

Agenda Item 5.5

PLB ISSUES

1. ACTION REQUIRED

The Joint Committee is invited to:

- a) note common issues related to PLBs; and
- b) recommend or request appropriate actions to provide any guidance for countries, manufacturers/distributors in order to help final users (person in distress and Rescue Coordinate Center) to use their beacon with all information.

2. RELATED STRATEGIC GOALS

The Joint Committee is invited to note that this information is provided in the context of the following Cospas-Sarsat Strategic Goals:

- STRATEGIC GOAL 1: CONTINUOUS AND EFFECTIVE SYSTEM OPERATIONS**
Objective 1: Deliver distress alerts to the appropriate Search and Rescue Points of Contact (SPOCs)
Action 1: Coordinate with ICAO, IMO and other appropriate bodies to identify SPOCs and ensure that proper arrangements and systems are in place to deliver alerts.
- STRATEGIC GOAL 3: WORLD WIDE SUPPORT FOR THE PROGRAMME**
Objective 1: Promote adoption and use of Cospas-Sarsat standards and Specifications
Action 1: Actively co-operate with standards organisations to ensure consistency of international and national standards with Cospas-Sarsat requirements.
- STRATEGIC GOAL 3: PROMOTE WORLD-WIDE SUPPORT FOR THE PROGRAMME**
Objective 3: Manage stakeholder expectations
Action 1: Liaise with appropriate international organisations to publicise System performance and inform user groups of System capabilities and Programme objectives.
- STRATEGIC GOAL 4: FOR PARTICIPANTS, USERS AND CUSTOMERS TO USE AND OPERATE THE SYSTEM TO ITS FULL POTENTIAL**
Objective 1: Raise user awareness on the availability and proper use of the System
Action 1: Develop a plan to educate users on the proper use and benefits of the system.

3. BACKGROUND

At this time, four types of COSPAS-SARSAT operational beacons are used:

- Emergency Locator Transmitters (ELTs), for aviation use;
- Emergency Position-Indicating Radio Beacons (EPIRBs), for maritime use;
- Personal Locator Beacon (PLB), for “personal use”;
- Ship Security Alert System (SSAS), for maritime security use.

The International Civil Aviation Organization (ICAO) supports ELT beacons for aviation domain. This organisation provides clear guidance and all countries are in charge of taking appropriate regulations in conformity of ICAO recommendations. ELTs are mandatory for civil aviation. PLBs coded with an “ELT/aviation protocol code” are considered as ELTs.

The International Maritime Organization (IMO) supports EPIRB and SSAS beacons for maritime domain. This organisation provides clear guidance and all countries are in charge of taking appropriate regulations in conformity of IMO recommendations. EPIRBs are mandatory aboard vessels under SOLAS (Safety Of Life At Sea) regulations. PLBs coded with an “EPIRB/maritime protocol code” are considered as EPIRBs.

For PLBs coded with a serial number, it is more difficult to have a direct link between the beacon and the mobile. Some PLBs are used only on a terrestrial domain and some are used multi/environmentally (e.g. in terrestrial and/or maritime and/or aeronautical domains).

In this case, some issues have been identified.

4. DISCUSSION

ELT, EPIRB and SSAS beacons are coded, as required by international and national regulations, with the same country code as the flag/registration of the mobile (e.g. vessel, aircraft).

For the most part, PLBs can be coded with maritime protocol codes (e.g. EPIRB WITH MMSI, EPIRB WITH SERIAL NUMBER, etc.) or aeronautical protocol codes (ELT WITH 24-BIT ADDRESS; ELT WITH SERIAL NUMBER, etc.) on user, standard and national location protocols. In this case, PLBs are processed like ELTs or EPIRBs, linked with a mobile (e.g. vessel, aircraft) and they are under the same regulations/recommendations. The above presumes that PLBs coded as ELTs meet the Cospas-Sarsat ELT technical standards.

As above, characteristics of PLBs coded with a serial number:

- can be used in one or several environments (e.g. maritime, aeronautical, terrestrial);
- not linked with a mobile (e.g. vessel, aircraft);
- belonging to a person/society.

Furthermore, for PLBs used terrestrially, there are no International Organisations in charge of making appropriate guidance, recommendations or regulations.

4.1. DETERMINE COUNTRY OF REGISTRATION / KIND OF USE

As with other COSPAS-SARSAT beacons, PLBs can be used anywhere in the world, but contrary to other beacon categories, PLBs are unregulated with regard to International Organizations.

§4.1.1: No guidance for manufacturers/distributors

Within the open / global market, users (owners) can easily buy a beacon (on the Internet or via other unregulated sources) without constraint or consideration of the beacon's Country Code.

For example: a manufacturer of COSPAS-SARSAT beacons can sell his beacons coded with a UK Country Code in the French and European markets.

§4.1.2: Country Code choice for his "charge of registration"

Some users (owners) buy their COSPAS-SARSAT beacons conditional only on whether or not they are free of tax or registration charge by a country's administration.

For example: some Belgian and Swiss Francophones chose COSPAS-SARSAT beacons coded with a French Country Code because their registration is free of charge. Their own countries' Administrations make a charge for beacon registration.

§4.1.3: Country Code of uses vs Country Code of nationality

Everywhere, and especially in Europe, people travel, live and practice their professional and recreational activities in different countries. It is sometimes difficult therefore, to know where a user (owner) should register his beacon (i.e. where he lives, where he practices his activities or if he should fall back on his nationality).

For example: a person of Swiss nationality, living in UK and practicing his activities (sailing and climbing) in Spanish territory must decide what is the best place to register his PLB (programmed with which Country Code).

§4.1.4: PLB can be used everywhere?

A PLB has the same capability (like ELT, EPIRB and SSAS beacons) to be heard everywhere in the world and it is well known that it is a reliable method of alerting rescue services of distress.

For beacons under OMI/OACI regulations (e.g. ELT, EPIRB, SSAS) appropriate International and National measures have been taken as a result of International Conventions (e.g. International Convention on Maritime Search and Rescue in 1979 and Convention on International Civil Aviation in 1944).

Volume 1 of International Aeronautical and Maritime Search and Rescue Manual (IAMSAR) speaks about Organization and Management Manual. So, at International level, centres in charge of Search And Rescue for Maritime and Aeronautical domain are [A/M/J]RCC ([Aeronautical / Maritime/ Joint] Rescue Co-ordination Centres).

For terrestrial domain, there is no “identified” Rescue Coordinate Center all over the world.

That is why it can be difficult to answer in all cases when someone asks if his/her PLB can be used terrestrially everywhere in the world. Technically: yes, but operationally it is not easy to know if adequate structures exist (this information is not available in C/S S.007). In addition, even when there is a NOCR; if there is inadequate structure in the country where the beacon emits, it could take a long time to start Search and Rescue operations.

4.2. DETERMINE WHO IS IN CHARGE OF GUIDANCE/RECOMMENDATION

For PLBs that not used in the aeronautical or maritime environments, there is no universal guidance on how best internationally agile PLBs should be coded and registered.

§4.2.1: International guidance/recommendation

There is no International Organization in charge of PLBs. The consequence is that there is no guidance and/or recommendations to harmonize actions that have been taken by countries in order to develop any regulations.

In this case, COSPAS-SARSAT is the knowledgeable and expert International Organisation and it is suggested that it should provide any guidance/recommendations for:

- countries, to help them to develop appropriate rules; and
- to require manufacturers/distributors to responsibly distribute COSPAS-SARSAT distress beacons in each country with appropriate country codes; and
- to educate users / owners on the salient coding and registration factors relating to each country.

§4.2.2: Distribution on market

Following guidance/recommendation from COSPAS-SARSAT, manufacturers/distributors have:

- to take more responsibility for ensuring that COSPAS-SARSAT beacons are coded with the appropriate Country Code (according to C/S S.007); and
- to ensure that responsible and accurate information is provided to their customers by manufacturers and their agents, who should also retain, for production to SAR agencies when necessary customer contact information against each beacon sold.

5. RECOMMENDATIONS

Switzerland, the UK and France recommend that the Joint Committee:

- a) invite Participants contribute to the work necessary to revise document C/S G.003 “Introduction to the Cospas-Sarsat System” to provide clear information and guidance (e.g. PLB issues, battery pack; testing beacons, etc.) to owners or prospective owners, and retailers, of serially-encoded PLBs (who may be unfamiliar with Cospas-Sarsat) to enable them to make well informed decisions regarding PLB purchases and registration;
- b) request the Secretariat to consider in the course of Cospas-Sarsat website redesign ways to provide the above information in an interactive fashion on the website, and to advise on resource requirements for implementation;
- c) review and revise as appropriate proposed text (at Attachment 1) on “International Regulations” for inclusion in the Handbook of Beacon Regulations, document C/S S.007;
- d) invite Participants to contribute to the work necessary to revise document C/S S.007 to include information about the ways that Participants allow use of serially-encoded PLBs by their citizens or by those who may be under their jurisdiction (for example those non-citizens who may be temporarily visiting for recreational purposes), in particular as discussed in section 4.1.4 and 4.2.1 above;
- e) invite Participants to consider and advise on whether increased reliance on the IBRD, especially as a centralized facility available for the registration of PLBs, would help to mitigate the problems related to serially-encoded PLBs discussed in sections 4.1.2 and 4.1.3 above; and
- f) invite Participants to make recommendations to CSC-51 about identifying resources that may be required to perform the above work.

ATTACHMENT 1

Proposed modifications to document C/S S.007 “Handbook of Beacon Regulations” are shown in **red** and a **red-strikeout** is used for deleted text.

1.4 International Regulations

1.4.1 EPIRBs and ELTs (or PLBs coded like EPIRBs or ELTs)

Regulations usually reflect the specific application in each country/region of regulations (i.e. Recommendations, Resolutions, etc.) issued by the following international organizations:

- the International Civil Aviation Organization (ICAO);
- the International Maritime Organization (IMO); and
- the International Telecommunication Union (ITU).

Copies of the relevant IMO Assembly Resolutions and Annexes to the Convention on International Civil Aviation are provided at section 6. Other international organizations' documents will be included for information in section 6 as appropriate.

1.4.2 PLBs (coded with a serial number)

A PLB (Personal Locator Beacon) has a direct link with its user (owner) rather than with a mobile unit (e.g. vessel, aircraft). Based on this, it is recommended that:

- **a PLB should be coded with the country code of:**
 - **the nationality of the users (owners), or**
 - **the country where the user (owner) lives; and**
- **emergency contacts listed in the registration record of the PLB should speak the official language associated with the country code of the beacon.**

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