

ANSI/CTA Standard

Mobile Electronics Cabling Standard

ANSI/CTA-2015 R2017

(Formerly ANSI/CEA-2015)

May 2007



**Consumer
Technology
Association™**

NOTICE

Consumer Technology Association (CTA)TM Standards, Bulletins and other technical publications are designed to serve the public interest through eliminating misunderstandings between manufacturers and purchasers, facilitating interchangeability and improvement of products, and assisting the purchaser in selecting and obtaining with minimum delay the proper product for his particular need. Existence of such Standards, Bulletins and other technical publications shall not in any respect preclude any member or nonmember of the Consumer Technology Association from manufacturing or selling products not conforming to such Standards, Bulletins or other technical publications, nor shall the existence of such Standards, Bulletins and other technical publications preclude their voluntary use by those other than Consumer Technology Association members, whether the standard is to be used either domestically or internationally.

Standards, Bulletins and other technical publications are adopted by the Consumer Technology Association in accordance with the American National Standards Institute (ANSI) patent policy. By such action, the Consumer Technology Association does not assume any liability to any patent owner, nor does it assume any obligation whatever to parties adopting the Standard, Bulletin or other technical publication.

This document does not purport to address all safety problems associated with its use or all applicable regulatory requirements. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of regulatory limitations before its use.

This document is copyrighted by the Consumer Technology Association (CTA)TM and may not be reproduced, in whole or part, without written permission. Federal copyright law prohibits unauthorized reproduction of this document by any means. Organizations may obtain permission to reproduce a limited number of copies by entering into a license agreement. Requests to reproduce text, data, charts, figures or other material should be made to the Consumer Technology Association (CTA)TM.

(Formulated under the cognizance of the **CTA R6 Portable, Handheld and In-Vehicle Electronics Committee.**)

Published by
©CONSUMER TECHNOLOGY ASSOCIATION 2017
Technology & Standards Department
www.cta.tech

All rights reserved

FOREWORD

This standard was developed by the Consumer Electronics Association (CEA) R6 Mobile Systems Committee.

CONTENTS

1 Scope.....	3
2 References.....	3
2.1 Normative References.....	3
2.1.1 Normative Reference List	3
2.1.2 Normative Reference Acquisition	3
2.2 Informative References.....	3
2.2.1 Informative Reference List.....	3
2.2.2 Informative Reference Acquisition	4
2.3 Symbols and Abbreviations	4
2.4 Compliance Notation.....	4
3 Conductor Design	4
4 Power Handling Capability.....	6
4.1 Power Cables	6
4.2 Speaker Cables	10
5 Jacket Material	14
6 Cable Flexibility.....	14
7 Test and Measurement Requirements	14
7.1 Physical Measurement.....	14
7.2 Electrical Measurement	15
8 Reporting Requirements	15

Tables

Table 1: Size, Conductor Resistivity and Strand Count Requirements for CEA Wire Gauges.....	5
Table 2: Circular Mil per Ampere Limits for Various Wire Gauges Rated for 90° C in Ambient Temperature of 71-80° C	8
Table 3: Maximum Power Cable Length in Terms of CEA-2006-A Rated Total Amplifier Power in Meters (Feet).....	9
Table 4: Maximum Speaker Cable Length and CEA-2006-A Rated Per-Channel Amplifier Power for Various Cable Gauges	13

MOBILE ELECTRONICS CABLING STANDARD

1 Scope

This standard defines size and performance requirements for power and speaker cabling used in mobile electronics applications.

2 References

2.1 Normative References

The following references contain provisions that, through reference in this text, constitute normative provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

2.1.1 Normative Reference List

ASTM B 258, Standard Specification for Standard Nominal Diameters and Cross-Sectional Areas of AWG Sizes of Solid Round Wires Used as Electrical Conductors, Rev. 02

NBS HDBK100, International Annealed Copper Standard (IACS), Rev. 66

2.1.2 Normative Reference Acquisition

ASTM, NBS Standards:

- Techstreet, 3916 Ranchero Drive, Ann Arbor, MI USA 48108; Phone 800-699-9277; Fax 734-780-2046; Internet <http://www.techstreet.com>; Email techstreet.service@thmsonreuters.com

2.2 Informative References

The following references contain provisions that, through reference in this text, constitute informative provisions of this standard. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

2.2.1 Informative Reference List

CEA-2006-A, Testing & Measurement Methods for Mobile Audio Amplifiers, November 2004

National Electric Code, 2005 Edition