

GPS Substitutions

What are the rules?

Substitution Rules ... ?

1. Substitute for any NAVAID or fix when outside of FAF, even if decommissioned or NOTAM'd.
2. Substitute for all NAVAIDs on an “or GPS” (overlay) approach.
3. Can't use at all inside the FAF on a non-overlay, non-RNAV approach.

AC 90-108

(March 3, 2011)

7. USES OF SUITABLE RNAV SYSTEMS.

a. Usage of Suitable RNAV Systems. Subject to the operating requirements in this AC, operators may use a suitable RNAV system in the following ways.

(1) *Determine aircraft position relative to or distance from* a VOR (see first note in subparagraph 7b), TACAN, NDB, compass locator (see second note in subparagraph 7b), DME fix; or a named fix defined by a VOR radial, TACAN course, NDB bearing, or compass locator bearing intersecting a VOR or Localizer (LOC) course.

(2) *Navigate to or from* a VOR, TACAN, NDB, or compass locator.

(3) *Hold over* a VOR, TACAN, NDB, compass locator, or DME fix.

(4) *Fly an arc based upon* DME.

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(continued)

8. USES OF SUITABLE RNAV SYSTEMS NOT ALLOWED BY THIS AC. An otherwise suitable RNAV system cannot be used for the following:

a. NOTAMed Procedures. Unless otherwise specified, navigation on procedures that are identified as not authorized (“NA”) without exception by a NOTAM. For example, an operator may not use a RNAV system to navigate on a procedure affected by an expired or unsatisfactory flight inspection, or a procedure that is based upon a recently decommissioned NAVAID.

b. Substitution on a Final Approach Segment (FAS). Substitution for the NAVAID (for example, a VOR or NDB) providing lateral guidance for the FAS.

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c. Lateral Navigation on LOC-Based Courses. Lateral navigation on LOC-based courses (including LOC back-course guidance) without reference to raw LOC data.

AIM 1-2-3(c)5

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5. Use of a suitable RNAV system as a means to navigate on the final approach segment of an instrument approach procedure based on a VOR, TACAN or NDB signal, is allowable. The underlying NAVAID must be operational and the NAVAID monitored for final segment course alignment.

Details

- AIM 1-2-3 language supported by Garmin GTN version 6.5
- Requirement to “monitor” the legacy NAVAID may be problematic
 - You must be equipped (ADF still work?)
 - Must be tuned and identified
 - CDI must be present so you can monitor alignment
- A win for AP coupled approaches (NBAA)