



PRO PROFESSIONAL SERIES

Simrad Communication and Safety Solutions



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Simrad Professional Communication and Safety

SIMRAD PROFESSIONAL

The Simrad Professional portfolio offers a comprehensive range of marine electronic products spanning instruments, autosteering, gyro compasses, navigation systems, radar, communications and safety. Simrad Professional products are synonymous with sophistication and rugged reliability, providing tried and trusted solutions for a wide range of professional applications. With more than 60 years experience of developing quality products, Simrad are well positioned to meet the needs of today's professional mariners.

SIMRAD PROFESSIONAL COMMUNICATION AND SAFETY

The Simrad Automatic Identification Systems are essential items of modern day safety equipment that enable you to see and be seen whilst on the water. AIS provides all information in order to avoid collisions between marine vessels, which is a serious concern in today's congested ports and busy shipping lanes.

Simrad VHF radios have earned a strong reputation for their robust construction and dependable reliability, making them highly prized by coastguards, rescue services and government agencies.

For more than ten years, the Simrad safety product range has had an enviable reputation for the supply of GMDSS survival craft radios, to the world's shipping fleet.



Simrad Automatic Identification Systems

Smaller boats can easily go undetected by radar systems on larger commercial vessels, because the radar's line-of-sight can be blocked by the superstructure of the ship or can also miss the boat due to the high placement of the radar antenna. This can easily exceed 30 meters over the sea level. The AIS is not line-of-sight and the range is typically about 20 nautical miles. This is one major reason why large commercial vessels are required to carry an AIS-transponder.

AIS focuses your awareness on all vessels in your vicinity and helps reduce the risk of collision by exchanging safety data between them, such as: Vessel Name, Size & Call sign - Maritime Mobile Service Identity number (MMSI), Vessel Type, Time to closest point of approach, Course, Speed and Heading.

Simrad is currently the only major brand that offers NMEA2000/SimNet compatible Class-B Transmit and Receive AIS transponder systems, both as an integrated standalone product with colour display (AI50) and as a black box solution (NAIS-300) designed for use with any AIS-compatible multi-function display product.

AI50

PRO AI50 KEY FEATURES

- ▶ Class-B AIS transponder with integrated GPS receiver and 4" TFT colour display
- ▶ Backlit display and keypad
- ▶ Built-in map with range rings and 12 zoom ranges from 0.01 to 32 nm
- ▶ Cursor ID mode allows easy readout of target vessel data
- ▶ Target track log mode data stored and played back via SD-Card
- ▶ Call Target. Simply place the cursor over the target you wish to contact and press the DSC button*

* Note: This feature requires that the AI50 is connected to a Simrad RS80 series VHF radio.

- ▶ Favourite list with "Fleet tracking". Audible/Visual alarms for Collision, Lost vessel track, Favourite buddy alarm and Guard Zone
- ▶ NMEA2000/SimNet/RS232 Interface



▶ AI50

Part Number	Description
000-0135-00	AI50 AIS Class B transponder
000-0135-03	NAIS-300N Class B AIS with SimNet interface
000-0135-04	NAIS-300L Class-B AIS with NMEA 2000® interface

NAIS-300N/L

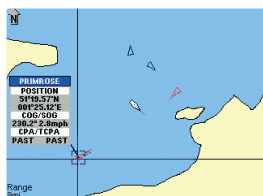
The NAIS-300 is a Class-B AIS black box transponder system with an integrated GPS receiver. It comes in two versions; the L-version with the NMEA2000 Interface and the N-version with the SimNet Interface. A CD-ROM and a RS232 PC cable are included for entering the MMSI number and other vessel data.

PRO NAIS-300 KEY FEATURES

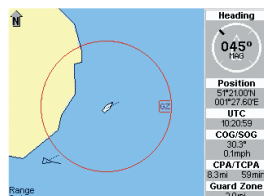
- ▶ Black Box Class-B AIS Transponder System with integrated GPS receiver
- ▶ NMEA-2000/SimNet/NMEA-0183 (high Speed) Interface
- ▶ AIS Transmit & Receive function (AIS Class-B)



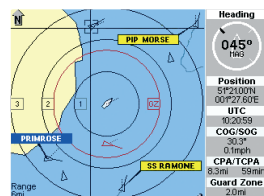
▶ NAIS-300



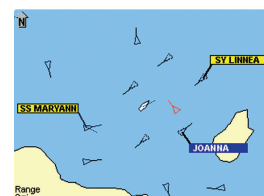
▶ Move the cursor over a target to identify the vessel



▶ Set a guard zone for a target



▶ Range rings make it easy to judge distance to any target



▶ See when your colleagues / sister ships in the area and get notified when they enter your AIS range

Simrad RS86 and RS87 DVHF Radios

The RS Series is based on 'Black box transceiver' technology. The transceiver can be placed anywhere on board and connected to the control unit or handset via simple to install extension cables.

Handset or control panel operated, the flexible full Class D DSC RS86 and RS87 radios cover a wide spectrum of VHF requirements for every vessel. With either a fixed control panel, as the RS86, or with a hand controller as the RS87, both systems share the same transceiver box and have the capability of connecting an additional handset as well as an iDSC output, which allows RS86/RS87 radio to be linked to any Simrad NavStation or chartplotter series. Once connected, DSC information can be displayed directly on the chartplotter screen.

The distress and all ships buttons are protected by a spring-loaded cover to avoid accidental use. Individual ship calls and group calls are easily executed from the internal MMSI directory or entered directly on the numeric keypad. Choice of full function Remote handsets or Classic Panel mount installations (up to 4 stations with the RS86/87) Full intercom functionality between stations. Up to 2 loudhailer horns on the RS86/87 system with full hailer/listenback and fog horn functionality.

SIMRAD RS87

The Simrad RS87 Modular VHF System is our flagship radio and includes all of the high-end features you expect from a premium Simrad Professional product, including support for up to four control stations with intercom, built-in loudhailer and foghorn functions. The telephone style handset includes a large display and a numeric key-pad for easy entry of channel numbers. The external speaker volume can be controlled from the handset.

SIMRAD RS86

The Simrad RS86 Modular VHF System is equipped with a traditional fixed mount style control panel and includes all of the high-end features found on the RS87. The fixed mount control panel has a large display, built-in loudspeaker, numeric keypad and rotary controls for volume, squelch and channel selection. You can choose between a removable telephone handset style microphone or a fist microphone.



► RS87 Handset DVHF Radio

PRO RS86/87 KEY FEATURES

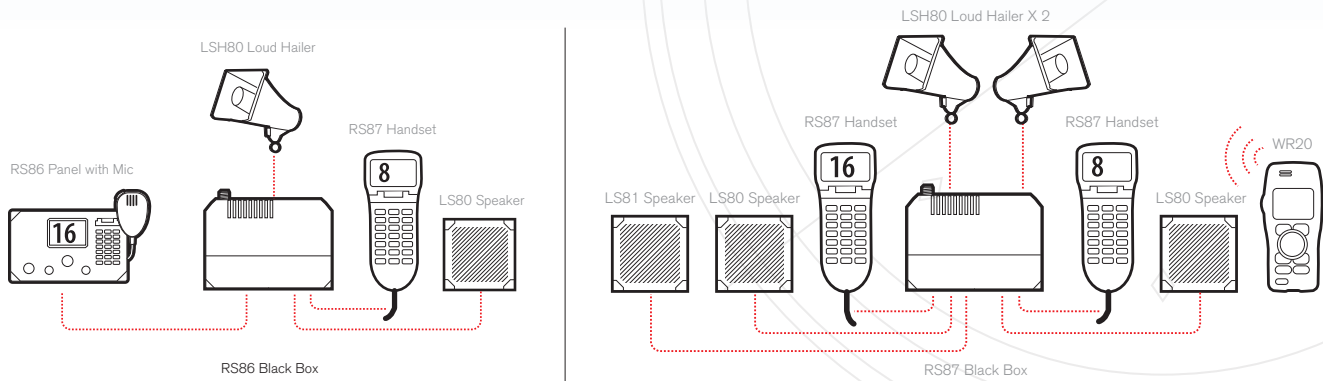
- Full Class D DSC for easy use and safety functionality
- Individual speaker control for comfortable volume
- SimNet capable – integrate your GPS Chartplotter
- Add additional stations, hailer/fog horn or individual intercom speakers
- Optional scrambler for secure communications

Part Number	Description
RS87:EXB	RS87 VHF system
AHK87	RS87 Dual station handset
RS86:EXB:F	RS86 VHF system
PCK86:F	RS86 Dual station control panel kit



► RS86 Control Panel DVHF Radio

► **RS86 AND RS87 BASIC SYSTEMS**



WR20 WIRELESS REMOTE COMMANDER

The Simrad's award winning WR20 Wireless Remote Commander enables wireless control of compatible Simrad Yachting VHF radios at a distance of up to 100m/330ft.

The WR20 system consists of a wireless waterproof handset and a below-deck processor box that connect to the SimNet backbone. The versatile handset allows custom configuration of multiple data pages and features a 1,600 mA Li-Ion battery that is automatically recharged when the handset is returned to its cradle.

The bright backlit display and ergonomic keypad offer straightforward operation and a powerful Bluetooth Class-1 wireless interface ensures wireless operation from virtually any location on the vessel. The WR20 can also be paired with Bluetooth compatible mobile phones providing the same functionality as a regular Bluetooth headset.

Wireless VHF Handset: If your boat is equipped with a SimNet enabled VHF radio such as the RS87, the WR20 provides full wireless radio control; plus a two-way intercom between the WR20 handset and the base radio.



► **WR20 Wireless Remote Commander**

PRO WR20 KEY FEATURES

- Large 128 x 64 pixel graphic display
- Backlit display and keys
- Single, dual or multi-line display format
- Customisable data pages
- 1,600 mA rechargeable battery
- Waterproof to IP67

Part Number	Description
WR20	WR20 Remote commander system
WB20	WR20 Base Station
WC20	WR20 Battery Charger
LS80	External speaker
LS81	External speaker with intercom switch
LSH80	Hailer horn
EHK80	External horn key



► **LSH80 Hailing and foghorn**



► **LS80 External Speaker**



► **Transceiver unit**

Simrad Professional Safety Equipment

The Simrad EPIRBs are designed to alert search and rescue services in the event of an emergency. They do this by transmitting a coded message on the 406 MHz and on 121,5MHz distress frequency relayed via satellite and earth stations to the nearest rescue co-ordination centre.

EPIRB

All four Simrad EPIRBs come with a built-in strobe light, a five-year non-hazardous Li-Ion battery for safe and easy transportation, a flexible whip antenna and include a Lanyard that can be attached to a survival craft.

EG50:AUTO

This model is our top of the line EPIRB. It includes an integral 16 channel GPS unit for the fastest possible emergency response time providing the rescue teams with accurate position data. The EG50:AUTO is also equipped with an Auto-Release-Bracket which deploys the EPIRB when the unit is submerged in 2-4 metres of water.

EG50:MAN

The EG50:MAN is equipped with the same feature as the AUTO, however it has a Manual-Release-Bracket instead of the Auto-Release version.

EP50:AUTO

This model includes the same Auto-Release-Bracket as the EG50:AUTO.

EP50:MAN

The EP50:MAN is supplied with the same Manual-Release-Bracket as the EG50:AUTO.



► EP50 EPIRB



► Automatic Release Bracket

PRO EPIRB KEY FEATURES

- Compact and stylish
- 406MHz Distress Alert with 121.5MHz Homing Beacon
- Audible and visual indication of activation
- Non-Hazardous Battery for easy, low cost transportation
- Two part bulkhead bracket prevents accidental activation
- Intelligent diagnostic features track battery usage
- EG50 fitted with integral "state of the art" 16 channel GPS engine
- User Self Test facility

Part Number	Description
EP50:MAN	EPIRB -manual release
EP50:AUTO	EPIRB -auto release
EG50:MAN	EPIRB with GPS -manual release
EG50:AUTO	ERIRB with GPS -auto release
LTB5	EP50 replacement battery
MBEP50	Manual bracket assembly
ABEP50	Auto housing assembly
HREP50	Hydrostatic release capsule



► Get spotted on rescue radar

SART

Make sure you are visible to your rescuers' radar. IMO carriage requirements means all SOLAS vessels over 300 tons must carry at least one SART, Passenger ships two SARTs, with RO-RO ferries requiring an additional SART for every four liferafts.

SA50

The Simrad SA50 is triggered by the search vessel's pulse radar, easing location of the liferaft in difficult conditions. With the SA50 SART activated and interrogated by an X-band radar it emits 12 pulses, which show on the radar display as blips. Nearest blip to the center shows the transponder. The SA50 SART (Search and Rescue Transponder) enables any rescue vessel or aircraft fitted with radar to locate and steer to your position, dramatically increasing your chance of rescue should the unthinkable happen. As the smallest and lightest SART available today, the SA50 can be easily stowed, making it ideal for all applications including work boats, life rafts and yachts and powerboats where space may be at a premium.

If you need to call your SA50 into action it is easy to prepare for use and can be activated in seconds to ensure your position is attainable as soon as possible. Once transmitting, the SA50 has an operating time of eight hours, and 96 hours on standby. The sophisticated battery is classified as non-hazardous and has a shelf-life of five years. A self test feature also ensures the integrity of the SA50 so you can be confident that it is ready to go with a moments notice and the minimum of hassle.

Once the SA50 is activated and subsequently interrogated by an X-Band radar it continues to emit twelve pulses, which are shown on the radar screen as blips. The nearest of these blips provide your potential rescuers with not only your bearing but also your range. With this information you can be found quickly and safely, in all weather conditions, day or night.



▶ SA50 SART

PRO SART KEY FEATURES

- ▶ Use of non-hazardous battery for easy, low cost transportation
- ▶ Self contained lanyard in easy to wind out spool
- ▶ Use as carry off device or fit in liferaft
- ▶ Capable of automatic activation
- ▶ Smallest SART available, compact design allows easy packing in liferaft

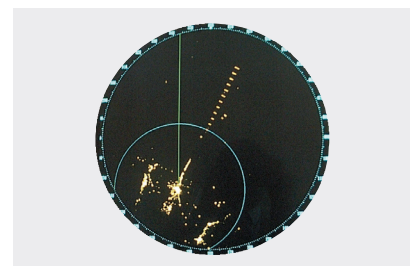
Part Number	Description
27117969	SA50 SART
MPS50	Mounting pole and SART attachment bracket
LTB4	Lithium battery for SA50



- ▶ Easy to prepare for use, can be activated in a few seconds



- ▶ The SART unit can be mounted on a pole in the liferaft



- ▶ SART pulses shown on the radar

AXIS GMDSS Handheld VHF

With modern, high-impact materials, the latest micro electronics, and designs that are thoroughly practical in every detail, the AXIS range features the toughest, most efficient and most user friendly handheld VHF radios on the market. The Simrad range of GMDSS handhelds offers the choice of the basic AX30 for GMDSS emergency use only or the AX50 provides a cost effective handheld for safety and on board use.

SIMRAD AX30 GMDSS

The AX30 is purpose designed as a GMDSS compliant handheld for survival craft use. Large, clear controls ensure easy operation by untrained personnel.

PRO AX30 KEY FEATURES

- ▶ Simple operation for untrained personnel in emergency
- ▶ Non-Hazardous Lithium battery for easy, low cost transportation

SIMRAD AX50 GMDSS

The AX50 provides a competitive solution for both on board and emergency use. Its high efficiency antenna gives the best possible range, while maximizing battery life. All the features expected on a modern handheld are provided. The clear LCD shows channel, operating and battery status, and can be illuminated for night time use.

PRO AX50 KEY FEATURES

- ▶ Use for on-board and emergency communications
- ▶ Volume and Squelch adjustment, power selection and scan functions
- ▶ LCD display of radio status
- ▶ Rechargeable NiCd battery option

Part Number	Description
AX30:BXG	AXIS 30 Emergency VHF
AX50:MG	AXIS 50 GMDSS Two-way VHF Radio
LTB2:Y	Lithium battery for AX30
TSTB1	Test battery for AXIS 30
ANT3	Spare Antenna for AX50
NC08	Rechargeable 850mAh NiMH battery pack for AX50.
LTB3:Y	Lithium battery for AX50
TC50	Trickle charger AX50/HT50
RC50	Rapid charger AX50/HT50



▶ AX30 and AX50 GMDSS VHF

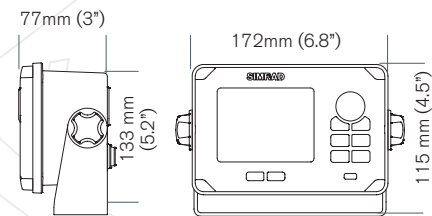


Technical Specifications

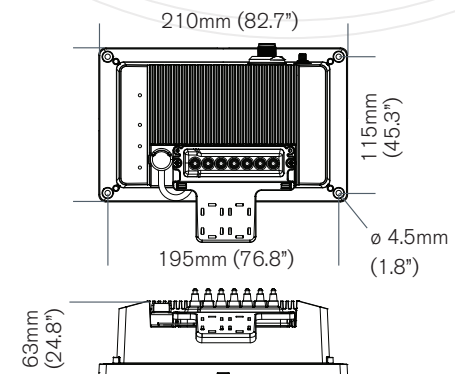
▶ AI50 AND NAIS-300 SPECIFICATIONS

	AI50	NAIS-300
Power supply	10.8V to 15.6V	10.8V to 15.6V
Power consumption	< 1A	< 0.5A
Receiver type	Dual TDMA (shared DSC)	Dual TDMA (shared DSC)
Receiver sensitivity	< -107dBm for 20% PER	< -107dBm for 20% PER
Transmit power	2 W	2 W
Type approval	IEC62287-1	IEC62287-1
AIS Class	Class B for use on non-SOLAS craft	Class B for use on non-SOLAS craft
GPS	Integral 16 channel receiver	Integral 16 channel receiver
Dimensions with bracket	20 x 133x 77mm / 7.9x 5.2x 3"	n/a
Dimensions without bracket	172x 115x 77mm / 6.8 x 4.5x 3"	210x167x735mm / 8.27x6.6x2.9"
Weight	1kg	0.65kg
EMC	IEC60945	IEC60945
Temperature range	-15°C to +55°C	-15°C to +55°C
Waterproof	IP67	IP67
Backlighting	Keypad LED (red or white)	n/a
Display type	VGA TFT 102mm (4in)	n/a
Connectors	VHF Antenna PL259 / GPS Antenna SMB	
Interfaces	NMEA0183 Out: 38kbaud VDM, VDO, RMC, ARL In: 38kbaud for configuration and testing only SimNet/NMEA2000 Network load 1	

▼ AI50



▼ NAIS-300



▶ RS86 AND RS87 DVHF SPECIFICATIONS

GENERAL

Power supply	10.8 to 15.6V dc
Power consumption	RX 0.45, TX 5.5A max
Modes: Simplex/Semi-Duplex	Yes
Channels: All international, WX US, special regional	Yes
Type approval	EN301 025/EN300 698
Weight	0.6 kg (RS86) / 0.45 kg (RS87)

TRANSMITTER

Power output	High 25W - Low 1W
Spurious emissions	< -80dBc (25W)
Modulation Depth	+/- 5kHz max

RECEIVER

Sensitivity	< 1µV EMF /20dB SINAD
Adjacent Channel Selectivity/	>70dB
Intermodulation Rejection	
Hum and Noise	< -40dB

DSC WATCH RECEIVER (CHANNEL 70)

Frequency	156.525MHz
Sensitivity	< 1µV for 10-2 BER
Environmental: -10°C to 55°C	Yes
Construction: Robust die cast aluminum enclosure	Yes
EMC: EN60945	Yes

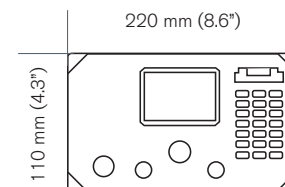
PERIPHERAL INTERFACE

GPS interface: NMEA0183	Yes
Input	GLL, RMC, ZDA
SimNet/NMEA2000®	A/C*

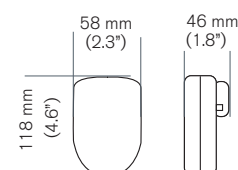
* A=SimNet Approved
C=NMEA2000® certified

Note: Local radio regulations may restrict the approval for use of some models in certain countries.
Please consult your Simrad Yachting national distributor or local dealer for more details about the other fixed models.
Specifications are subject to change without notice.

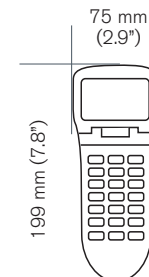
▼ RS86



▼ RS86 FISTMIC



▼ RS87



▶ WR20 SPECIFICATIONS

REMOTECOMMANDER

HANDSET

Weight	150 gram (0.33lbs)
Waterproof	IP67
Display Size	35mm x 25mm (1.4"x0.98"), 128 x 64 dots
Backlight	Selectable red or white
Battery Capacity	1600mAh
Battery Type	Rechargeable Li-Ion
Wireless System	Bluetooth Class 1
Environment	-10°C to +55°C

RECHARGE CRADLE

Supply voltage	12V (10.8-16Vdc)
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BASE STATION

Waterproof	IP67
Wireless System	Bluetooth Class 1
Power Supply	Direct from SimNet Bus
Connectors	2 x SimNet Ports, 1 x VHF Port
Environment	-10°C to +55°C

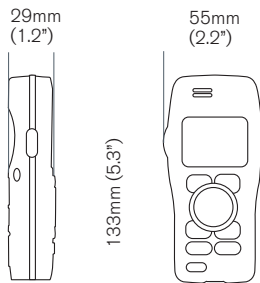
ACCESSORIES

VHF Cable*	EXPC05 (5 m) or EXPC20 (20 m)
Mains adaptor	MAR50 (for charging handset from mains voltage)
SimNet	Approved
NMEA2000®	is pending approval
Clear LCD Display	Shows channel, battery condition and operating status
LED Indicators	No
Illuminated display	Yes
Battery options	850 mAh NiCd rechargeable
Powersave mode	Yes
Type approval	EN300-255 plus IMO, ITU, SOLAS and FCC CFR47 part 80 GMDSS rules

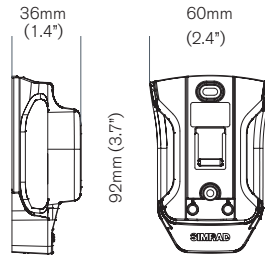
*Required to connect base station to RS80 series VHF

- Simple installation requiring just a single cable running from the SimNet network to the base station and VHF cable from VHF black box.
- The charging cradle operates from any convenient 12V supply.

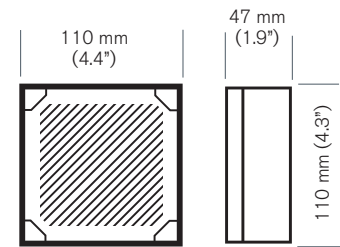
▼ WR20 REMOTE



▼ WR20 BATTERY CHARGER



▼ LS80 LOUDSPEAKER

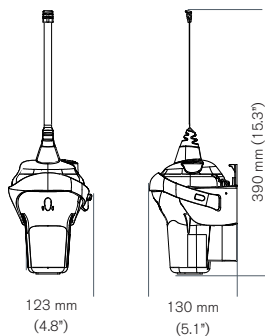


▶ EPIRB SPECIFICATIONS

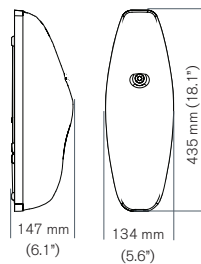
GENERAL

Operating temperature range	-20°C to +55°C (class2)
Drop proof	20m into water
Battery shelf life	5 years
Battery operating time	48 hrs minimum
Type approval standards	MiNO resolution A.810 (19), MSC56(66), A.662(16), A.694(17) COSPAS-SARSAT T.007 T.001 IEC6 1097-2, IEC60945

▼ EP50 AND EG50



▼ AUTOMATIC RELEASE BRACKET

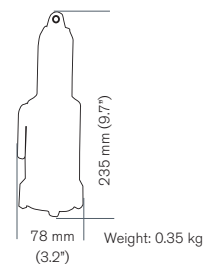


▶ SART SPECIFICATIONS

GENERAL

Operating temperature range	-20°C to +55°C
Drop proof	20m into water
Battery shelf life	5 years
Battery operating time	96 hrs minimum in standby
Type approval standards	IMO resolution A.802(19), EN61097-1, EN60945

▼ SA50 SART



▶ AX30 SPECIFICATIONS

GENERAL

Weight	0.4 kg
Temperature tolerance	-20°C to +55°C
Battery options	Lithium primary battery. Non rechargeable test battery
Frequency range	Ch06, Ch13 and Ch16 only
Channel spacing	25 KHz

TRANSMITTER

Power output	0.5 watts ERP
Power consumption	0.35A

RECEIVER

Audio output power	0.4 watts
Power consumption	150mA at 0.4W, 10mA squelched
Sensitivity	< 0.5uV for 20dB SINAD
Rejection of unwanted signals	70dB
Spurious emissions	< 2nW

FEATURES

Channel capacity	Channels 06, 13 and 16
Dual watch	No
TRI WATCH	No
Push button operation	Channel select, volume and squelch
Clear LCD Display	No
LED Indicators	Channel transmit status
Illuminated display	No
Battery options	Lithium
Powersave mode	No
Type approval	EN300-255 plus IMO, ITU, SOLAS and FCC CFR47 part 80 GMDSS rules

▶ AX50 SPECIFICATIONS

GENERAL

Weight	0.4 kg
Temperature tolerance	-20°C to +55°C
Battery options	Lithium primary battery. 850mA NiCd rechargeable
Frequency range	155-163MHz
Channel spacing	25 KHz

TRANSMITTER

Power output	2.5 watts / 1 watt switchable
Power consumption	0.95A at 2.5W, 0.6A at 1W

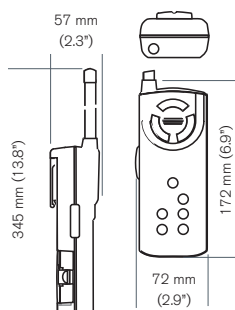
RECEIVER

Audio output power	0.4 watts
Power consumption	0.2A (typ)
Sensitivity	< 0.5uV for 20dB SINAD
Rejection of unwanted signals	70dB
Spurious emissions	< 2nW

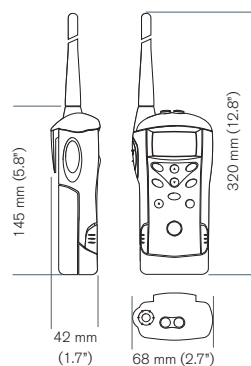
FEATURES

Channel capacity	All simplex channels. Duplex and national channels may also be programmed
Dual watch	Channel 16 and working channel
TRI WATCH	Channel 16, working channel and user selected channel
Push button operation	All functions
Clear LCD Display	Shows channel, battery condition and operating status
LED Indicators	No
Illuminated display	Yes
Battery options	850 mAh NiCd rechargeable
Powersave mode	Yes
Type approval	EN300-255 plus IMO, ITU, SOLAS and FCC CFR47 part 80 GMDSS rules

▼ AX30 GMDSS VHF



▼ AX50 GMDSS VHF



▼ AXIS BATTERY CHARGER

