

**Outdoor  
Fireworks  
Display**

# Fireworks FAQ

## **Q. Who is required to have a fireworks exhibitor license?**

A. Any person who wishes to be an exhibitor (commonly referred to as a "lead shooter") of indoor, outdoor, theatrical, or special effects fireworks in Ohio.

## **Q. What are the minimum qualifications for a new fireworks exhibitor license?**

A. As outlined in the OFC every applicant for a new fireworks exhibitor license shall:

1. Submit a properly completed application on a form prescribed by the State Fire Marshal along with the \$50 fee.
2. Submit with the application one (1) of the following:
  - Written and signed documentation from an Ohio licensed fireworks exhibitor, manufacturer, or wholesaler attesting to the applicant's proficiency in the handling and discharging of fireworks in a manner that emphasizes the safety and security of the public, or
  - A copy of a valid license issued by another state authorizing the applicant to conduct all types of fireworks exhibitions and discharging any and all types of "1.3G" fireworks.
3. Provide evidence that you do not have any felony convictions.
4. Pass the Fireworks Exhibitor Licensing Exam with a score of 70% or higher.

The application can be downloaded from [www.com.ohio.gov](http://www.com.ohio.gov) or copied from the forms section of this publication.

## **Q. Do I have to retest for each renewal?**

A. No. Retesting would only be required if you failed to have your renewal application and fees received by our office prior to expiration of your current license. To renew annually you will submit the renewal form, payment, evidence that you do not have any felony convictions, and proof of continuing education prior to the license expiration date. If your exhibitor license has expired, you must submit an application, pay the associated fees and retest the same as a new applicant.

## **Q. What are the continuing education requirements for exhibitors?**

A. Exhibitors shall attend a continuing education program approved by the State Fire Marshal once every three years. The program shall consist of at least six hours of instruction. A licensed exhibitor or the exhibitor's designee who attends a required program shall, within one year after attending the program, and on an annual basis during the following two years, conduct in-service training for other employees of the licensee.

## **Q. If I'm a licensed fireworks exhibitor, do the people who help me set up an exhibition have to have fireworks exhibitor licenses?**

A. No. Individuals involved only in the setup or clean up of the discharge site before or after the exhibition and do not handle 1.3G fireworks, are not required to be registered.

## **Q. Does an exhibitor need to register their employees?**

A. Yes. The exhibitor shall annually register with the State Fire Marshal all employees who assist the licensed exhibitor in conducting fireworks exhibitions. At the time of registration, the exhibitor must provide written verification that the employee completed a minimum of three hours in-service education in the safe operation of a public display. The employee must be registered with the State Fire Marshal at least 14 days prior to assisting the licensed exhibitor in conducting a fireworks exhibition and no later than 7 days after the date hired.

An employee, once registered with the state, may work for any Ohio licensed exhibitor. Only exhibitors, registered employees, and fire safety inspectors shall be permitted within the discharge perimeter of an exhibition (ORC 3743.56).

**Q. How do I register a Fireworks Exhibitor Assistant?**

A. The employee registration form is available on-line, in the back of this book, or can be obtained by calling (614) 752-7126. Complete the form and return it with payment and evidence that the applicant does not have any felony convictions. Payment can be made by credit card, check, or money order made payable to: The Treasurer of the State of Ohio. A \$25.00 fee is required for each fireworks exhibitor assistant being registered. For any assistants registered the previous year, you may renew their certificate and pay on-line at <http://www.com.state.oh.us/sfm/elicense.aspx> by signing onto your exhibitor renewal page.

**Q. How can I find a person is licensed as an exhibitor or assistant?**

A. A person can search listings of all individuals or companies licensed by the State Fire Marshal's office at the link provided below. Select *fireworks exhibitor or exhibitor assistant information* and choose a *county* to find those that are currently licensed in the area. [http://www.com.state.oh.us/sfm/fire\\_lookups.aspx](http://www.com.state.oh.us/sfm/fire_lookups.aspx)

**Q. What is Quickmatch?**

A. This is a black match that is encased in a loose-fitting paper or plastic sheath to make it rapidly burn. Quick match is used for aerial shells and for simultaneous ignition of a number of pyrotechnic devices, such as lances in a ground display piece.

**Q. Where can a licensed exhibitor obtain fireworks for an exhibition?**

A. Ohio licensed exhibitors may obtain fireworks to be used at a specifically permitted exhibition from either an Ohio licensed wholesaler or manufacturer of fireworks. Exhibitors may also obtain fireworks from an out-of-state shipper with an SFM issued permit that allows the shipper to ship fireworks into the state. See ORC 3743.54, 3743.55 and 3743.40 for more details.

**Q. Can a licensed exhibitor acquire and use 1.4g fireworks?**

A. Yes. A licensed exhibitor may acquire and use 1.4g product in an outdoor exhibition that is properly permitted. See ORC 3743.54, 3743.55.

**Q. When does the working relationship between the exhibitor and the fire department begin and how can we make it better?**

A. Communication is the key to a successful show. The exhibitor should make contact with the AHJ (authority having jurisdiction) well in advance of the exhibition to find what their requirements are. Fireworks, pyrotechnic, and flame effect exhibitions must follow all NFPA and OFC standards, but those requirements are the minimum standard for a show. The jurisdiction(s) where an exhibition is being held may require additional measures to ensure that it is a safe & incident free performance. Talking early and talking often can cut down or eliminate those little surprises or miscommunications that create problems. It also gives the exhibitor enough time to provide support documents and any other information that might be required.

Q. At what point would you cancel a show due to high winds? Is there a rule of thumb for wind speeds that are prohibitive for a safe show? What are the dangers of rain during set up operations?

Per NFPA 1123 section A.8.1.4.2, in considering when wind speed is excessive for the reasonably safe performance of a fireworks display, there are two primary considerations as follows:

- (1) The potential for an increased risk of hazardous debris from the display falling into the spectator areas
- (2) The potential for an increased probability of fire that is made excessively difficult to control

Covering the mortars with plastic will keep the shells dry in the event of rain. Securing the plastic tightly over the top of the guns will keep the wind from blowing the plastic off, and when the plastic is taut across the top the shells, they can be shot with the plastic still on. Moisture damaged pyrotechnic materials should not be used.

NFPA 1123 section 9.4.4 When a serious electrostatic discharge hazard exists, such as during an electrical storm, all electrostatic discharge-sensitive operations shall be suspended, and personnel shall withdraw to a safe location.

NFPA 1123 section 8.1.4.2\* If high winds, precipitation, or other adverse weather conditions prevail or begin such that a hazard exists in the opinion of the operator or the AHJ, the fireworks display shall be postponed or discontinued until weather conditions improve.

The AHJ will be the final judge as to what is acceptable.

# Fireworks Definitions

## **Aerial Device (Display)**

A fireworks device designed to be launched into the air for use in a firework display.

## **Aerial Salute**

A salute that functions as an aerial shell.

## **Aerial Shell**

A cartridge containing pyrotechnic composition, a burst charge, and an internal time fuse or module, that is propelled into the air from a mortar and that is intended to burst at or near its highest point.

## **Artillery**

Multiple reports.

## **Ash Can**

Ash can is another name for a silver salute. True ash cans became illegal in 1966. Legal ash cans today contain only 50 milligrams of flash powder.

## **Assistant**

A person who works under the supervision of the pyrotechnic operator.

## **Automatic Electrical Firing Unit**

A panel or box that operates automatically to provide the source of electric current used to ignite electric matches.

## **Barrage**

A rapidly fired sequence of aerial fireworks.

## **BATFE or ATF**

Bureau of Alcohol, Tobacco, Firearms and Explosives. A federal agency which oversees and regulates the safe use and handling of fireworks.

## **Battery**

A collection of fireworks devices, such as a group of mortars (finale battery) or a bundle of roman candles (candle battery), fused together in such a manner that they are fired within a short period of time.

## **Black Match**

Used in the manufacture of fireworks, black match is a type of fuse that is made by saturating cotton string in black powder. Unconfined, black match burns at an approximate rate of one inch per second. Also known as quick match.

## **Black Powder**

A low explosive consisting of a mixture of potassium or sodium nitrate, charcoal, and sulfur.

## **Bombette**

A Bombette is an exploding star, usually ejected from a roman candle or fountain. Bombettes are limited to a maximum charge of 130 milligrams of flash powder in legal consumer fireworks.

**Break.** An individual burst from an aerial shell, generally producing either a visual effect (stars) or noise (salute).

### **Cake**

A dense-packed collection of mine/shell tubes. It is a chain-fused firework that propels a series of aerial shells, comets, or mine effects into the air.

### **Chain Fusing**

A series of two or more aerial shells fused to fire in sequence from a single ignition.

### **Comet**

A single pellet of pyrotechnic composition that is ignited and simultaneously propelled into the air from a mortar or tube; a comet is self-consuming as it rises into the air and can be designed to split apart.

### **Consumer Fireworks**

Small fireworks devices containing restricted amounts of pyrotechnic composition, designed primarily to produce visible or audible effects by combustion that comply with the construction, chemical composition, and labeling regulations of the U.S. Consumer Product Safety Commission (CPSC), as set forth in CPSC 16 CFR 1500 and 1507, 49 CFR 172, and APA Standard 87-1, *Standard for the Construction and Approval for Transportation of Fireworks, Novelties, and Theatrical Pyrotechnics*.

### **Discharge Site**

The area immediately surrounding the fireworks mortars used for an outdoor fireworks display.

### **Display Fireworks**

Large fireworks devices that are explosive materials intended for use in fireworks displays and designed to produce visible or audible effects by combustion, deflagration, or detonation, as set forth in CPSC 16 CFR 1500 and 1507, 49 CFR 172, and APA Standard 87-1, *Standard for the Construction and Approval for Transportation of Fireworks, Novelties, and Theatrical Pyrotechnics*.

### **Display Site**

The immediate area where a fireworks display is conducted, including the discharge site, the fallout area, and the required separation distance from mortars to spectator viewing areas, but not spectator viewing areas or vehicle parking areas.

### **Dud**

A shell (or any device) that leaves the mortar, but fails to function in the air coming back down unexploded.

### **Electrical Ignition**

A technique used to ignite fireworks using a source of electric current.

### **Electrical Firing Unit**

A device that provides and controls the electric current used to ignite fireworks during a display.

### **Electric Match**

An electric device that contains a small amount of pyrotechnic material that ignites when current flows through it. When a sufficient electric current is passed through the wire circuit,

the heat that is generated ignites the pyrotechnic composition, producing a small burst of flame. This flame can be used to ignite a fuse or a lift charge in a fireworks device.

**Fallout Area**

The designated area in which hazardous debris is intended to fall after a pyrotechnic device is fired. Page 1 of Chapter 3 Definitions 3 fired.

**Fireworks**

Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, deflagration, or detonation, that meets the definition of *Consumer Fireworks* or *Display Fireworks* as set forth in NFPA 1124, 2006 edition.

**Fireworks Display**

A presentation of fireworks for a public or private gathering.

**Ground Display Piece**

A pyrotechnic device that functions on the ground (as opposed to an aerial shell that functions in the air) including fountains, wheels, and “set pieces.”

**Ground Salute**

A salute that functions from a stationary or secured position.

**Handheld Electrical Firing Unit**

A small, handheld unit with manually operated switches that control the flow of electric current to electric matches attached to fireworks devices.

**Hazardous Debris**

Any debris produced or expelled by the functioning of a pyrotechnic device that is capable of causing personal injury or unpredicted property damage.

**Lance**

A thin cardboard tube packed with color-producing pyrotechnic composition used to construct ground display pieces.

**Lift Charge**

The composition that propels (lifts) the pyrotechnic device into the air.

**Loader**

An assistant who loads or reloads aerial shells, comets, or mines into mortars.

**Manual Electrical Firing Unit**

A panel or box with manually operated switches that control the flow of electric current to electric matches attached to fireworks devices.

**Manual Ignition**

A technique used to ignite fireworks using a handheld ignition source such as a fusee or portfire.

**Mine**

A device containing multiple pyrotechnic effects that are simultaneously ignited and dispersed into the air from mortar or tube.

**Misfire**

A misfire occurs when fire has been presented to a device, and the device failed to function entirely, not ever leaving the tube.

**Mortar**

A tube from which certain aerial devices are fired into the air.

**Mortar Rack**

A frame containing one or more mortars.

**Mortar Trough**

Aboveground structure filled with sand or similar material into which mortars are positioned.

**Operator**

The person with overall responsibility for the operation and safety of a fireworks display.

**Portfire**

A long tube containing slow-burning pyrotechnic composition that is sometimes used to ignite fireworks at outdoor fireworks displays.

**Pyrotechnic Material (Pyrotechnic Special Effects Material)**

A chemical mixture used in the entertainment industry to produce visible or audible effects by combustion, deflagration, or detonation.

**Quick Match**

A black match that is encased in a loose-fitting sheath.

**Ready Box**

A storage container for aerial devices for use during setup and display.

**Ready Box Tender**

An assistant who controls and dispenses the contents of ready boxes during a fireworks display.

**Roman Candle**

A chain-fused firework that propels a series of aerial shell, comet, or mine effects into the air from a single tube.

**Safety Cap**

A tube, closed at one end, that is placed over the end of the fuse until the intended ignition to protect it from damage and accidental ignition.

**Salute**

Fireworks designed to produce an explosive sound as their primary effect.

**Shall**

Indicates a mandatory requirement.

**Shooter**

A member of the fireworks display crew (either the operator or an assistant) who performs the actual ignition of the fireworks, either by manual or electrical means.

**Sponsor**

The organization (person, group, or government agency) that arranges with a duly authorized fireworks supplier for its services in presenting a fireworks display or in providing fireworks for use in a display.

**Spotter**

A member of the fireworks display crew (either the operator or an assistant) who observes the firing and bursting of aerial shells and other display fireworks for the purpose of detecting proper mortar angling, noting the occurrence of duds, and observing for other potentially hazardous situations.