



Manufacturer of Professional Audio-Visual Products

720 Middle Ground Boulevard Newport News, Virginia 23606
(800) 227-6602 (757) 873-0212 Fax

Installation Instructions for Laminar and Laminar XL Projection Screens

Caution

1. Read Instructions through completely before proceeding; keep them for future reference. Follow these instructions carefully. Installation contrary to instructions invalidates warranty.
2. Before removing your screen from its packaging, check for damage and make sure all parts are included.
3. Screen should be accessible for complete removal should fabric become damaged or should other servicing be required.
4. Screen should be installed level.
5. Nothing should fasten to the screen dowel or viewing surface.
6. Operating switch/switches are packed separately in screen carton. **DO NOT DISCARD PACKING MATERIAL WITHOUT REMOVING THE SWITCH!**
7. Screen operated on 110-120V, 60Hz. 1.1 amp current draw.

PLEASE NOTE:

Screen has been thoroughly inspected and tested at the factory and found to be operating properly prior to shipment.

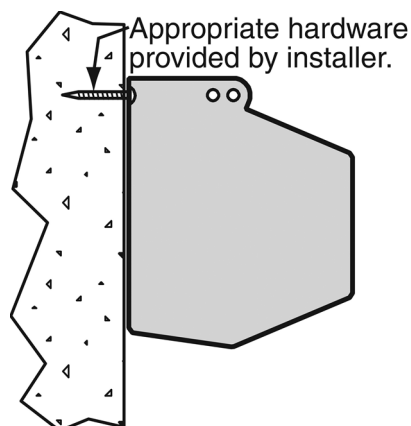
Hanging the Screen:

General:

When locating the viewing surface and checking clearance for screen's operation, remember surface is centered in case. Handle the case carefully to protect its finish. Regardless of the mounting method being used, screen should be securely supported so that vibration or even abusive pulling on the viewing surface will not cause the case to work loose or fall. The installer **MUST** insure that fasteners used are of adequate strength and suitable for the mounting surface chosen.

Wall Installation:

Mount screen through holes in the back of the end caps as shown. Installer should furnish screws, toggle bolts, molly bolts, nylon or lead anchors as required. BEI does not supply these.





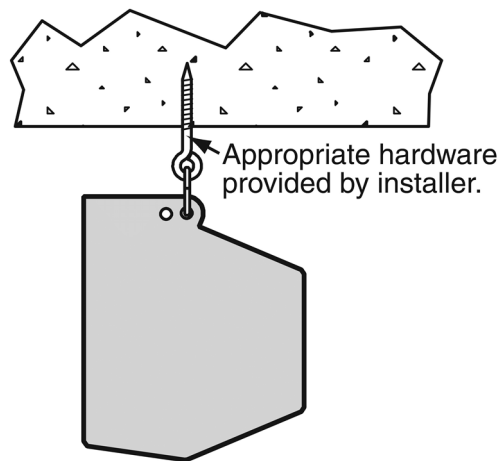
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Hanging the Screen Continued:

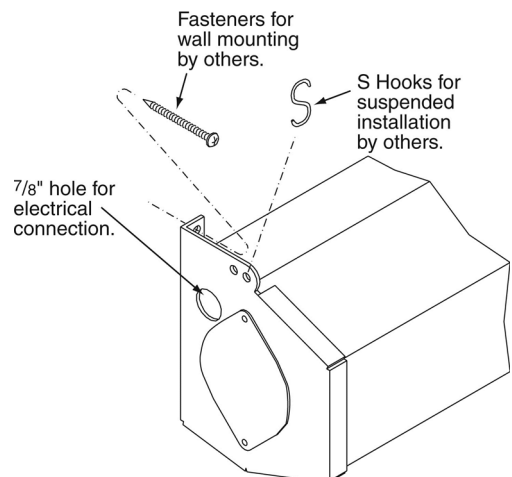
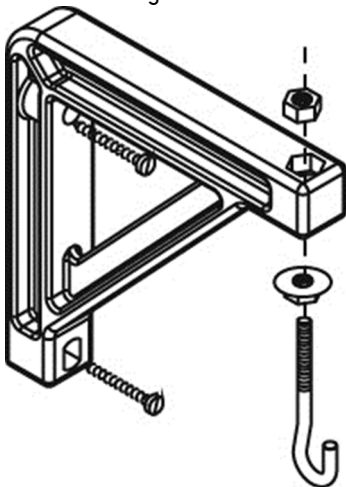
Suspended Installation:

Suspend screen from holes in end caps as shown. "S" hooks, chains (or cable) and turnbuckles should be provided by the installer. "S" hooks should go through the front holes on the end caps (as shown below) and both ends of the "S" hooks should be crimped for additional safety. Chains should be attached to beams or other structural members. Turnbuckles should be adjusted so the screen hangs level.



Wall Installation with Optional 6" Extension Brackets:

Mount the brackets (see below) using hardware recommended for "Wall Installation". Then suspend the screen from the front holes with "S" hooks as in "Suspended Installation". For added safety, be sure to crimp both ends of the "S" hooks so the screen can not come off. For a more rigid installation, mount the screen from the back holes to the front of the bracket using the screws and nuts provided with the brackets.





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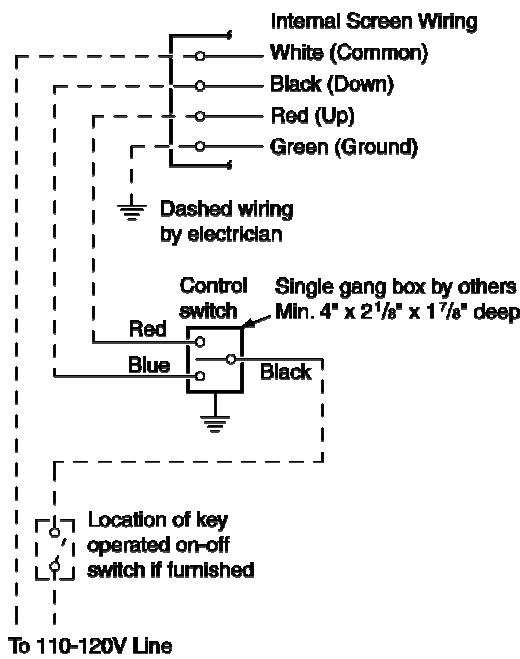
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Electrical Connections:

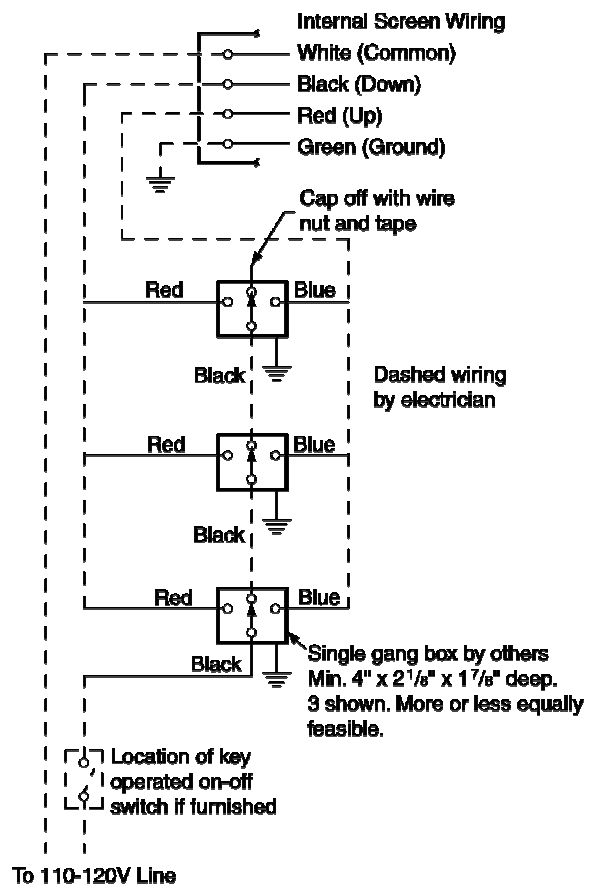
Screen operates on 110-120V, 60hz., 1.1 amp current draw. Duty cycle: On 28 seconds / Off 4 minutes.

There is a junction box located inside the left end cap and the cover plate is secured to the end cap with two screws. The junction box contains red, black and white pigtail leads and a green internal ground wire (see diagram below). Screen is shipped with internal wiring complete and control switch(es) fully boxed. Wires connecting screens to switch(es) and switch(es) to power supply should be furnished by installer. Connections should be made in accordance with wiring diagrams provided by BEI and should comply with National and local electrical codes. **Please note: Do NOT wire motors in parallel.** All operating switches should be "off" before power is connected.

Single Station Control



Multiple Station Control





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Operation:

Before operating the screen, remove the tape securing fabric and dowel to roller. If viewing surface hangs out of case 8"-9", tape has probably been broken by rough handling in shipment, allowing surface to "unwrap" one turn about the roller. Manually wrap fabric back around the roller without turning the roller itself.

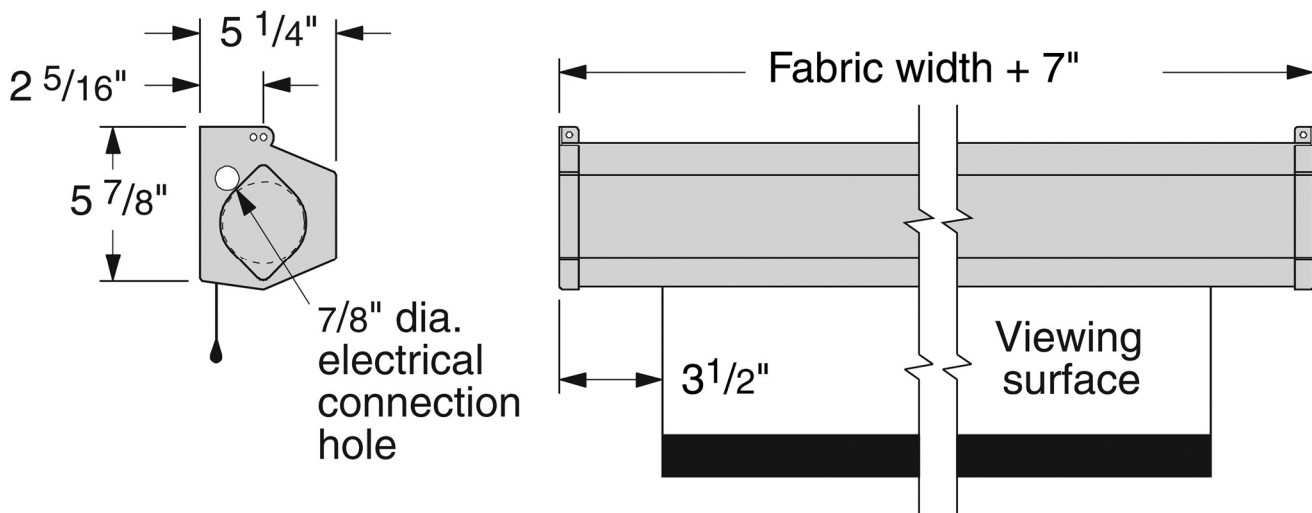
110-120V Single Station Control: 3-position up-off-down switch permits operation to be stopped at any point. Factory adjusted limit switches automatically stop screen when fully down or fully up.

110-120V Multiple Station Control: Switches are similar in appearance to the 110-120V single station control. Screen stops when switch is released and may be restarted in either direction. Factory adjusted limit switches stop the screen automatically when fully up or fully down.

24V Control: Three-button up-stop-down switches stop at any point desired and operate in any sequence. Factory adjusted limit switches automatically stop screen when fully up or fully down.

Key Operated Switching: Two kinds of key-operated switches are optionally available with this unit. ¹ The key operated power supply switch controls power to the screen and switches. When it is "off", the switches will not operate screen. Key may be removed from the switch in either "on" or "off" position. ² A three-position key switch permits the screen to be operated directly by key. In this case, the screens operator must always have a key.

RS232 / Ethernet: Serial communication and network communication optionally available with wall switches, RF or IR remote.





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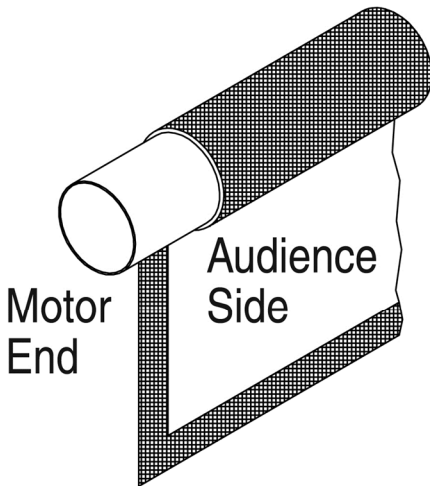
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Limit Adjustments (Standard / Quiet Motors):

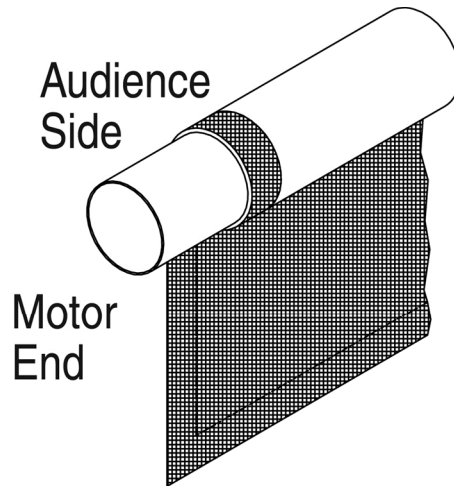
Tools needed: Flashlight, small flathead screwdriver / Allen wrench (4mm or 5/32"). Screen settings have been factory set as ordered and should not normally require further adjustment. However, if you find it necessary to adjust for more or less viewing area, proceed as follows.

Caution!

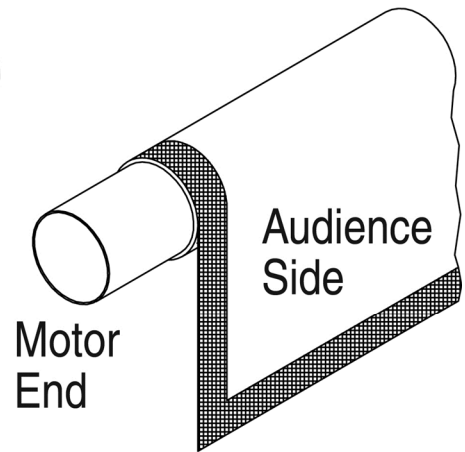
Always be prepared to shut screen off manually when new adjustment is being tested. Screen may be severely damaged if viewing surface is allowed to run too far up or too far down. When running up, the dowel should never wrap over the roller. When run to the down limit, a minimum of 1¼ wraps of fabric must remain on the roller. The motor limit screws are normally located on the audience left of screen roller.



Standard Roll



Reverse Roll



Waterfall Roll

Standard/Reverse Roll

Left hand motor

White Socket—Down

Yellow Socket—Up

Right hand motor

White Socket—Up

Yellow Socket—Down

Waterfall Roll

Left hand motor

White Socket—Up

Yellow Socket—Down

Right hand motor

White Socket—Down

Yellow Socket—Up



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Down Limit Adjustment

To reduce the screen drop:

1. Raise screen surface about 1' above desired setting and turn off.
2. Turn the DOWN limit screw clockwise (3 screw turns = ½ roller revolution)
3. Test by running screen down and repeat steps 1 and 2 until desired position is reached.

To increase the screen drop:

1. Run the screen to the down limit.
2. With the down switch on, turn the DOWN limit screw counterclockwise (3 screw turns = ½ roller revolution) to increase drop.
3. Test by running screen up about 1' and back down to new down limit.
4. Repeat steps 2 and 3 until desired position is reached.

Caution!

At least 1¼ wraps of fabric must remain on the roller when the screen is at the down limit.

Up Limit Adjustment

Screen is running up too far:

1. Lower screen surface about 1' below desired setting and turn off.
2. Turn the UP limit screw clockwise (3 screw turns = ½ roller revolution)
3. Test by running screen up.
4. Repeat steps 1 through 2 until desired position is reached.

Screen needs to run up more:

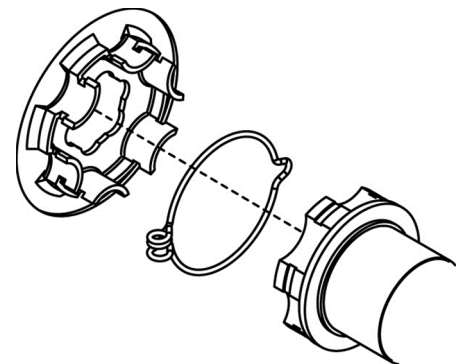
1. Run screen down about 1' and turn off.
2. With the UP switch on, turn the UP limit screw counterclockwise (3 screw turns = ½ roller revolution)
3. Repeat steps 1 and 2 until desired position is reached.

Caution!

Do not allow the dowel to wrap up over the roller when the screen is running up! This could damage the screen.



Do not remove the roller assembly from the case unless necessary for repairs. If the roller assembly is removed, be sure motor is fully re-seated in the bracket, and re-secure it carefully with the motor retaining spring (as pictured at right.)





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Limit Adjustments (Built-In Low Voltage Motors)

1. Connect the ILT switch to the motor via the terminal blocks, or via the modular port using four conductor modular cable. When using modular cable, the cable connectors **MUST NOT** be crimped in reverse, as with standard telephone cable.
2. Set the slide switch to the lower position. Press and hold the DOWN button on the opposite direction, release the DOWN button and depress the STOP button. This will reverse the operation of the UP and DOWN switches.
3. Set the slide switch to the higher position. Move the viewing surface to the desired upper limit by pressing and holding the UP button on the wall switch.
4. Return the slide switch to the center position to return to normal operation.

“Down” Limit Adjustment

To Reduce Screen Drop:

1. Raise the screen surface about 1' above desired setting and turn off.
2. Turn the DOWN limit screw (I) clockwise (3 screw turns= $\frac{1}{2}$ roller revolution.)
3. Test screen by running screen down and repeat steps 1 and 2 until desired position is reached.

To Increase Screen Drop:

1. Run screen to the down limit.
2. With the down switch on, turn the DOWN limit screw (I) counterclockwise (3 screw turns= $\frac{1}{2}$ roller revolution) to increase the drop.
3. Test by running the screen up about 1' and back down to new down limit.
4. Repeat steps 2 and 3 until desired position is reached.

CAUTION! At least $1\frac{1}{4}$ wraps of fabric must remain on the roller when screen is at the down limit!



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“Up” Limit Adjustment

Screen is running too far up:

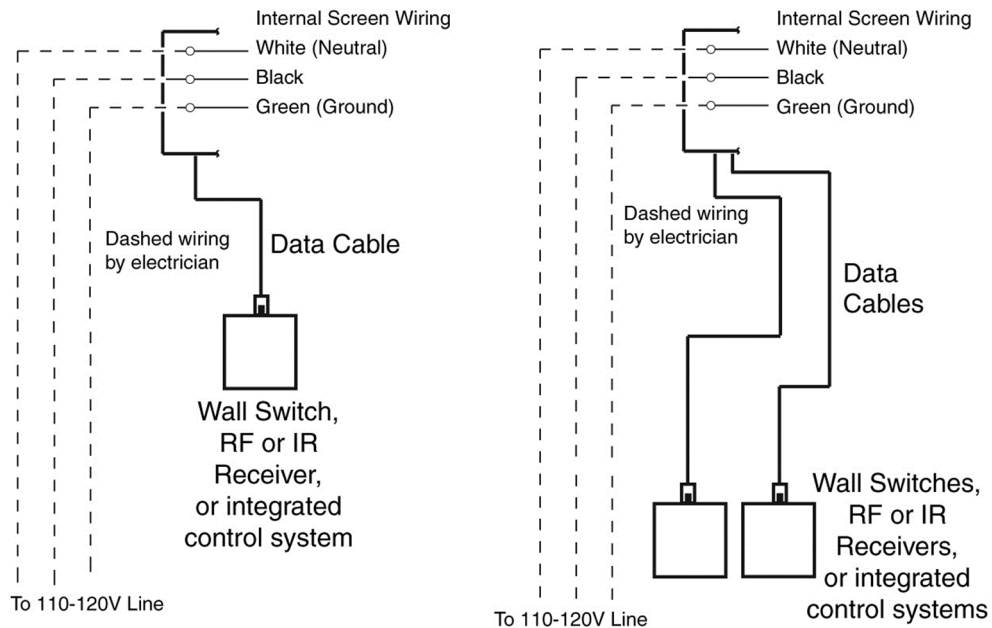
1. Lower the screen surface about 1' above desired setting and turn off.
2. Turn the UP limit screw (II) clockwise (3 screw turns= $\frac{1}{2}$ roller revolution.)
3. Test screen by running screen up and repeat steps 1 and 2 until desired position is reached.

Screen needs to run up more:

1. Run screen down about a 1' and turn off.
2. With the up switch on, turn the UP limit screw (II) counterclockwise (3 screw turns= $\frac{1}{2}$ roller revolution)
3. Repeat steps 1 and 2 until desired position is reached.

CAUTION! Do NOT allow the dowel to wrap up over the roller when the screen is running up! This will damage the screen and void any warranties in place.

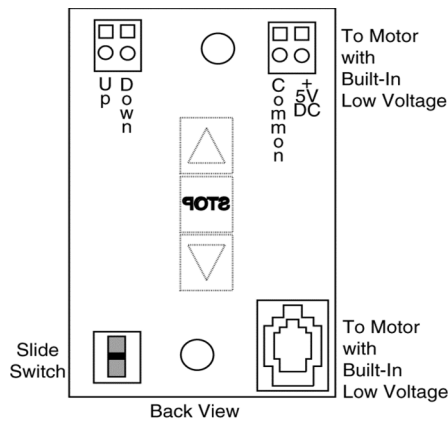
Single Low Voltage Control Multiple Low Voltage Controls





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POSITION	FUNCTION
DOWN	Set LOWER limit
UP	Set UPPER limit
CENTER	Normal Operation

Limit Adjustments (Built-In Low Voltage Motors)

All height adjustments are made from the wall switch. If using other controls, please be sure to keep the switch in a safe place.

1. Connect the ILT switch to the motor via the terminal blocks, or via the modular port using four conductor modular cable. When using modular cable, the cable connectors **MUST NOT** be crimped in reverse, as with standard telephone cable.
2. Set the slide switch to the lower position. Press and hold the DOWN button on the switch to move the viewing surface to the desired lower limit. If the screen moves in the opposite direction, release the DOWN button and press and hold down the STOP button for four seconds. This will reverse the operation of the UP and DOWN switches.
3. Move the slider switch into center position. Wait 10 seconds before continuing.
4. Set the slide switch to the higher position. Move the viewing surface to the desired upper limit by pressing and holding the UP button on the wall switch.
5. Return the slide switch to the center position to return to normal operation.
6. To set the viewing surface to an alternate format position, move the viewing surface to the desired position and press the STOP button. Press and hold STOP for at least 3 seconds to record the position.

Please note: If you move the slide switch from down to up in one motion is set the two limits in the same position.

***Please note:** Pressing and releasing the UP button on the switch will move the screen to its upper limit. Pressing and releasing the DOWN button will move the screen to its lower limit. While the motor is in motion, pressing STOP for less than two seconds will stop the viewing surface at its present position. Once the motor is stopped, pressing the STOP button will move the viewing surface to its alternate format position. Pressing and holding the STOP button, when the motor is at rest or in motion, for at least three seconds will record a new alternate format position.*