

FURUNO

AIS
Automatic Identification System



Model:
FA-170

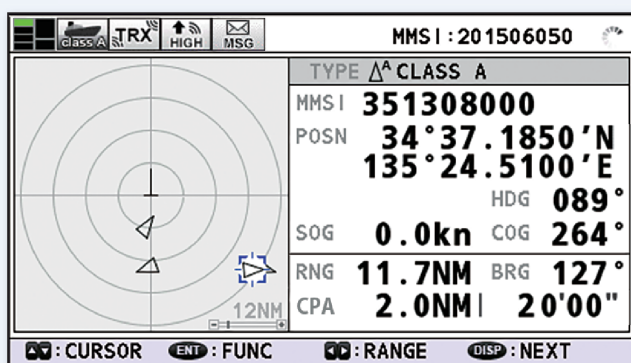
*The **FURUNO FA-170 AIS** presents data for collision avoidance with its easy-to-use interface*

AIS
Automatic Identification System



- ▶ Class A AIS transponder
- ▶ Clear 4.3" color display
- ▶ Displays information about the AIS-equipped ships, as well as, coastal stations and Aids to Navigations within VHF coverage
- ▶ Outputs AIS data to ECDIS, radar and other navigational equipment for collision avoidance support
- ▶ Sufficient output ports for dual configuration of ECDIS and radar system
- ▶ LAN interface available for efficient network integration into a bridge system
- ▶ BAM (Bridge Alert Management) ready
Meets the specific requirements for alerts and interconnection with Bridge Alert Management as specified in IMO MSC.302 (87).
- ▶ Optional pilot plug available
- ▶ Receives AIS-SART signals for assisting in streamlining SAR activities

Plotter display



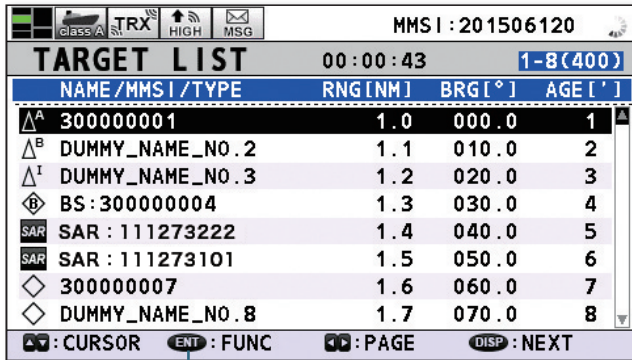
Displays symbols for AIS-equipped ships, base stations, AIS-SARTs, and so on. When you select a certain target, the information about the ship (MMSI (or name, when available), heading, SOG, COG, etc.) is displayed.

AIS symbols

	Own ship symbol		AIS base station		AIS-SART/MOB-AIS/EPIRB-AIS
	Target		Aid to Navigation (physical)		SAR aircraft
	Selected target		Aid to Navigation (virtual)		SAR vessel

Target list

The FA-170 can store up to 2048 AIS targets and AIS-SARTs.



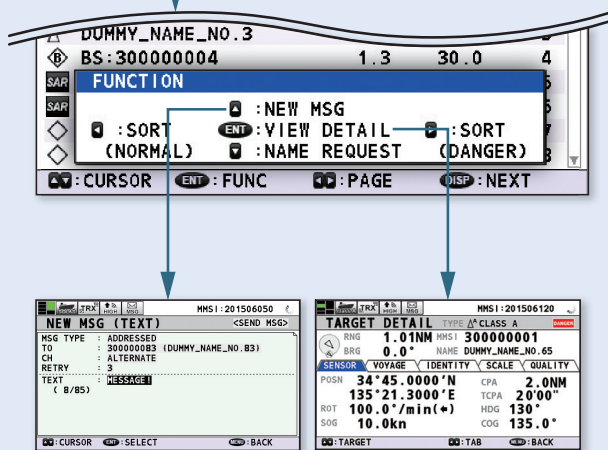
MMSI: 201506120

TARGET LIST				
NAME/MMSI/TYPE	RNG[NM]	BRG[°]	AGE[']	
300000001	1.0	000.0	1	
DUMMY_NAME_NO.2	1.1	010.0	2	
DUMMY_NAME_NO.3	1.2	020.0	3	
BS:300000004	1.3	030.0	4	
SAR:111273222	1.4	040.0	5	
SAR:111273101	1.5	050.0	6	
300000007	1.6	060.0	7	
DUMMY_NAME_NO.8	1.7	070.0	8	

Cursor: CURSOR Ent: FUNC Page: Disp: NEXT

Quick-access functions

When you select one target from the list and press [ENT] key, the pop-up window is generated.



Target Detail for DUMMY_NAME_NO.3 (BS:300000004):

NAME	RNG	BRG	AGE
DUMMY_NAME_NO.3	1.3	30.0	4

Function menu:

- :NEW MSG
- :VIEW DETAIL
- :NAME REQUEST
- :SORT (NORMAL)
- :SORT (DANGER)

Cursor: CURSOR Ent: FUNC Page: Disp: NEXT

New Message (TEXT) screen:

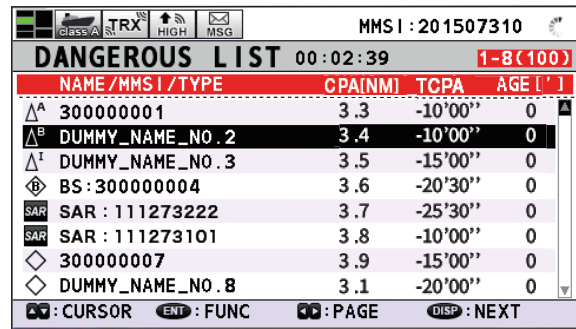
MSG TYPE: ADDRESSED
TO: 300000003 (DUMMY_NAME_NO.03)
CH: ALTERNATE
RETRY: 3
TEXT: (8/85)

Cursor: CURSOR Select: Back: BACK

The FA-170 displays the detailed information on the selected target. Also, you can create an AIS message or send a name request to the target ship.

Dangerous target list

The dangerous target list displays the name and particulars of targets classified as dangerous targets.



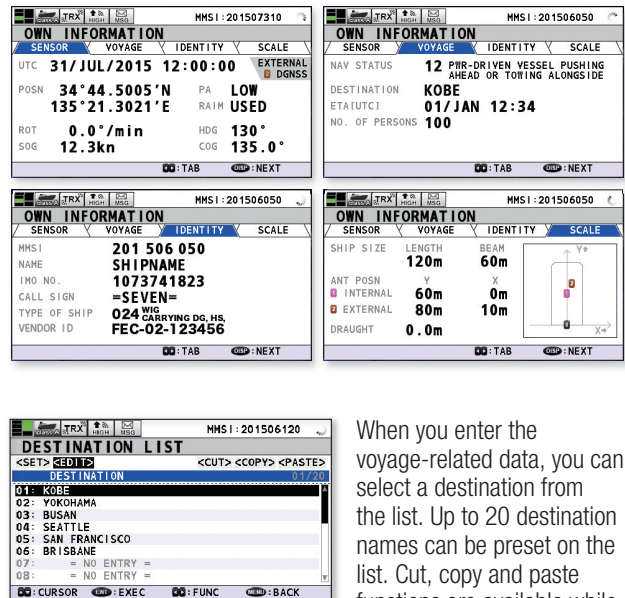
MMSI: 201507310

DANGEROUS LIST				
NAME/MMSI/TYPE	CPA[NM]	TCPA	AGE[']	
300000001	3.3	-10'00"	0	
DUMMY_NAME_NO.2	3.4	-10'00"	0	
DUMMY_NAME_NO.3	3.5	-15'00"	0	
BS:300000004	3.6	-20'30"	0	
SAR:111273222	3.7	-25'30"	0	
SAR:111273101	3.8	-10'00"	0	
300000007	3.9	-15'00"	0	
DUMMY_NAME_NO.8	3.1	-20'00"	0	

Cursor: CURSOR Ent: FUNC Page: Disp: NEXT

Own ship information

Displays own ship's position, heading, ROT, COG, SOG, destination, ship size, MMSI, name, and so on.



Own Ship Information (MMSI: 201507310):

SENSOR	VOYAGE	IDENTITY	SCALE
UTC	31/JUL/2015 12:00:00	EXTERNAL	DGNSS
POSN	34°44.5005'N	PA	LOW
	135°21.3021'E	RAIM	USED
ROT	0.0°/min	HDG	130°
SOG	12.3kn	COG	135.0°

Own Ship Information (MMSI: 201506050):

SENSOR	VOYAGE	IDENTITY	SCALE
NAV STATUS	12	PWR-DRIVEN VESSEL PUSHING AHEAD OR TOWING ALONGSIDE	
DESTINATION	KOBE		
ETA(UTC)	01/JAN 12:34		
NO. OF PERSONS	100		

Own Ship Information (MMSI: 201506050):

SHIP SIZE	LENGTH	BEAM
120m	60m	
ANT POSN	Y	X
INTERNAL	60m	0m
EXTERNAL	80m	10m
DRAUGHT	0.0m	

Destination List (MMSI: 201506120):

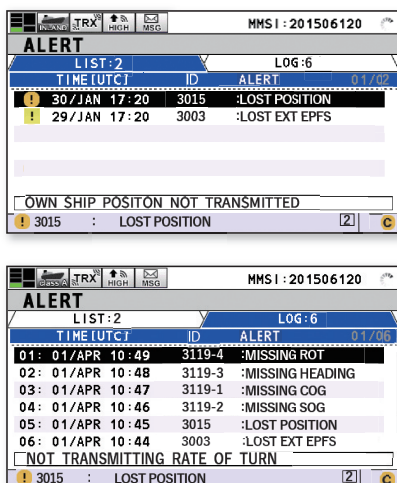
DESTINATION
01: KOBE
02: YOKOHAMA
03: BUSAN
04: SEATTLE
05: SAN FRANCISCO
06: BRISBANE
07: = NO ENTRY =
08: = NO ENTRY =

Cursor: CURSOR Exec: EXEC Func: Back: BACK

When you enter the voyage-related data, you can select a destination from the list. Up to 20 destination names can be preset on the list. Cut, copy and paste functions are available while editing the list.

Alert list

Displays all (current and past) alerts



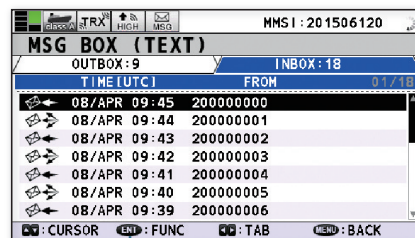
MMSI: 201506120

ALERT			
LIST:2	LOG:6		
TIME(UTC)	ID	ALERT	
30/JAN 17:20	3015	:LOST POSITION	
29/JAN 17:20	3003	:LOST EXT EPFS	

OWN SHIP POSITION NOT TRANSMITTED

3015 : LOST POSITION

Short safety-related messages

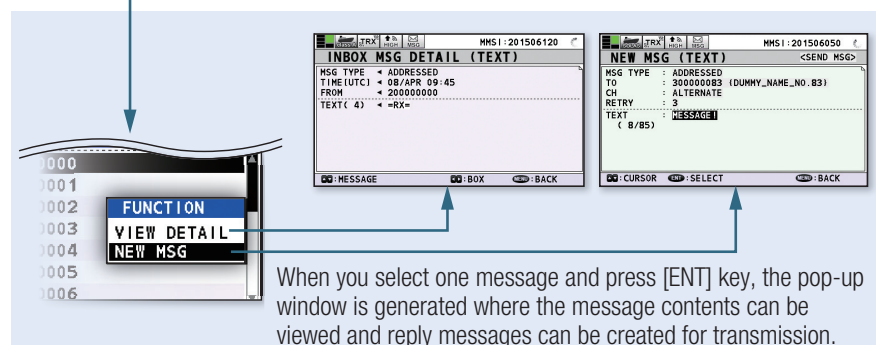


MMSI: 201506120

MSG BOX (TEXT)		
OUTBOX:9	INBOX:18	
TIME(UTC)	FROM	
08/APR 09:45	200000000	
08/APR 09:44	200000001	
08/APR 09:43	200000002	
08/APR 09:42	200000003	
08/APR 09:41	200000004	
08/APR 09:40	200000005	
08/APR 09:39	200000006	

Cursor: CURSOR Ent: FUNC Tab: Back: BACK

Short safety-related messages can be exchanged with a specified MMSI or all AIS-equipped ships via VHF channels. The FA-170 can store up to 20 transmitted messages and up to 20 addressed received messages and 20 broadcast received messages.



Message Detail (TEXT) (MMSI: 201506120):

MSG TYPE: ADDRESSED
TIME(UTC): 08/APR 09:45
FROM: 200000000
TEXT(4): -RX-

New Message (TEXT) (MMSI: 201506050):

MSG TYPE: ADDRESSED
TO: 300000003 (DUMMY_NAME_NO.03)
CH: ALTERNATE
RETRY: 3
TEXT: (8/85)

Cursor: CURSOR Select: Back: BACK

Function menu:

- :VIEW DETAIL
- :NEW MSG

When you select one message and press [ENT] key, the pop-up window is generated where the message contents can be viewed and reply messages can be created for transmission.

SPECIFICATIONS

GENERAL

Product Name	U-AIS TRANSPONDER
Reporting capacity	2250 reports per minute on 1 channel 4500 reports per minute on 2 channels
Standards	IMO MSC.74(69) ANNEX 3, IMO MSC.302(87), IMO A.694(17), IMO MSC.191(79), ITU-R M.1371-5, DSC ITU-R M.825-3, IEC61993-2 Ed. 3, IEC60945 Ed. 4 CORRIGENDUM 1, IEC 62288 Ed. 2, IEC 61162-1 Ed. 5, IEC 61162-2 Ed. 1, IEC61162-450 Ed. 2, IEC62923-1/-2 Ed. 1

TRANSPONDER UNIT

TX/RX frequency	156.025 to 162.025 MHz
Bandwidth	25 kHz
Output power	1 W or 12.5 W selectable
DSC receiver	156.525 MHz, CH70 fixed

INTERFACE

COM port	6 ports input/output, IEC61162-1 Ed. 5 / IEC61162-2 Ed. 1
SENSOR port	3 ports input only, IEC61162-1 Ed. 5
LAN	1 port, IEC61162-450 Ed. 2, 100 Base-TX, Auto MDI/MDIX
Alarm output	1 port, Relay contact (select from Normally closed (default) or Normally open), Alarm ACK

GPS RECEIVER

Receiving channels	12 channels parallel, 12 satellites tracking
RX frequency	1575.42 MHz
RX code	C/A code
Position accuracy	GPS: less than 13 m (2 drms, HDOP<4) DGPS: less than 5 m (2 drms, HDOP<4)

VHF ANTENNA

50 Ω Single dipole antenna

MONITOR UNIT

Screen size	4.3-inch color LCD, 480 x 272 dots (WQVGA)
Viewing area	95.04 (W) x 53.856 (H) mm
Brightness adjustment	18 steps

POWER SUPPLY

Transponder unit	12-24 VDC 6-3 A
Monitor unit	12 VDC 0.3 A max. (supplied by Transponder unit)
AC/DC Power Supply Unit PR-241 (option)	100-230 VAC, 1 φ, 50/60 Hz

ENVIRONMENT

Ambient Temperature	Transponder unit/Monitor unit/ Pilot plug unit/Power supply unit	-15 to +55°C
	GPS/VHF combined antenna/GPS antenna	-30 to +70°C
Relative humidity	93% or less at 40°C	
Degree of protection	Transponder unit	IP22 at bulkhead mount, IP20 at floor
	Monitor unit	IP22, IP35 with optional Waterproofing kit
	Pilot plug unit	front panel: IP22
	GPS/VHF combined antenna/GPS antenna	IP56
Vibration	IEC60945 Ed.4	

EQUIPMENT LIST

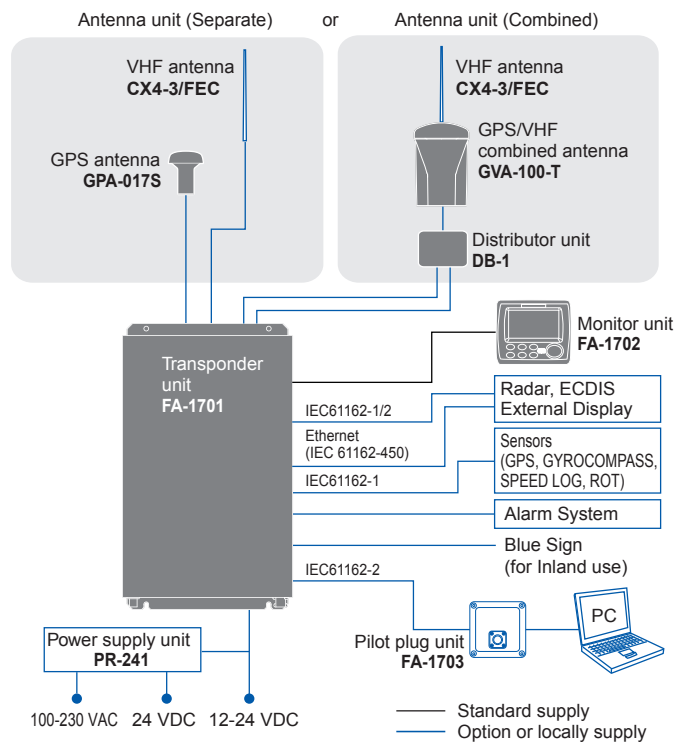
Standard

1	Transponder unit	FA-1701	1 unit
2	Monitor unit	FA-1702	1 unit
3	GPS/VHF combined antenna and Distributor unit	GVA-100-T and DB-1	1 set
4	GPS antenna	GPA-017S	1 unit

Option

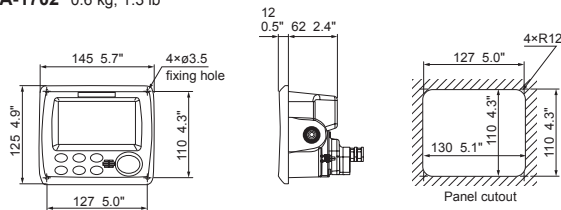
1	Antenna cable kit for GPS/VHF combined antenna or GPS antenna (30/40/50 m)	
2	Antenna base (for pipe mount/offset bracket/deck mount/handrail mount)	
3	VHF antenna	CX4-3/FEC
4	Power supply unit	PR-241
5	Pilot plug unit	FA-1703
6	AD converter	AD-100
7	Sub monitor unit	FA-1702
8	Flush mount kit for Monitor unit	OP24-35
9	Monitor flush mount kit for retrofitting from FA-150	OP05-140
10	Waterproofing kit for Monitor unit (IP35)	OP05-139

INTERCONNECTION DIAGRAM



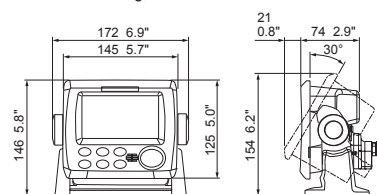
Monitor unit (flush mount)

FA-1702 0.6 kg, 1.3 lb



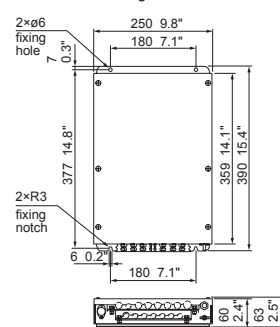
Monitor unit (hanger)

FA-1702 0.7 kg, 1.5 lb



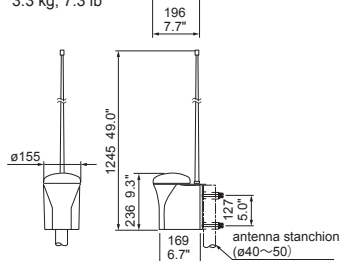
Transponder unit

FA-1701 3.0 kg, 6.6 lb



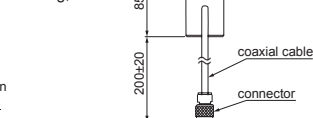
GPS/VHF combined antenna GVA-100-T

3.3 kg, 7.3 lb



GPS antenna GPA-017S

0.12 kg, 0.3 lb



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