

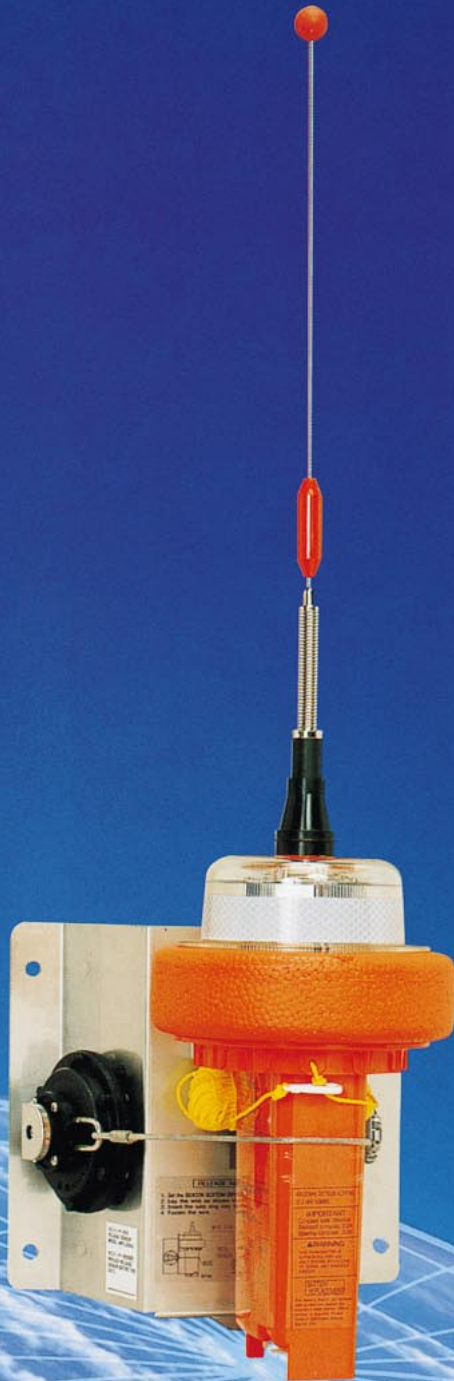
# JRC 406MHz SATELLITE EPIRB

Emergency Position Indicating Radio Beacon



## JQE-3A

*Designed in compliance with the carriage requirements for the GMDSS*



The Global Maritime Distress and Safety System (GMDSS) developed by International Maritime Organization (IMO) is a global maritime communications system using the latest digital and satellite communication technologies in order to improve the safety of life and ships at sea.

The COSPAS/SARSAT search and rescue (SAR) system constitutes a key part of the GMDSS. It provides an automatic distress monitoring service on emergency frequencies, including the 406MHz frequency transmitted from an Emergency Position Indicating Radio Beacon (EPIRB).

The 406MHz satellite EPIRB, when it is thrown into water from a vessel or automatically released from the bracket in distress, automatically emits the 406MHz emergency signal, which the COSPAS/SARSAT satellite receives and relays to a Local User's Terminal (LUT) on 1.5GHz. The LUT decodes the signal information including the location of the EPIRB and transmits it to a Rescue Co-ordination Center (RCC) for quick start of SAR operations by aircraft and vessels.

The JQE-3A is a float-free compact type EPIRB designed to emit the 406MHz emergency signal and the 121.5MHz homing signal in accordance with IMO/CCIR and COSPAS/SARSAT regulations.



*Japan Radio Co., Ltd.*



## ■ FEATURES

- The emergency transmission on 406MHz includes a digitally encoded message containing the ship's identity and nationality, thereby enabling an RCC to quickly catch the distress information. The ship's location can be determined with an accuracy of 2 to 5km.
- The JQE-3A incorporates a 121.5MHz emergency transmitter to emit a homing signal to the search and rescue aircraft in the immediate vicinity of the ship in distress.
- The JQE-3A is automatically released from the float-free release bracket under water pressure at a depth of less than 4 meters to float to the surface for continuous emissions for 48 hours or more with automatic flashing of the strobelight.

- Provision is made to prevent faulty signal emissions so that automatic signal emissions are available only in the floating state of the buoy. In event of distress, however, the buoy can be operated manually by a simple switch operation.
- The JQE-3A is of compact, lightweight, watertight and rugged design. It can easily be mounted on a bulkhead and even when it is thrown into water from a height of 20 meters, it can normally work.
- The battery life of the JQE-3A is improved to extend the battery's replacement up to 5 years.
- The water pressure sensor is of non-destructive type which can be repeatedly used. Its replacement period is 4 years.

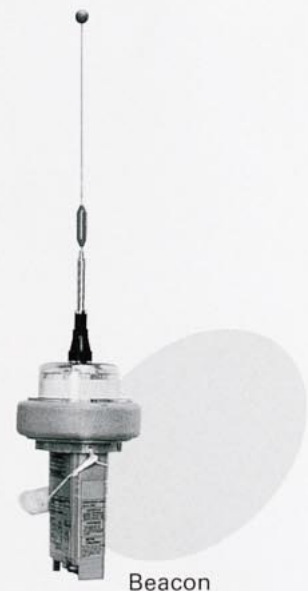
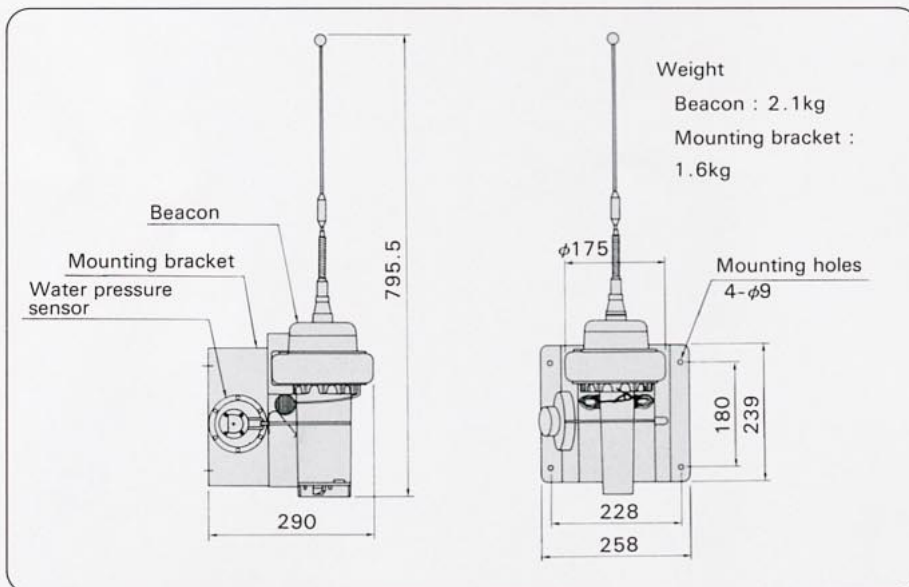
## ■ SPECIFICATIONS

<b>Operating frequency :</b>	406.025 ± 0.002MHz
<b>Frequency stability :</b>	2 × 10 <sup>-9</sup> 100msec or less (short-term)
<b>Output power :</b>	5watts ± 2dB
<b>Modulation :</b>	Phase modulation (1.1 ± 0.1 radian peak)
<b>Homing transmitter</b>	
<b>Frequency :</b>	121.5MHz
<b>Output power :</b>	50mW at 50-ohm load
<b>Modulation :</b>	Amplitude modulation
<b>Antenna :</b>	Vertical whip
<b>Battery type :</b>	Lithium (term of validity : 5years)
<b>Operating life :</b>	48 hours (or more)
<b>Activation methods :</b>	Automatic and manual

<b>Strobelight</b>	
<b>Effective intensity :</b>	0.75 candela or more (effective)
<b>Flash rate :</b>	20 to 30 times/minute
<b>Digital message</b>	
<b>Repetition rate :</b>	50sec ± 5%
<b>Transmission time :</b>	440msec ± 1% (short message)
<b>Temperature range</b>	
<b>Operating :</b>	-20°C to +55°C
<b>Storage :</b>	-30°C to +70°C
	(COSPAS/SARSAT class-2)
<b>Mounting bracket :</b>	Float free type with hydrostatic release

## ■ DIMENSIONS & WEIGHT

Specifications may be subject to change without notice.



For further information, contact:

**JRC**

Since 1915

**Japan Radio Co., Ltd.**

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