

**GOVERNMENT/INDUSTRY AERONAUTICAL CHARTING
FORUM 07-02 Charting Group**

October 24-25, 2007

RECOMMENDATION DOCUMENT

FAA Control # 07-02-202

Subject: Inconsistent and Incomplete Charting of STAR Holding Patterns

Background/Discussion: Attached are the NACO and Jeppesen charts for the CIVET FIVE (STAR) Arrival to KLAX. For purposes of this discussion, the ETINE radial/DME fix and holding pattern serve as the example of the issue. Note that ETINE is a radial/DME fix only; i.e., there is no cross-radial option to determine the fix. Thus, DME is mandatory to execute the holding pattern. But, the NACO chart shows no DME holding information. We are advised this is because NACO lacks a charting specification to chart DME holding information on STAR charts. Historically, such DME holding fixes would contain the DME distances within the holding oval icon. In this case it should be "79/71" since the source indicates 8 mile legs.

The Jeppesen chart shows "8 nm" within the oval. We presume Jeppesen elected to chart the actual value rather than "79/71" because of the reality that most aircraft holding at ETINE today would be using RNAV to substitute for the ground-based facilities. Nonetheless, this is still a ground-based VOR/DME STAR.

Also, source provides an unnecessarily short leg length for holding at the minimum specified flight level of FL 250. (This minimum flight level of FL 250 is confusing on the NACO chart in that it appears within the holding oval.)

If this were an RNAV STAR source would show a leg length of 12 n.m. This is because of an inconsistency in FAAO 7130.3A in the selection of leg lengths for DME holding and GPS (RNAV) holding.

Recommendations:

1. NACO charting specifications be revised to require publication of DME leg lengths on all instrument procedure charts when specified on source.
2. That both NACO and Jeppesen charts be required to chart both DME and RNAV leg lengths on ground-based STAR charts. In this case, "79/71 (8)" would best serve all users.

3. That source for DME holding on en route and arrival/departure charts use the greater of DME or GPS leg length selection. In this ETINE example, the recommended charting would then become "79/67 (12)."
4. The AIM be revised accordingly to provide necessary explanatory guidance to pilots.

Comments: This recommendation affects IACC specifications, Jeppesen STAR and SID specifications, and FAAO 8260.19(c) (soon to be (d)), and the Aeronautical Information Manual.

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MEETING 07-02: Richard Boll, NBAA, would like to see Holding Pattern Leg lengths and DME Min/Max Limits charted on conventional STAR charts.

Holding Pattern limits are provided to the public via the NFDD source. They are not included on the SID/STAR procedure source documents (FAA forms 8260 or 7100). There was discussion about how the leg lengths are sourced, including whether or not the information should be included in the procedure source document 8260 or 7100. Ms. Valerie Watson, NACO, pointed out that publishing these limits is not part of the SID/STAR Specs.

Jeff Struyk, NGA, commented that they are not published in DAFIF.

Jeppesen charts the Holding Pattern Leg Length from the NFDD source. Jeppesen charts also provide the Min/Max DME distance in as much as it can be derived from the Fix Formation data (including DME distance) shown on the chart. The same depiction is made on Jeppesen SID/STARs and Enroute Charts.

ACTION: The issue will be passed to the FAA AIS Working Group via Tom Schneider since it involves possible changes to FAA source content. After the AIS WG completes its review, then the ACF will revisit the charting aspects of the recommendation.

MEETING 08-01: The NBAA recommendation is to chart Holding Pattern Leg Lengths and DME Min/Max Limits on conventional SID/STAR charts. After Tom Schneider, FAA/AFS-420, recapped the issue he remarked that SID/STAR charts are already too cluttered and this was unnecessary. If the leg length is not charted, timing is to be used as a substitute. Brad Rush, FAA/NFPO, stated that the information was available but not provided on the same source material. Ms. Valerie Watson, FAA/NACO, responded that under current procedure, if it's not on the procedure form then NACO will not chart it. Air Traffic agreed that the leg length should be on the form. Jeppesen charts the Holding Pattern Leg Length from the NFDD source. Jeppesen also provides the Min/Max DME distance in as much as it can be derived from the Fix Formation data (including DME distance) shown on the chart. The same depiction is made on Jeppesen Enroute Charts. Jeppesen and NGA asked why they couldn't have the holding pattern information on the 8260 procedure form as a matter of convenience. Mr. Brad Rush was opposed to this idea due to rulemaking implications. From a technical standpoint, Jeppesen should not transfer a holding pattern limit from the NFDD. Charts should strictly reflect and depict holding pattern limits or the omission of limits. Mr. Rush added if there's a change to the holding pattern then the 8260-2 will be used for holding information, but not on SIDs/STARs. The Aeronautical Information Services Working Group (AISWG) consensus is that in the absence of published leg length a pilot should use timing for holding. Ms. Watson added that the charts are cluttered enough and NACO does not have a spec to add this information. Jeppesen provides the leg length because it has a customer request to do so. The problem is that the data is not found on just one source. The 8260-2 (Dash 2) gives the holding pattern for a given STAR. Richard Boll, NBAA, would like the FAA to reconsider their position and put the leg distance. The FAA policy is, if the Dash 2 says to chart, then they will. Jeppesen will have to remove leg lengths if timing is published instead of distance. Official source is either the 7100-9 forms or the Dash 2 for holding pattern source. Policy issue put back on AISWG since it involves possible changes to FAA source content.

ACTION: Bill Hammet and Tom Scheider will take action at the AISWG.

MEETING 08-02: The NBAA's recommendation is to chart Holding Pattern Leg Lengths and DME Min/Max Limits on conventional SID/STAR charts. Tom Schneider, FAA/AFS-420, took the issue to the AISWG. The consensus of the AISWG was to include a notation in the remarks section of the NFDD for each holding pattern to indicate specific

usage for SID/STAR charting purposes. The 8260-2 will still be the source for holding pattern usage on SIAPs.

Mr. Greg Pray, FAA/NFDC will put in NFDD and publish on the applicable SID or STAR.

ACTION: Mr. Greg Pray will report at the next ACF.

MEETING 09-01: Ms Adrienne Funk, FAA/NFDC, reported that the issue was completed; however, the database (eNASR) will not be published for two more years. Based on internal FAA agreements, holding patterns and leg lengths specific to a particular procedure will be included on the appropriate 8260 or 7100 procedure source. This effectively addresses the original problem.

Mr. Richard Boll, NBAA, agreed the issue should be closed.

CLOSED