

# **Tech Olympics Guidelines**

## **Overview of Guidelines**

### **General Information**

- The true spirit of Tech Olympics is to offer a fun, competitive, educationally sound environment that showcases the skills and talents of young theatre technicians. Each event is designed to demonstrate as closely as possible the techniques and practices used in the professional theatre industry.
- However, as Tech Olympics is also a competition, certain allowances are made to promote the idea of competition and boost the excitement of the various events. For example, it is not part of general practices for technicians to run on stage. But in events like drop fold and cable roll-up relay, running is acceptable, as long as it falls within safety parameters.
- Participants should feel free to ask questions of the judges in each event to help clarify rules or procedures before they compete. However, that is not the time to ask to be taught how to do an event. Participants are also strongly encouraged to watch, cheer for, and support other teams during the competition.
- Times for each participant will be announced when he or she has completed his or her attempt. Participants are welcome to ask the judge of an event, “What is the time to beat?” However, it is not appropriate for a participant to ask the specific time of another competitor.

### **Tech Olympic Events for Festival**

**Drop Fold** – 4-Person Team Competition

**Hang and Focus a Lighting Instrument** – Individual Competitors

**Knot Tying** – Individual Competitors

**Thread a Sewing Machine** – Individual Competitors (two per team may try)

**Costume Quick Change** – 3-Person Team Competition

**Prop Shift** - 2-Person Team Competition

### **Event: Costume Quick Change**

*Three-Person Team Event. Two participants act as the wardrobe crew and execute the quick change. The third participant acts as the “actor.”*

The wardrobe crew will have up to 20 seconds for prep before the actor is released from the start box. The actor will enter even if wardrobe crew is not ready.

### **Equipment/Materials Required per Station**

- Two (2) full costumes (designed to be one size fits all) including accessories
- Table for accessories
- Costume rack
- Hangers
- Tape (for marking table accessory layout and start box)
- Stopwatch

## Rules

1. Participants must properly snap, hook, and lace all clothing items.
2. Participants must dress actor in all appropriate accessories.
3. Participants must be polite and professional and treat the actor with respect at all times.
4. Participants must not drop hangers or other items.
5. Follow the sequence and additional instructions below.

The maximum time allotted for this event is five (5) minutes.

## Required Sequence

1. Time begins when wardrobe crew leaves the start box and begins prepping. Standard conventions like “puddling of costumes”\* and “reverse dressing”\*\* are acceptable quick change techniques.

*\*Puddling costumes refers to the placing of pants and shoes on the floor so an actor can step into them quickly.*

*\*\*Reverse dressing occurs when a dresser turns a shirt inside out, places his or her arms in sleeves, grabs the hands of the actor, and pulls the costume over the actor’s head and onto his or her arms at the same time.*

2. After 20 seconds, the actor is released from the start box to the quick change box. The actor will be fully dressed in the Scene 1 outfit.
3. Wardrobe crew to assist the actor out of the Scene 1 outfit: undo fastening, help lift costume over the head or off the arms. *Note: The actor can help unbuttoning, stepping out, removing shoes, etc. but only if the wardrobe crew requests.*
4. Assist the actor into Scene 2 outfit: do fastenings completely and put on hats or accessories.
5. Once set, the wardrobe crew returns to the start box with all Scene 1 costume pieces in hand. (Note: Costumes do not have to be rehung to end the event.)

## Penalties: Quick Change

Items not properly placed on actors	+5 seconds per item
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Lack of teamwork	+10 seconds
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## Event: Fold a Drop

### *Four-Person Team Event*

The team must fold a theatrical backdrop (or leg or teaser) for storage. The drop will be laid out flat on the stage floor. The team members should plan who will be at each corner as the drop is folded and who should check for the crispness of each fold or pleat.

The maximum time allotted for this event is three (3) minutes.

### Equipment/Materials Required per Station

- One (1) large theatrical drop
- Tape (for marking start box, finish box, and field of play)
- Stopwatch

### Rules and Required Sequence

1. Leave the start box.
2. Make sure the drop is wrinkle-free, find centerline.
3. Make the first fold. The team must fold the **pipe pocket** (lower corners) to the **webbing** (upper corners). The drop should be folded to the tie lines, with the label plainly visible.
4. Fold the drop again from the lower edge to the webbing, smoothing wrinkles.
5. Continue folding until the width is approximately 3 feet, smoothing wrinkles and creases.
6. Fold the hemmed edges toward the center, leaving 1' to 1'6" space for the final book fold.
7. Repeat, until the backdrop can be folded into a square of 2 to 3 feet.
8. Fold the two halves of the drop back on themselves, creating a book-like shape with one open end.
9. Move the folded drop onto the sizing template box taped on the floor.
10. Team returns to the start box and says, "Done!"

### Penalties: Fold a Drop

Folded off-center	+5 seconds
Messy folds or pleats	+5 seconds
Drop does not fit into the sizing template	+5 seconds

## **Event: Prop Shift**

### *Two-Person Team Event*

Each team will have to change the set quickly and efficiently from Act 1 props to Act 2 props and creatively insert their “character” into the scene. The onstage table will be set for Act 1 (tablecloth, plates, utensils, etc.) with spike marks under the tablecloth for Act 2 props. The offstage table will be taped and hold Act 2 props, which include plates, cups, utensils, etc. There will also be sections taped for Act 1 props to be placed there when they come offstage.

### **Equipment/Materials Required per Station**

- Two (2) sets of props (e.g., tablecloth, utensils, napkin, plates, vase with flower)
- Props table (offstage table)
- Dining table or similar (onstage table) with a tablecloth having markings for the first setting and spike marks on the tabletop for the second setting
- Tape (for marking the table material layout and start box)
- Stopwatch

The maximum time allotted for this event is three (3) minutes.

### **Rules**

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

### **Required sequence**

1. Leave the start box.
2. Clear the Act 1 props and set.
3. Place Act 1 props in the preset marks on the offstage table and scenery pieces on the taped marks on the floor.
4. The Act 2 props and set should be taken from the offstage table and set on the onstage table and Act 2 spike marks.
5. The Act 2 props should be taken from the offstage table and moved to the correct marks on the cloth covering the onstage table.
6. Once set, the contestants return to the start box for time to stop.

## Penalties: Prop Shift

Carelessly handling props/set pieces	+5 seconds each instance
Setting props in the wrong position	+5 seconds

## Event: Cable Roll-up Relay

### *4-Person Team Event*

The team gets two tries.

*Note:* At the beginning of the event, all cables will be connected and have a tie-line connected to the female end. Once judging is complete, the team will restore the event, under the supervision of the judge, before being released from the starting box.

### Equipment/Materials Required per Station

- 4 Extension Cords\*

2 10' Cords

1 15' Cord

1 25' Cord

*\*Cords should be marked as described below, and each cord should have a piece of tie line at the female end.*

- Table for “storage” of cords
- Masking tape for labeling storage areas on table
- Stopwatch

Participants must be in the starting box which will have a next participant area marked in it.

All cables will be in one continuous run, beginning with a 10' cable connected to a 15' cable connected to a 25' cable connected to a 10' cable. (For ease of restoring the connection sequence, the cable connection points will be labeled with a piece of tape on the floor showing the length of the next connected cable. That is, the label at the first cable will be 10' and at the next connection label 15' and so on. The cables used for this event are power cables, although sound or DMX cables may be used as a variation on the event.)

### The Relay

When the judge says, “Start,” the person in the next participant spot will proceed to the first cable connection point. He or she will disconnect the cable, roll up the cable properly using the “over/under” rolling technique, secure it using the tie line or Velcro, and place it in the designated storage spot. Then the participant will tag the next participant to begin and proceed

back to the starting box. This procedure continues until the last cable is rolled and stored and the last participant is in the starting box.

Judging is based on neatness, size of coil, and proper location.

#### “Over/under Coiling Technique”

1. Hold one end of the cable in your receiving hand and grab another part about 2 feet farther down the cable.
2. Make the first coil normally, by bringing your hands straight together and accumulating that coil in your holding hand. Rotating both wrists slightly counterclockwise will help the cable bend the right direction. Let the cable spin in your hands to form a nice round first loop.
3. Grab another piece 2 feet away, but as you bring this one in, rotate your wrist clockwise to invert the loop as it forms. It often helps to also roll the cable slightly between your thumb and fingers, to better guide it into flopping the right way. If the loop starts to twist funny or tries to figure-eight on you as it forms, twisting the cable in your fingers helps to flatten out the loop.
4. Add this inverted loop to your bundle. The part that heads for the floor should pass UNDER the loop you’re just making. That is the key. This is your first “flipped” loop. It may look and feel a little wonky, but this is exactly what you want. Now, if you look carefully at the rest of this particular cable going toward the floor, you may be able to tell that its twist will lend itself to coming up in a “normal” non-flipped loop. So reach for that next bit and make another straight-in loop.
5. Next comes another flipped loop. Grab the next part and rotate your wrist to invert the coil underneath and add it to the bundle.
6. Next comes a normal straight-in loop and then an under loop, etc. Just keep going that way — over, under, over, under — until the cable is finished.

#### Penalties: Cable Relay

Rolling cable over arm	+15 seconds
Messy and inconsistent roll size, each instance	+10 seconds
Cables not properly secured	+5 seconds
Failure to follow proper sequence	+5 seconds

#### Tech Challenge Event: Leg a platform

##### *2-Person Event*

One pair per team. Each team is allowed two attempts.

**Equipment/Materials required per station:**

- 1 2’x4’ Platform
- 4 2”x4” Legs, predrilled for 3/8” bolts
- 24 3/8” Hex bolts (2 bolts per leg plus extras)
- 24 Washers (2 washers per bolt plus extras)
- 16 3/8” Nuts (1 Nut per bolt plus extras)
- 2 Ratchets with sockets
- 2 Open-end/box-end wrenches
- Table
- Stopwatch

In this challenge, one platform is available, and the pair must attach two legs and remove two legs, leaving the platform ready for the next team. Two legs are bolted to the platform and two are not. The platform is 2’x4’, framed with 2”x4”s with a 2”x4” leg for each corner. The leg holes are drilled slightly larger than the 3/8” bolts used to attach them to the platforms.

At the start of event, two legs are attached to the platform. The other two legs, bolts, washers, and nuts are placed in the corners of the platform. Ratchets and wrenches are placed on the table at the start line.

Maximum time allotted is five minutes.

**Rules and Required Sequence**

1. Both team members leave the start line.
2. Each member picks up a wrench and a ratchet from the table.
3. Each member attaches a leg. Hardware sequence should be bolt, washer, wood frame of platform, 2”x4” leg, washer, nut (on inside of platform).
4. Pair uses the same tools to remove the other two legs.
5. Removed legs and hardware should be placed in the corners of the platform from which they were removed.
6. Pair returns to the finish line and one says, “Done!”

**Penalties: Leg a platform**

Loose legs	
Slight wiggle	+5 seconds
Medium wiggle	+10 seconds

Very loose wiggle	+15 seconds
Placing things in mouth	+10 seconds
Inaccurate hardware sequence per incident	+10 seconds
Failure to follow proper sequence	+5 seconds
Failure to follow the outlined sequence	+10 seconds
Blatant disregard for safety	Disqualification
Blatant disregard for rules/procedures	Disqualification

## **Event: Thread a Sewing Machine**

### *Individual Event*

*Two people per team can try this event, and each one gets two tries.*

Each participant will insert a wound bobbin into the bobbin housing of a sewing machine and then properly thread the machine to pull the bobbin thread up through the stitch plate.

### **Equipment/Materials Required per Station**

- Sewing machine\* with needle in place
- Bobbins wound with thread
- Spools of thread
- Scissors
- Stopwatch

*\*Although most standard sewing machines thread the same, the machine supplied for the event will be a Singer Heavy Duty Basic Student Machine with a drop-in bobbin like the one pictured here.*

The maximum time allotted for this event is two (2) minutes.

### **Preset for Event**

- Wound (filled) bobbin, spool of thread, and scissors should be placed on the table to the right of the machine.
- Bobbin housing cover should be in place on the machine.
- Thread spindle cap should be in place on the machine.



## Required sequence

1. Leave the starting line.
2. Remove bobbin housing cover.
3. Insert the bobbin into the bobbin housing with thread unwinding counter-clockwise.
4. Remove thread spool cap and place thread on spindle.
5. Replace thread cap and thread the machine following the thread guide on the machine.
6. Thread needle.
7. Turn fly wheel and pull bobbin thread up through the sewing plate on the machine.
8. Pull thread under the pressure foot to the back of the machine.
9. Replace bobbin housing cover.
10. Return to starting line to stop time.

## Penalties: Thread a Sewing Machine

Careless handling of equipment	+5 seconds
Incorrect threading sequence	+5 seconds
Incorrect insertion of bobbin into housing	+5 seconds

## Event: Hang and Focus a Lighting Instrument

### *Individual Event*

*Two people per team can try this event, and each one gets two tries.*

Participants will be asked to successfully hang and focus an ETC Source 4 ellipsoidal spotlight. All equipment and tools will be provided, but participants can bring their own adjustable crescent wrench.

### Equipment/Materials Required per Station

- Light Stand
- ETC Source 4 ellipsoidal with three-prong Edison plug or pin connector
- Female pin connector to male Edison plug convertor if needed.
- Safety cable attached to yoke of ellipsoidal
- Gel frame with pre-cut gel
- Adjustable crescent wrench with tether
- Extension cords
- Masking tape
- Table

- Stopwatch

## Rules

1. Participants must use adjustable crescent wrenches. No speed wrenches.
2. Participants must tether their wrench when it is out and put it in a pocket when not in use. All wrenches brought must be attached to an 18” minimum tie line tether when in use. Items should never be tethered around a participant’s neck or over the shoulder.
3. Participants must not carry gel frames in a pocket.
4. Participant must provide the sharpest possible focus of the fixture.
5. Follow the sequence and additional instructions below.

*Note:* The safety cable should be on the side of the instrument closest to the light stand upright to keep it from falling off after being clipped.

When the unit is secured properly to the pipe, powered on, correctly focused to the shape marked out on the wall, and gelled, then the event has been successfully completed. The ETC Source 4 ellipsoidal has a drop-in iris slot on the top of the fixture. The gel clip holder should also be on this side of the fixture. The gel clip holder needs to be on top of the fixture when it is focused. Not all ellipsoidal fixtures have gel clip holders.

The maximum time allotted is five minutes. For a video demonstration with some slight variations in sequence, visit <http://www.youtube.com/watch?v=0Psv-jvXzc8>.

## How to Hang an ETC Source 4 Ellipsoidal Spotlight

1. Place the **C-clamp** over the pipe at the designated hanging location. The opening of the C-clamp must face downstage of the electric pipe and toward the person installing the fixture, enabling unobstructed access to bolts.
2. Finger tighten the pipe bolt.
3. Attach the **safety cable** through the **yoke** and around the electric pipe.
4. Tighten the pipe bolt and adjust the C-clamp as necessary so that it is secure on the electric pipe. Pipe bolt should be no tighter than a quarter turn past finger tight.
5. Pull all the shutters in the fixture to open.
6. Plug the **tail** of the lighting instrument into the designated **circuit**.

## How to Focus an ETC Source 4 Ellipsoidal Spotlight

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** and the rotation knob as necessary, shape the beam to the desired shape and angle.

5. Make sure all nuts, handles, and knobs are tightened so the instrument does not **drop focus**.
6. Drop **color** into the color slot of the instrument.

### **How to Set 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.

### **How to Focus 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.

### **How to Rotate the Angle Within the Fixture**

1. Loosen the rotation locking knob. Do not remove it.
2. Rotate the barrel of the fixture left or right to the desired position.
3. Recheck the focus of the beam for sharp or soft focus, then tighten the rotation locking knob to secure the fixture in position.

### **Required Sequence**

1. Participants should have gloves on and wrench in hand prior to start time.
2. Leave the starting line on the judge's call.
3. Locate the fixture.
4. Hang the fixture.
5. Hand-tighten the C-clamp.
6. Install the safety cable.
7. Wrench tighten the C-clamp.
8. Open the shutters on the fixture.
9. Plug the fixture into power.
10. Position the fixture to illuminate the shape.
11. Lock the fixture. Loosen and tighten the pan screw on the C-clamp or the rotation knob as necessary.
12. Place the fixture in a sharp focus.
13. Make shutter cuts as necessary. Cuts must land on or within the 2" tape outline.
14. Review fixture focus and make adjustments as necessary.
15. Insert gel frame.
16. Return to starting line.
17. Assist judges in restoring all equipment to pre-event conditions.

### **Penalties: Hang and Focus a Light**

Add the following time for:

Placing items in mouth	10 seconds
Dropping items or placing them on the ground	10 seconds
Gloves not worn beginning to completion	10 seconds
Items tethered around neck	10 seconds
Gel frame not installed properly or forgotten	10 seconds
C-clamp opening not facing installer	5 seconds
Instrument hung upside down	15 seconds
Safety cable not used properly	10 seconds
Any item not tightened	10 seconds
Shutter cut inside or outside 2" tape lines	5 seconds each
Failure to follow sequence	10 seconds
Focus is not sharp	5 seconds
Blatant disregard for the rules	disqualified

## **Tech Challenge Event: Knot Tying**

### *Individual Event*

*Two people per team can try this event, and each one gets two tries.*

Individuals will be asked to correctly tie a series of commonly used knots for properly rigging scenery. Participants must tie knots correctly with a minimum of a 6" tail on all knot ends. Task completed when the contestant signals with hands-up.

The maximum time allotted is two minutes.

### **Rules and required sequence**

1. Leave the start line
2. Tie a clove hitch on the pipe stand.
3. Tie a half hitch, a locking knot, on the clove.

4. Tie a second line to the first with a sheet bend, a tailor's knot. Participants must put the tails for the sheet bend on the same side.
5. Use the end of the second line and tie a bowline.
6. Participants must put the tail for the bowline on the inside of the loop.
7. Contestant signals with hands up.

**Penalties: Knot tying**

Add the following time for:

Placing rope in the mouth	5 seconds
Failed knots or incorrectly tied knots (penalty for each)	2 seconds
Not having a minimum of 6" tail on all knot ends	2 seconds
Outside bowline: tail on outside of loop	2 seconds
Backward sheet bend: tail on opposite sides	2 seconds
Failure to follow the sequence	5 seconds
Blatant disregard for the rules	disqualified