

STN	Pozemná pohyblivá služba Rádiové zariadenia na analógovú a/alebo digitálnu komunikáciu (hovor a/alebo dáta) pracujúce v úzkopásmových kanáloch s anténovým konektorom Harmonizovaná norma vzťahujúca sa na základné požiadavky podľa článku 3.2 smernice 2014/53/EÚ	STN EN 301 166 V2.1.1 87 1166
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Land Mobile Service; Radio equipment for analogue and/or digital communication (speech and/or data) and operating on narrow band channels and having an antenna connector; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/17

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ETSI EN 301 166 V2.1.1 (2016-11)



HARMONISED EUROPEAN STANDARD

**Land Mobile Service;
Radio equipment for analogue and/or digital communication
(speech and/or data) and operating on narrow band channels
and having an antenna connector;
Harmonised Standard covering the essential requirements
of article 3.2 of the Directive 2014/53/EU**

Reference

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Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.7] to provide one voluntary means of conforming to the essential requirements of Directive 2014/53/EU on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC [i.3].

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table A.1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

National transposition dates	
Date of adoption of this EN:	12 September 2016
Date of latest announcement of this EN (doa):	31 December 2016
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2017
Date of withdrawal of any conflicting National Standard (dow):	30 June 2018

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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1 Scope

The present document covers the technical requirements for radio transmitters and receivers used in stations in the Private Mobile Radio (PMR) service. It applies to use in the land mobile service, operating on radio frequencies between 30 MHz and 3 GHz, with narrow channel separations (CSP) (less than 10 kHz) and intended for speech and/or data. It is the intention of the present document to cover any Channel Bandwidths (CBW) permitted by National Administrations for such systems, e.g. 6,25 kHz.

Table 1: Radiocommunications service frequency bands

Radiocommunications service frequency bands	
Transmit	30 MHz to 3 000 MHz
Receive	30 MHz to 3 000 MHz

In the present document different requirements are given for the different radio frequency bands, environmental conditions and types of equipment where appropriate.

In the present document, data transmission systems are defined as systems which transmit and/or receive data and/or digitized voice. The equipment comprises a transmitter and associated encoder and modulator and/or a receiver and associated demodulator and decoder.

The present document covers equipment which may use constant envelope or non-constant envelope modulation.

The types of equipment covered by the present document are as follows:

- base station: equipment fitted with antenna connector;
- mobile station: equipment fitted with antenna connector.

Handportable stations:

- a) either fitted with an antenna connector; or
- b) without an external antenna connector but fitted with a permanent internal or a temporary internal 50 Ω RF connector which allows access to the transmitter output and the receiver input.

Handportable station equipment without an external or internal Radio Frequency (RF) connector and without the possibility of having a temporary internal 50 Ω RF connector is not covered by the present document.

The present document contains requirements to demonstrate that "... *Radio equipment shall be so constructed that it both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference*" and that "...*radio equipment supports certain features ensuring access to emergency services*" [i.3].

In addition to the present document, other ENs (e.g. ETSI EN 301 489-1 [i.4] and ETSI EN 301 489-5 [i.5]) that specify technical requirements in respect of essential requirements under the Radio Equipment Directive [i.3], may apply to equipment within the scope of the present document.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

- [1] ANSI C63.5 (2006): "American National Standard for Electromagnetic Compatibility - Radiated Emission Measurements in Electromagnetic Interference (EMI) Control - Calibration and Qualification of Antennas (9 kHz to 40 GHz)".
- [2] Recommendation ITU-T O.153 (10-1992): "Basic parameters for the measurement of error performance at bit rates below the primary rate".
- [3] IEC 60489-3 (1988): "Methods of measurement for radio equipment used in the mobile services. Part 3: Receivers for A3E or F3E emissions", appendix F.
- [4] Recommendation ITU-R SM.329-12 (09-2012): "Unwanted emissions in the spurious domain".
- [5] Recommendation ITU-T O.41 (10-1994): "Psophometer for use on telephone-type circuits".

2.2 Informative references

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] ETSI TR 100 028 (V1.4.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".
- [i.2] ETSI TR 102 273 (V1.2.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement on Radiated Methods of Measurement (using test site) and evaluation of the corresponding measurement uncertainties".
- [i.3] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.

NOTE: Article 3.2 and article 10.8.

- [i.4] ETSI EN 301 489-1: "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Harmonised Standard covering the essential requirements of article 3.1(b) of the Directive 2014/53/EU and the essential requirements of article 6 of the Directive 2014/30/EU; Part 1: Common technical requirements".
- [i.5] ETSI EN 301 489-5: "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 5: Specific conditions for Private land Mobile Radio (PMR) and ancillary equipment (speech and non-speech) and Terrestrial Trunked Radio (TETRA) Harmonised Standard covering the essential requirements of article 3.1(b) of the Directive 2014/53/EU".
- [i.6] ECC/DEC/(15)05: "The harmonised frequency range 446.0-446.2 MHz, technical characteristics, exemption from individual licensing and free carriage and use of analogue and digital PMR 446 applications".
- [i.7] Commission Implementing Decision C(2015) 5376 final of 04.08.2015 on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council.
- [i.8] ETSI EN 300 793 (V1.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Land mobile service; Presentation of equipment for type testing".

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