

Laser Visuals Research Professional Laser Display Safety Training Course

Course Overview

Included with the course, all delegates receive:

- Full course reference manual
- Buffet lunch and refreshments throughout the day
- Certificate of Attendance
- Entry onto the Registered Laser Safety Attendee Scheme
- Special Edition of Scanguard laser Safety Analysis Software
- Discounts to upgrade to Scanguard Standard or Pro Version

Course covers new BSI published Laser show Safety Guidance

Professional Laser Display Safety Training Course

Overview

Laser Visuals Research presents a single day course in laser display safety. The course covers the key aspects that need to be considered by anybody involved in working with laser displays. The course combines theory with practical examples of many topics, enabling attendees to gain valuable knowledge and insight onto what is necessary to perform safe and enjoyable laser displays.

In addition to the subjects covered in the course, everyone that attends one of our laser safety training days is given a copy of our handbook on laser display safety & receives a certificate of attendance, along with a **free copy** of Scanguard capable of performing scanned effect calculations.



Main Course Topics Covered:

- Laser Beam Properties
- Biological Effects
- Safety Standards and Health & Safety Guidance
- Preparing Risk Assessments
- Designing Audience Safe Effects
- Working with Local Authorities & other Officials
- Demonstrations on how to measure scanned emissions
- Laser Hazards
- Legal Requirements
- Maximum Permissible Exposure (MPE)
- Outdoor Display Considerations
- Practical examples of calculating beam hazards
- Manufacturing and Installation Requirements
- Includes coverage of the recently released Laser Safety Standard (2007), and also BSI's new Lasershow Safety Guidance

Laser Safety : The Reason...

Lasers can be dangerous and can cause hazards if they are not installed and operated safely. The types of laser used for laser displays have the potential to cause serious injury to people if proper care is not taken. Standards and guidance do exist for using lasers, but understanding what is and is not necessary for laser displays, and knowing what legal obligations are required under H&S Law can be a daunting task. Our Professional Laser Display Safety Training Course is designed to teach you what's necessary to perform safe & enjoyable shows.

Laser Safety : The Solution...

The training course covers a wide range of laser safety topics targeted specifically for the light show and entertainment industry. You will learn about what the hazards are when using lasers, how to design safe shows and effects, along with what measurements and calculations are necessary to create safe audience scanning effects. You will also learn how to prepare risk assessments and work with the local authorities, and other regulatory bodies.

Laser Safety : The requirement...

Any person or venue operating a laser display that has an output power of more than 5mW should appoint a Laser Safety Officer (LSO) who is responsible for overseeing the safe installation, operation, and management of the laser display. There are legal requirements under Health and Safety Law and the *Management of Health and Safety at Work Regulations 1999* to carry out proper risk assessments when using lasers, and for staff to properly trained. In addition, many venues have to ensure any laser displays comply with regulations as part of their entertainment licence granted by the local authority, and for insurance purposes. With the influx of low-cost laser equipment available both online and on the High Street, the use of lasers in public places is becoming more widespread. As a result, regulatory bodies are starting to pay closer attention to laser display activity.



Laser Visuals Research

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Professional Laser Display Safety Training Course

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The topics covered in the safety course have been designed to help the laser user to ensure they have the knowledge required to perform safe and legal laser displays. The cost of our safety course is probably much less than what most operators would charge for a single laser show event; and with regulators having the authority to say no to a display if they are not happy with things, attending one of our courses and making sure you are aware of what's needed, can help you to avoid running into any such problems.

Being able to show that you have attended a laser safety course also gives you a competitive advantage over operators with no safety skills.

On completion of the day long course, you will receive full course notes and a certificate to show that you have attended our Laser Display Safety Training Course. Attendees also receive a special edition version of our Scanguard laser safety software.

Registered Laser Safety Attendee Scheme

Upon completion of attendance at the Professional Laser Display Training Course, attendees will each be given a certificate of attendance. A copy of the certificate should be enclosed with the Laser Safety Record produced for laser displays. In addition, each certificate contains a unique ID number that will be registered to the recipient. Attendees of the safety course can provide venue owners, local authority officers, and event organisers with this number, which can be checked online at www.lasershowsafety.org for authenticity to prove that you have attended a laser display training course. When they type the number along with surname printed on the certificate, the authenticator will report back if the number matches the registered surname.

Please Note: No other details are given about members on the registered database. In accordance with Data Protection Legislation, details are not revealed or passed onto third parties.

Reliable Knowledge...

The Laser Safety Course has been designed and presented by laser safety expert and laser display designer, James Stewart, who through over 17 years of experience in the light show industry has come across many of the safety problems and situations that are often unique the laser display applications. In 2003 Laser Visuals Research received a government DTI SMART award to help carry out extensive research work into the affects of audience scanned laser radiation, and ways of making laser displays safer. Since that time Laser Visuals have gone on to develop important safety products such as the multi award-winning Scanguard Laser Show Analyser software, and the innovative Scan Failure Detection System.

As well as specific laser safety expertise, James also a wider knowledge of general H&S issues being NEBOSH qualified and a member of the Institute for Occupational Safety and Health (IOSH) & International Institute of Risk and Safety Management (IIRSM). This broad mix of specialist skills has led to James being employed by some of the world's leading recording artists to prepare laser safety cases for their productions so that audiences can treated to spectacular and safe effects.

He also regularly helps provide feedback and input for developing Laser Safety Standards. In the past few years James has spoken about laser show safety issues at the annual Laser Safety Forum, presented papers at the International Laser Safety Conferences, in LA and San Francisco, and has spoken on the subject for PLASA at Earls Court. James is a Certified Laser Safety Officer, having taken the examination in the USA. Throughout the time James has been involved in laser safety he has gained recognition from leading experts in the laser safety world, & government agencies, of being a reputable source of information on the subject area.



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Laser Display Safety Training Course Outline

The course and the accompanying printed handbook are divided into six main segments that each cover a different aspect of the points that need to be considered before performing a laser display. Recently updated to include coverage of the recently released Laser Safety Standard (2007), and also BSI's new Lasershow Safety Guidance published in April 2008.

Section 1 - Laser Properties & Hazards – The Basics

The day begins with an introduction into laser beam properties and hazards. The parameters and terms used for laser safety assessment are introduced.

Section 2 - The Safety Standard, Health & Safety Guidance, & Legal Requirements

Discusses relevance of the published Laser Safety Standards and Health & Safety guidance, and what the legal requirements are for persons or venues operating laser displays are, and who needs to be notified when a lasers display is performed or installed.

Section 3 - Manufacturing and Installation Requirements

Covers the minimum set of features that should be included on Class 3B and Class 4 laser products used for laser displays. This session is useful to manufacturers and users alike, as it shows what needs to feature in a laser projector. The second part of this segment covers the rules and guidance on laser display installations.

Section 4 - Evaluating Laser Effects

Takes a closer look at Maximum Permissible Exposure (MPE), calculating Hazard Distance, and other important laser safety calculations, with practical examples.

Section 5 - Documenting the Laser Display for Safety Purposes

Planning and assessing the display area for indoor and outdoor events, conducting and documenting a Risk Assessment, preparing a Laser Safety Record, and other documentation.

Section 6 - Laser Shows in Practice

The final part of the day concentrates on ways in which laser displays can be made safer by choosing specific types of laser effect. It also covers how to measure scanned laser radiation, detailing what equipment is needed, with some practical demonstrations of the techniques used.

The course runs through a single day from 09:30hrs through to 17:00hrs, with welcome tea/coffee & biscuits, buffet lunch with morning & afternoon refreshment breaks.

Scanguard Special Edition

The Special Edition version of Scanguard has been specially designed for attendees of our Professional Laser Show Safety Training Course. Anyone that attends the course will receive a copy of this Special Edition completely **free of charge**. The Special Edition is a powerful analysis tool in its own right with virtually all the features of the Standard Edition, allowing users to try out and put into practice many of the things taught on the safety training course. In fact the only difference between the Special and Standard Editions is the ability to analyse ILDA frame files on the latter. And for anyone that wants to upgrade to the Standard or Professional Editions from the Special Edition they can do so at a preferential discount.

Scanguard Special Edition : full details www.laservisualsresearch.com/scanguard



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Professional Laser Display Safety Training Course

Overview

Details of Delegate

Full Name: (Dr/Mr/Mrs/Ms)
Organisation:
Address:
Telephone:
Email Address:
Any dietary requirements:

Second Delegate

Full Name: (Dr/Mr/Mrs/Ms)
Any dietary requirements:

Course Fee: One Delegate **£245** (£281.75 Inc Vat) Yes, One delegate
Course Fee: Two Delegates **£445** (£511.75 Inc Vat) Yes, Two delegates
Course Date & Location: To be confirmed

Method of Payment

- I enclose a cheque for £ (made payable to LVR Limited)
 Please charge my debit / credit card as follows:
Card Number:
Card Holder Name:
Start Date: Expiry Date: CVS No:

Alternatively, you can pay securely online at our website www.laservisualsresearch.com/training

Standard Terms & Conditions

1. Bookings will be regarded as provisional until the full course fee has been paid.
2. Payment must be made in advance by *to be confirmed*
3. VAT receipts will be issued for all payments received in respect of training courses.
4. All course fees include a course handbook, attendance certificate, free registration onto the Laser Safety Operators database and refreshments/lunch.
5. The course is not to be recorded in any way without the prior knowledge of Laser Visuals Research. Material supplied on the course is subject to copyright & must not be duplicated in whole or in part.
6. Any cancellations within four weeks of the course starting date will result in loss of the course fees. The delegate can re-book to an alternative date up to one week prior to the course start date & an administration fee of £25 plus VAT will be charged. Cancellations or postponement within one week of the course date will result in loss of course fees. Should a delegate be unable to attend a substitute is always welcome. We require as much notice as possible so that certificates etc can be personalised with the new name. Non appearance on the day will be treated as a cancellation & the course fees cannot be refunded.
7. Laser Visuals Research reserves the right to cancel any course due to circumstances beyond its control and that Laser Visuals Research liability shall be limited to the refund of fees paid.

I confirm I/we have read & agreed to the Terms & Conditions of booking:

Signed Date

Please return the completed form to:



LVR Limited

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