



# FURUNO®

High Quality, Marine Mobile

# 400W SSB RADIOTELEPHONE

## Model FS-5000



© The future today with FURUNO's electronics technology  
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Catalogue No. S-018i

TRADE MARK REGISTERED  
MARCA REGISTRADA

# General Communications and GMDSS Carriage Requirements

- Quality Communications by SSB, DSC, telex and CW
- Quick response PLL synthesizer giving high stability of 10 Hz to ensure DSC function
- Backlit LCD display presents channel numbers, TX and RX frequencies, operation modes, power/sensitivity/volume levels, signal strength, antenna current and date and time. Ship Lat/Lon may be additionally shown when fed from Nav aids
- Backlit touchpad controls for easy nighttime operation
- Scanning of receive frequencies in a wanted range
- Two-tone alarm generator, noise blanker, squelch control
- Automatic antenna coupler quickly tunes to 7 to 18 meter antenna
- Full duplex operation (receive antenna required)
- Meets IMO, ITU, IEC and other national regulations
- Control unit allows cable entry either from top or bottom for convenience of installation



The FURUNO's FS-5000 radiotelephone is designed with state-of-the-art technology in digital processing. The basic system consists of a control unit, a transceiver unit and an antenna coupler. The control unit is compact, splashproof and designed for flexible mounting - tabletop, bulkhead or panel, and cable entry on the top or bottom.

High performance PLL synthesizer controlled by microprocessor offers easy and instant selection of 2182 kHz, 2187.5 kHz, ITU HF channels (current and new), or 400 transmit and receive factory-programmed frequencies.

Transmit and receive frequencies can be easily recalled separately by direct frequency entry or channel numbers. The large backlit LCD panel displays operation status and a meter for signal strength and

antenna current, in addition to the frequency readouts. Volume, sensitivity and MF preselector settings are also shown on the LCD as bar graphs. Date/time and ship position, when fed from nav equipment, are also displayed.

The FS-5000 is provided with full-duplex operation with two- antenna configuration. Dual station operation is available by adding a second control unit.

The FS-5000 can be connected with Digital Selective Calling Terminal DSC-60 and Narrow-Band Direct-Printing Terminal DP-6 for maritime safety and efficient public correspondence.

The DSC-60 and DP-6 are designed to comply with GMDSS carriage requirements, and meet IMO Resolutions, ITU Radio Regulations and national rules and regulations.

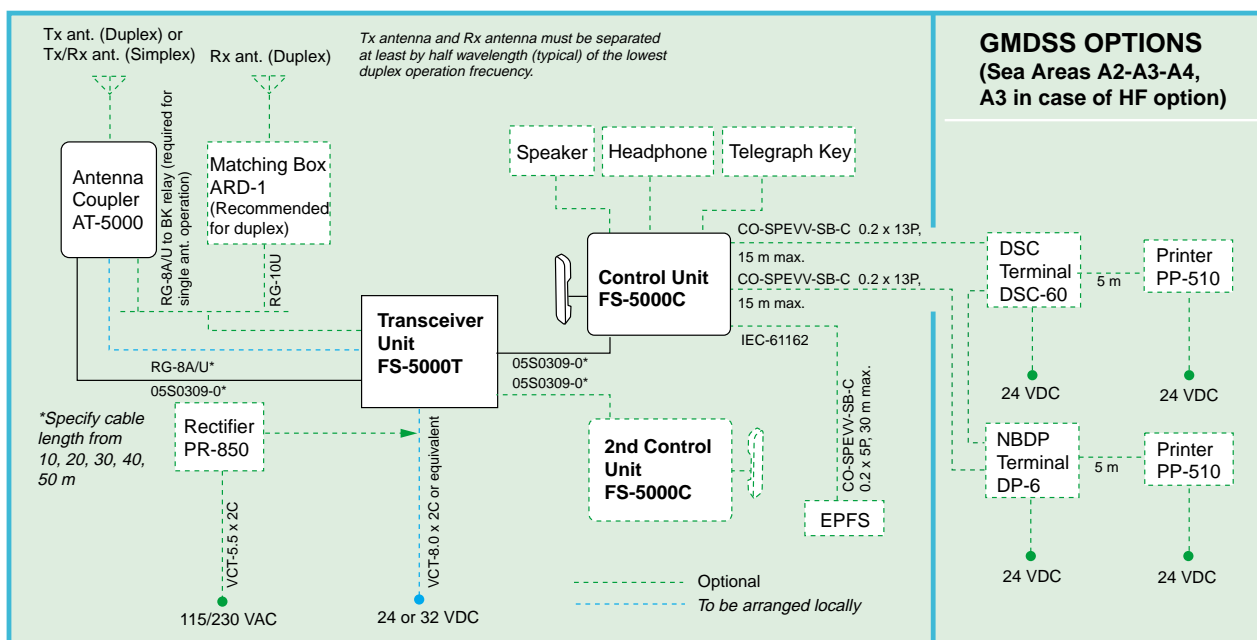
## ANTENNA COUPLER AT-5000



Automatically tunes to an antenna ranging 7 to 18 m long. Tuning time is 0.2 to 2 seconds typically in the same frequency band. Weatherproof by robust FRP housing and may be installed up to 50 m from the transceiver unit. Artificial Antenna (option) required by SOLAS can be fitted in the Coupler for test of Alarm Generator on a frequency specified by the administrations. Optional built-in BK relay permits semi-duplex or simplex operation with a single antenna

## TRANSCEIVER FS-5000T

Fully remote controlled blackbox may be installed up to 50 m away from the Control Unit. This unit contains modularized electronics for transmitter and receiver. Optional second Control Unit can be connected through a built-in switching board.



## Digital Selective Calling Terminal DSC-60 and Narrow-Band Direct-Printing Terminal DP-6

The **DSC-60** is a Class A MF/HF Digital Selective Calling (DSC) system with built-in DSC-Watch Receiver. The primary purpose is transmitting distress alerts on DSC frequency from ships in distress for improved operation. The DSC-60 incorporates a DSC Watch Receiver which provides continuous scanning of six distress frequencies: 2187.5, 4207.5, 6312, 8414.5, 12577, 16804.5; and 1.6 to 27.5 kHz. The DSC-60 can also be used as a remote controller of FS-5000.

The **DP-6** is a Telex Terminal for maritime safety communications and general communications for safety navigation. The DP-6 allows easy edition of messages prior to transmission. Messages are stored on a floppy disc and printed out on the printer.



DP-6



DSC-60



PP-510

# SPECIFICATIONS OF FS-5000

## GENERAL CHARACTERISTICS

### 1. Communication System

Full-duplex, semi-duplex or simplex

### 2. Frequency Range

1.6 to 30 MHz

(Receive in 10 Hz steps, Transmit in 100 Hz steps)

### 3. Class of Emission

J3E, R3E, A1A (CW), J2B (DSC, Telex)

### 4. Number of Channels

ITU frequencies including 2187.5 kHz and HF channels, 400 transmit and receive factory-programmed frequencies (MF/HF), DSC and NBDP distress frequencies. Separate section of Tx and Rx freq. Free selection (where authorized)

### 5. Power Supply

24 or 32 VDC (specify) receive 3 A, transmit 60 A max. (at 24 V)

115/230 VAC with an optional rectifier PR-850

## TRANSMITTER CHARACTERISTICS

### 1. RF Output Power

400 W<sub>pep</sub> +0/-1.4dB (1.6-25.5 MHz) at 50 ohms load, \*150 W at MF in U.S.A. (@24 VDC, IEC rec.)

\*Reduction to 60 W<sub>pep</sub> or less \*Full power for distress call

### 2. Frequency Accuracy

Frequency accuracy after warm-up: TX ±10 Hz  
Tuning Error: Rx 20 Hz (5 Hz by tune control)  
Tuning Drift: Rx 10 Hz (15 min.)

### 3. Two-tone Alarm Generator

Built in as standard. Complies with SOLAS and ITU-R

## ANTENNA COUPLER CHARACTERISTICS

### 1. Antenna (optional)

7 to 18 m wire or whip each for TX and RX (full duplex)  
*Single antenna operation on simplex or semi-duplex requires optional Relay Kit OP05-35 (to be mounted in Antenna Coupler)*

### 2. Input Impedance

50 ohms

### 3. Tuning Speed

Automatic control, 0.2 to 2 s typical

## RECEIVER CHARACTERISTICS

### 1. Receiving System

Double-conversion superheterodyne  
IF: 45455 kHz and 455 kHz

### 2. Sensitivity

Input level at 50 ohms to produce SINAD 20dB  
J3E/R3E: Less than 3 dB<sub>μ</sub>V

### 3. Intermodulation

90 dB<sub>μ</sub>V

### 4. Cross Modulation

94 dB<sub>μ</sub>V

### 5. Selectivity

J3E/R3E: 350 to 2700 Hz

A1A/F1B: ± 150 Hz

### 6. Audio output

2 W, 8 ohms built-in speaker

4 W, 4 ohms into external speaker

8 ohms, headphone

5 mW, 200 ohm handset

## EQUIPMENT LIST

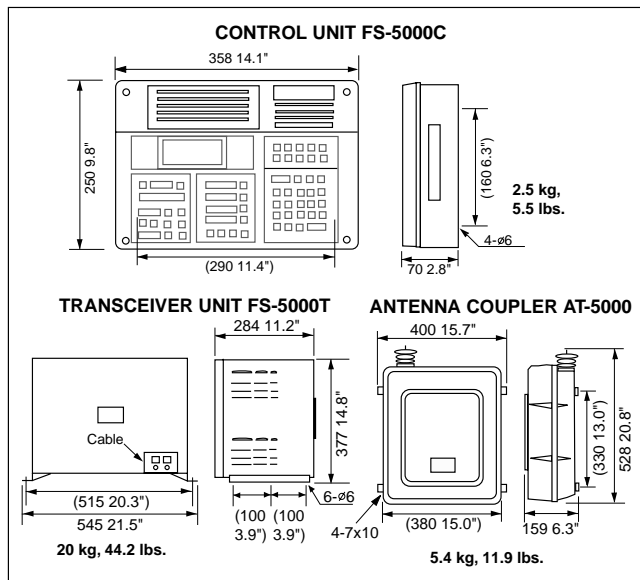
### (Standard)

1. Transceiver Unit FS-5000T	1 unit
2. Control Unit FS-5000C	1 unit
3. Antenna Coupler AT-5000	1 unit
4. Handset with Hanger	1 set

*Specify 24VDC or 32 VDC.*

### (Optional)

1. Rectifier PR-850 for 115/230 VAC mains
2. Additional Control Unit FS-5000C-OP
3. Handset HS-6000FZ5 for Additional Control Unit
4. DSC Terminal DSC-60
5. NBDP Terminal DP-6
6. Matching Box ARD-1 for receiving antenna on duplex
7. Artificial Antenna OP05-34 (to be mounted in ACU)
8. Antenna BK Relay Kit OP05-35 (to be mounted in ACU)
9. Handphone ST-90
10. External Speaker HCB100D
11. Tilttable Mounting Base OP-05-37 for Control Unit



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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