

Simrad AIS

Automatic Identification
System



AI70
Mobile station



AI71
Mobile station



AI70
Monitor



Antennas



IMO
Approved

Automatic identification - the key to safety through integration

SIMRAD
AIS
SYSTEM



Simrad AI71 Class A mobile station

Safety is a key issue for all mariners. With the new Simrad AIS Class A mobile station onboard, you can receive safety related navigational information broadcast from other ships, and in the future, nav aids such as buoys and lighthouses.

The Simrad AI70 has a remote mounting transponder and uses a compact control unit (MKD). The new Simrad AI71 has the display and controls integrated into the Class A Mobile Station.

The Simrad MKD is a compact control unit that can be installed within reach of the mariner, in accordance with the IMO installation guidelines. It provides you with the vessel's position, speed and course over ground as well as static and voyage related information.

AI70/71 features

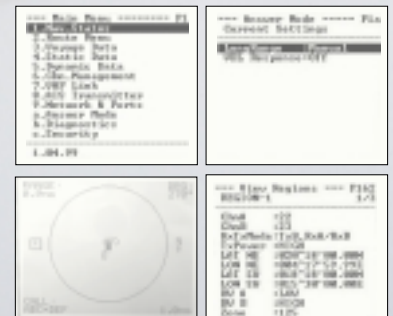
- Ship name / Call sign / MMSI / IMO number
- Date and time in UTC time of composition of message
- Position WGS84; Latitude / Longitude degrees & minutes
- Course over ground (COG) in degrees
- Speed over ground (SOG) in knots and 1 / 10 knots
- Destination / ETA
- Actual maximum draught in 1 / 10 of meters
- Ship / Cargo (Static and voyage related data)
- Length / Beams
- Number of persons on board
- SMS (Free)
- Graphical display of AIS targets (AI70 only)



Connected to radar or an electronic chart system, the AI70/71 provides a detailed overview of the shipping in your area.



The AI71 has dedicated keys for all main functions and a 4 line information display. Providing full overview and control, easy operation ensuring maximum safety on board.



Simrad AI70 displays

Connected to a chart system Simrad AIS can "see around corners"...

GPS Positioning

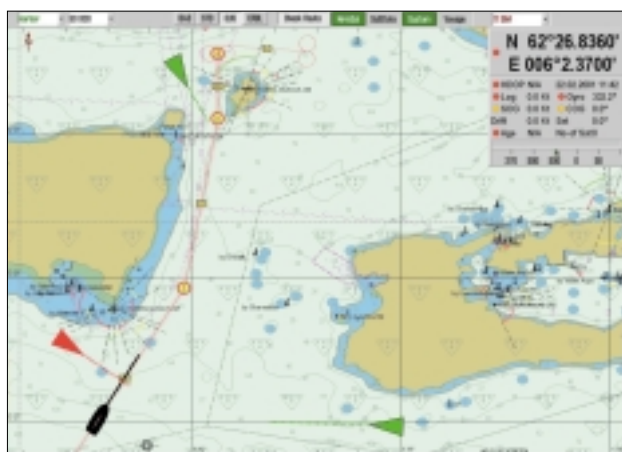
The vessel's primary GPS receiver is used as the main positioning source. However, the AI70/71 also incorporates an "all-in-view" GPS receiver used for both time synchronisation and also as back up for the primary GPS receiver.

Easy installation

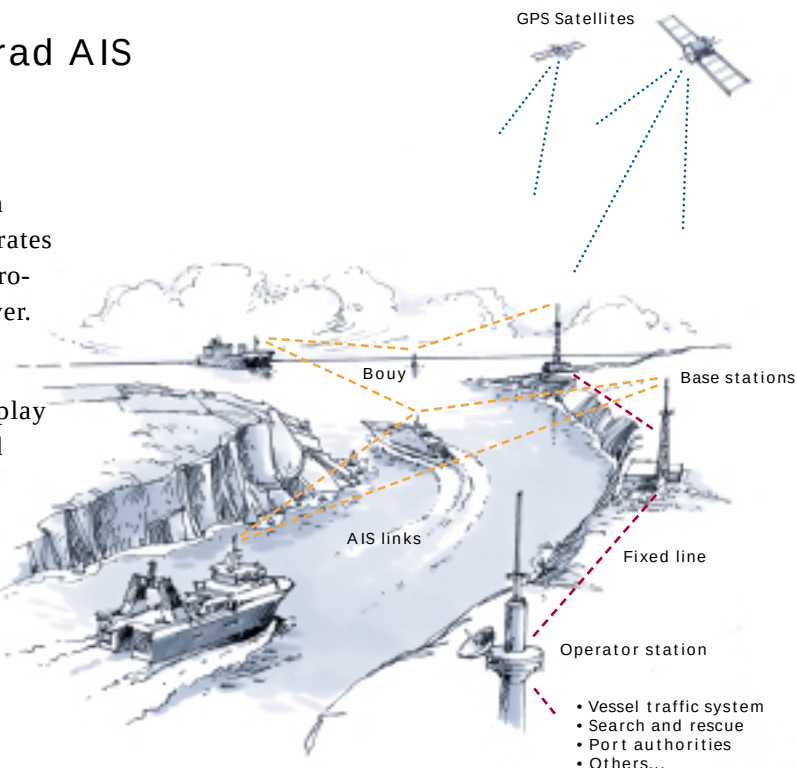
The remotely installed transponder with separate display provides a simple installation solution, saving time and money.

Simrad AIS MKD

The Simrad AIS MKD functionality has been extended and can now provide a graphical display of received AIS targets. The Simrad AI71 can also be upgraded to use the Simrad MKD as an option, providing the same functions as the AI70.



Vessels posing the potential risk of a collision are shown in RED. Vessels passing safely are shown in green.



ECDIS / ECS interfacing

Interfacing to ECDIS & ECS chart systems can be provided. The Simrad AI70/71 can also interface to Radar, Gyro and THD.

VHF data communication

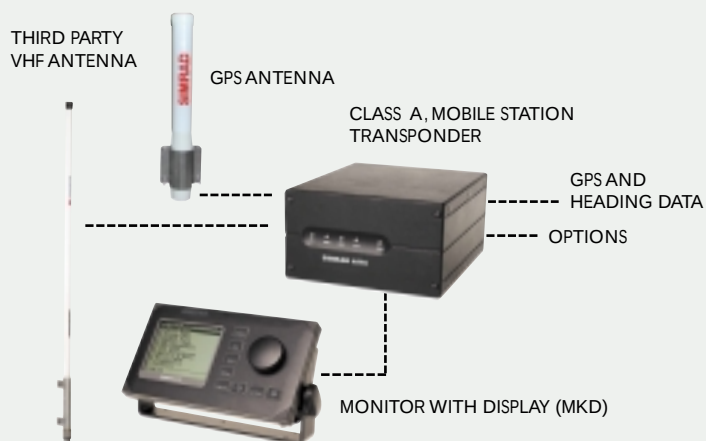
VHF data communication is used for all communication purposes. The Simrad AI70/71 uses the IMO defined transmission protocol with three VHF transceivers operating on the international AIS frequencies.

(VHF channel 70 is used for channel switching in areas where non standard AIS frequencies are used.)

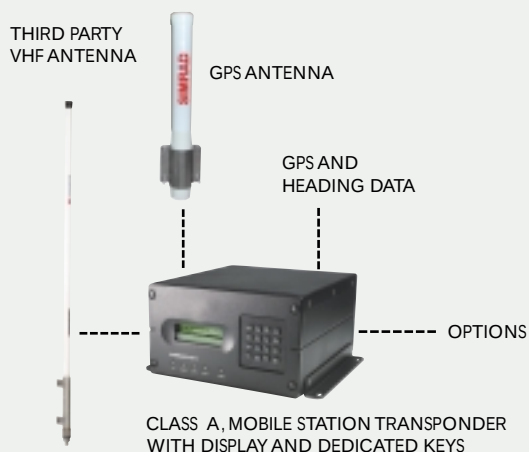
The Simrad AI70/71 is fully type approved in accordance with IMO requirements.



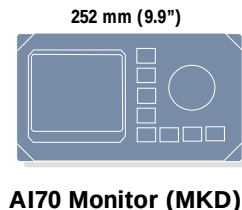
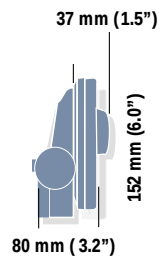
BASIC INTERFACE DIAGRAM AI70



BASIC INTERFACE DIAGRAM AI71



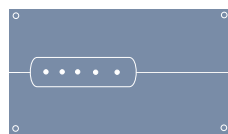
Specifications



AI70 Monitor (MKD)

144 mm (5.7")

257 mm (10.3")
Depth 230 mm (9.2")



AI70 Transponder

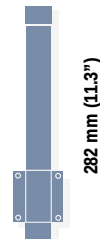
132 mm (5.3")

257 mm (10.3")
Depth 230 mm (9.2")



AI71 Transponder

37 mm (1.5")



RS5640 GPS Antenna

Data inputs

Gyro compass: NMEA

GPS main source: NMEA

DGPS corrections: RTCM - SC104 v2.1

Power

Input voltage: 24 (18-36)V DC

Power consumption: 30 - 70W (max while transmitting, 30W (nominal)

Displays

MKD (mandatory)

ECDIS, ECS

Physical and environmental

AI70 MKD

Operating temperature: -15 to +55°C

Storage temperature: -20 to +70°C

Humidity - operating: 0-95% RH

AI70/71 Transponder

Operating temperature: -15 to +55°C

Storage temperature: -15 to +60°C

Humidity - operating: 0-95% RH

GPS antenna

Operating temperature: -40 to +55°C

Storage temperature: -40 to +70°C

Humidity - operating: 100% Hermetically sealed

Weight

AI70 MKD: 0.9 kg

AI70 Transponder: 6 kg

AI71 Transponder: 6 kg

GPS antenna: 0.5 kg

Radio module

VHF transmitter: 12 W/ 2W

Receiver sensitivity: -107 dBm

Protocol: SOTDMA

Modulation: GMSK

Bandwidth: 12.5kHz or 25 kHz

Frequencies: 156.025 MHz - 162.025 band

Default CH87B (161.975 MHz)

Default CH88B (162.025 MHz)

CH70 (156,525 MHz)

GPS module (internal receiver)

12 Channel GPS receiver (all in view)

Position accuracy (GPS): 15 m r.m.s.

Position accuracy (DGPS): 5 m r.m.s.

Output rate: 1 Hz

Performance (typical)

Position accuracy: 5 m (DGPS optional) -95% CEP

Velocity: 0.05 m/s (DGPS optional) -95%

Output rate: 1 Hz

Interfaces

Communication ports: 6xRS-422

1xRS-232 (service)

Baud rate: 1200 - 57600 baud

Message formats: NMEA

Message type: AIS meessage

LAN: Ethernet - 10 BaseT

Alarm relay

Standards

Product safety low voltage: IEC 945/EN60950

Electromagnetic compability immunity/

radiation: IEC 945/EN60945

Vibration: IEC 945/EN60945

AIS: IEC 61993-2

Options Input/output

- Rate of turn (Input)
- ECDIS/ECS
- Standard PI
- Radar
- Long range communication system

Recommended units

Simrad HS50 - GPS compass

Simrad GC80/85 - Gyrocompass

Simrad CS56 Chart system

Simrad RA80/90 Radar Series

Simrad MS80 SatCom

Mandatory inputs

GPS & HEADING DATA

Recommended input units

Simrad HS50 GPS Compass

Simrad GN33 GPS Navigator

Simrad RGC50/GC80/85 Gyrocompasses



Note: Specifications are subject to change without notice.

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