

# BACKstage

## Technical Theatre for High Schools

### Rigging Terminology

**Arbor Pit:** Opening in the stage floor under the arbors that allows counterweight arbors to travel below stage level  
Synonym: Arbor Well, Counterweight Pit, Well

**Arbor Rod:** Vertical, round metal members of a Counterweight arbor

**Balance:** When counterweight arbor load equally compensates the suspended load  
Synonym: In Balance

**Batten:** Horizontal pipe, tube, or other structural shape 1) for hanging scenery, lighting, curtains, etc.; 2) in a pocket of or attached to a fire safety curtain  
Synonym: Pipe

**Batten Heavy:** See also: Out of Balance

**Block:** An assembly of one or more sheaves in a housing designed to support one or more lines

**Body Harness Component** of a personal fall arrest system consisting of straps that adjust to fasten around the body; use requires training  
Synonym: Harness, Safety Harness

**Bowline:** Popular knot that is used extensively because it is secure and easy to undo

**Box Truss:** Truss consisting of 4 linear members

**Breaking Strength:** The load at which failure will occur in a component

**Breasting:** Laterally moving a suspended object

**Bridle:** Two or more support lines running from multiple points to a single point

**Bull Line:** Line used to lift or control an out of balance line set  
**Carabiner:** Hardware clip used for quick connections; may be load rated  
Synonym: Biner, Crab, Krab

**Chain Hoist:** Manual or electric geared mechanical device that uses chain for lifting  
Synonym: Chain Motor, Chain Fall, Hoist

**Compression Fitting:** Swage fitting used to terminate wire rope by means of crimping the fitting onto the rope  
Synonym: Crimp, Nicopress<sup>®</sup> Sleeve, Oval Sleeve, Swage, Wire Rope Sleeve

**Counterweight:** A weight used to balance the load on a line that is being raised, lowered, or held in position  
Synonym: Brick, Pig, Stage Weight, Weight

**Counterweight arbor:** A guided, movable rigid carriage assembly used to hold counterweights and to counterbalance a load.  
Synonym: Counterweight Carriage

**Counterweight Loader:** Person who loads and unloads counterweight arbors  
Synonym: Loader

**Dead End:** End of a rope or part of a device that is not active or load carrying  
Synonym: Bitter End

**Dead Hung:** Suspension of an object in a fixed, nonadjustable position

**Design Factor:** A ratio of the design load to the breaking strength of a material or component.

**End Stop:** 1) Position at the end of a traveling device; 2) Mechanical device that physically limits travel

**Fire Safety Curtain:** Fire resistant barrier which closes off the proscenium opening in case of fire  
Synonym: Asbestos (obsolete term), Fire Curtain, Proscenium Fire Safety Curtain, Safety Curtain

**Fly Loft:** The space between the roof and the performance area that is not visible to the audience  
Synonym: Flies, Fly House, Fly Tower

**Fly Rail:** Operating position for a theatrical counterweight fly system  
Synonym: Rail

**Go No-go Gauge:** Piece of metal with slots that measures the accuracy of: 1) a crimp; 2) the spacing of chain links

**Gridiron:** Over stage support structure consisting of regularly spaced members permanently affixed to the venue to support equipment  
Synonym: Grid

**Guide Shoe:** A component of a counterweight arbor assembly that engages the guide rails in order to maintain vertical alignment over the length of the arbor travel

**Head Block:** The stationary block assembly above and closest to the counterweight arbor or pin rail. The head block permits lift lines to change direction. In some counterweight systems, the head block is also grooved to allow the operating line to change direction by 180 degrees.

**Hemp House:** Venue that uses ropes and sandbags primary rigging components

**Lanyard:** Component of a personal fall arrest system that connects the safety harness to the anchorage point; use requires training

**Lift Line:** Any fiber or wire rope reeved through block(s) and attached to a load. Lift lines operate singly, as spot lines, or in "sets" of several lift lines working together to support a load.

**Line Set:** A system of multiple lift lines, operated together to raise, lower, or suspend a load; all of the mechanical, component subsystems required for supporting, positioning, and operating those lift lines as a system.

**Loading Bridge:** A load-bearing, elevated personnel access and work area, located to permit counterweight loading and unloading at the arbor.  
Synonym: Loading Gallery

**Locking Collar:** A device placed on a counterweight arbor rod to reduce unintended vertical movement of counterweights on the arbor.

**Locking Rail:** A structural railing that supports the rope locks.

**Loft Block:** An overhead block through which one or more lift lines pass before being attached to the batten. A loft block typically permits the change of lift line direction in the vertical plane.

**Operating Line:** The line that an operator pulls to move, position or hold a counterbalanced load  
Synonym: Hand Line, Purchase Line

**Personal Fall Arrest System:** System used to prevent an individual from falling from a working level; use requires training

**Rigging:** General term for arrangements of hardware and systems for the raising, lowering, and suspending of scenery, properties, lighting, and similar loads

**Rope Lock:** A positioning device, located on the locking rail that holds an operating line of a balanced counterweight set and prevents unintended movement.

**Shackle:** U shaped fastening device secured by a bolt or a pin through holes in the ends of the two arms  
Synonym: Round Pin Shackle, Screw Pin Anchor Shackle; Pin Anchor Shackle

**Single Purchase:** A system of rigging employing weights, blocks and lines to hold or move a load of similar weight, using a 1:1 mechanical advantage for counterweight and batten load.

Synonym: Single Reeve

**Spreader Plate:** Plate that is installed between counterweight arbor rods to keep the rods from spreading during rapid travel or impact, preventing counterweights from falling out of the arbor.

**Spike:** Act of inserting a spike ribbon through an operating line See also: Spike Ribbon

Synonym: Stab

**Swaging Tool:** Manual or hydraulic tool for crimping compression fittings

Synonym: Nicopress<sup>®</sup> Tool

**Tension Wire Grid:** System of interwoven wire rope that serves as a working platform

Synonym: Cable Grid, Izenour Grid, Sky Deck<sup>®</sup>, Tension Grid, Wire Grid

**Thimble:** A grooved fitting around which a rope is bent to form an eye. It supports and protects the rope to prevent kinking and wear

**Toe Rail:** Metal plate at the bottom edge that prevents objects from sliding through the opening

**Trim Chain:** A length of chain and fittings used to connect a lift line to a batten (or other load) and adjust its level relative to the other lift lines along the batten

**Trim:** To bring a rigging element to a defined height  
Synonym: Trim Height

**Wire Rope Clip:** Mechanical device used for terminating wire rope by means of a saddle, a U bolt and two nuts  
Synonym: Crosby

**Working load limit (WLL):** The maximum rated capacity of a component or system during normal operating conditions, as determined by the component manufacturer, or as determined by a qualified person for a specific application

\*Terminology derived from eSET Counterweight Rigging Lexicon and ANSI E1. 4 (2016): Entertainment Technology - Manual Counterweight Rigging Systems [www.esta.org](http://www.esta.org)