EUROPEAN RADIOCOMMUNICATIONS COMMITTEE

ERC Decision
of 23 November 1998
on the adoption of approval regulations for Radio transmitters and receivers at aeronautical stations of the aeronautical mobile service operating in the VHF band (118 MHz-137 MHz) using amplitude modulation and 8.33 kHz channel spacing;
Technical characteristics and methods of measurement
based on the European Standard ETS 300 676

(ERC/DEC/(98)28)

EXPLANATORY MEMORANDUM

1 INTRODUCTION.

The free movement of radiocommunications goods and the provision of Europe-wide services for radiocommunications are only achievable if there exist common regulations throughout Europe regarding availability of frequency bands, type approval requirements and border crossing procedures. A basic requirement to fulfil these objectives is the Europe-wide implementation of national regulations based on the European Telecommunications Standards (ETSs/ENs) developed by the European Telecommunications Standards Institute (ETSI).

This Decision (ERC/DEC/(98)28) provides the necessary mechanism for CEPT administrations to commit themselves to implement, within their national regimes, ETS 300 676[1] and withdraw any conflicting national standard.

2 BACKGROUND.

Both the ERC and ETSI are involved in the development of common regulations, as described in (1) above. The Memorandum of Understanding between ERC and ETSI explains the respective responsibilities of the two organisations and its annex describes the principles of cooperation. The ERC, for its part, should, *inter alia*, adopt Decisions on the introduction of ETSI standards into approval regimes.

ETS 300 676 has been prepared by the Radio Equipment and Systems (RES) Technical Committee of ETSI. The standard has undergone the ETSI standards approval procedure and is now published as an ETS.

The use of the frequency range (118 MHz-137 MHz) covered by ETS 300 676 is harmonised within CEPT. The equipment used in this frequency range is subject to national licensing and national and international frequency planning which requires specification of, *inter alia*, frequency of operation and effective radiated power (e.r.p.). Such parameters or requirements are considered as outside the scope of this Decision.

Nevertheless, there are a number of parameters, in particular those considered by the ERC as essential for spectrum management purposes[2], which can be harmonised by adopting within approval regulations the limit values and measurement methods provided in ETS 300 676.

3 REQUIREMENT FOR AN ERC DECISION.

The allocation and assignment of radio frequencies and the complementary equipment type approval regimes in CEPT member countries are laid down by law, regulation or administrative action. The ERC recognises that for harmonised fixed and mobile radio services to be introduced successfully throughout Europe, manufacturers and operators must be given the confidence to make the necessary investment in the development and procurement of new systems. Commitment by CEPT administrations to implement this ERC Decision will provide a clear indication that equipment conforming to national type approval regulations based on ETS 300 676 will have the benefit of a Europe-wide market.

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[1] ETS 300 676 March 1997: Radio Equipment and Systems (RES): Radio transmitters and receivers at aeronautical stations of the aeronautical mobile service operating in the VHF band (118 MHz-137 MHz) using amplitude modulation and 8.33 kHz channel spacing; Technical characteristics and methods of measurement

[2] Parameters necessary for spectrum management as agreed at the 11th ERC meeting in Brussels, June 1994.

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"The European Conference of Postal and Telecommunications Administrations,

considering:

a) that CEPT has a long term objective to harmonise the use of frequencies and the related regulatory regimes;

b) that such harmonisation will benefit administrations, manufacturers, operators and users;

c) that the allotment of 8.33 kHz channels in the VHF band has been decided by the International Civil Aviation Organization (ICAO) and may be found in ICAO Annex 10 Volume V;

d) that the date for the mandatory carriage and operation of 8.33 kHz channel spacing capable equipment within the ICAO EUR Region is 1st January 1999;

e) that the carriage of 8.33 kHz channel spacing capable equipment is mandatory for operations in the ICAO EUR Region for flights above FL 245 - above FL 195 over France - on the understanding that an individual state may grant exemption(s) within its area of responsibility;

f) that ETSI has published ETS 300 676 for radio transmitters and receivers at aeronautical stations of the aeronautical mobile service operating in the VHF band (118 MHz-137 MHz) using amplitude modulation and 8.33 kHz spacing;

g) that the scope of ETS 300 676 is limited to ground base stations, and excludes ground mobile and handportable stations;

h) that, for the foreseeable future, there will continue to be widespread use of equipment having the technical characteristics described in (f) above;

i) that, in accordance with the Memorandum of Understanding between ERC and ETSI, the ERC shall adopt ERC Decisions on the introduction of ETSs and ENs into national approval regimes;

j) that the use of radio equipment is subject to national licensing and frequency planning requirements, in particular for frequency of operation, limit of maximum duration of transmission (e.g. use of time-out/timers) and maximum field strength levels;

k) that suitable transitional arrangements are given in CEPT Recommendation T/R 01-05;

DECIDES

1. to adopt approval regulations for radio transmitters and receivers at aeronautical stations of the aeronautical mobile service operating in the VHF band (118 MHz-137 MHz) using amplitude modulation and 8.33 kHz channel spacing, based on the limit values and measurement methods for spectrum management parameters contained in ETS 300 676, with the exclusion by national choice of those parameters which are subject to national licensing requirements. A list of the parameters to be included in approval regulations is given in **Annex 1**;

2. to withdraw any conflicting national regulation(s);

3. that this Decision shall enter into force on 1 December 1998;

3. that CEPT Member administrations shall communicate the national measures implementing this Decision to the ERC Chairman and the ERO when the decision is nationally implemented."

Note:
Please check the ERO web site (www.ero.dk) under "Documentation / Implementation" for the up to date position on the implementation of this and other ERC Decisions.

ANNEX 1

Methods of measurement and limits from ETS 300 676 to be included in national approval requirements:

EN 300 676	Section	Comments
Transmitter parameters[3]:	**7**	
Frequency error	7.1	
Carrier power	7.2	
Amplitude modulation characteristics	7.3	
- Modulation depth	7.3.1	
- Modulation compression	7.3.2	
- Amplitude modulation distortion	7.3.3	
- Unwanted frequency modulation	7.3.5	
Adjacent channel power	7.4	
Conducted spurious emission	7.5	
Cabinet radiation	7.6	
Intermodulation attenuation	7.7	
RF power attack time and release time	7.8	
Transient frequency behaviour of the transmitter	7.9	
Receiver parameters[3]	**8**	
Maximum usable sensitivity	8.1	
Adjacent channel selectivity	8.5	
Spurious response rejection	8.6	
Intermodulation response rejection	8.7	
Blocking or desensitisation	8.8	
Conducted spurious emissions	8.9	
Radiated spurious emissions	8.10	
Squelch operation	8.11	
Cross modulation rejection	8.12	

[3] In some countries the spurious emissions and spurious radiations of transmitters and receivers are not considered as approval requirements but are essential requirements of the EMC Directive 89/336 EC for which alternative procedures apply.