

# **Cascade Installation & Operational Guide**

Carefully read all the instructions in this guide prior to the installation process as it is important to understand the proper sequence of the installation steps. Also, a qualified electrician may be required for some high voltage connections. Professional mounting techniques should be used. Stewart Filmscreen cannot be held liable for substandard or faulty installations.

#### Installation

- 1. Remove unit from shipping container (IMC control box may be attached)
- 2. Lift Cascade out of crate at both ends only
- 3. Mount to location using All Thread, Lag Screws, Chain or whatever hardware is required for your particular location. Use only rated hardware as professional mounting techniques are required. Stewart Filmscreen will not be held liable for use of sub-standard mounting hardware / apparatus or faulty installation attempts.
- The Cascade is securely attached and ready for operation by only using the (4) corner mounting holes on the end brackets. No need for additional support required. Do not drill into or attach any addition support pieces or other items to the Cascade's housing as screen damage will occur.
- 5. All differing mounting locations can present challenges. In some situations the installer will have to create on site solutions for proper screen mounting. These could entail fabricating mounting adapter brackets or fittings, installing wooden reinforcement backing, etc.
- 6. Remove the outer packing paper layer surrounding the Cascade's housing.

#### Page 2

#### **Electrical Connection to External LVC Box Using 3-Button Wall Switch**

A qualified electrical technician may be required for high voltage connections

- 1. Install the supplied LVC box where required. Typically this box resides in the vicinity of the Cascade keeping in mind future accessibility. Do not permanently bury any electrical controller in walls or ceilings.
- Connect the supplied white motor cable to the LVC box. See the wiring hookup diagram inside the LVC box; Neutral, Up, Down & Ground. Professional hookup techniques should be used. It is advisable to use spade terminals on these motor leads for the connection screw terminals.
- 3. Connect incoming AC line to the LVC box. Use the LVC's ground lug to secure the ground connection; Neutral, Hot & Ground.
- Install a (4) conductor Class 2 control wire to the LVC inputs. The wiring diagram will indicate proper connections; Common, Up, Down & Stop. Many technicians use Cat5 or Cat6e wire for this control run. Should the run exceed 80 ft. in length, it would be advisable to use 18 AWG (4) Conductor Shielded Electronic Control Cable.
- Install the supplied 3 button wall keypad to the switch run described in paragraph 4. You can also parallel this connection to other 3<sup>rd</sup> party control systems such as Crestron. Only use momentary relays for controlling the LVC / Cascade from 3<sup>rd</sup> party control networks.
- 6. Apply AC power to the LVC box. The Cascade screen is now ready for operation.

#### Attached Stewart IMC Control Box – see diagrams on pages 5 & 6

- 1. Locate mounting position for the IMC control box.
- Make necessary low voltage switch connections. White Common or -12 volt trigger, Red Up, Black Down, Green +12 volt trigger.
- 3. Use wire nuts to secure new control cable to the factory switch lead. Small gauge control cable (20 24 AWG) 4-conductor should be used.
- 4. Make any and all optional control connections as needed.
- 5. **Do Not** bury this control in ceiling with no access.

#### **Operating the Cascade – First Time Deployment**

- 1. Use control method "Down" button to activate the screen. Slowly, carefully using incremental control only, watch the screen as it descends stopping it as needed to remove any shipping / packing items that may be present.
- 2. Also make sure the screen releases properly during this critical first time deployment. Once the screen has fully deployed and all packing items are removed, the Cascade projection screen is ready for normal operation.

#### How to Adjust Cascade Screen Motor Limit Switches

The Cascade screen has been manufactured and set to the specified dimensions that were ordered. Once the screen has been installed it may be necessary to adjust the "Down" limit switch for proper picture alignment. Use the following instructions to adjust the Cascade's motor limit switches.

**Caution!** Please read and understand the following information. Improperly adjusted motor limit switches can result in irreparable damage to the projection screen or motor.

Tool required: 4 mm hex key or 5/32" hex driver. You can even use an electrician's 1/8<sup>th</sup> inch flat blade screw driver (tweaker).

**Never** use an electric drill or powered screw driver to adjust Somfy motor limit switches as this will damage the internal timing assembly in the motor. The switches are designed for manual (by hand) adjustment only.

#### A. Adjust screen's deployed (down) stopping position

This is the number 1 adjustment that users will need to make. A projection screen may typically require the deployed stopping position to be re-adjusted from the factory setting.

This adjustment will be made using the "white" limit switch (see Fig.1 on next page). It is important to remember that you cannot reduce the screen's deployment setting when the screen is currently stopped at its full down setting. You must either use the control switch to raise the screen up a foot or so before attempting a switch adjustment. If the screen is operated by a screen trigger, you must reduce this "white" limit switch when the screen is stopped in its fully "retracted" up position.

Turn the white "down" limit switch "clockwise" to reduce settings. Turning the switch "counter-clockwise" will increase or extend the screen's deployed stopping position. Do not extend the screen so far that the aluminum roller tube becomes exposed. There must be at least one full wrap of screen left on the roller tube when the screen is resting at its final deployed setting. If you turn this limit switch too much (clockwise) and the screen is now stopping short of where you want it, simply turn it in the opposite direction (counter-clockwise) and the screen will automatically drop in increments as you rotate the switch.

## B. Adjust the screen's retracted (up) stopping position

We typically don't advise users to make adjustments of this switch because they can inadvertently damage the screen and or motor if the fully retracted stopping position is set "too high" into the housing. This will cause the screen's batten bar to impact the screen roll and may cause optical damage to the screen. Improper adjustment can also cause the batten to "jam" into the housing which obstructs it from deploying when the "down" command is sent. Left in this position, the motor will fail due to continual over-run. The "Up" limit switch is the "Yellow" adjuster in this photo.







# (continued from page 4)

In the fully "up" retracted stopping position, the screen's batten bar must hang freely underneath the screen roller tube. The batten bar cannot contact or press against the projection screen roll. Make sure to check and correctly adjust the yellow or "up" limit switch to avoid screen damage from a compacted batten bar.

Counter-clockwise adjustments of this switch will "raise" the batten bar and clock-wise adjustments will "lower" the batten's top setting. Lowering the batten's top stopping position is valuable when trying to align the screen's batten with a finished ceiling slot.

## Summary

Please remember that improperly adjusted limit switches will cause damage to your projection screen or motor. Make sure that both of the limit switches have been properly adjusted allowing the Cascade projection screen to stop correctly at both the retracted and deployed positions.

Contact the factory if you have any questions or concerns regarding the use of the screen limit switches.

For questions or assistance with these instructions or installation of the Cascade contact Stewart Filmscreen Technical Support Manager.

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