

RTCM 11000.2 Standard for 406 MHz Satellite Emergency Position-Indicating Radiobeacons (EPIRB), June 20, 2002

NOTE: This version of the RTCM EPIRB standard is incorporated by reference in the regulations of the U.S. Federal Communications Commission.

This document contains minimum requirements for the functional and technical performance of maritime satellite emergency position-indicating radiobeacons (EPIRBs) operating in the 406.0 to 406.1 MHz band through a polar-orbiting satellite system. A 406 MHz satellite EPIRB designed and manufactured to the standards contained in this document constitutes the satellite EPIRB portion of the COSPAS-SARSAT System developed and implemented by the COSPAS-SARSAT Partners (Canada, France, the Russian Federation, and the United States).

When activated, the satellite EPIRB transmits in short bursts at approximately 50 second intervals. The transmission consists of an unmodulated carrier followed by a digital message format that provides stored information (identification, nationality, type of user, etc.), and optionally, current information such as the type of emergency and estimated location. The stored information is encoded in the satellite EPIRB by the manufacturer. The stored message includes the satellite EPIRB's identification, which, when decoded into its 15 character hexadecimal representation becomes the satellite EPIRB's unique identifier number, or 15 -Hex ID. This number is used by the SAR forces to identify the specific vessel in distress when the satellite EPIRB is activated. For satellite EPIRBs carried on USA vessels, it is also the number which is used by the satellite EPIRB's owner to register the satellite EPIRB in a registration data base maintained by the NOAA, NESDIS United States Mission Control Center (USMCC). The registration data provided by the satellite EPIRB's owner contains important additional information about the vessel on which the satellite EPIRB is installed. It also contains emergency points of contact who could be contacted in the event that the satellite EPIRB is activated. When a distress message is received by the United States MCC, the registry information is automatically appended to the alert message which is sent to the SAR forces.

Satellite EPIRBs are divided into two categories:

1. Category 1 satellite EPIRB is designed for use by ships worldwide where a float-free, automatically-activated satellite EPIRB is needed and/or required.
2. Category 2 satellite EPIRB is designed for use by ships worldwide where a manually-activated satellite EPIRB without a float-free capability is needed and/or required.