



Office for the Arts at Harvard

Agassiz Theatre / Farkas Hall

10–12 Holyoke Street | Cambridge | Massachusetts 02138 | T 617 495 8727 | F 617 495 8728 | www.ofa.fas.harvard.edu/theater

Addendum to
Farkas Hall Handbook:

Technical Safety
Manual



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INTRODUCTION

For everyone working in Farkas Hall, safety is the utmost concern. Guidelines and procedures have been established to ensure that everyone can work in the theater safely, and so that people may enjoy the space for years to come. At times these rules may seem strict. One must remember that these policies have been put in place with the students' ambitions and goals in mind, and are enforced for everyone's safety.

1. GENERAL SAFETY

While working in the theater, make yourself aware of your surroundings. If working in the theater for the first time, please take a moment to walk around and familiarize your self with the location of safety devices and aids. Find the nearest first-aid station, phone, fire extinguisher, fire alarm pull station, emergency assistance buttons, eye-wash station, and fire exit. Knowing your environment is the first step in being safe in your environment.

Maintaining focus is another key to working safely in the theater. Having fun is encouraged while mounting a production. However, excessive horseplay and general misconduct is dangerous and can lead to injury. Pay attention to the task at hand, be considerate of others while working, and always think before you act.

The use of drugs and alcohol in Farkas Hall is illegal and extremely dangerous. Anyone found working in the theater while under the influence of drugs and/or alcohol will be dismissed from the facility and face appropriate disciplinary action.

Before working in Farkas Hall, you must be trained and approved on each individual piece of equipment that you intend to use. Trainings should be scheduled as soon as possible. Do not expect to come in an hour before your work call to be trained and approved. As soon as a work call has been established, the supervising student technician will be responsible for scheduling any training with the Technical Supervisor. The counterweight fly system, the personnel lift (Genie), the orchestra pit lift, and the shop tools are just a few examples of equipment that require training. Once trained, individuals are expected to adhere to the established policies and procedures, in addition to all manufacturers' instructions.

All work calls in the theater will use the "Buddy System." No one is allowed to work alone in the theater at any time. Having another person to help will make the work easier, and help ensure everyone's safety. If at any time someone is injured, call Harvard's Emergency Services at 617-495-1212 immediately. Also, make the supervising technician and the Technical Supervisor aware of the situation. An accident report will be filled out by the Technical Supervisor, the supervising technician, and the injured person, when able.

See page 3 for a quick reference sheet for general safety at Farkas Hall. All supervising technicians should have this sheet with them during all work calls.



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FACT SHEET

GENERAL SAFETY

WHO NEEDS TO BE TRAINED:

Everyone working in Farkas Hall

RISKS INCLUDE:

Personal injury, injury to others, damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- Everyone shall be aware of the location of all the first-aid stations, phones, fire extinguishers, fire alarm pull stations, emergency assistance buttons, and fire exits at all times.
- No one shall engage in general misconduct or any other potentially harmful activities that would cause injury to person or property.
- Everyone shall employ appropriate techniques for injury prevention, e.g. lifting with the legs, not the back, wearing hard hats while working on the stage.
- Anyone found working in the theatre under the influence of drugs or alcohol shall be dismissed immediately, and face appropriate disciplinary action.
- No one shall work alone in the theatre at any time.
- The building shall be kept clean, orderly, and clear of obstacles at all times. This includes all paths of egress such as doorways, stairwells, hallways, and aisles.
- Training and approval are required prior to the use of Farkas Hall tools or equipment, as per Farkas Hall policies and procedures.
- Anyone using Farkas Hall tools or equipment shall adhere to manufacturer's instructions and Farkas Hall policies and procedures at all times.
- For every incident which requires the assistance of the Harvard Police or EMT, a visit to the Harvard University Health Services, or any other hospital emergency room, an accident report should be filed with the Farkas Hall Technical Supervisor.

EMERGENCY# - 51212



2. COUNTERWEIGHT FLY SYSTEM

Farkas Hall has a single-purchase counterweight fly system for use with flying electric batten and scenic elements. The counterweight system uses iron bricks on an arbor to counter the weight of whatever has been attached to the batten. The arbor is connected to a series of cables that is attached to the batten and, with a length of rope attached to the arbor; someone can fly the batten in and out, using very little energy. As a counterweight system is a slightly more complex piece of stage equipment, training and approval is required before operation. The Technical Supervisor is the **ONLY** person who can train and certify operators of the counterweight fly system. Training will cover the use of a line set, both during a work call and a show call, and the loading and unloading of a line set.

General

General policies apply whenever work is being done with the counterweight system. While a line set is being operated the following rules must be adhered to:

1. A line set schedule **MUST** be provided to the Technical Supervisor, at least three days in advance of any work call. The Technical Supervisor and the supervising technician will review the line set schedule before any work begins.
2. Hard hats must be worn at all times, by **EVERYONE**. The only exception is during the run of show, when only authorized personnel are allowed backstage.
3. While running a line set, there must be quiet on the stage. All power tools must stop; all music and conversations must be lowered to a non-distracting level.
4. There must be two approved individuals present at all times. One individual will operate the line set, and the other will visually guide the operator, alerting them to any obstacles that may be present.
5. The locking ring on the rope lock must be engaged anytime the line set is not in motion.
6. The locking collars on the arbor must be engaged anytime the line set is in motion.
7. The area directly beneath the line set to be moved must be clear of any people or scenic elements. The operator of the line set is responsible for having the area cleared.
8. While loading or unloading weight from the overhead load rail, the SR side of the stage must be kept clear of people. The operator of the line set is responsible for keeping the area clear. A snubbing safety device must be applied to the fly rail so that the operator may clear the area as well.



Operation of a Line set

The trained and approved operator is responsible for locating all individuals who may be working within the path of the line set. The following procedure establishes their location and alerts the rest of the crew that a line set is being moved.

1. Operator - “ON THE LOAD RAIL! ARE YOU CLEAR OF LINE SET # (# of the line set moving)?
2. Person on Load Rail, if clear of line set - “CLEAR OF LINE SET #!(# of line set moving)
3. Person on Load Rail, if NOT clear - “HOLD! NOT CLEAR OF LINE SET #! (# of line set moving)
4. Once the Person on Load Rail is clear, Operator - “ON THE DECK AND THE RAIL, LINE SET # (# of line set moving) MOVING!

Now that the Operator has alerted everyone, they may move the line set. Place one hand on the operating line, lift the locking ring off of the handle, and slowly lower the locking lever. This will free the operating line, and allow the line set to move.

If at any time the line set does not move easily, stop, engage the rail lock, and make a visual inspection. The supervising technician may fix the issue if it can be easily resolved. If the issue is not readily apparent, then stop use of the line set, engage any pertinent safety precautions, and inform the Technical Supervisor.



Loading and Unloading Weight

Loading and unloading weight is the single most dangerous task in a counterweight fly system. It takes focus, strength, and the utmost regard for safety. When working on the loading rail, there must be two individuals, one of whom has been trained and approved. One individual will load the weight on to the arbor, while the other will prep the weight for the loader. The following procedure alerts the crew on the deck to the status of the individuals loading weight.

1. Operator - "ON THE LOAD RAIL. PLEASE ADD # (# of lbs) TO LINE SET # (# of line set)
2. Operator - "ON THE LOAD RAIL. PLEASE REMOVE # (# of lbs) FROM LINE SET # (# of line set)
3. Person on Load Rail - "ON THE DECK, ADDING # (# of lbs) TO LINE SET # (# of line set). IS THE RAIL CLEAR?"
4. Person on Load Rail - "ON THE DECK, REMOVING # (# of lbs) FROM LINE SET # (# of line set). IS THE RAIL CLEAR?"
5. If the rail is clear of people, than the Operator will reply - "THE RAIL IS CLEAR!", if not clear, the Operator is responsible for clearing the area, and letting the Person on the Load Rail know when they are clear.
6. Person on Load Rail, once a confirmation has been received, will reply - "LOADING WEIGHT"
7. Once the Person on Load Rail has loaded half of the desired weight on to the arbor, they will announce - "HALFWAY!" and stop loading weight on the arbor. The Operator will then take the opportunity to check the counterweight fly system for any trouble signs. Once the Operator has deemed the system is safe, and have left the loading area, they will reply - "CONTINUE"
8. Once the Person on Load Rail has finished loading the desired weight, they will announce - "# (# of lbs) ADDED (or REMOVED) FROM LINE SET # (# of line set) COMPLETE!"
9. Operator - "THANK YOU! TESTING WEIGHT ON LINE SET # (# of line set)" At this point, the Operator shall than use the procedure for moving a line set, to test the weight of the line set. If the line set is in balance, then it may be locked off. If weight needs to be added or removed, then the Operator must start again at instruction #1.

See page 8 for a reference sheet for counterweight system operations at the Farkas Hall. Any supervising technician that uses the counterweight system should have this sheet with them during all work calls.



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COUNTERWEIGHT FLY SYSTEM

WHO NEEDS TO BE TRAINED:

Anyone operating the counterweight fly system at Farkas Hall.

RISKS INCLUDE:

Severe bodily injury, even resulting in death. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- Everyone who uses the counterweight fly system **MUST** be trained and approved by a Farkas Hall technical staff member. Anyone who uses the system, without approval, will lose that privilege until otherwise notified.
- Hard hats **MUST** be worn at all times during operation of fly system.
- Prior to the load-in of a production, a line set schedule **MUST** be provided to the Farkas Hall Technical Supervisor, three days before any work to be done. This schedule shall include scenic units and electrics being hung, and their estimated weight.
- Anyone moving a line set **MUST** adhere to the official procedure of operation. This procedure will be explained as a part of the approval process. Placards are located at the fly rail to clearly display this procedure.
- There shall be two approved persons at all times during operation of the fly system, one to operate the hand line, and the other to visually guide the travel of the batten.
- During operation, the area underneath an individual line set shall be completely clear of people and scenery.
- During operation of the fly system, there **MUST** be quiet on the stage.
- Anytime at which a line set is not being operated, the rope lock **MUST** be engaged completely, with its locking ring in place.
- In the event that control of a line set is lost, do **NOT** attempt to stop it. Provide an explicit call to evacuate the stage, and clear away from the fly rail.

EMERGENCY# - 51212



3. LOAD-IN & STRIKES

During a load-in or strike, the amount of work will always increase, while the amount of time in which to accomplish it will always decrease. With this heightened sense of urgency, there also needs to be a heightened sense of safety. Just prior to each load-in call, the supervising technician will discuss with their individual crews the tasks to be completed and any procedures that must be adhered to. Just prior to a strike call, the supervising technician(s) will discuss the tasks to be completed with the entire company.

All individuals involved with a load-in or strike must wear the appropriate clothing (such as closed-toe shoes) and personal protection for the duration of the work call. This includes but is not limited to the following:

- **hard hats**
- **safety glasses**
- **ear plugs**
- **particulate masks**
- **work gloves**

These will be provided at no cost to the producing entity. The supervising technician is responsible for ensuring that there is enough available safety equipment and that everyone is using it properly. If there is not enough safety equipment for all individuals, the Technical Supervisor should be contacted, so that more equipment can be provided.

Appropriate behavior is also required during load-in and strike work calls. Focus is a necessary part of all work calls, and anything that inhibits concentration is not recommended. Music may be played during load-in calls, but good judgment must be exercised during occasions that require focus and coordination. Music will not be allowed during strikes.

During any work call, appropriate breaks should be taken. This will help prevent fatigue and lack of concentration during load-in and strike. A fifteen minute break should be taken every two hours, and thirty minute meal break should be taken if a call is to last eight or more hours.

See page 10 for a reference sheet for load-in and strike calls at the Farkas Hall. Any supervising technician that is in charge of a work call should have this sheet with them during all work calls.



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FACT SHEET

LOAD-IN & STRIKE

WHO NEEDS TO BE TRAINED:

Anyone involved with a load-in or strike at Farkas Hall.

RISKS INCLUDE:

Cuts, scrapes, bruises, fatigue, death. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- Everyone working during a load-in or strike at Farkas Hall shall wear appropriate clothing and personal protection at all times. This includes closed toe shoes (i.e. no flip flops), safety glasses, ear plugs, particulate masks and/or respirators, as required. All long sleeves and long hair should be tied back and secured in a safe fashion.
- All load-in and strike calls shall be supervised by a trained person. This person will have previously received the appropriate training and approval of a Farkas Hall Technical Staff member.
- Hardhats **MUST** be worn at all times during a load-in or strike call.
- Prior to the start of all load-in and strike calls, the trained supervisor shall inform all participating individuals of pertinent safety concerns and procedures and ensures that they are followed.
- Load-in and strike calls should be organized and well thought out. A written plan shall be provided to the Technical Supervisor, a minimum of three (3) days prior to the call.
- During load-in calls, music is allowed at a reasonable level. However, good judgment must be exercised during occasions that require focus and coordination. Due to the complex nature of strike, music is **NEVER** allowed.
- Appropriate break schedules should be followed, when possible. A fifteen (15) minute break should be taken every two hours, and a thirty (30) minute meal break should be scheduled if a call is to last eight (8) or more hours.

EMERGENCY# - 51212



4. LADDERS & LIFTS

An assortment of ladders are stored on stage for general production use. These ladders will be used for their intended purposes only. Please follow the manufacturers' instructions at all times. These are clearly posted on the ladders. Ladders should also be visually inspected by the user, prior to use. If at any time the ladder seems damaged or is not working as it was intended to, stop using it and alert the Technical Supervisor.

A JLG personnel lift is also available, and is stored on stage for general production use. This personnel lift cannot be used by anyone other than a trained and approved individual. To receive training, please arrange an appointment at least three days before the lift needs to be used. Training will typically take no longer than half an hour, and approval will last until the end of the current school year. Individuals are required to be retrained.

While using the JLG personnel lift, the stabilizing outriggers must be present, and in their locked position. Anyone discovered using the lift or moving the lift without its outriggers in place, will lose the privilege of its use. Also, at no time will any individual step on or over the railings of the personnel platform. Anyone discovered doing so, will lose the privilege of using the lift.

When working at any elevated position, where others may be working underneath, everyone must remove any loose objects from their person, i.e. hard hats, loose tools, change in pockets. If tools are required for work overhead, they must be tethered to the individual or the building. Also, if required by University policy or OSHA requirements, a fall-arrest harness will be provided when working on an elevated surface.

See page 12 for a reference sheet for anyone using a ladder or personnel lift at the Farkas Hall. Any supervising technician that is in charge of a work call that requires a ladder or personnel lift should have this sheet with them during all work calls.



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LADDERS & LIFTS

WHO NEEDS TO BE TRAINED:

Anyone who uses a ladder or personnel lift at Farkas Hall.

RISKS INCLUDE:

Injury from falling and even death. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- Everyone working with a ladder shall be trained on the proper usage by an approved supervisor.
- Anyone working with the personnel lift **MUST** be trained and approved by a Farkas Hall technical staff member. A list of names, of those individuals who have been approved, will be affixed to the side of the personnel lift.
- When working on an elevated surface, all objects that pose a fall hazard must be removed from the body, e.g. hard hats, loose tools, change in pockets.
- All ladders must be used in their fully locked position, as designed. An A-Frame style ladder may **NOT** be used to lean against walls, nor should an Extension style ladder be used to bridge a span.
- Never substitute a ladder or personnel lift with a chair or box. Rope ladders are **NOT** an approved substitution for fixed ladders and in general, are not allowed in Farkas Hall.
- Stabilizing outriggers must be firmly in place during operation of the personnel lift. When the lift is extended out of its base position, it shall **NOT** be moved. Anyone caught operating the lift, without its outriggers in place, will lose the privilege of its use, indefinitely.
- If a ladder or personnel lift appears to be damaged, do **NOT** use it. Report the damage to a Farkas Hall Technical Staff member.
- Fall arrest harnesses **MUST** be used, when required.

EMERGENCY# - 51212



5. RIGGING

Due to the design and construction of the Farkas Hall, the permanent counterweight fly system may never be altered in any fashion. Any temporary rigging system (apparatus used to suspend a scenic element overhead) must have received approval from the Technical Supervisor, prior to installation. The system layout must be submitted, for review and approval, to the Technical Supervisor prior to its installation, allowing for sufficient construction time. Immediately after the installation of the rigging system is complete, it must be inspected and approved by the Technical Supervisor.

When designing a temporary rigging system for Farkas Hall, there are a few basic guidelines to follow. The following are recommendations that will aid in the review and approval process:

1. The complex nature of temporary rigging systems requires sufficient time for design, construction, installation, and review. This should be accounted for in any production schedule.
2. All temporary rigging systems should be designed with a 10:1 safety factor. For example, if an object weighs 100#, then the object holding it up must be capable of holding up to 1000#.
3. Employ standard rigging practices and hardware whenever possible. Using a method that is proven to work will be easier to design and build, and more often than not, less expensive. “Homemade” hardware is NEVER an acceptable alternative and not allowed.
4. A temporary system design should also make provisions for its operation during a show. The question of how the system will be used should be answered before it needs to be used.
5. All components used must be rated for their application and only installed according to the manufacturer’s instructions.
6. The flying of actors will not be allowed by anyone other than a professional, self-insured company. For recommendations of companies, see the Technical Supervisor.

There are two types of rope used for rigging in Farkas Hall, galvanized aircraft cable or wire rope and synthetic poly rope. When working with rope, follow all standard rigging practices. The most common knots for the stage are the clove hitch (used for wrapping around things), the bowline (useful when a loop is needed), and a half hitch (used for secure the loose end of a rope).

The use of special tools and hardware for cutting and terminating the end of wire rope is required. Wire rope cutters are used specifically for this purpose, and should not be used to cut anything else. Swaging tools are used to compress metal sleeves on to the wire rope just like cable clips are used to pinch the wires together. These methods are used to form a loop in the wire rope, so that it may be connected to something. All of these tools and hardware have very specific instructions, which must be adhered to in order to ensure the safe use the wire rope.



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RIGGING

WHO NEEDS TO BE TRAINED:

Anyone installing rigging systems, not associated with the counterweight fly system, at Farkas Hall.

RISKS INCLUDE:

Mild to severe bodily injury, resulting in death. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- No one shall install a rigging system without the express permission of the Farkas Hall Technical Supervisor. All system designs must be reviewed and approved by the Farkas Technical Supervisor, prior to its installation, allowing for sufficient time for construction. Once installed, the system must be inspected and approved by the Farkas Hall Technical Supervisor immediately.
- Rigging system designs shall be engineered at a 10:1 safety factor for all overhead applications. This factor should be informed by working load limits for all components.
- Whenever and wherever possible, standard rigging practices should be utilized.
- No one, with the exception of an insured professional company, may implement or operate a system that flies a person at Farkas Hall.
- All operators of the rigging system must be trained and approved in the proper inspection and safe use of all individual components and the system as a whole.
- All components of a rigging system shall be installed and used only as per manufacturer's instructions.
- Anyone working with a rigging system that utilizes rope should know the following common knots; a half-hitch, a bow-line, and a clove hitch.
- All manufacturer's instructions **MUST** be followed when working with wire rope and wire rope terminations (Nico-press® swages or Crosby© cable clips).

EMERGENCY# - 51212



6. PROP SHOP

The Prop Shop is located on Lower Level 2 of Farkas Hall. The shop may be used for constructing both scenery and properties. Painting may also take place in this space. Use of the Farkas Hall Prop Shop will be limited to individuals whom have received approval from the Technical Supervisor. All individuals who use the shop must never work alone.

The prop shop hours will be Mon.-Fri., 9:00AM to 11:30PM, and Sat.-Sun., 10:30AM to 11:30PM. This means that clean-up must begin no later than 11:00pm. All tools and materials must be returned to their proper storage areas. The Technical Supervisor must be informed if a project will be left in the shop.

When there is a performance taking place on stage, use will be limited to “soft construction” only. “Soft construction” includes activities like sanding, gluing, painting, and sewing. “Soft construction” will begin at half hour to top of show and will finish once the performance has ended.

Everyone must wear appropriate clothing while working in the Prop Shop. Closed-toe shoes are a must. Anyone with long sleeves or hair must make sure they are tied back and secure. There will also be safety glasses and goggles, ear plugs, and particulate masks available at no cost for anyone who wants them.

When working in the Farkas Hall Prop Shop, individuals should be aware of all safety devices in the room. This includes emergency electrical switch-off buttons, emergency assistance buttons, fire extinguishers, first-aid kits, and fire alarm pulls. There will also be a binder that contains Material Safety Data Sheets (MSDS) for all materials used in the Prop Shop. Before working with any material, everyone should refer to these sheets.



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FACT SHEET

PROPERTIES SHOP

WHO NEEDS TO BE TRAINED:

Anyone in the Prop Shop at Farkas Hall.

RISKS INCLUDE:

Cuts, scrapes, bruises, dismemberment, electrical shock, hearing loss, vision impairment, poisoning, fatigue, death. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- No one shall be allowed to use the Prop Shop without the approval of a Farkas Hall Technical Staff member.
- Everyone working in the Farkas Hall Prop Shop shall wear appropriate clothing and personal protection at all times. This includes closed toe shoes (i.e. no flip flops!), safety glasses, ear plugs, particulate masks and/or respirators. All long sleeves and long hair should be tied back and secured in a safe fashion.
- No one shall be allowed to use any power tools, without proper training and approval of a Farkas Hall Technical Staff member.
- There shall be two people present, at all times, while working with power tools in the Prop Shop.
- When working in the Farkas Hall Prop Shop, be aware at all times the locations of Emergency Electrical Switch-Off buttons, Emergency Assistance Buttons, First-Aid Kits, Fire Extinguishers, and Fire Alarm Pulls.
- Prior to working with any material, one should review the appropriate Material Safety Data Sheet (MSDS). This can be found in a clearly labeled binder, either in the shop, or in the Technical Supervisor's office. One can also refer to Harvard's Environmental Health and Safety Office's website, http://www.uos.harvard.edu/ehs/onl_msd.shtml.
- Anyone using the Farkas Hall Prop Shop is responsible for returning all tools back to their proper storage location and cleaning the shop of any and all debris at the end of every work session.

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7. LIGHTING PRODUCTION

The Farkas Hall owns and maintains a sizeable inventory of lighting gear. Contact the Technical Supervisor for a written inventory of all equipment. Farkas Hall lighting equipment will not be allowed to leave the building at any time. If lighting equipment is needed at another venue, speak with the Technical Supervisor about other possibilities.

All equipment must be properly maintained. If any lighting equipment is not functioning properly, discontinue its use and inform the Technical Supervisor. Damaged equipment may also be left at the Electrics Work Bench, with a label indicating the issue with the equipment.

Electrics work calls at Farkas Hall must be supervised by an individual who has been trained and approved to use both the counterweight fly system and the personnel lift. Appropriate procedures must be adhered to when using these pieces of stage equipment. This supervising technician should also have a working knowledge of Farkas Hall ladders, lighting positions, and other circumstances that require fall protection.

An appointment to review the light plot should be made with the Technical Supervisor at least three days prior to any electrics work calls. At this meeting, the supervising technician and the Technical Supervisor will discuss work schedules, inventory, and expendables purchases. If a rental is required for a production, then contact the Technical Supervisor at least two weeks prior to when the rental is needed.

The following are a few guidelines for working safely on an electrics crew:

- NEVER work on lighting equipment that is energized. Unplug any gear and release any stored energy if necessary.
- Safety cables MUST be attached to any lighting instrument hung overhead. The cable must be engaged in such a fashion that would prevent it from falling from its position. NO EXCEPTIONS.
- All electrics cables must be dressed neatly with tie-line. If a cable needs to run in a backstage area, than it must be secured with carpet or a cable ramp. In addition, it should be labeled with either glow tape or white gaff tape in such a fashion that makes it conspicuous to all backstage personnel. At no time will cable be allowed in a path of public egress.
- Electrical connections should use standard, UL approved connectors. Electrical tape is never a suitable substitution.
- When wiring practical fixtures, or running circuits, be mindful of the capacity of circuits. If you have a question in regards to the capacity of a circuit, check with the Technical Supervisor.
- Water and electricity do not mix! Don't even try it!



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LIGHTING PRODUCTION

WHO NEEDS TO BE TRAINED:

Anyone working on lighting production at Farkas Hall.

RISKS INCLUDE:

Electrocution, potentially resulting in death. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- Everyone who participates in lighting production work **MUST** be made aware of all potential hazards of tasks assigned to them and be supervised by a trained and approved individual.
- Only trained, approved electricians shall be allowed to perform electrical work associated with the building. If there are any electrical issues, please alert a Farkas Hall technical staff member immediately. **DO NOT** attempt to correct the problem.
- All lighting equipment must be properly maintained at all times. It may **NEVER** be used in any fashion other than that intended by the manufacturer. If any lighting equipment is not working properly, stop using it, and alert a Farkas Hall technical staff member of the problem.
- The appropriate procedures for the counterweight fly system must be used during the electrics hang.
- **NEVER** work on any lighting equipment that is energized. Make sure all power cables are unplugged before work begins.
- Safety cables **MUST** be used on all lighting instruments and cable must be tied securely with tie-line.
- All electrical cable must be properly dressed, as to prevent a tripping hazard. If a cable run must pass through a backstage walkway, it must be further secured with carpet or a cable ramp.
- All electrical connections must be made using UL approved connectors. Electrical tape is not a suitable connection method!
- Be aware of the electrical capacity of all circuits. **NEVER** overload a circuit. Remember, Watts = Volts x Amps.
- Water and electricity do not mix! Never work with electrical equipment in the vicinity of water.

EMERGENCY# - 51212



8. SOUND PRODUCTION

Farkas Hall maintains an ample supply of sound equipment, including but not limited: sound console, a varied collection of microphones, speakers, and a Clear-Com® communications system. Contact the Technical Supervisor for a written inventory of all equipment. Farkas Hall sound equipment will not be allowed to leave the building at any time. If sound equipment is needed at another venue, speak with the Technical Supervisor about other possibilities.

All equipment must be properly maintained. If any sound equipment is not functioning properly, discontinue its use and inform the Technical Supervisor. Damaged equipment may also be left at the Sound Work Bench, with a label indicating the issue with the equipment.

Sound work calls at Farkas Hall must be supervised by an individual who has been trained and approved to use both the counterweight fly system and the personnel lift. Appropriate procedures must be adhered to when using these pieces of stage equipment. This supervising technician should also have a working knowledge of Farkas Hall ladders, sound positions, and other circumstances that require fall protection.

An appointment to review the sound hang should be made with the Technical Supervisor at least three days prior to any sound work calls. At this meeting, the supervising technician and the Technical Supervisor will discuss work schedules, inventory, and expendables purchases. If a rental is required for a production, then contact the Technical Supervisor at least two weeks prior to when the rental is needed.

Everyone who works on a sound call must be made aware of all potential hazards of tasks assigned to them. The following are a few guidelines for working safely on a sound crew:

- Safety cables **MUST** be attached to any sound equipment or speakers hung overhead. The cable must be engaged in such a fashion that would prevent it from falling from its position. **NO EXCEPTIONS.**
- All sound cables must be dressed neatly with tie-line. If a cable needs to run in a backstage area, than it must be secured with carpet or a cable ramp. In addition, it should be labeled with either glow tape or white gaff tape in such a fashion that makes it conspicuous to all backstage personnel. At no time will cable be allowed in a path of public egress.
- Sound connections should use standard connectors. Individuals may never replace existing connectors. Use the appropriate adapter at all times. If an adapter cannot be found, contact the Technical Supervisor for other possibilities
- When connecting speakers to the system, be mindful of their capacity compared to the system's amplifiers. Never provide more wattage than is absolutely necessary.

See page 19 for a reference sheet for anyone who is working on a sound call at the Farkas Hall. Any supervising technician that is in charge of a sound work call should have this sheet with them during all work calls.



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FACT SHEET

SOUND PRODUCTION

WHO NEEDS TO BE TRAINED:

Anyone working on sound production at Farkas Hall.

RISKS INCLUDE:

Loss of hearing, potential electrical shock. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- Everyone who participates in sound production work **MUST** be made aware of all potential hazards of tasks assigned to them and be supervised by a trained and approved individual.
- All sound equipment must be properly maintained at all times. It may **NEVER** be used in any fashion other than that intended by the manufacturer. If any sound equipment is not working properly, stop using it, and alert a Farkas technical staff member of the problem.
- The appropriate procedures for the counterweight fly system must be used during the sound hang.
- Safety cables **MUST** be used on all sound equipment and speakers and cable must be tied securely with tie-line.
- All sound cable must be properly dressed, as to prevent a tripping hazard. If a cable run must pass through a backstage walkway, it must be further secured with carpet or a cable ramp.
- All connections must be made using standard connectors. Use appropriate adapters where necessary.
- Be aware of the capacity of all speakers. **NEVER** overdrive a speaker!
- Always alert everyone to all loud noises prior to playing sound

EMERGENCY# - 51212



9. PAINT

Farkas Hall maintains an ample supply of paint equipment. All equipment must be properly cleaned and maintained to ensure its longevity. If there is something specific that is required, and is not readily found at Farkas Hall, please contact the Technical Supervisor with any questions.

All paint orders must be provided to the Technical Supervisor at least one week prior to any paint production. Please check the paint supply in the Prop Shop first, to see what paint is available. When creating your order, remember that one gallon of paint covers approximately 300 sq. feet. The Farkas Hall inventory carries basic paint and paint supplies like Allflor Black, Allflor White, and Joint compound. There are two main types of scenic paint used at the Farkas:

Off Broadway – waterproof, not concentrated, doesn't necessarily need be diluted.

Supersaturated: - waterproof, concentrated, comes in quarts.

The following guidelines should be followed when working on a paint production staff at Farkas:

- Label the show's name and date on each can of paint, and each bucket of mixed paint. At the end of every paint call, paint cans and buckets must be returned to the production's assigned shelf.
- Do not leave a can uncovered.
- Paint should never be poured directly out of a can. Please mix paint ladles or plastic spoons. Please reuse all plastic utensils
- Paint should never be poured down the sink. Please clean out any excess paint into the backpaint bucket. Wash out the paint can and lid, and place it with the other empty cans.
- Always wash brushes and rollers thoroughly and immediately after use. If necessary, use a paint comb or steel brush to help clean the brushes. If you need to use a brush later during the work call, please wrap it in a plastic bag, so it does not dry out. Return all brushes to their proper location to dry.
- When transporting paint from the shop to the stage you must use a paint cart. If paint is spilled on the carpet, immediately start cleaning it hot water, and have someone contact the Technical Supervisor: agitchel@fas.harvard.edu or (x58716). Productions will be charged for extra cleaning required for spills or other damage.
- Please speak with the Technical Supervisor before painting the stage floor. Whenever painting occurs onstage, craft paper or plastic must be used to protect the floors and walls of the theatre. Also, put away or fly out all the soft goods (curtains, blacks) to avoid getting paint on them. Productions will be charged for any necessary cleaning or replacement of soft goods.
- All scenic elements must be flame-proofed and back-painted. No raw wood is allowed on stage. Please speak with the Technical Supervisor about fire regulations for your production.
- At strike, all unused mixed paint should be disposed of, by pouring it into the BACK PAINT bucket. If there is unmixed paint left, put them on their respective shelves in the paint area – other shows can now use them. If there is any paint that cannot be recycled in to back paint, then it should be disposed of into a 5-gallon disposal bucket.



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FACT SHEET

PAINTING PRODUCTION

WHO NEEDS TO BE TRAINED:

Anyone who takes part in painting in Farkas Hall

RISKS INCLUDE:

Skin/Eye irritation, Environmental pollution.

GUIDELINES, RULES, & POLICIES:

- Label all paint.
- Never pour paint down the drain.
- Always clean out brushes and rollers thoroughly.
- Transport painting using the Farkas Paint Cart.
- All scenic elements must be back-painted. **NO RAW WOOD ON STAGE!**
- At strike, all paint must be disposed of properly.

EMERGENCY# - 51212



10. STAGE EQUIPMENT

The Farkas Hall has a few pieces of automated stage equipment that enhances convenience for everyone who uses the space. However, to ensure proper use and safety for all, the stage equipment shall only be used by trained and approved individuals. The following is a list of stage equipment found in Farkas, its use, and potential hazards.

Orchestra Pit Lift

Used to adjust the height of the apron. There are four different levels to which the orchestra pit lift can travel; Stage, Audience, Orchestra, and Lower Level (LL) 2. When at the stage level the lift extends the stage out into the house. At the audience level it allows for extra row of seats to be placed in the house. At the orchestra level it creates an orchestra pit for musicians. When at LL 2 the lift can be accessed by a set of double doors and used to ferry scenery or equipment to the stage. There are safeguards in place to protect against injury, but individuals should be mindful of all pinch points when using the lift. The lift is operated by a pendant that can be connected to the DSL control station, or a floor pocket on the lift itself. Only two people may ride the lift at anytime, the operator and a spotter. This lift should not be considered for use during a show. Before the lift can move, a fall barrier must be installed on the downstage edge of the lift well.

ADA Pit Access Lift

Located approximately center stage, this lift provides ADA access to the stage, orchestra pit, and LL2. This lift is for people only and shall not be used for utility purposes. It can be operated either from a pendant connected to the DSL control station or from the control station located on the lift. This lift shall not be used during a show.

Main Rag

The house curtain for Farkas is an Austrian-style curtain. It is operated by the DSR control station. The main rag has numerous presets and is also variable speed. For storage purposes the main rag should be left in whenever possible. During work calls the main rag should be flown out to prevent any possible damage.

Fire Curtain

The fire curtain is a Braille-style curtain that flies in to the stage floor when activated. The curtain seals off the audience from the stage area, allowing more time for them to evacuate the building in case of an emergency. The fire curtain is operated manually by the DSR control station. In the case of an emergency, there is a lever located DSL that releases the curtain, allowing it to drop automatically. To preserve the fabric, the fire curtain should be only partially raised, except during a show.

FOH Speaker Batten

The FOH speaker batten is located just downstage of the proscenium arch. The FOH fill speakers are hung from this batten. The batten can be flown in to a working height. The batten is operated from a pendant that is connected to the DSR control station. Prior to this batten flying in, sufficient cable slack must be provided. This batten shall not be moved during a show.



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FACT SHEET

STAGE EQUIPMENT

WHO NEEDS TO BE TRAINED:

Any technicians operating the Farkas Hall stage equipment.

RISKS INCLUDE:

Bodily harm, perhaps even death. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- Use yellow barrier railings, when moving the orchestra/trap pit, to guard against fall hazards.
- Operator of orchestra/trap pit must have visual contact with lift at all time.
- Make sure all objects on the pit are clear of potential pinch points.
- When lowering the Main Rag or Fire Curtain, make sure all objects and people are clear.
- In case of emergency, the Fire Curtain will deploy automatically. If not, pull manual release lever.
- Always untie cable swag to FOH Batten, prior to lowering it to a working height.

EMERGENCY# - 51212



11. EMERGENCY RESPONSE

Despite all best intentions, accidents can happen. Procedures and policies have been established in order to minimize the scale of an accident. The following section discusses examples of emergencies, the appropriate procedures, and any related emergency response equipment available at Farkas Hall. There are many different types of emergencies that require varying degrees of response. Common sense and good judgment should always prevail, but if you find yourself asking, “Should we call somebody?” then you most definitely should.

TYPES OF EMERGENCIES

- Splinter/Small cuts/Bruises – Most of these accidents can be dealt with on site, using a first aid kit. The Technical Supervisor should be made aware of the incident. All injuries should be followed up with a medical profession.
- Large Cut/Broken Bone/Loss of Consciousness – HUPD should be contacted immediately, use first aid kit to reduce effects of injury. Technical Supervisor should be contacted, and appropriate paperwork should be filled out.
- Fire/Natural Disaster – HUPD should be contacted immediately and fire alarms should be pulled. Fire extinguishers may be used to prevent fire from spread, but fire fighting should be left to the fire department.
- Robbery/Assault/ Suspicious Activity – HUPD should be contacted immediately, and blue emergency assistance buttons should be pushed. If possible, find a safe location to wait for HUPD’s arrival.

EMERGENCY RESPONSE EQUIPMENT

The following devices are located within the building and are there to assist in the event of an emergency:

- Fire Alarm Pulls – located throughout the building, when activated, this alarm will alert the Operations Center, and numerous emergency groups will respond. (Cambridge Fire Department, HUPD, EMS, etc.)
- Blue Assistance Buttons – one located on every floor, when activated, this alarm will alert HUPD only. In addition to pressing the button, HUPD should be called directly, to provide specific details of the emergency.
- Red Kill Switches – located in the Prop Shop, when activated this switches will cut off all power in the shop. To be used when a power tool needs to be deactivated immediately. (NOTE – some tools may still have energized or moving parts, even if no power is being supplied. Remain cautious at all times.)
- First Aid Kits – located in the Prop Shop, on Stage, and in the Box Office. (Band-aids, anti-septic, etc.)
- Eye Wash Station – located on Stage and in the Prop Shop. Please alert the Technical Supervisor if used, so that they can be replenished.
- Fire Extinguishers – located throughout the building. Please alert the Technical Supervisor if used.
- AED Unit – located in Box Office. A trained individual should only use this. Please make note of its location, if asked by someone from emergency medical services.



FACT SHEET

EMERGENCY RESPONSE

WHO NEEDS TO BE TRAINED:

Anyone using the Farkas Hall Stage or Support spaces.

RISKS INCLUDE:

Bodily harm, even death. Damage to equipment and facilities.

GUIDELINES, RULES, & POLICIES:

- Splinter/Small cuts/Bruises – Most of these accidents can be dealt with on site, using a first aid kit. The Technical Supervisor should be made aware of the incident. All injuries should be followed up with a medical profession.
- Large Cut/Broken Bone/Loss of Consciousness – HUPD should be contacted immediately, use first aid kit to reduce effects of injury. Technical Supervisor should be contacted, and appropriate paperwork should be filled out.
- Fire/Natural Disaster – HUPD should be contacted immediately and fire alarms should be pulled. Fire extinguishers may be used to prevent fire from spread, but fire fighting should be left to the fire department.
- Robbery/Assault/ Suspicious Activity – HUPD should be contacted immediately, and blue emergency assistance buttons should be pushed. If possible, find a safe location to wait for HUPD's arrival.
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- First Aid Kits – located in the Prop Shop, on Stage, and in the Box Office. (Band-aids, anti-septic, etc.)
- Eye Wash Station – located on Stage and in the Prop Shop. Please alert the Technical Supervisor if used, so that they can be replenished.
- Fire Extinguishers – located throughout the building. Please alert the Technical Supervisor if used.
- AED Unit – located in Box Office. A trained individual should only use this. Please make note of its location, if asked by someone from emergency medical services.

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12. TRAINING & APPROVAL PROCESS

The mental and physical challenges of technical theater can be very rewarding, particularly in a venue like Farkas Hall. However, due to these challenges, it can also be a potentially dangerous activity for an untrained or unsupervised individual. In order to ensure the safety of EVERYONE, individuals or groups wanting to use the theatre must be trained and approved in its proper use.

Individuals or groups wishing to be trained and approved for use of Farkas Hall should contact the Farkas Hall Technical Supervisor. The Farkas Hall technical staff will try to be as accommodating as possible; however, priority will be given to individuals or groups who have upcoming production assignments. Approval is ALWAYS at the discretion of the Farkas Hall Technical Supervisor. If need be, a followup training session can be scheduled on an individual basis. At the end of a training session, if someone has proven themselves competent, they will be asked to sign and date the Training and Approval Checklist. This document will be kept on record in the Technical Supervisor's office at Farkas Hall.

Training sessions will consist of both practical and theoretical information. In addition, written literature and visual aids will be used to enhance comprehension of the subject material. For some areas of Farkas Hall, individuals will also be asked to perform small tasks, to further prove competence and understanding. . If an individual or group uses the Farkas Hall without prior permission or approval, the privilege of its use will be suspended. The following areas will require training and approval:

PROP SHOP

Training covers general shop safety, the use of bench tools (table saw, panel saw, chop saws, band saw, drill press, bench sander), handheld power tools (corded/cordless screw guns, jig saws, circular saw), pneumatic tools (framing nailer, finish nailer, upholstery stapler), and general hand tools (hammers, pliers, pry bars, screwdrivers, wrenches)

LADDERS & LIFTS

Training covers the proper use of all Farkas Hall ladders (aframe and extension) and the JLG personnel lift, and where each device should be used. This will include the appropriate use of fall protection.

COUNTERWEIGHT FLY SYSTEM

Training covers the basic operation of the counterweight fly system, the appropriate procedures for loading and unloading weight, common rigging scenarios, and operation during show scenarios.

STAGE EQUIPMENT

Training covers the proper use of all stage equipment (pit lift, ADA lift, main rag, fire curtain, FOH sound batten) and the appropriate safety precautions taken during operation.

FALL PROTECTION

Training covers the proper use of all fall arrest equipment located in Farkas Hall. Specific areas that require Fall Protection will also be covered.



TRAINING & APPROVAL

GENERAL SAFETY

Personal Protective Equipment

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Wear gloves when working with dangerous materials.

Appropriate Attire

- Closed Toe Shoes
- Shirts and Pants that can get dirty
- Long Hair tied back
- Work Aprons
- No loose clothing, scarves, ties, or jewelry

Emergency Response

- Fire Alarm Pulls – located throughout the building, when activated, this alarm will alert the Operations Center, and numerous emergency groups will respond. (Cambridge Fire Department, HUPD, EMS, etc.)
- Blue Assistance Buttons – one located on every floor, when activated, this alarm will alert HUPD only. In addition to pressing the button, HUPD should be called directly, to provide specific details of the emergency.
- Red Kill Switches – located in the Prop Shop, when activated this switches will cut off all power in the shop. To be used when a power tool needs to be deactivated immediately. (NOTE – some tools may still have energized or moving parts, even if no power is being supplied. Remain cautious at all times.)
- First Aid Kits – located in the Prop Shop, on Stage, and in the Box Office. (Band-aids, anti-septic, etc.)
- Eye Wash Station – located on Stage and in the Prop Shop. Please alert the Technical Supervisor if used, so that they can be replenished.
- Fire Extinguishers – located throughout the building. Please alert the Technical Supervisor if used.
- AED Unit – located in Box Office. A trained individual should only use this. Please make note of its location, if asked by someone from emergency medical services.
- Contact HUPD at x51212 for any and all emergencies.



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TRAINING & APPROVAL

PAINT SHOP

Paint Area

- Always wear work apron and rubber gloves.
- Label all mixed paint with show title and date.
- Clean all spills immediately with sawdust.
- Dispose of all old paint into a 5-gallon waste paint bucket
- Clean all brushes and rollers immediately.



TRAINING & APPROVAL

PROP SHOP

Table Saw

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Do not wear gloves, loose clothing, or jewelry that may catch in rotating parts.
- Keep the saw table free of tool and debris.
- The blade should project only a minimal distance above the cut, between 1/8" to 1/4".
- Never reach over or behind the blade with the table saw operating.
- Do not cut free hand. Always use the guide fence or miter gauge for a straight cut.
- Use a push stick to keep your fingers away from the saw blade.
- The saw should always be turned off and unplugged before making adjustments.
- Avoid standing directly behind the work piece when making a rip cut.

Panel Saw

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Handle the counterbalance with care.
- Do not use push sticks.
- Cross-cutting (vertical) must always be done from the top down.
- Ripping (horizontal) must always be done by moving the work piece through saw in the direction of the arrow on the saw motor.
- Never cut a work piece with a width smaller than that of the saw carriage.
- Always wait for blade to stop completely before changing positions.
- Feed work into the blade against the direction of rotation of the blade only.
- Avoid cutting nails.



TRAINING & APPROVAL

PROP SHOP

Drill Press

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Remove material or debris from the work area.
- Make certain the chuck key is removed before starting the tool.
- Never hold the work piece by hand. Always secure the work piece with a clamp
- Don't touch drill bit or cutting debris, as they are hot immediately after drilling.
- If something goes wrong, never attempt to correct a problem with the drill operating. Shut off and un-plug before any work is done.
- Never grab the chuck to stop a drill press.

Bench Sander

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Always keel your face and hands well clear of moving arts such as belts and pulleys.
- Forcing too much pressure can cause stalling, overheating of the tool, burning of the work piece and possible kickback of the work piece.
- Your work area should be at least 3 ft. to 4 ft. larger than the length of the stock, on all working sides of the sander.
- Always support your work piece with the table or backstop.

Jig Saw

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- The tool should be unplugged before checking or installing blades.
- Firmly position the tool's base plate/shoe on the work piece before turning on the tool.
- Keep your hands and fingers well clear of moving parts.
- After making partial cuts, wait till blade stops before removing from work piece.
- Know what is behind a cut before you make it.
- Maintain firm contact between the base and the material being cut.
- Remember that the blade may be hot immediately after cutting.



TRAINING & APPROVAL

PROP SHOP

Reciprocating Saw

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Use sharp blades, and always use the blade specifically for the job being done.
- Work piece must be clamped securely, and the shoe of the saw held firmly against the work.
- Always hold the tool by the insulated grouping surfaces.
- Allow the blade to stop completely, before removing from the work piece.
- Remember that the blade may be hot immediately after cutting.

Circular Saw

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Do not use a circular saw that is too heavy for you to easily control.
- Check the blade guard for proper operations before each use. Never defeat the guard.
- Make sure the power cord and extension cord are out of the blade path.
- Hold the saw firmly with both hands and secure the work piece.
- Set blade depth to no more than 1/8" to 1/4" greater than the thickness of the material being cut.
- Allow saw blade to reach full speed before engaging the work piece.
- NEVER overreach.
- Wait till blade has stopped completely before removing from work piece
- Never reach under the saw or work piece.
- Switch the tool off after each cut. Keep saw away from body until blade stops.

Band Saw

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Don't use the saw with tools, debris, or objects of any kind on the table.
- Adjust the upper guide of the saw so it just clears the work piece.
- Don't force material through the saw. Do not force small radius cuts.
- Provide adequate light for safe cutting.
- Keep hands away from blade. Use push stick to free work.
- Always wait for blade to stop completely before removing scrap from the table.
- Be mindful of small off cuts jamming in the slot.



TRAINING & APPROVAL

PROP SHOP

Router

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Install router bits securely, using the wrenches provided with the tool.
- Always face the cutter blade opening away from your body.
- Hold only the gripping surfaces of the router designated by the manufacturer.
- Keep your hands way from bits or cutter areas when the router is plugged in.
- Do not reach underneath the work while bits are rotating. Never attempt to remove debris while the router is operating.
- Always unplug router before changing bits or making adjustments.
- Make sure to secure work piece before engaging the router.
- The switch should be in the “off” position before plugging into the power outlet.
- Allow the router to reach full speed before feeding the router into the work.
- Never force a router.
- When removing a router from the work piece, always turn the base and bit away from you.

Screw Guns

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Use auxiliary handles supplied with the tool. Loss of control can cause personal injury.
- Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a “live” wire will make exposed metal parts of the tool “live” and shock the operator.
- Always be sure you have a firm footing.
- Be sure no one is below when using the tool in high locations.
- Hold the tool firmly.
- Keep hands away from rotating parts.
- Do not leave the tool running. Operate the tool only when hand-held.
- Do not touch the drill bit or the workpiece immediately after operation; they may be extremely hot and could burn your skin.
- Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin.



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TRAINING & APPROVAL

PROP SHOP

Pneumatic Staplers & Nailers

- Always wear safety goggles or safety glasses.
- Use a dust mask in dusty work conditions.
- Wear hearing protection during operation.
- Check lumber surfaces before nailing. Look for knots, nails, straps, hangers, etc. that could cause recoil or ricochet.
- Use a hammer or positive placement nailer when nailing metal joinery or irregular lumber.
- For placement work, keep hands at least 12 inches away from the nailing point at all times. Consider using clamps to brace instead of your hands.
- Always shoot nail guns away from your body and away from co-workers.
- Always disconnect the compressed air when: Leaving a nailer unattended; Travelling up and down a ladder or stairs; Passing the nail gun to a co-worker; Clearing jammed nails; Performing any other maintenance on the nail gun.
- Recognize the dangers of awkward position work and provide extra time and precautions.



TRAINING & APPROVAL

TRAINING CHECKLIST

The following is a checklist for the four major areas within the Farkas Hall that require training and approval. The Technical Supervisor will check each box, after each individual has proven competence in each area. A copy of this document will be kept on record in the Technical Supervisor's office.

1. GENERAL SAFETY

- Personal Protective Equipment
- First Aid Kits/Eye Wash
- Appropriate Attire
- Emergency Contact

2. PAINT

- Paint Area

3. PROP SHOP

- Table Saw
- Panel Saw
- Chop Saw
- Jig Saw
- Router
- Screw Guns
- Band Saw
- Chop Saw
- Bench Sander
- Circular Saw
- Reciprocating Saw
- Pneumatic Staple/Nail Guns

By signing this sheet I am indicating that I have attended an introductory training session and understand the potential hazards while working in the Farkas Hall. In addition, I assume responsibility for my actions, and the actions of those who are being supervised by me.

Print Name,
as it appears on HUID: _____ Class Year: _____

Signature: _____ 1st Training Date : _____

Signature: _____ 2nd Training Date : _____

Signature: _____ 3rd Training Date : _____

Signature: _____ 4th Training Date : _____



TRAINING & APPROVAL

LADDERS & LIFTS

General Ladder Use

- Properly set-up and use the ladder in accordance with safety instructions and warnings.
- Wear shoes with non-slip soles.
- Center body on the ladder and keep belt buckle between the rails while maintaining a firm grip.
- Move materials with extreme caution so as not to lose balance or tip the ladder.
- Have another person help with a heavy ladder.
- Have another person hold the ladder while you are working on it.
- Climb facing the ladder, move one step at a time and firmly set one foot before moving the other.
- Haul materials with a line rather than carry them up an extension ladder.
- Use extra caution when carrying anything on a ladder.
- Don't stand above the highest safe standing level. For a-frame style ladders, this is the second step from the top. For extension ladders, this is the fourth rung from the top.

Extension Ladder

- Safety considerations from above also apply to extension ladders.
- Make sure extension ladder is in locked position before climbing it. Locks should be fully engaged onto rung.

JLG Personnel Lift

- Before each use, the lift should be visually inspected for wear or damage.
- The power cord should be connected in such a fashion that it will not come unplugged during use.
- Only one person in the lift bucket at anytime.
- Never overreach by standing on mid- or hand-rails.
- Clear all tools, debris, or other items out of lift bucket after every use.
- All outriggers must be secured in their proper positions before use. Never remove outriggers while the lift bucket is in the air.
- There must be another person present when using the personnel lift, for emergency purposes.

Fall Protection

- Before each use, safety harnesses should be visually inspected for wear and damage.
- Harnesses must be fitted each time it is worn to the person wearing it. Make sure all belt buckles and clasps are engaged and locked.
- All lanyards must be visually inspected for wear and damage. Make sure all lanyards and snap hooks have been engaged and locked into their anchorage points and safety harnesses.
- There must be another person present while someone is working in an area that requires fall protection.
- The orchestra pit lift warning line system is required anytime the orchestra pit lift is moving.



TRAINING & APPROVAL

COUNTERWEIGHT FLY SYSTEM

Basic Operation

- At least two trained people are required; one to operate the line set the other to spot. When using the pin-and-rail system, three or more may required. Hard hats must be worn by all people on the stage.
- Use Farkas's official procedure each time a line is moved. This procedure is taught as part of the approval process.
- Never stand or walk under a moving line set.
- Never move a line set when someone is under it.
- There should be quiet on stage whenever line sets are flown.
- Rope locks should always be locked closed with the lock ring in place when line is not in motion.
- Label any line set that should not be moved for safety reasons. Never move line set that is labeled with a warning not to do so.
- If a line set begins to fall out of control DO NOT ATTEMPT TO STOP IT.

Loading/Unloading Weight

- At least three trained people are required; two on the loading gallery and a supervisor on the stage to test the line set, call commands, and spot.
- Hard hats must be worn by all people on stage.
- Remove any unnecessary items from pockets or which could fall off (this includes hard hats) before climbing up to the loading gallery.
- During the loading/unloading process, an unbalanced load condition exists. This is potentially VERY DANGEROUS. Use Farkas's official procedure each time a line loaded or unloaded. This procedure is taught as part of the approval process.
- Whenever possible, battens should be loaded at Low Trim. Counterweights should be the LAST THING LOADED, and the FIRST THING UNLOADED.
- Never load or unload weights when anyone is standing below the loading gallery.
- A spreader plate should be used at all labeled locations on the arbor. Arbor collars should remain fastened in place after loading and unloading.
- There should be quiet on stage whenever counterweights are being loaded/unloaded.
- Counterweights should never be stacked higher than the top of the kick rail and should be evenly distributed along the length of the loading gallery.
- Line sets should always be kept in balance. Never rely on the rope lock to hold an unbalanced load.
- If the line can't be perfectly balanced because the imbalance is smaller than the smallest weight available, it is usually better to leave the line arbor heavy.



TRAINING & APPROVAL

STAGE EQUIPMENT

Pit Lift

- Before using pit lift, the warning line system must be in place.
- Only two people may be on the lift while it is moving, the operator and a helper.
- Scenic elements and other stage equipment may be brought up to stage level using the lift. All loads must be sufficiently secured.
- When the orchestra pit is not in use, all e-stop buttons must be engaged and the pickle must be unplugged.

ADA Lift

- For the ADA lift to work, all of the pressure switches must be engaged.
- Before removing any of the trap plugs, the safety chain stanchions must be firmly in place.
- Only the person requiring the lift and an assistant may ride the lift during its operation.
- When not in use, all e-stop buttons must be engaged.

Main Rag

- When not in use the main rag should be left in its down position. This includes before and after all productions. Also, all e-stops buttons must be engaged.
- For non-show purposes, the speed of the main rag should never exceed half of maximum speed.
- For show purposes, the speed of the main rag may be adjusted, but is subject to the approval of the Technical Supervisor.

Fire Curtain

- When not in use the fire curtain should be left in its down position. This includes before and after all work calls or productions. Also, all e-stops buttons must be engaged.
- In the case of an emergency, please use the SR panel to close the fire curtain. If the SR panel is accessible, please use the Fire Curtain Release, located DSL.

FOH Batten

- When the FOH batten is not in use it all e-stops should be engaged and the pickle should be unplugged.
- When the FOH batten needs to be moved, make sure to undress any cable swag, to allow enough slack to lower the batten to a working height.
- The speakers hung from the FOH batten should never be struck.
- The FOH batten should never be loaded past its rated capacity, as per manufacturer's specifications.



Office for the Arts at Harvard

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TRAINING & APPROVAL

LIGHTING & SOUND

General Knowledge

- Never perform a task that YOU do not feel comfortable with.
- Only knowledgeable individuals will be allowed to operate the control boards or stations.
- Be aware of all scenarios that would require fall prevention devices, and how to use those devices.

Overhead Rigging

- Whenever hanging an instrument overhead, use rated safety cables, in such a fashion that reduces the possible distance an instrument can fall.
- Only hang instruments on approved and rated positions.
- All booms must either employ a boom base with sandbags or be tied off at the top of the boom
- Ground Supported booms MAY not exceed 10 feet in height.



TRAINING & APPROVAL

TRAINING CHECKLIST

The following is a checklist for the four major areas within the Farkas Hall that require training and approval. The Technical Supervisor will check each box, after each individual has proven competence in each area. A copy of this document will be kept on record in the Technical Supervisor’s office.

1. LADDERS & LIFTS

- A-Frame
- JLG Personnel Lift
- Extension
- Fall Protection

2. COUNTERWEIGHT FLY SYSTEM

- Basic Operation
- Loading/Unloading Weight

3. STAGE EQUIPMENT

- Pit Lift
- Main Rag
- FOH Batten
- ADA Lift
- Fire Curtain

4. LIGHTING & SOUND

- General Safety
- Overhead Rigging

By signing this sheet I am indicating that I have attended an introductory training session and understand the potential hazards while working in the Farkas Hall. In addition, I assume responsibility for my actions, and the actions of those who are being supervised by me.

Print Name,
as it appears on HUID: _____ Class Year: _____

Signature: _____ 1st Training Date : _____

Signature: _____ 2nd Training Date : _____

Signature: _____ 3rd Training Date : _____

Signature: _____ 4th Training Date : _____