



Your Performance Partner

Owner's Manual Diva® Acoustical Shell

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Note: Please read and understand this Owner's Manual before working with or using the Diva® Acoustical Shell.

Note: Refer to the illustrations on the following pages. If you need additional information about your Diva® Acoustical Shell, write, telephone or email Wenger Corporation at the number below.

Note: It is recommended that two or more people work together when working with Diva® Acoustical Shell components..

IMPORTANT USER INFORMATION

GENERAL

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Printed and bound in the United States of America.

The information in this manual is subject to change without notice and does not represent a commitment on the part of Wenger Corporation. Wenger Corporation does not assume any responsibility for any errors that may appear in this manual.

In no event will Wenger Corporation be liable for technical or editorial omissions made herein, nor for direct, indirect, special, incidental, or consequential damages resulting from the use or defect of this manual.

The information in this document is not intended to cover all possible conditions and situations that might occur. The end user must exercise caution and common sense when assembling or installing Wenger Corporation products. If any questions or problems arise, call Wenger Corporation at 800-733-0393.

MANUFACTURER

The Diva® Acoustical Shell is manufactured by:

Wenger Corporation
555 Park Drive
Owatonna, MN 55060
1-507-455-4100 • 1-800-733-0393
www.wengercorp.com

INTENDED USE

The Wenger Diva® Acoustical Shell is intended for indoor use. The Diva® Acoustical Shell is not intended to be used outside or in wet conditions.

- Never expose the Diva® Acoustical Shell components to wet, humid, or wet outdoor weather conditions.
- The system is ***not intended to be permanently installed and used*** in outdoor environments.

INSTALLATION

- The Wenger Diva® Acoustical Shell installation and use must comply with local regulations and codes.
- All personnel (including all temporary workers) installing or maintaining the Wenger Diva® Acoustical Shell must read and understand this entire manual and other related installation instructions.
- Always refer to the information on page 4 and 5, *Electrical Installation and Maintenance*, and page 19, *Ceiling Panel Light Electrical Connection*, when connecting the Wenger Diva® Acoustical Shell components to a power source.

WARRANTY

The Diva® Acoustical Shell is guaranteed free of defects in materials and workmanship for five full years.

Our guarantee assures you of either a full refund or repair or replacement of the defective materials or workmanship without charge, at the discretion of our Customer Service Department. Just call a Customer Service Representative at 1-800-887-7145 and state the reason you are dissatisfied. If a product return is necessary, your representative will issue a return authorization. This is your sole remedy for breach of this warranty.

Should you have a question or problem with any Wenger product, don't hesitate to call, even if the product is past warranty. It's important to us that all our customers be satisfied.

This is the sole warranty made by Wenger. Wenger disclaims all other warranties, including the warranties of merchantability and fitness for a particular purpose, as well as all liability for incidental, consequential, special, and indirect damage. Wenger liability for direct damages shall be limited to the amount you paid for the product involved. Wenger reserves the right to make product changes without obligation to incorporate such changes into products previously sold.

Some states do not allow the exclusion or limitation of damages or warranties, so the above may not apply to you. This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

SAFETY

GENERAL

Throughout this manual you will find cautions and warnings which are defined as follows.

- **WARNING** means that failure to follow the instruction may result in serious injury or death.
- **CAUTION** means that failure to follow the instruction may result in serious injury or damage to property.

Note: Read all of these safety instructions before installing or using Diva® Acoustical Shell components.

Note: Failure to comply with warnings and cautions in this document can result in damage to property, serious injury, death.

INSTALLATION

Warning! *Always wear a hard hat (compliant with ANSI Z89-1997) when installing the Diva® Acoustical Shell Assemblies. Failure to observe this warning can result in damage to property, serious injury, or death.*

Warning! *Always wear safety glasses and safety shoes and use heavy work gloves when working on the Diva® Acoustical Shell. Failure to observe this warning can result in serious injury.*

Warning! *Always make sure that personnel, including all temporary personnel, working on the Diva® Acoustical Shell read and understand this manual. Failure to observe this warning can result in damage to property, serious injury, or death.*

Warning! *Assembly requires two or more persons working together. Some components are heavy and are difficult to handle alone. Failure to observe this warning can result in damage to property, serious injury, or death.*

Warning! *Care must be exercised because a dangerous pinch point develops when lowering a Tower Assembly to the floor after lifting it into a vertical position and when placing Panels onto the floor. Failure to observe this warning can result in serious injury.*

Warning! *Never walk or stand on Panels, suspended Ceiling Panels, or Tower Assemblies. Failure to observe this warning can result in damage to property, serious injury, or death.*

Warning! *When assembling Diva® Acoustical Shell components always observe the warnings and other information contained in this manual — especially the information on pages 4, 5, and 6. Failure to observe this warning can result in damage to property, serious injury, or death.*

ELECTRICAL INSTALLATION AND MAINTENANCE

Warning! *Branch circuits that supply power for Ceiling Panel Lights and other accessories must always be designed by an electrical engineer and comply with electrical codes and user requirements. Failure to follow this precaution can result in damage to property, fire, serious injury, or death!*

Warning! *Always disconnect power to the Ceiling Panel Lights before cleaning. Failure to observe this precaution can result in electrical shock or death.*

Warning! *Always disconnect power before changing Ceiling Panel Light bulbs. Failure to observe this precaution can result in electrical shock or death.*

SAFETY CONTINUED

ELECTRICAL INSTALLATION AND MAINTENANCE CONTINUED

- Warning!** *Do not alter the Ceiling Panel Light electrical circuits without the expressed permission of Wenger Corporation. Failure to follow this precaution can result in damage to property, fire, serious injury or death!*
- Warning!** *Replace any broken Ceiling Panel light bulbs immediately. Failure to observe this precaution can result in electrical shock.*
- Warning!** *Replace any malfunctioning Ceiling Panel electrical components only with components with the same specification. Failure to observe this precaution can result in electrical shock, fire, damage to property, serious injury, or death.*
- Warning:** *A licensed electrician must perform the Ceiling Panel electrical installation. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning:** *All Ceiling Panel Light electrical sources must be permanently wired and comply with local electrical codes. Failure to observe this precaution can result in serious injury, death, or damage to property.*

STORAGE AND TRANSPORTATION

- Warning!** *Never use the Air Transporter for any other purpose other than to move and position Diva® Towers. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Never attempt to manually lift or move a Diva Tower without using an Air Transporter. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Never move a Diva® Tower with or without an Air Transporter on an inclined surface or ramp. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Two or more people must work together when moving a Diva® Tower. One person must always watch for obstructions on the stage and above the stage while a second person pushes the Air Transporter. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Always clear all people and objects from the stage when moving Diva® Towers to or from storage or when flying Ceiling Panel to or from storage. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Always rotate and lock the Tower Wing Panels to the storage position before moving Tower to or from the performance position. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Never move a Diva® Tower faster than one-foot-per-second when transporting to or from the storage position. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Never ride on an Air Transporter. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *When using the Air Transporter to move a Tower, make sure that all electrical connections will not separate and interrupt power to the Air Transporter. Failure to observe this precaution can result in serious injury, death, or damage to property.*

SAFETY CONTINUED

TOWERS

- Warning!** *Only trained and authorized persons should position and adjust Diva® Towers. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Never remove a counterweight from a Tower Base. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Never climb on a Diva® Tower for any reason. Failure to observe this precaution can result in serious injury, death, or damage to property.*
- Warning!** *Never mount or hang other equipment, such as lighting, microphones, speakers, etc., without consulting Wenger Corporation Customer Service. Failure to observe this precaution can result in serious injury, death, or damage to property.*

CEILING PANELS

- Warning!** *Only qualified personnel familiar with rigging systems should set up the rigging, add weights to the Arbor, or fly the Ceiling Panels. Failure to observe this warning can result in death, serious injury, or damage to property.*
- Warning!** *Always wear safety glasses, gloves, and safety shoes when installing the Diva Acoustical Shell Ceiling components. Failure to observe this warning can result in serious injury.*
- Warning!** *Always wear a hard hat (compliant with ANSI Z89-1997) when installing the Diva Acoustical Shell Ceiling components. Failure to observe this warning can result in death or serious injury.*
- Warning!** *All personnel working on the rigging above the floor surface must wear a safety harness. Failure to observe this warning can result in death, serious injury, or damage to property.*
- Warning!** *Make sure that all rigging and rigging hardware is capable of lifting the Ceiling Panel component calculated weight plus a reasonable margin of safety. Always comply with local codes and regulations. Failure to observe this warning can result in damage to property and serious injury.*
- Warning!** *Make sure that all fasteners are tight before adding any weight to the Arbor. Failure to observe this warning can result in serious injury or damage to property.*
- Warning!** *Never climb onto or hang from Ceiling Panels in any position. Failure to comply with this warning can result in death or serious injury.*
- Warning!** *Never mount or hang other equipment such as lights, cameras, microphones, etc. from a Ceiling Panel or Ceiling Panel rigging without consulting with Wenger Corporation Customer Service. Failure to observe this warning can result in death, serious injury, or damage to property.*
- Warning!** *Always clear the stage area of people when moving Ceiling Panel to or from storage. Failure to observe this warning can result in death, serious injury, or damage to property.*
- Warning!** *Always fly the Ceiling Panels slowly and have a spotter watch for obstructions or rigging interference. Failure to observe this warning can result in death, serious injury, or damage to property.*

DIVA® ACOUSTICAL SHELL SET UP

GENERAL INFORMATION

Warning! Always make sure that personnel, including all temporary personnel, working on the Diva® Acoustical Shell read and understand this manual, especially the safety information on pages 4, 5, and 6. Failure to observe this warning can result in damage to property, serious injury, or death.

Warning! Always wear a hard hat (compliant with ANSI Z89-1997) when installing the Diva® Acoustical Shell Ceiling Assemblies. Failure to observe this warning can result in damage to property, serious injury, or death.

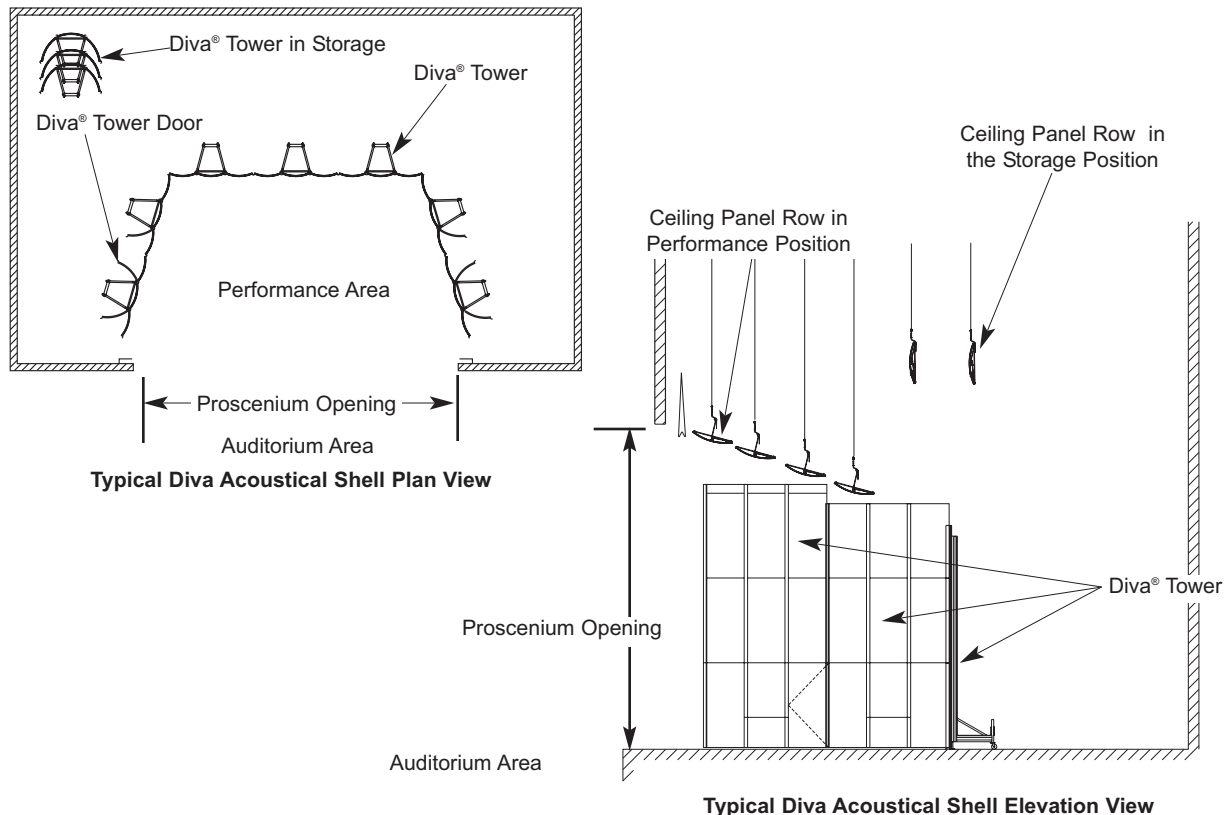
Warning! Always wear safety glasses and safety shoes and use heavy work gloves when working on the Diva® Acoustical Shell. Failure to observe this warning can result in serious injury.

Warning! Assembly requires two or more persons working together. Some components are heavy and are difficult to handle alone. Failure to observe this warning can result in damage to property, serious injury, or death.

The Diva® Acoustical Shell can be used for a variety of performance groups such as orchestra performance, single performance recitals, etc. Tower and Ceiling Panel arrangements can be easily changed.

The number of Towers and Ceiling Panels used, how they overlap, and the performance angles can be adjusted for different effects. Some Towers have one or two doors for easy stage access.

Refer to the Installation Drawings and Installation Instructions for the initial set up.



DIVA® ACOUSTICAL SHELL SET UP CONTINUED

GENERAL INFORMATION CONTINUED

- Towers are stored in a nested position off-stage with Wing Panels folded.
- Ceiling Panel Rows are stored rotated into the vertical position and lifted to the ceiling.

The sequence for setting up the Diva® Acoustical Shell is as follows.

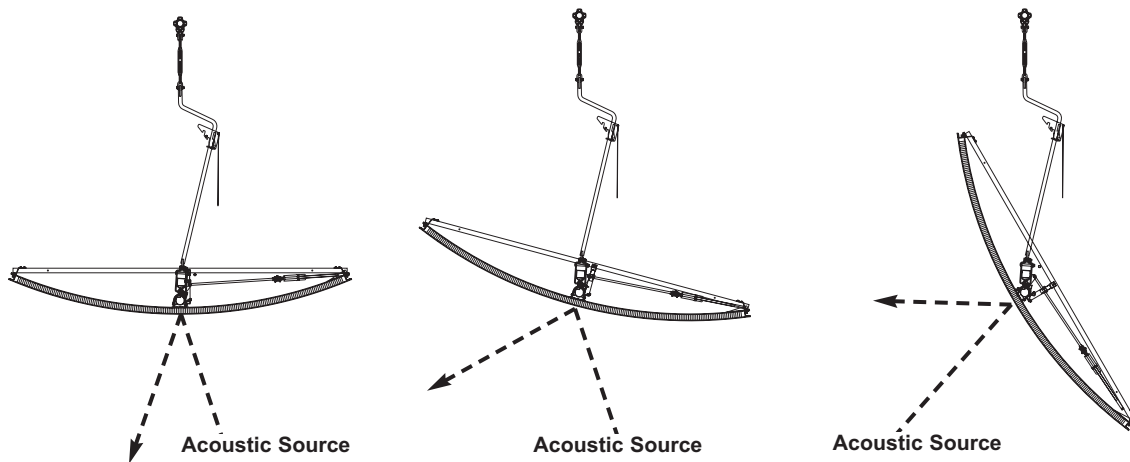
1. Lower the Ceiling Panels first.
 - a. Place the Ceiling Panels in a position where the Panels can be rotated from the Storage Position to the Performance Position, then, lift the Ceiling Panel Rows high enough to move Towers across the stage.

Note: Time can be saved if Tower positions are marked on the stage floor.

- b. Move the Towers with an Air Transporter to the performance position and open the Wing Panels to the Performance position.
- c. If the Ceiling Panel Rows have tapered ends, lower each row to a position slightly below the top of the adjacent Tower on the stage side.
- d. If the Tower has a tapered top and the edge of the Ceiling Panel Row extends outside of the Tower, lower the Ceiling Panel Row to a position four-inches to six-inches above the Tower. Gaps between the Ceiling Panels and Tower should not be visible from the auditorium area.

CEILING PANEL PERFORMANCE ANGLES

Ceiling Panel Performance angles can be adjusted to achieve different acoustic effects. Refer to the illustration below.



Performance Angles that are horizontal will return more acoustic energy to the performers on the stage.

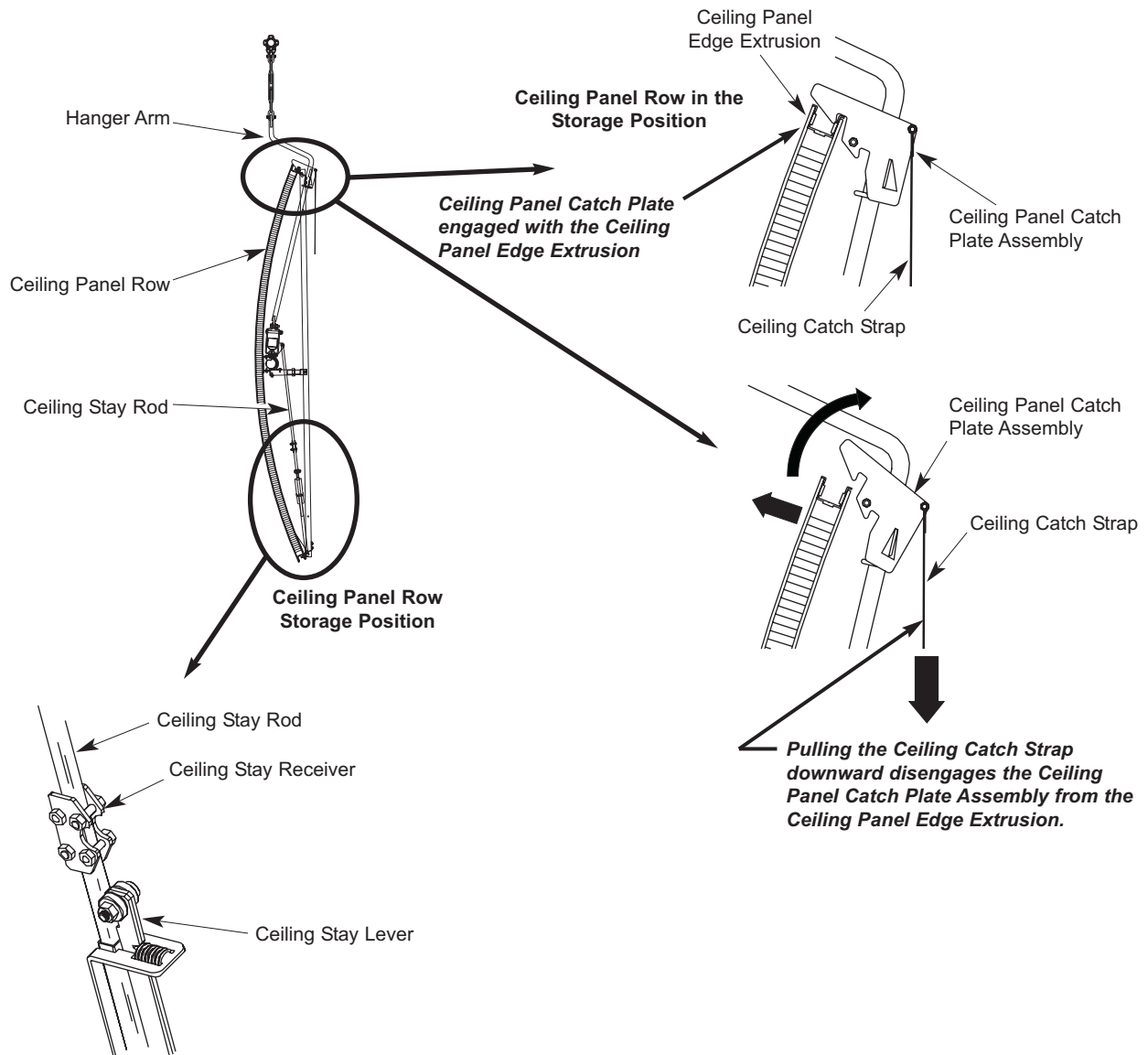
Performance Angles that are steeper will return more acoustic energy toward the auditorium area.

DIVA® ACOUSTICAL SHELL SET UP CONTINUED

CEILING PANEL STORAGE POSITION

Ceiling Panels are always stored in a vertical position or are placed into the Performance Position. Refer to the illustrations below.

- **Performance Position** — the Ceiling Panel Row is rotated until the Ceiling Stay Receiver engages the Ceiling Stay Lever (Performance Angle) and is lifted to a position above the stage to reflect acoustic energy into the auditorium area. Refer to the illustrations on page 8.
- **Storage Position** — the Ceiling Panel Row is rotated vertically until the Ceiling Panel Edge Extrusion is engaged with the Ceiling Panel Catch. Refer to the illustrations below.



In the Storage Position, the Ceiling Stay Receiver is disengaged from the Ceiling Stay Lever.

DIVA® ACOUSTICAL SHELL SET UP CONTINUED

PLACING CEILING PANELS INTO PERFORMANCE POSITION

Warning! Always make sure that personnel, including all temporary personnel, working on the Diva® Acoustical Shell read and understand this manual, especially the information on pages 4, 5, and 6. Failure to observe this warning can result in damage to property, serious injury, or death.

Warning! Always wear a hard hat (compliant with ANSI Z89-1997), safety glasses and safety shoes and use heavy work gloves when working on the Diva® Acoustical Shell. Failure to observe this warning can result in serious injury.

Warning! Always clear all people and objects from the stage when moving Diva® Towers to or from storage or when flying Ceiling Panel to or from storage. Failure to observe this precaution can result in serious injury, death, or damage to property.

To move a Ceiling Panel Row into the Performance Position, do as follows. Work from the Downstage side to the Upstage side. Refer to the illustrations below.

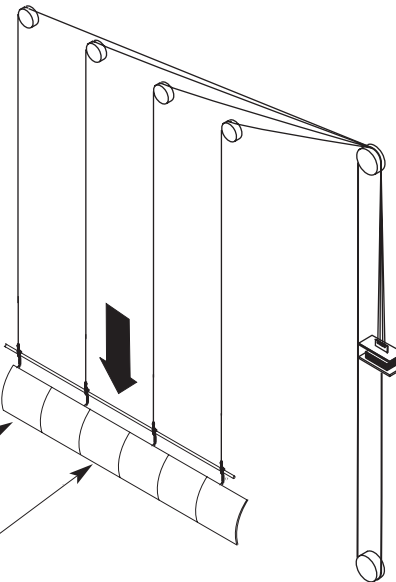
1. Clear the stage of all people and objects that might interfere with lowering Ceiling Panels.

Caution! Never allow a Ceiling Panel Row Upstage Edge to touch or strike the stage floor. Failure to observe this precaution can result in damage.

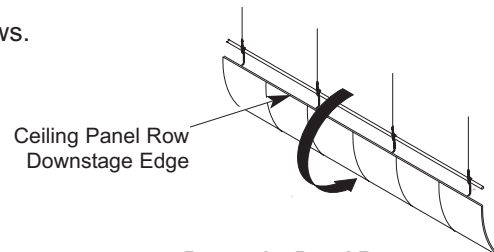
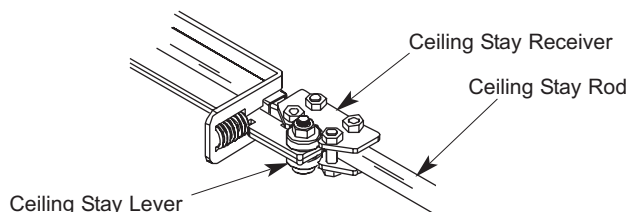
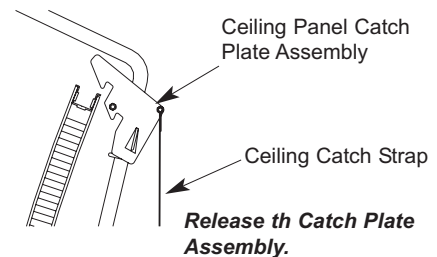
2. Lower a Ceiling Panel Row until the Upstage Edge nearly touches, **but does not touch**, the stage floor (not less than 6-inches of clearance).
3. Mark this position (Low Trim Position) on the hand line at the lock rail.

The Ceiling Panel Row is shown in the Storage Position and lowered to Low Trim, not less than one-half-foot from the Stage Floor.

Ceiling Panel Row Upstage Edge



4. Move the Ceiling Panels into the Performance Angle.
 - a. Pull the Ceiling Catch downward and release the Panel from the Ceiling Panel Catch Plate Assembly.
 - b. Rotate the Downstage Edge of the Panel Row downward until the Ceiling Stay Receiver engages the Ceiling Stay Lever.
5. Clear the stage and lift the Ceiling Panel Row to the Performance Position. Make sure that the Ceiling Panel Row does not swing while lifting it.
6. Repeat steps 1 through 5 for the other Ceiling Panel Rows.



Rotate the Panel Row to the Performance Position.

DIVA® ACOUSTICAL SHELL SET UP CONTINUED

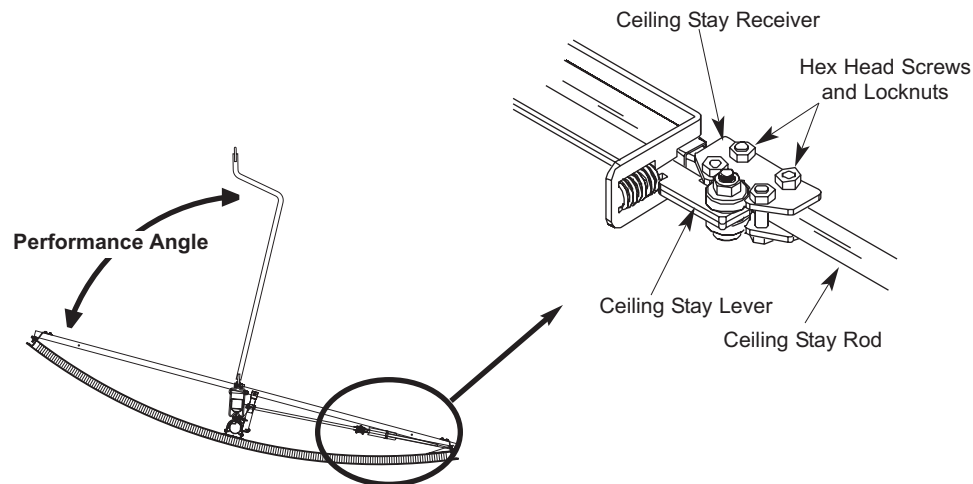
CHANGING THE CEILING PANEL PERFORMANCE ANGLE

To change a Ceiling Panel Row Performance Angle, do as follows. Refer to the illustrations below.

1. Clear the stage of all people and objects that might interfere with lowering Ceiling Panels.

Caution! *Never allow a Ceiling Panel Row Upstage Edge to touch or strike the stage floor. Failure to observe this precaution can result in damage.*

2. Lower a Ceiling Panel Row to the Low Trim Position (**make sure that the Upstage Edge does not touch the stage floor has not less than 6" of clearance to the stage floor**).
3. With two or more people working together, rotate the Ceiling Panel into the current Performance Position.
 - a. Pull the Ceiling Catch downward and release the Panel from the Ceiling Panel Catch Plate Assembly.
 - b. Rotate the Downstage Edge of the Panel Row downward until the Ceiling Stay Receiver engages the Ceiling Stay Lever.
4. Use a pair of $\frac{7}{16}$ " combination wrenches to loosen all of the Hex Head Screws (four) and Locknuts on the Ceiling Stay Receiver while two people hold the Ceiling Panel Upstage Edge.
5. With two people working together grasping the Upstage Edge, rotate the Ceiling Panel Row slightly above the new Performance Angle (perhaps five to ten-degrees) making sure that the Ceiling Stay Receiver remains engaged with the Ceiling Stay Lever. Ceiling Panel Rows are heavier on the Upstage Side.



6. Use the pair of $\frac{7}{16}$ " combination wrenches and tighten all of the Hex Head Screws (four) and Locknuts on the Ceiling Stay Receiver while two people hold the Ceiling Panel Upstage Edge.
7. Check the Performance Angle and make any necessary adjustments.

Note: If the Performance Angle is changed often, mark the positions on the Ceiling Stay Rod.

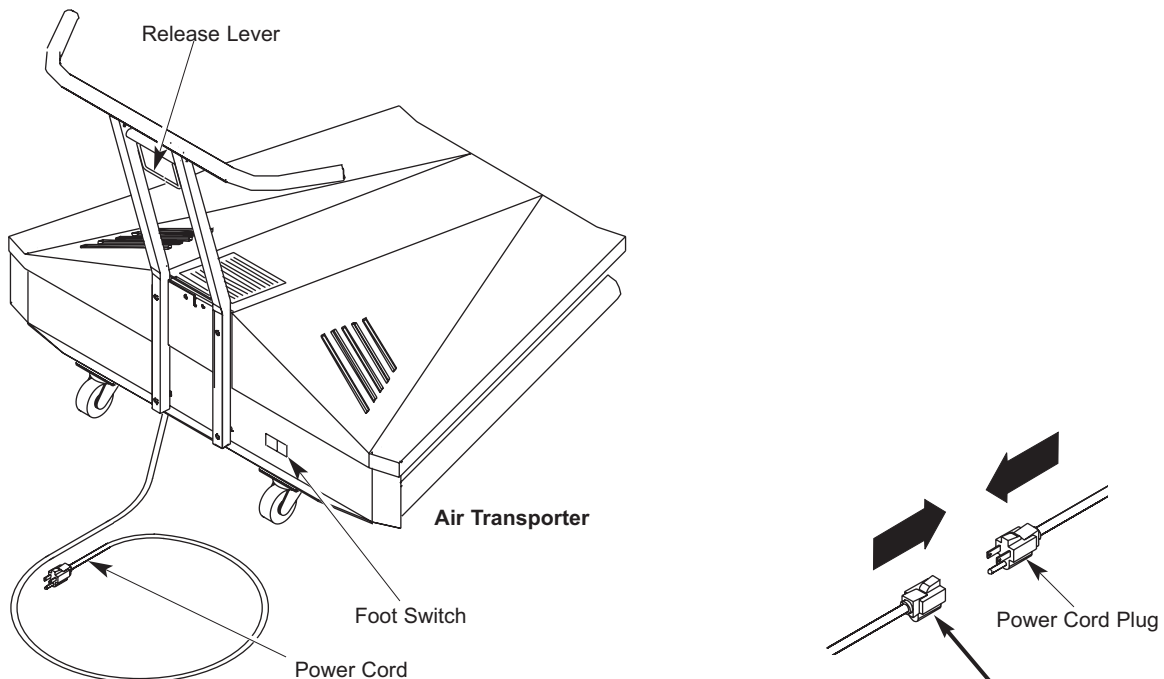
8. Lift the Ceiling Panel Row to the Performance Position. Make sure that the Ceiling Panel Row does not swing while lifting it.

TOWER SET UP

MOVING TOWERS FROM STORAGE

- Warning!** Always use the Air Transporter when moving Diva® Towers. Never attempt to move Diva® Towers without using the Air Transporter. Failure to observe this warning can result in damage to property, serious injury, or death.
- Warning!** Always wear a hard hat (compliant with ANSI Z89-1997) when moving the Diva® Towers. Failure to observe this warning can result in damage to property, serious injury, or death.
- Warning!** Always wear safety glasses and safety shoes and use heavy work gloves when moving the Diva® Towers. Failure to observe this warning can result in serious injury.
- Warning!** Always use an Air Transporter to transport a Diva® Tower. Failure to observe this precaution can result in serious injury, death, or damage to property.
- Warning!** Never move a Diva® Tower on an inclined surface or ramp with or without using the Air Transporter. Failure to observe this precaution can result in serious injury, death, or damage to property.
- Warning!** Never ride on an Air Transporter. Failure to observe this precaution can result in serious injury, death, or damage to property.
- Warning!** Connect the Air Transporter Power Cord to a fused, grounded, 120 VAC, 15 ampere, 14 gauge power cord. Failure to observe this precaution can result in serious injury, death, fire, or damage to property.

1. Connect the Air Transporter Power Cord to a 14 gauge extension cord that connects to a fused, grounded, 120 VAC, 15 ampere power source. Make sure that the extension cord is long enough to reach wherever the Air Transporter will be moved.



Connect the Power Cord Plug to a 14 gauge extension cord that connects to a fused, grounded, 120 VAC, 15 ampere power source

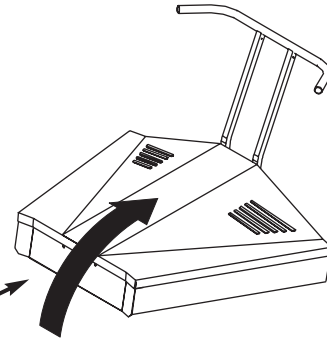
TOWER SET UP CONTINUED

MOVING TOWERS FROM STORAGE CONTINUED

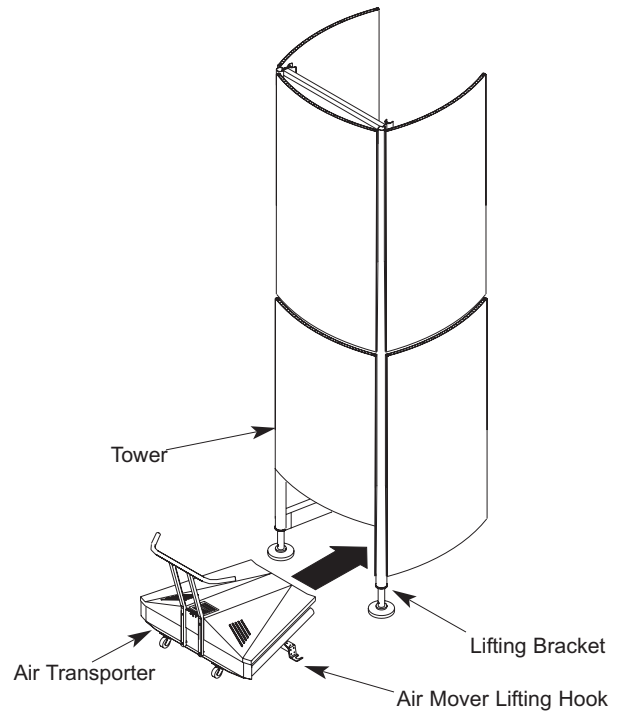
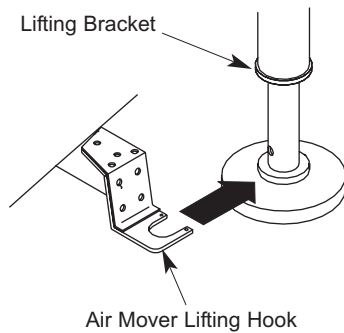
Warning! Make sure that all electrical connections will not separate and interrupt power to the Air Transporter when moving a Tower. Failure to observe this precaution can result in serious injury, death, or damage to property.

2. To move the Air Transporter when not supporting a Tower, tilt the front of the Air Transporter upward on the rear casters about 10 to 15-degrees. The front caster will drop downward into place.

To move the Air Transporter when not supporting a Tower, tilt the Front End upward about 10-degrees.



3. Place the Air Mover under the Tower Assembly with the Lifting Hooks under the Lifting Brackets on Tower Assembly. Refer to the illustrations below and right.



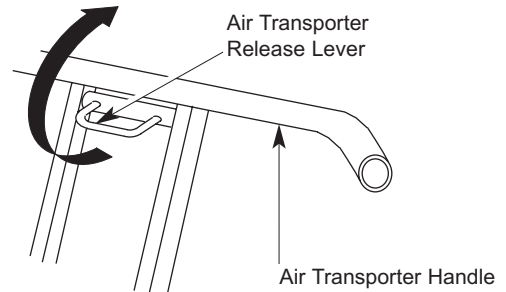
TOWER SET UP CONTINUED

MOVING TOWERS FROM STORAGE CONTINUED

Warning! Two or more people must work together when moving a Diva® Tower. One person must always watch for obstructions on the stage and above the stage while a second person pushes the Air Transporter. Failure to observe this precaution can result in serious injury, death, or damage to property.

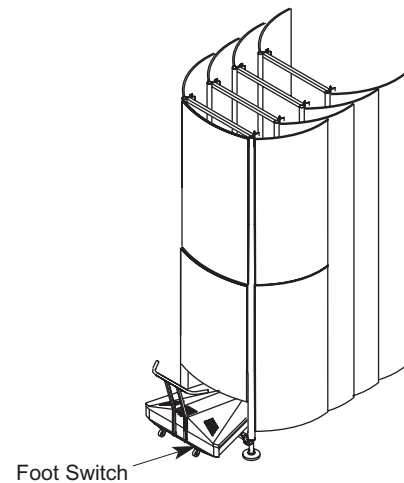
Warning! Always clear all people and objects from the stage when moving Diva® Towers to or from storage. Failure to observe this precaution can result in serious injury, death, or damage to property.

4. Lift the Release Lever to extend the air pads to the floor.



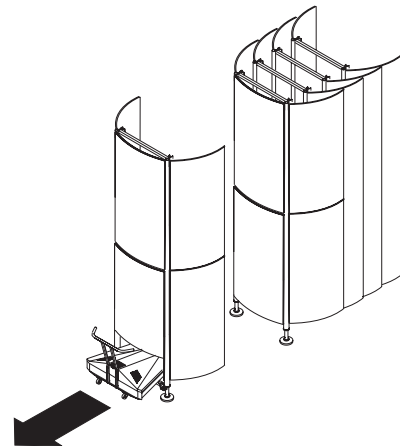
5. Turn on the Air Transporter air blower by placing the Foot Switch into the on position (press the left side of the switch).

Note: Make sure that both Lift Hooks engage the Lifting Brackets.



Warning! Always rotate and lock the Tower Wing Panels to the storage position before moving Tower to or from the performance position. Failure to observe this precaution can result in serious injury, death, or damage to property.

6. Using the Air Transporter, slowly move the Tower about 5' from the other Towers.
7. Stop moving the Tower so that a second person can make sure that the Wing Panels are locked in the storage position and that the Wing Doors are locked to the Wing Panels.



TOWER SET UP CONTINUED

MOVING TOWERS FROM STORAGE CONTINUED

Warning! Never move a Diva® Tower faster than one-foot-per-second when transporting to or from the storage position. Moving a Tower carelessly or too fast can cause a serious accident such as tipping the Tower over, running into objects, etc. Failure to observe this precaution can result in serious injury, death, or damage to property.

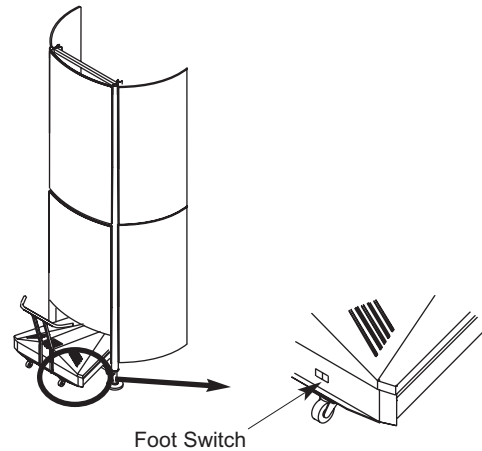
8. With one person pushing the Air Transporter and a second person guiding, slowly move (**no faster than one-foot-per-second**) the Tower to the performance position. Be careful to not push the Tower into any obstructions on the stage floor or above the stage floor (such as Ceiling Panels, etc.).

Note: It is best to create permanent marks for the performance positions for all Towers before moving the Towers from Storage.

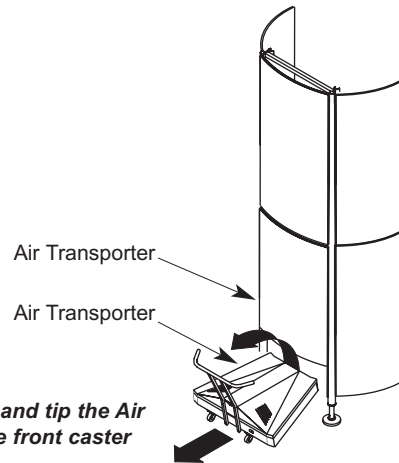
9. When the Tower is in the performance position, turn off the Air Transporter Air Blower by placing the Foot Switch into the off position (press the right side of the switch).

Note: As the air escapes from the Air Transporter air pads, the Tower will tilt slightly forward.

When the Tower is in the Performance Position, turn off the Air Blower by placing the Foot Switch into the off Position.



10. Remove the Air Transporter from the Tower as follows.
 - a. When the air pads are deflated, pull the Air Transporter away from the Tower so that the Lift Hooks are clear of the Tower Lift Brackets.
 - b. Place a foot against the rear of the Air Transporter and tilt the front upward until the front caster locks into place (down position).
 - c. Move the Air Transporter to the next Tower to be moved.



Pull the Air Transporter clear of the Tower and tip the Air Transporter front end upward to deploy the front Caster (lock into the down position).

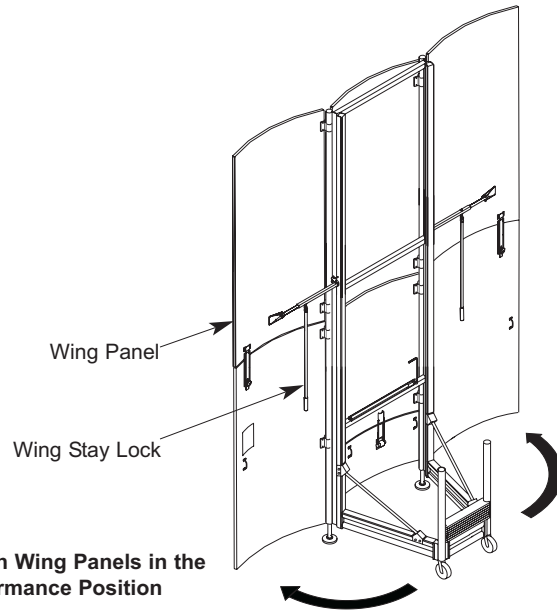
11. Move other Towers to performance positions by repeating steps 3 to 10.

TOWER SET UP CONTINUED

TOWER PERFORMANCE POSITION SETUP

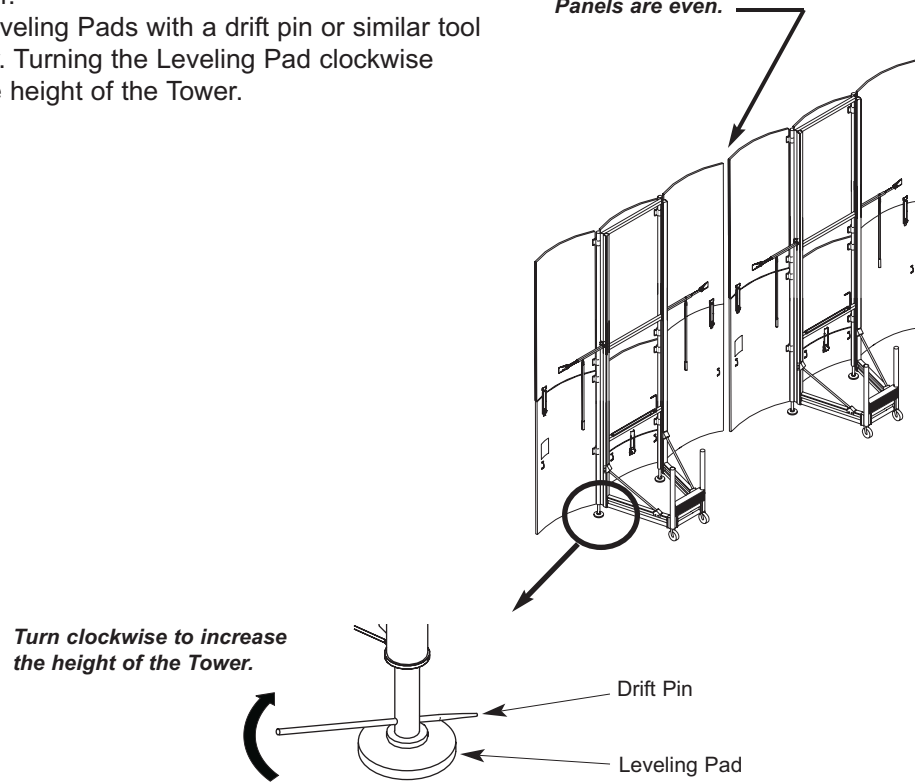
Prepare the Tower for performance as follows.

1. Position the Tower Wing Panels.
 - a. Turn the Wing Stay Lock about one-half turn counterclockwise to release the Wing Panel.
 - b. Rotate the Wing Panel to the Performance Position.
 - c. Lock the Wing Panel by turning the Wing Stay Lock clockwise until snug.
 - d. Position the opposite Wing Panel by repeating steps 1a through 1c.
 - e. Place the other Tower Wing Panels into the Performance Position.
 - f. If necessary, adjust the Tower positions with the Air Transporter.



2. Level the Towers as follows. Towers should be level and adjacent Wing Panels should be even.
 - a. Use a 48" box level or similar tool and check the level of each Tower.
 - b. Adjust the Leveling Pads with a drift pin or similar tool as necessary. Turning the Leveling Pad clockwise increases the height of the Tower.

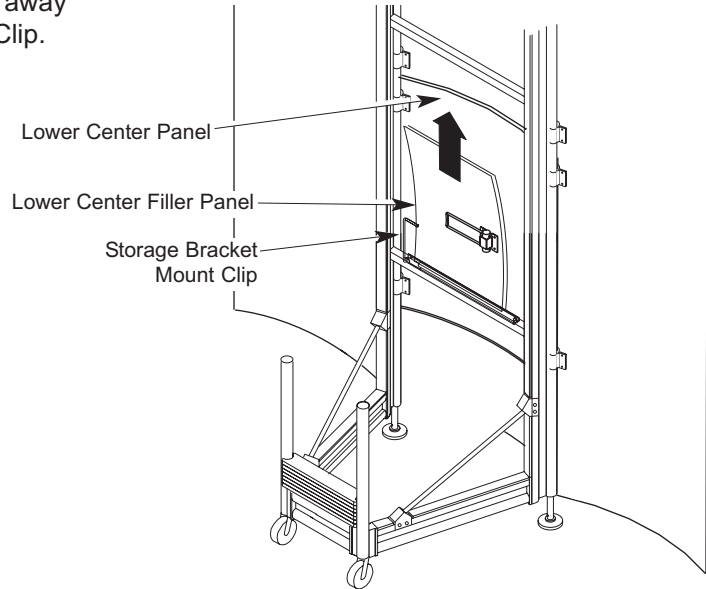
Use a box level or similar tool and make sure that the each Tower is level and that the adjacent Wing Panels are even.



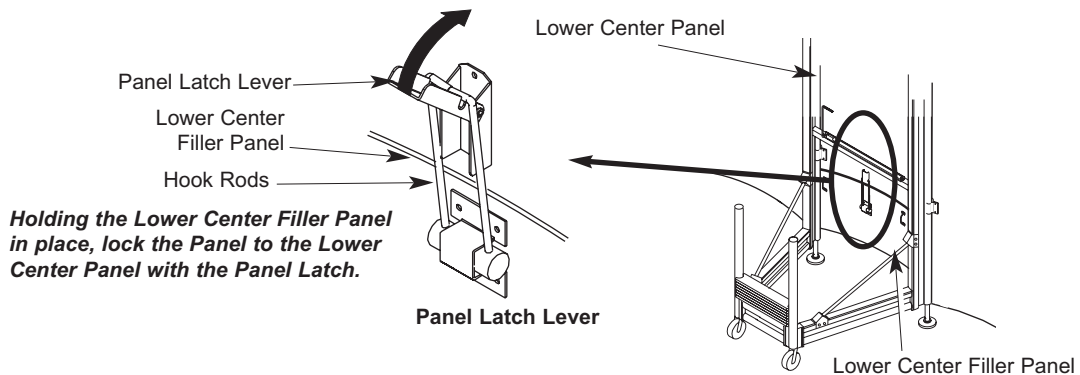
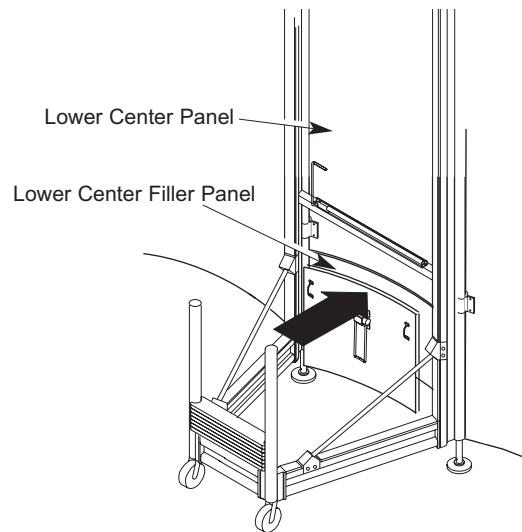
TOWER SET UP CONTINUED

TOWER PERFORMANCE POSITION SETUP CONTINUED

3. Install the Lower Center Filler Panel to the Tower as follows.
 - a. Lift the Lower Center Filler Panel away from the Storage Bracket Mount Clip.



- b. Align the Filler Panel just below the Lower Center Panel. It may be necessary to fit the Panel through the opening from the outside.
 - c. Holding the Panel Handles, place the Lower Filler Panel into position below the Lower Center Panel.
 - d. Lock the Lower Center Filler Panel to the Lower Center Panel with one person holding the Filler Panel in place and a second person engaging the Hook Rods with the Locking Lever and closing the Locking Lever. See the illustration below.



Holding the Lower Center Filler Panel in place, lock the Panel to the Lower Center Panel with the Panel Latch.

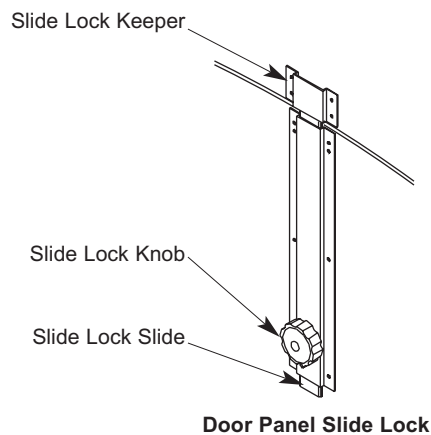
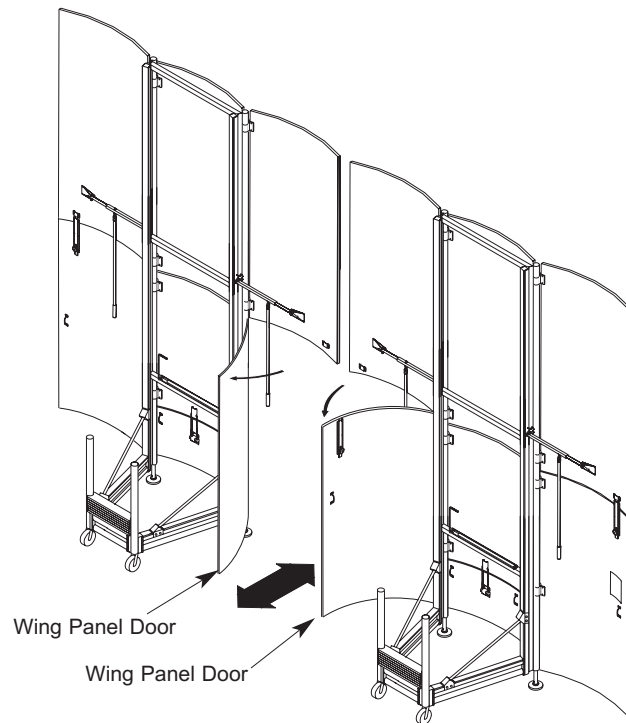
TOWER SET UP CONTINUED

TOWER WING PANEL DOORS

Wing Panels with a Door open as follows.

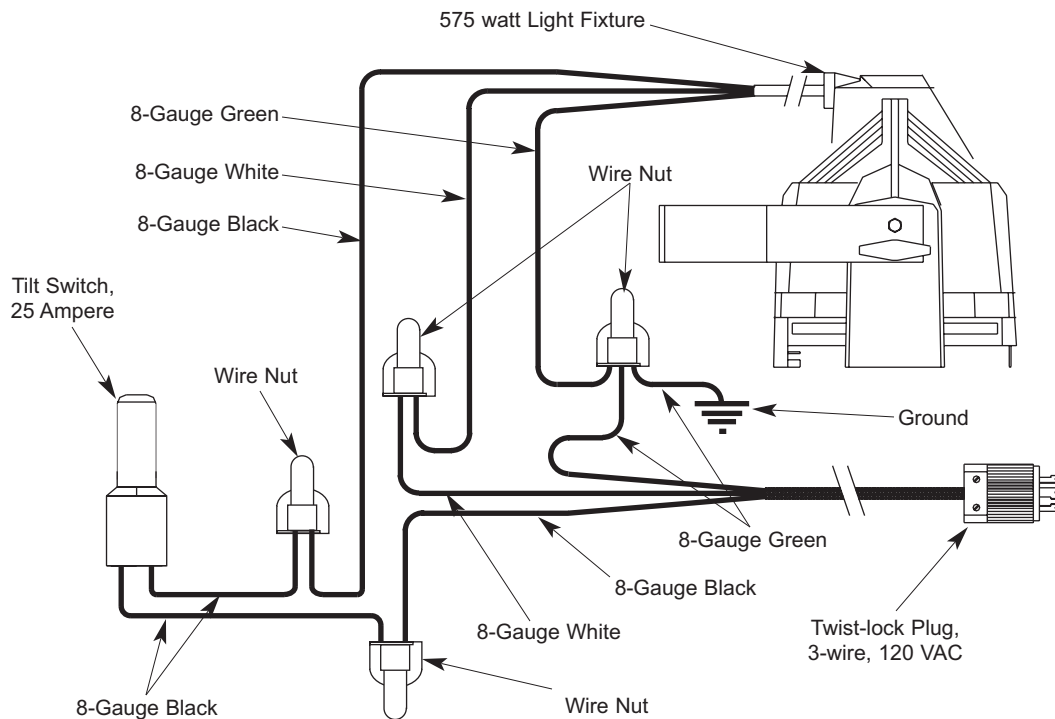
Note: When two Doors are adjacent, always open the the Door without Edge Trim first.

1. Turn the Slide Lock Knob counterclockwise to release the Slide Lock Slide.
2. Pull the Slide Lock Slide downward to clear the Slide Lock Keeper and turn the Slide Lock Knob clockwise until it is snug.
3. Open the Door.



CEILING PANEL LIGHTS

CEILING LIGHT ELECTRICAL SCHEMATIC



CEILING LIGHT ELECTRICAL CONNECTION

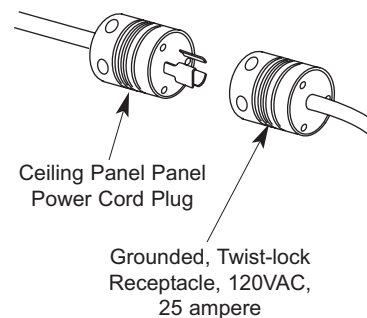
Warning! Branch circuits that supply power to the Ceiling Light must always be designed by an electrical engineer, permanently wired, and comply with electrical codes and user requirements. Failure to follow this precaution can result in damage to property, serious injury or death!

Warning! Always disconnect power to the Ceiling Panel Lights before cleaning. Failure to observe this precaution can result in electrical shock or death.

Warning! Always disconnect power to the light switch before changing Ceiling Panel Light bulbs. Failure to observe this precaution can result in electrical shock or death.

Warning: A licensed electrician must perform the Ceiling Panel electrical installation. Failure to observe this precaution can result in serious injury, death, or damage to property.

Connect the Ceiling Panel Light Power Cord to a grounded, fused, three-wire, 120VAC, 25 ampere power source with a twist-lock receptacle. **The power source must comply with local electrical codes.**



MAINTENANCE

TOWERS

1. Clean surfaces with a mild, non-abrasive detergent when soiled.
2. Make sure that all fasteners are tight.
3. Replace any damaged part immediately.
4. Lubricate any Leveler parts that do not move freely with a general purpose grease.
5. Immediately replace any missing counterweights with a Wenger Corporation replacement part.
6. Make sure that all hinges move freely. If necessary, replace worn or damaged hinges.
7. Replace any damaged rear frame casters.

CEILING PANELS

1. Clean surfaces with a mild, non-abrasive detergent when soiled.
2. Make sure that all fasteners are tight.
3. Inspect rigging before flying or storing Ceiling Panels.
4. Make sure that all hanger brackets turn freely on truss assemblies. Replace parts as necessary.
5. Check Ceiling Panel Performance Angles and adjust when necessary. Make sure that the Ceiling Panel Ceiling Stay Levers work and move easily.

CEILING LIGHTS

Warning! *Always disconnect power to the Ceiling Panel Lights before cleaning. Failure to observe this precaution can result in electrical shock or death.*

Warning! *Always disconnect power before changing Ceiling Panel Light bulbs. Failure to observe this precaution can result in electrical shock or death.*

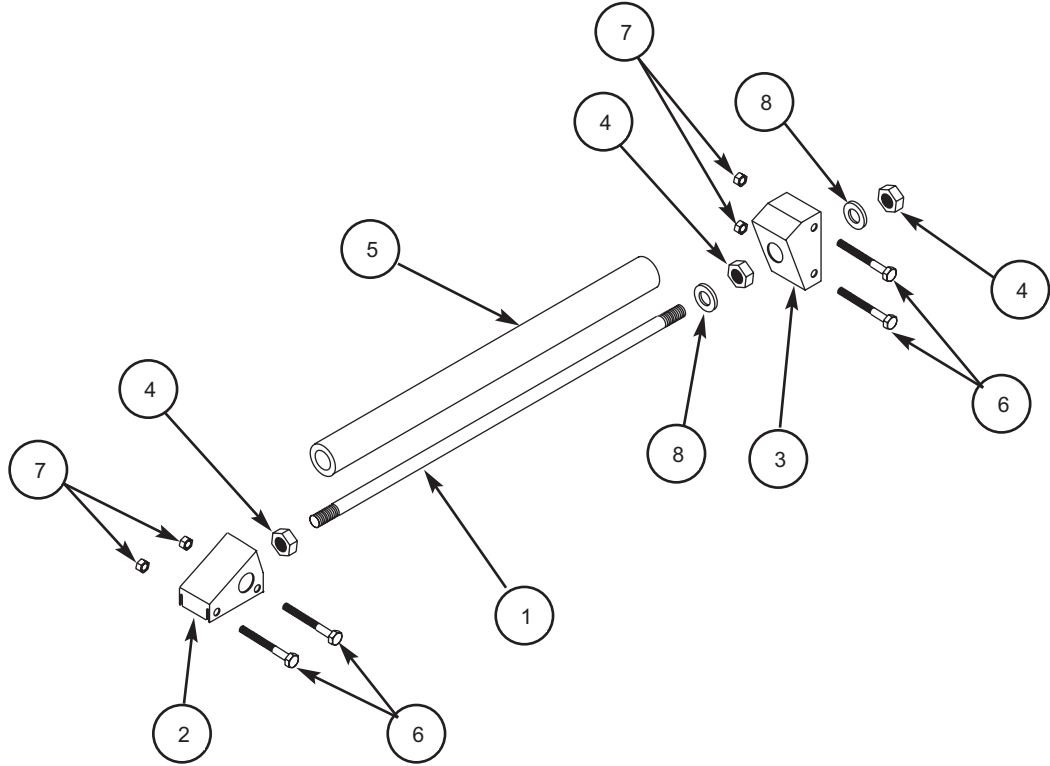
Warning! *Replace any broken Ceiling Panel light bulbs immediately. Failure to observe this precaution can result in electrical shock.*

Warning! *Replace any malfunctioning Ceiling Panel electrical components only with components with the same specification. Failure to observe this precaution can result in electrical shock, fire, damage to property, serious injury, or death.*

1. Replace burned out lamps with a 120 VAC, 575 watt flood lamp.
2. Make sure that all Ceiling Light Power Cord Plugs are connected to grounded, twist-lock receptacles in a locked position.
3. Make sure that all power cords are not frayed or under tension when the Ceiling Panels are deployed or stored.
4. Make sure that each Ceiling Light Tilt Switch works correctly before the Ceiling Panel is moved to the performance position.

TOWER REPLACEMENT PARTS

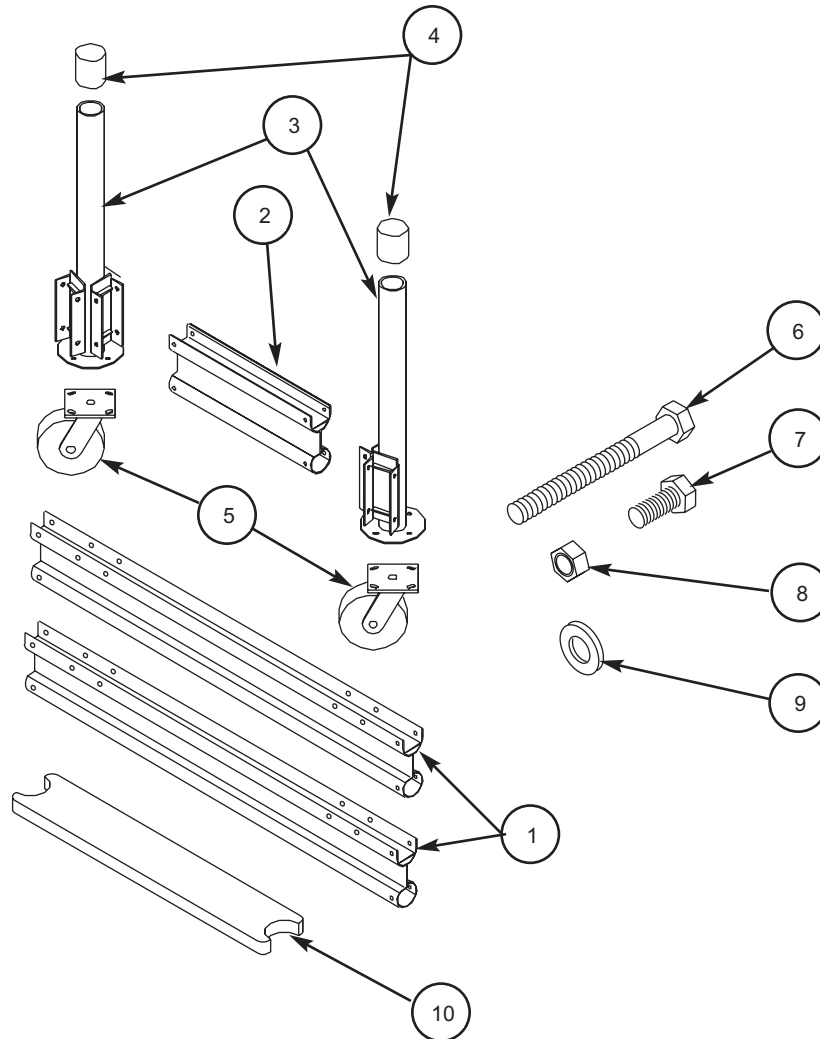
DIAGONAL BRACE ASSEMBLY



Item	Description
1	Diagonal Rod, 1-8 x 3'
2	Horizontal Mounting Bracket
3	Vertical Mounting Bracket
4	Hex Nut, 1-8
5	Polyethylene Extrusion
6	Hex Head Screw, $\frac{3}{8}$ -16 x 3 $\frac{1}{2}$ "
7	Locknut, $\frac{3}{8}$ -16
8	Washer, Nylon, 1" Inside Diameter

TOWER REPLACEMENT PARTS CONTINUED

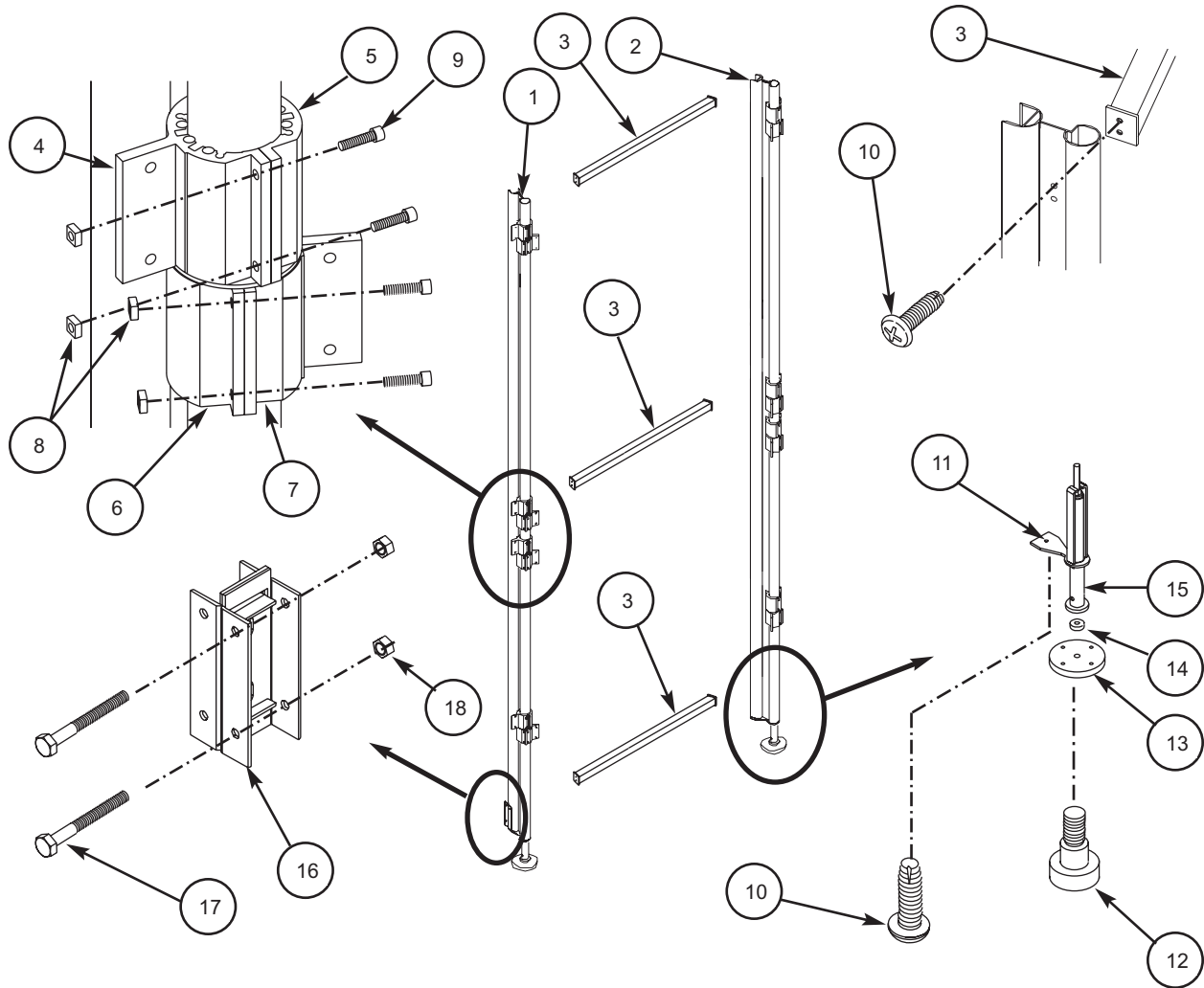
BASE FRAME



Item	Description
1	Base Frame Side Frame
2	Base Frame Rear Frame
3	Base Frame Caster Mount
4	Caster Mount Cap
5	Swiveling Caster, 6" diameter
6	Hex Head Screw, $\frac{3}{8}$ -16 x $3\frac{1}{2}$ "
7	Hex Head Screw, $\frac{3}{8}$ -16 x 1"
8	Locknut, $\frac{3}{8}$ -16
9	Flat Washer, .410" ID x $\frac{3}{4}$ " outside diameter
10	Counterweight

TOWER REPLACEMENT PARTS CONTINUED

VERTICAL FRAME ASSEMBLY



Item Description

- 1 Right Hand Vertical Frame**
- 2 Left Hand Vertical Frame**
- 3 Cross Brace
- 4 Outer Hinge
- 5 Inner Hinge
- 6 Fixed Outer Bracket
- 7 Fixed Inner Bracket
- 8 Square Lock Nut, 1/4-20
- 9 Hex Socket Screw, 1/4-20 x 1"
- 10 Self-drill Screw, 1/4-20 x 1"

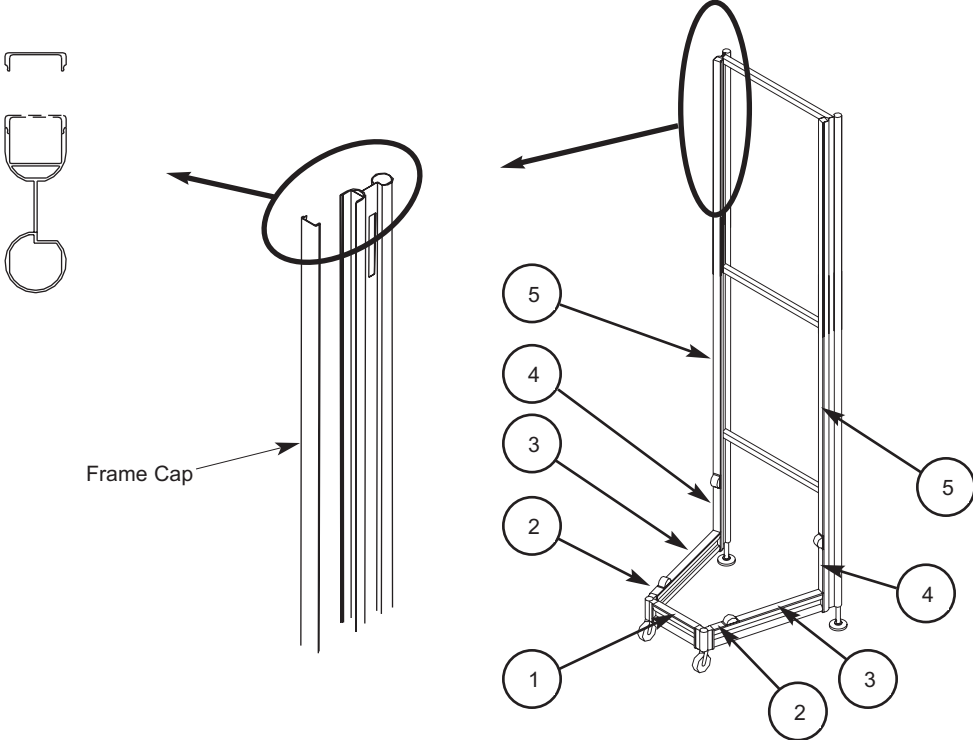
** Specify length

Item Description

- 11 Upper Leveler Bracket
- 12 Shoulder Screw, 1/2 x 3/4"
- 13 Floor Plate
- 14 Leveler Bearing
- 15 Lower Leveler Bracket
- 16 Frame Transition Assembly
- 17 Hex Head Screw, 3/8-16 x 3 1/2"
- 18 Locknut, 3/8-16

TOWER REPLACEMENT PARTS CONTINUED

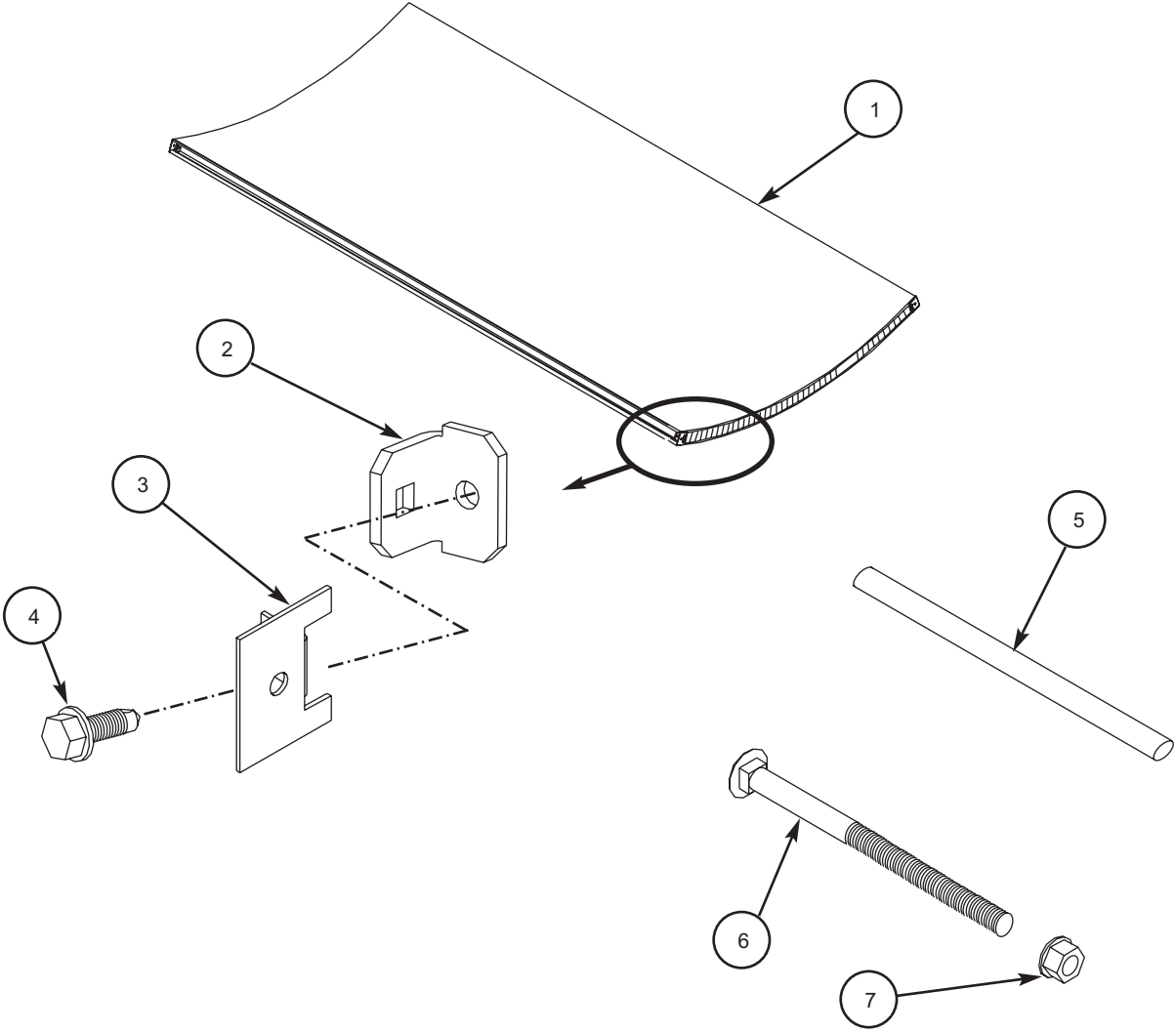
FRAME CAP



Item	Description
1	Rear Frame End Cap, 20.68"
2	Short Side Frame End Cap, 5.43"
3	Long Side Frame End Cap, 29.50"
4	Lower Vertical End Cap, 15.75"
5	Upper Vertical End Cap (specify length from 28 to 192")

TOWER REPLACEMENT PARTS CONTINUED

TOWER WING-DOOR-CENTER PANEL

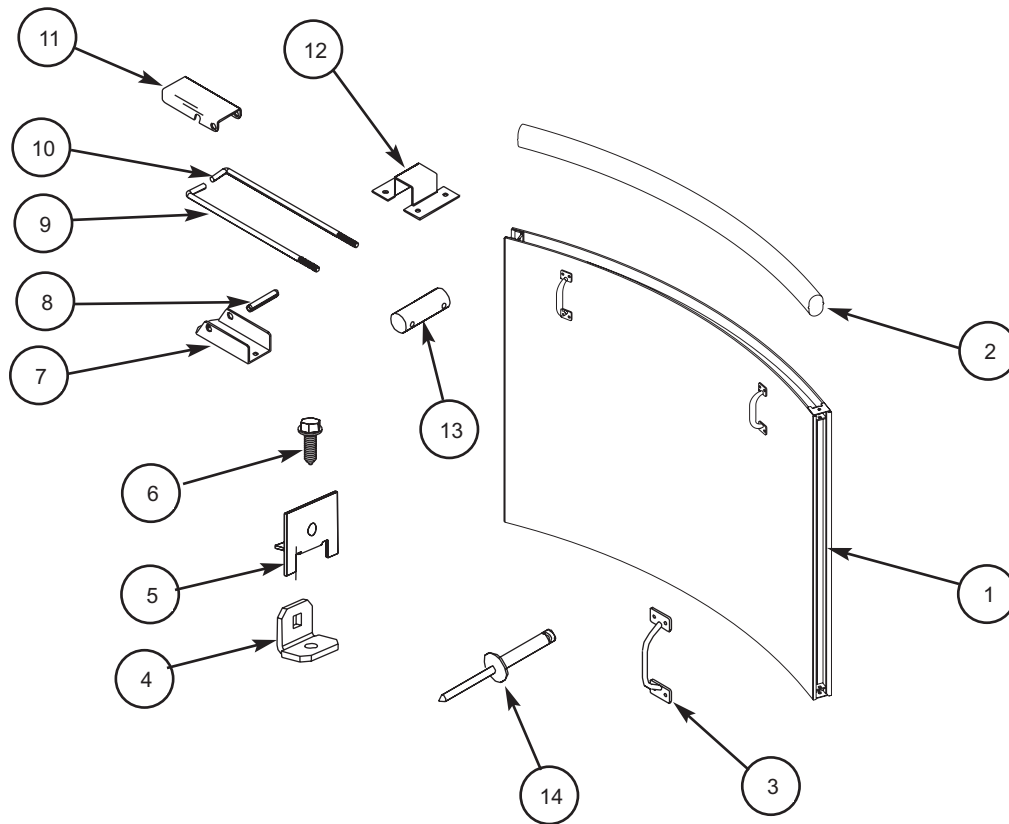


Item	Description
1	Tower Panel**
2	Inner Corner Clip
3	Outer Corner Clip
4	Self-drill Screw, 1/4-20 x 1"
5	Polyethylene Extrusion
6	Carriage Bolt, 1/4-20 x 3 1/2"
7	Hex Nut, 1/4-20

** Specify length

TOWER REPLACEMENT PARTS CONTINUED

LOWER FILLER PANEL

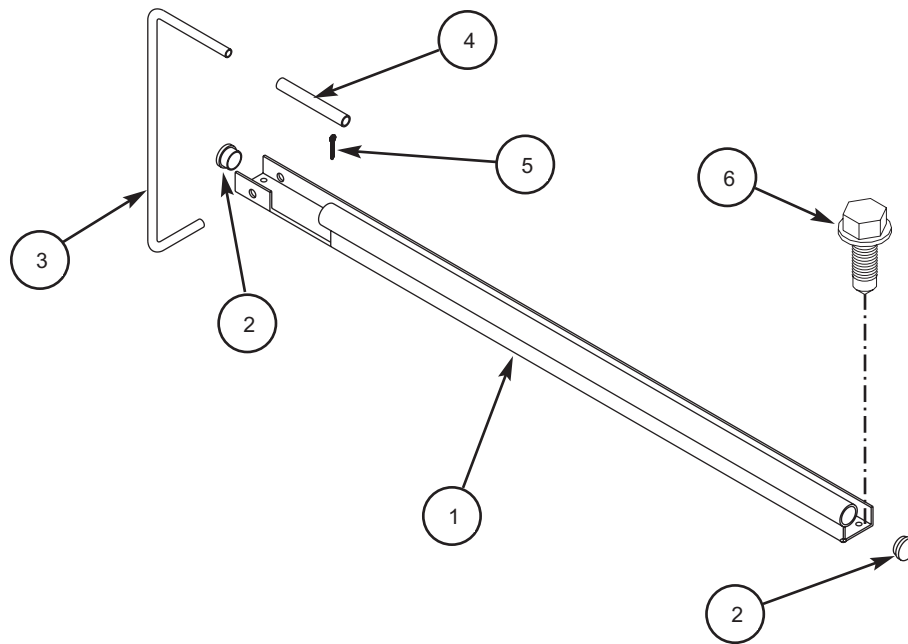


Item	Description
1	Lower Filler Panel
2	Polyethylene Extrusion
3	Door Handle
4	Inner Corner Clip
5	Outer Corner Clip
6	Hex Head Self-drill Screw, 1/4-20 x 1"
7	Panel Latch Lever Bracket
8	Spring Pin, 5/16" x 1 3/4"
9	Left Hook Rod

Item	Description
10	Right Hook Rod
11	Panel Latch Lever
12	Panel Latch Bracket
13	Hinge Rod
14	Blind Rivet, 3/16" x 3/8"

TOWER REPLACEMENT PARTS CONTINUED

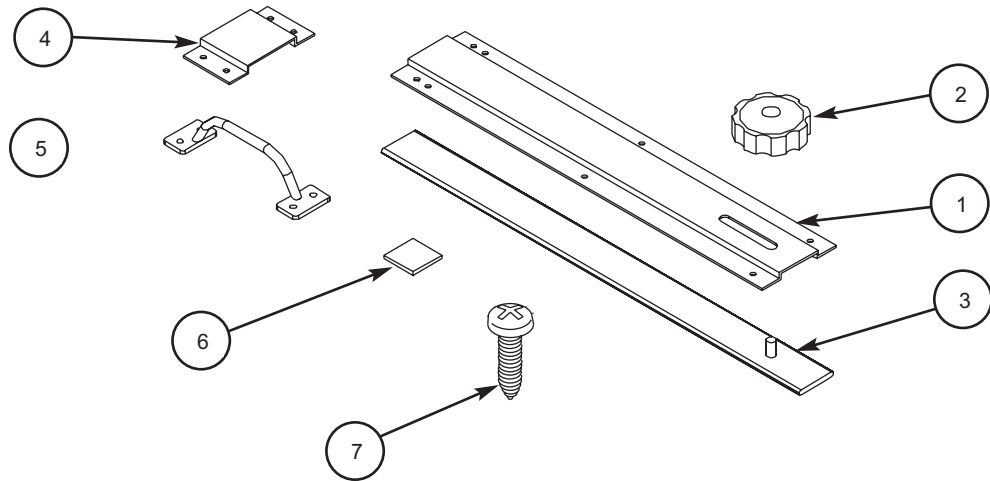
LOWER FILLER PANEL MOUNT ASSEMBLY



Item	Description
1	Filler Panel Mounting Bracket
2	Ribbed Plug
3	Filler Panel Mounting Clip
4	Filler Panel Mounting Clip Cushion
5	Cotter Pin, $\frac{5}{32}$ " x $\frac{3}{4}$ "
6	Self-drill Hex Head Screw, $\frac{1}{4}$ -14 x $\frac{3}{4}$ "

TOWER REPLACEMENT PARTS CONTINUED

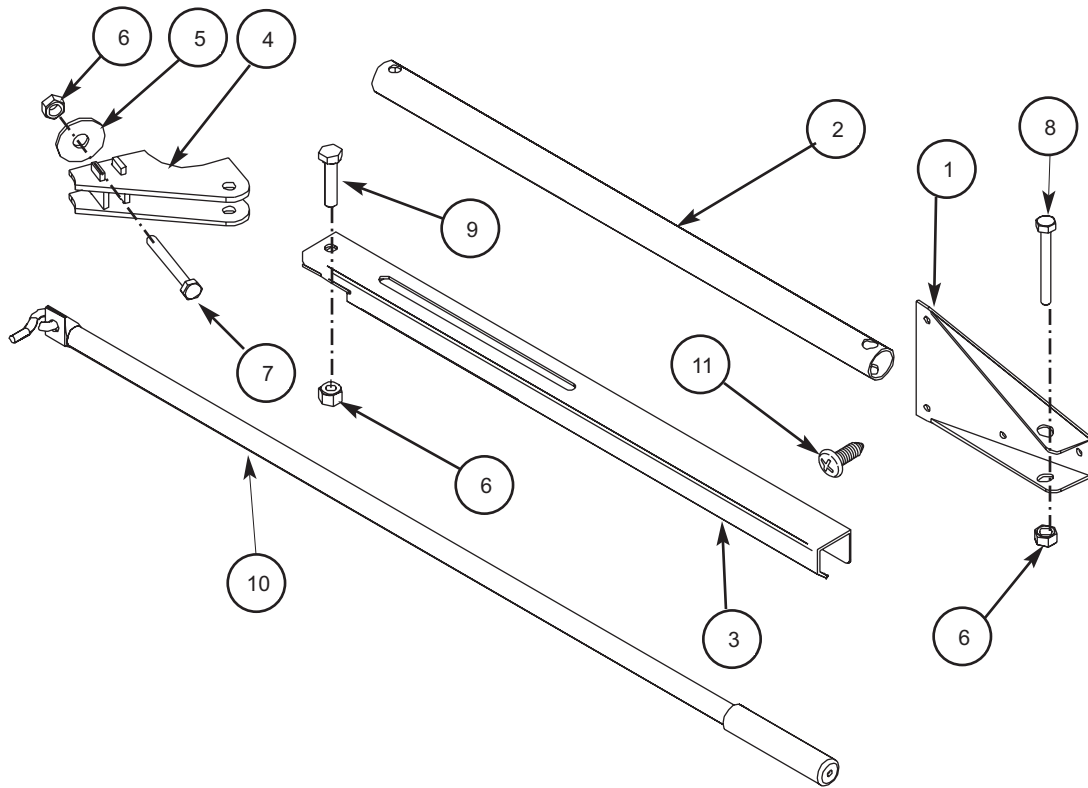
SLIDE LOCK ASSEMBLY



Item	Description
1	Slide Lock Housing
2	Slide Lock Knob
3	Slide Lock Slide
4	Slide Lock Keeper
5	Door Handle
6	Slide Lock Cushion
7	Phillips Pan Head Screw, $\frac{1}{4}$ -20 x $\frac{5}{8}$ "

TOWER REPLACEMENT PARTS CONTINUED

WING STAY ASSEMBLY



Item Description

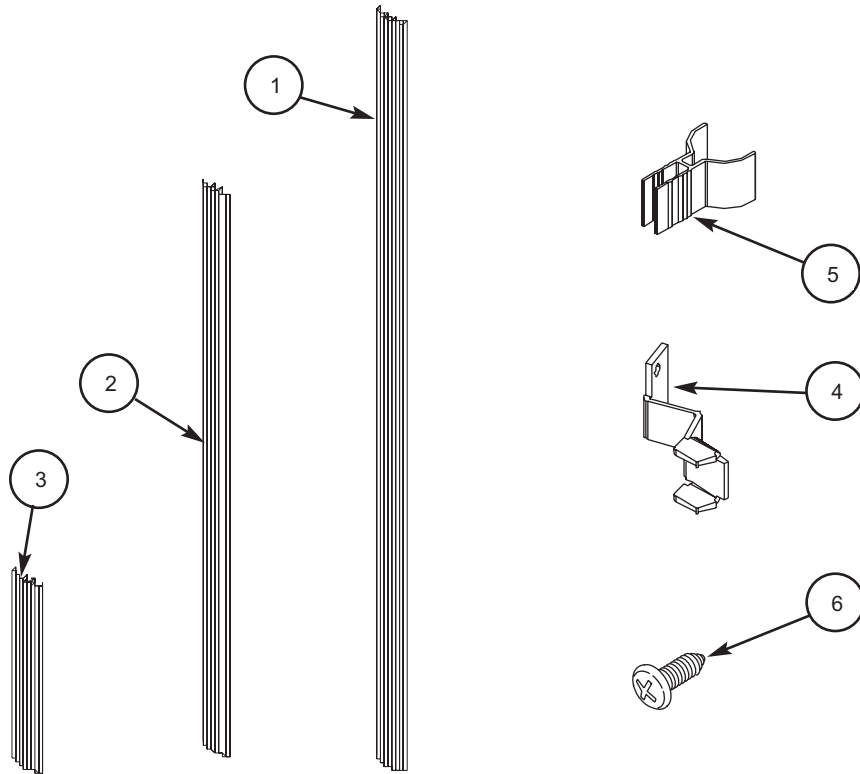
- 1 End Bracket
- 2 Wing Stay Tube
- 3 Wing Stay Channel
- 4 Stay Base Bracket
- 5 Flat Washer, $\frac{3}{8}$ " x $1\frac{1}{4}$ "
- 6 Locknut, $\frac{3}{8}$ -16

Item Description

- 7 Hex Head Capscrew, $\frac{3}{8}$ -16 x $1\frac{3}{4}$ "
- 8 Hex Head Capscrew, $\frac{3}{8}$ -16 x $2\frac{1}{4}$ "
- 9 Hex Head Capscrew, $\frac{5}{16}$ -18 x $1\frac{3}{8}$ "
- 10 Wing Stay Lock
- 11 Phillips Pan Head Screw, 10-24 x $\frac{5}{8}$ "

TOWER REPLACEMENT PARTS CONTINUED

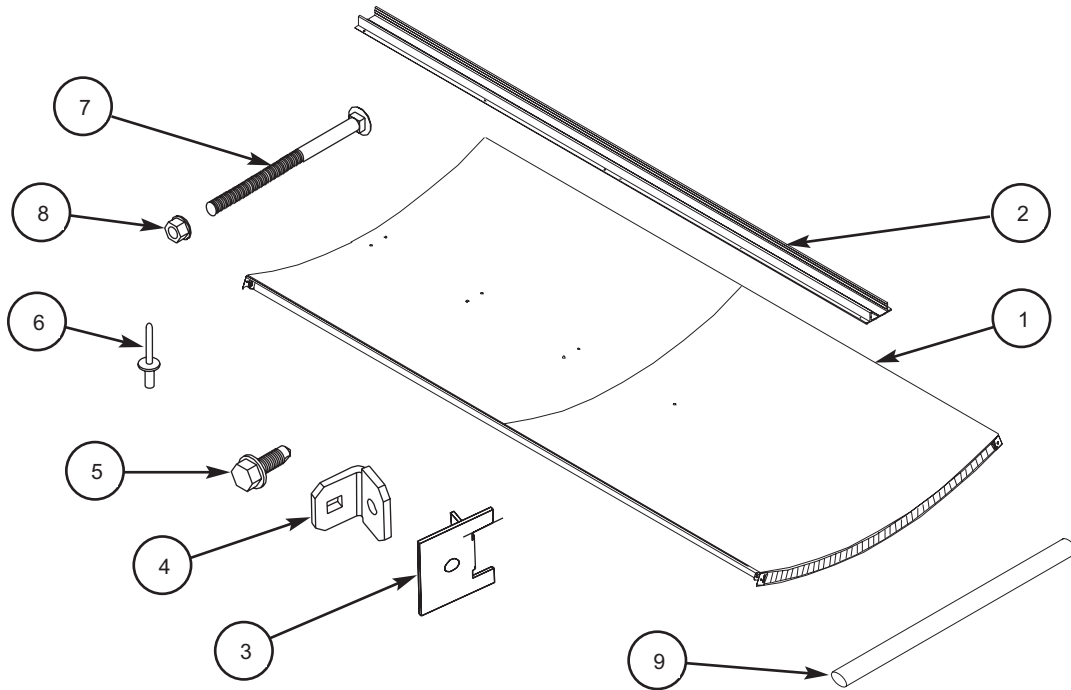
TOWER TRIM KIT



Item	Description
1	Panel Trim Strip (specify length — 96 to 237")
2	Lower Center Panel Trim Strip, 61 ⁵ / ₈ "
3	Filler Panel Trim Strip, 33 ¹ / ₂ "
4	Edge Clip
5	Trim Clip
6	Phillips Pan Head Screw, 10-24 x ⁵ / ₈ "

CEILING PANEL REPLACEMENT PARTS

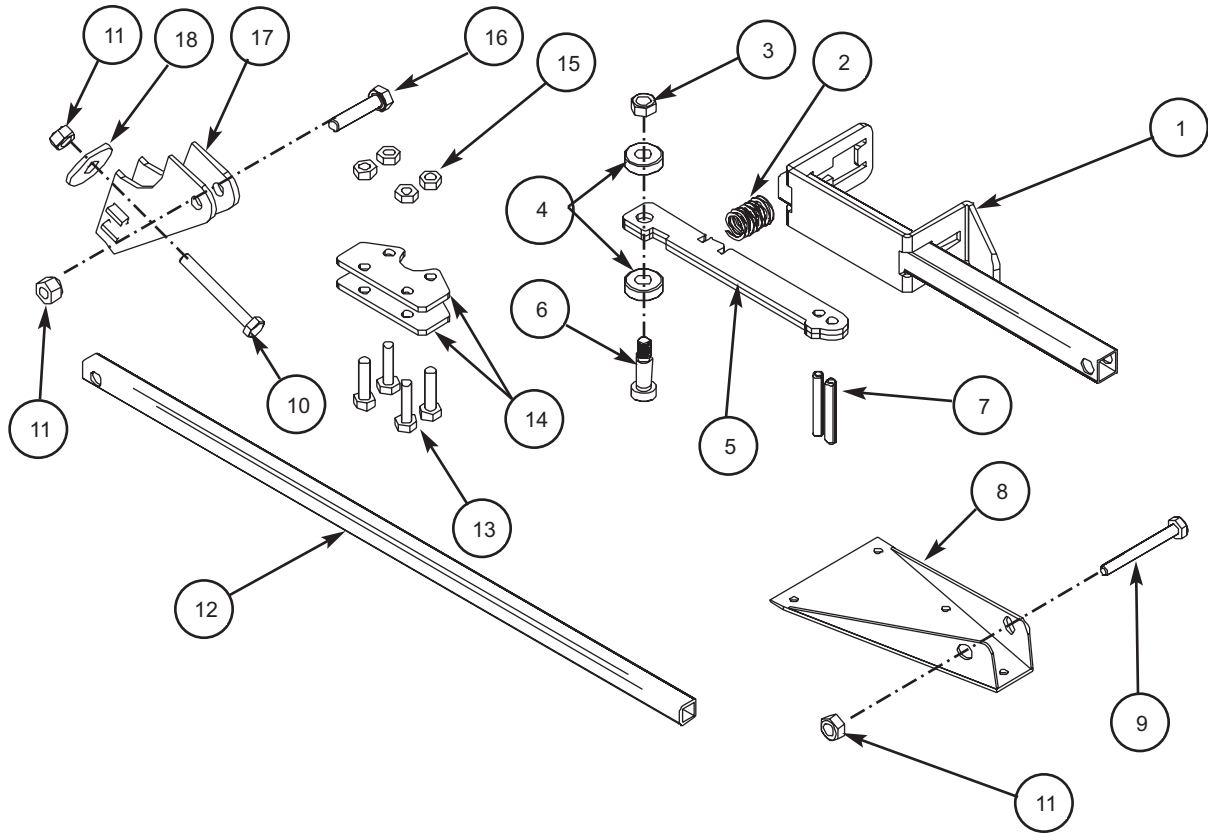
CEILING PANEL



Item	Description
1	Ceiling Panel (specify size)
2	Ceiling Panel Channel (specify length)
3	Outer Corner Clip
4	Inner Corner Clip
5	Self-drill Screw, $\frac{1}{4}$ -20 x 1"
6	Blind Rivet, $\frac{3}{16}$ " x $\frac{3}{8}$ "
7	Carriage Bolt, $\frac{1}{4}$ -20 x $3\frac{1}{2}$ "
8	Hex Nut, $\frac{1}{4}$ -20
9	Polyethylene Extrusion

CEILING PANEL REPLACEMENT PARTS CONTINUED

CEILING PANEL STAY ASSEMBLY

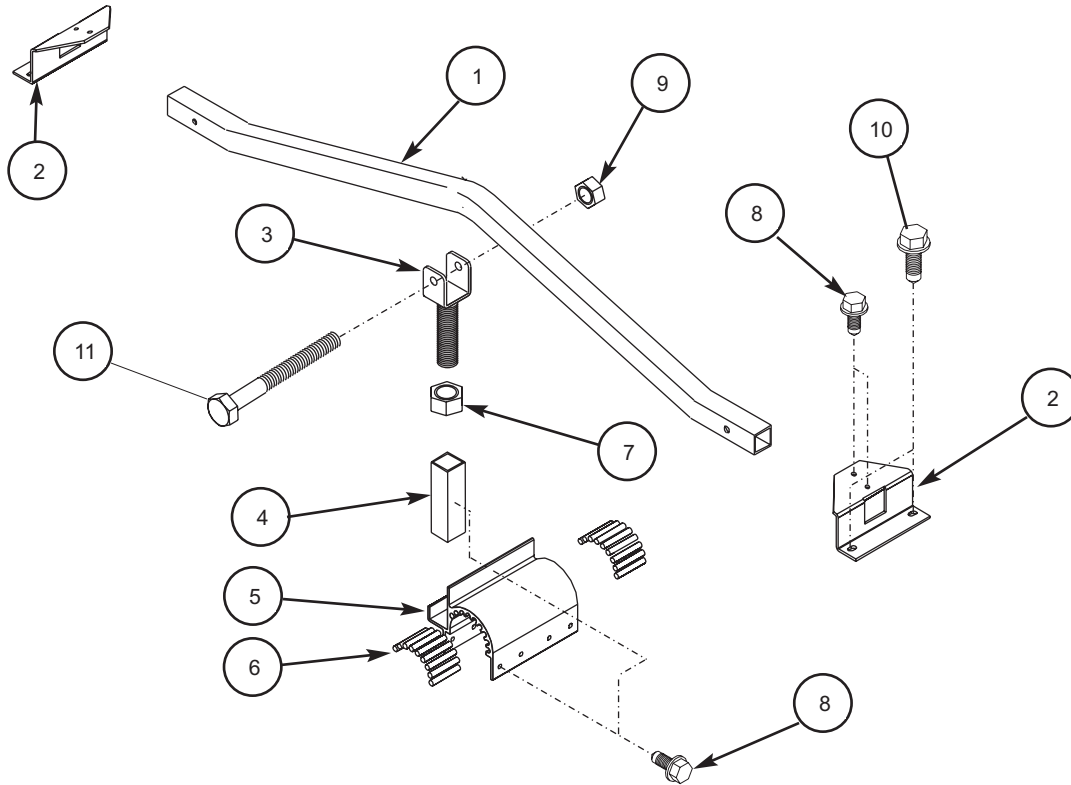


Item	Description
1	Ceiling Panel Stay Tube and Bracket
2	Compression Spring, .720" diameter
3	Locknut, $\frac{5}{16}$ -18
4	Bearing, $\frac{3}{8}$ " inside diameter
5	Latch Bar
6	Hex Socket Shoulder Bolt, $\frac{3}{8}$ " x $\frac{7}{8}$ "
7	Spring Pin, $\frac{1}{4}$ " x $1\frac{5}{8}$ "
8	End Bracket
9	Hex Head Capscrew, $\frac{3}{8}$ -16 x $2\frac{1}{4}$ "
10	Hex Head Capscrew, $\frac{3}{8}$ -16 x $1\frac{3}{4}$ "

Item	Description
11	Locknut, $\frac{3}{8}$ -16"
12	Ceiling Stay Rod
13	Hex Head Capscrew, $\frac{1}{4}$ -20 x $1\frac{1}{4}$ "
14	Latch Receiver Plate
15	Locknut, $\frac{1}{4}$ -20
16	Hex Head Capscrew, $\frac{5}{16}$ -18 x $1\frac{3}{8}$ "
17	Stay Base Bracket
18	Flat Washer, $\frac{3}{8}$ x $1\frac{1}{4}$ "

CEILING PANEL REPLACEMENT PARTS CONTINUED

BOWSTRING ASSEMBLY

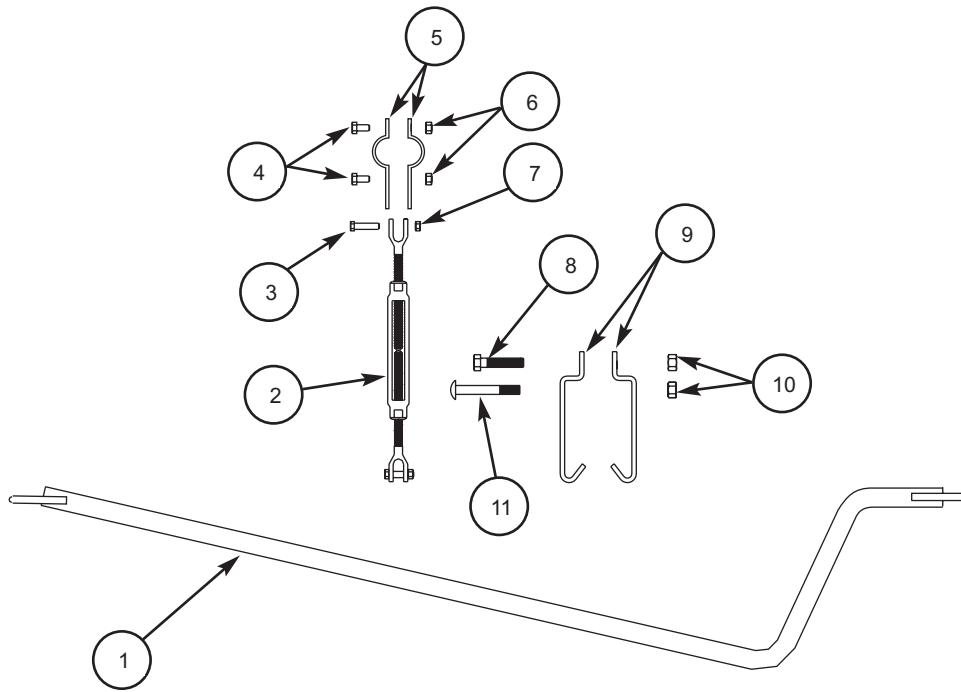


Item	Description
1	Bowstring (specify size and length)
2	Ceiling Clip
3	Bowstring Jack
4	Bowstring Jack Tube
5	Hanger Bracket
6	Hanger Bearing Rod

Item	Description
7	Bowstring Jack Jam Nut
8	Self-drill Screw, 1/4-14 x 3/4"
9	Locknut, 3/8-16
10	Self-tapping Screw, 5/16-18 x 1"
11	Hex Head Screw, 3/8-16 x 2 1/4"

CEILING PANEL REPLACEMENT PARTS CONTINUED

HANGER ARM ASSEMBLY



Item	Description
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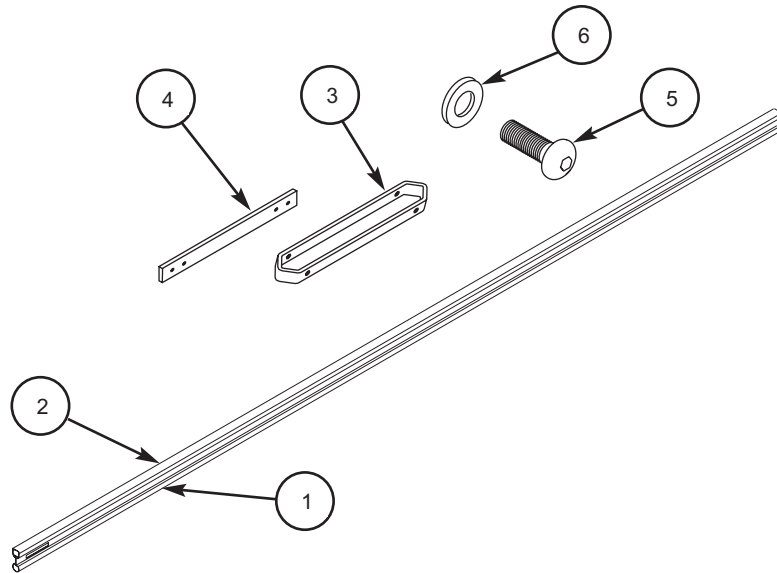
- | | |
|---|---|
| 1 | Bowstring |
| 2 | Turnbuckle |
| 3 | Hex Head Screw, $\frac{3}{8}$ -16 x 2", Grade 5 |
| 4 | Hex Head Screw |
| 5 | Batten Clamp |
| 6 | Locknut |

Item	Description
------	-------------

- | | |
|----|---|
| 7 | Locknut, $\frac{3}{8}$ -16 |
| 8 | Hex Head Screw, $\frac{1}{2}$ -13 x $1\frac{3}{4}$ ", Grade 5 |
| 9 | Hanger Strap |
| 10 | Locknut, $\frac{1}{2}$ -13 |
| 11 | Carriage Bolt, $\frac{1}{2}$ -13 x $3\frac{3}{4}$ " |

CEILING PANEL REPLACEMENT PARTS CONTINUED

TRUSS ASSEMBLY

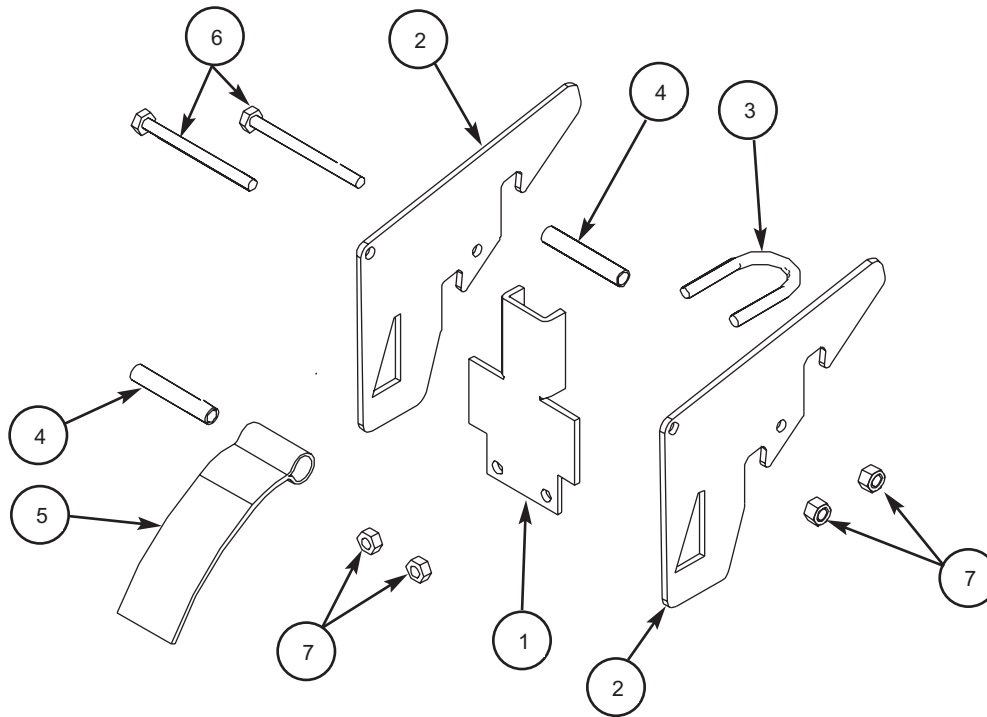


Item	Description
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- | | |
|---|---|
| 1 | Ceiling Truss, (specify length: 4, 8, 12, 16, 20') |
| 2 | Ceiling Truss Cap, (specify length: 4, 8, 12, 16, 20') |
| 3 | Splice Bracket |
| 4 | Splice Bar |
| 5 | Button Head Hex Socket Screw, $\frac{3}{8}$ -16 x $\frac{3}{4}$ " |
| 6 | Washer, $\frac{3}{8}$ " Inside diameter x $1\frac{1}{4}$ " outside diameter |

CEILING PANEL REPLACEMENT PARTS CONTINUED

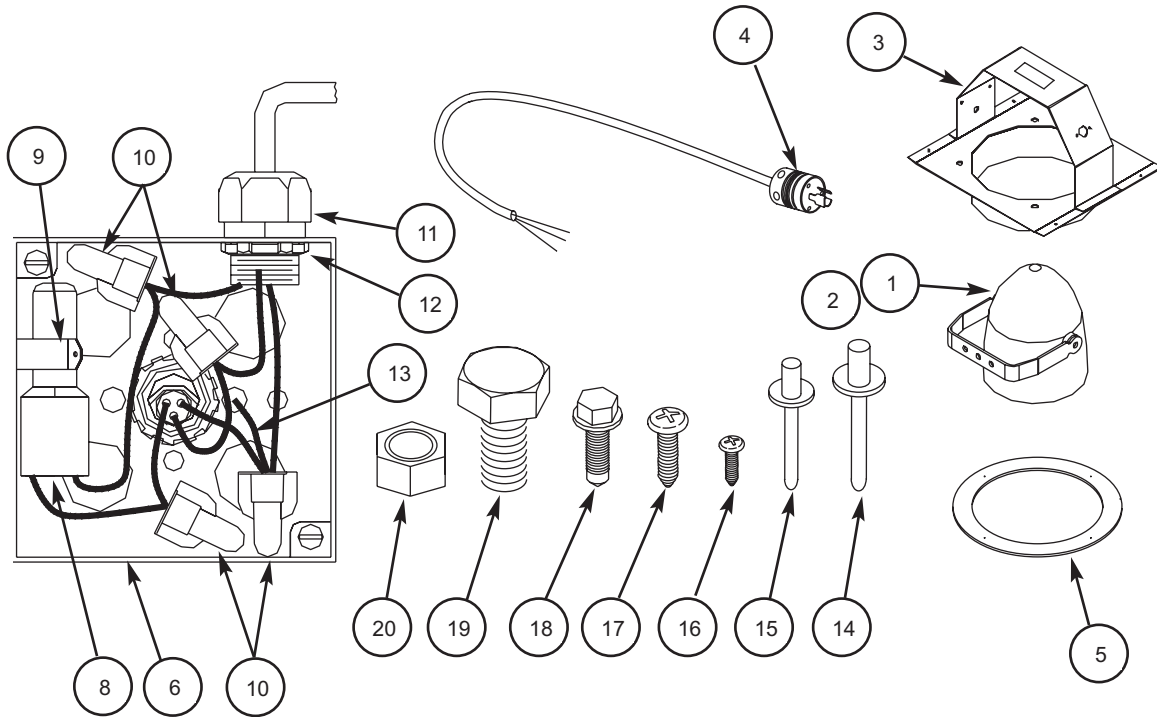
CEILING PANEL CATCH ASSEMBLY



Item	Description
1	Pivot Plate
2	Catch Plate
3	U-Bolt, 1/4-20 x 2" inside
4	Spacer, Tube
5	Ceiling Catch Strap
6	Hex Head Screw, 1/4-20 x 3"
7	Locknut, 1/4-20

CEILING PANEL REPLACEMENT PARTS CONTINUED

CEILING PANEL LIGHT ASSEMBLY



Item Description

- 1 Flood Light Fixture, 575 watt
- 2 Lamp, 575 watt, 120VAC, 2000 Hour
- 3 Light Mount Assembly
- 4 Light Power Cord, 3 wire, twist-lock
- 5 Light Trim Ring
- 6 Electrical Junction Box, 4" x 4" x 1 1/2"
- 7 Flat Cover, 4" x 4" (not shown)
- 8 Switch, tilt, 25 ampere, cotton lead
- 9 Tilt Switch Mounting Clip
- 10 Wire Nut, wing, yellow

Item Description

- 11 Cable Strain Relief, Liquid Proof
- 12 Conduit Locknut, 1/2" NPT
- 13 Ground Wire, R-98-8, Green
- 14 Blind Rivet, 3/16" x 1/4"
- 15 Blind Rivet, 1/8" x 1/8"
- 16 Truss Head Screw, 8-18 x 3/8"
- 17 Pan Head Screw, 10-18 x 3/4"
- 18 Self-drill Screw, 1/4-20 x 1"
- 19 Hex Head Screw, 1/2-13 x 1"
- 20 Locknut, 1/2-13