

ARINC 424 NDB

**Draft 1 of Supplement 23
Discussion/Proposal**

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CODING FD LEG DISTANCES WITH TURN ANTICIPATION REQUIRED

V.0

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SUMMARY
Discussion of adding detail to Attachment 5 section 3.6 regarding turn anticipation as required by IAP notes and use of FD path terminators. Discuss proposal of distance coding tolerances when FD legs used as course reversal legs from a navaid to CF legs

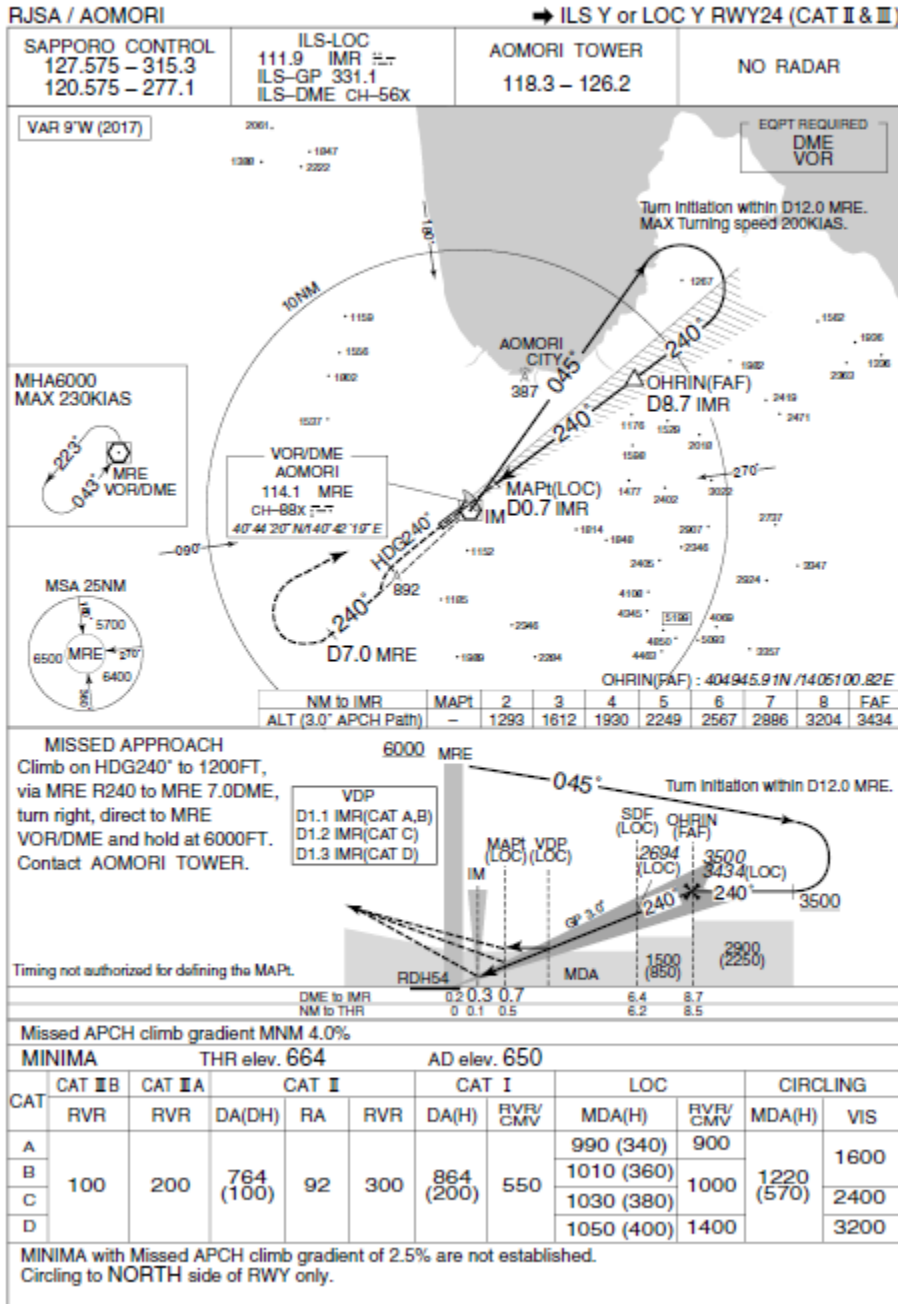
1.0 INTRODUCTION/ BACK GROUND

Instrument Approach Procedure (IAP) chart notes in some cases may include
“Turn Initiation within D xx.x ...”

ARINC 424 does not include data parameter or waypoint descriptor of turn anticipation required for use by the system in either trajectory or guidance steering.

FD legs are used as applicable path terminators on Instrument Procedure coding where a course reversal tear-drop like maneuverer is required. Typically this is an outbound track to a distance from a VHF navaid and greater than 180 degree course reversal to a CF leg to the inbound final approach course. Turn anticipation is unknown to PBN systems and the use of FD leg termination point is overfly. FD leg distance coding can be subjective and may not be sufficient at the set distance coding to comply with turn anticipation See example of RJSA where turn anticipation is required within 12.0nm of MRE navaid when using MRE as the IAP transition.

INSTRUMENT APPROACH CHART



2.0 DISCUSSION and or ACTION

Propose to include clear coding rule text in Appendix 5 section 3.6 with use of FD path terminator distance tolerances. The new text accounts for FD leg is used used on IAP as an outbound course from a fix followed by next leg is the final approach course inbound. Common nomenclature is known as a “tear drop maneuverer” but not as a procedure turn leg (PI).

3 Changes as depicted (Track Changes is Helpful)

- 3.6 Leg types of CD, CR, FD, VD, and VR overfly the terminator point. ~~If turn anticipation is required to reflect the source, alternate leg types must be used.~~ *FD path terminator distance must consider turn initiation distance when noted on Instrument terminal procedure charts where FD leg is appropriate path terminator for course reversal to the final approach inbound course and PI leg is not intended. The nominal distance used for FD path terminators when used for course reversal and turn initiation distance limit is charted should be coded at an abeam distance point of the next fix after FD leg with 2nm pad and always less than the charted turn initiation distance. If coding of set distance is not possible, alternate leg types must be used.*