SARSAT Beacon Manufacturer's Workshop
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SARP-3 / Beacon Malfunction

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SARP-3 / Beacon Malfunction

- The 15 and 30 hexadecimal beacon IDs are missing bits/bytes from the front end.

- <u>Satellite Problem</u>
    - SARP-1 &2 looked for the self-test frame synchronization pattern, 011010000 and the DRU breaks lock
    - SARP-3 ignores the self-test frame synchronization pattern, 011010000 and just looks for 000101111
    - If 000101111 is found anywhere in the 144 bits, SARP-3 treats it as an operational beacon burst and starts the ID with the next bit
    - There is no fix for the next SARP-3 satellite – planned launched date is 17 Sep 2012.

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- ## Beacon Problem
  - As reported by France, in many cases the problem occurred when a beacon transmitted rapidly (burst interval of 10 seconds) in the self-test mode.
    - We have identified 4 beacon manufacturer/models that transmit at a high repetition rate in the self-test mode
    - Those 4 manufacturer/models have also been identified with corrupt beacon IDs from SARP-3 only
    - We have not been able to confirm that all SARP-3 corrupt IDs require that the beacon transmits rapidly and in the self-test mode
  - The US identifies a SARP-3 corrupt ID by
    - Manually checking an MCC identified corrupt ID from S-11 or S-12 against the US 406 Registration database (RGDB).
    - Searching the RGDB using a wild card in front of the 14, 13, 12, 11, & 10 characters of the corrupt ID.

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- <u>For the Manufacturers:</u>
    - Beware of the problem
    - Beacons should never be able to transmitted except at the prescribed 50 sec repetition rate.
    - Beacons should never be able to get stuck in the self-test mode physically or software.

Contact Information

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