

## **University of Alaska Anchorage Safe Handling of Lighting Instruments**

### **General Procedures:**

- When overhead or catwalk work is in progress all floor workers must be clear of the work area.
- A spotter must be in attendance whenever anyone is on a ladder, platform, or personal lift.
- Proper footwear must be worn when climbing ladders or platforms.
- When using wrenches overhead the wrist strap must be used at all times.
- Ensure your pockets are free of any loose items which might fall (cell phones included)
- Proper attire is required when working in the catwalks. Proper attire consists of long pants/leg coverings and long sleeves are preferred. No loose clothing/jewelry that may be caught on pipes, lights or ladders. Hair should be pulled back and out of the face. Work gloves are recommended for lighting focus.
- Any work overhead or on the catwalks must be done in the buddy system. Never work alone in the catwalks.

### **- Crew Contact and Confirmation**

When stage lights are being adjusted and moved about, contact with crew members to be sure the “coast is clear” is crucial. After contacting the crew members the individual/s adjusting the lighting rig should wait to hear a confirmation from those who are being made contacted. This should be done before each stage lighting rig is being repositioned. Many times stage work is maneuvered in the dark, so even if you think all is okay try giving a call-out to be certain. This protocol should also be expended when using heavy equipment, personnel lifts, rigging or when adjusting any over stage fixtures.

### **- Informing About Potential Hazards**

It's important for stage personnel to be attentive to any potential vulnerabilities to sustain a safe stage environment. All reported safety risks should be taken sincerely. The stage crew has a lot of responsibility on their shoulders and should not hesitate to report any potential or existing malfunctions and/or hazards to the faculty supervisor.

### **- Actions**

If an urgent situation occurs a professional crew should know exactly what to do. Fire extinguishers and first-aid kits should always be immediately on hand to resolve hazardous issues along with the proper means to contact any outside help if needed.

### **- Comfort with activity being done**

If you are not comfortable with any activity being asked of you please bring this to the attention of the faculty supervisor. We will never ask you to do something that you have not been trained to do, or feel comfortable doing. That said, every effort should be given to receive the proper training, and ensure safety.

## **Hanging Lights at UAA:**

1. Check and prepare the lights and equipment to be used. Equipment should be set aside and identified by the instructor.

Preparing should include:

- Visually checking for frayed cables or loose strain reliefs on plugs
  - Placing the yoke in a vertical position and ensure the yoke, tilt, pan, and c-clamp bolts are tight
  - Check the adjustable features of the light operate (shutters, clamp, lens tube, pan screw)
  - Closing the shutters and removing any loose accessories (filters or gobos)
  - Opening the pipe bolt in the clamp (Studio Theatre) or jaw (Mainstage) so that it will easily fit on the pipe
  - Confirming the presence of a safety cable and checking the cable clip to ensure it closes properly
  - Plugging the light into a test circuit to confirm electrical operation
  - Ensure the proper lens or lens tube is in place.
2. Place the light and clamp on the pipe in approximately the correct position.
3. Finger-tighten the pipe bolt or jaw to the pipe so that it cannot come off.
4. Attach the safety cable to the pipe.
5. Adjust the light position or yoke out the light as necessary and then tighten the pipe bolt securely. When adjusting the final position of a light there should be a minimum of 3 inches of clear space between the body of a light and any draperies or flammable surfaces. 3 inches is equivalent to the approximate width of your hand.
6. Pan and tilt the light to the rough focus position indicated on the plot. Secure the pan and tilt bolts.
7. Open the shutters on an Ellipsoidal or spot focus a Fresnel.
8. Tie the plug (pigtail) close to the c-clamp to allow full range of movement of the light.
9. Add accessories such as filters, gobos or barn doors as indicated on the lighting plot.
10. Cable the light and secure excess cable to the pipe above or beside the light (in a loose coil if necessary) with tie line tied in a bow. Ensure the cable extending from the light itself is not pulled tight and that longer runs of cable do not hang loose on or below the grid and that the body of the light is free of direct contact with tie lines or cable.
11. All circuiting must be done when the circuits are dead. Do not hot patch!
12. When running extension cables, please use the following guidelines:
- Never run cables on grating of the grid.
  - Cables should be secured so no stress is placed on either end of the electrical connection.
  - Every effort should be made to run cables above head height, and tied off to approved structures
  - Cables should not be tied to existing lighting conduit or sprinkler pipes.
  - Use the appropriate size cable for the application.
  - Label each side of extension cables with 1" white gaff tape and a permanent marker.
  - Tape (with 1" gaff tape) stage pin connectors together when necessary.
  - Do not twist or wrap cables around pipes. Use tie line and bow knots to secure cables to pipes.
  - When running cables on the stage deck. Run cables in parallel lines, and put rubber mats over areas that may be walked on. Use cable paths in areas where anything may roll over the cable runs.

## **Removing a Light: (NOTE: lights that have been recently used may be hot and gloves should be used.)**

1. Detach and remove cables. All circuiting must be done when the circuits are dead. Do not hot patch! 2. Remove accessories.
3. Close shutters on Ellipsoidals so that they cannot catch as the light is being removed.
4. Pan and tilt the light to a vertical position (pointing straight down).
5. Loosen the pipe bolt or jaw just so that it can rotate on the pipe without coming off.
6. Remove the safety cable from the pipe and clip it to itself so that it can't fall.
7. Finish loosening the pipe bolt or jaw until the light and clamp can be removed.
8. Remove the light from the pipe and replace it to its designated location in the catwalks.
9. Make sure all accessories are returned to their proper location and cables are coiled and stored properly.

**Changing Lamps:**

- If you have not been trained specifically on changing lamps please have a faculty supervisor assist you.
- The light *must* be physically unplugged before it is opened.
- Theatrical bulbs can be extremely hot and can cause severe burns. If you have to change a bulb you must wait a minimum of 5 minutes after the lamp has been on and you must use gloves.
- Depending on the instrument you are working with wattages may vary. Replace bulbs only of the same type and wattage as the original.

**Hanging Automated Fixtures:**

1. Use the buddy system. Automated fixtures are *very* heavy.
2. Take precautions when moving the mirror fixtures, as the mirror is very fragile.
3. Properly address the unit before hanging.
4. Follow the same guide lines as above for hanging instruments.
5. Running data cables:
  - Data cables are very sensitive, so extreme care should be used.
  - Do not twist data cables tightly around pipes. Loosely coil any un-necessary cable and secure it in an “out of the way” location.
  - Ensure data lines are not run on or past any hot instruments. (this includes in front of any lights)
  - Follow the general guidelines above for running cables in the catwalks.