

ELECTRONIC COMMUNICATIONS COMMITTEE

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)



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 1999/5/EC (the R&TTE Directive) and Directive 2002/20/EC (the Authorisation Directive) 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.

There is a potential risk that radio transmissions near airports could degrade the performance of electronic navigation and control equipment used on board aircraft. The risk is dependent on aircraft immunity and the power and antenna gain of the transmitter and its distance from the aircraft. Those aircraft approaching or taking-off from the runway are especially vulnerable as these are critical procedures which may bring the aircraft close to a transmitter. The former ERC has investigated this problem in consultation with national and international, civil and military aircraft authorities. These consultations showed that an aircraft immunity level of no more than 20 V/m could be assumed if adequate protection should be given to electronic aircraft control and

navigation systems. Taking into account an aircraft immunity level of 20 V/m, the geometry of the “glide path” and the characteristics of this type of satellite terminal, suitable technical and operational constraints have been developed. These are given in *noting* (c) of the Decision. VSATs that do not comply with *noting* (c) are not covered by this Decision.

The users and installer of the terminals should be made aware of the restrictions via information in the user manual and on the package of the equipment to be provided by manufacturers.

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.

3 REQUIREMENTS FOR AN ECC DECISION

ERC/REC 01-07 that was adopted in 1995 and revised in 2000 listed 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/REC 01-07.

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frequency bands 14.25 - 14.50 GHz Earth-to-space and 10.70 - 11.70 GHz space-to-Earth**

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“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/REC 01-07;
- 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 contains provisions ensuring to prevent VSATs from unintended and unauthorised transmissions;
- k) that CEPT/ERC Recommendation 13-03 (The Hague 1996) 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 or equivalent technical specifications also fulfil the conditions for licence exemption listed in ERC/REC 01-07;
- n) that this Decision applies only to VSATs:

- using a transmitter power of no more than 2 watts;
- using an equivalent isotropically radiated power (e.i.r.p.) of no more than 50 dBW;
- used beyond 500 metres from the boundary fence of an airport.

DECIDES

1. to exempt VSATs that fulfil considerations l), m) and n) from individual licensing. 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 CEPT web site (<http://www.CEPT.org>) for the up to date position on the implementation of this and other ERC/ECC decisions.