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Satellite Earth Stations and Systems (SES);
Harmonised Standard for Satellite Earth Stations (MES)
for MSS operating in the 2 GHz frequency bands;
Part 2: User Equipment (UE) for wideband systems
covering the essential requirements
of article 3.2 of the Directive 2014/53/EU

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Foreword

This draft Harmonised European Standard (EN) has been produced by ETSI Technical Committee Satellite Earth Stations and Systems (SES), and is now submitted for the combined Public Enquiry and Vote phase of the ETSI standards EN Approval Procedure.

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.13] 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 [9].

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.

The present document is part 2 of a multi-part deliverable covering the Harmonised Standard for satellite earth stations for MSS operating in the 1 980 MHz to 2 010 MHz (earth-to-space) and 2 170 MHz to 2 200 MHz (space-to-earth) frequency bands, as identified below:

Part 1: "Complementary Ground Component (CGC) for wideband systems covering the essential requirements of article 3.2 of the Directive 2014/53/EU";

Part 2: "User Equipment (UE) for wideband systems covering the essential requirements of article 3.2 of the Directive 2014/53/EU**";**

Part 3: "User Equipment (UE) for narrowband systems covering the essential requirements of article 3.2 of the Directive 2014/53/EU".

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	18 months after doa

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).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Introduction

The present document is part of a set of standards developed by ETSI and is designed to fit in a modular structure to cover all radio and telecommunications terminal equipment within the scope of the RE Directive [9]. The modular structure is shown in ETSI EG 201 399 [i.3].

1 Scope

The present document applies to User Equipment (UE) radio equipment type which has the following characteristics:

- these UEs have both transmit and receive capabilities and operate in an hybrid Satellite/terrestrial network i.e. a satellite and/or Complementary Ground Component (CGC) network;
- the satellite component is based on GSO;
- these UEs operate with an assigned channel signal bandwidth (CBw) of 1 MHz or greater;
- these UEs may be handset, handheld, portable, vehicle-mounted, aircraft mounted device (in this case the present document refers to Aeronautical Terminal - AT) 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 UE is an element in a multi-mode terminal, unless otherwise stated in the present document, its requirements apply only to the UE element of the terminal operating in the Mobile Satellite Service (MSS) frequency bands given in Table 1;
- the present document applies for several class of UEs:
  - UE for terrestrial use Power Class 1 - clauses 4 and 5;
  - UE for terrestrial use Power Class 1bis - clauses 4 and 5;
  - UE for terrestrial use Power Class 2 - clauses 4 and 5;
  - UE for terrestrial use Power Class 3 - clauses 4 and 5;
  - UE for aeronautical use (Aeronautical Terminal - AT) - clauses 6 and 7;
  - UE for terrestrial use (non-aeronautical UE E-UTRA) - clauses 8 and 9;
- the Aeronautical Terminals (AT) operates at altitude of 1 000 m and higher above ground level.

This radio equipment type is capable of operating in all or any part of the frequency bands given in Table 1.

Table 1: Mobile Satellite Service UE frequency bands

Operating band	Direction of transmission	UE frequency bands
I	Transmit	1 980 MHz to 2 010 MHz
	Receive	2 170 MHz to 2 200 MHz

The present document is intended to cover the provisions of Directive 2014/53/EU [9] (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 1: In addition to the unwanted emission limits defined in clauses 4.2.4 and 4.2.5 of the present document, additional operational constraints may be required to prevent harmful interference into services operating in the neighbouring bands outside the operational band defined in Table 1.

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 RE Directive [9] may apply to equipment within the scope of the present document.

NOTE 2: A list of such ENs is included on the web site http://www.newapproach.org.