



EUROCAE Paper No. EUR 295-18 / WG98-40  
 RTCA Paper No. 223-18/SC229-034

Paris, 28<sup>th</sup> August 2018

**16<sup>th</sup> Joint EUROCAE WG-98 / RTCA SC-229 - Calling Notice “Aircraft  
 Emergency Locator Transmitters (ELTs)”**

<b>Date</b>	<b>Tuesday 28<sup>th</sup> through Friday 31<sup>st</sup> August 2018</b>
<b>Place</b>	<b>Paris, France</b>
<b>Venue</b>	<b>EUROCAE, 9-23 Rue Paul Lafargue, 93210 Saint-Denis, FRANCE</b>
<b>Hosted</b>	<b>EUROCAE</b>

**Present:**

FIRST NAME	NAME	COMPANY
AUDOUZE-CHAUD	XAVIER	EASA
BOUHET	ALAIN	OROLIA
BOYLE	ERIN	USCG
CRESP	CLAUDE	ECA GROUP ELTA
FISHER	JOHN	US FEDERAL AVIATION ADMINISTRATION (FAA)
FUHRMANN	DAVID	USAF
GREEN	CHARISSE	FAA
HOFFMAN	CHRISTOPHER	ACR ELECTRONICS, INC.
HORIOT	CHRISTOPHE	AIRBUS
KHALIL	FADL	BOEING
KOUBEISSI	MAJED	COBHAM
MILLER	BRAD	HONEYWELL
MORRISON	REBECCA	RTCA
PACK	THOMAS	ACR ELECTRONICS
PLANTIN DE HUGUES	PHILIPPE	BEA
SMITH	RICHARD	NTSB
ST-PIERRE	DANY	INTERNATIONAL COSPAS-SARSAT PROGRAMME
TAYLOR	STUART	H R SMITH GROUP
THIEDMAN	EDWIN	USCG
VON GROOTE	ANNA	EUROCAE
WANG	MINGWEI	COMAC AMERICA
THEODORAKOS	GEORGE	NASA
FOSTER	ANTHONY	NASA

**WEBEX:**

LEMON	DAN	NOAA
SENL	AHMET	AIRBUS
SANDHU	INDERBIR	HONEYWELL
MCCURRY	CHRIS	RADIANT POWER CORP
VAN DEN HEUVEL	BLAKE	DRS TECHNOLOGIES CANADA LTD.

## **Day 1 – Tuesday 28<sup>th</sup> August 2018 (9:00 AM – 5 PM)**

### **1. Welcome/Introductions/Administrative Remarks/DFO FACA Statement**

The meeting opened at 9:10. Tom and Philippe welcomed members to the 16<sup>th</sup> Joint meeting.

Christian Schleifer, EUROCAE Secretary General welcomed everyone discussing the big achievements that have been made to date by the working group. He discussed the link to regulatory frame, benefits for aviation community and the high quality standards produced. He also provided recognition of voluntary workforce and commitment of EUROCAE members.

Anna provided the Administrative remarks discussing meeting room and opening times.

Rebecca announced the RTCA Antitrust policy.

Rebecca and Anna discussed the EUROCAE and RTCA membership and IPR policies. Tom called out for comments - No IP issues were raised

Round table introductions commenced. Ahmet, George, Inderbir and Dan lemon joined via WebEx.

### **2. Agenda overview and approval**

Tom and Philippe discussed the proposed agenda from the onscreen slide:-

#### **Day 1 – Tuesday 28<sup>th</sup> August (9:00 AM – 5 PM)**

- Welcome/Introductions/Administrative Remarks
- Agenda overview and approval
- Minutes Washington D.C. meeting review and approval
- Review Action Items from Washington D.C. Meeting
- Industry coordination and presentations
- Week's plan
- Working Group of the whole meeting (rest of the day) to answer the comments received during the formal FRAC / Open Consultation

#### **Day 2 & 3 – Wednesday 29<sup>th</sup> and Thursday 30<sup>th</sup> August 2018 (9 AM – 5 PM)**

- Working Group of the whole meeting to answer the comments received during the formal FRAC// Open Consultation

#### **Day 4 – Friday 31<sup>st</sup> August 2018 (9 AM – 4 PM)**

- Working Group of the whole meeting to answer the comments received during the formal FRAC/ Open Consultation
- Consider a motion to approve ED-62B/DO204B and submit to the council/PMC for publication
- Other business
- Adjourn

Tom and Philippe discussed the work that had been achieved and discussed the way forward to include the Publication expected after PMC/Council approval before the end of December 2018.

It was discussed that publication arrangements will be coordinated between Rebecca and Anna.

It was noted that there is currently a Non Concur comment and that communication would take place with Embraer once the committee has discussed it.

There was an update to the FAA/EASA – TSO/ETSO progress and that the TSO is under internal FAA review, the public comment period should start in September; if comments come up against the MOPS during the consultation FAA will have to review and could be processed as a change/next revision; TSO to be finished in Nov (rev of 126C) – TSO will be available also in Dec 2018 upon publication of DO-204.

Xavier confirmed that for the ETSO, EASA is publishing an update of CS-ETSO NPA in early 2019 (January), the final ETSO should be published between March-May 2019. Coordination between EASA and FAA will be ensured. Differences between ETSO and TSO are to be discussed.

Tom and Philippe provided a full review of WG history.

### **3. Minutes Washington meeting review and approval**

It was discussed that the minutes from the last meeting had been posted in draft form on the web space.

There were no questions regarding the minutes and they were considered to be accepted.

### **4. FRAC comments Review (Rest of the day)**

It was proposed that resolution for many comments was already available and all of the outstanding comments were classified as 'need review' on the worksheet.

There was a group discussion that the title of EUROCAE and RTCA documents would be harmonised; it was agreed that the title would be: "MOPS for Aircraft Emergency Locator Transmitters 406 MHz" and that WG-98 would submit a paper to the Council for approval along with the document to request change in title.

The Working Group Continued for the whole meeting to answer the comments received during the formal FRAC/ Open Consultation.

At 3pm Luis from Embraer dialled in via telephone to discuss their non-concur regarding comment # 325 from the worksheet.

Luis discussed the reasons why they wanted to change the text described in the worksheet regarding the safety classifications of unintended deployments and how it was derived.

There was a group discussion on how the working group came up with these particular values and it was explained that a lot of the work had been taken from the Crash data working group chaired by Philippe, for the update of ED112 previously.

Following the confirmation provided by group members, Embraer accepted that there was no longer the requirement to change the text in the document. The group decided not to change the document based on the information provided regarding the previous studies on this issue. Embraer agreed to keep the text as original and that they would no longer non-concur on this item.

Philippe took the action to provide details from working group WG-90 on how they derived the probability figures described in ED112 and to send them to Embraer.

"The group had previously carried out the work on the paragraph 3.1.1. The group felt that there was no need to modify the paragraph as it was clear enough"

Honeywell no longer agreed with this because they felt that the group hadn't considered all ELT installations including those on GA aircraft. They said that ELTs have always had an "ON" switch on the ELT unit, and didn't think it should change as previously discussed.

That matter was debated in depth to try and prevent a non concur. The group wanted to stick with the removal of the "On" switch.

Rebecca suggested two options to move forward.

1. For Honeywell to discuss internally and try and come up with a proposal or compromise to discuss as a plenary before the end of the week's meetings.
2. To discuss internally with their PMC representative to produce a letter detailing their reasons as to why they want to keep the text "as is".

The group continued to resolve all other comments for the rest of the day.

## **Day 2**

### **5. FRAC comments Review (Cont)**

The Working Group Continued for the whole meeting to answer the comments received during the formal FRAC/ Open Consultation (All Day).

## **Day 3**

### **6. FRAC comments Review (Cont)**

The Working Group Completed the review of all comments received during the formal FRAC/ Open Consultation. A full copy of the review was circulated to the whole group to enable all members to review during the evening to check for any errors.

## **Day 4**

### **7. FRAC comments Review (Cont)**

Philippe welcomed everyone back to the plenary session. He explained that he had received 9 fresh comments during the evening which needed to be reviewed and agreed.

He explained that the aim was to have the document complete to send to Anna on Monday.

Rebecca announced that the next stage would be for RTCA and EUROCAE to check the document, add their styles (font, font size page sizing etc) and complete the document ready for December.

The group continued to review the remaining comments.

Item # 354 was discussed at length as Honeywell were in disagreement with the outcome.

The group had previously carried out the work and decided that by providing an actual "Manual ON" Switch is not advisable for ELT (AF) due to high number of false alarm rates. ELT is located in the tail of the aircraft and it is very difficult to see the switch position. During OEM Installation, installers could inadvertently switch the ELT (AF) into TRANSMIT instead of ARMED during the installation process. Except for ELT (AD), the controls on the ELT system shall enable selection of at least the following functions: Off, Armed, Reset, Self-Test and Cancellation. Honeywell had two days to review their non concurrence and to propose a compromise and Philippe asked to review their action to see if the group could reach a resolution.

Honeywell's resolution said that for GA aircraft, they have always had an on switch and Honeywell's understanding is that the manual on function doesn't have to be a switch. So you can use controls anywhere on the ELT unit or a combination of controls to turn it on, it doesn't have an "on" position. He asked the group if his interpretation was correct? George asked how would a user know how to turn it on? Chris read the existing text which didn't necessarily state that you need a switch that says "on". He said that you could have flicking the self test switch 3 times to turn the ELT on for example. That example would meet that requirement.

Honeywell said if that is the understanding and we put that in the resolution, that it isn't a physical "on" switch, and it's consistent with what's documented in the MOPS, that they would probably consider to remove their non concurrence.

Philippe asked if the group could agree on the comment resolution. He said we just have to agree that we are talking about a function and not a physical switch.

Greg suggested a compromise that we don't need to change the document itself but produce some wording for the resolution of the comment for clarification.

Greg compromised the following statement for a resolution:-

*The group believes that the current wording of the document clearly states that ELT units require controls to allow the activation of all the functions listed in section 3.1.1. Also, as noted in the document, activation of each function must be by a unique combination of control manipulations. However, it does not require an individual physical control for each function and in fact notes that the activation of multiple functions may be combined onto a single control so long as the operation of that control is unique for each function. The group believes that the flexibility allowed by the terminology in section 3.1.1 would also allow a manufacturer to implement a control mechanism which requires the manipulation of multiple ELT unit controls, or a similarly complex manipulation of the controls on the unit. Therefore, the proposal to remove the Manual On function from section 3.1.1 was withdrawn.*

Honeywell agreed with Greg's proposal and agreed to withdraw their non concur.

Rebecca explained that the excel worksheet will be uploaded onto the workspace after the PMC.

## **8. Motion**

A motion was Considered and agreed to approve ED-62B/DO204B and submit to the council/PMC for publication.

Rebecca commended everyone on their progress. She said that we are looking good for December 13<sup>th</sup> for PMC Approval.

## **9. Other business**

Tom announced other working groups that still continue, the ARINC AEEC group looking at industry standards and if anyone is interested in joining, to contact him.

Philippe gave an update regarding Doc10054; Danny asked when they were going to issue it. Philippe said that Doc 10054 is running late due to workload by ICAO but as soon as the secretariat has time they will publish the document.

Philippe discussed a paper sent to members a few weeks previous regarding the ICAO navigation conference. He said it has now been accepted by the 4 states and he will send the latest paper to members. He said that that he has asked them to revised annex 6 and it will be pushed by the 44 states. Currently if you have a means to receive an aircraft in distressed you can remove an automatic fixed ELT and the 6 nm is not acceptable. *See paper from Philippe.*

Action - Philippe to send the working paper

Chris asked if anything is happening with Annex 10. Philippe said they are creating a SAR panel to produce a document related to SAR but nothing has happened in the last few years as no secretary was available. They are waiting for someone to be appointed as secretary.

Dany discussed the satellites 24 Galileo and the satellites available by the end of the year along with new MEOLUTS being installed. He provided an update from the council meeting approving the first and second generation beacons. For 2<sup>nd</sup> generation beacons, they now have a document available.

He announced that the next JC is in 2 months and they are expecting developments to standards and adjustments to align with items discussed at meetings like this and that Next year, they are having the JC in June and council in November.

Dany discussed that they have been trying to align their processes at Cospas Sarsat to work with updates from this working group and it has been a pleasure working with the group

Rebecca gave an update to what happens next:-

- Philippe will transmit the completed file to Anna.
- Anna reviews the files and completes her updates
- Rebecca reviews the files and completes her updates
- Tom submits his chair report to the PMC
- The next for PMC is Nov 13<sup>th</sup> so it will have to be the PMC on Dec 13<sup>th</sup>

The PMC will carry out a review and have a discussion of what happened. They may come back with questions but it is expected that they will approve the document.

The final version will be posted available for anyone to download the following week.

## 10. Adjourn

Tom and Philippe thanked everyone on the committee for the work over the last 4.5 years, discussing the number of events taking place since the kick off meeting, battery issues, Cospas Sarsat 2<sup>nd</sup> Generation Beacons being key part of the terms of reference, addition of tracking ELTs in flight, starting working groups with Cospas Sarsat, now part of this standard. Wg98 producing a MASPS- ED137, which is now in use.

Tom thanked everyone, all the companies involved, Rebecca and Sophie, charisse for being the DFO and secondly FAA representative and for all The contributors and Philippe for being Co-Chair.

Philippe thanked Tom for being Co Chair and Stuart for being secretary and for all of his hard work

Tom adjourned the last joint plenary session at 3pm.

Meeting closed at 15:00

List of Plenary Actions:-

ACTION NUMBER	ACTIONNEE	ACTION	STATUS
Action 1	Philippe	To provided work provided in ED112 working group	Complete
Action 2	Philippe	To send the complete worksheet to Anna and Rebecca.	Complete