AERONAUTICAL CHARTING MEETING
Instrument Procedures Group
Meeting 20-02 – October 27, 2020

RECOMMENDATION DOCUMENT

FAA Control # 20-02-354

Subject:
Use of Suitable Area Navigation (RNAV) Systems on Conventional Procedures and Routes

Background/Discussion:

The FAA Aeronautical Charting Meeting has made progress on a proposal from 2013 to clarify equipment required notes on IFR procedure charts. For more information, see topic 13-02-312 (I am the unnamed CFI referenced in that recommendation).

Unfortunately, many pilots who have an IFR-approved GNSS (i.e., a suitable RNAV system) are still puzzled by equipment requirements on charts, and the new-format notes still don't address a key point of confusion.

For example, see the KBEH ILS or LOC RWY 28 approach chart (attached chart and the excerpt, also included below).

A long thread at the BeechTalk forum demonstrates that many folks think that *both* notes, **RNAV-1 GPS required** *and* **DME Required for LOC only**, apply if you're flying the LOC-only version of this procedures. That is, if you have an IFR-approved GNSS, you must also have DME to fly the non-precision version of the procedure—you can't use GNSS to substitute for the DME requirement unless you have a second GNSS that you can use to load the I-BEH localizer as a fix to provide distance information from the location of that DME transmitter.

Of course, if you load this procedure in a system such as a G1000 or Garmin GNS or GTN navigator (see attached image), the fixes you need to fly the LOC-only procedure are in the flight plan list. The MAP, at the threshold of RWY 28, is the key. You can use along track distance (ATD) as described in the AIM and other sources to keep track of your position and identify key points, such as the VDP, along the final approach segment.

But the guidance on this topic in **AIM 1−2−3 Use of Suitable Area Navigation (RNAV) Systems on Conventional Procedures and Routes** and AC 90-108 is apparently too subtle.

For example, both references above state:

> Use of a suitable RNAV system as a Substitute Means of Navigation when a Very−High Frequency (VHF) Omni−directional Range (VOR), Distance Measuring Equipment (DME), Tactical Air Navigation (TACAN), VOR/TACAN (VORTAC), VOR/DME, Non−directional Beacon (NDB), or compass locator

facility including locator outer marker and locator middle marker is out−of−service (that is, the navigation aid (NAVAID) information is not available); an aircraft is not equipped with an Automatic Direction Finder (ADF) or DME; or the installed ADF or DME on an aircraft is not operational…

NOTE−
1. The allowances described in this section apply even when a facility is identified as required on a procedure (for example, "Note ADF required").

Recommendations:

Update guidance in the AIM and other guidance to *explicitly* (not buried in a note) clarify that if you have GNSS (subject to limitations in the AFM supplement, etc.), procedure notes that require DME, ADF, dual VOR receivers, and the like, don't apply. And that notes such as those on the KBEH ILS RWY 28 chart aren't additive.

Comments:

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Date: February 18, 2020

Initial meeting 20-02: Bruce Williams, Flight Instructor and FAAST Team Member, presented the item, and briefed from slides. This issue is related to questions he often receives in his instructional capacity regarding confusing equipment notes when the pilot has a suitable RNAV (IFR-approved) system. The issue is addressed in the AIM and AC 90-108, but is hard to locate. Bruce would like information regarding the use of a suitable RNAV system to be more prominent, and clarify that pilots can disregard notes that would no longer apply (e.g., ADF required or GPS required). Bruce said the real goal would be to clarify equipment requirement notes on the charts, but recognizes that is a difficult challenge. The alternative is to clarify the guidance on the notes in the AIM, AC, Instrument Procedures Handbook (IPH), etc. Bruce showed the location of the information via the slides, pointing out how hard it is to find in the AIM. Example approaches were shown and discussed. Joel Dickinson, FAA Flight Operations Group, said this is an area he is also concerned about, and said they standardized the requirements box nomenclature for the PBN boxes a few years ago. Joel said they are working on a draft AC that combine all existing AC 91-105/107/108 information in a single AC, to include RNAV substitution guidance. There are also adjustments to AIM/IPH guidance in progress, and will discuss with Bruce in a separate conversation. The group discussed the merits of accepting the issue for further action. John Moore, Jeppesen, suggested keeping it open since some criteria changes may occur and he would like the opportunity for the ACM to review those. Gary McMullin, Southwest Airlines, also receives this question often and wants to accept the issue and keep it open.

Action Items:

- Bruce Williams will work with Joel Dickinson on the issue.
- Flight Operations Group and Flight Procedures and Airspace Group will report on any work and changes to criteria or advisory guidance material based on this issue.

Status: Item accepted and open.