

No. 2817

Dissimilar Level of Service During an SBAS Approach

Application

This Service Letter is applicable to dual WAAS FMS, UNS-1Ew, UNS-1E_{spw}, UNS-1Fw or UNS-1Lw system installations.

Description

When linking an SBAS approach into a flight plan with the aircraft within 30 nm of the destination airport it is possible that each FMS will display a dissimilar Level Of Service (LOS).

The Universal dual FMS architecture does not require that both FMSs indicate the same LOS to fly an SBAS approach. It is acceptable to fly the approach based upon the FMS with the highest indicated LOS as long as that FMS is the selected navigation source. Each FMS predicts its LOS for an SBAS approach independently.

The FMS accomplishes two SBAS LOS predictions, initially at approach arming and again at approach activation. Only at approach arming will the FMS automatically select the highest available LOS based upon the prediction. Between the times the approach is armed and when the approach is activated, the FMS does not dynamically update the LOS prediction. If at approach activation when the second prediction occurs, the FMS predicts a higher LOS, then that LOS will be available for the pilot to select on the LOS page. The FMS will not automatically select a different LOS. The FMS will maintain the selected LOS between approach arming and sequencing the FAF, unless the pilot has manually changed it at approach activation. The pilot cannot manually change the LOS after sequencing the FAF.

While a dissimilar LOS condition is not unsafe, the crew may prefer that both FMS indicate the same LOS for the SBAS approach. If the different LOS is not the result of a receiver/antenna problem, the pilot may choose to change this condition by manually selecting a different LOS after the approach is armed and before sequencing the FAF.

Upon sequencing the FAF, the FMS will automatically downgrade the LOS if the system integrity is compromised for any reason. Under this condition, vertical deviation will be flagged but display of lateral deviation will be retained.

Universal Avionics will implement a software change to minimize the number of times the FMS will predict different LOS. Following this update, the FMS should only predict different LOS at approach arming due to actual receiver/antenna problems.

Reference Documents

References are made to other pertinent Service Information in this Service Letter. If you require any of this information it is readily available on the UniNet portion of our website, <http://www.uasc.com/>.

Report No. 2423sv1000/1100 – SCN 1000/1100 FMS Operator's Manual