FURUNO

Installation Manual
SSB RADIOTELEPHONE
FS-1575/2575/5075

FURUNO ELECTRIC CO., LTD.

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The paper used in this manual
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⚠ SAFETY INSTRUCTIONS

The installer must read the safety instructions before attempting to install the equipment.

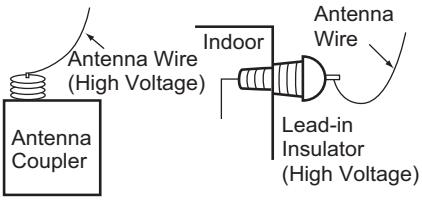
⚠ DANGER	Indicates a potentially hazardous situation which, if not avoided, will result in death or serious injury.
⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

⚠ Warning, Caution Prohibitive Action Mandatory Action

⚠ DANGER

Never touch the SSB antenna, antenna coupler or lead-in insulator when the SSB radio-telephone is transmitting.

High voltage that will cause death or serious injury is present at the locations shown in the illustration below.



Do not touch the whip antenna or wire antenna.

Electrical shock, serious injury or death can result if the antenna is touched during transmission.

⚠ WARNING

Do not work inside the equipment unless totally familiar with electrical circuits.

Hazardous voltage which can shock exists inside the equipment.

Turn off the power at the mains switchboard before beginning the installation.
Post a sign near the switchboard to indicate it should not be turned on while the equipment is being installed.

Fire, electrical shock or serious injury can result if the power is left on or is applied while the equipment is being installed.

⚠ CAUTION

Confirm that the power supply voltage is compatible with the voltage rating of the equipment.

Connection to the wrong power supply can cause fire or damage the equipment.

Ground the equipment.

Ungrounded equipment can give off or receive electromagnetic interference or cause electrical shock.

Handle the copper strap with care.

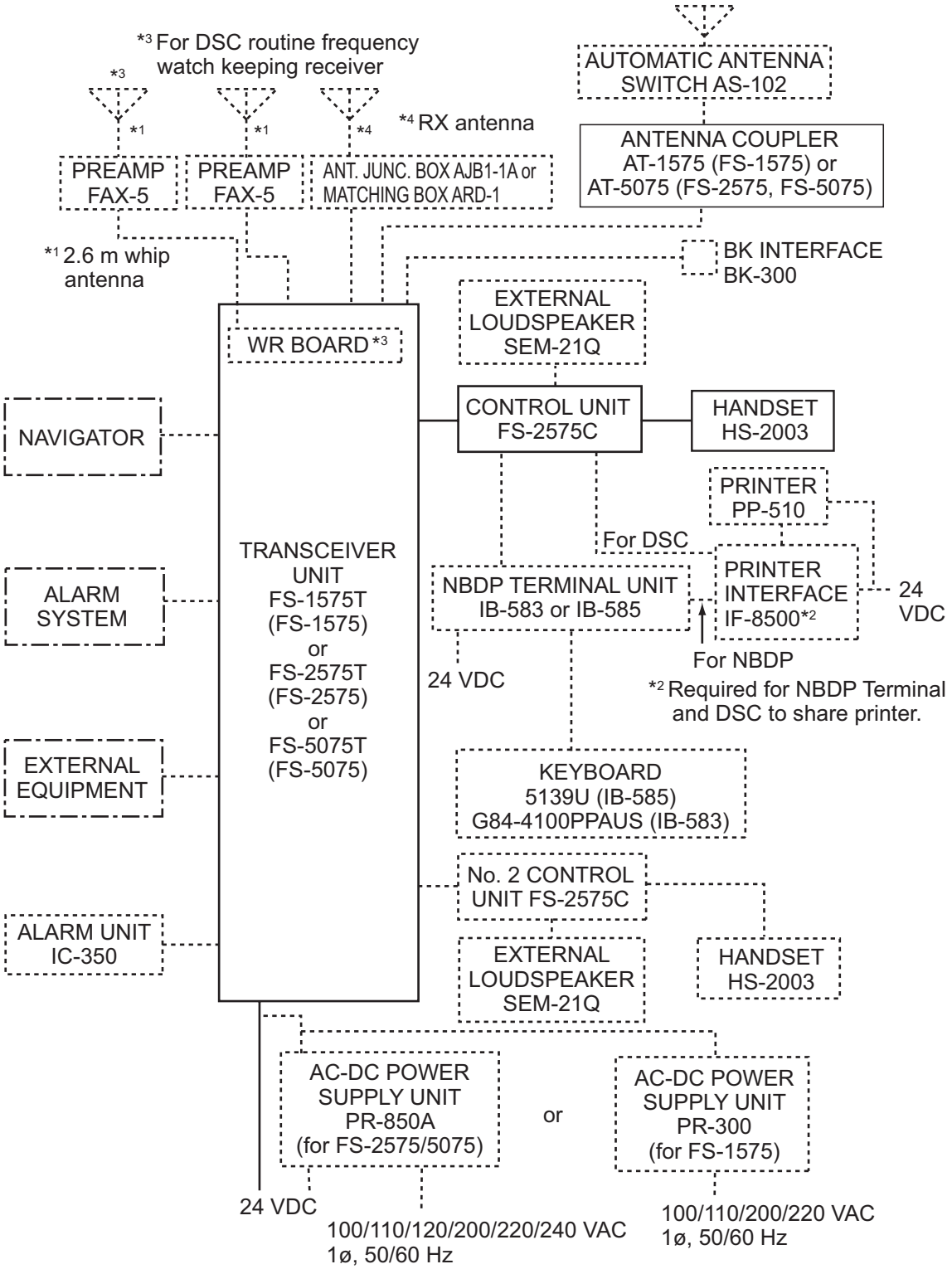
The strap has sharp edges that can cut fingers.

⚠ NOTICE

Follow the compass safe distances to prevent interference to a magnetic compass.

Unit	Standard Compass	Steering Compass
FS-1575T	2.30 m	1.50 m
FS-2575T	2.40 m	1.50 m
FS-5075T	2.45 m	1.50 m
FS-2575C	0.60 m	0.40 m
HS-2003	1.50 m	0.95 m
AT-1575-AES	0.85 m	0.55 m
AT-1575-SUS	0.75 m	0.45 m
AT-5075	0.80 m	0.50 m
PP-510	1.00 m	0.80 m
IC-350	1.20 m	0.75 m
SEM-21Q	2.20 m	1.50 m
PR-850A	1.00 m	0.70 m
IB-583	0.70 m	0.40 m
IB-585	0.85 m	0.55 m
AS-102	0.65 m	0.40 m
IF-8500	1.05 m	0.70 m
5139U	0.30 m	0.30 m
PR-300	0.90 m	0.70 m

SYSTEM CONFIGURATION



Unit	Category
Preamp Unit	Exposed to the weather
Antenna Coupler	Exposed to the weather or protected from the weather
Other Units	Protected from the weather

——— : STANDARD
------- : OPTION
-—-— : LOCAL SUPPLY

EQUIPMENT LIST

Standard Supply

Name	Type	Code No.	Qty	Remarks	
Transceiver Unit	FS-1575T	-	1	For FS-1575	
	FS-2575T	-		For FS-2575	
	FS-5075T	-		For FS-5075	
Control Unit	FS-2575C	-	1		
Antenna Coupler	AT-1575	-	1	For FS-1575	
	AT-5075	-		For FS-2575/5075	
Installation Materials	CP05-12100	000-019-245	1	For FS-2575C, no cable, with inst. mat. CP05-12101	
	CP05-12110	000-019-301		For FS-2575C, with DSUB15-5P-L5M cable	
	CP05-12300	000-019-247	1	05S0952 *10M*	Between transceiver unit & antenna coupler.
	CP05-12310	000-019-248		05S0952 *20M*	
	CP05-12320	000-192-490		05S0952 *30M*	
	CP05-12330	000-019-250		05S0952 *40M*	
	CP05-12340	000-019-251		05S0952 *50M*	
	CP05-10800	000-057-435		05S0793 *10M*	Between transceiver unit & antenna coupler. (w/armor)
	CP05-10810	000-057-436		05S0793 *20M*	
	CP05-10820	000-057-453		05S0793 *30M*	
	CP05-10830	000-057-454		05S0793 *40M*	
	CP05-10840	000-057-455		05S0793 *50M*	
	CP05-12400	000-019-216	1	DSUB15-5P-L10M	Between transceiver unit & control unit.
	CP05-12410	000-019-217		DSUB15-5P-L20M	
	CP05-12420	000-019-218		DSUB15-5P-L30M	
	CP05-12430	000-019-219		DSUB15-5P-L40M	
	CP05-12440	000-019-220		DSUB15-5P-L50M	
	CP05-12001	001-135-560	1	For FS-1575T/2575T/5075T	
	CP05-12201	001-135-590	1	For AT-1575/5075	
	CP05-12901	001-175-190	1	For AT-1575	
Accessories	FP05-06600	000-019-246	1	Handset HS-2003-15, FP05-05510, FP05-05511	
Spare Parts	SP05-06300	000-020-893	1	For FS-1575,	For HK only
	SP05-06000	000-019-214	1	For FS-2575	
	SP05-06100	000-019-215	1	For FS-5075	

Optional Equipment

Name	Type	Code No.	Remarks
Printer	PP-510	-	w/inst. mat. CP16-01200 and accessories FP16-00100
Control Unit	FS-2575C	-	No. 2 Control Unit
Printer Interface	IF-8500	000-053-895	
External Loudspeaker	SEM-21Q	001-165-970-10	

Name	Type	Code No.	Remarks
Terminal Unit	IB-583	000-043-435	For NBDP
	IB-585	000-020-894	For NBDP, with bracket
		000-021-652	For NBDP, no bracket
Preamp	FAX-5 *15M*	000-011-702	w/15 m cable
	FAX-5 *1M*	000-011-703	w/1 m cable
AC-DC Power Supply Unit	PR-300	000-015-941-10	For FS-1575
	PR-850A	000-057-233	For FS-2575/5075
Matching Box	ARD-1	005-502-230	For matching, w/resistor
Antenna Junction Box	AJB1-1A	000-870-284	For matching, no resistor
Automatic Antenna Switch	AS-102	000-016-464	Automatic antenna switching
Antenna Switch	AS1-1E	000-167-029-10	Manual antenna switching
BK Interface	BK-300	000-013-305	
Flush Mount Kit	OP05-122	001-135-600	For Control Unit
Watch Receiver Kit	OP05-123	001-135-610	
Connector Set	OP05-124	001-135-620	M-P-7, 2 pcs., FMA-1
Full Duplex Kit	OP05-125	001-135-630	For FS-5075
Waterproofing Kit	OP05-126	001-148-880	For FS-2575C
Key Template	OP05-101	004-447-450	For Russian flag vessels (IB-583)
	OP05-135	001-184-560	For Russian flag vessels (IB-585)
Hose Clamp	OP08-11	005-946-960	For Preamp FAX-5
Extension Cable Kit	OP04-2 *10M*	000-041-174	3D2V assy., w/relay connector
	OP04-2 *20M*	000-041-175	
	OP04-2 *30M*	000-041-176	
	OP04-2 *40M*	000-041-177	
	OP04-2 *50M*	000-041-178	
Whip Antenna	FAW-6R2A	000-107-921	6 m, universal bracket, copper terminal
	FAW-6R2	000-572-108	6 m, no universal bracket, copper terminal
	FAW-6RP2	000-572-109	6 m, universal bracket, M-plug
	FAW-6D	000-572-128	6 m, universal bracket, copper terminal
	04S4176	001-073-340-10	2.6 m
	WH-027-8M	001-138-110-10	8 m whip antenna
	WH-027-8M02	001-138-120-10	8 m whip antenna
	WH-027-8M03	001-138-140-10	8 m whip antenna
	WH-027-10M	001-139-400-10	10 m whip antenna
Manual Tilting Mechanism	WH-027-KD	001-139-410-10	For WH-027-8M02/10M
	WH-027-KD2	001-141-850-10	For WH-027-10M
Accessories	FP05-05700	000-010-246	Handset HS-2003-15, Bracket FP-05510, Accessories FP05-05511
Handset	HS-2003-15	000-054-223	
Bracket for Handset	FP05-05510	005-951-790	

Name	Type	Code No.	Remarks
Antenna Installation Materials	CP05-09010	005-954-180	10 m
	CP05-09020	005-964-410	25 m
	E-22	000-050-632	
	E-24	000-050-634	
	E-25	000-050-635	
	E-26	000-050-636	
	E-27	000-050-637	
Wire Rope Assy.	TM-173-D4 L1520Y8	000-176-211-10	For FS-1575
	TM-173-D4 L1670Y8	000-175-179-10	For FS-2575
	TM-173-D4 L1800Y8	000-175-178-10	For FS-5075
Coaxial Cable	RG-10/U-Y	000-159-411-10	10 m
		000-159-412-10	20 m
		000-159-413-10	30 m
		000-159-414-10	40 m
		000-159-415-10	50 m
	RG-8A/U	000-167-213-10	10 m
		000-167-214-10	20 m
		000-169-060-10	30 m
		000-169-062-10	40 m
		000-169-064-10	50 m
Cable Assy.	57FE-17JE-BC10PL3000	000-174-473-10	
Cable Assy (7-core)	05S0952 *10M*	000-758-821-10	Between transceiver unit & antenna coupler
	05S0952 *20M*	000-758-822-10	
	05S0952 *30M*	000-758-823-10	
	05S0952 *40M*	000-758-824-10	
	05S0952 *50M*	000-758-825-10	
Cable Assy (5-pair)	05S0793 *10M*	000-125-984-10	Between transceiver unit & antenna coupler w/armor
	05S0793 *20M*	000-125-986-10	
	05S0793 *30M*	000-125-987-10	
	05S0793 *40M*	000-125-988-10	
	05S0793 *50M*	000-125-989-10	
Cable Assy.	DSUB15-5P-L5M	001-146-850-10	Between transceiver unit & control unit
	DSUB15-5P-L10M	001-146-860-10	
	DSUB15-5P-L20M	001-146-870-10	
	DSUB15-5P-L30M	001-146-880-10	
	DSUB15-5P-L40M	001-146-890-10	
	DSUB15-5P-L50M	001-146-900-10	

1. HOW TO INSTALL THE SYSTEM

1.1 Control Unit FS-2575C

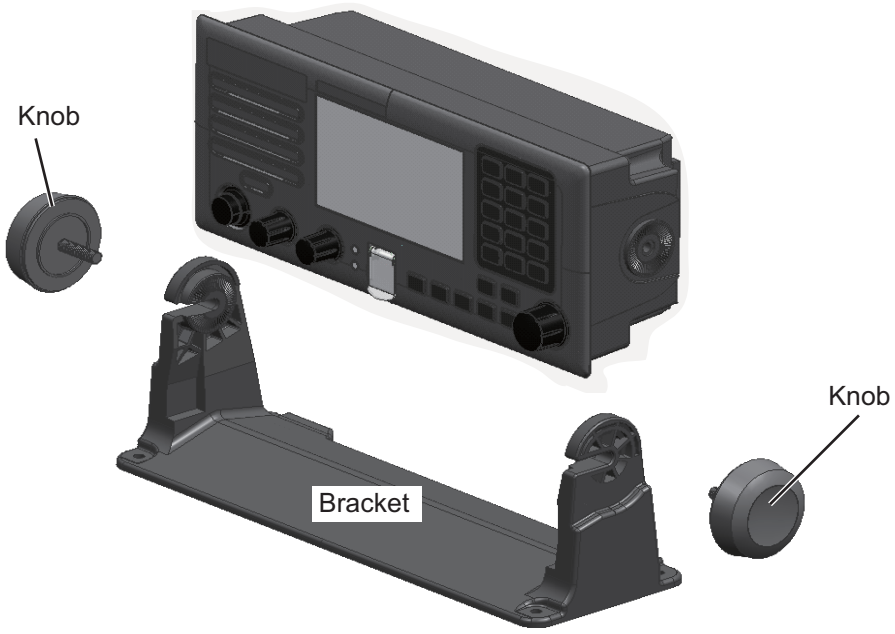
1.1.1 Installation location

- The location must not be near water, rain and water splash.
- Make sure the location is strong enough to hold the unit under the conditions of continued vibration and shock normally found on the boat.
- Install the unit where the controls can easily be operated.
- Install the unit where it does not cause the interference to persons or prevent operation of other equipment, especially the ship's wheel.
- Follow the compass safe distances shown in the Safety Instructions to prevent the interference to a magnetic compass.
- Follow the recommended maintenance space shown in the outline drawing to allow the service-man to reach the connectors at the rear of the unit.
- Direct sunlight can cause the inside of the unit to become hot. Install the unit away from direct sunlight.

1.1.2 How to install the unit on a desktop

A bracket is provided to install the unit on a desktop.

1. Fasten the bracket to the installation location with the self-tapping screws.
2. Loosely screw in the knobs at the sides of unit.
3. Set the unit to the bracket and tighten the knobs.

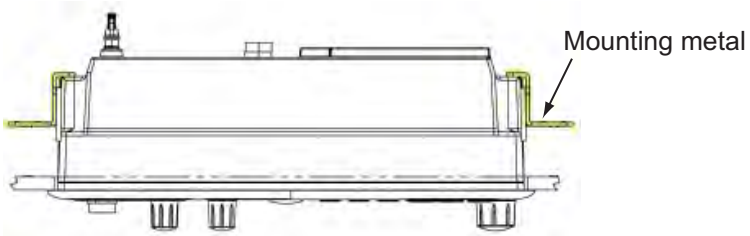


1.1.3 How to install the unit in a console (flush mount)

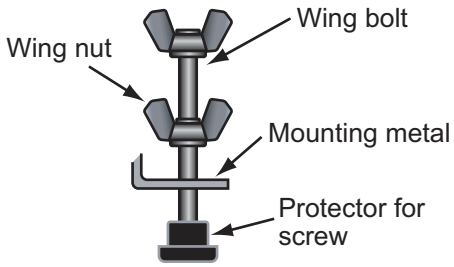
The flush mount kit is required to install the Control Unit in a console.
Type: OP05-122, Code No.: 001-135-600

Name	Type	Code No.	Qty
Mounting metal	05-089-1171-0	100-299-020	2
Wing bolt	M4×40 YBSC2	000-175-263-10	4
Wing nut	M4 YBSC2	000-168-239-10	4
Hex. bolt	M6×12 SUS304	000-162-897-10	2
Spring washer	M6 SUS304	000-158-855-10	2
Protector for screw	26-005-2125-0	100-354-800-10	4

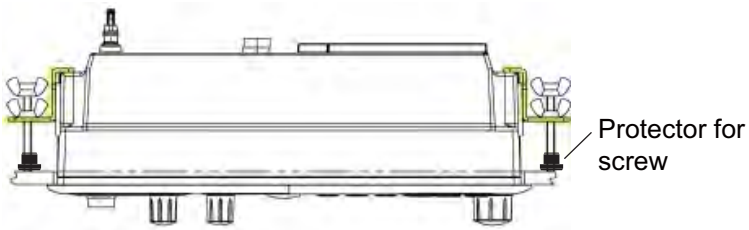
1. Make a cutout in the installation location. See the outline drawing.
2. Set the Control Unit to the cutout.
3. Attach two mounting metals (supplied) to the Control Unit with two hex bolts (M6×12, supplied) and M6 spring washers (supplied).



4. Screw the wing bolts and the wing nuts to the mounting metal, then attach the protectors for screws as below.



5. Fasten each wing bolt so that the protector for screw touches the back side of the mounting place.



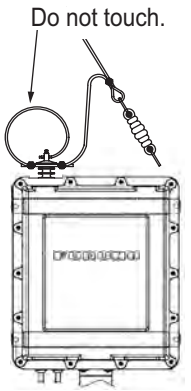
6. Fasten the wing nuts tightly.

1.2 Antenna Coupler AT-1575 (FS-1575), AT-5075 (FS-2575, FS-5075)

The Antenna Coupler is installed between the antenna and the Transceiver Unit, and tunes the antenna to the transmitter. The coupler must have a correct ground to function properly. The radiotelephone cannot provide its intended performance unless the ground is proper.

⚠ DANGER

ELECTRICAL SHOCK HAZARD
Do not touch lead-in wire or insulator. Electric shock, fire, serious injury or death can result if the cables or insulator are touched while the radiotelephone is transmitting.



Pictured: AT-5075

1.2.1 Installation location

The water-jetsproof construction of the antenna coupler permits installation either indoors or outdoors. Install the unit on a bulkhead or the overhead (indoor installation). Do not install the unit on a deck.

When selecting a location, keep in mind the following points.

General considerations

- Select a location where the coupler can be easily maintained, but where it will not interfere with crew or passengers.
- Follow the compass safe distances listed in the Safety Instructions to prevent interference to a magnetic compass.
- Leave enough space around the sides of the coupler for maintenance and checking. See the outline drawing for minimum space.
- Install the coupler close to the antenna base and as near to the ground as possible, for optimum radio energy.
- The lead-in wire should be as near to the coupler as possible.

Indoor installation

- Install the unit away from GNNS equipment, radio equipment, etc. to prevent mutual interference.

Outdoor installation

- The coupler is water-jetsproof, but is not designed to take a continual soaking. If necessary, cover the top and sides with a wooden housing (or similar enclosure) or by sealing any opening in the top or sides with silicone sealant.
- Keep wires as short as possible and keep the wires away from any grounded conductors such as lifelines, mast shrouds, or fittings.
- Locate the insulator away from funnels, etc.

1.2.2 Ground

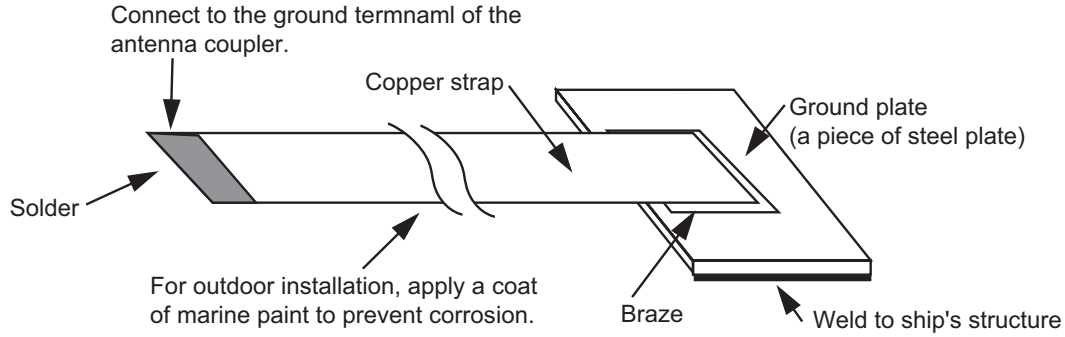
⚠ CAUTION

Ground the equipment.

Ungrounded equipment can give off or receive electro-magnetic interference or cause electrical shock.

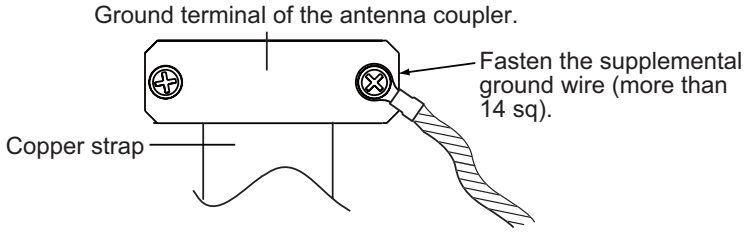
The ground connection must have the lowest possible RF-impedance. Losses in the ground connection reduce the communication distance.

Make the ground connection to the Antenna Coupler with a copper strap, constructed as shown below. **For vessels with conducting hulls**, make the width at least 60 mm and the length not more than one meter. **For FRP vessels**, make the width at least 60 mm and the length not more than five meters.



For outdoor installation, do the following.

- Coat the junction where the copper strap connects to the ground terminal of the antenna coupler with silicone sealant.
- Coat the copper strap between the ground plate and ground terminal of the anntenna coupler with marine paint to prevent corrosion.
- Add a supplemental ground wire (local supply, more than 14 sq) and fasten it to the ground terminal of the antenna coupler as shown below.

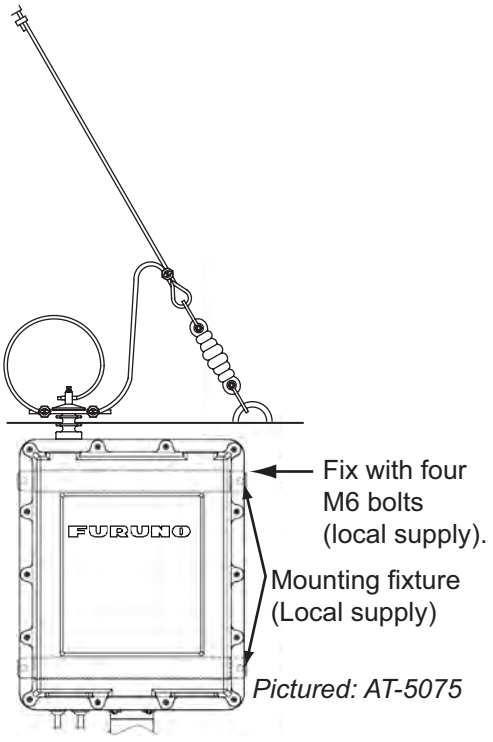


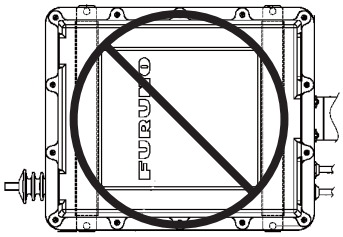
1.2.3 Installation procedure

Outdoor installation

Fasten the Antenna Coupler to a bulkhead of the bridge, mast, handrail, etc., with the M6 bolts (local supply).

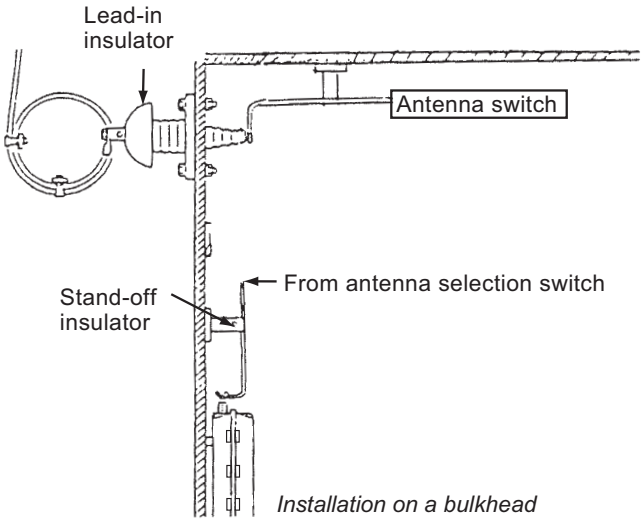
For installation on the mast, see section 1.5 to select a location. Weld suitable mounting fixtures (local supply) to the mast and bolt the coupler there.

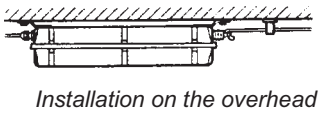




Indoor installation

Fasten the Antenna Coupler to a bulkhead on the bridge or the overhead. Select a location where the distance between the lead-in insulator and the coupler is as short as possible.





1.3 Transceiver Unit FS-1575T (FS-1575), FS-2575T (FS-2575), FS-5075T (FS-5075)

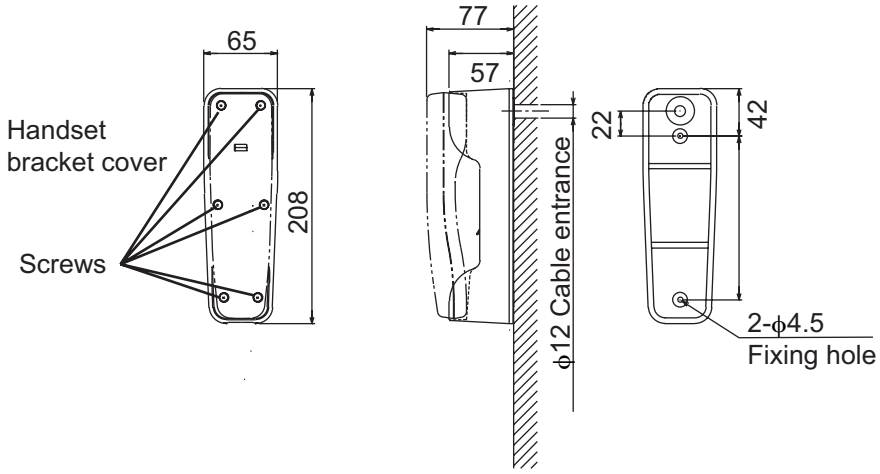
Select a location that meets these conditions:

- Install only on a bulkhead.
- Select a location which provides good ventilation.
- The location must be clean and dry.
- Make sure the location can hold the unit under the conditions of continued vibration and shock normally found on the boat. If necessary, increase the strength the installation location.
- Follow the compass safety distance shown in the Safety Instructions to prevent the interference to a magnetic compass.
- Follow the recommended service space shown in the outline drawing to provide space for maintenance and checking.
- Install the unit away from direct sunlight to prevent overheating.

Fasten the unit with 6×30 self-tapping screws. Refer to the outline drawing for installation dimensions.

1.4 Handset HS-2003

Unfasten six screws to remove the bracket cover. Fasten the bracket to the location with two self-tapping screws 4x16 (supplied).



1.5 Antenna

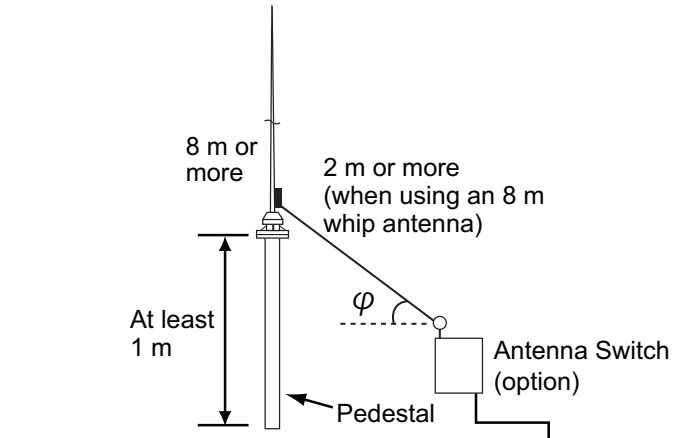
The antenna plays the most important role in radio communication. If it cannot receive or transmit due to improper installation, even the most sophisticated transceiver will be useless.

Types of antennas

The most commonly used antenna is a whip antenna. The recommended minimum total length is 10 meters. For an 8 m whip antenna, secure it with a lead-in wire of at least 2 m in length, as shown in the illustration at right.

A long wire antenna can also be used. The total length must be between 10 and 18 meters.

After setting up the equipment, confirm that the antenna can tune all frequencies.



φ: As vertically as possible and not less than 45 degrees towards the horizontal plane.

General requirements

- Separate the TX antenna as far as possible from stays, metallic objects, and direction finder antenna.
- The distance to an Inmarsat antenna must be more than five meters.
- The RX antenna (required for duplex communications) should be separated at least five meters from the TX antenna. Install a receiving antenna junction box at the base of the antenna.
- Locate the insulator away from funnels, etc.
- Use a wave-type insulator to connect to the coupler (or antenna switch) and leave some slack in the feed-in wire, to prevent direct stress to the coupler.

Installation requirements for whip antenna

- The installation arrangement of the antenna or pedestal must be constructed to withstand the strain from swaying and vibration.
- Locate the antenna in an elevated position on the ship and at least one meter away from conductive structures.
- Insulate the down lead from the base of the antenna to the coupler. Run as vertically as possible and not less than 45 degrees towards the horizontal plane.
- For indoor installation, use a lead-in insulator (FURUNO type: YA-256) to make the connection. If necessary, use a high quality antenna switch and stand-off insulator.
- it is recommended to construct an enclosure around the whip antenna to prevent contact with the antenna. Also, post a weather resistant “DANGER HIGH VOLTAGE” sign on the enclosure.

Installation requirements for a long wire antenna

- The length of the vertical portion should be longer than four meters. Run as vertically as possible and within 10 degrees toward the vertical plane.

RX antenna

An RX antenna is required for duplex communications.

1.6 How to Install Optional Equipment

1.6.1 Preamp Unit FAX-5

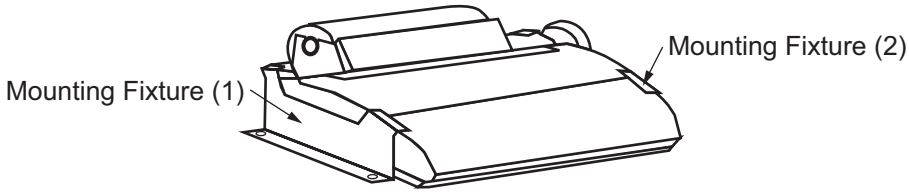
The preamp unit can be mounted two ways: screwed on to a mast or fixed to a mast, using stainless steel hose clamps (optional supply). The mast should not be longer than 1.5 m (5 feet) to prevent undue flexing in heavy winds.

For detailed installation procedure, see the outline drawing for the preamp unit.

1.6.2 Printer PP-510

Refer to the outline drawing at the end of this manual for mounting dimensions and recommended maintenance space. Follow the compass safety distance shown in the Safety Instructions to prevent interference to a magnetic compass. Connect the interconnection cable between the printer and the Control Unit (or Printer Interface). For how to load paper and set ribbon cassette, refer to the Operator's Manual of the printer.

Fix the printer to the mounting location with the two mounting fixtures provided.



1.6.3 Printer Interface IF-8500

Refer to the outline drawing at the end of this manual for mounting dimensions and recommended maintenance space. Follow the compass safety distance shown in the Safety Instructions to prevent interference to a magnetic compass. Fasten the Printer Interface with self-tapping screws (local supply) to desktop or bulkhead.

1.6.4 External Loudspeaker SEM-21Q

The external loudspeaker can be installed on a tabletop, the overhead or bulkhead. Follow the compass safety distance shown in the Safety Instructions to prevent interference to a magnetic compass. See the outline drawing at the back of this manual for mounting dimensions and recommended maintenance space. Select a location that is within 2.8 m of the Control Unit because that is the length of the connection cable. Fasten the loudspeaker to the mounting location with the self-tapping screws (supplied).

1.6.5 AC-DC Power Supply PR-850A, PR-300

Select a location that satisfies the following conditions:

- The location provides good ventilation.
- The location is clean and dry.
- Make sure the location is strong enough to support the unit under the conditions of continued vibration and shock normally encountered on the boat.
- Follow the compass safety distance in the Safety Instructions to prevent interference to a magnetic compass.
- The location provides the maintenance space shown in the outline drawing.

1.6.6 Terminal Unit IB-583, IB-585

Install the Terminal Unit on a desktop. Select a location that meets the following conditions.

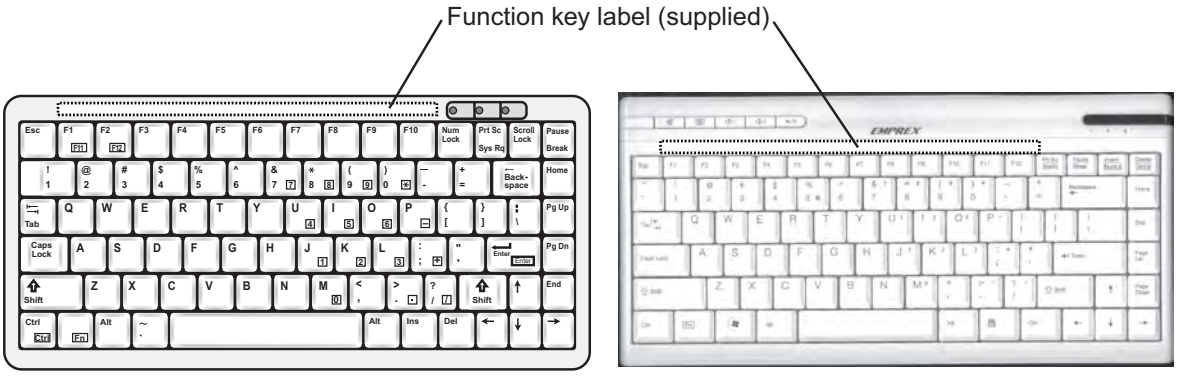
- The temperature and humidity in the location must be stable and moderate.
- Keep the unit away from the high-power radiotelephone and its feeder wire so that RFI (Radio Frequency Interference) is minimum.
- Follow the compass safety distance shown in the Safety Instructions to prevent the interference to a magnetic compass.
- Follow the recommended maintenance space shown in the outline drawing to facilitate maintenance and checking.

How to install the terminal unit

1. Fix the bracket to the location with four self-tapping screws (supplied).
2. Loosely screw in two knobs in the terminal unit.
3. Set the terminal unit to the bracket and tighten the knobs.

How to install the keyboard

1. Attach the function key label to the keyboard as shown below.



Keyboard for IB-583 *Keyboard for IB-585*

2. Attach four fasteners (small, supplied with the optional kit) to the bottom of the keyboard.
3. Attach four fasteners (large, supplied with the optional kit) to the small fasteners used in step 2.
4. Remove the paper from four fasteners.
5. Fasten the keyboard to the location.

1.6.7 Automatic Antenna Switch AS-102

The AS-102 allows you to connect the antenna to ground remotely when there is a possibility of lightning, or the antenna must be grounded to meet with local regulations when returning to a harbor. Install the switch between the antenna and the Antenna Coupler. Fasten the unit on a bulkhead with four 5×20 self-tapping screws (supplied), or bolts and nuts. Coat the ground terminal with silicone sealant. An external switch can be installed to turn off the antenna manually. See the interconnection diagram.

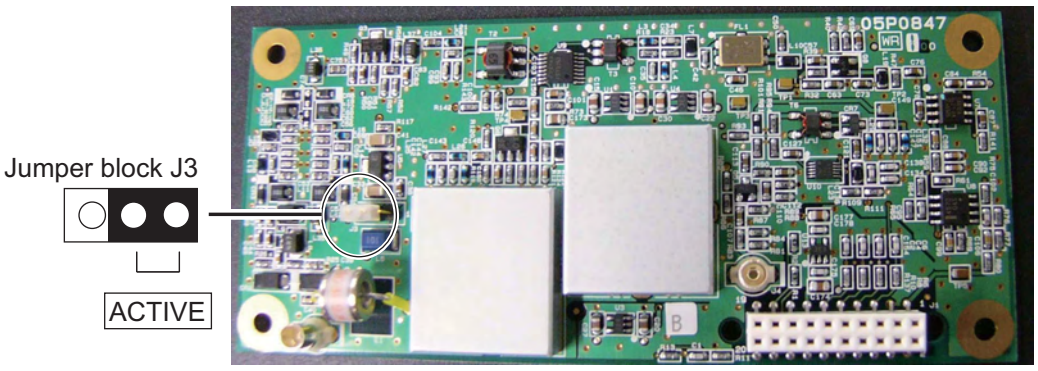
Fixing hole (4 pcs.)
Fasten unit with four self-tapping screws (5x20, supplied).

1.6.8 WR2 Board

The WR2 Board (05P0847B) enables reception of DSC routine frequencies while using the SSB radiotelephone connection. A whip antenna (to WR2_ANT) is necessary.
Parts name: Watch Receiver Kit, Type: OP05-123, Code No. 001-135-610

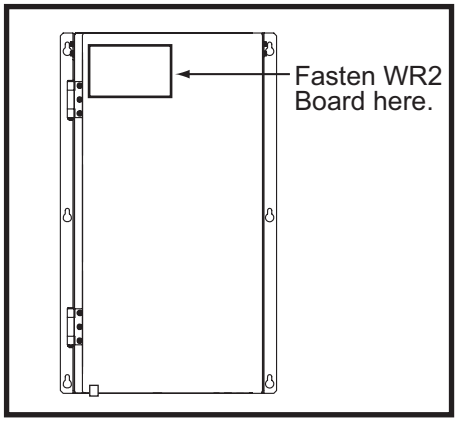
Name	Type	Code No.	Qty
WR2 Board	05P0847B(LF)	001-137-100	1
Binding head screw	M3×6 SUS304	000-163-485-10	6
Mini-pin assy.	L-200 07S0046	000-165-847-10	1
Connector assy.	MJ145-TMP-1.5D-L520	000-175-320-10	1
Shield case	03-161-1011-0	100-302-730-10	2

1. The Preamp Unit FAX-5 requires 12 VDC power. Set the jumper block J3 on the WR2 Board to the ACTIVE position to supply power to the unit.

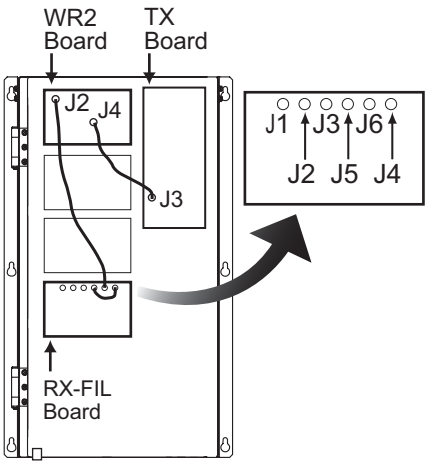
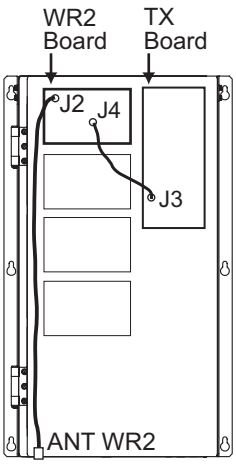


2. Open both the Transceiver Unit and the shield cover.

3. Fasten the WR2 Board with four screws (supplied) at the location shown below.



4. Make the following connections between the WR2 Board / ANT WR2 / RX-FIL Board, with the Mini-pin assy. (supplied with this kit) and the connector assy. (supplied with this kit).

Connections if Divider is connected	***Connections if Divider is not connected***
	
• Connect J2 on WR2 Board to J6 on RX-FIL Board. Use mini-pin assy. L-380. • Connect J4 on WR2 Board to J3 on TX Board. Use mini-pin assy. L-200. • Connect J5 on RX-FIL Board to J4 on RX-FIL Board. Use existing mini-pin assy.	• Connect J2 on WR2 Board to ANT WR2. Use connector assy. • Connect J4 on WR2 Board to J3 on TX Board. Use mini-pin assy. L-200.

5. **For FS-2575/5075, if a divider is not connected**, fasten the connector assy. with the locking saddle next to the WR2 Board.
6. Close the shield cover and the Transceiver Unit.
7. **If a divider is connected**, open the [RT SETUP] menu (see section 3.3.4), select [SETUP] and set [DIVIDER] to [ON].

1.6.9 DUP-FIL Board (FS-5075 only)

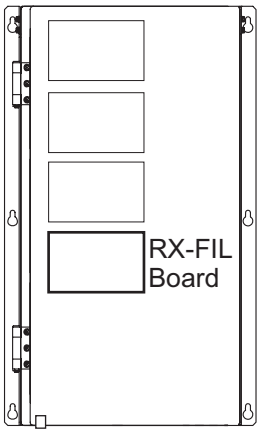
The DUP-FIL Board (05P0863) installs above the RX-FIL Board (05P0862) and gives the FS-5075 full duplex capability. Parts Name: Full Duplex Kit, Type No. OP05-125, Code No. 001-135-630

Name	Type	Code No.	Qty
DUP-FIL Board	05P0863(LF)	001-137-900	1
Mini-pin assy.	L-80	000-165-835-10	3
Spacer	SQ-15	000-159-299-10	4

1. Open both the Transceiver Unit and the shield cover.
2. Make the connections shown below between the DUP-FIL Board and the RX-FIL Board, using the mini-pin assemblies (supplied).

DUP-FIL Board		RX-FIL Board
J1	⟷	J3
J2	⟷	J4
J3	⟷	J8

3. Unfasten the four pcb mounting screws from the RX-FIL Board. See the illustration below for the location of the Board.



4. Screw in four spacers (supplied) in the pcb mounting screw holes for the RX-FIL Board.
5. Set the DUP-FIL Board on top of the spacers then fasten the Board to the spacers with the screws removed at step 3.
6. Close the shield cover and the Transceiver Unit.

1.6.10 Waterproofing kit for the Control Unit

The waterproofing kit OP-126 (Code No. 001-148-880) protects the connectors and jacks on the control unit from water ingress, to waterproofing standard IP22.

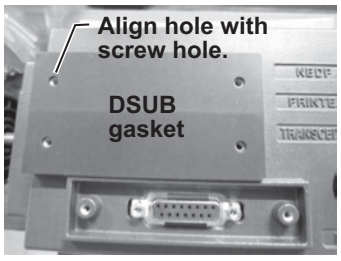
Name	Type	Code No.	Qty
DSUB gasket	05-106-5571-1	100-365-871-10	1
SPJACK gasket	05-106-5572-0	100-365-880-10	1
DSUB clamping plate	05-106-5604-1	100-365-931-10	3
SPJACK clamping plate	05-106-5606-0	100-365-950-10	1
DSUB boot	05-106-5603-0	100-365-920-10	3
SPJACK boot	05-106-5605-0	100-365-940-10	1
Cable tie	CV-125N	000-172-164-10	4
Binding head screw	M3×8 SUS304	000-162-665-10	8

How to protect unused connector(s), speaker jack

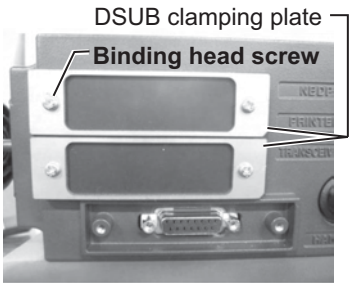
UNUSED CONNECTOR(S)

Two connectors

1) Put the DSUB gasket on the unused connectors and align its holes with the screw holes on the connectors. Leave the plastic caps on the connectors.

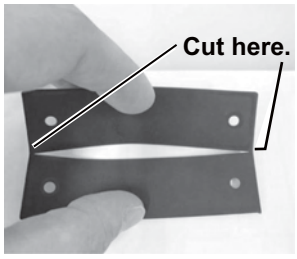


2) Put the DSUB clamping plates on the DSUB gasket and fasten them with four binding head screws (torque: 0.5Nm).

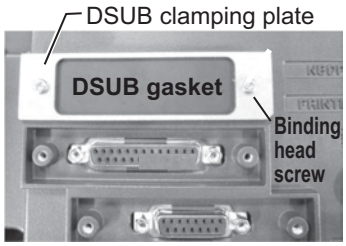


One connector

1) Cut the DSUB gasket at the two places shown, in the direction of the slit on the gasket.

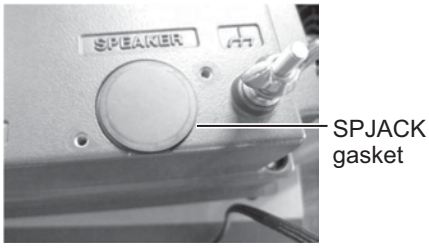


2) Put the DSUB gasket and DSUB clamping plate on the unused connector. Fasten them with two binding head screws (torque: 0.5Nm).

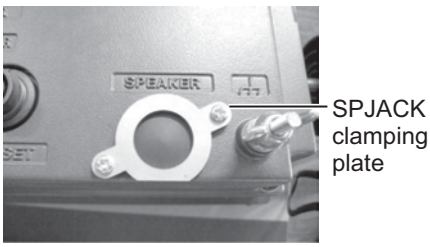


UNUSED SPEAKER JACK

1) Put the SPJACK gasket on the speaker jack location. Be sure the gasket seats in the recess.



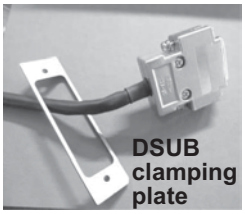
2) Put the SPJACK clamping plate on the SPJACK gasket, with the straight edge on the plate down. Fasten the plate with two binding head screws (torque: 0.5Nm).



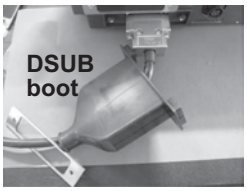
How to protect connector, speaker jack in use

CONNECTOR IN USE

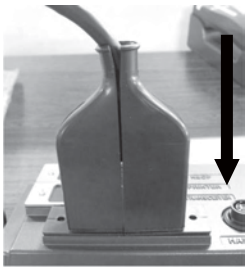
1) Pass the cable through the DSUB clamping plate.



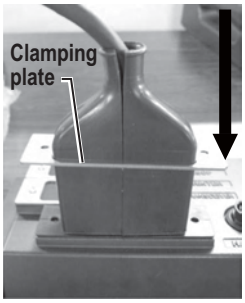
2) Connect the cable to the control unit. Put the DSUB boot on the cable, with the slit on the boot down.



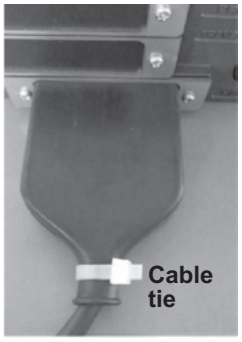
3) Slide the DSUB boot downward until it contacts the control unit.



4) Slide the clamping plate downward until it contacts the boot. Be sure there is no gap between the plate and the boot.



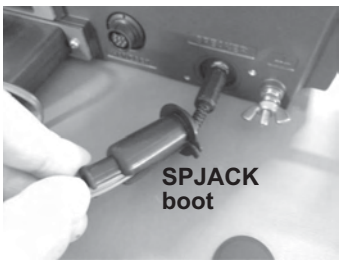
5) Fasten the plate with two binding head screws. (torque: 0.5Nm). Fasten the boot to the cable with a cable tie.



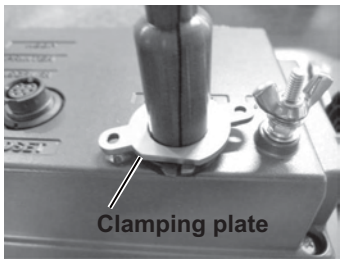
SPEAKER JACK IN USE

1) Pass the cable through the SPJACK clamping plate. Note the orientation of the straight edge on the clamping plate.

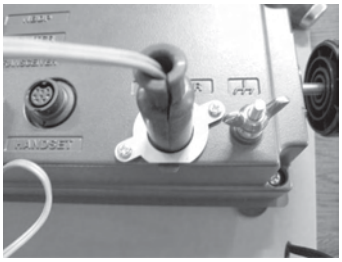
2) Connect the cable to the speaker jack. Put the SPJACK boot on the cable, with the slit on the boot down.



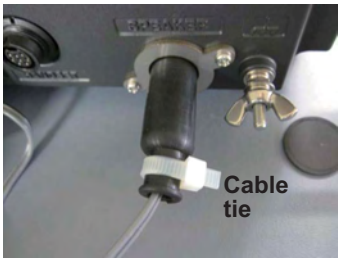
3) Slide the clamping plate downward until it contacts the boot, with the straight edge on the plate down. Be sure there is no gap between the plate and the boot.



4) Fasten the plate with two binding head screws (torque: 0.5Nm).



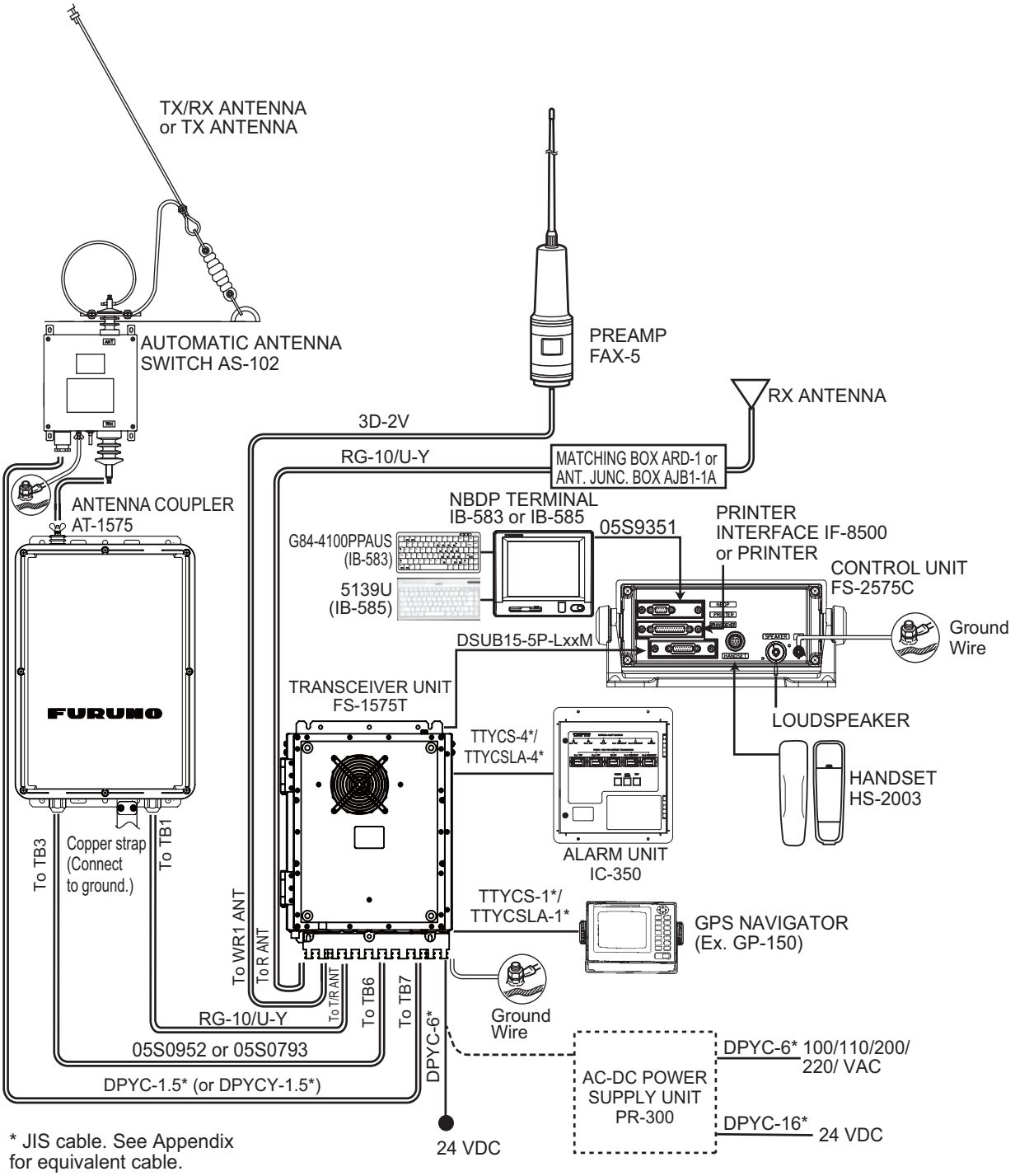
5) Fasten the boot to the cable with a cable tie.



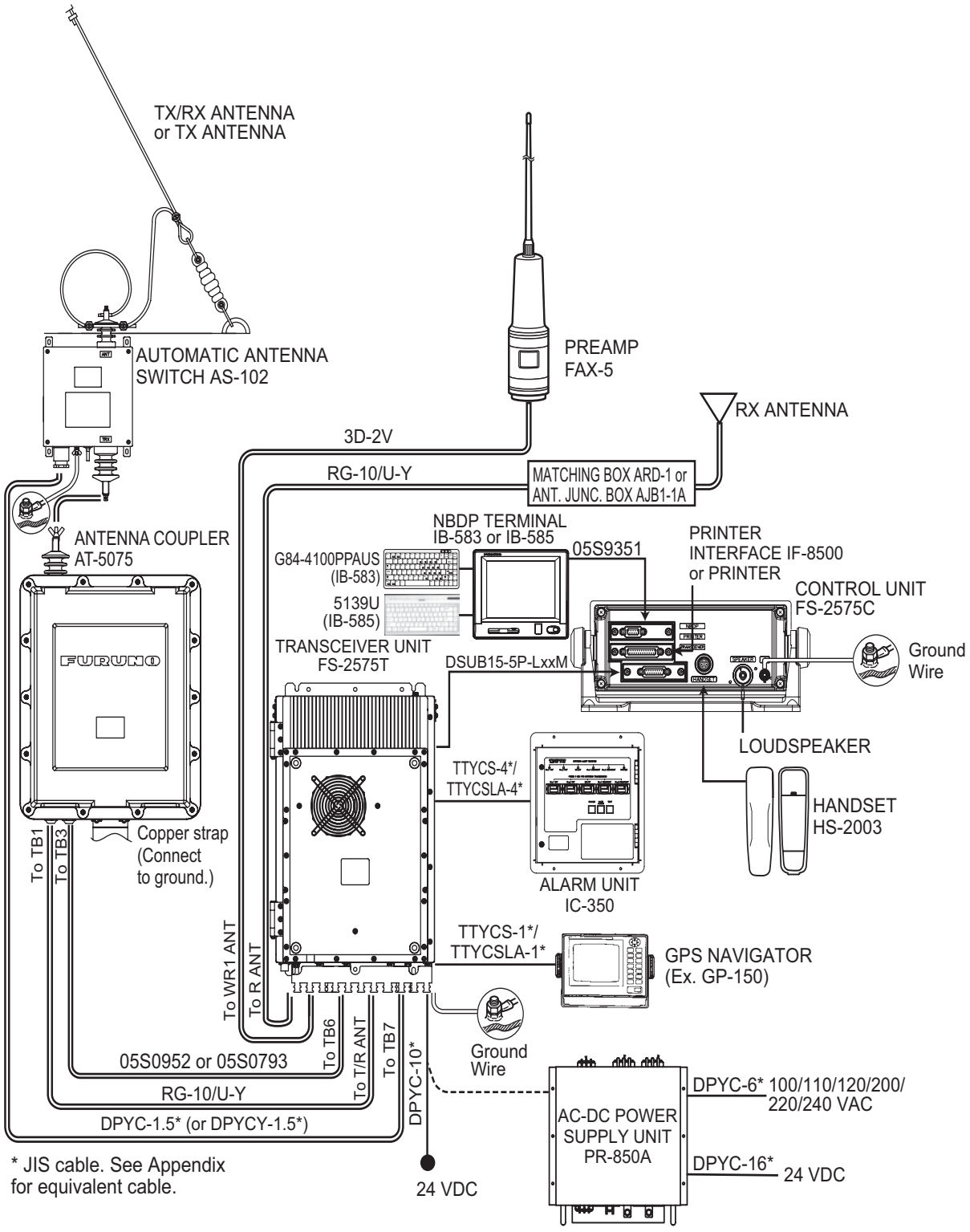
2. WIRING

The illustration on this page and the next two pages show general connections between the Antenna Coupler, Transceiver Unit, Control Unit and external equipment. For detailed information, see the interconnection diagram. Many of the cables mentioned are JIS (Japan Industry Standard) cables. If not available locally, use the equivalent. See the cable guide in the Appendix for how to select equivalent cables.

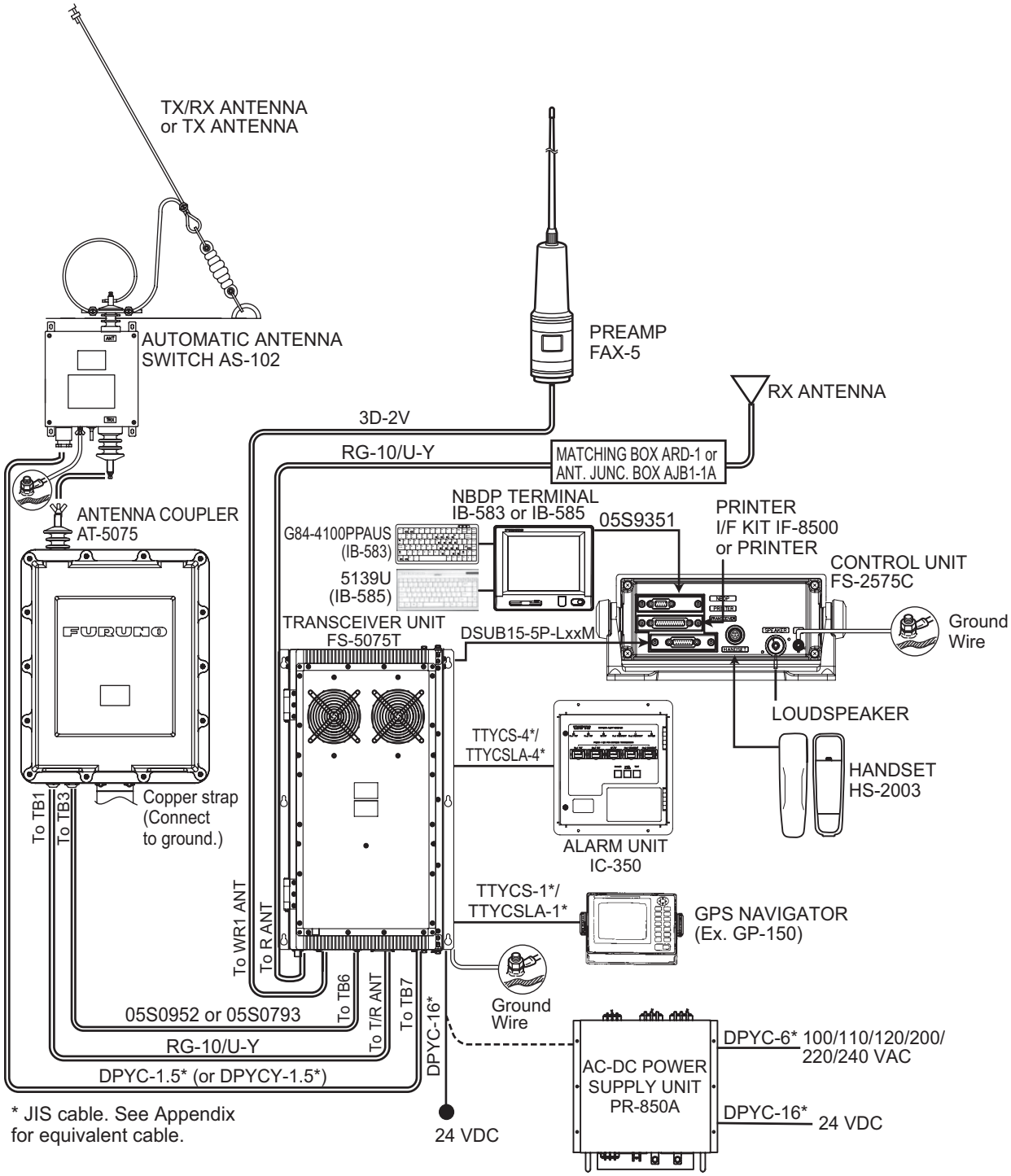
FS-1575



FS-2575


TX/RX ANTENNA
or TX ANTENNA
AUTOMATIC ANTENNA
SWITCH AS-102
PREAMP
FAX-5
RX ANTENNA
3D-2V
RG-10/U-Y
MATCHING BOX ARD-1 or
ANT. JUNC. BOX AJB1-1A
ANTENNA COUPLER
AT-5075
NBDP TERMINAL
IB-583 or IB-585
G84-4100PPAUS
(IB-583)
5139U
(IB-585)
05S9351
PRINTER
INTERFACE IF-8500
or PRINTER
CONTROL UNIT
FS-2575C
Ground
Wire
TRANSCEIVER UNIT
FS-2575T
DSUB15-5P-LxxM
LOUDSPEAKER
TTYCS-4*/
TTYCSLA-4*
HANDSET
HS-2003
ALARM UNIT
IC-350
Copper strap
(Connect
to ground.)
To TB1
To TB3
To WR1 ANT
To R ANT
TTYCS-1*/
TTYCSLA-1*
GPS NAVIGATOR
(Ex. GP-150)
Ground
Wire
05S0952 or 05S0793
To TB6
To T/R ANT
To TB7
DPYC-10*
RG-10/U-Y
DPYC-1.5* (or DPYCY-1.5*)
AC-DC POWER
SUPPLY UNIT
PR-850A
DPYC-6*
100/110/120/200/
220/240 VAC
DPYC-16*
24 VDC
24 VDC
* JIS cable. See Appendix
for equivalent cable.

FS-5075


TX/RX ANTENNA
or TX ANTENNA
AUTOMATIC ANTENNA
SWITCH AS-102
PREAMP
FAX-5
RX ANTENNA
3D-2V
RG-10/U-Y
MATCHING BOX ARD-1 or
ANT. JUNC. BOX AJB1-1A
ANTENNA COUPLER
AT-5075
NBDP TERMINAL
IB-583 or IB-585
05S9351
PRINTER
I/F KIT IF-8500
or PRINTER
G84-4100PPAUS
(IB-583)
5139U
(IB-585)
CONTROL UNIT
FS-2575C
TRANSCEIVER UNIT
FS-5075T
DSUB15-5P-LxxM
Ground
Wire
LOUDSPEAKER
TTYCS-4*/
TTYCSLA-4*
HANDSET
HS-2003
ALARM UNIT
IC-350
Copper strap
(Connect
to ground.)
To TB1
To TB3
To WR1 ANT
To R ANT
TTYCS-1*/
TTYCSLA-1*
GPS NAVIGATOR
(Ex. GP-150)
To TB6
To T/R ANT
To TB7
DPYC-16*
Ground
Wire
05S0952 or 05S0793
RG-10/U-Y
DPYC-1.5* (or DPYCY-1.5*)
AC-DC POWER
SUPPLY UNIT
PR-850A
DPYC-6* 100/110/120/200/
220/240 VAC
DPYC-16* 24 VDC
24 VDC
* JIS cable. See Appendix
for equivalent cable.

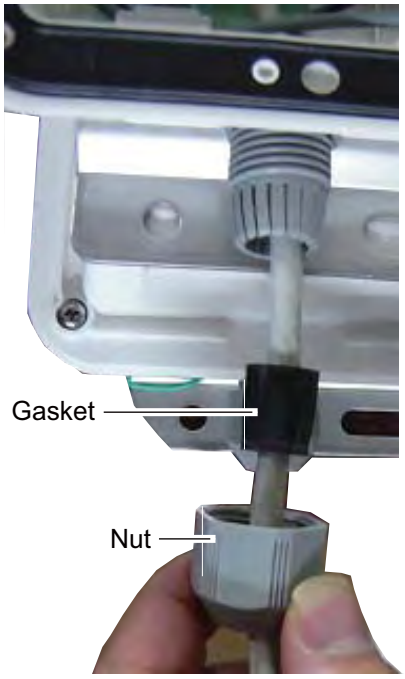
2.1 Antenna Coupler

Note: The T/R antenna is automatically connected to ground when the power is turned off.

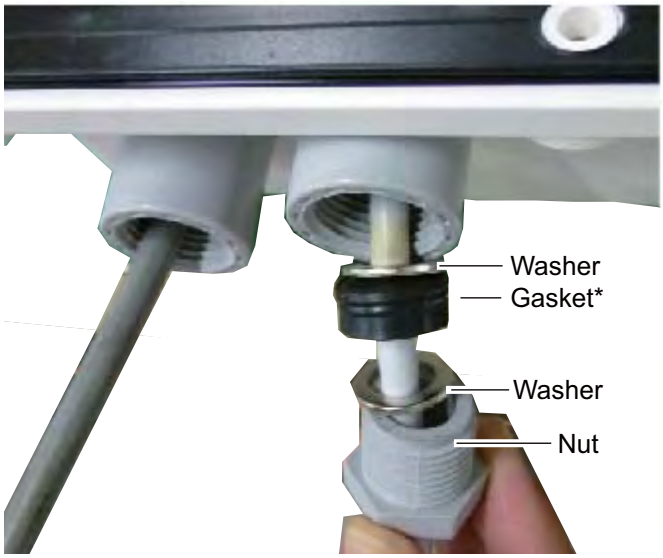
2.1.1 General connections

Three cables connect to the Antenna Coupler: the signal cable (7-core cable (05S0952) or 5P cable (05S0793)), coaxial cable from the Transceiver Unit, and the antenna wire. For the connection of the antenna wire, use an insulator so as not to put stress on the connector at the insulator of the Antenna Coupler. For cable 05S0952, cut off the armor at the outside of the Antenna Coupler, and then wrap vinyl tape around the end of armor.

1. Open the cover of the Antenna Coupler.
2. Unscrew the nut for the signal cable and coaxial cable and remove the following from each cable:
   AT-1575: Gasket
   AT-5075: Two washers and gasket
3. Do one of the following:
   AT-1575: Pass the nut and gasket onto the cable as shown below.
   AT-5075: Pass the nut, two washers and gasket onto the cable in the order shown below.



Antenna Coupler AT-1575

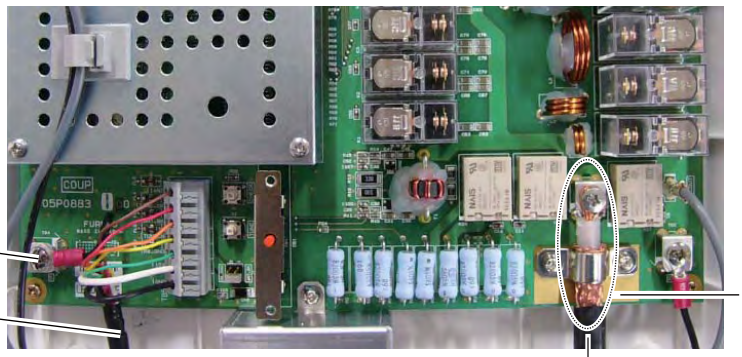


* Replace this gasket with one supplied with accessories if diameter of coax cable is larger than the one supplied.

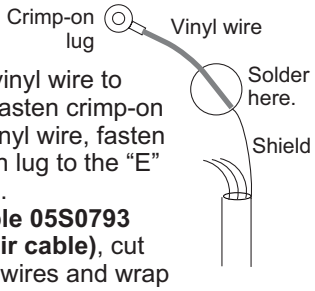
Antenna Coupler AT-5075

Antenna Coupler AT-1575, AT-5075, bottom front view

4. Connect the signal cable and the coaxial cable as shown below.



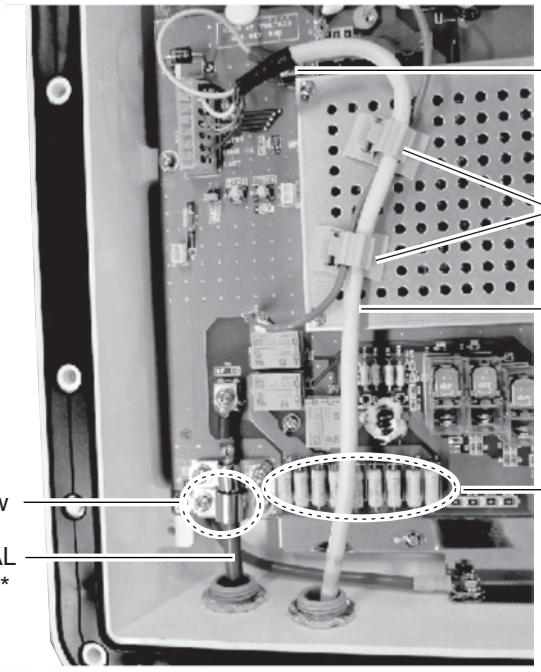
*** How to process the shield:**

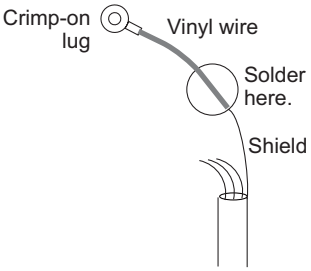


Solder vinyl wire to shield, fasten crimp-on lug to vinyl wire, fasten crimp-on lug to the “E” terminal.
For cable 05S0793 (five-pair cable), cut unused wires and wrap them and the shield with vinyl tape.

**** How to fabricate the coaxial cable**:
1. Remove sheath 50 mm.
2. Remove insulator 20 mm.
3. Make length of conductor 20 mm.
4. Cut shield to length of 10 mm and fix with the fixing plate.

Antenna Coupler AT-1575, inside view



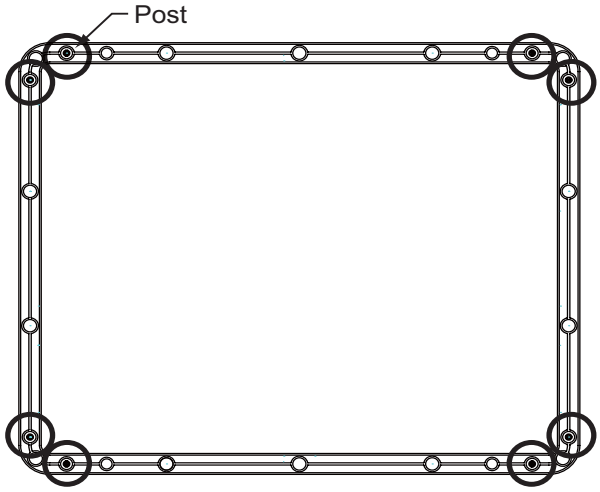


*** How to process the shield**:
Solder vinyl wire to shield, fasten crimp-on lug to vinyl wire, fasten crimp-on lug to the “E” terminal.
For cable 05S0793 (five-pair cable), cut unused wires and wrap them and the shield with vinyl tape.

**** How to fabricate the coaxial cable**:
1. Remove sheath 50 mm.
2. Remove insulator 20 mm.
3. Make length of conductor 10 mm.
4. Cut shield to length of 5 mm and fix with the fixing plate.

Antenna Coupler AT-5075, inside view

5. Check that the gasket is engaged to the posts on the casing then close the cover. (Pictured: AT-5075)

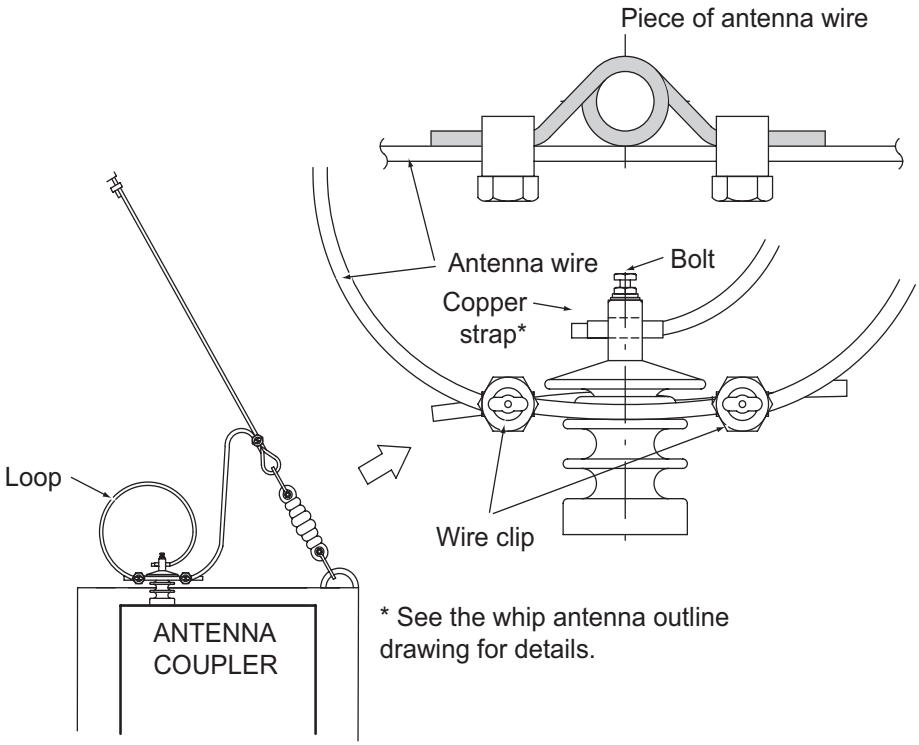


2.1.2 Connections for outside installation

For outside installation, arrange the antenna wire as shown below. The optional antenna materials shown below are necessary.

Name	Type	Code No.	Remarks
Antenna materials	CP05-09010	005-954-180	w/10 m antenna cable
	CP05-09020	005-964-410	w/25 m antenna cable

1. Make a loop (diameter approx. 120 mm) in the antenna cable at the insulator of the Antenna Coupler.
2. Put the end of the antenna cable through the hole of the insulator and fasten the bolt.
3. Prepare a piece of antenna wire (approx. 300 mm) and wind it around the insulator one turn.
4. Fasten the above piece of wire and antenna wire together with the wire clips near the ends of the piece of wire.
5. Coat the bolt with the silicone sealant.



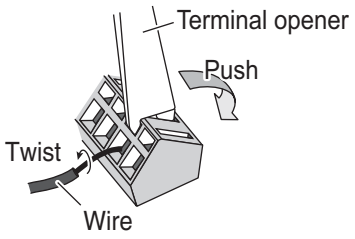
* See the whip antenna outline drawing for details.

2.2 Transceiver Unit

2.2.1 General connections

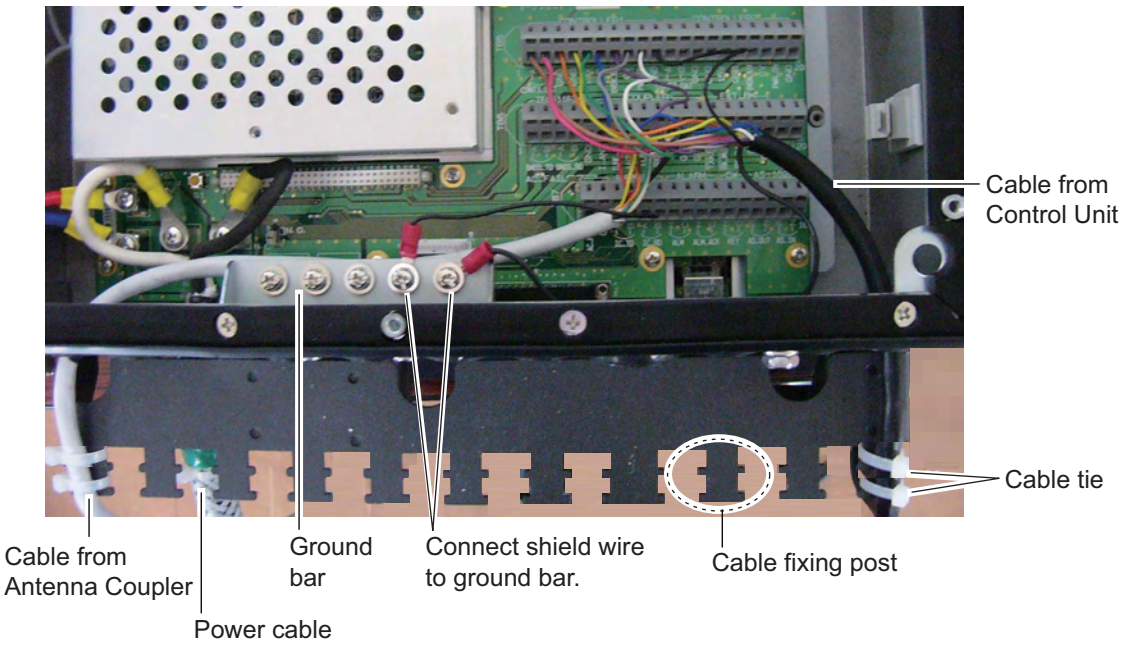
The general procedure for connecting cables to the Transceiver Unit is as follows:

1. Treat the cable end. See section 2.2.4.
2. Use a knife to cut intersecting cuts in the applicable rubber bushing at the bottom of the unit.
3. Open the unit. Put the cable through the rubber bushing.
   Note: For the FS-1575T, insert cables in descending order of their corresponding terminal numbers; TB7→TB6→TB5...→TB1
4. **For the FS2575T/FS-5075T**, put the cable (except power cable) through a locking wire saddle at the right side of the unit.
5. Connect the cable (except power cable) to the appropriate WAGO connector on the T-IF Board. See the interconnection diagram. Use the terminal opener (attached inside the unit) to open the terminals on the connector.

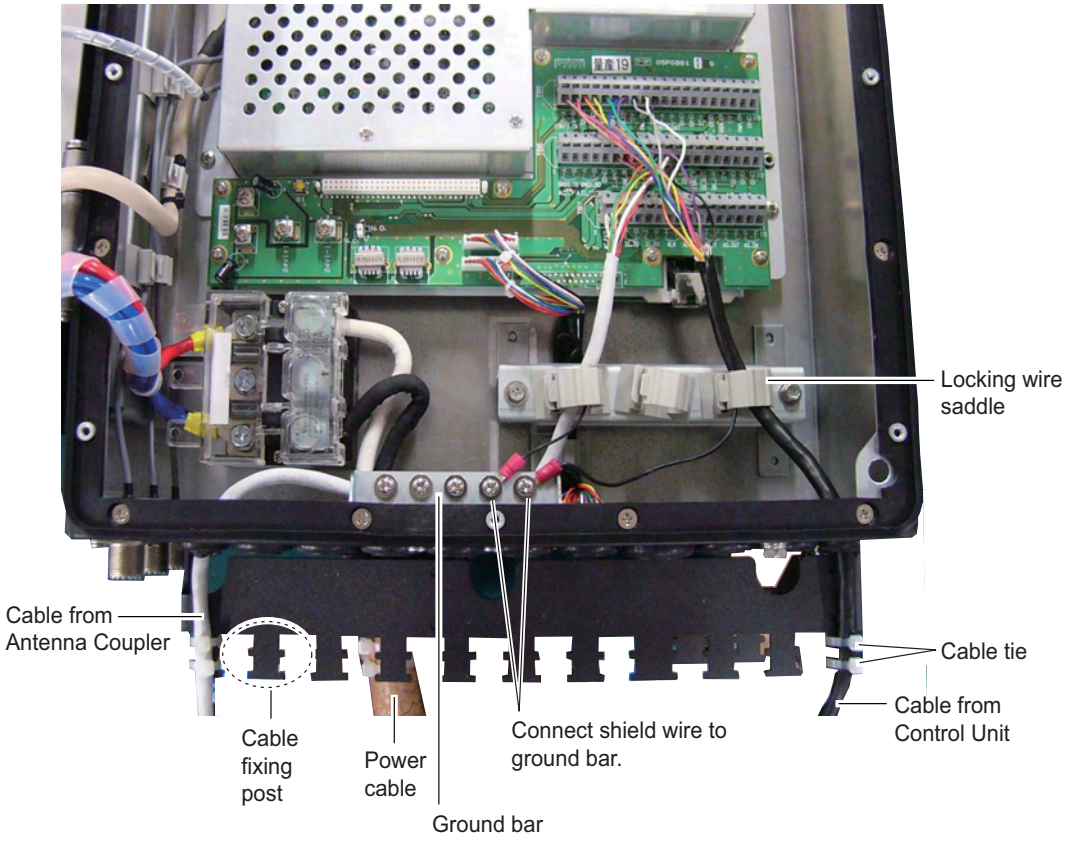


Procedure
1. Twist core.
2. Insert terminal opener and push.
3. Insert wire into hole.
4. Release terminal opener.
5. Pull wire to confirm it is correctly inserted.

6. Fasten a crimp-on lug to the shield of the cable. Connect the shield to the ground bar.
7. Fasten the cable to a cable fixing post with two cable ties.



Transceiver Unit FS-1575T, inside view

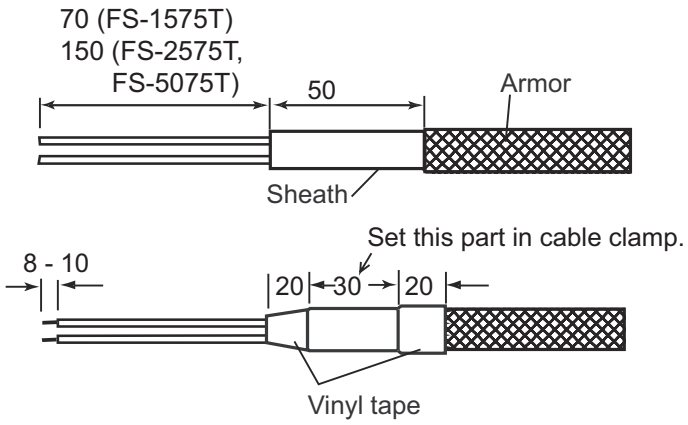


Transceiver Unit FS-5075T, inside view

Note: The inside of the FS-2575T is almost identical to that of the FS-5075T. See the illustration above for connections.

2.2.2 Power cable

Fabricate the cable DPYC-6 (FS-1575), DPYC-10 (FS-2575) or DPYC-16 (FS-5075) as shown below. Attach the crimp-on lugs supplied on the 24 VDC terminal to the cable. Connect the cable to the 24 VDC terminal. If an equivalent cable is used it must not allow the voltage to drop more than 5%.



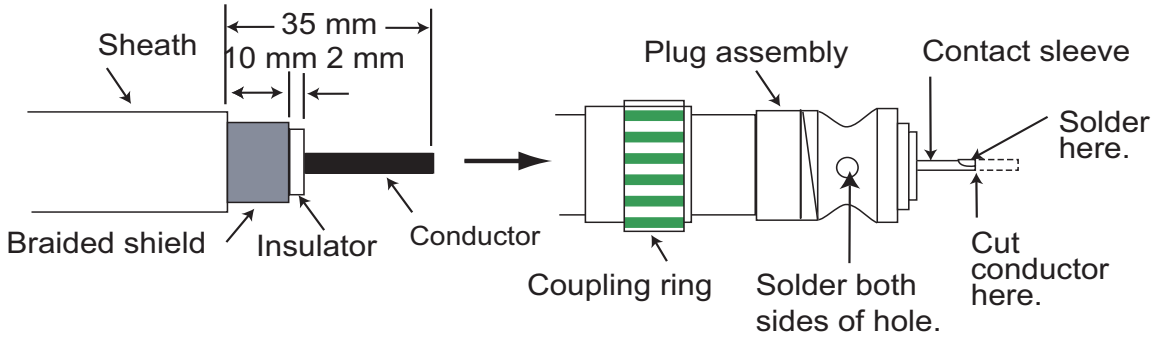
2.2.3 Coaxial cable

Coaxial cables connect the antennas to the Transceiver Unit. Attach the M-type connector of the coaxial cable. Leave some slack in the coaxial cable so that the cover of the Transceiver Unit can be opened easily.

The antennas are connected to the Transceiver Unit with a 50 ohm coaxial cable, type RG-10/U-Y, RG-8A/U or 3D-2V. Lay the coaxial cable and attach an M-type plug to the cable as shown on the next page.

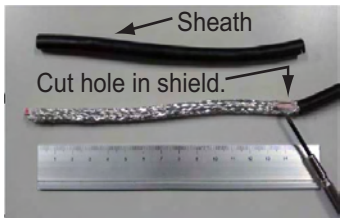
1. Remove the sheath by 35 mm.
2. Bare 23 mm of the conductor. Trim braided shield by 10 mm and solder.
3. Slide the coupling ring onto the cable.

4. Screw the plug assembly on the cable.
5. Solder the plug assembly to the braided shield through solder holes. Solder the contact sleeve to the conductor.
6. Screw the coupling ring into the plug assembly.
7. Screw the plug into the WR1_ANT, WR2_ANT, R_ANT or T/R_ANT receptacle on the Transceiver Unit as applicable.



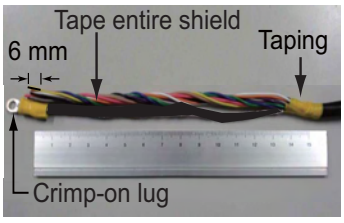
2.2.4 5-pair cable

Fabricate the cable as shown below. Do not unravel the twisted wire pairs.



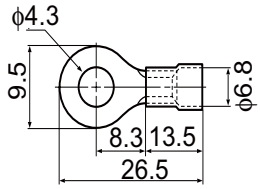
(A) Remove sheath by approx. 15 cm (150 mm) and cut hole in shield.

(B) Pull out paper tape and inner shield from hole and cut them. Shorten shield considering its location in the transceiver.



(C) Attach crimp-on lug* to shield. Expose cores of wires approx. 6 mm. Tape wires and shield with vinyl tape.

* Dimensions of crimp-on lug:



2.3 Control Unit

Connect the Transceiver Unit to the Control Unit with the cable with the D-sub 15-pin connector at both ends. Connect a single Control Unit to the CONTROLLER 1 port. (This port has priority when two Control Units are connected.) Connect a No.2 Control Unit to the CONTROLLER 2 port.

Connect the handset HS-2003 to the HANDSET port at the rear of the Control Unit. For other handset or microphone, connect to the HANDSET REAR port.

2.4 External Equipment

Connect cables for external equipment to the T-IF Board in the Transceiver Unit.

GNSS

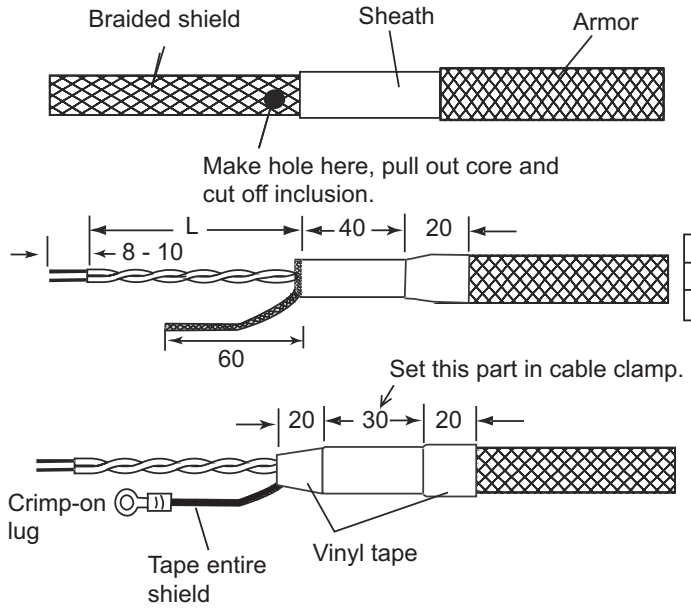
This radiotelephone can receive the following sentences in IEC 61162-1 (ed.2nd) format. Use the cable TTYCS-1/TTYCSLA-1 (or the equivalent) to connect the equipment to IEC 61162-1 of TB6 in the Transceiver Unit.

Data	Sentence, priority order
Position info, Position fix	GNS>GGA>RMC>GLL
Time info	ZDA>RMC

Alarm Unit IC-350

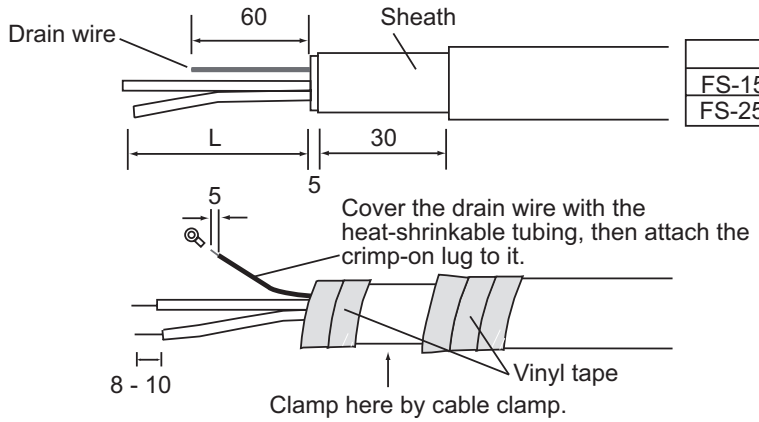
Connect the Alarm Unit IC-350 to TB7 in the Transceiver Unit with the cable TTYCS-4/TTYCSLA-4 (or the equivalent).

Fabrication of TTYCS series



	Length of "L"
FS-1575T	190
FS-2575T/FS-5075T	120

Fabrication of TTYCSLA series

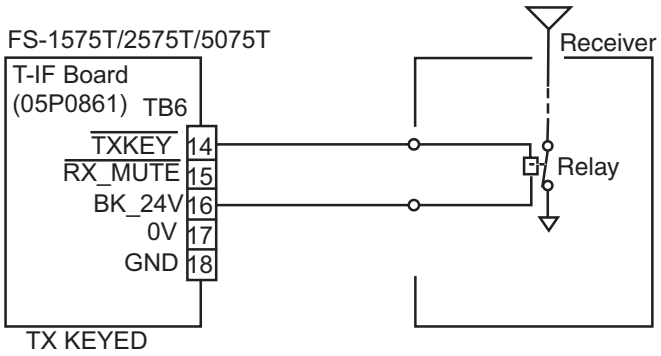


	Length of "L"
FS-1575T	190
FS-2575T/FS-5075T	120

EXT BK (SSB radiotelephone, etc.)

Terminal no. on TB6 of T-IF Board	Signal name	Function	Object
14	$\overline{\text{TXKEY}}$	Go to GND when at TX	BK control for other radiotelephone
15	$\overline{\text{RX\_MUTE}}$	Receiver circuit muted when this line goes GND.	BK control from other radiotelephone
16	BK_24V	Output voltage: 24 VDC	Power of relay BK for other radiotelephone
17	0V	GND	0V
18	GND		

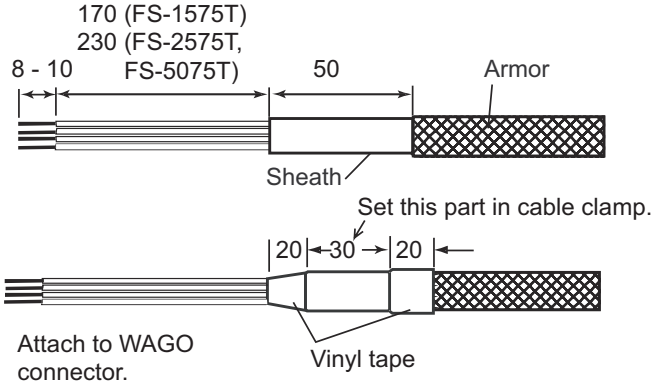
Note: When the GND line from other radiotelephone is connected to the chassis, float the ground.



Example of connection with a receiver

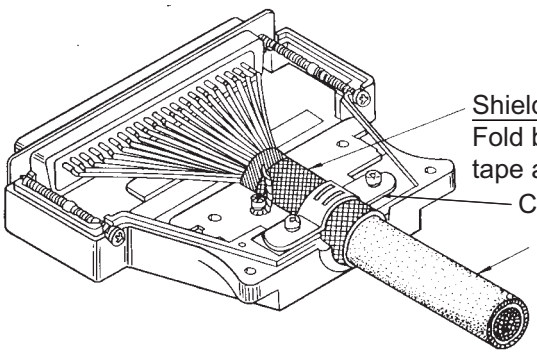
For connection to a transceiver unit, see the BK interface interconnection diagram at the back of this manual.

Connect the SSB radiotelephone to EXT BK in the Transceiver Unit with the cable MPYC-4 (or equivalent).



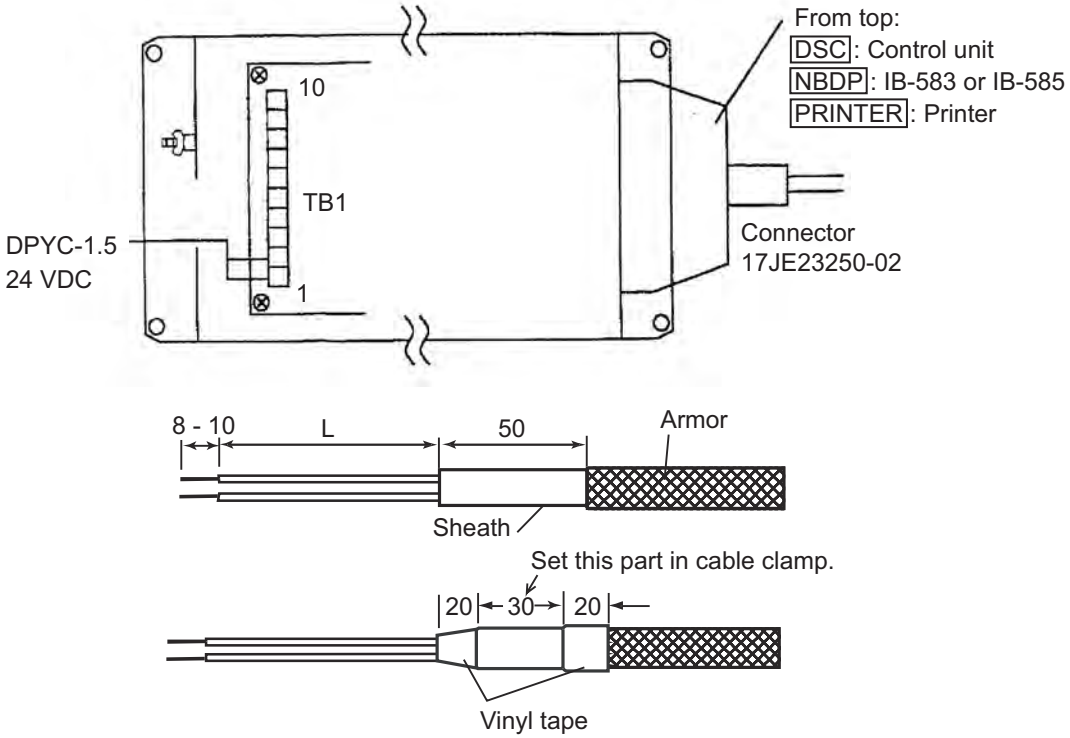
MIF unit

Use connector 17JE-13250-02 (supplied as installation materials) to connect the MIF unit to the REMOTE port on Transceiver Unit.



Shield tape (metal)
Fold back armor, then wind shield tape along edge of cable.
Cable clamp
Cable
Type: UL2464-SM (M) 13PX28AWG
Code No.: 000-125-302
or equivalent.

Printer Interface IF-8500



Keyboard for Terminal Unit IB-583, IB-585

IB-583: Connect the PS/2 connector of the keyboard (G84-4100PPAUS) to the PS/2 port at the rear of the IB-583.

IB-585: Connect the USB connector of the keyboard (5139U) to the USB port at the front of the IB-585.

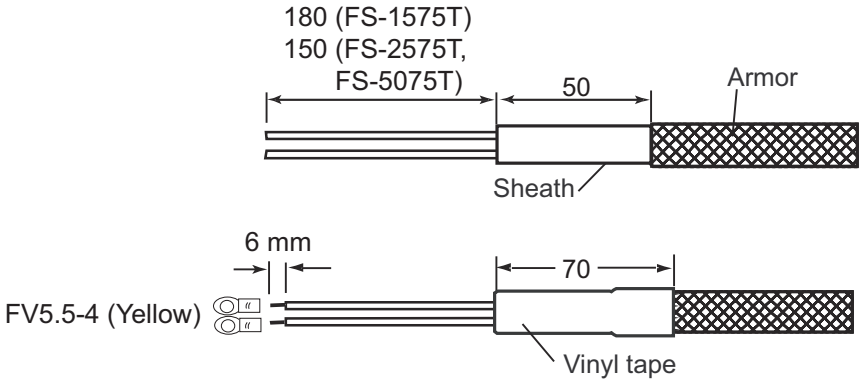
2.5 AC-DC Power Supply Unit PR-300/PR-850A (option)

To connect to both an AC and DC ship's mains, the optional AC-DC power supply unit PR-300 (FS-1575) or PR-850A (FS-2575/FS/5075) is required. Attach the crimp on lug FV5.5-4 (local supply) to the following cables or equivalent (local supply) for connection with the power supply unit.

- AC power: DPYC-6
- DC power: DPYC-6 (FS-1575), DPYC-10 (FS-2575), DPYC-16 (FS-5075)

How to process power cables

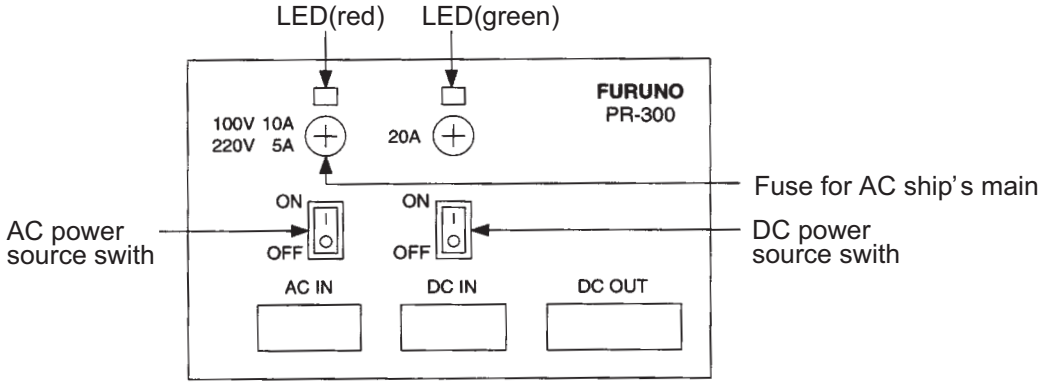
Fabricate the cable as shown below. Connect cables to their input terminals with crimp-on lugs.



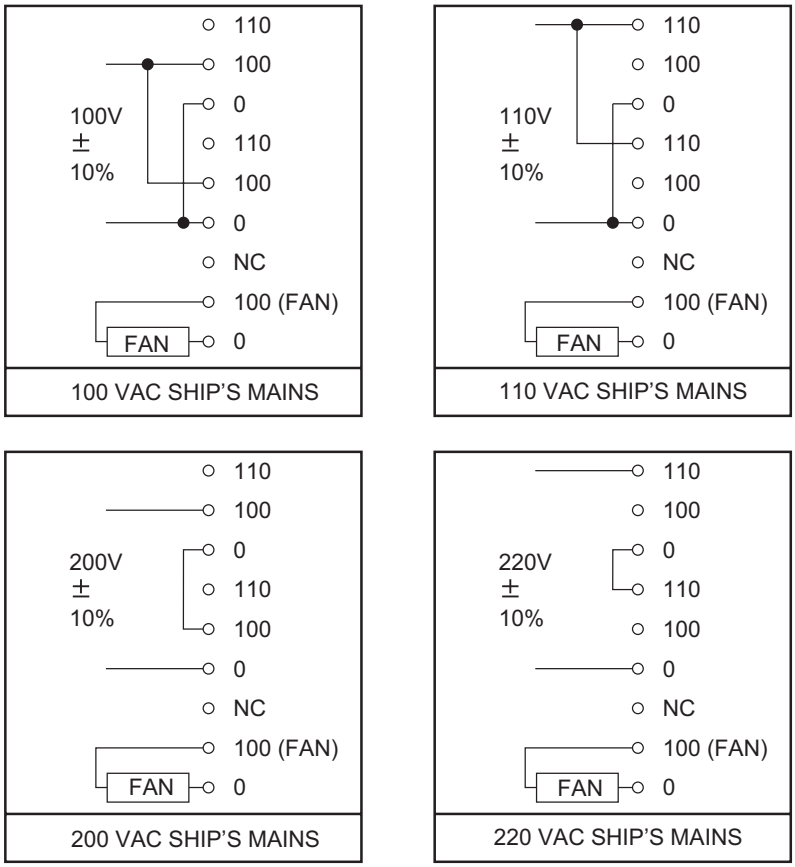
How to select input voltage

PR-300 for FS-1575:
The input voltage is adjustable for 100/110/200/220 VAC, and is factory-set for 220 VAC. To select other input voltages, open the top cover and change the wiring according to the figure on the next page and change the power fuse accordingly to AC input voltage as follows.

Input voltage	Power fuse
100/110 VAC	10 A
200/220 VAC	5 A



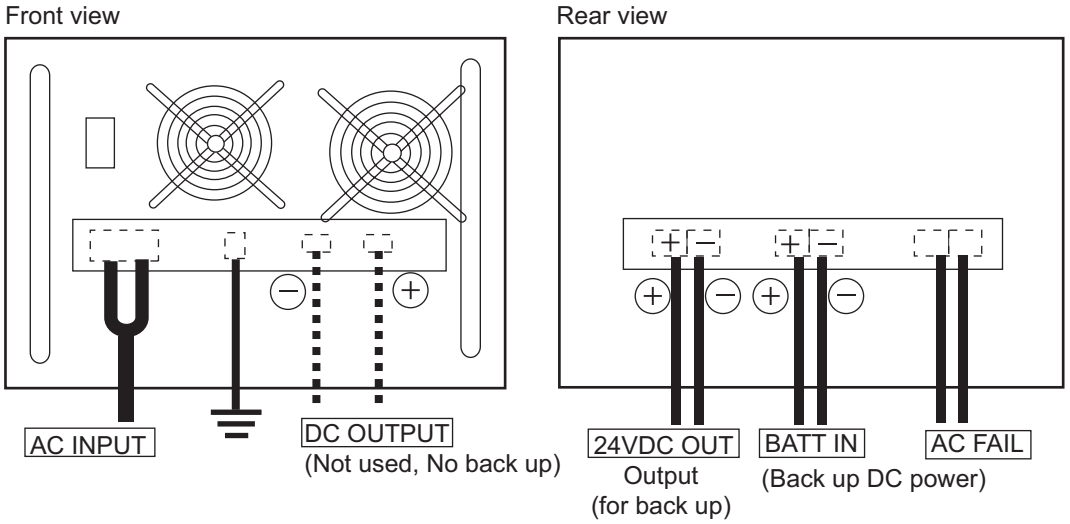
AC-DC power supply unit PR-300, rear view

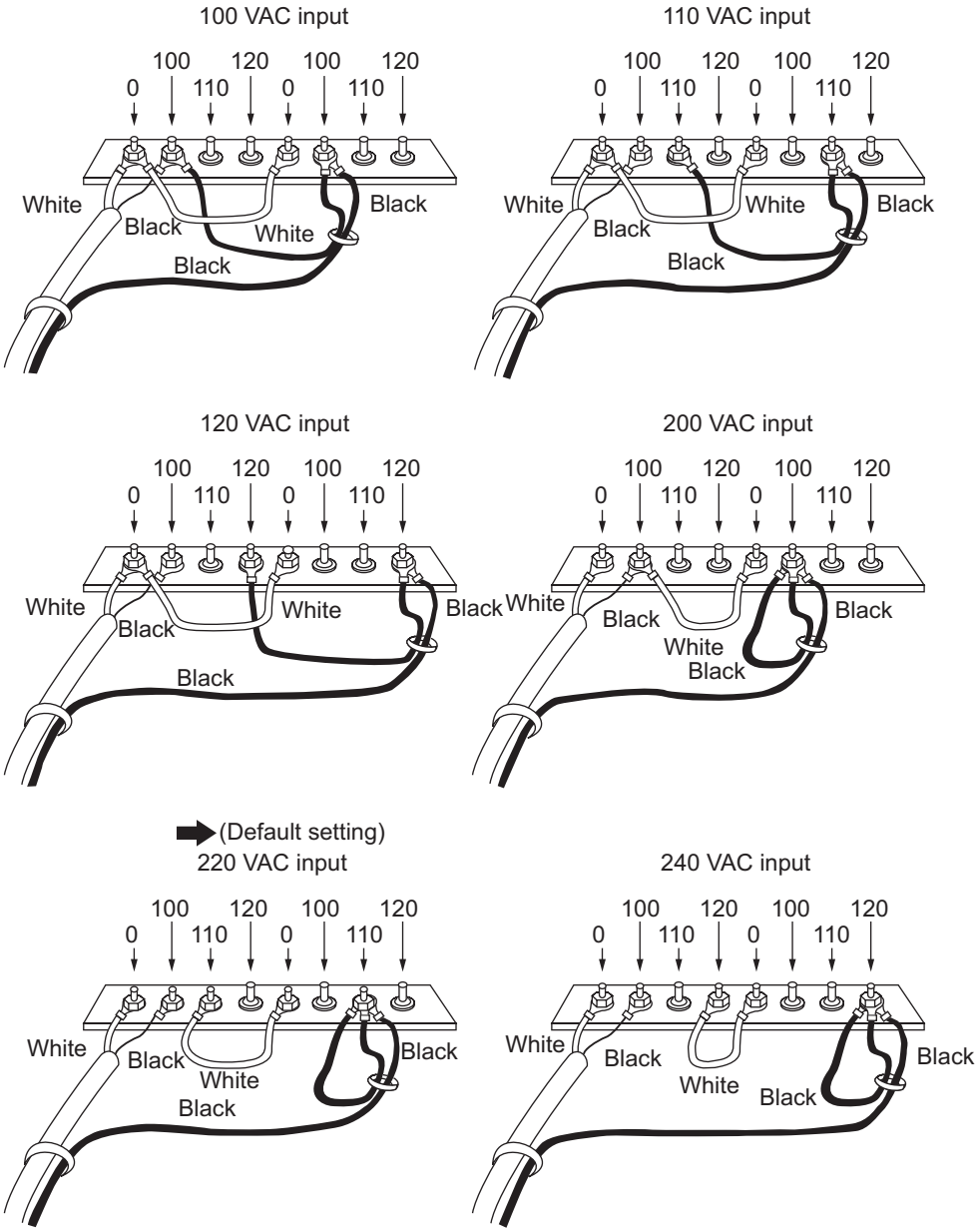


Tap connections in the PR-300

PR-850A for FS-2575/5075:

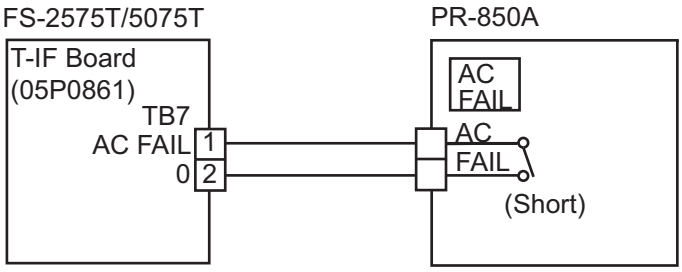
The input voltage is adjustable for 100/110/120/200/220/240 VAC, and is factory-set for 220 VAC. To select other input voltages, open the top cover and change the wiring according to the figure on the next page. After changing the input voltage, correct the sticker on the front panel accordingly.





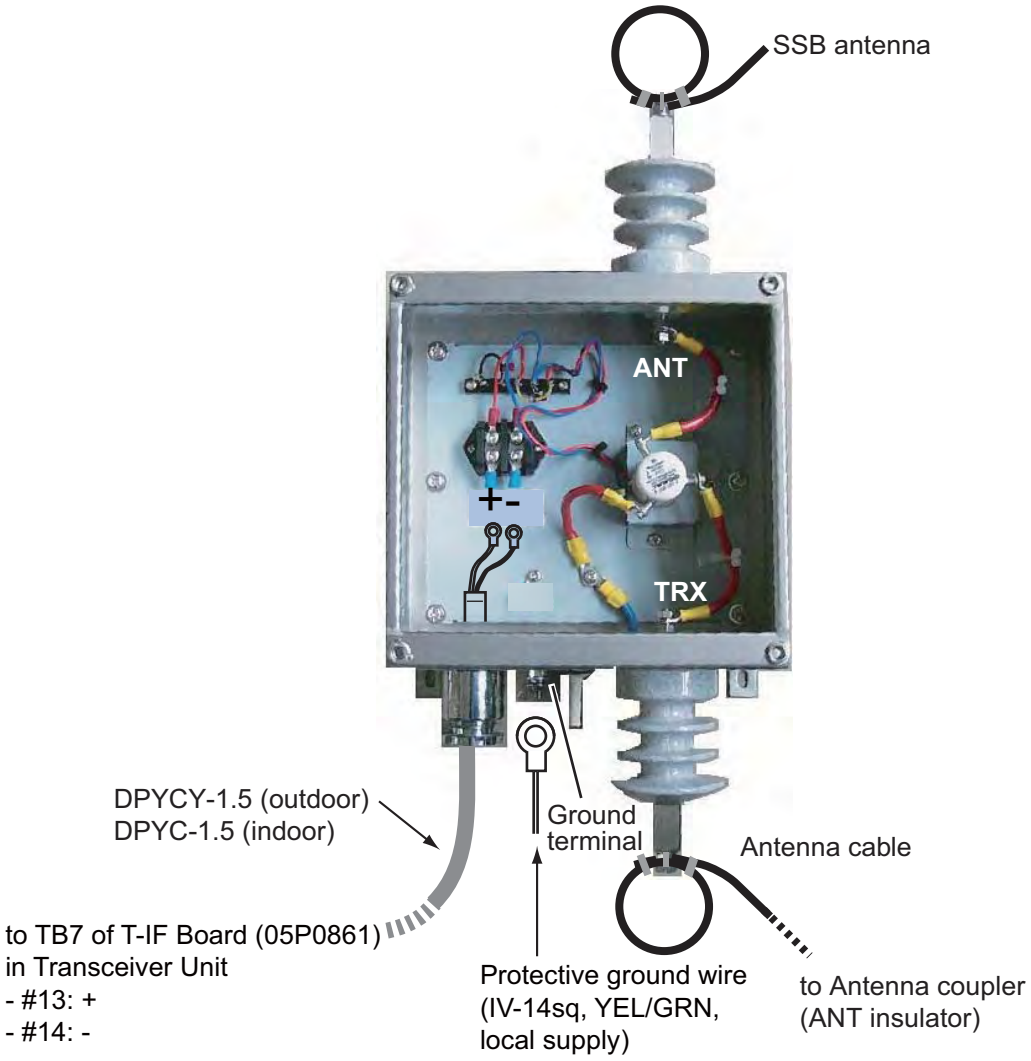
AC FAIL line (PR-850A)

When the power supply is switched to the back-up, AC and FAIL at PR-850A are shorted as shown in the figure at right.

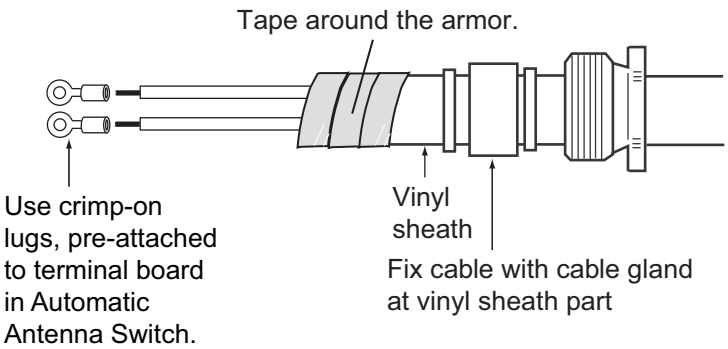


2.6 Automatic Antenna Switch AS-102 (option)

Connect the SSB antenna to the ANT terminal, and use the antenna cable to connect the TRX terminal and the Antenna Coupler (ANT terminal) as shown below. For the signal cable, connect the DPYCY-1.5 (or DPYC-1.5) cable between the Transceiver Unit and the Automatic Antenna Switch as shown below. For outside installation, follow the procedure in section 2.1.2.



How to process the cable (example: DPYCY-1.5)

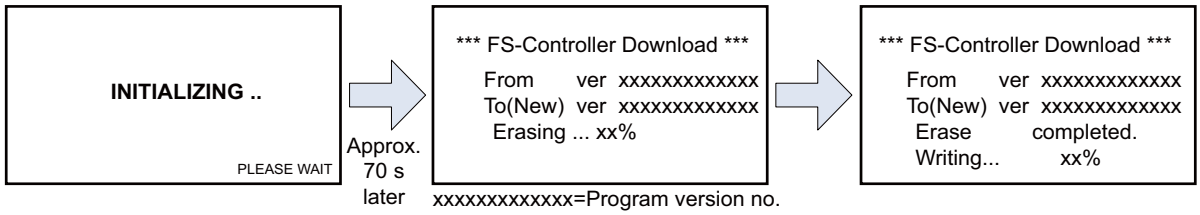


3. INITIAL SETTINGS

This chapter shows you how to enter the initial settings. A password is required to enter the initial settings. Refer to FURUNO Information for the password.

3.1 How to Initialize the Control Unit and Transceiver Unit

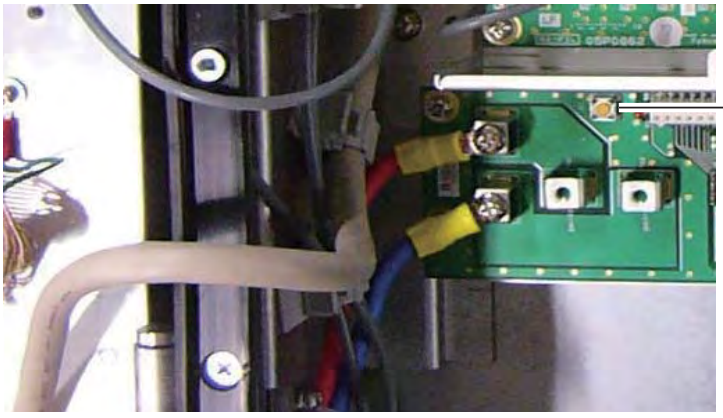
Turn on the power switch on the Control Unit. The equipment starts to update the software, in the sequence shown below. When the procedure is completed, the radiotelephone screen appears.

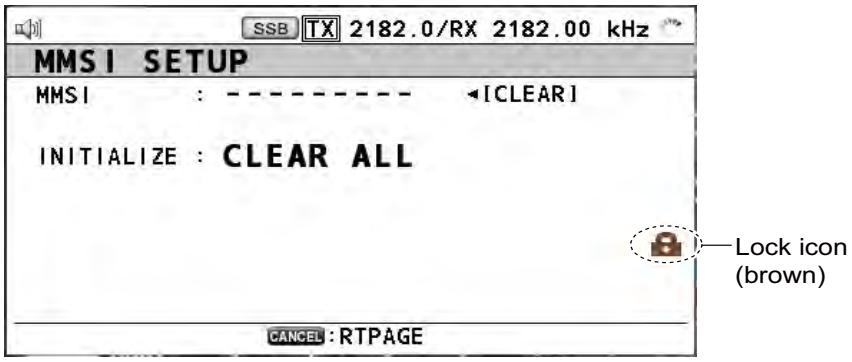


xxxxxxxxxxxx=Program version no.

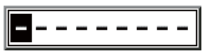
3.2 How to Enter MMSI

1. Turn on the Control Unit. Open the Transceiver Unit and press and hold the Reset switch S1 (approx. 5 seconds) on the T-IF Board (05P0861) until the menu shown below appears on the Control Unit.





2. Enter the password. The lock icon turns green, the shackle of the lock opens and the cursor selects the MMSI area. Push the **Rotary** knob to show the MMSI input box.



MMSI input box

3. Use the numeric keys to enter the MMSI.
4. Push the **Rotary** knob to register the MMSI.

Note: You can re-enter the MMSI if it is wrong. Select ◀[CLEAR] then push the **Rotary** knob. You are asked "MMSI Clear OK?". Select [Yes] then push the **Rotary** knob. Select the MMSI number input area then push the **Rotary** knob. Enter the MMSI.

3.3 Performance Check

Power the system and check the receiver and transmitter as follows:

Receiver

1. Set the unit as follows:
   Speaker: ON, Squelch: OFF, AGC: Fast, Gain: Maximum
2. Confirm that a signal can be received on each band. If noise is present or a signal is weak, check the antenna lead-in section, coaxial cable and ground.

Transmitter

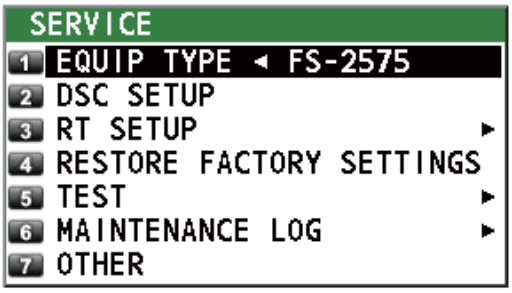
1. On each band, confirm that the antenna is tuned when the **0/TUNE** key is pressed. If “tuning error” appears, check the antenna (connection, ground, etc.).
2. Communicate with the handset. Confirm that IA and IC change with voice level.

3.4 System Setup

This section shows you how to enter the system settings, on the [SERVICE] menu.

3.4.1 How to open the SERVICE menu, do operations on the menu

1. Press the **MENU** key to open the menu.
2. Rotate the **Rotary** knob to select [SERVICE].
3. Enter the password to show the [SERVICE] menu.



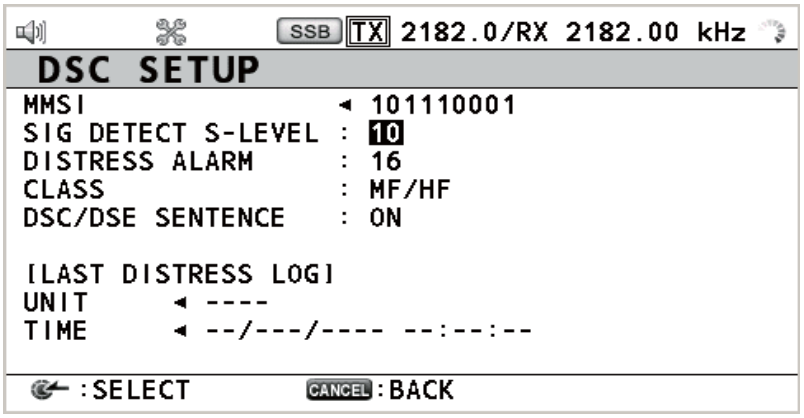
4. Rotate the Rotary knob to select a menu then push the knob.
5. Rotate the **Rotary** knob to select a menu item then push the knob.
6. Rotate the Rotary knob to select an option (or set numeric value) then push the knob.
7. Press the **CANCEL** key to go backward in the menu, or press the **MENU** key to close the menu.

3.4.2 EQUIP TYPE menu

The system automatically detects the model name and displays the results, [FS-1575], [FS-2575] or [FS-5075].

3.4.3 DSC SETUP menu

The [DSC SETUP] menu sets up the system's DSC features.

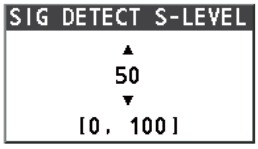


MMSI: Ship's MMSI (display only).

SIG DETECT S-LEVEL: Adjust the carrier sense threshold for DSC and PSTN. DSC transmission is delayed if the carrier level is lower than the level set here. Also, determine whether a DSC frequency is in use or not. A DSC message is not transmitted when the signal strength of the DSC frequency is lower than that set here. When the DSC frequency becomes clear, the DSC message is sent.
The carrier is checked at a specified interval during PSTN communications, and if the carrier level is lower than set here the line is disconnected.

Procedure

1) Select [SIG DETECT S-LEVEL].
2) Push the **Rotary** knob to show the [SIG DETECT S-LEVEL] adjustment window.



3) Rotate the **Rotary** knob to set the level.
4) Push the **Rotary** knob to finish.

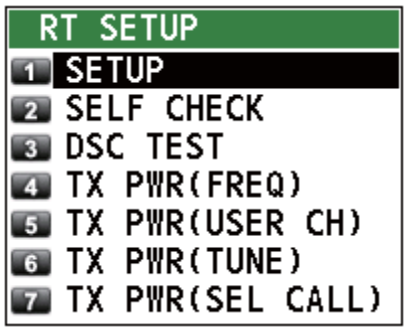
DISTRESS ALARM: Set the audio level for the buzzer that sounds when a distress or urgent message is received.

CLASS: Set the function of the watch receiver: [MF/HF] (sea area A3), [MF] (sea area A1, A2), or [NON-GMDSS] (DSC function disabled).

DSC/DSE SENTENCE: Select ON to output DSC/DSE sentences (messages) from the IEC 61162-1 TD port.

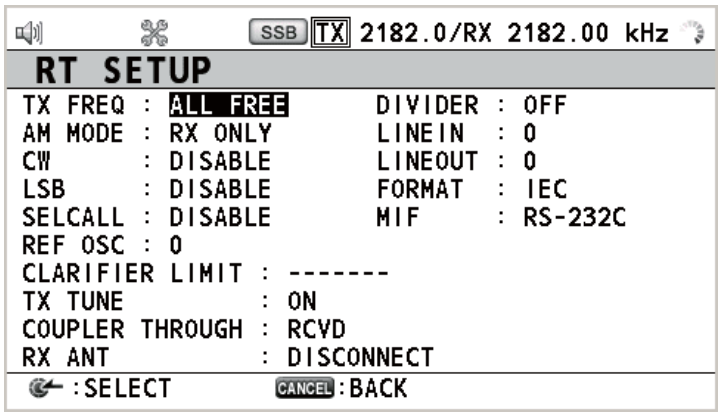
LAST DISTRESS LOG: The name of the unit ("FS-xx75" or "ALARM UNIT") that transmitted the last distress alert and the date and time of transmission are shown here.

3.4.4 RT SETUP menu



SETUP

The [RT SETUP] menu sets functions according to needs and regulations and adjusts TX power.



TX FREQ: Select the frequencies to use. [ALL FREE]: Transmit on any frequency. [FREE]: Some restrictions to frequency use apply. For example, NBDP-use distress frequency can not be used for transmission in the SSB mode. [MARINE USER]: Use the frequency and radio type set in the marine band and the user channel. [ITU/USER]: Use the frequency and radio type set in the user channel or permitted with ITU channel. [USER]: Use the frequency and radio type set in the user channel.

AM MODE: Select the function of AM (H3E), [RX ONLY] (Receive only), or [TX/RX] (Send and receive.)

CW: Enable or disable CW. [ENABLE]: On, [DISABLE]: Off

LSB: Enable or disable LSB. [ENABLE]: On, [DISABLE]: Off

SELCALL: Enable or disable the selective call radio buoy feature. When enabled, function key **F3** is automatically assigned to the selective call buoy feature. [ENABLE]: On, [DISABLE]: Off

REF OSC: Tune the reference oscillator.

CLARIFIER LIMIT: Set the range for clarifier adjustment.

TX TUNE: Tune the Antenna Coupler. [ON]: tuning enabled, [OFF]: tuning disable

COUPLER THROUGH: Select the function of the Antenna Coupler at RX.
[OFF]: RX signal passes through the matching network. [RCVD]: RX signal does not pass through the matching network. [DIFF]: Same as [OFF] if TX and RX frequencies are the same.

RX ANT: Select whether an RX antenna is connected or not. [CONNECT]: RX antenna connected. [DISCONNECT]: RX antenna not connected

DIVIDER: Divider connection. [ON]: Divider connected. [OFF]: Divider not connected.

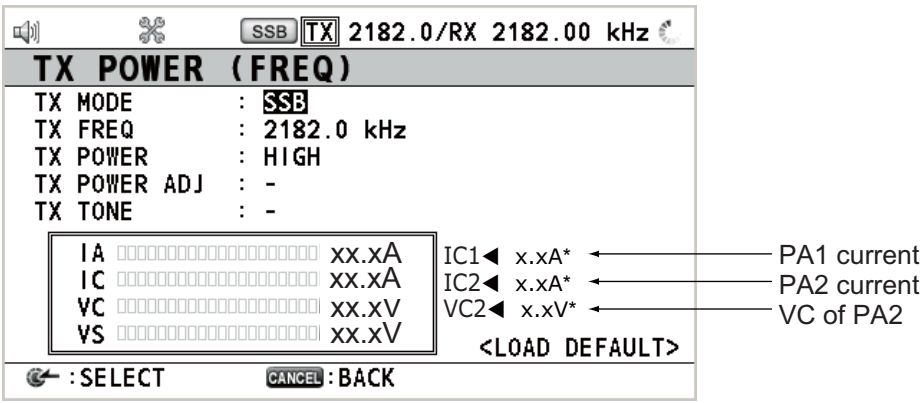
LINEIN: Adjust the input sensitivity of the device connected to the LINE IN terminal (25 D-SUB 25 pin).

LINEOUT: Adjust the output level of the device connected to the LINE OUT terminal (25 D-SUB 25 pin).

FORMAT: Select the NMEA sentence format to use. [IEC]: Receives only IEC-61162-1 complying sentences. Receive analysis not done unless a checksum is present. [IEC+NMEA]: Tries to receive NMEA ver. 1 - 3 sentences as much as possible. Receive analysis done regardless of presence or absence of checksum.

MIF: Select the format for the remote terminal, RS-232C or RS-422.

TX PWR (FREQ)



* Shown for FS-5075 only

TX power can fluctuate on certain frequencies depending on antenna location. If this occurs, adjust the TX power on the problem frequency.

TX MODE: Select the mode for which to set TX power.

TX FREQ: Select the frequency.

TX POWER: Set the output level.

TX POWER ADJ: Set the TX power.

TX TONE: Output tone.

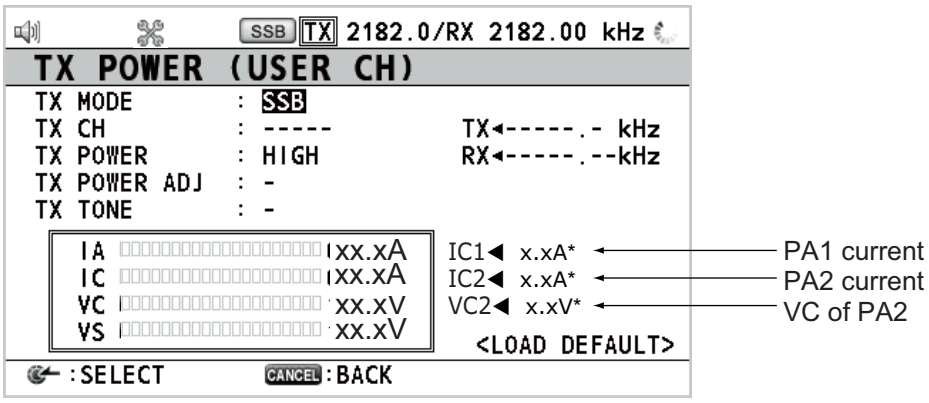
LOAD DEFAULT: Restore default TX power (frequency) settings.

Procedure

1) Set [TX MODE], [TX FREQ] and [TX POWER] as applicable. [TX POWER ADJ] shows the current TX power setting for item selected.
2) Press the PTT switch to show IA, IC, VC and VS figures.
3) Select [TX POWER ADJ], push the **Rotary** knob, rotate the knob to adjust TX power then push the knob.

Note: To get a tone signal from the speaker, set [TX TONE] to other than OFF. The frequency of the tone is as follows: SSB: 1500 Hz; 1100 Hz and 1700 Hz; 700 and 1700 Hz, DSC/NBDP: 1615 Hz; 1785 Hz; DOT, CW: Side tone frequency.

TX PWR (USER CH)



* Shown for FS-5075 only

TX power on user channels can fluctuate according to antenna location. If this occurs, adjust the TX power on user channels.

TX MODE: Select the mode for which to set TX power.

TX FREQ: Select the frequency.

TX POWER: Set the output level.

TX POWER ADJ: Set the TX power.

TX TONE: Output tone.

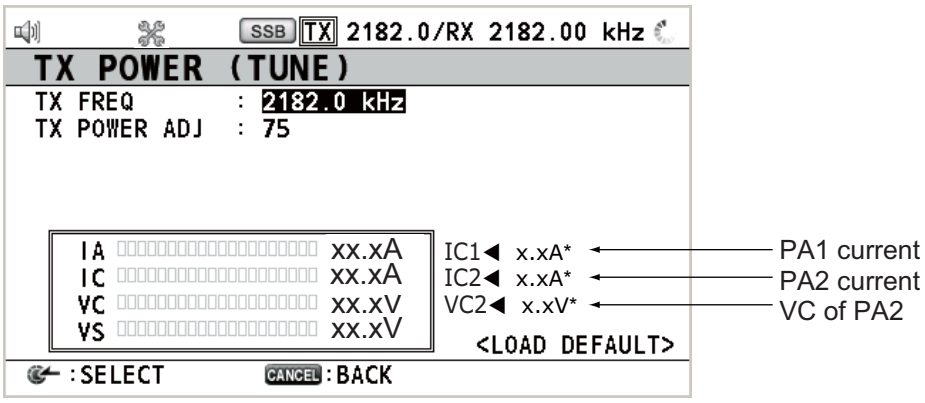
LOAD DEFAULT: Restore default TX power (user channel) settings.

Procedure

1) Set [TX MODE], [TX FREQ] and [TX POWER] as applicable. [TX POWER ADJ] shows the current TX power setting for item selected.
2) Press the PTT switch to show IA, IC, VC and VS figures.
3) Select [TX POWER ADJ], push the **Rotary** knob, rotate the knob to adjust TX power then push the knob.

Note: To get a tone signal from the speaker, set [TX TONE] to other than OFF. The frequency of the tone is as follows: SSB: 1500 Hz; 1100 Hz and 1700 Hz; 700 and 1700 Hz, DSC/NBDP: 1615 Hz; 1785 Hz; DOT, CW: Side tone frequency.

TX PWR (TUNE)



* Shown for FS-5075 only

Tune output power.

TX FREQ: Select the frequency.

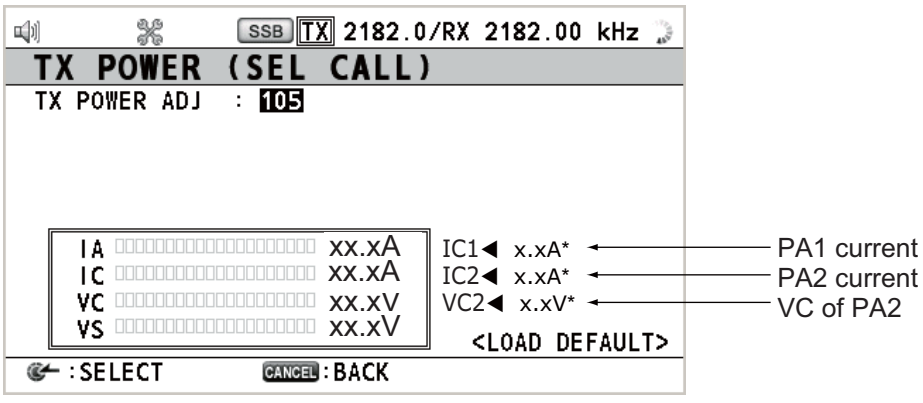
TX POWER ADJ: Set the TX power.

LOAD DEFAULT: Restore default TX tune settings.

Procedure

1) Set [TX FREQ] as applicable. [TX POWER ADJ] shows the current TX power setting for item selected.
2) Press the PTT switch to show IA, IC, VC and VS figures.
3) Select [TX POWER ADJ], push the **Rotary** knob, rotate the knob to adjust TX power then push the knob.

TX PWR (SELCALL)



* Shown for FS-5075 only

Tune output power on selcall frequencies.

TX POWER ADJ: Set the TX power.

LOAD DEFAULT: Restore default selcall TX power settings.

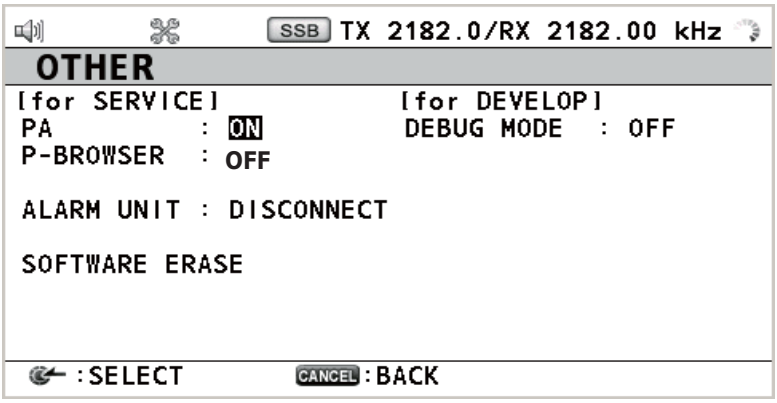
Procedure

1) Press the PTT switch to show IA, IC, VC and VS figures.

2) Select [TX POWER ADJ], push the **Rotary** knob, rotate the knob to adjust TX power then push the knob.

See the next several pages for sample antenna connections.

3.4.5 OTHER menu



PA: Lower output power. Select [OFF] to lower the output power. Reset the power to affect the change. For the service technician.

P-BROWSER: Select ON to enable the parameter browser, controlled from a PC.

ALARM UNIT: Select [CONNECT] if Alarm Unit IC-350 is connected.

SOFTWARE ERASE: For the service technician. See the service manual.

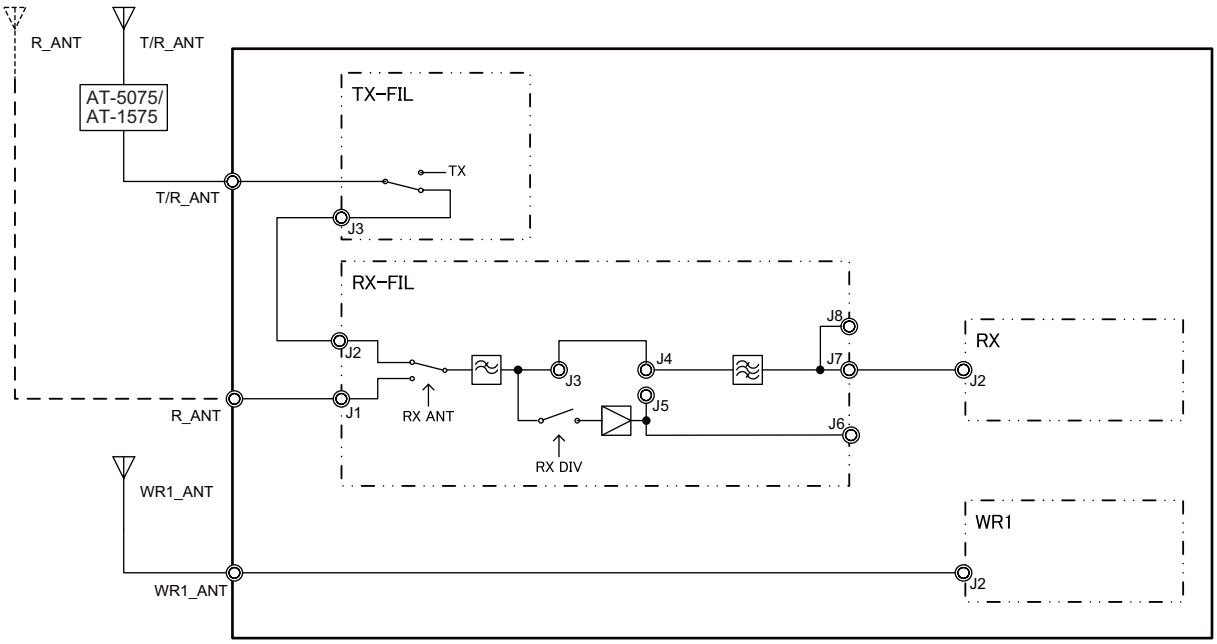
DEBUG MODE: For the developer. Leave the debug mode [OFF].

3.4.6 Example antenna configurations

Standard configurations

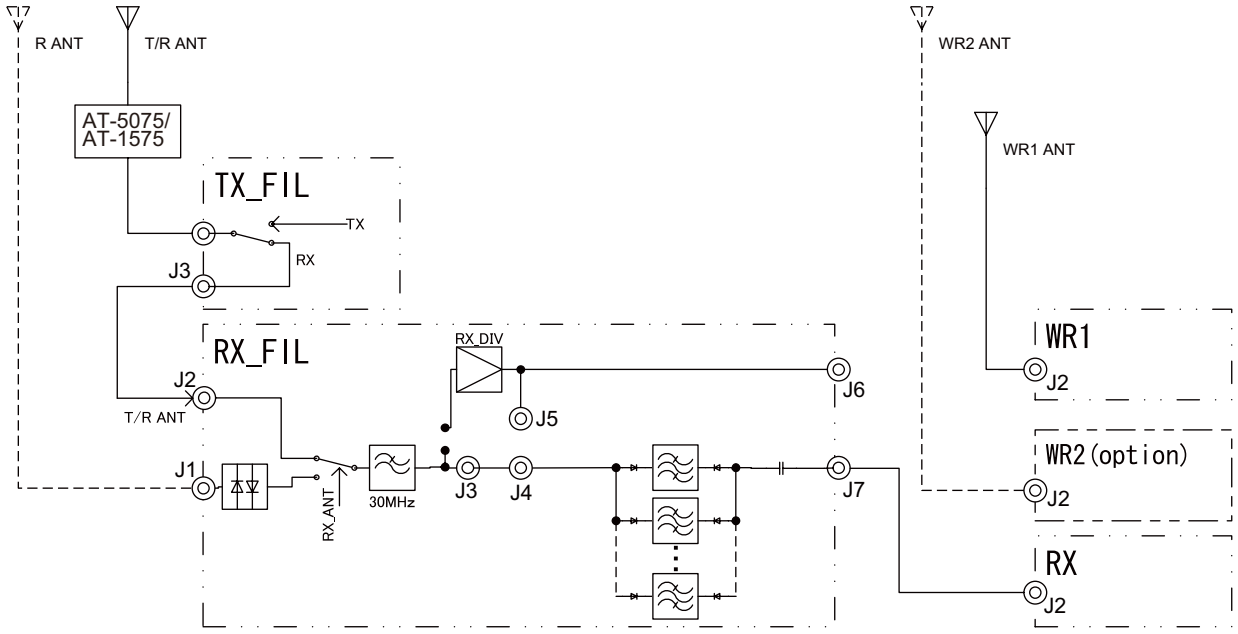
Standard configuration 1: Separate R_ANT and WR1 antennas

To connect R. ANT, set [RX ANT] on the [RT SETUP] menu to [CONNECT].



Standard configuration 2: Separate R_ANT and WR1 antennas, optional WR2 board installed

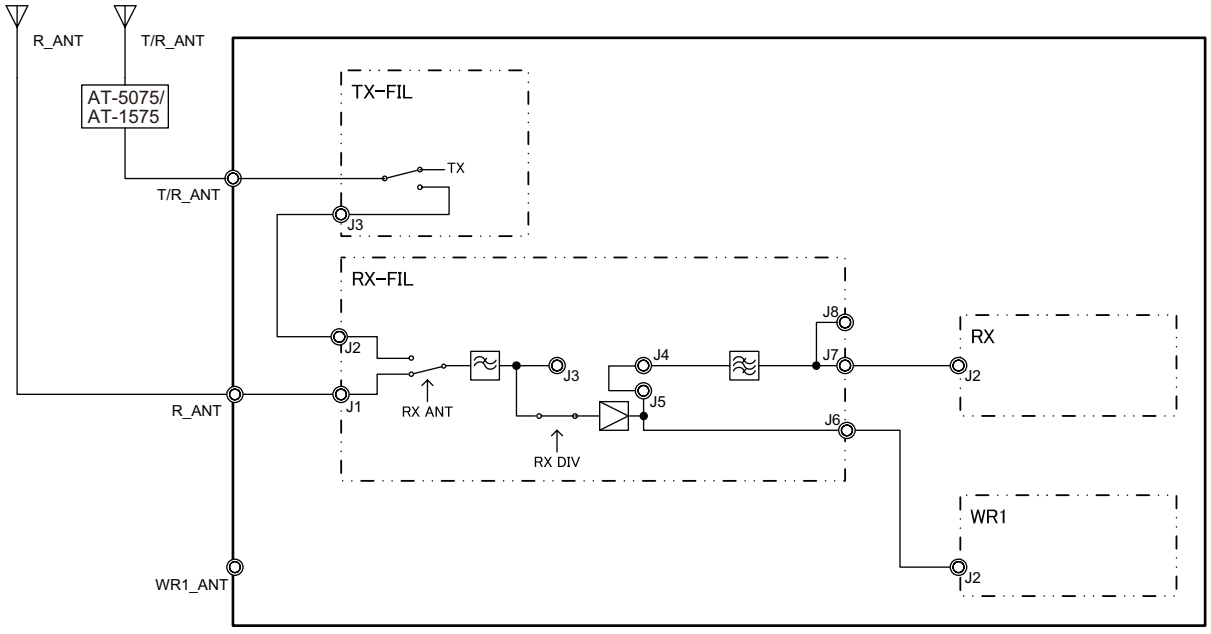
To connect R. ANT, set [RX ANT] on the [RT SETUP] menu to [CONNECT].



Shared antenna configurations

Shared antenna configuration 1: R_ANT and WR1 antennas commonly shared

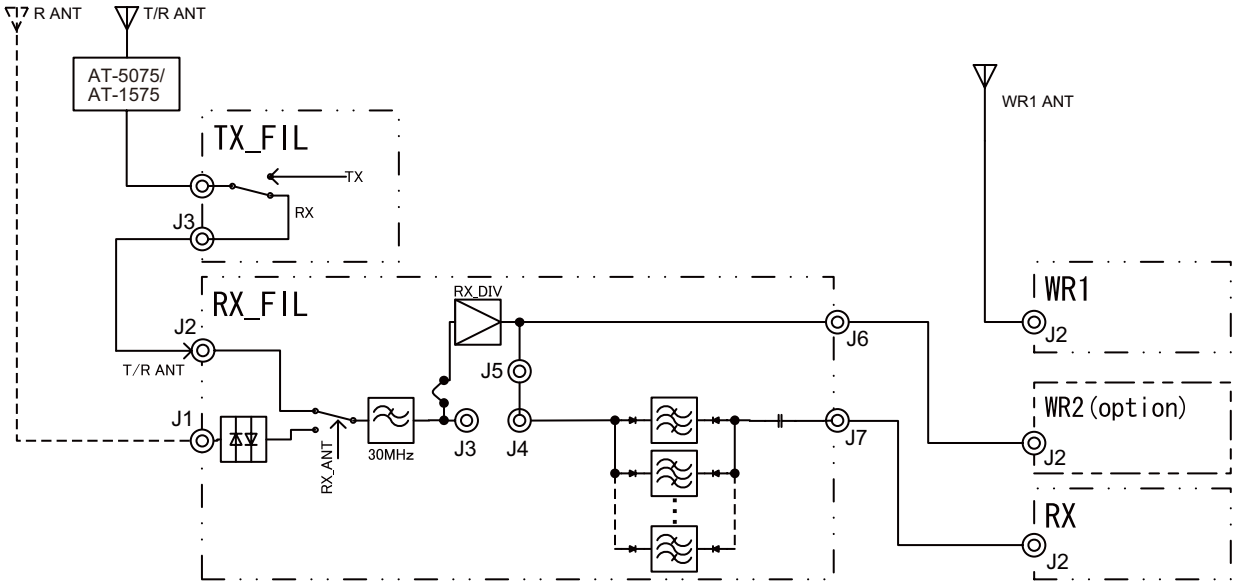
1) Turn on [DIVIDER] in the [RT SETUP] menu of the [SERVICE] menu.
2) Set [RX ANT] on the [RT SETUP] menu in the [SERVICE] menu to [CONNECT].
3) Use the mini-pin assemblies (supplied) to make these connections:
   - Connect J4 to J5 on the RX FIL Board.
   - Connect J6 on RX FIL Board to J2 on WR1 Board.



Shared antenna configuration 2: R_ANT and WR2 antennas commonly shared

Optional WR2 Board installed to watch on DSC general frequencies.

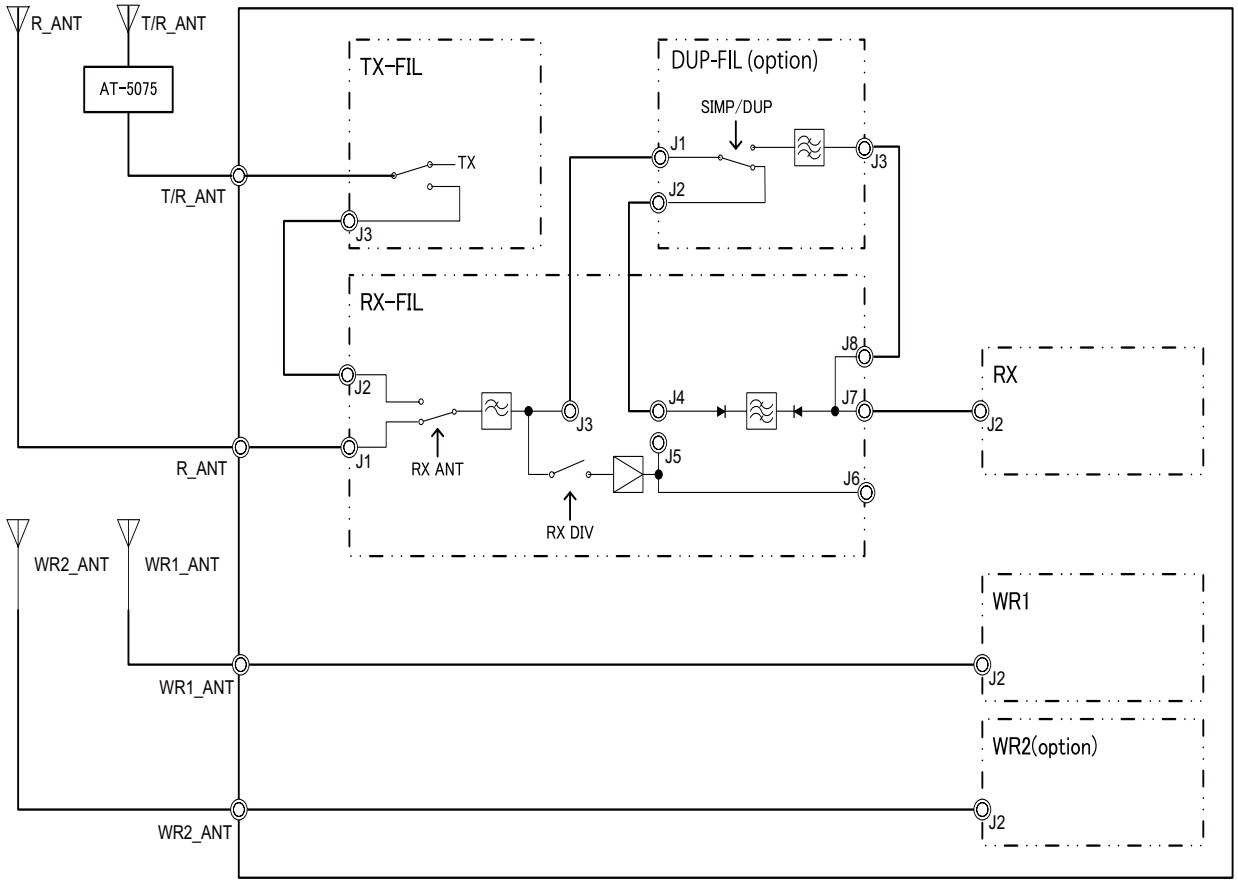
1) Turn on [DIVIDER] in the [RT SETUP] menu.
2) Set [RX ANT] on the [RT SETUP] menu to [CONNECT].
3) Use the mini-pin assemblies (supplied) to make these connections:
   - Connect J4 to J5 on the RX FIL Board.
   - Connect J6 on RX FIL Board to J2 on WR1 Board.



Full duplex configurations (FS-5075 only)

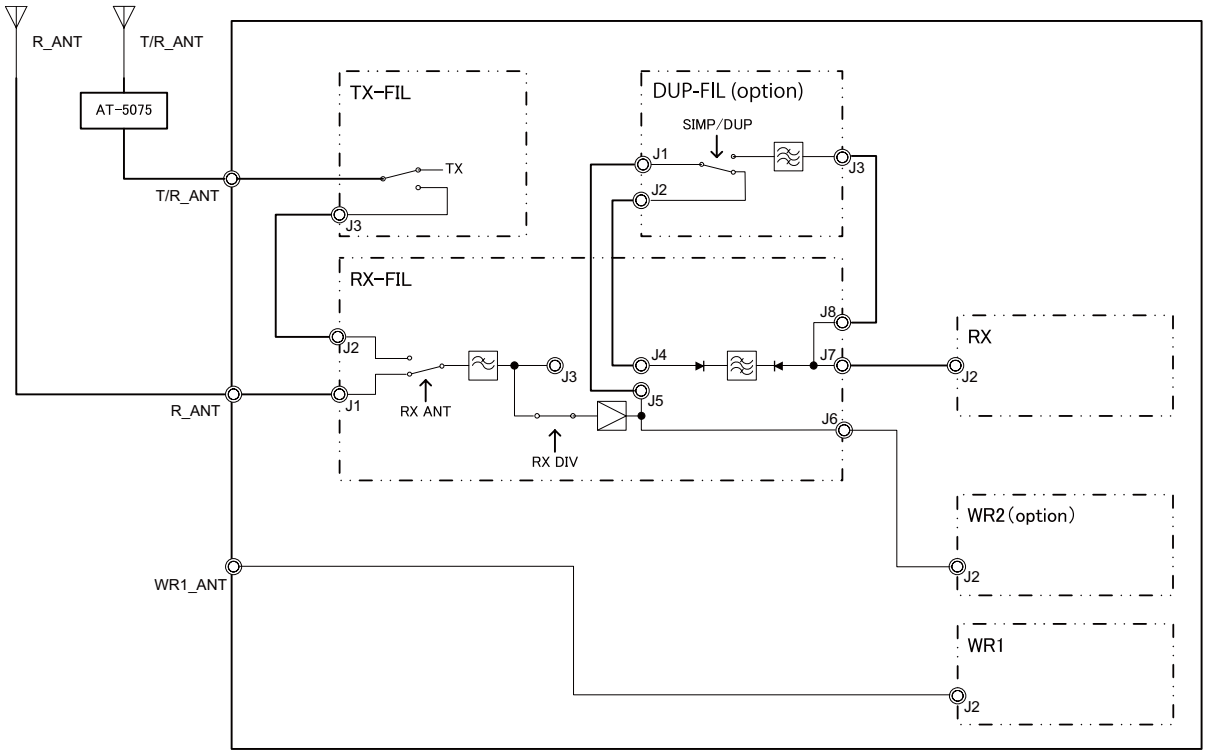
Full duplex configuration 1: Separate R_ANT and WR1 antennas, optional DUP-FIL board installed

Watch on DSC general frequencies available with installation of optional WR2 Board. Set [RX ANT] on the [RT SETUP] menu in the [SERVICE] menu to [CONNECT].



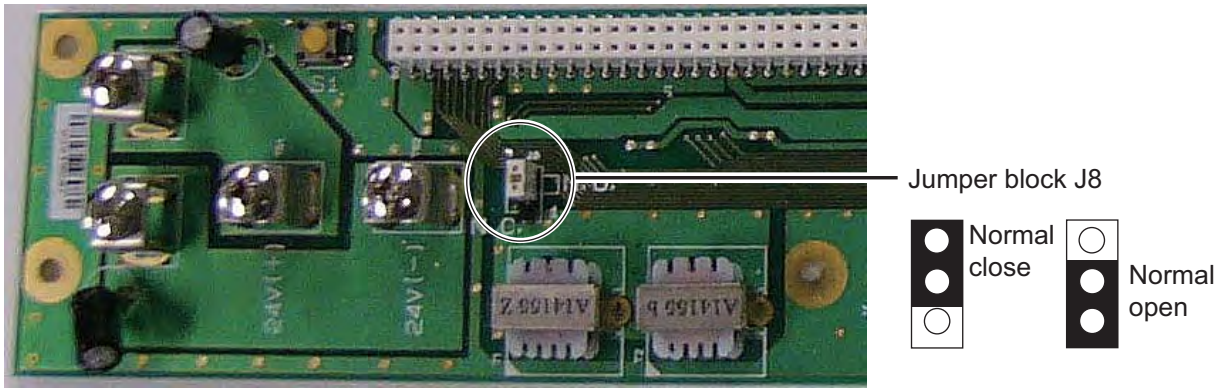
Full duplex configuration 2: R_ANT and WR1 (or WR2) antennas commonly shared

Turn on [DIVIDER] in the [RT SETUP] menu. Set [RX ANT] on the [RT SETUP] menu to [CONNECT].



3.5 Alarm Contact Signal

Set the format of the alarm contact signal for normal close or normal open, with the jumper block J8 on the T-IF Board (05P0861).



3.6 I/O Data

Data	Input/Output	Sentence, priority order
Position info, Position fix	Input	GNS>GGA>RMC>GLL
Time info	Input	ZDA>RMC
DSC information, Expanded DSC	Output	DSC, DSE

APPENDIX 1 JIS CABLE GUIDE

Cables listed in the manual are usually shown as Japanese Industrial Standard (JIS). Use the following guide to locate an equivalent cable locally.

JIS cable names may have up to 6 alphabetical characters, followed by a dash and a numerical value (example: DPYC-2.5). For core types D and T, the numerical designation indicates the *cross-sectional Area (mm^2)* of the core wire(s) in the cable. For core types M and TT, the numerical designation indicates the *number of core wires* in the cable.

1. Core Type

D Double core power line

T Triple core power line

M Multi core

TT Twisted pair communications (1Q=quad cable)

2. Insulation Type

P Ethylene Propylene Rubber

3. Sheath Type

Y PVC (Vinyl)

4. Armor Type

C Steel

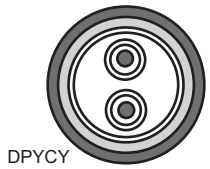
5. Sheath Type

Y Anticorrosive vinyl sheath

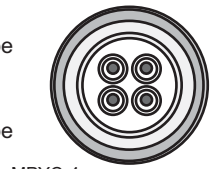
6. Shielding Type

SLA All cores in one shield, plastic tape w/aluminum tape

-SLA Individually shielded cores, plastic tape w/aluminum tape


DPYCY


TPYCY


MPYC-4


TTYCSLA-4

1 2 3 4 5 6

EX: DPYCYSLA - 1.5

Designation type ┘ Core Area (mm^2) ┘

1 2 3 4

MPYC - 4

Designation type ┘ # of cores ┘

The following reference table lists gives the measurements of JIS cables commonly used with Furuno products:

Type	Core Area	Core Diameter	Cable Diameter	Type	Core Area	Core Diameter	Cable Diameter
DPYC-1.5	1.5mm^2	1.56mm	11.7mm	TPYCY-1.5	1.5mm^2	1.56mm	14.5mm
DPYC-2.5	2.5mm^2	2.01mm	12.8mm	TPYCY-2.5	2.5mm^2	2.01mm	15.5mm
DPYC-4	4.0mm^2	2.55mm	13.9mm	TPYCY-4	4.0mm^2	2.55mm	16.9mm
DPYC-6	6.0mm^2	3.12mm	15.2mm	TPYCYSLA-1.5	1.5mm^2	1.56mm	13.9mm
DPYC-10	10.0mm^2	4.05mm	17.1mm	TTYC-7SLA	0.75mm^2	1.11mm	20.8mm
DPYC-16	16.0mm^2	5.10mm	19.4mm	TTYCSLA-1	0.75mm^2	1.11mm	9.4mm
DPYCY-1.5	1.5mm^2	1.56mm	13.7mm	TTYCSLA-1Q	0.75mm^2	1.11mm	10.8mm
DPYCY-2.5	2.5mm^2	2.01mm	14.8mm	TTYCSLA-4	0.75mm^2	1.11mm	15.7mm
DPYCY-4	4.0mm^2	2.55mm	15.9mm	TTYCY-4SLA	0.75mm^2	1.11mm	19.5mm
DPYCYSLA-1.5	1.5mm^2	1.56mm	11.9mm	TTYCYSLA-1	0.75mm^2	1.11mm	11.2mm
DPYCYSLA-2.5	2.5mm^2	2.01mm	13.0mm	TTYCYSLA-4	0.75mm^2	1.11mm	17.9mm
MPYC-2	1.0mm^2	1.29mm	10.0mm				
MPYC-4	1.0mm^2	1.29mm	11.2mm				
MPYC-7	1.0mm^2	1.29mm	13.2mm				
MPYCY-12	1.0mm^2	1.29mm	19.0mm				
MPYCY-19	1.0mm^2	1.29mm	22.0mm				

PACKING LIST

FS-1575T-J/E/J-HK

A-1

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
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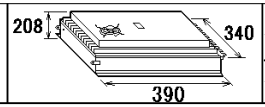
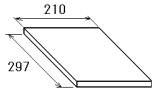
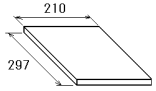
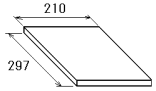
送受信部 TRANSCEIVER UNIT		FS-1575T-J/E/J-HK 000-020-900-00 **	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP05-12001 001-135-560-00	1
図書 DOCUMENT			
取扱説明書 OPERATOR'S MANUAL		OM*-56770-* 000-175-164-1* **	1
操作要領書 OPERATOR'S GUIDE		OS*-56770-* 000-175-166-1* **	1
装備要領書 INSTALLATION MANUAL		IM*-56770-* 000-175-168-1* **	1

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（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

PACKING LIST

A-2

FS-2575T-J/E/J-HK

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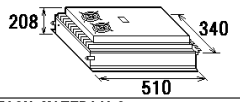
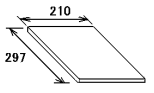
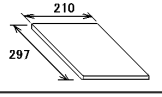
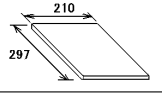
送受信部 TRANSCEIVER UNIT		FS-2575T-J/E/J-HK 000-019-234-00 **	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP05-12001 001-135-560-00	1
図書 DOCUMENT			
取扱説明書 OPERATOR'S MANUAL		OM*-56770-* 000-175-164-1* **	1
操作要領書 OPERATOR'S GUIDE		OS*-56770-* 000-175-166-1* **	1
装備要領書 INSTALLATION MANUAL		IM*-56770-* 000-175-168-1* **	1

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PACKING LIST

05E0-X-9852 -1 1/1
A-3

FS-5075T-J/E/J-HK

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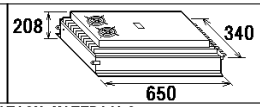
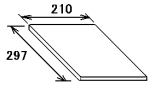
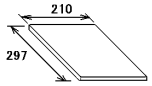
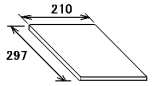
送受信部 TRANSCEIVER UNIT		FS-5075T-J/E-J-HK 000-019-237-00 **	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP05-12001 001-135-560-00	1
図書 DOCUMENT			
取扱説明書 OPERATOR'S MANUAL		OM*-56770-* 000-175-164-1* **	1
操作要領書 OPERATOR'S GUIDE		OS*-56770-* 000-175-166-1* **	1
装備要領書 INSTALLATION MANUAL		IM*-56770-* 000-175-168-1* **	1

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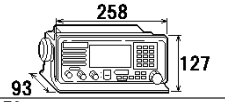
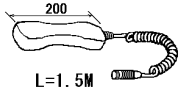
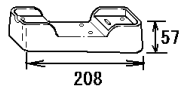
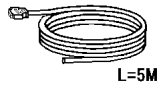
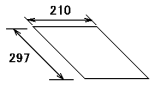
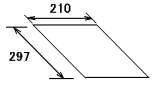
C5678-Z01-B

PACKING LIST

05E0-X-9854 -0 1/1
A-4

FS-2575C-J-A/E-A/J-A-HK

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット UNIT			
操作表示部 CONTROL UNIT		FS-2575C-J/E/J-HK 000-019-240-00 **	1
付属品 ACCESSORIES		**FP05-06600**	
ﾊﾝﾄﾞｾｯﾄ HANDSET		HS-2003-15 000-015-996-00	1
ﾊﾝﾄﾞｾｯﾄﾊﾝｶﾞｰ組品 BRACKET FOR HANDSET		FP05-05510 005-951-790-00	1
付属品 ACCESSORIES		FP05-05511 005-951-920-00	1
工事材料 INSTALLATION MATERIALS		**CP05-12110**	
ｹｰﾌﾞﾙ組品 CABLE ASSEMBLY		DSUB15-5P-L5M 001-146-850-10	1
工事材料 INSTALLATION MATERIALS		CP05-12101 001-135-570-00	1
図書 DOCUMENT			
遭難警報ﾌﾛｰ(HF) DISTRESS ALERT CHART (HF)		*52-00102-* 000-809-271-1* **	1
遭難警報ﾌﾛｰ(VHF/MF) DISTRESS ALERT CHART(VHFMF)		*52-00101-* 000-809-269-1* **	1

ｺｰﾄﾞ番号末尾の[**]は、選択品の代表ｺｰﾄﾞを表します。
CODE NUMBER ENDING WITH "**" INDICATES THE CODE NUMBER OF REPRESENTATIVE MATERIAL.

型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。
TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

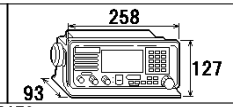
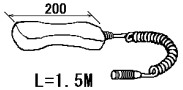
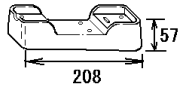
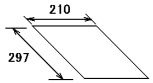
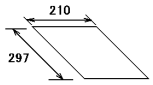
C5677-Z06-A

PACKING LIST

05E0-X-9853 -1 1/1

A-5

FS-2575C-J-N/E-N/J-N-HK

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット UNIT			
操作表示部 CONTROL UNIT		FS-2575C-J/E/J-HK 000-019-240-00 **	1
付属品 ACCESSORIES		**FP05-06600**	
ﾊﾝﾄﾞｾｯﾄ HANDSET		HS-2003-15 000-015-996-00	1
ﾊﾝﾄﾞｾｯﾄﾊﾝｶﾞｰ組品 BRACKET FOR HANDSET		FP05-05510 005-951-790-00	1
付属品 ACCESSORIES		FP05-05511 005-951-920-00	1
工事材料 INSTALLATION MATERIALS		**CP05-12100**	
工事材料 INSTALLATION MATERIALS		CP05-12101 001-135-570-00	1
図書 DOCUMENT			
遭難警報ﾌﾛｰ(HF) DISTRESS ALERT CHART (HF)		*52-00102-* 000-809-271-1* **	1
遭難警報ﾌﾛｰ(VHF/MF) DISTRESS ALERT CHART(VHFMF)		*52-00101-* 000-809-269-1* **	1

ｺｰﾄﾞ番号末尾の[**]は、選択品の代表ｺｰﾄﾞを表します。
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型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

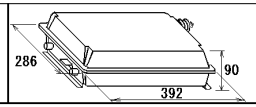
C5677-Z02-B

PACKING LIST

05ER-X-9852 -0 1/1

A-6

AT-1575-AES/-HK

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット UNIT			
ｱﾝﾃﾅｶﾌﾟﾗ ANTENNA COUPLER		AT-1575-AES/-HK 000-020-911-00 **	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP05-12901 001-175-190-00	1

ｺｰﾄﾞ番号末尾の[**]は、選択品の代表ｺｰﾄﾞを表します。
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型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

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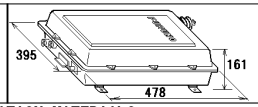
C5676-Z02-A

PACKING LIST

AT-5075/HK

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット UNIT			
ｱﾝﾃﾅｶﾌﾟﾗ ANTENNA COUPLER		AT-5075/HK 000-019-243-00 **	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP05-12201 001-135-590-00	1

ｺｰﾄﾞ番号末尾の[**]は、選択品の代表ｺｰﾄﾞを表します。
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型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

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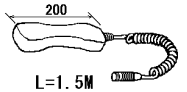
PACKING LIST

SP05-06000

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
予備品 SPARE PARTS			
ﾊﾝﾄﾞｾｯﾄ HANDSET		HS-2003-15 000-015-996-00	1
予備品 SPARE PARTS		SP05-06001 001-135-530-00	1

型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

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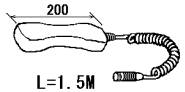
PACKING LIST

SP05-06100

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
予備品 **SPARE PARTS**			
ﾊﾝﾄﾞｾｯﾄ HANDSET		HS-2003-15 000-015-996-00	1
予備品 SPARE PARTS		SP05-06101 001-135-540-00	1

型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

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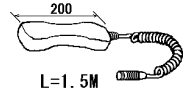
PACKING LIST

SP05-06300

NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット **UNIT**			
ﾊﾝﾄﾞｾｯﾄ HANDSET		HS-2003-15 000-015-996-00	1
予備品 **SPARE PARTS**			
予備品 SPARE PARTS		SP05-06301 001-174-840-00	1

型式/ｺｰﾄﾞ番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

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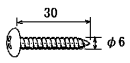
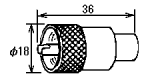
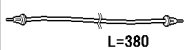
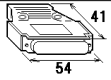
FURUNO

CODE NO.	001-135-560-00	05E0-X-9403 -2
TYPE	CP05-12001	1/1

工事材料表
INSTALLATION MATERIALS

FS-1575T/2575T/5075T

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ﾅﾄﾗｽﾀｯﾋﾟﾝﾈｼﾞ 1ｼｭ SELF-TAPPING SCREW		6X30 SUS304 CODE NO. 000-162-614-10	6	
2	ｺﾈｸﾀ (M) COAXIAL CONNECTOR *M TYPE*		GSC-100/MP-7 CODE NO. 000-166-977-10	2	
3	ﾐﾆﾋﾟﾝ組品(1) MINI PIN ASSY(1)		L-380 CODE NO. 000-165-859-10	1	
4	ﾎﾟﾘｶｰﾎﾞﾈｰﾄ POLYCARBONATE WASHER		M6 P.C CODE NO. 000-168-259-10	6	
5	ｺﾈｸﾀ(XM2) CONNECTOR(D-SUB)		XM2S-2513-S014 CODE NO. 001-115-850-10	1	

型式/ｺｰﾄﾞ番号が２段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

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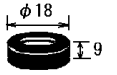
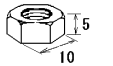
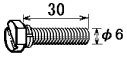
FURUNO ELECTRIC CO ., LTD.

FURUNO

CODE NO.	001-135-590-00	05E0-X-9405 -0
TYPE	CP05-12201	1/1

工事材料表
INSTALLATION MATERIALS

AT-5075/HK

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ｸﾞﾗﾝﾄﾞﾊﾟｯｷﾝ1 GROUND GASKET 1		05-106-3619-0 CODE NO. 100-366-120-10	1	
2	六角ﾅｯﾄ 1ｼｭ HEXAGONAL NUT		M6 SUS304 CODE NO. 000-158-856-10	4	
3	ﾐｶﾞｷ平座金 FLAT WASHER		M6 SUS304 CODE NO. 000-158-854-10	8	
4	六角ｽﾘﾜﾘ ｾﾑｽA HEX.BOLT(SLOTTED WASHER HEAD)		M6X30 SUS304 CODE NO. 000-162-937-10	4	

型式/ｺｰﾄﾞ番号が２段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

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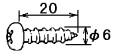
FURUNO ELECTRIC CO ., LTD.

FURUNO

CODE NO.	001-175-190-00	05ER-X-9401 -0
TYPE	CP05-12901	1/1

工事材料表

INSTALLATION MATERIALS

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ﾅﾍﾞﾀｯﾋﾟﾝUI 1ｼｭ SELF-TAPPING SCREW		6X20 SUS304 CODE NO. 000-163-871-10	4	
2	ﾐｶﾞｷ平座金 FLAT WASHER		M6 SUS304 CODE NO. 000-158-854-10	4	

型式/ｺｰﾄﾞ番号が２段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。　なお、品質は変わりません。

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QUALITY IS THE SAME.
（略図の寸法は、参考値です。　DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

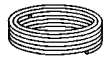
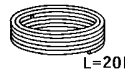
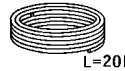
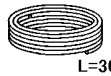
FURUNO

CODE NO.		05EO-X-9406 -1
TYPE		1/1

工事材料表

INSTALLATION MATERIALS

AT-1575/1575-HK/5075/5075-HK(CP05-123**/108**)

番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ｹｰﾌﾞﾙ(5P) 5P TWISTED PAIR CABLE		05S0793-0 *10M* CODE NO. 000-125-984-10	1	(*2) 選択 TO BE SELECTED
2	ｹｰﾌﾞﾙ(5P) 5P TWISTED PAIR CABLE		05S0793-0 *20M* CODE NO. 000-125-986-10	1	(*2) 選択 TO BE SELECTED
3	ｹｰﾌﾞﾙ(5P) 5P TWISTED PAIR CABLE		05S0793-0 *30M* CODE NO. 000-125-987-10	1	(*2) 選択 TO BE SELECTED
4	ｹｰﾌﾞﾙ(5P) 5P TWISTED PAIR CABLE		05S0793-0 *40M* CODE NO. 000-125-988-10	1	(*2) 選択 TO BE SELECTED
5	ｹｰﾌﾞﾙ(5P) 5P TWISTED PAIR CABLE		05S0793-0 *50M* CODE NO. 000-125-989-10	1	(*2) 選択 TO BE SELECTED
6	ｹｰﾌﾞﾙ(7C) CABLE(7C)		05S0952 *10M* CODE NO. 000-758-821-10	1	(*1) 選択 TO BE SELECTED
7	ｹｰﾌﾞﾙ(7C) CABLE(7C)		05S0952 *20M CODE NO. 000-758-822-10	1	(*1) 選択 TO BE SELECTED
8	ｹｰﾌﾞﾙ(7C) CABLE(7C)		05S0952 *30M* CODE NO. 000-758-823-10	1	(*1) 選択 TO BE SELECTED
9	ｹｰﾌﾞﾙ(7C) CABLE(7C)		05S0952 *40M* CODE NO. 000-758-824-10	1	(*1) 選択 TO BE SELECTED
10	ｹｰﾌﾞﾙ(7C) CABLE(7C)		05S0952 *50M* CODE NO. 000-758-825-10	1	(*1) 選択 TO BE SELECTED

(*1), (*2)より選択願います。
CHOOSE ONE FROM *1 AND *2.

型式/ｺｰﾄﾞ番号が２段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。　なお、品質は変わりません。

TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT.
QUALITY IS THE SAME.
（略図の寸法は、参考値です。　DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

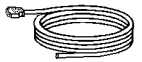
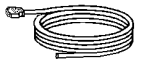
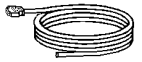
FURUNO

CODE NO.		05E0-X-9409 -1
TYPE	CP05-124**	1/1

工事材料表

INSTALLATION MATERIALS

FS-1575/2575/5075

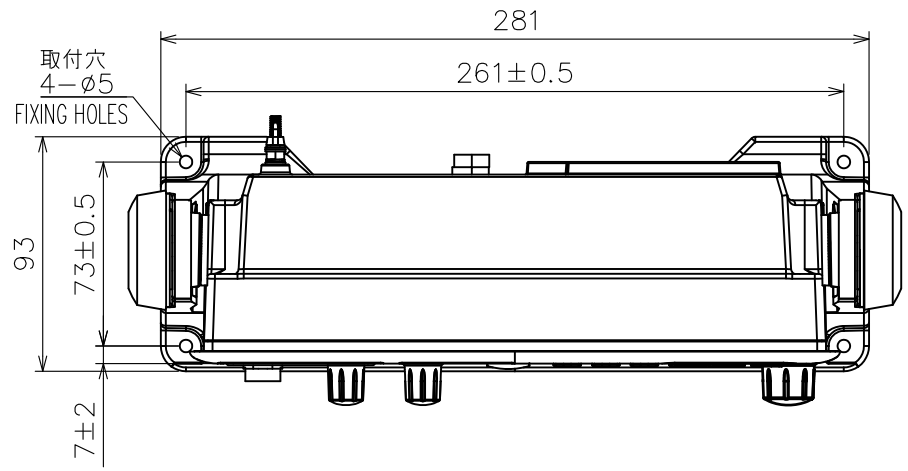
番号 NO.	名称 NAME	略図 OUTLINE	型名／規格 DESCRIPTIONS	数量 Q'TY	用途／備考 REMARKS
1	ｹｰﾌﾞﾙ組品 CABLE ASSEMBLY	 L=10M	DSUB15-5P-L10M CODE NO. 001-146-860-10	1	*選択 TO BE SELECTED
2	ｹｰﾌﾞﾙ組品 CABLE ASSEMBLY	 L=20M	DSUB15-5P-L20M CODE NO. 001-146-870-10	1	*選択 TO BE SELECTED
3	ｹｰﾌﾞﾙ組品 CABLE ASSEMBLY	 L=30M	DSUB15-5P-L30M CODE NO. 001-146-880-10	1	*選択 TO BE SELECTED
4	ｹｰﾌﾞﾙ組品 CABLE ASSEMBLY	 L=40M	DSUB15-5P-L40M CODE NO. 001-146-890-10	1	*選択 TO BE SELECTED
5	ｹｰﾌﾞﾙ組品 CABLE ASSEMBLY	 L=50M	DSUB15-5P-L50M CODE NO. 001-146-900-10	1	*選択 TO BE SELECTED

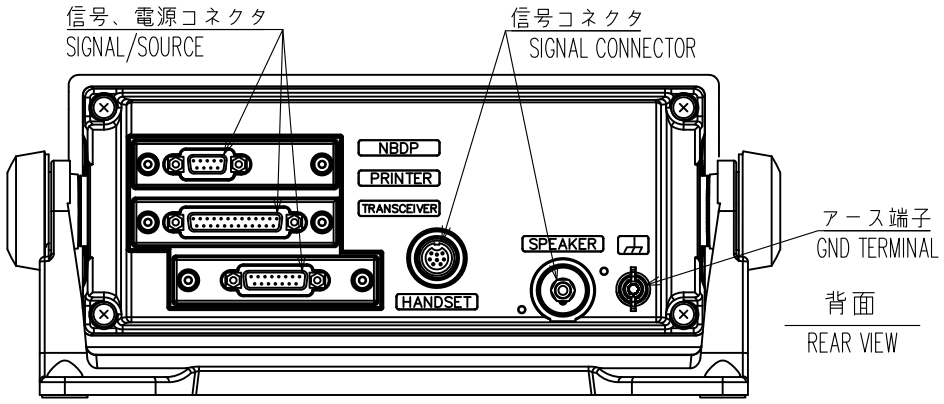
型式/ｺｰﾄﾞ番号が２段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。 なお、品質は変わりません。

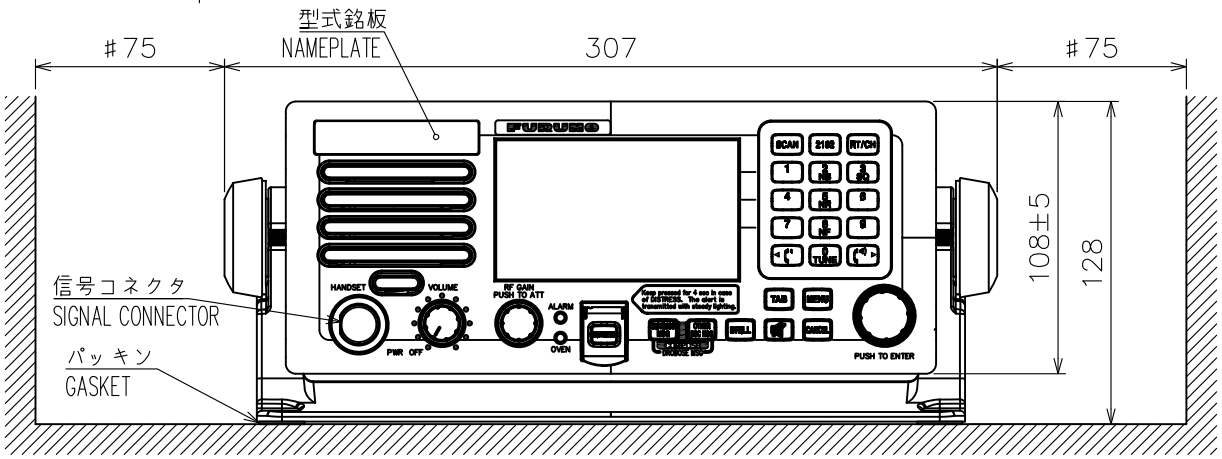
TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

（略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.）

FURUNO







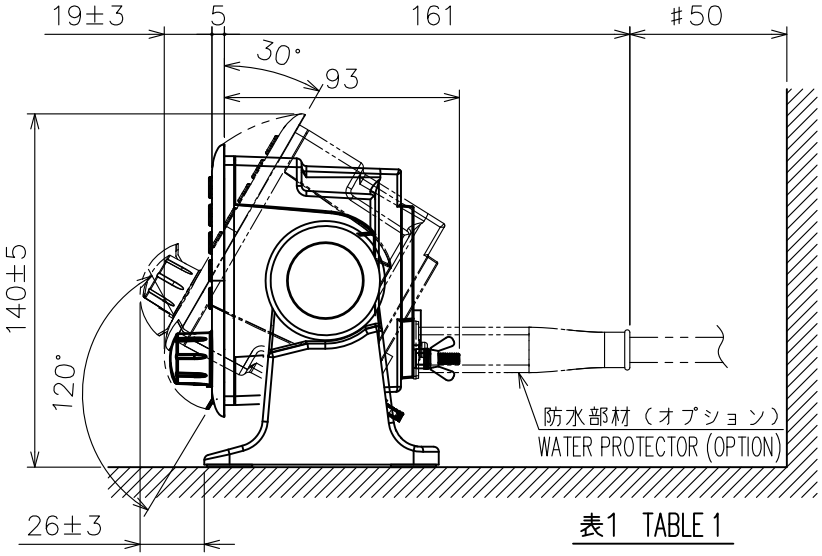


表1 TABLE 1

寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3

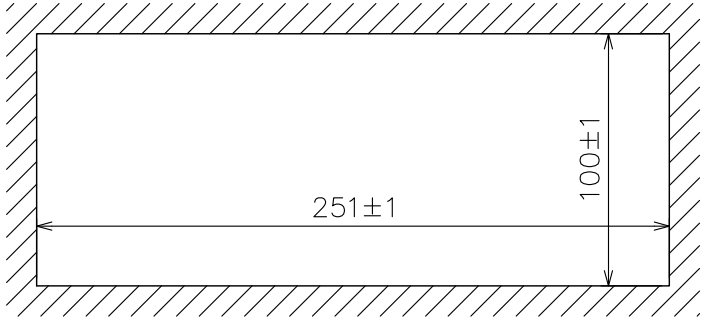
注 記 1）指定外の寸法公差は表１による。
2）＃印寸法は最小サービス空間寸法とする。
3）取付用ネジは＋トラスタッピンネジ呼び径４ｘ１６を使用のこと。

NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE TAPPING SCREWS ø4x16 FOR FIXING THE UNIT.

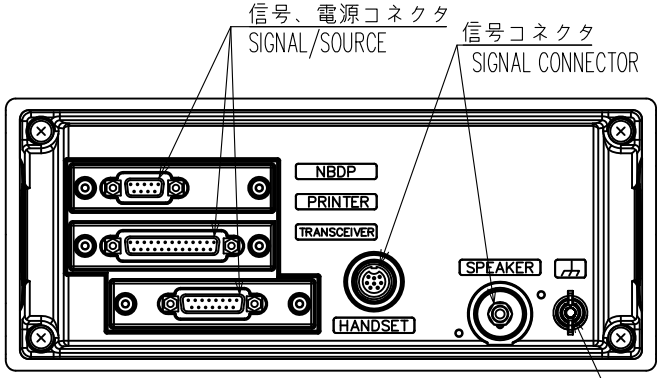
DRAWN 31/May/2011 T.YAMASAKI		TITLE	FS-2575C
CHECKED 31/May/2011 H.MAKI		名称	操作表示部（卓上装備）
APPROVED 31/May/2011 Y.NISHIYAMA			外寸図
SCALE 1/3	MASS 1.8 ±10% kg 質量はケーブル・オプションを含まず。MASS DOES NOT INCLUDE CABLE/OPTION.	NAME	CONTROL UNIT (TABLETOP MOUNT)
DWG.No. C5677-G01- C	REF.No. 05-106-550G-2		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO



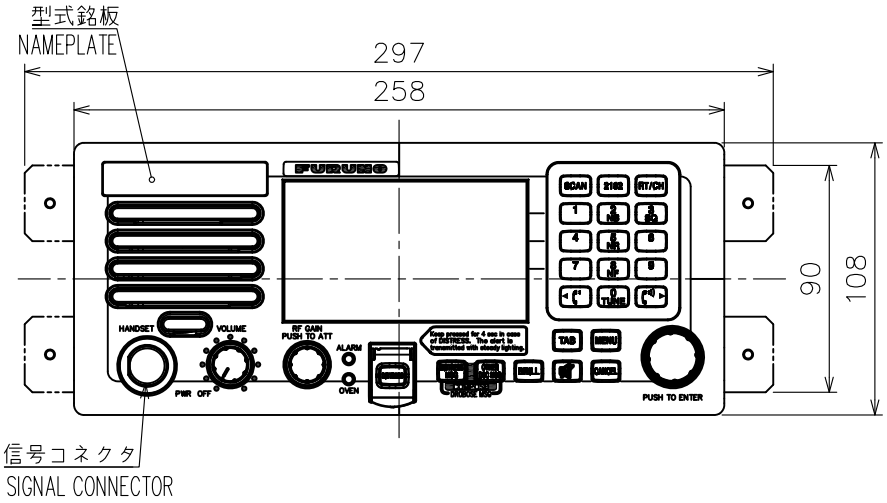
取付穴寸法（参考図）
CUTOUT DIMENSIONS (FOR REFERENCE)

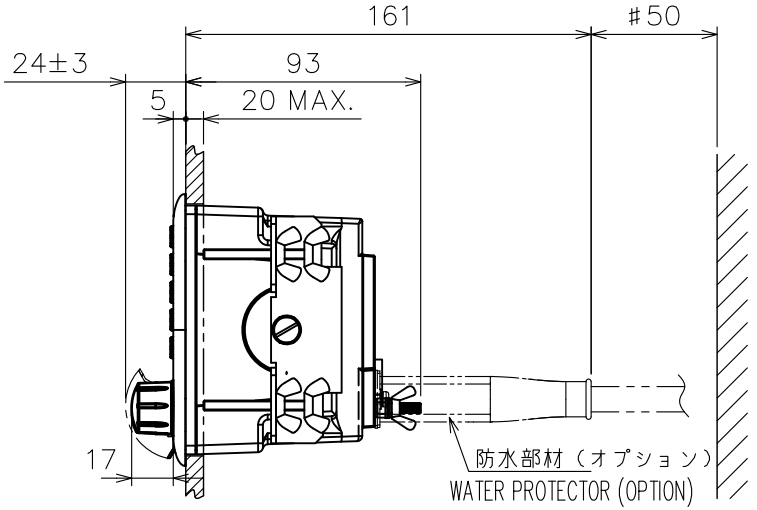


背面
REAR VIEW

表 1 TABLE 1

寸法区分（mm）DIMENSION	公差（mm）TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3





注　記　1）指定外の寸法公差は表１による。
　　2）＃印寸法は最小サービス空間寸法とする。
　　3）壁の厚さは最大２０ｍｍとする。

NOTE　1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
　　2. #: MINIMUM SERVICE CLEARANCE.
　　3. BULKHEAD THICKNESS: 20mm MAX.

DRAWN 25/May/2011 T.YAMASAKI		TITLE	FS-2575C
CHECKED 26/May/2011 H.MAKI		名称	操作表示部（埋込装備）
APPROVED 27/May/2011 Y.NISHIYAMA			外寸図
SCALE 1/3 MASS 1.8 ±10% kg	質量はケーブル・オプションを含まず。MASS DOES NOT INCLUDE CABLE/OPTION.	NAME	CONTROL UNIT (FLUSH MOUNT)
DWG.No. C5677-G02- B	REF.No. 05-106-551G-1		OUTLINE DRAWING

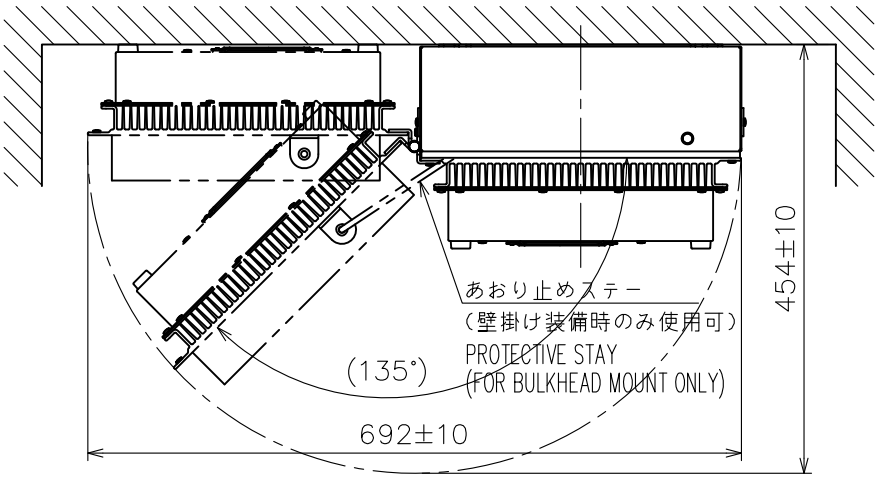
FURUNO ELECTRIC CO., LTD.

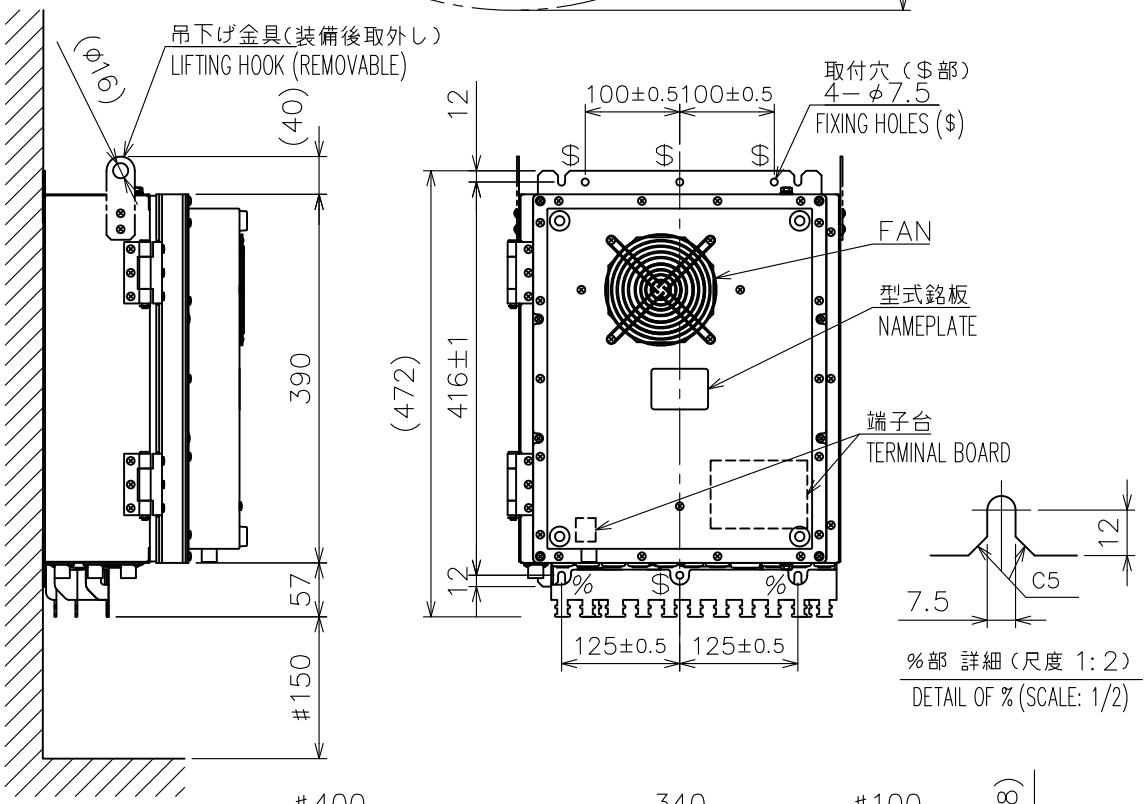
FURUNO

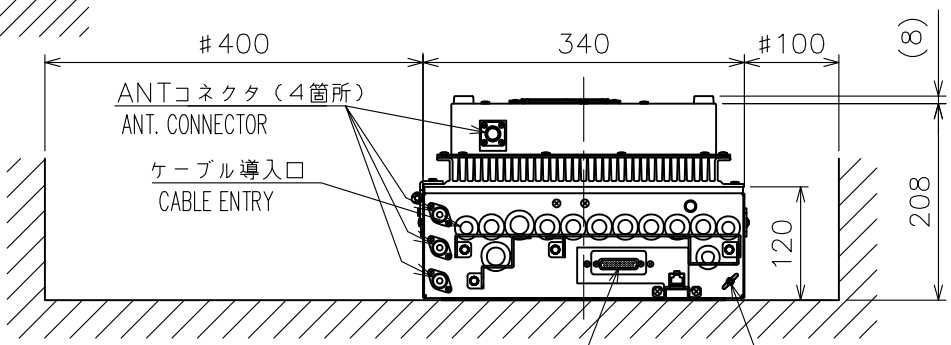
D-3a

表1 TABLE 1

寸法区分 (mm) DIMENSION	公差 (mm) TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3







注 記 1) 指定外の寸法公差は表1による。
2) #印寸法は最小サービス空間寸法とする。
3) 取付用ネジは+トラスタッピンネジ6x30を使用のこと。

NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE TAPPING SCREWS ø6x30 FOR FIXING THE UNIT.

DRAWN 16/Mar/2012 T.YAMASAKI		TITLE	FS-1575T
CHECKED 16/Mar/2012 H.MAKI		名称	送受信部
APPROVED 16/Mar/2012 Y.NISHIYAMA	FS-1575		外寸図
SCALE 1/8	MASS 16 ±10% kg	NAME	TRANSCEIVER UNIT
DWG. No. C5676-G03- A	REF. No. 05-106-252G-0		OUTLINE DRAWING

FURUNO

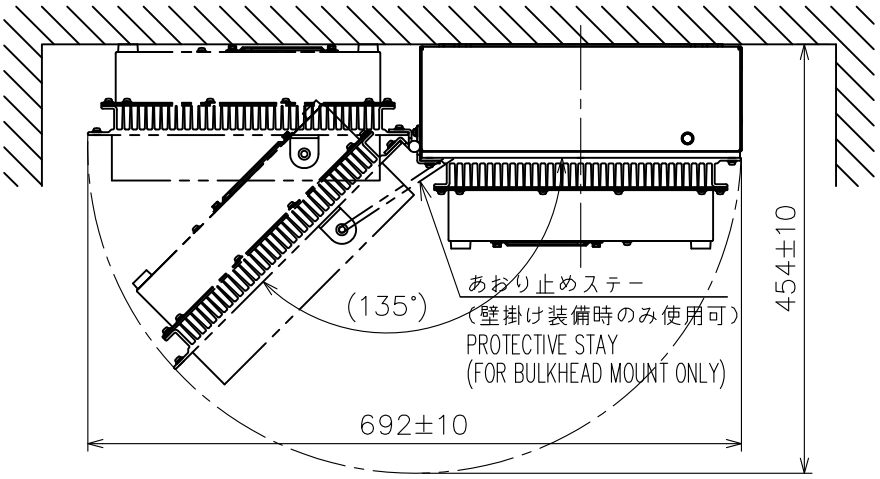
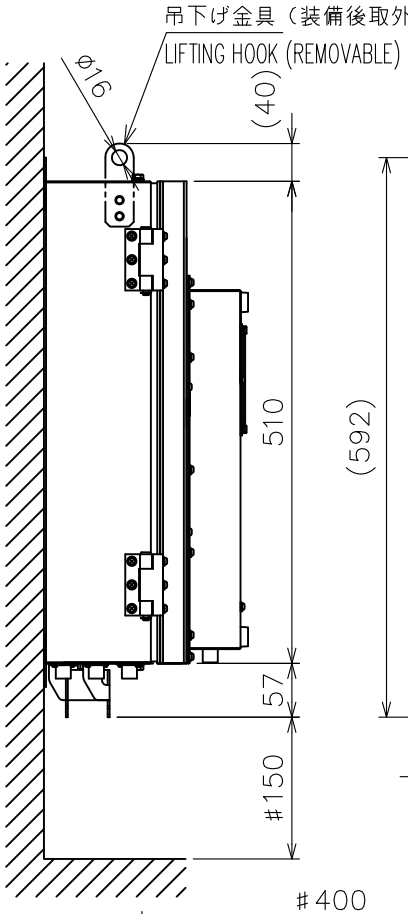
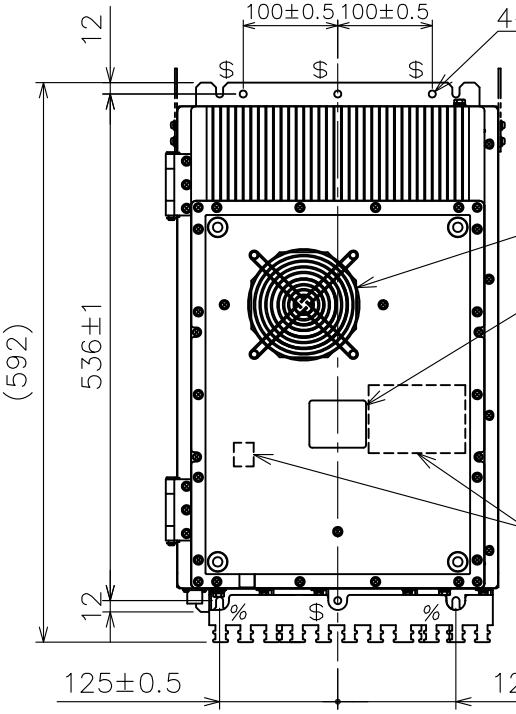


表1 TABLE 1

寸法区分 (mm) DIMENSION	公差 (mm) TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3
500<L≦1000	±4



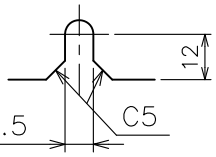


注 記

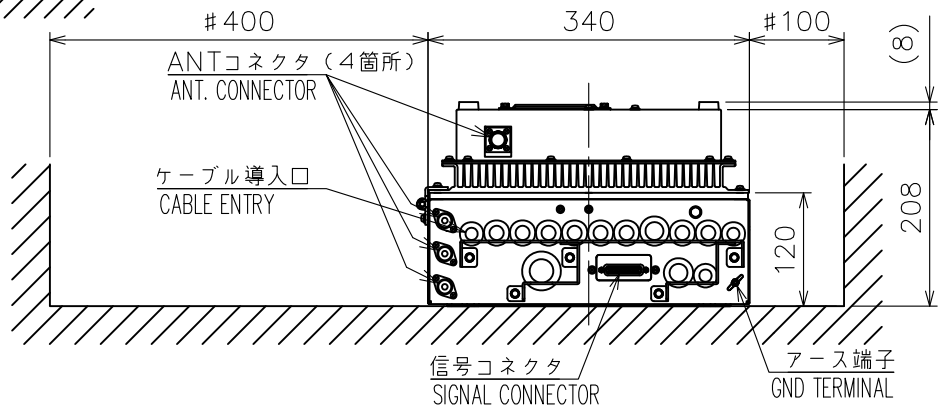
1) 指定外の寸法公差は表1による。
2) #印寸法は最小サービス空間寸法とする。
3) 取付用ネジは+トラスタッピンネジ
呼び径6x30を使用のこと。

NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE TAPPING SCREWS ø6x30 FOR FIXING THE UNIT.



%部 詳細 (尺度 1:2)
DETAIL OF % (SCALE: 1/2)

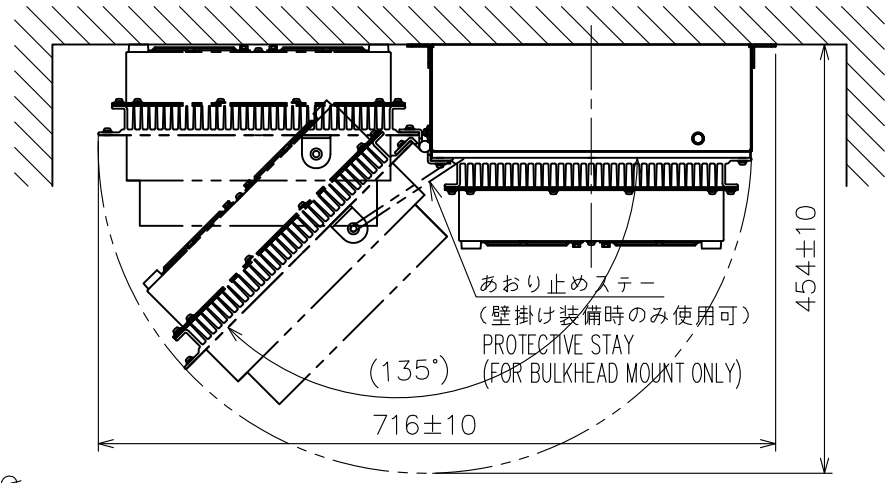


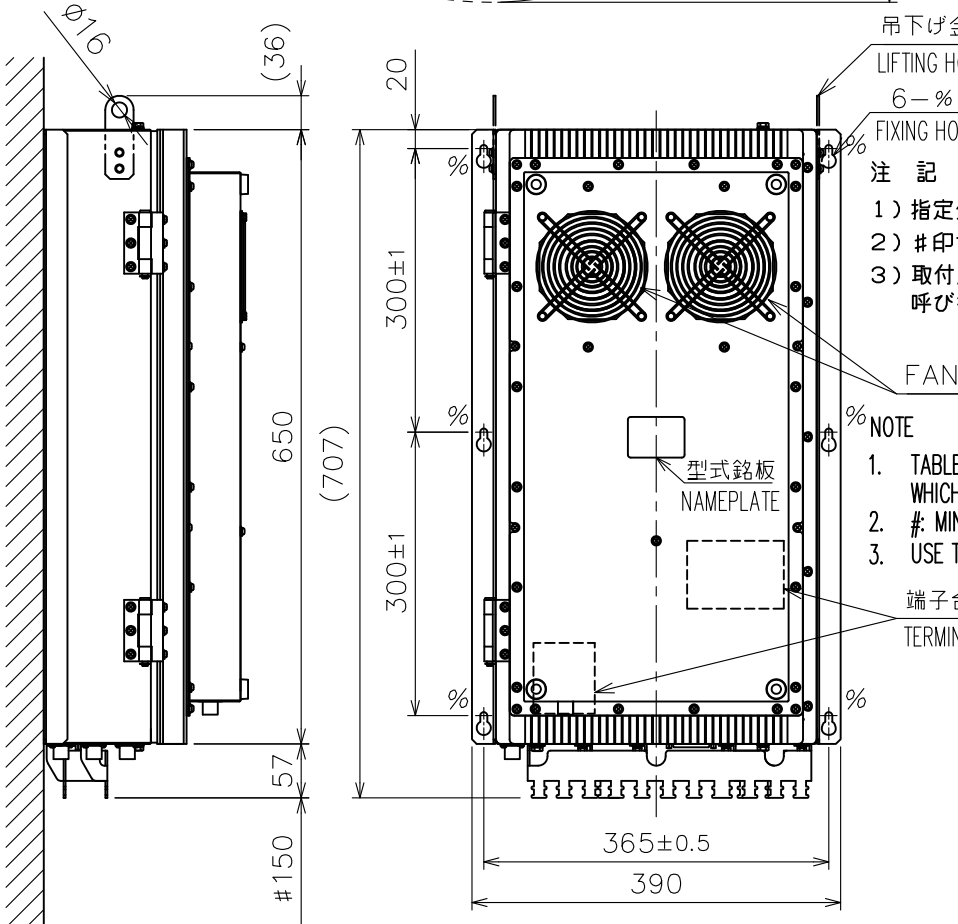
DRAWN 26/Apr/2011 T.YAMASAKI		TITLE	FS-2575T
CHECKED 26/Apr/2011 H.MAKI		名称	送受信部
APPROVED 26/Apr/2011 D.MILLS	FS-2575		外寸図
SCALE 1/8 MASS 20 ±10% kg		NAME	TRANSCEIVER UNIT
DWG. No. C5677-G03- A	REF. No. 05-106-251G-0		OUTLINE DRAWING

FURUNO

表1 TABLE 1

寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3
500<L≦1000	±4



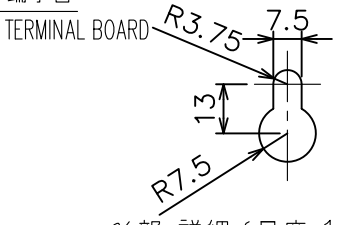


注 記

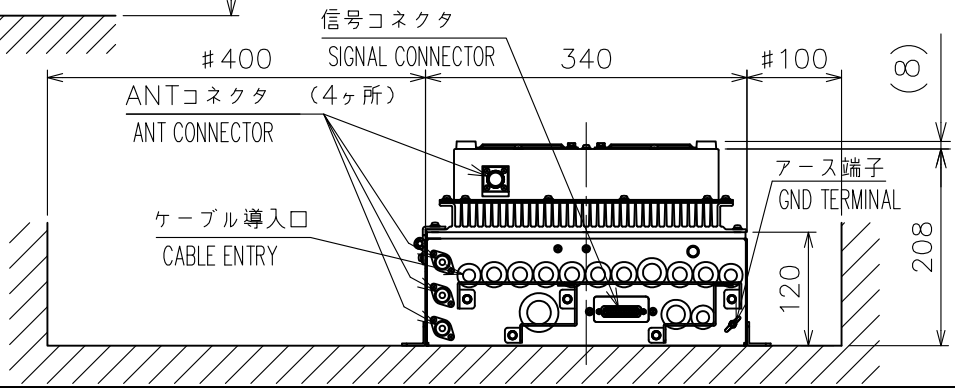
1）指定外の寸法公差は表1による。
2）#印寸法は最小サービス空間寸法とする。
3）取付用ネジは＋トラスタッピンネジ
呼び径6×30を使用のこと。

NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE TAPPING SCREWS ø6x30 FOR FIXING THE UNIT.



%部 詳細（尺度 1:2）
DETAIL FOR % (SCALE: 1/2)

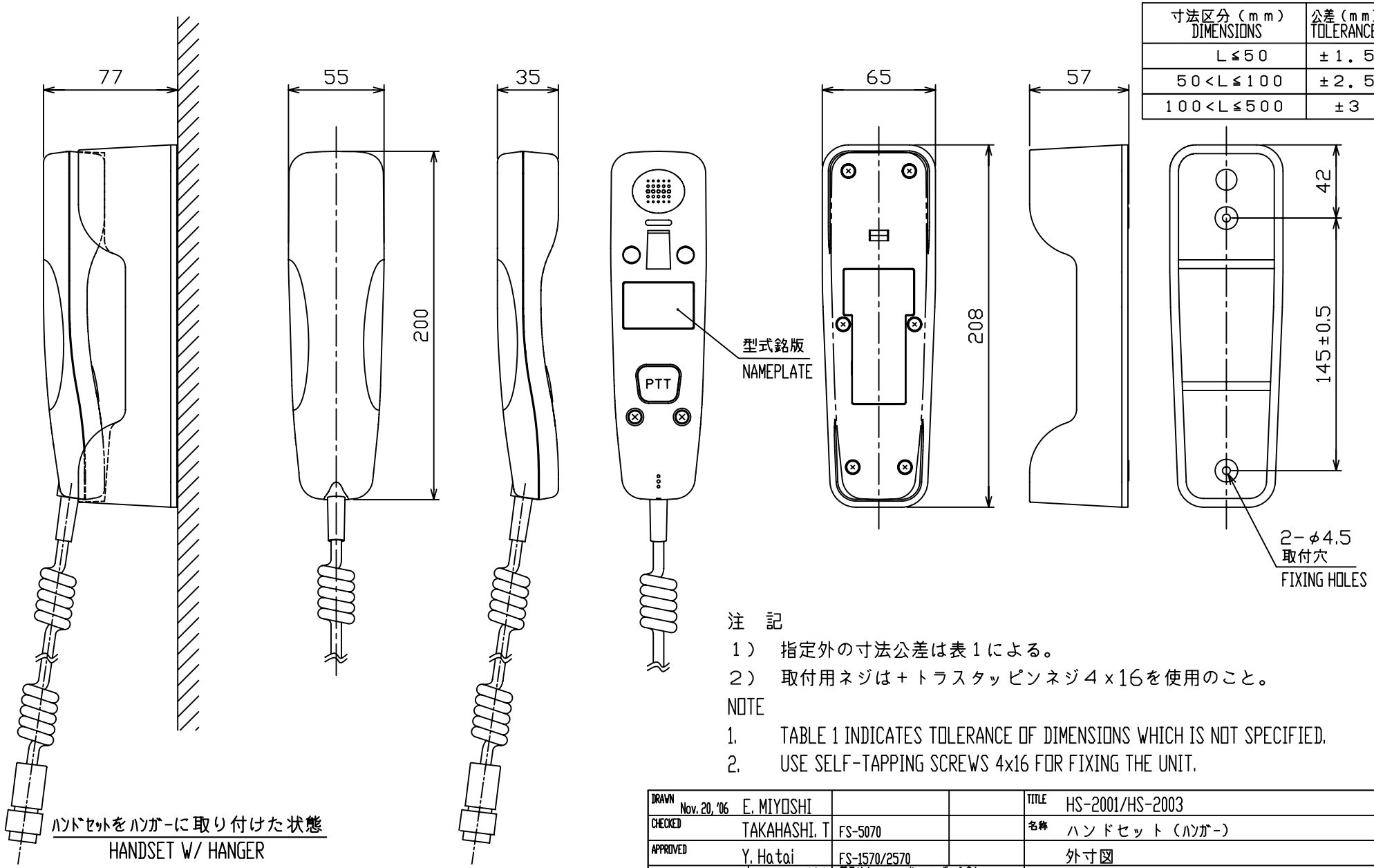


DRAWN 22/Apr/2011 T.YAMASAKI		TITLE	FS-5075T
CHECKED 22/Apr/2011 H.MAKI		名称	送受信部
APPROVED 26/Apr/2011 D.MILLS	FS-5075		外寸図
SCALE 1/8 MASS 27 ±10% kg		NAME	TRANSCEIVER UNIT
DWG. No. C5678-G02- A	REF. No. 05-106-250G-0		OUTLINE DRAWING

FURUNO

表 1 TABLE 1

寸法区分（ｍｍ） DIMENSIONS	公差（ｍｍ） TOLERANCE
L≦50	±1．5
50<L≦100	±2．5
100<L≦500	±3



ﾊﾝﾄﾞｾｯﾄをﾊﾝｶﾞｰに取り付けた状態
HANDSET W/ HANGER

注　記

1）　指定外の寸法公差は表 1 による。

2）　取付用ネジは＋トラスタッピンネジ４x16を使用のこと。

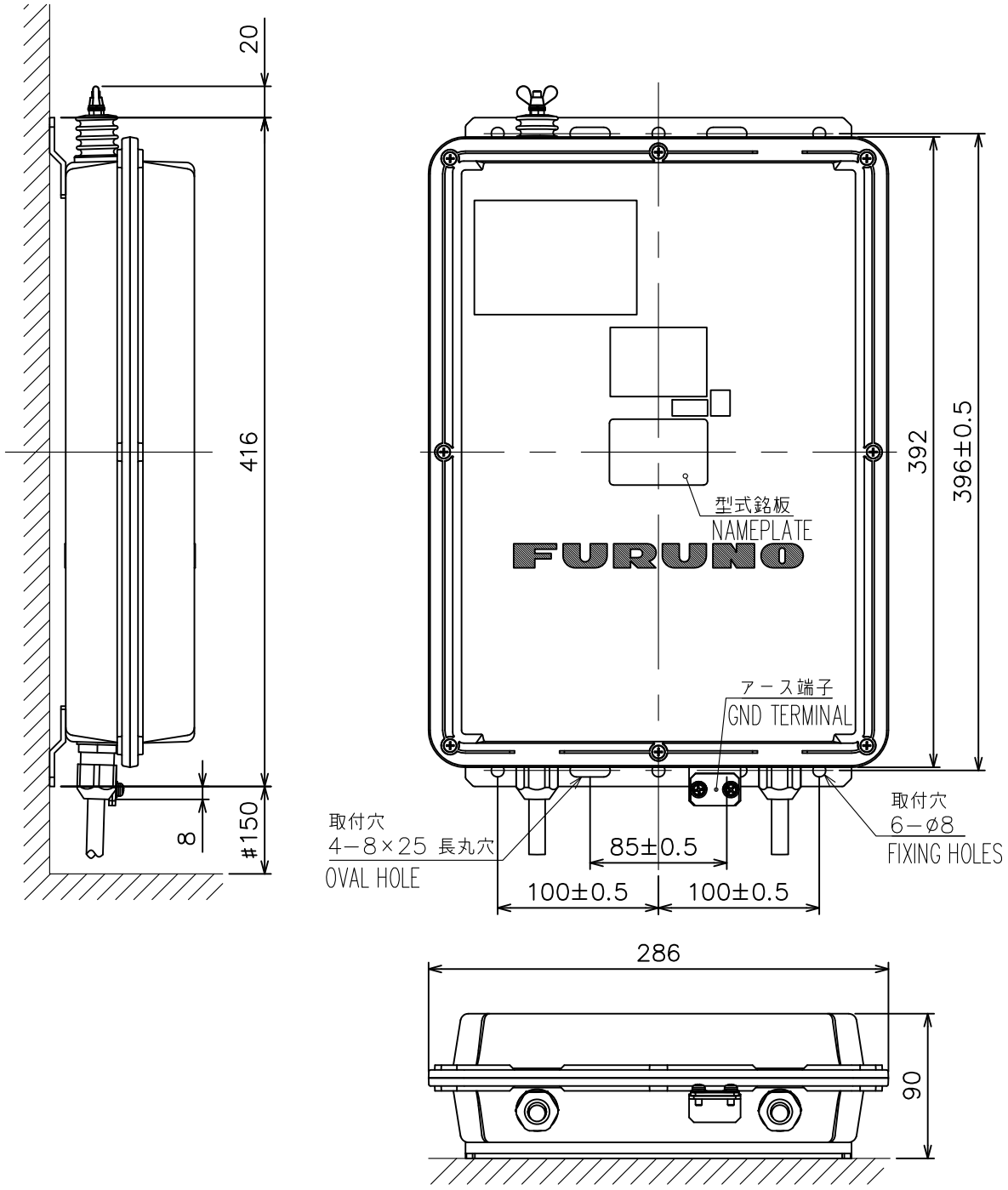
NOTE

1.　TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.

2.　USE SELF-TAPPING SCREWS 4x16 FOR FIXING THE UNIT.

DRAWN Nov. 20, '06 E. MIYOSHI			TITLE HS-2001/HS-2003
CHECKED TAKAHASHI. T	FS-5070		名称 ハンドセット（ハンガー）
APPROVED Y. Hatai	FS-1570/2570		外寸図
SCALE 1/3 MASS 0.54 ±10% kg	質量はカールコード、ハンガーを含む。 MASS W/ CABLE AND HANGER.		NAME HANDSET/ HANGER
DWG No. C5636-G04- E	05-089-400G-3		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.



注　記

１）指定外の寸法公差は表１による。

２）＃印寸法は最小サービス空間寸法とする。

３）取付用ネジはＭ６ボルトを使用のこと。

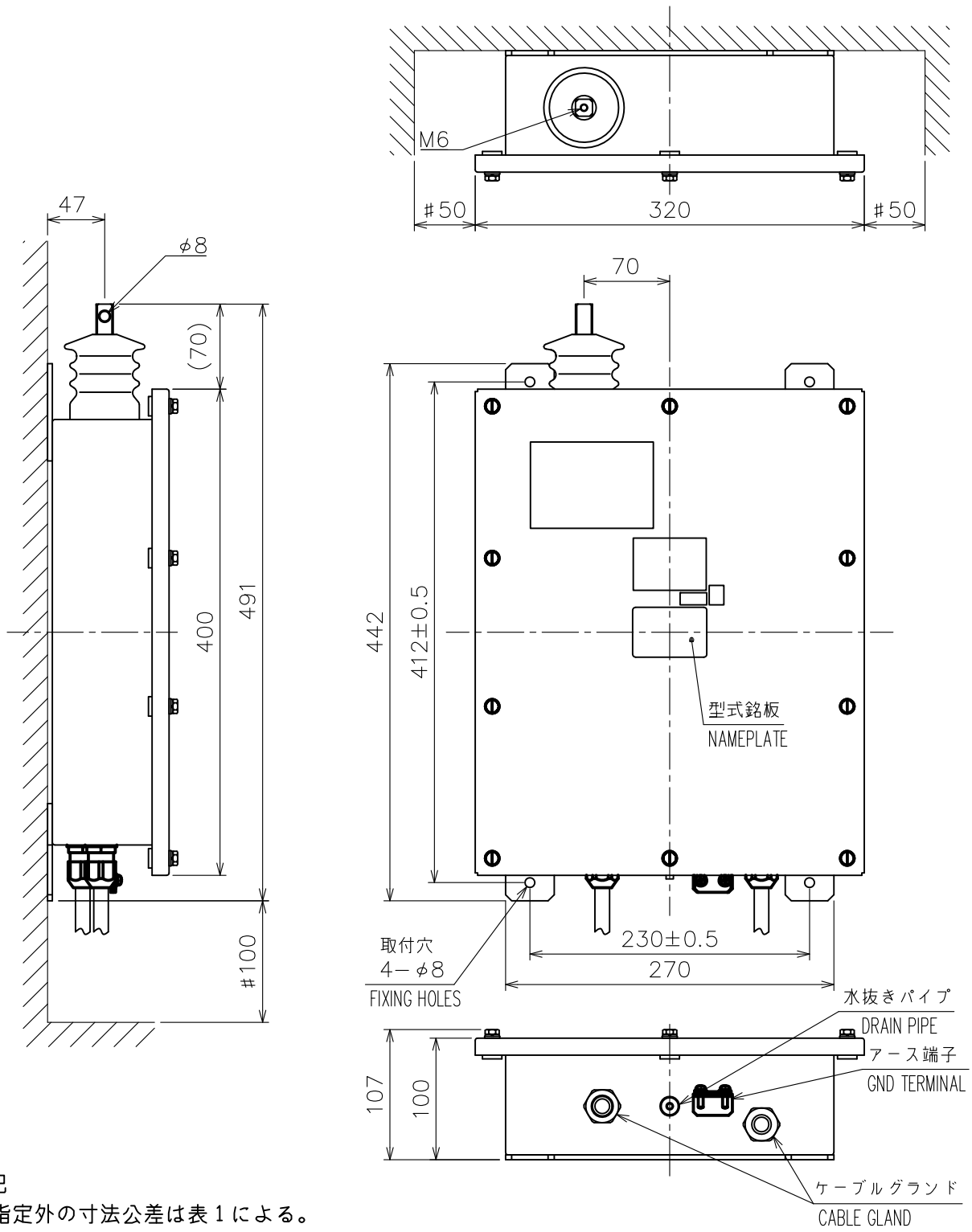
NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE M6 BOLTS FOR FIXING THE UNIT.

表１　TABLE 1

寸法区分（ｍｍ） DIMENSION	公差（ｍｍ） TOLERANCE
Ｌ≦５０	±１．５
５０<Ｌ≦１００	±２．５
１００<Ｌ≦５００	±３

DRAWN 20/Jan/2012 T.YAMASAKI		TITLE	AT-1575 (AES)
CHECKED 20/Jan/2012 H.MAKI		名称	アンテナカプラ
APPROVED 20/Jan/2012 Y.NISHIYAMA	FS-1575		外寸図
SCALE 1/4 MASS 2.6 ±10% kg		NAME	ANTENNA COUPLER
DWG. No. C5676-G01- A	REF. No. 05-106-351G-0		OUTLINE DRAWING



注　記

1）指定外の寸法公差は表１による。

2）＃印寸法は最小サービス空間寸法とする。

3）取付用ネジはＭ６ボルトを使用のこと。

NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE M6 BOLTS FOR FIXING THE UNIT.

表１　TABLE 1

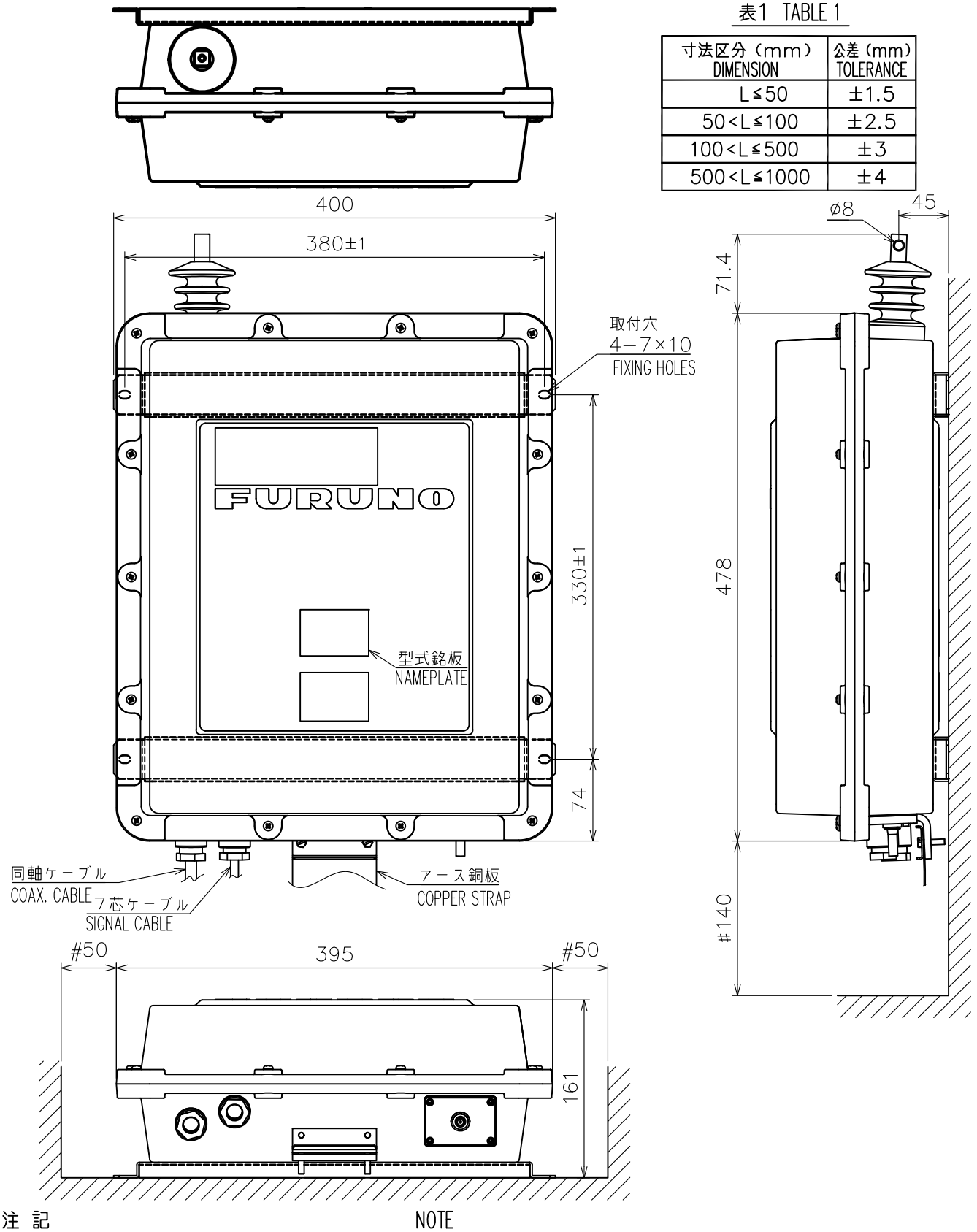
寸法区分（ｍｍ） DIMENSION	公差（ｍｍ） TOLERANCE
Ｌ≦５０	±１．５
５０<Ｌ≦１００	±２．５
１００<Ｌ≦５００	±３

DRAWN 20/Jan/2012 T.YAMASAKI		TITLE	AT-1575 (SUS)
CHECKED 20/Jan/2012 H.MAKI		名称	アンテナカプラ
APPROVED 20/Jan/2012 Y.NISHIYAMA	FS-1575		外寸図
SCALE 1/5 MASS 8.8 ±10% kg		NAME	ANTENNA COUPLER
DWG. No. C5676-G02- A	REF. No. 05-106-352G-0		OUTLINE DRAWING

FURUNO

表1 TABLE 1

寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3
500<L≦1000	±4



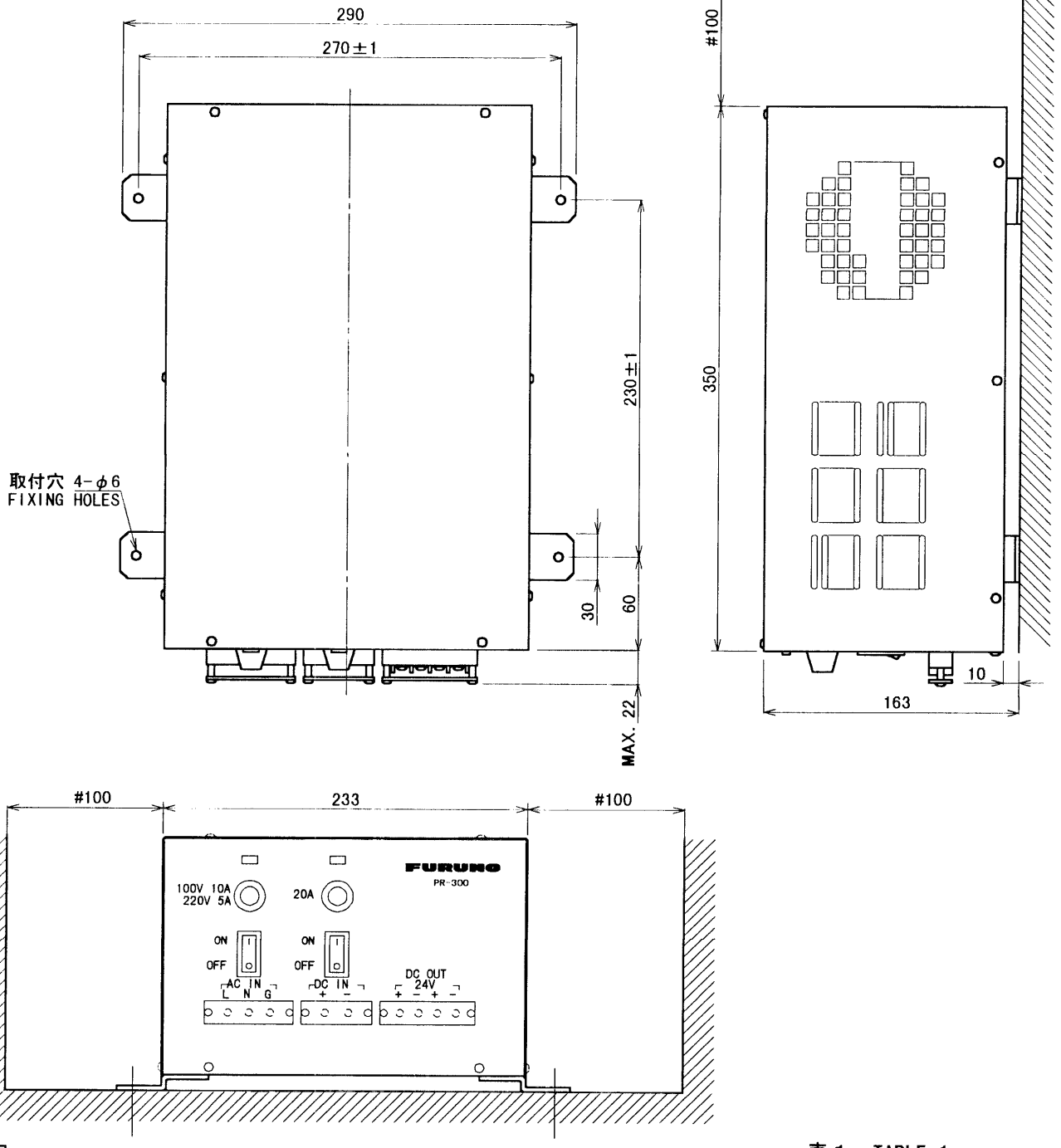
注 記

1）指定外の寸法公差は表1による。
2）#印寸法は最小サービス空間寸法とする。
3）取付け用ネジはM6ボルトを使用のこと。

NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE M6 BOLTS FOR FIXING THE UNIT.

DRAWN 22/Apr/2011 T.YAMASAKI		TITLE	AT-5075
CHECKED 22/Apr/2011 H.MAKI		名称	アンテナカプラ
APPROVED 26/Apr/2011 D.MILLS	FS-2575/5075		外寸図
SCALE 1/5 MASS 8.5 ±10% kg		NAME	ANTENNA COUPLER
DWG. No. C5678-G01- A	REF. No. 05-106-350G-2		OUTLINE DRAWING



注記
1）#：推奨する最小サービス空間寸法。
2）指定なき寸法公差は表1による。

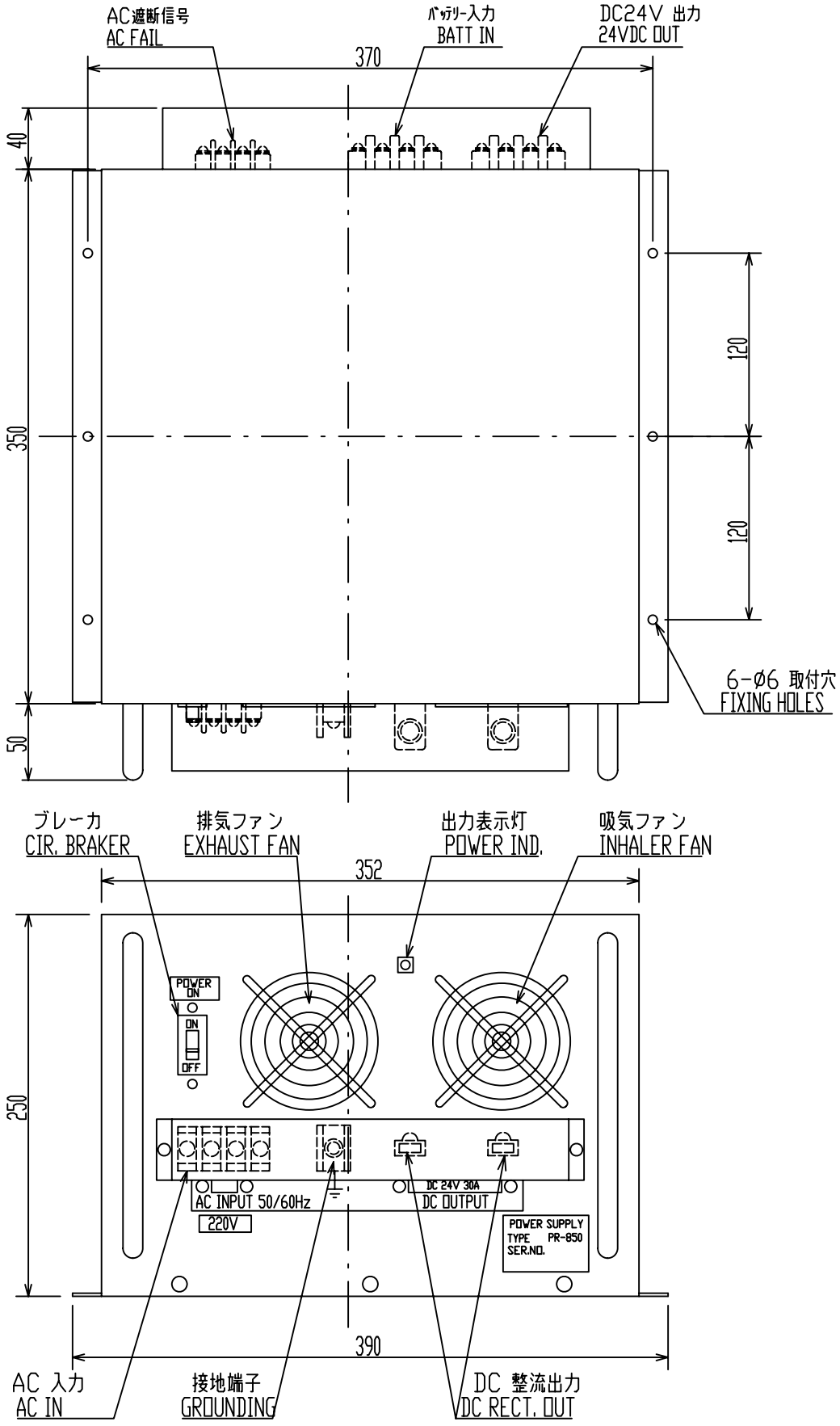
NOTE:
1. #: RECOMMENDED SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.

表1 TABLE 1

寸法範囲 (mm) DIMENSION	公差 (mm) TOLERANCE
0 ＜ L ≦ 50	±1.5 mm
50 ＜ L ≦ 100	±2.5 mm
100 ＜ L ≦ 500	±3 mm

DRAWN June.19'00 T.YAMASAKI		TITLE	PR-300
CHECKED June 19 '00 T.Kuno		名称	AC-DC電源ユニット
APPROVED June 19 '00 T.Kuno			外寸図
SCALE 1/4	MASS ±10% 14.5 kg	NAME	AC-DC POWER SUPPLY UNIT
DWG. No. C5003-G02- D			OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.



DRAWN Nov. 25, '06 E. MIYOSHI		TITLE	PR-850A
CHECKED TAKAHASHI.T		名称	AC-DC電源ユニット
APPROVED Y. Hatai			外寸図
SCALE 1/4	MASS 35 ±10% kg	NAME	AC-DC POWER SUPPLY UNIT
DWG.No. C5519-G11-G	REF.No.		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

FURUNO

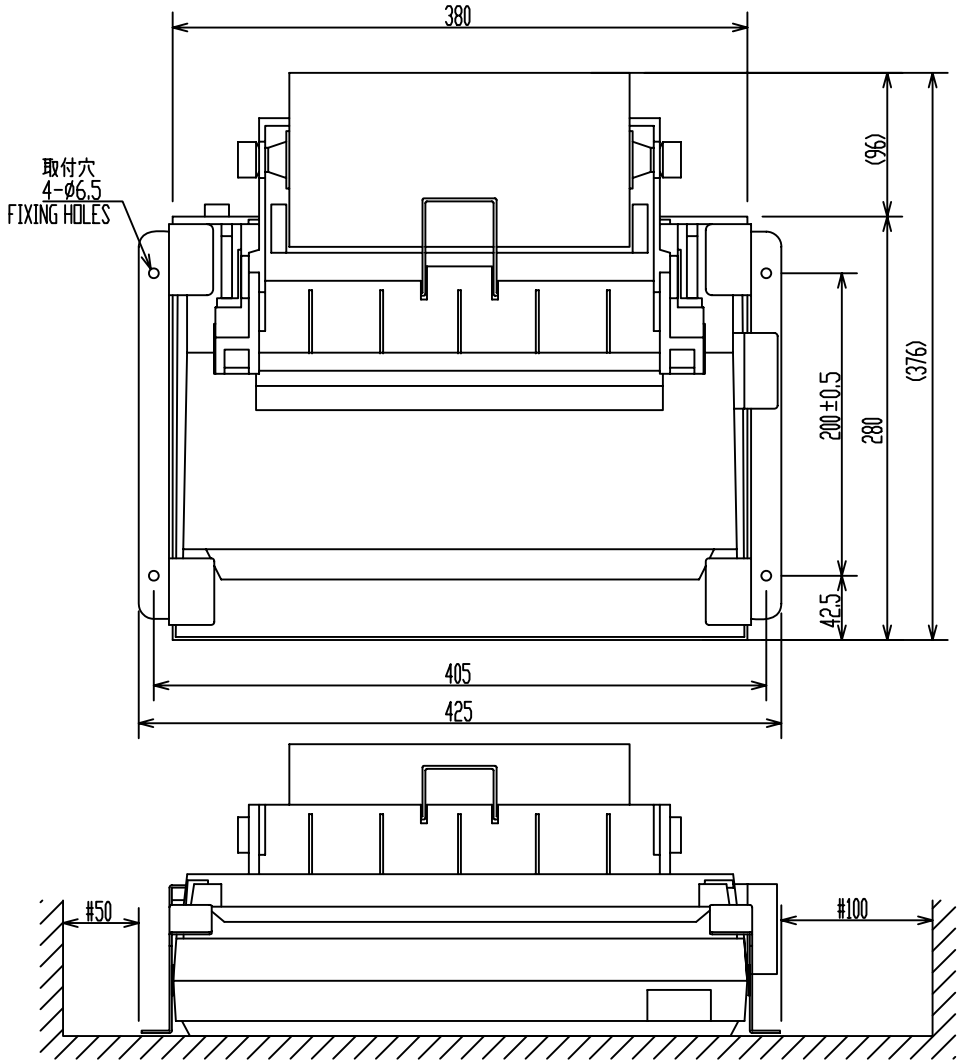
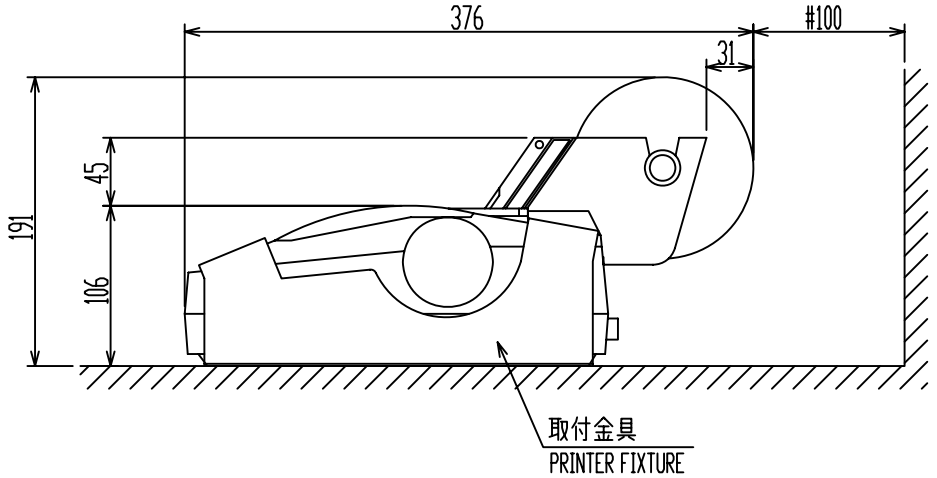


表 1　TABLE 1

寸法区分（mm）DIMENSIONS	公差（mm）TOLERANCE
0 < L ≦ 50	±1．5
50 < L ≦ 100	±2．5
100 < L ≦ 500	±3

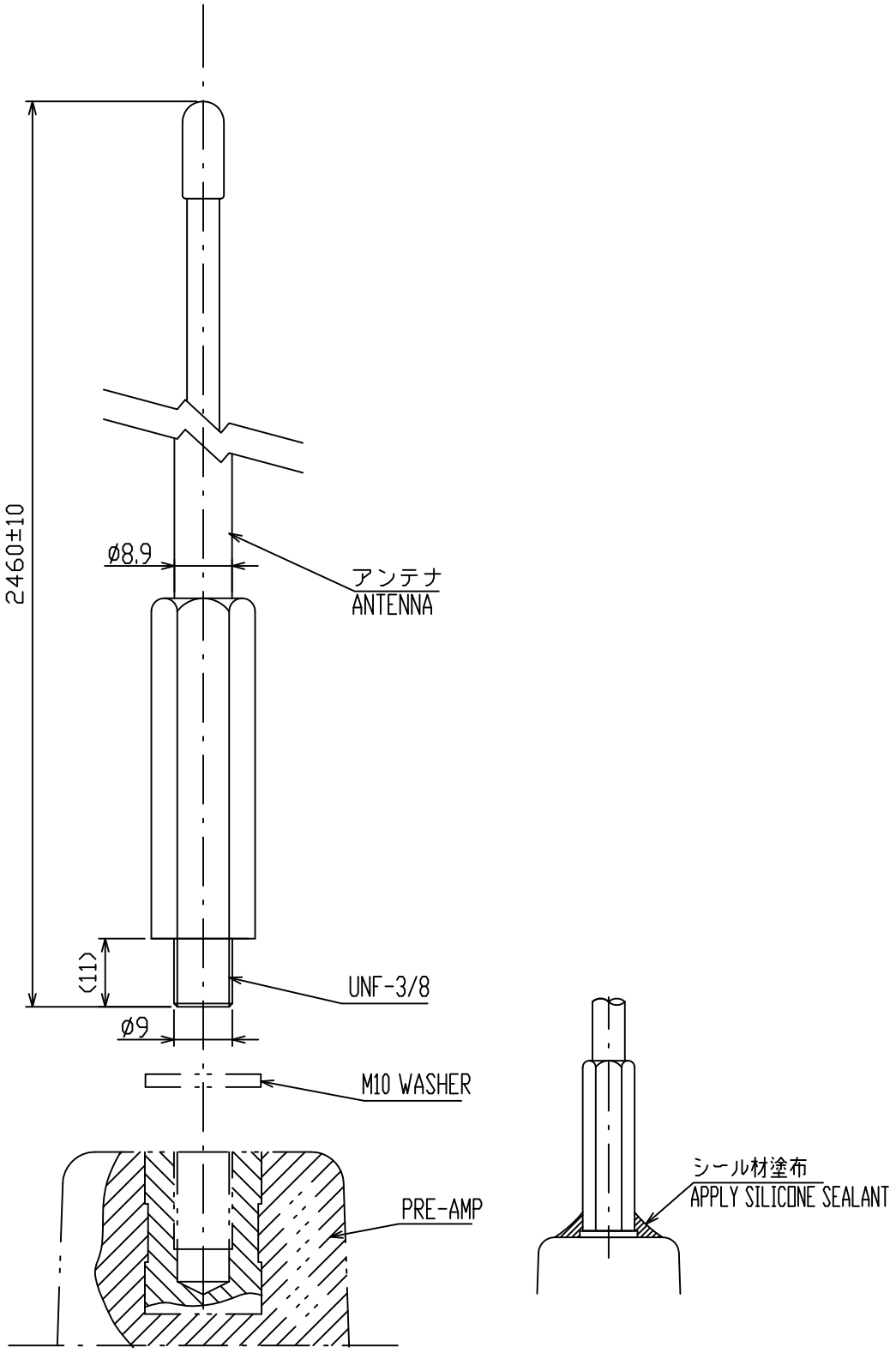


注　記　1）＃印寸法は最小サービス空間寸法とする。
　　2）指定外の寸法公差は表１による。
　　3）取付用ネジはＭ６ボルトまたはコーチボルト呼び径６を使用のこと。

NOTE　1. #: MINIMUM SERVICE CLEARANCE.
　　2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
　　3. USE M6 BOLTS OR COACH SCREWS φ6 FOR FIXING THE UNIT.

DRAWN Nov. 27, '06 E. MIYOSHI		TITLE	PP-510
CHECKED TAKAHASHI. T		名称	プリンタ
APPROVED Y. Hotai			外寸図
SCALE 1/5 MASS 3.8 ±10% kg		NAME	PRINTER
DWG.No. C5589-G08- K	REF.No. 16-007-660G- 2		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

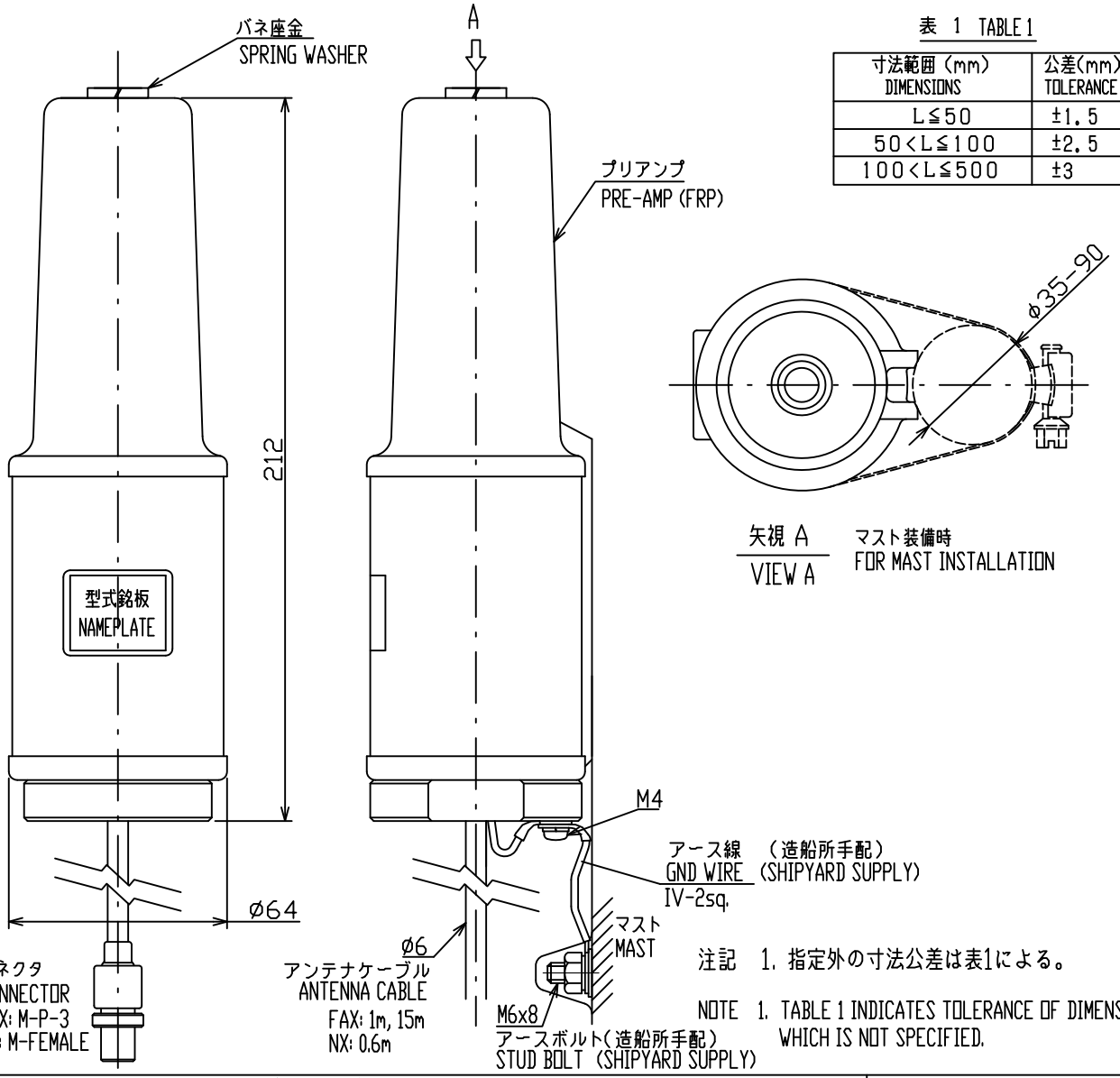


DRAWN 17/Jun/09 T.YAMASAKI		TITLE	04S4176
CHECKED 17/Jun/09 T.TAKENO		名称	2.6m ホイップアンテナ
APPROVED 26/Jun/09 R.Esumi			外寸図
SCALE 1/1 MASS 0.5 ±10% kg		NAME	2.6m WHIP ANTENNA
DWG.No. C4002-018- J	REF.No.		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

表 1 TABLE 1

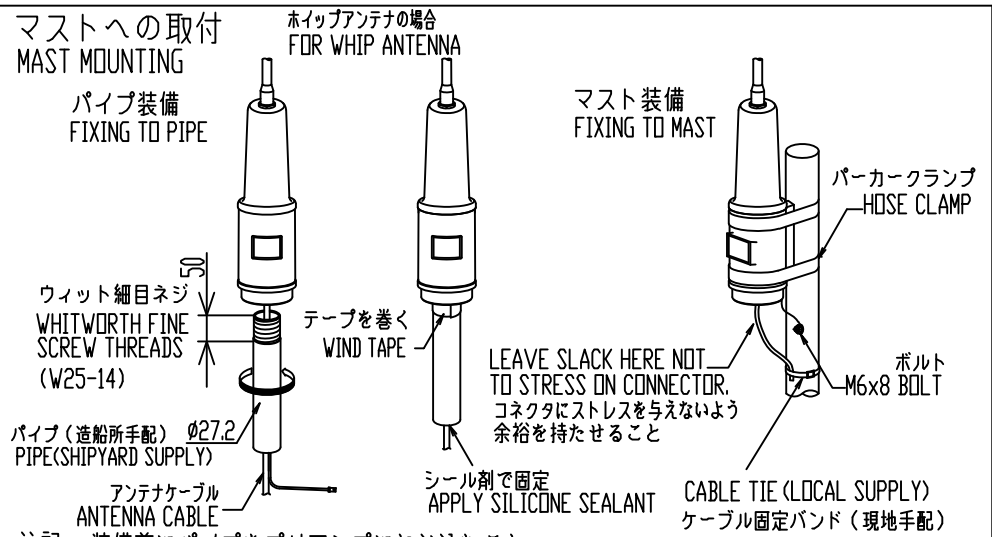
寸法範囲 (mm) DIMENSIONS	公差(mm) TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3



注記 1. 指定外の寸法公差は表1による。

NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.

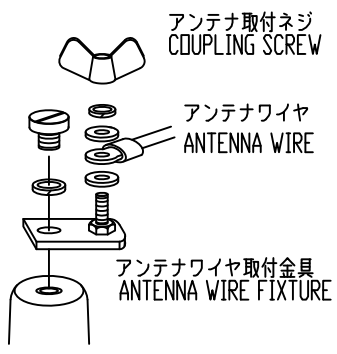
マストへの取付 MAST MOUNTING



注記 装備前にパイプをプリアンプにねじ込むこと。

NOTE FASTEN PIPE TO ANTENNA BEFORE INSTALLATION.

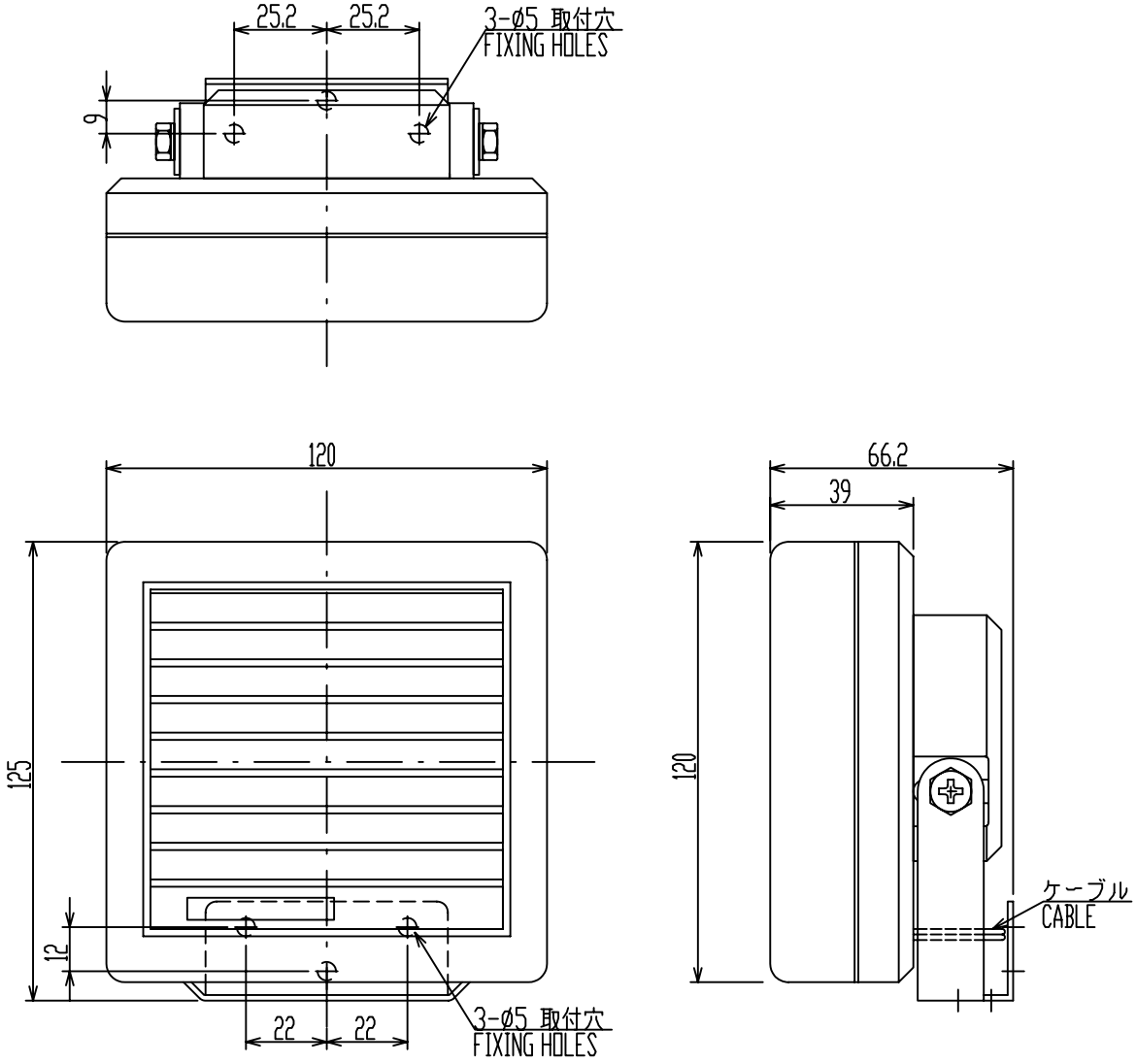
アンテナワイヤの場合
FOR ANTENNA WIRE



DRAWN 24/Mar/2011 T.YAMASAKI		TITLE	FAX-5, NX-5/6
CHECKED 24/Mar/2011 H.MAKI		名称	プリアンプ
APPROVED 25/Mar/2011 Y.NISHIYAMA			外寸図
SCALE 1/2	MASS 0.6 ±10% kg 質量はケーブルを含まず。 MASS DOES NOT INCLUDE CABLE.	NAME	PRE-AMP UNIT
DWG.No. C6244-003- P	REF.No.		OUTLINE DRAWING

表1 TABLE 1

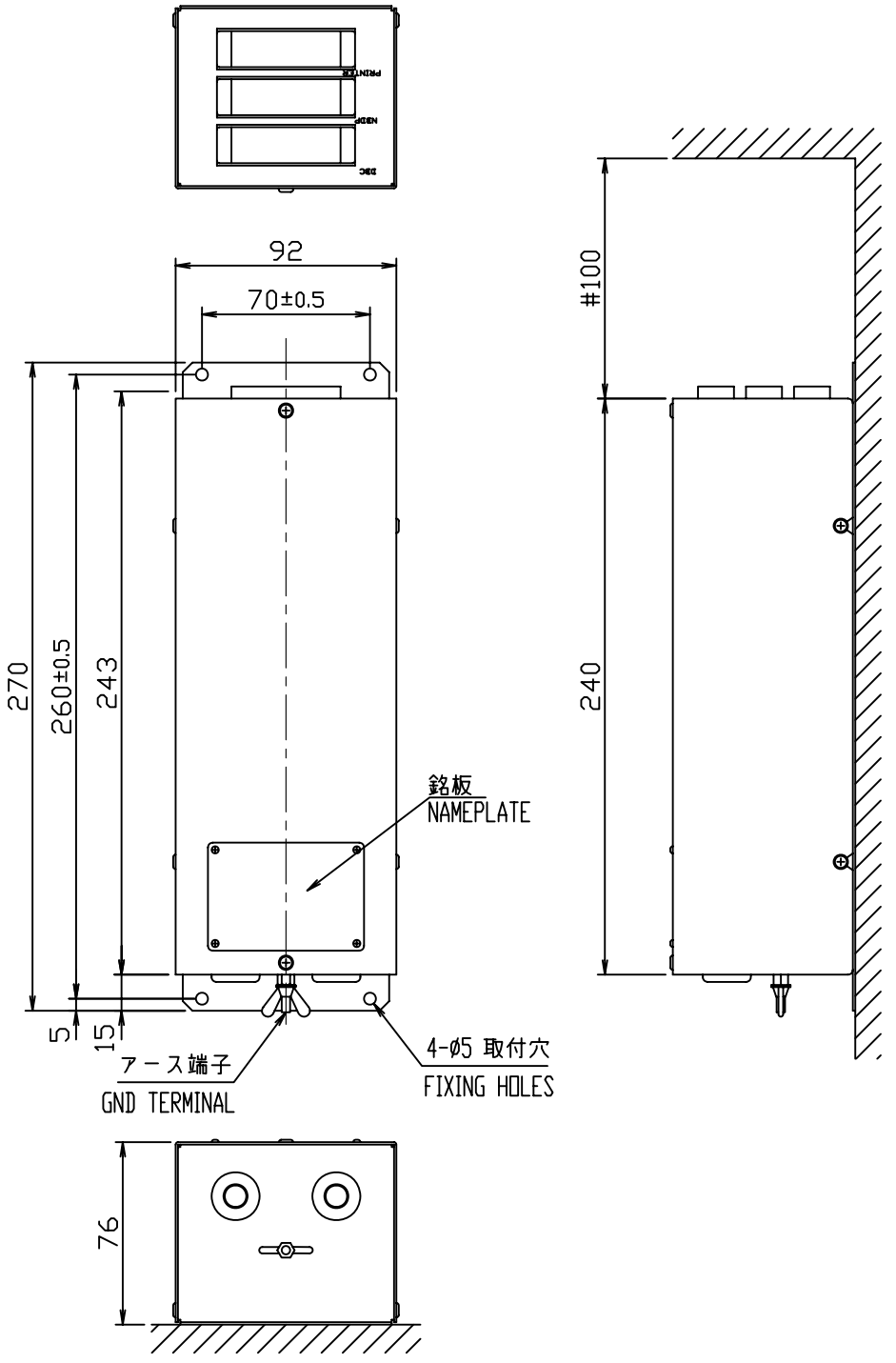
寸法区分(mm) DIMENSIONS	公差(mm) TOLERANCE
0 < L ≦ 50	±1.5
50 < L ≦ 100	±2.5
100 < L ≦ 500	±3



注記 1 ）指定外寸法公差は表1による。

NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.

DRAWN Nov. 25, '06 E. MIYOSHI		TITLE	SEM-21Q
CHECKED TAKAHASHI. T		名称	スピーカ
APPROVED Y. Hatai			外寸図
SCALE 1/2	MASS 0.54 ±10% kg 質量は2.8mケーブルを含む MASS W/ 2.8m CABLE	NAME	LOUDSPEAKER
DWG.No. C5016-G07- C	REF.No.		OUTLINE DRAWING



注記

1）指定なき寸法公差は表1による。

2）#：最小サービス空間寸法。

NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.

2. #: MINIMUM SERVICE CLEARANCE.

表1 TABLE 1

寸法区分(mm) DIMENSION	公差(mm) TOLERANCE
0 <L≦ 50	±1.5
50 <L≦ 100	±2.5
100 <L≦ 500	±3

DRAWN Sep. 6 '06 T.YAMASAKI			TITLE IF-8500
CHECKED Sep. 6 '06 T.TAKENO			名称 プリンタインターフェイス
APPROVED Sep.21'06 T.Matsuguchi	FM-8500		外寸図
SCALE 1/3	MASS 0.7 ±10% kg		NAME PRINTER INTERFACE
DWG.No. C5603-G05- C	05-073-2100-G1		OUTLINE DRAWING

FURUNO

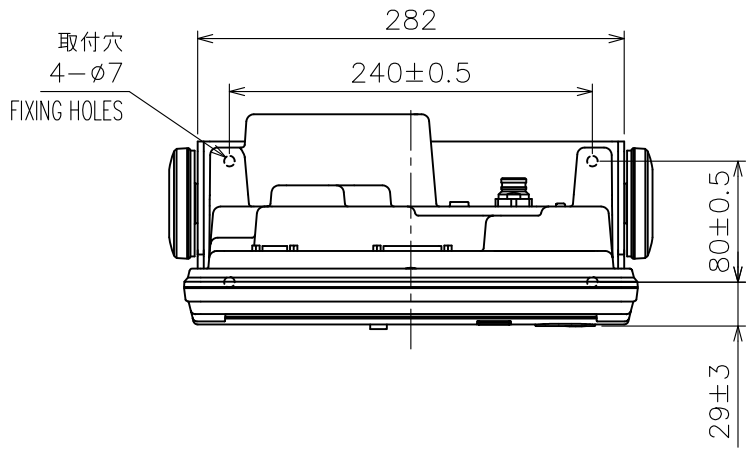
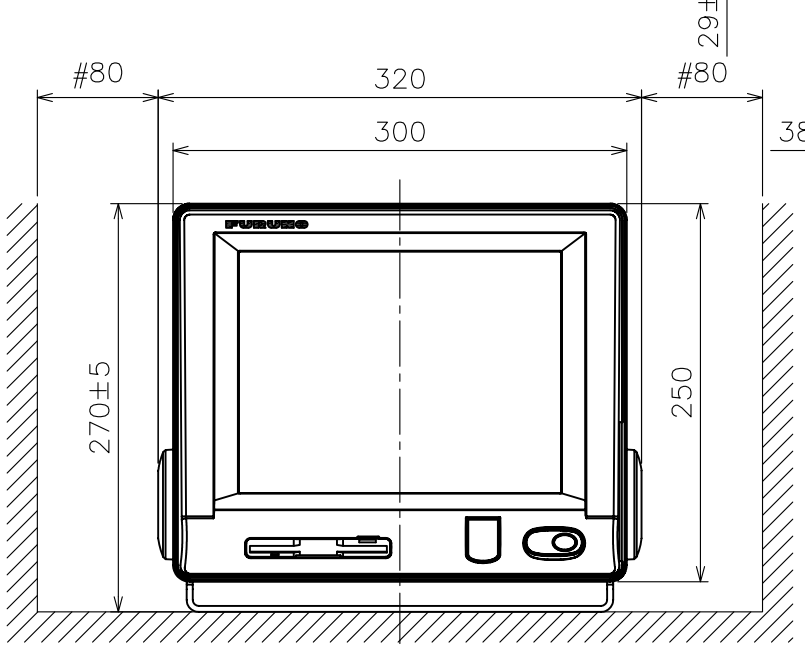
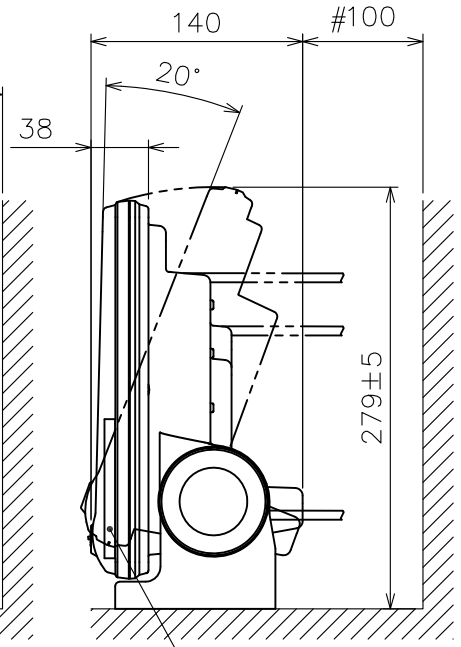
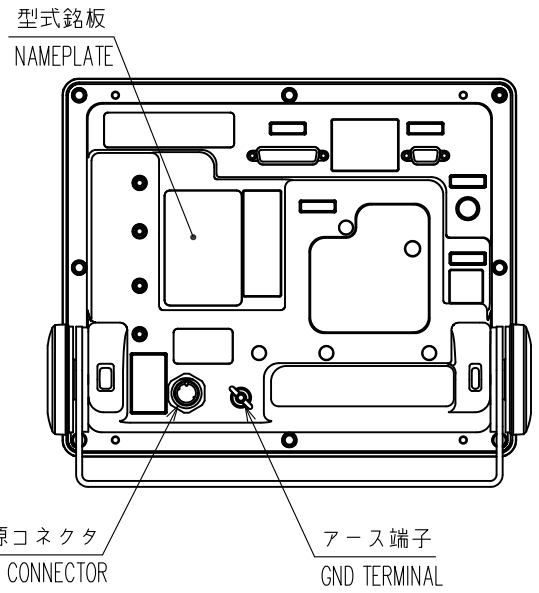


表 1　TABLE 1

寸法区分（mm）DIMENSION	公差（mm）TOLERANCE
L≦50	±1．5
50<L≦100	±2．5
100<L≦500	±3







注　記　1）指定外の寸法公差は表１による。
　　2）＃印寸法は最小サービス空間寸法とする。
　　3）取付用ネジはトラスタッピンネジ呼び径５×２０を使用のこと。

NOTE　1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
　　2. #: MINIMUM SERVICE CLEARANCE.
　　3. USE TAPPING SCREWS ø5x20 FOR FIXING THE UNIT.

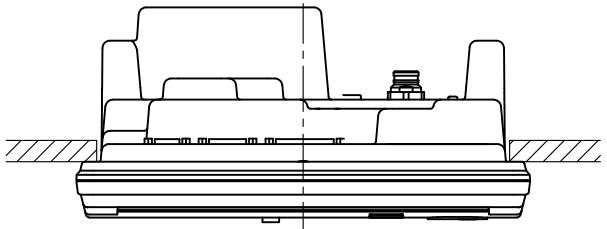
DRAWN 8/Jun/09 T.YAMASAKI			TITLE IB-583
CHECKED 8/Jun/09 T.TAKENO			名称 ターミナル部（卓上装備）
APPROVED 18/June/09 R.Esumi	FS-1570/2570/5070		外寸図
SCALE 1/5	MASS 4.1 ±10% kg		NAME TERMINAL UNIT (TABLETOP MOUNT)
DWG. No. C5636-G06- C	REF. No. 05-089-600G-4		OUTLINE DRAWING

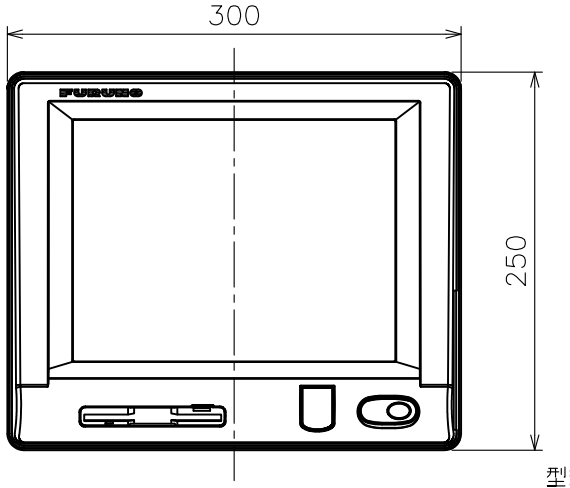
FURUNO ELECTRIC CO., LTD.

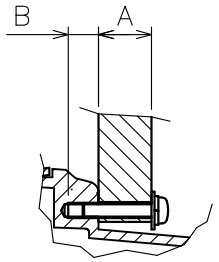
FURUNO

表１ TABLE 1

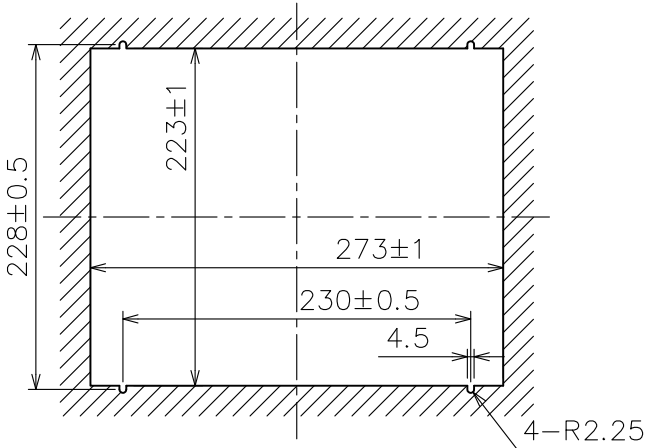
寸法区分（ｍｍ） DIMENSION	公差（ｍｍ） TOLERANCE
Ｌ≦５０	±１．５
５０<Ｌ≦１００	±２．５
１００<Ｌ≦５００	±３



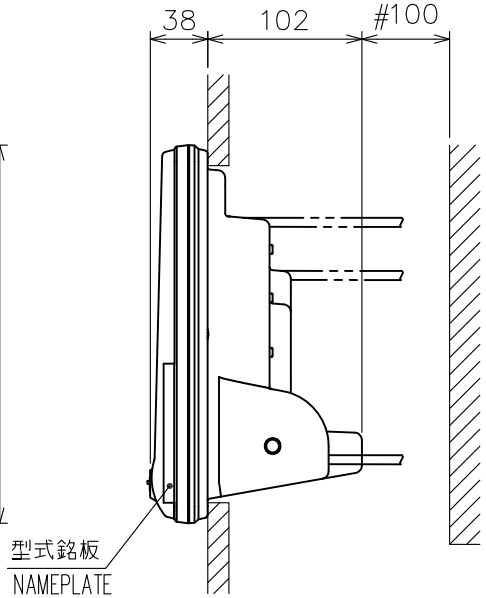


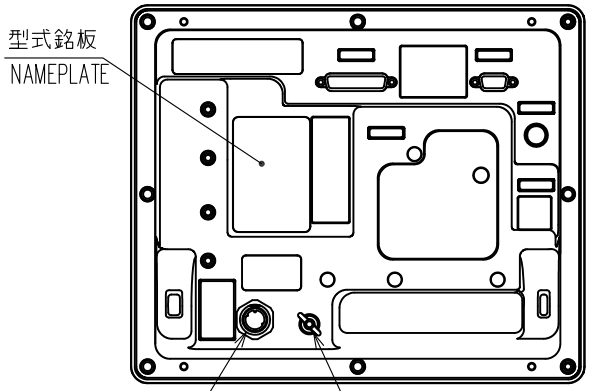


取付ネジ部断面 尺度 1/2
DETAIL FOR FASTENING (SCALE 1/2)



取付穴寸法図
CUTOUT DIMENSIONS





注　記　１）指定外の寸法公差は表１による。
２）＃印寸法は最小サービス空間寸法とする。
３）取付用ネジは、セムスネジＢ Ｍ４×２０を使用のこと。
壁の厚さ（Ａ）は１１≦Ａ≦１４とする。それ以外の壁に
装備する場合、使用するネジ長さは（Ａ＋７．８）±２とする。
筐体にはネジ部を８ｍｍ以上入れないこと。（Ｂ≦８）

NOTE
1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED
2. #: MINIMUM SERVICE CLEARANCE.
3. USE SEMS SCREWS M4x20 FOR FIXING THE UNIT.
THICKNESS A: 11≤A≤14 OR SCREW LENGTH: (A+7.8)±2.
DO NOT FASTEN SCREWS INTO UNIT MORE THAN 8 mm.

DRAWN 8/Jun/09 T.YAMASAKI		TITLE	IB-583
CHECKED 8/Jun/09 T.TAKENO		名称	ターミナル部（埋込装備）
APPROVED 18/June/09 R.Esumi	FS-1570/2570/5070		外寸図
SCALE 1/5 MASS 3.5 ±10% kg		NAME	TERMINAL UNIT (FLUSH MOUNT)
DWG. No. C5636-G07- C	REF. No. 05-089-6106-4		OUTLINE DRAWING

FURUNO ELECTRIC CO., LTD.

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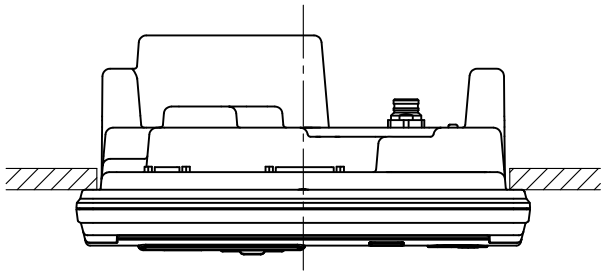
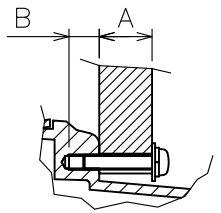
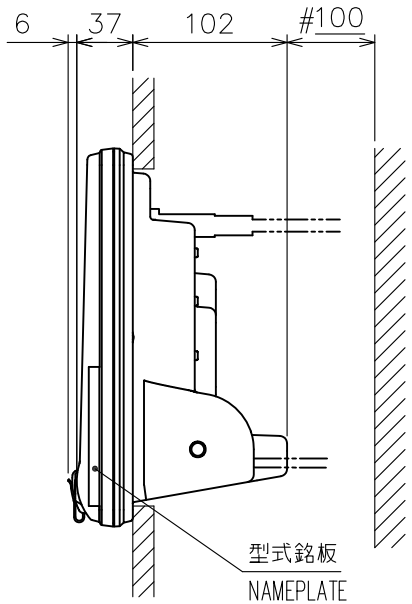
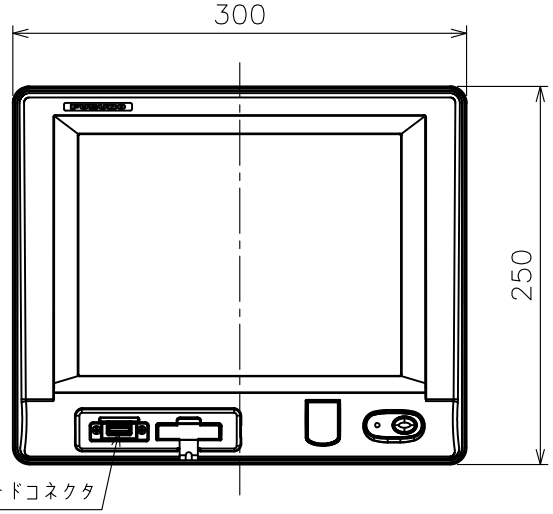
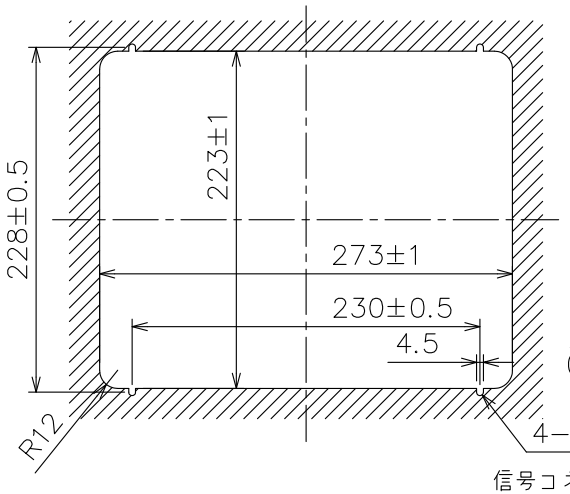




取付部詳細（尺度: 1／2）
DETAIL FOR FIXING (SCALE: 1/2)



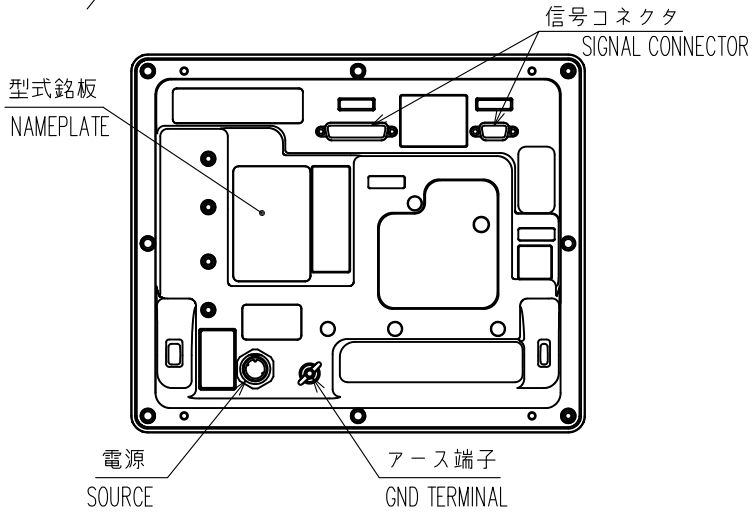




取付穴寸法図
CUTOUT DIMENSIONS

表 1　TABLE 1

寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3



注 記　１）指定外の寸法公差は表１による。
２）＃印寸法は最小サービス空間寸法とする。
３）取付用ネジは、セムスネジＢ Ｍ４×２０を使用のこと。
壁厚さ（Ａ）は１１≦Ａ≦１４とする。
または、ネジ長さを（Ａ＋７．８）±２とする。
筐体にはネジ部を８ｍｍ以上入れないこと。（Ｂ≦８）

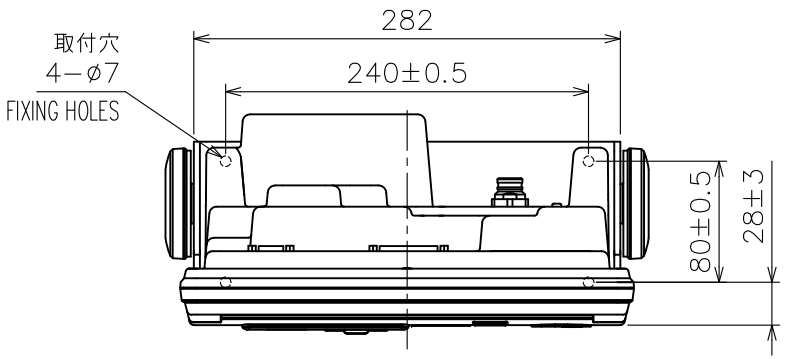
NOTE 1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE SEMS B SCREWS M4x20 FOR FIXING THE UNIT.
THICKNESS (A): 11≦A≦14 OR SCREW LENGTH: (A+7.8)±2.
DO NOT FASTEN SCREWS INTO UNIT MORE THAN 8 mm (B≦8).

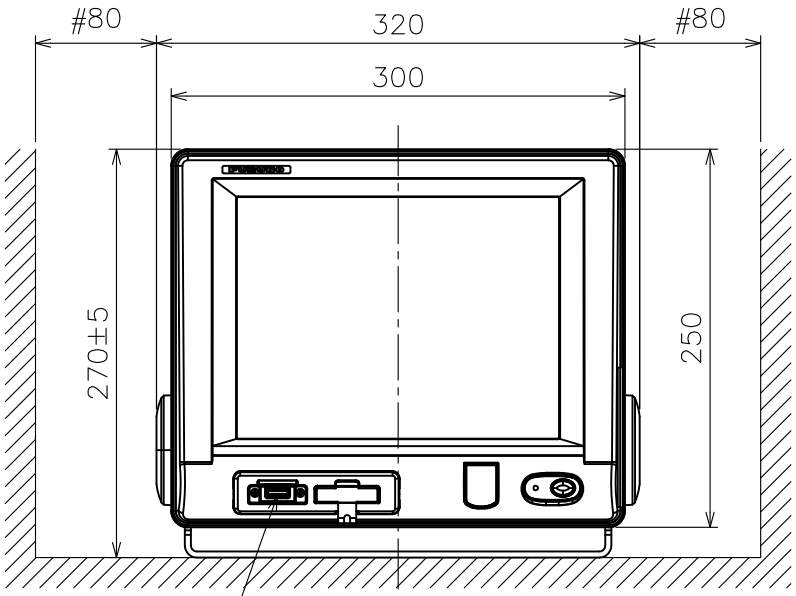
DRAWN 20/Jan/2012 T.YAMASAKI		TITLE	IB-585
CHECKED 20/Jan/2012 H.MAKI		名称	ターミナルユニット（埋込装備）
APPROVED 24/Jan/2012 Y.NISHIYAMA	FS-1575 SER.		外寸図
SCALE 1/5 MASS 3.0 ±10% kg	質量はケーブルを含まず。 MASS DOES NOT INCLUDE CABLE.	NAME	TERMINAL UNIT (FLUSH MOUNT)
DWG.No. C5677-G04- A	REF.No. 05-106-451G-0		OUTLINE DRAWING

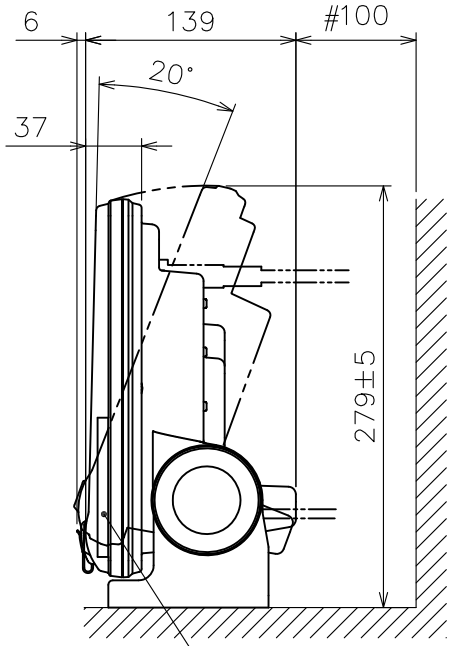
D-15a

FURUNO ELECTRIC CO., LTD.

FURUNO







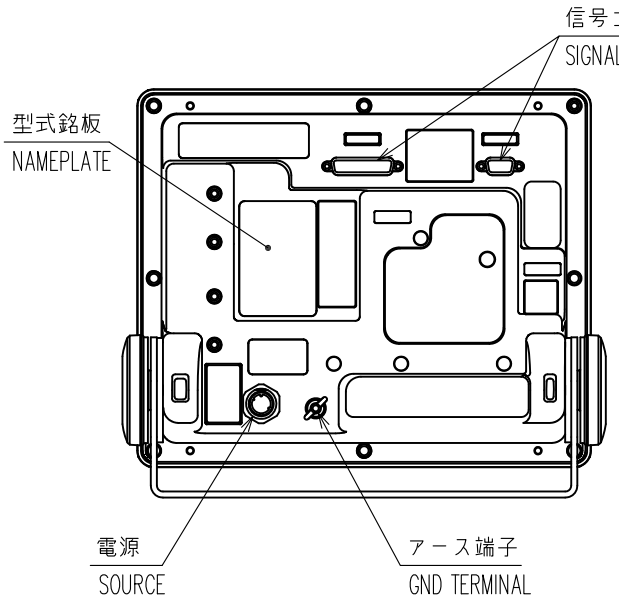


表 1　TABLE 1

寸法区分（mm）DIMENSION	公差（mm）TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3

注　記　1）指定外の寸法公差は表１による。
　　2）＃印寸法は最小サービス空間寸法とする。
　　3）取付用ネジはトラスタッピンネジ呼び径５×２０を使用のこと。

NOTE　1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
　　2. #: MINIMUM SERVICE CLEARANCE.
　　3. USE TAPPING SCREWS ø5x20 FOR FIXING THE UNIT.

DRAWN 20/Jan/2012 T.YAMASAKI		TITLE	IB-585
CHECKED 20/Jan/2012 H.MAKI		名称	ターミナルユニット（卓上装備）
APPROVED 24/Jan/2012 Y.NISHIYAMA	FS-1575 SER.		外寸図
SCALE 1/5 MASS 3.6 ±10% kg	質量はケーブルを含まず。MASS DOES NOT INCLUDE CABLE.	NAME	TERMINAL UNIT (TABLETOP MOUNT)
DWG.No. C5677-G05- A	REF.No. 05-106-450G-0		OUTLINE DRAWING

D-15b

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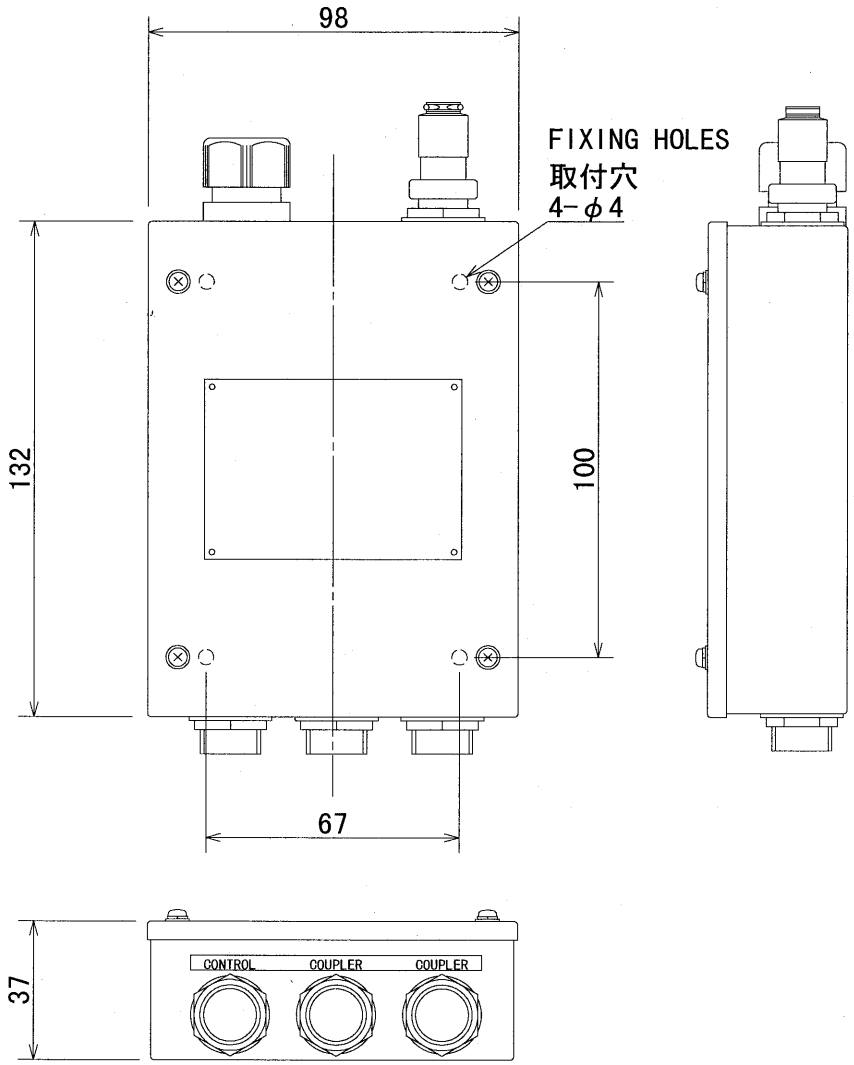

DRAWN Nov. 12 '98 T.YAMASAKI			TITLE	BK-300
CHECKED Nov 12 '98 K.Kusunoki			名称	BKインターフェイス
APPROVED Nov 12 '98 K.Kusunoki				外寸図
SCALE 1/2	MASS 0.48 kg		NAME	BK INTERFACE
DWG. No. C5083-G01- A				OUTLINE DRAWING

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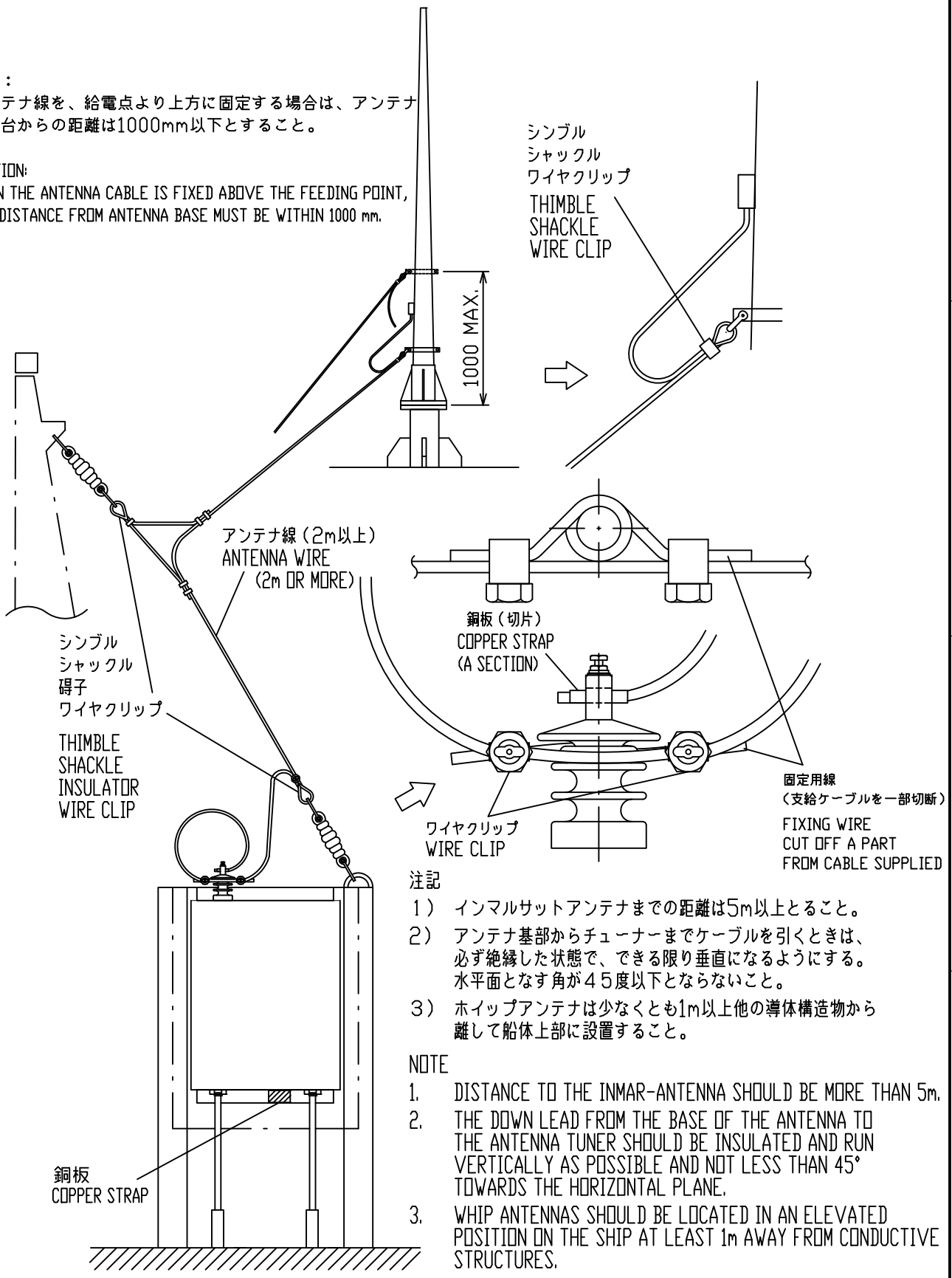
注意：
アンテナ線を、給電点より上方に固定する場合は、アンテナ取付台からの距離は1000mm以下とすること。

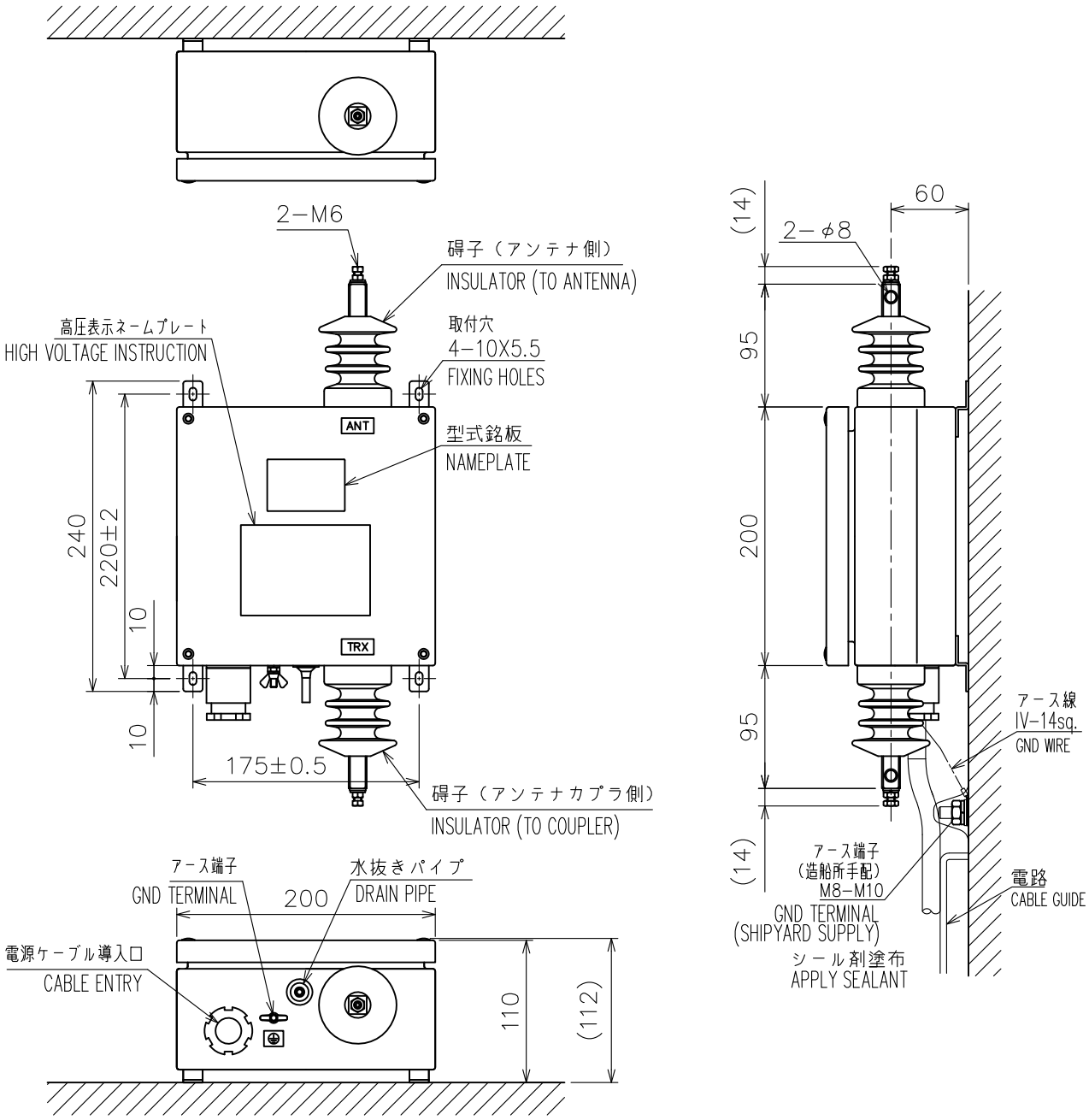
CAUTION:
WHEN THE ANTENNA CABLE IS FIXED ABOVE THE FEEDING POINT, THE DISTANCE FROM ANTENNA BASE MUST BE WITHIN 1000 mm.



注記
1） インマルサットアンテナまでの距離は5m以上とること。
2） アンテナ基部からチューナーまでケーブルを引くときは、必ず絶縁した状態で、できる限り垂直になるようにする。水平面となす角が４５度以下とならないこと。
3） ホイップアンテナは少なくとも1m以上他の導体構造物から離して船体上部に設置すること。

NOTE
1. DISTANCE TO THE INMAR-ANTENNA SHOULD BE MORE THAN 5m.
2. THE DOWN LEAD FROM THE BASE OF THE ANTENNA TO THE ANTENNA TUNER SHOULD BE INSULATED AND RUN VERTICALLY AS POSSIBLE AND NOT LESS THAN 45° TOWARDS THE HORIZONTAL PLANE.
3. WHIP ANTENNAS SHOULD BE LOCATED IN AN ELEVATED POSITION ON THE SHIP AT LEAST 1m AWAY FROM CONDUCTIVE STRUCTURES.

DRAWN 20/May/2011 T.YAMASAKI		TITLE	WHIP ANTENNA
CHECKED 20/May/2011 H.HAYASHI		名称	ホイップアンテナ組立工材　装備例
APPROVED 20/MAY/2011 R. ESUMI			装備要領
SCALE	MASS ±10% kg	NAME	WHIP ANTENNA LEAD-IN KIT (FOR REFERENCE)
DWG.No. C5023-Y01- J			INSTALLATION PROCEDURE



注　記

1）　指定外の寸法公差は表１による。

2）　アンテナ及びアンテナカプラに繋げる線については十分な空間を確保すること。

3）　取付用ネジはトラスタッピンネジ 呼び径５×２０を使用のこと。

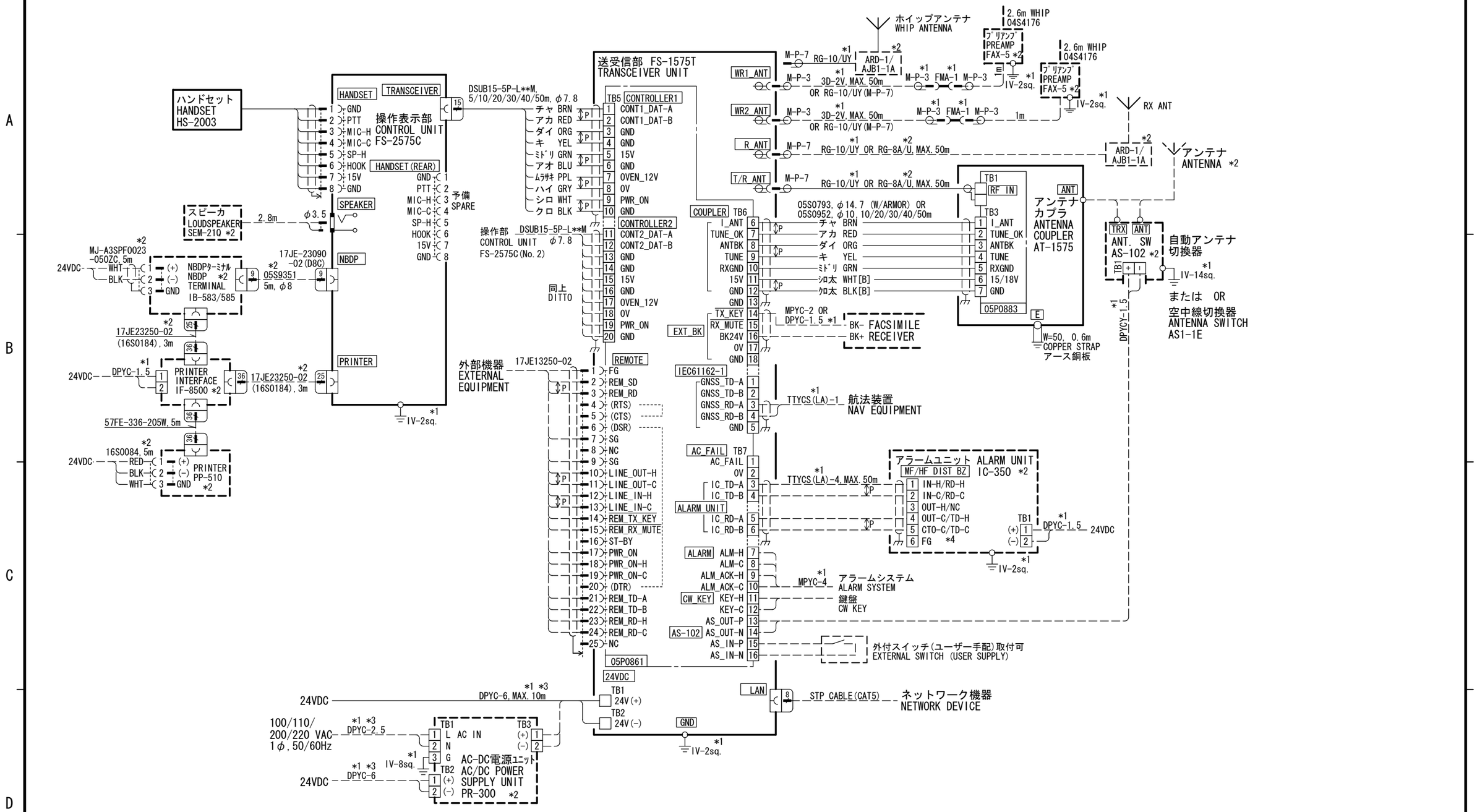
NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. KEEP SUFFICIENT CLEARANCE TO CONNECT THE WIRES TO ANTENNA AND COUPLER.
3. USE TAPPING SCREWS ø5x20 FOR FIXING THE UNIT.

表 1　TABLE 1

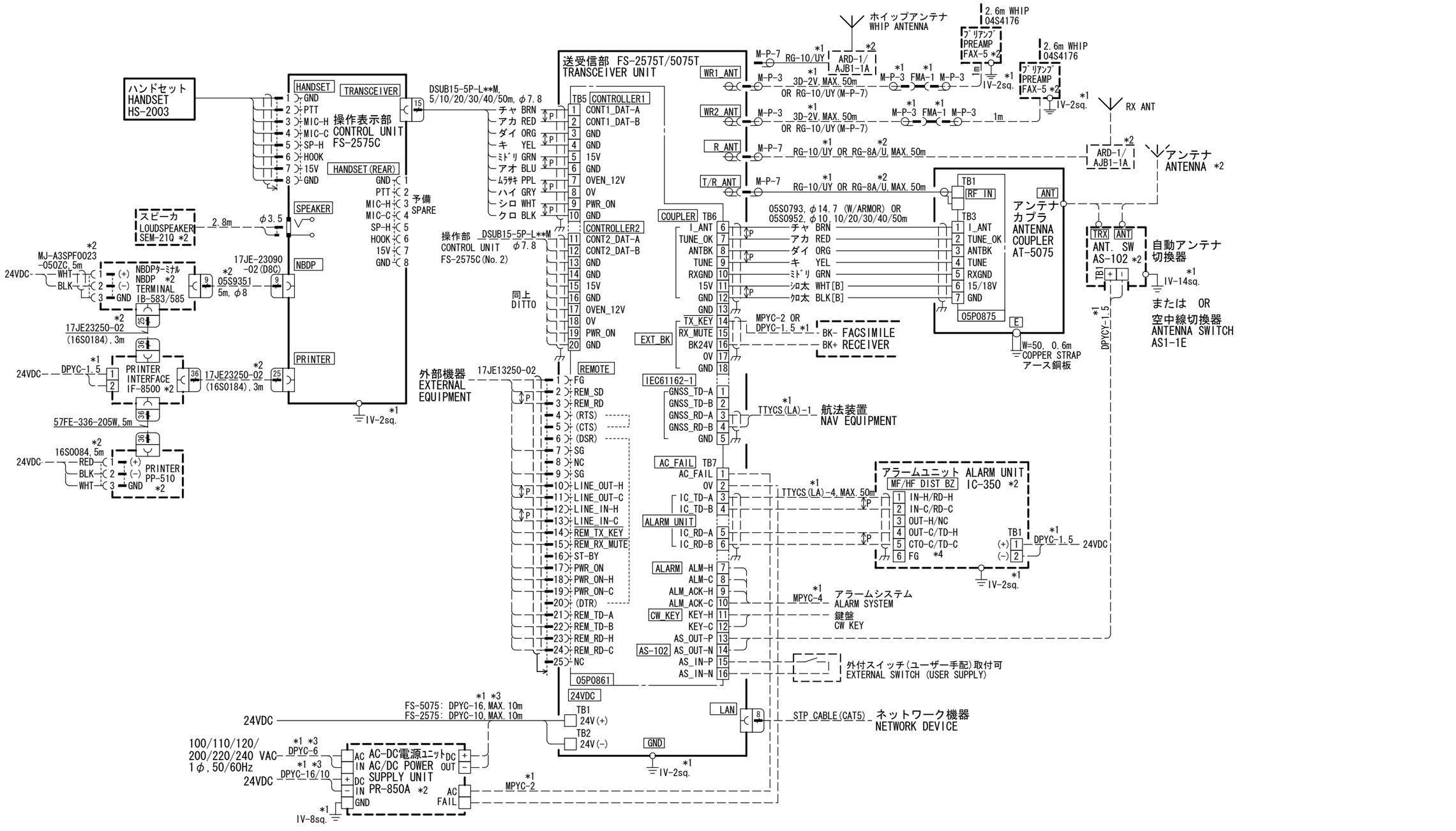
寸法区分（mm） DIMENSION	公差（mm） TOLERANCE
L≦50	±1.5
50<L≦100	±2.5
100<L≦500	±3

DRAWN 11/Sep/09 T.YAMASAKI		TITLE	AS-102
CHECKED 11/Sep/09 T.TAKENO		名称	自動アンテナ切換器
APPROVED 25/Sep/09 R.Esumi	FS-1570/2570/5070		外寸図
SCALE 1/5 MASS 3.2 ±10% kg		NAME	ANTENNA SWITCH
DWG. No. C5656-G04- A	REF. No. 05-094-400G-1		OUTLINE DRAWING



注記
＊１）造船所手配。
＊２）オプション。
＊３）長さに応じて芯線太さを変更する。
＊４）内部スイッチ設定が必要。
NOTE
*1: SHIPYARD SUPPLY.
*2: OPTION.
*3: CHANGE WIRE THICKNESS ACCORDING AS CABLE LENGTH.
*4: INTERNAL SWITCH SETTING REDUIRED.

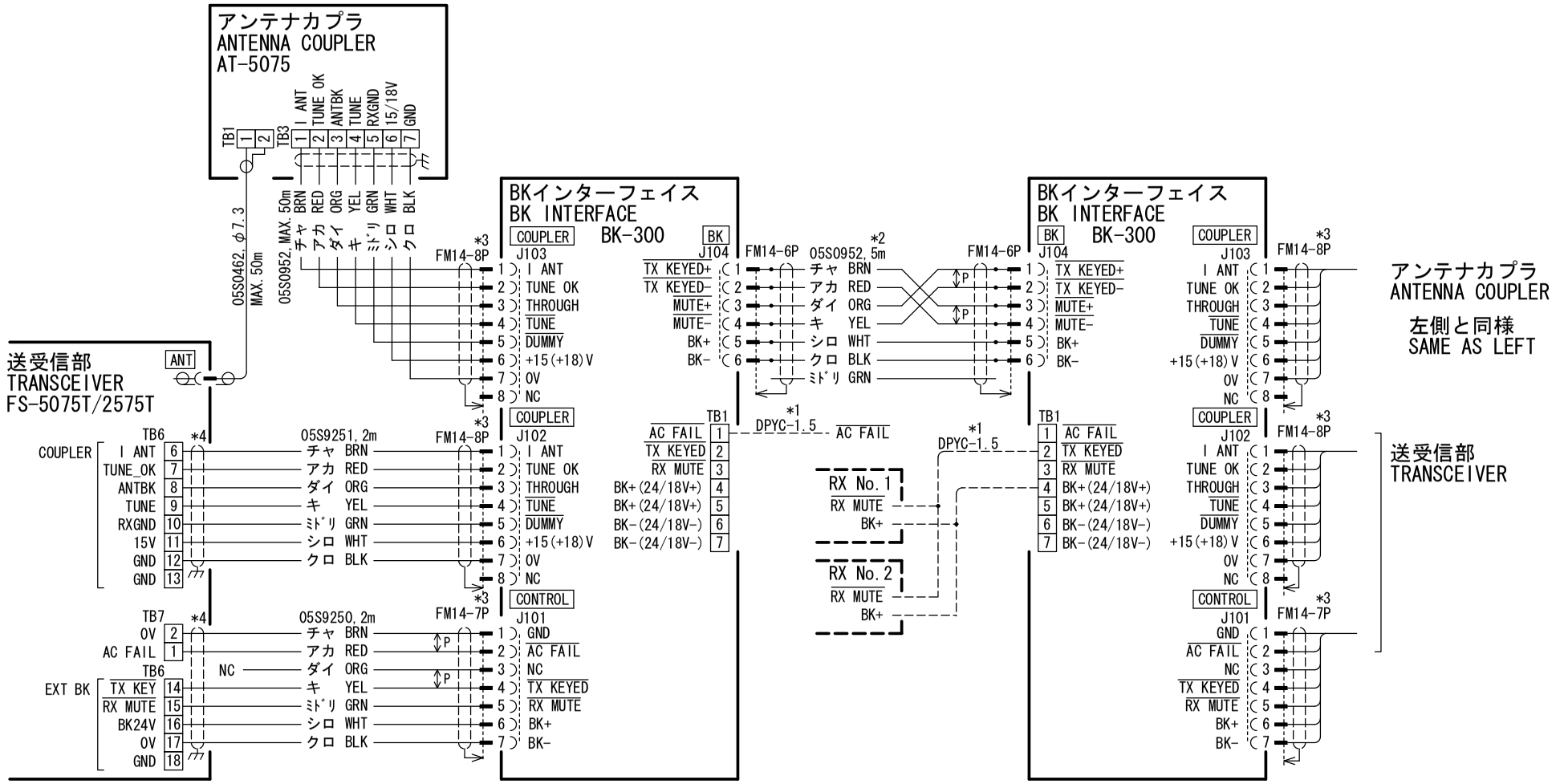
DRAWN 7/May/2012 T.YAMASAKI		TITLE	FS-1575
CHECKED 7/May/2012 H.MAKI		名称	SSB送受信機
APPROVED 8/Dec/2011 Y.NISHIYAMA			相互結線図
SCALE / MASS		NAME	SSB RADIOTELEPHONE
DWG.No. C5676-C01- B	REF.No.		INTERCONNECTION DIAGRAM



注記
＊１）造船所手配。
＊２）オプション。
＊３）長さに応じて芯線太さを変更する。
＊４）内部スイッチ設定が必要。
NOTE
*1: SHIPYARD SUPPLY.
*2: OPTION.
*3: CHANGE WIRE THICKNESS ACCORDING AS CABLE LENGTH.
*4: INTERNAL SWITCH SETTING REDUIRED.

DRAWN 7/May/2012 T.YAMASAKI		TITLE	FS-2575/5075
CHECKED 7/May/2012 H.MAKI		名称	SSB送受信機
APPROVED 8/Dec/2011 Y.NISHIYAMA			相互結線図
SCALE / MASS		NAME	SSB RADIOTELEPHONE
DWG. No. C5678-C01- E	REF. No.		INTERCONNECTION DIAGRAM

FURUNO



注記

＊１）造船所手配

＊２）オプション。

＊３）コネクタは工場にて取付済み。

＊４）プラグを切断して芯線をコネクタピンに接続する。

NOTE

*1: SHIPYARD SUPPLY.
*2: OPTION.
*3: CONNECTOR PLUGS FITTED AT FACTORY.
*4: CONNECT WIRES TO PIN CONNECTOR AFTER PLUG REMOVED.

DRAWN 4/Jul/2011 T.YAMASAKI		TITLE	BK-300 (FS-5075 ser.)
CHECKED 4/Jul/2011 H.MAKI		名称	BK インターフェイス
APPROVED 5/Jul/2011 Y.NISHIYAMA			相互結線図
SCALE / MASS kg		NAME	BK INTERFACE
DWG No. C5083-C03- A			INTERCONNECTION DIAGRAM

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