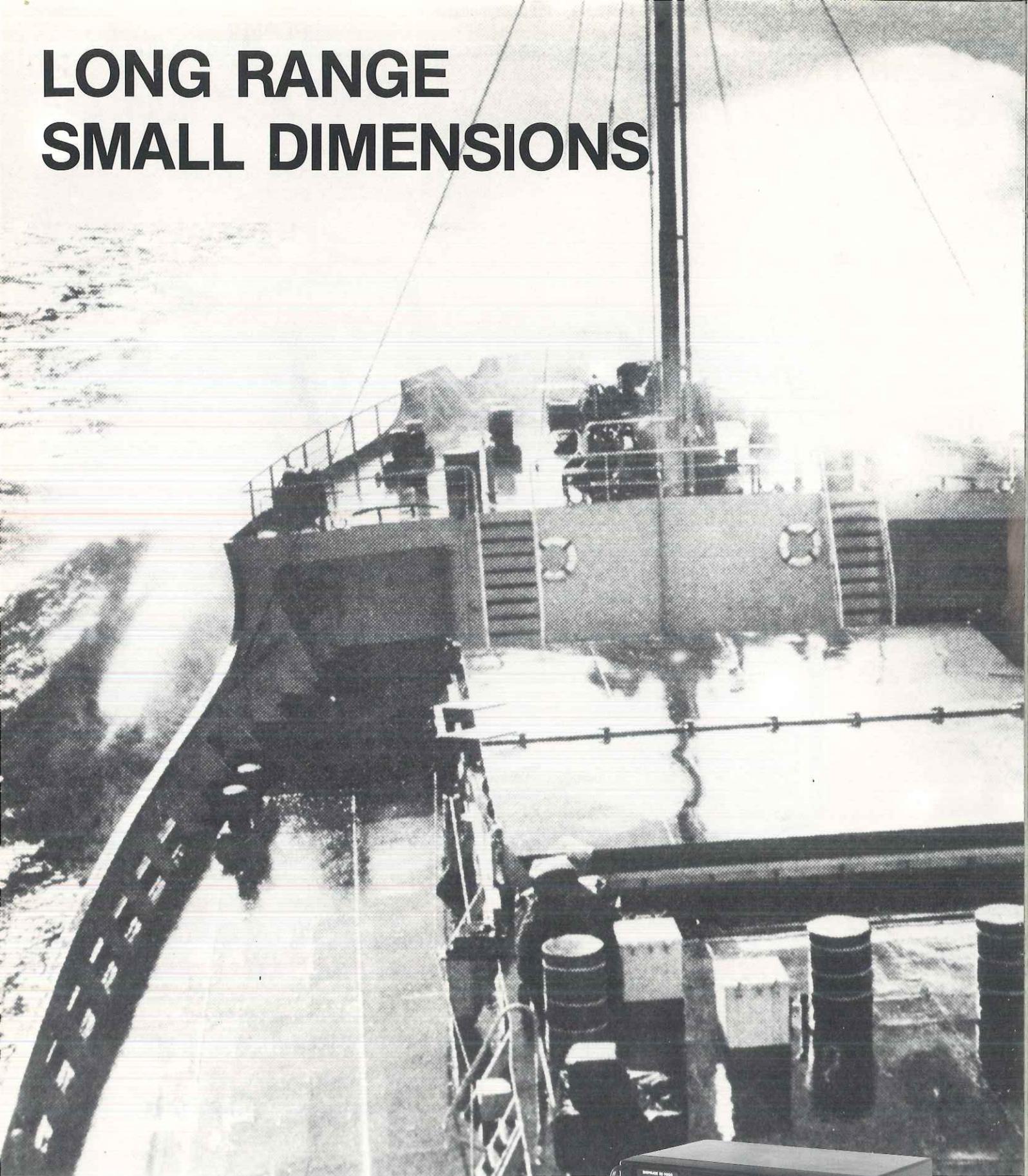


LONG RANGE SMALL DIMENSIONS



SHIPMATE

SSB RADIOTELEPHONE

RS 9000



RS9000 SSB RADIOTELEPHONE



GENERAL

The RS9000 series from SHIPMATE is the new generation of HF-equipment for single sideband communication (SSB). The equipment is adapted for duplex, semiduplex, and simplex communication on the maritime channels from 1.6 to 30 MHz.

The HF-installation's long range means that it will be very usefull to all ships working far from home port.

The RS9000 series is characterized by solidity which makes it suitable for the fishing fleet. It is compact and has a low power consumption which also makes it suitable for yachts (at the same time the price is very competitive).

The RS9000 series consists of a compact and well-arranged transceiver and a fully automatic antenna tuner. The compact construction means that the equipment is especially suitable for installation under the most difficult accomodation and antenna conditions.

The transceiver is installed in the most appropriate place to the user and the tuner is installed close to the antenna in order to avoid transmission loss.

The transceiver has an epoxy coated steel cabinet and the tuner has a cabinet made of aluminium.

The RS9000 series has been built-in with the most advanced microprocessor technology which ensures a high dependability and furthermore several other advantages such as internal test of all functions, easy operation and user programmable special functions.

As standard the user is able to program 300 of the most used pairs of channels and the radio can be supplied with memory with a capacity of 680 pre-programmed pairs of channels.

RS9000 is approved to all CEPT specifications and to UK 1214, MPT 1224, MPT 1225, and national specifications in a number of countries.

RS9000 - A MULTI PURPOSE MARINE SSB-SET



RS9001 TRANSCEIVER

The RS9001 contains the control unit and the receiver, control panel and control functions. The frequencies are generated in 2 very stable synthesizers, which makes it possible to select any frequency in the area 1.6 to 30 MHz at 100 Hz intervals.

The transmitter frequencies are chosen by pressing the keyboard. The receiver frequencies are chosen on the keyboard or by adjustment of the tuning button. The frequencies are shown on 2 large LCD displays, which ensures an easy reading both in direct sunlight and at night.

Besides manual frequency tuning, the RS9001 can be tuned automatically on the emergency and calling frequency by a single press on the red 2182 KHz key.

In RS9001 the user is able to program 300 of the most used pairs of channels. At the same time the radio can be supplied with memory with a capacity of 680 pre-programmed pairs of channels. The electronic memory of RS9001 is supplied with a battery back-up with a minimum life of 5 years, even if the radio is turned off.

The RS9001 has a built-in "Receiver only" function, which reduces the power consumption substantially when only the receiver is operating. The microprocessor in RS9001 is programmed to carry out a number of internal controls which include tests of all major functions.

The microprocessor is controlled by standard data input and output. Therefore, the complete HF-equipment can be controlled from a computer or an automatic teleprinter.

RS9002

On ships without telegraph operator, you are not allowed to key the transmitter channels yourself. Therefore, the RS9002 is made as a pure channel transmitter with locked keyboard. The transmitter works on all permitted frequencies, whilst the receiver can be adjusted to all frequencies.

The RS9002 can be supplied with 680 pairs of channels approved by the authorities, which are pre-programmed from the factory.

RS9003 ANTENNA UNIT

The RS9003 is a fully automatic antenna tuner which contains the transmitter's PA-module and the power supply.

The power tuner has no control lever and is remote-controlled from RS9001. Therefore, it can be installed close to the foot of the antenna.

RS9003 can be installed at a distance of 50 m from the RS9001 transceiver.

The antenna impedance is automatically adapted to the RS9003. Therefore, a maximum effect can be obtained in the antenna. (RS9003 can be operated manually in an emergency).

If the antenna falls down or is short-circuited the transmitter will not be destroyed. It will only reduce the transmitter efficiency (by up to 75%) and continue the transmission.

The connection between RS9001 and RS9003 consists of a 16 core cable and a 50 ohm coax cable. Both units are equipped with the necessary couplings for easy and safe mounting.

PROFILE

- Epoxy coated steel cabinet.
- No control lever on the antenna tuner.
- Controlled by microprocessor.
- 300 user programmable pairs of channels.
- 680 factory programmable pairs of channels.
- Possibility of user programmable special functions.
- 2182 KHz key.
- Standard data input and output to computer.
- Remote control of the radio from another computer.
- 200 W transmitter effect.
- Automatical antenna tuning.
- All mounting possibilities.

TECHNICAL SPECIFICATIONS

GENERAL

Modes of operation:	Telephony, telegraphy, and telex. Duplex, semiduplex, simplex.
Frequency generation:	Fully synthesized in steps of 100 Hz.
Frequency stability:	
Temp. range:	
0-40°C:	Long term ± 40 Hz. Short term ± 5 Hz.
-15°C to +55°C:	Long term ± 50 Hz.
Frequency selection:	By common keyboard. The emergency frequency 2182 KHz is entered by a single key.
Distress frequency:	Fully automatic on 2182 KHz.
Display:	6-digit LCD.
Temp. range:	-15°C to +55°C.
Vibration:	0...50 Hz, max. 1 g.
Power supply, DC:	12 VDC or 24 VDC.
Power supply, AC:	External 110/220 V, 50-60 Hz.
Power consumption:	13.2 VDC 26.4 VDC
Receiver only:	1.8A 0.9A
Transceiver unkeyed:	4.2A 2.1A
A3J Mod. 200W pep:	18.0A 9.0A
Dimensions:	
Transceiver:	H: 175, W: 432, D: 250 mm.
Tuner:	H: 132, W: 432, D: 290 mm.
Weight:	
Transceiver:	10 kg.
Tuner:	6 kg.

RECEIVER

Frequency range:	1.6 MHz to 27 MHz and 100 KHz to 30 MHz at reduced performance.
Fine tune range:	± 200 Hz typical.
Types of emission:	A1, A3/A3H and A3A/A3J.
Sideband:	Upper sideband.
Sensitivity:	At 10 dB SINAD: 0.1-1.6 MHz A3/A3H 15.0 μ V. 1.6-4.0 MHz A3/A3H 4.0 μ V. 4.0-30 MHz A3/A3H 2.5 μ V. 1.6-4.0 MHz A1/A3A/A3J 1.0 μ V. 4.0-30 MHz A1/A3A/A3J 0.5 μ V.
Selectivity:	A3/A3H ± 2.7 KHz at -6 dB. ± 10 KHz at -60 dB. A3J/A3A 2.4 KHz at -6 dB. 3.7 KHz at -60 dB.

Spurious signal rejection:	70 dB.
Intermodulation:	90 dB μ V per signal produces equivalent input signal at 30 dB μ V.
Cross modulation:	105 dB μ V unwanted signal will produce cross modulation products 20 dB below output level.
Blocking:	105 dB μ V unwanted signal causes a change of 3 dB in output level.
Radio output:	Internal loudspeaker 8 ohms, max. 2.5W. External loudspeaker 8 ohms, max. 2.5W. Line 600 ohms, 0 dBm. Earphone (or handset).
Options:	Oven controlled reference oscillator. Stability, long term ± 0.1 ppm.

TRANSMITTER

Frequency range:	1.6 to 30 MHz.
Frequency setting:	RS9001: Frequency setting direct from keyboard or by recalling one of the 300 user defined or 680 pre-programmed channel frequencies. RS9002: Frequency setting by recalling one of the 680 pre-programmed channel frequencies.
Types of emission:	A3J, A3A, A1, A7J. A3H on 2182 KHz only.
Audio frequency	350 Hz to 2700 Hz at -6 dB. -600 Hz and 3400 Hz at -40 dB.
Audio sensitivity:	Line input 600 ohms 0 dBm. Microphone 1 kohm 20 mV Telex input 600 ohms 0 dBm.
Output power (RS9002):	200W PEP.
Power reduction:	6 dB.
Intermodulation (3. IMD):	31 dB rel. PEP.
Spurious emission:	-50 dB rel. PEP. 7.5 KHz from carrier.
Alarm signal:	Built-in two tone generator. Audio tones 1300 Hz and 2200 Hz. Signal sequence durations 45 sec.
Aerial length:	5-15 metres whip or wire aerials.
Tuning speed:	Less than 15 sec.

SHIPMATE 
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