INTERNATIONAL CIVIL AVIATION ORGANIZATION

SOUTH AMERICAN REGIONAL OFFICE

GUIDELINES TO IMPROVE THE USE OF THE COSPAS/SARSAT SYSTEM IN THE CAR/SAM REGIONS

Lima, May 2001

Guidelines to improve the use of the Cospas/Sarsat System in the CAR/SAM Regions

COSPAS = Space system for search of vessels in distress

SARSAT = Search and rescue satellite-aided tracking

1. Purpose

1.1 The main purpose of these guidelines is to provide guidance and references to CAR/SAM States for the development of their domestic planning and regulation, with a view to foster the use of the Cospas/Sarsat System and, thus, improve the efficiency of search and rescue (SAR) services in both Regions.

1.2 These guidelines have been prepared based on ICAO provisions, Cospas/Sarsat documents and material generated at informal meetings and seminars related to the implementation and operation of the Cospas/Sarsat System.

2. Background of the Cospas/Sarsat System

2.1 Implementation and evolution of the System

2.1.1 The Cospas/Sarsat System originated from a partnership among Canada, the United States of America, France and the Soviet Union, and has evolved as follows, up until the aforementioned States signed the International Cospas/Sarsat Programme Agreement:

- 1979 - Canada, USA and France agree to test jointly an experimental SARSAT system;
- 1980 - The SARSAT system partners sign an agreement with the Soviet Union for a joint demonstration project called Cospas/Sarsat;
- 1982 - The Soviet Union launches the first search satellite (COSPAS I); on that same year, the first satellite-assisted rescue takes place;
- 1983 - The SARSAT and COSPAS II satellites are launched;
- 1984 - The 406 MHz system is deemed ready for operational use;
- 1984 - Experiments with a geostationary system using the GOES 7 satellite begin;
- 1987 - An agreement is signed with INMARSAT to provide a central secretariat for Cospas/Sarsat, with headquarters in London;

1988 - The International Cospas/Sarsat Programme Agreement is signed by Canada, USA, France and the Soviet Union.

Note - The Russian Federation has undertaken the responsibilities of the former Soviet Union in the Cospas/Sarsat Programme.

2.2 **International Cospas/Sarsat Programme Agreement**

2.2.1 The International Cospas/Sarsat Programme Agreement was formalized bearing in mind navigation safety and, above all, humanitarian factors **(See Attachment A).**

3. **Guidelines for participation in the Cospas/Sarsat System**

3.1 The guidelines for participation in the Cospas/Sarsat system provide basic information on the principles governing access and use of the system by States. They also contain recommendations that States should take into account to ensure an efficient operation of the system. These guidelines are described in detail in the document entitled "Guidelines for participating in the Cospas/Sarsat System", **(See Attachment B):**

4. **Responsibilities of the Contracting States regarding use of the Cospas/Sarsat System**

4.1 **Establishment of search and rescue point of contact (SPOC)**

4.1.1 Regarding this requirement, it should be noted that Annex 12 prescribes that States shall designate a SPOC for receiving alert messages from the Cospas/Sarsat System (see Annex 12, 3.2.4).

4.1.2 In this context, it is recalled that the CAR/SAM/2 RAN Meeting formulated Conclusion 7/9, urging CAR/SAM States to designate SPOCs.

4.2 **Installation of emergency locator transmitters (ELTs) on aircraft**

4.2.1 Provisions regarding the mandatory carriage of ELTs on board aircraft are included in Annex 6 as follows:

a) **Commercial air transport:**

- All airplanes operated on long range over water flights shall be equipped with at least two ELTs. (Annex 6, Part I, 6.17.1). Long-range flights over water are described in Annex 6, Part I, 6.5.3;

- All airplanes overflying land areas considered by the State concerned to be difficult for search and rescue shall be equipped with at least one ELT.

b) **General aviation**

- All airplanes operated on extended flights over water and when operated on flights over land areas considered by the State concerned to be difficult for search and rescue shall be equipped with one ELT (Annex 6, Part II, 6.3.3 b), 6.4 and 6.12).

c) **Helicopters**

- All helicopters operated on flights over water as described in Annex 6, Part III, Section III, 4.3.1, shall be equipped with at least one ELT per raft carried but no more than a total of two ELTs are required (Annex 6, Part III, Section III, 4.10.1).

- All helicopters on flights over designated land areas considered by the State concerned to be difficult for search and rescue, shall be equipped with at least one ELT (Annex 6, Part III, Section III, 4.4 and 4.10.2).

Notes:

(1) Aside from the Standards indicated in a), b) and c) above, Annex 6 **recommends** that **all** airplanes should carry an automatically activated ELT.

(2) ELT equipment carried on board to satisfy the requirements of a), b) and c) above, shall operate in accordance with the relevant provisions of **Annex 10, Vol. III, Part II, Chapter 5.**

4.3 Technical requirements for the ELT

4.3.1 The Standards and Recommended Practices related to the technical specifications of ELTs are contained in Annex 10, Vol. III, Part II, Chapter 5. Aside from the technical aspects, it should be noted that the Standard of Annex 10 stipulates that States shall take the necessary steps to keep a registry of 406 MHz ELTs. That registry and the corresponding data shall be available for the rescue co-ordination centres (RCCs). Attachment C contains a model registration card for 406 MHz ELTs.

5. Implementation and operation of the Cospas/Sarsat System in the CAR/SAM Regions

5.1 The provisions and requirements for implementation of the Cospas/Sarsat System elements, are defined in ICAO SARPs and documents developed by the Cospas/Sarsat.

5.2 Regarding the implementation and use of the Cospas/Sarsat System in the CAR/SAM Regions, the CAR/SAM/2 RAN Meeting (Santiago de Chile, 2-19 May, 1989), in addition to the provisions stated in 5.1 above, recalled that the 26th Session of the Assembly had expressed its support of the work being carried out in the field of satellite-assisted search and rescue and that the Council had invited States to consider their participation in the Cospas/Sarsat System. It was also noted that the information on the system was contained in ICAO Circular 185, "Satellite-aided Search and Rescue Cospas/Sarsat System."

5.3 Furthermore, the CAR/SAM/2 Meeting agreed that CAR/SAM States should be encouraged to establish contact with the Cospas/Sarsat Secretariat in order to consider their participation in the Cospas/Sarsat Programme and, at least, inform the Secretariat as to the corresponding SPOCs assigned to receive alert messages generated by the System and distributed by Mission Control Centres (MCCs). Since distress calls detected by the Cospas/Sarsat System could be related to aeronautical, maritime or terrestrial incidents, there should be a SPOC for relaying alert information within a SAR region. The SPOC could be an existing aeronautical or maritime RCC accepting responsibility for handling all Cospas/Sarsat alert information, irrespective of the nature of the distress. Consequently, the Meeting decided to formulate Recommendation 7/9, as follows:

RECOMMENDATION 7/9 - DESIGNATION OF SAR POINT OF CONTACT (SPOC)

a) States which have not already done so, designate a SPOC which will receive alerts detected by Cospas/Sarsat System; and

b) The SPOCs be part of the information contained in Table SAR-1 of the CAR/SAM ANP.

5.4 Regarding the above, the meeting agreed that the CAR/SAM Regional Planning and Implementation Group (GREPECAS) would be the appropriate body to study the implementation and use of the Cospas/Sarsat System at a regional level. In this respect, the meeting formulated Conclusion 7/10, as follows:

CONCLUSION 7/10 - IMPLEMENTATION AND USE OF COSPAS/SARSAT ON REGIONAL BASIS

That all appropriate matters concerning the implementation and use of Cospas/Sarsat on regional basis be addressed to CAR/SAM Regional Planning and Implementation Group, in close coordination with the Cospas/Sarsat Council.

5.5 Finally, the CAR/SAM/2 RAN Meeting agreed that the holding of seminars on the Cospas/Sarsat System would be beneficial for States. Therefore, Recommendation 7/11 was developed as follows:

RECOMMENDATION 7/11 -COSPAS/SARSAT SEMINARS

That ICAO, through CAR/SAM Regional Offices, organize Seminars with participation of States having experience in the Cospas/Sarsat programme, or use other appropriate means, to distribute information on satellite-aided SAR.

5.6 **Action by CAR/SAM Regional Offices towards the implementation and use of the Cospas/Sarsat System**

5.6.1 As part of its functions, the ICAO NACC and SAM Regional Offices have been doing a ongoing follow-up of CAR/SAM/2 RAN Conclusions and Recommendations related to the implementation of Part V - Search and Rescue Services of the CAR/SAM ANP, Doc. 8733, including elements related to the Cospas/Sarsat System.

5.6.2 The activities of Regional Offices aimed at fostering the implementation and use of the Cospas/Sarsat System included the holding of seminars, informal meetings and assistance to States during country missions.

5.6.3 Regarding the status of implementation of the Cospas/Sarsat System in the CAR/SAM Regions, the implementation and use of the System in many CAR/SAM States has not yet reached the desired level, despite its clear benefits for search and rescue services and despite the provisions contained in the SARPs and ICAO guidelines regarding this matter, thus impairing SAR efficiency in both Regions.

5.6.4 An analysis of possible causes which might be preventing or hindering a more efficient use of the Cospas/Sarsat System in the CAR/SAM Regions has led to the conclusion that the main obstacle for its implementation and use is poor organization of SAR services in many States. It is clear that alert messages generated by the System will be of little or no use if the SAR structure involved is not prepared to receive and process the messages and dispatch SAR forces in a timely manner. Likewise, if States lack suitable legislation requiring aircraft under their registry to carry ELT, an adequate level of efficiency cannot be expected from the System.

6. Action required to improve implementation and use of the Cospas/Sarsat System in the CAR/SAM Regions

6.1 Organization and implementation of SAR services

6.1.1 The responsibilities of Contracting States related to providing assistance to aircraft in distress in their territories are clearly defined in Article 25 of the Convention on International Civil Aviation. It should also be recalled that the key to a successful search and rescue operation is the speed and efficiency by which it can be organized and conducted. The assumption should be that, in all incidents, there are survivors requiring assistance and whose possibilities for survival decrease with every minute lost.

6.1.2 As stated before, the success of a SAR operation depends basically on the RCC receiving promptly the available information required for assessing the distress, deciding on the best course of action and sending available SAR forces to locate and help the survivors as soon as possible.

6.1.3 Experience has shown that the possibilities for survival of injured people decrease considerably during the first 24 hours following the accident and, for those uninjured, after the first three days. Furthermore, it is a fact that, due to "shock" resulting from the accident, uninjured and physically capable people often cannot logically manage to do even the simplest task, thus impairing, delaying and even preventing them from saving themselves.

6.1.4 All of the above underlines the fact that the efficiency of SAR services depends upon proper organization and operational structure at State level. Therefore, the implementation and proper use of the Cospas/Sarsat System depends upon said organization and structure.

6.2 Assignment of a SAR point of contact - SPOC

6.2.1 One of the elements required for achieving the desired efficiency in the Cospas/Sarsat System is timely delivery of alert messages generated by the System to the RCC responsible for the corresponding SRR. To that end, a SPOC must have been established and reported to Cospas/Sarsat.

6.2.2 In this respect, it should be noted that Annex 12 establishes that States shall assign a SPOC for receiving Cospas/Sarsat alert messages. Likewise, it should be recalled that, under Agenda Item 7, the CAR/SAM/2 RAN Meeting formulated Recommendation 7/9, which was approved by the Council and included in Part V of the CAR/SAM ANP for compliance by States. **(See Attachment I).**

6.2.3 However, many States have not yet established their SPOCs as required by ICAO. As a result, the corresponding SAR services are not benefitting from the valuable support that could be obtained from the Cospas/Sarsat System.

6.3 Regulation on the use of ELT equipment on board aircraft

6.3.1 The operation of the Cospas/Sarsat System is based on the integration of space (satellite) and ground (LUT/MCC/SPOC) segments and airborne equipment (ELT). The system is useless if the aircraft in distress does not have an ELT. In this sense, it should be noted that the Standard of Annex 6 Parts I, II and III clearly states the requirements for ELT installation on board used in commercial air transport, general aviation, and helicopters.

6.3.2 It should also be recalled that the CAR/SAM/2 RAN Meeting, when discussing Agenda Item 7, stressed the need for States to comply with the provisions of Annex 6 and formulated **Conclusion 7/8** in that respect. Regarding implementation, the GREPECAS/6 Meeting, as a preliminary step to the current guidelines, approved **Conclusion 6/12 b),** urging CAR/SAM States to establish appropriate **regulation** for mandatory use of the 406 MHz ELT in the course of 1997.

6.3.3 Experience has clearly shown that search time is considerably reduced when using the location information provided by the Cospas/Sarsat System, thus adding to the possibilities of saving lives and precious SAR resources, especially if using the 406 MHz ELT. According to data provided by Cospas/Sarsat and by some administrations, many lives have been saved thanks to quick location through the system. Aside from humanitarian aspects, cost-benefit analyses prepared by some administrations have shown that savings in the cost of search achieved by using the satellite system, shall recover, in a short time, the implementation cost of ELTs and ground elements.

6.3.4 Regarding the type of ELT to be installed, it should be recalled that ICAO Annex 10 recommends the ELTs operating simultaneously on 406 and 121.5 due to its operational advantages over ELTs operating on 121.5 MHz only

Main advantages of the 406/121.5 MHz over the 121.5 MHz ELTs

- was specifically designed for use with satellites;
- provides global coverage;
- provides greater system capacity;
- provides greater location precision;
- provides better resolution of ambiguities;
- provides coded identification data on aircraft/vessel or person in distress and other information of interest;
- allows a 121.5 MHz signal for homing;

- is standardized for the Cospas/Sarsat System and enables registration by the State;

- has satellite-processed signals, which increases system efficiency.

6.3.5 As to the performance of the 121.5 MHz and 406 MHz beacons, **Attachment D** contains a comparative table of equipment performance. Regarding location precision, practical tests with 121.5 and 406 MHz beacons conducted by Cospas/Sarsat have given the following results:

Precision characteristics
of 121.5 and 406 MHz beacons
(tests conducted by Cospas/Sarsat)

Beacons	Location Precision	Location Probability %	Resolution of Ambiguities %
121. MHz	18.5 km (average)	85	75
406 MHz	5 km	87	95
	10 km	94	
	20 km	97	

6.3.6 Although it is prerequisite for obtaining the benefits of the Cospas/Sarsat System for SAR operations and despite provisions contained in the relevant ICAO documentation, not all CAR/SAM States have included in their airworthiness regulations specific provisions on the compulsory use of ELT equipment on board of aircraft under their registration.

6.4 **Problems related to the operation and use of the Cospas/Sarsat System**

6.4.1 The use of the Cospas/Sarsat System has helped to save, up until December 1996, approximately 6,178 people in 1959 SAR operations. However, the system has admittedly some deficiencies, which, to a certain extent, impair its efficiency and, thus, the location and rescue of many people in distress. The main problems of the system are the interference in the 121.5 and 406 MHz frequencies and the false alarms.

Interference on 121.5 and 406 Mhz

6.4.2 This type of interference mainly originates from unauthorized transmissions 121.5 and 406 MHz or nearby frequencies. Such interferences reduce system efficiency, especially in the following aspects:

- interference may mask alert transmissions from emergency beacons;
- it causes location errors in emergency transmissions;
- system resources are required for tracking, location and elimination of interference; and
- in addition to the above, interference contributes to reduce system reliability.

Solution to interference problems

6.4.3 The solution to interference-related problems in 121.5 and 406 MHz ELTs lies in administrations taking action to eliminate interference sources, developing, at the same time, awareness programmes concerning this issue.

6.4.4 In this sense, it should be noted that, in keeping with Cospas/Sarsat data, interference in the CAR/SAM Regions has decreased significantly since 1989.

Beacon activation without a state of emergency

6.4.5 This problem results from unauthorized activation of beacons when there is no emergency. It also occurs due to accidental activation.

6.4.6 Experience has shown that the main causes of undue activation of beacons are related to the following main factors:

- improper handling of the equipment;
- poor maintenance of the equipment;
- inadequate installation of the equipment;
- accidental beacon activation caused by rough landing; etc.

6.4.7 Regarding false alerts it should be noted that they cause serious harm to the system and to the efficiency of SAR. In this sense, the following could be mentioned:

- allocation of SAR resources to locate the beacons and terminate their transmissions;
- waste of time and SAR funds;
- diversion of SAR resources from actual emergencies; and
- beacon activation without a real state of emergency reduces the confidence in the Cospas/Sarsat System.

6.4.8 The following table shows false alarm data developed by the United States Mission Co-ordination Centre (USMCC) for 1994.

Beacon activation without a state of emergency
(Ref.: Data recorded by the USMCC)

Beacons	Alert Messages	Emergency		Remarks
		False	True	
121.5/243 MHz	13,298	97.8%	2.2%	
406 MHz	1,378	89.4%	10.6%	82% of the false alarms was solved through RCC telephone line, based on the information provided by the 406 MHz beacon data base before SAR forces were activated.

Solution to cases of beacon activation without a state of emergency

6.4.9 The solution to these problems might be in the hands of Civil Aviation Administrations and manufacturers, as follows:

a) Administrations would need to develop training programmes for users, to ensure:

- adequate maintenance of beacons;
- correct handling of beacons;
- correct equipment testing procedures.

b) Manufacturers would need to improve beacon design to ensure:

- better reliability; and
- easier and safer use of beacons by users (switch activation).

6.5 Status of implementation of the ground segment (LUT/MCC) in the CAR/SAM Regions

6.5.1 The Regional Planning and Implementation Group (GREPECAS), at its Sixth Meeting (Mexico City, 1-7 October, 1996), examined the work carried out by the ATS/SG concerning the implementation of the Cospas/Sarsat System in the CAR/SAM Regions. Regarding the status of implementation of the LUTs/MCCs, it took note of the following data:

a) **Argentina:** A project is underway for the installation of two LUTs and one MCC in the course of 1997. One LUT/MCC would be located in Ezeiza and the other LUT would be installed in the southern part of the country;

b) **Brazil:** There is one LUT/MCC installed in Brasilia and one LUT in Recife. Furthermore, the Administration will install a third LUT in the north part of the country (Manaus);

c) **Chile:** There is one LUT/MCC installed in Santiago. Moreover, the Administration has foreseen the installation in 1997 of a second LUT in the southern part of the country;

d) **United States:** The LUTs of the United States which are of interest to the CAR/SAM Regions are installed in California, Houston and Puerto Rico. They are connected to the MCC of the United States (USMCC, Suitland, Maryland, USA), whose Service Area includes the ICAO CAR and SAM Regions; and

e) **Peru:** There is one LUT/MCC installed in Lima/Callao. The system, which is operated by the Peruvian Coast Guard, was installed mainly to support maritime SAR; however, it also supports aeronautical SAR.

6.5.2 Regarding the systems mentioned in 6.5.1 above, it should be noted that the LUTs and MCC of Brazil have been commissioned by Cospas/Sarsat.

6.5.3 Regarding coverage requirements for the CAR/SAM Regions, it should be noted that the LUTs already implemented, supplemented by those in the implementation/planning phase, would suffice to meet coverage requirements of the Cospas/Sarsat System in both Regions. In this sense, it would be worth noting that there is no need for new facilities nor the respective financial investments in LUTs/MCCs for adequate reception of System alert messages. Attachment E shows approximate coverages of the aforementioned LUTs.

6.6 Proposal for a Cospas/Sarsat South American Region

6.6.1 In keeping with the current structure established by Cospas/Sarsat, the ICAO CAR/SAM Regions are included in the West (W) Region of Cospas/Sarsat, within the Service Area of the United States MCC (USMCC), which is the Regional (Nodal) Centre responsible for transmission of system alerts to the SPOCs of CAR/SAM States.

6.6.2 During the Cospas/Sarsat Seminar and the ATS/SAR Informal Meeting held at the ICAO SAM Regional Office (Lima, 28 November-1 December, 1995), the Cospas/Sarsat Secretariat presented a proposal/study originated by USA on the establishment of a Cospas/Sarsat South American Region aimed at improving system efficiency in South America. According to the proposal, the Cospas/Sarsat West (W) Region would basically be divided into a northern sector, which would include the ICAO CAR Region, and a southern sector with the SAM Region. **Attachment F** shows the approximate boundaries of the proposed Cospas/Sarsat South American Region.

6.6.3 Based on studies carried out by Cospas/Sarsat, the establishment of a South American Region would generate the following immediate benefits for SAR services:

a) Improved distribution of Cospas/Sarsat alert messages:

- alert data from the 121.5 and 406 MHz ELTs would be sent directly to RCCs (SPOCs) concerned;

- coverage overlap would enable alarm detection and distribution during scheduled and non-scheduled maintenance periods.

b) Improved operational efficiency of the System through filtering of redundant messages:

- filtering would be the process of eliminating redundant alarm messages when two or more messages regarding the same beacon are received;

- through filtering the RCC receives a single message from Cospas/Sarsat.

c) The Region would support its own requirements:

- System resources would be better used, since the South American MCCs have more experience in the region. The better knowledge of SAR requirements could facilitate and improve Cospas/Sarsat applications;

- overlap of LUT coverage would enable several MCCs to provide services in specific areas of the continent.

6.6.4 It would be worth noting that the Cospas/Sarsat South American Region could be structured to receive operational support from the MCCs of Argentina, Brazil, Chile and Peru as they are commissioned by Cospas/Sarsat. Consequently, one of these MCCs could in due course be commissioned as Nodal MCC. The main responsibilities of the Nodal MCC in the South American Region would be as follows:

a) Co-ordination of alarm messages for South America

b) Co-ordination of system information for South America

c) Co-ordination of Cospas/Sarsat activities

6.7 Documentation on the Cospas/Sarsat System

6.7.1 In order to facilitate the implementation and correct use of the system and to gradually improve its efficiency, Administrations would need to have available updated documentation on Cospas/Sarsat. Attachment G shows a list of these documents, which may be requested from the Cospas/Sarsat Secretariat.

- END -

List of Attachments

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406 MHz EMERGENCY BEACON
COSPAS/SARSAT REGISTRATION CARD (Model)

1. Instructions for Manufacturers / Retailers: Please complete this section of the card.

Beacon Manufacturer:. . . . . Model: . . . . . .
Number of Cospas/Sarsat approval: . . . . . .
Manufacturer, Retailer or Agent Address: :. . . . . .
Tel: . . . . . Fax: . . . . . .
If the beacon is: (Please mark)
__ A maritime EPIRB, please consult the purchaser to fill in sections 2 and 3 or __ an aviation ELT , please consult the purchaser to fill in sections 2 and 4 or
__ a Personal Localizer Beacon (PLB), please consult the purchaser to fill in section 2 and provide the address of the authority of registry, as shown in the following sheet.

This unique identification beacon key of 15 Hexadecimal characters **should** be provided below (26-85 bits of digital messages).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

2. Users data: To be provided by the Owner.

Name of the Owner: . . . . . Address: . . . . . .

Telephone (Home) . . . . . (Work): . . . . . .

Emergency Contacts:

Name: . . . . . Name: . . . . . .
Telephone (home) : . . . . . Work: . . . . . .
Telephone (home) : . . . . . Work: . . . . . .

3. EPIRB: (Details of the Ship)

Name of the Ship:
Reg. Number of the Ship:. . . . . .(if applicable)
Radiocall signal: . . . . . .
MMSI Numbers (9 digits):
Ship's measure: . . . . . .
Gross Tonnage: . . . . . .
Puerto de Base:

Max. No. of __ less than:. . . . . .

4. ELT: Aircraft Details

Aircrat Designator type: . . . . . .

Aircraft Registration Marks : . . . . . .
Or Aircraft Operator: . . . . . (3-letter code)

Airport Base . . . . . .

Max No. of __ less than 5.

Persons on board: __ 5 to 25. __ more than 25. __ Navigation __ On-board force __ outboard F. __ Other Propulsion, specifiy: . . . . . . Ship color: . . . . . . Communications/Navigation: (please mark) . . . . . . VHF __,MF __, HF __, DSC __, Inmarsat-A __,B __, C __, M _, Inmarsat Telephone Nos . . . . . . Other Coms. (for ex. Celular No.: . . . . . . Global Nav. Sat. System (GPS / Glonass) . . . . . . Other Nav. Primary Systems	Persons on-borar __ 5 to 25. __ more than 25. Aircraft Color: . . . . . . Communications/ Navigation: (please mark with an X) VHF __, UHF __, HF __, Satcom Voice __, Data __, VOR __, DME __, ADF __, Inertial Nav: __, RNAV __, Glonass / GPS: __, Other Nav Systems: . . . .

See instructions for purchaser / User in the next Sheet

5. Instructions for purchaser/user

The 406 MHz beacon that you have acquired, must be registered with the appropriate National Authority in the country identified by the "Country Code" of 27 to 36 of the Beacon Identification Code.

After the purchae please complete this registry card and send it via mail to the address indicated below (provided by the manufacturer / agent) or request the national authority for registration.

This card must also be used to notify the property change or beacon transference.

If your beacon has been re-codified, please enter below Hexadecimal Characters of the Previous Beacon Identification Code.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	

NOTE

The following countries have specified their own requirements for registry. Please use the appropriate natoinal form:

Australia - Canada - Chile - France - Norway – Russia – United States of America.

Address of the Registration Authority
(To be provided by the manufacturer / agent).

_____

_____

_____

_____

Fax No. _____ Tel. No: _____

E-mail: _____

PP/1030-June 1996

DRAFT REGULATIONS FOR MANDATORY USE OF EMERGENCY LOCATION BEACONS (ELT)

IN VIEW OF:

The need for utilization at CAR/SAM Regional Level of the Cospas/Sarsat System.

CONSIDERING:

- That the Search and Rescue Service equipped with the Cospas/Sarsat, Terrestrial Segment obtains an easy and accurate detection of aircraft either in danger.

- That Points of Contact (SPOC) are established in the CAR/SAM Regional Air Navigation Plan.

- That the utilization of Emergency Location Beacons (ELT), improves the possibility of locating the aircraft which has this equipment.

IT IS RESOLVED:

- Emergency Systems

  a) Every aircraft shall be equipped with an Emergency Location Beacon (ELT).

  b) The following aircraft are exempted from the mandatory use of ELT:

     i) Gliders and aerostats

     ii) Single-seaters

IN FORCE:

Mandatory as of 01 September 1997.

END