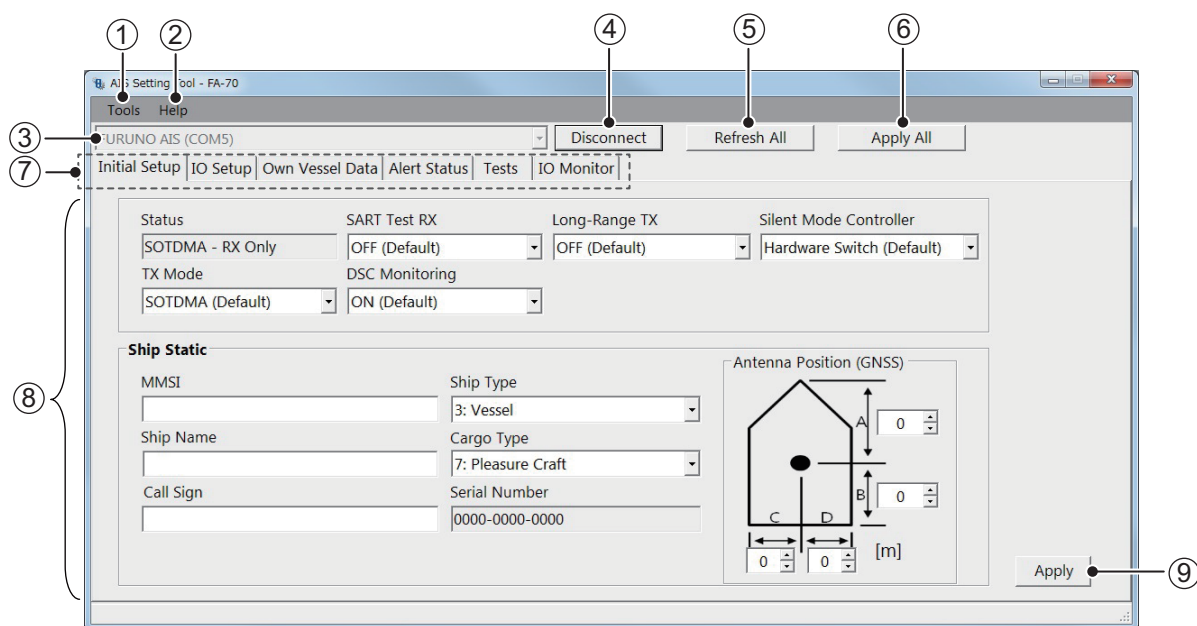


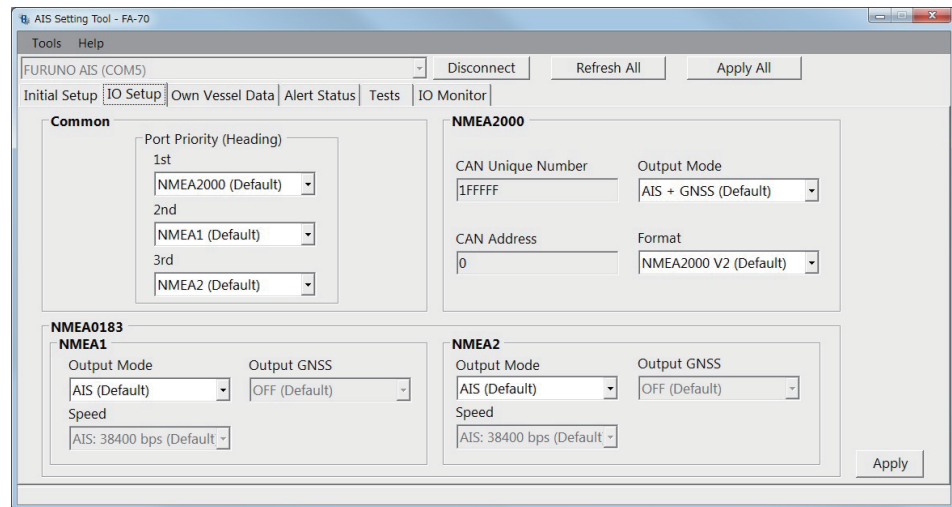
3.2 Overview of the AIS Setting Tool



No.	Name	Description
1	[Tools]	[Disconnect]: Disconnects from the FA-70. [Screenshot...]: Takes a screenshot.
2	[Help]	[Usage Considerations]: Shows the precautions for use. [About]: Shows the program version number. xx denotes minor modifications.
3	Port selection	Select the COM port to connect.
4	[Connect]/[Disconnect]	[Connect]: Connects to the FA-70. [Disconnect]: Disconnects from the FA-70.
5	[Refresh All]	Obtains the latest data from the FA-70, and then updates all settings of all menu tabs.
6	[Apply All]	Saves all settings in all tab pages, and then transmits the data to the FA-70.
7	Menu tab	Opens each menu.
8	Setting/Display area	Shows the setting values, menu options, status, test results, and so on depend on the selected menu.
9	[Apply]	Saves all settings in the current tab page, and then transmits the data to the FA-70.

3.3 IO setup (input/output port)

You can change the input/output settings from the [IO Setup] menu.



[CAN Unique Number], [CAN Address]: Display only.

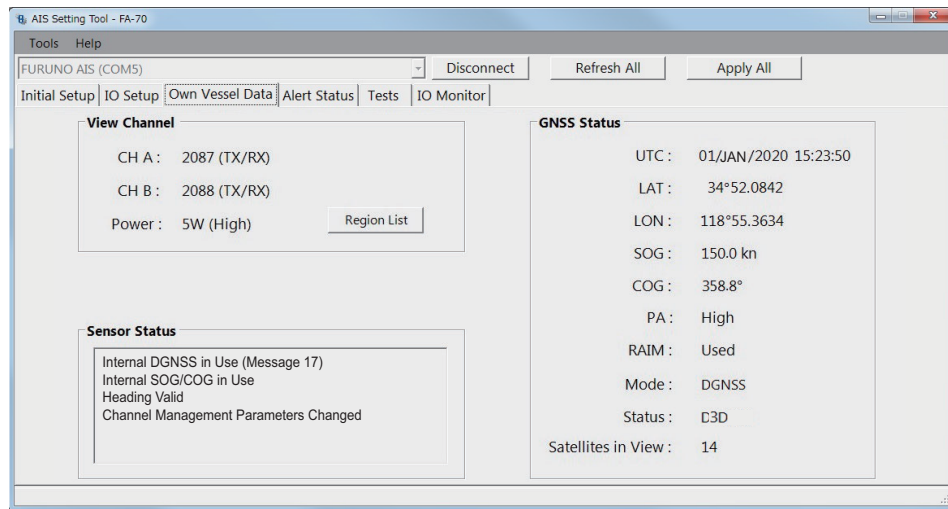
[IO Setup] menu for PC

Menu item	Description
[Common]	
[Port Priority (Heading)] [1st], [2nd], [3rd]	Set the input port priority for heading data.
[NMEA2000]	
[CAN Unique Number]	Shows the CAN unique number.
[CAN Address]	Shows the CAN address.
[Output Mode]	Select the output mode among [OFF], [AIS], [GNSS], or [AIS + GNSS]. [OFF]: Does not output AIS and GNSS data. [AIS]: Outputs AIS data. [GNSS]: Outputs GNSS data. [AIS + GNSS]: Outputs both AIS and GNSS data.
[Format]	Select the output PGN format version from [NMEA2000 V2] or [NMEA2000 V1].
[NMEA0183]	
[NMEA1 Output Mode], [NMEA2 Output Mode]	Select the output mode among [OFF], [AIS], [GNSS], or [AIS + GNSS].
[NMEA1 Speed], [NMEA2 Speed]	When selecting [OFF] or [GNSS] in the [NMEA1/NMEA2 Output Mode] menu, select the baudrate for NMEA1/NMEA2 from [AIS: 38400 bps] or [Sensor: 4800 bps].
[NMEA1 Output GNSS], [NMEA2 Output GNSS]	When selecting [GNSS] or [AIS + GNSS] in the [NMEA1/NMEA2 Output Mode] menu, select the output GNSS sentence for NMEA1/NMEA2 among [OFF], [GGA + VTG (Sentences)], [GLL + VTG (Sentences)] or [RMC (Sentence)]. [OFF]: Does not output GGA, VTG, GLL and RMC sentences. [GGA + VTG (Sentences)]: Outputs GGA and VTG sentences. [GLL + VTG (Sentences)]: Outputs GLL and VTG sentences. [RMC (Sentence)]: Outputs RMC sentence.

For the PC, click [Apply] or [Apply All] to confirm the settings.

3.4 Own Vessel Data Screen

The [Own Vessel Data] screen shows the information of AIS channel, sensor status, and GNSS status.

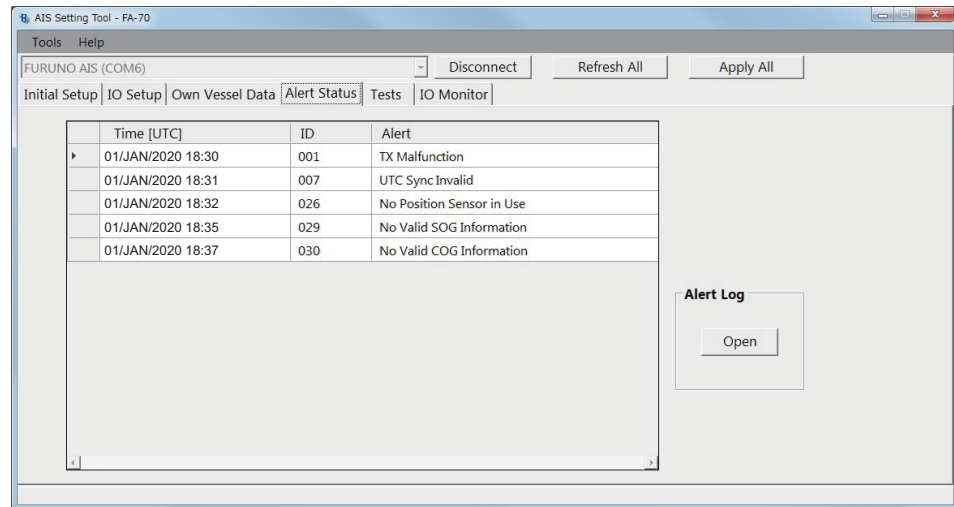


[Own Vessel Data] screen for PC

Menu item	Description
[View Channel]	
[CH A]	Shows the channel number and TX/RX mode for channel A.
[CH B]	Shows the channel number and TX/RX mode for channel B.
[Power]	Shows the transmission power.
[Region List] (for the PC)	Shows the channel management information of local sea areas. To take a screenshot, click [Screenshot] at the bottom right of the screen.
[Sensor Status]	Shows the information about the sensors connected to the FA-70. - Internal DGNSS in Use: DGNSS currently in use. - Internal GNSS in Use: GNSS currently in use. - Internal SOG/COG in Use: SOG/COG currently in use. - Heading Valid: Valid heading data. - Channel Management Parameters Changed (for the PC): Channel parameters have been changed.
[GNSS Status] (for the PC)	Shows the GNSS information. [UTC]: Universal Time Coordinated [LAT]: Latitude [LON]: Longitude [SOG]: Speed over ground [COG]: Course over ground [PA]: Positioning accuracy [RAIM] (Receiver autonomous integrity monitoring): Whether to use RAIM or not. [Mode]*: Positioning mode [Status]*: Positioning status [Satellites in View]*: The number of satellites in view. *: These items are not displayed when using the positioning data from the external sensor.

3.5 Alert Status

The [Alert Status] screen shows the alerts currently occurred.

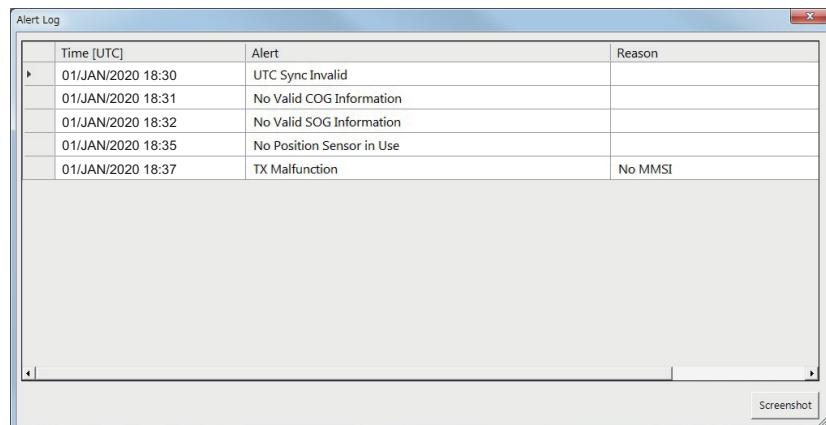


[Alert Status] screen for PC

- [Time [UTC]]: Shows the time and date when the alert occurred.
- [ID]: Shows the alert number.
- [Alert]: Shows the alert message*.

*: For the external display, select the alert ID to display the alert message on the bottom of the screen.

For the PC, click [Open] of [Alert Log] to show the alerts occurred in the past (max. 20 alerts).



- [Time [UTC]]: Shows the time and date when the alert occurred.
- [Alert]: Shows the alert message.
- [Reason]: Shows the reason why the alert occurred.

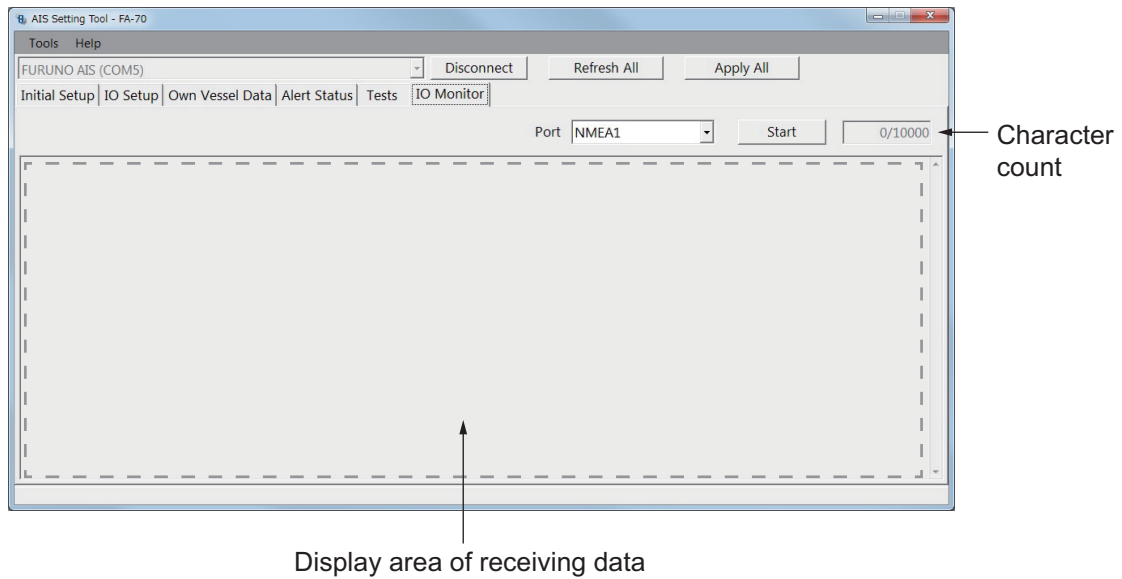
Click [Screenshot] to take a screenshot.

For the alert lists, see page AP-4.

3.6 IO Monitor

The data input from each port can be monitored.

Note: This menu appears only on the PC.



- [Port]: Select the port that displays the received data.
- [Start]: Click to start the receiving data display. The displayed characters are up to 10000 characters. The [Start] button changes to the [Stop] button.
- [Stop]: Click to stop the receiving data display. The [Stop] button changes to the [Start] button.

4. MAINTENANCE

**WARNING**

**ELECTRICAL SHOCK HAZARD**
Do not open the equipment.

Only qualified personnel can work inside the equipment.

NOTICE

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

Those items contain organic solvents that can damage coating and plastic parts, especially plastic connectors.

4.1 Maintenance

Regular maintenance helps good performance. Check the items listed below monthly to keep your equipment in good working order.

Item	Check point
Wiring	Check that each cable and wire are securely fastened. Refasten if necessary.
Ground	Check grounding for rust. Clean if necessary.
Antenna	Check antenna and its cabling for damage. Replace if necessary.
Cabinet	Dust and dirt should be removed from the cabinet with a soft, dry cloth. Do not use chemical-based cleaners; they can remove paint and markings.

4.2 Replacement of Fuse

**WARNING**

Use the correct fuse.

Use of a wrong fuse can cause fire or serious damage to the equipment.

The fuse (5A) in the cable protects it from overcurrent and equipment fault. If the unit cannot be powered, that is, the POWER LED is off, the fuse may have blown. If this happens, turn off the power to the FA-70, and check the fuse. If the fuse has blown, find out the reason before replacing it. If it blows again after replacement, contact your dealer for advice.

Name	Type
Fuse (5A)	250VAC, 5A

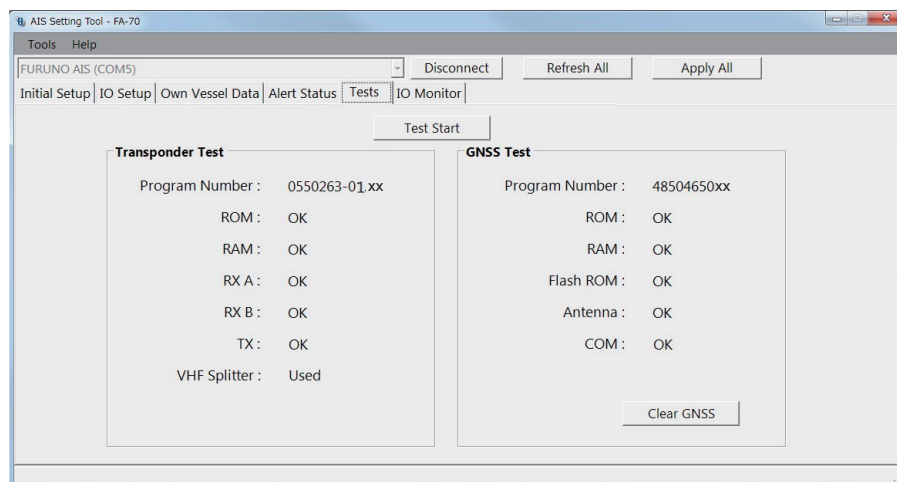
4.3 Troubleshooting

The troubleshooting table below provides typical operating problems and the means to restore normal operation. If you cannot restore normal operation, do not open the cover of the FA-70; there are no user serviceable parts inside the transponder.

Symptom	Remedy
Cannot turn on the power.	- Check that the cable between the transponder and power for damage. - Check the power supply. - Check the fuse.
Cannot transmit/receive.	- Check that the VHF antenna cable is firmly connected. - Check the VHF antenna and its cabling for damage. - Confirm the channel setting.
The message is sent to a wrong ship.	Confirm the MMSI.
No position data.	- Check the GPS antenna. - Check the GPS antenna cable and its connectors.
ERROR LED lights in red.	Contact your dealer.
ERROR LED lights in orange.	- Check that the GPS antenna is correctly connected. - Check that the VHF antenna is correctly connected. - Confirm the MMSI.
Cannot start the AIS Setting Tool, or cannot connect the PC to the transponder.	- Check that the USB cable between the transponder and the PC for damage. - Do the followings: - Quit the AIS Setting Tool. - Disconnect the USB cable of the PC, and then connect the USB cable again. - Start the AIS Setting Tool.

4.4 Diagnostics

The FA-70 provides diagnostic tests to check the transponder unit for proper operation.



[Tests] screen for PC

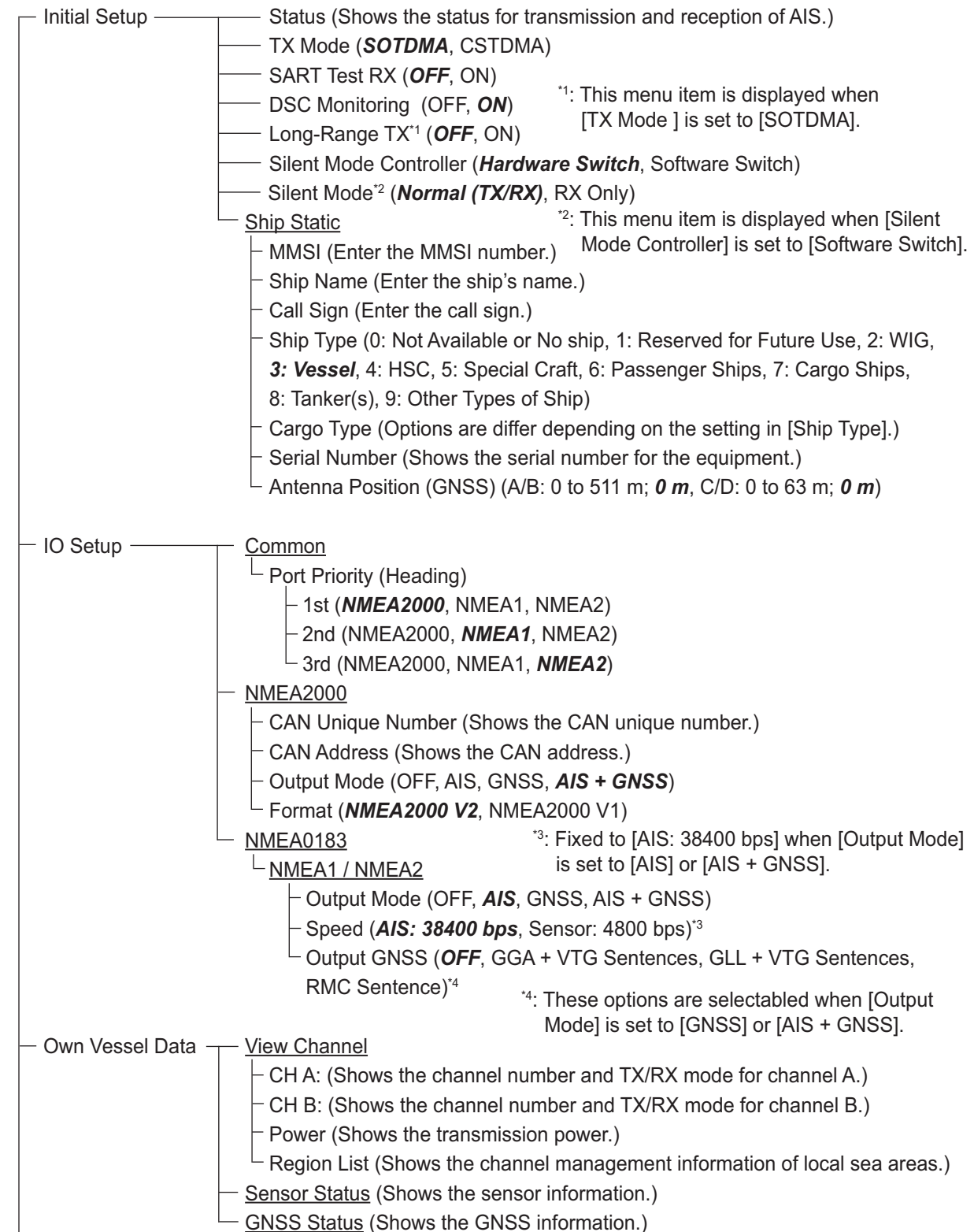
Menu item	Description
[Test Start] (for the PC)	Click to start the test.
[Transponder Test]	The program version number appears on the first line. The RAM, ROM, two RX channels (A and B) and TX are checked for proper operation, and the results are displayed as "OK" or "NG" (No Good). For any NG, contact your dealer for advice. When the VHF splitter board is connected, "Used" appears, not connected, "Unused" appears on the last line.
[GNSS Test]	The program version number appears on the first line. The ROM, RAM, Flash ROM, the connection with antenna (including power line) and COM (communication) are checked for proper operation, and the results are displayed as [OK] or [NG] (No Good). For any NG, contact your dealer for advice.
[Clear GNSS] (for the PC)	Click to initialize the internal GNSS core. The confirmation message "Clear GNSS. Are you sure?" appears. Click [Yes] to initialize.

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APPENDIX 1 MENU TREE

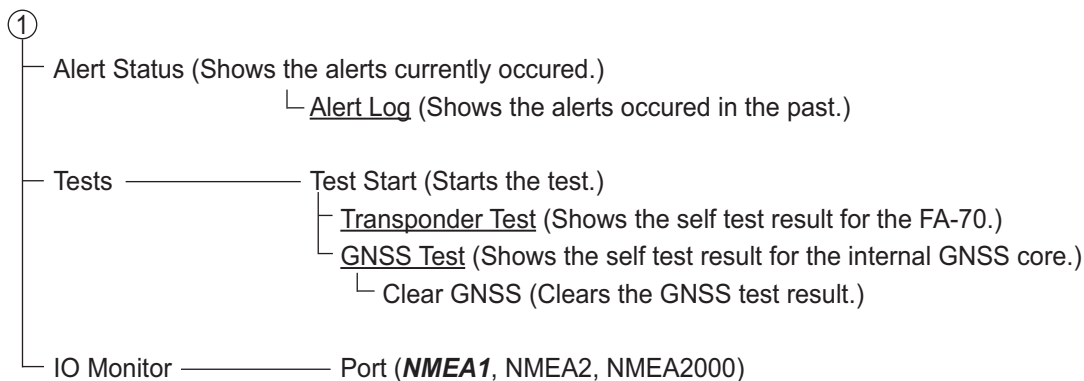
AIS Setting Tool (PC)

Bold italic: Default



①

APPENDIX 1 MENU TREE

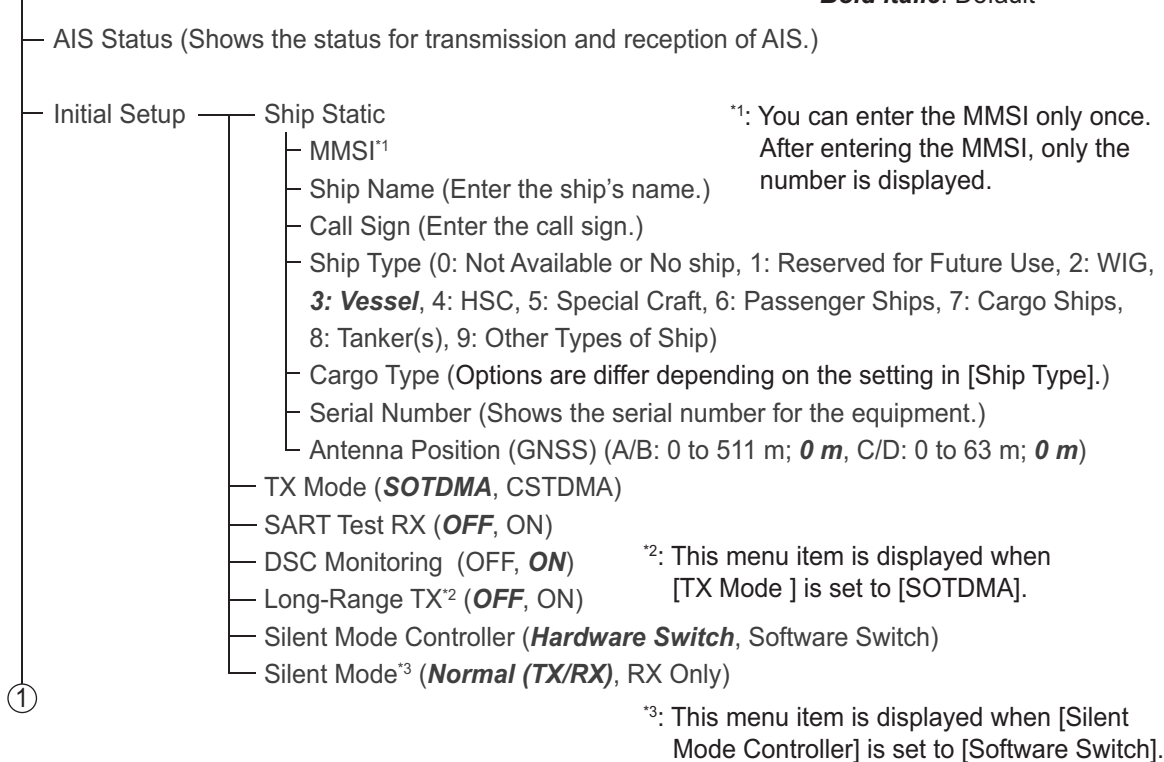


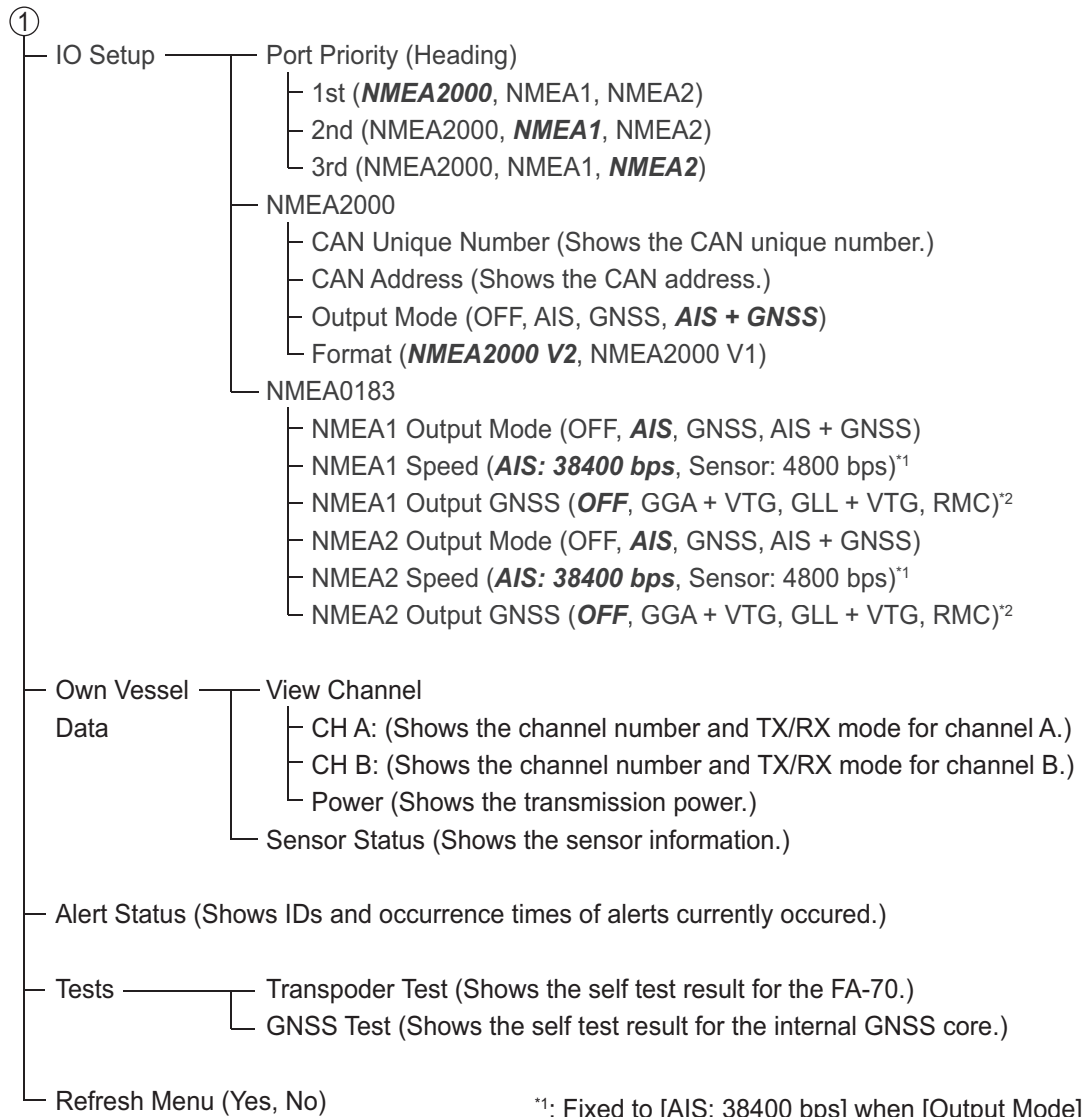
TZTL12F/15F, TZT12F/16F/19F

On the home screen, select [Settings] - [Initial Setup] - [NETWORK SENSOR SETUP] - [FA-70] in order to display the menus.

Menu

Bold italic: Default





^{*1}: Fixed to [AIS: 38400 bps] when [Output Mode] is set to [AIS] or [AIS + GNSS].

^{*2}: These options are selectable when [Output Mode] is set to [GNSS] or [AIS + GNSS].

APPENDIX 2 ALERT LISTS

The table below shows the alert ID, text, meaning and remedy for each alert.

ID	Text	Meaning	Remedy
001	TX Malfunction	Transmission stopped due to a failure. (The ERROR LED lights in red.)	<u>Reasons: RF AMP Too Hot, Regulator For RF AMP Too Hot, VSWR Exceeds Limit, Current to RF AMP Regulated</u> Check the VHF antenna and FA-70 connections. <u>Reason: TX PLL Error</u> Contact your dealer. <u>Reason: No MMSI</u> Check that the own ship MMSI is set. <u>Reason: Noise Level Too High</u> Check noise sources near the antenna.
002	Antenna VSWR Exceeds Limit	High VSWR for the AIS antenna detected. (Continued operation possible.)	Check the VHF antenna. If the problem is not rectified, contact your dealer.
003	RX Channel 1 Malfunction	RX1 hardware trouble. Transmission stopped on corresponding TX channel. (The ERROR LED lights in red.)	Circuit board may be damaged. Contact your dealer.
004	RX Channel 2 Malfunction	RX2 hardware trouble. Transmission stopped on corresponding TX channel. (The ERROR LED lights in red.)	
007	UTC Sync Invalid	Internal GPS has no fix. (Continued operation possible using indirect or semaphore synchronization.)	Check the GPS antenna connection. If the error appears frequently, contact your dealer.
026	No Position Sensor in Use	No L/L data. (Continued operation possible.)	
029	No Valid SOG Information	Invalid SOG data. (Continued operation possible.)	
030	No Valid COG Information	Invalid COG data. (Continued operation possible.)	

APPENDIX 3 NMEA2000/0183 INPUT/OUTPUT DATA

CAN bus (NMEA2000) input/output

Input PGN

PGN	Description
059392	ISO Acknowledgment
059904	ISO Request
060160	ISO Transport Protocol, Data Transfer
060416	ISO Transport Protocol, Connection Management - BAM Group Function
060928	ISO Address Claim
065240	ISO Commanded Address
126208	NMEA - Request Group Function
	NMEA - Command Group Function
127250	Vessel Heading

Output PGN

PGN	Description	Output cycle ^{*1} (ms)
059392	ISO Acknowledgment	
059904	ISO Request	
060928	ISO Address Claim	
126208	NMEA - Acknowledge Group Function	
126464	PGN List - Transmit PGN's Group Function	*2
	PGN List - Received PGN's Group Function	
126992	System Time	1,000
126993	Heartbeat	60,000
126996	Product Information	*2
126998	Configuration Information	*2
127258	Magnetic Variation	1,000
129025	Position, Rapid Update	100
129026	COG & SOG, Rapid Update	250
129029	GNSS Position Data	1,000
129038	AIS Class A Position Report	
129039	AIS Class B Position Report	
129040	AIS Class B Extended Position Report	
129041	AIS Aids to Navigation (AtoN) Report	
129540	GNSS Sats in View	1,000
129792	AIS DGNSS Broadcast Binary Message	
129793	AIS UTC and Date Report	
129794	AIS Class A Static and Voyage Related Data	
129795	AIS Addressed Binary Message	*3
129796	AIS Acknowledge	
129797	AIS Binary Broadcast Message	
129798	AIS SAR Aircraft Position Report	

PGN	Description	Output cycle ^{*1} (ms)
129801	AIS Addressed Safety Related Message	
129802	AIS Safety Related Broadcast Message	
129803	AIS Interrogation	
129804	AIS Assignment Mode Command	*3
129805	AIS Data Link Management Message	
129806	AIS Channel Management	
129807	AIS Group Assignment	
129809	AIS Class B "CS" Static Data Report, Part A	
129810	AIS Class B "CS" Static Data Report, Part B	
129811	AIS Single Slot Binary Message	
129812	AIS Multi Slot Binary Message	*3
129813	AIS Long - Range Broadcast Message	*3

*1: Output cycle for an AIS related PGN depends on vessel traffic conditions.

*2: Outputs when receiving output request.

*3: SOTDMA mode only

NMEA0183 input/output

Sentence	Description	Input	Output
ABM	AIS Addressed and Binary Broadcast Acknowledgement	*	
ABK	AIS Addressed and Binary Broadcast Acknowledgement		✓
ACA	AIS Regional Channel Assignment Message		✓
ACK	Acknowledge Alarm	✓	
ACS	AIS Channel Management Information Source		✓
AIQ	Query Sentence	✓	
ALR	Set Alarm State		✓
BBM	AIS Broadcast Binary Message	*	
GGA	Global Positioning System Fix Data		✓
GLL	Geographic Position - Latitude/Longitude		✓
HDT	Heading, True	✓	
RMC	Recommended Minimum Specific GNSS Data		✓
SSD	AIS Ship Static Data	✓	✓
THS	True Heading and Status	✓	
TXT	Text Transmission		✓
VDM	AIS VHF Data-Link Message		✓
VDO	AIS VHF Data-Link Own-Vessel Report		✓
VER	Version		✓
VSD	AIS Voyage Static Data	✓	✓
VTG	Course Over Ground & Ground Speed		✓

*: SOTDMA mode only

APPENDIX 4 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)

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 contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'ISED. Cet équipement doit être installé et utilisé 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 CLASS B AIS TRANSPONDER FA-70

1 GENERAL

1.1	Type	Class B AIS Transponder
1.2	RX capacity	2250 report/minute, 1 channel 4500 report/minute, 2 channel
1.3	RX system	SOTDMA or CSTDMA (user select), dual wave simultaneous reception
1.4	Synchronous framing	UTC direct or UTC indirect (SOTDMA) UTC direct (CSTDMA)
1.5	Operating mode	Autonomous, Assigned, polled/interrogation response
1.6	Frequency switching	Automatic
1.7	DSC receiving	Time sharing system
1.8	Initialization	Within 2 minutes after power-on
1.9	Prevention of abnormal TX	Auto-suspended for detecting TX more than 1 second
1.10	Regulations	IEC 62287-1/2

2 TRANSMITTER

2.1	Frequency range	156.025 MHz to 162.025 MHz (F1D)
2.2	Output power	5 W or 1W (SOTDMA), 2 W (CSTDMA)
2.3	Modulation	GMSK
2.4	Channel interval	25 kHz
2.5	Frequency deviation	±500 Hz
2.6	Spurious emission	9 kHz to 1 GHz, -36 dBm or less 1 GHz to 4 GHz, -30 dBm or less
2.7	Transmission interval	
	SOTDMA	5 s (SOG>23 kn), 15 s (14<SOG≤23 kn), 30 s (2<SOG≤14 kn), 3 min. (SOG≤2 kn)
	CSTDMA	30 s (SOG>2 kn), 3 min. (SOG≤2 kn)

3 AIS RECEIVER

3.1	Frequency range	156.025 MHz to 162.025 MHz (F1D)
3.2	Oscillator frequency	1 st local oscillator: f+ (46.35/58.05 MHz), 2 nd local oscillator: 45.9/57.6 MHz
3.3	Intermediate frequency	1 st : 46.35/58.05 MHz, 2 nd : 450 kHz
3.4	Receiving method	Double super heterodyne
3.5	Sensitivity	-107 dBm or less (PER20% or less)
3.6	Error at high input level	-77 dBm (PER2% or less), -7 dBm (PER10% or less)
3.7	Co-channel rejection	-10 dB or more
3.8	Adjacent channel selectivity	70 dB or more
3.9	Spurious response	70 dB or more
3.10	Inter-modulation	65 dB or more

4 DSC RECEIVER (TIMESHARING SYSTEM)

4.1	Frequency	156.525 MHz (CH70)
4.2	Sensitivity	-107 dBm (BER1% or less)

- 4.3 Error at high input level -7 dBm (PER10% or less)
- 4.4 Co-channel rejection -10 dB or more
- 4.5 Adjacent channel selectivity 70 dB or more
- 4.6 Spurious response 70 dB or more
- 4.7 Inter-modulation 65 dB or more
- 4.8 Sensitivity suppression 84 dB

5 VHF SPLITTER

- 5.1 Rx function
 - Frequency range 155 MHz to 164 MHz
 - Insertion loss 0 dB typical
- 5.2 Tx function
 - Frequency range 155 MHz to 164 MHz
 - Insertion loss 1 dB or less
 - Input power 25 W max.
 - Power detection 0.1 W or more

6 GPS RECEIVER

- 6.1 Number of channel GPS: 12 channels parallel, SBAS: 2 channels, 14 satellites
- 6.2 Receiving frequency 1575.42 MHz, C/A code
- 6.3 Position fixing method All in view, 8-state Kalman filter
- 6.4 Position accuracy GPS: 13 m approx. (2drms, HDOP≤4)
- 6.5 Tracking velocity 1000 kn
- 6.6 Position fixing time 90 s approx.
- 6.7 Update interval 1 s
- 6.8 DGPS data correcting By AIS information

7 INTERFACE

- 7.1 Number of port
 - Serial 2 ports, IEC61162-1, 4800/38400 bps
 - NMEA2000 1 port, External power required 12-24VDC (9-32VDC), LEN=1@9V
 - USB 1 port, USB2.0, Full speed, for maintenance
 - Contact closure 1 port, for silent switch
- 7.2 Data sentence
 - Input ABM, ACK, AIR, AIQ, BBM, HDT, SSD, THS, VSD
 - Output ABK, ACA, ACS, ALR, GGA, GLL, RMC, SSD, TXT, VDM, VDO, VER, VSD, VTG
- 7.3 Output P sentence
 - PFEC pidat
- 7.4 NMEA2000 PGN
 - Input 059392/904, 060160/416/928, 061184, 065240, 126208/720, 127250
 - Output 059392/904, 060928, 061184, 126208/464/720/992/993/996/998, 127258, 129025/026/029/038/039/040/041/540, 129792/793/794/795*/796/797/798, 129801/802/803/804*/805/806/807/809/810/811/812*/813*, 130822/823

*: SOTDMA only

8 POWER SUPPLY

12-24 VDC (9.6-31.2 VDC): 1.8-0.9 A (TX), 0.3-0.2 A (RX)

9 ENVIRONMENTAL CONDITIONS**9.1 Ambient temperature**

Antenna unit -25°C to +70°C

Transponder -15°C to +55°C

9.2 Relative humidity 93% or less at +40°C**9.3 Degree of protection**

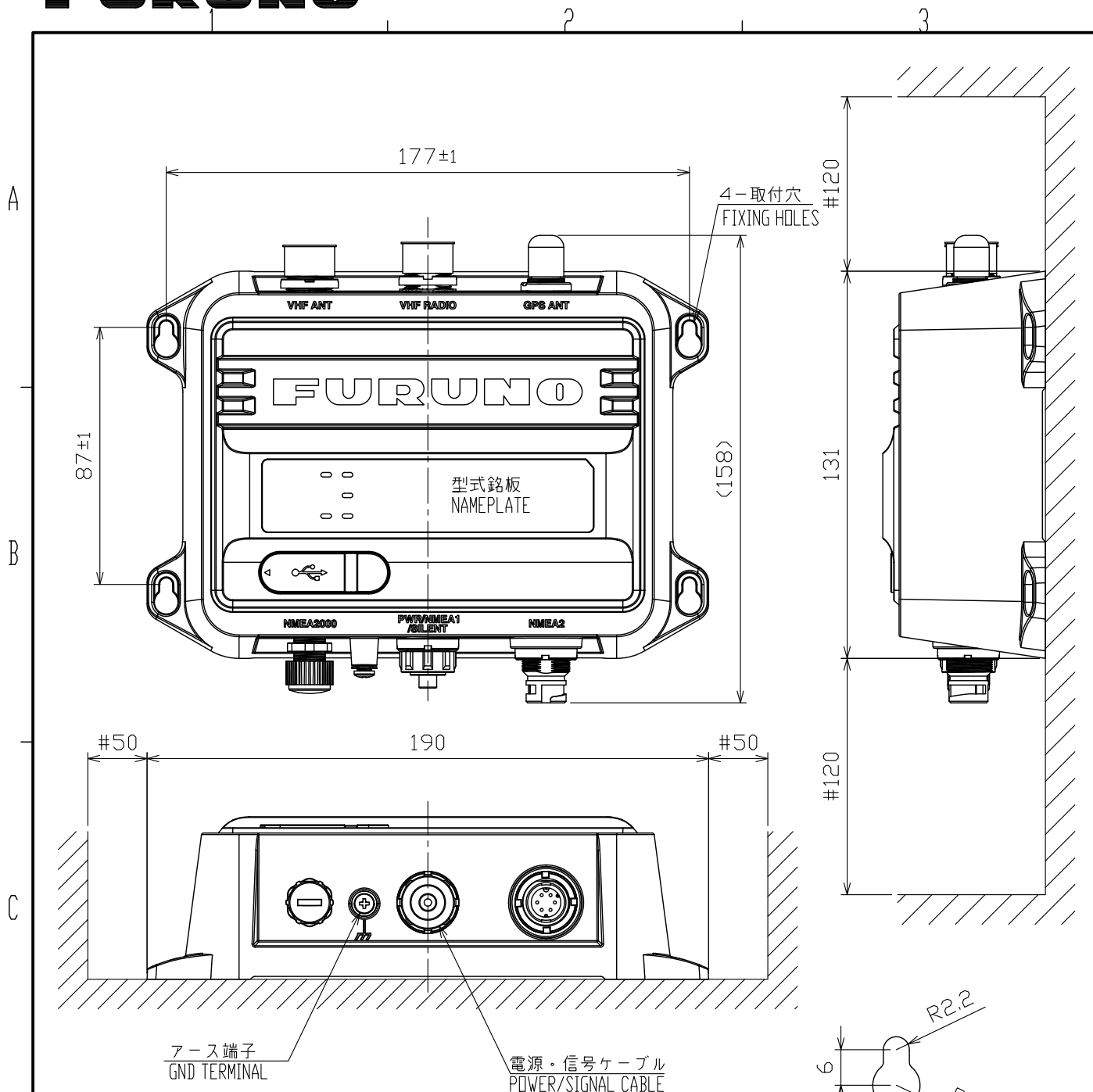
Antenna unit IP56

Transponder IP55

9.4 Vibration IEC 60945 Ed.4**10 UNIT COLOR**

10.1 Antenna unit N9.5

10.2 Transponder N1.0



注記

- 1) 指定なき寸法公差は表 1 による。
- 2) #印寸法は最小サービス空間寸法とする。
- 3) 取付用ねじはトラスタッピンネジ呼び径3.5を使用のこと。

NOTE

1. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.
2. #: MINIMUM SERVICE CLEARANCE.
3. USE TAPPING SCREWS $\phi 3.5$ FOR FIXING THE UNIT.

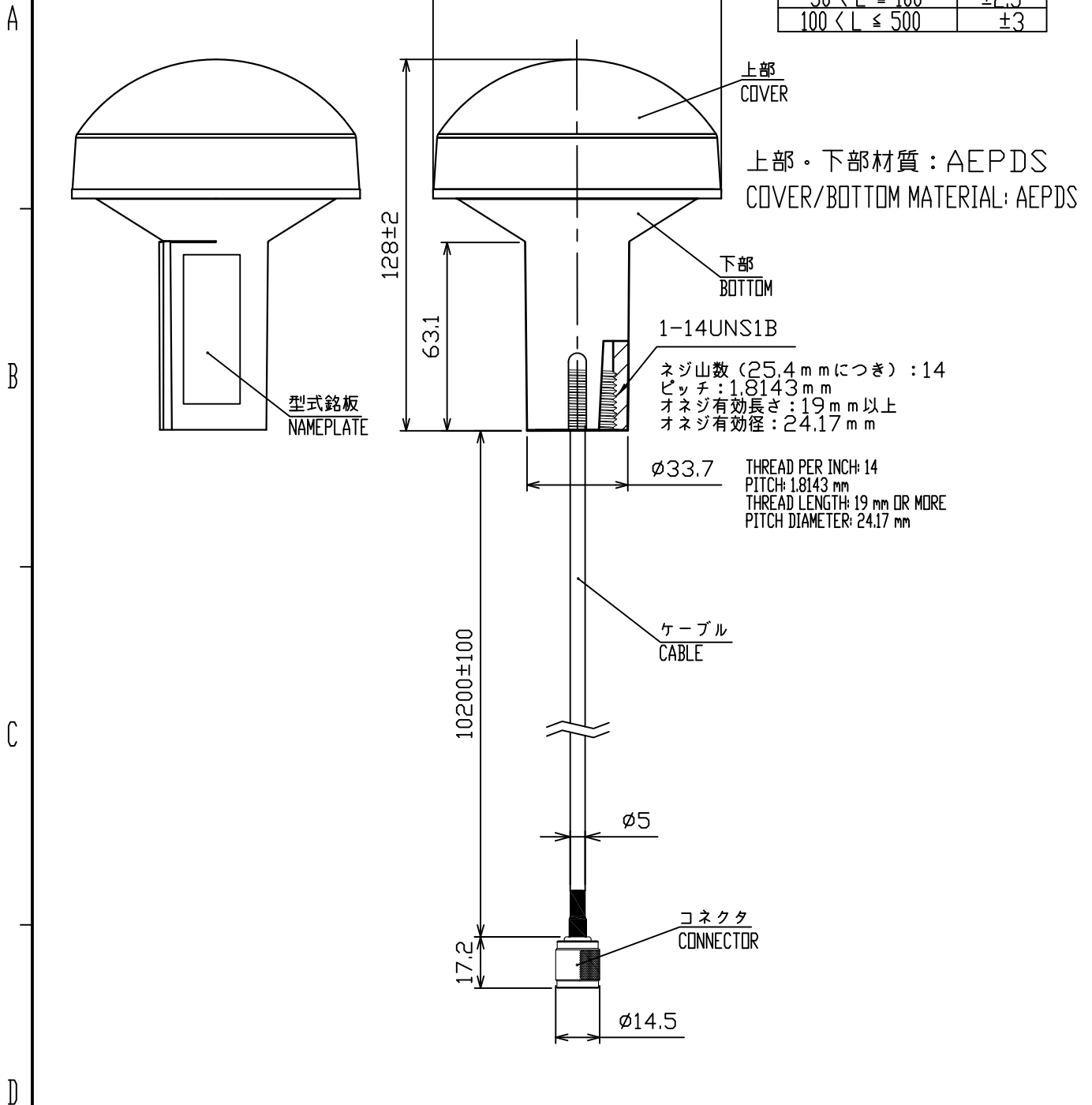
表 1 TABLE 1

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

DRAWN	17/Oct/2019 T.YAMASAKI	TITLE	FA-70
CHECKED	17/Oct/2019 H.MAKI	名称	簡易型船舶自動識別装置 (壁掛・卓上装備)
APPROVED	18/Oct/2019 H.MAKI		外寸図
SCALE	1/2	MASS	0.52 ±10% kg
DWG. No.	C4515-G01-C	REF. No.	
		質量はケーブルを含まず。 MASS DOES NOT INCLUDE CABLE.	NAME
			CLASS B AIS TRANSPONDER (BULKHEAD/TABLETOP MOUNT)
			OUTLINE DRAWING

表1 TABLE 1

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



注記

1) 指定なき寸法公差は表1による。

NOTE

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

DRAWN	7/Apr/2017 T.YAMASAKI		TITLE	GPA-C01
CHECKED	7/Apr/2017 H.MAKI		名称	空中線部
APPROVED	7/Apr/2017 H.MAKI	GP-39		外寸図
SCALE	1/2	MASS 0.53 ±10% kg	質量はケーブル (10m) を含む。 MASS INCLUDES 10m CABLE.	NAME
DWG. No.	C4494-G04- B	REF. No.		ANTENNA UNIT
				OUTLINE DRAWING

表1 TABLE 1

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

1-14UNS1B

ねじ山数 (25.4mmにつき) : 14

ピッチ: 1.8143 mm

オネジ有効長さ: 19 mm以上

オネジ有効径: 24.17mm

THREAD PER 25.4mm (1 INCH): 14

PITCH: 1.8143 mm

THREAD LENGTH: 19 mm OR MORE

PITCH DIAMETER: 24.17mm

表2 TABLE 2

型式 TYPE	ケーブル長(m) CABLE LENGTH	プラグ PLUG	質量(kg $\pm 10\%$) MASS
GPA-017	10	TNC-P-3	0.6
GPA-017S	0.2	TNC-J-3	0.15

注記

指定外の寸法公差は表1による。

NOTE

TABLE 1 INDICATES TOLERANCE OF DIMENSIONS WHICH IS NOT SPECIFIED.

DRAWN	Mar. 27 '07 T.YAMASAKI	TITLE	GPA-017/017S
CHECKED	Mar. 27 '07 T.TAKENO	名称	空中線部
APPROVED	Mar. 27 '07 R.Esumi		外寸図
SCALE	1/1	NAME	ANTENNA UNIT
DWG.No.	C4384-G04- L		OUTLINE DRAWING



***2: OPTION.**

DRAWN	2/0ct/2019	I. YAMASAKI				TITLE	FA-70
CHECKED	2/0ct/2019	H. MAKI				名 称	簡易型船舶自動識別裝置
APPROVED	23/0ct/2019	H. MAKI					相互結線図
SCALE		1/ASS	kg			NAME	CLASS B AIS TRANSPONDER
DWG. No.		C4515-001- A				REF. No.	INTERCONNECTION DIAGRAM

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Declaration of Conformity

[FA-70]

Bulgarian (BG)	С настоящото Furuno Electric Co., Ltd. декларира, че гореспоменат тип радиосъоръжение е в съответствие с Директива 2014/53/ЕС. Цялостният текст на ЕС декларацията за съответствие може да се намери на следния интернет адрес:
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. El texto completo de la declaración UE de conformidad está disponible en la dirección Internet siguiente:
Czech (CS)	Tímto Furuno Electric Co., Ltd. prohlašuje, že výše zmíněné typ rádiového zařízení je v souladu se směrnicí 2014/53/EU. Úplné znění EU prohlášení o shodě je k dispozici na této internetové adrese:
Danish (DA)	Hermed erklærer Furuno Electric Co., Ltd., at ovennævnte radioudstyr er i overensstemmelse med direktiv 2014/53/EU. EU-overensstemmelseserklæringens fulde tekst kan findes på følgende internetadresse:
German (DE)	Hiermit erklärt die Furuno Electric Co., Ltd., dass der oben genannte Funkanlagentyp der Richtlinie 2014/53/EU entspricht. Der vollständige Text der EU-Konformitätserklärung ist unter der folgenden Internetadresse verfügbar:
Estonian (ET)	Käesolevaga deklareerib Furuno Electric Co., Ltd., et ülalmainitud raadioseadme tüüp vastab direktiivi 2014/53/EL nõuetele. ELi vastavusdeklaratsiooni täielik tekst on kättesaadav järgmisel internetiaadressil:
Greek (EL)	Με την παρούσα η Furuno Electric Co., Ltd., δηλώνει ότι ο προαναφερθέντας ραδιοεξοπλισμός πληροί την οδηγία 2014/53/ΕΕ. Το πλήρες κείμενο της δήλωσης συμμόρφωσης ΕΕ διατίθεται στην ακόλουθη ιστοσελίδα στο διαδίκτυο:
English (EN)	Hereby, Furuno Electric Co., Ltd. declares that the above-mentioned radio equipment type is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:
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. Le texte complet de la déclaration UE de conformité est disponible à l'adresse internet suivante:
Croatian (HR)	Furuno Electric Co., Ltd. ovime izjavljuje da je gore rečeno radijska oprema tipa u skladu s Direktivom 2014/53/EU. Cjeloviti tekst EU izjave o sukladnosti dostupan je na sljedećoj internetskoj adresi:
Italian (IT)	Il fabbricante, Furuno Electric Co., Ltd., dichiara che il tipo di apparecchiatura radio menzionato sopra è conforme alla direttiva 2014/53/UE. Il testo completo della dichiarazione di conformità UE è disponibile al seguente indirizzo Internet:
Latvian (LV)	Ar šo Furuno Electric Co., Ltd. deklarē, ka augstāk minēts radioiekārta atbilst Direktīvai 2014/53/ES. Pilns ES atbilstības deklarācijas teksts ir pieejams šādā interneta vietnē:

Lithuanian (LT)	Aš, Furuno Electric Co., Ltd., patvirtinu, kad pirmiau minėta radijo įrenginių tipas atitinka Direktyvą 2014/53/ES. Visas ES atitikties deklaracijos tekstas prieinamas šiuo interneto adresu:
Hungarian (HU)	Furuno Electric Co., Ltd. igazolja, hogy fent említett típusú rádióberendezés megfelel a 2014/53/EU irányelvnek. Az EU-megfelelőségi nyilatkozat teljes szövege elérhető a következő internetes címen:
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. It-test kollu tad-dikjarazzjoni ta' konformità tal-UE huwa disponibbli f'dan l-indirizz tal-Internet li ġej:
Dutch (NL)	Hierbij verklaar ik, Furuno Electric Co., Ltd., dat het hierboven genoemde type radioapparaat conform is met Richtlijn 2014/53/EU. De volledige tekst van de EU-conformiteitsverklaring kan worden geraadpleegd op het volgende internetadres:
Polish (PL)	Furuno Electric Co., Ltd. niniejszym oświadczam, że wyżej wymieniony typ urządzenia radiowego jest zgodny z dyrektywą 2014/53/UE. Pełny tekst deklaracji zgodności UE jest dostępny pod następującym adresem internetowym:
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. O texto integral da declaração de conformidade está disponível no seguinte endereço de Internet:
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. Textul integral al declarației UE de conformitate este disponibil la următoarea adresă internet:
Slovak (SK)	Furuno Electric Co., Ltd. týmto vyhlasuje, že vyššie spomínané rádiové zariadenie typu je v súlade so smernicou 2014/53/EÚ. Úplné EÚ vyhlásenie o zhode je k dispozícii na tejto internetovej adrese:
Slovenian (SL)	Furuno Electric Co., Ltd. potrjuje, da je zgoraj omenjeno tip radijske opreme skladen z Direktivo 2014/53/EU. Celotno besedilo izjave EU o skladnosti je na voljo na naslednjem spletnem naslovu:
Finnish (FI)	Furuno Electric Co., Ltd. vakuuttaa, että yllä mainittu radiolaitetyyppi on direktiivin 2014/53/EU mukainen. EU-vaatimustenmukaisuusvakuutuksen täysimittainen teksti on saatavilla seuraavassa internetosoitteessa:
Swedish (SV)	Härmed försäkrar Furuno Electric Co., Ltd. att ovan nämnda typ av radioutrustning överensstämmer med direktiv 2014/53/EU. Den fullständiga texten till EU-försäkran om överensstämmelse finns på följande webbadress:

Online Resource

http://www.furuno.com/en/support/red_doc