INTERNATIONAL STANDARD

IEC 61947-1

First edition
2002-08

Electronic projection – Measurement and documentation of key performance criteria –

Part 1: Fixed resolution projectors

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International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

PRICE CODE V

For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRONIC PROJECTION – MEASUREMENT AND DOCUMENTATION OF KEY PERFORMANCE CRITERIA

Part 1: Fixed resolution projectors

FOREWORD

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International Standard IEC 61947-1 was prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

FDIS	Report on voting
100/501/FDIS	100/537/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.

The committee has decided that the contents of this publication will remain unchanged until 2004. At that date, the publication will be

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- withdrawn;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

INTRODUCTION

This standard was developed to ensure a common, meaningful description of key performance parameters for fixed resolution projectors. The measurement methods and test signals correlate closely to typical uses involving computer-generated text and graphics displays. These measurements evaluate the actual viewable image that emanates from fixed resolution projectors. The resulting performance specifications are conservative in nature and allow any display device to be used beyond its rated specifications with degraded performance. The point at which this degraded performance is no longer useful is highly subjective and strongly affected by the environment and the application.

This standard is designed to specify a means of measuring and quantifying the performance of fixed resolution projectors and is not intended to provide design goals for manufacturers of such equipment.

ELECTRONIC PROJECTION – MEASUREMENT AND DOCUMENTATION OF KEY PERFORMANCE CRITERIA

Part 1: Fixed resolution projectors

1 Scope

This part of IEC 61947 specifies requirements for measuring and documenting key performance parameters for electronic projection systems with fixed resolution projectors in which the light source and projection/magnification optics are an integral part of the system (i.e. individual pixel light sources or matrix displays such as liquid crystal, DMD, plasma, or electroluminescent panels). It also applies to LCD panels or other fixed resolution imaging devices themselves that are used with overhead projectors.

The provisions of this standard are designed to codify the measurement of the performance of variable resolution projectors and are not intended to provide design goals for manufacturers of such equipment.

This standard is intended for fixed resolution projectors that are primarily designed for use with discrete colour (RGB) raster-scanned video, text, and graphics signals generated by computer equipment.

NOTE These devices may also accept composite or component television video signals encoded in ITU/R publications, which are not within the scope of this standard. In this standard, all of these signals are referred to as television video (TV video).

Projectors and projection systems with multiple variable resolutions, such as cathode-ray tubes and laser projectors, are not fully addressed by this standard, and reference should be made to IEC 61947-2.

A discussion of considerations taken into account in the development of this standard appears in Annex C.

2 Normative references

The following referenced documents are indispensable for the application 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 61947-2, *Electronic projection – Measurement and documentation of key performance criteria – Part 2: Variable resolution projectors*

IEC 61966-4, *Multimedia systems and equipment – Colour measurement and management – Part 4: Equipment using liquid crystal display panels*

IEC 61966-5, *Multimedia systems and equipment – Colour measurement and management – Part 5: Equipment using plasma display panels*

ISO 3741, *Acoustics – Determination of sound power levels of noise sources using sound pressure – Precision methods for reverberation rooms*

ISO 7779, *Acoustics – Measurement of airborne noise emitted by information technology and telecommunication equipment*