



MALTA COMMUNICATIONS AUTHORITY


Twenty-Eighth Schedule to Decision No. MCA/D-22-4662

Apparatus General Authorisation for Earth Stations on Board Vessels (ESV)

Publication Date

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Revision History of the Twenty-Eighth Schedule

Earth stations on board vessels

Date	Comments
13/11/2023	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 an earth station on board vessel 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 station on board vessel" or "ESV" means an earth station intended to be used while in motion or during halts at unspecified points and which is installed on board a vessel;
- (2) "earth stations" shall have the same meaning as in the Radio Regulations;
- (3) "ECC/DEC/(05)09" means ECC Decision of 24 June 2005 on the free circulation and use of Earth Stations on board Vessels operating in fixed-satellite service networks in the frequency bands 5925-6425 MHz (Earth-to-space) and 3700-4200 MHz (space-to-Earth), as amended;
- (4) "ECC/DEC/(05)10" means ECC Decision of 24 June 2005 on the free circulation and use of Earth Stations on board Vessels operating in fixed-satellite service networks in the frequency bands 14-14.5 GHz, as amended;
- (5) "GSO" means geostationary-satellite orbit; and
- (6) "Resolution 902" means Resolution 902 of the ITU relating to earth stations located on board vessels which operate in fixed-satellite service networks in the uplink bands 5925-6425 MHz and 14.0-14.5 GHz (WRC-03).

Article 3 – Minimum technical parameters

- (1) The minimum technical parameters for ESV shall be those specified in the Annex to this Schedule.
- (2) An ESV shall comply with Resolution 902.
- (3) An ESV shall operate under the control of a network control facility.

Article 4 – Additional usage conditions

- (1) The use of ESV installed on a vessel registered in Malta from another country shall be subject to observance with any terms, conditions or limitations which could be applicable in that country.

- (2) An ESV shall immediately cease its transmissions in the event that a country experiences harmful interference caused by an ESV regulated under this apparatus general authorisation.
- (3) Unless stated otherwise by the ECC as regards the implementation of ECC/DEC/(05)09¹, an ESV using the frequency band 5925-6425 MHz and employed with a transmit antenna with a minimum diameter of 1.2 m may be operated without any prior agreement of the competent authorities of a country:

Provided that the ESV is located at least 330 km away from the low-water mark of that country.
- (4) The operation of an ESV in the frequency band 5925-6425 MHz which is located less than 330 km away from the low-water mark of a country shall seek the prior approval of the competent authorities of that country prior operating the ESV from that location.
- (5) Unless stated otherwise by the ECC as regards the implementation of ECC/DEC/(05)10², an ESV using the frequency band 14.0-14.5 MHz and located at least 125 km away from the low-water mark of a country may be operated without any prior agreement of the competent authorities of that country.
- (6) The requirement described in paragraph (5) hereof relating to seeking the prior approval of the countries that are within a distance that is less than 125 km away from the low-water mark does not apply if the countries which are within this distance are those listed in footnote 5.506B of the National Frequency Plan.

¹ Please refer to: <https://docdb.cept.org/implementation/390>.

² Please refer to: <https://docdb.cept.org/implementation/391>.

Annex to the Twenty-Eighth Schedule Minimum Technical Parameters for Earth Stations on board Vessels (ESV)

A. ESV operating in the 4/6 GHz frequency bands

Parameter	Technical condition										
Frequency bands	5925-6425 MHz (Earth-to-space) 3700-4200 MHz (space-to-Earth)										
Minimum antenna diameter	2.4 m										
Tracking antenna accuracy	$\pm 0.2^\circ$ (peak)										
Maximum e.i.r.p. towards the horizon	20.8 dBW										
Maximum e.i.r.p. spectrum density towards the horizon	17 dB(W/MHz)										
Maximum off-axis e.i.r.p. density	<p>Any angle φ specified, off the main-lobe axis of an earth station antenna, the maximum e.i.r.p. in any direction within 3° of the GSO shall not exceed the following values:</p> <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;"><i>Angle off-axis</i></th> <th style="text-align: center;"><i>Maximum e.i.r.p. per 4 kHz band</i></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">$2.5^\circ \leq \varphi \leq 7^\circ$</td> <td style="text-align: center;">$(32 - 25 \log \varphi)$ dB(W/4kHz)</td> </tr> <tr> <td style="text-align: center;">$7^\circ < \varphi \leq 9.2^\circ$</td> <td style="text-align: center;">11 dB(W/4kHz)</td> </tr> <tr> <td style="text-align: center;">$9.2^\circ < \varphi \leq 48^\circ$</td> <td style="text-align: center;">$(35 - 25 \log \varphi)$ dB(W/4kHz)</td> </tr> <tr> <td style="text-align: center;">$48^\circ < \varphi \leq 180^\circ$</td> <td style="text-align: center;">-7 dB(W/4kHz)</td> </tr> </tbody> </table>	<i>Angle off-axis</i>	<i>Maximum e.i.r.p. per 4 kHz band</i>	$2.5^\circ \leq \varphi \leq 7^\circ$	$(32 - 25 \log \varphi)$ dB(W/4kHz)	$7^\circ < \varphi \leq 9.2^\circ$	11 dB(W/4kHz)	$9.2^\circ < \varphi \leq 48^\circ$	$(35 - 25 \log \varphi)$ dB(W/4kHz)	$48^\circ < \varphi \leq 180^\circ$	-7 dB(W/4kHz)
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$9.2^\circ < \varphi \leq 48^\circ$	$(35 - 25 \log \varphi)$ dB(W/4kHz)										
$48^\circ < \varphi \leq 180^\circ$	-7 dB(W/4kHz)										

B. ESV operating in the 11/12/14 GHz frequency bands

Parameter	Technical condition
Frequency bands	14.0-14.5 GHz (Earth-to-space) 10.7-11.7 GHz (space-to-Earth) 12.5-12.75 GHz (space-to-Earth)
Minimum antenna diameter	0.6 m
Tracking antenna accuracy	$\pm 0.2^\circ$ (peak)
Maximum e.i.r.p. towards the horizon	16.3 dBW

Parameter	Technical condition										
Maximum e.i.r.p. spectrum density towards the horizon	12.5 dB(W/MHz)										
Maximum off-axis e.i.r.p. density	<p>Any angle φ specified, off the main-lobe axis of an earth station antenna, the maximum e.i.r.p. in any direction within 3° of the GSO shall not exceed the following values:</p> <table border="0"> <thead> <tr> <th><i>Angle off-axis</i></th> <th><i>Maximum e.i.r.p. per 40 kHz band</i></th> </tr> </thead> <tbody> <tr> <td>$2^\circ \leq \varphi \leq 7^\circ$</td> <td>$(33 - 25 \log \varphi)$ dB(W/40kHz)</td> </tr> <tr> <td>$7^\circ < \varphi \leq 9.2^\circ$</td> <td>12 dB(W/40kHz)</td> </tr> <tr> <td>$9.2^\circ < \varphi \leq 48^\circ$</td> <td>$(36 - 25 \log \varphi)$ dB(W/40kHz)</td> </tr> <tr> <td>$48^\circ < \varphi \leq 180^\circ$</td> <td>-6 dB(W/40kHz)</td> </tr> </tbody> </table>	<i>Angle off-axis</i>	<i>Maximum e.i.r.p. per 40 kHz band</i>	$2^\circ \leq \varphi \leq 7^\circ$	$(33 - 25 \log \varphi)$ dB(W/40kHz)	$7^\circ < \varphi \leq 9.2^\circ$	12 dB(W/40kHz)	$9.2^\circ < \varphi \leq 48^\circ$	$(36 - 25 \log \varphi)$ dB(W/40kHz)	$48^\circ < \varphi \leq 180^\circ$	-6 dB(W/40kHz)
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