


Irish Aviation Authority The Times Building 11–12 D’Olier Street Dublin 2, Ireland www.iaa.ie Safety Regulation Division	Údarás Eitlíochta na hÉireann Foirgneamh na hAmanna 11–12 Sráid D’Olier Baile Átha Cliath 2, Éire Rannán na Rialachán Sábháilteachta	AERONAUTICAL NOTICE No. A.39 ISSUE 06 DATE 06.09.19	
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TRANSPONDER CALIBRATION

The Irish Aviation Authority in pursuance of Articles 17 and 31 of the Irish Aviation Authority (Airworthiness of Aircraft) Order, 1996, (S.I. No. 324 of 1996), as amended by Irish Aviation Authority (Airworthiness of Aircraft) (Amendment) Order S.I. No. 102 of 1997, as amended by Irish Aviation Authority (Airworthiness of Aircraft) (Amendment) Order S.I. No 684 of 2003, hereby directs that, where not subject to corresponding and applicable provisions under Commission Regulation (EU) No. 2018/1139 as amended:

The operator or owner of an aircraft registered in the State operated or intended to be operated under Instrument Flight Rules shall ensure that each transponder and altitude reporting system installed on that aircraft is inspected and tested as required in the aircraft maintenance schedule or, where such tests are unspecified or not detailed, that each such system has been inspected and tested as follows -

- an altitude and signal calibration check at least once within each 24-month period, (e.g. cf: FAR 43 App E and F), or
- an altitude calibration check following installation or maintenance on a system where an altitude data coding correspondence error could be introduced (e.g. cf: FAR 43 App E para (c)), or
- following any opening or closing of the pressure altitude lines (where couplings are not self-sealing, other than by routine operation of system drains or alternate pressure source selection valves (e.g. cf: FAR 43 App E para (a)),


and having been found to comply with the appropriate calibration requirements of the operator or aircraft maintenance manual or where such requirements are unspecified, with the appropriate calibration requirements of United States Federal Aviation Regulation 43, Appendices E (Altimetry) and F (Transponder) as applicable (shown bracketed above for reference only).

The appropriate calibration requirements in respect of each inspection are as follows (US FAR references are in brackets for information).

24 monthly Inspection/Check - the radiated signal and altitude data correspondence should be verified to establish the integrity of the equipment and using a sufficient number of altitude data points to establish that the altitude correspondence is satisfactory throughout the operating altitude envelope of the aircraft concerned. (FAR 43 App E and F refer).

Component replacement - calibration is required where altitude data correspondence needs to be re-established for the systems concerned. The check must include sufficient data test points to reliably establish system performance throughout the aircraft operating envelope. (FAR 43 App E para (c) refers).

Opening of systems - the appropriate calibration requirement relates to a calibrated leak test if required. Where maintenance manuals identify self-sealing couplings in relation to disconnections of installed pitot-static systems, for example, a leak test may not be required. (FAR 43 App E para (a) refers).

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The radio signal calibration requirements of transponders shall relate to the following parameters:-

- Radio Reply frequency
- Suppression
- Receiver Sensitivity
- Radiated Output Power

The tests shall be conducted using appropriate test equipment and certified by an organisation approved for aircraft maintenance with the capability and equipment for the performance of such tests or, in the case of private or aerial work aircraft, by a suitably qualified person authorised under the Irish Aviation Authority (Personnel Licensing) Orders, 2000 as amended.

This Notice replaces Aeronautical Notice A.39 at issue 5 which should be discarded.

**Chief Executive
Irish Aviation Authority**