



INTERNATIONAL STANDARD

**Multimedia systems –
Guide to the recommended characteristics of analogue interfaces to achieve
interoperability**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	8
2 Normative references	10
3 Terms and definitions	10
4 General conditions.....	13
5 Power supply.....	13
5.1 Alternating current (AC) power supply voltages and frequencies	13
5.2 Direct current (DC) power supply voltages	14
5.3 Power supply feed for microphones	14
6 Interconnections	14
6.1 Connections.....	14
6.1.1 General	14
6.1.2 Characteristics of cables	14
6.2 Connectors	16
7 Marking and symbols for marking	16
7.1 Marking.....	16
7.2 Symbols for marking	16
8 Electrical recommended values.....	16
8.1 General purpose output/input	16
8.2 General purpose audio output/input	16
8.2.1 Audio-only interfaces for consumer equipment.....	16
8.2.2 Interfaces for professional equipment and consumer equipment where audio and video signals are present on the same connector or cable	17
8.3 General purpose video input/output	19
9 Interoperability of microphones and amplifiers	19
9.1 Microphones (excluding piezoelectric types).....	19
9.2 Power supply feed for electret microphones fed over a signal conductor ("plug-in power")	20
9.3 Power supply feed for electret microphones fed by a separate conductor ("soundcard power" or "PC power")	21
9.4 Phantom supply system	21
9.4.1 General	21
9.4.2 Supply voltage polarity	21
9.4.3 Circuit diagram	22
9.4.4 Value of the supply voltage	22
9.4.5 Supply current	22
9.4.6 Marking	22
9.5 A-B supply system	23
9.5.1 General	23
9.5.2 Output impedance of the microphone	23
9.5.3 Circuit diagram	23
9.5.4 Connection of the power supply to earth	23
9.5.5 Marking	23
9.6 Polarity of the audio frequency voltage	23
10 Interoperability of record-playing units (pick-ups) and amplifiers	25

11	Interoperability of loudspeakers and amplifiers	26
11.1	Single unit loudspeakers.....	26
11.2	Loudspeaker systems	26
11.2.1	Loudspeakers with built-in amplifier	26
11.2.2	Impedance-defined loudspeaker systems	26
11.2.3	Constant voltage loudspeaker systems.....	27
11.3	Voltage (or power) interoperability of amplifiers and loudspeakers	27
11.3.1	Overview	27
11.3.2	Interoperability requirements	27
11.4	Polarity of the sound pressure	28
12	Interoperability of headphones and amplifiers	28
12.1	General.....	28
12.2	Interoperability of headphones with stationary amplifiers	28
12.3	Interoperability of portable audio headphones/earphones and portable audio equipment.....	29
12.3.1	General	29
12.3.2	Portable audio headphones/earphones	29
12.3.3	Portable audio equipment.....	29
12.3.4	Recommended values and input/output values for portable audio headphones/earphones and portable audio equipment	29
13	Interoperability of amplifiers with other amplifiers.....	30
13.1	Pre-amplifiers and power amplifiers for general purpose and sound reinforcement.....	30
13.2	Broadcast and similar line amplifiers.....	31
	Annex A (informative) Pairing and screening of conductors.....	32
	Annex B (informative) Phantom power variants for specialized applications.....	33
	Bibliography.....	34
	Figure 1 – Audio and video sources and destinations	9
	Figure 2 – Example of plug-in power system for a single microphone.....	23
	Figure 3 – Example of plug-in power system for a two-channel microphone	24
	Figure 4 – Example of soundcard power system.....	24
	Figure 5 – Example of phantom power supply system	24
	Figure 6 – Example of A-B power supply system	25
	Figure B.1 – Caution symbol.....	33
	Table 1 – Direct current (DC) power supply voltages and tolerances.....	14
	Table 2 – General purpose values for audio-only interfaces	16
	Table 3 – General purpose values for audio signals for professional interfaces.....	18
	Table 4 – General purpose recommended values for video signals	19
	Table 5 – Recommended values for microphones and amplifiers.....	20
	Table 6 – Required values for phantom supply systems	25
	Table 7 – Required values for A-B power supply systems	25
	Table 8 – Recommended values for analogue record-playing units and amplifiers.....	25
	Table 9 – Recommended values for impedance-defined loudspeaker systems	26
	Table 10 – Recommended values for constant voltage loudspeaker systems	27

Table 11 – Recommended values for headphones and amplifiers in stationary applications	28
Table 12 – Recommended values for portable audio headphones/earphones and portable audio equipment	29
Table 13 – Recommended values for pre-amplifiers and power amplifiers	31
Table 14 – Recommended values for broadcast and similar line amplifiers	31

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MULTIMEDIA SYSTEMS – GUIDE TO THE RECOMMENDED CHARACTERISTICS OF ANALOGUE INTERFACES TO ACHIEVE INTEROPERABILITY

FOREWORD

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International Standard IEC 61938 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

This third edition cancels and replaces the second edition published in 2013. This edition constitutes a technical revision.

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

- a) electric tolerance is standardized;
- b) recommended value of output source impedance is adjusted;
- c) value of 6 Ω is additionally recommended to impedance-defined loudspeaker systems;
- d) values in each table are chosen with respect to the state of the art and representative of best practice in industry.

The text of this International Standard is based on the following documents:

CDV	Report on voting
100/2879/CDV	100/2996/RVC

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

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

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

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

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

INTRODUCTION

The first edition of IEC 61938 was derived from IEC 60268-15, IEC 60574-4 and IEC 60933-1 and also from related proposals which had been submitted up until the date of this revision. IEC 60268-15 was the first standard to address 'interoperability' – the ability of equipment from different manufacturers to be assembled into a system with full compatibility at every 'interface'. The aim of the previous revision was to make the intention of this document easily comprehensible by using widely used terminology in the title and text of the document. The purpose of this revision is to expand the measurement frequency range in step with the progress of recent equipment.

The features of the revision are the following:

- a) unification and arrangement of existing related standards, including effective proposals which have been submitted;
- b) extension of the measurement frequency range.

NOTE The standard numbers mentioned above correspond to the revised numbers, if applicable.

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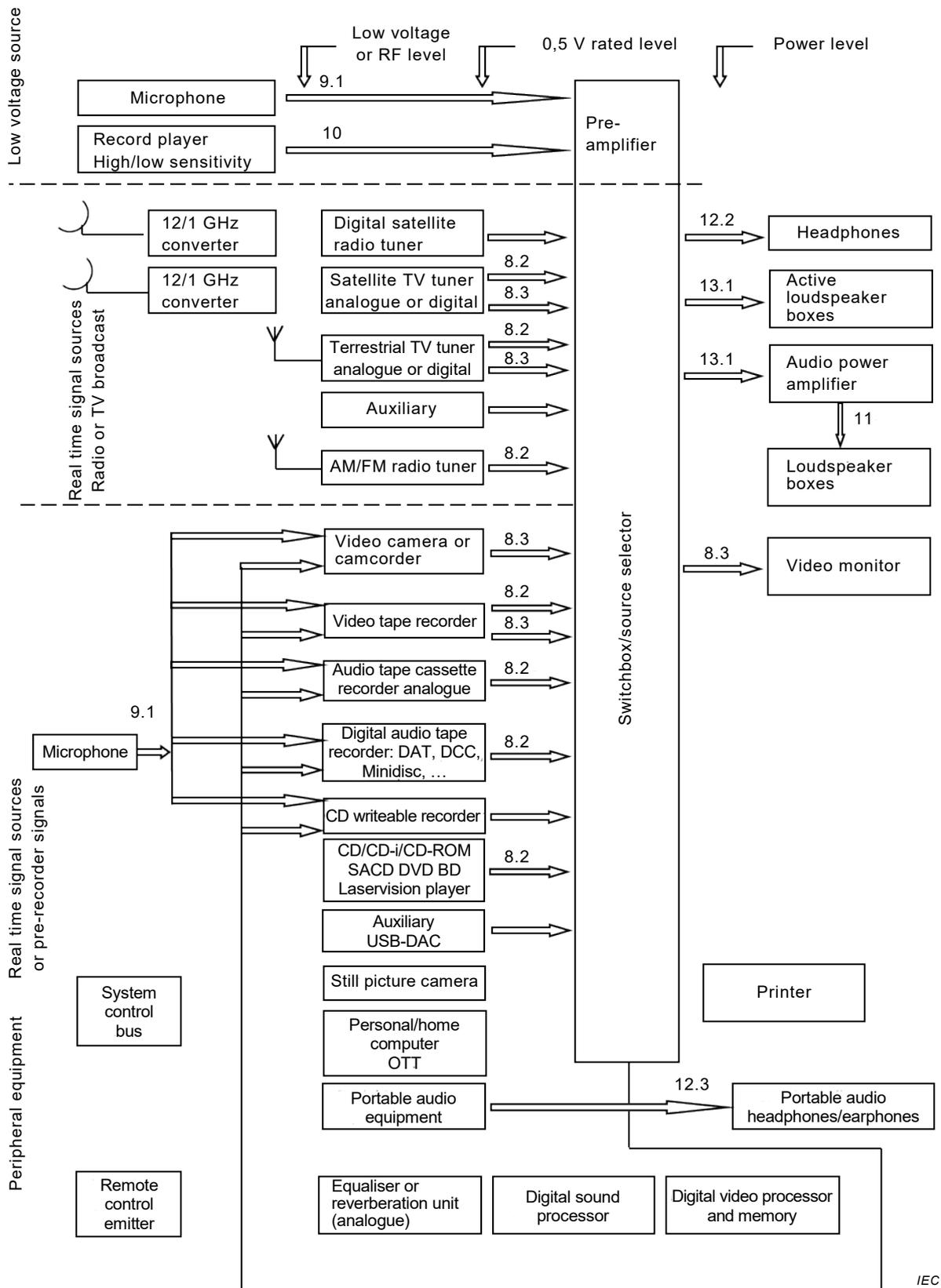
1 Scope

This document gives guidance on current practice for the characteristics of multimedia analogue interfaces to achieve interoperability between equipment from different manufacturers. It is not a performance standard.

Recommendations for interfaces for equipment used in vehicles, and for analogue video interfaces for broadcast and similar equipment, are not given.

Refer to IEC 60958 for the interconnection of digital signals.

Figure 1 shows in a diagram the possible interfaces of the audio and video sources and destinations.



NOTE The numbers indicated above the arrows refer to the appropriate clause or subclauses of this document.

Figure 1 – Audio and video sources and destinations

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60038, *IEC standard voltages*

IEC 60094-2, *Magnetic tape recording and reproducing systems – Part 2: Calibration tapes*

IEC 60268-1, *Sound system equipment – Part 1: General*

IEC 60268-3, *Sound system equipment – Part 3: Amplifiers*

IEC 60268-5, *Sound system equipment – Part 5: Loudspeakers*

IEC 60268-7:2010, *Sound system equipment – Part 7: Headphones and earphones*

IEC 60268-11:1987, *Sound system equipment – Part 11: Application of connectors for the interconnection of sound system components*

IEC 60268-11:1987/AMD1:1989, *Sound system equipment – Part 11: Application of connectors for the interconnection of sound system components*

IEC 60268-11:1987/AMD2:1991, *Sound system equipment – Part 11: Application of connectors for the interconnection of sound system components*

IEC 60268-12, *Sound system equipment – Part 12: Application of connectors for broadcast and similar use*

IEC 60603-11:1992, *Connectors for frequencies below 3 MHz for use with printed boards – Part 11: Detail specification for concentric connectors (dimensions for free connectors and fixed connectors)*

IEC 60958:2016, *Digital audio interface – ALL PARTS*

ITU-R BT.1700:2005, *Characteristics of composite video signals for conventional analogue television systems*