



MALTA COMMUNICATIONS AUTHORITY

Thirty-Third Schedule to Decision No. MCA/D-22-4662

Apparatus General Authorisation for Fixed Earth Stations Operating with Non-Geostationary Satellite Systems in the Frequency Ranges 10.7-12.75 GHz and 14.0-14.5 GHz

Publication Date

22 July 2022

 (+356) 2133 6840  info@mca.org.mt  www.mca.org.mt

 Valletta Waterfront, Pinto Wharf, Floriana FRN1913, Malta



Revision History of the Thirty-Third Schedule

Fixed earth stations operating with non-geostationary satellite systems in
the frequency ranges 10.7-12.75 GHz and 14.0-14.5 GHz

Date	Comments
22/07/2022	Publication

**This Schedule shall be read and construed as one with
Part I and Part II of Decision No. MCA/D/22-4662**

**Adopted pursuant to Article 30A of the
Electronic Communications (Regulation) Act (Cap. 399)
establishing the radiocommunications apparatus
general authorisation**

Article 1 – Applicability

This apparatus general authorisation applies to any person installing or using a fixed earth station operating with non-geostationary satellite systems in the frequency ranges 10.7-12.75 GHz and 14.0-14.5 GHz or any apparatus intended to be used as a component part of that apparatus.

Article 2 – Interpretation

In this Schedule unless the context otherwise requires:

- (1) "earth stations" shall have the same meaning as in the Radio Regulations;
- (2) "ECC Report 272" means the report developed by the Electronic Communications Committee of CEPT on earth stations operating in the frequency bands 4-8 GHz, 12-18 GHz and 18-40 GHz in the vicinity of aircraft;
- (3) "fixed earth station" means an earth station that is installed at a fixed location with antennas that track continuously the satellites in non-geostationary orbits;
- (4) "HIRF" means high intensity radiated field;
- (5) "network control facility" or "NCF" refers to a set of functional entities that, at system level, monitor and control the correct operation of the ESOMP and, if appropriate, all of the ESOMPs in a network; and
- (6) "Time Division Multiple Access" or "TDMA" means a transmission technique involving the multiplexing of many time slots onto the same time payload.

Article 3 – Minimum technical parameters

- (1) Unless otherwise specified in the National Frequency Plan, a fixed earth station shall operate with non-geostationary satellites as part of the fixed-satellite service within the 10.70-12.75 GHz (space-to-Earth) and 14.00-14.50 GHz (Earth-to-space) frequency bands, under the control of a satellite system.
- (2) A fixed earth station shall operate under the control of a network control facility.
- (3) The minimum technical parameters of a fixed earth station shall be those specified in the Annex to this Schedule.

Annex to the Thirty-Third Schedule

Minimum Technical Parameters for Fixed Earth Stations Operating with Non-Geostationary Satellite Systems in the Frequency Ranges 10.7-12.75 GHz and 14.0-14.5 GHz

Fixed earth stations operating with non-geostationary satellite systems in the frequency bands 10.7-12.75 GHz and 14.0-14.5 GHz shall comply with the following technical and operational requirements:

1. The design, coordination and operation of fixed earth stations shall take into account the following factors:
 - a) antenna mis-pointing;
 - b) variations in the antenna pattern;
 - c) variations in the transmit e.i.r.p.
2. Fixed earth stations that use closed-loop tracking of the satellite signal shall employ an algorithm that is resistant to capturing and tracking adjacent satellite signals. Fixed earth stations shall immediately inhibit transmissions when they detect that unintended satellite tracking has happened or is about to happen.
3. Techniques to access spectrum and mitigate interference that provide an appropriate level of performance to comply with the essential requirements of Directive 2014/53/EU of the European Parliament and of the Council shall be used. If relevant techniques are described in harmonised standards or parts thereof the references of which have been published in the *Official Journal* of the European Union in accordance with Directive 2014/53/EU, performance at least equivalent to the performance level associated with those techniques shall be ensured.
4. Fixed earth stations shall comply with the following requirements established to ensure compliance with aircraft HIRF protection criteria based on ECC Report 272, using a maximum HIRF field strength of 190 V/m in the 14.0-14.5 GHz band:
 - a) the maximum e.i.r.p. of fixed earth stations shall be limited to 60 dBW;
 - b) the maximum e.i.r.p. of fixed earth stations operating within TDMA networks shall be respected after taking into consideration the duty cycle;¹ and
 - c) when an antenna is coupled to more than one transmitter or a transmitter provides more than one carrier (multi-carrier operation), the above e.i.r.p. level is the sum of all simultaneous emissions from the antenna on the main lobe.

¹ Refer to sections 3.3 and 3.4 of ECC Report 272.