# Figure Of Merit Description ARINC 424-22 vs AC20-138D

There appears to be an inconsistency between the above standards regarding the Figure Of Merit classification tables.

Can we assume that the table in the Arinc 424 standard is the correct one to use?

## AC 20-138D

## 6-4.d.

(3) For facilities with an ARINC 424 figure of merit (FOM), the RNAV system may use the FOM value from Table 3 as the acceptable, usable region.

| If the ARINC 424 FOM is: | The aircraft's DME/DME RNAV system must be: |                                    |  |
|--------------------------|---|------------------------------------|--|
|                          | Less than or equal to:                      | And less than:                     |  |
| 0                        | 40 NM from the facility                     | 12,000 ft above facility elevation |  |
| 1                        | 70 NM from the facility                     | 18,000 ft above facility elevation |  |
| 2                        | 130 NM from the facility                    |                                    |  |
| 3                        | 160 NM from the facility                    |                                    |  |
|                          | Table 3 DME Usable Ran                      |                                    |  |

Table 3. DME Usable Range

### **ARINC 424-22**

### 5.149 Figure Of Merit (FOM)

Source/Content: Actual Field Entry Values are not contained in official government source but rather are derived values based on usage, class, availability, etc. These may be further adjusted by input from actual users. When the field content is equal to the information in the VHF Navaid Class field (Section 5.35), this is an indication that no information has been received indicating usable ranges beyond the Class specification

The content will be as defined in the table below.

| Field<br>Content | Description   |  |  |  |  |
|------------------|---|--|--|--|--|
| 0                | Terminal Use (generally within 25NM)                      |  |  |  |  |
| 1                | Low Altitude Use (generally within 40NM)                  |  |  |  |  |
| 2                | High Altitude Use (generally within 130NM)                |  |  |  |  |
| 3                | Extended High-Altitude Use (generally beyond 130NM)       |  |  |  |  |
| 7                | Navaid not included in a civil international NOTAM system |  |  |  |  |
| 9                | Navaid Out of Service                                     |  |  |  |  |

As the FOM is derived from the Navaid Class, the same altitude restrictions should apply.

| Coverage  |  |   |   |  |  |  |
|---|--|---|---|--|--|--|
| Terminal  |  |   | Т |  |  | Generally usable within 25NM of the facility and below 12000 feet  |
| Low Altitude  |  |   | L |  |  | Generally usable within 40NM of the facility and up to 18000 feet  |
| High Altitude   |  |   | Н |  |  | Generally usable within 130NM of the facility and up to 60000 feet |
| Undefined   |  |   | U |  |  | Coverage not defined by government source                          |
| ILS/TACAN   |  | С |   |  | Full TACAN facility frequency-paired and operating with the same |  |
|   |  |   |   |  | identifier as an ILS Localizer. Coverage is Terminal             |  |
| Estimated from Neurald Class (E. 25) field definition |  |   |   |  |  |  |

Extracted from Navaid Class (5.35) field definition