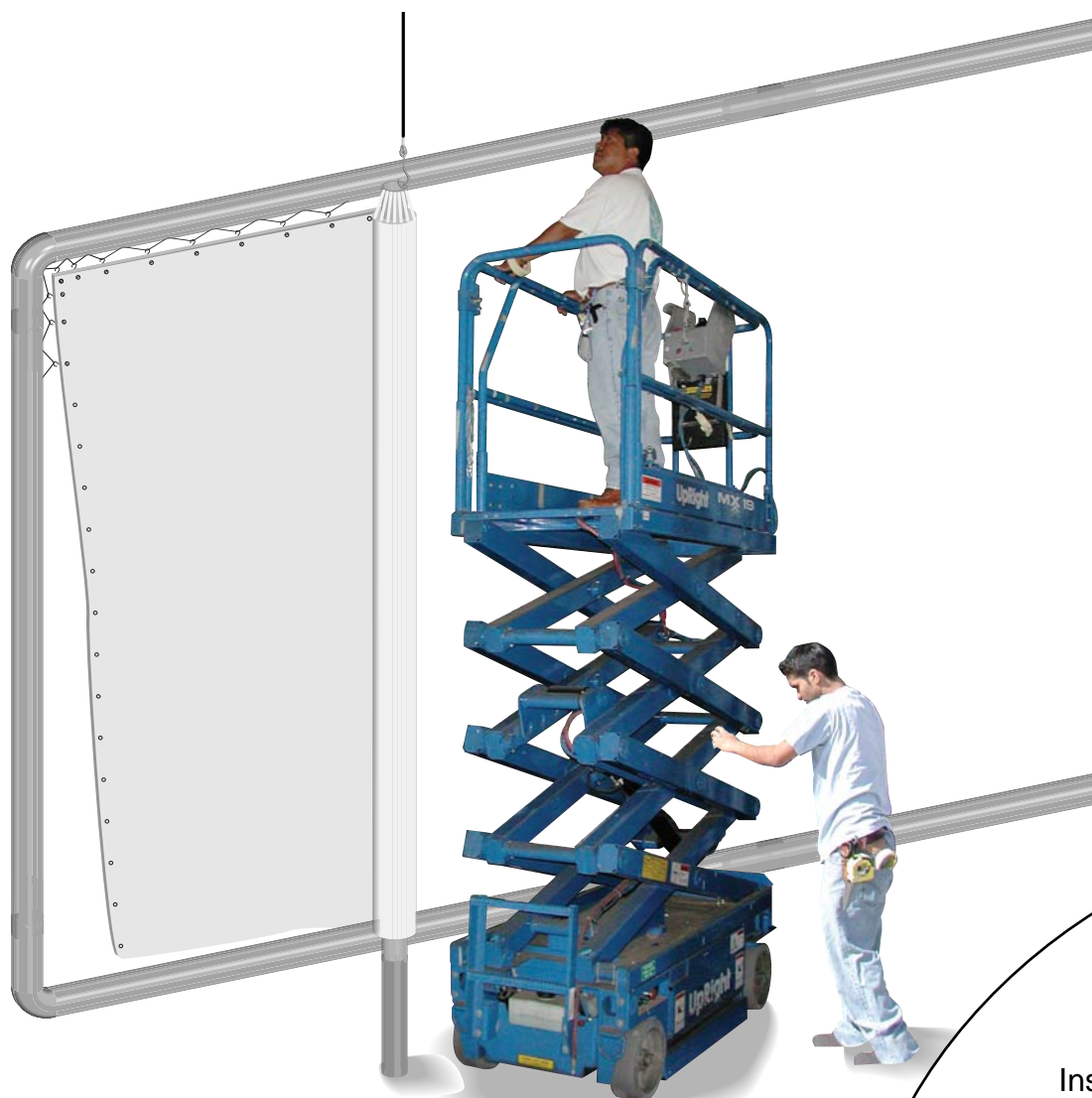


# Lace and Grommated Screens

OWNER'S MANUAL



To the Owner

Installation Instructions

Maintenance

LG-1005

**TO THE INSTALLER: BE SURE TO LEAVE THIS MANUAL WITH THE OWNER.**

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# Lace and Grommated Screens

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## O W N E R ' S M A N U A L

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Congratulations on your purchase of the finest optical viewing screen available anywhere in the world!

Please take a moment to review this manual—it will help ensure you many years of trouble-free service from your new Stewart Filmscreen product.

### About your screen

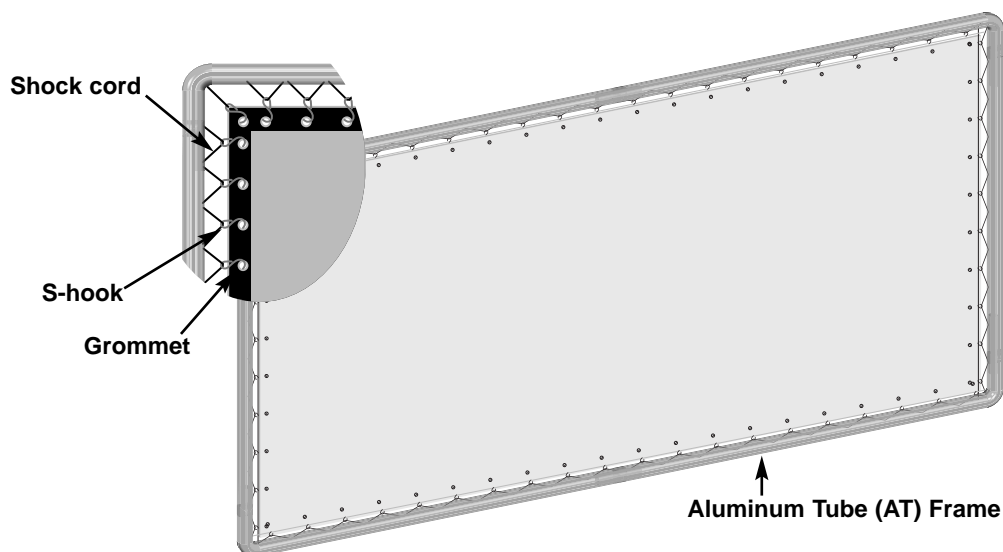
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The Lace and Grommeted screens use an AT frame with seamless tubing, heliarc welds, shock (stretch or bungee) cord, and S-hooks to secure the screen edge through grommets. Each screen is built to individual specification.

**Note:** An owner-supplied frame can also be used, but in this case the screen is not warranted.

### Options

- ◆ Black masking borders absorb over-scanning and create a finished look, or screen material can wrap around the frame and attach on the back side (wraparound).
- ◆ Frames can be flat or factory-curved to any specified radius.
- ◆ The frame can be an AT2 or AT3 (2" or 3" / 5 or 7.5 cm diameter tubing, respectively).
- ◆ Mitered corners are standard, curved corners are optional.
- ◆ Mounting options include wall mounts, stage-fly bolts, or T-stands.



**Figure 1.** Assembled screen (curved corners, no masking); audience view

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## PREPARING THE INSTALLATION

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**Before proceeding with the installation of this screen, take time to thoroughly read and understand these installation and operation instructions.**

Specifications regarding the individual screen dimensions, weight, and mounting are provided by the factory when the unit is ordered. Before beginning the installation:

- ◆ Check the specifications.
- ◆ Clear an area at least equal to the frame dimensions. Lay out clean paper or plastic as a clean work surface. (Screen or mask fabric will attract dust or dirt if the area is not clean.)
- ◆ Check the size and weight of the screen to be installed so that you can plan for the number of people required to move it. You need at least four people; more may be needed for larger, heavier screens.

For larger screens, you will need special equipment to support the screen tube and to elevate personnel to an appropriate height for attaching the screen to the frame.

You will need:

- ◆ For screens whose top is high off the ground, use a rolling scaffold, scissors-lift, or genie lift.
- ◆ For larger screens, use a crane or block-and-tackle to hoist screen tube into place and support it during installation.
- ◆ For smaller screens, use a 4-wheel equipment dolly to support the screen tube.
- ◆ Level
- ◆ Tools to fasten bolts
- ◆ Measuring tape
- ◆ Cutters to cut tie-off cords

Be sure to read instructions completely before beginning. The general sequence for installation is:

- ◆ Assemble frame
- ◆ Assemble support (wall mount, stage-fly mount, or T-stand)
- ◆ Attach screen

### **Caution**

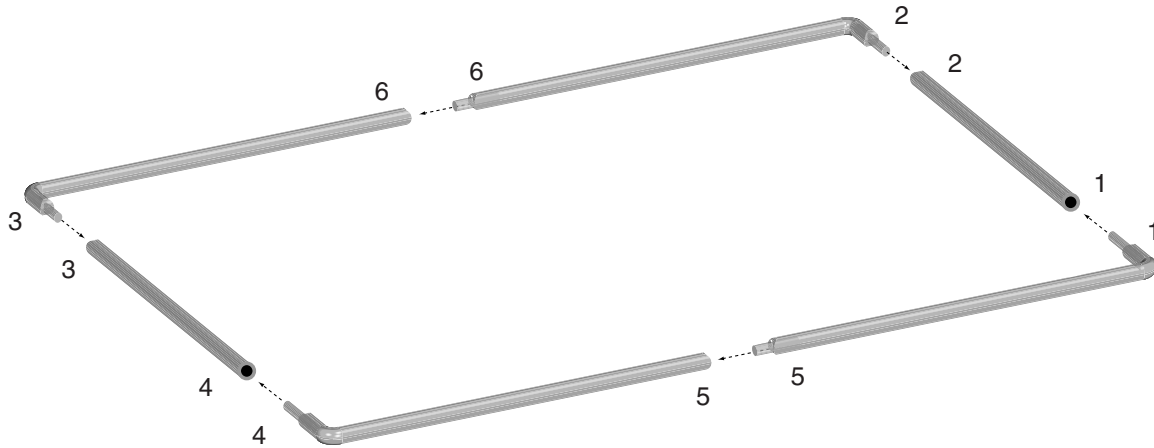
**During installation, do not place the components on an unstable cart, stand, table, or ladder. The item may fall, causing injury to a person and damage to the component.**

### Assembling the frame

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Frame members and corners are numbered to make assembly easier.

1. As you unpack the frame, check the corners and tube ends for numbering.
2. On the clean work area, lay out the tubes; if masked, the masking side should be down. Make sure to align the corresponding numbered ends.



**Figure 2.** Frame members aligned according to numbered ends

3. Assemble the frame components using the supplied bolts. A back brace is used for front projection screens over 16' / 4.8 m wide that use a T-stand or stage fly mount.
4. Proceed to the instructions for the wall mount support system, stage fly mount, or the T-stand.

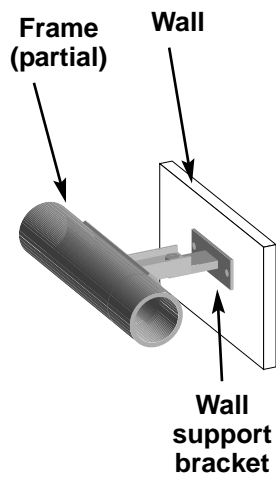
### Wall mount support system

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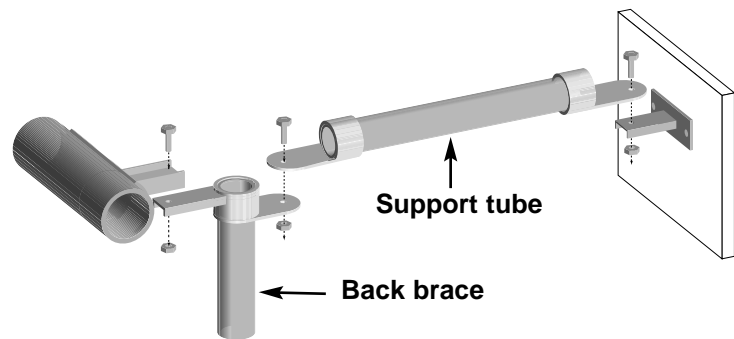
**Note:** You will temporarily elevate the frame into position so that you can mark the correct position for the wall brackets.

1. Attach wall support brackets to the assembled frame (this is temporary).
2. Establish a level horizontal line on the wall using a chalk line. (The horizontal line should align with the bottom of the frame.) The line will function as a constant for verifying accuracy of frame position.
3. Gather equipment, tools, and personnel to temporarily elevate the assembled frame into position. Be sure to precisely position the bottom frame referencing the chalk line.
4. Make sure that each frame member of the frame assembly is level and plumb. Check the diagonal measurements to verify that the assembly is square.
5. Mark the holes for each wall support bracket.

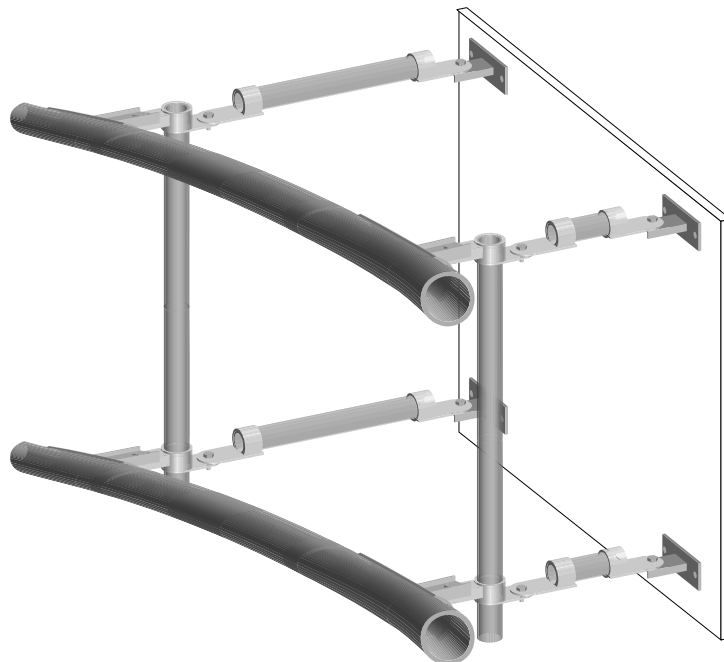
6. Lower the frame to the floor.
7. Remove the wall support brackets from the frame. Drill the locations marked on the wall to accept the appropriate fastener.
8. Attach the mounting brackets to the wall.
9. Curved frames use support tubes of different lengths (shorter in the center, longer at the end of the screen). Refer to Figure 5.
10. Gather equipment and personnel to mount the frame to the wall support assembly, using support tubes if required.



**Figure 3.** Wall mount for flat screen



**Figure 4.** Wall mount for curved screen: Frame, back brace, support tube, wall bracket



**Figure 5.** Wall mount for curved screen

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## Stage-fly mount

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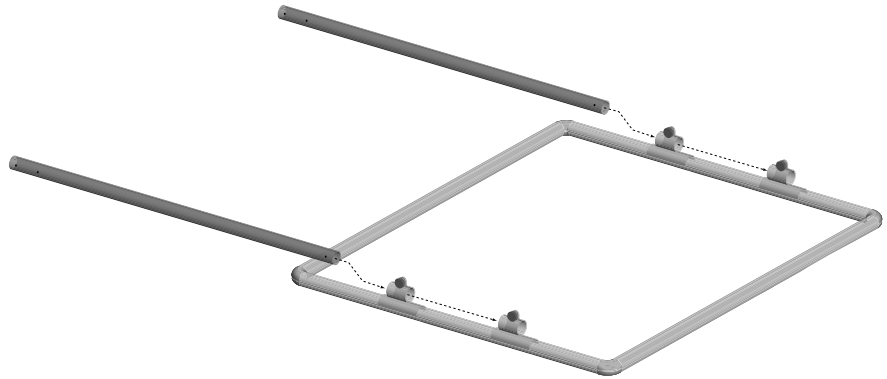
Eyebolts are attached to frame members at the factory. Gather equipment and personnel to elevate the frame and suspend it from the eyebolts.

## Assembling the T-stand

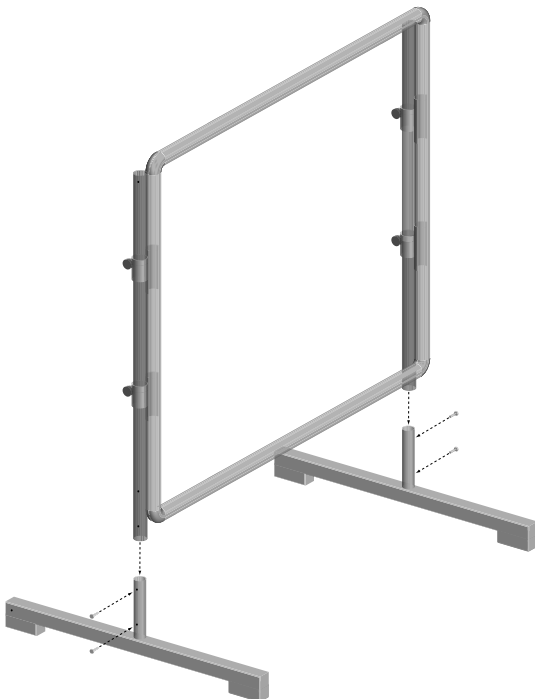
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Follow these steps to assemble the T-stand. A back brace may be used for larger screens.

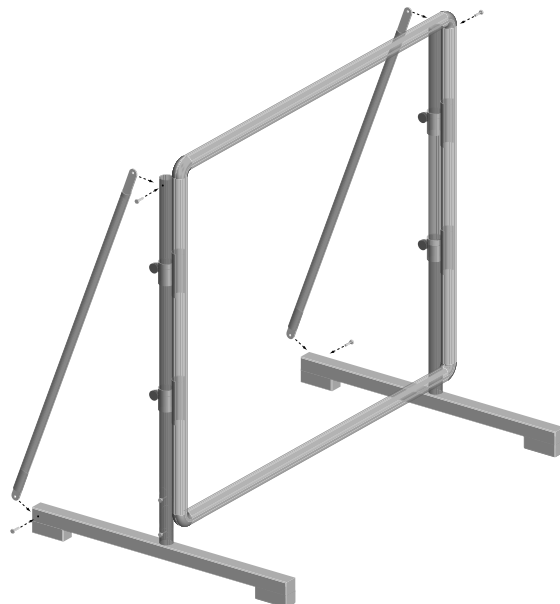
1. Insert upright support posts into screen frame brackets and tighten. Refer to Figure 6.
2. Insert T-Stand bases into upright support posts and attach with bolts. Refer to Figure 7.
3. Attach cross braces to support standing T-stand posts. Refer to Figure 8.



**Figure 6.** Inserting support posts



**Figure 7.** Attaching T-stands



**Figure 8.** Attaching cross braces



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## Attaching the screen to the frame—General procedure

The general procedure for attaching lace and grommeted screens to the frame is the same for all mounting and screen types. Specific notes for wraparound screens and owner-supplied frames follow this section.

You will attach the screen to the top left corner of the frame first, then along the top, then the sides, then the bottom. Read the tips and follow the sequence.

### Tips for attaching the screen to the frame

Read all instructions prior to beginning. Have all tools and equipment ready.

- ◆ During packing and transit, the screen may shrink. The Stewart screen material has some elasticity, and will stretch and spring back. The grommeted edge binding will not stretch past the manufactured outer dimensions. After the screen is attached to the frame, some tension will be apparent at each grommet.
- ◆ At least one person on a scaffold or lift and one person on the floor must work together to rotate the screen cylinder to unroll the screen. You may need another person on the ground to move the scaffold or lift.
- ◆ Handle the screen carefully. Avoid contact of the screen fabric with fingernails. Grasp the screen edge binding only.
- ◆ As you finish attaching each section, take a moment to pause and inspect the screen to ensure that it is not pulling or stretching in such a way that it may tear.

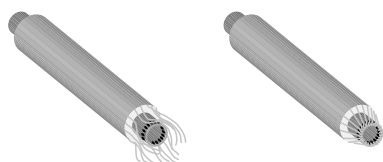
### Caution

**To avoid damage to the screen, use caution when handling the screen roll.**

**Carry the roll by the ends only. Do not place the screen roll on steps or any uneven surface as the pressure can make permanent indentations in the screen.**

### Preparing the screen tie-off cords

1. Carefully lay the rolled up screen on the floor.
2. Tie off the cords to the holes in the central packing tube. You can elevate the end of the screen for easier access, or straddle the tube on the floor. As you tie off the cords, you will need to lift and rotate the screen.



**Figure 9.** Screen with tie cords



**Figure 10.** Rigger attaching tie cords to tube end on elevated screen

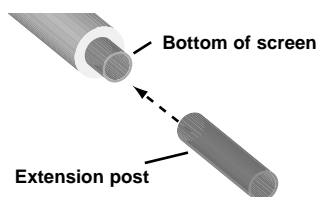
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## Attaching the screen to the frame—steps

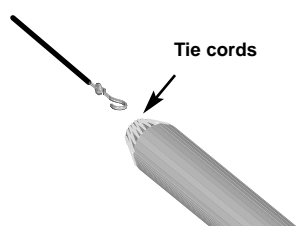
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Follow the steps to attach the screen to the frame.

1. If used, install the optional extension post to the bottom of the screen tubing. Set the height so that the bottom of the screen will be in the correct position once the screen is hoisted into place. Refer to Figure 11.
2. For larger screens, attach the hoist or crane cable to the “thru bolt” in the top of the screen tube. Refer to Figure 12. For smaller screens, the tube can be supported by a rolling dolly instead of a crane.
3. Slowly raise the screen into position while moving the bottom of the screen along the floor until the screen is in the vertical position at the audience left side of the frame.
4. If used, adjust the optional extension post at the bottom of the screen so that the screen is at the correct height.



**Figure 11.** Optional extension post

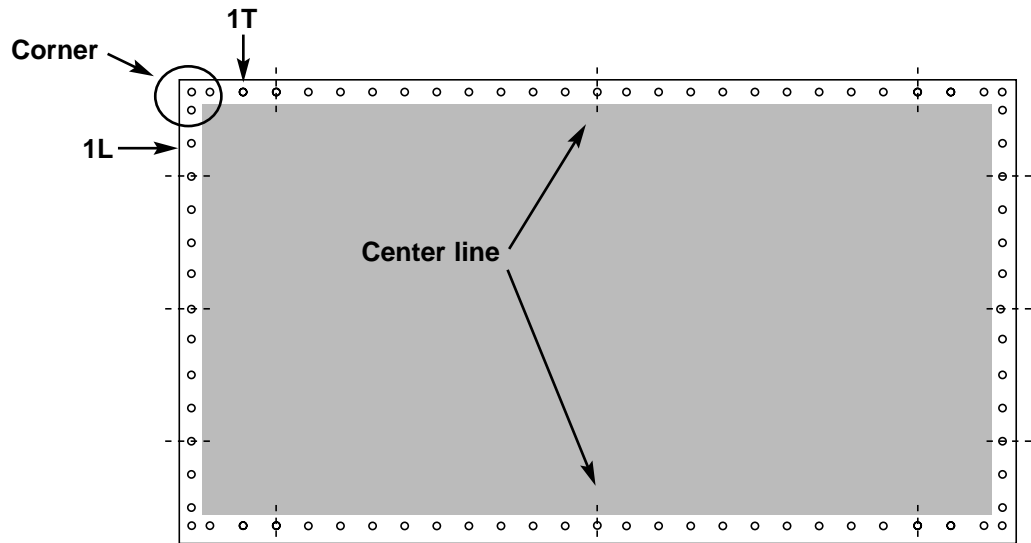


**Figure 12.** Screen top with cable from crane



**Figure 13.** Beginning to attach screen to frame

5. Cut the first tie cord and unroll the screen so that the grommets on the left side of the screen are exposed. (Do not cut all tie cords at this time.)
  - ◆ Unroll the screen slowly making sure to cut each successive tie cord so that the screen is free to unroll.
  - ◆ Do not cut all the tie cords at once, as they support the screen until it is attached to the frame.
  - ◆ You can cut one or two tie cords ahead of the attachment as the screen is unrolled so that there is no danger of pulling out a grommet when the screen is unrolled.
  - ◆ As the screen is being unrolled, it will be necessary to slide the extension post (at the bottom of the screen) along the floor in order to keep the screen vertical.

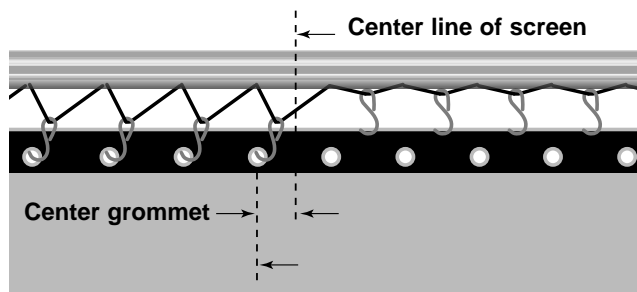


**Figure 14.** Screen, audience viewing side

### **Caution**

**Do not use excessive force to stretch the screen into place as this can cause the screen to tear.**

6. Attach S-hooks to the grommets labeled 1T and 1L. Refer to Figure 14. Attach the three grommets in the top left corner.
7. Continue attaching S-hooks to grommets along the top from the top left to the center top. The screen center line is marked with a red grommet at the frame center. Refer to Figures 13 and 14.
8. When the middle S-hook is attached to the center top grommet, the grommet should be within 3" / 7.5 cm of the center of the screen. If the offset is greater than 3" / 7.5 cm, wait a while for the screen to stretch before continuing.



**Figure 15.** Top center of frame

9. Continue to unroll the screen, cutting tie cords as required, and attaching S-hooks to grommets along the top from the center to the right side. Inspect the screen to ensure that it is properly attached and not overstretched.
10. Attach every other S-hook on the left side from the top to the center.
11. Attach every other S-hook on the right side from the top to the center. If the screen edge is more than 4" / 10 cm from the frame on the right side, allow a few minutes for the screen to stretch before continuing. Tension should be even; the top of screen and frame should be parallel.
12. Attach the remaining S-hooks on the left side, from top to bottom.
13. Attach the remaining S-hooks on the right side, from top to bottom.
14. Inspect the screen to ensure that it is properly attached and not overstretched. Check for even tension.
15. Attach every other S-hook along the bottom from left to center. Allow the screen time to stretch as needed.
16. Attach the remaining S-hooks along the bottom, from left to right.
17. Make a final inspection of the screen to verify that it is attached properly and that the corners are free from tears and stress.

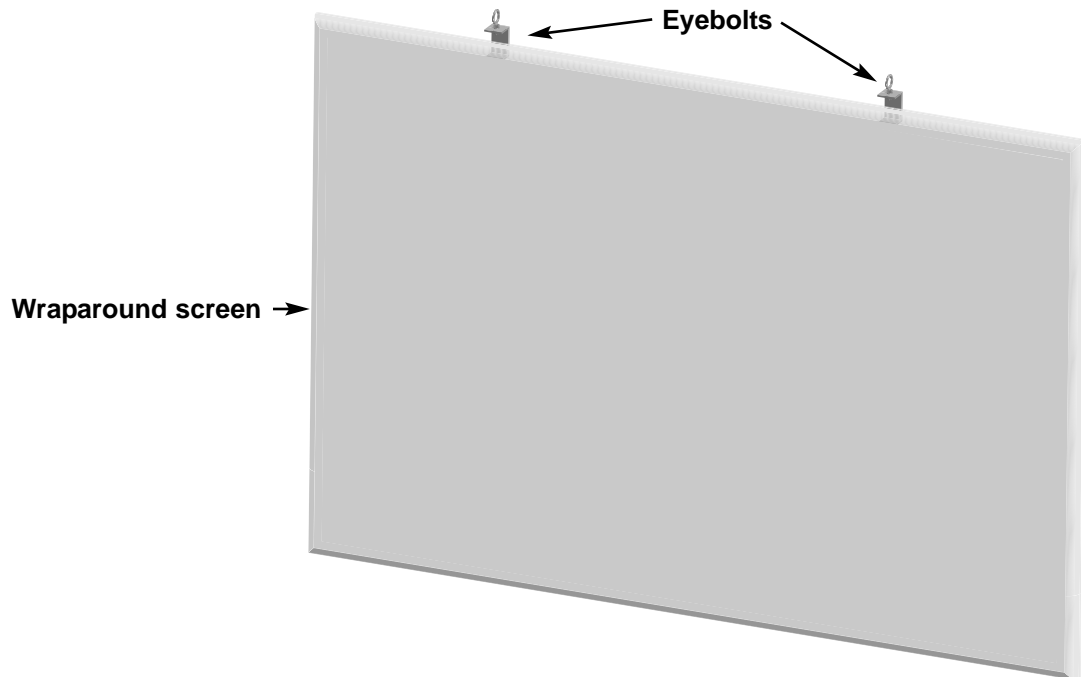
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## Attaching a wraparound screen to the frame

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Once you have assembled the frame, you can attach the wraparound screen to the frame. The general instructions are the same as for a non-wraparound screen with the following differences. Be sure to refer to the preceding instructions and cautions.

- ◆ The screen has been manufactured with an overall dimension of 8" / 20 cm larger than the frame size. When unrolling the screen vertically, the edge should be about 4" / 10 cm past the side of the frame.
- ◆ It is imperative that the screen edge is pulled up and over the frame as the S-hooks are attached to the grommets. Do not rely on the shock cord to pull the screen over.
- ◆ When properly attached, there will be no tension on the screen top between the edge of the screen and the drilled holes securing the shock cord to the frame.
- ◆ For smaller screens, you can lay the screen on a clean floor, audience side down, then lay the frame over the screen and attach the screen to the frame.



**Figure 16.** Wraparound screen with eyebolts for stage fly mount

## INSTALLATION: SCREEN WITH OWNER-SUPPLIED FRAME

### Caution

**Screens used on owner-supplied frames are not covered by the Stewart product warranty. Extreme caution should be used when installing the screen.**

If the owner-supplied frame is like the Stewart AT-type frame, use the instructions beginning on page 7. Be sure the frame dimensions are appropriate for the size of the screen.

Some owner-supplied frames use a peg-style attachment. These instructions provide information on installing the screen so that damage does not occur. The frame requires an accurate peg layout that matches the screen grommet layout starting at the screen center line. Refer to Figure 17.

**Installers must know how to perform T-lacing (theater-lacing) to attach the screen to the peg-style frame.**

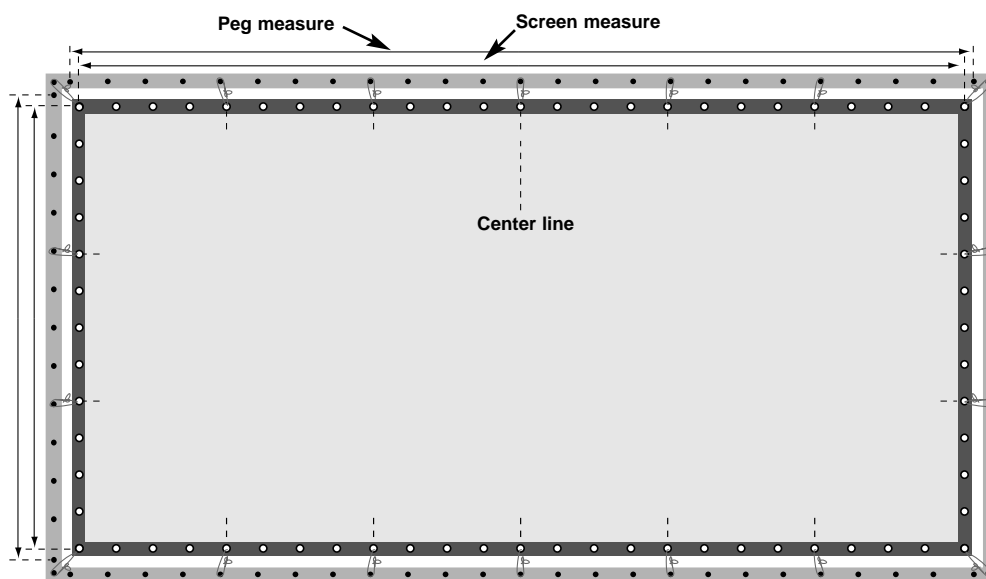
Be sure you know the manufactured outer dimensions of the screen. Note them here:

Height: \_\_\_\_\_ Width: \_\_\_\_\_

Before beginning, measure peg to peg distance from top to bottom and from side to side. Compare measurements with screen dimensions. There should not be more than 5-6" / 12-15 cm total difference.

During packing and transit, the screen may shrink. When lacing the screen to the frame, DO NOT exceed these dimensions as corner damage will result. The warranty does not apply to torn corners or grommets.

The Stewart screen material has some elasticity, and will stretch and spring back. The lace cord is used as a means of attaching the material to a rigid frame. The grommeted edge binding will not stretch past the manufactured outer dimensions. After the screen is laced to the frame, some tension will be apparent at each grommet.



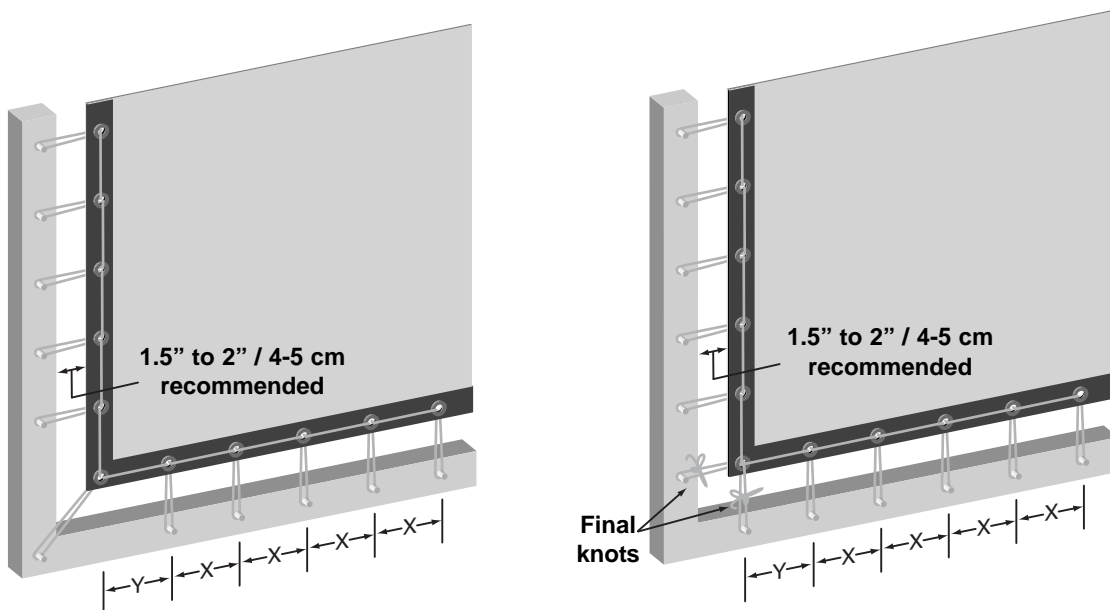
**Figure 17.** Alignment of screen and owner-supplied frame

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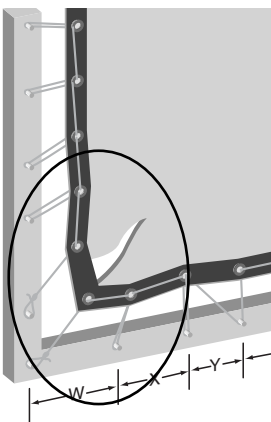
## Using T-lacing to attach the screen to a peg-type frame

Follow the same general procedure and cautions described in the section beginning on page 7. For a peg-style frame, instead of attaching S-hooks to grommets, use the T-lacing method.

1. Using the lace cord provided, lace the screen corner into pegs at the top left, and continue along the top towards the center using the T-lace method. Refer to Figures 18 and 19. The screen center line is marked with a red grommet at the frame center. Continue unrolling towards audience right. Make sure that the screen is centered in the frame.



**Figure 18.** Proper methods of T-lacing



**Figure 19.** Improper method of lacing, unequal spacing, resulting in tear

2. Lace the left side 3-4 feet (1 m) down from the top and tie off.
3. Continue to unroll towards audience right, lacing along the top of the frame, using the T-lace method. The top webbing will stretch to the manufactured size.
4. Continue T-lacing the left side and then the right side from top to bottom. Use patience and care to allow the screen to stretch to the manufactured size.
5. Once the sides are laced, T-lace the bottom.
6. Make a final inspection of the screen to verify that it is attached properly and that the corners are free from tears and stress.

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## SCREEN CARE AND CLEANING

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With reasonable care, you can expect many years of trouble-free use of your Stewart projection screen.

We encourage you to keep your screen clean. Avoid getting any foreign material on the screen, as cleaning may prove very difficult. It may not be possible to remove scratches, paint, ink, etc.

### **General maintenance**

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The surface of your screen is delicate. Special attention to these instructions should be followed when cleaning.

#### **Caution**

**Do not use chemicals or solvents to clean the fabric.**

- ◆ A draftsman-style brush may be used to lightly whisk away any loose dirt or dust particles. (This type of brush is usually available at office supply stores.) Stewart Filmscreen has an optional screen cleaning kit that contains the proper type of brush. Contact your dealer if you would like to obtain this cleaning kit.
- ◆ For tougher spots, use a solution of mild detergent and water. Rub lightly using a sponge. Blot with a damp sponge to absorb excess water. Residual water marks will evaporate within a few minutes. Let the screen air dry.

Do not use any other cleaning materials on the screen. Contact the factory if you have questions about removing difficult spots.

### **Replacement parts and service**

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No user-serviceable parts are contained within the unit. Contact your dealer or the factory if you require part replacement or service.



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## TROUBLESHOOTING

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Refer to the following guidelines if you encounter a problem with your Stewart Filmscreen.

Should you have a problem that is not addressed here, call the Stewart Filmscreen Corporation.

<b>Problem description</b>	<b>Probable cause</b>	<b>Action to take</b>
Dirt, finger prints, marks, etc. on screen surface.	Improper handling of screen.	Brush off or use a mild detergent solution with clean rag or cotton swab. See p.14 of this manual.
Indentations appear on screen surface.	Debris or particles adhering to screen due to static cling.	Check back of screen; gently brush debris away by hand. See p. 14 of this manual.
Tears in screen corner or side .	Improper handling or attachment of screen to frame .	Repair tear immediately to prevent further tearing. Use cellophane or mylar tape on the back side of the screen.  For large tears, or tears that interfere with the projected image, contact the factory for a replacement screen.

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## PRODUCT WARRANTY FOR SCREENS USING STEWART FRAMES

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### **Caution**

**Screens used on owner-supplied frames are not covered by the Stewart product warranty.**

This warranty covers defects in materials and workmanship for a period of one (1) year from the date of installation, not to exceed fifteen (15) months from the date of shipment, provided this product is installed in a normal environment and maintained according to written instructions in the product Owner's Manual. Stewart Filmscreen warrants against loss of usefulness, discoloration or deterioration of optical quality within the warranty period as a result of manufacturing or material defects.

A factory authorized returned screen arriving prepaid to our facility for inspection and proved defective due to an inherent manufacturing fault will be repaired or replaced by Stewart Filmscreen Corp. This warranty expressly does not cover any costs of removal, installation, framing, or other incidental costs to replacing the screen or returning it to the manufacturer.

Should you encounter a perceived product fault or problem, contact your dealer regarding application of this warranty.

MAINTENANCE NOTES

**Stewart**  
Filmscreen Corporation®

**[www.stewartfilm.com](http://www.stewartfilm.com)**

1-800-762-4999 ♦ Fax (310) 326-6870