



X Cube Lift

Model: XCU 600

XCU 700

Installation Instructions

X CUBE LIFT
INSTALLATION INSTRUCTIONS

Please read installation instructions carefully before installation and keep it for future reference.

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The information in this manual is subject to change without any prior notice.

Updated on June 02, 2014

Installation and Operation Manual

This manual explains how to install, operate and maintain the **X Cube lift** for video projector. Please read carefully the manual before installation and keep it for future reference. This manual is for installer, interior designer, architect, M&E consultant and system integrator who has known about XLT X Cube lift.



IMPORTANT SAFETY INSTRUCTIONS

WARNING: FAILURE TO FOLLOW ALL THE FOLLOWING INSTRUCTIONS CAN RESULT IN SERIOUS PERSONAL INJURY OR DAMAGE TO EQUIPMENT.

CAUTION

- 1) The lift is not for out-door used.
- 2) The lift is intended for use in ordinary location.
- 3) Please do not place or operate the lift in upside down position. The lift must be properly installed at the ceiling before operating.
- 4) The equipment is not to be used by children or persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instructions.
- 5) Please do not allow children being supervised to play with the equipment.
- 6) Do not install the lift on adjacent ceiling or light fixture.
- 7) Entire bottom of the lift must be unobstructed to allow proper operation.
- 8) The lift must be installed in level from front-to-back and side-to-side.
- 9) Please do not attach any projector with the weight above maximum weight capacity.

WARNING

- 1) Please read the instructions before installation. Improper installation could lead to serious injury or damage to the lift.

- 2) Keep hands and other objects away from the mechanism when the lift is operating. Serious injury or damage could result.
- 3) Clear all persons and obstructions along the lift travel path while it is operating or in service.
- 4) Watch the moving projector lift and keep people away until the projector lift is completely closed.
- 5) Please do not close the lift while the projector is running or while it is in “cool down” operation to avoid premature failure to electrical or electronic components.
- 6) Please do not step on the lift. Overloading could lead to damage of equipment or injury.

ELECTRICAL RISK

- 1) Please check the standard of the local power supply before installation and ensure that the operation voltage of the motor is related as the local power supply. The motor may damage due to incorrect voltage supply.
- 2) Never operate the lift with damaged or faulty cord or plug.
- 3) Please keep the cord away from heated surface.
- 4) Please turn off power supply or unplug before cleaning or servicing.

THE X CUBE LIFT

Overview

The lift is powered by a tubular motor which is operated on Single phase 230~240 V AC with the convenience of a remote setting controller with 3 programmable positions, at ceiling or store level, projection level and maintenance level. It provides attractive solution to recess a projector in ceiling, extend to projection level and fully extended for maintenance.

The lift is shipped with the carton box and the following items are allocated. Please inspect them for any damages once received the lift.

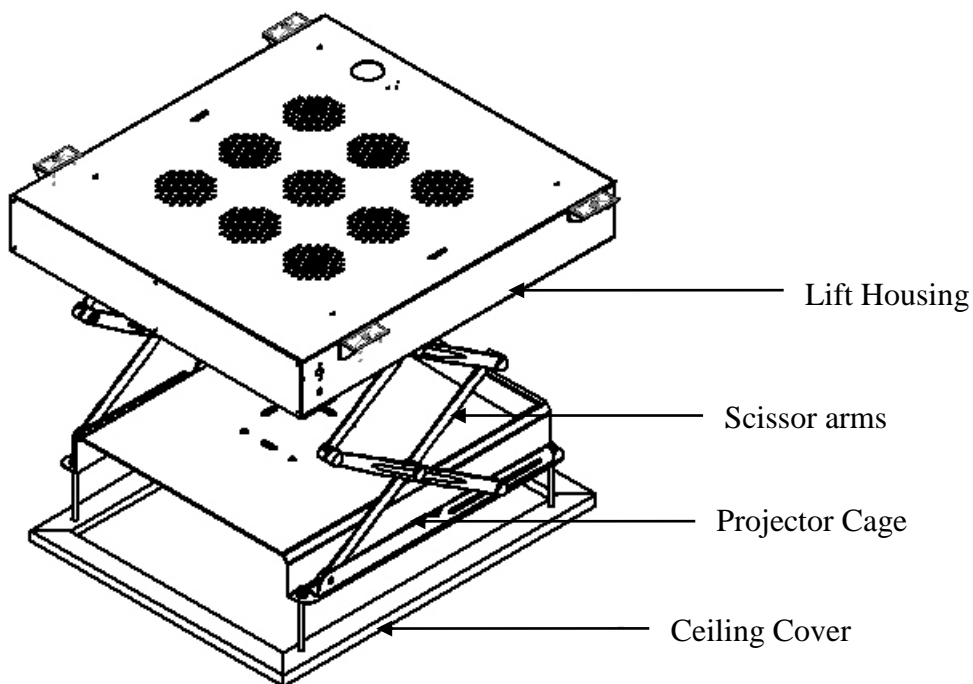
- 1) The X Cube lift
- 2) 2 Adjustable ceiling mounting bars
- 3) 4 angle bars to serve as ceiling cover frame
- 4) Remote control
- 5) User manual
- 6) A package of screws for projector

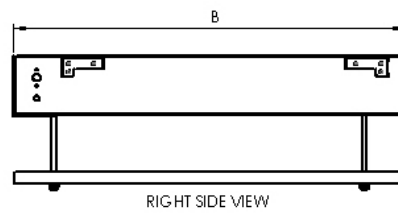
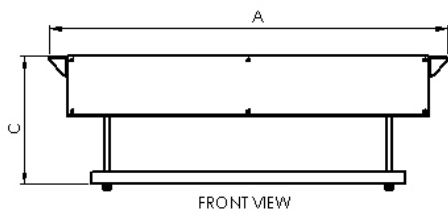
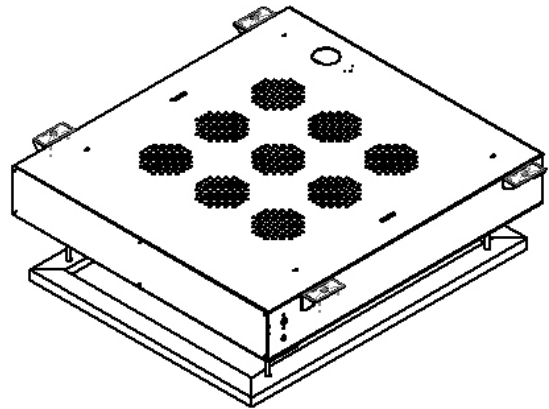
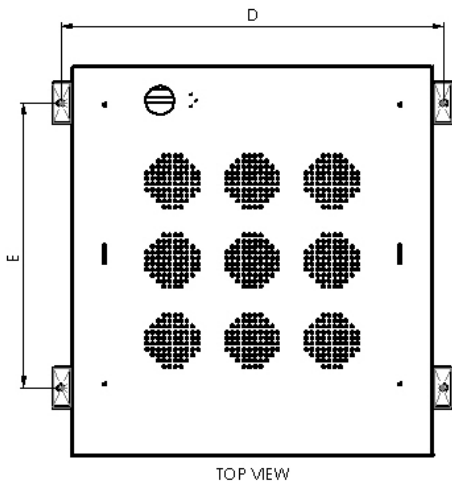
Specifications:

| Model | XCU 600 | XCU 700 |
|----------------------------|--------------------------------|---------------------------------|
| Dimension (W x D) | 635 X 685(mm) | 730 X 730(mm) |
| Height in Closed Position | 224mm | 265mm |
| Weight | 21 kg | 26 kg |
| Max. Lifting Capacity | 15 kg | 15 kg |
| Power Consumption | 100 W | 100 W |
| Voltage | 230 ~ 240V AC 50 Hz | 230 ~ 240V AC 50 Hz |
| Rated Current | 0.5 A | 0.5 A |
| Max. Travel Distance | 600 mm | 950 mm |
| Projector Cage (W x D x H) | 544 x 575 x 75(ADJUSTABLE)(mm) | 635 x 665 x 125(ADJUSTABLE)(mm) |

Exploded view of the X Cube Lift

Dimensions





| | A (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) |
|---------|--------|--------|--------|--------|--------|--------|
| XCU 600 | 699 | 686 | 224 | 674 | 500 | 9 |
| XCU 700 | 794 | 730 | 265 | 769 | 530 | 9 |

Installation Instructions

PLEASE ENGAGE LOCAL PROFESSIONAL INSTALLER TO PERFORM INSTALLATION. PLEASE ALWAYS FOLLOW LOCAL BUILDING CODES, ELECTRICAL CODES AND LOCAL LAWS.

1. Preliminary Checking:

- 1) The ceiling structure should support at least **FOUR** times the total weight of the lift and projector. Please **reinforce** additional supporting structure if needed.
- 2) Please check the overall dimensions of the lift and ensure that there is sufficient space above ceiling before installation.
- 3) 45mm length and 12mm pitch louvers are arranged at left, right, front and back cover of the lift for ventilation.
- 4) 100mm (4") clearances from all surrounding structures are recommended. The minimum ceiling space required for the lift to install at ceiling is 950mmWx850mmDx650mmH for XCU 190 and 900mmWx800mmDx450mmH for XCU 180. The installer must be accessible to every sides of the lift in order to install it.
- 5) Check the dimensions of the projector to be mounted within the available space.
- 6) Determine the projector installation position based on projection screen location and projector specifications.
- 7) Confirm that there is adequate space for installation, operation and maintenance.
- 8) Arrange the space for service and the access to the lift.
- 9) Confirm height of ceiling with maximum travel of the lift.
- 10) Physically check for any damages or loose parts at the lift.

2. Guidelines for Installation:

- 1) An access from above the lift with enough clearance space should be provided in case of any service is required.
- 2) Installer must ensure that all fasteners support have adequate strength to securely support the lift and projector.

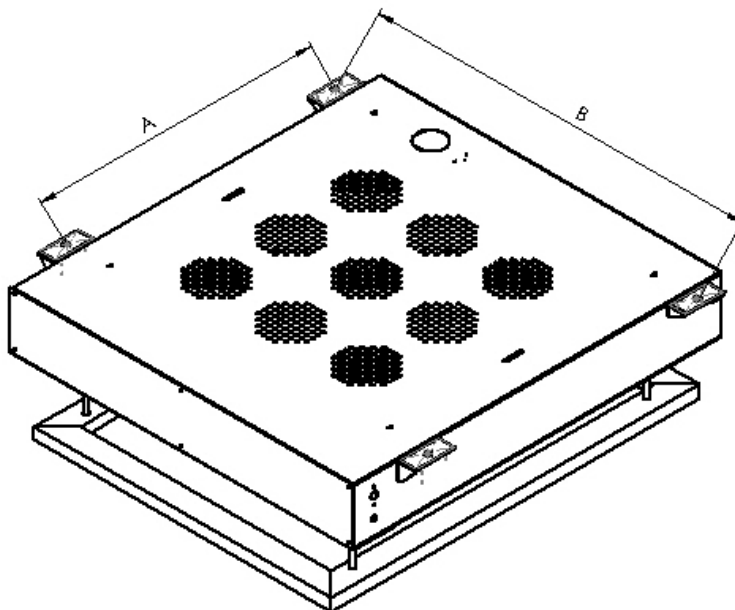
- 3) The lift must be installed in level from front-to-back and side-to-side.
- 4) Make sure that the lift is level in all directions and weight should be shared equally by all four threaded mounting rods.
- 5) Bottom of the lift must be unobstructed after installation.

3. Installing on the Ceiling

CAUTION:

It is installer's responsibility to make sure that the ceiling structure can support at least FOUR times the total weight of the lift and the projector. Reinforce the structure as required before installing the lift.

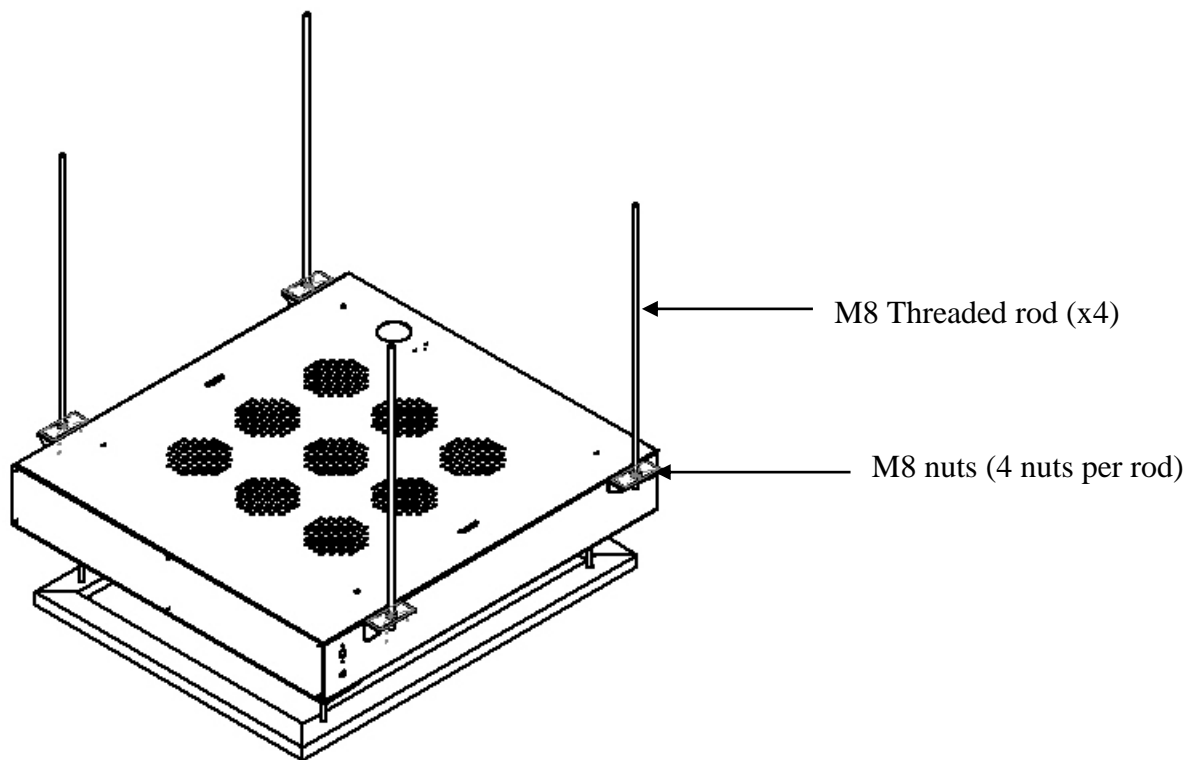
- 1) Please check that the ceiling has enough space to mount the lift.
- 2) **No mounting material is provided.** Please use suitable anchors and fasteners base on the ceiling type.
- 3) Mount two adjustable ceiling mounting bars to the ceiling. In case the ceiling has limited space, the installer has the option to mount the lift directly to the ceiling and threaded rod without using adjustable ceiling mounting bars.
- 4) Please refer the table below for mounting holes distances.



OR

| | A (mm) | B (mm) |
|---------|--------|--------|
| XCU 600 | 500 | 674 |
| XCU 700 | 530 | 769 |

- 5) The lift has to fix to the adjustable ceiling mounting bars by using **M8 or 5/16"** threaded rods. The length of the rods may vary depend on the height of the ceiling.
- 6) The threaded rods must pass through the mounting holes of the lift as well as adjustable ceiling mounting bars and secure by nuts above and below. (Fig.)



- 7) The threaded rods should not extend more than 2' (600mm).
- 8) Use the threaded locking compound angle nuts to prevent swinging.
- 9) Adjust the threaded rods length to get the proper height.
- 10) Adjust the nuts at treaded rods to level the lift.
- 11) Check that the lift is leveled from front-to-back and side-to-side.
- 12) A minimum size of opening on false ceiling is required for the lift to travel.

| | | |
|--|---------|---------|
| | XCU 600 | XCU 700 |
|--|---------|---------|

| | | |
|------------------------|---------------|---------------|
| Minimum opening (WXD) | 700mm x 690mm | 800mm X 740mm |
|------------------------|---------------|---------------|

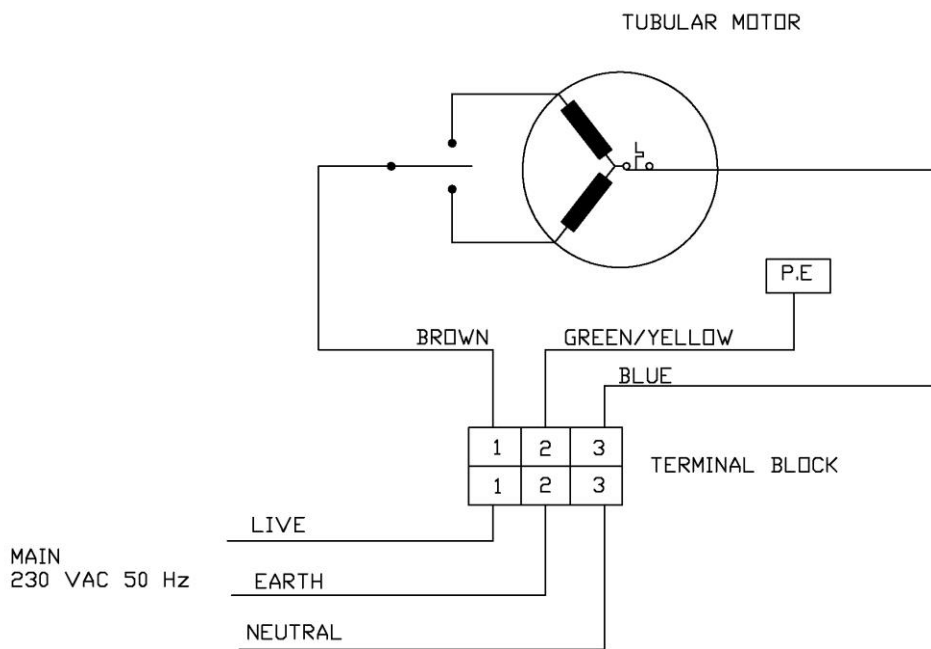
4. Connecting to Power Supply (For XCU-700)

CAUTION:

Please ensure that the operating voltage of the motor is related to the standard of the local power supply. The motor can be damaged due to incorrect voltage supply.

Please do not replace power supply cable of the motor. Please call local dealer should you have any problem with the motor.

Please refer diagram below for wiring.



The recommended cable size is 1.5mm² (16AWG). The power supply has to connect to the building wires and a **disconnection means** must be provided in accordance with the wiring rules.

5. Installing Projector

- 1) Prior to the installation of projector, the lift should be checked for proper operation.

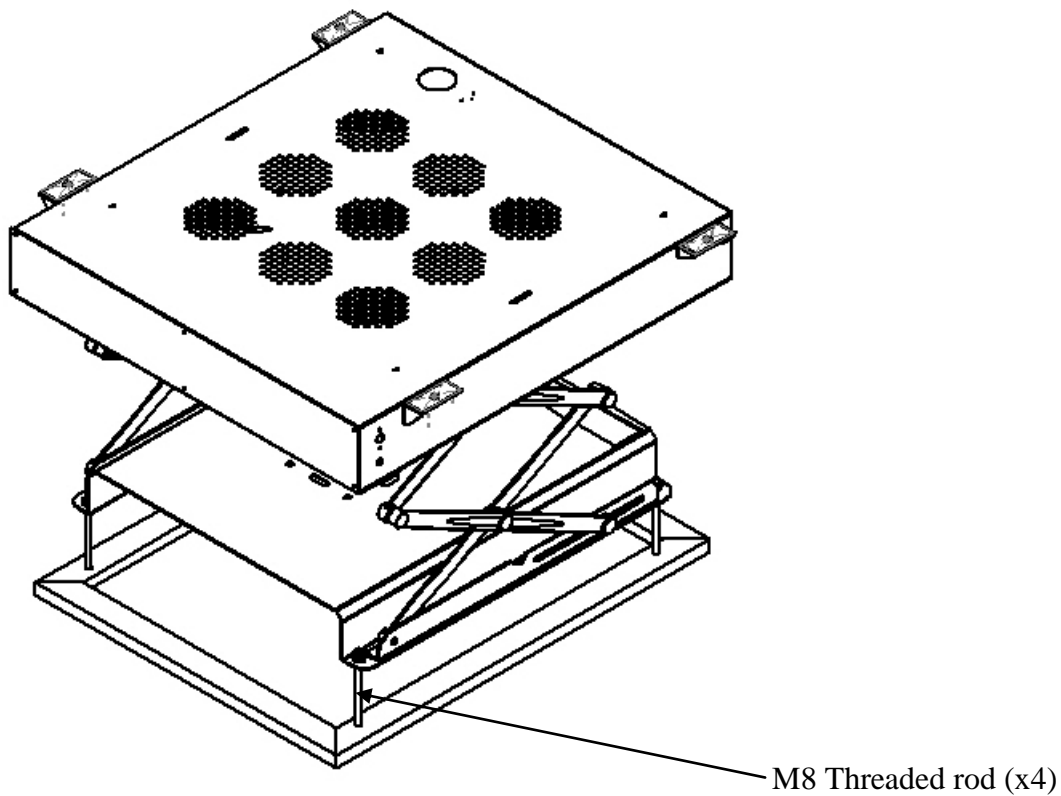
- 2) Check the dimensions of the projector for proper operation within the available space.
- 3) The projector should be suspended on projector mounting bracket. Please follow the projector manufacturer's instructions.
- 4) The projector should be adjusted at the screen level as necessary.

6. Cable Management

- 1) Make sure that the cables are long enough for the lift to go up and down.
- 2) Place all the cables inside the cable carrier.
- 3) Please check that all the cables are out of the way of operation.

7. Installing Ceiling Cover

- 1) The ceiling cover is fixed at the underside of the lift which normally greater in size and serve as platform to receive all types of ceiling materials. The lift must be lowered down in order to fix the ceiling cover frame.
- 2) The four angle bars will serve as the ceiling cover frame. (Fig. below)
- 3) Please use **M8 or 5/16" (x4) threaded rod** to fix the ceiling cover frame and the lift housing.
- 4) The ceiling cover is settled to flush with the false ceiling.

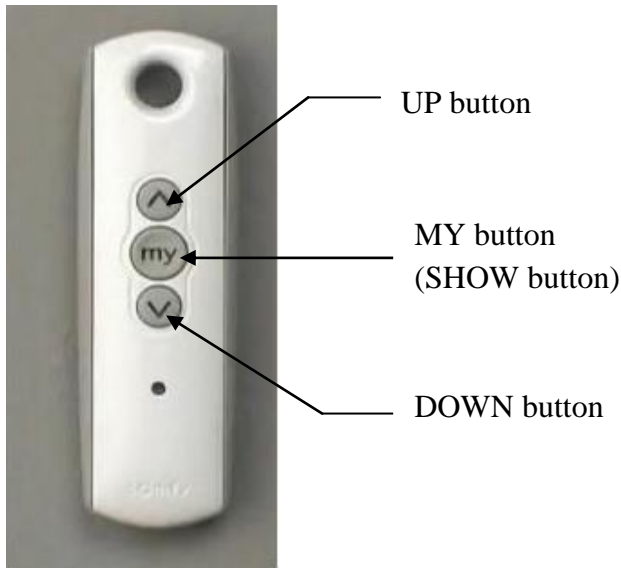


8. Re-adjusting the limit settings (For XCU-700)

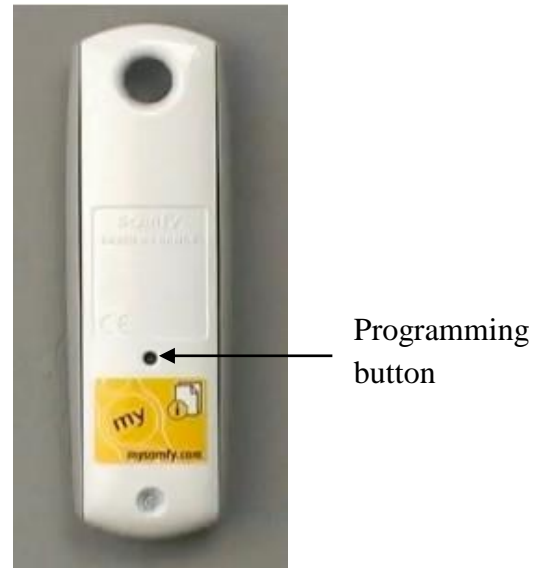
NOTE:

The UP and DOWN adjustment shall be done within 4 minutes. The motor is equipped with a built-in thermal overload protector which limits their operations to intermittent use only; the power supply will be cut off temporarily if continuous operated for more than 4 minutes. If such things happen, please wait for the motor to cool down and restart it again. It will take 1 hour to cool down the motor after 4 minutes continuous operation.

(For XCU 700)



Hand Held transmitter



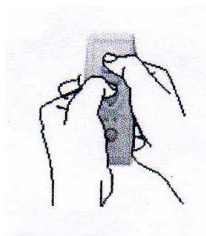
Back of Hand Held transmitter

The hand held transmitter (remote control) is paired with the lift in factory; the transmitter will not communicate with other lift by default.

The lift is preset with Upper (Stored Position) and Lower (Service Position) limits.

8.1. Setting for Lower Position (Service Level)

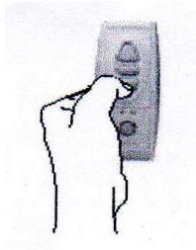
- a) Power up the lift after installation, press DOWN button, the lift will travel and stop at the position preset by the factory.
- b) To delete the limit setting of this position, press the UP and DOWN button simultaneously until the lift begins to move briefly (up and down).



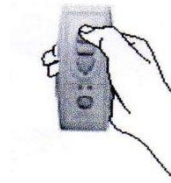
2 to 3 seconds



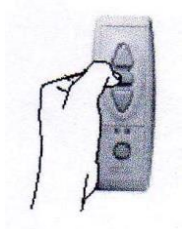
- c) Adjust the lift to the require position while the UP or DOWN key are pressed (holding period).



OR



- d) Press and hold the STOP button until the lift begins to move briefly (up and down), the new position is recorded.



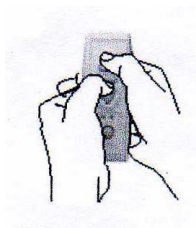
2 to 3 seconds



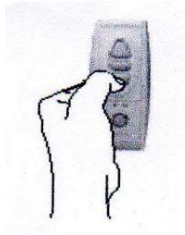
8.2. Setting for Upper Position (Stored Level)

NOTE: Please do not set the UP limit higher than the limit preset by the factory.

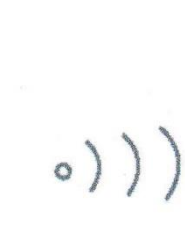
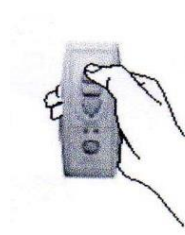
- Press the UP button, the lift will travel and stop at the position preset by the factory.
- To delete the limit setting of this position, press the UP and DOWN button simultaneously until the lift begins to move briefly.



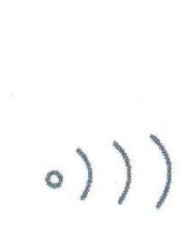
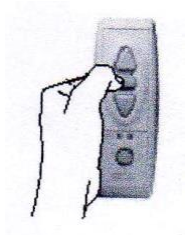
- Adjust the lift to the required position while the UP or DOWN key is pressed (holding period).



OR

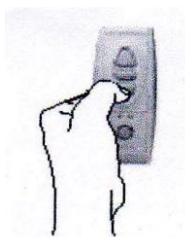


- d) Press and hold the STOP button until the lift begins to move briefly (up and down), the new position is recorded.

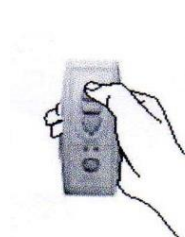


8.3. Setting for Intermediate Position (Projection level)

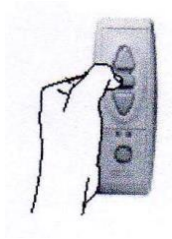
- a) Turn on the projector and press UP/STOP or DOWN/STOP buttons to position the lift to the level where the images are aligned perfectly on the screen.



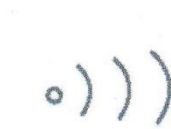
OR



- b) Press and hold the STOP button until the lift begin to move briefly (up and down), the new position is recorded. (Note: The lift must be completely stopped in the position before setting.)



more than 4 seconds



- c) To delete the intermittent position that previously recorded, press STOP button, the lift will travel to the position that recorded.
- d) Press and hold the STOP button, until the lift begins to move briefly (up and down), the intermittent position is deleted.
- e) Repeat step (a) and (b) to record the new position.

The Upper position (Store Level), intermediate position (Projection Level) and Lower position (Service Level) are recorded. Press Up and Down button and operate the lift to countercheck the recorded positions.

9. Optional Accessories

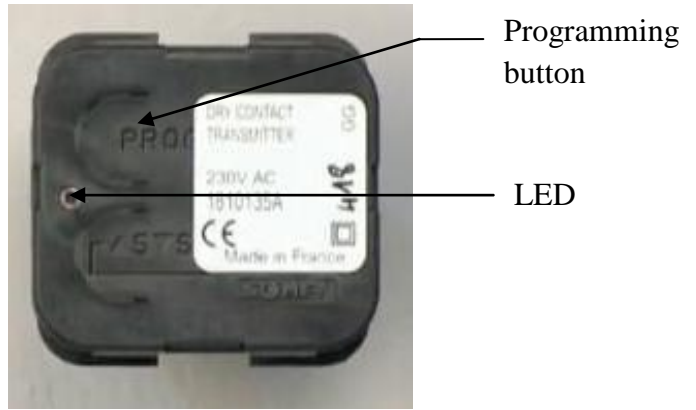
1) Dry Contact Transmitter

NOTE: The device must be installed by qualified electrician for whom this instruction is intended. Please read the instructions carefully before installation. Please follow the local electrical codes.

If you are interfacing the lift with AMX or Crestron, the **Inteo Dry Contact Transmitter** will be needed.



Inteco Dry Contact transmitter



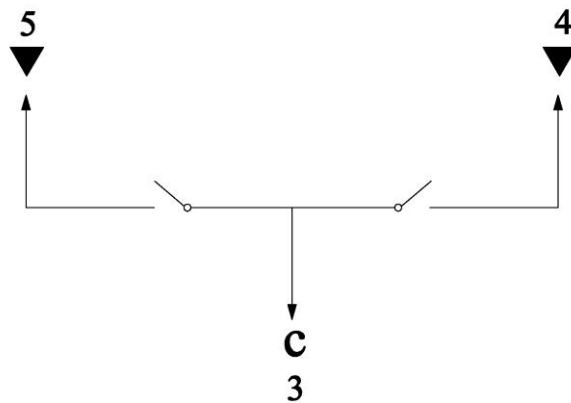
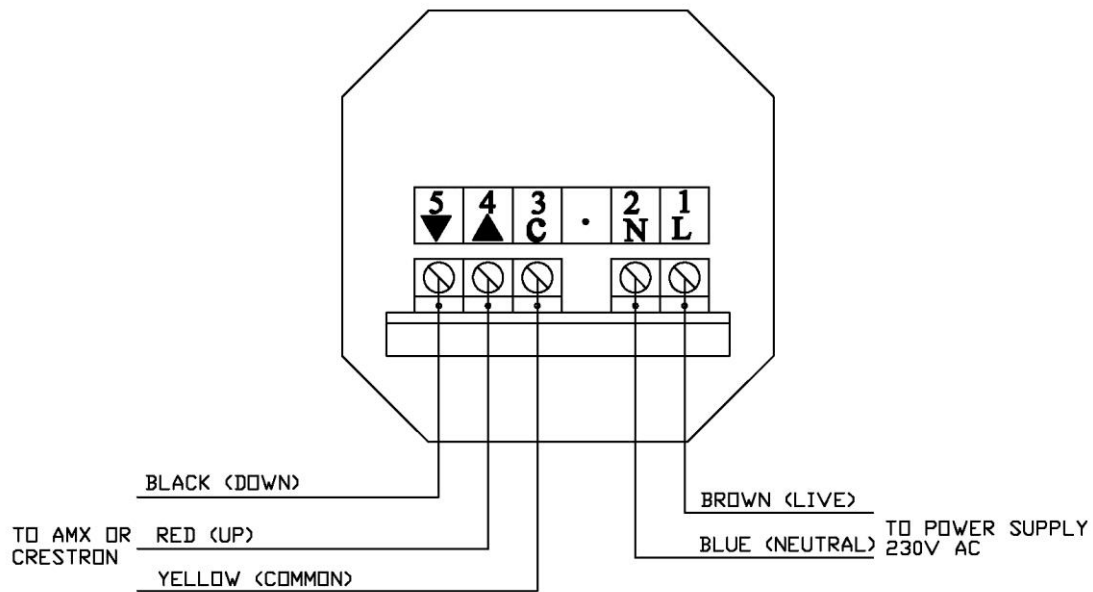
Transmitter without front cover

a) Please refer the wiring diagram shown below to connect the dry contact transmitter.

(Note: The dry contact transmitter doesn't need to connect to motor. They will interact each other by means of radio frequency.)

b) The UP or Down positions are achieved when the up or down inputs (▲ or ▼) are connected with the common input C. The intermittent position is achieved when the three inputs (▲, ▼, C) are connect together.

Dry Contact Transmitter



- c) Turn on the power supply to the Dry Contact Transmitter.
- d) Please confirm the three positions are correctly recorded by pressing UP, DOWN and STOP buttons on hand held transmitter (remote control).
- e) Press and hold the Programming button at the back of the hand held transmitter (remote control) until the lift begins to move briefly.



Programming button

- f) Press and hold the “PROG” button on the frontside of the Dry Contact Transmitter until the lift begins to move briefly.



PROG button

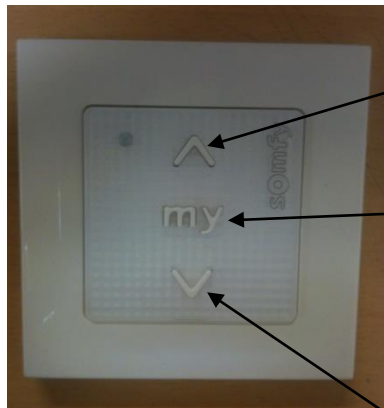
- g) The three positions are memorized by the Dry Contact Transmitter which automatically quits its programming mode.

NOTE TO PROGRAMMER:

- (i) Please program AMX or Crestron contact closure to trigger the lift by ‘pulse’ only.
- (ii) Please do not hold the contact closure for more than 3 seconds, the record will be deleted.

2)Wall Mount Switch

(For XCU 700)



Wall Switch

UP button

SHOW button

DOWN button



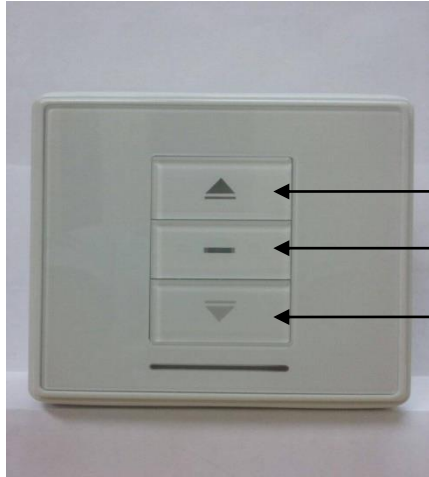
PROG
button

Back of Wall Switch

Should you need to control with wall mount switch, please follow the instructions below to pair wall mount switch and the lift.

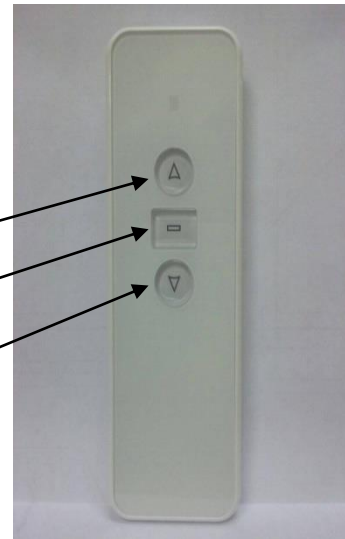
- a) Press and hold the Programming button at the back of the hand held transmitter (remote control) until the lift begins to move briefly.
- b) Press and hold “PROG” button on back of the wall switch until the lift begins to move briefly. The setting is memorized by wall switch.

10. (For XCU 600)



RF Switch Front

UP button
STOP button
DOWN button

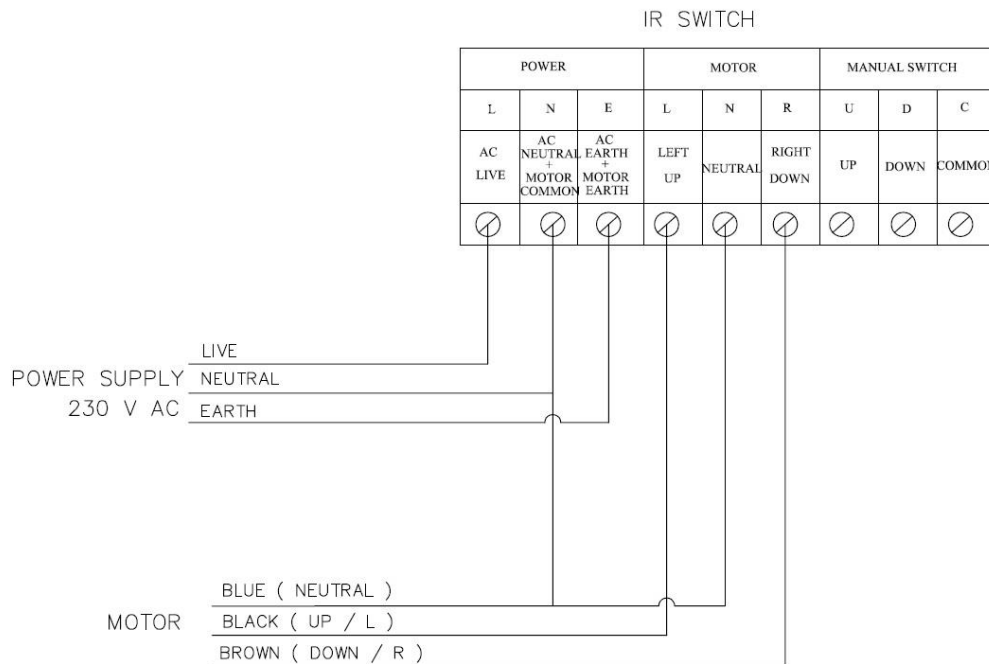


Hand held Transmitter



RF switch (Top)

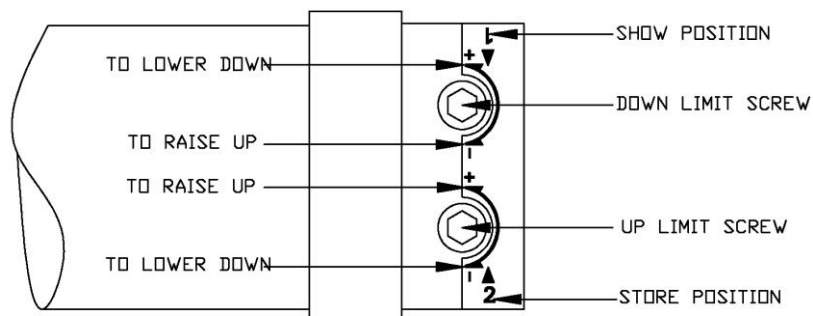
1) Please refer the wiring diagram shown below.



2) Turn on the power to conduct functional check to ensure that the wire is connected in the correct direction (UP= raises, DOWN= lowers).

11. Adjusting Upper and Lower Positions

- 1) Please check the limit setting which is preset by the factory and re-adjust the setting if necessary.
- 2) The limit setting screw is located at the back of the lift.

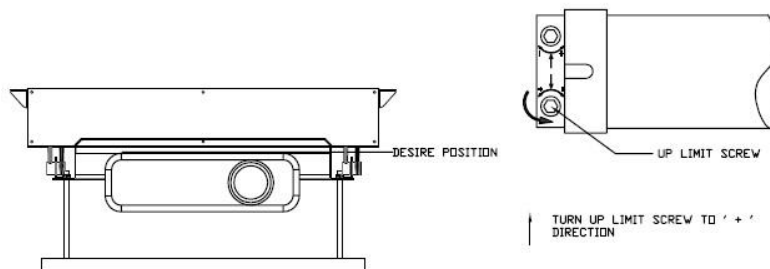


11.1 Adjusting Store Position (UP Limit)

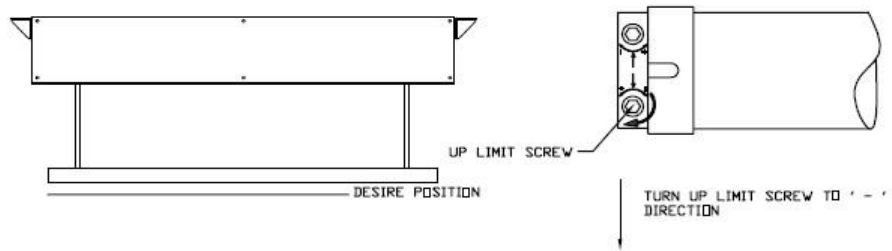
NOTE: The UP limit is already set by the factory.

- a) In case you had disturbed the UP limit preset by the factory, please refer the following steps to reset the setting.
- b) Make sure that you are not overturning the screw when you raise up the lift (step 1), as the lower ceiling cover will hit the frame and cannot move further, you may not realize that the limit screw is overturned and the motor is continuously working.
- c) This may damage the motor permanently.

- 1) If the system stops before (i.e. lower than) its desire store position , turn the UP limit screw to '+' direction to raise up.



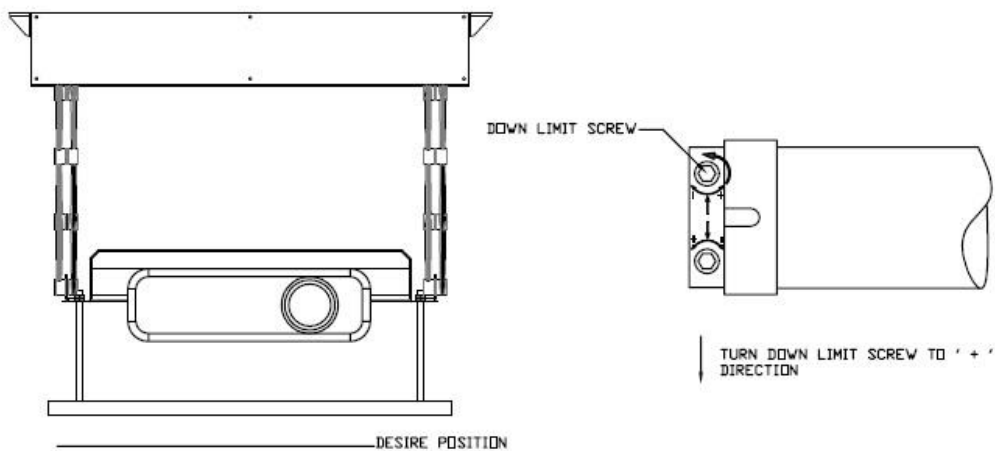
- 2) If the system stops over (i.e. higher than) its desire store position, turn the UP limit screw to '-' direction to lower down.



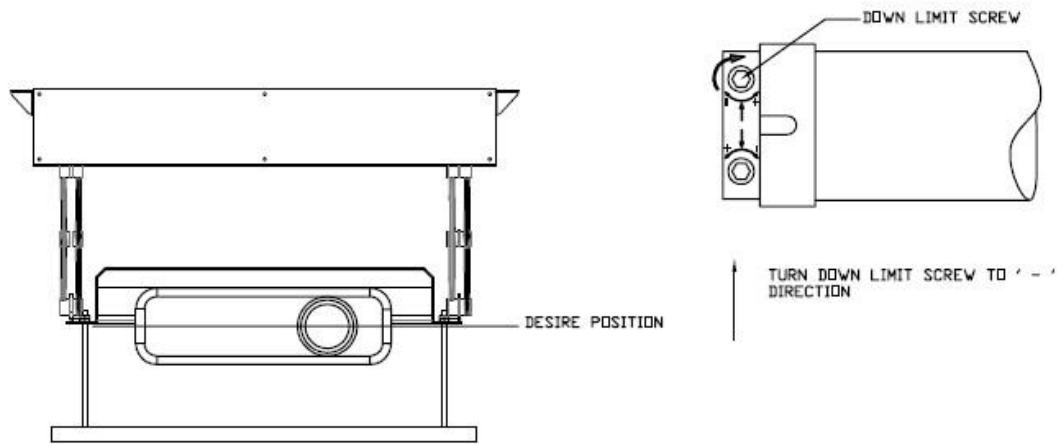
3) Repeat this until the correct setting is achieved.

11.2 Adjusting Show Position (DOWN Limit)

1) If the system stops before (i.e. higher than) its desire show position , turn the DOWN limit screw to '+' direction to lower down.



2) If the system stops over (i.e. lower than) its desire store position, turn the DOWN limit screw to '-' direction to raise up.



3) Repeat this until the correct setting is achieved.

After adjusting the settings, please operate the lift up and down to double check the settings.

NOTE: Please visit the following link for video instructions on XLT scissor lift limit settings. The procedure to reset the limit setting for X Cube lift is the same as that of scissor lift.

<http://www.youtube.com/watch?v=AfSyawTEtKU>

