The Global Maritime Distress and Safety System (GMDSS) is the international radio safety system for ships mandated by the International Maritime Organization (IMO). The GMDSS system provides automated distress alerting and voice, data and telex/telephone communication services with local information.

Ships engaged in international shipping (Solas vessels) are obliged to carry GMDSS communication equipment. Also, most governments have specified use of selected GMDSS systems for their regulated domestic vessels and non-regulated vessels are permitted to use any GMDSS system.

### Required GMDSS Communication Radio equipment

<table>
<thead>
<tr>
<th>Sea Area</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Complete VHF and MF radio station</td>
</tr>
<tr>
<td>A2</td>
<td>Complete VHF and MF radio station</td>
</tr>
<tr>
<td>A3</td>
<td>Complete VHF and MF/HF radio station</td>
</tr>
</tbody>
</table>

**Notes:**
- A2 radios are not in use in SOLAS vessels. A2 stations are used on some charters, while certain MF/HF radio stations or Inmarsat stations may also be required.
- A3 stations are the only ones required on Solas vessels.

### Maintenance

Ships operating in Sea Area A1 or A2 must select at least one, and ships operating in Sea Area A3 and A4 must select at least two of the following methods of maintenance. Icom GMDSS radios offer an ideal duplication solution for replacement equipment.

- At Sea maintenance
- On-board maintenance
- Duplication of the following equipment
  - IC-205 as a complete VHF radio station
  - Sea Area A2 – a complete MF and MF radio station
  - Sea Area A3 – a complete MF/HF radio station

### GMDSS Radios

Icom’s line-up of GMDSS radio communication equipment includes the GM600 MF/HF radio transceiver, GM600 VHF radio transceiver and the IC-GM900. VHF radio for survival craft. All these radios comply with the EU Marine Equipment Directives (MED) to be carried and used on ships registered under the European Union.

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**SPECIFICATIONS**

### MF/HF MARINE TRANSCIEVER

- **Frequency range (GHz)**: 16.0–30.000 & 1.070–2.300
- **Antenna**: Built-in antenna
- **Modulation**: F1B, J2B, A1A, H3E, J3E
- **Frequency stability**: ±50 ppm
- **Order of precedence**: Main (20 dB SINAD) –2 dB/uni03BC emf typical –7 dB/uni03BC emf typical
- **Audio out-put**: DSC, DSE

### DIMENSIONS

- **IC-GM1600E**: 190 mm × 274 mm × 121.5 mm
- **GM600**: 148.25 mm × 274 mm × 114 mm
- **GM800**: 148.25 mm × 274 mm × 125 mm

### INTERCONNECTION DIAGRAM

- Includes connection diagrams for IC-GM1600E, GM600, and GM800.

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**SOS**

### Operational overview of GMDSS

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### Required GMDSS Communication Radio equipment

- **Port side**
- **Starboard side**
- **VHF Marine Transceivers**
- **MF/HF Marine Transceiver**

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The Latest GMDSS Functionality in a Very User-Friendly Package

User-Friendly Package

- 4.3 inch Wide Viewing Angle Colour Display
  - The 4.3 inch colour TFT LCD provides almost 180 degree wide viewing angle and displays high resolution characters in all conditions, even when wearing heavy gloves. The transparent display information from various viewing angles. The night mode display ensures good readability in low light conditions.

- Unifed Design User Interface
  - The GM600 (VHF) and GM800 (MF/HF) have a unified design and offer consistent operation. A combination of the directional keypad and soft keys provides simple operation. A combination of the directional keypad and soft keys provides simple operation. A combination of the directional keypad and soft keys provides simple operation. A combination of the directional keypad and soft keys provides simple operation.

- Provides Loud, Clear Audio
  - By adopting a new waterproof paper speaker cone, the speaker provides superior sound quality and a flat frequency response with a wide frequency range. In addition, the radio delivers a powerful 10 W (GM600)* audio when connected to an external speaker.

- Other Features
  - *GM800 delivers 4 W audio.
  - 125 W* (PEP) output power
  - IEC 61162-1 interface for GNSS receiver
  - Printer connector (Centronics IEEE1284)
  - Remote Distress alarm

Satisfies SOLAS Carriage Requirements

- GMDSS Portable for Survival Craft
  - The IC-GM1600E Marine VHF handheld has been designed for GMDSS compliant survival craft communications. This radio is engineered to survive and function in the extreme environmental conditions common in marine emergencies. Using this simple to use radio, operators can transmit a distress call without hesitation in an emergency.

- Meets Strict Environmental Requirements
  - The IC-GM1600E meets temperature, thermal shock, vibration and drop resistance from 1 m height requirements. After passing those environmental tests, the IC-GM1600E retains 1 m depth waterproof construction as specified by IMO resolutions A.694 (17), MSC149 (77) and related specifications.

- Optional Battery with Superior Low Temperature Characteristics
  - The optional high capacity primary Lithium battery, BP-304, provides more than 8 hours operation even at -20°C. The BP-304 can be used in the CP-141 (Duty cycle: Ty: Tr: Stand-b: 0: 6: 48) battery charger.

- Large Keypad with Positive Button Action
  - Clearly labeled large buttons and positive button action allows for operation in all conditions, even when wearing heavy gloves. The transparent display allows operation even from behind (not on top), and the operating label on the keypad will never be erased under hard use over many years.

- Wide Viewing Angle, High Intensity LCD
  - A wide viewing angle, high intensity LCD offers bright and easy to read characters. The bright LCD indicator on top of the front panel shows the operating status clearly.