# TIA TELECOMMUNICATIONS SYSTEMS BULLETIN 

Telecommunications - Multiline Terminal Systems - Comparison of PBX Transmission Requirements in Standards TIA-464-C and ETSI ES 201 168 Version 1.1

## TSB-147

## NOTICE

TIA Engineering Standards and 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 and Publications shall not in any respect preclude any member or nonmember of TIA from manufacturing or selling products not conforming to such Standards and Publications, nor shall the existence of such Standards and Publications preclude their voluntary use by those other than TIA members, whether the standard is to be used either domestically or internationally.

Standards, Publications and Bulletins are adopted by TIA in accordance with the American National Standards Institute (ANSI) patent policy. By such action, TIA does not assume any liability to any patent owner, nor does it assume any obligation whatever to parties adopting the Standard, Publication, or Bulletin. Further details of the development process are available in the TIA Engineering Manual, located at http://www.tiaonline.org/standards/sfg/engineering_manual.cfm

Technical Bulletins are distinguished from TIA Standards or Documents, in that they contain a compilation of engineering data or information useful to the technical community, and represent approaches to good engineering practices that are suggested by the formulating committee.

This Bulletin is not intended to preclude or discourage other approaches that similarly represent good engineering practice, or that may be acceptable to, or have been accepted by, appropriate bodies. Parties who wish to bring other approaches to the attention of the formulating committee to be considered for inclusion in future revisions of this Bulletin are encouraged to do so. It is the intention of the formulating committee to review this document every five years, but it maybe revised and updated at any time as may be occasioned by changes in technology, industry practice, or government regulations, or for other appropriate reasons.
(From Project No. 3-0099, formulated under the cognizance of the TIA TR-41.1 Subcommittee on Multiline Terminal Systems.

Published by
©TELECOMMUNICATIONS INDUSTRY ASSOCIATION 2004
Standards and Technology Department
2500 Wilson Boulevard
Arlington, VA 22201 U.S.A.

## PRICE: Please refer to current Catalog of TIA TELECOMMUNICATIONS INDUSTRY ASSOCIATION STANDARDS AND ENGINEERING PUBLICATIONS <br> or call Global Engineering Documents, USA and Canada <br> (1-800-854-7179) International (303-397-7956) <br> or search online at http://www.tiaonline.org/standards/search_n_order.cfm

All rights reserved
Printed in U.S.A.

## NOTICE OF DISCLAIMER AND LIMITATION OF LIABILITY

The document to which this Notice is affixed (the "Document") has been prepared by one or more Engineering Committees or Formulating Groups of the Telecommunications Industry Association ("TIA"). TIA is not the author of the Document contents, but publishes and claims copyright to the Document pursuant to licenses and permission granted by the authors of the contents.

TIA Engineering Committees and Formulating Groups are expected to conduct their affairs in accordance with the TIA Engineering Manual ("Manual"), the current and predecessor versions of which are available at http://www.tiaonline.org/standards/sfg/engineering manual.cfm. TIA's function is to administer the process, but not the content, of document preparation in accordance with the Manual and, when appropriate, the policies and procedures of the American National Standards Institute ("ANSI"). TIA does not evaluate, test, verify or investigate the information, accuracy, soundness, or credibility of the contents of the Document. In publishing the Document, TIA disclaims any undertaking to perform any duty owed to or for anyone.

The use or practice of contents of this Document may involve the use of intellectual property rights ("IPR"), including pending or issued patents, or copyrights, owned by one or more parties. TIA makes no search or investigation for IPR. When IPR consisting of patents and published pending patent applications are claimed and called to TIA's attention, a statement from the holder thereof is requested, all in accordance with the Manual. TIA takes no position with reference to, and disclaims any obligation to investigate or inquire into, the scope or validity of any claims of IPR.

TIA does not enforce or monitor compliance with the contents of the Document. TIA does not certify, inspect, test or otherwise investigate products, designs or services or any claims of compliance with the contents of the Document.

ALL WARRANTIES, EXPRESS OR IMPLIED, ARE DISCLAIMED, INCLUDING WITHOUT LIMITATION, ANY AND ALL WARRANTIES CONCERNING THE ACCURACY OF THE CONTENTS, ITS FITNESS OR APPROPRIATENESS FOR A PARTICULAR PURPOSE OR USE, ITS MERCHANTABILITY AND ITS NON-INFRINGEMENT OF ANY THIRD PARTY'S INTELLECTUAL PROPERTY RIGHTS. TIA EXPRESSLY DISCLAIMS ANY AND ALL RESPONSIBILITIES FOR THE ACCURACY OF THE CONTENTS AND MAKES NO REPRESENTATIONS OR WARRANTIES REGARDING THE CONTENT'S COMPLIANCE WITH ANY APPLICABLE STATUTE, RULE OR REGULATION, OR THE SAFETY OR HEALTH EFFECTS OF THE CONTENTS OR ANY PRODUCT OR SERVICE REFERRED TO IN THE DOCUMENT OR PRODUCED OR RENDERED TO COMPLY WITH THE CONTENTS.

TIA SHALL NOT BE LIABLE FOR ANY AND ALL DAMAGES, DIRECT OR INDIRECT, ARISING FROM OR RELATING TO ANY USE OF THE CONTENTS CONTAINED HEREIN, INCLUDING WITHOUT LIMITATION ANY AND ALL INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF BUSINESS, LOSS OF PROFITS, LITIGATION, OR THE LIKE), WHETHER BASED UPON BREACH OF CONTRACT, BREACH OF WARRANTY, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY OR OTHERWISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING NEGATION OF DAMAGES IS A FUNDAMENTAL ELEMENT OF THE USE OF THE CONTENTS HEREOF, AND THESE CONTENTS WOULD NOT BE PUBLISHED BY TIA WITHOUT SUCH LIMITATIONS.

