



# AMENDMENT

**ETS 300 279**

**A1**

**March 1997**

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Source: ETSI TC-RES

Reference: RE/RES-09031

ICS: 33.020

**Key words:** EMC, mobile, PMR, radio

**This amendment A1 modifies  
the European Telecommunication Standard ETS 300 279 (1996)**

**Radio Equipment and Systems (RES);  
ElectroMagnetic Compatibility (EMC) standard for Private  
land Mobile Radio (PMR) and ancillary equipment  
(speech and/or non-speech)**

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## Foreword

This amendment to ETS 300 279 (1996) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

ETS 300 279 as amended by this amendment, with one or more of the relevant following: ETS 300 086, ETS 300 113, ETS 300 296, ETS 300 341 & ETS 300 390, 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 300 279 as amended by this amendment is intended to become a Harmonized EMC Standard for equipment within the scope of I-ETS 300 219.

Annex C contains the ERC Decision which references the technical specifications in I-ETS 300 219 for inclusion in national type approval regulations.

<b>Transposition dates</b>	
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 the Foreword with the following:

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

This ETS, with one or more of the relevant following: ETS 300 086, ETS 300 113, ETS 300 296, ETS 300 341 & ETS 300 390, 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).

This ETS is intended to become a Harmonized EMC Standard for equipment within the scope of I-ETS 300 219.

The technical specifications which are relevant to the EMC Directive are listed in normative annex A and annex B for I-ETS 300 219.

Annex C contains the ERC Decision which references the technical specifications in this ETS for inclusion in national type approval regulations.

### Page 24

Insert the following before the History:

**Annex A (normative): ETS 300 279, ElectroMagnetic Compatibility (EMC) standard for Private land Mobile Radio (PMR) and ancillary equipment (speech and/or non-speech)**

**Table A.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 and limits for emission tests		
8.1	Enclosure of ancillary equipment	4(a)	
8.2	DC power input/output port	4(a)	
8.3	AC mains power input/output port	4(a)	
9	Test methods and levels for immunity tests		
9.1	Radio frequency electromagnetic field (80-1 000 MHz)	4(b)	
9.2	Electrostatic discharge	4(b)	
9.3	Fast transients common mode	4(b)	
9.4	RF common mode, 0,15 MHz - 80 MHz (current clamp injection)	4(b)	
9.5	Transients and surges, vehicular environment	4(b)	
9.6	Voltage dips and interruptions	4(b)	
9.7	Surges common and differential mode	4(b)	

**Annex B (normative):** Clauses and/or subclauses from I-ETS 300 219: Radio Equipment and systems (RES); Land mobile service Technical characteristics and test conditions for radio equipment transmitting signals to initiate a specific response in the receiver, which are relevant for compliance with essential requirements of the EC Council Directives

**Table B.1: Subclauses of this ETS relevant for compliance of equipment within the scope of I-ETS 300 219 with the essential requirements of the EC Council Directives**

Clause/subclause number and title		Corresponding article of Council Directive 89/336/EEC	Qualifying remarks
B.1	Spurious emissions	4(a)	
B.4	Spurious radiations	4(a)	
B.2	Spurious response rejection	4(b)	
B.3	Blocking or desensitization	4(b)	

## B.1 Spurious emissions

For the definition and the measuring method see subclause 9.5 of I-ETS 300 219: 1993.

The power of any spurious emission shall not exceed the values given in tables B.2 and B.3.

**Table B.2: Conducted emissions**

Frequency range	9 kHz to 1 GHz	> 1 to 4 GHz or > 1 to 12,75 GHz (note)
Tx operating	0,25 $\mu$ W (- 36,0 dBm)	1,00 $\mu$ W (- 30,0 dBm)
Tx standby	2,0 nW (- 57,0 dBm)	20,0 nW (- 47,0 dBm)
NOTE:	The frequency range 9 kHz to 4 GHz applies for equipment operating on frequencies below 470 MHz; the frequency range of 9 kHz to 12,75 GHz applies for equipment operating on frequencies above 470 MHz.	

**Table B.3: Radiated emissions**

Frequency range	30 MHz to 1 GHz	> 1 to 4 GHz
Tx operating	0,25 $\mu$ W (- 36,0 dBm)	1,00 $\mu$ W (- 30,0 dBm)
Tx standby	2,0 nW (- 57,0 dBm)	20,0 nW (- 47,0 dBm)

## B.2 Spurious response rejection

For the definition and the measurement method see subclause 10.6 of I-ETS 300 219: 1993.

At any frequency separated from the nominal frequency of the receiver by more than one channel, the spurious response rejection ratio shall not be less than 70,0 dB.

## B.3 Blocking or desensitization

For the definition and the measurement method see subclause 10.8 of I-ETS 300 219: 1993.

The blocking ratio, for any frequency within the specified ranges, shall not be less than 84,0 dB, except at frequencies on which spurious responses are found (see subclause 10.6).

## B.4 Spurious radiations

For the definition and the measurement method see subclause 10.9. of I-ETS 300 219: 1993.

The power of any spurious radiation shall not exceed the values given in table B.4 and B.5.

**Table B.4: Conducted components**

Frequency range	9 kHz to 1 GHz	> 1 to 4 GHz, or > 1 to 12,75 GHz, (note)
Limit	2,0 nW (- 57,0dBm)	20,0 nW (- 47,0 dBm)
NOTE:	The frequency range 9 kHz to 4 GHz applies for equipment operating on frequencies below 470 MHz; the frequency range of 9 kHz to 12,75 GHz applies for equipment operating on frequencies above 470 MHz.	

**Table B.5: Radiated components**

Frequency range	30 MHz to 1 GHz	> 1 to 4 GHz
Limit	2,0 nW (- 57,0 dBm)	20,0 nW (- 47,0 dBm)

**Annex C (normative):** **ERC Decision on the adoption of approval regulations for radio equipment to be used in the land mobile service for transmitting signals to initiate a specific response in the receiver based on the Interim European Telecommunications Standard (I-ETS) 300 219**

This annex contains the ERC Decision which references the technical specifications in I-ETS 300 219 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  
in the land mobile service for transmitting signals to initiate  
a specific response in the receiver based on  
the Interim European Telecommunications Standard  
(I-ETS) 300 219  
(ERC/DEC/(96)10)







## 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)10) provides the necessary mechanism for CEPT Administrations to commit themselves to implement, within their national regimes, Interim European Telecommunications Standard (I-ETS) 300 219<sup>1</sup> 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 300 219 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 CEPT Recommendation T/R 24-01 Annex V.

The ERC will normally produce decisions on the introduction of ETSI standards into approval regimes, once the relevant standard becomes a European Telecommunications Standard (ETS). This Decision has been produced, as an exception: I-ETS 300 219 is mature, in use, and has not been upgraded because of issues which affect other standards in the same series. This Decision will be reviewed when the standard is up-graded to an ETS.

The use of the frequency range (30-1000 MHz) covered by I-ETS 300 219 is not harmonised within CEPT. Although CEPT Recommendation T/R 25-08 provides preferred arrangements for some frequency bands designated for mobile radio systems, administrations have adopted different arrangements, to meet national requirements, for frequency bands, duplex separations and channel separations (12.5, 20 and 25 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.) and, in some cases, additional requirements to improve spectrum utilisation, for example timers to limit maximum duration of transmissions. 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<sup>2</sup>, which can be harmonised by adopting within approval regulations the limit values and measurement methods provided in I-ETS 300 219.

### 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 300 219 will have the benefit of a Europe-wide market.

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<sup>1</sup> I-ETS 300 219: *"Technical characteristics and test conditions for radio equipment transmitting signals to initiate a specific response in the receiver"* (Edition 1, 1993)

<sup>2</sup> See Annex 1 of the Decision

**ERC Decision  
of 1 November 1996**

**on the adoption of approval regulations for radio equipment  
to be used in the land mobile service for transmitting  
signals to initiate a specific response in the receiver  
based on the Interim European Telecommunications Standard (I-ETS) 300 219**

**(ERC/DEC/(96)10)**

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 300 219 for equipment transmitting signals to initiate a specific response in the receiver, to be used in the land mobile service operating on radio frequencies between 30 MHz and 1000 MHz, with channel separations of 12.5 kHz, 20 kHz and 25 kHz;
- d) that, for combined speech/non-speech equipment, this I-ETS is complementary to ETS 300 086, which covers radio equipment for use in the land mobile service intended primarily for analogue speech;
- e) that, for the foreseeable future, many official, public and private networks will continue to use land mobile equipment having the technical characteristics described in (c) above;
- f) 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;
- g) 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. e.i.r.p.;
- h) that suitable transitional arrangements are given in CEPT Recommendation T/R 01-05.

**DECIDES**

- 1. to adopt, by 1 March 1997, approval regulations for radio equipment to be used in the land mobile service for transmitting signals to initiate a specific response in the receiver, based on the limit values and measurement methods contained in I-ETS 300 219, with the exception of those parameters which are subject to national licensing requirements<sup>3</sup>. 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.

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<sup>3</sup> Annex 2 is provided for information to show which options have been adopted by each administration in those cases where I-ETS 300 219 offers a choice.

## ANNEX 1

Parameters from I-ETS 300 219 to be included in approval regulations:

I-ETS 300 219	Section	Comments
<b>Transmitter parameters (section 6.1) :</b>		
Frequency error	6.1.1	Options for 12.5 and 20 and 25 kHz and frequency of operation
Carrier power variation (conducted)	6.1.2	
Effective radiated power	6.1.3	Subject to national licensing conditions
Adjacent channel power	6.1.4	Options for 12.5 and 20 and 25 kHz
Spurious emissions	6.1.5	
Intermodulation attenuation	6.1.6	Site engineering conditions in special cases
Transient frequency behaviour of a transmitter	6.1.7	
<b>Receiver parameters (Section 6.2) :</b>		
Receiver sensitivity (response)	6.2.1	
Maximum usable sensitivity (response, conducted)	6.2.2	
Maximum usable sensitivity (response, field strength)	6.2.3	Split into frequency bands
Co-channel rejection	6.2.4	Options for 12.5 and 20 and 25 kHz
Adjacent channel selectivity	6.2.5	Options for 12.5 and 20 and 25 kHz
Spurious response rejection	6.2.6	
Intermodulation response rejection	6.2.7	
Blocking or desensitisation	6.2.8	
Spurious radiation	6.2.9	
<b>Duplex operation - receiver limits (Section 6.3) :</b>		
Receiver desensitisation and maximum usable sensitivity	6.3.1	
Receiver spurious response rejection	6.3.2	

ANNEX 2

Adoption of I-ETS 300 219: National variations for channel spacing and temperature range<sup>4</sup>

Administration	Adoption of channel spacing options	Adoption of temperature range options
Albania		
Andorra		
Austria		
Belgium		
Bosnia and Herzegovina		
Bulgaria		
Croatia		
Cyprus		
Czech Republic		
Denmark		
Estonia		
Finland		
France		
Germany		
Greece		
Hungary	V1, V2, V3, U1, U2, U3	3
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	1 ; 3	
Ukraine		
United Kingdom		
Vatican City		

Key: Channel spacing options: Temperature range options  
U = UHF 1 = 12.5 kHz 1 = -25 to +55°C  
V = VHF 2 = 20 kHz 2 = -15 to +55°C  
3 = 25 kHz 3 = -10 to +55°C

<sup>4</sup> Harmonisation of temperature range is underway in ETSI.

**European Radiocommunications Committee Decision**

**CEPT/ERC/DEC(96)10**

**on the adoption of approval regulations for radio equipment to be used in the land mobile service for transmitting signals to initiate a specific response in the receiver based on the Interim European Telecommunications Standard (I-ETS) 300 219**

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

Austria  
Croatia  
Iceland  
Ireland  
Italy  
Lithuania  
Norway  
United Kingdom

## History

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