

GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING FORUM
Instrument Procedures Group
(Transcribed/Re-Formatted)
HISTORY RECORD

FAA Control # 98-01-198

SUBJECT: Minimums With or Without Last Step-down Fix.

BACKGROUND/DISCUSSION: 288 c. (4) (c) addresses stepdown fixes within the final approach segment, and states *"Minimums shall be published both with and without the last stepdown fix, except for procedures requiring DME or NDB procedures which use a VOR radial to define the stepdown fix."* (emphasis add).

The purpose of this TERPS criterion is to assure that the pilot is able to apply the correct minimum descent altitude and visibility minimum in the event he is unable to identify the stepdown fix because of airborne equipment limitations. Implicit in the identification of a final segment stepdown fix is simultaneous reception of the along track navigation facility and the facility forming the stepdown fix.

Because the NAS is VOR-based, it is presumed that all IFR aircraft have one VOR receiver (nominally equipped aircraft). Thus, the exception for NDB procedures with VOR crossing radials exists because it's presumed that the VOR receiver is idle and available during an NDB procedure. The exception for procedures that require DME (XXX/DME) is based on the fact that an XXX/DME procedure triggers the presence of one DME airborne set which, by nature, is separate from the VOR set. Other than these two logical presumptions, the criterion at issue cannot, and does not, presume simultaneous reception of any other stepdown fix, such as VOR-VOR, VOR-NDB, LOC-VOR, LOC-NDB, or XXX-Fan Marker.

The Guam ILS Runway 6L has been in the spotlight and serves as an excellent example of the purpose of the subject criterion. Because VOR and LOC receivers are combined, the presumption at Guam would be that the nominally equipped aircraft would have its single VOR receiver tracking the IGUM LOC. The VOR stepdown fix would *not* be available to such nominally equipped aircraft, thus 1,440 (1,184) would have been the first charted minimum had the subject criterion been complied with by the FAA. Not only would this serve the "simple to interpret" concept by giving the pilot a "head's up" about the final segment stepdown fix's implications, it would have triggered charting of the correct visibility minimums for an aircraft that could not go below 1,440. Without charting of the 1,440 minimum, it would be impossible for the pilot to apply the correct visibility minimum.

The imperative "shall" in the subject TERPS paragraph is defined in TERPS as having a mandatory application. The FAA's implementation handbook (8260.19C) gives three examples of the application of the Paragraph 288 c. (4) (c). These examples were incorrectly interpreted by AVN-100 as being all inclusive. To the contrary, implementation material can expand upon TERPS criteria, and hopefully clarify somewhat ambiguous TERPS criteria. But, it cannot restrict intent of TERPS criteria. Paragraph 288 c. (4) (c) is not ambiguous; it clearly applies to all final stepdown fix applications except for NDB procedures with a VOR crossing radial, and a LOC, VOR, or NDB, procedure with DME required in the title of the procedure.

RECOMMENDATION: That Paragraph 288 c. (4) (c) be referenced in Chapter 3 of TERPS so that its application is not overlooked by procedures specialists. Also, Handbook 8260.19C should be revised to make the application clear.

COMMENT: This proposal affects the TERPS Handbook, 8260.3B, and Flight Procedures and Airspace, Order 8260.19C.

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INITIAL DISCUSSION (MEETING 98-01): (Agreed item to be worked with 97-02-187) **Status:**
Item Closed