

<b>STN</b>	<b>Rozhlasové prijímače</b> <b>Časť 2: Služba rozhlasového vysielania AM</b> <b>Harmonizovaná norma pre prístup k rádiovému</b> <b>spektru</b>	<b>STN</b> <b>EN 303 345-2</b> <b>V1.1.1</b>  87 3345
------------	---	---

Broadcast Sound Receivers; Part 2: AM broadcast sound service; 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. 10/20

Obsahuje: EN 303 345-2 V1.1.1:2020

**130888**

# ETSI EN 303 345-2 V1.1.1 (2020-02)



## **Broadcast Sound Receivers; Part 2: AM broadcast sound service; Harmonised Standard for access to radio spectrum**

---

**Reference**

DEN/ERM-TG17-152

---

**Keywords**analogue, broadcast, harmonised standard,  
radio, receiver**ETSI**650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

---

**Important notice**

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at [www.etsi.org/deliver](http://www.etsi.org/deliver).

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

---

**Copyright Notification**

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2020.

All rights reserved.

**DECT™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.

**3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

**oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners.

**GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

# Contents

Intellectual Property Rights .....	5
Foreword.....	5
Modal verbs terminology.....	6
Introduction .....	6
1 Scope .....	7
2 References .....	7
2.1 Normative references .....	7
2.2 Informative references.....	7
3 Definition of terms, symbols and abbreviations.....	8
3.1 Terms.....	8
3.2 Symbols.....	8
3.3 Abbreviations .....	9
4 Technical requirements specifications .....	9
4.1 Test signal configurations .....	9
4.2 Sensitivity .....	10
4.2.1 Definition .....	10
4.2.2 Limits.....	10
4.2.3 Conformance.....	11
4.3 Adjacent channel selectivity and blocking .....	11
4.3.1 Definition.....	11
4.3.2 Limits.....	11
4.3.3 Conformance.....	12
5 Testing for compliance with technical requirements.....	12
5.1 Environmental conditions for testing .....	12
5.2 Interpretation of the measurement results .....	13
<b>Annex A (informative): Relationship between the present document and the essential requirements of Directive 2014/53/EU .....</b>	<b>14</b>
<b>Annex B (informative): Test signal generation.....</b>	<b>15</b>
<b>Annex C (informative): Development of the present document.....</b>	<b>17</b>
C.1 Introduction .....	17
C.2 Relevance .....	17
C.3 Receiver parameters under article 3.2 .....	17
C.3.1 General .....	17
C.3.2 Receiver sensitivity .....	17
C.3.3 Receiver co-channel rejection .....	18
C.3.4 Receiver selectivity .....	18
C.3.4.1 General.....	18
C.3.4.2 Single signal selectivity .....	18
C.3.4.2.1 Receiver adjacent signal selectivity (adjacent channel selectivity).....	18
C.3.4.2.2 Receiver spurious response rejection .....	18
C.3.4.3 Receiver multiple signal selectivity .....	18
C.3.4.3.1 Receiver blocking .....	18
C.3.4.3.2 Receiver radio-frequency intermodulation.....	19
C.3.4.3.3 Receiver adjacent signal selectivity (adjacent channel selectivity).....	19
C.3.4.4 Other receiver effects.....	19
C.3.4.4.1 Receiver dynamic range.....	19
C.3.4.4.2 Reciprocal mixing .....	19
C.3.4.4.3 Desensitization .....	19

C.3.5	Receiver unwanted emissions in the spurious domain .....	20
<b>Annex D (informative):</b>	<b>Change History .....</b>	<b>21</b>
History .....		22

---

# Intellectual Property Rights

## Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

## Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

---

# 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.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 [i.1].

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. Full details of the entire series can be found in part 1 [1].

The present document has a number of test data files that are contained in archive en\_30334501v010101p0.zip which accompanies ETSI EN 303 345-1 [1].

National transposition dates	
Date of adoption of this EN:	3 February 2020
Date of latest announcement of this EN (doa):	31 May 2020
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 2020
Date of withdrawal of any conflicting National Standard (dow):	30 November 2021

---

## 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 provides the necessary limits and conformance requirements for radio receivers to meet the essential requirements of article 3.2 of Directive 2014/53/EU [i.1] for the AM sound broadcast service and is used with reference to ETSI EN 303 345-1 [1], which describes the generic requirements and test methods.

---

# 1 Scope

The present document specifies the test signal configuration and the limits for sensitivity, selectivity and blocking for devices that receive AM broadcast sound services.

NOTE: The relationship between the present document and essential requirements of article 3.2 of Directive 2014/53/EU [i.1] is given in annex A.

---

## 2 References

### 2.1 Normative references

References are specific, identified by date of publication and/or edition number or version number. Only the cited version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://docbox.etsi.org/Reference/>.

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] ETSI EN 303 345-1 (V1.1.1) (06-2019): "Broadcast Sound Receivers; Part 1: Generic requirements and measuring methods".
- [2] Recommendation ITU-R BS.468-4 (07/1986): "Measurement of audio-frequency noise voltage level in sound broadcasting".
- [3] Recommendation ITU-R BS.559-2 (06/1990): "Objective measurement of radio-frequency protection ratios in LF, MF and HF broadcasting".

### 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] 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.
- [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.
- [i.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".
- [i.4] ETSI TR 100 028-2 (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2".



- [i.5] Recommendation ITU-R BS.1615-1: "Planning parameters for digital sound broadcasting at frequencies below 30 MHz".
- [i.6] AES17: "AES standard method for digital audio engineering - Measurement of digital audio equipment".
- [i.7] ETSI EG 203 336 (V1.1.1) (08-2015): "Electromagnetic compatibility and Radio spectrum Matters (ERM); 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".
- [i.8] ITU GE75: "Final Acts of the Regional Administrative LF/MF Broadcasting Conference (Regions 1 and 3)".
- [i.9] Recommendation ITU-R BS.560-4 (10/1997): "Radio-frequency protection ratios in LF, MF and HF broadcasting".
- [i.10] Recommendation ITU-R SM.332-4 (07/1978): "Selectivity of Receivers".
- [i.11] CENELEC EN 55032:2015: "Electromagnetic compatibility of multimedia equipment - Emission Requirements".

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**