

INTERNATIONAL STANDARD



Consumer audio/video equipment – Digital interface –
Part 6: Audio and music data transmission protocol
(standards.iteh.ai)

IEC 61883-6:2014

<https://standards.iteh.ai/catalog/standards/sist/cc354951-b6a7-41fc-a998-be45c16f40f4/iec-61883-6-2014>



THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2014 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in 14 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

More than 55 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

IEC 61883-1:2014
INTERNATIONAL STANDARD
(standard)

https://standards.iteh.ai/catalog/standards/iec-61883-1-2014
be45c16f40f4/iec-61883-1-2014

INTERNATIONAL STANDARD



**Consumer audio/video equipment – Digital interface –
Part 6: Audio and music data transmission protocol**

STANDARD PREVIEW
(standards.iteh.ai)

[IEC 61883-6:2014](https://standards.iteh.ai/catalog/standards/sist/cc354951-b6a7-41fc-a998-be45c16f40f4/iec-61883-6-2014)

<https://standards.iteh.ai/catalog/standards/sist/cc354951-b6a7-41fc-a998-be45c16f40f4/iec-61883-6-2014>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

PRICE CODE

XE

ICS 33.160.01; 35.200

ISBN 978-2-8322-1822-8

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	11
1 Scope.....	13
2 Normative references	13
3 Terms, definitions and abbreviations	13
3.1 Terms and definitions.....	13
3.2 Abbreviations.....	15
4 Reference model for data transmission.....	16
4.1 General.....	16
4.2 Application layer	17
4.3 Adaptation layer.....	17
4.4 Packetization layer.....	18
5 Transport requirements	19
5.1 Arbitrated short bus reset.....	19
5.2 Bit, byte, and quadlet ordering	19
6 Packet header for audio and music data	19
6.1 General.....	19
6.2 Isochronous packet header format	19
6.3 CIP header format	19
7 Packetization.....	20
7.1 Packet transmission method	20
7.2 Transmission of timing information.....	20
7.3 Time stamp processing.....	21
7.4 Transmission control.....	21
7.4.1 Non-blocking transmission method	21
7.4.2 Blocking transmission method	23
8 Event types	24
8.1 General.....	24
8.2 AM824 data	27
8.2.1 Generic format.....	27
8.2.2 IEC 60958 conformant data	29
8.2.3 Multi-bit linear audio (MBLA)	29
8.2.4 One-bit audio.....	30
8.2.5 MIDI conformant data	31
8.2.6 SMPTE time code data	32
8.2.7 Sample count data.....	32
8.2.8 High-precision multi-bit linear audio.....	32
8.2.9 Ancillary data.....	33
8.2.10 Application specific ancillary data	35
8.3 32-bit floating-point data	35
8.4 24-bit × 4 audio pack	36
8.5 32-bit generic data	36
9 FDF definition.....	36
9.1 Overview	36
9.2 Basic format.....	37
9.3 Special format.....	39

10	FDf definition for AM824 data	39
10.1	Definition of N-flag	39
10.2	Supplementary SFC definition	39
10.3	Clock-based rate control mode (FDF = 0000 0xxx ₂)	40
10.3.1	Introductory remark	40
10.3.2	Default SFC table for (FDF = 0000 0xxx ₂)	40
10.4	Command-based rate control mode (FDF = 00001xxx ₂)	41
10.4.1	Introductory remark	41
10.4.2	Default SFC table for (FDF = 0000 1xxx ₂)	42
11	AM824 adaptation process	42
11.1	Introductory remark	42
11.2	Basic sequence conversion	42
11.3	Sequence multiplexing	43
11.4	Compound data block structure	43
11.4.1	General	43
11.4.2	Compound data structure rule	44
12	AM824 sequence adaptation layers	47
12.1	Overview	47
12.1.1	General	47
12.1.2	IEC 60958 bitstream	47
12.1.3	One-bit audio	53
12.1.4	Non-linear audio (data stream)	56
12.1.5	MIDI data stream	56
12.1.6	SMPTe time code and sample count	57
12.1.7	High-precision and double-precision multi-bit linear audio	57
12.2	DVD-audio	62
12.2.1	General	62
12.2.2	DVD-Audio specific ancillary data	62
12.2.3	Data for CCI	64
12.2.4	Data for ISRC	64
12.2.5	Example of DVD-Audio stream	64
12.3	SACD definition	66
12.3.1	General	66
12.3.2	SACD ancillary data	66
12.3.3	SACD supplementary data	67
12.3.4	Multi-bit linear audio data	68
12.3.5	SACD Track_Mode&Flags data	68
12.3.6	SACD Track_Copy_Management data	68
12.3.7	Example of SACD streams	68
12.4	Blu-ray Disc	70
12.4.1	General	70
12.4.2	Structure of sample word for audio transmission	70
12.4.3	Multi-bit linear audio data	71
12.4.4	Blu-ray Disc specific ancillary data	71
12.4.5	Data transmitted at every data block	71
12.4.6	Data for CCI	74
12.4.7	Example of Blu-ray Disc stream	75
12.5	Multi-bit linear audio (MBLA)	79
12.5.1	General	79

12.5.2	Structure of sample word for audio transmission.....	79
12.5.3	Fixed channels' structure of sample word for audio transmission	79
12.5.4	Variable channels' structure of sample word for audio transmission.....	81
12.5.5	MBLA data.....	83
12.5.6	MBLA specific ancillary data.....	83
12.5.7	Data transmitted at every data block of Group 1 for the fixed channels' structure	83
12.5.8	Data transmitted at every data block of Group 2 for the fixed channels' structure	86
12.5.9	Data transmitted at every data block of Group 3 for the fixed channels' structure	88
12.5.10	Data transmitted at every data block of Group 4 for the fixed channels' structure	91
12.5.11	Data transmitted at every data block for the variable channels' structure	93
12.5.12	Data transmitted at extension channel bit order 1 for the variable channels' structure	96
12.5.13	Data transmitted at extension channel bit order 2 for the variable channels' structure	100
12.5.14	Data for CCI	102
12.5.15	Example of MBLA stream for the fixed channels' structure.....	103
12.5.16	Example of MBLA stream for the variable channels' structure	105
Annex A (informative)	Synchronization issues.....	108
A.1	General.....	108
A.2	Delivery of sampling clock of arbitrary frequency	108
Annex B (informative)	Catching up in non-blocking transmission method	110
Annex C (informative)	Transport characteristics.....	111
C.1	Sampling-clock jitter characteristics.....	111
C.2	Sample clock transfer jitter mechanisms using A/M protocol	111
C.2.1	General	111
C.2.2	CYCLE_TIME register jitter.....	111
C.2.3	Time-stamp quantization jitter.....	112
C.3	Embedded sample-clock jitter	113
C.3.1	Embedded sample-clock jitter spectrum.....	113
C.3.2	Embedded sample-clock jitter amplitude	113
C.4	Jitter attenuation.....	116
C.5	Jitter measurement	116
Bibliography	118
Figure 1	– Reference model for audio and music data transmission	16
Figure 2	– Reference model for AM824 data transmission	17
Figure 3	– Implementation example of receiver	18
Figure 4	– Isochronous packet header	19
Figure 5	– Common isochronous packet (CIP) format	20
Figure 6	– Non-blocking transmission method.....	22
Figure 7	– Transmission parameters	23
Figure 8	– Blocking transmission method	23
Figure 9	– Cluster events.....	25
Figure 10	– Pack and cluster events	26

Figure 11 – Pack event with 24-bit event sequence.....	26
Figure 12 – Generic AM824 format	27
Figure 13 – AM824 data with SUB LABEL.....	28
Figure 14 – AM824 LABEL allocation map	28
Figure 15 – IEC 60958 conformant data format.....	29
Figure 16 – MBLA data	29
Figure 17 – Raw audio data	30
Figure 18 – Alignment of 20-bit data in 24-bit field	30
Figure 19 – MIDI conformant data format.....	31
Figure 20 – No-data format.....	31
Figure 21 – High-precision multi-bit linear audio data.....	32
Figure 22 – Generic high-precision quadlet sequence	33
Figure 23 – Generic ancillary data	33
Figure 24 – Ancillary no data	34
Figure 25 – General format for ASID	35
Figure 26 – General format for application-specific ancillary data	35
Figure 27 – 32-bit floating-point data format.....	36
Figure 28 – 24-bit × 4 audio pack format.....	36
Figure 29 – 32-bit generic data format	36
Figure 30 – Generic FDF definition.....	37
Figure 31 – FDF code for NO-DATA packet	39
Figure 32 – Structure of FDF for AM824 data type	39
Figure 33 – SFC interpretation.....	40
Figure 34 – FDF for AM824 and AM824 LABEL space	40
Figure 35 – Adaptation to AM824 sequence.....	42
Figure 36 – Asynchronous sequence multiplexing.....	43
Figure 37 – Example of compound data block	44
Figure 38 – Condition of AM824 rule	44
Figure 39 – Generic compound data block structure	45
Figure 40 – Example of unspecified region structure	46
Figure 41 – Generic one-bit audio quadlet	54
Figure 42 – Generic one-bit audio quadlet sequence	55
Figure 43 – One-bit audio DST encoded quadlet.....	55
Figure 44 – Multiplexing of MIDI data streams	56
Figure 45 – High-precision first ancillary data	57
Figure 46 – IEC 60958 conformant data with high-precision data.....	58
Figure 47 – Common and application-specific ancillary data with high-precision data.....	59
Figure 48 – High-precision channel assignment ancillary data	59
Figure 49 – Example of high-precision data	60
Figure 50 – Example of double-precision data	61
Figure 51 – Example of double-precision compound data	62
Figure 52 – Data transmitted at data starting-point.....	63
Figure 53 – Data transmitted at every data block	63

Figure 54 – Ancillary data for CCI	64
Figure 55 – Ancillary data for ISRC	64
Figure 56 – Basic data block of DVD-Audio stream	65
Figure 57 – Example of DVD-Audio data	66
Figure 58 – SACD ancillary data	67
Figure 59 – SACD supplementary data	68
Figure 60 – SACD Track_Mode&Flags data	68
Figure 61 – SACD Track_Copy_Management data	68
Figure 62 – Example of SACD stream in the case of six channels	69
Figure 63 – Example of SACD stream in the case of five channels	70
Figure 64 – Basic data blocks of Blu-ray Disc	71
Figure 65 – Data transmitted at every data block	72
Figure 66 – Ancillary data for CCI	75
Figure 67 – Basic data block of Blu-ray Disc	75
Figure 68 – Examples of Blu-ray Disc stream of one channel	76
Figure 69 – Example of Blu-ray Disc stream of two channels	77
Figure 70 – Example of Blu-ray Disc stream of three channels (3/0)	78
Figure 71 – Example of Blu-ray Disc stream three channels (2/1)	78
Figure 72 – Example of Blu-ray Disc stream of four channels (2/2)	79
Figure 73 – Basic data block of the fixed channels' structure	81
Figure 74 – Basic data block of the variable channels' structure	83
Figure 75 – Data transmitted at every data block of Group 1 for the fixed channels' structure	84
Figure 76 – Data transmitted at every data of Group 2 for the fixed channels' structure	86
Figure 77 – Data transmitted at every data block of Group 3 for the fixed channels' structure	89
Figure 78 – Data transmitted at every data block of Group 4 for the fixed channels' structure	91
Figure 79 – Data transmitted at every data block for the variable channel's structure	93
Figure 80 – Data transmitted at extension channel bit order 1 for the variable channels' structure	96
Figure 81 – Data transmitted at extension channel bit order 2 for the variable channels' structure	100
Figure 82 – Ancillary data for CCI	102
Figure 83 – Examples of MBLA stream for the fixed channels' structure of one channel	104
Figure 84 – Examples of MBLA stream for the fixed channels' structure of two channels	104
Figure 85 – Example of MBLA stream for the fixed channels' structure of three channels (3/0)	105
Figure 86 – Example of MBLA stream for the fixed channels' structure of four channels (2/2)	105
Figure 87 – Examples of MBLA stream for the variable channels' structure of one channel	106
Figure 88 – Example of MBLA stream for the variable channels' structure two channels	106
Figure 89 – Example of MBLA stream for the variable channels' structure of three channels (3/0)	106

Figure 90 – Example of MBLA stream for the variable channels' structure of four channels (2/2).....	107
Figure 91 – Example of MBLA stream for the fixed channels' structure of seven channels.....	107
Figure C.1 – Two-node bus.....	113
Figure C.2 – Three-node bus.....	114
Figure C.3 – Thirty-five-node bus.....	115
Figure C.4 – Sample-clock recovery jitter attenuation template.....	116
Figure C.5 – Sample clock jitter measurement filter characteristic.....	117
Table 1 – Isochronous packet header fields.....	19
Table 2 – CIP fields.....	20
Table 3 – LABEL definition.....	28
Table 4 – SB and SF definitions.....	29
Table 5 – ASI1 definition.....	30
Table 6 – VBL (valid bit length code) definition.....	30
Table 7 – LABEL definition for one-bit audio (plain).....	31
Table 8 – LABEL definition for one-bit audio (encoded).....	31
Table 9 – C (counter) definition.....	31
Table 10 – Num. (slot number) definition.....	32
Table 11 – LABEL definition for ancillary data type.....	33
Table 12 – LABEL definition for common ancillary data.....	34
Table 13 – CONTEXT definition.....	34
Table 14 – SUB LABEL definition for ASID.....	35
Table 15 – LABEL definition for application specific ancillary data.....	35
Table 16 – Subformat and FDF allocations.....	37
Table 17 – DBS for AM824 and 32-bit floating-point data.....	37
Table 18 – DBS for 24-bit × 4 audio pack.....	37
Table 19 – Event type (EVT) code definition.....	37
Table 20 – Default SFC table.....	38
Table 21 – TRANSFER_DELAY for blocking transmission.....	38
Table 22 – Default SFC table for FDF = 0000 0xxx ₂	41
Table 23 – TRANSFER_DELAY for blocking transmission.....	41
Table 24 – Default SFC table for FDF = 0000 1xxx ₂	42
Table 25 – Sampling frequency in IEC 60958-3.....	48
Table 26 – Original sampling frequency.....	48
Table 27 – Up or down sampling ratio of 32 kHz line.....	49
Table 28 – Up or down sampling ratio of 44,1 kHz line.....	49
Table 29 – Up or down sampling ratio of 48 kHz line.....	49
Table 30 – Clock accuracy in IEC 60958-3.....	50
Table 31 – Cases.....	50
Table 32 – Examples.....	51
Table 33 – Relation of values in IEC 60958-3 and A/M protocol.....	53
Table 34 – Sampling frequency definition of one-bit audio.....	54

Table 35 – TRANSFER_DELAY for blocking transmission in the case of the one-bit audio	54
Table 36 – SFC definition of one-bit audio for high-speed AM824 data transfer	56
Table 37 – Channel definition	57
Table 38 – Accuracy definition	57
Table 39 – Recommended rules.....	58
Table 40 – Channel assignment definition.....	59
Table 41 – DVD-Audio specific ancillary data.....	63
Table 42 – Data transmitted at starting-point	63
Table 43 – Data transmitted at every data block	64
Table 44 – Data information.....	67
Table 45 – Validity flag definition	67
Table 46 – ASI2 definition for DVD-Audio	68
Table 47 – ASI1 definition for Blu-ray Disc.....	71
Table 48 – ASI2 definition for Blu-ray Disc.....	71
Table 49 – Blu-ray Disc specific ancillary data	71
Table 50 – Data transmitted at every data block	72
Table 51 – L channel definition	72
Table 52 – R channel definition	72
Table 53 – Lfe channel definition	73
Table 54 – C channel definition.....	73
Table 55 – LS channel definition.....	73
Table 56 – RS channel definition	73
Table 57 – Rls channel definition	73
Table 58 – Rrs channel definition.....	73
Table 59 – L/R ch identifier definition	74
Table 60 – C ch identifier definition.....	74
Table 61 – LS/RS ch identifier definition	74
Table 62 – Data transmitted at every data block	75
Table 63 – MBLA specific ancillary data.....	83
Table 64 – Data transmitted at every data block of Group 1 for the fixed channels' structure	84
Table 65 – Emphasis flag definition	84
Table 66 – FL channel definition	84
Table 67 – FR channel definition.....	85
Table 68 – LFE1 channel definition	85
Table 69 – FC channel definition.....	85
Table 70 – LS channel definition.....	85
Table 71 – RS channel definition	85
Table 72 – BL channel definition.....	85
Table 73 – BR channel definition	86
Table 74 – FL/FR ch identifier definition.....	86
Table 75 – FC ch identifier definition.....	86
Table 76 – Data transmitted at every data of Group 2 for the fixed channels' structure	87

STANDARD PREVIEW
 (standards.iteh.ai)

IEC 61883-6:2014
<https://standards.iteh.ai/catalog/standards/sist/cc354951-b6a7-41fc-a998-be45c1614014/iec-61883-6-2014>

Table 77 – Emphasis flag definition	87
Table 78 – FLc channel definition	87
Table 79 – FRc channel definition	87
Table 80 – LFE2 channel definition	87
Table 81 – BC channel definition	88
Table 82 – SiL channel definition.....	88
Table 83 – SiR channel definition.....	88
Table 84 – TpFL channel definition	88
Table 85 – TpFR channel definition.....	88
Table 86 – Data transmitted at every data block of Group 3 for the fixed channels' structure	89
Table 87 – Emphasis flag definition	89
Table 88 – FLw channel definition.....	89
Table 89 – FRw channel definition	89
Table 90 – TpFC channel definition.....	90
Table 91 – TpC channel definition.....	90
Table 92 – TpBL channel definition	90
Table 93 – TpBR channel definition	90
Table 94 – TpSiL channel definition	90
Table 95 – TpSiR channel definition	91
Table 96 – Data transmitted at every data block of Group 4 for the fixed channels' structure	91
Table 97 – Emphasis flag definition	91
Table 98 – TpBC channel definition	92
Table 99 – BtFC channel definition	92
Table 100 – BtFL channel definition	92
Table 101 – BtFR channel definition	92
Table 102 – LSd channel definition	92
Table 103 – RSd channel definition.....	92
Table 104 – TpLS channel definition	93
Table 105 – TpRS channel definition	93
Table 106 – Data transmitted at every data block for the variable channels' structure	93
Table 107 – Emphasis flag definition.....	94
Table 108 – FL channel definition	94
Table 109 – FR channel definition.....	94
Table 110 – LFE1 channel definition	94
Table 111 – FC channel definition	94
Table 112 – LS channel definition.....	95
Table 113 – RS channel definition	95
Table 114 – BL channel definition.....	95
Table 115 – BR channel definition	95
Table 116 – FL/FR ch identifier definition.....	95
Table 117 – FC ch identifier definition.....	96
Table 118 – Extension ch flag 1 definition	96

Table 119 – Extension ch flag 2 definition	96
Table 120 – Data transmitted at extension channel bit order 1 for the variable channels' structure.....	97
Table 121 – FLc channel definition	97
Table 122 – FRc channel definition	97
Table 123 – LFE2 channel definition	97
Table 124 – BC channel definition	98
Table 125 – SiL channel definition	98
Table 126 – SiR channel definition.....	98
Table 127 – TpFL channel definition	98
Table 128 – TpFR channel definition.....	98
Table 129 – FLw channel definition.....	99
Table 130 – FRw channel definition	99
Table 131 – TpFC channel definition.....	99
Table 132 – TpC channel definition.....	99
Table 133 – TpBL channel definition	99
Table 134 – TpBR channel definition	99
Table 135 – TpSiL channel definition	100
Table 136 – TpSiR channel definition.....	100
Table 137 – Data transmitted at extension channel bit order 2 for the variable channels' structure.....	100
Table 138 – TpBC channel definition	101
Table 139 – BtFC channel definition.....	101
Table 140 – BtFL channel definition.....	101
Table 141 – BtFR channel definition.....	101
Table 142 – LSd channel definition	101
Table 143 – RSd channel definition.....	102
Table 144 – TpLS channel definition	102
Table 145 – TpRS channel definition	102
Table 146 – Data transmitted at every data block	102

STANDARD PREVIEW

(standards.itec.ai)

IEC 61883-6:2014

<https://www.itec.ai/catalog/standards/sist/cc354951-b6a7-41fc-a998-be45c16f40f4/iec-61883-6-2014>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**CONSUMER AUDIO/VIDEO EQUIPMENT –
DIGITAL INTERFACE –****Part 6: Audio and music data transmission protocol**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61883-6 has been prepared by technical area 4: Digital system interfaces and protocols, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This third edition cancels and replaces the second edition, published in 2005, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) AM824 sequence adaptation layer for Blu-ray Disc application is added.
- b) Blocking transmission method becomes normative.
- c) Previously defined protocols have been included for the sake of backwards compatibility.

The text of this standard is based on the following documents:

FDIS	Report on voting
100/2341/FDIS	100/2372/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61883 series, published under the general title *Consumer audio/video equipment – Digital interface*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

ITIH STANDARD PREVIEW
(standards.iteh.ai)

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

CONSUMER AUDIO/VIDEO EQUIPMENT – DIGITAL INTERFACE –

Part 6: Audio and music data transmission protocol

1 Scope

This part of IEC 61883 describes a protocol for the transmission of audio and music data employing IEEE 1394 and specifies essential requirements for the application of the protocol.

This protocol can be applied to all modules or devices that have any kind of audio and/or music data processing, generation and conversion function blocks. This standard deals only with the transmission of audio and music data. The control, status and machine-readable description of these modules or devices should be defined outside of this standard according to each application area.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60958 (all parts), *Digital audio interface*

<https://standards.iteh.ai/catalog/standards/sist/cc354951-b6a7-41fc-a998-5e1724c00000>

IEC 60958-3, *Digital audio interface – Part 3: Consumer applications*

IEC 61883-1, *Consumer audio/video equipment – Digital interface – Part 1: General*

IEEE 754:1985, *Standard for Binary Floating-Point Arithmetic*

IEEE 1394, *Standard for a High Performance Serial Bus*

IEEE 1394A, *Standard for a High Performance Serial Bus – Amendment 1*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61883-1, together with the following, apply.

3.1.1

32-bit floating-point data

data type which is defined in IEEE 754

3.1.2

AM824 data

32-bit data consisting of an 8-bit label and 24-bit data