

Manufacturer Responsible Name LASER LIGHT SHOW (____) - ____ - _____	EVENT REPORT AND NOTIFICATION -- LASER LIGHT SHOW EVENT SETUP, ALIGNMENT, TESTING AND PERFORMANCE PRODUCURES	XTAEGA Form Version 2014-11-22 forms.xtaega.com/1014 FORM XTA 1014 (11/14) MFR. VARIANCE NO.
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NOTE: No laser light show, projection system, or device may vary from compliance with 21 CFR 1040.11(c) in design or use without an approved variance in accordance with 21 CFR 1010.4.

INSTRUCTIONS

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| 1. Check all applicable boxes and type or print the requested information.
2. Retain a copy for your records as required 21 CFR 1002.30(a) (1) AND (2) and for preparing product reports as required by 21 CFR 1002.10 and 1002.11. | 3. Submit copies to appropriate federal, state, and local authorities before the event.
4. Follow the documented procedure and controls when performing setup, alignment, testing and performance of the laser light show. |
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SHOW LOCATION, DATES AND TIMES

1. VENUE NAME

2. ADDRESS OF VENUE *(Include ZIP Code)*

3. VENUE TYPE *(Select One)*

<input type="checkbox"/> Planetarium or other dome projection structure	<input type="checkbox"/> Discotheque or night club
<input type="checkbox"/> Theater	<input type="checkbox"/> Pavilion
<input type="checkbox"/> Hotel/Motel ballroom or meeting room	<input type="checkbox"/> Indoor Arena
<input type="checkbox"/> Store displays	<input type="checkbox"/> Outdoor Arena*
<input type="checkbox"/> Trade show or convention	<input type="checkbox"/> Museum
<input type="checkbox"/> Outdoor unenclosed area*	
<input type="checkbox"/> Other* <i>(Specify)</i> _____	

* IF AN FAA WAIVER IS REQUIRED FOR AN OUTDOOR SHOW IT MUST BE ATTACHED TO THIS REPORT. (See attached, if applicable).

4. NAME AND TITLE OF EVENT AUTHORIZED REPRESENTATIVE	5. TELEPHONE NO. <i>(Include area code)</i>	6. DATE OF REPORT
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7. NAME OF EVENT LASER SAFETY OFFICER	8. TELEPHONE NO. <i>(Include area code)</i>	9. LSO ID. NO. <i>(If applicable)</i>
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10. EVENT TYPE <input type="checkbox"/> Fixed <i>(Installation/Single Show Setup)</i> <input type="checkbox"/> Mobile <i>(Tour/Multiple Show Setups)</i>	11. PERMANENT/PERPETUAL EVENT <input type="checkbox"/> Yes <i>(If yes, skip 11)</i> <input type="checkbox"/> No
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12. EVENT DATE(S) AND TIME(S) *(Attach a complete schedule if necessary)*

DATE	START TIME	END TIME

EVENT DESCRIPTION AND USE

13. BRIEFLY DESCRIBE THE USE OF LASERS AT THIS EVENT

14. EVENT UTILIZES THE FOLLOWING LASER EFFECTS (Check all that apply)

- Front screen projections
- Rear screen projections
- Holographic displays
- Multiple reflection/diffraction effects
- Audience Scanning (Includes scanning any accessible uncontrolled areas)
- Other (Specify) _____
- Reflections from stationary mirrors or mirrored surfaces (Beam Matrices)
- Stationary irradiation of rotating mirror balls, etc.
- Scanning irradiation of rotating mirror balls, etc.
- Fiber optic projections
- Fog, smoke, or other atmospheric enhancement effects

LASER DEVICE INFORMATION

15. EVENT UTILIZES THE FOLLOWING LASER DEVICES (Attach a complete list if necessary)

MAKE	MODEL	WAVELENGTH (nm) OPTICAL POWER (W)	VARIANCE NO.	STATE/LOCAL ID. <i>(If applicable)</i>	QUANTITY

EVENT HAZARDS

16. BEAM HAZARDS (Check all that apply)

- Eye and Skin hazard from direct beam
- UV/Blue Light Exposure
- Eye and Skin hazard from reflected or scattered beam
- Invisible Beam
- High Power (Class IIIB/4)
- Visible Beam

17. NON-BEAM HAZARDS (Check all that apply)

- High Voltage Equipment
- Compressed Gasses
- Flammable Materials
- Confined Space
- Heavy Lifting
- Falling Debris
- Other (Specify) _____
- Electrical Hazard
- Fire
- Chemical Agents
- Fall
- Loud Noises
- Ladder
- Hazardous Materials/Waste
- Liquid Cryogenes
- Explosives/Fireworks
- Trip/Slip
- Ladder
- Pinch Points

PERSONAL PROTECTIVE EQUIPMENT (PPE)

18. PPE AVAILABLE AT THE EVENT LOCATION

- Laser Eyewear (List all types available)

For this laser wear this Eyewear		
MAKE	MODEL	WAVELENGTH(S)	OD	VLT	QUANTITY

- Face-shield
- Respiratory Protection
- Other (Specify) _____
- Protective Clothing
- Hard Hat
- Gloves
- Safety Glasses
- Hearing Protection
- Foot Protection

ENGINEERING AND ADMINISTRATIVE CONTROL MEASURES

19. EVENT HAZARD CONTROL MEASURES (Check all that apply)

- | | | |
|---|---|---|
| <input type="checkbox"/> Controlled area (curtains, barriers, enclosures, etc.) | <input type="checkbox"/> Posted warning signs | <input type="checkbox"/> External interlock |
| <input type="checkbox"/> Cable Covers | <input type="checkbox"/> Ventilation | <input type="checkbox"/> Proper Work Base |
| <input type="checkbox"/> Access control (keys, keycards, etc.) | <input type="checkbox"/> Alignment procedures | <input type="checkbox"/> Emergency Stop Device |
| <input type="checkbox"/> Regular safety check | <input type="checkbox"/> Scheduling | <input type="checkbox"/> Communication / Notification |
| <input type="checkbox"/> Secure Mounting/Strapping | <input type="checkbox"/> Emission Indicators | <input type="checkbox"/> Beam Attenuators |
| <input type="checkbox"/> Clear Work Area | <input type="checkbox"/> All Beam Paths Visible from Control Location | <input type="checkbox"/> Beam Blocks/Masks Adjusted |
| <input type="checkbox"/> Physical Barriers | <input type="checkbox"/> Show Rehearsal | <input type="checkbox"/> Equipment Tested (proper operation, alignment, etc.) |
| <input type="checkbox"/> Non-Beam Hazard Controls | <input type="checkbox"/> Records Maintained | <input type="checkbox"/> LSO/Operator Training |
| <input type="checkbox"/> Visitors / Observer Controls (Specify) _____ | | |
| <input type="checkbox"/> Other Controls (Specify) _____ | | |

ALTERNATE MEANS OF RADIATION CONTROL MEASURES AS SPECIFIED IN THE PROVISIONS OF VARIANCE NUMBER: _____.

SETUP, TESTING, ALIGNMENT AND PERFORMANCE PROCEDURES

20. STANDARD SETUP PROCEDURES FOR LASER OPERATION

- Securely mount the Laser hardware to the beam or truss, or ensure that any table or surface the hardware is placed on is stationary. Either mounting strategy or placement should be free of movement.
- Run any cables necessary for proper operation of the Laser hardware.
- Place any area signage as necessary.
- Ensure any cables are properly secured so they do not pose a trip/slip or electrical hazard.
- Verify the Laser hardware permanent beam blocks/stops are in place.
- Ensure all safety features of the Laser hardware are present prior to energizing the system.
- Energize the system and ensure that all safety features such as emission indicators and interlocks are fully operational.
- Ensure the Emergency Stop and Shutter functions properly and instantaneously.
- Restrict access to trained and authorized Personnel only.
- Verify appropriate Personal Protective Equipment (PPE) is worn by any remaining trained and authorized Personnel.

21. STARTUP, PERFORMANCE, SHUTDOWN PROCEDURES

- Turn on any required computer control system and verify any data connection to the Laser Hardware.
- Adjust the permanent Beam blocks/stops to designated open position. Verify the shutter is closed.
- Disengage the Key Switch interlock by turning the switch to the "ON" or "OUTPUT" position.
- Verify the Laser Beam path is free of personnel, objects, tools or instruments.
- Using the lowest possible output power, adjust the Laser Beam to the desired positions.
- Verify any Beam Target/Screen or Beam Stop is free of any unintended specular reflections within the Controlled Area.
- Slowly increase the output power to the desired operating level and verify there are no unintended specular reflections within the Controlled Area.
- Ensure any required hazard controls of the Audience Zone are met, (i.e. 3m height requirement / 2.5m lateral requirement, etc.).
- Ensure any required hazard controls of the Operator/Performers are met (i.e. All Beams Visible, Exposure Limits, etc.).
- Verify Beam blocks/stops are properly adjusted and Effects are performed safely and as expected
- Ensure necessary physical barriers are firmly in place.
- Ensure the Emergency Stop and Shutter functions properly and instantaneously.
- Rehearsal (no audience) indicates Laser hardware and safety equipment is working correctly.
- Audience and Non-Laser Personnel admitted for the duration of the Performance, if applicable.
- Engage the Key Switch interlock by turning the switch to the "OFF" or "SHUTTER" position.
- Ensure the keys are removed from the Laser hardware when the system is deactivated or the system is otherwise rendered inoperable.
- Power down the system.
- Turn off any required computer system.

22. BEAM ALIGNMENT, MAINTENANCE, SAFETY TEST PROCEDURES

- Follow any recommended procedure as provided in the User Manual of the Laser hardware as certified by the device Manufacturer.
- Alignment of the internal Laser hardware can only be carried out by an experienced Laser technician or the device Manufacturer.
- Remove jewelry or any potentially reflective objects from your person during Setup or Shutdown.
- Wear appropriate Personal Protective Equipment (PPE) at all times when the Laser is Setup or Shutdown.
- Ensure no unexpected reflective items are in the Beam Path.
- Avoid looking directly into the output beam, even if it is scanned or at low power.
- Ensure all Laser hardware is properly labeled and is certified compliant with 21 CFR 1040.10 and possesses any required variances.
- Federal, State, and Local authorities have been notified within 24 hours of the Event.
- The Federal Aviation Administration (FAA) has been notified and a Laser Show Report has been filed with the FAA at least 30 days in advance, and a letter of no objection obtained in all cases of outdoor usage.

EMERGENCY PROCEDURES

23. EMERGENCY STOP USE

- In the event of an emergency situation, the Emergency Stop is used under agreed circumstances.
- Use the emergency stop if there is an immediate eye exposure hazard to Audience, Personnel or Performers.
- Use the emergency stop if there is an immediate risk of an uncontrolled beam. (i.e. Mylar confetti, Flying reflective debris, etc.).
- Use the emergency stop if there is a failure to any mounting structure or platform.
- Use the emergency stop if there is an uncontrolled fire present or electrical hazard to the Laser hardware.
- Use the emergency stop if there is unintended behavior of the Laser hardware which results in a static beam.

24. ACCIDENTAL EXPOSURE / INJURY INCIDENT

- In the event of an emergency, turn off the Laser hardware immediately via computer software or the Emergency Stop.
- Contact the Show Manufacturer, Event Laser Safety Officer and the Event Authorized Representative.
- In the event of fire or life threatening injuries, call 911.
- For others, call local medical personnel or the Venue's local non-emergency line (_____) - _____ - _____ .
- Promptly Report any exposure incident to the appropriate Federal, State and Local authorities.

SAFETY ASSESSMENT

25. LIKELYHOOD OF EXPOSURE/INCIDENT WITH HAZARD CONTROLS *(Select One)*

- Very Likely Likely Possible Unlikely Very Unlikely

26. CONSEQUENCES OF EXPOSURE/INCIDENT WITH HAZARD CONTROLS *(Select One)*

- Negligible Minor Moderate Significant Severe

CERTIFICATION

I CERTIFY that all of the above information and statements are true, complete, and correct to the best of my knowledge and ACKNOWLEDGE that the procedures and control measures provided herein have been reviewed and agreed upon by the parties below in preparation for the Event described in this report. The undersigned agrees this report or a facsimile will function as a quality assurance checklist on the date(s) and time(s) of the Event at the specified Venue.

27. SIGNATURE OF MANUFACTURER AUTHORIZED REPRESENTATIVE

28. NAME (Type or Print)

29. TITLE

30. SIGNATURE OF EVENT AUTHORIZED REPRESENTATIVE

31. NAME (Type or Print)

32. TITLE

33. SIGNATURE OF EVENT LASER SAFETY OFFICER

34. NAME (Type or Print)

35. LSO ID. NO. (If applicable)

POST EVENT REVIEW

36. REVIEWER NAME

37. REVIEWER TITLE

38. POST EVENT REVIEW DATE

39. EVENT WAS PERFORMED WITHIN STATED CONTROLS

- Yes
- No *(Specify below)*

40. PROVIDE ANY SAFETY FEEDBACK ON THIS EVENT