

**From:** Vijayakumar Rathnam  
**To:** [Senol, Ahmet](#); [Adler, Charles O](#)  
**Cc:** [Peter Grau](#)  
**Subject:** RE: ARINC 202 Label questions  
**Date:** Tuesday, March 27, 2018 9:33:23 AM

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Thank you Ahmet for your response.  
Chuck, it will be worthwhile to touch upon these questions on Heartbeat and clarifications from Ahmet to get everybody on the page during Wednesday telecon.

Thanks,  
Vijay Rathnam

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**From:** Senol, Ahmet [<mailto:ahmet.senol@airbus.com>]  
**Sent:** Tuesday, March 27, 2018 9:26 AM  
**To:** Vijayakumar Rathnam <[Vijayakumar.Rathnam@panasonic.aero](mailto:Vijayakumar.Rathnam@panasonic.aero)>; [Charles.O.Adler@Boeing.com](mailto:Charles.O.Adler@Boeing.com)  
**Cc:** Peter Grau <[Peter.Grau@sae-itc.org](mailto:Peter.Grau@sae-itc.org)>  
**Subject:** AW: ARINC 202 Label questions

Sorry for confusion, I have added one precision in red below.

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Dear Vijay,

as promised last week, please find my answers attached below.

I hope this clarifies, but this is my interpretation. Chuck any comments from you.

Regs Ahmet

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**Von:** Vijayakumar Rathnam [<mailto:Vijayakumar.Rathnam@panasonic.aero>]  
**Gesendet:** Donnerstag, 15. März 2018 20:02  
**An:** Senol, Ahmet <[ahmet.senol@airbus.com](mailto:ahmet.senol@airbus.com)>; [Charles.O.Adler@Boeing.com](mailto:Charles.O.Adler@Boeing.com)  
**Cc:** Peter Grau <[Peter.Grau@sae-itc.org](mailto:Peter.Grau@sae-itc.org)>  
**Betreff:** ARINC 202 Label questions

Hi Ahmet and Chuck,

Thank you for sending the latest definition of ARINC 202 trigger label with Heart beat monitor signal incorporated.

- Let's assume the heart beat signal is sent from ADT module to Transceiver module every 500 ms (TBD).
- There are 3 possible branches:
  - (a) Distress condition

- (b) Normal condition (no distress), heart beat on and
- (c) Normal condition (no distress), heart beat is off (label 202 transmission is missing from ADT)

**Distress condition:**

- Trigger/cancel Matrix: Bits 11 thru 16 will **NOT** be coded as 011011 ( Octal 33) by ADT **correct**
- Instead, Bits 11-16 will coded as cognizant Trigger code or cancel code **correct**
- Distress Trigger Origin, Distress Trigger Origin ext and Flight phase will be populated with relevant data **correct**
- Bit 17 will be coded as Airborne mode **if the a/c is airborne**
- Distress data (Lat, Lon, Altitude (optional), UTC time stamp (managed by ELT), ARINC 202 label, A/C ID (managed by ELT),?) will be transmitted down to AOC and RCC.

**Normal condition (Label 202 transmitted) (ie., No distress condition):**

- Trigger/cancel matrix: Bits 11 thru 16 will be coded as Heart beat signal 011011 (Octal 33) by ADT. **correct**
- Bit 17 will be coded as Airborne mode **if the a/c is airborne**
- Distress trigger Origin Min – will be coded as 0's (ie., will not be populated with data) **correct**
- Distress Trigger Origin Ext - will be coded as 0's (ie., will not be populated with data) **correct**
- Flight phase- will NOT be populated with data (yes or no)? **if Flight Phase is implemented then it will be send accordingly e.g. Cruise, ....**
- Distress data (Lat, Lon, Altitude (optional), UTC time stamp (managed by ELT), ARINC 202 label, A/C ID (managed by ELT?) will **be send to the ELT/Transmission unit, but it will probably** NOT be transmitted down to AOC and RCC.

**Normal condition (Label 202 label not transmitted) (ie., No distress condition):**

- ADT is dead as a door knob.
- This does not mean A/C is in distress condition **correct**
- Distress monitoring capability is non existing **correct or wiring is broken, but if a/c was airborne then at least the ELT shall trigger**
- ADT to be rectified/replaced on ground during LM checks (pre departure) subject to MEL conditions

Is the heart beat monitor disabled on the ground? **No, but the ELT/Transmission unit is disarmed by Label 202**

Is the above interpretation correct?  
Please advise.  
Thanks.

Best regards,

*Vijay Rathnam, PMP*

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