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## Firework displays — General guidance

*Artifices de divertissement — Lignes directrices générales*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 264, *Fireworks*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

This document is intended to provide guidance on the organization of fireworks displays carried out by professionals in countries where such events are not fully covered by national legislation or industry codes of practice.

The target readership for this document is the following:

- the parties involved in fireworks displays;
- the designing, operating and management personnel for fireworks displays;
- the relevant authorities in charge of monitoring fireworks displays.

The recommendations of the present guidance were drawn up with a view to improve the approach of public safety where national provisions may be inadequate. In no case they are a full guarantee against the hazards and risks of the use of fireworks. Other practices may exist leading to better results and possible revisions of the present guidance. Organizers and operators of fireworks displays should be aware that the proposed recommendations are only a step on the way toward better practices and that only risk analyses can lead to maximize public safety in real and foreseeable conditions of firing, taking into account local culture and risk acceptability and the conditions that prevail when the display is fired. The examples given in this document are provided reference for the countries where they may be applicable.



# Firework displays — General guidance

## 1 Scope

This document provides guidance on the operation of fireworks displays by professional teams of people with specialized knowledge. It is not applicable to the use of theatrical pyrotechnic articles on stage, in filming locations, or any other locations. It is not applicable to displays that involve only fireworks of categories 1, 2 and 3.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 3.1

#### **fireworks displays**

operations that are carried out at certain site and time, with choreography and design, by professional personnel handling and firing a certain number of fireworks such as display shells, batteries and combinations, lance fireworks, special fireworks, etc.

Note 1 to entry: This definition is also applicable to hand-fired fireworks.

### 3.2

#### **display operation**

operations that are related to *fireworks displays* (3.1) including installation, loading, connecting, firing system test, firing control and after show check and clean-up

### 3.3

#### **electric firing device**

device that delivers the firing electric current to the electric igniters of the fireworks

### 3.4

#### **electric firing system**

system that includes the *electric firing device* (3.3) and commands and controls the whole sequences of fireworks displays

### 3.5

#### **electric igniter**

electric igniting element that consists of leading wires, chips or bridge wires, ignition charge, protective paint, varnish or cover and short circuit caps or twisted bare conductors at the ends of the leading wires

### 3.6

#### **effect radius**

maximum horizontal distance to which the firework effect expands from the burst point