
PAPUA NEW GUINEA

AIC

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File: 33.16.3

CHANGES TO DISTRESS BEACON SPECIFICATION - SAR PROCEDURES

1 - INTRODUCTION

1.1 - ICAO Agreements 6, 10, 12, and 13 cover SAR activities, organisation and equipment specifications. Several changes have been agreed and will take effect at different dates from November 1993. These changes account for operating circumstances and existing technology, with their effects on standards and recommended practices. This AIC makes you aware of the changes, their implementation and the flow on consequences for us all.

1.2 - Two (2) separate satellite systems, Communication Oceanic Satellite Pacific Atlantic System (COSPAS), and Search and Rescue Satellite Aided Tracking (SARSAT), have been operating for several years and will continue. Both systems can locate transmissions on 121.5MHz and to less extent on 243MHz; each satellite can down link the range it measures to the master station of its system.

1.3 - The 243MHz frequency is no longer specified by ICAO as one of the distress beacon transmit frequencies with effect from November 1993. The VHF 121.5MHz frequency is retained as a specified frequency for distress beacons. The international standing of 121.5MHz as the distress calling frequency is not altered at all.

1.4 - The voice traffic on 121.5, can inhibit tracking of beacon transmissions by satellites and audio homing by search aircraft. Another frequency for emergency beacon transmission has been specified as 406MHz, with effect from November 1994. This is not a calling or voice frequency; it allows satellites to focus on both beacon frequencies for better range data.

1.5 - The names of the emergency beacons have also been altered so the different frequency capability is clear. The present 121.5/243MHz or 121.5 only are Emergency Locator Beacon (Aircraft) or ELBA; the 121.5 and 406MHz are Emergency Locator Transmitter or ELT. Either type can be Automatic Fixed, Automatic Portable, Automatically Deployable, or Survival as certificated and installed.

There is a wish to have the ELT as protected as the FDR and CVR where those are required. It might be the ELT which is the only survivor of some event.

1.6 - A further reason for the frequency changes is the need to provide an identification of the transmitter. Each ELT will have a specific and individual identifier included as a binary number in its transmissions on 406MHz. This aspect will mean that the ELT is "registered" just like the aircraft carrying it and allows rapid identification of the distressed aircraft. Each national organisation will assign identifiers and maintain the list. The RCC requires communication access to a satellite ground station so that a decoded identification can be obtained.

2 - IMPLEMENTATION

2.1 - The need, if any, to disable the 243MHz facility on existing ELBA's is under examination. The 121.5MHz capability must remain unchanged as will all procedures, requirements, and maintenance. From 1 November, 1993, the TSO and TC approvals for ELTs became available so that routine replacement of ELBA by an ELT is workable. The complete withdrawal of the present ELBAs by November 1994 is not yet mandatory and will be under consideration.

2.2 - The methods used for identifier assignment and registration will be developed by the end of 1994. Other regulatory and documentary changes should be implemented in the same time frame.

2.3 - The changes to our RCC procedures, the communications facilities and inter FIR/RCC arrangements may take little more time and affect our international scheduling of events. However, our interim and final position will be for an improvement of SAR distress beacon detection and location. Our terrain, the over water flight tracks, and our climatology are the incentive to use technology for our benefit. The first time we need to use ELT need not be the last time as well, in the new environment.

2.4 - The airworthiness aspects and application of the TSOs, C91A and C126 will be covered by AWI and the approvals of Airworthiness Section.

3 - CANCELLATION

3.1 - This AIC will remain current until further notice.

DISTRIBUTION: NORMAL

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| CURRENT AIC: | 1985: | 5, 8 |
| | 1989: | 3, 4 |
| | 1990: | 2 |
| | 1991: | 3, 4, 5, 6 |
| | 1992: | 4, 5, 6 |
| | 1993: | 1, 2, 3, 4, 5, 6 |
| | 1994: | 1, 2, 3 |