016

Side view of Control Units

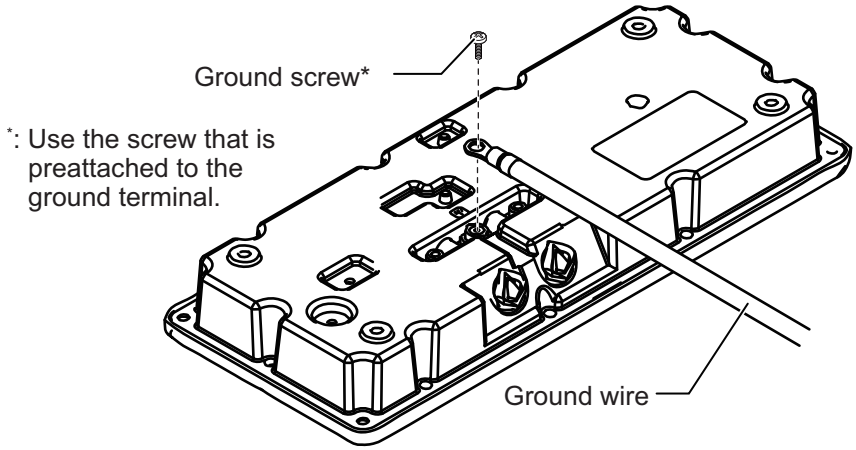
Flush mount, using with panel (for RCU-014 only)

Use the optional flush mount kit OP03-245 to mount the control unit to a console panel using with the panel. See the mounting procedure in the kit for details.

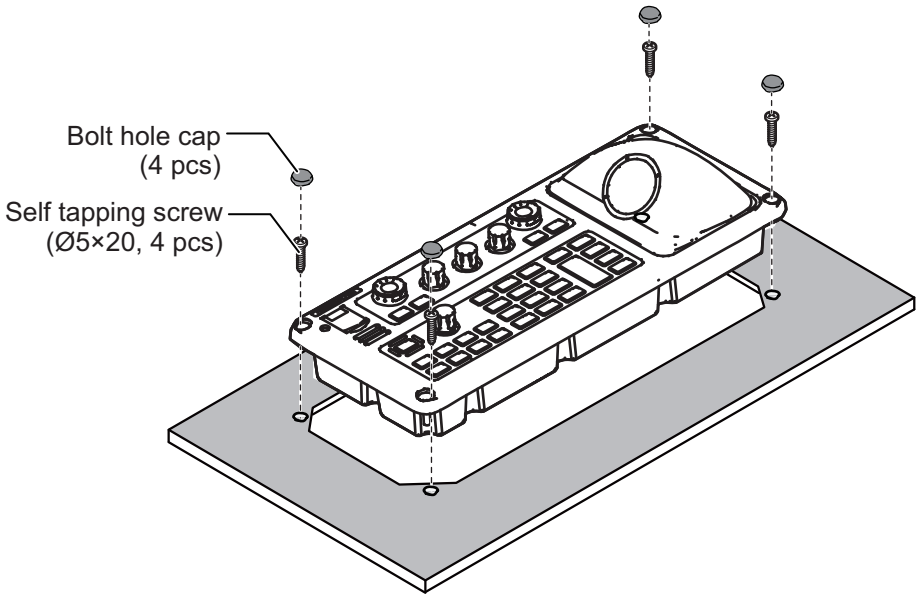
Flush mount, fixed at front (for RCU-031)

Note: For flush mounting, select a location where the surface is flat.

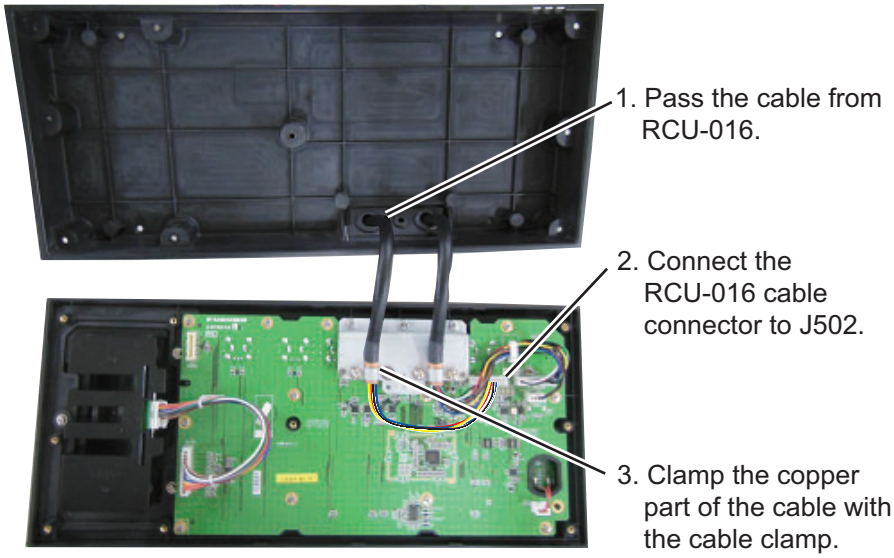
1. Make a mounting hole and drill four pilot holes in the mounting location, referring to the outline drawing at the back of this manual.
2. Attach a ground wire (IV-1.25sq, supplied locally) to the ground terminal at the bottom of the unit.



3. Set the unit to the mounting hole, then secure the unit with four self-tapping screws (ϕ5×20, supplied).
4. Attach four bolt hole caps (supplied).



1.4.3 Installation of RCU-016 connected with RCU-014



1.4.4 How to change the cable entry of RCU-015/016

To change the cable entry from the side (default) to the bottom, modify the unit as shown in the following procedure.

1. Turn the chassis upside-down and remove four screws (M3×8) to open the back cover.