

Below Ceiling Electriscreen

Owner's Manual



To the Owner

Installation Instructions

Screen Care

Maintenance

CFS-092313-BC

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

TO THE OWNER

Congratulations on your purchase of one of our highly versatile CIMA projection screens representing "Top of the Class" in standard commercial and residential projection screens.

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

About your Cima Below Ceiling Electriscreen

The Cima Below Ceiling Electriscreen is designed for ease of installation. The Cima Below Ceiling features a self-finishing face-plate. There are no user-servicable parts contained within the unit.

IMPORTANT SAFETY INFORMATION

SAFETY PRECAUTIONS

- ◆ Carefully read the instructions appropriate for your needs
- ◆ This control must be installed by a qualified electrician.
- ◆ For supply connections, use wires rated for at least 75 C.
- ◆ **WARNING: FOR CONTINUED PROTECTION AGAINST FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE.**
- ◆ Use Copper or Aluminum conductors.
- ◆ For indoor use only.
- ◆ Do not connect Low-Voltage to Line-Voltage Power.
- ◆ Article 725-54(a), (1) Exception No. 3 (NEC) or Canadian CE Code Handbook, Rule 16-212, Sub rule (4) requires segregation between line voltage and Class 2 (low voltage) circuits. Low Voltage /network wires should enter enclosure boxes through separated openings. Also, conductors shall be separated by at least 1/4" or segregated by barriers. Check with your local electrical inspector or compliance with local/national codes and wiring practices
- ◆ Earth Ground terminal connection must be made as shown in wiring diagrams
- ◆ Proper short-circuit and overload protection must be provided at the circuit breaker distribution panel. You can use up to a 20A maximum circuit breaker with adequate short-circuit breaking capacity for your installation
- ◆ For Indoor Use Only



Below Ceiling Electriscreen

Owner's Manual

Contents

To the Owner	2
Preparing the Installation	4
Product Dimensions	5
Step 1. Hanging the Case	7
Step 2. Electrical Hookup - 12V STI Trigger	8
Electrical Hookup - Keypad	10
Electrical Wiring - STI & Optional Cima-Link.	11
Electrical Hookup - Cima-Link Controller Operation ...	12
Operating The Screen	16
Screen Tension Adjustment.	17
Screen Care & Cleaning.	18
Troubleshooting.	19
Product Warranty	22

PREPARING THE INSTALLATION

Description

The Cima Below Ceiling product can be controlled through a number of remote control devices, including keypads, dry contact outputs, and low-voltage trigger outputs. With the optional Cima IMC Controller your screen can be controlled by local and remote Infrared, IP (Internet Protocol), and computer-based signaling sources (serial communication) such as those manufactured by Control4, AMX, Crestron, Elan Home Systems with RS-232-C or RS-485 interfaces.

Caution

TO BE INSTALLED AND/OR USED IN ACCORDANCE WITH
APPROPRIATE ELECTRICAL CODES AND REGULATIONS

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.)

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.

Unpacking

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.

Motor Wiring

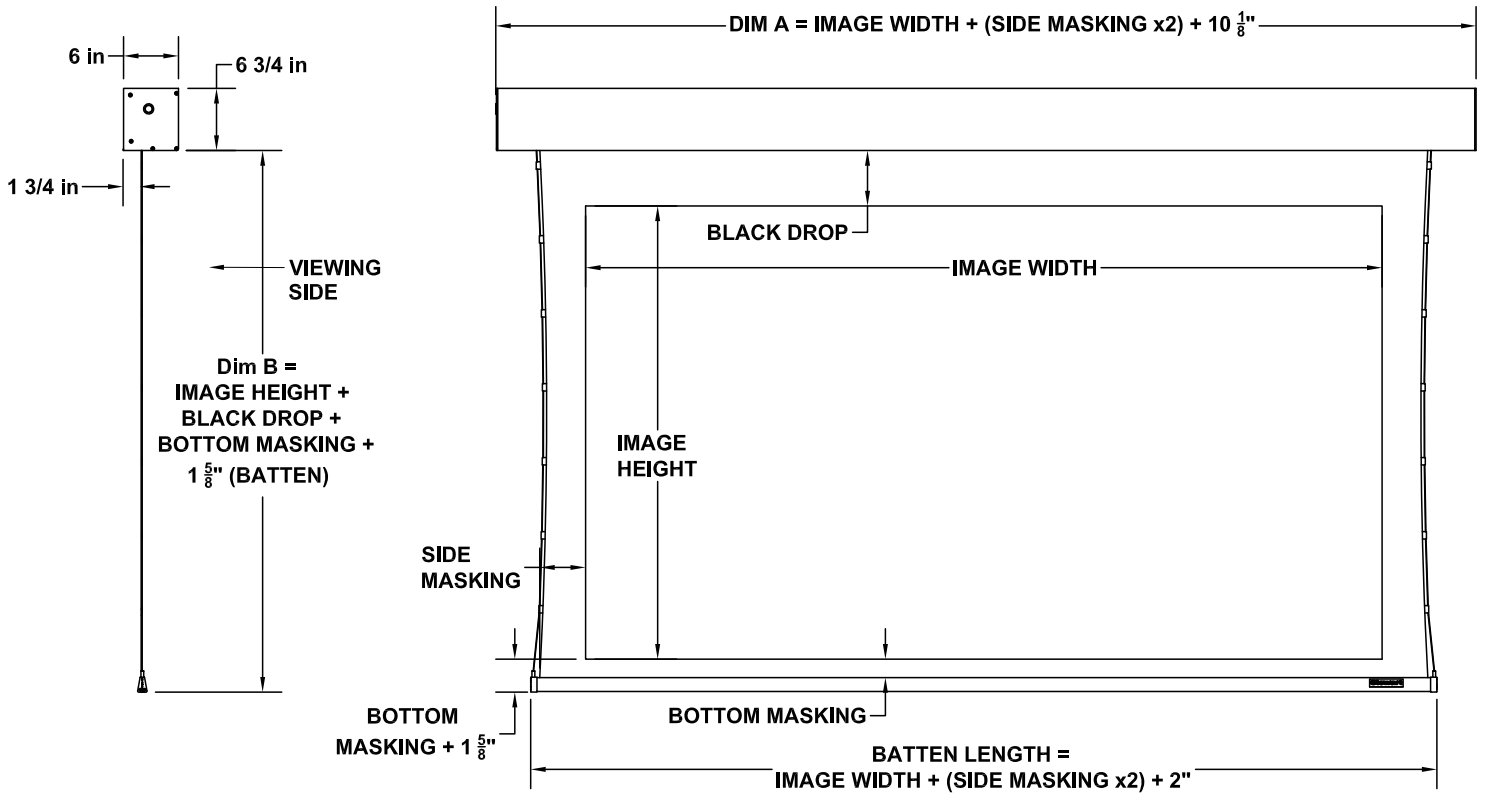
The Cima Above Ceiling's screen motor is pre-wired at the factory. No additional motor assembly is required

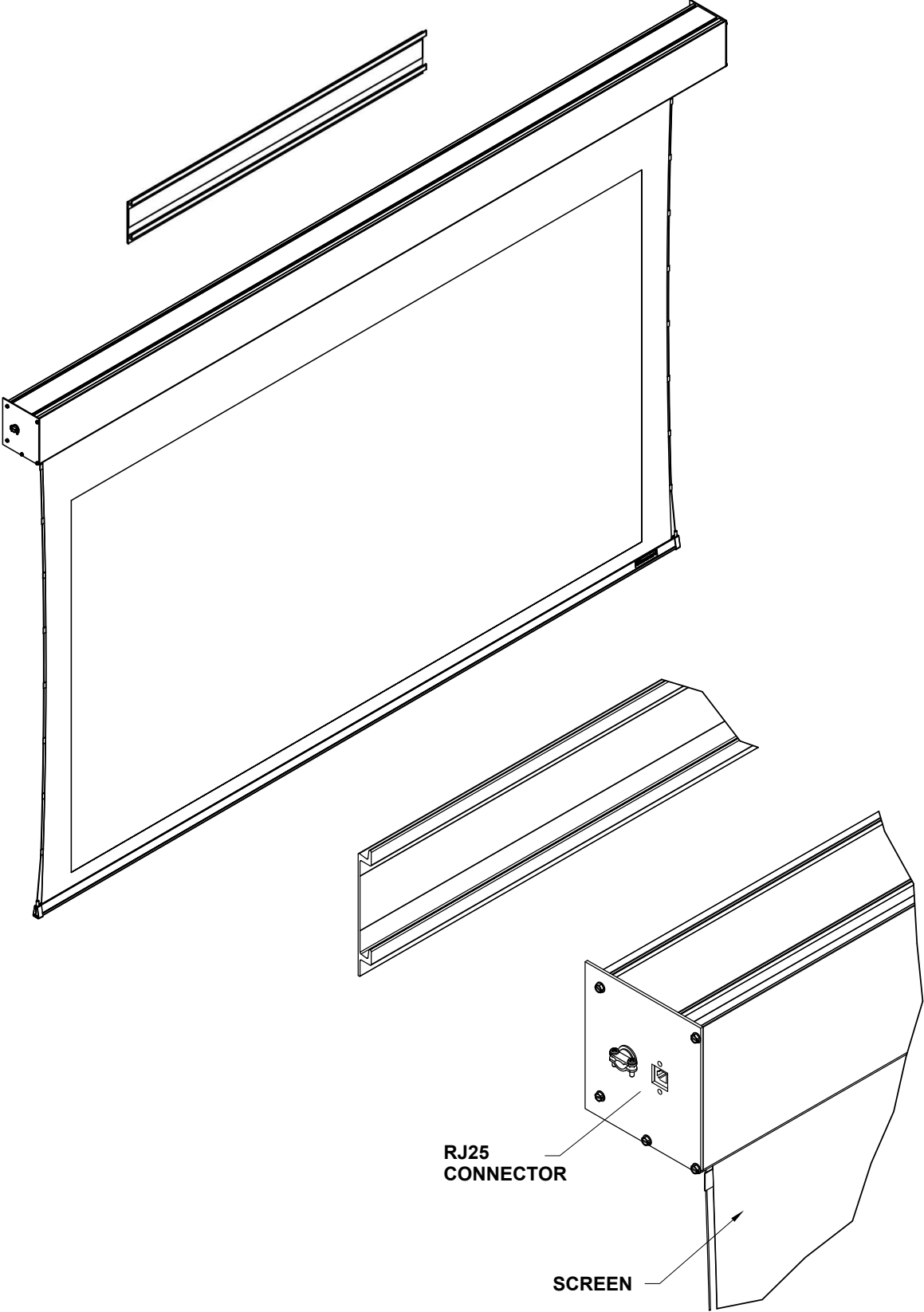
Caution

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

PRODUCT DIMENSIONS

DIM A (OVERALL LENGTH)
 DIM B (SCREEN OUT OF THE BOX)





RJ25
CONNECTOR

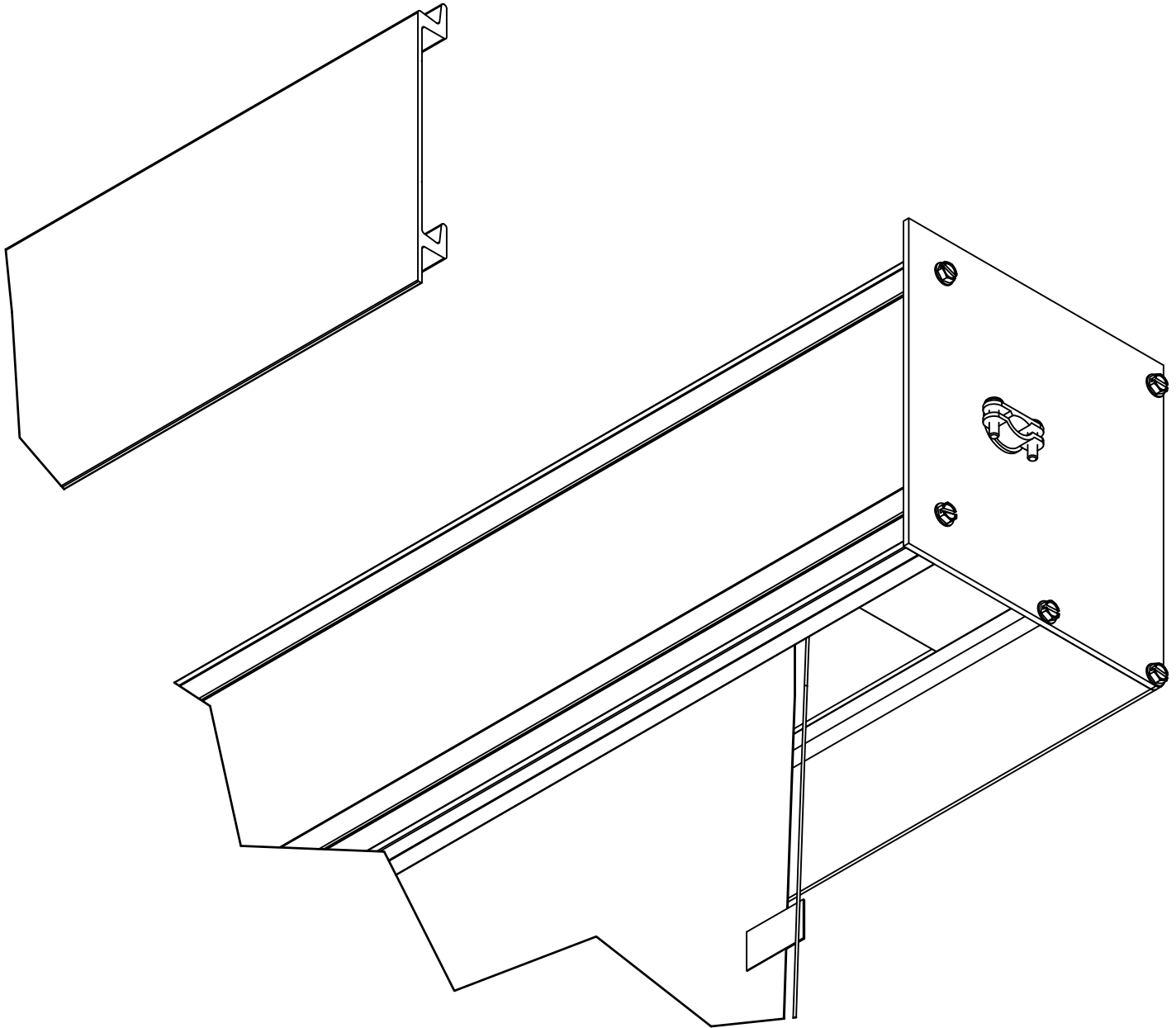
SCREEN

Top View
MOUNTING
BRACKET

STEP 1. HANGING THE CASE

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

Make sure that you mount the case so that the electrical connection is on the left side (audience left).



1. Install the mounting bar onto the wall and make sure that it is level
2. Hang the case onto the support structure making sure that the mounting bar is level

Step 2. ELECTRICAL HOOK-UP - KEYPAD

A standard 3-button low voltage keypad is supplied for both the standard STI trigger control and the optional IMC controller.

Operation

Press the "Down" button once and the Cima screen will automatically extend fully to its pre-set limit, and then will power itself off. Press the "Up" button once and the Cima screen will automatically retract back into the case and power itself off. If a custom position is desired, simply press the "Stop" button at any time during the screen's deployment or retraction to set its position.

Making the connections

Figure 4 illustrates the connections.

1. Connect the keypad to the RJ25 cable
2. Connect the other end of the RJ25 cable to the Cima unit

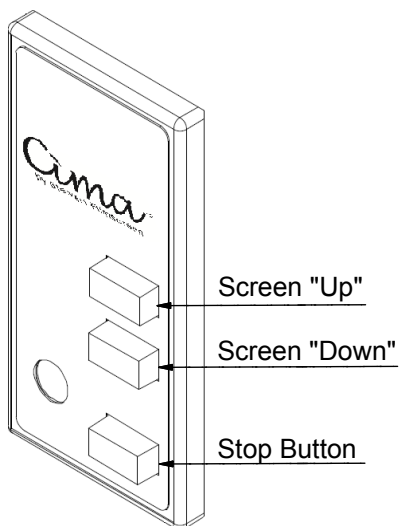


Figure 4: Cima Keypad

Note: The maximum length of the keypad's R25 cable to the Cima product shall not exceed 50'

STEP 3. ELECTRICAL HOOK-UP - 12V STI TRIGGER (STANDARD)

Description

The STI-100 supports both closure contact and voltage sensing input. There are two close contact inputs: one for up and one for down. These inputs require an external switch or relay to short these inputs to ground. The voltage sensing input will trigger an up or down motor movement based on the voltage level. A voltage level between 5vdc and 12vdc will drive the motor down, a 0vdc will drive the motor up. The voltage level input is triggered on the transition or change of voltage. A signal changing from 0 to 12v will trigger the down, a transition from 12v to 0v will trigger an up. All inputs are protected from static discharge

If there is a change of direction, the motor is paused for 1/2 second before reversing direction. This is to prevent strain on the motor mechanism, and to prevent damage to any material controlled by the motor. Relays are automatically de-energized after 120 seconds of operation to reduce power consumption

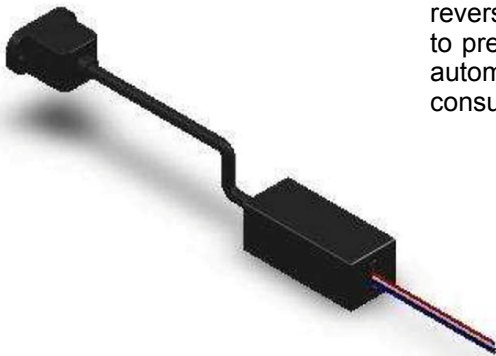


Figure 3: STI Controller (internal)

Operation

The operation of the STI is based on the state of the LV and STI inputs as follows:

LV	STI	Function
LV1 Close	N/A	Up
LV1 Open	N/A	None
LV2 Close	N/A	Down
LV2 Open	N/A	None
LV1&LV2 Close	N/A	Stop
LV2&LV2 Open	N/A	
LV1&LV2 Open	0V -> 12V	Down
LV1&LV2 Open	12V -> 0V	Up

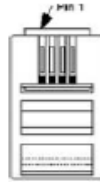
Both the STI inputs and LV can be used at the same time, as illustrated above. There is a built in de-bounce function whereby the change of a signal must exist for a time greater than 80ms. Any signal less than 80ms is ignored

STEP 3. ELECTRICAL HOOK-UP 0- 12V STI TRIGGER (CONTINUED)

Home Automation Connection

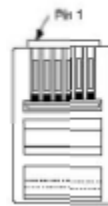
A 4 pin RJ25 jack provides the connection to any external control equipment. An RJ25 can be 6 pin or 4 pin, either can be used as shown below:

4 pin:



Pin	Signal
1	Common
2	LV1
3	LV2
4	STI

6 pin:



Pin	Signal
1	Not used
2	Common
3	LV1
4	LV2
5	STI
6	Not used

LV1 and LV2 are the close contact connections, these require a short to common activate. An external switch or relay should connect this to the common. In the open circuit there is about 5Vdc present on the connection. STI is the Voltage sensing connection. An external device should connect to this pin and common

Specifications:

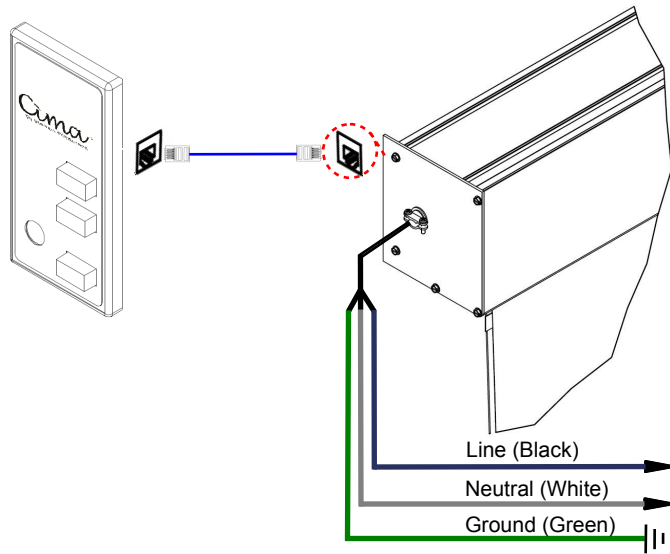
AC	
Relay contacts	1/3 hp motor 120V
	1/2 hp motor 240V
	5 Amp resistive load
Power Requirement	120vac (<0.5w)
	240vac (STI-101)

LV Connections	
LV 1 & 2	
Open circuit voltage	~5vdc
Closed circuit voltage	<1.1mA
STI Voltage min	3.2 v dc
STI Voltage max	12V ¹
STI Current @ 12V	<0.5mA
STI Current @ 5V	<0.2mA

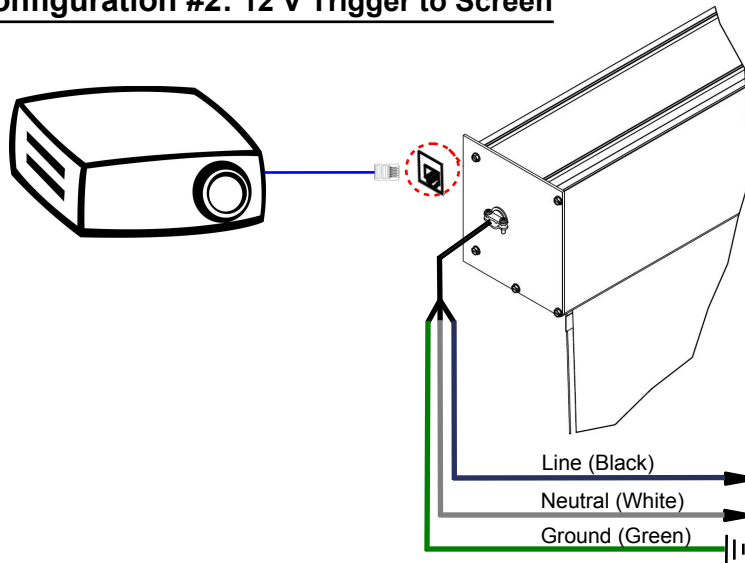
¹ Do not exceed 13vdc

STEP 3. ELECTRICAL WIRING DIAGRAMS - STI Switch & Cima-link

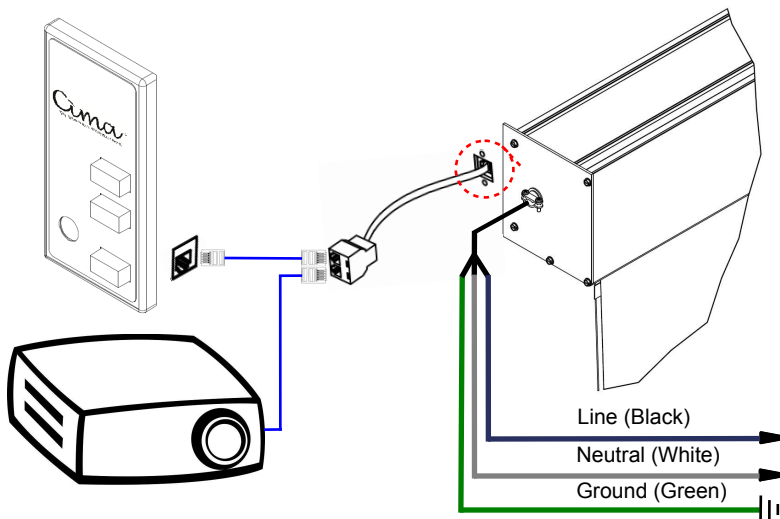
Configuration #1: Keypad to Screen



Configuration #2: 12 V Trigger to Screen



Configuration #3: 12 V Trigger & Keypad to Screen



STEP 2B. CIMA-LINK CONTROLLER OPERATION (OPTIONAL)

Description

The Cima-Link Motor Controller is a state-of-the art bi-directional communication AC motor controller designed to control projection screens, drapery, and curtain applications. One or more Cima-Link controllers can be networked to control nearly an unlimited number of motorized devices.

Configuration

The controller's incredibly small size enables the unit to be positioned seamlessly within the Cima Above Ceiling housing. Popular building and home automation systems have developed customized devices drivers which enable simple to sophisticated control of motors and functions. In addition, a family CS-Bus interface adapters are available which enable IMC motor controllers to be connected to nearly any type system without third-party drivers.

Specifications

AC Motor Control	Control of a single 1/3 hp, 2.1 amp bi-directional AC motor (two directions), 120V (240V version available). Relays certified to 5 amps. Fuse protection to 5 amps. Built-in surge protection
Network Communications	CS-Bus (4-wire bus). On-board powered RJ-25 connector (for driving keypads and accessories) and one RJ-25 connector for additional bus connections.
Hardware Compatibility	A built-in connector allows keypads to be easily integrated using Category 2 wiring
Software Compatibility	-VPAD (virtual keypad) PC application -Any third-party Serial COMM. Utilities -Lighting & Shading Panels from Lutron and Vantage -Automation systems from AMX, Crestron, Control 4, Elan Home Systems, and others
IR Control	On-board CS-Bus connector enables low-cost IR receiver to be connected for IR operation
Screen Trigger Control	IBE-1000 Intelligent Bus Encoder

STEP 2C. CIMA-LINK CONTROLLER OPERATION (OPTIONAL)

SPECIFICATIONS (CONTINUED)

External LV Control	On-board channel (i.e. Up/Down) low voltage connection is designed to interact with dry contact keypad or third-party off-the-shelf switches
RS-232-C Control	IBT-100 serial adapter plugs anywhere onto CS-Bus network line up to 4,000 feet from IMC-100 Controller
Power Requirements	Domestic Version: 120vAC, 50/60 Hz, International Version: 240 vAC 50/60
Safety	ETL Listed. Conforms to UL STD 325 (120v version)

CIMA-LINK ACCESSORY INTERFACE (OPTIONAL)

Figure 5 shows example applications of the Cima IMC Accessories (not included) for which the Cima Above Ceiling's IMC controller can be integrated with infrared remote, additional Cima screens, and 3rd party applications

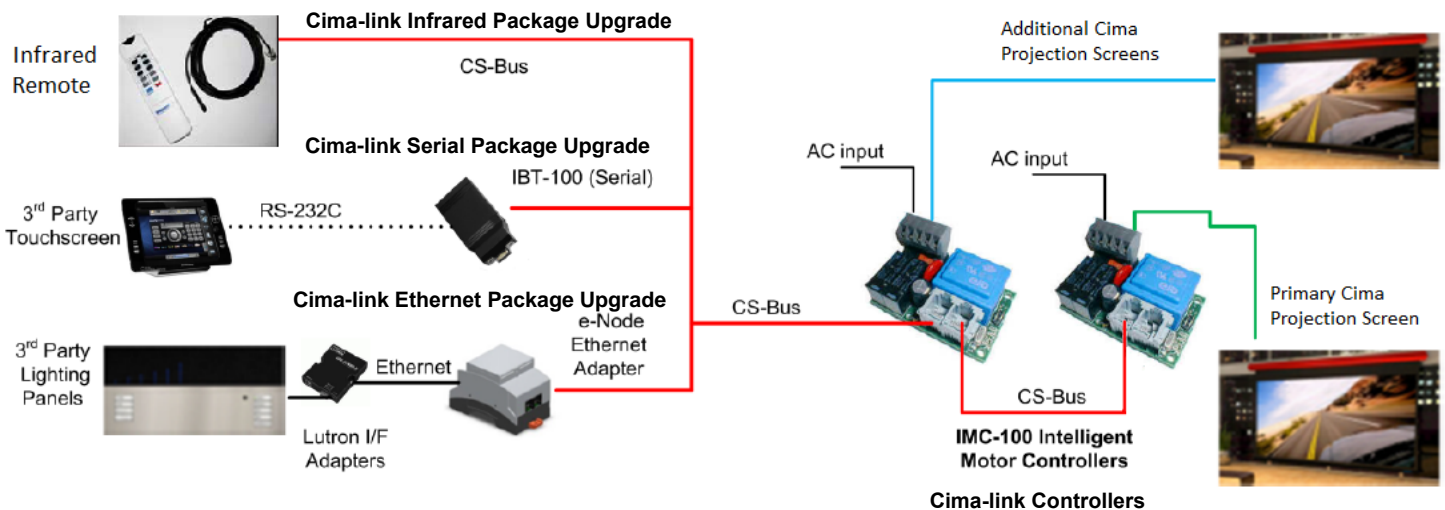


Figure 5: Cima-Link Interface

STEP 2D. CIMA-LINK CONTROLLER OPERATION (OPTIONAL)

External Dry Contact and/or Keypad

The Cima-Link Controllers' J3 connector is designed to accept up to two (2) dry contact closures as well as one voltage triggering input such as those available with screen trigger or external 12V contact closures.

Low Voltage Wiring Instructions

Use 22-24 AWG CAT5 (or CAT3) interconnection wires with maximum length of bus less than 4,000 feet (if using 4 pair wire, simply do not use the Brown and Brown/White of 4th pair wires).

Making the connections

Figure 4 illustrates the connections.

1. Connect the keypad to the RJ25 cable
2. Connect the other end of the RJ25 cable to the Cima unit

Controlling Multiple Cima products

The Cima-Link is a state-of-the art bi-directional communication AC motor controller designed to control up to . With the Cima-Link Controller, up to 255 Cima screens can be linked together on any one span when connected together via serial RS-232/485 or ethernet (via the optional Cima-Link Ethernet Controller Upgrade)

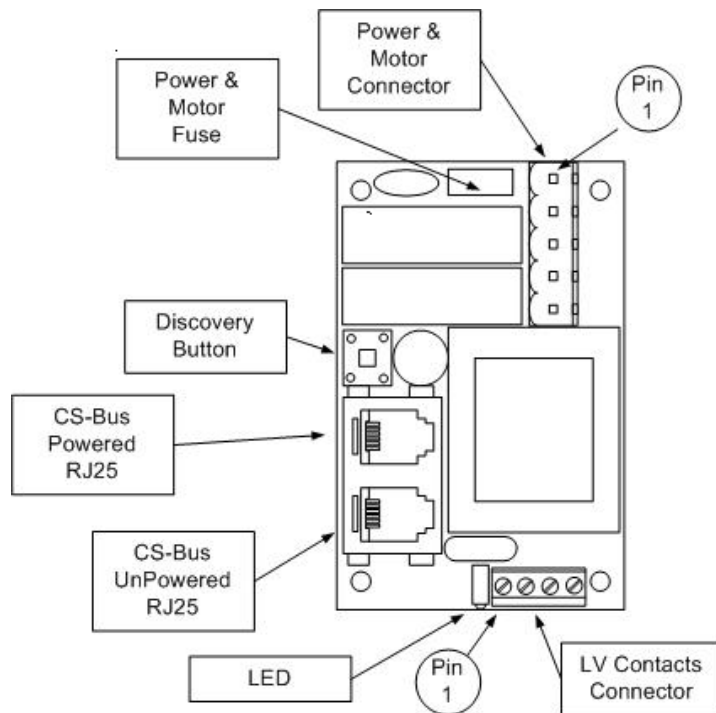


Figure 6: Cima-Link Controller (internal)

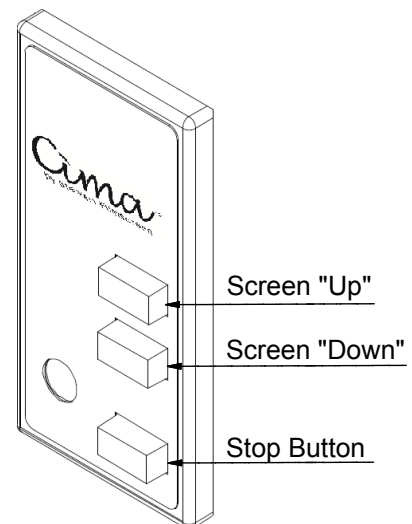
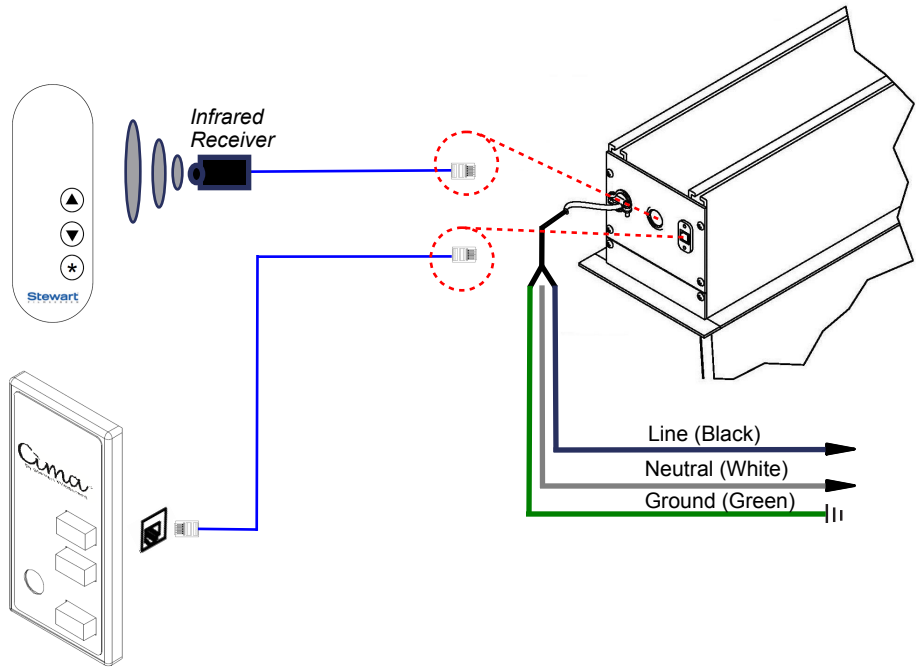


Figure 7: Cima keypad

CIMA-LINK INFRARED PACKAGE ELECTRICAL HOOK-UP (OPTIONAL)

IR Remote & Keypad to Screen (Cima-Link Infrared Package)



OPERATING THE SCREEN

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

When you lower or retract the screen, it will stop at its preset limit. If an obstacle (such as a person or furniture) is in the path of the screen as it is lowered, 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 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 motor 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 occurs, 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.

The extension and retraction limit switches have been preset at the factory. In general, we advise you to avoid readjusting these switches. Please remove the dust cover before proceeding.

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

Warning!

The screen is fully retracted when the batten is 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.

SCREEN TENSION ADJUSTMENT (WHERE REQUIRED)

To correctly adjust the batten setting position and side line length on your Cima screen, it may be necessary to loosen the existing side line attachment screws. After the adjustment has been completed, the batten weight will be increased on the screen while decreasing the side line tension.

This procedure can improve the overall flatness of the screen primarily in the lower section of the image area. In many instances, the screen's factory deployment setting has been reduced at the site and therefore this batten adjustment is necessary:

The objective is to thread the screw into the ferrule just enough to get a very low amount of side line tension (approximately 3 to 4 turns). The side lines will now have less tension which is desirable. The results is that more batten weight will be distributed on the screen once this adjustment is completed. You should see a slight improvement when finished, however, it will take some time for this adjustment to fully take effect (stretching screen) thereby eliminating any wrinkles, waves, or puckers

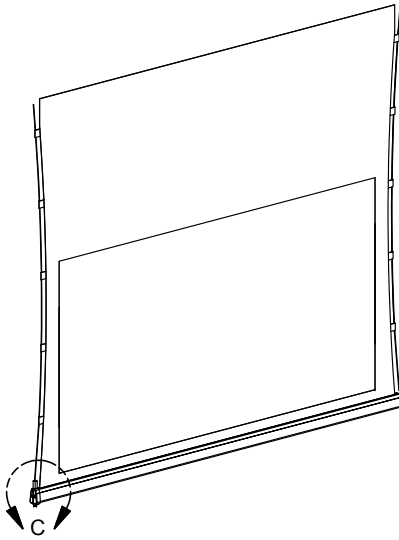


Figure 9: Cima Screen

Screen Tension Adjustment Procedure

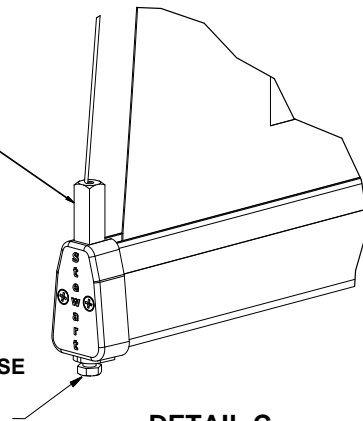
STEP 1:

PUSH THE FERRULE DOWN

STEP 2:

TURNING IT COUNTER-CLOCKWISE WILL SHORTEN THE SIDE CORD.

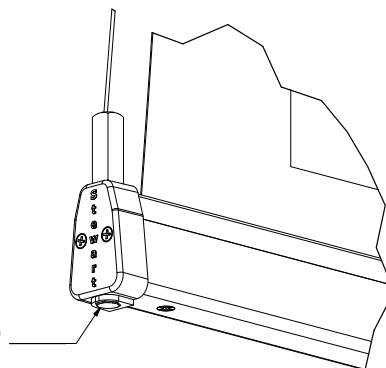
TURNING IT CLOCKWISE WILL RELEASE THE TENSION ON THE SIDE CORD



DETAIL C
(TOP VIEW)

STEP 3:

ALIGN THE TENSION SCREW TO THE RECESSED POCKET AND RELEASE IT



DETAIL C
(UNDERSIDE)

SCREEN CARE AND CLEANING

With reasonable care, you may 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

Treat your screen surface delicately. 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.

Weekly maintenance

To maximize the longevity of your Cima screen we recommend the screen be deployed overnight at least once a week.

If using a 3rd party control system to deploy your Cima screen, you may be able to program the 3rd party system to automatically deploy your Cima screen once a week.

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 any difficulty in the operation of your Cima by Stewart Screen. 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 outboard switching apparatus. Check voltage availability. Contact an electrician.
Screen won't roll up or down (even though power is available).	Bad connection at switch. Polarity of STI / IMC line may be bad.	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. • Check STI / IMC module's line connections, or the mini-plugs at the screen input or projector output. Check 12V DC line for correct polarity. 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.

TROUBLESHOOTING (CONTINUED)

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. See pp. 12-13 of this manual.
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. See pp. 12-13 of this manual.
During operation, there is a repeated thumping or clicking sound.	Motor cable or connectors are out of position in the case and interfering with the screenroll.	Remove screenroll assembly and reposition cable and connectors so that they remain within the electrical box when the screenroll assembly is fitted back into the case. See p. 11.
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, 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.
----- STI, IMC fails to operate motor.		
Dirt, finger prints, marks, etc. on screen surface.	Improper handling of screen.	Lightly 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.

LIMITED ONE YEAR WARRANTY

STEWART FILMSCREEN CORPORATION (Stewart) warrants its CIMA™ by Stewart Filmscreen products to the original purchaser only, to be free from defects in materials and workmanship for a period of one (1) year from the date of purchase by the original purchaser or eighteen (18) months from date of manufacture, as defined in the serial number, provided they are properly operated and maintained according to Stewart instructions and are not damaged due to improper handling or treatment after shipment from the factory. This warranty does not apply to equipment showing evidence of misuse, abuse, or accidental damage, including neglect caused by improper installation (i.e. proximity to hot lights, exposure to extreme heat or cold, exposure to excessive humidity, etc.). No Stewart services are available for this product.

Stewart's sole obligation under this warranty shall be to repair or to replace (at Stewart's sole discretion) the defective part of the merchandise. This warranty expressly does not cover any costs of removal, installation, framing, or other costs incident to replacing the screen or returning it to Stewart. Returns for service should be made to your Stewart dealer. If it is necessary for the dealer to return the screen or part to Stewart, transportation (freight) expenses to and from Stewart are payable by the purchaser. Stewart is not responsible for damage in shipment. To protect yourself against damage or loss in transit, insure the product and prepay all transportation expenses.

This warranty is in lieu of all other warranties, expressed or implied, including warranties as to fitness for use and merchantability. Any implied warranties of fitness for use, or merchantability, that may be mandated by statute or rule of law are limited to the one (1) year warranty period. This warranty gives you specific legal rights, and you may also have other rights which vary from state-to-state. In no event will Stewart be liable for sums in excess of the purchase price of the product. No liability is assumed by Stewart for expenses or damages resulting from interruption in operation of equipment, or for incidental, direct, or consequential damages of any nature.

In the event that there is a defect in materials or workmanship of a CIMA™ by Stewart Filmscreen product, you may contact our Customer Service Department at 1161 W Sepulveda Blvd, Torrance, California 90502-2797 (310-784-5300) Toll free (800-762-4999).

IMPORTANT: This warranty shall not be valid and Stewart shall not be bound by this warranty if the product is not installed and maintained in accordance with Stewart's written instructions.

Stewart Filmscreen Corporation shall not be liable for any and all consequential damage(s) occasioned by the breach of any written or implied warranty pertaining to the sale of CIMA™ by Stewart Filmscreen product in excess of the purchase price of the product sold.

Printed in USA. Rev. 9/23/2013



Cima[™]
by Stewart Filmscreen

www.stewartfilmscreen.com
1-800-762-4999 ♦ Fax (310) 326-6870

10964