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**Talni VHF ročni, mobilni in fiksni radijski oddajniki, sprejemniki in sprejemniki-oddajniki za VHF aeronavtično mobilno storitev, ki uporablja amplitudno modulacijo - 2. del: Harmonizirani EN, ki zajema bistvene zahteve člena 3.2 direktive R&TTE**

Ground-based VHF hand-held, mobile and fixed radio transmitters, receivers and transceivers for the VHF aeronautical mobile service using amplitude modulation - Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive

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**Ta slovenski standard je istoveten z: EN 300 676-2 Version 1.5.1**

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**ICS:**

33.060.20	Sprejemna in oddajna oprema	Receiving and transmitting equipment
49.090	Oprema in instrumenti v zračnih in vesoljskih plovilih	On-board equipment and instruments

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# ETSI EN 300 676-2 V1.5.1 (2011-09)



Harmonized European Standard

**Ground-based VHF hand-held, mobile and  
fixed radio transmitters, receivers and  
transceivers for the VHF aeronautical mobile service  
using amplitude modulation;  
Part 2: Harmonized EN covering essential requirements  
of article 3.2 of the R&TTE Directive**

## Reference

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REN/ERM-JTFEA-007

## Keywords

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aeronautical, AM, DSB, radio, testing, VHF

**ETSI**

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Sous-Préfecture de Grasse (06) N° 7803/88

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## Foreword

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

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC (as amended) [i.4] laying down a procedure for the provision of information in the field of technical standards and regulations.

The title and reference to the present document are intended to be included in the publication in the Official Journal of the European Union of titles and references of Harmonized Standard under the Directive 1999/5/EC [i.1].

See article 5.1 of Directive 1999/5/EC [i.1] for information on presumption of conformity and Harmonised Standards or parts thereof the references of which have been published in the Official Journal of the European Union.

The requirements relevant to Directive 1999/5/EC [i.1] are summarised in annex A.

The present document is part 2 of a multi-part deliverable covering the Ground-based VHF hand-held, mobile and fixed radio transmitters, receivers and transceivers for the VHF aeronautical mobile service using amplitude modulation; as identified below:

Part 1: "Technical characteristics and methods of measurement";

**Part 2: "Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive".**

National transposition dates	
Date of adoption of this EN:	4 August 2011
Date of latest announcement of this EN (doa):	30 November 2011
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 May 2012
Date of withdrawal of any conflicting National Standard (dow):	31 May 2013

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## 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 R&TTE Directive [i.1]. The modular structure is shown in EG 201 399 [i.3].

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# 1 Scope

The present document applies to DSB AM ground base stations, with channel separations of 8,33 kHz or 25 kHz intended for analogue speech intended for ACARS data communication. The scope of the present document is limited to ground based stations, ground mobile and hand held radios for ground use. These radio equipment types are capable of operating in all or any part of the Aeronautical frequency band- between 118 MHz and 136,975 MHz.

The present document is intended to cover the provisions of Directive 1999/5/EC (R&TTE Directive) [i.1], article 3.2, which states that "... radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as 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 R&TTE Directive [i.1] as well as essential requirements under the SES Interoperability Regulation 552/2004 [i.2] and related implementing rules may apply to equipment within the scope of the present document.

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

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# 2 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 reference document (including any amendments) applies.

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## 2.1 Normative references

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

- [1] ETSI EN 300 676-1 (V1.5.2): "Ground-based VHF hand-held, mobile and fixed radio transmitters, receivers and transceivers for the VHF aeronautical mobile service using amplitude modulation; Part 1: Technical characteristics and methods of measurement".
- [2] ETSI EN 300 113-1 (V1.6.2): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Land mobile service; Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector; Part 1: Technical characteristics and methods of measurement".
- [3] ETSI TR 100 028 (all parts) (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

## 2.2 Informative references

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] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity; amended by Regulation (EC) No 1882/2003 of the European Parliament and of the Council of 29/09/2003.



- [i.2] Regulation (EC) No 552/2004 of the European Parliament and of the Council of 10 March 2004 on the interoperability of the European Air Traffic Management network (interoperability Regulation), OJ L 96, 31.03.2004, p. 26 as amended by Regulation (EC) No 1070/2009, OJ L 300, 14.11.2009, p. 34.
- [i.3] ETSI EG 201 399: "Electromagnetic compatibility and Radio spectrum Matters (ERM); A guide to the production of candidate Harmonized Standards for application under the R&TTE Directive"; amended by Regulation (EC) No 1070/2009 of the European Parliament and of the Council of 21/10/2009. Official Journal L 300/34, 14/11/2009.
- [i.4] Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations.

## 3 Definitions and abbreviations

### 3.1 Definitions

For the purposes of the present document, the terms and definitions given in the R&TTE Directive [i.1] and the following apply:

**aeronautical mobile service:** mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate

**conducted measurements:** measurements which are made using a direct RF connection to the equipment under test

**environmental profile:** range of environmental conditions under which equipment within the scope of the present document is required to comply with the provisions of the present document

**ground base station:** aeronautical station equipment, in the aeronautical mobile service, for use with an external antenna and intended for use at a fixed location

**hand held:** radio equipment with integral batteries, designed to be hand portable and operated hand held

**integral antenna equipment:** radio communications equipment with an antenna integrated into the equipment without the use of an external connector and considered to be part of the equipment

NOTE: An integral antenna may be internal or external to the equipment. In equipment of this type, a 50  $\Omega$  RF connection point should be provided for test purposes. A connection point for an AF modulating input and for AF output measurements should also be provided.

**mobile station:** radio equipment designed for permanent or temporary vehicle installation and operation, including provision for vehicle DC power supply, and connections for external antenna, PTT key, microphone, speaker and/or headphone

**non-integral antenna equipment:** radio communications equipment with a connector intended for connection to an antenna

**portable station:** radio equipment with integral battery for independent hand-carried use

NOTE: Provisions may be made for connections of an external antenna, PTT key, microphone, headphone and charger, but principally to be operated as a self contained unit.

**radiated measurements:** measurements which involve the measurement of a radiated field

### 3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

ACARS	Aircraft Communications Addressing and Reporting System
AF	Audio Frequency
AM	Amplitude Modulation