51 Walden Rigging System
Users Guide

51 Walden Street
Concord, MA 01742

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1 Introduction

The stage at 51 Walden has a new rigging system that was installed in September of 2000. Anyone who plans to use this rigging system must demonstrate that they are familiar with the proper and safe use of this system. Overhead safety is the primary concern and the safety of the system is entirely dependent on the safe operation of the system and the quality of rigging performed by the people who use it. Remember, just because it is a new system doesn't mean it's safe!! Improperly attached loads, unbalanced weighting of the system and not loading the counterweight arbors properly dramatically increase the risk to everyone who is on the stage.

Rigging systems are a machine, and as such, they must be maintained and properly used. The new rigging system is capable of much heavier loads than the old system, which also significantly increases the potential danger. The maximum total load on any one batten is not to exceed the amount that can be balanced by placing counterweights on the arbor. This limits the load added to an empty batten to 480 pounds. With the added weight of the rigging hardware, there is the possibility of having approximately 7,000 pounds of material suspended over the heads of people on stage. Battens flown completely out will be 26 feet above the stage floor. Even a one pound lighting clamp falling this distance could easily kill someone on stage.

The importance of overhead safety can not be overstated. When someone is on stage it is analogous to having someone standing under a wrecking ball suspended from a crane. In fact, stage rigging is subject to the same laws and regulations used for construction cranes. Virtually everyone, even if they do give it a passing thought, assumes that it is safe. Unfortunately in far too many theaters, it is not. With the introduction of the new rigging system at 51 Walden comes a much higher expectation of overhead safety that will be enforced. A safety committee will be checking the quality of any rigging performed at 51 Walden on a regular basis and, in addition, members of the committee may perform spot checks at any time.

Any performance that is open to the public and charges an admission fee to that performance causes the organization producing the performance, and those involved in the organization, to be labeled "professional" in the eyes of the law. It does not matter if you are a non-profit community theatre, a group of friends who decides to put on a show, a dance group, or a Broadway production company. The same rules, regulations and laws apply to everyone – no exceptions!!

As "professionals" in the eyes of the law, this means that any organization that holds performances for a paying public takes on a tremendous responsibility for the safety of actors, stage crew, technical crews, house crew and the public that comes to see the performance. Those involved in the rigging aspects of the production are, perhaps, taking the largest risk in terms of *accountability* and *liability* for the safety of anyone on stage. Rigging accidents, when they occur, can be catastrophic and law suits often follow. Liability insurance is a must for any organization, and if you are involved in rigging on a regular basis, personal liability insurance on the order of one to two million dollars is a good idea.

A final introductory note – While this document describes some basic do's and don'ts of stage rigging as it pertains to the rigging at 51 Walden, and rigging in general, it is *not*, by any stretch of the imagination, to be considered a rigging course. Anyone who works with stage rigging should have attended a certified rigging class just to cover the basics. These classes are available in the Boston area every 12 to 24 months. A "quick" course may last two days and only cover a few basics. A general, basic, rigging course takes a week and a full course takes about 12-13 weeks to complete.

2 Counterweight System Operation Outline

This operation outline lists the major operational procedures that must be followed when operating the rigging system. The remaining sections of this manual go over these and other key points in additional detail.

- Overhead safety is the primary concern.
- Maximum load on any single batten is 480 pounds.
- Line sets must always be balanced.
- Use extra precautions when adding a heavy object to the rigging system. (See manual)
- Rope locks are not designed to hold more than 50 pounds of imbalance in the line set.
- Never add more weight to the arbor than what will fit between the arbor rods.
- Stagger notched ends of counterweights.
- Large weights are 30 pounds, Small weights are 12.5 pounds.
- A spreader plate must be used when the weight stack reaches approximately 2 feet high.
- The locking collars must ***always*** be locked!
- When moving a line set:
    - Make sure the area under the batten is clear.
    - Call out a warning such as “Pipe 6 coming in!”
    - Make sure you get an “all clear” from people on the stage.
    - With a firm grasp on the handline, release the rope lock.
    - Begin moving the batten.
    - Bring the batten to rest using your arm muscles – do not use rope lock as brake!
    - Set the rope lock and place the locking ring over the handle.
    - Announce that the line set is locked.
- All rigging hardware shall be forged and rated for overhead use.
- Any object flown from the system should be hung in compression. (See Manual)
- All lighting instruments must have properly attached safety cables on them.
- Audience members should never be allowed upstage of the proscenium arch.
- Stage Manager, Set Designer and Lighting Designer must work within the system limits.
- At a minimum, a short formal rigging course is STRONLY recommended for all users.
- Do not use/operate the system if you are unwilling to accept the liabilities involved.

3 Persons with Rigging System Responsibilities

3.1 Producers

Producers should read this guide to be made aware of the fact that they *can* be held accountable and *liable* if an accident happens due to the fact that they are the "managers" of the entire production. A producers best insurance is to have a technically competent stage manager and crew.

3.2 Technical Director and Safety Committee

The technical director (TD) has the responsibility to see that all of the equipment in the theatre is properly maintained. At 51 Walden, this generally includes the lighting and rigging systems while the operation and maintenance of the workshop, scene dock, sound systems, and general building issues are overseen and maintained by other individuals. Members of the safety committee have overall responsibility to check all aspects of building safety issues on a regular basis.

3.3 Stage Managers

The stage manager (SM) for any production has responsibility for the day-to-day safe use of the rigging system. In addition, the stage manager has the authority to enforce safe rigging practices and limit the amount of weight that is placed on any of the battens. Set designers, lighting designers and stage crew all come under the authority of the stage manager in regards to use of the rigging system.

Although set designers and lighting designers often do their work when the stage manager is absent, stage managers should always look at the battens before rehearsal to see if any new set pieces, soft goods, or lighting equipment has been added since the last rehearsal. If possible, check with the appropriate crew head to verify that it is safe to use the stage. It is also good practice to bring those battens in that have had the loading changed to check the balance on the line set and to check all attachments for safety.

One important responsibility of the stage manager is to insure that one or two members of the stage crew monitor the stage immediately after the performance is over to prevent audience members from wandering up on stage. "Stage savvy" audience members may be allowed on stage after the house is empty but the must be escorted at all times. Children, unless they are cast members, should never be allowed on stage.

3.4 Set Designers/Builders

Set designers have the responsibility of designing any set pieces that must be flown in such a way that they do not exceed the rated load of the batten, and that the piece being flown is designed in a way that allows it to be safely attached to the batten. All scenery must be hung under compression *NOT* under tension. In other words, all scenery must be supported from the bottom and the weight carried up to the batten. No scenery (flat, etc) shall be flown suspended from the top rail of the piece being flown – curtains and other "soft goods" are the only exceptions to this.

Set builders are responsible for the safe attachment of set pieces to the batten, and are frequently responsible for the attachment of soft goods (teasers and legs) to the battens to prevent sight lines from the audience from reaching into the stage wing and fly areas.

3.5 Lighting Designers

In many cases the lighting designer ends up loading a batten more than anyone else. Any soft goods that falls to the stage floor will give anyone a good scare but a falling lighting instrument is likely to kill. The lighting designer (who usually hangs the lights as well) must insure that all the lighting instruments are firmly clamped to the batten and that all safety cables are properly installed on all instruments and accessories. All electrical cables must be secured to the batten using tie line at regular intervals. Gaff tape may also be used. Never use Duct tape or masking tape anywhere on stage.

NOTE: The older lighting instruments are available for general use by anyone using the stage. There are also new lighting instruments that are the property of the Concord Players. These newer lighting instruments are identified by yellow labels with black lettering in the form "CPxx" where "xx" is a number. These lights are not available for general use. Rental of these lights for use by other groups is at the discretion of the Concord Players.

3.6 Stage Crew

Any person who operates the rigging system either during a rehearsal or performance must also be trained and demonstrate proper use of the system. It is the responsibility of the stage manager to insure that any stage crew members that operate the rigging are properly trained.

3.7 Safety Committee

51 Walden has a safety committee that monitors safety issues at 51 Walden. One or more members of this committee will usually do a walkthrough of the stage area within a week of a show's opening to see if there are any safety concerns.

4 Rigging System Description

The rigging system at 51 Walden consists of ten battens, numbered one through ten from down stage to up stage. The fire curtain and the dead hung main curtain do not have batten numbers. Line set 1 and line set 2 have shorter battens due to the dimmer shed. Although any batten could be configured for any purpose, most shows would work well using the battens as follows:

Batten #	Weight Limit	Loc from Plaster line	Normal Use
1	480 pounds	1 foot 6 inches	1st Drop
2	480 pounds	2 feet 8 inches	1st Electric
3	480 pounds	6 feet 1 inches	General Use
4	480 pounds	9 feet 6 inches	Border (Teaser)
5	480 pounds	10 feet 6 inches	Mid Stage Traveler
6	480 pounds	12 feet 4 inches	2nd Electric
7	480 pounds	14 feet 5 inches	General Use
8	480 pounds	17 feet 6 inches	Border (Teaser)
9	480 pounds	18 feet 6 inches	3rd Electric / Cyc Lights
10	480 pounds	21 feet 0 inches	Cyc

Table 1 – Batten Weight Limits, Location, and Normal Use

The weight limit represents the maximum loading that may be applied to an empty batten. The battens are not always on 6 inch center increments due to the structural layout of the grid.

The weight limit for any batten is reached when it is not possible to load any additional counterweights on the arbor and the line set is in balance. It is not possible to load the top 11-12 inches of the arbor with weights because this space is needed to tip one end of the weights up to load and unload them. Each arbor has two red weights at the bottom of the arbor. These weights should never be removed. They are used to balance the empty line set. For information on loading and unloading counterweights and calculating the batten load, see section 4.2.

The main curtain is dead hung and cannot be flown out. “Legs” (or “torms”) to block sight lines into the stage wings could be hung from the counterweighted battens, however several sets of ten foot long wooden battens on non-counterweighted lines are in the process of being installed for this purpose. These are not to be adjusted during a performance for safety reasons. Any legs that must be moved during a performance must be suspended from a counterweighted batten.

A diagram showing the layout of the rigging system is included at the end of this document.

5 General Rigging Practices

This section outlines some very general rigging practices that must be followed.

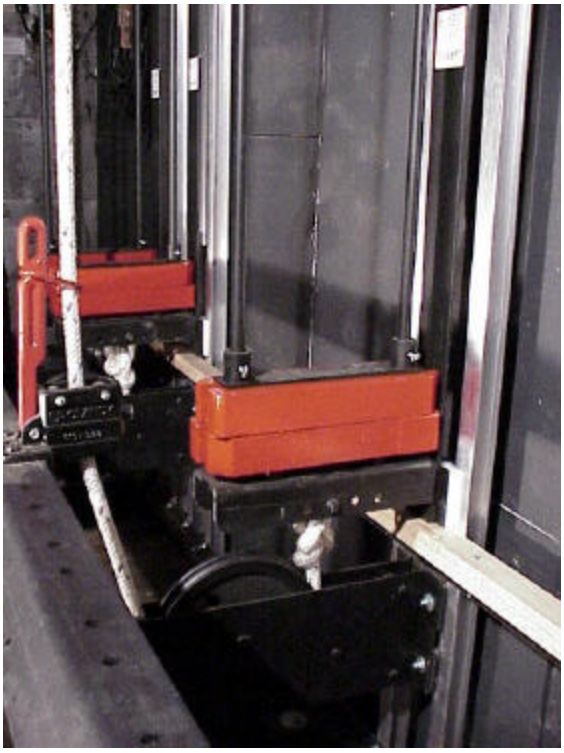


Photo 1
This photo shows a counterweight arbor at 51 Walden with two red “pipe weight” counterweights on the arbor (unloaded batten). Note the corner cuts on the counterweights alternate sides, the locking collar is on top of the counterweights and thumbscrews tightened to lock them in place.

5.1 Moving the Battens

This section outlines the proper procedure for operating a line set. For the purpose of this section it is assumed that the line set is already balanced, checked for safety and ready to operate.

5.1.1 Step 1 – Make sure the area under the batten is clear

Before doing anything – make sure that the area under the batten is clear of all personnel. Do not have anyone under the batten when the rope lock is released. Always hold both hand lines in one hand before you release the rope lock. This will give you immediate knowledge of how well the line set is balanced. If you have any question about the balance, wrap the lines around one another as you release the rope lock and slowly untwist the lines. If possible, have a spotter on stage to watch the batten and keep the area below the batten clear of cast and crew.

5.1.2 Step 2 – Announce that the batten is about to move

Just prior to moving the batten announce in a loud, clear voice that a batten (pipe) is coming in (being lowered) or going out (being raised). For example, if you plan to lower batten #9 then say "Pipe 9 coming in!" or "Upstage pipe coming in!" Seasoned cast/crew will usually respond by saying "All Clear!" You should get an acknowledgement from someone on the stage before you move the batten. The *only time* you don't do this is during actual performances and final dress rehearsals.

5.1.3 Step 3 – Release the rope lock and move the batten

With a very firm grip on the hand line, lift the locking ring off the rope lock handle, release the rope lock and begin moving the batten in the desired direction. Be aware that at 51 Walden the new battens extend well into the wing space on both sides of the stage. So much, in fact, that when bringing a batten in, you must be careful that you don't hit yourself in the head with the batten you are bringing in. If you feel any change in the amount of force it takes to move the batten, stop the batten, lock the hand line with the rope lock and investigate the problem. One case where the amount of force will change is when a curtain or traveler is being lowered to the floor. As the batten is lowered, more and more of the curtain weight will be on the floor which will make the batten harder to bring in. This type of weight shift is normal but "sudden" weight shifts are not and should be investigated immediately.

5.1.4 Step 4 – Bring the batten to rest and lock the hand line

As the batten reaches the desired height, slow it down and bring it to a halt by using your arm muscles. *Never* use the rope lock as a brake! Only apply the rope lock after the batten has come to rest. Once the rope lock has been set, place the lock ring over the handle of the rope lock.

5.1.5 Step 5 – Announce that that batten is secure

After the rope lock has been set and the locking ring is back on the handle, announce that the batten is secure by saying "Locked!" in a loud clear voice. Never leave a line set unlocked.

5.2 Counterweights: Use of and Loading/Unloading

For the rigging system to operate efficiently and smoothly the load on the batten must be balanced by the counterweights placed in the arbor. Each arbor (or counterweight carriage) at 51 Walden is four feet high. The rigging system at 51 Walden uses the "narrow" counterweights. As a gauge, no counterweights should be wider than the red counterweights at the bottom of each arbor. There are two sizes of narrow counterweights. The thick (about 2 inches) weights are

approximately 30 pounds each and the thin (a little over ¾ of an inch) weights are approximately 12.5 pounds each. At the bottom of each arbor are two counterweights that are painted red. These red weights are what is required to balance an empty pipe and should never be removed from the arbor. The approximate weight on the batten can be estimated on a balanced line set by counting the number of large weights and multiply this number by 30 and add the number of small weights multiplied by 12.5.

Thick weights = approximately 30 lbs.
Thin weights = approximately 12.5 lbs.

The rope locks are designed to hold a maximum imbalance of 50 pounds. When loading a pipe with lighting equipment, for example, it is a good idea to clamp two or three lights to the batten and then "rebalance" the system by adding counterweights to bring the system back into balance. If many lights are to be hung, it is permissible to make the system slightly "arbor heavy" by two or three lights worth of weight, lower the batten and then put on four to six lights to make the system "batten heavy" by two or three lights worth, then rebalance the system. Never load an empty batten with lighting equipment than then rely on the rope lock to hold more than 50 pounds while you load weights on the arbor. *This is asking for an accident to happen.* If the rope lock lets go, get out of the way and have your checkbook ready to pay for replacement lighting fixtures, the hospital bills of anyone who is injured and for any law suits that follow.

If flying a heavy set piece, it may be impossible to balance the system a little "arbor heavy" to start with and have it a little "batten heavy" after the set piece is attached. In this case it would be necessary to tie several heavy ropes to the batten and have two or three people on the grid to help haul the batten up and HOLD it while counterweight is being added. Likewise when it comes time to remove a heavy load. There should be two or three people on the grid with heavy ropes to hold the batten in place while some portion of the weight is unloaded from the arbor before the batten is lowered. Do not lower the batten and remove a heavy load with out unloading an appropriate amount of weight from the arbor first! Otherwise the arbor will be at the grid level with a lot of weight on it and releasing the rope lock will cause the arbor to drop at a high rate of speed! Anyone attempting to control the decent of the arbor will either get severe rope burns or will be lifted off the stage floor if they have a tight grip on the hand line. Remember, this new system has a much higher weight capacity which also increases the danger!!

In an ideal situation, a line set should be balanced so it does not tend to move when the rope lock is released. If there is any imbalance, it is suggested that the arbor be slightly heavier so the batten will tend to drift up rather than down where it might hit someone.

It is best to have two people working together loading and unloading counterweights. One person does the actual loading/unloading of the weights from the arbor while the other person is responsible for locating additional weights (or storing the weights being taken off) and assist with the proper placement of the spreader plates and locking collars on the arbor. The counterweights are notched in one corner. When placing them on the arbor, the notch should go on alternating sides (left/right) as they are stacked. This makes it easier to remove the weights when it comes time to take them off.

Each arbor comes with two spreader plates. When the weight stack gets to be approximately 18 inches high (a little below the center of the arbor) the bottom spreader plate should remain at this level. There are labels on the arbors to show the approximate location where this spreader plate should go. The upper spreader plate is ALWAYS on top of the weight stack and MUST BE LOCKED into position by the locking collars before the arbor is moved. The locking collars prevents counterweights from coming off the arbor should a runaway condition occur. This happens when the arbor rises to the grid at a high rate of speed and suddenly hits the carriage stop at the top of the track. If the counterweights are not locked into position they will continue to move upward and possibly come off the arbor. Always make sure the locking collars are LOCKED after loading or unloading the arbors.

Photo 2
Locking Collars must be locked at all times!

The arbors are “full” when the weight stack is 11-12 inches from the top of the arbor. This space is needed to tip the counterweights at an angle so they fit between the rods on the arbor.

Only the counterweights designed to fit into the arbor are to be used and they must be locked in place by the locking collars. Under no conditions is more weight to be added to the arbor by hanging extra weight off of the arbor. Once the arbor is full, the weight limit for the batten has been reached. If the line set can not be balanced, weight MUST be removed from the batten.

The hand lines may be marked to show trim levels using spike tape only. Do not use masking tape or duct tape as these tapes are hard to remove and leave a sticky residue. All tape is to be removed from the hand lines during strike.

5.3 Rigging Soft Goods

Soft goods such as legs and teasers must be checked at regular intervals for flamertarding and signs of wear. This is the responsibility of the technical director and the safety committee at 51 Walden. However, if a user suspects a problem with any soft goods, Inform the FOPAC office and the safety committee will investigate. Any soft goods brought in for a production must be flame retarded.

Legs and teasers have tie lines in grommets about every six inches. To attach the material to a batten, simply attach the tie line to the batten as if tying a shoelace. Curtains and drops are usually attached in a similar manor

Attaching a traveler involves attaching a curtain track to the batten before the curtain is hung. The curtain track has several attachment points along its length. The mounting hardware should be kept with the curtain track and consists of a short length of chain (about 18 inches) and a shackle for each mounting point. The line set should be made slightly arbor heavy before the batten is brought in and the curtain track attached. Once the track has been attached, the batten should be flown out and the line set made arbor heavy again. Then, the batten is brought back in and one curtain attached to the track. Again the batten is flown out and the line set rebalanced so it is arbor heavy again to attach the other curtain. After both curtains have been attached the batten is taken all the way out and the line set rebalanced. Load the counterweights as outlined section 5.2.

Please do not let soft goods pile up on the stage floor when they are lowered. For teasers or the cyc a good “trick” is to line up 10-12 chairs across the stage directly under the teaser (or cyc) with

them alternating direction (facing upstage / downstage) to “catch” or “hold” the teaser (cyc) off the stage floor. This is especially true for the cyc since it will easily pick up dirt from the stage. If you must lay any soft good on the stage put something on the stage floor to prevent the leg (teaser / cyc) from picking up dirt from the floor.

All soft goods must be flame retarded. By law, any fabric used on stage must be flame retarded. This includes fabric on furniture as well as costumes.

There is a limited amount of soft goods available from FOPAC to provide masking of the stage. This material is available for general use by all users of the stage. An exact list was not available at the time this was written. A “best guess” estimate is shown in Table 2 below:

QTY	***DESCRIPTION***	***SIZE (h x w feet)***	***COLOR***
4	Legs	20 x 10 (estimate)	Flat Black
2	Border/Teaser	4 x 40 (estimate)	Flat Black
1	Cyc	20 x 60 (estimate)	Dark Tan

Table 2 – FOPAC Soft Goods List (estimated qty and size)

The Concord Players own most of their own masking, as well as a cyc. These items can *not* be counted on as being available for use by other groups using the stage. In general, the Concord Players will strike all of their lighting equipment and soft goods when a show closes. Use/rental of Concord Players lighting instruments and soft goods by other groups is at the discretion of the Concord Players. Concord Player specific lighting equipment is identified by labels with “CPxx” on them where “xx” is a number. Concord Players soft goods have a label on them near the top center of each piece that identifies them. When not in use on stage, Concord Players soft goods are stored in large plastic tubs marked “CONCORD PLAYERS” along with a description of the contents. Do not remove or use the soft good from these tubs unless you have obtained permission from the Concord Players.

The Concord Players own the following soft goods:

QTY	***DESCRIPTION***	***SIZE (h x w feet)***	***COLOR***
6	Legs	20 x 10	Flat Black
3	Border/Teaser	6 x 42	Flat Black
1	Cyc	16 x 40 (estimate)	Off White

Table 3 – Concord Players Soft Goods List

5.4 Rigging Set Pieces

Many people are injured each year by dangerous overhead rigging performed by people who have had absolutely no training in this area and often have never even read a book about it. Most of their rigging is based on their “common sense” and the fact that “it looks strong enough. If you plan to get involved in stage rigging it is strongly recommended that you take formal training courses in this area. A few general guidelines are listed below

5.4.1 What not to use

The list of things that have been used for rigging set pieces from battens is almost endless. A short list of the more common things that have been used include:

Duct Tape	Gaff Tape	Tie Line
Clothesline	Fishing Line	Twine
Decorative chain	Electrical wire	Eye Bolts

Cast wire rope clips	Carabineers	U-Bolts
Dog Chain	String	Screw Eyes
Chain & bolt combinations	Monofilament	Chair clamps
All thread (threaded rod)	Pipe Hangers	Picture Frame Wire
S-hooks	“Hardware Store” Rope	Piano Wire

None of the items on the above list should ever be used for overhead rigging. Check the package of any rigging hardware you are thinking of using from local stores and in almost all cases it will say “Not Rated For Overhead Use.” Stage rigging is considered as “overhead rigging” and is subject to all the laws and regulations that apply to cranes that are used to lift material at construction sites.

Any of the above material found being used for rigging done at 51 Walden is subject to immediate removal from the building by any member of the Safety Committee – with or without prior notification. You will NOT be reimbursed for hardware that is removed! It is in your best interest to do your rigging correctly the first time!

It is strongly suggested that you avoid the use of turnbuckles whenever possible. They are very poor at taking side forces which cause them to break easily. If you do use them, they must be forged, rated for overhead use and have the manufacturer’s stamp on them. NOTE: “China” is *not* a manufacturer!

5.4.2 Types of hardware to use

There are several golden rules to follow when performing overhead rigging.

- Only use hardware that is rated for overhead lifting.
- Know who the manufacturer is on every piece of hardware used.
- Wire rope clips and shackles must be forged and rated.
- Chain must be rated for overhead lifting.
- Wire rope must be uncoated aircraft cable (usually 7x19) rated for overhead use
- Only Grade 5 or Grade 8 nuts/bolts are to be used.
- The heavier the set piece, the more important it is to use batten clamps to suspend it.

Photo 3 - Showing Trim Chain, Shackle and Batten Clamp

If you use rope or wire rope (preferred) never exceed the Working Load Limit (WLL) of the rope. Do not confuse this value with the tensile or (breaking strength) of the rope. The WLL of a rope is on the order of 1/7th to 1/10th of its breaking or tensile strength. This means that if you want to suspend a 20 pound weight, you must use rope with a breaking strength of at least 200 pounds. If you buy rope for doing your rigging you must be able to provide proof of its rating to any member of the safety committee. Otherwise the rope must be removed.

The most common way to support flown set pieces is to use wire rope with forged and rated wire rope clips. Wire rope clips from Crosby are highly recommended and can be identified by a red U-bolt and large, beefy saddle with the “Crosby”, “Crosby Group” or “CG” stamped on the saddle. Follow the installation instructions carefully to get the proper orientation, spacing, and proper torque on the bolts. For heavier pieces Chain that is forged and rated for overhead lifting along with shackles are used. The chain must have the manufacturer’s stamp on every 5th link of the chain.

One other important point is flown set pieces must be supported by the bottom of the piece whenever possible. That is, the wire rope or chain should extend to the bottom of the piece being flown so the piece is in compression. When supported from the top the piece is in tension and tends to pull itself apart.

Never fly people from this rigging system. Flying people requires special rigging and special training. Contact Rick Shamel who will put you in contact with a consultant that can be hired to do this work. Often, a 6 to 9 month notice is required.

6 Rigging References

6.1 General Rigging Supply Sources

High Output
184 Everett Street
Boston, MA 02134
TEL: 617-787-4747
FAX: 617-787-4666
www.highoutput.com

6.2 Local Sources of Crosby Hardware

C.G. Edwards Tel: 617-268-4111 – about a 15% discount for qtys over 100

Eastern Sling Tel: 617-464-4422 – discounts start if total is over $1,000.00

6.3 Suggested Reference Books

These books are available from High Output.

- *Stage Rigging Handbook* (2nd Edition) by Jay O. Glerum ($25)
- *Backstage Handbook* by Paul Carter ($17)

6.4 Rigging Courses

Monitor www.highoutput.com and www.riskit.com for courses in the Boston area. You can also request to be put on a mailing list though these websites. What you don't know *can* kill you or someone else. Also keep in mind that ignorance of the laws and safety regulations will not protect you in court. If you are involved in a show that goes before a paying audience, you are considered to be a professional in the entertainment business in the eyes of the law. To be in that business you must comply with the laws and regulations of that business. Be sure to get the formal training that you need.

6.5 Any Questions?

A binder that describes the equipment is available backstage at the stage manager station on stage right. DO NOT REMOVE THIS BOOK FROM THE STAGE! If you need a copy of any of the sheets in the binder, please see Cathy Chick at the FOPAC office. Additional copies of this document are available at the FOPAC office. This document is also available in soft copy as a PDF file.

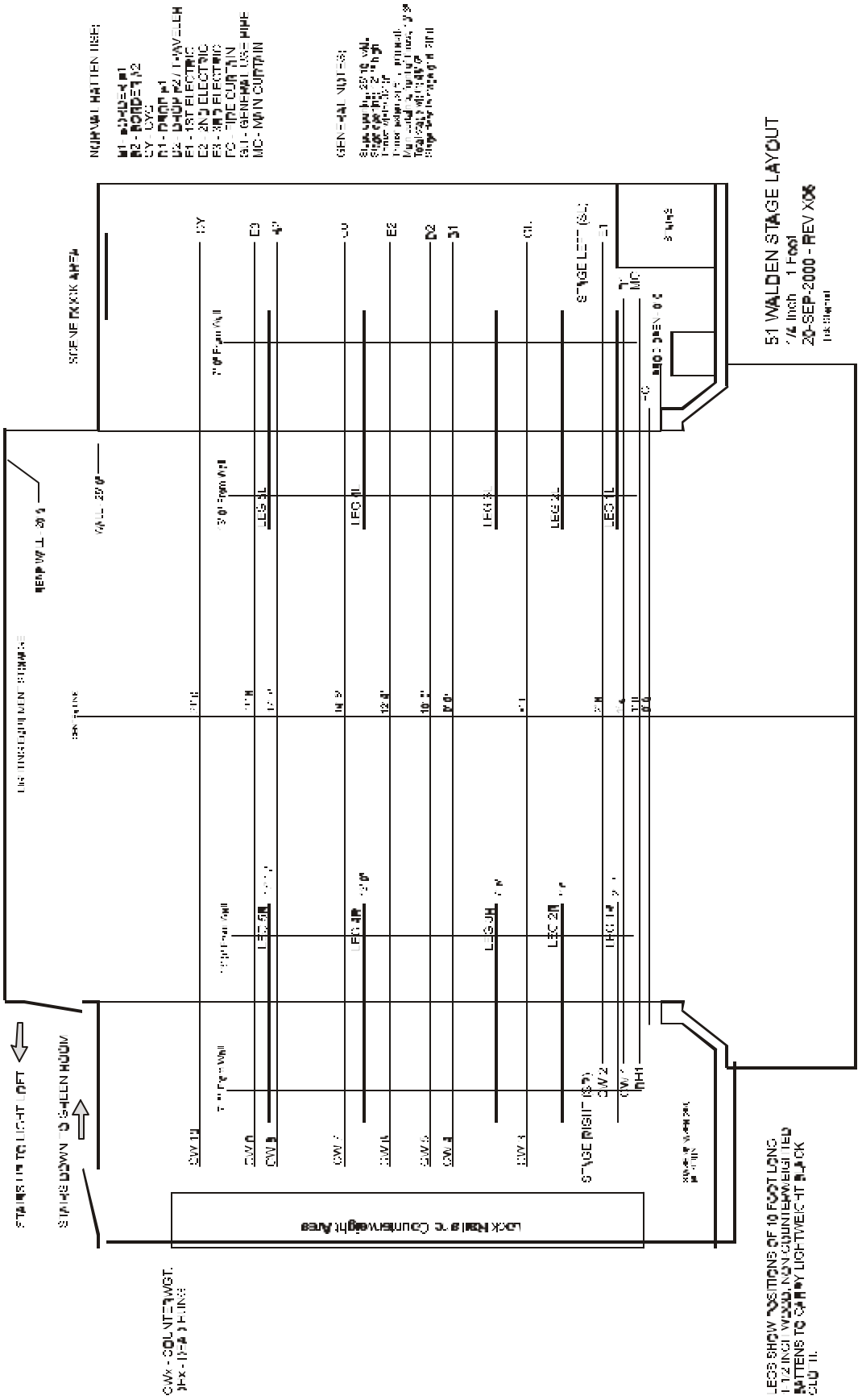
Don't guess if you aren't sure what to do! Contact Rick Shamel, Concord Players Technical Director, TEL: 978-263-1045, or email at rshamel@gis.net and/or rick.j.shamel@intel.com if you have any questions.

7 Stage Layout Diagram

The next page contains a drawing of the stage layout. Note that this drawing has been reduced in size in order to fit on an 8-1/2 by 11 inch page and is not drawn to the scale indicated on the

page. Key dimensions are given on this diagram which should be good enough for general use. A larger (11 x 17 inch) copy of the drawing is posted on stage right and copies are usually available from the FOPAC office (Kathy Chick) or by contacting Rick Shamel (see section 5.5 above).

At the time of this writing, the wood battens for the legs are still in the process of being installed. The final position and quantity may differ from the diagram on the next page.


51 WALDEN STAGE LAYOUT
20-SEP-2000 - REV X08
STAGE RIGHT (SR)
STAGE LEFT (SL)
Lock Rail & Counterweight Area
LEGS SHOW POSITIONS OF 10 FOOT LONG
BATTENS TO CARRY LIGHTWEIGHT BLACK