

DECLARATION

OF

SPECIFICATION

ENTITLED

RADIO EQUIPMENT AND SYSTEMS

ANGLE-MODULATED CITIZEN'S BAND RADIO EQUIPMENT

(CEPT PR 27 RADIO EQUIPMENT)

TECHNICAL CHARACTERISTICS AND METHODS OF MEASUREMENT

AS

THE IRISH STANDARD SPECIFICATION FOR

RADIO EQUIPMENT AND SYSTEMS

ANGLE-MODULATED CITIZEN'S BAND RADIO EQUIPMENT

(CEPT PR 27 RADIO EQUIPMENT)

TECHNICAL CHARACTERISTICS AND METHODS OF MEASUREMENT

EOLAS - The Irish Science and Technology Agency in exercise of the power conferred by section 20 (3) of the Industrial Research and Standards Act, 1961 (No. 20 of 1961) and the Science and Technology Act, 1987 (No. 30 of 1987), and with the consent of the Minister for Industry and Commerce, hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Radio Equipment and Systems Angle-Modulated Citizen's Band Radio Equipment (CEPT PR 27 Radio Equipment) Technical Characteristics and Methods of Measurement) Declaration, 1991.

2. (1) The Specification set forth in the Schedule to this declaration is hereby declared to be the standard specification for Radio Equipment and Systems Angle-Modulated Citizen's Band Radio Equipment (CEPT PR 27 Radio Equipment) Technical Characteristics and Methods of Measurement. The Schedule comprises the text of ETS 300135:1991.

(2) The said standard specification may be cited as Irish Standard/ETS 300135:1991 or as I.S./ETS 300135:1991.

EUROPEAN
TELECOMMUNICATION
STANDARD

ETS 300 135

June 1991

UDC: 621.396

Key words: radio, citizens' band

Radio Equipment and Systems

**Angle-modulated Citizens' Band radio equipment
(CEPT PR 27 Radio Equipment)**

Technical characteristics and methods of measurement

ETSI

European Telecommunications Standards Institute

ETSI Secretariat: B.P.152 . F - 06561 Valbonne Cedex . France

TP. + 33 92 94 42 00 TF. + 33 93 65 47 16 Tx. 47 00 40 F

© European Telecommunications Standards Institute 1991.
All rights reserved.

No part may be reproduced or used except as authorised by contract or other written permission. The copyright and the foregoing restriction on reproduction and use extend to all media in which the information may be embodied.

Contents

Foreword	7
Introduction	7
1 Scope	9
2 Normative references	9
3 Definition, abbreviations and symbols	9
3.1 Definitions	9
3.2 Abbreviations	10
3.3 Symbols	10
4 General	10
4.1 Presentation of equipment for testing purposes	10
4.2 Mechanical and electrical design	10
4.2.1 General	10
4.2.2 Controls	10
4.2.3 Marking	10
4.3 Interpretation of the measurement results	11
5 Technical characteristics	12
5.1 Common characteristics	12
5.1.1 Frequency band	12
5.1.2 Carrier frequencies and channel numbers	12
5.1.3 Channel separation	12
5.1.4 Multi-channel equipment	12
5.1.5 Type of modulation	13
5.1.6 Push-to-talk (ptt) and voice activated switch	13
5.1.7 Controls	13
5.1.8 Combination with other equipment	13
5.2 Transmitter parameter limits	13
5.2.1 Frequency error	13
5.2.2 Power	13
5.2.3 Frequency deviation	13
5.2.4 Unwanted amplitude modulation	13
5.2.5 Adjacent channel power	13
5.2.6 Spurious emissions of the transmitter	14
5.2.7 Transient frequency behaviour of the transmitter	14
5.2.8 Synthesisers and Phase Locked Loop (PLL) systems	15
5.3 Receiver parameter limits	15
5.3.1 Maximum usable sensitivity	15
5.3.2 Adjacent channel selectivity	15
5.3.3 Intermodulation response rejection	15
5.3.4 Spurious radiations	15
6 Test conditions, power sources and ambient temperatures	15
6.1 Normal and extreme test conditions	15
6.2 Test power source	16
6.3 Normal test conditions	16
6.3.1 Normal temperature and humidity	16
6.3.2 Normal test power source	16
6.3.2.1 Mains voltage and frequency	16
6.3.2.2 Regulated lead-acid battery power sources on vehicles	16
6.3.2.3 Other power sources	16
6.4 Extreme test conditions	16
6.4.1 Extreme temperatures	16
6.4.2 Extreme test source voltages	17
6.4.2.1 Mains voltage	17
6.4.2.2 Regulated lead-acid battery power sources on vehicles	17
6.4.2.3 Power sources using other types of battery	17
6.4.2.4 Other power sources	17

6.5	Procedure for tests at extreme temperatures	17
6.5.1	Test procedure	17
7	General conditions	17
7.1	Arrangements for test signals applied to the receiver input	17
7.2	Receiver mute or squelch facility	18
7.3	Receiver rated audio output power	18
7.4	Normal test modulation	18
7.5	Artificial antenna	18
7.6	Test fixture	18
7.7	Arrangement for test signals at the input of the transmitter	18
7.8	Test site and general arrangements for radiated measurements	18
8	Method of measurement for transmitter parameters	19
8.1	Frequency error	19
8.1.1	Definition	19
8.1.2	Method of measurement	19
8.2	Transmitter carrier power	19
8.2.1	Definition	19
8.2.2	Method of measurement (for equipment other than equipment with integral antenna only)	19
8.2.3	Method of measurement for equipment with integral antenna	19
8.3	Maximum frequency deviation	20
8.3.1	Maximum permissible frequency deviation	20
8.3.1.1	Definition	20
8.3.1.2	Method of measurement	20
8.4	Unwanted amplitude modulation	20
8.4.1	Method of measurement	20
8.5	Adjacent channel power	20
8.5.1	Definition	20
8.5.2	Method of measurement	21
8.6	Spurious emissions	21
8.6.1	Definition	21
8.6.2	Method of measuring the power level in a specified load, subclause 8.6.1 (a)	21
8.6.3	Method of measuring the effective radiated power, subclause 8.6.1 (b)	22
8.6.4	Method of measuring the effective radiated power, subclause 8.6.1 (c)	22
8.7	Transient frequency behaviour of the transmitter	23
8.7.1	Definitions	23
8.7.2	Method of measurement	23
9	Methods of measurement for receiver parameters	26
9.1	Maximum usable sensitivity	26
9.1.1	Definition	26
9.1.2	Method of measuring the SND/ND ratio	26
9.2	Adjacent channel selectivity	26
9.2.1	Definition	26
9.2.2	Method of measurement	26
9.3	Intermodulation response rejection	27
9.3.1	Definition	27
9.3.2	Method of measurement	27
9.4	Spurious radiations	27
9.4.1	Definition	27
9.4.2	Method of measuring the power level in a specified load, subclause 9.4.1 (a)	28
9.4.3	Method of measuring the effective radiated power, subclause 9.4.1 (b)	28
9.4.4	Method of measuring the effective radiated power, subclause 9.4.1 (c)	28
10	Measurement uncertainty	29
Annex A:	Radiated measurement	30
A.1	Test sites and general arrangements for measurements involving the use of radiated fields	30
A.1.1	Outdoor test site	30
A.1.1.2	Test site for handportable stations	30
A.1.2	Test antenna	31
A.1.3	Substitution antenna	31
A.1.4	Optional additional indoor site	32
A.2	Guidance on the use of radiation test sites	33
A.2.1	Measuring distance	33

A.2.2	Test antenna	33
A.2.3	Substitution antenna	33
A.2.4	Artificial antenna	34
A.2.5	Auxiliary cables	34
A.3	Further optional alternative indoor test site using an anechoic chamber	34
A.3.1	Example of the construction of a shielded anechoic chamber	34
A.3.2	Influence of parasitic reflections in anechoic chambers	34
A.3.3	Calibration of the shielded anechoic chamber	36
Annex B:	Specification for adjacent channel power measurement arrangements	38
B.1	Power measuring receiver specification	38
B.1.1	IF filter	38
B.1.2	Variable attenuator	39
B.1.3	Rms value indicator	39
B.1.4	Oscillator and amplifier	39

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-