



AMENDMENT

ETS 300 445

A1

March 1997

Source: ETSI TC-RES

Reference: RE/RES-09034

ICS: 33.020

Key words: Audio, EMC, radio, radio mic, testing

**This amendment A1 modifies
the European Telecommunication Standard ETS 300 445 (1996)**

**Radio Equipment and Systems (RES);
ElectroMagnetic Compatibility (EMC) standard
for wireless microphones and similar
Radio Frequency (RF) audio link equipment**

ETSI

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Foreword

This amendment to ETS 300 445 (1996) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

ETS 300 445 as amended by this amendment, with ETS 300 454, is intended to become a Harmonized EMC Standard, the reference of which is intended to be published in the Official Journal of the European Communities referencing Council Directive 89/336/EEC (EMC Directive).

ETS 300 445 as amended by this amendment is intended to become a Harmonized EMC Standard for equipment within the scope of I-ETS 300 422.

Annex D contains the ERC Decision which references the technical specifications in I-ETS 300 422 for inclusion in national type approval regulations.

Transposition dates	
Date of adoption	21 February 1997
Date of latest announcement of this ETS (doa):	30 June 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 December 1997
Date of withdrawal of any conflicting National Standard (dow):	31 December 1997

Amendments

Page 5, Foreword

Replace Foreword with the following:

This European Telecommunication Standard (ETS) was produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS together with ETS 300 454 is intended to become a Harmonized EMC Standard, the reference of which is intended to be published in the Official Journal of the European Communities referencing the EMC Directive.

This ETS is intended to become a Harmonized EMC standard for equipment within the scope of I-ETS 300 422.

The technical specifications which are relevant to the EMC Directive are listed in normative annex B for ETS 300 454 and annex C for I-ETS 300 422.

Annex D contains the ERC Decision which references the technical specifications in I-ETS 300 422 for inclusion in national type approval regulations.

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Insert the following before History:

Annex B (normative): ETS 300 445, Radio Equipment and Systems (RES): ElectroMagnetic Compatibility (EMC) standard for wireless microphones and similar Radio Frequency (RF) audio link equipment

Table B.1: Subclauses of this ETS relevant for compliance with the essential requirements of the EC Council Directives

Clause/subclause number and title		Corresponding article of Council Directive 89/336/EEC	Qualifying remarks
8	Test methods for emission tests of transmitters and/or receivers and/or ancillary equipment		
8.2	Enclosure - ancillary equipment	4(a)	
8.3	DC power input/output port	4(a)	
8.4	AC mains power input/output port	4(a)	
9	Test methods for immunity tests of transmitters and/or receivers and/or ancillary equipment		
9.2	Radio frequency electromagnetic field (80 to 1 000 MHz)	4(b)	
9.3	Electrostatic discharge	4(b)	
9.4	Fast transients common mode	4(b)	
9.5	RF common mode, 0,15 MHz to 80 MHz (current clamp injection)	4(b)	
9.6	Transients and surges, vehicular environment	4(b)	
9.7	Voltage dips and interruptions	4(b)	
9.8	Transients common and differential mode	4(b)	

Annex C (normative): Clauses and/or subclauses from I-ETS 300 422: Radio Equipment and Systems (RES): Technical characteristics and test methods for wireless microphones in the 25 MHz to 3 GHz frequency range, which are relevant for compliance with essential requirements of the EC Council Directives

Table C.1: Subclauses of this ETS relevant for compliance of equipment within the scope of I-ETS 300 422 with the essential requirements of the EC Council Directives

Clause/subclause number and title		Corresponding article of Council Directive 89/336/EEC	Qualifying remarks
C.1	Spurious emissions - transmitter	4(a)	
C.2	Spurious emissions - receiver	4(a)	

Limits are detailed below, methods of measurement are contained in I-ETS 300 422.

C.1 Spurious emissions - transmitter

The power of the spurious emissions shall not exceed the limits of table C.1.

Table C.1: Radiated measurements

State	Frequency		
	47 MHz to 74 MHz 87,5 MHz to 118 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other frequencies below 1 000 MHz	Frequencies above 1 000 MHz
Operation	4 nW	250 nW	1 µW
Standby	2 nW	2 nW	20 nW

C.2 Spurious emissions - receiver

The power of the spurious emissions shall not exceed the limits of table C.2.

Table C.2

	25 - 1 000 MHz	Frequencies above 1 000 MHz
erp or conducted	2 nW	20 nW

Annex D (normative): **ERC Decision on the adoption of approval regulations for radio equipment to be used for wireless microphones in the 25 MHz to 3 GHz frequency range to be used in the mobile service based on the Interim European Telecommunications Standard (I-ETS 300 422)**

This annex contains the ERC Decision which references the technical specifications in I-ETS 300 422 for inclusion in national type approval regulations.

EUROPEAN RADIOCOMMUNICATIONS COMMITTEE

ERC Decision
of 1 November 1996
on the adoption of approval regulations for radio equipment
to be used for wireless microphones
in the 25 MHz to 3 GHz frequency range
to be used in the mobile service
based on the Interim European Telecommunications
Standard (I-ETS) 300 422

(ERC/DEC/(96)15)



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, 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) developed by the European Telecommunications Standards Institute (ETSI).

This Decision (ERC/DEC/(96)15) provides the necessary mechanism for CEPT Administrations to commit themselves to implement, within their national regimes, Interim European Telecommunications Standard 300 422¹ 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 co-operation. The ERC, for its part, should, *inter alia*, adopt Decisions on the introduction of ETSI standards into approval regimes.

I-ETS 300 422 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 I-ETS. The I-ETS is based on and uses the limits established by CEPT Recommendation T/R 20-06.

The use of the frequency range (25 MHz to 3 GHz) covered by I-ETS 300 422 is not harmonised within CEPT. Administrations have adopted different arrangements, to meet national requirements, for frequency bands and channel bandwidths (50, 75, 100, 150 and 200 kHz). Further, the equipment used in this frequency range is subject to national licensing and frequency planning which requires specification of, *inter alia*, frequency of operation and equivalent isotropically radiated power (e.i.r.p.).

Nevertheless, there are a number of parameters, in particular those considered by the ERC as essential for spectrum management purposes², which can be harmonised by adopting within approval regulations the limit values and measurement methods provided in I-ETS 300 422.

3. REQUIREMENT FOR AN ERC DECISION

The allocation and assignment of radio frequencies and the complementary equipment 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 approval regulations based on I-ETS 300 422 will have the benefit of a Europe-wide market.

¹ I-ETS 300 422: "*Technical characteristics and test methods for wireless microphones in the 25 MHz to 3 GHz frequency range*" (Edition 1, 1995)

² See Annex 1 of the Decision

**ERC Decision
of 1 November 1996**

on the adoption of approval regulations for radio equipment to be used for wireless microphones in the 25 MHz to 3 GHz frequency range to be used in the mobile service based on the Interim European Telecommunications Standard (I-ETS) 300 422

(ERC/DEC/(96)15)

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 ETSI has published I-ETS 300 422 for equipment to be used for wireless microphones in the 25 MHz to 3 GHz frequency range with channel bandwidths of 50, 75, 100, 150 and 200 kHz;
- d) that, for the foreseeable future, there will continue to be widespread use of wireless microphone equipment having the technical characteristics described in (c) above;
- e) that, in accordance with the Memorandum of Understanding between ERC and ETSI, the ERC shall adopt ERC Decisions on the introduction of ETSI standards into approval regimes;
- f) that the use of radio equipment is subject to national licensing and frequency planning requirements, in particular for frequency of operation e.i.r.p.;
- g) that suitable transitional arrangements are given in CEPT Recommendation T/R 01-05.

DECIDES

1. to adopt, by 1 March 1997, approval regulations for wireless microphone equipment operating in the frequency range 25 MHz to 3 GHz with power levels of up to 50 mW, based on the limit values and measurement methods for spectrum management parameters contained in I-ETS 300 422, with the exclusion by national choice of those parameters which are subject to national licensing requirements³. A list of the spectrum management parameters to be included in approval regulations is given in Annex 1;
2. to withdraw any conflicting national approval regulation(s);
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.

³ Annex 2 is provided for information to show which options have been adopted by each administration in those cases where I-ETS 300 422 offers a choice.

ANNEX 1

Parameters from I-ETS 300 422 to be included in approval regulations:

I-ETS 300 422	Section	Comments
Transmitter parameters (Section 8) :		
Frequency error	8.1	Options for bandwidths of 50, 75, 100, 150 and 200 kHz and frequency of operation
Carrier power	8.2	Options for 50 or 2 mW subject to national licensing
Channel bandwidth	8.3	Options for bandwidths of 50, 75, 100, 150 and 200 kHz
Spurious emissions	8.4	
Transient frequency behaviour of the transmitter	8.5	
Receiver parameters (Section 9) :		
Spurious emissions	9.1	

ANNEX 2

Adoption of I-ETS 300 422: National variations for power⁴ and channel bandwidth⁵

Administration	Adoption of power options	Adoption of channel bandwidth options
Albania		
Andorra		
Austria		
Belgium		
Bosnia and Herzegovina		
Bulgaria		
Croatia		
Cyprus		
Czech Republic		
Denmark		
Estonia		
Finland		
France		
Germany		
Greece		
Hungary	1	L ; Q ; R
Iceland		
Ireland		
Italy		
Latvia		
Liechtenstein		
Lithuania		
Luxembourg		
Malta		
Moldova		
Monaco		
Netherlands		
Norway		
Poland		
Portugal		
Romania		
Russian Federation		
San Marino		
Slovak Republic		
Slovenia		
Spain		
Sweden		
Switzerland		
The Former Yugoslav Republic of Macedonia		
Turkey	50 mW	L, M, P, Q, R
Ukraine		
United Kingdom		
Vatican City		

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Equipment	effective radiated power (erp) or conducted	
	Class 1	Class 2
Radio microphones	50 mW	2 mW
Tour guide systems	10 mW	2 mW
Aids for the handicapped	10 mW	2 mW

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Declared channel Bandwidth (B)	Designation
50 kHz	L
75 kHz	M
100 kHz	P
150 kHz	Q
200 kHz	R

European Radiocommunications Committee Decision

CEPT/ERC/DEC(96)15

on the adoption of approval regulations for radio equipment to be used for wireless microphones in the 25 MHz to 3 GHz frequency range to be used in the mobile service based on the Interim European Telecommunications Standard (I-ETS) 300 422

As of 1 February 1997 the following CEPT Members have committed themselves to apply the terms of this Decision:

Austria
Croatia
Finland
Iceland
Italy
Liechtenstein
Lithuania
Norway
Slovak Republic
Switzerland
United Kingdom

History

Document history	
January 1996	First Edition
October 1996	Unified Approval Procedure UAP 56: 1996-10-21 to 1997-02-14
March 1997	Amendment 1 to First Edition