

Special Effects Explosives Safety Course, Part 1

Introduction

This information pack provides you with details of the special effects explosives safety course, the syllabus, the course location and accommodation. If you have any further questions, please contact us at the number or email address in the final section.

Course aim

The course is intended to educate Special Effects (SFX) personnel in the safe use of explosives in the SFX industry. It provides training to a level appropriate for a sufficiently experienced Trainee (Pyrotechnic SFX) to apply for an upgrade to Technician (Pyrotechnic SFX) through the Joint Industry Grading Scheme (JIGS).

Course objectives

On successful completion of the course, delegates will:

1. Be trained as SFX personnel in accordance with the guidance laid out in the HSE Information Sheet '*Special or Visual Effects involving Explosives or Pyrotechnics used in Film and Television Productions*' (Entertainment Information Sheet No 16).
2. Be aware of existing and new products and techniques in Explosive SFX.
3. Understand the environmental aspects of Pyrotechnic SFX and how to reduce disturbance in using them.
4. Understand the legislation, regulations, code of practice and safety requirements that need to be met in order to carry out safe Pyrotechnic SFX.
5. Be able to readily identify the most common explosive articles and substances used for Pyrotechnics SFX and have an understanding of their limitations and safe use.

Course details

The two day course is based at Event Horizon's site at The Old Brewery near Glastonbury in Somerset. Course tuition is a highly interactive process, using a series of session formats covering:

- Tutorial and lecture style presentations, using computer generated visual aids.
- Participative case study exercises.
- Environmental control and live firing practical sessions.

An examination is held at the end of the course; delegates who pass the examination will be issued with a 'Special Effects Explosives Safety Course - Part 1' certificate. The course is run by highly experienced and qualified professional staff, who bring both formal qualifications and many years practical work in the pyrotechnic, explosive and film industries.

Course Syllabus

Delegates can expect to cover the following material during the course.

1. Historical Development of Explosives

Outline of the development of commercial explosives, from early Chinese experiments with black powder through to gelatines, ANFO, slurries, and emulsion explosives.

2. Explosive Characteristics

A description of the relevant parameters to look at when deciding upon an explosive for a particular application.

3. Explosive Types

Descriptions of the different types of explosives, both deflagrating and detonating along with their main characteristics, including limitations in usage.

4. Explosives Accessories

a. *Initiators*

Construction and operation of electric, non-electric detonators and igniters, including limitations and potential hazards in their usage.

b. *Exploders Firing Boxes/Desks and Safety Ohmmeters*

Description of different types of exploders and ohmmeters, including their output characteristics and requirements for testing.

c. *Detonating Cords*

Description of the various cords available for use and their effects on different explosives and other materials.

d. *Other Accessories*

Description of various items, eg, safety fuse, igniter cords, shock tube, quickmatch.

5. Initiation Methods

Description of the different systems of initiation and their affect on the overall special effect.

6. SFX Planning

Choice of explosive types, quantities and locations coupled with details of initiation techniques.

7. Disposal of Excess Explosives

Basic information describing the various techniques for disposing of the different types of excess, unwanted and waste explosives that may be left after Pyrotechnic SFX have been executed. Disposal process requirements for compliance with HSE Guidance Note CS23 ('Disposal of Explosives Waste').

8. Security and Storage MSER 2005

Basic information on the issue of licences to acquire, store and use explosives with regard to safety, security and good housekeeping.

- Sale/transfer of explosives - types of storage.
- Explosive classification.
- Compatibility groups.
- Placing/Withdrawing explosives from the store and record keeping.
- Security requirements.
- Prohibited persons.

9. Transport of Explosives

A discussion covering the general transportation of explosives. The requirements for transporting explosives on site and on public roads, in accordance with the HSE 'Carriage of Explosives by Road Regulations'.

- *The Load.* What can be carried, maximum quantities, mixing explosive loads.
- *The Vehicle.* Vehicle requirements.
- *Planning.* Route planning, anticipating problems with delivery.
- *Documentation.* Documentation requirements, placarding requirements.
- *The Journey.* Safety, security and attendance, emergencies, equipment, fire.

10. Practical Training

Practical training is carried out at Event Horizon's firing ground and includes:

- Packing and transporting explosives and detonators from store to site and recording issues and returns.
- Site assessment, including exclusion zones, setting out sentries and correct signs.
- Setting up basic electrical circuits, associated hazards and reading resistance.
- Setting up non-electric circuits with reference to the increased risk of shrapnel.
- Dealing with a misfire on both electric and non electric.
- Priming basic explosives and pyrotechnics.
- Various signaling methods.
- The use of different types of firing devices.
- The correct methods of cutting detonating cord.
- The setting up of air overpressure meters.
- Safe handling of black powder and pyrotechnic substances.
- Safe set-up and firing of a number of basic effects.

Facilities will be made available for guest SFX supervisors to attend and instruct in specialist areas.

11. Environmental Disturbance

A discussion on the cause of environmental disturbance and the control that the students can use to minimize the magnitude of the disturbance. Comparison of different initiation techniques with regard to disturbance:

- *Overpressure.* Causes and control.
- *Vibration.* Causes and control.
- *Vibrographs.* Basic operation, basics of creating regression lines and their uses.

The above topics are supported by paper exercises on the practical aspects of special effects.

Completion of the course is assessed by examination.

Course Venue

The two day course is hosted at The Old Brewery, Ashcott, Somerset.

The Old Brewery is set in the heart of the Somerset countryside. Natural attractions and tourist destinations such as Cheddar Gorge, Wookey Hole Caves and the Mendip Hills are within easy reach by car, along with tourist towns such as Cheddar, Wells and Glastonbury.

Course Fees and Arrangements

The course fee is £500.00 (including VAT) and comprises:

- Course tuition by highly qualified staff.
- Course notes.
- Final examination.
- Lunch and refreshments.

Delegates are expected to make their own travel arrangements to and from The Old Brewery, and should arrive by 10.30am for registration on the first day of the course.

Course applications must be accompanied by a £100 non-returnable deposit, with the balance of £400 payable prior to the start of the course.

How to Apply

For further information or to apply for a place on the course, contact Charles Adcock or Malcolm Ingry at Event Horizon Ltd or go to our website, <http://www.precisionenergetics.co.uk>

You can request an application form:	by email	info@precisionenergetics.co.uk
	by post	Event Horizon Ltd The Old Brewery Stagman lane Ashcott Somerset TA7 9QW
	by phone	01458 210280

Application Notes

All applications **must** be accompanied by:

- Two passport size photographs.
- Your completed and signed Booking Form and Prohibited Person Form.
- Your £100 non-returnable deposit.

Joining Instructions

Event Horizon will issue joining instructions and a timetable for the course once your application has been successfully processed.