

APPX. 2 LONGITUDE ERROR TABLE (96 NM SCALE)

(nm)

LAT \ q	50°	55°	60°	65°	70°	75°	80°	85°	90°
75°	1.2780	1.2192	1.1233	0.9933	0.8332	0.6479	0.4431	0.2249	0
70°	1.24442563	1.18701379	1.09356117	0.96694117	0.81103484	0.3061092	0.43117887	0.21881975	0
65°	1.20131324	1.14577786	1.05546143	0.93315023	0.78260251	0.60843159	0.41596331	0.21107193	0
60°	1.14905813	1.09582188	1.00932899	0.89225746	0.74821409	0.58162173	0.397582	0.20171772	0
55°	1.08805799	1.03752602	0.95551494	0.84457408	0.70813132	0.55038538	0.37617487	0.19082831	0
50°	1.0187708	0.97133397	0.89442885	0.79046297	0.66265924	0.51496026	0.35190481	0.17848659	0
45°	0.94174265	0.89774948	0.82653562	0.73033596	0.61214392	0.47561599	0.32495654	0.16478648	0
40°	0.85754099	0.81733258	0.75235195	0.66465066	0.55696981	0.43265198	0.29553516	0.14983224	0
35°	0.76681293	0.73069528	0.63744242	0.59390696	0.49755683	0.38639524	0.26386458	0.13373769	0
30°	0.67024897	0.63849695	0.58741521	0.51864327	0.43435714	0.33719779	0.23018583	0.11662531	0
25°	0.568584	0.54143927	0.49791741	0.43943239	0.36785173	0.28543407	0.19475522	0.09862535	0
20°	0.46259176	0.44026091	0.40463016	0.35687717	0.29854675	0.23149802	0.15784242	0.07987479	0
15°	0.35307892	0.3357319	0.30826343	0.2716059	0.22696965	0.17580013	0.11972833	0.06051633	0
10°	0.2487894	0.22864776	0.20955062	0.18426754	0.15366517	0.1187643	0.08070304	0.0406973	0
5°	0.12684572	0.11982348	0.10624302	0.09552679	0.0791912	0.04106355	0.04106355	0.02056855	0
0°	0.01184713	0.01008727	0.008104	0.00605903	0.00411455	0.00111154	0.00111154	0.00028325	0

APPX. 3 ALERT LIST

This radar provides aggregated header alerts for presentation of an aggregation on the AMS (Alert Management System). The following table shows the aggregate header alerts along with the corresponding ALF alert number.

Aggregated Alert Name	ALF No.*	Aggregated Alert Name	ALF No.*
TARGET CAPACITY	3042, ×	LOST SIGNAL	3015, ×
TARGET CAPACITY	3043, ×	LOST SIGNAL	3016, ×
NEW TARGET	3048, ×	WRONG SETTING	3019, ×
LOST TARGET	3052, ×	NETWORK OVERLOAD	52906, ×
LOST RADAR FUNC	3008, ×		

*: "×" indicates instance number.

The following table lists the possible alerts for this equipment. Each alert is listed with priority and category. This equipment can output alerts in ALF or ALR format. The alert number depends on the output format and may differ between formats.

Note: Highlighted alerts have no aggregated alert name.

ALF format alerts

Alert ID	Alert title	Alert Message	Priority & Category
3042, 1	TT TGT FULL(AUTO)	"CANCEL NON-DANGEROUS TT TARGETS MANUALLY"	Warning Cat: A
	Meaning: Automatically acquired target capacity has reached 100%. Remedy: Press the ALARM ACK key. Remove TT symbols manually.		
3042, 2	TT TGT FULL(MAN)	"CANCEL NON-DANGEROUS TT TARGETS MANUALLY"	Warning Cat: A
	Meaning: Manually acquired target capacity has reached 100%. Remedy: Press the ALARM ACK key. Remove TT symbols manually.		
3042, 3	AIS DISPLAY FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Warning Cat: A
	Meaning: AIS display capacity has reached 100% (350 targets). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of targets displayed.		
3042, 4	AIS CPTY FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Warning Cat: A
	Meaning: AIS capacity has reached 100% (1200 targets). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of targets displayed.		
3042, 5	ACTIVE AIS FULL	"SLEEP NON-DANGEROUS AIS TARGETS MANUALLY"	Warning Cat: A
	Meaning: Active AIS target capacity has reached 100% (50 targets). Remedy: Press the ALARM ACK key. Sleep all unnecessary AIS targets.		
3043, 1	TT TGT 95%(AUTO)	"SLEEP NON-DANGEROUS AIS TARGETS MANUALLY"	Caution Cat: B
	Meaning: Automatically acquired target capacity has reached 95%. Remedy: Press the ALARM ACK key. Remove TT symbols manually.		

Alert ID	Alert title	Alert Message	Priority & Category
3043, 2	TT TGT 95%(MAN)	"CANCEL NON-DANGEROUS TT TARGETS MANUALLY"	Caution Cat: B
	Meaning: Manually acquired target capacity has reached 95%. Remedy: Press the ALARM ACK key. Remove TT symbols manually.		
3043, 3	AIS DISPLAY 95%	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS display capacity has reached 95% (333 targets). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of targets displayed.		
3043, 4	AIS CAPACITY 95%	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS capacity has reached 95% (1140 targets). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of targets displayed.		
3043, 6	ACTIVE AIS 95%	"SLEEP NON-DANGEROUS AIS TARGETS MANUALLY"	Caution Cat: B
	Meaning: Active AIS target capacity has reached 95% (48 targets). Remedy: Press the ALARM ACK key. Sleep all unnecessary AIS targets.		
3043, 7	AIS DATAREP FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS data report capacity has reached 100% (50 objects). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of objects displayed.		
3043, 8	AIS SART FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS locating device capacity has reached 100% (20 objects). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of objects displayed.		
3043, 9	AIS SYN TGT FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS synthetic target capacity has reached 100% (50 objects). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of objects displayed.		
3044	CPA/TCPA	"TAKE EVASIVE ACTION IF NECESSARY"	Alarm Cat: A
	Meaning: Target is within CPA/TCPA threshold, danger of collision. Remedy: Press the ALARM ACK key. Take evasive action if necessary. Adjust CPA/TCPA settings.		
3048, 1	TT NEW TARGET	"CONFIRM TT NEW TARGETS"	Warning Cat: A
	Meaning: A new TT target has entered the Acquisition Zone. Remedy: Press the ALARM ACK key. Confirm location of new target.		
3048, 2	AIS NEW TARGET	"CONFIRM AIS NEW TARGETS"	Warning Cat: A
	Meaning: A new AIS object has entered the Acquisition Zone. Remedy: Press the ALARM ACK key. Confirm location of new object.		
3052, 1	TT TARGET LOST	"CHECK LOST TGT. ACQ TARGET IF NECESSARY"	Warning Cat: A
	Meaning: TT target is lost. Remedy: Press the ALARM ACK key. Lost target indication (blinking in red) is removed.		

Alert ID	Alert title	Alert Message	Priority & Category
3052, 2	REF TARGET LOST	"CHECK LOST TGT. ACQ TARGET IF NECESSARY"	Warning Cat: A
	Meaning: REF targets is lost. Remedy: Press the ALARM ACK key. If the target was used as a speed reference, acquire a new reference target.		
3052, 3	AIS TARGET LOST	"CONFIRM AIS LOST TARGETS"	Warning Cat: A
	Meaning: AIS object is lost. Remedy: Press the ALARM ACK key. Lost object indication (blinking in red) is removed.		
3052, 4	AIS ATON LOST	"CONFIRM AIS LOST ATONS"	Warning Cat: A
	Meaning: AIS AtoN data not input for a specified period. Remedy: Press the ALARM ACK key. Confirm that the object is lost, and acquire the object again, if necessary.		
3052, 5	AIS SART LOST	"CONFIRM AIS LOST LOCATING DEVICES"	Warning Cat: A
	Meaning: Data not input from AIS SART, AIS MOB, EPIRB-AIS for a specified period. Remedy: Press the ALARM ACK key. Confirm that the object is lost, and acquire the object again, if necessary.		
3003	AIS MSG SEND ERR	"UNABLE TO TRANSMIT AIS MESSAGE. CHECK AIS"	Caution Cat: B
	Meaning: Unable to transmit AIS message. Remedy: Press the ALARM ACK key. Check power and connection to AIS unit.		
3008, 1	LOST ISW FUNC	"USE RADAR AS STANDALONE"	Warning Cat: B
	Meaning: Interswitch function had to be stopped. (Only displayed when Interswitch is active.) Remedy: Press the ALARM ACK key. Use the radar as a standalone.		
3008, 2	LOST WAVE FUNC	"CHECK CONNECTION WITH WAVE ANALYSIS PC"	Warning Cat: B
	Meaning: Wave analysis function has a problem. Remedy: Press the ALARM ACK key. Check connection with wave analysis PC, or disable WAVE mode.		
3015, 1	LOST HEAD-LINE	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Heading marker signal interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
3015, 2	LOST AZI-MUTH SIG	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Antenna azimuth signal is interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
3015, 3	LOST TRIGGER SIG	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Antenna trigger interrupted/lost Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
3015, 4	LOST VIDEO SIG	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Video signal interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		

Alert ID	Alert title	Alert Message	Priority & Category
3015, 5	LOST CTRL UNIT	"CHECK CONNECTION WITH CONTROL UNIT"	Warning Cat: B
		Meaning: Control Unit (RCU-014/015/016) signal interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.	
3015, 6	LOST TUNE IND	"INITIALIZE TUNING AGAIN"	Warning Cat: B
		Meaning: TUNE error due to faulty settings or malfunction. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.	
3015, 7	LOST RADAR ANT	"CHECK CONNECTION WITH RADAR ANTENNA"	Warning Cat: B
		Meaning: Signal between processor and antenna interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.	
3015, 8	LOST MTR-DRV	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
		Meaning: Signal between antenna's SPU and MTR-DRV interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.	
3015, 9	LOST RF-CONV*1	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
		Meaning: Signal between antenna's SPU and RF-CONVERTER interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.	
3015, 10	LOST RP BOARD*5	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
		Meaning: Signal between MAIN board and RP board in the processor is interrupted or lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.	
3015, 11	LOST TUNE GATE*2	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
		Meaning: No tune gate signal from the FAR-2x58 antenna. Remedy: Press the ALARM ACK key. Consult your local dealer for service.	
3015, 12	LOST TX-HV VOLT*2	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
		Meaning: The antenna voltage is below 300 V (For FAR-2x58/2x68DS). Remedy: Press the ALARM ACK key. Turn the PSU-019 power on. If the problem persists, consult your local dealer for service.	
3015, 20	LOST GYRO SIGNAL	"CHECK HEADING SENSOR OR SENTENCE MONITOR"	Warning Cat: B
		Meaning: No heading information received from gyrocompass for five seconds. Remedy: Press the ALARM ACK key. Restore the signal to remove this indication.	
3015, 21	LOST LOG(WT) SIG	"CHECK SPEED SENSOR OR SENTENCE MONITOR"	Warning Cat: B
		Meaning: No speed through water data received for thirty seconds when [LOG(WT)] is set as speed reference. Remedy: Press the ALARM ACK key. Use a different sensor if necessary.	
3015, 22	LOST LOG(BT) SIG	"CHECK SPEED SENSOR OR SENTENCE MONITOR"	Warning Cat: B
		Meaning: No speed over ground data received for thirty seconds when [LOG(BT)] is set as speed reference. Remedy: Press the ALARM ACK key. Use a different sensor if necessary.	

Alert ID	Alert title	Alert Message	Priority & Category
3015, 23	LOST POSITION	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: EPFS Error. No position data received from EPFS device for thirty seconds. Remedy: Press the ALARM ACK key. Restore the signal. This indication cannot be erased if the position signal is missing. The indication is automatically removed when the signal is restored.		
3015, 24	LOST DATUM	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: DTM sentence not received for thirty seconds, or erroneous data received. Remedy: Press the ALARM ACK key. Use the WGS-84 datum.		
3015, 25	LOST UTC SIGNAL	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: UTC error. No date or time data received for thirty seconds. No ZDA sentence input. Remedy: Press the ALARM ACK key. Restore the signal to remove this indication.		
3015, 26	LOST AIS COM	"CHECK AIS OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No AIS data received for thirty seconds. Remedy: Press the ALARM ACK key. Check power and connection to AIS unit.		
3015, 27	LOST COG/ SOG SIG	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No COG/SOG data received from EPFS device for thirty seconds when [EPFS] is set as speed reference. Remedy: Press the ALARM ACK key. Restore the signal. This indication cannot be erased if the COG/SOG signal is missing. The indication is automatically removed when the signal is restored.		
3015, 28	LOST ECDIS COM	"CHECK ECDIS OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No ECDIS data received for thirty seconds when [ECDIS] is set as speed reference. Remedy: Press the ALARM ACK key. Check power and connection to ECDIS unit.		
3016, 13	LOST PM BOARD	"EXECUTE THE DIAGNOSTIC TEST"	Caution Cat: B
	Meaning: Signal between antenna's SPU and PM interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
3016, 21	LOST LOG(WT) SIG	"CHECK SPEED SENSOR OR SENTENCE MONITOR"	Caution Cat: B
	Meaning: No speed through water data received for thirty seconds when [LOG(WT)] is NOT set as speed reference. Remedy: Press the ALARM ACK key. Use a different sensor if necessary.		
3016, 22	LOST LOG(BT) SIG	"CHECK SPEED SENSOR OR SENTENCE MONITOR"	Caution Cat: B
	Meaning: No speed over ground data received for thirty seconds when [LOG(BT)] is set as speed reference. Remedy: Press the ALARM ACK key. Use a different sensor if necessary.		
3016, 26	LOST AIS COM	"CHECK AIS OR SENTENCE MONITOR"	Caution Cat: B
	Meaning: No AIS data received for thirty seconds when AIS function is OFF. Remedy: Press the ALARM ACK key. Check power and connection to AIS unit.		

Alert ID	Alert title	Alert Message	Priority & Category
3016, 27	LOST COG/ SOG SIG	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Caution Cat: B
	Meaning: No COG/SOG data received from EPFS device for thirty seconds when [EPFS] NOT is set as speed reference. Remedy: Press the ALARM ACK key. Restore the signal. This indication cannot be erased if the COG/SOG signal is missing. The indication is automatically removed when the signal is restored.		
3019, 1	WRONG IP ADDR	"CHECK IP SETTINGS AND ASSIGN A UNIQUE IP"	Caution Cat: B
	Meaning: LAN1 IP address is in use by other equipment. Remedy: Press the ALARM ACK key. Check the IP settings and assign a unique IP address.		
3019, 2	WRONG IP (LAN2)	"CHECK IP SETTINGS AND ASSIGN A UNIQUE IP"	Caution Cat: B
	Meaning: LAN2 IP address is in use by other equipment. Remedy: Press the ALARM ACK key. Check the IP settings and assign a unique IP address.		
3019, 3	RP VER MIS- MATCH* ⁵	"CONSULT YOUR LOCAL DEALER FOR SW UPDATE"	Caution Cat: B
	Meaning: MAIN board and RP board software versions do not match. Remedy: Press the ALARM ACK key. Consult you local dealer for a software update.		
3019, 4	WRONG POSN INT	"CHECK THE OUTPUT SETTINGS FOR EPFS DEVICE"	Caution Cat: B
	Meaning: Position signal interval cycle has exceeded 10 seconds for a period. Remedy: Press the ALARM ACK key. Check the output settings for the connected EPFS device. Adjust output interval (cycle) as required.		
3032	ANCHOR WATCH	"CONFIRM OWN SHIP LOCATION"	Warning Cat: B
	Meaning: Ship position outside set anchor watch zone. Remedy: Press the ALARM ACK key. Confirm Own Ship location and adjust as necessary.		
52795	SELECT SART MODE* ³	"SART SIGNAL DETECTED. SELECT SART MODE"	Warning Cat: A
	Meaning: A SART signal was detected. Remedy: Press the ALARM ACK key. Show the SART marks on the radar display ([7 SART] set to [ON]).		
52782	ARRIVED AT WPT* ⁴	"SET NEXT WPT, IF NECESSARY"	Warning Cat: B
	Meaning: Ship has entered the destination arrival alert zone. Remedy: Press the ALARM ACK key. Set next waypoint, if necessary.		
52785	XTD LIM EX- CEEDED* ⁴	"CHECK COURSE AND ADJUST AS NECESSARY"	Warning Cat: B
	Meaning: Cross-track error, ship is off-course. Remedy: Press the ALARM ACK key. Check course and adjust as necessary.		
52792	CHART MEM- ORY ERR* ⁵	"CHECK PROCESSOR UNIT"	Warning Cat: B
	Meaning: An error has occurred while loading chart data. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.		

Alert ID	Alert title	Alert Message	Priority & Category
52906, 1	NETWORK OVERLOAD	"CHECK OTHER DEVICES IN THE NETWORK"	Caution Cat: B
	Meaning: A network communication overload is detected on the LAN1 port. If the network load increases after the alert is generated, this equipment automatically shuts down the network communication on the LAN1 port. Remedy: Press the ALARM ACK key. Check other devices in the network connected to LAN1 port.		
52906, 2	NETWORK OVERLOAD	"CHECK OTHER DEVICES IN THE NETWORK"	Caution Cat: B
	Meaning: A network communication overload is detected on the LAN2 port. If the network load increases after the alert is generated, this equipment automatically shuts down the network communication on the LAN2 port. Remedy: Press the ALARM ACK key. Check other devices in the network connected to LAN2 port.		

- *1. This alert appears only for solid state radars.
- *2. This alert appears only for FAR-2x58/2x68DS.
- *3. This alert appears only for X-band solid state radars. Keep in mind the following points:
 - This alert can occur when this equipment receives interference simultaneously from multiple radars.
 - This alert may not occur under the bad weather conditions such as at rain.
- *4. This alert is output only on B/W-type radars.
- *5. This alert is output only on A/B/W-types with radar plotter functionality.

ALF format indications

The following indications are shown by this equipment when ALF format is in use. The indications have no category, are not subject to responsibility transfer and are not output as ALF sentences.

Note: Indications also appear in the ALERT BOX on the screen and on the ALERT LIST.

ID	Title	Message
52001, 4	RPU:HIGH TEMP	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Temperature in the RPU is above the recommended limit. Remedy: Press the ALARM ACK key. Lower the temperature.	
52001, 11	MD TYPE MISMATCH	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Unable to detect the MD board bandwidth. Remedy: Press the ALARM ACK key. Check connections to the antenna.	
52001, 12	PM TYPE MISMATCH	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The PM board type mismatch. Remedy: Press the ALARM ACK key. Have a qualified technician check the PM board.	

ID	Title	Message
52001, 21	MTR-DRV:HIGH TEMP	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board temperature is above the recommended limit. Remedy: Press the ALARM ACK key. Lower the temperature.	
52001, 22	MTR-DRV:OVER CURRENT	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board power input from the motor is outside recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the motor.	
52001, 23	MTR-DRV:MTR PWR ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board motor's voltage is outside recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the motor.	
52001, 24	MTR-DRV:P12V ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Voltage in the +12V line of the MTR-DRV motor is outside recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the power supply.	
52001, 25	MTR-DRV:HALL SENSOR ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Error in the hall sensor signal detected by the MTR-DRV board. Remedy: Press the ALARM ACK key. Have a qualified technician check the hall sensor.	
52001, 26	MTR-DRV:ANT LOCK	"CHECK THE SCANNER FOR OBSTRUCTIONS. IF THERE ARE NONE, SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Antenna lock detected by the MTR-DRV board. Remedy: Press the ALARM ACK key. Unlock the antenna.	
52001, 27	MTR-DRV:PWR SUPPLY ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board detected an drop in power. Remedy: Press the ALARM ACK key. Have a qualified technician check the power supply.	
52001, 28	MTR-DRV:BRAKE-R ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board detected an error in the brake resistance. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna brake.	
52001, 29	MTR-DRV:OVERLOAD	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board detected an overload. Remedy: Press the ALARM ACK key. Have a qualified technician check the motor.	

ID	Title	Message
52001, 31	PM:P12V ERROR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Voltage in the +12V line of the PM board is outside recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the power supply.	
52001, 32	PM:PLL UNLOCK	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: PM board's PLL is unlocked. Remedy: Press the ALARM ACK key. Have a qualified technician check the PM board.	
52001, 41	RFC:P6V ERROR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Voltage in the +6V line of the RF-Converter is outside rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the power.	
52001, 42	RFC:P48V ERROR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Voltage in the +48V line of the RF-Converter is outside rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the power.	
52001, 43	RFC:IF PLL UNLOCK	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: PLL lock on the IF side of the RF-Converter is unlocked. Remedy: Press the ALARM ACK key. Have a qualified technician check the RF-Converter.	
52001, 44	RFC:PLL UNLOCK	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: PLL lock on the RF side of the RF-Converter is unlocked. Remedy: Press the ALARM ACK key. Have a qualified technician check the RF-Converter.	
52001, 45	RFC:OUTPUT SIG LVL ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Signal output from the RF-Converter is outside the recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the RF-Converter.	
52001, 46	RFC:INPUT SIG LVL ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Signal input from the RF-Converter is outside the recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the RF-Converter.	
52001, 47	HPA:OUTPUT SIG LVL ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Signal output from the HPA board is outside the recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the HPA board.	

ID	Title	Message
52001, 48	HPA:OUTPUT PK CRR ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Peak current detected in the signal output from the HPA board. Remedy: Press the ALARM ACK key. Have a qualified technician check the HPA board.	
52001, 51	HPA:HIGH TEMP	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Excessively high temperature detected on the HPA board. Remedy: Press the ALARM ACK key. Have a qualified technician check the HPA board.	
52001, 52	VSWR ERROR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Abnormal VSWR detected by the RF Converter. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna.	
52001, 53	RFC:TYPE MISMATCH*7	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The RF-CONVERTER and HPA board of the antenna do not match. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna.	
52001, 61	MAG HEATER CURRENT ERR*6	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The heater current of the magnetron is outside rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the SPU board.	
52002, 1	RPU:FAN1 NO ROTATE	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The FAN1 in the processor unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
52002, 2	RPU:FAN2 NO ROTATE	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The FAN2 in the processor unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
52002, 3	RPU:FAN3 NO ROTATE	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The FAN3 in the processor unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
52002, 4	RPU:FAN(RP) NO ROTATE*1	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The RPU fan on the RP board in the processor unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	

ID	Title	Message
52002, 5	RPU:RP HW ERROR ^{*1, *3}	"IN SAFE WATERS, REBOOT THE SYSTEM. IF THE ERROR OCCURS FREQUENTLY, SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The RP board has stopped working. Charts and marks cannot be displayed. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
52002, 6	RSB FAN1 NO ROTATE ^{*4}	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Fan1 in the antenna unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna unit.	
52002, 7	RSB FAN2 NO ROTATE ^{*5}	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Fan2 in the antenna unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna unit.	
52002, 10	SPU:HIGH TEMP ^{*7}	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: SPU board temperature is above the recommended limit. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna unit.	
52601, 10	LOST WAVE UNIT ^{*1}	"CHECK CONNECTION WITH WAVE ANALYSIS PC, OR DISABLE WAVE MODE".
	Meaning: Wave data not received from wave analysis PC, when WAVE mode is enabled. Remedy: Press the ALARM ACK key. Check connection with wave analysis PC, or disable WAVE mode.	
52602, 1	POSN SOURCE CHG	"POSITION SOURCE USING IN SYSTEM CHANGES TO OTHER SOURCE."
	Meaning: Positioning sensor input lost, automatically changed sensors. Remedy: Press the ALARM ACK key. The indication is automatically removed when the signal is restored or a different sensor is selected.	
52602, 2	SPD SOURCE CHG	"SPEED SOURCE USING IN SYSTEM CHANGES TO OTHER SOURCE."
	Meaning: Speed sensor input lost, automatically changed sensors. Remedy: Press the ALARM ACK key. The indication is automatically removed when the signal is restored or a different sensor is selected.	
52602, 3	HDG SOURCE CHG	"HEADING SOURCE USING IN SYSTEM CHANGES TO OTHER SOURCE."
	Meaning: Heading sensor input lost, automatically changed sensors. Remedy: Press the ALARM ACK key. The indication is automatically removed when the signal is restored or a different sensor is selected.	
52740, 1	ISW: NO SIGNAL	"SELECTED RADAR HAS PROBLEM. USE RADAR AS STANDALONE."
	Meaning: Selected radar has an error. (Only displayed when Interswitch is active.) Remedy: Press the ALARM ACK key. Use radar as standalone or restore the external radar to normal operating condition.	

ID	Title	Message
52740, 2	ISW: NO RADAR	"COMMUNICATION WITH SELECTED RADAR HAS INTERRUPTED/LOST. USE RADAR AS STANDALONE."
	Meaning: Communication with selected radar interrupted or lost. (Only displayed when Interswitch is active.) Remedy: Press the ALARM ACK key. Use radar as standalone or check connection and power to the external radar.	
52740, 3	ISW: STBY* ²	"SELECTED RADAR ENTERED STANDBY MODE. SET SELECTED RADAR TO TX MODE."
	Meaning: Selected radar entered standby mode. Remedy: Press the ALARM ACK key. Check transmission status of the selected radar.	
52740, 4	ISW: NO SENSOR* ²	"SELECTED RADAR HAS PROBLEM. USE RADAR AS STANDALONE."
	Meaning: No heading data was received from the selected radar for more than five seconds. Remedy: Press the ALARM ACK key. Check heading data input status for the selected radar.	
52793, 1	LOST WV UTC SIG	"CHECK THAT DATA INPUT TO WAVE ANALYZER IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in time/date input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
52793, 2	LOST WV COG/SOG	"CHECK THAT DATA INPUT TO WAVE ANALYZER IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in speed data input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
52793, 3	LOST WV WIND SIG	"CHECK THAT DATA INPUT TO WAVE ANALYZER IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in speed data input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
52793, 4	LOST WV RADAR ANT	"CHECK THE CONNECTION WITH SELECTED RADAR IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in speed data input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
52793, 5	LOST WV GYRO SIG	"CHECK THAT DATA INPUT TO WAVE ANALYZER IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in speed data input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
52796, 1	LAN1 LOCKDOWN	"CHECK OTHER DEVICES IN THE NETWORK"
	Meaning: The network communication on the LAN1 port is shut down because the network communication overload is not rectified. Remedy: Isolate the network communication on the LAN1 port manually or turn the system off.	

ID	Title	Message
52796, 2	LAN2 LOCKDOWN	"CHECK OTHER DEVICES IN THE NETWORK"
	Meaning: The network communication on the LAN2 port is shut down because the network communication overload is not rectified. Remedy: Isolate the network communication on the LAN2 port manually or turn the system off.	

- *1. This indication is output only on A/B/W-types with radar plotter functionality.
- *2. This indication appears only on A/B-type radars when Dual Radar mode is active and enabled.
- *3. When this indication is rectified, the [Chart] button appears in yellow color. Click the [Chart] button to restore the system to normal operation.
- *4. This indication appears only for FAR-2xx8, FAR-2xx8W, FAR-2xx8-NXT, and FAR-2028-NXT-MARK-2.
- *5. This indication appears only for FAR-2xx8, FAR-2xx8W, FAR-2xx8S, FAR-2xx8SW, FAR-2xx8-NXT, and FAR-2028-NXT-MARK-2.
- *6. This indication appears only for FAR-2018/2028-MARK-2.
- *7. This indication appears only for FAR-2028-NXT-MARK-2.

ALR format alerts

The Alert "CPA/TCPA" cannot be acknowledged from external equipment and must be acknowledged from the radar itself.

ALR Alert ID	Alert title	Alert description	Priority & Category
523	TT TGT FULL(AUTO)	"CANCEL NON-DANGEROUS TT TARGETS MANUALLY"	Warning Cat: A
	Meaning: Automatically acquired target capacity has reached 100%. Remedy: Press the ALARM ACK key. Remove TT symbols manually.		
525	TT TGT FULL(MAN)	"CANCEL NON-DANGEROUS TT TARGETS MANUALLY"	Warning Cat: A
	Meaning: Manually acquired target capacity has reached 100%. Remedy: Press the ALARM ACK key. Remove TT symbols manually.		
531	AIS DISPLAY FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Warning Cat: A
	Meaning: AIS display capacity has reached 100% (350 targets). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of targets displayed.		
533	AIS CPTY FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Warning Cat: A
	Meaning: AIS capacity has reached 100% (1200 targets). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of targets displayed.		
535	ACTIVE AIS FULL	"SLEEP NON-DANGEROUS AIS TARGETS MANUALLY"	Warning Cat: A
	Meaning: Active AIS target capacity has reached 100% (50 targets). Remedy: Press the ALARM ACK key. Sleep all unnecessary AIS targets.		

ALR Alert ID	Alert title	Alert description	Priority & Category
522	TT TGT 95%(AUTO)	"CANCEL NON-DANGEROUS TT TARGETS MANUALLY"	Caution Cat: B
	Meaning: Automatically acquired target capacity has reached 95%. Remedy: Press the ALARM ACK key. Remove TT symbols manually.		
524	TT TGT 95% (MAN)	"CANCEL NON-DANGEROUS TT TARGETS MANUALLY"	Caution Cat: B
	Meaning: Manually acquired target capacity has reached 95%. Remedy: Press the ALARM ACK key. Remove TT symbols manually.		
530	AIS DISPLAY 95%	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS display capacity has reached 95% (333 targets). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of targets displayed.		
532	AIS CAPACITY 95%	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS capacity has reached 95% (1140 targets). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of targets displayed.		
534	ACTIVE AIS 95%	"SLEEP NON-DANGEROUS AIS TARGETS MANUALLY"	Caution Cat: B
	Meaning: Active AIS target capacity has reached 95% (48 targets). Remedy: Press the ALARM ACK key. Sleep all unnecessary AIS targets.		
800	AIS DATAREP FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS data report capacity has reached 100% (50 objects). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of objects displayed.		
801	AIS SART FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS locating device capacity has reached 100% (20 objects). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of objects displayed.		
802	AIS SYN TGT FULL	"ADJUST [AIS DISP FILTER] SETTINGS"	Caution Cat: B
	Meaning: AIS synthetic target capacity has reached 100% (50 objects). Remedy: Press the ALARM ACK key. Adjust [AIS DISP FILTER] settings to decrease the number of objects displayed.		
516	CPA/TCPA	"TAKE EVASIVE ACTION IF NECESSARY"	Alarm Cat: A
	Meaning: Target is within CPA/TCPA threshold, danger of collision. Remedy: Press the ALARM ACK key. Take evasive action if necessary. Adjust CPA/TCPA settings.		
521	TT NEW TARGET	"CONFIRM TT NEW TARGETS"	Warning Cat: A
	Meaning: A new TT target has entered the Acquisition Zone. Remedy: Press the ALARM ACK key. Confirm location of new target.		
529	AIS NEW TARGET	"CONFIRM AIS NEW TARGETS"	Warning Cat: A
	Meaning: A new AIS object has entered the Acquisition Zone. Remedy: Press the ALARM ACK key. Confirm location of new object.		

ALR Alert ID	Alert title	Alert description	Priority & Category
527	TT TARGET LOST	"CHECK LOST TGT. ACQ TARGET IF NECESSARY"	Warning Cat: A
	Meaning: TT target is lost. Remedy: Press the ALARM ACK key. Lost target indication (blinking in red) is removed.		
528	REF TARGET LOST	"CHECK LOST TGT. ACQ TARGET IF NECESSARY"	Warning Cat: A
	Meaning: REF targets is lost. Remedy: Press the ALARM ACK key. If the target was used as a speed reference, acquire a new reference target.		
537	AIS TARGET LOST	"CONFIRM AIS LOST TARGETS"	Warning Cat: A
	Meaning: AIS object is lost. Remedy: Press the ALARM ACK key. Lost object indication (blinking in red) is removed.		
804	AIS ATON LOST	"CONFIRM AIS LOST ATONS"	Warning Cat: A
	Meaning: Data not input from AIS AtoN for a specified period. Remedy: Press the ALARM ACK key. Confirm that the object is lost, and acquire the object again, if necessary.		
805	AIS SART LOST	"CONFIRM AIS LOST LOCATING DEVICES"	Warning Cat: A
	Meaning: Data not input from AIS SART, AIS MOB, EPIRB-AIS for a specified period. Remedy: Press the ALARM ACK key. Confirm that the object is lost, and acquire the object again, if necessary.		
541	AIS MSG SEND ERR	"UNABLE TO TRANSMIT AIS MESSAGE. CHECK AIS"	Caution Cat: B
	Meaning: Unable to transmit AIS message. Remedy: Press the ALARM ACK key. Check power and connection to AIS unit.		
740	LOST ISW FUNC	"USE RADAR AS STANDALONE"	Warning Cat: B
	Meaning: Interswitch function had to be stopped. (Only displayed when Interswitch is active.) Remedy: Press the ALARM ACK key. Use the radar as a standalone.		
793	LOST WAVE FUNC	"CHECK CONNECTION WITH WAVE ANALYSIS PC"	Warning Cat: B
	Meaning: Wave analysis function has a problem. Remedy: Press the ALARM ACK key. Check connection with wave analysis PC, or disable WAVE mode.		
720	LOST HEADLINE	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Heading marker signal interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
721	LOST AZIMUTH SIG	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Antenna azimuth signal is interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
722	LOST TRIGGER SIG	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Antenna trigger interrupted/lost Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		

ALR Alert ID	Alert title	Alert description	Priority & Category
723	LOST VIDEO SIG	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Video signal interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
70	LOST CTRL UNIT	"CHECK CONNECTION WITH CONTROL UNIT"	Warning Cat: B
	Meaning: Control Unit (RCU-014/015/016) signal interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
48	LOST TUNE IND	"INITIALIZE TUNING AGAIN"	Warning Cat: B
	Meaning: TUNE error due to faulty settings or malfunction. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
727	LOST RADAR ANT	"CHECK CONNECTION WITH RADAR ANTENNA"	Warning Cat: B
	Meaning: Signal between processor and antenna interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
781	LOST MTR-DRV	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Signal between antenna's SPU and MTR-DRV interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
783	LOST RF-CONV*1	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Signal between antenna's SPU and RF-CONVERTER interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
786	LOST RP BOARD*5	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: Signal between MAIN board and RP board in the processor is interrupted or lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
787	LOST TUNE GATE*2	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: No tune gate signal from the FAR-2x58 antenna. Remedy: Press the ALARM ACK key. Consult your local dealer for service.		
789	LOST TX-HV VOLT*2	"EXECUTE THE DIAGNOSTIC TEST"	Warning Cat: B
	Meaning: The antenna voltage is below 300 V (For FAR-2x58/2x68DS). Remedy: Press the ALARM ACK key. Turn the PSU-019 power on. If the problem persists, consult your local dealer for service.		
450	LOST GYRO SIGNAL	"CHECK HEADING SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No heading information received from gyrocompass for five seconds. Remedy: Press the ALARM ACK key. Restore the signal to remove this indication.		
278	LOST LOG(WT) SIG*4	"CHECK SPEED SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No speed through water data received for thirty seconds when [LOG(WT)] is set as speed reference. Remedy: Press the ALARM ACK key. Use a different sensor if necessary.		
284	LOST LOG(BT) SIG*5	"CHECK SPEED SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No speed over ground data received for thirty seconds when [LOG(BT)] is set as speed reference. Remedy: Press the ALARM ACK key. Use a different sensor if necessary.		

ALR Alert ID	Alert title	Alert description	Priority & Category
170	LOST POSITION	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: EPFS Error. No position data received from EPFS device for thirty seconds. Remedy: Press the ALARM ACK key. Restore the signal. This indication cannot be erased if the position signal is missing. The indication is automatically removed when the signal is restored.		
469	LOST DATUM	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: DTM sentence not received for thirty seconds, or erroneous data received. Remedy: Press the ALARM ACK key. Use the WGS-84 datum.		
272	LOST UTC SIGNAL	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: UTC error. No date or time data received for thirty seconds. No ZDA sentence input. Remedy: Press the ALARM ACK key. Restore the signal to remove this indication.		
380	LOST AIS COM	"CHECK AIS OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No AIS data received for thirty seconds. Remedy: Press the ALARM ACK key. Check power and connection to AIS unit.		
279	LOST COG/SOG SIG	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No COG/SOG data received from EPFS device for thirty seconds when [EPFS] is set as speed reference. Remedy: Press the ALARM ACK key. Restore the signal. This indication cannot be erased if the COG/SOG signal is missing. The indication is automatically removed when the signal is restored.		
50	LOST ECDIS COM	"CHECK ECDIS OR SENTENCE MONITOR"	Warning Cat: B
	Meaning: No ECDIS data received for thirty seconds when [ECDIS] is set as speed reference. Remedy: Press the ALARM ACK key. Check power and connection to ECDIS unit.		
782	LOST PM BOARD	"EXECUTE THE DIAGNOSTIC TEST"	Caution Cat: B
	Meaning: Signal between antenna's SPU and PM interrupted/lost. Remedy: Press the ALARM ACK key. Restore signal or rectify reason for signal loss.		
278	LOST LOG(WT) SIG* ⁴	"CHECK SPEED SENSOR OR SENTENCE MONITOR"	Caution Cat: B
	Meaning: No speed through water data received for thirty seconds when [LOG(WT)] is NOT set as speed reference. Remedy: Press the ALARM ACK key. Use a different sensor if necessary.		
284	LOST LOG(BT) SIG* ⁵	"CHECK SPEED SENSOR OR SENTENCE MONITOR"	Caution Cat: B
	Meaning: No speed over ground data received for thirty seconds when [LOG(BT)] is set as speed reference. Remedy: Press the ALARM ACK key. Use a different sensor if necessary.		
380	LOST AIS COM	"CHECK AIS OR SENTENCE MONITOR"	Caution Cat: B
	Meaning: No AIS data received for thirty seconds when AIS function is OFF. Remedy: Press the ALARM ACK key. Check power and connection to AIS unit.		

ALR Alert ID	Alert title	Alert description	Priority & Category
279	LOST COG/SOG SIG	"CHECK POSITION SENSOR OR SENTENCE MONITOR"	Caution Cat: B
	Meaning: No COG/SOG data received from EPFS device for thirty seconds when [EPFS] NOT is set as speed reference. Remedy: Press the ALARM ACK key. Restore the signal. This indication cannot be erased if the COG/SOG signal is missing. The indication is automatically removed when the signal is restored.		
784	WRONG IP ADDR	"CHECK IP SETTINGS AND ASSIGN A UNIQUE IP"	Caution Cat: B
	Meaning: LAN1 IP address is in use by other equipment. Remedy: Press the ALARM ACK key. Check the IP settings and assign a unique IP address.		
785	WRONG IP (LAN2)	"CHECK IP SETTINGS AND ASSIGN A UNIQUE IP"	Caution Cat: B
	Meaning: LAN2 IP address is in use by other equipment. Remedy: Press the ALARM ACK key. Check the IP settings and assign a unique IP address.		
788	RP VER MISMATCH* ⁵	"CONSULT YOUR LOCAL DEALER FOR SW UPDATE"	Caution Cat: B
	Meaning: MAIN board and RP board software versions do not match. Remedy: Press the ALARM ACK key. Consult you local dealer for a software update.		
729	WRONG POSN INT	"CHECK THE OUTPUT SETTINGS FOR EPFS DEVICE"	Caution Cat: B
	Meaning: Position signal interval cycle has exceeded 10 seconds for a period. Remedy: Press the ALARM ACK key. Check the output settings for the connected EPFS device. Adjust output interval (cycle) as required.		
495	ANCHOR WATCH	"CONFIRM OWN SHIP LOCATION"	Warning Cat: B
	Meaning: Ship position outside set anchor watch zone. Remedy: Press the ALARM ACK key. Confirm Own Ship location and adjust as necessary.		
755	SELECT SART MODE* ³	"SART SIGNAL DETECTED. SELECT SART MODE"	Warning Cat: A
	Meaning: A SART signal was detected. Remedy: Press the ALARM ACK key. Show the SART marks on the radar display ([7 SART] set to [ON]).		
790	ARRIVED AT WPT* ⁴	"SET NEXT WPT, IF NECESSARY"	Warning Cat: B
	Meaning: Ship has entered the destination arrival alert zone. Remedy: Press the ALARM ACK key. Set next waypoint, if necessary.		
791	XTD LIM EXCEED-ED* ⁴	"CHECK COURSE AND ADJUST AS NECESSARY"	Warning Cat: B
	Meaning: Cross-track error, ship is off-course. Remedy: Press the ALARM ACK key. Check course and adjust as necessary.		
792	CHART MEMORY ERR* ⁵	"CHECK PROCESSOR UNIT"	Warning Cat: B
	Meaning: An error has occurred while loading chart data. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.		

*1. This alert appears only for solid state radars.

- *2. This alert appears only for FAR-2x58/2x68DS.
- *3. This alert appears only for X-band solid state radars. Keep in mind the following points:
 - This alert can occur when this equipment receives interference simultaneously from multiple radars.
 - This alert may not occur under the bad weather conditions such as at rain.
- *4. This alert is output only on B/W-type radars.
- *5. This alert is output only on A/B/W-types with radar plotter functionality.

ALR format indications

The following indications are shown by this equipment when ALR format is in use. The indications have no category, and are not output as ALR sentences.

Note: Indications also appear in the ALERT BOX on the screen and on the ALERT LIST.

ID	Title	Message
075	RPU:HIGH TEMP	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Temperature in the RPU is above the recommended limit. Remedy: Press the ALARM ACK key. Lower the temperature.	
770-1	MD TYPE MISMATCH	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Unable to detect the MD board bandwidth. Remedy: Press the ALARM ACK key. Check connections to the antenna.	
772-1	PM TYPE MISMATCH	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The PM board type mismatch. Remedy: Press the ALARM ACK key. Have a qualified technician check the PM board.	
771-1	MTR-DRV:HIGH TEMP	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board temperature is above the recommended limit. Remedy: Press the ALARM ACK key. Lower the temperature.	
771-2	MTR-DRV:OVER CURRENT	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board power input from the motor is outside recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the motor.	
771-3	MTR-DRV:MTR PWR ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: MTR-DRV board motor's voltage is outside recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the motor.	
771-4	MTR-DRV:P12V ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Voltage in the +12V line of the MTR-DRV motor is outside recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the power supply.	

ID	Title	Message
771-5	MTR-DRV:HALL SENSOR ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: Error in the hall sensor signal detected by the MTR-DRV board. Remedy: Press the ALARM ACK key. Have a qualified technician check the hall sensor.
771-6	MTR-DRV:ANT LOCK	"CHECK THE SCANNER FOR OBSTRUCTIONS. IF THERE ARE NONE, SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: Antenna lock detected by the MTR-DRV board. Remedy: Press the ALARM ACK key. Unlock the antenna.
771-7	MTR-DRV:PWR SUPPLY ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: MTR-DRV board detected a drop in power. Remedy: Press the ALARM ACK key. Have a qualified technician check the power supply.
771-8	MTR-DRV:BRAKE-ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: MTR-DRV board detected an error in the brake resistance. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna brake.
771-9	MTR-DRV:OVERLOAD	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: MTR-DRV board detected an overload. Remedy: Press the ALARM ACK key. Have a qualified technician check the motor.
772-2	PM:P12V ERROR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: Voltage in the +12V line of the PM board is outside recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the power supply.
772-3	PM:PLL UNLOCK	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: PM board's PLL is unlocked. Remedy: Press the ALARM ACK key. Have a qualified technician check the PM board.
773-1	RFC:P6V ERROR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: Voltage in the +6V line of the RF-Converter is outside rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the power.
773-2	RFC:P48V ERROR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
		Meaning: Voltage in the +48V line of the RF-Converter is outside rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the power.

ID	Title	Message
773-3	RFC:IF PLL UNLOCK	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: PLL lock on the IF side of the RF-Converter is unlocked. Remedy: Press the ALARM ACK key. Have a qualified technician check the RF-Converter.	
773-4	RFC:PLL UNLOCK	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: PLL lock on the RF side of the RF-Converter is unlocked. Remedy: Press the ALARM ACK key. Have a qualified technician check the RF-Converter.	
773-5	RFC:OUTPUT SIG LVL ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Signal output from the RF-Converter is outside the recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the RF-Converter.	
773-6	RFC:INPUT SIG LVL ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Signal input from the RF-Converter is outside the recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the RF-Converter.	
773-7	RFC:TYPE MIS-MATCH* ⁷	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The RF-CONVERTER and HPA board of the antenna do not match. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna.	
775-1	HPA:OUTPUT SIG LVL ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Signal output from the HPA board is outside the recommended rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the HPA board.	
775-2	HPA:OUTPUT PK CRR ERR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Peak current detected in the signal output from the HPA board. Remedy: Press the ALARM ACK key. Have a qualified technician check the HPA board.	
775-3	HPA:HIGH TEMP	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Excessively high temperature detected on the HPA board. Remedy: Press the ALARM ACK key. Have a qualified technician check the HPA board.	
775-4	VSWR ERROR	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Abnormal VSWR detected by the RF Converter. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna.	

ID	Title	Message
776-1	MAG HEATER CURRENT ERR ^{*6}	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The heater current of the magnetron is outside rating. Remedy: Press the ALARM ACK key. Have a qualified technician check the SPU board.	
083	RPU:FAN1 NO ROTATE	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The FAN1 in the processor unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
084	RPU:FAN2 NO ROTATE	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The FAN2 in the processor unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
085	RPU:FAN3 NO ROTATE	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The FAN3 in the processor unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
082	RPU:FAN(RP) NO ROTATE ^{*1}	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The RPU fan on the RP board in the processor unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
087	RPU:RP HW ERROR ^{*1, *3}	"IN SAFE WATERS, REBOOT THE SYSTEM. IF THE ERROR OCCURS FREQUENTLY, SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: The RP board has stopped working. Charts and marks cannot be displayed. Remedy: Press the ALARM ACK key. Have a qualified technician check the processor unit.	
088	RSB FAN1 NO ROTATE ^{*4}	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Fan1 in the antenna unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna unit.	
089	RSB FAN2 NO ROTATE ^{*5}	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: Fan2 in the antenna unit is stopped or disconnected. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna unit.	
092	SPU:HIGH TEMP ^{*7}	"CONDUCT A DIAGNOSTIC TEST WHILE THE ERROR IS PRESENT. SUPPLY THE TEST RESULTS TO YOUR LOCAL DEALER."
	Meaning: SPU board temperature is above the recommended limit. Remedy: Press the ALARM ACK key. Have a qualified technician check the antenna unit.	

ID	Title	Message
798	LOST WAVE UNIT ^{*1}	"CHECK CONNECTION WITH WAVE ANALYSIS PC, OR DISABLE WAVE MODE."
	Meaning: Wave data not received from wave analysis PC, when WAVE mode is enabled. Remedy: Press the ALARM ACK key. Check connection with wave analysis PC, or disable WAVE mode.	
472	POSN SOURCE CHG	"POSITION SOURCE USING IN SYSTEM CHANGES TO OTHER SOURCE."
	Meaning: Positioning sensor input lost, automatically changed sensors. Remedy: Press the ALARM ACK key. The indication is automatically removed when the signal is restored or a different sensor is selected.	
474	SPD SOURCE CHG	"SPEED SOURCE USING IN SYSTEM CHANGES TO OTHER SOURCE."
	Meaning: Speed sensor input lost, automatically changed sensors. Remedy: Press the ALARM ACK key. The indication is automatically removed when the signal is restored or a different sensor is selected.	
473	HDG SOURCE CHG	"HEADING SOURCE USING IN SYSTEM CHANGES TO OTHER SOURCE."
	Meaning: Heading sensor input lost, automatically changed sensors. Remedy: Press the ALARM ACK key. The indication is automatically removed when the signal is restored or a different sensor is selected.	
741	ISW: NO SIGNAL	"SELECTED RADAR HAS PROBLEM. USE RADAR AS STANDALONE."
	Meaning: Selected radar has an error. (Only displayed when Interswitch is active.) Remedy: Press the ALARM ACK key. Use radar as standalone or restore the external radar to normal operating condition.	
742	ISW: NO RADAR	"COMMUNICATION WITH SELECTED RADAR HAS INTERRUPTED/LOST. USE RADAR AS STANDALONE."
	Meaning: Communication with selected radar interrupted or lost. (Only displayed when Interswitch is active.) Remedy: Press the ALARM ACK key. Use radar as standalone or check connection and power to the external radar.	
743	ISW: STBY ^{*2}	"SELECTED RADAR ENTERED STANDBY MODE. SET SELECTED RADAR TO TX MODE."
	Meaning: Selected radar entered standby mode. Remedy: Press the ALARM ACK key. Check transmission status of the selected radar.	
744	ISW: NO SENSOR ^{*2}	"SELECTED RADAR HAS PROBLEM. USE RADAR AS STANDALONE."
	Meaning: No heading data was received from the selected radar for more than five seconds. Remedy: Press the ALARM ACK key. Check heading data input status for the selected radar.	
793-1	LOST WV UTC SIG	"CHECK THAT DATA INPUT TO WAVE ANALYZER IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in time/date input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
793-2	LOST WV COG/SOG	"CHECK THAT DATA INPUT TO WAVE ANALYZER IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in speed data input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	

ID	Title	Message
793-3	LOST WV WIND SIG	"CHECK THAT DATA INPUT TO WAVE ANALYZER IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in speed data input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
793-4	LOST WV RADAR ANT	"CHECK THE CONNECTION WITH SELECTED RADAR IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in speed data input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
793-5	LOST WV GYRO SIG	"CHECK THAT DATA INPUT TO WAVE ANALYZER IS CORRECT, OR DISABLE WAVE MODE."
	Meaning: With the wave radar active ([4 WAVE DATA] set to [ON]), the wave analysis PC has an error in speed data input. Remedy: Press the ALARM ACK key. Check that data input to Wave Analyzer is correct, or disable WAVE mode.	
796, 1	LAN1 LOCKDOWN	"CHECK OTHER DEVICES IN THE NETWORK"
	Meaning: The network communication on the LAN1 port is shut down because the network communication overload is not rectified. Remedy: Isolate the network communication on the LAN1 port manually or turn the system off.	
796, 2	LAN2 LOCKDOWN	"CHECK OTHER DEVICES IN THE NETWORK"
	Meaning: The network communication on the LAN2 port is shut down because the network communication overload is not rectified. Remedy: Isolate the network communication on the LAN2 port manually or turn the system off.	

- *1: This indication is output only on A/B/W-types with radar plotter functionality.
- *2: This indication appears only on A/B-type radars when Dual Radar mode is active and enabled.
- *3: When this indication is rectified, the [Chart] button appears in yellow color. Click the [Chart] button to restore the system to normal operation.
- *4: This indication appears only for FAR-2xx8, FAR-2xx8W, FAR-2xx8-NXT, and FAR-2028-NXT-MARK-2.
- *5: This indication appears only for FAR-2xx8, FAR-2xx8W, FAR-2xx8S, FAR-2xx8SW, FAR-2xx8-NXT, and FAR-2028-NXT-MARK-2.
- *6: This indication appears only for FAR-2018/2028-MARK-2.
- *7: This indication appears only for FAR-2028-NXT-MARK-2.

APPX. 4 DATA COLOR AND MEANING

Validity and integrity of input data (mode indicator)

Data color	HDG	L/L	SPD	COG/SOG
Normal color (normal data)	THS-A, E HDT	GNS-A, D * ¹ , F, P, R and (NAV status: S, V) GGA-1, 2 * ¹ , 3, 4, 5 GLL-A, D and (status: A) RMC-A, D, F, P, R and (status: A) and (NAV status: S, V)	VBW-A VHW	VTG-A, D, P RMC-A, D, F, P, R and (status: A) and (NAV status: S, V).
Red color (invalid data)		GNS-E, M, S GGA-6, 7, 8 GLL-E, M, S and (status: A) RMC-E, M, S and (Status: A)		VTG-E, M, S RMC-E, M, S, and (sta- tus: A)
Yellow color (low integrity)		GNS-A, D * ¹ , F, P, R, and (NAV status: C, U) RMC-A, D, F, P, R and (status: A) and (NAV status: C, U)		RMC-A, D, F, P, R and (status: A) and (NAV status: C, U)
***.*	THS-M, V, S	GNS-N GGA-0 RMC-N, (status: V), (NAV status: N) GLL-N, (status: V)	VBW-V	VTG-N RMC-N (sta- tus: V)

*¹: "Age of differential GPS data" in GGA and GNS sentences is ten seconds or higher. In this case, ship's latitude and longitude are displayed in yellow.

APPX. 5 ABBREVIATIONS

A:

Abbreviation	Word	Abbreviation	Word
ACE	Automatic Clutter Elimination	ACK	Acknowledge
ACQ	Acquire	Act	Activate
AID	Aid	AIS	Automatic Identification System
ALF	ALF sentence	ALR	Alarm
AMB	Amber	AMS	Alert Management System
ANT	Antenna	AP	Autopilot
APR	April	ARC	Arc
ATON	Aids to Navigation	AUG	August
AUTO	Automatic	AUTH	Authentication
A/C RAIN	Anti Clutter Rain	A/C SEA	Anti Clutter Sea

B:

Abbreviation	Word	Abbreviation	Word
BCR	Bow Crossing Range	BCT	Bow Crossing Time
BLU	Blue	BRG	Bearing
BRILL	Brilliance	BT	Bottom Tracking

C:

Abbreviation	Word	Abbreviation	Word
CALC	Calculated	CALIB	Calibrate
CCRP	Consistent Common Reference Point	CERT	Certificate
CHG	Change	CH	Channel
COG	Course Over Ground	CONT	Continue
CORR	Corrected/Correction	CPA	Closest Point of Approach
CPU	Central Processing Unit	CRS	Course
CTW	Course Through the Water	CU	Course Up
CYA	Cyan		

D:

Abbreviation	Word	Abbreviation	Word
DATAREP	Data Report	DEC	December
deg	degree(s)	DEST	Destination
DGPS	Differential GPS	DISP	Display
DIST	Distance	DOS	Denial of Service
DR	Dead Reckoning	DTE	Data Terminal Equipment
DTM	Datum		

E:

Abbreviation	Word	Abbreviation	Word
E	East	EAV	Echo Averaging
EBL	Electronic Bearing Line	EBRL	Electronic Bearing Range Line
ECDIS	Electronic Chart Display and Information System	EP	Estimated Position
EQUIP	Equipment	ERR	Error
ES	Echo Stretch	ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure	EXT	External

F:

Abbreviation	Word	Abbreviation	Word
FEB	February	FILT	Filter/Filtered
FUNC	Function		

G:

Abbreviation	Word	Abbreviation	Word
GAP	Gap	GC	Great Circle
GND	Ground	GMDSS	Global Maritime Distress and Safety System
GPS	Global Positioning System	GRAD	Gradation
GRN	Green	GRY	Gray
GT	Gross Tonnage		

H:

Abbreviation	Word	Abbreviation	Word
HD	Heading	HDG	Heading
HL	Heading Line	HSC	High Speed Craft

I:

Abbreviation	Word	Abbreviation	Word
IBS	Integrated Bridge System	ID	Identification
IMO	International Maritime Organization	INT	Interval
INS	Integrated Navigation System	INFO	Information
IR	Interference Rejection	IP ADDRESS	Internet Protocol Address

J:

Abbreviation	Word	Abbreviation	Word
JAN	January	JUN	June
JUL	July		

APPX. 5 ABBREVIATIONS

L:

Abbreviation	Word	Abbreviation	Word
L	Long pulse	LAT	Latitude
LAN	Local Area Network	LCD	Liquid Crystal Display
LIM	Limit	L/L	Latitude/Longitude
LOG	Log	LON	Longitude
LOP	Line Of Position		

M:

Abbreviation	Word	Abbreviation	Word
MAG	Magnetic	MAG	Magenta
MAN	Manual	MAR	March
MAX	Maximum	MAY	May
MBS	Main Bang Suppression	M-CYA	Multi Cyan
MD	Modulator	MENU	Menu
MFDF	Medium Frequency Direction Finder	MIC	Monolithic Integrated Circuit
M-GRN	Multi Green	M1	Medium pulse 1
MID	Middle	M3	Medium pulse 3
M2	Medium pulse 2	MON	Monday
MOB	Man Over Board	MSC	Maritime Safety Committee
Msgs	Messages	MTR-DRV	Motor Drive

N:

Abbreviation	Word	Abbreviation	Word
N	North	NAV	Navigation
NLT	Not Less Than	NMT	Not More Than
NOV	November	NR	Noise Rejector

O:

Abbreviation	Word	Abbreviation	Word
OS	Own Ship	OCT	October

P:

Abbreviation	Word	Abbreviation	Word
PAST POSN	Past Positions	PC	Personal Computer
PI	Parallel Index Line	PLT	Palette
PLL	Phase Locked loop	PM	Performance Monitor
PNK	Pink	POSN	Position
PPI	Plan Position Indicator		

Q:

Abbreviation	Word
QLTY	Quality

R:

Abbreviation	Word	Abbreviation	Word
RACON	Radar beacon	RAD	Radius
RAM	Random Access Memory	RAIM	Receiver Autonomous Integrity Monitoring
RAIN	Anti Clutter Rain	RD	Read
RED	Red	REF	Reference/Echo Reference
R, REL	Relative	REJ	Rejection
RENC	Regional ENC Co-ordinating Centre	RFC board	RF Control board
RL	Rhumb Line	RM	Relative Motion
RNG	Range	ROM	Read Only Memory
ROT	Rate Of Turn	RTE	Route
RTGT	Reference Target	RX	Receive

S:

Abbreviation	Word	Abbreviation	Word
S	South	S1	Short pulse1
S2	Short pulse2	S57	IHO Special Publication 57
SAR	Search and Rescue	SART	Search and Rescue Transponder
SD	Secure Digital	SEA	Anti Clutter Sea
SEL	Select	SENC	System ENC
SEP	September	SIG WAVE	Significant Wave
SIO	Serial Input Output	SOG	Speed Over Ground
SOLAS	Safety of Life at Sea	SPD	Speed
SPU	Signal Processing Unit board	STAB	Stabilized
STBD	Starboard	STBY	Standby
STC	Sensitivity time control	Std	Standard
STW	Speed Through Water	SW	Switch
SYM	Symbol	SYN TGT	Synthetic Target
Symb	Symbol(s)		

T:

Abbreviation	Word	Abbreviation	Word
T	True	TAG	Tag
TCPA	Time to CPA	TGT	Target
TM	True Motion	TPL	Transferred Line Of Position
True-G	True ground stabilized	True-S	True sea stabilized
TT	Target Tracking/Tracked Target	TTG	Time To Go
TX	Transmit		

U:

Abbreviation	Word	Abbreviation	Word
UNCAL	Uncalibrated	UTC	Coordinated Universal Time

V:

Abbreviation	Word	Abbreviation	Word
VECT	Vector	VRM	Variable Range Marker

W:

Abbreviation	Word	Abbreviation	Word
W	West	WAT	Water
WGS	World Geodetic System	WHT	White
W/O	Without	WOP	Wheel Over Point
WP	Waypoint	WPT	Waypoint
WR	Write	WT	Water Tracking
WTC	Water Tracking Current		

X:

Abbreviation	Word
XTE	Cross Track Error

Y:

Abbreviation	Word
YEL	Yellow

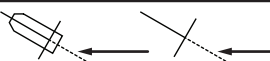
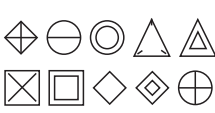
Units of measurement

Unit abbreviation	Meaning	Unit abbreviation	Meaning
deg	Degree(s)	ft	Foot/feet
H	Hour(s)	km	Kilometer(s)
KM	Kilometer(s)	kn	Knot(s)
KYD	Kiloyard(s)	min	Minute(s)
m	Meter(s)	MHz	Megahertz
NM	Nautical miles	sec	Second(s)
SM	Statute mile(s)	°	Degree(s)

APPX. 6 SYMBOLS

The pages following list the symbols which can be displayed on your radar.

General radar symbols

<u>Symbol/Icon</u>	<u>Name/Meaning</u>
 (on power switch)	Power Symbol
	Own Ship Marker. Appears at the CCRP location as either a scaled symbol (left figure) or minimized symbol (right figure).
	Own Ship Marker. (Shown for B/W-types with Radar Plotter functionality only).
	Antenna mark. Indicates the location of your antenna and appears only when ship symbol is scaled.
	Heading line. Appears at the CCRP location and indicates your current heading.
	Stern line. Appears at the CCRP location and indicates your current stern direction.
	Fixed Range Rings. Appear with the CCRP location as the center and allow you to estimate range.
VRM 1  VRM 2	Variable Range Markers. Appear with the CCRP as the center* ¹ and allow for range measurement. The dashed line length for each VRM is different.
EBL2  EBL1 EBRL markers (range)	Electronic Bearing Lines. Indicate bearing. Shown as a dashed line with different line length from the heading line and each other. The small line that intersects the EBL is the EBRL, used for measuring range.
	North mark. Indicates the NORTH direction. Appears a thin dotted line at the edge of the operational display area.
	Cursor. Indicates the cursor location.
	Barge Icon. Indicates the barge location.
	Drop Mark. Appears at the location a drop mark is entered. Range and bearing from OS to the drop mark appear on-screen.
 Numbered 	<u>Origin Marks</u> Used to mark any prominent target or a point of particular interest. When entered, the distance and bearing from the cursor position to the mark appear at the bottom of the screen.
	MOB (Man Over Board) Mark
	<u>Waypoint Mark</u> Used to indicate a start point, turn point or destination point.
	<u>Chart status (A/B/W-types with Radar Plotter functionality only)</u> Left: Chart scale displayed correctly; Center: Chart scale displayed incorrectly; Right: There is no chart file.

Radar map symbols (B/W radar types)

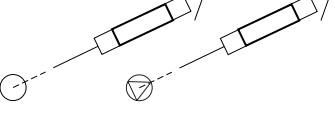
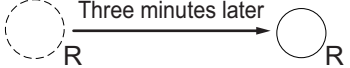
For B/W-types, the color of some symbols can be changed (see section 5.4.2).

<u>Symbol</u>	<u>Name</u>
	Mark
	Danger Highlight
	Buoy
	Buoy
	Buoy
	Buoy
	Buoy
	Danger Highlight
	Mark
	Mark
	Mark
	Mark
	Mark
	Mark
	Mark
	Nav Line (map)
	Coastline
	Contour
	Prohibited Area
 (cable)	Danger Highlight
 (w/line)	Buoy
 (w/line)	Mark
 (w/line)	Mark
 (w/line)	Mark

Radar map symbols (IMO/A/R radar types)

<u>Symbol</u>	<u>Name</u>	<u>Symbol</u>	<u>Name</u>
 Red	Buoy	 Orange	Mark
 Green	Buoy	 Orange	Mark
 Red	Buoy	 Orange	Mark
 Green	Buoy	 Magenta	Navline (map)
 Red	Buoy	 White	Coastline
 Green	Buoy	 Gray	Contour Line
 Red	Buoy	 Magenta	Danger Highlight
 Green	Buoy	 Magenta (cable)	Danger Highlight
 Magenta	Danger Highlight	 Orange	Mark
 Magenta	Danger Highlight	 Orange	Mark

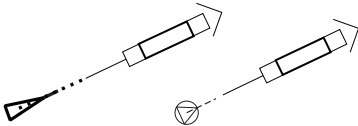
TT symbols

TT symbols	
Symbol	
	Manually acquired target. Appears as a dashed circle at initial acquisition, changes to solid circle when tracking is stable.
	Automatically acquired target. Appears as a dashed red circle at initial acquisition, changes to solid circle when tracking is stable.
	Vector on acquired target (approx. 1 minute after acquisition)
	Stable tracking on acquired target (approx. 3 minute after acquisition)
	Dangerous target. Symbol flashes in red color to indicate that this target may be on a collision course with your vessel.
	Associated TT target. Appears when the target is associated and TT is given priority.
	Associated dangerous TT target. Appears in red color when the target is associated, TT is given priority and the target may be on a collision course with your vessel.
	Lost TT target. Indicates that this target is lost and is no longer being tracked. Appears as a flashing symbol with a red colored "X".
	Approaching and collision areas (predicted area of dangers) for the TT target. Indicates the risk of collision with own ship.
	Acquisition zone target. Appears when a target is acquired by the acquisition zone. Target symbol flashes in red color.
	Selected target. Indicates that the target is selected for data display (range, bearing, speed, etc.).
	Reference target. Indicates that this target is selected as a reference point for speed calculations.
T	Trial maneuver indication (IMO-types only)
S	TT simulation mode indication

Note: For B/W-types, In addition to the "standard" circle TT symbol, you may select from the symbols shown below. You can also change the symbol's attributes (name, color, etc). See section 3.9.3.



AIS symbols

<u>Symbol</u>	<u>Name</u>
	Activated AIS target. Appears a thick-lined symbol. Color is selectable from the menu.
	Activated AIS target with vector. Indicates the target's ROT (Rate Of Turn). Vector appears when the target's ROT is higher than the menu setting.
	Dangerous AIS target. Flashing red symbol indicates that the target matches then CPA/TCPA criteria. Symbol stops flashing after the alert is acknowledged.
	Lost AIS target. Indicates that this target is lost and is no longer being tracked. Appears as a flashing symbol with a red colored "X" until the alert is acknowledged.
	Sleeping AIS target. Color is selectable from the menu.
 sleeping  active	Denote sleeping/active AIS symbol without HDG and COG.
	AIS target selected for data display. Location of data display in the information box is indicated below the target as "A", "B" or "C".
	Associated AIS target. Appears when the target is associated and AIS is given priority.
	Dangerous associated AIS target. Appears in red color when the target is associated, AIS is given priority and the target may be on a collision course with your vessel.
	Active AIS target with scaled ship symbol. Indicates the target vessel's dimensions (length, width, antenna location) and changes on-screen size according to display range.
	Approaching and collision areas (predicted area of dangers) for the AIS target. Indicates the risk of collision with own ship.
	AIS SART
	AIS SART (TEST)
	AIS Base station
	SAR Aircraft - Fix wing Note: AIS aircraft are not regarded as a collision hazard. CPA and TCPA for AIS aircraft appears as "***".
	SAR Aircraft - Helicopter Note: AIS aircraft are not regarded as a collision hazard. CPA and TCPA for AIS aircraft appears as "***".
	Synthetic Target Denote VTS generated/synthetic target.

<u>Symbol</u>	<u>Name</u>
	Synthetic Target - Distress Denote synthetic target in vessel distress situations.
	Non HDG/COG synthetic target Denote VTS generated.synthetic target without HDG and COG.
	AIS Search and Rescue (SAR) Vessel
  <u>AIS target</u> <u>AIS AtoN physical</u>  <u>AIS base station</u>	With unread/viewing AIS message symbol Denote AIS symbol with unread or viewing AIS message.

AIS AtoN symbols

Note: Synthetic AtoN is described as basic shape.

AIS Physical AtoN Symbol	AIS Virtual AtoN Symbol	Meaning
		Basic shape
		RACON
		Emergency wreck mark
		North cardinal mark
		East cardinal mark
		South cardinal mark
		West cardinal mark
		Port hand mark
		Starboard hand mark
		Isolated danger
		Safe water

AIS Physical AtoN Symbol	AIS Virtual AtoN Symbol	Meaning
		Special mark
	-	Off position ^{*2} (Displayed with yellow line and yellow text)
	-	Light off or at reduced range (Displayed with yellow text)
	-	RACON error (Displayed with yellow text)
	-	Light error or combination of light error/off with RACON error (Displayed with yellow text)
	-	Missing ^{*1} (Displayed with yellow line and yellow text)
		Mobile AtoN, basic shape
		Self-propelled, but direction not reported or unavailable mobile AtoN
		Tethered from a watercraft (e.g. cable, pipe, net)
		Mobile AtoN with COG information. Arrow mark points in course direction of COG within $\pm 22.5^\circ$ sectors.

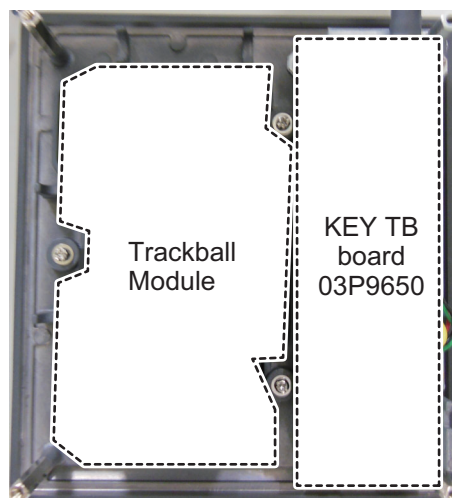
*1. "Unlit", "Racon err" and "Error" may be included.

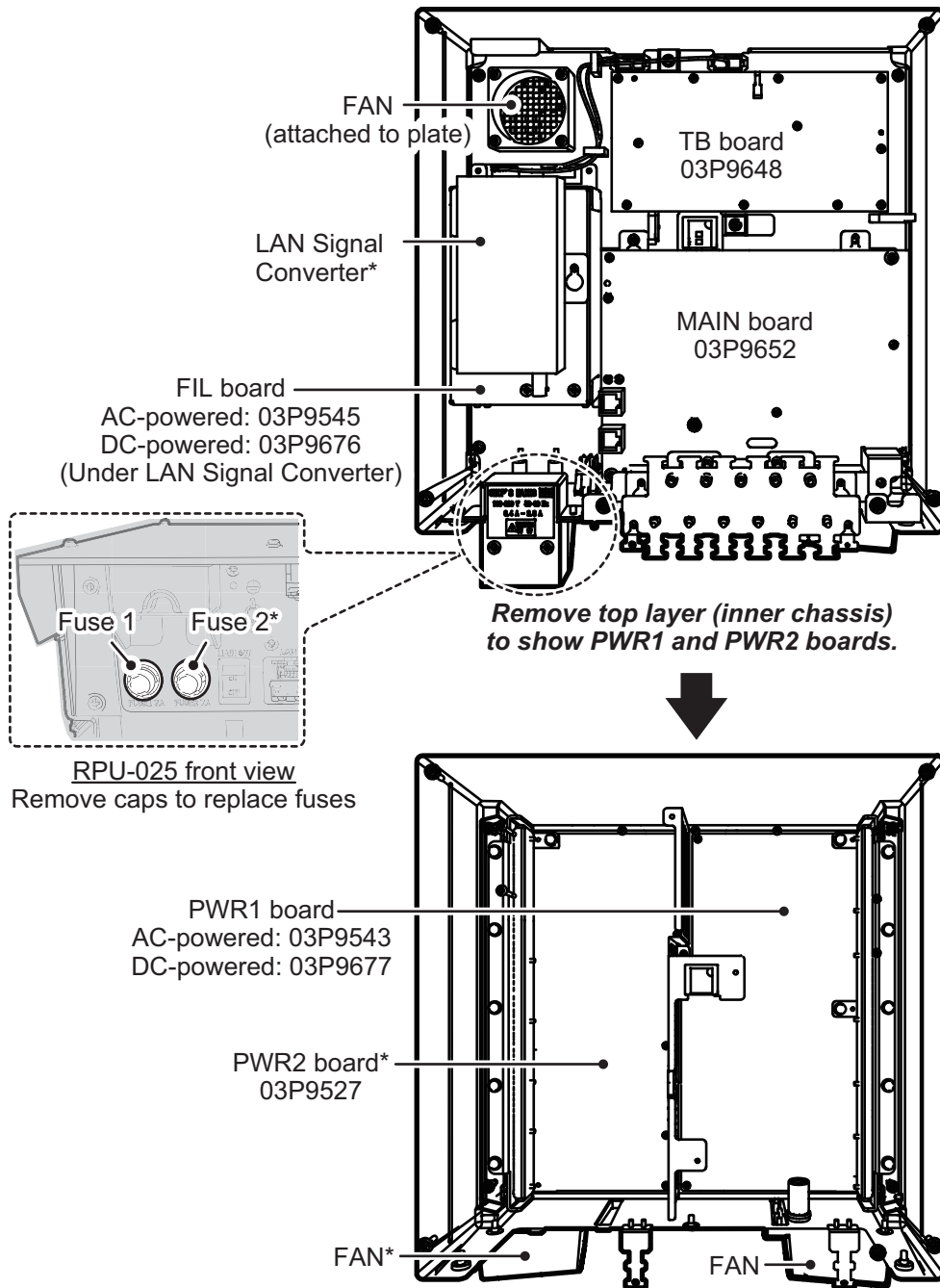
APPX. 7 PARTS LOCATION

Control Unit RCU-014



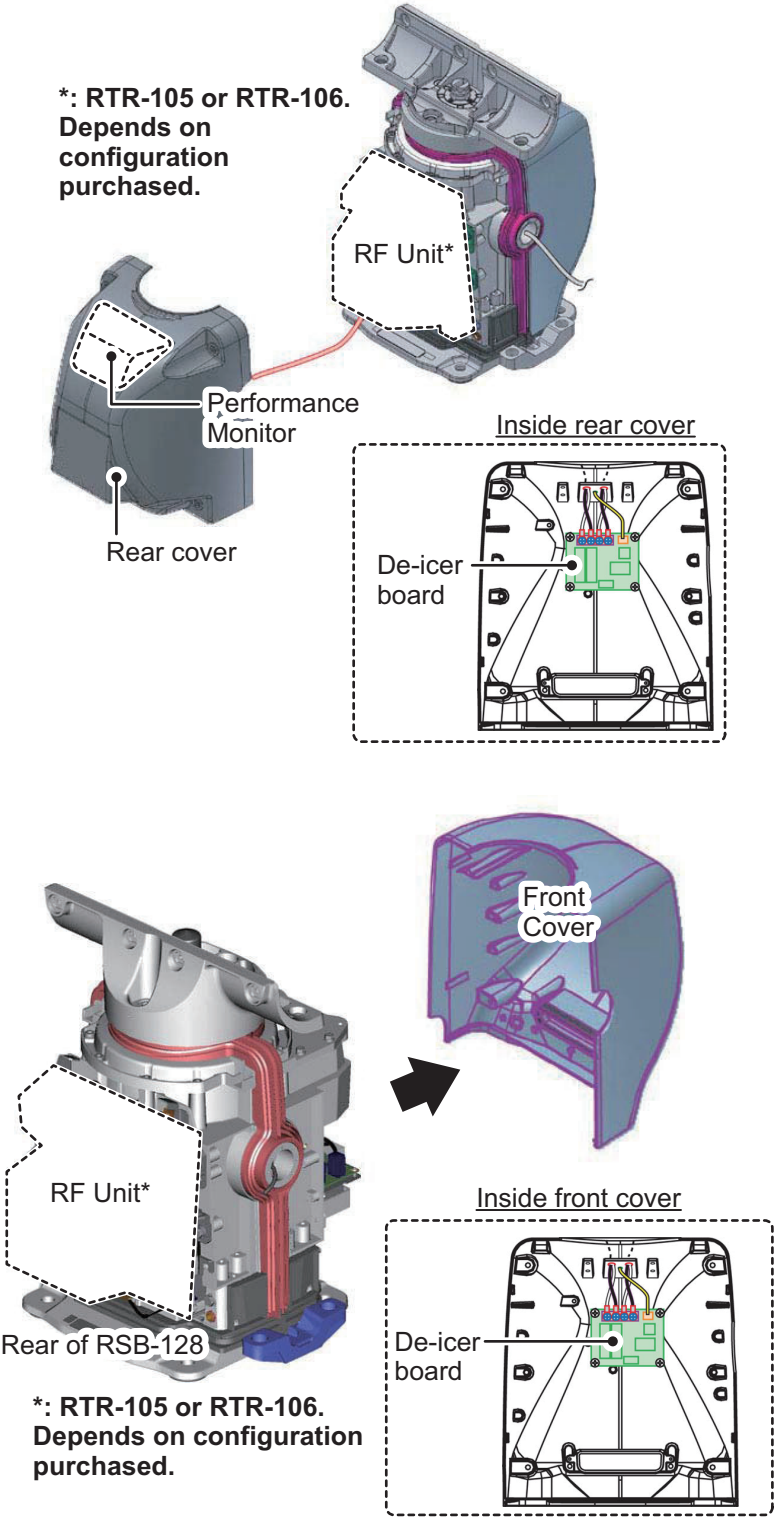
Control unit RCU-015/RCU-016

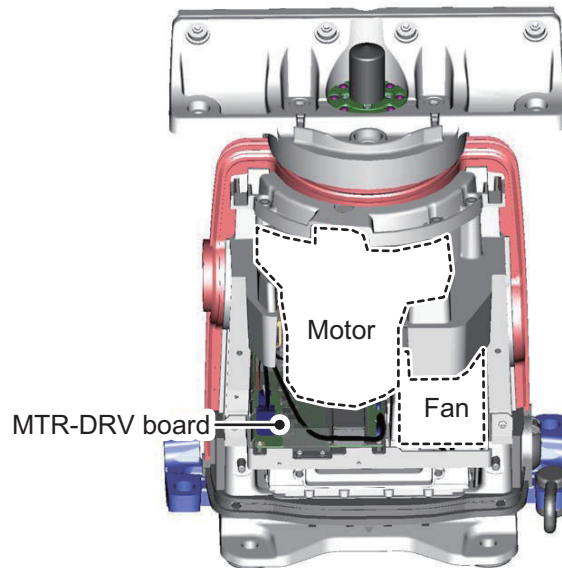


Processor Unit RPU-025

*: The presence of this component depends on configuration purchased.

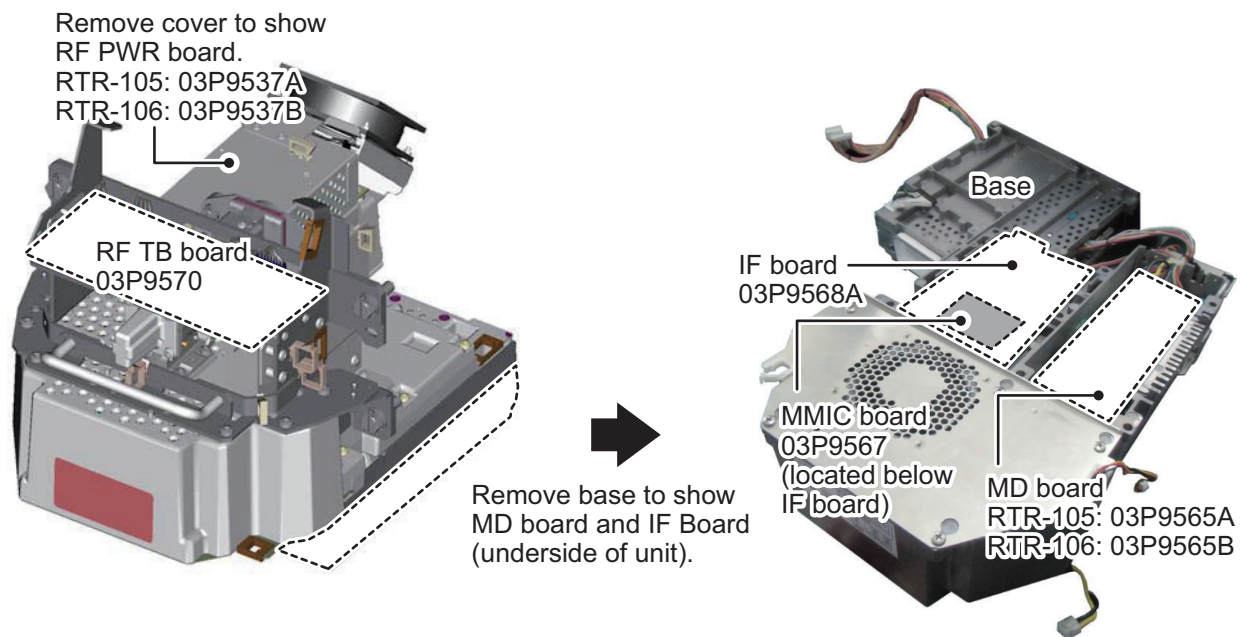
Scanner Unit RSB-128 (FAR-2218(-BB), FAR-2318, FAR-2228(-BB), FAR-2328)



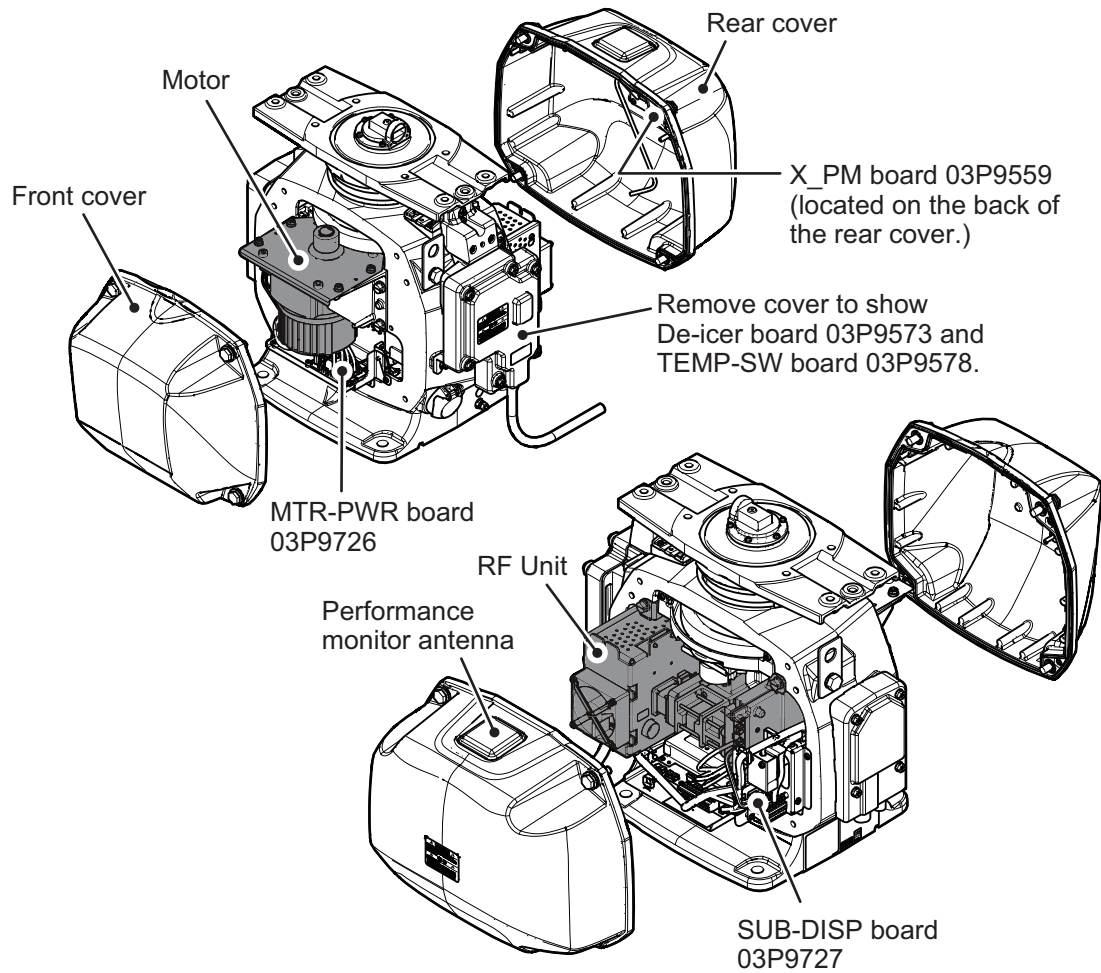


Front view of RSB-128
(front cover removed)

RF Unit RTR-105/106 (FAR-2218(-BB), FAR-2318, FAR-2228(-BB), FAR-2328)



Scanner Unit RSB-146 (FAR-2018-MARK-2, FAR-2028-MARK-2)



RF Unit RTR-131/132 (FAR-2018-MARK-2, FAR-2028-MARK-2)

