

Complying with GMDSS carriage requirements

MARINE VHF RADIOTELEPHONE

with built-in DSC

Model FM-8500

General features

- All-in-one unit design including radiotelephone, DSC facility and watch keeping receiver
- Fully meets ITU, IEC, ETSI, IMO for GMDSS and other related standards
- Compact cabinet for ease of installation

VHF features

- Precision PLL frequency synthesizer for high frequency stability as required for DSC operation
- Output power 25 W, reducible to 1 W
- Dual watch and multiple watch

DSC features

- Continuous DSC watch on CH70
- Prevention of accidental distress alert
- File editing for emergency readiness
- Automatic entry of own ship position with manual override



The FURUNO FM-8500 is a cost-effective all-in-one marine VHF radio system consisting of a 25 W VHF radiotelephone, a DSC modem and a CH 70 Watch Receiver. It complies with GMDSS carriage requirements for safety and general communications.

The FM-8500 offers simplex/semi-duplex voice communications on all ITU channels in the 156-174 MHz VHF band. Other standard features are Dual Watch and Multiple Watch functions which allow a watch on CH 16 and another selected frequency.

Full Class A DSC functions are provided for distress

alert transmission and reception, as well as the general call formats: Individual Telephone, All Ships, Group and Area Call. Distress alert can be readily transmitted but an arrangement is provided to prevent an accidental activation. The FM-8500 maintains a continual watch on CH 70 even while you are using another VHF channel. Upon receiving an incoming DSC message the FM-8500 gives aural and visual alarms.

The compact cabinet allows a flexible and space-saving installation on a navigation console or at the conning position.

SPECIFICATIONS OF FM-8500

VHF Section

GENERAL CHARACTERISTICS

- 1. Class of Emission** G3E (voice), G2B (DSC)
- 2. Communication System** Simplex/Semi-duplex
- 3. Channel Program**
 General version: 55 channels (RR Appendix 18)
 U.S.A. version: General, US channels,
 Weather channels
 Nordic version: General, Fish/Pleasure private
- 4. Power Supply** 24 VDC, +30%, -10%
- 5. Display** 24 characters x 2 lines,
 character 5 x 7 dots, backlit
 LCD (dimnable)

TRANSMITTER

- 1. Frequency Range** 155.00 - 161.475 MHz
- 2. RF Output Power** 25 W, reducible to 1 W
 US version: CH67, CH13 at 1 W, manual override for FULL
- 3. Frequency Stability** 1.5 kHz (-20°C to +55°C)
- 4. Time-out Timer**
 Deactivates the transmitter after an uninterrupted
 transmission of more than 5 minutes

RECEIVER

- 1. Frequency Range** 155.00 - 166.075 MHz
- 2. Receiving System**
 Double-conversion superheterodyne
 IF: 21.4 MHz and 455 kHz
- 3. AF Output Power** 3 W (internal 8 Ω loud speaker)
 2 mW (200 Ω handset)
- 4. Audio Response** De-emphasis of 6 dB/oct +1/-3 dB
- 5. Sensitivity** -5 dBμV at SINAD 20 dB
- 6. Adjacent Channel Selectivity** 70 dB (+15°C to +35°C)

DSC Section

1. Distress Call and Message

Distress call attempt is transmitted as five consecutive calls. It is repeated after a random delay of between 3.5 and 4.5 min from the beginning of initial call.

2. Message Storage

Receive: 50 distress messages plus 50 non-distress messages
 Transmit: 50 non-distress messages plus 99 files containing station ID, telephone No.

- 3. Interface** Nav data: IEC61162
 Printer: FURUNO MIF w/Interface box

4. Alarm

Aural and visual on receipt of a DSC call

5. Receiver Characteristics

DSC frequency: CH70
 Calling sensitivity: Symbol error rate 10⁻², input -3 dBμV
 Watch keeping: Continuous watch on CH70

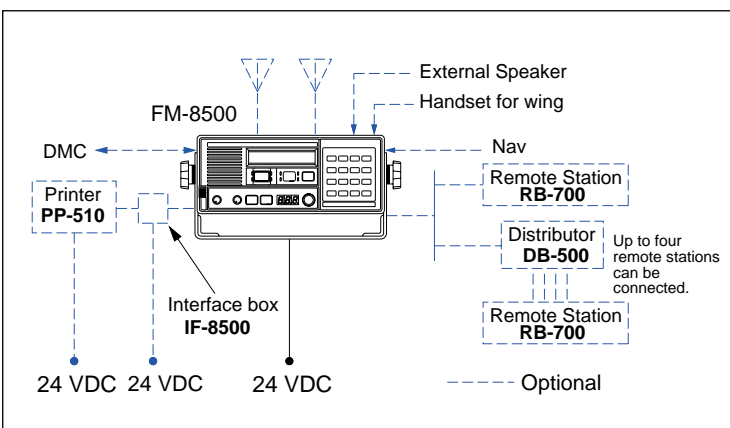
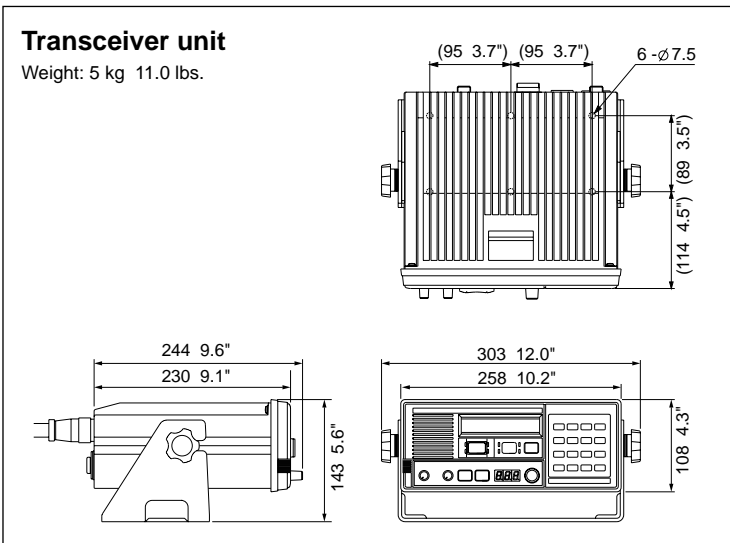
EQUIPMENT LIST

Standard

- | | |
|---------------------------|--------|
| 1. Transceiver unit | 1 unit |
| 2. Handset | 1 set |
| 3. Installation materials | 1 set |

Optional

1. Whip antennas for VHF and DSC
2. Coaxial antenna cable
3. Remote Station RB-700
4. Distributor DB-500 (Required to connect 2 or more sets of the RB-700. Extension kit is required in DB-500 to connect 3 sets of RB-700 or more)
5. Extension handset
6. Mic receptacle box
7. Printer PP-510
8. Interface box IF-8500 for PP-510
9. AC-DC changeover unit



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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