



ECC Decision (03)04

Exemption from Individual Licensing of Very Small Aperture Terminals (VSAT) operating in the frequency bands 14.25-14.50 GHz Earth-to-space and 10.70-11.70 GHz space-to-Earth

Approved 17 October 2003

Amended 8 March 2019

EXPLANATORY MEMORANDUM

1 INTRODUCTION

Licensing is an appropriate tool for administrations to regulate the use of radio equipment and the effective use of the frequency spectrum and to avoid harmful interference. However intervention from the administrations as far as the installation and use of equipment is concerned needs to be proportionate. Administrations and especially users, retailers and manufacturers will benefit from a more deregulated system of authorising the use of radio equipment.

2 BACKGROUND

There is general agreement that when the efficient use of the frequency spectrum is not at risk and as long as harmful interference is unlikely, the installation and use of radio equipment might be exempted from individual licensing. Within the EEA, Directives 2014/53/EU (the RTE Directive) [1] and Directive 2002/20/EC (the Authorisation Directive) [2] introduce the principle that individual licensing is only justified for reasons related to the effective/efficient use of the spectrum and the avoidance of harmful interference.

In general the CEPT administrations apply similar systems of licensing and exemption from individual licensing. However, different criteria are used to decide whether radio equipment should be licensed or exempted from an individual licence.

The provision of Pan European wide services will be greatly assisted when all CEPT administrations exempt the same categories of radio equipment from licensing and apply -to achieve that- the same criteria to decide on this.

When radio equipment is subject to an exemption from individual licensing, anyone can have installed and use the radio equipment without any prior individual permission from the administration. Furthermore, the administration will not register the individual equipment. The use of the equipment can be subject to general provisions or general licence.

This Decision intends to provide for licence exemption of Very Small Aperture Terminals (VSAT) within the CEPT. The European Telecommunication Standards Institute (ETSI) provides specifications for the standardisation of the characteristics of Very Small Aperture Terminals (VSATs) operating as part of a satellite network (e.g. star, meshed or point-to-point) used for the distribution of information. These VSATs have the following characteristics:

They operate in one or more frequency ranges in the exclusive part of the following bands allocated to the fixed satellite services (FSS):

- 14.00 GHz to 14.25 GHz (Earth-to-space)
- 12.50 GHz to 12.75 GHz (space-to-Earth)

or in the shared parts of the following band, allocated to the FSS and Fixed Services (FS):

- 14.25 GHz to 14.50 GHz (Earth-to-space)
- 10.70 GHz to 11.70 GHz (space-to-Earth).

They operate with geostationary satellites and the terminals are envisaged for unattended operation, having an antenna diameter up to 3.8m.

The powers specified in this Decision are peak powers. Where an antenna is coupled to more than one transmitter or a transmitter provides more than one carrier, the transmitter power specified in this Decision is the sum total of all carriers feeding the antenna and the e.i.r.p specified is the sum total of all the emissions from the antenna on the main lobe.

The electromagnetic compatibility between satellite terminals and aircraft avionics has been examined in ECC Report 272 on the “Earth Stations operating in the frequency bands 4-8 GHz, 12-18 GHz and 18-40 GHz in the vicinity of aircraft” [3]. This ECC Report provides the maximum earth station e.i.r.p. levels to ensure compliance with aircraft High Intensity Radiated Field (HIRF) protection criteria.

Maximum e.i.r.p. levels for earth stations retained in this Decision are equal to or lower than maximum e.i.r.p. based on ECC Report 272 that ensures compliance with aircraft HIRF protection criteria. Therefore the maximum e.i.r.p. levels indicated in this Decision implicitly provide the necessary protection for aircraft HIRF.

3 REQUIREMENT FOR AN ECC DECISION

ERC Recommendation 01-07 [4] was adopted in 1995 and revised in 2000, and it lists harmonised criteria for the administrations to decide whether an exemption of individual licence should be applied.

The aim of this Decision is to exempt VSATs from individual licensing because they fulfil the criteria for exemption listed in ERC Recommendation 01-07.

ECC DECISION OF 17 OCTOBER 2003 ON EXEMPTION FROM INDIVIDUAL LICENSING OF VERY SMALL APERTURE TERMINALS (VSAT) OPERATING IN THE FREQUENCY BANDS 14.25-14.50 GHZ EARTH-TO-SPACE AND 10.70-11.70 GHZ SPACE-TO-EARTH (ECC/DEC/(03)04), AMENDED ON 8 MARCH 2019

“The European Conference of Postal and Telecommunications Administrations,

considering

- a) that within the CEPT administrations there is a growing awareness of a need for harmonisation of licensing regimes in order to facilitate the provision of Pan European wide services;
- b) that it therefore would be desirable for CEPT administrations to have common licence regimes at their disposal in order to control the installation, ownership and use of radio equipment;
- c) that there is a strong desire within the CEPT administrations to improve efficiency by reducing the control exercised by administrations in the form of mandatory provisions;
- d) that there are considerable differences in national licensing, laws and regulations and that harmonisation therefore can only be introduced gradually;
- e) that national licensing regimes should be as simple as possible, in order to minimise the burden upon the administrations and users of equipment;
- f) that intervention by the national administrations with respect to the use of radio equipment should in general not exceed the level necessary for the efficient use of the frequency spectrum;
- g) that administrations should work towards the exemption of relevant radio equipment from individual licensing based on harmonised criteria detailed in ERC Recommendation 01-07 [4];
- h) that these terminals comply with relevant European and international standards for Essential Requirements with regard to radio, EMC and safety;
- i) that this Decision shall not impede EEA member countries from fulfilling their obligations according to Community law;
- j) that EN 301 428 [5] contains provisions ensuring to prevent VSATs from unintended and unauthorised transmissions;
- k) that CEPT/ERC Recommendation 13-03 (The Hague 1996) [6] on the use of the band 14.0 - 14.5 GHz for VSAT (and Satellite News Gathering (SNG)) recommends that the use of the band 14.25 - 14.5 GHz for the Fixed Service should be discouraged in those countries that have not already implemented radio links in the band and that flexible and unrestricted use of VSAT (and SNG) applications in the band 14.25-14.5 GHz should be allowed at least in those countries where no fixed links have been implemented so far,
- l) that VSATs operate with geostationary satellites as part of the Fixed Satellite Service (FSS) within the frequency bands 10.70-11.70 GHz (space-to-Earth) and 14.25-14.50 GHz (Earth-to-space) under the control of the satellite system (authorised, if applicable), providing analogue or digital communications;
- m) that VSATs complying with the harmonised European Standard EN 301 428 [5] or equivalent technical specifications also fulfil the conditions for licence exemption listed in ERC Recommendation 01-07 [4];
- n) that ECC Report 272 concludes on maximum earth station e.i.r.p. levels to ensure compliance with aircraft HIRF protection criteria.

DECIDES

1. to exempt from individual licensing VSATs that fulfil considerations l) and m) and which comply with the following requirements that ensure compliance with aircraft HIRF protection criteria based on ECC Report 272 [3], using maximum HIRF field strength of 190 V/m in 14.25-14.5 GHz:

- a) The maximum e.i.r.p. of VSAT shall be limited to 50 dBW;
- b) The maximum e.i.r.p. of VSAT operating within TDMA networks shall be respected after taking into consideration the duty cycle (see section 3.3 and 3.4 of ECC Report 272);

Where justified, administrations may require a simple form of registration.

2. that this Decision shall enter into force on 17 October 2003;
3. that CEPT administrations shall communicate the national measures implementing this Decision to the ECC Chairman and the Office when the Decision is nationally implemented

Note:

Please check the Office documentation database <https://www.ecodocdb.dk> for the up to date position on the implementation of this and other ECC Decisions.

ANNEX 1: LIST OF REFERENCES

This annex contains the list of relevant reference documents.

- [1] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC
- [2] Directive 2002/20/EC of the European Parliament and of the Council of 7 March 2002 on the authorisation of electronic communications networks and services Radio Equipment Directive 2014/53/EU
- [3] ECC Report 272: "Earth Stations operating in the frequency bands 4-8 GHz, 12-18 GHz and 18-40 GHz in the vicinity of aircraft", January 2018
- [4] ERC Recommendation 01-07: "Harmonised regime for exemption from individual licensing for the use of radio spectrum", revised June 2004
- [5] ETSI EN 301 428 V2.1.2: "Satellite Earth Stations and Systems (SES); Harmonised Standard for Very Small Aperture Terminal (VSAT); Transmit-only, transmit/receive or receive-only satellite earth stations operating in the 11/12/14 GHz frequency bands covering the essential requirements of article 3.2 of Directive 2014/53/EU"
- [6] CEPT/ERC Recommendation 13-03: "The use of the band 14.0 - 14.5 GHz for Very Small Aperture Terminals (VSAT) and Satellite News Gathering (SNG)", December 1996