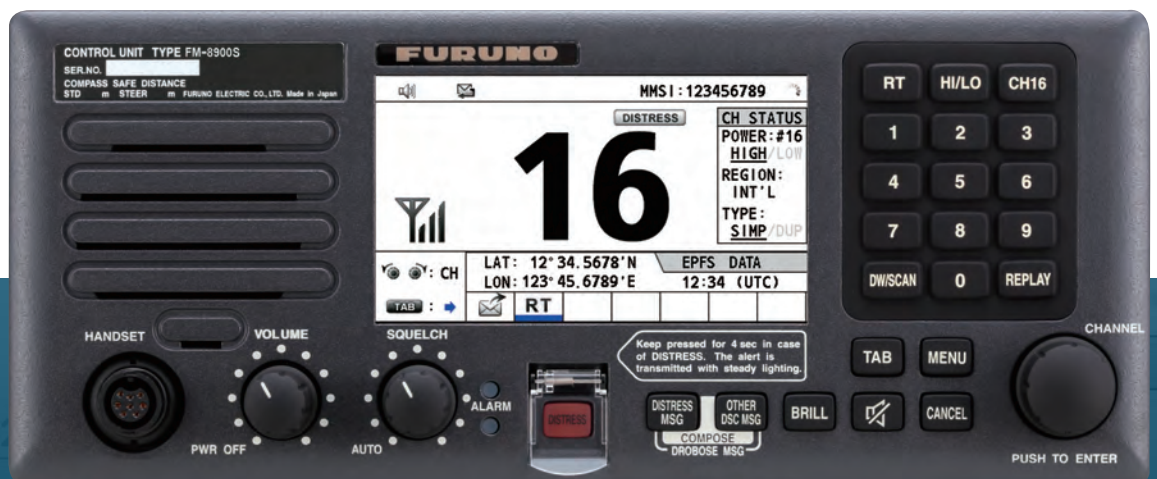


# FURUNO

## VHF

Marine VHF Radiotelephone

Model: FM-8900S



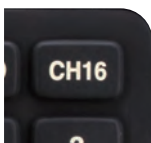
More details on  
[www.furuno.com](http://www.furuno.com)





Model: FM-8900S

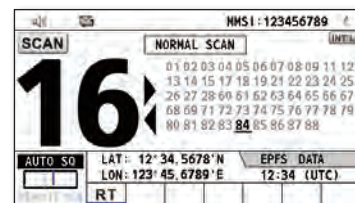
- ▶ **Semi-duplex 25-Watt VHF radiotelephone with a built-in Class-A DSC and CH70 watch Receiver**
- ▶ **Fully meets GMDSS carriage requirements for SOLAS ships**
- ▶ **Meets the new ITU recommendation on digital selective calling system for use in the Maritime Mobile Service, ITU-R M.493-14**
- ▶ **Easy to read, high-contrast 4.3" bright color LCD**
- ▶ **Enhanced noise reduction and speaker for superb voice quality**
- ▶ **Quick access to CH16 key**  
Press the CH16 key on the keypad to switch to radiotelephone display and select CH16 instantly
- ▶ **Easy channel selection with rotary control or direct keypad input**
- ▶ **Automatic entry of own ship position and time through the interfaced GPS receiver**
- ▶ **ATIS signal transmission available for inland waterways**
- ▶ **Connect to an office or home via an existing PSTN (Public Switched Telephone Network)**



# telephone 0 watch receiver

## Scans all channels in the selected region and CH16

The FM-8900S scans all channels in the selected region as well as watches CH16 in alternate shift.



SCAN Display

## Transmitting and receiving general/distress DSC messages

By long-pressing (3 seconds) the "DISTRESS" button, DSC distress alert can be transmitted. Also, quick entry to DSC message composition screen is available by use of "DISTRESS MSG" and "OTHER DSC MSG" buttons.

For general DSC messages, press "OTHER DSC MSG" to enter the composition screen.

For DSC messages for distress alert, press "DISTRESS MSG" to enter the composition screen.

For DSC messages for DROBOSE (DSC Relay On Behalf Of Someone else), press both "DISTRESS MSG" and "OTHER DSC MSG" to enter the composition screen.

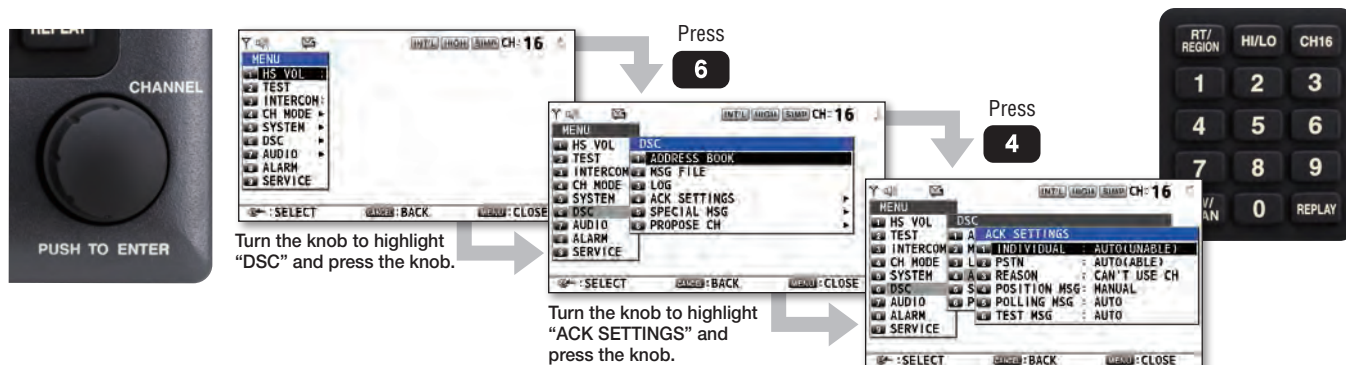
In the DSC Display, the operators can view the message log of the sent/received DSC messages.



DSC Display

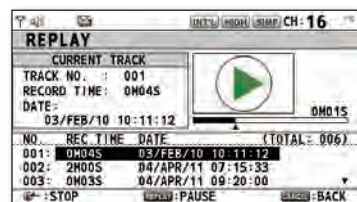
## Quick access to dedicated functions in the menu operation using numeric keypad

In the menu, all tasks are assigned numbers, and the operator can access each of the menu items either by turning and pressing PUSH TO ENTER knob or simply pressing the corresponding numbers on the numeric keypad.



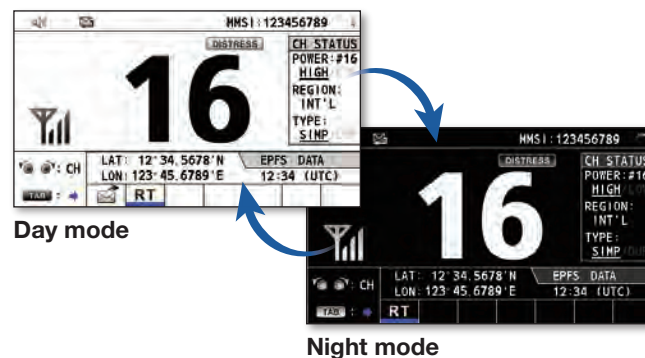
## Replay function

The FM-8900S records the latest 120 seconds of incoming communication on the currently set channel. By simply pressing the "REPLAY" button on the numeric keypad, the last-received message will be played back on the spot.



Replay Display

## Day mode and Night mode can be selected according to the lighting condition of the wheelhouse



## SPECIFICATIONS

**PRODUCT NAME** VHF RADIOTELEPHONE

### GENERAL CHARACTERISTICS

#### Rules and Regulations

|                      |                                                        |
|----------------------|--------------------------------------------------------|
| VHF Radiotelephone   | EN 301 925 V1.4.1 (2013-05)                            |
| VHF ATIS             | EN 300 698-1 V1.4.1 (2009-12)                          |
| DSC                  | ITU-R M.493-14 (09/2015)                               |
|                      | ITU-R M.541-10 (10/2015)                               |
|                      | ITU-R M.689-3 (03/2012)                                |
|                      | EN 300 338-1 V1.4.1 (2017-02)                          |
|                      | EN 300 338-2 V1.4.1 (2017-02)                          |
| Class of emission    | G3E/F3E (Radiotelephone), G2B/F2B (DSC)                |
| Communication system | Simplex/Semi-duplex                                    |
| Channels             | INTL: 59 (ITU-R RR AP18(WRC-15))                       |
|                      | USA: 50 (FCC 47 CFR Ch. 1 § 80.371, § 80.373)          |
|                      | Canada: 57 (Industry CANADA RBR-2)                     |
|                      | Weather: 10 (USA and Canada, receive only)             |
|                      | Inland waterway: 57 (ETSI EN 300 698-1 V1.4.1 2009-12) |
|                      | Private: 20 (permitted by administrations)             |
| Display              | MEMORY CH: 50                                          |
|                      | 4.3 inches WQVGA (480x272 dots), color dot matrix LCD  |

### TRANSMITTER

|                                          |                                                                                                           |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Frequency range                          | 155.000 - 161.600 MHz                                                                                     |
| RF output power                          | High: Max 25 W, Low: Not exceed 1 W                                                                       |
|                                          | US version: Manual override for 25 W available on CH13, CH67 and CH77 (usually not exceed 1W)             |
| Frequency stability                      | Less than $\pm 1.5$ kHz                                                                                   |
| TX timeout<br>(for US & Inland-waterway) | Deactivates the transmitter after an uninterrupted transmission of more than 5 minutes                    |
| ATIS                                     | An ATIS signal is transmitted at the end of transmission, by modulating the carrier at 1,300 and 2,100 Hz |

### RECEIVER

|                              |                                                                                                |
|------------------------------|------------------------------------------------------------------------------------------------|
| Frequency range              | Simplex: 155.000 - 161.600 MHz<br>Semi-duplex: 159.600 - 164.200 MHz                           |
| Receiving system             | Double-conversion super-heterodyne<br>1st IF: 51.1375 MHz<br>2nd IF: 62.5 kHz                  |
| Sensitivity                  | Less than 6 dB $\mu$ V at SINAD 20 dB                                                          |
| Adjacent channel selectivity | 70 dB or more                                                                                  |
| AF output power              | Built-in speaker: 3 W (4 ohms. THD 10 % or less)<br>Handset earphone receiver: 2 mW (150 ohms) |
| Audio response               | De-emphasis of 6 dB/oct +1/-3 dB                                                               |

### DSC SECTION

|                            |                                                                |
|----------------------------|----------------------------------------------------------------|
| Message log                | Receive: 50 distress messages and 50 non-distress messages     |
|                            | Transmit: 50 messages                                          |
| Interface                  | Nav data: IEC61162-1 Ed.4<br>Printer: Centronics-compatible    |
| Alarm                      | Audible and visual on receipt of a DSC call                    |
| DSC watch-keeping receiver | Receiving frequency 156.525 MHz (CH70)                         |
|                            | Sensitivity Symbol error rate: Less than 1 % (at 0 dB $\mu$ V) |

### POWER SUPPLY

24 VDC, Standby: 1.3 A max., RX: 2.3 A max., TX: 4.7 A max.

### ENVIRONMENT

|                                       |                                  |
|---------------------------------------|----------------------------------|
| Temperature                           | -15°C to +55°C                   |
| Relative humidity                     | 93% (at 40°C)                    |
| Waterproofing                         |                                  |
| FM-8900S (VHF Radiotelephone)         | IP20 (IP22 with option)          |
| HS-2003 (Handset)                     | IP24                             |
| IF-8900 (Junction box)                | IP22 (Bulkhead), IP20 (Tabletop) |
| RB-8900 (Remote station)              | IP22                             |
| RB-8900-W (Watertight remote station) | IP56                             |
| RC-8900 (VHF console)                 | IP20                             |

### EQUIPMENT LIST

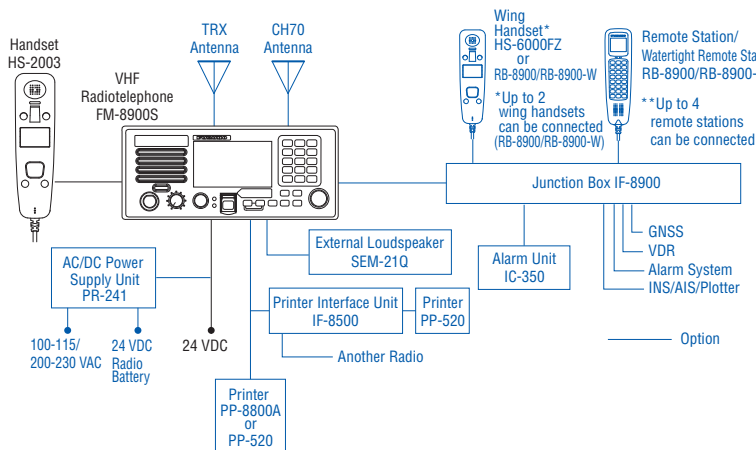
#### Standard

|                                        |            |       |
|----------------------------------------|------------|-------|
| VHF Radiotelephone                     | FM-8900S   | 1unit |
| Handset                                | HS-2003    | 1unit |
| Handset Cradle                         | FP05-05510 | 1unit |
| Installation materials and spare parts |            | 1set  |

#### Option

|                           |                 |
|---------------------------|-----------------|
| Junction Box              | IF-8900         |
| Remote Station            | RB-8900         |
| Watertight Remote Station | RB-8900-W       |
| Handset and Cradle        |                 |
| Flush Mount Kit           | OP05-129        |
| External Loudspeaker      | SEM-21Q         |
| Printer                   | PP-8800A/PP-520 |
| Printer Interface Unit    | IF-8500         |
| AC/DC Power Supply Unit   | PR-241          |
| VHF Console               | RC-8900         |

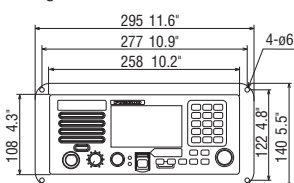
## INTERCONNECTION DIAGRAM



### Transceiver Unit (Flushmount)

#### FM-8900S

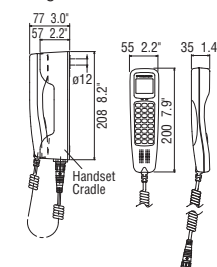
4.2 kg 9.3 lb



### Remote Station

#### RB-8900

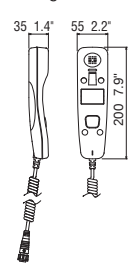
0.7 kg 1.5 lb



### Handset

#### HS-2003

0.2 kg 0.4 lb



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