

USE OF LASERS

Due to recent incidents Venue must be notified as soon as possible, but at least six (6) weeks before show date if laser systems are to be used. The laser systems and show must comply with Venue's policy regarding the use of lasers stated in this document.

- 1) Laser systems and their usage must comply with the following IEC standards & technical report:

IEC 60825: Safety of laser products

- *Part 1: Equipment classification and requirements*
- *Part 3: Guidance for laser displays and shows*
- *Part 14: A user's guide*

Besides these standards & technical report, Venue states the following additional policies or emphasizes parts of the IEC standard & technical report:

- 2) The amount of laser light that an employee may be exposed to is set by exposure limits defined in the Artificial Optical Radiation Directive (Directive 2006/25/EC).
- 3) All personnel at the event must be informed by signage about the presence and safety precautions regarding lasers.
- 4) At least one laser protection officer (LSO) must be constantly present on site. Venue must be informed who of the touring company is the LSO for the event at least six (6) weeks before show date.
- 5) A risk assessment for the use of lasers at the specific event must be sent to the Venue at least six (6) weeks before show date.
- 6) Venue must be informed if the laser radiation could cause an unintentional fire hazard at least six (6) weeks before show date and measures should be taken.
- 7) The minimum distance between the laser output window and the audience must be at least 4 meters.
- 8) A minimum separation of 3 meters in height above audience and 2,5 meters laterally should be maintained between laser beams that exceed the audience maximum permissible exposure (MPE) and any surface upon which audience reasonably be expected to stand.
- 9) Lasers should never be aimed at TV or CCTV cameras. Therefore so called 'safety zones' should be defined in the presence of an artist production representative, venue representative and promoter representative and programmed into the equipment before the lasers can be turned on. When defining these zones also the possible presence of a balcony at the venue and reflecting objects such as mirror balls or other must be taking into account. Venue will distribute in advance a venue map with predefined safety zones for CCTV-cameras and Security Command Center.

- 10) A demonstration should be executed at all times. Such demonstration should take place within a sufficient time frame before the show (preferably early in the afternoon) in the presence of an artist production representative, the LSO, venue representative and promoter representative or delegate. During the demonstration the safety zones will be finally defined between all parties present.
- 11) Laser systems, operator consoles and other control equipment must not be accessible for unauthorized persons and must be locked by the operator to prevent such persons to start and operate the equipment unwittingly.
- 12) Lasers must be operated by certified, trained staff that has the responsibility to monitor the laser show, the equipment and the laser beam closely at all times. Therefore the operating staff must be able to view the complete sphere of action of the laser.
- 13) The operator must shut down the equipment immediately when there is any doubt in relation to the safety of the public, including but not limited to the following situations:
 - a) a malfunction in the equipment is happening or is likely to happen;
 - b) there is any doubt in relation to operating conditions of the equipment;
 - c) there is unrest among the public;
 - d) when an evacuation of the venue is needed.
- 14) Audience scanning is allowed when complied with the following:
 - a) The maximum laser projector output shall not exceed the level required to obtain the intended effects and not exceed the audience MPE;
 - b) Audience scanning with pulsed lasers is forbidden, use continuous wave lasers only;
 - c) A single beam may never be aimed into the audience. Only diverged laser beams for audience scanning are allowed;
 - d) Lasers should not be aimed at TV or CCTV cameras and other non-audience safety zones.
- 15) A permit is required for the outdoor use of lasers. The Human Environment and Transport Inspectorate assesses whether a laser show can be allowed and under what conditions, based on the location, the type of lasers and other parameters of the outdoor event. The municipality of the event location will issue the permit.

Notwithstanding the above, the artist will at all times be liable for all damages and costs of Venue in relation to issues, accidents or injuries with regard to the use of lasers during this production.