

<b>STN</b>	<b>Družicové zemské stanice a systémy (SES). Harmonizovaná norma na pohyblivé zemské stanice (MES) vrátane ručných zemských staníc pre družicové osobné komunikačné siete (S-PCN), pracujúce vo frekvenčných pásmach 1,6 GHz/2,4 GHz v pohyblivej družicovej službe (MSS), vzťahujúca sa na základné požiadavky článku 3.2 smernice 2014/53/EÚ.</b>	<b>STN EN 301 441 V2.1.1</b>
		87 1441

Satellite Earth Stations and Systems (SES); Harmonised Standard for Mobile Earth Stations (MES), including handheld earth stations, for Satellite Personal Communications Networks (S-PCN) operating in the 1,6 GHz/2,4 GHz frequency band under the Mobile Satellite Service (MSS) 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. 02/17

Obsahuje: EN 301 441 V2.1.1:2016

**124188**

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Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2017  
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

# ETSI EN 301 441 V2.1.1 (2016-06)



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**Reference**

REN/SES-00383

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**Keywords**earth station, MES, MSS, regulation, satellite,  
S-PCN**ETSI**

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# Contents

Intellectual Property Rights .....	6
Foreword.....	6
Modal verbs terminology.....	6
Introduction .....	6
1 Scope .....	8
2 References .....	8
2.1 Normative references .....	8
2.2 Informative references.....	9
3 Definitions and abbreviations.....	9
3.1 Definitions.....	9
3.2 Abbreviations .....	11
4 Technical requirement specifications .....	12
4.1 Environment profile .....	12
4.1.1 General.....	12
4.1.2 Temperature.....	12
4.1.3 Voltage.....	12
4.1.4 Vibration.....	12
4.2 Conformance requirements .....	12
4.2.1 Unwanted emissions outside the band 1 610 MHz to 1 626,5 MHz and the band 1 626,5 MHz to 1 628,5 MHz (carrier-on).....	12
4.2.1.1 Justification .....	12
4.2.1.2 Technical requirements .....	12
4.2.1.3 Conformance test .....	13
4.2.2 Unwanted emissions within the band 1 610 MHz to 1 626,5 MHz and the band 1 626,5 MHz to 1 628,5 MHz (carrier-on).....	13
4.2.2.1 Justification .....	13
4.2.2.2 Technical requirements .....	13
4.2.2.3 Conformance test .....	14
4.2.3 EIRP density within the operational band.....	15
4.2.3.1 Justification .....	15
4.2.3.2 Technical requirements .....	15
4.2.3.3 Conformance test .....	15
4.2.4 Unwanted emissions in carrier-off state.....	15
4.2.4.1 Justification .....	15
4.2.4.2 Technical requirements .....	15
4.2.4.3 Conformance test .....	15
4.2.5 MES Control and Monitoring Functions (CMF) .....	16
4.2.5.1 Self-monitoring functions / Processor monitoring .....	16
4.2.5.1.1 Justification .....	16
4.2.5.1.2 Technical requirements.....	16
4.2.5.1.3 Conformance test.....	16
4.2.5.2 Self-monitoring functions / Transmit frequency generation sub-system monitoring.....	16
4.2.5.2.1 Justification .....	16
4.2.5.2.2 Technical requirements.....	16
4.2.5.2.3 Conformance test.....	16
4.2.5.3 Network control authorization .....	16
4.2.5.3.1 Justification .....	16
4.2.5.3.2 Technical requirements.....	16
4.2.5.3.3 Conformance test.....	17
4.2.5.4 Network control reception.....	17
4.2.5.4.1 Transmission disable/enable.....	17
4.2.5.4.2 Transmit frequency control .....	17
4.2.5.5 Fellow radio stations in a dual-mode or multi-mode terminal .....	18
4.2.5.5.1 Justification .....	18

4.2.5.5.2	Technical requirements.....	18
4.2.5.5.3	Conformance test.....	18
4.2.6	Equipment identity.....	18
4.2.6.1	Justification.....	18
4.2.6.2	Technical requirements.....	18
4.2.6.3	Conformance test.....	18
4.2.7	Protection of the radio astronomy service operation in the band 1 610,6 MHz to 1 613,8 MHz.....	18
4.2.7.1	Justification.....	18
4.2.7.2	Technical requirements.....	18
4.2.7.3	Conformance test.....	18
4.2.8	Receiver Adjacent Channel Selectivity.....	19
4.2.8.1	Justification.....	19
4.2.8.2	Technical requirements.....	19
4.2.8.3	Conformance test.....	19
4.2.9	Receiver Blocking Characteristics.....	19
4.2.9.1	Justification.....	19
4.2.9.2	Technical requirements.....	19
4.2.9.3	Conformance test.....	20
5	Testing for compliance with technical requirements.....	20
5.1	Environmental conditions for testing.....	20
5.1.1	Specification of the environmental test conditions.....	20
5.1.2	Tests under extreme voltage conditions.....	20
5.2	Essential radio test suites.....	20
5.2.1	General.....	20
5.2.1.1	Presentation of equipment for testing purposes.....	20
5.2.1.2	Description of equipment.....	21
5.2.1.3	Testing of host-connected equipment and plug-in modules.....	21
5.2.1.3.1	Alternative approaches.....	21
5.2.1.3.2	Alternative A: combined equipment.....	21
5.2.1.3.3	Alternative B: use of a test jig.....	22
5.2.1.4	CMF / Special Test Equipment (STE).....	22
5.2.1.5	General test requirements.....	22
5.2.1.5.1	MES test modes.....	22
5.2.1.5.2	Special Test Equipment (STE).....	23
5.2.1.5.3	Laboratory Test Equipment (LTE).....	23
5.2.1.5.4	Methods of test for MES RF emissions according to the equipment type.....	24
5.2.1.5.5	Procedures for measurement of radiated emissions.....	24
5.2.1.5.6	Procedures for measurement of conducted emissions.....	29
5.2.1.5.7	Interpretation of the measurement results.....	30
5.2.1.5.8	Test report.....	30
5.2.2	Unwanted emissions outside the band 1 610 MHz to 1 626,5 MHz and the band 1 626,5 MHz to 1 628,5 MHz (carrier-on).....	30
5.2.2.1	Method of test.....	30
5.2.2.2	Peak measurement.....	31
5.2.2.3	Average measurement.....	31
5.2.2.4	Test requirements.....	32
5.2.3	Unwanted emissions within the band 1 610 MHz to 1 626,5 MHz and the band 1 626,5 MHz to 1 628,5 MHz (carrier-on).....	32
5.2.3.1	Method of test.....	32
5.2.3.2	Measurement method.....	32
5.2.3.3	Test requirements.....	33
5.2.4	EIRP density within the operational band.....	33
5.2.4.1	Method of test.....	33
5.2.4.2	Peak limit test.....	33
5.2.4.3	Mean limit test.....	34
5.2.4.4	Test requirements.....	34
5.2.5	Unwanted emissions in carrier-off state.....	34
5.2.5.1	Method of test.....	34
5.2.5.2	Measurement method.....	35
5.2.5.3	Test requirements.....	35
5.2.6	MES Control and Monitoring Functions (CMF).....	35

5.2.6.1	Self-monitoring functions / Processor monitoring .....	35
5.2.6.2	Self-monitoring functions / Transmit frequency generation sub-system monitoring .....	35
5.2.6.3	Network control authorization .....	35
5.2.6.3.1	Method of test.....	35
5.2.6.3.2	Test procedure .....	35
5.2.6.3.3	Test requirement .....	36
5.2.6.4	Network control reception.....	36
5.2.6.4.1	Transmission disable/enable.....	36
5.2.6.4.2	Transmit frequency control .....	37
5.2.6.5	Fellow radio stations in a dual-mode or multi-mode terminal .....	37
5.2.6.5.1	Method of test.....	37
5.2.6.5.2	Test procedure .....	38
5.2.6.5.3	Test requirements .....	38
5.2.7	Equipment identity.....	38
5.2.7.1	Method of test .....	38
5.2.7.2	Test procedure.....	38
5.2.7.3	Test requirements.....	38
5.2.8	Receiver Adjacent Channel Selectivity.....	38
5.2.8.1	General .....	38
5.2.8.2	Test set-up .....	38
5.2.8.3	Test procedure.....	39
5.2.9	Receiver Blocking Characteristics .....	39
5.2.9.1	General .....	39
5.2.9.2	Test set-up .....	39
5.2.9.3	Test procedure.....	39
<b>Annex A (normative):</b>	<b>Relationship between the present document and the essential requirements of Directive 2014/53/EU .....</b>	<b>41</b>
<b>Annex B (informative):</b>	<b>Explanation of nominated bandwidth.....</b>	<b>43</b>
B.1	Introduction .....	43
B.2	Interpretation of Parameters $[B_n, f_c, a, b]$ .....	43
B.3	Choice of nominated bandwidth.....	43
B.4	Maximum value for nominated bandwidth .....	45
<b>Annex C (informative):</b>	<b>Bibliography .....</b>	<b>48</b>
History .....		49

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## Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Satellite Earth Stations and Systems (SES).

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.2] 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 [10].

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:	16 May 2016
Date of latest announcement of this EN (doa):	31 August 2016
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	28 February 2017
Date of withdrawal of any conflicting National Standard (dow):	28 February 2018

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## 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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## Introduction

ETSI has designed a modular structure for the standards. Each standard is a module in the structure. The modular structure is shown in ETSI EG 201 399 [i.1]

**Figure 1: Void**

The present document is based on ETSI TBR 041 [4].

The technical requirements in the present document are applied under articles 3.2 of the Directive 2014/53/EU [10], concerning the effective uses of the spectrum allocated to terrestrial/space radio communication and orbital resources so as to avoid harmful interference.

These requirements are in two major categories:

**emissions limits:** to protect other radio services from harmful interference generated by the MES in normal use.

**MES Control and Monitoring Functions (CMF):** to protect other radio services from unwanted transmissions from the MES. The CMF in each MES is capable of answering to commands from the Network Control Facilities (NCF) for its S-PCN.

**Receiver performance specifications:** to enable reception of a wanted signal in the presence of other high power signals in the adjacent channel and/or adjacent band.

NOTE: The requirements for Network Control Facilities (NCF) for S-PCN are contained in ETSI ETS 300 735 [5].

The determination of the parameters of the user earth stations using a given satellite constellation for the protection of the spectrum allocated to that satellite constellation, is considered to be under the responsibility of the satellite operator or the satellite network operators.



# 1 Scope

The present document applies to Mobile Earth Station (MES) radio equipment which have the following characteristics:

- these MES have both transmit and receive capabilities and operate in a Satellite-Personal Communications Network (S-PCN). An S-PCN MES may be a handheld, portable, vehicle-mounted, host connected, semi-fixed or fixed equipment, or may be an element in a multi-mode terminal. It may consist of a number of modules with associated connections and user interface, or may be a self-contained single unit;
- if the MES is an element in a multi-mode terminal, unless otherwise stated in the present document, its requirements apply only to the S-PCN MES element of the terminal;
- these MES are capable in operating in all or part of the frequency bands shown in table 1.

**Table 1: Mobile Satellite Service frequency bands**

MES	MSS frequency bands
Transmit	1 610 MHz to 1 626,5 MHz
Receive	1 613,8 MHz to 1 626,5 MHz
Receive	2 483,5 MHz to 2 500,0 MHz

The present document is intended to cover the provisions of Directive 2014/53/EU [10] (RE Directive) article 3.2 which states 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."

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of article 3 of the Directive 2014/53/EU [10] may apply to equipment within the scope of the present document.

NOTE 1: A list of such ENs is included on the ETSI web site.

NOTE 2: These LMESs are controlled and monitored by a Network Control Facility (NCF). The NCF is outside 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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NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

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

- [1] Void.
- [2] Recommendation ITU-T O.153 (10/92): "Basic parameters for the measurement of error performance at bit rates below the primary rate".
- [3] Void.
- [4] ETSI TBR 041 (Edition 1) (02-1998): "Satellite Personal Communications Networks (S-PCN); Mobile Earth Stations (MES), including handheld earth stations, for S-PCN in the 1,6/2,4 GHz bands under the Mobile Satellite Service (MSS); Terminal essential requirements".

- [5] ETSI ETS 300 735 (Edition 1) (10-1997): "Satellite Personal Communications Networks (S-PCN); Network Control Facilities (NCF) for Mobile Earth Stations (MES), including handheld earth stations, for S-PCN in the 1,6/2,4 GHz and the 2,0 GHz bands, providing voice and/or data communications under the Mobile Satellite Service (MSS)".
- [6] Final Acts of the World Radio Conference (WRC '95); Geneva 1995.
- [7] IEC 60068-2-1 (2007): "Environmental testing - Part 2: Tests. Tests A: Cold".
- [8] IEC 60068-2-2 (2007): "Environmental testing - Part 2: Tests. Tests B: Dry heat".
- [9] IEC 60068-2-64 (2008): "Environmental testing. Part 2-64: Tests. Test Fh: Vibration, broadband random and guidance".
- [10] 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.

## 2.2 Informative 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.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

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 EG 201 399 (V3.1.1): " Electromagnetic compatibility and Radio spectrum Matters (ERM); A guide to the production of Harmonized Standards for application under the Radio & Telecommunication Terminal Equipment Directive 1999/5/EC (R&TTE) and a first guide on the impact of the Radio Equipment Directive 2014/53/EU (RED) on Harmonized Standards".
- [i.2] Commission Implementing Decision C(2015) 5376 final of 4.8.2015 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.

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