

Standard Change CS-SC006a

EXCHANGE OF A COM, NAV OR NAV/COM UNIT FOR A COMBINED VHF VOICE COMMUNICATION AND NAVIGATION (NAV/COM) UNIT

1. Purpose

This SC enables the exchange of any COM, NAV or NAV/COM unit for a combined NAV/COM unit.

Installers may take advantage of this SC to benefit from any 'additional' functions that are included in the NAV/COM unit, such as, for example, a built-in course deviation indicator (CDI).

This SC incorporates any type or combinations of NAV functions. This SC also includes any external 'additional' function that the manufacturer of the NAV/COM unit declares as compatible.

This SC does not include the installation of antennas (see CS-SC004a, which may be applied concurrently).

Note 1: The purpose of the NAV (navigation) function is for awareness only.

Note 2: This SC excludes equipment installations that are already described in other specific SCs for a different purpose.

Note 3: 'Additional functions' means any functions that contribute to the consistent integration of several functions into the cockpit. In this context, an 'additional' function can be both a dedicated means to operate the NAV/COM unit or anything that can simplify NAV/COM operations. 'Additional' functions are not necessarily required by airworthiness or operational regulations.

2. Applicability/Eligibility

Aeroplanes that are not complex motor-powered aircraft, and any ELA2 aircraft except VLR.

This SC only applies to VFR installations (including night VFR).

This SC covers the installation of equipment that is not already described in another specific SC.

Operational regulations and airspace requirements complement the airworthiness requirements. This SC only addresses the 'airworthiness requirements'.

3. Acceptable methods, techniques, and practices

Note: The 'Acceptable methods, techniques, and practices' section merges the requirements for the COM function, for the NAV function, and for their combination into a single NAV/COM system.

The following standard contains acceptable data:

- FAA Advisory Circular AC 43.13-2B, Chapter 2.

Additionally, the following conditions apply:

- The COM function is capable of a 8.33-kHz and 25-kHz channel spacing.
- For the COM function, if the existing antenna cable is compliant with M17/28-RG58 (or equivalent standards, as specified for low operating temperatures), it may be reused, but it is recommended that it should be replaced with a cable that is compliant with M17/128-RG400 (PTFE) or equivalent.

- The unit is authorised in accordance with any of the following technical standards: JTSO-2C37d, JTSO-2C37e, ETSO-2C37e, JTSO-2C38d, JTSO-2C38e, ETSO-2C38e or ETSO-2C169a, or later amendments, or equivalent standards.
- The equipment is suitable for the environmental conditions to be expected during normal operations; see CS STAN.42 in Subpart A for guidance.
- The manufacturer of the unit has declared that the installation of the NAV/COM unit is suitable for the type of aircraft intended to be modified by means of this SC and for the intended operations.
- The manufacturer of the unit has declared that the installation of the NAV/COM is compatible with the connections to the existing flight management/navigation systems, as applicable.
- The installer follows the instructions from the manufacturer of the unit.
- The installer verifies that the power consumption is compatible with the aircraft installation. The results of the electrical-load analysis are recorded, or referred to, in EASA Form 123.
- An installation check flight confirms that the transmission and reception of the COM function are adequate. The proper functioning of the NAV functions is also checked as per the manufacturer instructions. Refer to CS STAN.48 in Subpart A for guidance.

4. Limitations

Any limitations defined by the equipment manufacturer apply.

In the case of aircraft approved for NVISs/NVGs, the change cannot be considered a SC.

Note: This SC does not apply to a complete conversion from a traditional cockpit to a glass cockpit, or vice versa. In this SC, a glass cockpit is to be interpreted as highly integrated and computerised display. In this context, following installation of this SC, the COM function shall continue to be easily accessible.

In accordance with CS STAN.20 in Subpart A, the installation of the equipment does not extend the operational capability of a specific aircraft: this SC cannot install a new item of equipment required to comply with an operational capability that did not already exist in the AFM.

This SC cannot be used to exchange units capable of receiving data link services from ATS.

This SC cannot be used to install a combined unit that includes a flight management system (FMS).

5. Manuals

Amend the AFM with an AFMS to include information stating 'NAV information to be used for situational awareness only' or similar information, together with any necessary operating instructions, procedures or limitations.

Note: No new capabilities are introduced by this SC.

Amend the Instructions for Continuing Airworthiness (ICAs) to establish maintenance actions/inspections and intervals, as required.

6. Release to service

This SC is not suitable for the release to service of the aircraft by the pilot-owner.

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