SUZUKI

Installation Manual
Multi-Function Display
Model SMD7/SMD9

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IMPORTANT NOTICES AND SAFETY INSTRUCTIONS

General

- This manual has been authored with simplified grammar, to meet the needs of international users.
- The operator of this equipment must read and follow the descriptions in this manual. Wrong operation or maintenance can cancel the warranty or cause injury.
- Do not copy any part of this manual without written permission from SUZUKI.
- If this manual is lost or worn, contact your dealer about replacement.
- The contents of this manual and equipment specifications can change without notice.
- The example screens (or illustrations) shown in this manual can be different from the screens you see on your display. The screens you see depend on your system configuration and equipment settings.
- Save this manual for future reference.
- Any modification of the equipment (including software) by persons not authorized by FURUNO will cancel the warranty.
- The following concern acts as our importer in Europe, as defined in DECISION No 768/2008/EC.
  - Name: SUZUKI MOTOR CORPORATION EUROPEAN LIAISON OFFICE -MARINE-
  - Address: MINERVASTRAAT 16, 1930 ZAVENTEM, BELGIUM
- All brand and product names are trademarks, registered trademarks or service marks of their respective holders.

How to discard this product

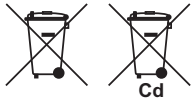
Discard this product according to local regulations for the disposal of industrial waste. For disposal in the USA, see the homepage of the Electronics Industries Alliance (http://www.eiae.org/) for the correct method of disposal.

How to discard a used battery

Some SUZUKI products have a battery(ies). To see if your product has a battery, see the chapter on Maintenance. Follow the instructions below if a battery is used. Tape the + and - terminals of battery before disposal to prevent fire, heat generation caused by short circuit.

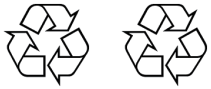
In the European Union

The crossed-out trash can symbol indicates that all types of batteries must not be discarded in standard trash, or at a trash site. Take the used batteries to a battery collection site according to your national legislation and the Batteries Directive 2006/66/EU.



In the USA

The Mobius loop symbol (three chasing arrows) indicates that Ni-Cd and lead-acid rechargeable batteries must be recycled. Take the used batteries to a battery collection site according to local laws.



In the other countries

There are no international standards for the battery recycle symbol. The number of symbols can increase when the other countries make their own recycle symbols in the future.

Program Number

2.0.0R** (** denotes minor modifications)

Safety Instructions

Read these safety instructions before you install or operate the equipment.

WARNING Indicates a condition that can cause death or serious injury if not avoided.

CAUTION Indicates a condition that can cause minor or moderate injury if not avoided.

Warning, Caution | Prohibitive Action | Mandatory Action

WARNING

Turn off the power at the switchboard before beginning the installation.

Fire or electrical shock can result if the power is left on.

Do not open the equipment unless totally familiar with electrical circuits and service manual.

Only qualified personnel can work inside the equipment.

Be sure no water leaks in at the transducer mounting location.

Water leakage can sink the vessel. Also, confirm that vibrations will not lossen the transducer. The installer of the equipment is solely responsible for the proper installation of the equipment. SUZUKI will assume no responsibility for any damage associated with improper installation.

The front panel of the display unit is made of glass. Handle it with care.

Injury can result if the glass breaks.

CAUTION

Ground the equipment to prevent electrical shock and mutual interference.

Do not transmit with the transducer out of water.

The unit and transducer may be damaged.

Do not connect/disconnect the cables connect to the unit while the power is turned on.

The unit may be damaged.

CAUTION

Turn off the power immediately at the switchboard if water leaks into the equipment or smoke or fire is coming from the equipment.

Failure to turn off the equipment can cause fire or electrical shock.

Use only the specified power and signal cable.

Fire or damage to the equipment can result if a different cable is used.

Do not turn the equipment on with the transducer out of water.

The transducer can be damaged.

The transducer cable must handled carefully, following the guidelines below.

- Keep fuels and oils away from the cable.
- Locate the cable where it will not be damaged.
- Do not paint the cable.

The cable sheath is made of chlorophrane or polychloride vinyl, which are easily damaged by plastic solvents such as toluene. Locate the cables away from plastic solvents.

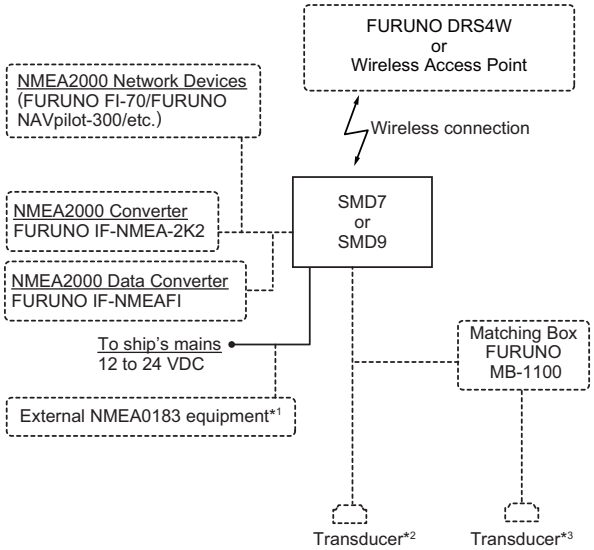
Do not use high-pressure cleaners to clean this equipment.

This equipment has the waterproof rating outlined in the specifications, at the back of this manual.
However, the use of high-pressure cleaning equipment can cause water ingress, resulting in damage to, or failure of, the equipment.

Observe the following compass safe distances to prevent interference to a magnetic compass:

Standard compass	Steering compass
0.6 m	0.4 m

SYSTEM CONFIGURATION



Transducers

*2: 520-5PSD, 520-5MSD, 520-PLD, 525-5PWD, 525T-PWD, 525T-BSD, 525T-LTD/12, 525T-LTD/20, SS60-SLTD/12, SS60-SLTD/20, 526TID-HDD, TM150M, B-75L, B-75H, B-175L, B-175H, 525STID-PWD, 525STID-MSD
*3: 50/200-1T, 50B-6, 50B-6B, 200B-5S

Cautions regarding configurations
- The SMD7/SMD9 are designed to connect with a single DRS4W radar sensor. Connection with multiple radar sensors in not available.
- The DRS4W radar sensor can connect with up to two separate SMD7/SMD9 units.
- Up to four SMD7/SMD9 units can be connected to the same NMEA2000 network. However, settings and data are not shared directly between units.
- All optional items are manufactured by FURUNO ELECTRIC CO.,LTD. Contact your FURUNO dealer for purchase.

EQUIPMENT LIST

Standard supply

Name	Type	Part No.	Qty.	Remarks
Multi-Function Display	SMD7	-	1	-
	SMD9	-		-
GASKET, FLUSH MOUNT 7	-	31914-98L00	1	SMD 7 Only
GASKET, FLUSH MOUNT 9	-	31914-98L10	1	SMD 9 Only
GATEWAY	-	34923-96L00	1	Kit Only
SCREW FLUSH MOUNT	-	34920-98L00	4	-
CABLE, POWER SUPPLY	-	36663-98L00	1	-
HARNESS ASSY NETWORK POWER	-	36663-88L20	1	Kit Only
WIRE 2 EXTENSION	-	36662-88L10	1	Kit Only
CONNECTOR BRANCH	-	36664-88L00	3	Kit Only
UNIT RESISTOR FEMALE	-	36665-88L00	1	Kit Only
UNIT RESISTOR MALE	-	36665-88L10	1	Kit Only
KNOB, TOP MOUNT BRACKET	-	34936-98L00	2	-
BRACKET, TOP MOUNT 7	-	34933-98L00	1	-
BRACKET, TOP MOUNT 9	-	34933-98L10	1	-
SCREW BRACKET MOUNT	-	34920-98L10	4	-
CLEANER, DISPLAY	-	34938-98L00	1	-

Optional supply*4

Name	Type	Code No.	Remarks
Matching Box	MB-1100	000-027-226	-
Junction Box	FI-5002	000-010-765	-
Temperature Sensor	T-04MSB	000-026-893	Thru-hull type
	T-04MTB	000-026-894	Transom mount
Speed/Temperature Sensor	ST-02MSB	000-137-986-01	Thru-hull type, metal
	ST-02PSB	000-137-987-01	Thru-hull type, plastic
Inner Hull Mounting Kit	22S0191-3	001-321-930	-
Cable Assembly	02S4147-2 (10-10,6P)	001-258-330	For ST Sensors.
Extension Cable*3	C332 10M	001-464-120	10m, for transducer/triducer
NMEA Data Converter	IF-NMEA2K2	000-020-510	-
	IF-NMEAFI	000-027-047	
Waterproof Cap	CAP-WBDMSMA1	000-167-169-10	For NMEA Connector at rear of unit.
Triducer	525STID-PWD (*2)	000-011-784-00	-
	525STID-MSD (*2)	000-011-783-00	

Name	Type	Code No.	Remarks
Transducer	520-5PSD (*2)	000-015-204-00	Select one **Note:** The following transducers require Matching Box MB-1100 for installation: • 50/200-1T *10M* • 50B-6 *10M* • 50B-6B *15M* • 200B-5S *10M*
	520-5MSD (*2)	000-015-212-00	
	525-5PWD (*2)	000-146-966-00	
	520-PLD (*2)	000-023-680-00	
	525T-BSD (*2)	000-023-020-00	
	525T-PWD (*2)	000-023-019-00	
	SS60-SLTD/12 (*2)	000-023-676-00	
	SS60-SLTD/20 (*2)	000-023-677-00	
	525T-LTD/12 (*2)	000-023-679-00	
	525T-LTD/20 (*2)	000-023-678-00	
	50/200-1T *10M* (*2)	000-015-170-00	
	526TID-HDD (*2)	000-023-021-00	
	50B-6 *10M*	000-015-042	
	50B-6B *15M*	000-015-043	
	200B-5S *10M*	000-015-029	
CHIRP Transducer	TM150M	000-035-550	-
	B-75L	000-035-501	
	B-75H	000-035-502	
	B-175L	000-035-503	
	B-175H	000-035-504	
Termination Resistor (Micro)	FRU-MF000000001	001-507-060	-
	FRU-MM1000000001	001-507-070	-
Micro T-Connector	FRU-MM1MF1MF1001	001-507-050	-
Cable Assembly	FRU-NMEA-PFF-010	001-507-010	-
	FRU-NMEA-PFF-020	001-507-030	-
	FRU-NMEA-PFF-060	001-507-040	-
	FRU-NMEA-PMMFF-010	001-506-820	-
	FRU-NMEA-PMMFF-020	001-506-830	-
	FRU-NMEA-PMMFF-060	001-507-000	-
Operator's Manual	OME-45040-x*1	000-195-462-1x*1	Printed manual

*1: "x" indicates revision/version number.

*2: Compatible with ACCU-FISH™, Bottom Discrimination and RezBoost™ Enhanced mode. All listed transducers marked with "*2" are compatible with RezBoost™ Standard mode.

*3: Use of the extension cable may cause the following: reduction in detection performance, incorrect ACCU-FISH™ information, wrong speed data and/or incorrect TD-ID recognition.

*4: All optional items are manufactured by FURUNO ELECTRIC CO., LTD. Contact your FURUNO local dealer for purchase.

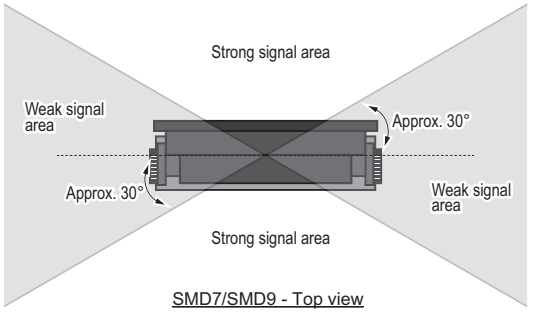
1. INSTALLATION

1.1 Display Unit Installation

The Display Unit (SMD7 or SMD9) can be mounted in one of two ways: desktop (bracket) or flush mount (in the console, etc.).

When selecting a mounting location, keep the following points in mind:

- Determine the suitability of the mounting location before permanently mounting the unit. Bulkheads and roofs can affect the incoming/outgoing signals, depending on the shape of the vessel, preventing communication with the radar sensor. Signals are strongest to the fore/aft direction of the unit; weakest to either side of the unit.



SMD7/SMD9 - Top view

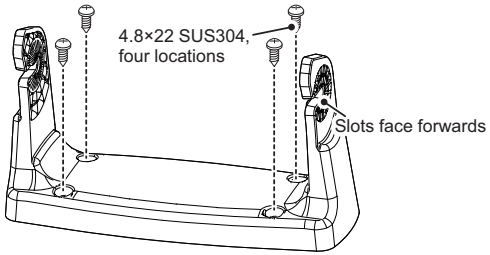
  The unit should be located within the following distances from the radar sensor, to ensure a stable connection.
  Vessels with no obstructions: approximately 5 m, or less.
  Vessels with obstructions: approximately 2 m, or less. (Avoid locations where the obstruction(s) are composed of metal, carbon-fiber, or similar materials.)
- There should be no interfering objects within the line-of-sight to the satellites. An object within line-of-sight to satellites, for example, a mast, may block reception or prolong acquisition time. Select a location out of the radar and inmarsat beams. Those beams will obstruct or prevent reception of the GPS satellite signal.
- Locate the unit away from areas subject to water splash and rain.
- The operating temperature range of this unit is -15°C to +55°C. Be sure the mounting location satisfies this requirement.
- Locate the unit away from exhaust pipes and vents.
- The mounting location should be well ventilated.
- Mount the unit where shock and vibration are minimal.
- Keep the unit away from electromagnetic field-generating equipment such as motors and generators.
- Select a location away from VHF/UHF antennae, to avoid interference caused by harmonic waves.
- Referring to the outline drawings at the back of this manual, leave sufficient room for service and maintenance.

- Select a location where the cables have sufficient slack to allow for maintenance and service.
- A magnetic compass may receive interference if it is placed too close to this unit. Observe the compass safe distances noted in the safety instructions () to prevent interference to the magnetic compass.

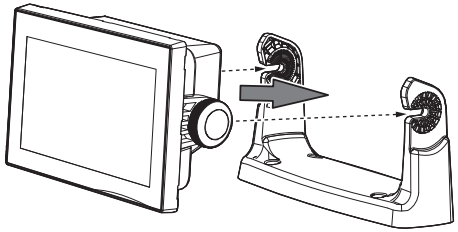
1.1.1 Desktop (bracket) installation

Before mounting the Display Unit on a desktop, remove the unit from the attached bracket.

1. Unfasten the two knob bolts, one on either side of the Display Unit. Do not discard the knob bolts.
2. Place the Display Unit face-down on a soft, firm surface, then remove the bracket. To remove the bracket, gently push the bracket arms on either side of the Display Unit outwards.
3. Place the bracket at the mounting location, then secure the bracket in place with the supplied self-tapping screws (4.8×22 SUS304, 4 pieces).
   Note: Orient the bracket so that the slots in the bracket arms face forwards, as shown in the figure below.



4. Loosely fasten the knob bolts, removed at step 1, to the Display Unit. Leave approximately 10 mm of thread exposed.
5. Fit the Display Unit to the bracket, then fasten the knob bolts. Take care that the Display Unit is seated properly at the back of the bracket slots.

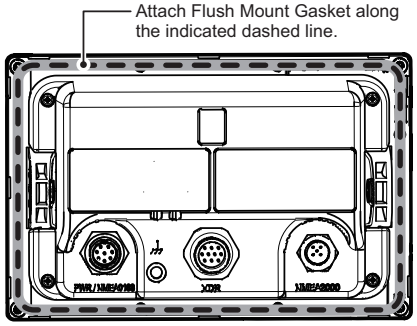


6. Connect the required cables to the rear of the Display Unit.
   If there is no NMEA2000 connections in your configuration, fit the supplied NMEA2000 connector cap to the NMEA2000 connector, at the rear of the Display Unit.
   If your configuration has NMEA2000 connections, discard the connector cap.

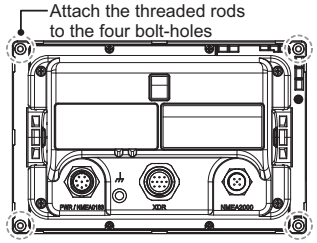
1.1.2 Flushmount (console) installation

Before mounting the Display Unit in a desktop or console, remove the unit from the attached bracket.

1. Unfasten the two knob bolts, one on either side of the Display Unit. Do not discard the knob bolts.
2. Place the Display Unit face-down on a soft, firm surface, then remove the bracket. To remove the bracket, gently push the bracket arms on either side of the Display Unit outwards.
3. Remove one side of the adhesive protection sheet on the Flush Mount Gasket, then fit the gasket to the rear of the Display Unit.

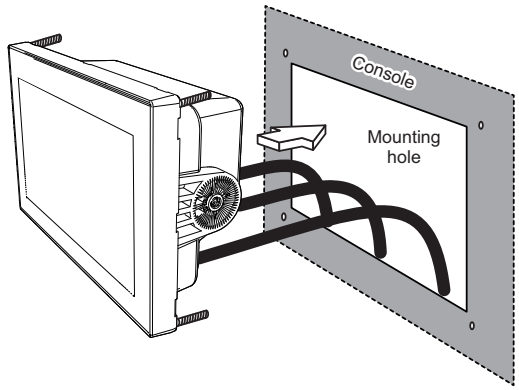


4. Mark and cut the installation hole, then drill four bolt holes, referring to the Flush Mount Template at the back of this manual.
5. Fit the supplied threaded rods (M4×40 SUS304, 4 pieces) to the locations indicated in the figure below. Do not use tools, such as pliers, to fit the rods, as the thread may be damaged.



6. Connect the required cables to the rear of the Display Unit.
   If there is no NMEA2000 connections in your configuration, fit the supplied NMEA2000 connector cap to the NMEA2000 connector, at the rear of the Display Unit.
   If your configuration has NMEA2000 connections, discard the connector cap.
7. Remove the adhesive protection sheet from the Flush Mount Gasket.

8. Fit the Display Unit to the mounting hole, taking care that the threaded rods are aligned with the bolts holes drilled at step 4.



9. Fit the flat washers and nuts to the threaded rods.
10. Fasten the nuts to secure the unit in place.

1.2 Radar Sensor (FURUNO DRS4W) Installation

The optional radar sensor (FURUNO DRS4W) has no power switch. To turn the sensor on/off, the sensor must be connected to the switchboard or a similar power-governance device. For DRS4W installation instructions, see the manual included with the DRS4W.

1.3 Transducer Installation

⚠ CAUTION

Do not transmit with the transducer out of water.

The unit and transducer may be damaged.

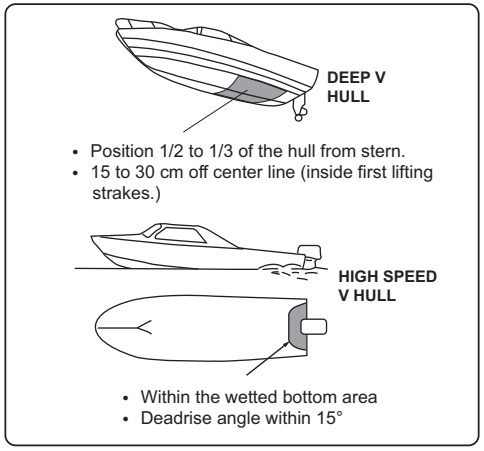
1.3.1 How to mount a transducer through the hull

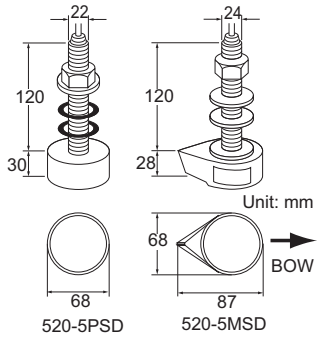
Transducer mounting location

The thru-hull mount transducer provides the best performance of all, since the transducer protrudes from the hull and the effect of air bubbles and turbulence near the hull skin is reduced. If your boat has a keel, the transducer should be at least 30 cm away from it.

The performance of this fish finder is directly related to the mounting location of the transducer, especially for high-speed cruising. The installation should be planned in advance, keeping the length of the transducer cable and the following factors in mind:

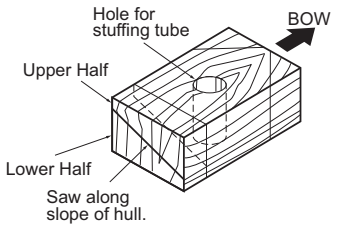
- Air bubbles and turbulence caused by movement of the boat seriously degrade the sounding capability of the transducer. The transducer should, therefore, be located in a position where water flow is the smoothest. Noise from the propellers also adversely affects performance and the transducer should not be mounted nearby. The lifting strakes are notorious for creating acoustic noise, and these must be avoided by keeping the transducer inboard of them.
- The transducer must always remain submerged, even when the boat is rolling, pitching or up on a plane at high speed.
- A practical choice would be somewhere between 1/3 and 1/2 of your boat's length from the stern. For planing hulls, a practical location is generally rather far astern, so that the transducer is always in water regardless of the planing attitude.



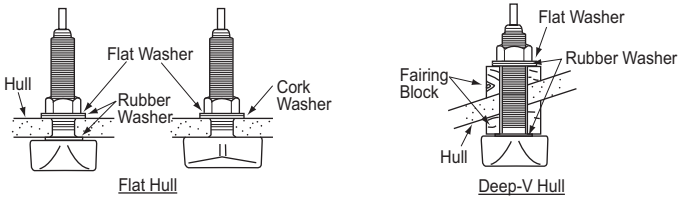


Installation procedure

1. With the boat hauled out of the water, mark the location chosen for mounting the transducer on the bottom of the hull.
2. If the hull is not level within 15° in any direction, fairing blocks made out of teak should be used between the transducer and hull, both inside and outside, to keep the transducer face parallel with the water line. Fabricate the fairing block as shown below and make the entire surface as smooth as possible to provide an undisturbed flow of water around the transducer. The fairing block should be smaller than the transducer itself to provide a channel to divert turbulent water around the sides of the transducer rather than over its face.



3. Drill a hole just large enough to pass the threaded stuffing tube of the transducer through the hull, making sure it is drilled vertically.
4. Apply a sufficient amount of high quality caulking compound to the top surface of the transducer, around the threads of the stuffing tube and inside the mounting hole (and fairing blocks if used) to ensure watertight mounting.
5. Mount the transducer and fairing blocks and tighten the locknut. Be sure that the transducer is properly oriented and its working face is parallel to the waterline.



Note: Do not over-stress the stuffing tube and locknut through excessive tightening, since the wood block will swell when the boat is placed in the water. It is suggested that the nut be tightened lightly at installation and re-tightened several days after the boat has been launched.

Transducer preparation

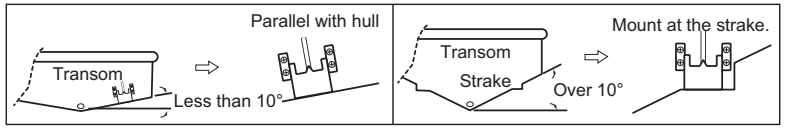
Before putting your boat in water, wipe the face of the transducer thoroughly with a detergent liquid soap. This will lessen the time necessary for the transducer to have good contact with the water. Otherwise the time required for complete "saturation" will be lengthened and performance will be reduced.

DO NOT paint the transducer. Performance will be affected.

1.3.2 Transom mount transducer

The optional transom mount transducer is very commonly employed, usually on relatively small I/O or outboard boats. Do not use this method on an inboard motor boat because turbulence is created by the propeller ahead of the transducer.

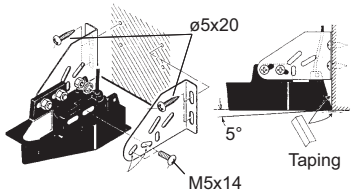
DO NOT over-tighten screws, to prevent damage to the transducer.



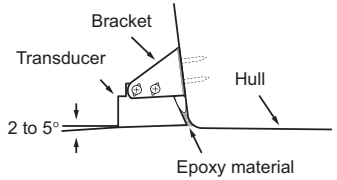
Installation procedure

A suitable mounting location is at least 50 cm away from the engine and where the water flow is smooth.

1. Drill four pilot holes for self-tapping screw (ϕ5×20) in the mounting location.
2. Coat the threads of the screws (M5x14) for the transducer with marine sealant for waterproofing. Attach the transducer to the mounting location with the self-tapping screws.
3. Adjust the transducer position so the transducer faces right to the bottom. If necessary, to improve water flow and minimize air bubbles staying on the transducer face, incline the transducer about 5° at the rear. This may require a certain amount of experimentation for fine tuning at high cruising speeds.
4. Tape the location shown in the figure below.



5. Fill the gap between the wedge front of the transducer and transom with epoxy material to eliminate any air spaces.



6. After the epoxy hardens, remove the tape.

1.3.3 How to mount a transducer inside the hull

The transducer may also be installed inside the hull on FRP boats. However, this installation method affects the ability to detect the bottom, fish and other objects because the ultrasound pulse is weakened when it passes through the hull.

Note: This mounting method should not be used to mount a transducer that supports the RezBoost™, ACCU-FISH™ and/or bottom discrimination display features, since performance is greatly degraded.

Necessary tools

The following tools are required:

- Sandpaper (#100)
- Marine sealant
- Water-filled plastic bag

Remarks on installation

- Do the installation with the ship moored at a dock, etc. The water depth should be 6.5 to 32 feet (2 to 10 meters).
- Turn off the engine.
- Do not power the unit with the transducer in the air, to prevent damage to the transducer.
- Do not use this method on a double layer hull.
- Before attaching the transducer to the hull, check that the site is suitable, by following steps 1 to 3 in the installation procedure below.

Installation procedure

The attenuation of the ultrasound pulse varies with the thickness of the hull. Select a location where attenuation is the lowest.

1. Select 2-3 locations considering the four points mentioned below.

- Mount the transducer at a location 1/2 to 1/3 of the length of your boat from the stern.
- The mounting location is between 15 to 50 cm from the centerline of the hull.
- Do not place the transducer over hull struts or ribs which run under the hull.
- Avoid a location where the rising angle of the hull exceeds 15°, to minimize the effect of the boat's rolling.

2. Decide the most suitable site from the locations selected.
   1) Connect the power cable and transducer cable to the display unit.
   2) Put the transducer into water-filled plastic bag. Press the transducer against the chosen site.
   3) Turn the power on.
   4) After the startup procedure completes (approx. 90 seconds), the last used display appears. Tap the [Home] icon to show the home screen. See for how to use the menu.
   5) Tap [Settings], then tap [Fish Finder].
   6) Drag the [Fish Finder] menu to show the [Initial Setup] menu.
   7) Tap [Transducer].
   8) Confirm the available fish finder from the list of available sounders, then tap the appropriate fish finder.

   9) Tap the [<] icon to return to the [Fish Finder] menu
   10) At the [Transmission Power] menu item, tap [High] or [Low] as appropriate.
   11) Drag the right-hand side of the screen leftwards to show the slide-out menu. Tap the toggle button at [Transmission] to show [ON]. Check if the bottom echo appears on the screen, in the display area. If no bottom echo appears, repeat the procedure unit a suitable location is found.
3. Remove the transducer from the plastic bag and wipe the face of transducer with a cloth to remove water and any foreign material. Lightly roughen the face with #100 sandpaper. Also, use the sandpaper to roughen the inside of the hull where the transducer is to be mounted.
4. Wipe off any sandpaper dust from the face of the transducer.
5. Dry the face of the transducer and the hull. Coat the transducer face and mounting location with marine sealant. Hardening begins in approx. 15 to 20 minutes so do this step without delay.
6. Attach the transducer to the hull. Press the transducer firmly down on the hull and gently twist it back and forth to remove any air which may be trapped in the marine sealant.
7. Support the transducer with a piece of wood to keep it in place while the sealant is drying. It takes 24 to 72 hours to harden completely.
8. Turn the power on and change the menu setting as shown below. See for how to use the menu.
   1) Tap [Settings], then tap [Fish Finder].
   2) Drag the [Fish Finder] menu to show the [Initial Setup] menu.
   3) At the [Transmission Power] menu item, set the transmission power to [High].
   4) At the [Offsets] menu item, adjust the settings as shown in the table below.

Menu Item	Setting
HF Bottom Level	-40
LF Bottom Level	-40
HF Echo Offset	20
LF Echo Offset	20

1.3.4 Triducer

DO NOT over-tighten screws, to prevent damage to the transducer.

525STID-MSD

The optional triducer 525STID-MSD is designed for thru-hull mounting.

525STID-PWD

The optional triducer 525STID-PWD is deigned for transom mounting.

Pretest for speed and temperature

Connect the sensor to the instrument and spin the paddlewheel. Check for a speed reading and the approximate air temperature. If there is no reading, return the sensor to your place of purchase.

Tools and materials required

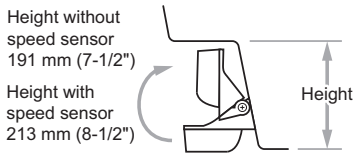
- Scissors
- Masking tape
- Safety goggles
- Dust mask
- Electric drill
- Screwdrivers
- Drill bit:
  For bracket holes: 4 mm, #23, or 9/64”
  For fiberglass hull: chamfer bit (preferred), 6 mm, or 1/4”
  For transom hole: 9 mm or 3/4” (optional)
  For cable clamp holes: 3 mm or 1/8”
- Straight edge
- Marine sealant
- Pencil
- Cable ties
- Water-based anti-fouling paint (mandatory in salt water)

Mounting location

To ensure the best performance, the sensor must be submerged in aeration-free and turbulence-free water. Mount the sensor close to the centerline of your boat. On slower heavier displacement hulls, positioning it farther from the centerline is acceptable.

Allow adequate space above the bracket for it to release and rotate the sensor upward.

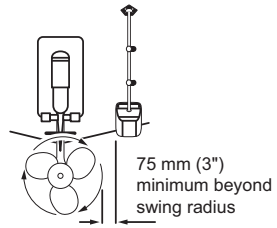
Note 1: Do not mount the sensor in an area of turbulence or bubbles: near water in-take or discharge openings; behind strakes, struts, fittings, or hull irregularities; behind eroding paint (an indication of turbulence).



Note 2: Avoid mounting the sensor where the boat may be supported during trailering, launching, hauling, and storage.

Note 3: For single drive boat, mount on the starboard side at least 75 mm (3") beyond the swing radius of the propeller, as shown in the right figure.

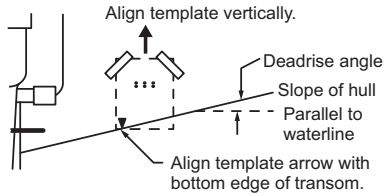
Note 4: For twin drive boat, mount between the drives.



How to install the bracket

1. Cut out the installation template (enclosed with transducer) along the dotted line.
2. At the selected location, position the template, so the arrow at the bottom is aligned with the bottom edge of the transom. Being sure the template is parallel to the waterline, tape it in place.

   Warning: Always wear safety goggles and a dust mask.



3. Using a 4 mm, #23, or 9/64” bit, drill three holes 22 mm (7/8”) deep at the locations indicated. To prevent drilling too deeply, wrap masking tape around the bit 22 mm (7/8”) from the point.
   Fiberglass hull: Minimize surface cracking by chamfering the gelcoat. If a chamfer bit or countersink bit is not available, start drilling with a 6mm or 1/4” bit to a depth of 1 mm (1/16”).
4. If you know your transom angle, the bracket is designed for a standard 13° transom angle.
   - 11°-18° angle: No shim is required. Skip to step 3 in "Adjustments".
   - Other angles: The shim is required. Skip to step 2 of "Adjustments".

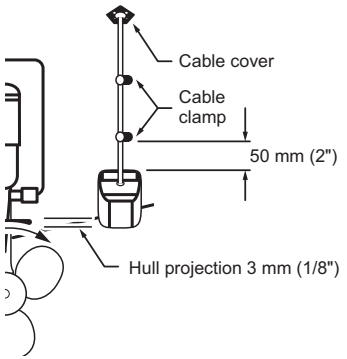
   If you do not know the transom angle, temporarily attach the bracket and sensor to the transom to determine if the plastic shim is needed.
5. Using the three #10×1-1/4” self-tapping screws, temporarily screw the bracket to the hull. DO NOT tighten the screws completely at this time. Follow the step 1-4 in "How to attach the sensor to the bracket", before proceeding with "Adjustments".

Adjustments

1. Using a straight edge, sight the underside of the sensor relative to the underside of the hull. The stern of the sensor should be 1-3 mm (1/16-1/8”) below the bow of the sensor or parallel to the bottom of the hull.
   Note: Do not position the bow of the sensor lower than the stern because aeration will occur.
2. To adjust the sensor's angle relative to the hull, use the tapered plastic shim provided. If the bracket has been temporarily fastened to the transom, remove it. Key the shim in place on the back of the bracket.
   2°-10° transom angle (stepped transom and jet boats): Position the shim with the tapered end down.

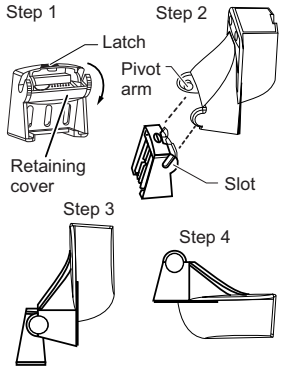
19°-22° transom angle (small aluminum and fiberglass boats): Position the shim with the tapered end up.

3. If the bracket has been temporarily fastened to the transom, remove it. Apply a marine sealant to the threads of the three #10 x 1-1/4” self-tapping screws to prevent water seeping into the transom. Screw the bracket to the hull. Do not tighten the screws completely at this time.
4. Repeat step 1 to ensure that the angle of the sensor is correct.
   Note: Do not position the sensor farther into the water than necessary to avoid increasing drag, spray, and water noise and reducing boat speed.
5. Using the vertical adjustment space on the bracket slots, slide the sensor up or down to provide a projection of 3 mm (1/8”). Tighten the screws.



How to attach the sensor to the bracket

1. If the retaining cover near the top of the bracket is closed, open it by depressing the latch and rotating the cover downward.
2. Insert the sensor's pivot arms into the slots near the top of the bracket.
3. Maintain pressure until the pivot arms click into place.
4. Rotate the sensor downward until the bottom snaps into the bracket.
5. Close the retaining cover to prevent the accidental release of the sensor when your boat is underway.



How to route the cable

Route the sensor cable over the transom, through a drain hole, or through a new hole drilled in the transom above the waterline.

Never cut the cable or remote the connector; this will void the warranty. Always wear safety goggles and a dust mask.

1. If a hole must be drilled, choose a location well above the waterline. Check for obstructions such as trim tabs, pumps, or wiring inside the hull. Mark the location with a pencil. Drill a hole through the transom using a 19 mm or 3/4” bit (to accommodate the connector).
2. Route the cable over or through the transom.

3. On the outside of the hull secure the cable against the transom using the cable clamps. Position a cable clamp 50 mm (2") above the bracket and mark the mounting hole with a pencil.
4. Position the second cable clamp halfway between the first clamp and the cable hole. Mark this mounting hole.
5. If a hole has been drilled in the transom, open the appropriate slot in the transom cable cover. Position the cover over the cable where it enters the hull. Mark the two mounting holes.
6. At each of the marked locations, use a 3 mm or 1/8” bit to drill a hole 10 mm (3/8”) deep. The prevent drilling too deeply, wrap masking tape around the bit 10 mm (3/8”) from the point.
7. Apply marine sealant to the threads of the #6×1/2” self-tapping screw to prevent water from seeping into the transom. If you have drilled a hole through the transom, apply marine sealant to the space around the cable where it passes through the transom.
8. Position the two cable clamps and fasten them in place. If used, push the cable cover over the cable and screw it in place.
9. Route the cable to the display unit being careful not to tear the cable jacket when passing it though the bulkhead(s) and other parts of the boat. To reduce electrical interference, separate the sensor cable from other electrical wiring and "noise" sources. Coil any excess cable and secure it in place with zip-ties to prevent damage.

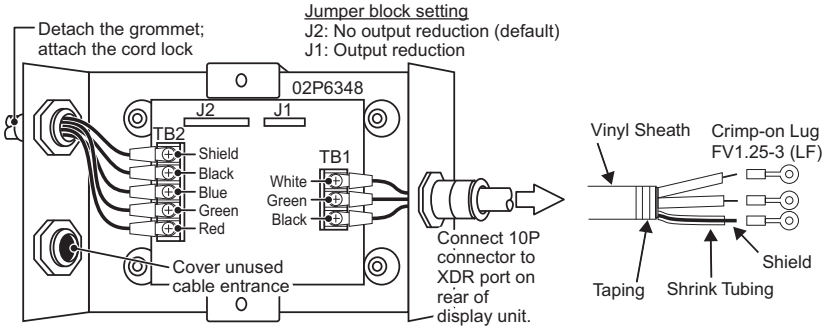
1.3.5 Matching box (required for 50/200-1T transducer)

The matching box (Available as an optional extra. Type: MB-1100, Code No.: 000-041-353) is required to connect the optional 50/200-1T transducer.

Part	Type	Code no.	Qty
Matching Box*	MB-1100	000-041-353	1
Crimp-on Lug	FV1.25-3 (LF)	000-166-756-10	6
Cord Lock**	NC-1	000-168-230-10	1

*: With 10P connector cable

**: For connecting two transducers



1.4 Speed/Temperature Sensor (option) Installation

1.4.1 Speed/temperature sensors ST-02MSB, ST-02PSB

The speed/temperature sensors (ST-02MSB, ST-02PSB) are designed for thru-hull mounting. Install them as shown in this section.

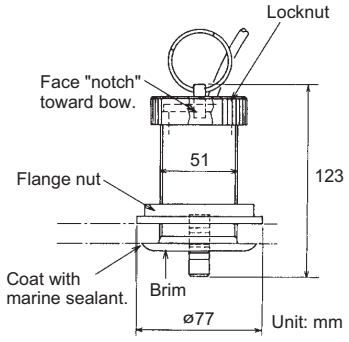
Mounting considerations

Select a suitable mounting location, considering the following:

- Select a location where the transducer will not be damaged in trailering, launching, hauling, and storage.
- Select a mid-boat flat position. The sensor does not have to be installed perfectly perpendicular.
- Select a location in the forward direction viewing from the drain hole, to allow for circulation of cooling water.
- Select a location away from water flow from keel, water discharge pipe, etc.
- Vibration at the location shall be minimal.
- Do not install fore of the transducer of a fish finder, to prevent disturbance (and loss of performance) to the fish finder.

Mounting procedure

1. Dry-dock the boat.
2. Make a hole of approx. 51 mm diameter in the mounting location.
3. Unfasten the locknut and remove the sensor section.
4. Apply marine sealant to the flange of the sensor. The height of the coat should be approx. 6 mm.
5. Pass the sensor casing through the hole.
6. Face the notch on the sensor toward boat's bow and tighten the flange.
7. Set the sensor section to the sensor casing and tighten the locknut.
8. Launch your boat and check for water leakage around the sensor.

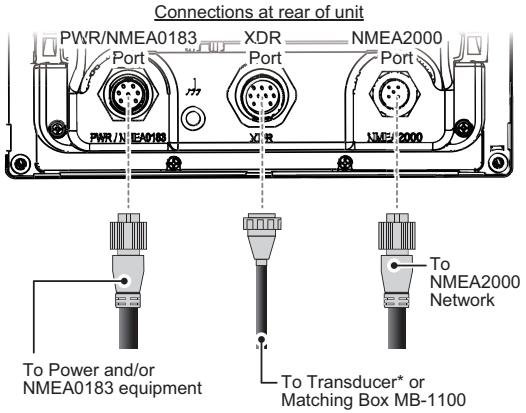


1.4.2 Temperature sensors T-04MSB and T-04MTB

For installation instructions for T-04MSB and T-04MTB sensors, see the installation instructions included with the sensor.

2. WIRING

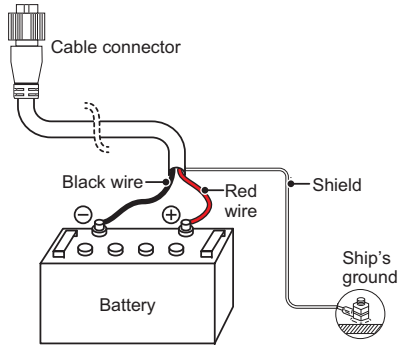
The SMD7/9 has three interface connectors at the rear of the unit, as shown in the following figure.



Note: Do not connect/disconnect the cables connected to the unit while the power is turned on. The unit may be damaged.

2.1 Power/NMEA0183 Port

Connect the black and white wires from the power cable to the ship's battery (12 VDC or 24 VDC), as indicated in the following figure. Connect the black wire to the negative terminal, then connect the red wire to the positive terminal. Connect the shield wire to the ship's ground.



Connecting NMEA0183 equipment

There are two methods for connecting the SMD7/9 with NMEA0183 equipment:

- Connected directly via the NMEA0183 port at the rear of the unit. This method is recommended for single connections.
- Via the CAN bus network, using the optional NMEA data converter (IF-NMEA2K2). This method is recommended when connected with multiple NMEA0183 devices.

The NMEA0183 connection baud rate, on the external equipment, must be set to either 4800 bps or 38400 bps.

Heading input allows functions such as Radar Overlay and course stabilization (North up, Course up, etc.) in the radar operating modes. The NMEA0183 heading refresh rate needs to be 100 ms in order for any radar function to work properly. NMEA0183 heading can be accepted at either baud rate shown above.

Note: For more information on connecting and wiring IF-NMEA2K2, refer to the installation manual for the IF-NMEA2K2 (IMC-44591-xx; "xx" indicates publication version).



NMEA0183 Pin Assignment

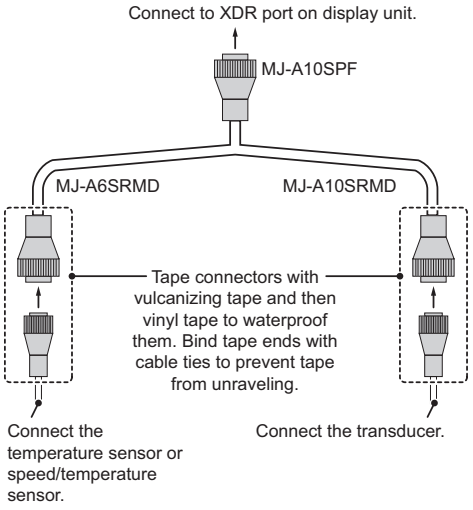
Pin #	Wire Color	Signal Name
1	Black (20AWG)	VIN-
2	Red (20AWG)	VIN+
3	White (22AWG)	TD-A (NMEA0183)
4	Green (22AWG)	RD-B (NMEA0183)
5	Gray (22AWG)	GND
6	Yellow (22AWG)	RD-A (NMEA0183)
7	Blue (22AWG)	TD-B (NMEA0183)
8	Drain wire	SHIELD

2.2 XDR Port

Connect the transducer to the XDR port on the rear of the display unit. If the optional speed/temperature sensor is connected, connect the transducer with the optional cable assembly (type: 02S4147).

Note: Use of the optional extension cable (type: C332 10M) may cause the following problems:

- Reduced detection ability
- Wrong ACCU-FISH™ information (fish length smaller than actual length, fewer fish detections, error in individual fish detection)/
- Wrong speed data
- No TD-ID recognition



2.3 NMEA2000 (CAN bus) Connections

What is CAN bus?

CAN bus is a communication protocol (NMEA2000 compliant) that shares multiple data and signals through a single backbone cable. You can simply connect any CAN bus devices onto the backbone cable to expand your network on-board. With CAN bus, IDs are assigned to all the devices in the network, and the status of each sensor in the network can be detected. All the CAN bus devices can be incorporated into the NMEA2000 network.

The table below shows the NMEA2000 devices which are compatible (connectible) with the SMD7/9 and can share information via the CAN bus network.

Device type	Device model
Sensors	FURUNO WS-200, FURUNO GP-330B, FURUNO SC-30, FURUNO PG-700, FURUNO IF-NMEA2K2
Instruments	FURUNO RD-33, FURUNO FI-70
Auto pilot	FURUNO NAVpilot-300

Note: For NMEA0183 connections, see section 2.1.

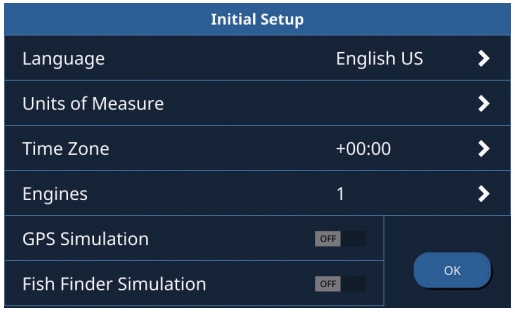
3. SETTINGS AND ADJUSTMENTS

About the microSD Card

Do not remove or insert the microSD Card when the power is turned on, to avoid loss or corruption of your data.

3.1 Starting the Setup Procedure

When the system is powered on the first time, the [Initial Setup] is displayed immediately after the startup tests are completed.



Once these settings are completed, this menu does not appear again. These settings can also be changed from the [Settings] menu on the [Home] page (see).

To set the [Initial Setup] menu, follow the procedure below.

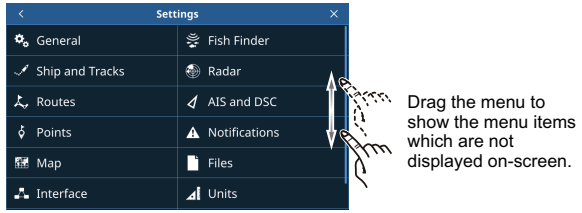
1. Tap [Language] to show the available display languages, then tap the language you want to use.
2. Tap [Units of Measure] to show the [Units] menu.
3. Tap the unit you want to set. The settings options window appears.
4. Tap the unit of measurement you want to use, then tap the [<] at the top-left of the settings options window.
5. Tap the [<] at the top-left of the [Units] menu to go back to the [Initial Setup] menu.
6. Tap [Time Zone]. The time offset window appears.
7. Select the appropriate time offset, then tap the [<] at the top-left of the offset window to go back to the [Initial Setup] menu.
8. Tap [Engines]. The engine selection window appears.
9. Select the number of engines on the boat, then tap the [<] at the top-left of the selection window to go back to the [Initial Setup] menu.
10. Tap [OK] to save and apply the settings. The system takes a few seconds to apply the settings, then the [Plotter] page appears.

Note: The menu items [GPS Simulation] and [Fish Finder Simulation] are intended for promotional purposes. Make sure both these menu items are set to [OFF].

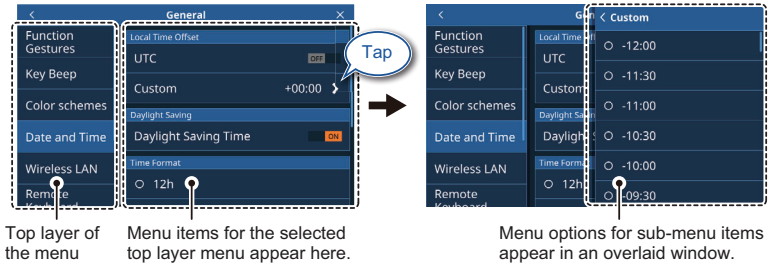
3.2 How to Use the Menu

The [Settings] menu contains customizing options for this equipment. To access the [Settings] menu, follow the procedure below.

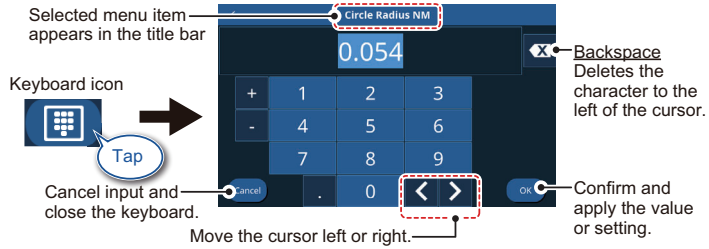
1. Tap the [Home] icon to show the [Home] screen.
2. Tap [Settings]. The [Settings] menu appears.



3. Tap the menu you want to access. Drag the menu to show menu items which do not appear on-screen.



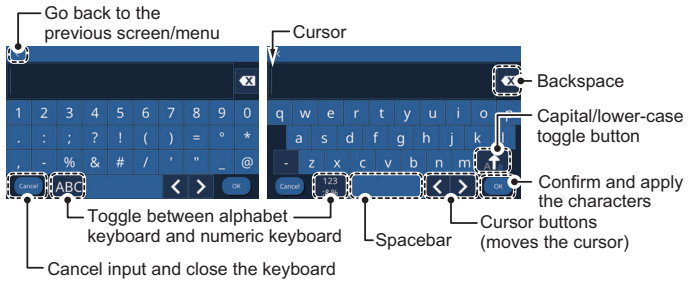
4. Tap the menu item you want to set; the available settings and options appear in the right-side of the screen. Tap the [>] icon to show sub-menu items.
5. Depending on the menu item selected, do one of the following:
   - **[ON]/[OFF] toggle boxes:** Select [ON] to activate the function or feature, select [OFF] to deactivate the function or feature.
   - **Settings and options:** Tap the desired setting or option. The current selection is indicated by a filled circle to the left of the setting or option.
   - **Slide-bar or keyboard icon:** Drag the slider (solid circle) on the slider-bar to set a value. For the software keyboard (appears after you tap the keyboard icon), tap the keyboard to input a value, then tap [OK].



6. Tap the [×] icon at the top-right corner of the menu to close the menu.

Alphanumeric input

To enter alphanumeric characters, follow the procedure below.



1. Tap the character or numeral you want to input.
2. Repeat step 1 until you have input the required characters/numerals.
3. Tap [OK].

3.3 Initial Setup Menu

You can change the display language, setup the details for your vessel and other initial settings, from the [Initial Setup] menu.

1. Tap the [Home] => [Settings] => [Initial Setup]. The [Initial Setup] menu appears.
2. Referring to the table below, set up the required menus.

Menu name	Description	Setting range/options
[Language] tab		
[Language]	Select the display language.	[English US], [English UK], others
[Vessel] tab		
[Vessel Type]	Select the hull-type for your vessel.	[Power Displacement], [Power Planing], [Sail Boat]
[Autopilot] tab		
[NAVpilot Control]	Select whether or not to use the NAVpilot for navigation.	[ON], [OFF]
[Navigation Setup] tab		
[Position Filter]	When the DOP or receiving condition is unfavorable, the GPS fix may change, even if the vessel is dead in water. This change can be reduced by smoothing the raw GPS fixes. The higher the setting, the more smoothed the raw data, however too high a setting slows response time to change in latitude and longitude. This is especially noticeable at high ship's speeds.	[Off], [Low], [Medium], [High]

Menu name	Description	Setting range/options
[Speed Filter]	During position fixing, ship's velocity (speed) is directly measured from the GPS satellite. The raw velocity data may change randomly depending on receiving conditions and other factors. You can reduce this random variation by increasing the filter setting. If the setting is too high, however, the response to speed and course change slows.	[Off], [Low], [Medium], [High]
Map Datum	Select the datum to use. For normal use, select [WGS 1984].	[TOKYO], [WGS 1972], [WGS 1984]
Perspective Angle	Selects the point-of-view for 3D/PS modes.	[5°] to [60°]
[Internal GPS Setup] tab		
[SBAS Mode]	Select whether or not to use SBAS mode.	[ON], [OFF]
[Restart GPS]	Restart reception of GPS satellites.	-
[Dynamic Model]	Set the operating environment. Select [Automotive] for environments located 500 m or more above sea level, or for high-speed craft (capable of more than 45 kn). For all other environments, use the default setting, [At Sea].	[At Sea], [Automotive]
[Navigation Speed]	The default setting is [Low]. Set to [High] for more accurate and stable COG output. However, when set to [High] and the ship speed is below 0.1 m/s, COG output may stop.	[Low], [High]
[Data Acquisition] tab		
[GP330B SBAS Mode]	Select whether or not to use the connected GP-330B's SBAS mode.	[ON], [OFF]
[WS200 SBAS Mode]	Select whether or not to use the connected WS-200's SBAS mode.	[ON], [OFF]
[SC-30 Setup] tab		
[SBAS Mode]	Select whether or not to use the connected FURUNO SC-30's SBAS mode.	[ON], [OFF]
[Heading Offset]	Apply an offset to the heading data.	[-180°] to [180°]
[Pitch Offset]	Apply an offset to the pitch data.	[-90°] to [90°]
[Roll Offset]	Apply an offset to the roll data.	[-90°] to [90°]
[Manual Fuel Management] tab		
[Manual Management]	Select whether or not to manual manage your fuel.	[ON], [OFF]
[Total Fuel Capacity]	Set the total fuel capacity for your vessel.	[0] to [9999] (US gal)

Menu name	Description	Setting range/options
[NMEA Output Instance]	Select the output instance for fuel data.	[0] to [5]
Note: The remaining fuel calculation is for reference purposes. Do not use the results for navigation planning or emergency purposes. During an entire voyage, select one SMD7/9 for the calculation at start-up and keep that unit powered. The calculation of remaining fuel is not done when the unit is powered off.		
[IF NMEA Setup tab]		
[Select IF]	Select the interface unit to use.	-
[Category]	Select the category of the analog sensor.	[Wind], [ST800/ST850], [Fuel], [Fresh Water], [Waste Water], [Live Well], [Oil], [Black Water]
[Resistance Full]	Set the resistance of the tank at full.	[0 ohm] to [500 ohm]
[Resistance Mid]	Set the resistance of the tank at half-full.	[0 ohm] to [500 ohm]
[Resistance Empty]	Set the resistance of the tank at empty.	[0 ohm] to [500 ohm]
[Capacity]	Set the maximum capacity of the tank.	[0] to [9999]
[Self Test]	Start a diagnostic test of the devices connected via the IF NMEA.	-
[Refresh]	Refresh the list of connected devices	-
[Rudder Setup] tab		
[PORT/STBD Reversing]	Select whether or not to set port and starboard in reverse.	[ON], [OFF]
[About] tab - [System Information]		
[Software Version]	Software version for the SMD7/9.	
[Boot Version]	Boot application version.	
[Kernel Version]	Kernel application version.	
[RootFS Version]	RootFS application version.	
[C-MAP 4D LIB]	Method of cartography.	
[Base Chart]	Type of chart used for Chart 1.	
[About] tab - [Fish Finder Information]		
[Serial Number]	Serial number of the connected transducer.	
[Program Version]	Fish Finder program version.	
[Boot Version]	Boot application version.	
[FPGA Version]	FPGA version.	
[FPGA Program Version]	FPGA program version.	
[About] tab - [C-Weather Information]		
[C-Weather]	C-Weather version.	
[About] tab - [About OSS]		
[About OSS]	Shows the open-source software information for your SMD7/9.	
[About] tab - [Copyright]		
[Copyright]	Shows the copyright information for your SMD7/9.	
[Service] tab		
[Open Test Page]	Open the diagnostics test page. A password is required to access this menu.	

Menu name	Description	Setting range/options
[Restore Defaults] tab		
[Restore Default Settings]	Select whether or not to restore the [Initial Setup] menu's default settings.	[Yes], [No]
[Restore All to Factory Defaults]	Select whether or not to restore all menu settings to default. **Note:** User settings are not affected by this menu.	[Yes], [No]
[Clear Memory] tab		
[Clear]	Select whether or not to clear the memory and restore all settings to default. **Note:** All user settings and data will also be cleared.	[Yes], [No]

3. Tap the [×] icon at the top-right corner of the menu to close the menu.

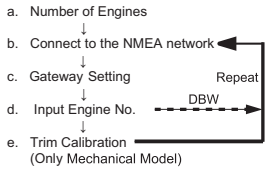
3.4 How to Set up the SUZUKI Gateway

This section covers the installation settings for your SUZUKI Gateway and SUZUKI engines. For other SUZUKI operations, see your Operator's Manual or eGuide.

1. Tap the [Home] icon to show the home screen.
2. Tap the [Settings].
3. Drag the menu to display the [Engine Setup].
4. Tap the [Engine Setup].
5. Open the [Engine Setup] and carry out setting in the following procedures.

3.4.1 Procedure of engine Installation

Register the engine position and the engine serial number with gateway before using gateway as shown below.



No. of Engine \ No of Repeat	Connected gateway (Instance)			
	0	1	2	3
Single Engine	CENTER	—	—	—
Dual Engines	PORT	STBD	—	—
Triple Engines	PORT	CENTER	STBD	—
Quad Engines	PORT	C.PORT	C.STBD	STBD

Number of engines (ex. Dual Engines)

1. Tap the [Installation] to show the [Number of Engines].
2. Select the number of the engine.



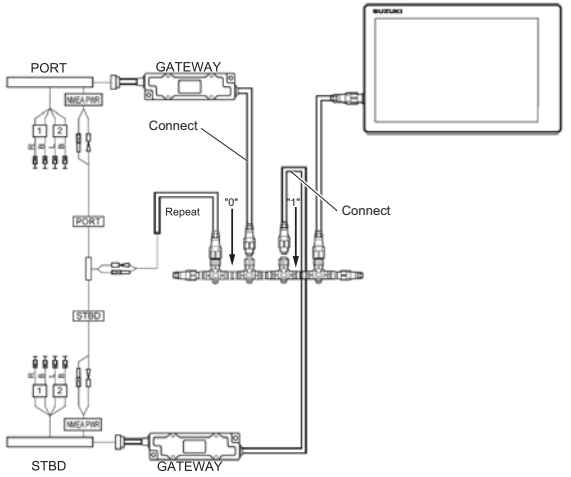
3.4.2 Engine setup

Set up and calibrate the engine with the following procedure.

Connect to the NMEA Network

Confirm that only gateway of PORT is connected to NMEA network.
Connect Gateway of STBD in a turn of repeat1.

Note: Do not remove GATEWAY until setting is completed.



Gateway Setting

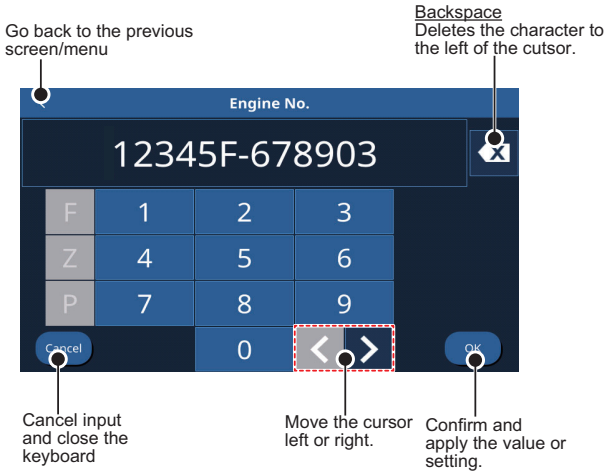
1. Tap the [Gateway Settings].
2. Tap the [Port].



3. Tap the [instance].
4. Select the Engine position.
5. Repeat instance setting according to the next procedure.

Engine No.

1. Tap the [Engine No.].
2. Input the engine number to following menu.

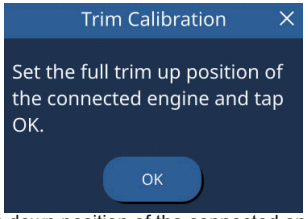


Trim Calibration (Only Mechanical Model)

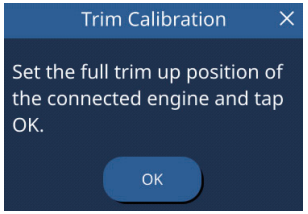
1. Tap the [TRIM CALIBRATION].



2. Set the full trim up position of the connected engine.
3. Tap the [OK] on Pop-up menu.

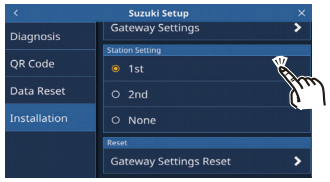


4. Set the full trim down position of the connected engine.
5. Tap the [OK] on Pop-up menu.



Station Settings

1. Drag the menu to display the [Station Setting].



2. Select the station.

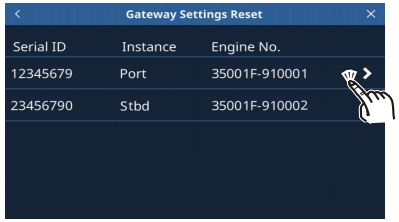
Gateway settings reset

You can clear the followings settings and data for any of the connected Gateways and their connected engines. Typically this is not required unless you have replaced or added a new engine and/or Gateway.

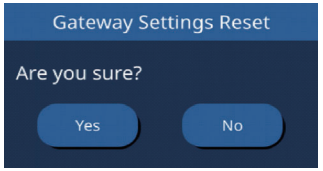
- [Instance]
- [Engine No.]
- [QR Code]*
- [Log data]
- [Fuel Economy Average]
- [Engine Trip Time]
- [Engine Trip Distance]
- [Total Fuel Used]

*: QR code is registered trademark of DENSO WAVE INCORPORATED.

1. Drag the menu to display the [GATEWAY SETTINGS RESET].
2. Tap the [Engine No.] to reset.



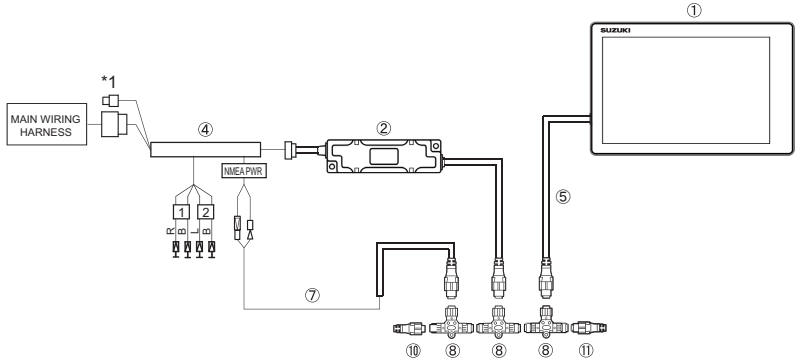
3. If necessary to reset, tap [YES].
   If not necessary to reset, tap [NO].



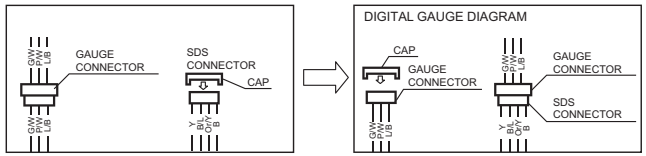
3.5 Connection Examples of Various Systems

3.5.1 Connection of Mechanical Remote Control System

The single station of single engine



*2 SDS CONNECTOR (DF40A-)



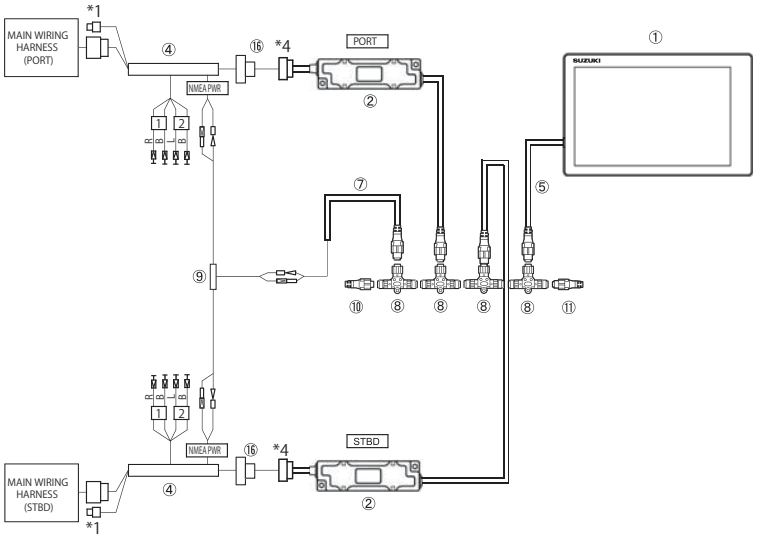
No.	Part Names	Part No.	Additional Quantity	
①	DISPLAY ASSY,MULTI**	34900-98L∗∗	1	
②	UNIT COMP, GATEWAY	34923-96L0∗	1	
④	ADAPTER COMP, GAUGE	36661-96L3∗	1	
⑤	WIRE COMP, EXTENSION (0.6 m)	36662-88L1∗	1	
⑦	HARNESS ASSY, NETWORK POWER	36663-88L0∗ 36663-88L2∗	1	*3
⑧	CONNECTOR COMP, BRANCH	36664-88L0∗	3	
⑩	UNIT COMP, RESISTOR FEMALE	36665-88L0∗	1	
⑪	UNIT COMP, RESISTOR MALE	36665-88L1∗	1	

*1: Connect only the system with the trim sender.

*2: It is required to change the SCS connector to one for engine.
Remove the SDs connector cap to connet to the gauge connector, and connect the DS connector to the female gauge connector.

*3: With CONNECTOR COMP, BRANCH : Q'ty. 1

The single station of dual engine

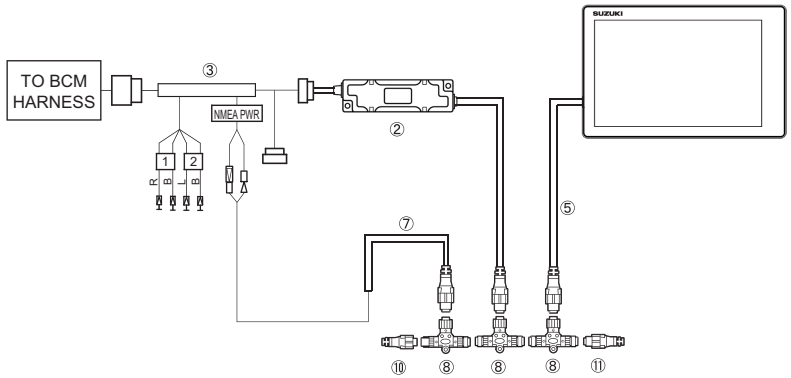


No.	Part Names	Part No.	Additional Quantity	
①	DISPLAY ASSY,MULTI∗∗	34900-98L∗∗	1	
②	UNIT COMP, GATEWAY	34923-96L0∗	2	
④	ADAPTER COMP, GAUGE	36661-96L3∗	2	
⑤	WIRE COMP, EXTENSION (0.6 m)	36662-88L1∗	1	
⑦	HARNESS ASSY, NETWORK POWER	36663-88L0∗ 36663-88L2∗	1	*3
⑧	CONNECTOR COMP, BRANCH	36664-88L0∗	4	
⑨	ADAPTER, GAUGE FOR MULTI	36665-87L1∗	1	
⑩	UNIT COMP, RESISTOR FEMALE	36665-88L0∗	1	
⑪	UNIT COMP, RESISTOR MALE	36665-88L1∗	1	
⑯	WIRE COMP, DUAL GAUGE EXT (0.6 m)	36667-96L2∗	–	*4

*1: Connect only the system with the trim sender.
*3: With CONNECTOR COMP, BRANCH : Q'ty 1
*4: ⑯ WIRE COMP, DUAL GAUGE EXT (0.6m) Option.

3.5.2 Connection of SUZUKI Precision Control System

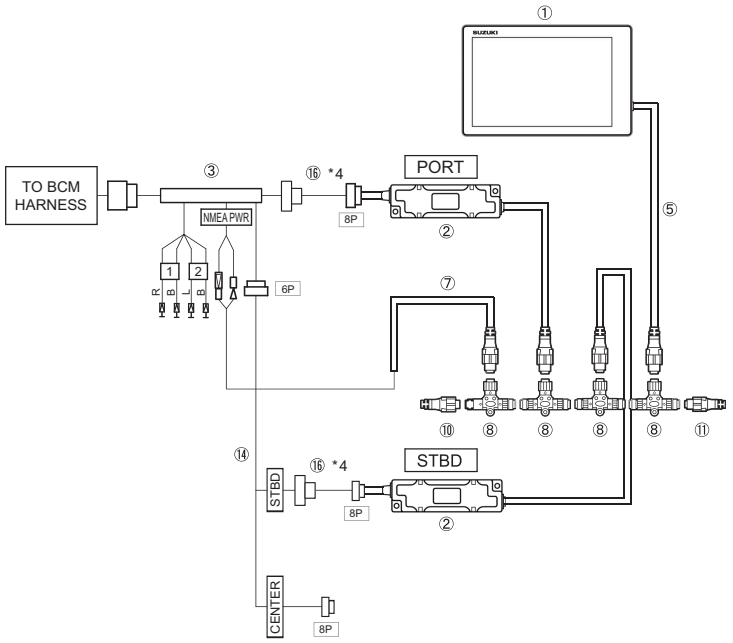
The single station of single engine



No.	Part Names	Part No.	Additional Quantity	
①	DISPLAY ASSY,MULTI∗∗	34900-98L∗∗	1	
②	UNIT COMP, GATEWAY	34923-96L0∗	1	
③	ADAPTER COMP, GAUGE	36661-96L2∗	1	
⑤	WIRE COMP, EXTENSION (0.6 m)	36662-88L1∗	1	
⑦	HARNESS ASSY, NETWORK POWER	36663-88L0∗ 36663-88L2∗	1	*3
⑧	CONNECTOR COMP, BRANCH	36664-88L0∗	3	
⑩	UNIT COMP, RESISTOR FEMALE	36665-88L0∗	1	
⑪	UNIT COMP, RESISTOR MALE	36665-88L1∗	1	

*3: With CONNECTOR COMP, BRANCH : Q'ty 1

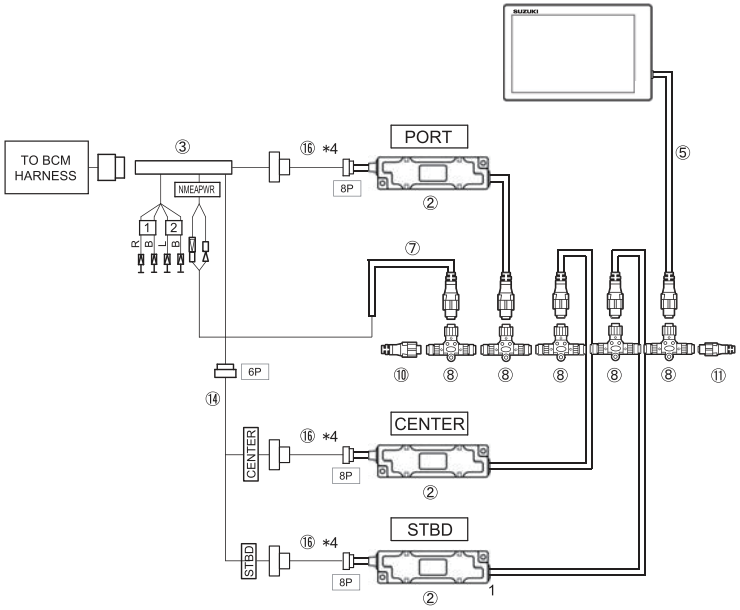
The single station of dual engine



No.	Part Names	Part No.	Additional Quantity	
①	DISPLAY ASSY,MULTI∗∗	34900-98L∗∗	1	
②	UNIT COMP, GATEWAY	34923-96L0∗	2	
③	ADAPTER COMP, GAUGE	36661-96L2∗	1	
⑤	WIRE COMP, EXTENSION (0.6 m)	36662-88L1∗	1	
⑦	HARNESS ASSY, NETWORK POWER	36663-88L0∗ 36663-88L2∗	1	*3
⑧	CONNECTOR COMP, BRANCH	36664-88L0∗	4	
⑩	UNIT COMP, RESISTOR FEMALE	36665-88L0∗	1	
⑪	UNIT COMP, RESISTOR MALE	36665-88L1∗	1	
⑭	WIRE COMP, GAUGE ADAPTER	36667-96L0∗	1	
⑯	WIRE COMP, DUAL GAUGE EXT (0.6 m)	36667-96L2∗	–	*4

*3: With CONNECTOR COMP, BRANCH : Q'ty 1
*4: ⑯ WIRE COMP, DUAL GAUGE EXT (0.6m) Option.

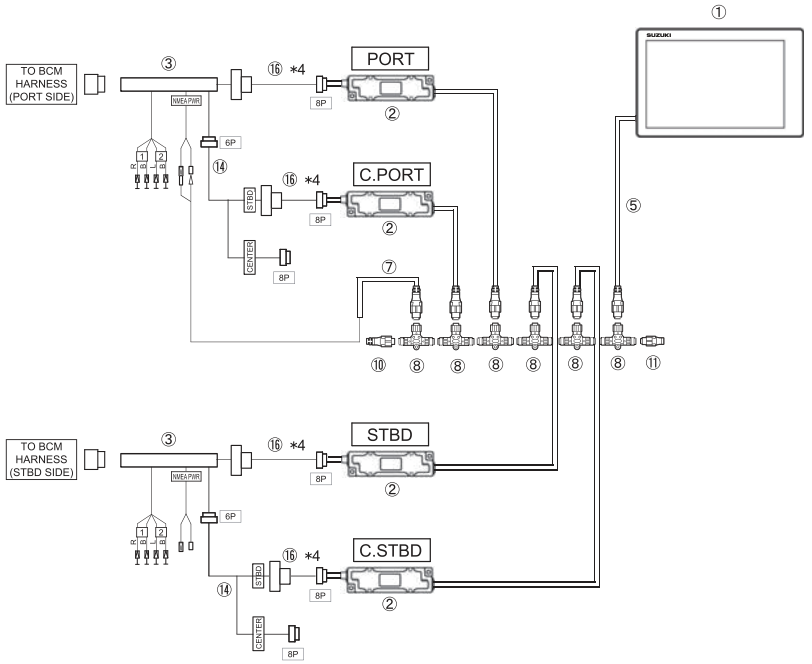
The single station of triple engine



No.	Part Names	Part No.	Additional Quantity	
①	DISPLAY ASSY,MULTI**	34900-98L**	1	
②	UNIT COMP, GATEWAY	34923-96L0*	3	
③	ADAPTER COMP, GAUGE	36661-96L2*	1	
⑤	WIRE COMP, EXTENSION (0.6 m)	36662-88L1*	1	
⑦	HARNESS ASSY, NETWORK POWER	36663-88L0* 36663-88L2*	1	*3
⑧	CONNECTOR COMP, BRANCH	36664-88L0**	5	
⑩	UNIT COMP, RESISTOR FEMALE	36665-88L0*	1	
⑪	UNIT COMP, RESISTOR MALE	36665-88L1*	1	
⑭	WIRE COMP, GAUGE ADAPTER	36667-96L0*	1	
⑯	WIRE COMP, DUAL GAUGE EXT (0.6 m)	36667-96L2*	–	*4

*3: With CONNECTOR COMP, BRANCH : Q'ty 1
*4: ⑯ WIRE COMP, DUAL GAUGE EXT (0.6m) Option.

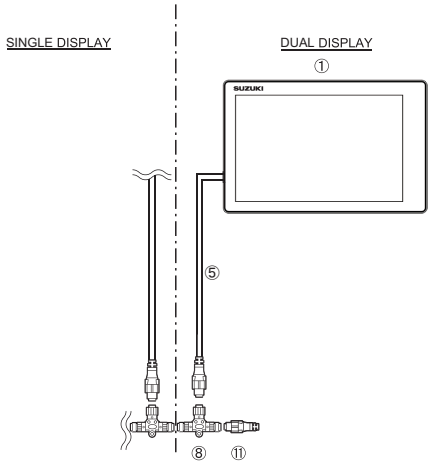
The single station of quad engine



No.	Part Names	Part No.	Additional Quantity	
①	DISPLAY ASSY,MULTI**	34900-98L**	1	
②	UNIT COMP, GATEWAY	34923-96L0*	4	
③	ADAPTER COMP, GAUGE	36661-96L2*	2	
⑤	WIRE COMP, EXTENSION (0.6 m)	36662-88L1*	1	
⑦	HARNESS ASSY, NETWORK POWER	36663-88L0* 36663-88L2*	1	*3
⑧	CONNECTOR COMP, BRANCH	36664-88L0*	6	
⑩	UNIT COMP, RESISTOR FEMALE	36665-88L0*	1	
⑪	UNIT COMP, RESISTOR MALE	36665-88L1*	1	
⑭	WIRE COMP, GAUGE ADAPTER	36667-96L0*	2	
⑯	WIRE COMP, DUAL GAUGE EXT (0.6 m)	36667-96L2*	–	*4

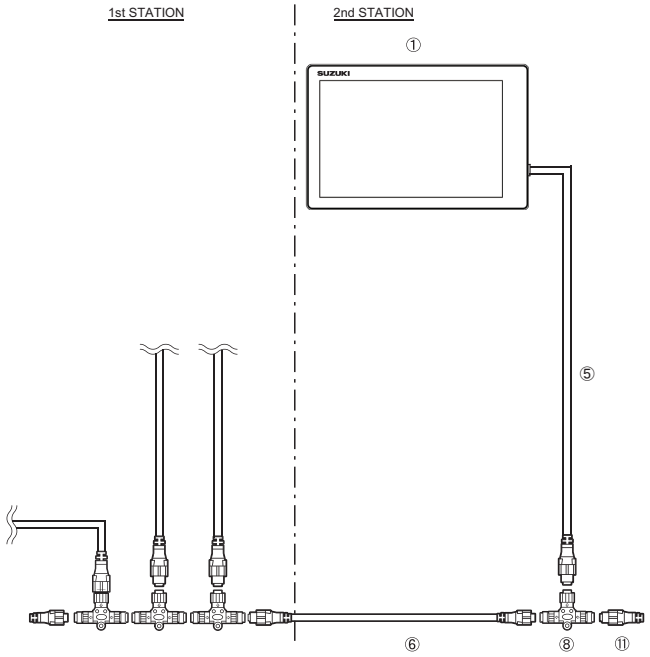
*3: With CONNECTOR COMP, BRANCH : Q'ty 1
*4: ⑯ WIRE COMP, DUAL GAUGE EXT (0.6m) Option.

The dual display



No.	Part Names	Part No.	Additional Quantity
①	DISPLAY ASSY,MULTI**	34900-98L**	1
⑤	WIRE COMP, EXTENSION (0.6 m)	36662-88L1*	1
⑧	CONNECTOR COMP, BRANCH	36664-88L0*	1
⑪	UNIT COMP, RESISTOR MALE	36665-88L1*	1

The dual station



No.	Part Names	Part No.	Additional Quantity
①	DISPLAY ASSY,MULTI**	34900-98L**	1
⑤	WIRE COMP, EXTENSION (0.6 m)	36662-88L1*	1
⑥	WIRE COMP, EXTENSION (4.6 m)	36662-88L3*	1
	WIRE COMP, EXTENSION (7.6 m)	36662-88L0*	
⑧	CONNECTOR COMP, BRANCH	36664-88L0*	1
⑪	UNIT COMP, RESISTOR MALE	36665-88L1*	1

3.6 How to Set Up the Fish Finder

To set up the fish finder, follow the procedures in this section.

3.6.1 Fish finder initial settings

1. Tap the [Home] icon to show the [Home] screen, then tap [Settings] => [Fish Finder] => [Initial Setup], to show the fish finder settings.
2. Referring to the table below, set up the fish finder menu.

Menu item	Settings/description
[Transmission Power]	Select [High] or [Low] as required.
[Transducer]	Select the transducer which is connected to your SMD7/9. Drag the menu to show transducer types which are not displayed on the screen. **Note 1:** Select the correct transducer. Incorrect selection may cause errors or malfunctions. **Note 2:** For transducers with a TDID, this setting is not required, as the system automatically detects the transducer.
[Transmit Rate]	Select [Auto] or [Manual] transmission rate as required. For [Manual], select the transmission rate with the slider bar, or enter a value between [0] and [20] with the software keyboard.
[LF Echo Offset], [HF Echo Offset]*1	Apply offsets to the gain for Low/High Frequency. At factory default ([0]), the strongest consecutively detected echo is recognized as the seabed. If the seabed is not shown on the display, lower the setting. If the fish finder shows the seabed at a shallower location than the actual seabed, increase the setting. Note that too low a setting may mistake fish for the seabed. Conversely an extremely high setting may not correctly detect the seabed.
[LF Bottom Level], [HF Bottom Level]*2	Apply offsets to the seabed level for Low/High Frequency. Only adjust this setting if the gain is not automatically adjusted correctly.
[Smoothing]	Select whether or not to smooth the displayed echoes.
[Depth Indication]	Select whether or not show the depth indication. Select [Small] or [Large] to show the appropriately size indication, or [Off] to hide the indication.

*1: For CHIRP transducers, this menu appears as [Echo Offset].

*2: For CHIRP transducers, this menu appears as [Bottom Level].

3. At the left-side of the screen, in the top layer of the menu, tap [Sensor Setup].
4. At [Draft], tap the keyboard icon to show the numerical keyboard.
5. Enter the draft value, then tap the [OK] button at the bottom-right of the keyboard.
6. At [Calibration], select the item you want to offset (calibrate), as required.
   - [Speed]: Offsets the sensor-detected speed.
   - [Temp °F]/[Temp °C]: Offsets the sensor-detected water temperature.
   - [Acoustic Speed m/s]: Offsets the speed for each sonic pulse emitted by your transducer.
7. Tap the [×] at the top-right of the screen to close the menu.

3.7 How to Set Up the Radar

3.7.1 How to connect to the FURUNO DRS4W Radar Sensor

If you have a FURUNO DRS4W radar antenna, you can connect to the antenna via wireless LAN. Before adjusting settings for the radar, make sure the antenna is turned on.

Note: For how to turn the FURUNO DRS4W on/off, see the FURUNO DRS4W Operator's Manual OME-36360-xx ("xx" indicates version number).

When connecting to the DRS4W, the following information is required.
- DRS4W SSID, supplied with the DRS4W when installed.
- DRS4W password, supplied with the DRS4W when installed.

On the SMD7/9, do the following procedure.

1. Tap the [Home] icon to show the [Home] screen, then tap [Settings] => [General] => [Wireless LAN].
2. Tap the toggle box inside the [Wireless LAN Antenna] section to show [ON]. The system checks for available wireless connections and shows the available SSIDs in the [Networks] list.
3. Tap the SSID of your FURUNO DRS4W. The password input screen appears.
4. Input the password, then tap [OK]. If the password is correct, the system connects to the DRS4W and the SSID appears in the [Active Networks] section.
5. Tap the [×] icon at the top-right corner of the menu to close the menu.
6. Tap the [Home] icon to show the [Home] screen, then tap [Settings] => [Radar] => [Initial Setup], to show the radar settings.
7. Referring to the following table, set up the radar.

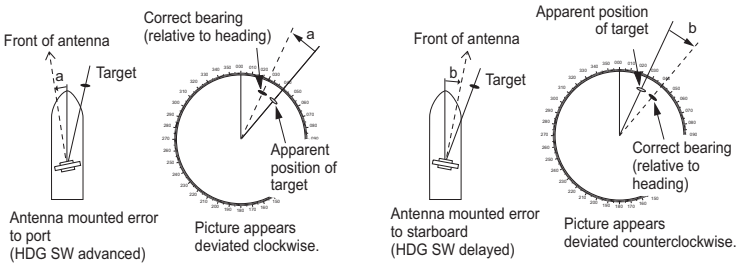
Menu item	Settings/description
[Tune Initialize]	Settings: [ON] (default), [OFF]. Enable/disable auto tuning for the radar.
[Random Pulse]	Settings: [ON] (default), [OFF]. Enable/disable random changes in pulse transmission rate, to reduce interference from other radars.
[On Time]	Display only. Shows total time the radar has been turned on.
[Tx Time]	Display only. Shows the total transmission time for the radar.
[Sector Suppression]	Settings: [ON] (default), [OFF]. Enable/disable sector suppression to stop transmission in a defined sector.
[Sector Start Angle]	Setting range: 0.0° (default) to 359.9°. Sets the start angle for sector suppression. This setting is only applied when [Sector Suppression] is set to [ON].
[Sector Width]	Setting range: 0.0° (default) to 135.0°. Sets the sector width for sector suppression. This setting is only applied when [Sector Suppression] is set to [ON].
[Video Contrast]	Settings: [0] (default), [1], [2], [3] Sets the contrast level for the radar display.
[Antenna Heading Align]	Aligns the antenna heading. Use this menu item only when the antenna is not facing directly towards the bow at installation. See for details on how to use this menu.

8. Tap the [×] icon at the top-right corner of the menu to close the menu.

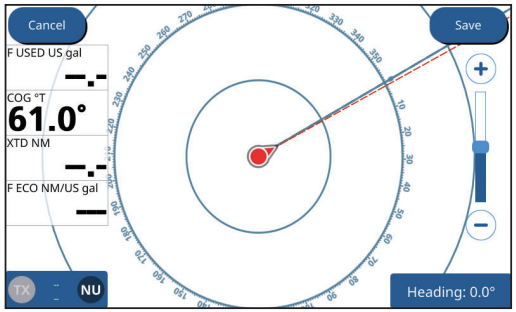
3.7.2 How to align the antenna heading

You have mounted the antenna unit facing straight ahead in the direction of the bow. Therefore, a small but conspicuous target dead ahead visually should appear on the heading line (zero degrees).

In practice, you will probably observe some small bearing error on the display because of the difficulty in achieving accurate initial positioning of the antenna unit. The following adjustment will compensate for the error.



1. Turn the boat towards a target. The target should be oriented directly forward of the bow.
2. Tap the [Home] icon to show the [Home] screen, then tap [Settings] => [Radar] => [Initial Setup], to show the radar settings.
3. Scroll to the bottom of the menu, then tap [Antenna Heading Align]. The system switches to the Radar page.



The data box at the bottom-right of the radar page shows indications for "Heading". The radar page also show a [Cancel] button and a [Save] button at the top of the page.

4. Use the range slider to adjust the heading. Tap the plus/minus, or drag the slider until the target selected at step 1 is displayed at the top-center of the screen. Confirm that the "Heading" indication at the bottom-right of the screen shows the correct offset value.
5. Tap [Save] to save the settings and return to the standard radar page.

4. INPUT/OUTPUT DATA

The SMD7/9 can connect to temperature sensors, speed sensors and other NMEA0183 or NMEA2000 compatible sensors. To connect and communicate with most sensors, sensor settings in the [Interface] menu must be completed.

4.1 How to access the [Interface] menu

The [Interface] menu contains menus for NMEA0183 and NMEA2000 devices. To access the Interface menu, follow the procedure below.

1. Tap the [Home] button at the top-left of the screen to show the [Home] page.
2. Tap [Settings] => [Interface]. The [Interface] menu appears.

For the sake of brevity, above two steps are written as "Open the Interface menu" in the following sections.

4.2 How to set up the NMEA0183 port

1. Open the [Interface] menu.
2. Tap [NMEA0183 Setup]. The [NMEA0183 Setup] menu appears.
3. Tap [Baud rate], then select the baud rate for your NMEA0183 sensors.
4. Tap the [<] at the top-left of the [Baudrate] options to go back to the [NMEA0183 Setup] menu.
5. Tap [Format], then select the NMEA0183 format for your NMEA0183 sensors.
6. Tap the [<] at the top-left of the [Format] options to go back to the [NMEA0183 Setup] menu.
7. Tap the [×] at the top-right of the screen to close the menu.

4.3 How to select a data source

1. Open the [Interface] menu.
2. Tap [Select Input Device].
3. At the left side of the [Select Input Device] menu, tap the data whose sensor you want to set up. The [Input Device] list appears to the right of the screen.
4. Select the input device (data source).
   - **[Internal GPS]**: Uses the internal GPS beacon to calculate/display data.
   - **[Internal FF]**: Uses the internal Fish Finder to calculate/display data.
   - **[NMEA0183]**: Uses the connected NMEA0183 sensor to calculate/display data.
   - **[NMEA2000 Auto]**: Automatically selects a NMEA2000 device (connected to the same network) to calculate/display data. If communication with the connected device is lost or interrupted, the next available NMEA2000 device for that data type is selected.

- **Specific sensor selection**: If a sensor is connected to the same NMEA2000 network, the sensor name appears in the [Input Device] list. Tap the sensor you want to use.
  Note: When the sensor to use as the data source is specified, automatic selection (when communication is lost or interrupted) is not available.

5. Repeat steps 3 and 4 to set up all data sources.
6. Tap the [×] at the top-right of the screen to close the menu.

4.4 How to select which NMEA2000 data to output

To set up which data is output to the NMEA2000 network, follow the procedure below.

1. Open the [Interface] menu.
2. Tap [Select Output NMEA2000 PGN]. The PGN list appears. The available PGNs are listed below.

126992 (System Time)	129283 (Cross Track Error)
127258 (Magnetic Variation)	129284 (Navigation Data)
127505 (Fluid Level)	129285 (Navigation - Route/WP Information)
128259 (Speed)	130310 (Environmental Parameters)
128267 (Water Depth)	130312 (Temperature)
128275 (Distance Log)	130316 (Temperature, Extended Range)
129025 (Position, Rapid Update)	130830 (Target Information)
129026 (COG & SOG, Rapid Update)	130831 (Target Bottom Classification Data)
129029 (GNSS Position Data)	130832 (Target Fish Length)
129033 (Time & Date)	

   All PGNs, excluding 127505, are set to [ON] as the factory default.
3. Tap the ON/OFF toggle box to the far right of each PGN to select the required setting.
   - [ON]: Selected PGN is output to the NMEA2000 network.
   - [OFF]: Selected PGN is not output to the NMEA2000 network.
4. Tap the [×] at the top-right of the screen to close the menu.

4.5 How to select which NMEA0183 sentence to output

1. Open the [Interface] menu.
2. Tap [Select Output NMEA01083 Sentence]. The sentence list appears.
3. Tap the ON/OFF toggle box to the far right of each sentence to select the required setting. Select [ON] to output the sentence.

Sentence	Description
AAM	Waypoint Arrival Alarm
APB	Autopilot Sentence B
BOD	Bearing Origin to Destination
BWR	Bearing & Distance to Waypoint - Rhumb Line
DBT	Depth Below Transducer
DPT	Depth
GLL	Geographic Position - Latitude/Longitude

Sentence	Description
GGA	Global Positioning System Fix Data
GNS	GNSS Fix Data
GSA	GNSS DOP and Active Satellites
GSV	GNSS Satellites in View
HDG	Heading, deviation and variation
HDT	Heading True
MTW	Water Temperature
MWV	Wind Speed and Angle
RMB	Recommended Minimum Navigation Information
RMC	Recommended Minimum Specific GNSS Data
RTE	Routes RTE - Routes
THS	True Heading & Status
TLL	Target Latitude and Longitude
VHW	Water Speed and Heading
VTG	Course Over Ground & Ground Speed
WPL	Waypoint Location
XTE	Cross-Track Error, Measured
ZDA	Time and Date
Target Information	Target information (PFEC,SDmrk)
Target Bottom Classification Data	Bottom discrimination data (PFEC,SDtbd)
Target Fish Length	Fish length information (PFEC,SDtfl)

   Note: If the total output baud rate of the selected sentences is too high, a notification appears to inform you. Deselect sentences or adjust the baud rate.
4. Tap the [×] at the top-right of the screen to close the menu.

4.6 How to calibrate (offset) the sensors

If the data provided by your sensor is not accurate, you can offset the sensor data by following the procedure below.

1. Open the [Interface] menu.
2. Tap [Calibration]. The sensor offsets appear.
3. At the sensor you want to offset, drag the slide bar, or tap the keyboard icon, to set the offset value.
   Note: The unit of measurement for some items is dependent on the language setting and the unit selected in the [Settings] => [Units] menu. For the default settings and setting options, see the menu tree at the back of this manual.
4. Tap the [×] at the top-right of the screen to close the menu.

4.7 How to reset the [Interface] menu

To restore the defaults for all settings in the Interface menu, follow the procedure below.

Note: The [Interface] menu settings cannot be restored to default individually.

1. Open the [Interface] menu.
2. Tap [Restore Factory Defaults]. A confirmation message appears.
3. Tap [YES] to restore the default settings for the [Interface] menu, or tap [NO] to cancel.

4.8 NMEA0183/NMEA2000 Monitor

You can view which NMEA0183 sentences and NMEA2000 PGNs are received (input) or sent (output) from the respective monitor. Input appears in orange color, output appears in white color.

1. Open the [Interface] menu.
2. Tap [NMEA0183 Monitor] or [NMEA2000 Monitor] as required.
   For [NMEA0183 Monitor], the sentences are listed in the order in which they are input/output.
   For [NMEA2000 Monitor], the PGNs are highlighted in the list as they are input/output.
3. Tap the [<] at top-left of the monitor to go back to the [Interface] menu, or tap the [X] at the top-right of the screen to close the menu.

5. MAINTENANCE AND TROUBLESHOOTING

This section provides maintenance and troubleshooting procedures that the user can follow to get optimum performance from the equipment. Before attempting any maintenance or troubleshooting procedure please review the safety information below. If you cannot restore normal operation after following the troubleshooting procedures do not attempt to check inside the equipment; have a qualified technician check the set.

⚠ WARNING



ELECTRICAL SHOCK HAZARD
Do not open the equipment.

Only qualified persons can work inside the equipment.

NOTICE

Do not apply paint, anti-corrosive sealant or contact spray to plastic parts or equipment coating.

Those items contain products that can damage plastic parts and equipment coating.

5.1 General Maintenance

Routine maintenance helps keep your equipment in good condition and prevents future problems. Check the items shown in the table below on a regular basis to help keep your equipment in good condition for years to come.

Check item	Check point	Remedy
Cables	Cable connection, corrosion	Connect/reconnect the cables that have loosened or disconnected. Replace any damaged cables.
Display unit	Dust on the display unit	Remove dust with a dry clean cloth. Do not use commercial cleaners to clean the equipment - they can remove paint and markings.
LCD	Dust on the LCD	Wipe the LCD carefully to prevent scratching, using tissue paper and an LCD cleaner. To remove dirt or salt deposits, use an LCD cleaner, wiping slowly with tissue paper so as to dissolve the dirt or salt. Change paper frequently so the salt or dirt will not scratch the LCD. Do not use solvents such as thinner, acetone or benzene for cleaning. Also, do not use degreaser or antifog solution, as they can strip the coating from the LCD.
	Waterdrops on the LCD	Waterdrops on the LCD can slow touch response. Wipe the LCD with a dry cloth to remove the water.
Radar antenna	Foreign material on the radar antenna	Foreign material can reduce sensitivity. Clean the antenna with a cloth wetted with freshwater. Do not use commercial cleaners to clean the radome - they can remove paint and markings.
Transducer	Transducer face	Marine growth on the transducer face can reduce sensitivity. Remove any growth with a wooden stick or fine grade sandpaper.

5.2 Life of Parts

LCD

The life of the LCD is approximately 18,000 hours. The actual number of hours depends on ambient temperature and humidity. When the brilliance cannot be raised sufficiently, contact your dealer about replacement of the LCD.

5.3 Troubleshooting

This section provides simple troubleshooting procedures that the user can follow to restore normal operation. If you cannot restore normal operation, do not check inside the unit. Have a qualified technician check the equipment.

5.3.1 General troubleshooting

Problem	Remedy
You can not turn on the power.	• Check that the power connector is tightly fastened. • Check for corrosion on the power cable connector. • Check for the power cable for damage and corrosion. • Check battery for correct voltage output. • Press and hold the power button for several seconds.
The power is on, however nothings appears on the screen.	• Press the power button several times to adjust the brilliance. • Check if the unit is plugged into the power source.
Picture is not displayed correctly.	Turn the power off, then on again. If the problem persists, contact your local dealer for service.
The touch screen does not respond to touch operations.	• Press the power key and check that [Touch Screen], in the [Brilliance] pop-up menu is set to [ON]. • Turn the power off, then on again. If the problem persists, contact your local dealer for service.
The display has frozen.	• Push the power switch until the power goes off. Turn the power on again. • Push the hard reset button, located below the microSD card slots.

5.3.2 Plotter troubleshooting

Problem	Remedy
Position is not fixed.	Check for interfering objects near the display unit that might be blocking reception.
Own ship track is not plotted.	Check if [Tracks Disp] is turned on in the layered menu.

5.3.3 Radar troubleshooting

Problem	Remedy
You tapped the [TX] icon on the radar display to transmit but nothing happens.	• Tap the [TX] icon again. (The icon is filled in white when the radar is in transmit state.) • Check if the radar source is correct.
Marks and characters appear, but echoes do not appear.	Check if the radar source is correct.
Picture is not updated or the picture freezes.	• Check that there are no obstructions between the antenna and the display unit. • If the picture has frozen, turn the power off and on again.
You tuned the receiver, but the sensitivity is weak.	The life span of the magnetron is over. Have a technician check the magnetron.
You changed the range, but the radar picture does not change.	• Try to change the range again. • Turn the power off and on again.
Poor discrimination in range.	Adjust the rain control.
Range rings are not displayed.	Check if [Radar Rings] is turned on in the layered menu.
You tapped the [TX] icon to transmit. The "TX screen" appears momentarily, but the radar soon goes into stand-by.	The overload protection has activated. To restore normal operation, turn off all equipment in the network. Wait a few seconds then turn on all the equipment.

5.3.4 Fish finder troubleshooting

Problem	Remedy
You selected a fish finder display, but no picture appears.	• Check that the transducer cable is tightly fastened. • Check that the fish finder source is correct. • Check that [Transmission] in the cog-wheel menu is set to [ON]. • Check that [Picture Advance] ([Settings] => [Fish Finder] => [Display] menu) is set to other than [OFF].
Marks and characters appear, but no picture appears.	Check if the transducer cable is tightly connected.
Picture appears but zero line does not appear.	• The picture is shifted. Check the shift setting. • Check if the draft setting ([Settings] => [Fish Finder] => [Sensor Setup]) is zero or higher.
The picture sensitivity is too low.	• If you are in the manual mode, check the gain setting. • Check the transducer face for marine life and air bubbles. • Bottom is too soft to return an acceptable echo.
The depth indication does not appear on the screen.	Adjust the bottom level HF/LF.
The seabed does not appear on the screen.	For manual operation, adjust the gain and range to display the bottom echo in reddish-brown.
Noise or interference shows on the display.	• Make sure the transducer cable is not near the engine. • Check the ground for tight connection, corrosion. • Check if another fish finder near your boat has the same frequency as your fish finder. • Try to reduce interference with [Interference] in the [Quick Settings] menu (cog-wheel at the bottom-left of the display).

5.4 How to Restore the Default Settings

There are two methods to restore default settings. You can clear the menu settings, saving only user data such as routes and points, etc, or reset the entire SMD7/9 settings to factory default. To restore the default settings for both methods, follow the procedure below.

1. Tap the [Home] icon to show the [Home] screen, then tap [Settings] => [Initial Setup].
2. **To reset the menu settings and keep user data**, tap [Factory Defaults]. Depending on the level of restoration, tap the appropriate item.
   - [Restore to Factory Defaults]: Resets the [Initial Settings] menu only.
   - [Restore All to Factory Defaults]: Resets all menu settings only.

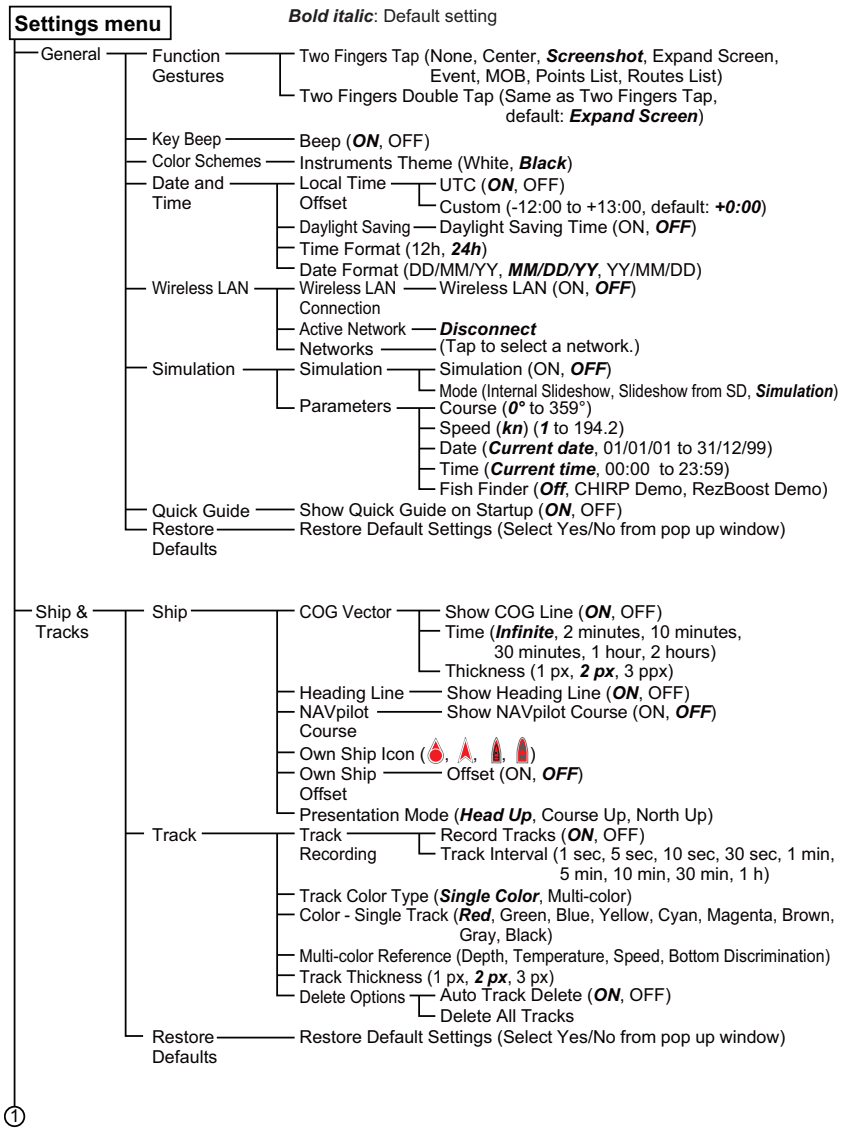
   A confirmation message appears, tap [Yes] to reset the selected settings, or [No] to cancel.
3. To reset the entire SMD7/9 settings and clear all user data, tap [Clear Memory] => [Clear].
   A confirmation message appears, tap [Yes] to reset the selected settings, or [No] to cancel. The system clears all selected, then restarts.

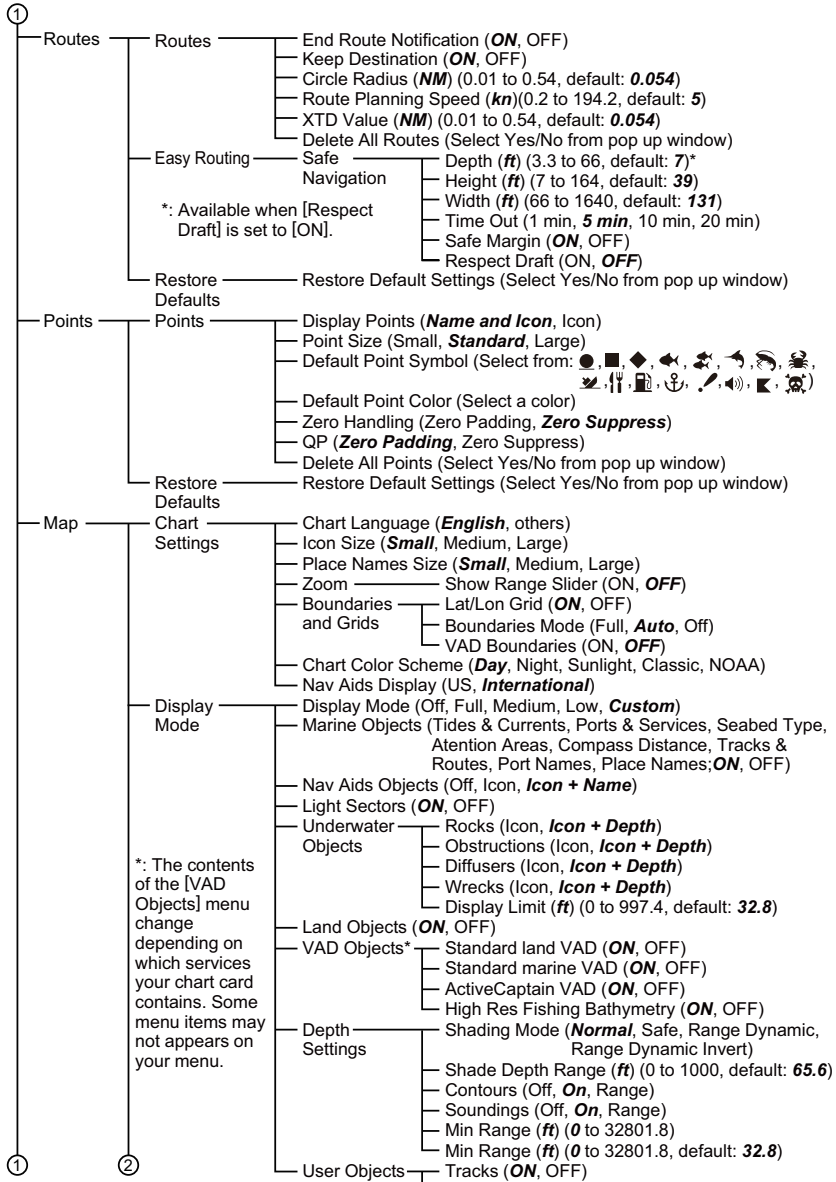
5.5 How to View the System Information

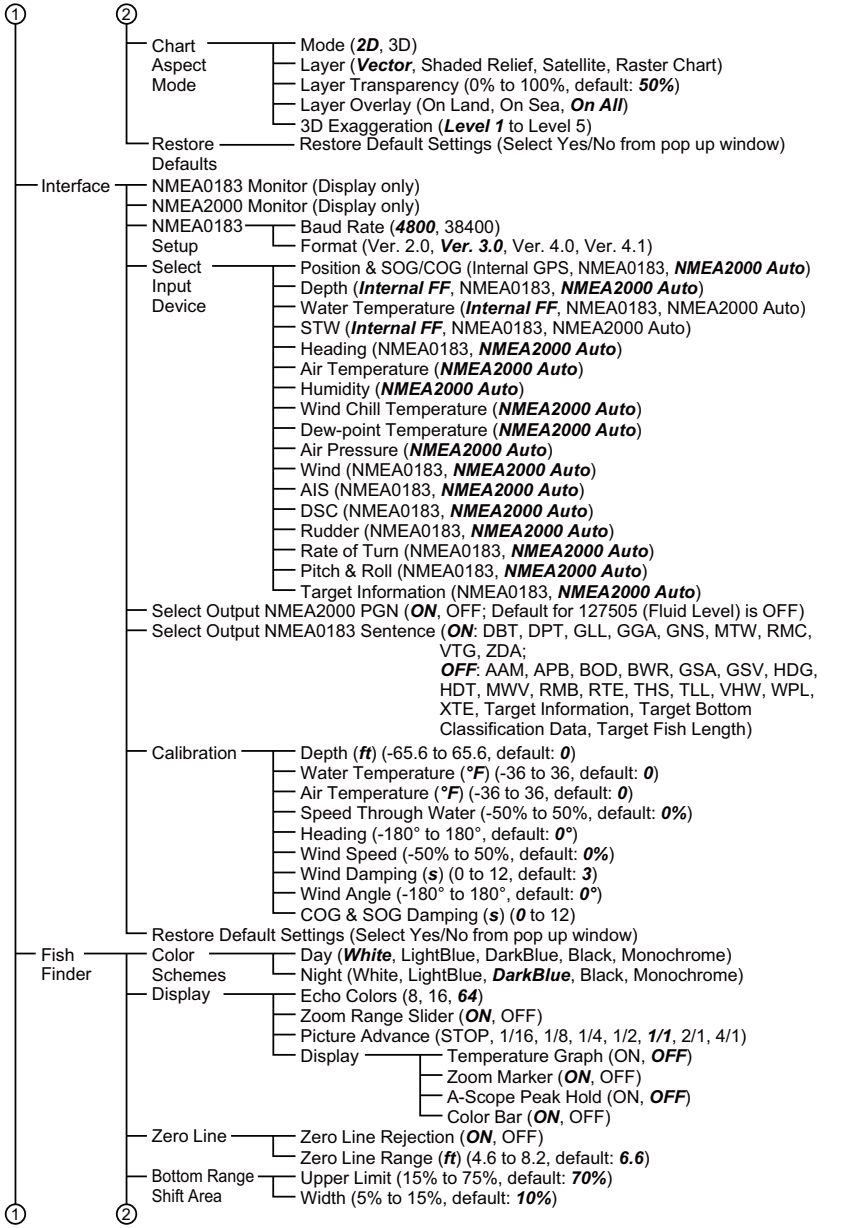
The system information is for use by service technicians and shows information such as software version numbers, serial numbers and copyright information.

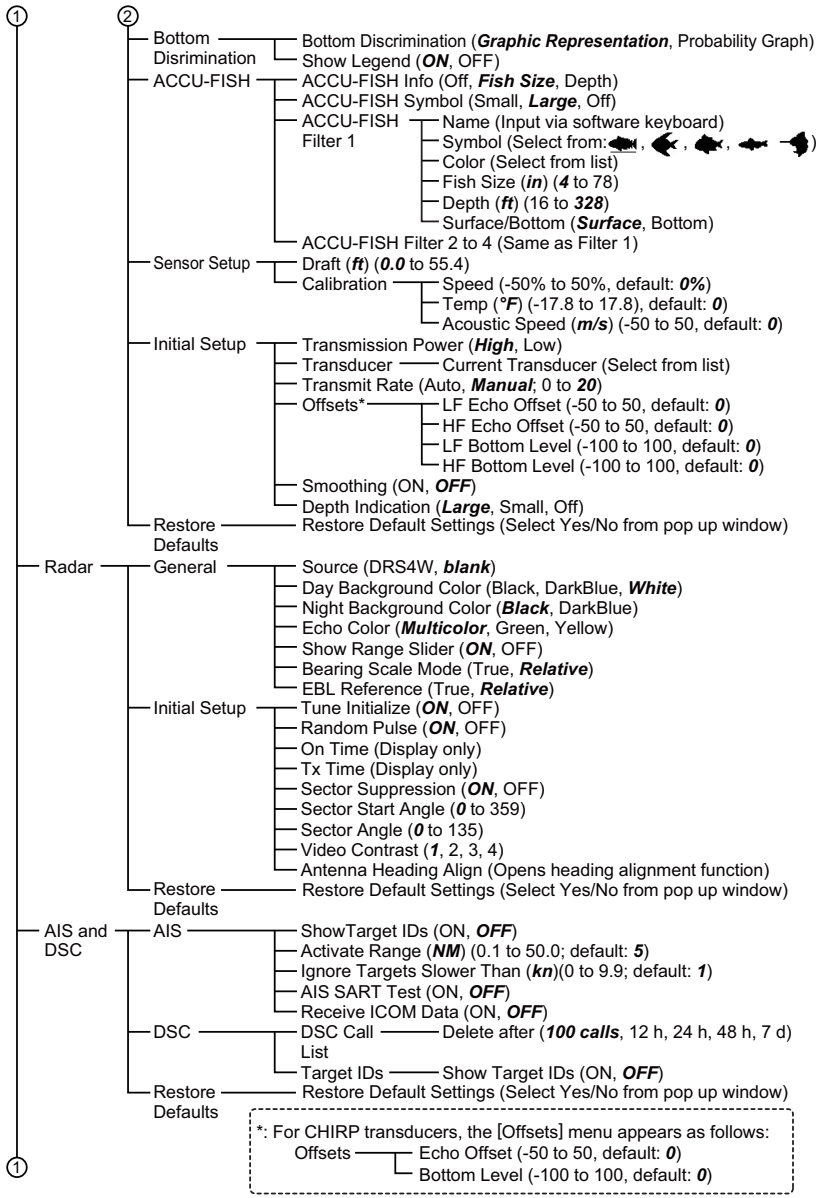
To view the system information, tap the [Home] icon, then tap [Initial Setup] => [About].

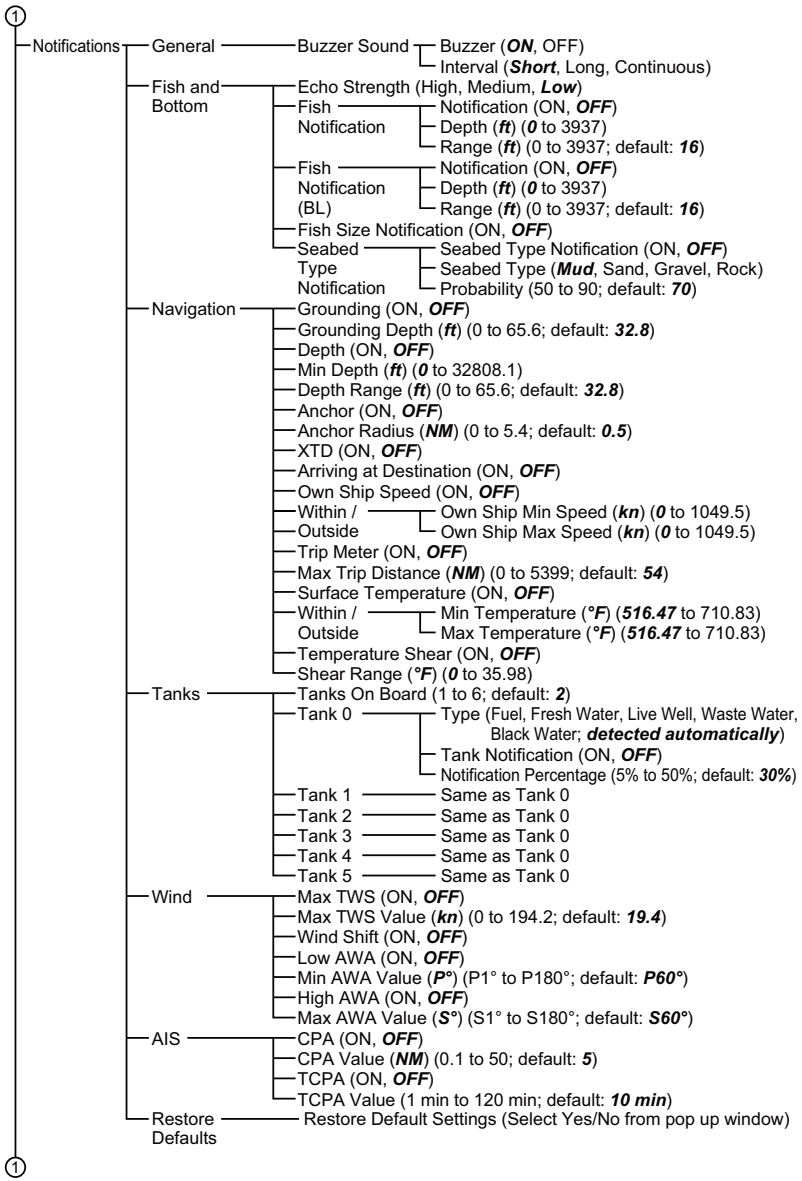
APPENDIX 1 MENU TREE

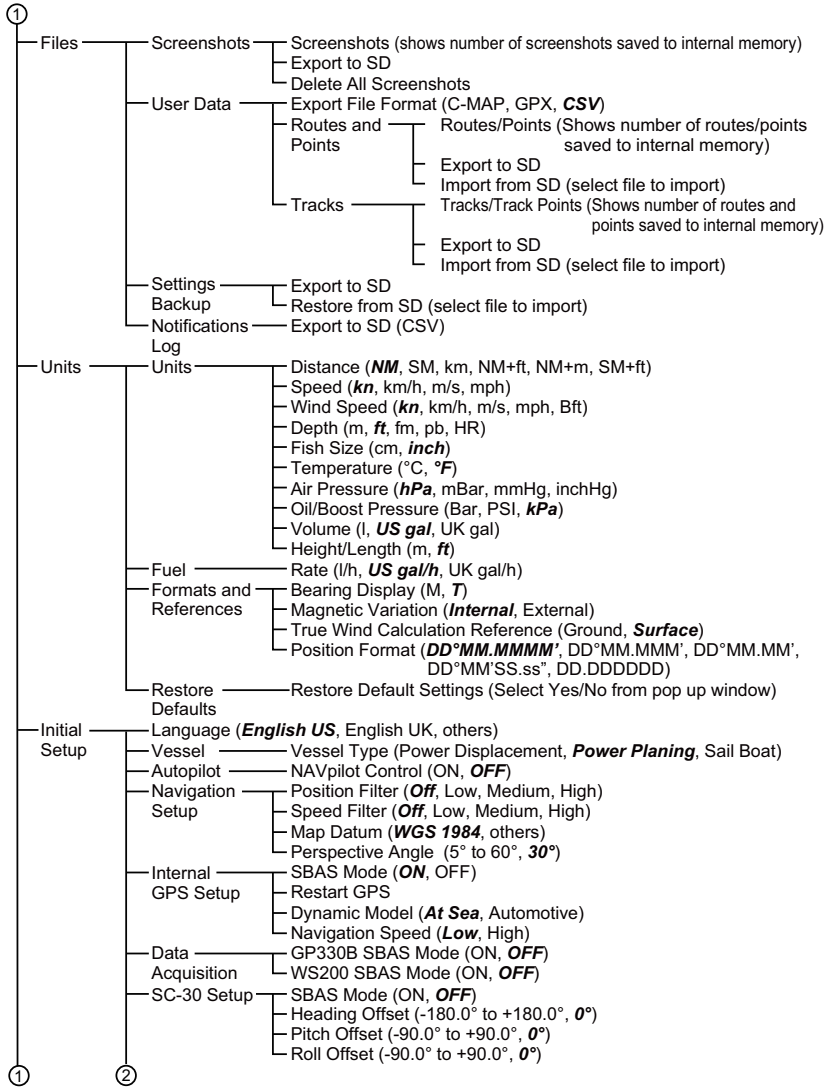


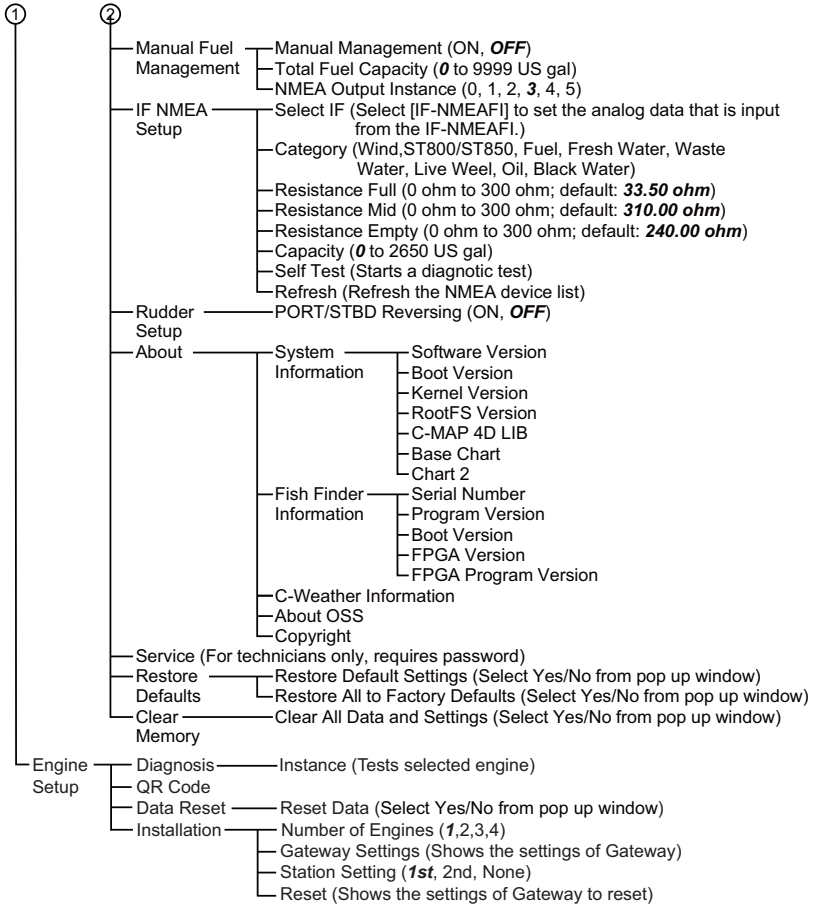

①
Routes
Routes
End Route Notification (ON, OFF)
Keep Destination (ON, OFF)
Circle Radius (NM) (0.01 to 0.54, default: 0.054)
Route Planning Speed (kn)(0.2 to 194.2, default: 5)
XTD Value (NM) (0.01 to 0.54, default: 0.054)
Delete All Routes (Select Yes/No from pop up window)
Easy Routing
Safe Navigation
Depth (ft) (3.3 to 66, default: 7)*
Height (ft) (7 to 164, default: 39)
Width (ft) (66 to 1640, default: 131)
Time Out (1 min, 5 min, 10 min, 20 min)
Safe Margin (ON, OFF)
Respect Draft (ON, OFF)
*: Available when [Respect Draft] is set to [ON].
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
Points
Points
Display Points (Name and Icon, Icon)
Point Size (Small, Standard, Large)
Default Point Symbol (Select from:
Default Point Color (Select a color)
Zero Handling (Zero Padding, Zero Suppress)
QP (Zero Padding, Zero Suppress)
Delete All Points (Select Yes/No from pop up window)
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
Map
Chart Settings
Chart Language (English, others)
Icon Size (Small, Medium, Large)
Place Names Size (Small, Medium, Large)
Zoom
Show Range Slider (ON, OFF)
Boundaries and Grids
Lat/Lon Grid (ON, OFF)
Boundaries Mode (Full, Auto, Off)
VAD Boundaries (ON, OFF)
Chart Color Scheme (Day, Night, Sunlight, Classic, NOAA)
Nav Aids Display (US, International)
Display Mode
Display Mode (Off, Full, Medium, Low, Custom)
Marine Objects (Tides & Currents, Ports & Services, Seabed Type, Atention Areas, Compass Distance, Tracks & Routes, Port Names, Place Names;ON, OFF)
Nav Aids Objects (Off, Icon, Icon + Name)
Light Sectors (ON, OFF)
Underwater Objects
Rocks (Icon, Icon + Depth)
Obstructions (Icon, Icon + Depth)
Diffusers (Icon, Icon + Depth)
Wrecks (Icon, Icon + Depth)
Display Limit (ft) (0 to 997.4, default: 32.8)
Land Objects (ON, OFF)
VAD Objects*
Standard land VAD (ON, OFF)
Standard marine VAD (ON, OFF)
ActiveCaptain VAD (ON, OFF)
High Res Fishing Bathymetry (ON, OFF)
Depth Settings
Shading Mode (Normal, Safe, Range Dynamic, Range Dynamic Invert)
Shade Depth Range (ft) (0 to 1000, default: 65.6)
Contours (Off, On, Range)
Soundings (Off, On, Range)
Min Range (ft) (0 to 32801.8)
Min Range (ft) (0 to 32801.8, default: 32.8)
User Objects
Tracks (ON, OFF)
Marks (ON, OFF)
Waypoints (ON, OFF)
*: The contents of the [VAD Objects] menu change depending on which services your chart card contains. Some menu items may not appears on your menu.
① ②


① ②
Chart Aspect Mode
Mode (2D, 3D)
Layer (Vector, Shaded Relief, Satellite, Raster Chart)
Layer Transparency (0% to 100%, default: 50%)
Layer Overlay (On Land, On Sea, On All)
3D Exaggeration (Level 1 to Level 5)
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
Interface
NMEA0183 Monitor (Display only)
NMEA2000 Monitor (Display only)
NMEA0183 Setup
Baud Rate (4800, 38400)
Format (Ver. 2.0, Ver. 3.0, Ver. 4.0, Ver. 4.1)
Select Input Device
Position & SOG/COG (Internal GPS, NMEA0183, NMEA2000 Auto)
Depth (Internal FF, NMEA0183, NMEA2000 Auto)
Water Temperature (Internal FF, NMEA0183, NMEA2000 Auto)
STW (Internal FF, NMEA0183, NMEA2000 Auto)
Heading (NMEA0183, NMEA2000 Auto)
Air Temperature (NMEA2000 Auto)
Humidity (NMEA2000 Auto)
Wind Chill Temperature (NMEA2000 Auto)
Dew-point Temperature (NMEA2000 Auto)
Air Pressure (NMEA2000 Auto)
Wind (NMEA0183, NMEA2000 Auto)
AIS (NMEA0183, NMEA2000 Auto)
DSC (NMEA0183, NMEA2000 Auto)
Rudder (NMEA0183, NMEA2000 Auto)
Rate of Turn (NMEA0183, NMEA2000 Auto)
Pitch & Roll (NMEA0183, NMEA2000 Auto)
Target Information (NMEA0183, NMEA2000 Auto)
Select Output NMEA2000 PGN (ON, OFF; Default for 127505 (Fluid Level) is OFF)
Select Output NMEA0183 Sentence (ON: DBT, DPT, GLL, GGA, GNS, MTW, RMC, VTG, ZDA; OFF: AAM, APB, BOD, BWR, GSA, GSV, HDG, HDT, MWV, RMB, RTE, THS, TLL, VHW, WPL, XTE, Target Information, Target Bottom Classification Data, Target Fish Length)
Calibration
Depth (ft) (-65.6 to 65.6, default: 0)
Water Temperature (°F) (-36 to 36, default: 0)
Air Temperature (°F) (-36 to 36, default: 0)
Speed Through Water (-50% to 50%, default: 0%)
Heading (-180° to 180°, default: 0°)
Wind Speed (-50% to 50%, default: 0%)
Wind Damping (s) (0 to 12, default: 3)
Wind Angle (-180° to 180°, default: 0°)
COG & SOG Damping (s) (0 to 12)
Restore Default Settings (Select Yes/No from pop up window)
Fish Finder
Color Schemes
Day (White, LightBlue, DarkBlue, Black, Monochrome)
Night (White, LightBlue, DarkBlue, Black, Monochrome)
Display
Echo Colors (8, 16, 64)
Zoom Range Slider (ON, OFF)
Picture Advance (STOP, 1/16, 1/8, 1/4, 1/2, 1/1, 2/1, 4/1)
Display
Temperature Graph (ON, OFF)
Zoom Marker (ON, OFF)
A-Scope Peak Hold (ON, OFF)
Color Bar (ON, OFF)
Zero Line
Zero Line Rejection (ON, OFF)
Zero Line Range (ft) (4.6 to 8.2, default: 6.6)
Bottom Range Shift Area
Upper Limit (15% to 75%, default: 70%)
Width (5% to 15%, default: 10%)
① ②


①
②
Bottom Disrimination
Bottom Discrimination (Graphic Representation, Probability Graph)
Show Legend (ON, OFF)
ACCU-FISH
ACCU-FISH Info (Off, Fish Size, Depth)
ACCU-FISH Symbol (Small, Large, Off)
ACCU-FISH Filter 1
Name (Input via software keyboard)
Symbol (Select from: , , , ,)
Color (Select from list)
Fish Size (in) (4 to 78)
Depth (ft) (16 to 328)
Surface/Bottom (Surface, Bottom)
ACCU-FISH Filter 2 to 4 (Same as Filter 1)
Sensor Setup
Draft (ft) (0.0 to 55.4)
Calibration
Speed (-50% to 50%, default: 0%)
Temp (°F) (-17.8 to 17.8), default: 0)
Acoustic Speed (m/s) (-50 to 50, default: 0)
Initial Setup
Transmission Power (High, Low)
Transducer
Current Transducer (Select from list)
Transmit Rate (Auto, Manual; 0 to 20)
Offsets*
LF Echo Offset (-50 to 50, default: 0)
HF Echo Offset (-50 to 50, default: 0)
LF Bottom Level (-100 to 100, default: 0)
HF Bottom Level (-100 to 100, default: 0)
Smoothing (ON, OFF)
Depth Indication (Large, Small, Off)
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
Radar
General
Source (DRS4W, blank)
Day Background Color (Black, DarkBlue, White)
Night Background Color (Black, DarkBlue)
Echo Color (Multicolor, Green, Yellow)
Show Range Slider (ON, OFF)
Bearing Scale Mode (True, Relative)
EBL Reference (True, Relative)
Initial Setup
Tune Initialize (ON, OFF)
Random Pulse (ON, OFF)
On Time (Display only)
Tx Time (Display only)
Sector Suppression (ON, OFF)
Sector Start Angle (0 to 359)
Sector Angle (0 to 135)
Video Contrast (1, 2, 3, 4)
Antenna Heading Align (Opens heading alignment function)
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
AIS and DSC
AIS
ShowTarget IDs (ON, OFF)
Activate Range (NM) (0.1 to 50.0; default: 5)
Ignore Targets Slower Than (kn)(0 to 9.9; default: 1)
AIS SART Test (ON, OFF)
Receive ICOM Data (ON, OFF)
DSC
DSC Call
Delete after (100 calls, 12 h, 24 h, 48 h, 7 d)
List
Target IDs
Show Target IDs (ON, OFF)
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
*: For CHIRP transducers, the [Offsets] menu appears as follows:
Offsets
Echo Offset (-50 to 50, default: 0)
Bottom Level (-100 to 100, default: 0)
①


①
Notifications
General
Buzzer Sound
Buzzer (ON, OFF)
Interval (Short, Long, Continuous)
Fish and Bottom
Echo Strength (High, Medium, Low)
Fish Notification
Notification (ON, OFF)
Depth (ft) (0 to 3937)
Range (ft) (0 to 3937; default: 16)
Fish Notification (BL)
Notification (ON, OFF)
Depth (ft) (0 to 3937)
Range (ft) (0 to 3937; default: 16)
Fish Size Notification (ON, OFF)
Seabed Type Notification
Seabed Type Notification (ON, OFF)
Seabed Type (Mud, Sand, Gravel, Rock)
Probability (50 to 90; default: 70)
Navigation
Grounding (ON, OFF)
Grounding Depth (ft) (0 to 65.6; default: 32.8)
Depth (ON, OFF)
Min Depth (ft) (0 to 32808.1)
Depth Range (ft) (0 to 65.6; default: 32.8)
Anchor (ON, OFF)
Anchor Radius (NM) (0 to 5.4; default: 0.5)
XTD (ON, OFF)
Arriving at Destination (ON, OFF)
Own Ship Speed (ON, OFF)
Within / Outside
Own Ship Min Speed (kn) (0 to 1049.5)
Own Ship Max Speed (kn) (0 to 1049.5)
Trip Meter (ON, OFF)
Max Trip Distance (NM) (0 to 5399; default: 54)
Surface Temperature (ON, OFF)
Within / Outside
Min Temperature (°F) (516.47 to 710.83)
Max Temperature (°F) (516.47 to 710.83)
Temperature Shear (ON, OFF)
Shear Range (°F) (0 to 35.98)
Tanks
Tanks On Board (1 to 6; default: 2)
Tank 0
Type (Fuel, Fresh Water, Live Well, Waste Water, Black Water; detected automatically)
Tank Notification (ON, OFF)
Notification Percentage (5% to 50%; default: 30%)
Tank 1
Same as Tank 0
Tank 2
Same as Tank 0
Tank 3
Same as Tank 0
Tank 4
Same as Tank 0
Tank 5
Same as Tank 0
Wind
Max TWS (ON, OFF)
Max TWS Value (kn) (0 to 194.2; default: 19.4)
Wind Shift (ON, OFF)
Low AWA (ON, OFF)
Min AWA Value (P°) (P1° to P180°; default: P60°)
High AWA (ON, OFF)
Max AWA Value (S°) (S1° to S180°; default: S60°)
AIS
CPA (ON, OFF)
CPA Value (NM) (0.1 to 50; default: 5)
TCPA (ON, OFF)
TCPA Value (1 min to 120 min; default: 10 min)
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
①


①
Files
Screenshots
Screenshots (shows number of screenshots saved to internal memory)
Export to SD
Delete All Screenshots
User Data
Export File Format (C-MAP, GPX, ***CSV***)
Routes and Points
Routes/Points (Shows number of routes/points saved to internal memory)
Export to SD
Import from SD (select file to import)
Tracks
Tracks/Track Points (Shows number of routes and points saved to internal memory)
Export to SD
Import from SD (select file to import)
Settings Backup
Export to SD
Restore from SD (select file to import)
Notifications Log
Export to SD (CSV)
Units
Units
Distance (***NM***, SM, km, NM+ft, NM+m, SM+ft)
Speed (***kn***, km/h, m/s, mph)
Wind Speed (***kn***, km/h, m/s, mph, Bft)
Depth (m, ***ft***, fm, pb, HR)
Fish Size (cm, ***inch***)
Temperature (°C, ***°F***)
Air Pressure (***hPa***, mBar, mmHg, inchHg)
Oil/Boost Pressure (Bar, PSI, ***kPa***)
Volume (l, ***US gal***, UK gal)
Height/Length (m, ***ft***)
Fuel
Rate (l/h, ***US gal/h***, UK gal/h)
Formats and References
Bearing Display (M, ***T***)
Magnetic Variation (***Internal***, External)
True Wind Calculation Reference (Ground, ***Surface***)
Position Format (***DD°MM.MMMM'***, DD°MM.MMM', DD°MM.MM', DD°MM'SS.ss", DD.DDDDDD)
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
Initial Setup
Language (***English US***, English UK, others)
Vessel
Vessel Type (Power Displacement, ***Power Planing***, Sail Boat)
Autopilot
NAVpilot Control (ON, ***OFF***)
Navigation Setup
Position Filter (***Off***, Low, Medium, High)
Speed Filter (***Off***, Low, Medium, High)
Map Datum (***WGS 1984***, others)
Perspective Angle (5° to 60°, ***30°***)
Internal GPS Setup
SBAS Mode (***ON***, OFF)
Restart GPS
Dynamic Model (***At Sea***, Automotive)
Navigation Speed (***Low***, High)
Data Acquisition
GP330B SBAS Mode (ON, ***OFF***)
WS200 SBAS Mode (ON, ***OFF***)
SC-30 Setup
SBAS Mode (ON, ***OFF***)
Heading Offset (-180.0° to +180.0°, ***0°***)
Pitch Offset (-90.0° to +90.0°, ***0°***)
Roll Offset (-90.0° to +90.0°, ***0°***)
①
②


①
②
Manual Fuel Management
Manual Management (ON, ***OFF***)
Total Fuel Capacity (***0*** to 9999 US gal)
NMEA Output Instance (0, 1, 2, ***3***, 4, 5)
IF NMEA Setup
Select IF (Select [IF-NMEAFI] to set the analog data that is input from the IF-NMEAFI.)
Category (Wind,ST800/ST850, Fuel, Fresh Water, Waste Water, Live Weel, Oil, Black Water)
Resistance Full (0 ohm to 300 ohm; default: ***33.50 ohm***)
Resistance Mid (0 ohm to 300 ohm; default: ***310.00 ohm***)
Resistance Empty (0 ohm to 300 ohm; default: ***240.00 ohm***)
Capacity (***0*** to 2650 US gal)
Self Test (Starts a diagnotic test)
Refresh (Refresh the NMEA device list)
Rudder Setup
PORT/STBD Reversing (ON, ***OFF***)
About
System Information
Software Version
Boot Version
Kernel Version
RootFS Version
C-MAP 4D LIB
Base Chart
Chart 2
Fish Finder Information
Serial Number
Program Version
Boot Version
FPGA Version
FPGA Program Version
C-Weather Information
About OSS
Copyright
Service (For technicians only, requires password)
Restore Defaults
Restore Default Settings (Select Yes/No from pop up window)
Restore All to Factory Defaults (Select Yes/No from pop up window)
Clear Memory
Clear All Data and Settings (Select Yes/No from pop up window)
Engine Setup
Diagnosis
Instance (Tests selected engine)
QR Code
Data Reset
Reset Data (Select Yes/No from pop up window)
Installation
Number of Engines (***1***,2,3,4)
Gateway Settings (Shows the settings of Gateway)
Station Setting (***1st***, 2nd, None)
Reset (Shows the settings of Gateway to reset)

Slide-out and Layered Menus

- Slide-out Menu
  - Engine Setup
  - Event Mark
  - Lat/Lon
  - Ruler
  - Tide Stations
  - Search
  - Troll
- Plotter Layered Menu
  - Chart Type (***Vector***, Shaded Relief, Satellite, Raster Chart)
  - VAD Contour Lines (ON, ***OFF***)
  - Lat/Lon Grid (***ON***, OFF)
  - AIS/DSC Targets (ON, ***OFF***)
  - ACCU-Fish Icons (ON, ***OFF***)
  - Show Own Tracks (***ON***, OFF)
  - Show Routes (***ON***, OFF)
  - Show Points (***ON***, OFF)
  - Radar Overlay (ON, ***OFF***)
  - Radar Rings (ON, ***OFF***)
- Fish Finder Layered Menu
  - Mode (***Single Freq***, Mkr Zoom, Btm Zoom, Btm Lock)
  - RezBoost (***Standard***, Enhanced)
  - Bottom Discrim. (ON, OFF)
  - A-Scope (***ON***, OFF)
  - Cursor info (***ON***, OFF)
  - ACCU-Fish (ON, **OFF**)
  - Size Correction (-50% to 100%, ***0%***)
  - ACCU-Fish Filter (Filter 1 to 4; ON, ***OFF***)
- Radar Layered Menu
  - Show EBL/VRM (***ON***, OFF)
  - Show Radar Rings (***ON***, OFF)
  - Show Heading Line (***ON***, OFF)
  - Show Own Ship Icon (ON, ***OFF***)
  - Sentry Zone 1 (ON, ***OFF***)
  - Sentry Zone 2 (ON, ***OFF***)
  - Show Points (ON, ***OFF***)
  - Show AIS/DSC (***ON***, OFF)

APPENDIX 2 RADIO REGULATORY INFORMATION

USA-Federal Communications Commission (FCC)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Caution: Exposure to Radio Frequency Radiation
- This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65.
- This equipment should be installed and operated keeping the radiator at least 20 cm or more away from person's body.
- This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Innovation, Science and Economic Development Canada (ISED)

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil contient un ou plusieurs émetteurs / récepteurs exempts de licence qui sont conformes à la norme « exempts de licence RSS (s) » Canadienne d'Innovation, Sciences et Développement économique. L'exploitation est autorisée aux deux conditions suivantes:
(1) l'appareil ne doit pas produire de brouillage.
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Caution: Exposure to Radio Frequency Radiation
This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the ISED radio frequency (RF) Exposure rules. This equipment should be installed and operated keeping the radiator at least 20 cm or more away from person's body.

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contr êolé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISED. Cet équipement doit etre installé et utilise en gardant une distance de 20 cm ou plus entre le dispositif rayonnant et le corps.

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that required for successful communication.

SPECIFICATIONS OF MULTI-FUNCTION DISPLAY
SMD7/9

1 DISPLAY

1.1	Screen type	
	SMD7	7-inch wide TFT color LCD, 800 x 480 (WVGA)
	SMD9	9-inch wide TFT color LCD, 800 x 480 (WVGA)
1.2	Display mode	Plotter, Fish finder, Radar, Instrument
1.3	Touch screen	Projective capacitive touch sensor (PCAP)
1.4	Projection	Mercator
1.5	Useable area	80° latitude or below
1.6	Brilliance	1000 cd/m^2 typical
1.7	Language	Danish, English (US/UK), Finnish, French, German, Greek, Italian, Japanese, Norwegian, Portuguese, Spanish, Swedish

2 GPS RECEIVER

2.1	Rx frequency	1575.42 MHz
2.2	Rx code	C/A code, WAAS
2.3	Receiving channels	GPS: 72 channels, WAAS: 1ch
2.4	Range accuracy	GPS: 10 m, SBAS: 7.5 m
2.5	Cold start	100 s approx.

3 PLOTTER

3.1	Effective projection area	0.125 NM to 2,048 NM (at equatorial area)
3.2	SD card	32 GB max., C-MAP 4D chart
3.3	Track display	Plot interval: by time
3.4	Memory capacity	Track: 30,000 point, Waypoint: 30,000, Course: 1,000 route (50 waypoints each)
3.5	AIS information	100 targets

4 FISH FINDER

4.1	Transmit frequency	CW: 50/200 kHz, Chirp: 40 to 225 kHz
4.2	Transducer	Power rating: 300 W, 600 W or 1 kW
4.3	Transmit interval	2000 times/min.
4.4	Pulselength	0.04 to 3.0 ms
4.5	Sensitivity	10 dBμV
4.6	Range	Display range: 5 to 1200 m, Shift: 0 to 500 m
4.7	Picture advance speed	Stop, 1/16, 1/8, 1/4, 1/2, 1/1, 2/1, 4/1
4.8	Other functions	ACCU-FISH™, RezBoost™, Chirp, Bottom discrimination

5 INTERFACE

5.1	Number of port	
	NMEA0183	1 port
	NMEA2000	1 port, micro connector, LEN=1

5.2	Data sentences (NMEA0183)	
	Input	DBT, DPT, DSC, DSE, GGA, GLL, GNS, HDG, HDT, MTW, MWV, RMC, ROT, RSA, THS, TLL, VHW, VTG, ZDA
	Output	AAM, APB, BOD, BWR, DBT, DPT, GGA, GLL, GNS, GSA, GSV, GTD, HDG, HDT, MTW, MWV, RMB, RMC, RTE, THS, TLL, VHW, VTG, WPL, XTE, ZDA
5.3	Output proprietary sentences	
	PFEC	SDmrk, SDtbd, SDtfl, pidat
5.4	NMEA2000 PGN	
	Input	126992, 127245/250/251/258/489/493/496/497/498/505, 128259/267/275, 129025/026/029/038/039/040/041/285/538/540, 129793/794/798/808/809/810, 130306/310/311/312/313/314/316 130577/830/831/832/880
	Output	126992, 127245/250/251/257/258/505, 128259/267/275, 129025/026/029/033/283/284/285, 130310/312/316/830/831/832
5.5	Wireless LAN	IEEE 802.11 b/g/n

6 POWER SUPPLY

6.1	Multi-function display	12 - 24 VDC: 1.0- 0.5 A

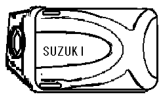
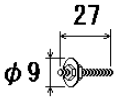
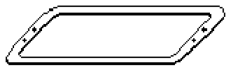
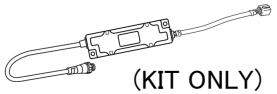
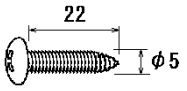
7 ENVIRONMENTAL CONDITIONS

7.1	Ambient temperature	-15°C to +55°C (storage: -20°C to +70°C)
7.2	Relative humidity	93% or less at +40°C
7.3	Degree of protection	IP56
7.4	Vibration	IEC 60945 Ed.4

8 UNIT COLOR

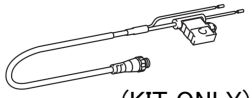
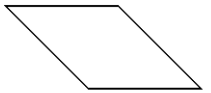
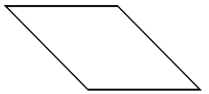
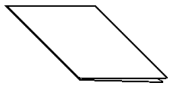
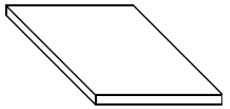
8.1	Multi-function display	N1.0

PACKING LIST SMD7-E

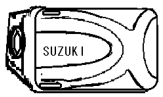
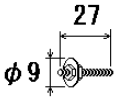
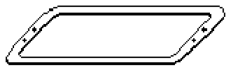
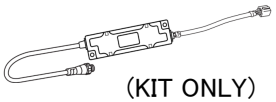
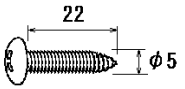
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ユニット UNIT			
ﾏﾙﾁﾌｧﾝｸｼｮﾝﾃﾞｨｽﾌﾟﾚｲ DISPLAY COMP MULTI 7		SMD7-E 34910-98L00	1
付属品 ACCESSORIES			
ﾉﾌﾞ(ﾎﾞﾙﾄ) KNOB TOP MOUNT BRACKET		20-032-1062-1 34936-98L00	2
ﾊﾝｶﾞｰ BRACKET TOP MOUNT 7		HBS53BX 34933-98L00	1
ﾌｨﾙﾀｰｸﾘｰﾅｰ CLEANER DISPLAY		MINUCLOTH-GREY 34938-98L00	1
工事材料 INSTALLATION MATERIALS			
Fﾏｳﾝﾄﾈｼﾞ SCREW FLUSH MOUNT		K10LC3005AV 34920-98L00	4
Fﾏｳﾝﾄﾊﾟｯｷﾝ GASKET FLUSH MOUNT 7		HGB16AX 31914-98L00	1
ｹﾞｰﾄｳｪｲ GATEWAY		34923-96L00	1
ﾀｯﾋﾟﾝﾈｼﾞ SCREW BRACKET MOUNT		VTATM4.8X22TCCINX 34920-98L10	4

SMD7 ASSY P/No. 34900-98L00

SMD7 KIT P/No. 34901-98L00

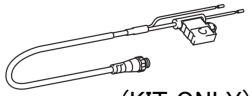
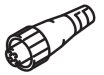
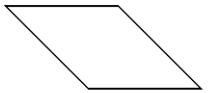
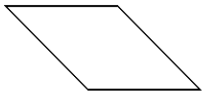
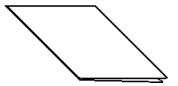
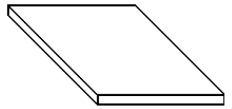
NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ｹｰﾌﾞﾙ(ｸﾐﾋﾝ) CABLE POWER SUPPLY		CBCOFS0810 36663-98L00	1
ﾊｰﾈｽｱｯｼ, ﾈｯﾄﾜｰｸﾊﾟﾜｰ HARNESS ASSY NETWORK POWER		FRU-2W-FU-01A 36663-88L20	1
ﾜｲﾔ, 2ｴｸｽﾃﾝｼｮﾝ(NMEA) WIRE 2 EXTENSION		36662-88L10	1
ｺﾈｸﾀ BRANCH(NMEA) CONNECTOR BRANCH		CBCOFS0810 36664-88L00	3
ﾕﾆｯﾄ, ﾚｼﾞｽﾀﾋｰﾒｲﾙ(NMEA) UNIT RESISTOR FEMALE		36665-88L00	1
ﾕﾆｯﾄ, ﾚｼﾞｽﾀﾒｰﾙ(NMEA) UNIT RESISTOR MALE		36665-88L10	1
図書 DOCUMENT			
ﾌﾗｯｼｭﾏｳﾝﾄ型紙 SHEET FLUSH MOUNT		C42-01805-* 34915-98L00	1
操作上の注意 GUIDE SAFETY INSTALLATION		E42-01804-* 34919-98L00	1
操作要領書(多言) GUIDE OPERATION		MLG-45040-* 34918-98L00	1
装備要領書(英) MANUAL INSTALLATION		IME-45040-* 34917-98L00	1

PACKING LIST SMD9-E

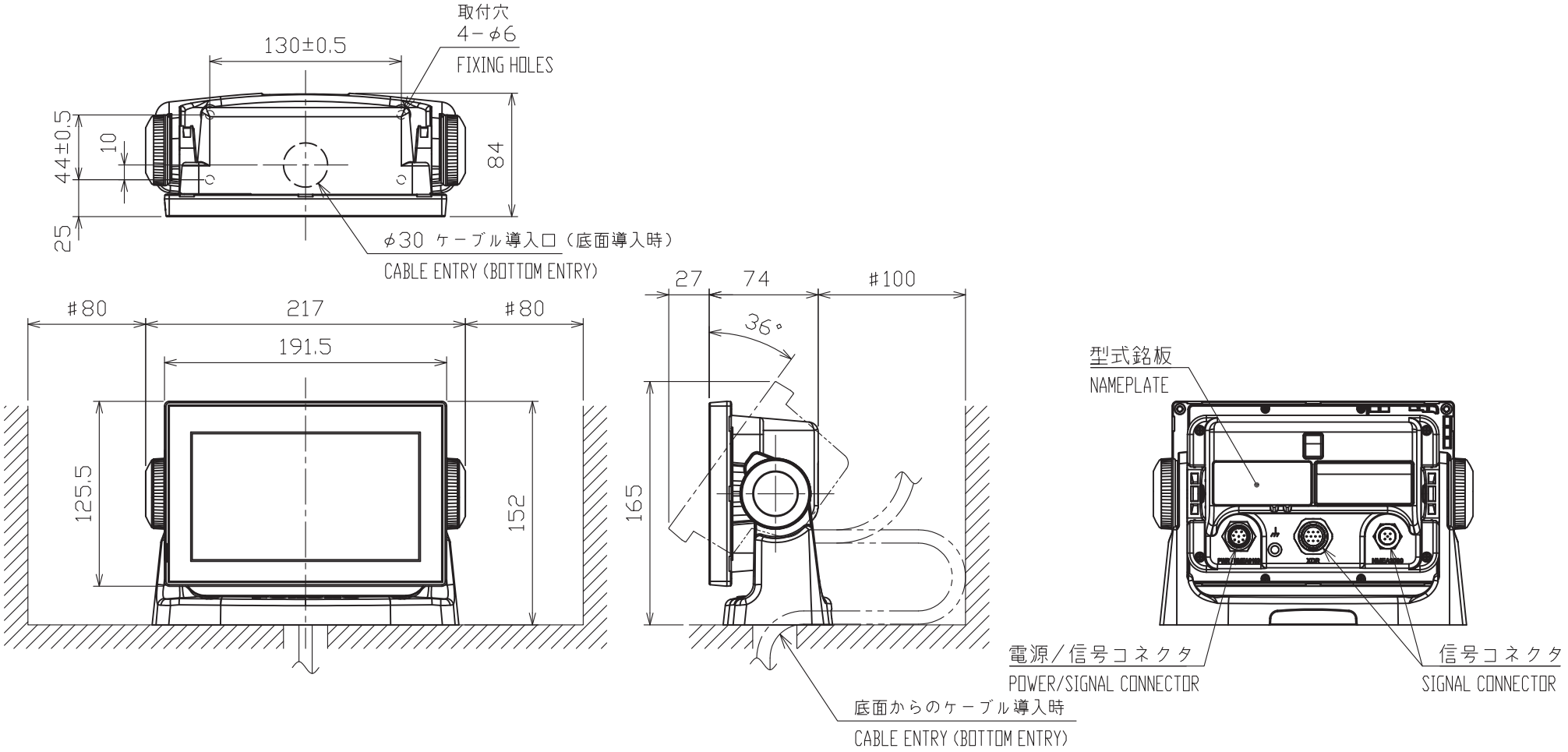
NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ユニット UNIT			
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付属品 ACCESSORIES			
ﾉﾌﾞ(ﾎﾞﾙﾄ) KNOB TOP MOUNT BRACKET		20-032-1062-1 34936-98L00	2
ﾊﾝｶﾞｰ BRACKET TOP MOUNT 9		HBS52BX 34933-98L10	1
ﾌｨﾙﾀｰｸﾘｰﾅｰ CLEANER DISPLAY		MINUCLOTH-GREY 34938-98L00	1
工事材料 INSTALLATION MATERIALS			
Fﾏｳﾝﾄﾈｼﾞ SCREW FLUSH MOUNT		K10LC3005AV 34920-98L00	4
Fﾏｳﾝﾄﾊﾟｯｷﾝ GASKET FLUSH MOUNT 9		HGB15AX 31914-98L10	1
ｹﾞｰﾄｳｪｲ GATEWAY		34923-96L00	1
ﾀｯﾋﾟﾝﾈｼﾞ SCREW BRACKET MOUNT		VTATM4.8X22TCCINX 34920-98L10	4

SMD9 ASSY P/No. 34900-98L10

SMD9 KIT P/No. 34901-98L10

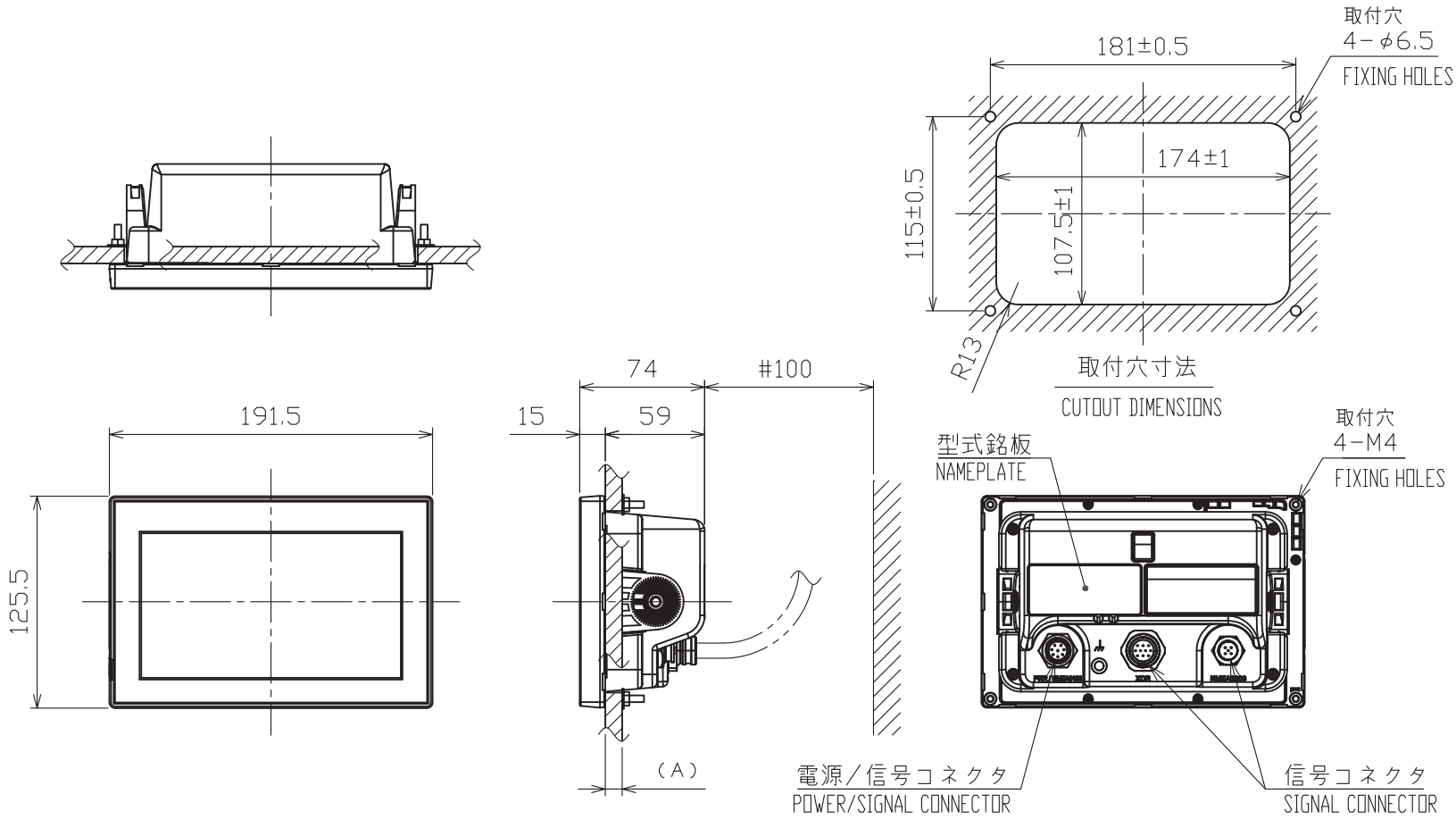
NAME	OUTLINE	DESCRIPTION/CODE No.	Q'TY
ｹｰﾌﾞﾙ(ｸﾐﾋﾝ) CABLE POWER SUPPLY		CBCOFS0810 36663-98L00	1
ﾊｰﾈｽｱｯｼ,ﾈｯﾄﾜｰｸﾊﾟﾜｰ HARNESS ASSY NETWORK POWER		FRU-2W-FU-01A 36663-88L20	1
ﾜｲﾔ,2ｴｸｽﾃﾝｼｮﾝ(NMEA) WIRE 2 EXTENSION		36662-88L10	1
ｺﾈｸﾀ BRANCH(NMEA) CONNECTOR BRANCH		CBCOFS0810 36664-88L00	3
ﾕﾆｯﾄ,ﾚｼﾞｽﾀﾋｰﾒｲﾙ(NMEA) UNIT RESISTOR FEMALE		36665-88L00	1
ﾕﾆｯﾄ,ﾚｼﾞｽﾀﾒｰﾙ(NMEA) UNIT RESISTOR MALE		36665-88L10	1
図書 DOCUMENT			
ﾌﾗｯｼｭﾏｳﾝﾄ型紙 SHEET FLUSH MOUNT		C42-01805-* 34915-98L00	1
操作上の注意 GUIDE SAFETY INSTALLATION		E42-01804-* 34919-98L00	1
操作要領書(多言) GUIDE OPERATION		MLG-45040-* 34918-98L00	1
装備要領書(英) MANUAL INSTALLATION		IME-45040-* 34917-98L00	1

SMD7 Muiti-Function Display OUTLINE (DRAWING)
(Tabletop mount)



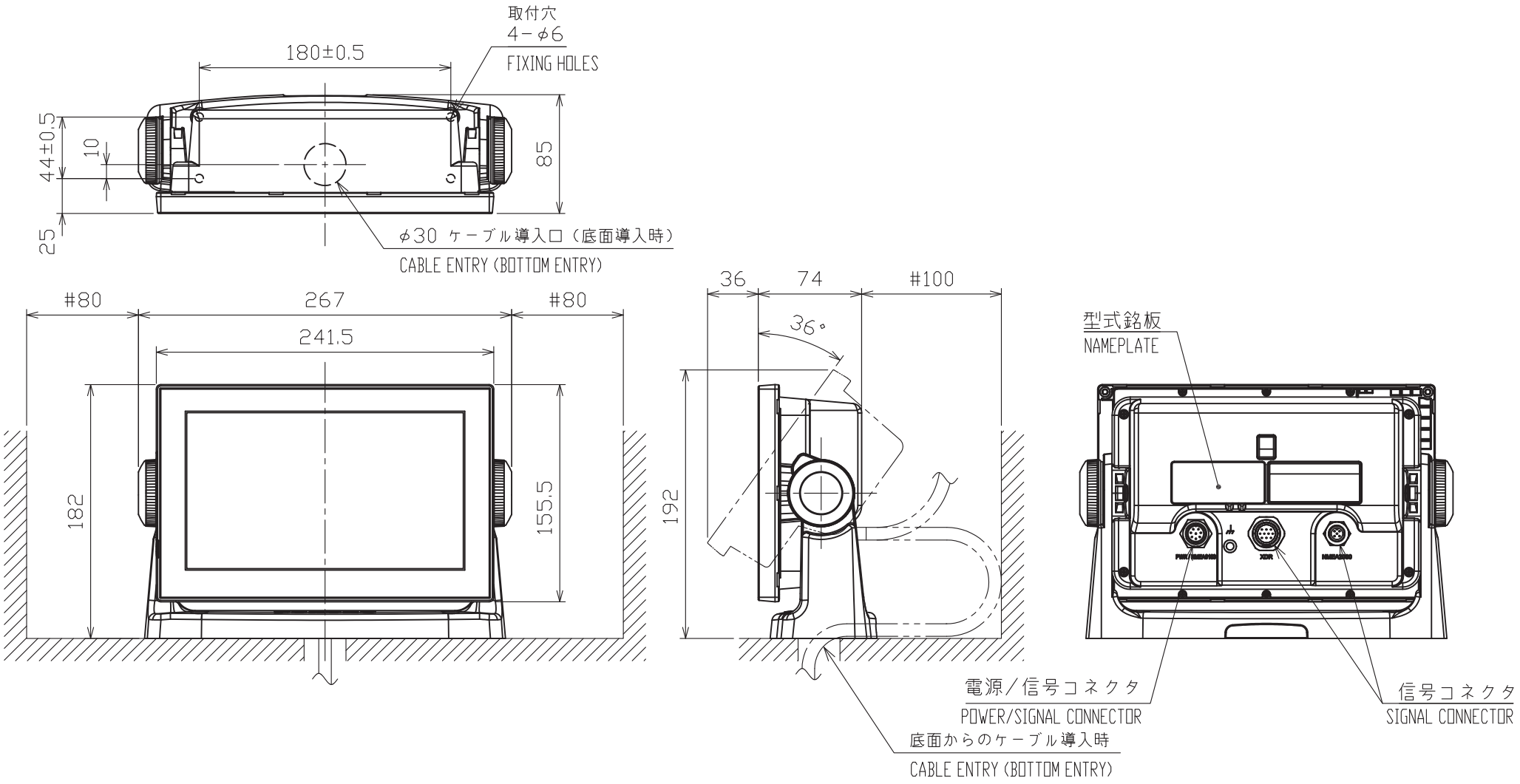
(REF. No. C4498-G01-A)

SMD7 Muiti-Function Display OUTLINE (DRAWING)
(Flushmount)



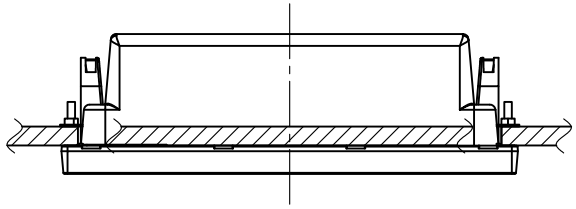
(REF. No. C4498-G02-A)

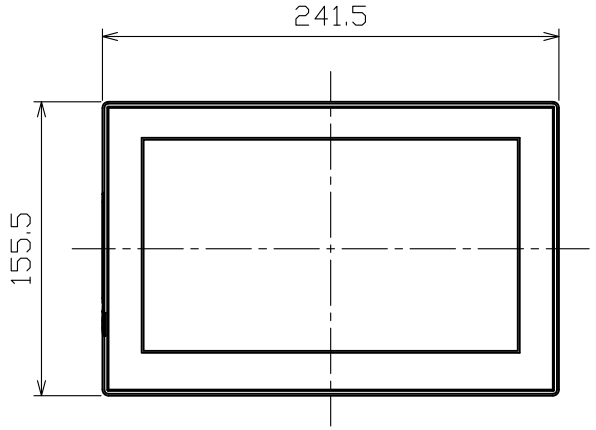
SMD9 Muiti-Function Display OUTLINE (DRAWING)
(Tabletop mount)

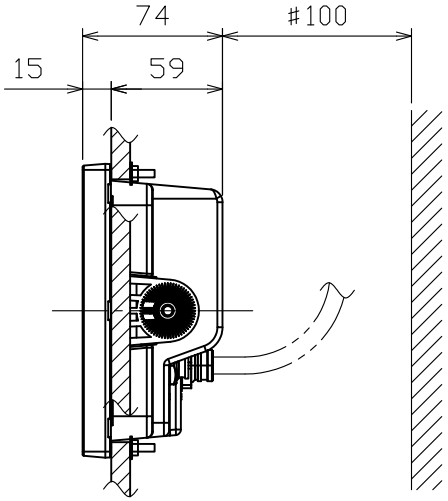


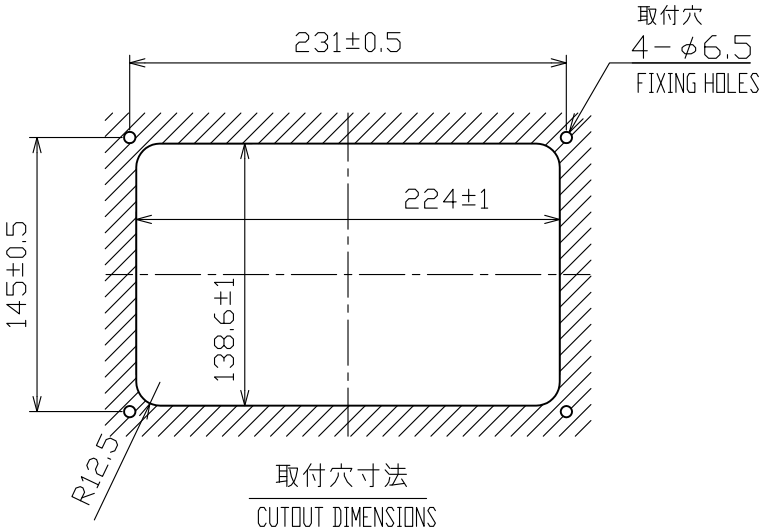
(REF. No. C4499-G01-A)

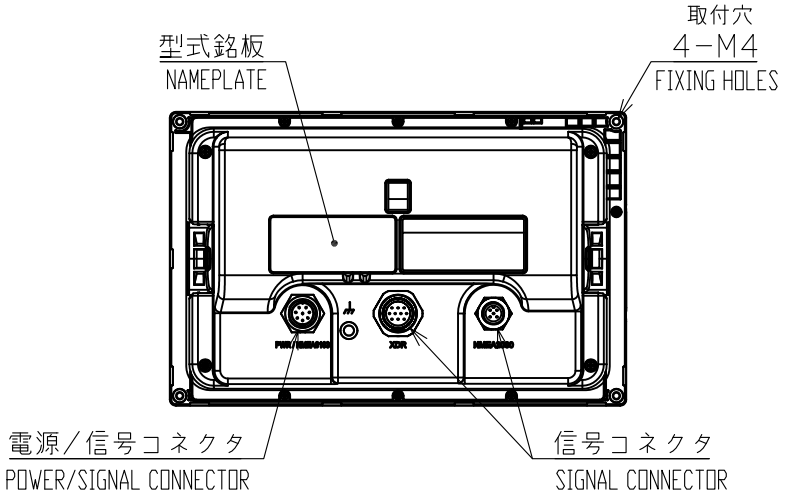
SMD9 Muiti-Function Display OUTLINE (DRAWING)
(Flushmount)





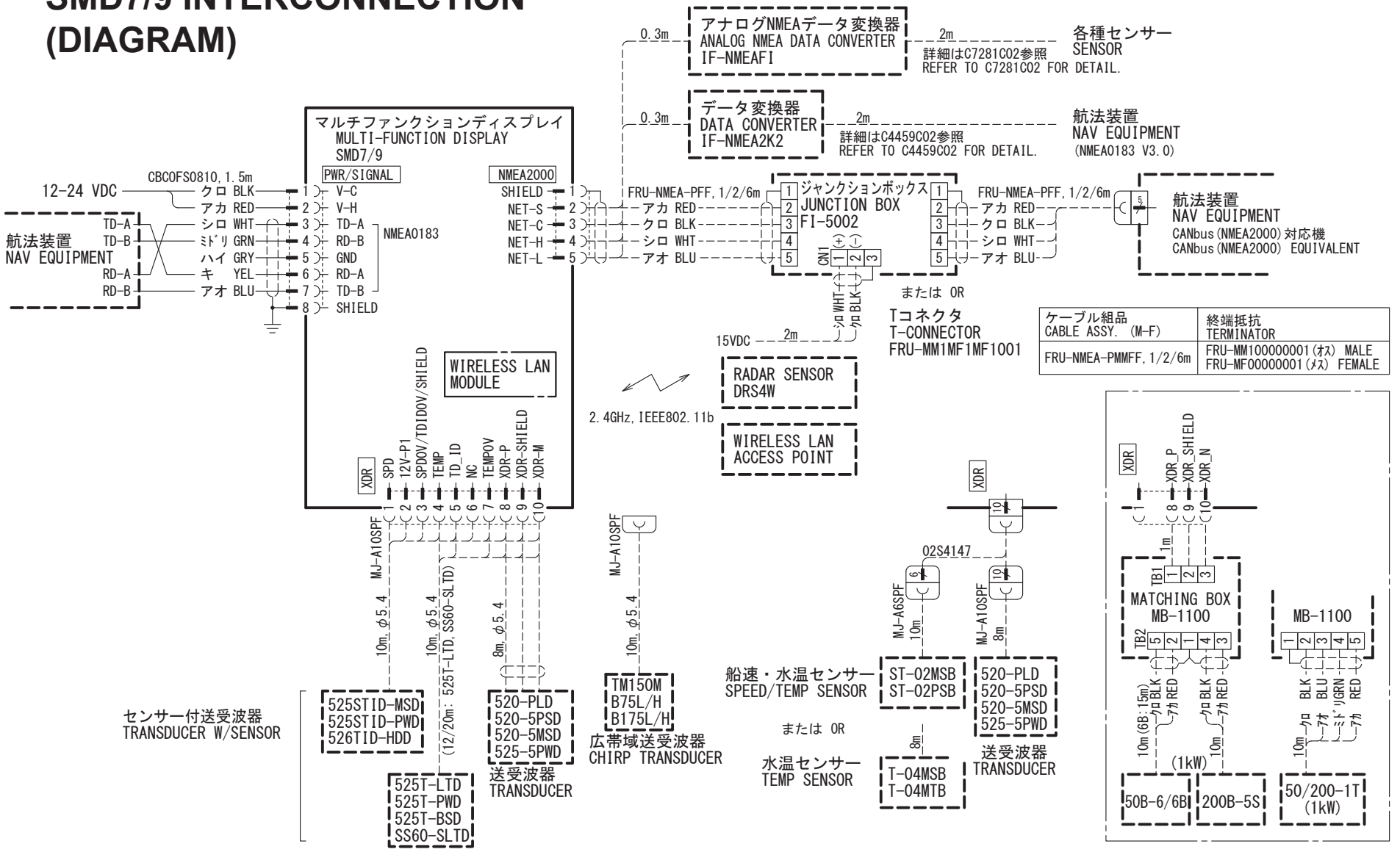






(REF. No. C4499-G02-C)

SMD7/9 INTERCONNECTION (DIAGRAM)



(REF. No. C4498-C01-D)

FURUNO ELECTRIC CO., LTD.
9-52 Ashihara-cho, Nishinomiya, 662-8580, Japan
Tel: +81 (0)798 65-2111 Fax: +81 (0)798 65-1020
www.furuno.com

Publication No. DOCQA1179

Declaration of Conformity

CE

We FURUNO ELECTRIC CO., LTD.

(Manufacturer)

9-52 Ashihara-Cho, Nishinomiya City, 662-8580, Hyogo, Japan

(Address)

declare under our sole responsibility that the product

GPS/WAAS CHART PLOTTER with Fish Finder
GP-1871F and GP-1971F

(Model name, type number)

to which this declaration relates conforms to the following standard(s) or normative document(s)

IEC 60945 Ed.4.0: 2002 EMC related items	EN 301 489-1 V2.1.1: 2017 EMC related items
IEC 60950-1 Ed.2.0: 2005 Safety related items	EN 301 489-17 V3.1.1: 2017 EMC related items
IEC 60950-1 Ed.2.0 A1: 2009 Safety related items	EN 301 843-1 V2.1.1: 2016 EMC related items
IEC 60950-1 Ed.2.0 A2: 2013 Safety related items	EN 300 328 V2.1.1: 2016 Spurious related items
IEC 62311 Ed.1.0: 2007 Safety related items	EN 303 413 V1.1.1: 2017 Spurious related items

(Title and/or number and date of issue of the standard(s) or other normative document(s))

1. Software ver. 1.0.0A**
2. Frequency 1575.42 MHz

(Specifications)

For assessment, see

- Test Report 17492A-CE, 17492A-S, 17492B-CE, 17492B-S prepared by G.S.D. S.r.l., and EC Declaration of Conformity for Wireless Lan Module issued by Texas Instruments Incorporated.

This declaration is issued according to the Directive 2014/53/EU of the European Parliament and of the Council on the harmonization of the laws of the Member States relating to the making available on the market of radio equipment.

On behalf of Furuno Electric Co., Ltd.

Nishinomiya City, Japan
May 7, 2018

(Place and date of issue)

Yoshitaka Shogaki
Department General Manager
Quality Assurance Department

(name and signature or equivalent marking of authorized person)

FURUNO ELECTRIC CO., LTD.
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Publication No. DOCQA9055

Declaration of Conformity

CE

We FURUNO ELECTRIC CO., LTD.

(Manufacturer)

9-52 Ashihara-Cho, Nishinomiya City, 662-8580, Hyogo, Japan

(Address)

declare under our sole responsibility that the product

GPS/WAAS CHART PLOTTER with Fish Finder
GP-1871F and GP-1971F

(Model name, type number)

to which this declaration relates is in conformity with the following standard(s) or other normative document(s)

EN50581: 2012

(title and/or number and date of issue of the standard(s) or other normative document(s))

This declaration is issued according to Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

On behalf of Furuno Electric Co., Ltd.

Nishinomiya City, Japan
May 1, 2018

(Place and date of issue)

Yoshitaka Shogaki
Department General Manager
Quality Assurance Department

(name and signature or equivalent marking of authorized person)

FURUNO ELECTRIC CO., LTD.
9-52 Ashihara-cho, Nishinomiya,
662-8580, Japan
www.furuno.com

June 20, 2018

OEM Declaration

Dear Sirs,

We, Furuno Electric Co., Ltd., declare that the following models are OEM products manufactured by Furuno and are electronically and mechanically identical. The differences between the products listed below are labeling, brand names and user interface in the software.

Furuno Electric Co., Ltd.		SUZUKI MOTOR CORPORATION	
Model	**Name**	**Model**	**Name**
GP-1871F	GPS/WAAS CHART PLOTTER with Fish Finder	SMD7	MULTI-FUNCTION DISPLAY
GP-1971F	GPS/WAAS CHART PLOTTER with Fish Finder	SMD9	MULTI-FUNCTION DISPLAY

Yours faithfully,

竹元 大.

Dai Takemoto
Manager
Light Marine Products Engineering Section
Research & Development Department
Product Designing, Development & Value-engineering Headoffice
Marine Electronic Products Division
Furuno Electric Co., Ltd.

Declaration of Conformity

[SMD7/SMD9]

Bulgarian (BG)	С настоящото Furuno Electric Co., Ltd. декларира, че гореспоменат тип радиосъоръжение е в съответствие с Директива 2014/53/ЕС.
Spanish (ES)	Por la presente, Furuno Electric Co., Ltd. declara que el tipo de equipo radioeléctrico arriba mencionado es conforme con la Directiva 2014/53/UE.
Czech (CS)	Tímto Furuno Electric Co., Ltd. prohlašuje, že výše zmíněné typ rádiového zařízení je v souladu se směrnicí 2014/53/EU.
Danish (DA)	Hermed erklærer Furuno Electric Co., Ltd., at ovennævnte radioudstyr er i overensstemmelse med direktiv 2014/53/EU.
German (DE)	Hiermit erklärt die Furuno Electric Co., Ltd., dass der oben genannte Funkanlagentyp der Richtlinie 2014/53/EU entspricht.
Estonian (ET)	Käesolevaga deklareerib Furuno Electric Co., Ltd., et ülalmainitud raadioseadme tüüp vastab direktiivi 2014/53/EL nõuetele.
Greek (EL)	Με την παρούσα η Furuno Electric Co., Ltd., δηλώνει ότι ο προαναφερθέντας ραδιοεξοπλισμός πληροί την οδηγία 2014/53/ΕΕ.
English (EN)	Hereby, Furuno Electric Co., Ltd. declares that the above-mentioned radio equipment type is in compliance with Directive 2014/53/EU.
French (FR)	Le soussigné, Furuno Electric Co., Ltd., déclare que l'équipement radioélectrique du type mentionné ci-dessus est conforme à la directive 2014/53/UE.
Croatian (HR)	Furuno Electric Co., Ltd. ovime izjavljuje da je gore rečeno radijska oprema tipa u skladu s Direktivom 2014/53/EU.
Italian (IT)	Il fabbricante, Furuno Electric Co., Ltd., dichiara che il tipo di apparecchiatura radio menzionato sopra è conforme alla direttiva 2014/53/UE.
Latvian (LV)	Ar šo Furuno Electric Co., Ltd. deklarē, ka augstāk minēts radioiekārta atbilst Direktīvai 2014/53/ES.
Lithuanian (LT)	Aš, Furuno Electric Co., Ltd., patvirtinu, kad pirmiau minėta radijo įrenginių tipas atitinka Direktyvą 2014/53/ES.
Hungarian (HU)	Furuno Electric Co., Ltd. igazolja, hogy fent említett típusú rádióberendezés megfelel a 2014/53/EU irányelvnek.
Maltese (MT)	B'dan, Furuno Electric Co., Ltd., niddikjara li msemmija hawn fuq-tip ta' tagħmir tar-radju huwa konformi mad-Direttiva 2014/53/UE.
Dutch (NL)	Hierbij verklaar ik, Furuno Electric Co., Ltd., dat het hierboven genoemde type radioapparatuur conform is met Richtlijn 2014/53/EU.
Polish (PL)	Furuno Electric Co., Ltd. niniejszym oświadcza, że wyżej wymieniony typ urządzenia radiowego jest zgodny z dyrektywą 2014/53/UE.
Portuguese (PT)	O(a) abaixo assinado(a) Furuno Electric Co., Ltd. declara que o mencionado acima tipo de equipamento de rádio está em conformidade com a Diretiva 2014/53/UE.
Romanian (RO)	Prin prezenta, Furuno Electric Co., Ltd. declară că menționat mai sus tipul de echipamente radio este în conformitate cu Directiva 2014/53/UE.
Slovak (SK)	Furuno Electric Co., Ltd. týmto vyhlasuje, že vyššie spomínané rádiové zariadenie typu je v súlade so smernicou 2014/53/EÚ.
Slovenian (SL)	Furuno Electric Co., Ltd. potrjuje, da je zgoraj omenjeno tip radijske opreme skladen z Direktivo 2014/53/EU.
Finnish (FI)	Furuno Electric Co., Ltd. vakuuttaa, että yllä mainittu radiolaitetyyppi on direktiivin 2014/53/EU mukainen.
Swedish (SV)	Härmed försäkrar Furuno Electric Co., Ltd. att ovan nämnda typ av radioutrustning överensstämmer med direktiv 2014/53/EU.

SUZUKI MOTOR CORPORATION
300 TAKATSUKA, MINAMI, HAMAMATSU, JAPAN

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A: NOV. 15, 2018

Pub. No. IME-45040-A
(TEHI) SMD7/9

00019624510

P/No. 34917-98L00