



**GEORGIA
THESPIANSSM**

TECH CHALLENGE GUIDE

SHOWING OFF THE DARK SIDE

Technical Theatre

Adapted from the EdTA Tech Challenge Guide and Terry McGonigle

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Introduction

Each troupe can bring one team of four (4) thespians from the same school. All needed equipment will be provided **except for gloves and wrench/ light tool for the light hang and focus. Each school must provide these items.**

The Tech Challenge is a series of events that are designed to test your knowledge of basic skills that every technician should have. The combination of team and individual events underline the principle that theatre technicians work alone and in ensemble groups depending on the required task in order to make the production successful. In technical theatre both time and accuracy are critical to a successful outcome. As artists we demand excellence in the tasks we are given, but as technicians we also have to perform the tasks quickly and efficiently so as not to disrupt the production process.

The Tech Challenge consists of preselected individual and team events. These events represent the basic skills that every technician should possess to be well rounded theatre professionals. Your team should consist of four members.

We are anticipating that the events will be:

1. **Lighting: *Hanging And Focusing a Source 4*** (individual event)
2. **Costumes: *Quick Change*** (individual event)
3. **Stagecraft: *Knot Tying*** (individual event)
4. **Stagecraft: *Leg a Platform*** (team event)
5. **Stagecraft: *Drop Fold*** (team event)
6. **Stagecraft: *Props Shift*** (team event)

We acknowledge the fact that there are many ways to accomplish these tasks and that various professionals, vendors and educators may have different methods. The following packet was designed by professionals, educators, and the Educational Theatre Association to communicate the standards upon which the event will be judged. The study materials will provide criteria for your team preparation for each event.

Throughout the manual you will find specific words that are bolded and capitalized. For your reference, the definitions of these words can be found in the vocabulary section of this manual.

Scoring will be based on accuracy and timing, 50% each. The timing score is based on 0s = 100 points and the maximum time for the event = 0 points. Accuracy is worth 100 points for a perfect execution; penalties exact a deduction of points based on the event. The two scores are added together to achieve the final event score. In this manner, accuracy and timing are equally important; which is true during shows as well. **Participants will be stopped at the maximum time for each event.** A penalty has been added to each event for blatant disregard for the rules. This penalty ensures that no team will do an event as quickly as possible, take all penalties, and still win. This is cheating, and teams will be penalized.

***Note: Schools must provide their own light tool and gloves for the light hang and focus.**

For safety reasons, participants should wear closed-toed shoes. Sandals, flip-flops, etc., are not allowed. Participants will not be allowed to compete in their event until they are in compliance with the shoe policy. Fingerless gloves are not allowed for the Light Hang & Focus event.

Lighting: Hanging and Focusing an Instrument (*Individual Event*)

Maximum time: 5 minutes

Lighting provides a tool for setting moods and tones of scenes on stage. Having knowledge of how to use the equipment allows one to act as the master electrician for a production. The responsibility of hanging and focusing the lights for a show falls on the **MASTER ELECTRICIAN (M.E.)**.

There are many different types of lighting instruments that the M.E will use in the theatre. Each type of instrument plays an important role in the overall lighting scheme. It is important that the M.E. has a broad understanding of all of these instruments, how they work, and how they are installed on the **ELECTRICS**. One of the instruments that you will use the most is the **ELLIPSOIDAL REFLECTOR SPOTLIGHT**. There are many types of ellipsoids from different manufacturers; one of the most common is the **ETC, SOURCE 4**.

In this challenge, individuals will be asked to successfully hang and focus an ETC, Source 4. All equipment and tools will be provided. **You must provide and use your own gloves and wrench.** Successful completion of this challenge is when the unit is secured to the pipe, powered on, and correctly focused to the shape marked out on the wall.



(ETC Source 4)

How to hang a lighting fixture (ellipsoidal)

1. Place **C-CLAMP** over the pipe at the designated hanging location.
NOTE: the opening of the C-clamp should be facing upstage of the electric pipe that the unit is hung on.
2. Attach the **SAFETY CABLE** through the **YOLK** and around the electric pipe.
3. Adjust the **PIPE BOLT** so that it is secure on the electric pipe.
NOTE: pipe bolt should be no tighter than $\frac{1}{4}$ turn past finger tight.
4. Plug the **TAIL** of the lighting instrument into the designated **CIRCUIT**.

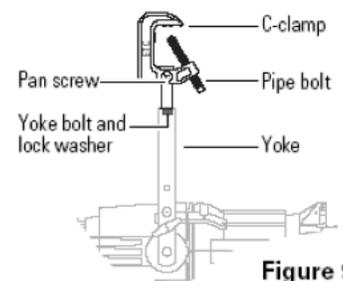


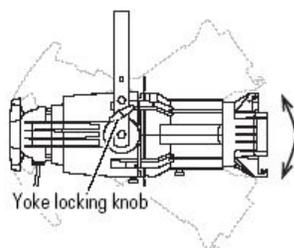
Figure 9

How to focus an ellipsoidal

1. Adjust the **PAN** of the unit so that it is set in the desired location. .
2. Adjust the **TILT** of the unit so that it is set in the desired location.
3. **FOCUS** the **BEAM** to the desired beam edge.
4. Using the **SHUTTERS**, shape the beam of light to the desired shape.
5. Make sure all nuts, handles and knobs are locked down so the instrument does not **DROP FOCUS**.
6. Drop **COLOR** in to the color slot of the instrument.

Setting the angle within the yoke

1. Loosen the yoke locking knobs. (Do not remove them.)
2. Tilt the fixture to the desired position.
3. Tighten the yoke locking knobs to secure the fixture in position.



Focusing the beam

1. Loosen the beam focus knob located under the barrel.
2. Slide the lens tube forward or backward to achieve the desired beam edge.
3. Once the fixture is focused, tighten the beam focus knob.

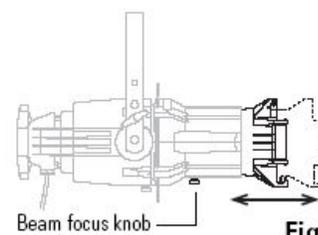


Figure 4

Hang & Focus

Recommended Sequence

1. Leave the Start line
2. Locate Fixture
3. Hang Fixture
4. Hand tighten C-clamp
5. Install safety cable
6. Wrench tighten C-clamp
7. Wrench tighten yoke bolt
8. Open shutters
9. Plug in fixture
10. Position fixture – Rotation and basic focus
11. Lock it: tighten pan screw and rotation knob
12. Sharp Focus
13. Shutter cuts to shape
14. Drop in pattern holder
15. Check orientation and focus
16. Drop in gel frame
17. Back to Finish line

Penalties (20 points each)

- Instrument upside down
- Out of Sequence (tightened before safety cable is attached)
- Forget safety cable
- Not tight:
 - o C-clamp
 - o Vertical hold – yoke handles, wing nuts
 - o Horizontal hold – pan screw
 - o Focus knob and barrel knob
- Shutters not open before plugging in
- Shutter cuts (personal judgment)
- Sharp focus (personal judgment)
- Forgot gel frame and/or gobo holder
- Pattern upside down or backwards
- Placing any items in mouth
- Dropping items
- Gloves not worn at all times

Blatant disregard to rules and procedures = disqualification

Costumes: Quick Change (*Individual Event*)

Maximum time: 5 minutes

During the run of any given production the **WARDROBE MASTER** is responsible for the successful organization, running and maintenance of the Costumes designed for a production. Their duties include making sure that all of the actors are in the correct **COSTUME** and also maintaining the look and integrity of the costumes.

One of the most important jobs that the wardrobe master and their crew have during the run of a show is a "Costume Quick Change." **QUICK CHANGES** are vital to ensuring that the flow and pace of the production is uninterrupted.

Many times the wardrobe crew has less than a few minutes to successfully complete the given change which can lead to organized chaos. To organize the chaos, the wardrobe master provides his/her crew with a **QUICK CHANGE PLOT**.

In this challenge your team of four people must use the "Wardrobe Master's Quick Change Plot" to successfully complete the costume change. In this case your actor was not able to under-dress, so you will have to complete the entire change.

Recommended Sequence

1. Leave the start line
2. Give 15 seconds of prep time before letting performer in
 - a. Actor will enter even if contestant isn't ready
3. Actor will be fully dressed in scene 1 outfit
Note: Actor can help during change.
4. Assist the performer out of scene 1 outfit
 - a. Undo fastening
 - b. Help lift over head or off arms
5. Assist the performer into scene 2 outfit
 - a. Do fastenings – must be completely buttoned
 - b. Put on hats or accessories
6. Rehang scene 1 outfit
7. Once set, the contestants run to the finish line.

Sample Costume Plot

Romeo & Juliet	I:1	I:2	I:3	I:4	I:5	II:1	II:2	II:3	II:4
Romeo	Green sweater Peege silk slacks Peege shoes, socks & belt	Same		White linen suit Black suit shirt Black belt & shoes	Add mask and cape	Same	Same	Same	
Juliet			Teach kimono Peege slip		White dress white petticoat white shoes Hofors Hofors		Kimono Slip		
Nurse			Day dress Hofors Shoes Necktie		Even dress Shoes same Sweaty Hofors?		Yours only		
Capulet	1 pt. grey silk suit Grey striped shirt Peege tie & handkerchief Black shoes	Same			5" Striped tie Cummerbund Silk shirt Peege tie & socks, & shoes All handkerchiefs Callipers, studs				
Lady Capulet	Blue suit dress, Silk shoes Necktie Carriage case Hofors, slip		Same		Black velvet gown Carriage Hofors Black shoes Mask				
Mercutio	White tan shirt Black leather jumps Black boots			Same Add blue cape Ribbon sword	Same Add mask	Same			
Time of Day	Sunday about noon	Sunday minutes later	Sunday late afternoon, early evening	Sunday late afternoon, pre-party	Sunday night party, usual dinner	Sunday night late post-party			

rental contracts and pull lists;

FIGURE 16.5
A sample costume chart. (Courtesy
of Dianne J. Holly.)

Penalties (20 points each)

Judging based on speed, smoothness of change and final look.

- Not prepared in 15 sec.
- Scene 2 clothing not properly placed on actor (snapped, hooked, laced...)
- Missing accessories – hat, scarf...
- Unnecessary roughness of the actor
- Scene 1 outfit not hung up or not placed on hangers properly
- Dropping hanger, unnecessary noise backstage

Blatant disregard to rules and procedures = disqualification

Stagecraft: Knot Tying (*Individual Event*)

Maximum time: 2 minutes

The ability to tie basic knots is essential to a wide range of technicians. This fundamental stagecraft skill is used every day from hauling equipment to the **CATWALK** or properly **RIGGING** scenery.

In this challenge individuals will be asked to correctly tie a series of commonly used knots.

Recommended Sequence

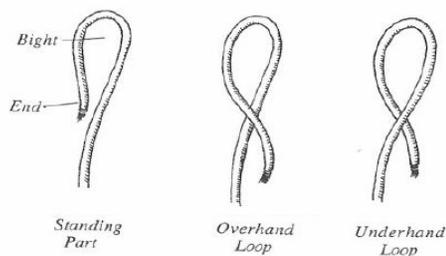
1. Leave the start line
2. Tie a **clove hitch** on the pipe stand.
3. Tie a second line to the first with a **sheet bend** (a tailor's knot).
4. Tie a one-handed **bowline** around his/her waist
(At no time should the contestant touch the line with both hands.)
5. Task completed the contestant signals with hands-up.

Penalties (20 points each)

- Placing rope in the mouth
- Failure to follow the sequence:
Clove hitch > sheet bend > bowline
- Incorrectly tied knot – penalty for each incorrect knot
- Touching the line with the second hand while tying the bowline

Blatant disregard to rules and procedures = disqualification

Knot terminology



Clove Hitch



Sheet Bend



Bowline

Scenery: Leg a Platform (*Team Event*)

Maximum time: 5 minutes

If one platform available, the team must attach two legs and remove two legs, leaving the platform ready for the next team. (2 legs are bolted to the platform and 2 not.)

If two platforms are available, then the team must attach four legs and remove four legs, leaving the platforms ready for the next team. (1 platform set with 4 legs bolted and 1 with none.)

The platforms will be 3'x3' 2x4 framed platforms with a 2x4 legs for each corner. The leg holes are drilled slightly larger than the 3/8 inch bolts used to attach them to the platforms. Two ratchets and two adjustable wrenches will be provided – each team member must use one of each type. Two ratchet wrenches and two adjustable wrenches provide challenge of setting the ratchet in forward/reverse mode, and getting the adjustable set to the correct width.

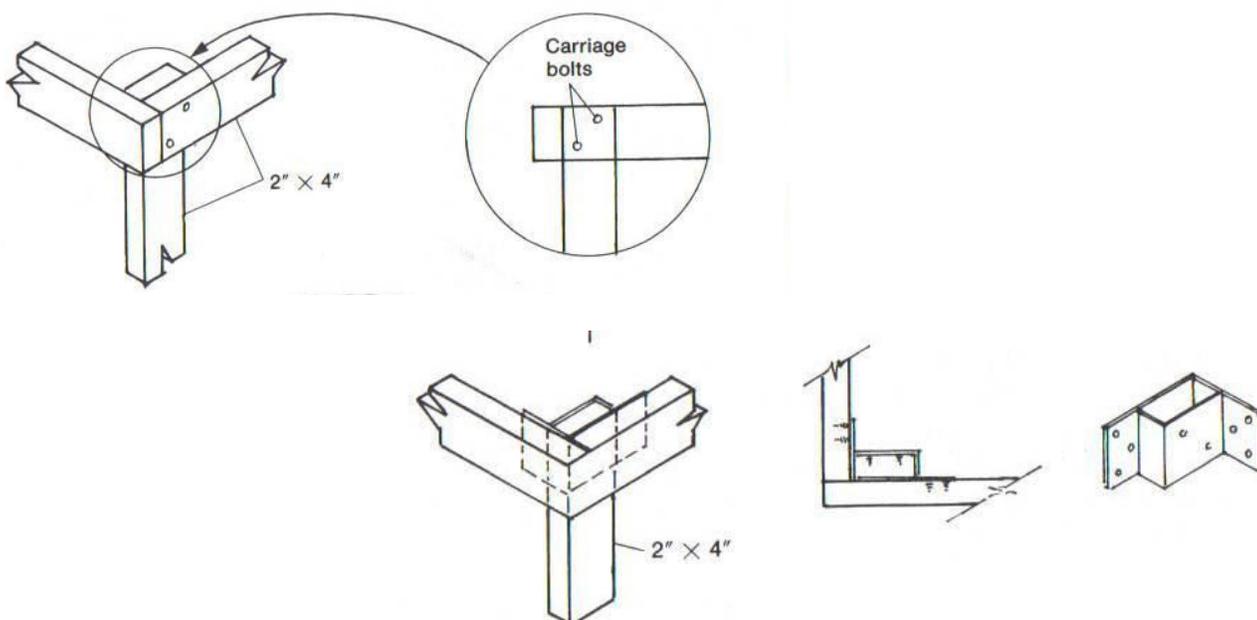
Recommended Sequence – One platform

1. Leave the start line
2. Each team member grabs a leg, wrenches and hardware.
3. Each team member attaches a leg
4. Then each member uses the same tools to remove the other leg.
5. Team returns to the finish line and one member says "DONE!"

Penalties (20 points each)

- Loose legs
- Placing any items in mouth
- Each team member must attach at least one leg
- Not set in spike marks correctly – off spike
- Using tools inappropriately – banging on bolt or leg
- Not using both tools
- Judgment of team work - no arguments

Blatant disregard to rules and procedures = disqualification



Scenery: Folding a Theatrical Backdrop (*Team Event*)

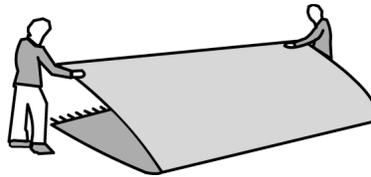
Maximum time: 5 minutes

BACKDROPS and other **SOFT GOODS** are essential to every production. When the goods are not hung on a **BATTEN** for show use, there are particular ways that the goods should be folded for safe storage and easy identification.

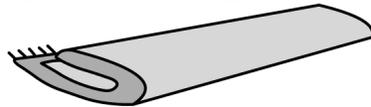
In this challenge your team of four will be asked to successfully fold a theatrical backdrop for storage using the method outlined below.

Step 1. Place backdrop on a clean stage floor face (painted or **KNAP** side) up. Make sure the drop is smooth and free of any wrinkles.

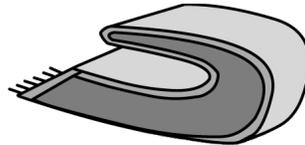
Step 2. The next step requires four people. Together fold the **PIPE POCKET** (lower corners) to the **WEBBING** (upper corner).



Step 3. Fold again from lower edge to the webbing (top) and smooth out any wrinkles.



Step 4. Fold again in the same manner until the backdrop is approximately 3 feet wide. Again smooth out any wrinkles or creases.



Step 5. Fold hemmed edges towards the center, leaving enough space for the final book fold (approx. 1' to 1'6").



Step 6. Fold edges towards the center again, in the same manner until the backdrop can be folded into a square of 2 to 3 feet.



Step 7. Fold the two halves of the drop back on themselves, creating a book-like shape with one open end.

Fold Drop

Recommended Sequence

Prior to the event, the drop will be crumpled in a disorganized pile on the stage floor. The team members should plan ahead who will be at each corner as the drop is folded and who should check for the crispness of each fold or pleat.

1. Leave the start line
2. Pull the drop out flat on the floor
3. Determine the Centerline
4. Make first fold to one end
5. Continue folding till appropriate width
6. Drop should be folded to the top (where the tie lines are).
7. Carry the folded drop and place it on the sizing template/in the storage box
8. Team returns to the finish line and one member says "DONE!"

Penalties (20 points each)

- Folding with the good side facing outwards
- Way off center - not folding on center line
- Bad folds or pleats
- Tie lines not visible/accessible
- Judgment of team work - no arguments
- Folded drop size too big or too small

Blatant disregard to rules and procedures = disqualification

Prop Shift (*Team Event*)

Maximum Time: 5 minutes

During the run of a show, the run crew is responsible for the smooth transitions of set pieces and props. It is the successful run crew that creates the magic of quick changes. A dropped prop or missing piece can ruin a scene, even an entire production. Changes must be done as quietly, quickly, and efficiently as possible.

During this event, students will be moving props from “off-stage” to “on-stage.” The on-stage table should be set for Act I (tablecloth, plates, utensils, etc. as based on the prop shift form. The off-stage table should be set for Act II with tablecloth, plates, and utensils on their marks.

Rules

1. Participants must not drop props or place them in pockets.
2. Participants must move quietly and efficiently.
3. Participants must not rough handle or be careless with props.
4. Participants must place tablecloth straight with no corners flipped and in the proper orientation, US/DS.
5. Participant must place items correctly and right side up.
6. Follow the sequence and additional instructions below.

Required sequence

1. Leave the start line.
2. Clear the on-stage table—all items including the tablecloth.
3. Place props on the pre-set marks on the off-stage table.
4. The Act II tablecloth should be taken from the off-stage table and set on the on-stage table.
5. The Act II props should be taken from the off-stage table and moved to the correct marks on the cloth covering the on-stage table.
6. Once set, the contestants run to the finish line.

Penalties (20 points each)

- Dropped prop
- Props put in pocket
- Noisily handling props
- Carelessly handling props
- Placing any item in the mouth
- Excessive noise on or off stage
- Wrong prop placed on table
- Improper position, missed mark on set table
- Tablecloth not set in proper orientation-US/DS
- Tablecloth not straight, corners flipped
- Silverware upside down/turned around
- Failure to follow the sequence
- Judgment of team work - no arguments

Blatant disregard to rules and procedures = disqualification

Vocabulary

Amplification – The act of reinforcing an actor's voice using mechanical means (a microphone).

Backdrop: The fabric curtain that has scenes, images, or textures painted on it. Scenic element used in theatre to set the location of the scene. Backdrops also help to disguise a scene change that is happening upstage of the drop.

Batten: A pipe or bar that lighting instruments, soft goods, and scenery are attached to for rigging purposes.

Beam: The cone of light that is projected by the instrument.

Catwalk: The overhead access that allows technicians to reach lighting and rigging positions in the ceiling and high up in the theatre.

C-Clamp: The hardware used to attach the lighting instrument to the batten.

Center Line: The line that divides the stage area into two equal parts; running from downstage to upstage.

Circuit: Provides power to the instrument.

Color (Also known as Gel or Filters): The colored plastic and frame that goes in the front of the instrument to color the light.

Costume: The clothes and accessories worn on stage by an actor portraying a character.

Costume Designer: The person who develops the artistic and technical scheme for the costumes of a particular production.

Device: A particular piece of gear that allows the sound engineer to play recorded sound effects of music (i.e. CD player, mp3 Player).

Drop Focus: the act of an instrument losing its correct positioning, shape or color.

Electrics: A special batten that contains just lighting instruments and circuits.

Ellipsoidal Reflector Spotlight: A lighting instrument with a lens that throws an intense light on defined areas. This type of fixture is used for front light, side light, specials, and projections (gobos).

ETC Source 4: A type of ellipsoidal or fixed beam spotlight that is manufactured by Electronic Theatre Controls (ETC).

Focus: The positioning, shaping, and coloring of the lighting instruments as determined by the lighting designer.

Ground Plan: A bird's eye view of the stage and scenery.

Hook Up Chart: The organizational chart that shows how the sound system is set up for a given production.

Lighting Designer: The person who develops the artistic and technical scheme for the lighting of a particular production.

Master Electrician: The person who oversees the lighting crew. He /she is responsible for the hanging, focusing, and programming of the show as well as the day-to-day upkeep of the lighting for the production's run.

Microphone: An amplification device that allows the actor's voice to be reinforced by the sound system.

Mixing Console: The control desk that allows the sound engineer to control various devices and how they sound to the audience.

Music: The recorded or live performance of musical instruments (including singing).

Nap: The short, fuzzy ends of fibers on the surface of cloth.

Pan: The horizontal position of the lighting instrument.

Pattern (gobo): A thin metal disk that goes in the gate of the instrument to create texture or to project images.

Pipe pocket: The open hem in the bottom of a drop or curtain that allows a piece of pipe to be inserted to stretch the drop.

Pipe bolt: The long skinny bolt located on the front of the C-Clamp that secures the clamp to the pipe.

Plaster Line: The line that runs from stage right to stage left across the upstage side of the proscenium wall. This line is used by designers and technicians to position various technical elements on the stage.

Playback – The use of devices to play sound effects or music (such as CDs/mini disk/mp3s)

Quick Change: Any costume change that happens between or during scenes when the actor does not have enough time to go return to their dressing room to complete the change. Quick changes may be simple as simple as just adding or subtracting an accessory, or they can be as complicated as changing the actor's entire costume.

Quick Change Plot: The organizational paperwork that outlines the what, who, when, and how of the quick change and how it is going to work.

Rigging: The suspension of soft goods, lighting instruments, scenery, and people over the stage so that they can be brought in for quick scene changes or easy access.

Safety Cable: A piece of aircraft cable that is attached to the yolk of an instrument and around the batten to prevent the instrument from falling to the ground if the C-Clamp fails.

Scale Rule: A ruler used to measure the same object in multiple scales.

Scenic Charge: Person responsible for the painting of props and scenery.

Scenic Designer: The person who develops the artistic and technical scheme for the scenery of a particular production.

Shank Button: A shank button has a raised area on the back of the button which is used to sew on the button.

Shutters: The part of the Ellipsoidal Reflector Spotlight that is used to shape the instruments beam. Located behind the lens of the fixture; therefore, all uses are opposite. Ex. The top shutter shapes the bottom portion of the beam.

Soft Goods: A term used for any type of curtains or drops used in a theatre that are not framed or rigid.

Sound Designer: The person who develops the artistic and technical scheme for the sound of a particular production.

Sound Effects: The recorded or live recreation of a known sound (i.e. dogs barking or a car honking).

Sound Engineer: The person who is responsible for the execution of the sound design during the run of the production.

Tail: The electrical cable that runs from the lamp base of the instrument to the connector.

Tilt: The vertical position of the lighting instrument.

Wardrobe Master: The person who is in charge of the running of the costume crew for a production. He/she also oversees the upkeep and laundering of the costumes during the run of the production.

Webbing: The top three (3) inches of the drop that is reinforced with webbing. The webbing also includes the ties and grommets for attaching the drop or curtain to a batten.

Yoke: The U-shaped metal piece that attaches the lighting instrument to the C-Clamp. Allows a technician to adjust the position of the instrument once secured to the batten.