

ElectriMask Electriscreen

OWNER'S MANUAL



To the Owner
Installation Instructions
Operating the Screen
Maintenance

EM-1005

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



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ElectriMask Electriscreen

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 ElectriMask Electriscreen

Stewart's ElectriMask system is designed to integrate with the latest multi-format video projectors, which are capable of variable sizes and aspect ratios for viewing standard broadcast television and the wide format seen in commercial theaters ("letterbox"). The term aspect ratio refers to the format (width to height) in which your home cinema sources are produced.

Your screen is equipped with a masking system to achieve different aspect ratios, for example:

- ◆ 1.85:1 screen with vertical masking
- ◆ 1.33:1 screen with horizontal masking

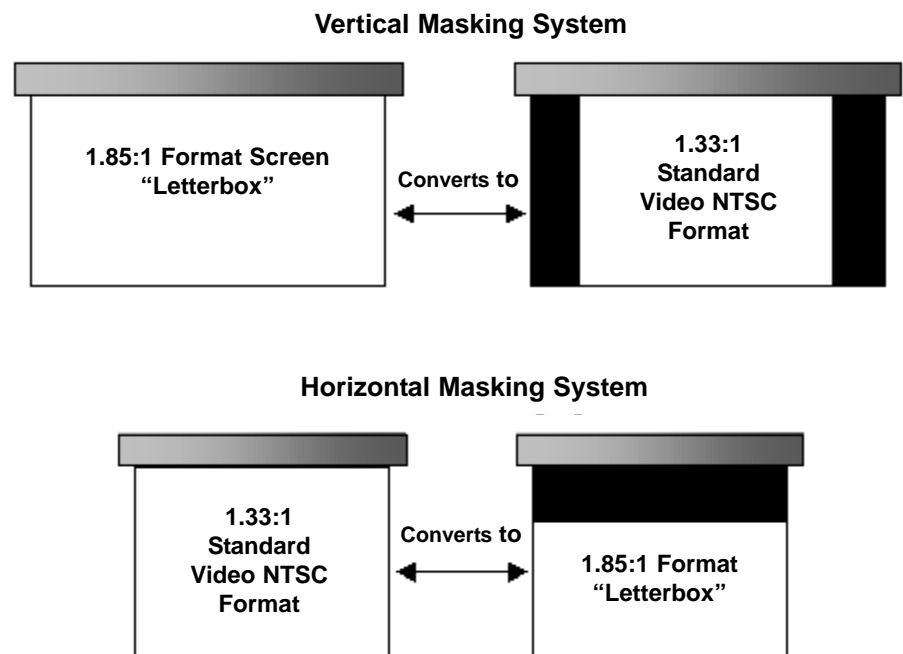


Figure 1: Vertical and horizontal masking systems

The installation, operation, and care of the ElectriMask Electriscreen is the same regardless of the masking system used.

Note: This manual refers to "AC" to represent electrical power. Your location may use 120 V, 220 V or other electrical power. Screen systems are manufactured using the electrical power type specified for the location. Use appropriate power sources for your location.

PREPARING THE INSTALLATION

- ◆ **Before proceeding with the installation of this screen, be sure to thoroughly read and understand all the installation and operating instructions.**
- ◆ **All electrical wiring installations must conform to local and national codes and should be performed by qualified service personnel.**
- ◆ **There are no user-serviceable parts contained in the unit.**

Preparation

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

- ◆ Check the specifications for the type of mounting and switch control to be used.
- ◆ Ensure that the mounting area and electrical connection are prepared.
- ◆ Check the size and weight of the screen to be installed so that you can plan for the number of people required for the mounting procedure. You need at least two people to mount the smaller screens; more are needed for larger, heavier screens.

You will need:

- ◆ Enough ladders for the personnel supporting the screen during the mounting process
- ◆ A level
- ◆ Fasteners appropriate for the surface on which the screen is being mounted (See instructions for the type of mount for recommendations.)

Caution

During installation, do not place the unit on an unstable cart, stand, table, or ladder. The unit may fall, causing injury to a child or adult and damage to the unit.

Unpacking

Warning!

Failure to remove the batten lock-down screws can result in permanent damage to the screen.

1. Remove the outer plastic covering and white wrapping paper surrounding the screen case.
2. Do not remove the wrapping paper surrounding the screen roller. You should remove it only after the unit is hung and all electrical connections have been made.
3. Remove the batten lock-down screws located on the back side of the case.

STEP 1. HANGING THE CASE

Professional mounting techniques should be used. Stewart Filmscreen Corporation cannot be liable for substandard or faulty installations.

Make sure that you mount the screen so that the electrical box is on the left side (audience left). Refer to Figure 2.

In the standard configuration, the unit is installed on the ceiling. As an option, it can also be installed on a wall.

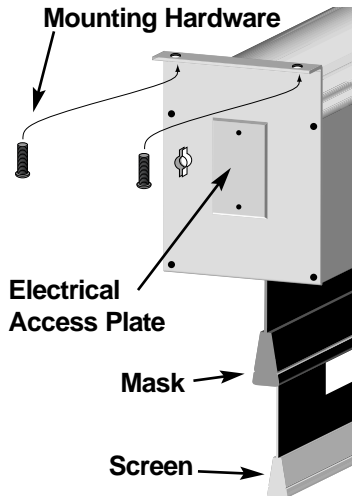


Figure 2: Position of electrical access on Electriscreen

Ceiling or top mount installation

The ElectriMask Electriscreen is ready to install into the ceiling or soffit. A false ceiling is not intended to support the weight of an ElectriMask Electriscreen.

If the unit is to be mounted to plaster, drywall, masonry, or other type of surface, use an appropriate fastener. (These might include toggle or molly bolts or similar fasteners.)

There are two types of ceiling or top mount: recessed or suspended. Follow the procedure for the specified type of mounting.

Recessed or concealed mount (standard)

You can install the screen so that the motor is recessed and the bottom is flush with dry wall or a suspended ceiling.

1. Install the unit onto the support structure making sure that the bottom of the case is flush with the finished ceiling.
2. Make sure the unit is level.
3. Drywall or other ceiling material may be screwed directly to the ceiling flanges (plaster "ears") on the case. Refer to Figure 3.

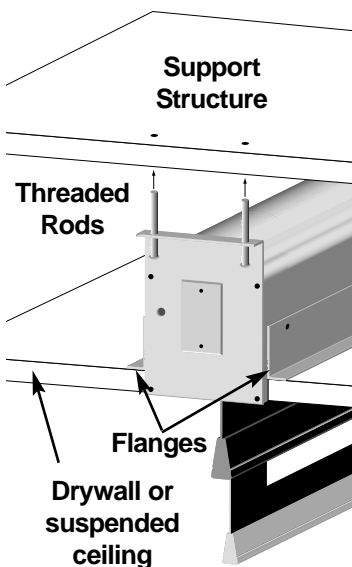


Figure 3: Recessed or concealed mount

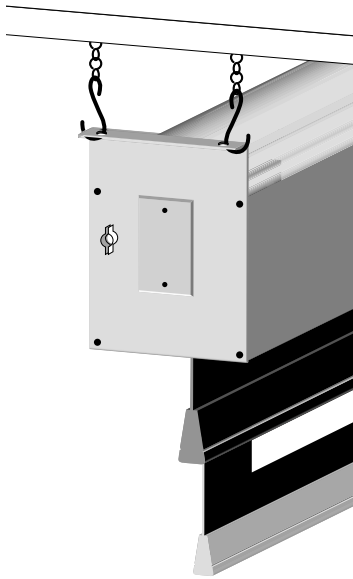


Figure 4: Suspended installation

Suspended installation

1. Suspend the unit from the holes in the end plates on the unit using "S" hooks, chains, cables, Unistrut, threaded rod, or turnbuckles. Refer to Figure 4.
2. Make sure the unit is level.



Figure 5: Wall mount using optional brackets

Wall installation (optional)

Note: When the wall installation option is ordered, wall mount brackets are provided with the screen unit.

1. Mount screen through the holes in the wall mount brackets. Refer to Figure 5.
 - If mounting onto a wood substructure, #12 screws may be used.
 - If the unit is to be mounted to plaster, drywall, masonry, or other type of surface, use an appropriate fastener. (These might include toggle or molly bolts or similar fasteners.)
2. Make sure the unit is level.

STEP 2. ELECTRICAL HOOK-UP

The ElectriMask Electriscreen has two roller tubes within the screen unit; one for the main screen and one for the mask. Each roller has its own motor and functions independently.

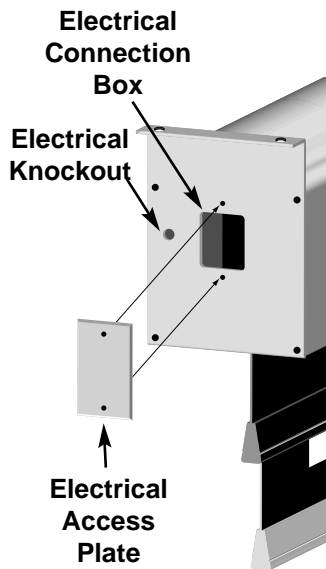
Caution

Professional techniques need to be used when making any electrical connection. A qualified electrician should perform these procedures.

Be sure to follow all standard safety procedures for installing electrical devices.

Do not disassemble or alter the configuration of the motor or the unit's electrical connections. This may cause injury to you or damage to the product.

The electrical connection should be made only to the type of power source indicated on the marking label.



The roller motor requires standard AC input. All connections are made to the electrical box on the side of the ElectriMask unit (audience left).

In addition to the standard high-voltage 3-position switch, there are optional switch controls available for the ElectriMask Electriscreen. Follow the installation procedure for the type of switch control you will install.

General suggestions for wiring:

- ◆ Soldering is recommended.
- ◆ The use of wire nuts is acceptable.
- ◆ On models not provided with armored whip, a romex connector should be installed in the appropriate electrical KO (Knock Out).

Refer to Figure 6 for an illustration of the electrical connection box on the side of the screen unit.

Figure 6: Electrical Connection box

Installing the high voltage switch control (standard)

A standard 3-position wall switch is supplied. The high-voltage control is connected to the electrical source. It alternates directions of screen motion by means of the hot lead, using the 3-position switch.

Preparing the connection

Before making the electrical connections, you need:

- ◆ An available AC constant power source
- ◆ One 4-conductor romex per connection or motor connector cable or one 8-conductor romex for two connections.

Making the connections

The diagram in Figure 7 illustrates the connections.

1. Connect the wall switch to the AC constant power source.
2. Connect the wall switch to the screen unit's electrical box.

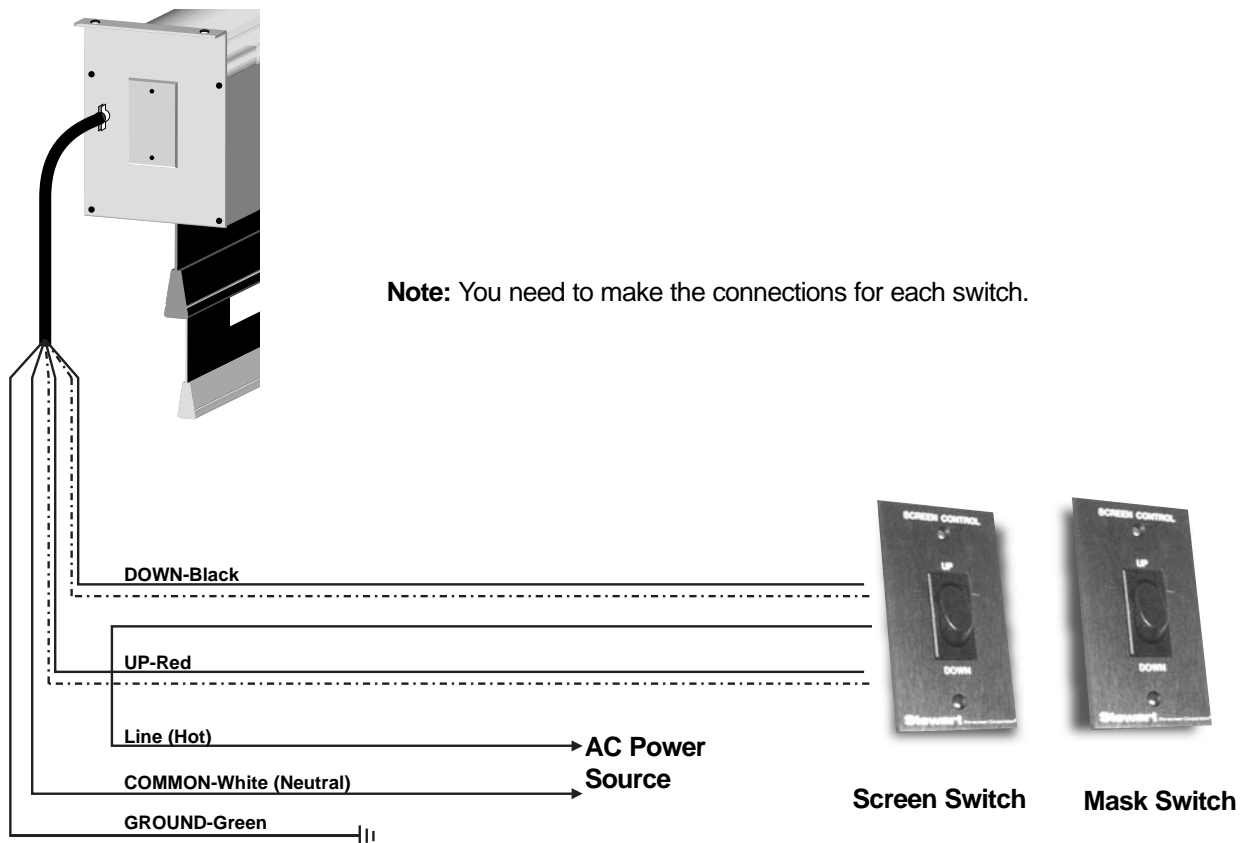


Figure 7: High voltage control wiring diagram

Installing the dual screen trigger interface option (vertical masking)

Note: The dual screen trigger interface option is *not* available for the horizontal masking system.

The optional 12V dual screen trigger interface enables up and down operation of the screen and mask in conjunction with a projector, tuner, VCR, cable box, or switched AC outlet.

Once the AC power outlet is installed near the screen, an electrician is not needed to connect the screen trigger interface to the power source.

Note: An optional 12V DC transformer is used if there is no 12V power source from the projector or AV control center.

Preparing the connection

Before making the electrical connections, you need:

- ◆ An available AC constant power source installed near the screen

Making the connection

The electrical diagram in Figure 8 illustrates the connection.

1. Plug the AC power cord into the AC outlet.
2. Attach the 12V trigger wires to the jack in the plate.

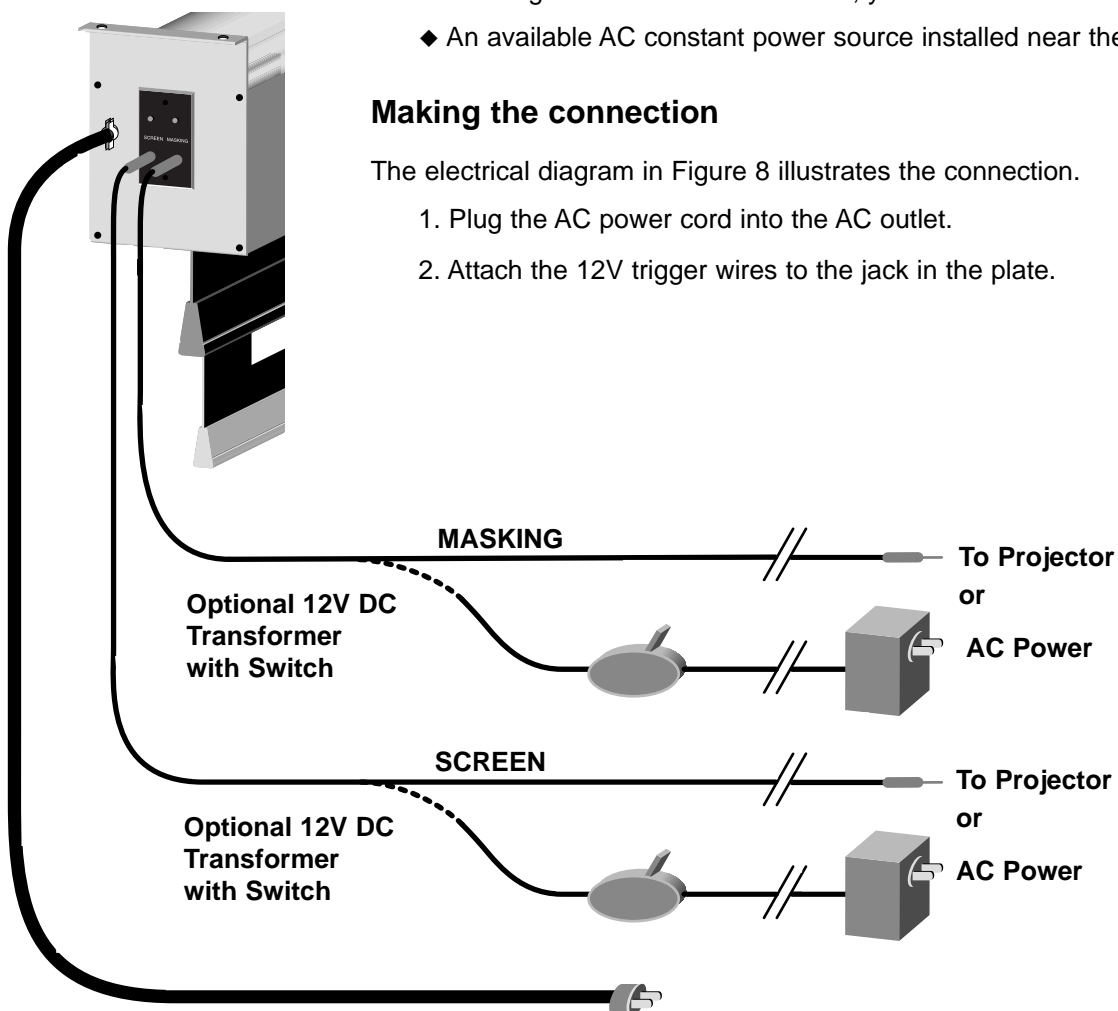


Figure 8: Screen trigger interface connection

Installing the low-voltage 3-button switch option

The optional Stewart Filmscreen low-voltage control allows the use of low-voltage wire to connect to the supplied 3-position 24V momentary wall switch.

Preparing the connection

Before making the electrical connections, you need:

- ◆ An available AC constant power source
- ◆ One 4-conductor switch hook-up cable per connection (4-conductor bell wire or category 5 cable is typically used for long runs) or one 8-conductor romex for two connections.
- ◆ Cat 5, multi-conductor unshielded, or similar type electronic cable can be used to connect the 3-button switch to the LVC. The recommended wire gauge is 20 to 24 AWG. Use plenum-rated cable when required.

Making the connection

Refer to the diagram that is located on the white label inside the steel housing, and in Figure 9.

1. Mount the low-voltage control box near the screen.
2. Connect the low-voltage control box to the screen by connecting the screen motor power leads to the power strip terminal block located on the circuit board of the control box.
3. Connect the low voltage control box to the AC power source by connecting the AC line voltage to the power strip terminal block located on the circuit board of the control box.
4. Connect the switch to the low-voltage control box.

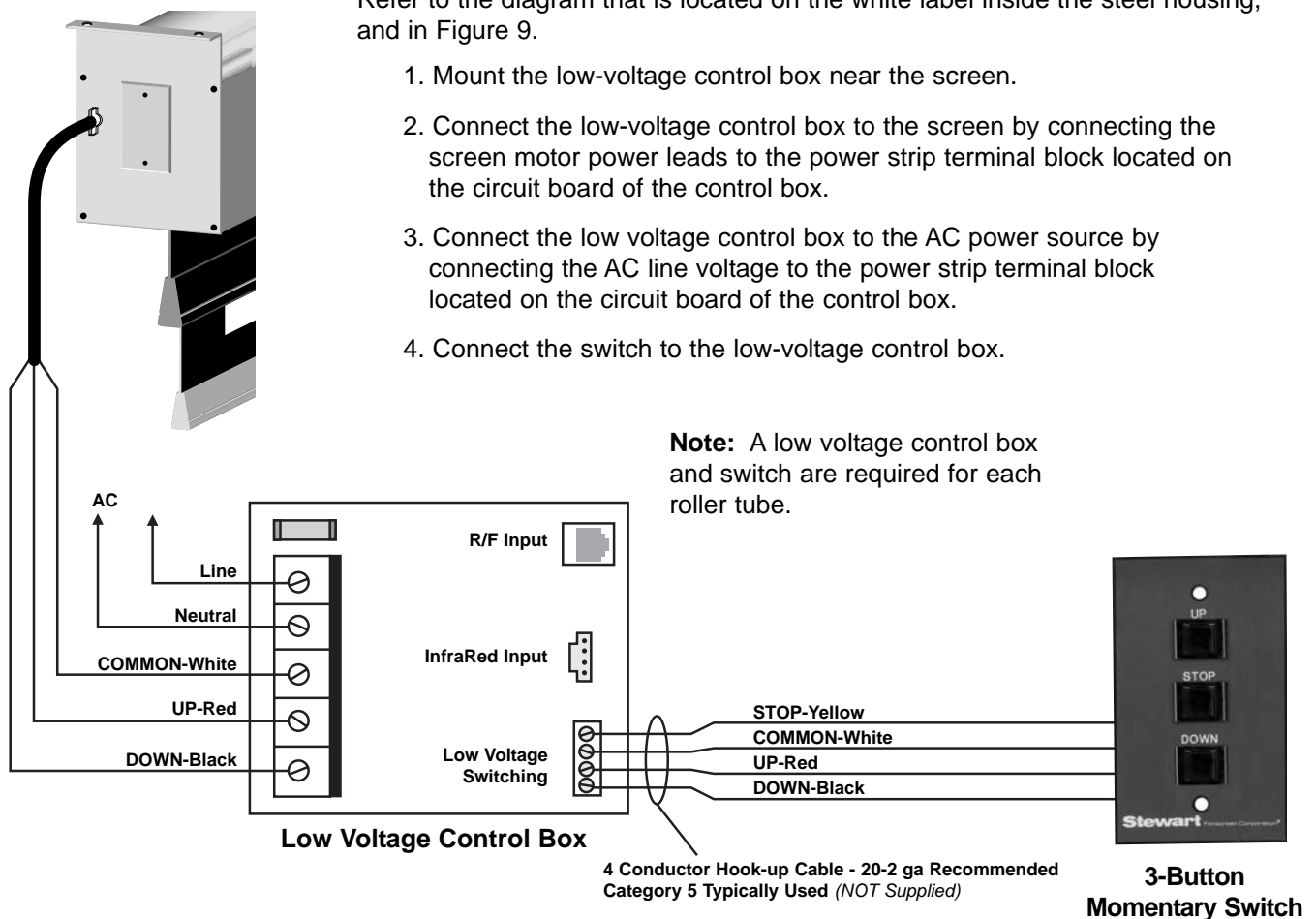


Figure 9: Low voltage 3-button switch wiring

Installing the wireless remote control option

The optional Stewart Filmscreen wireless remote control allows control of the screens from anywhere in the room.

Once the AC power outlet is installed near the screen, an electrician is not needed to connect the wireless remote receiver module to the power source.

Note: The distance between the hand-held remote control and the receiver can be up to 50 feet / 15 m. It is not necessary to have uninterrupted line-of-sight between the remote and the receiver, but there should be no metal objects between them. The override switch on the bottom of the receiver can be used instead of the remote control.

Preparing the connection

Before making the electrical connections, you need:

- ◆ An available AC power source installed near the screen

Making the connection

The electrical diagram in Figure 10 illustrates the connections.

1. Connect the 4-pin connector to the receiver module.
2. Plug the receiver module into the constant AC power source.

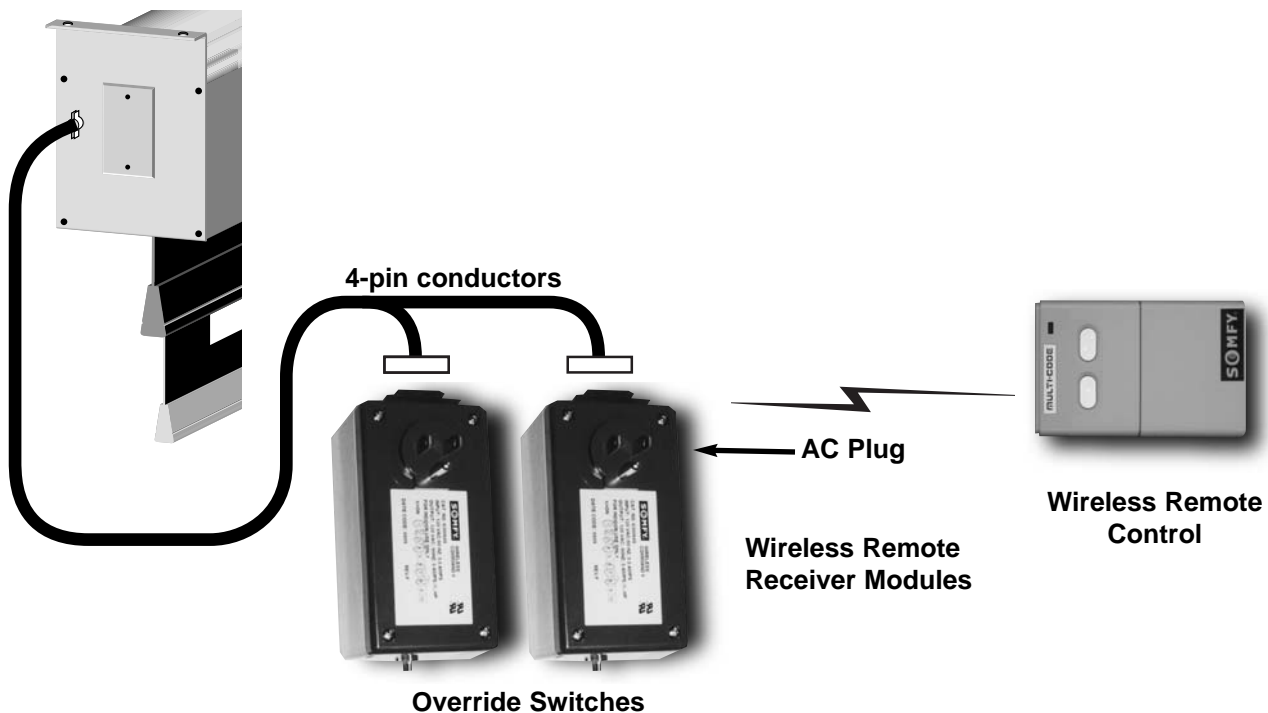


Figure 10: Wireless remote control connection

Installing the infrared remote control option

The optional Stewart Filmscreen infrared remote control allows control of the screens from anywhere in the room.

Note: The distance between the hand-held remote control and the receiver can be up to 50 feet / 15m. It is necessary to have uninterrupted line-of-sight between the remote and the receiver.

Preparing the connection

Before making the electrical connections, you need:

- ◆ An available AC constant power source
- ◆ A 4-conductor switch hook-up cable (4-conductor bell wire or category 5 cable is typically used for long runs)
- ◆ Wire nuts

Making the connection

Refer to Figure 11.

Note: The IR Channel Selection Switches must be set at different channels. The factory sets them at 1 and 2.

1. Mount each Multi-Channel Infrared Control box near the screen.
2. Mount each infrared (IR) eye sensor near the screen.
3. Use wire nuts to connect the screen motor power leads to the MCIR unit leads.
4. Connect each IR eye sensor to the plug-in module located on the board.
5. Connect the MCIR boards to the AC power source by connecting the AC line voltage to the black and white wires on the board.

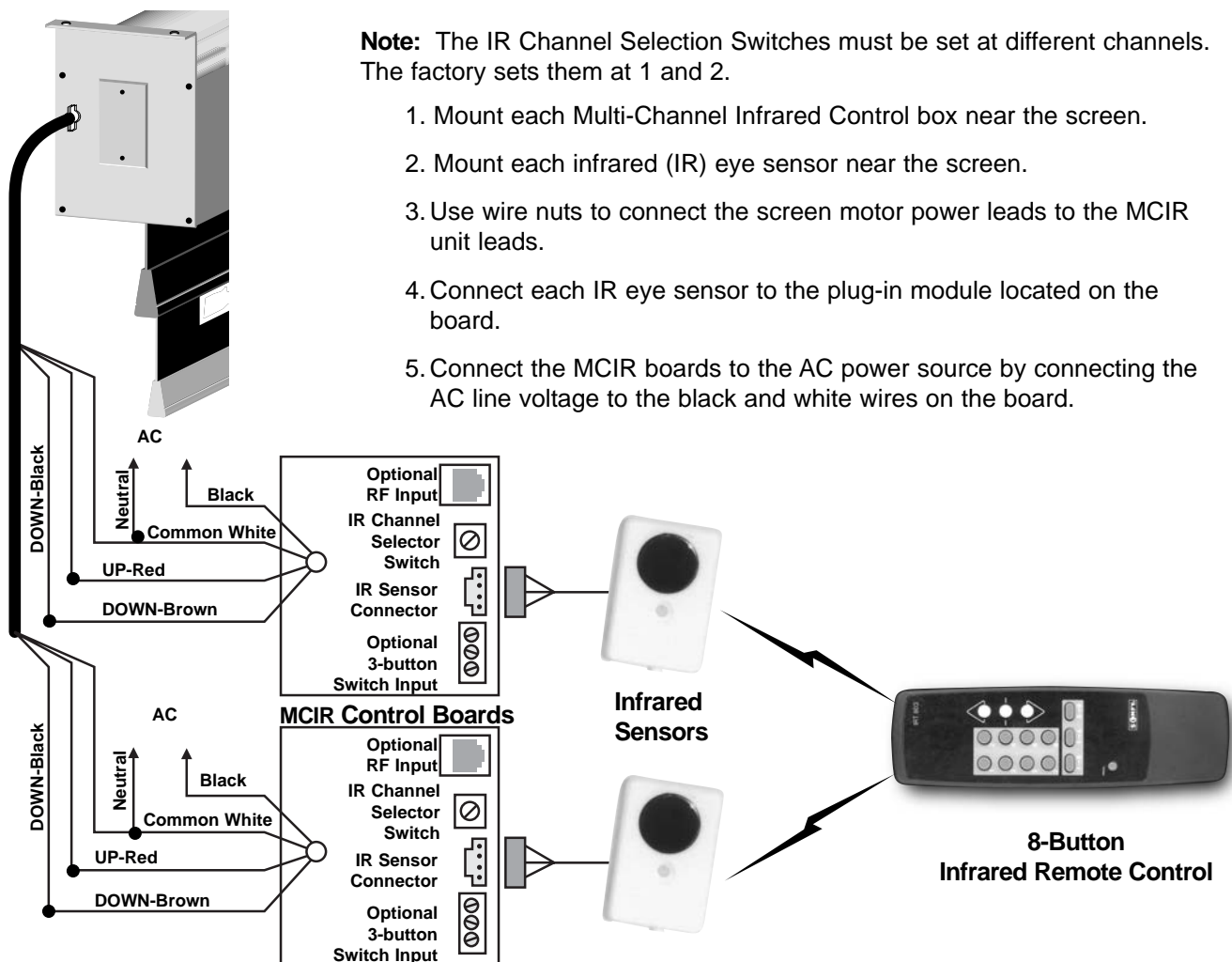


Figure 11: Infrared remote control wiring

OPERATING THE SCREEN

The method you use to raise and lower the screen and mask depends on the type of switch control devices you have selected.

Use the masking screen as needed to establish the appropriate viewing format.

When you lower or retract the main screen or the mask, they will stop at their preset limits. If an obstacle (such as a person or furniture) gets in the path of the screen as it is lowered, you should use the switch control to stop the screen's motion; it will not automatically stop if it hits an obstacle.

The motor is designed to be used for short operations such as lowering the screen (or mask) in preparation for viewing. The motor is not designed for continuous duty. If the motor operates continually for more than a few minutes, it may automatically shut off to prevent damage from overheating. If the motor occasionally needs to be run more than normal, for example during initial setup and positioning, allow time for the motor to cool down.

In general, when the screen is not in use, you should store it in the fully retracted position.

Caution

Do not operate the motors when any of the following occurs:

- ◆ **The unit emits any smoke, heat, abnormal noise or unusual odor.**
- ◆ **The unit is damaged in some way, such as damage from a water leak.**

If any of these situations occur, call a qualified service person.

ADJUSTING THE SCREEN EXTENSION

Caution

Improper adjustment of the limit switches can cause irreparable damage to the screen itself, resulting in voiding the factory warranty.

Each roller tube has a set of limit switches. The extension and retraction limit switches have been preset at the factory. In general, we advise you to avoid readjusting these switches.

In some cases, to enable proper alignment of the displayed image on the screen, you may need to adjust the extension of the screen or mask. If adjustment to the extension is necessary, carefully follow these instructions.

Warning!

The screen and mask are fully retracted when the battens are flush with the bottom of the case. Do not attempt adjustments with the yellow retraction (UP) limit switch that will further retract the screen. Incorrect adjustment of the switch will cause severe screen damage. Please consult the factory if you have any questions.

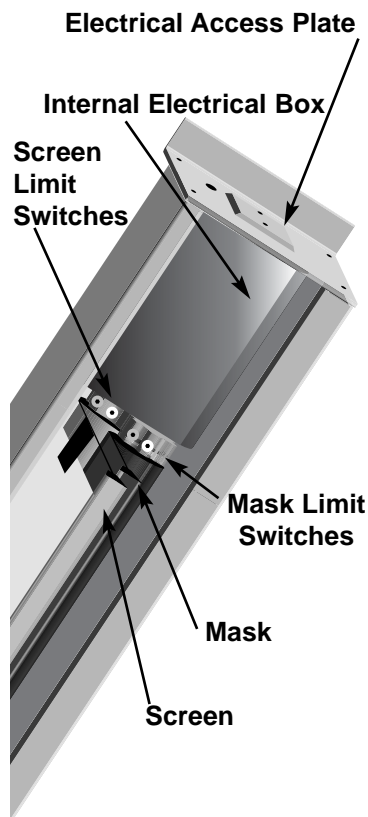


Figure 12: Underside view of Electriscreeen

Modifying the extension of the screen and the mask

You can increase the extension of the screen and mask up to 3" / 7.6 cm past the factory preset stop, or you can decrease the extension by approximately 4-6" (10-15 cm) from the factory preset stop. Do not attempt to modify the extension beyond these recommended amounts.

The limit switches for each are located on the left side of the roller tube inside the case, as shown in Figure 12.

To increase the fully extended (screen down) stop position:

1. Lower the screen or mask to its current stop position.
2. Locate the white extension (down) limit switch on the left side of the roller tube. Use a screwdriver to turn the switch in a counterclockwise direction. If the power is still on, the screen or mask will drop incrementally as the switch is turned.

Note: One complete turn of the switch will make approximately a 3/4" (2 cm) change in the screen or mask stop position.

To decrease the extension:

1. Lower the screen or mask until it is extended about halfway down.
2. Locate the white extension (down) limit switch on the left side of the roller tube. Use a screwdriver to turn the switch in a clockwise direction.

Note: One complete turn of the switch will make approximately a 3/4" (2 cm) change in the screen or mask stop position.

3. Activate the screen in the down direction until it reaches the newly reduced stop position. Repeat this procedure until the desired stop position is reached.

Once you have made the adjustment, whenever you lower the screen or mask, it will automatically stop at the new position.

Note: It is recommended that you make a note of any changes made to the factory preset.

SCREEN CARE AND CLEANING

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. To protect your screen when it is not in use, store it in the fully retracted position.

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

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

- ◆ 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.
- ◆ Particles left on the screen when it is retracted into the case may form an impression on the screen surface. Periodically wipe the back of the screen with a clean damp cloth.
- ◆ 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 completely before retracting.

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

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

TROUBLESHOOTING

Refer to the following guidelines if you encounter a difficulty in the operation of your Stewart Filmscreen. Problems related to electrical or motor function may require a qualified service person or electrician.

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

Problem description	Probable cause	Action to take
Screen won't operate.	No AC power available.	Check to see if the circuit breaker has switched off. Reset if needed. Check voltage availability. Contact an electrician.
Screen won't roll up or down (even though power is available).	Bad connection at switch.	Have an electrician or qualified service person check the connection as follows: <ul style="list-style-type: none"> · If you have a <i>high voltage control</i> switch, check switch -line connections. · If you have a <i>low voltage control</i> unit, check switch-line connections. · If you have a <i>screen trigger interface</i>, check line connections, or the mini-plugs at the screen input or projector output. Contacts may be sticking—tap relay to free contacts.
Screen roller chatters when power is activated.	Can be caused by voltage drop, bad connections, or a defective switch.	Have an electrician or qualified service person check all hook -ups including all outboard wiring.
Unit hums in up mode. (Screen has already retracted.)	The screen batten is retracting too far into the case. Failure to correct can damage motor and screen. Do not use the unit until this problem is resolved.	Have a qualified service person adjust the yellow UP limit switch. Turn the adjusting screw clockwise.
Screen drops when up direction is activated (grinding noise occurs).	Drop in voltage.	Screen motor requires full voltage. Have an electrician or qualified service person check available voltage.

Problem description	Probable cause	Action to take
Screen continues past bottom stop position.	White limit switch is out of adjustment.	Readjust the white DOWN limit switch. Turn the adjusting screw clockwise.
Batten retracts too far into case.	Yellow limit switch out of adjustment. Failure to correct can damage motor and screen. Do not use the unit until this problem is resolved.	Have a qualified service person readjust the yellow UP limit switch. Turn the adjusting screw clockwise.
Motor shuts off. Motor has been in use for more than 2 minutes.	Motor is designed for short operations (lowering and retracting), not continuous duty. Longer operation, such as during setup and positioning, causes the motor to overheat and shut off.	Allow the motor to cool down. Complete cooling can take an hour or more. Heat gain is cumulative and takes time to dissipate. If motor use is initiated before it has cooled completely, the motor will shut down again when it reaches maximum temperature.
Any controller (e.g., S TI, LVC, etc.) fails to operate motor.		
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.
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.

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.

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