

STN	Družicové zemské stanice a systémy (SES) Pozemné pohyblivé zemské stanice (LMES) a námorné pohyblivé zemské stanice (MMES) poskytujúce hlasovú a/alebo dátovú komunikáciu, pracujúce vo frekvenčných pásmach 1,5 GHz a 1,6 GHz Harmonizovaná norma pre prístup k rádiovému spektru	STN EN 301 444 V2.2.1 87 1444
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Satellite Earth Stations and Systems (SES); Land Mobile Earth Stations (LMES) and Maritime Mobile Earth Stations (MMES) providing voice and/or data communications, operating in the 1,5 GHz and 1,6 GHz frequency bands; Harmonised Standard for access to radio spectrum

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. 09/21

Obsahuje: EN 301 444 V2.2.1:2021

133394

ETSI EN 301 444 V2.2.1 (2021-04)



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Harmonised Standard for access to radio spectrum**

Reference

REN/SES-00416

Keywords

earth station, LMES, regulation, satellite

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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.3] 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.6].

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 April 2021
Date of latest announcement of this EN (doa):	31 July 2021
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 January 2022
Date of withdrawal of any conflicting National Standard (dow):	31 January 2023

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

Following the WRC-03 decision [i.4] to allocate to MSS the bands 1 518 MHz to 1 525 MHz (space to Earth) and 1 668 MHz to 1 675 MHz (Earth to space) and the conclusions of WRC-07 [i.5], a new set of emission requirements for LMESs and MMESs that are capable of transmitting in the frequency band from 1 668,0 MHz to 1 675,0 MHz is specified.

The two parts of the L-band frequency allocations are treated as two sub-bands which may be used separately or in any combination. The standard L-band allocation is referenced in the present document as "sub-band 1" and the extended L-band is referenced as "sub-band 2".

Table 2c is applicable for LMESs and MMESs that are capable of transmitting in any combination of either or both of these sub-bands. Table 2c is recommended for all new LMESs and MMESs including LMES and MMES that can only operate in sub-band 1.

The manufacturer may choose between tables 2b and 2c for new LMESs and MMES that are capable of transmitting in only the sub-band 1. The manufacturer has to declare which alternative is used.

The present document specifies a new set of receiver performance requirements for LMESs and MMESs under the new Radio Equipment Directive 2014/53/EU [i.6].

Figure 1: Void

The present document is intended to cover the provisions of Directive 2014/53/EU [i.6] (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".

Recital 10 of Directive 2014/53/EU [i.6] states that "*in order to ensure that radio equipment uses the radio spectrum effectively and supports the efficient use of radio spectrum, radio equipment should be constructed so that: in the case of a transmitter, when the transmitter is properly installed, maintained and used for its intended purpose it generates radio waves emissions that do not create harmful interference, while unwanted radio waves emissions generated by the transmitter (e.g. in adjacent channels) with a potential negative impact on the goals of radio spectrum policy should be limited to such a level that, according to the state of the art, harmful interference is avoided; and, in the case of a receiver, it has a level of performance that allows it to operate as intended and protects it against the risk of harmful interference, in particular from shared or adjacent channels, and, in so doing, supports improvements in the efficient use of shared or adjacent channels*".

Recital 11 of Directive 2014/53/EU [i.6] states that "*although receivers do not themselves cause harmful interference, reception capabilities are an increasingly important factor in ensuring the efficient use of radio spectrum by way of an increased resilience of receivers against harmful interference and unwanted signals on the basis of the relevant essential requirements of Union harmonisation legislation*".

As a consequence, the present document includes both transmitting and receiving parameters aiming to maximize the efficient use of radio spectrum.

1 Scope

The present document applies to Land Mobile Earth Stations (LMESs) and Maritime Mobile Earth Stations (MMESs) radio equipment with an EIRP of greater than or equal to 15 dBW and less than or equal to 33 dBW and which have the following characteristics:

- the LMES could be either vehicle mounted or portable equipment;
- these MMESs are installable equipment on ships;
- these LMESs and MMESs are controlled and monitored by a Network Control Facility (NCF). The NCF is outside the scope of the present document;
- the LMES and MMES operate through geostationary satellites as part of a network providing voice and/or data communications;
- these LMESs and MMESs operate with user bit-rates greater than 9,6 kbits/s;
- the LMES and MMESs are capable of operating in any combination of all or any part of the frequency ranges sub-band 1 and sub-band 2 defined in table 1a.

Table 1a: Land and Maritime Mobile Satellite Service frequency bands

Sub-Band	Direction of transmission	LMSS frequency bands
1	Transmit 1 (Earth to space)	1 626,5 MHz to 1 660,5 MHz
	Receive 1 (space to Earth)	1 525,0 MHz to 1 559,0 MHz
2	Transmit 2 (Earth to space)	1 668,0 MHz to 1 675,0 MHz
	Receive 2 (space to Earth)	1 518,0 MHz to 1 525,0 MHz

The present document is intended to cover the provisions of Directive 2014/53/EU [i.6] (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".

NOTE: The relationship between the present document and essential requirements of article 3.2 of Directive 2014/53/EU [i.6] is given in annex A.

2 References

2.1 Normative references

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- [1] Void.
- [2] CISPR 16-1-4 (2019): "Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-4: Radio disturbance and immunity measuring apparatus - Antennas and test sites for radiated disturbance measurements".
- [3] Void.

- [4] Void.
- [5] Void.
- [6] Void.

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- [i.1] Void.
- [i.2] Void.
- [i.3] 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.
- [i.4] World Radiocommunication Conference 2003 (WRC-03) Final Acts.
- [i.5] World Radiocommunication Conference 2007 (WRC-07) Finals Acts.
- [i.6] 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 (RE Directive).
- [i.7] The latest version of the ITU Master International Frequency Register (MIFR), available from the ITU website.
- [i.8] ETSI EG 203 336 (V1.2.1): "Guide for the selection of technical parameters for the production of Harmonised Standards covering article 3.1(b) and article 3.2 of Directive 2014/53/EU".

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