

SAILOR® A1 VHF

The serious choice



SAILOR A1 VHF is developed for powerboat owners, serious yachtsmen, workboat crews, fishermen and other seafaring people with a need for reliable, compact and inexpensive maritime communication equipment.

SAILOR A1 VHF links convenient telephony with safety and optional distress communication – all operated from a single easy-to-use handset. This way you can easily and dependably communicate with any vessel or harbor in your area. Where coast stations offer the service, digital selective telephony is also available.

The SAILOR A1 VHF DSC offers a secure and reliable way to make a distress call – all in one button. The system transmits the ship's identity code, and specifies the position and time of call when GPS-connected. You also have the option of sending a more detailed distress message if time allows it.

Meets or exceeds all requirements

The system conforms to all relevant ETSI, IEC, ITU and IMO requirements and resolutions. It more than satisfies international requirements to Class D DSC equipment. The basic SAILOR A1 VHF consists of a Transceiver Unit (RT4800), a Control Handset (C4900), optional loud-speakers and/or external power supply. The SAILOR A1 VHF DSC version consists of a Transceiver Unit (RT4801), a Control Handset (C4901), optional loud-speakers and/or external power supply. The latter version offers the Waterproof Handset C4951 as an option.

Made for the rough life at sea

The C4951WP handset from SAILOR is specially designed for the wet and noisy environment at sea. It is designed to operate with the SAILOR A1 VHF Class D. User friendly functions such as dual channel watch, channel scan, up to 40 private channels, automatic public call facilities and automatic squelch are available.

Features for both SAILOR A1 VHF and SAILOR A1 VHF DSC:

- Ergonomic design
- Full intercom facility
- Plug-and-play installation
- Large back-lit keypad
- Large LCD display
- Programmable scanning

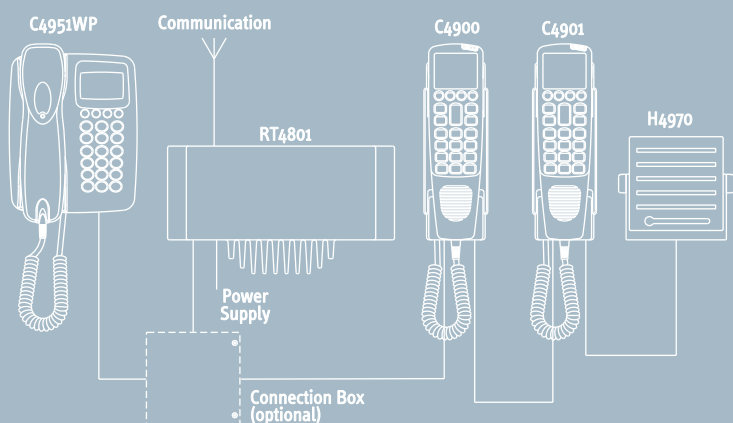
Features for SAILOR A1 VHF DSC version only:

- Digital Selective Calling (DSC)
- MMSI (Maritime Mobile Service Identity) phone book
- Large distress button

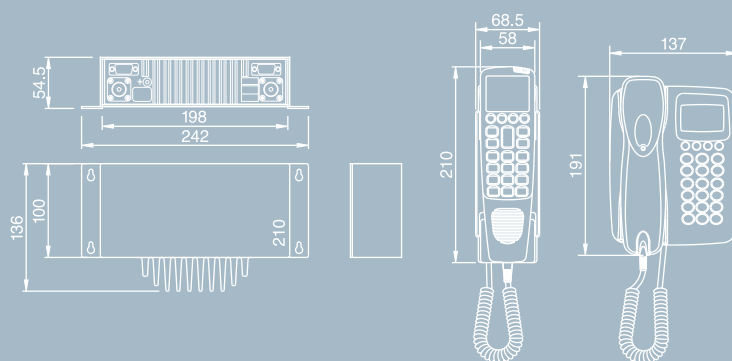
Features for Waterproof Handset C4951:

- Easy snap-on/off mounting
- Waterproof (IP67)
- Powerful 4-Watt loudspeaker

System configuration



Dimensions



System configuration

The SAILOR VHF RT4801 includes in a basic configuration a transceiver unit and a handset control unit. The units are connected by means of the SPARC-bus interface. This advanced balanced data and AF interface can be used to interconnect multiple control units as well as exterior computer based control/programming options. The maximum distance between transceiver unit and handset control unit may be up to 40m in 12VDC installations, in 24 VDC installations up to 80m.

Options

The system can be configured for individual needs:

- With additional loudspeakers designed for outside installation
- With multiple control units
- Or with an exterior computer for controlling and programming options

An external loudspeaker may be connected directly to the control handset holder. Alternatively the dual AF output channels on the transceiver unit can be used. These terminals may be configured for split level control, to follow two different handset control units.

The nominal system power supply is 12VDC. By means of SAILOR N163 and/or N420 the system can be powered from the AC mains or a 24 VDC battery. A standard NMEA interface for connection to on board navigational equipment is available in the transceiver option connector.

General

Normal channels	All int. channels for 25 kHz operation Up to 40 private channels
Opt. channels	All int. channels for 12.5 kHz operation. Up to 224 channels with up to 54 private channels
Channel spacing	25 kHz/opt. 12.5 kHz
Frequency range	150.8 MHz - 163.6 MHz
Operation modes	Simplex/semi-duplex
Modulation	G3EJN for telephony receiver G2B for DSC signalling
DSC Operation	According to Rec. ITU-R M.541-6 and Rec. ITU-R M.689-2
DSC Protocol	According to Rec. ITU-R M493-7 Class D
Navigator interface	NMEA 0183, GGA, GLL, ZDA
Frequency stability	± 10 ppm/opt. ± 5 ppm
Antenna connectors	Standard 50 Ω female, SO239
Temperature range	-15 °C to +55 °C
Supply voltage	13.2 VDC Nominal
Supply range	10.8 VDC to 15.6 VDC
Supply current	Stand-by 180 mA Transmitter on 1.3 A (Low power) Transmitter on 5.3 A (High power)
Transceiver dimension	H x W x D: 55 x 202 x 136 mm.
Transceiver weight	1.3 kg

ATIS with "killer" is a standard feature in the SAILOR A1 DSC (Class D*) and an option in the SAILOR A1 Basic.

Specifications subject to change without further notice.

Receiver

Sensitivity for 12 dB SINAD	-119dBm or 0.25ΩV p.d.
Symbol error rate below 1* 10 ⁻² at	-119dBm or 0.25ΩV p.d.
AF rated power	
Output 1	4W/4 Ω
Output 2	6W/4 Ω
Distortion THD	Below 5%
Signal/noise ratio	Better than 40 dB
AF response	-6 dB/octave
Spurious emission	Below 2nW
Spurious resp. att.	More than 70 dB
Intermodulation att.	More than 68 dB
Blocking	More than 90 dBμV
Co-channel rejection	Better than -10dB
Adj. ch. Selectivity	More than 70 dB

* Class D equipment provides facilities for VHF DSC distress, urgency and safety calls as well as routine calling and reception. Class D offers the key benefits of DSC in a form that is suitable for non-deep sea usage.

Transmitter

RF output power	High 25 W +0 db to -0.5 dB Low 0.9 W +0.5 dB to -1 dB
Adj. ch. Power	Below -70 dBc
Spurious radiation	Below 0.25ΩW
Cabinet radiation	Below 0.25ΩW
AF response	+6 dB/octave
Distortion	Below 5%
Signal/noise ratio	Better than 40 dB
Modulation	1700 Hz ±400 Hz 1200 Baud (30 ppm)
Frequency error	Below ±1 Hz
Residual DSC-mod.	Below -26 dB