

§ 25.132

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(IBFS) in accordance with the applicable provisions of part 1, subpart Y of this chapter.

(b) Receive-only earth stations in the FSS that operate with U.S.-licensed space stations, or with non-U.S.-licensed space stations that have been duly approved for U.S. market access, may be registered with the Commission in order to protect them from interference from terrestrial microwave stations in bands shared co-equally with the Fixed Service in accordance with the procedures of §§ 25.203 and 25.251, subject to the stricture in § 25.209(c).

(c) Licensing or registration of receive-only earth stations with the Commission confers no authority to receive and use signals or programming received from satellites. *See* section 705 of the Communications Act, 47 U.S.C. 605.

(d) Applications for registration must be filed on FCC Form 312, Main Form and Schedule B, accompanied by the coordination exhibit required by § 25.203 and any other required exhibits.

(e) Complete applications for registration will be placed on public notice for 30 days and automatically granted if no objection is submitted to the Commission and served on the applicant. Additional pleadings are authorized in accordance with § 1.45 of this chapter.

(f) The registration of a receive-only earth station results in the listing of an authorized frequency band at the location specified in the registration. Interference protection levels are those agreed to during coordination.

(g) Reception of signals or programming from non-U.S. satellites may be subject to restrictions as a result of international agreements or treaties. The Commission will maintain public information on the status of any such agreements.

(h) Registration term: Registrations for receive-only earth stations governed by this section will be issued for a period of 15 years from the date on which the application was filed. Applications for renewals of registrations must be submitted on FCC Form 312R (Application for Renewal of Radio Station License in Specified Services) no earlier than 90 days and no later than

30 days before the expiration date of the registration.

(i) Applications for modification of license or registration of receive-only earth stations shall be made in conformance with §§ 25.117 and 25.118. In addition, registrants are required to notify the Commission when a receive-only earth station is no longer operational or when it has not been used to provide any service during any 6-month period.

(j)(1) Except as set forth in paragraph (j)(2) of this section, receive-only earth stations operating with non-U.S. licensed space stations shall file an FCC Form 312 requesting a license or modification to operate such station.

(2) Operators of receive-only earth stations need not apply for a license to receive transmissions from non-U.S.-licensed space stations that have been duly approved for U.S. market access, provided the space station operator and earth station operator comply with all applicable rules in this chapter and with applicable conditions in the Permitted Space Station List or market-access grant.

[56 FR 24016, May 28, 1991, as amended at 61 FR 9952, Mar. 12, 1996; 62 FR 5929, Feb. 10, 1997; 62 FR 64172, Dec. 4, 1997; 65 FR 58466, Sept. 29, 2000; 67 FR 12485, Mar. 19, 2002; 68 FR 62249, Nov. 3, 2003; 68 FR 63999, Nov. 12, 2003; 69 FR 29901, May 26, 2004; 69 FR 47795, Aug. 6, 2004; 70 FR 32253, June 2, 2005; 78 FR 8421, Feb. 6, 2013; 79 FR 8318, Feb. 12, 2014; 81 FR 55330, Aug. 18, 2016]

§ 25.132 Verification of earth station antenna performance.

(a)(1) Except as provided in paragraph (a)(2) of this section, applications for transmitting earth stations in the FSS, including feeder-link stations, must include a certification that the applicant has reviewed the results of a series of radiation pattern tests performed by the antenna manufacturer on representative equipment in representative configurations, and the test results demonstrate that the equipment meets relevant off-axis gain standards in § 25.209, measured in accordance with paragraph (b)(1) of this section. Applicants and licensees must be prepared to submit the radiation pattern measurements to the Commission on request.

(2) Applicants that specify off-axis EIRP density pursuant to §25.115(g)(1) are exempt from the certification requirement in paragraph (a)(1) of this section.

(b)(1) For purposes of paragraph (a)(1) of this section and §25.115(g)(1), the following measurements on a production antenna performed on calibrated antenna range must be made at the top and bottom of each frequency band assigned for uplink transmission:

(i)(A) Co-polarized gain in the azimuth plane must be measured across a range extending to 180° on each side of the main-lobe axis, and the measurements must be represented in two plots: one across the entire angular range of ±180° from the main-lobe axis and the other across ±10° from the main-lobe axis.

(B) Co-polarized gain must be measured from 0° to 30° from beam peak in the elevation plane.

(ii) Cross-polarization gain must be measured across a range of plus and minus 7° from beam peak in the azimuth and elevation planes.

(iii) Main beam gain.

(iv) For antennas with asymmetric apertures or beams, where the minor axis of the antenna beam (major axis of the antenna aperture) will not always be aligned parallel to the plane tangent to the GSO arc, the measurements in paragraphs (b)(1)(i) through (iii) of this section must be made over the angular ranges specified in paragraphs (b)(1)(i)(A) and (B) of this section in two orthogonal planes, with the antenna oriented at the maximum skew angle at which it will operate.

(2) The relevant envelope specified in §25.209 must be superimposed on each measured pattern.

(c) The tests specified in paragraph (b) of this section are normally performed at the manufacturer's facility; but for those antennas that are very large and only assembled on-site, on-site measurements may be used for product qualification data. If on-site data is to be used for qualification, the test frequencies and number of patterns should follow, where possible, the recommendations in paragraph (b) of this section, and the test data is to be submitted in the same manner as described in paragraph (a) of this section.

(d) For each new or modified transmitting antenna over 3 meters in diameter, except antennas subject to measurement under §25.138(d), the following on-site verification measurements must be completed at one frequency on an available transponder in each frequency band of interest and submitted to the Commission.

(1) Co-polarized patterns in the elevation plane, plus and minus 7 degrees, in the transmit band.

(2) Co-polarized patterns in the azimuth and elevation planes, plus and minus 7 degrees, in the receive band.

(3) *System cross-polarization discrimination on-axis*. The FCC envelope specified in §25.209 shall be superimposed on each pattern. The transmit patterns are to be measured with the aid of a co-operating earth station in coordination with the satellite system control center under the provisions of §25.272.

(e) Certification that the tests required by paragraph (c) of this section have been satisfactorily performed shall be provided to the Commission in notification that construction of the facilities has been completed as required by §25.133.

(f) Antennas less than 3 meters in diameter and antennas on simple (manual) drive mounts that are operated at a fixed site are exempt from the requirements of paragraphs (c) and (d) of this section provided that a detailed technical showing is made that confirms proper installation, pointing procedures, and polarization alignment and manufacturing quality control. These showing must also include a plan for periodic testing and field installation procedures and precautions.

(g) Records of the results of the tests required by this section must be maintained at the antenna site or the earth station operator's control center and be available for inspection.

[58 FR 13419, Mar. 11, 1993, as amended at 69 FR 5710, Feb. 6, 2004; 70 FR 32253, June 2, 2005; 72 FR 50028, Aug. 29, 2007; 74 FR 47102, Sept. 15, 2009; 74 FR 57098, Nov. 4, 2009; 78 FR 14926, Mar. 8, 2013; 79 FR 8318, Feb. 12, 2014; 81 FR 55330, Aug. 18, 2016]