

Radio Technical Commission for Maritime Services (RTCM)



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Beacon Manufacturers Workshop 2014



RTCM Overview

- RTCM is an international non-profit scientific, professional and educational organization
- Members are both government and non-government organizations
- Established in 1947 as a U.S. government advisory organization
- Now an independent organization with members from all over the world
- Headquartered in Arlington VA, (Washington DC)



RTCM Main Activities

- RTCMs main area of activity is related to commercial shipping and navigation and radiocommunications systems for these vessels
- It also works in other areas when requested such as Differential GPS and Terrestrial Satellite Distress Alerting
- RTCMs main role is in developing standards, but it also plays a major part in national and international committees, information dissemination to its members and advising on legislation and regulatory changes



RTCM
SC110 Sub-Committee
Emergency Beacons
(EPIRBs and PLBs)
Update



RTCM Special Committee SC110 on Emergency Beacons



- SC110's primary role is to develop and maintain standards for Emergency Beacons – 406 MHz EPIRBs, PLBs and 406 MHz Ship Security Alert Systems (SSAS)
- It is also involved in:
 - Considering new technology, ideas and other related matters of interest to its members e.g. AIS EPIRB, C/S MEOSAR system
 - RTCM also plays a very active role in the work of Cospas-Sarsat and in particular in its Joint Committee (JC) meetings
 - Developing input towards Second Generation Beacon Standards for MEOSAR
 - Working towards an EPIRB AIS standard



EPIRB Status

- Updated standard RTCM 11000.3 published June 2012
- Only addresses differences from the IEC standard
 - Mandatory Internal Navigation Device
 - Internal Navigation Device Timing
 - GNSS Self Test
 - Inadvertent Activation
 - Incorrect Mounting
 - Ergonomics Requirements and Tests
 - Cold Thermal Shock Tests
 - Testing internal GPS Receivers using GPS Simulators
- FCC issued a NPRM to update Part 80 of rules to adopt the new Std at the end of February, which was published in the Federal Register in early April
- The NPRM requests responders to advise the FCC when Certification, Manufacture, Sale and Use of EPIRBs not meeting the new standard should be introduced





PLB Status

- Current Standard RTCM 11010.2 Published July 2008
- Amendment 1 to above Std Published Aug 2010 – Annex G Internal Navigation Device Test Methods and Test Procedures
- Amendment 2 to the above Published June 2012 – Amends part of Annex G
- FCC issued a NPRM to update Part 95 of rules to adopt the new Std at the end of February, which was published in the Federal Register in early April
- An updated version of the PLB standard is expected to be approved at the SC110 meeting tomorrow, this introduces the following changes:
 - Mandatory internal GNSS, Altitude Test, Wet Self-Test





RTCM
SC128 Sub-Committee
Satellite Emergency Notification Devices
(SEND)



RTCM SC128 SEND STANDARD

- Current standard RTCM 12800.0 published August 2011
- FCC issued a NPRM to authorize equipment certification and use of SENDs that comply with RTCM standards
- RTCM petitioned the FCC for new rules to be added to Part 95
- The FCC currently proposes to continue to authorize SENDs pursuant to Part 25 of the MSS rules instead
- RTCM plans to respond to the NPRM with comments in support of its original petition
- An updated version of the SEND standard is expected to be approved this week, it contains minor editorial clarifications to the way that SENDs are intended to operate and to the distress message format to be sent to SAR services





RTCM

SC119 Sub-Committee

**Maritime Survivor Locator Devices (MSLDs)
(or Manoverboard devices)**



RTCM SC119 MSLD STANDARD

- Current standard RTCM 11901.1 published June 2012
- The MSLD standard currently covers devices that:
 - Transmit on 121.5 MHz
 - Operate on VHF DSC Channel 70
 - Use Active Signalling
 - Transmit on VHF AIS frequencies
- FCC issued a NPRM to authorize equipment certification and use of MSLDs that comply with RTCM standards
- The FCC is requesting feedback on whether these additions should be in Part 80 or Part 95 of the Rules
- An updated version of the MSLD standard is expected to be approved this week, it contains changes to permit both 'open loop' and 'closed loop' DSC devices





RTCM Impact / Benefits

So what has RTCM done for you over the years?

RTCM has always led the way in developing standards for Cospas-Sarsat 406 MHz beacons and continues to do so today



EPIRBs

- RTCM EPIRB standard published in 1987, one of the first 406 MHz EPIRB standards in the world (ETSI 1992, IEC 1994)
- Allowed authorization of 406 MHz EPIRBs in the USA by the FCC
- To date there are around 197,000 EPIRBs in the NOAA database
- So we can estimate that around 250,000 EPIRBs have been sold in the USA over the years
- Globally almost one million EPIRBs have been produced since 1988
- This equates to around \$125M of business for manufacturers in the USA and around \$500M globally



PLBs

- RTCM PLB Standard published in 2002, one of the first 406 MHz PLB standards in the world
- Authorisation of PLBs in the USA in 2003 would not have been possible without the RTCM PLB standard
- To date there are around 137,000 PLBs (ex Military) in the NOAA database
- So we can estimate that over 150,000 PLBs have been sold in the USA over the years
- Globally over half a million PLBs have been produced over the last 10 years
- This equates to around \$45M of business for manufacturers in the USA and around \$150M globally



Cospas-Sarsat

- RTCM has attended every JC meeting since 2005 (and individual members attended for some years before this)
- RTCM has submitted input papers to each meeting and has actively participated in refining C/S T.001 and T.007
- RTCM has attended every meeting on Second Generation Beacons since the first one in 2010
- RTCM is an active participant in submitting papers to SGB meetings and developing the T.X01 standard
- Next year RTCM will start working on Second Generation Beacons standards for EPIRBs and PLBs in the USA



Rescues

- Around 5,700 406 MHz SAR events in total to date, around 2 a day globally with almost 7 people a day being rescued
- Worldwide over 35,000 people have been saved to date
- In total some 7,300 people have been rescued in the USA
- Last year 140 people were rescued at sea in the USA (almost one every other day)
- Last year 87 people were rescued on land in the USA using PLBs (one every 4 days)



RTCM Impact / Benefits

The bottom line

RTCM makes a difference
but needs your contributions and inputs to do this

Thank you

Questions ?



For further information on RTCM and details of membership and the work of SC110 & SC128 visit

www.rtcn.org