AERONAUTICAL CHARTING MEETING
Instrument Procedures Group
Meeting 21-02 – October 25-26, 2021

RECOMMENDATION DOCUMENT

FAA Control #21-02-365

Subject: IFR Low Altitude Enroute Charts should specify the SSV Service Volume Classifications of the VOR and DME in the NAVAID Identification Boxes

Background/Discussion:

The current IAC-1 charting specification specifies in section 3.7.4.6 the contents of the NAVAID Identification Boxes. In subsection 3.7.4.6.5 Standard Service Volume (SSV) Classifications (Frequency Protection) states:

> VOR, VOR/DME, VORTAC, DME, and TACAN NAVAIDs shall indicate the SSV(s) when the SSV of the NAVAID as a whole or either component part of a combined NAVAID (e.g., VOR/DME) has been designated as a Terminal facility. A capital letter "T" in parentheses (i.e., (T) or (T) (T) for combined NAVAIDs) shall be shown within the facility identification box following the NAVAID name when the entire facility has been classified as Terminal. When only a single component of the facility has been classified as Terminal, the SSVs of both components shall be shown in paired parentheses with the VOR SSV shown first (i.e., (T) (DL)).

> **NAVAIDs that have, as a whole, frequency protection of "H" (High Altitude), "VH" (VOR High), "DH" (DME High), "L" (Low Altitude), "VL" (VOR Low), or "DL" (DME Low) shall not be indicated as such on the chart.** NAVAIDs whose individual components have differing SSVs, one of which is "T", shall be shown.

Pilots do not have a means of determining from the IFR Low Enroute chart if a given VOR can be used for 70 NM above 5000 ft Above Transmitter Height, instead of 40 NM of a VL and VH VOR. They also do not have a means of determining if the VOR is H or VH between 14500 to 18000 MSL where the service volume increases to 100 NM from 40 NM for an H VOR or from 70 NM to 100 NM for a VH VOR. With the MON program eliminating VOR's and related airways, increasing the service volumes is a mitigation strategy as part of the MON reduction so that pilots could navigate to any point in the NAS direct to a VOR when 5000 feet above the VOR or higher as a key capability to keep VOR as a backup to GPS navigation when an aircraft is not equipped with GPS, has a GPS failure, or there is a widespread GPS outage. Pilots also can't plan on using the extended service volumes when planning VOR to VOR navigation.
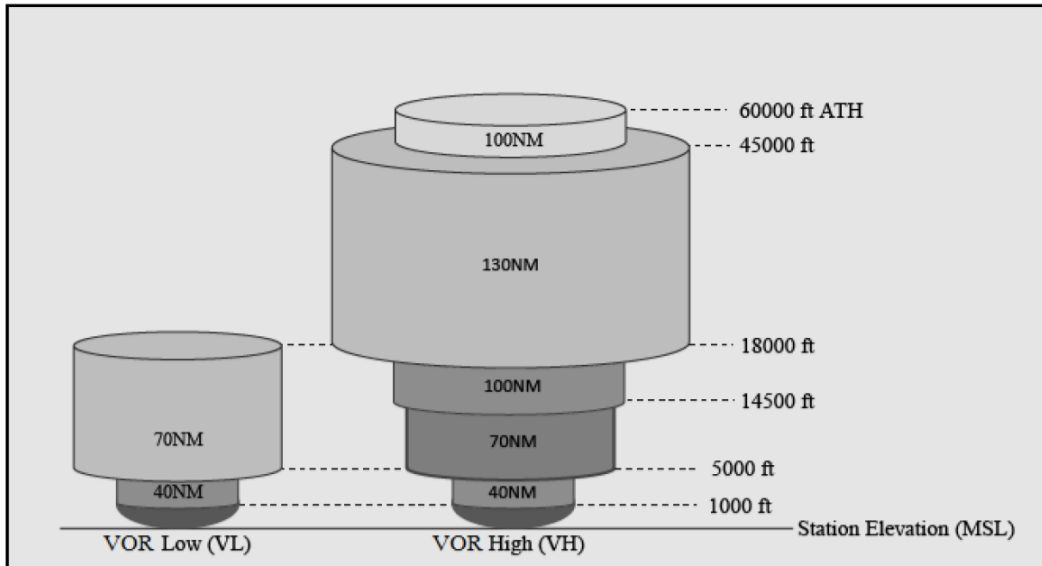
Even if 100% of the (L) and (H) get updated to (VL) and (VH), this will take many years to accomplish and there would be a mix of SSV in the NAS Pilots need this information for (H) and (VH) as well for flights between 14500 MSL and 18000 MSL.
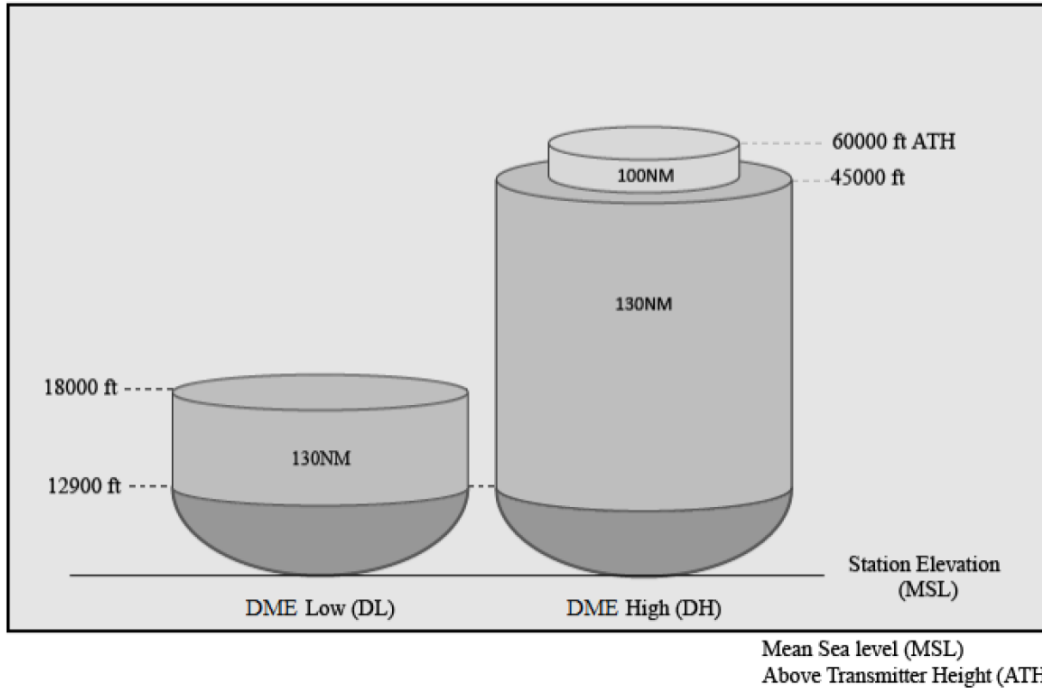
FIG 1−1−1
Original Standard Service Volumes
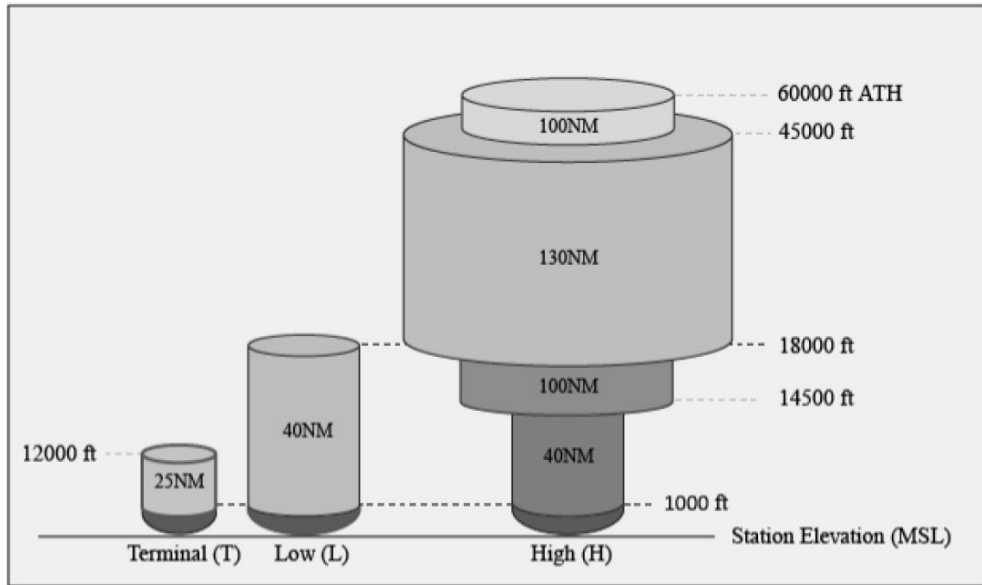
Mean Sea level (MSL)
Above Transmitter Height (ATH)

FIG 1−1−4
New VOR Service Volumes

Mean Sea level (MSL)
Above Transmitter Height (ATH)

FIG 1–1–5
New DME Service Volumes

Recommendations:

On the low altitude Enroute Charts, update the charting specification to identify the SSV for ALL VOR types by using (L), (H), (VL), (VH) in the NAVAID Identification Boxes in the same manner that is used for (T) Terminal VOR. The same should be considered for DME service volumes.

Comments:

This should not add significantly to the clutter of information on the existing low altitude charts NAVAID box and make it clear what SSV applies to the VOR being chosen and used by the pilot.

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MEETING 21-02

John Collins, ForeFlight, presented the recommendation. He proposed that all NAVAID facility boxes on IFR Low Altitude Enroute charts include Standard Service Volumes (SSV) designations. The Interagency Air Committee (IAC) charting specification currently says that the SSV will only be shown on IFR Low Altitude Enroute charts when the SSV of the NAVAID as a whole or either component part of a combined NAVAID has been designated as "Terminal". John said that with the new types of SSV, it is important for a pilot to determine if the VOR they are using has an extended service volume, e.g., if a VOR is (L) or (VL), (H) or (VH). John pointed out that it will take a long time for all NAVAIDs to transition to the new SSVs so he is requesting they all be shown on the IFR Enroute Low Altitude charts.

Valerie Watson, FAA/AJV-A250, suggested, for the sake of simplicity and because it would be easier for chart automation, that all NAVAID SSV designations be shown on both the IFR Enroute Low and High Altitude charts. John agreed with that suggestion. Valerie asked the audience if there were any objection to charting all NAVAID SSV designations on both chart series. No objections were voiced. Valerie said she will begin work on an Interagency Air Committee (IAC) specification change.

STATUS: OPEN

ACTION: Valerie Watson, AJV-A250, will process an Interagency Air Committee (IAC) specification change to depict all NAVAID Standard Service Volume (SSV) types on IFR Low and High Altitude Enroute charts.

MEETING 22-01

Valerie Watson, FAA/AJV-A250, reported that the Interagency Air Committee (IAC) specification change for the depiction of all VOR, VOR/DME, VORTAC, TACAN & DME NAVAID Standard Service Volume (SSV) designations on IFR Low and High Altitude Enroute charts has been approved. She clarified that this does not change the charting criteria for NAVAIDs, it only updates the SSV designations that are depicted in the NAVAID facility box. The specification change will be implemented on the 8 September 2022 effective date.

Aaron Jacobson, Jeppesen, asked if it is possible to have a VORTAC with the VOR portion extended and a legacy TACAN portion, i.e., (VH) (H). Dale Courtney, FAA/AJW-263, said that it is possible to have cases like that.

John Collins, ForeFlight, said he noticed some inconsistencies with how these have been charted thus far. Valerie said there were some issues with the initial implementation, however those should be resolved with the implementation of the current update.

STATUS: CLOSED