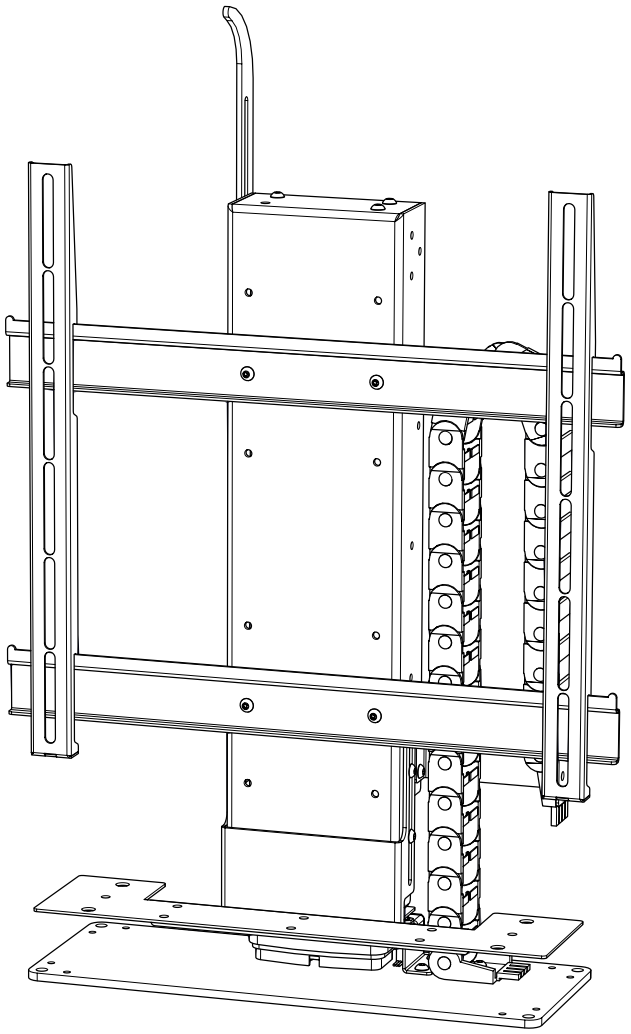
future automation

AL675-UDC1

TELESCOPIC TV LIFT



INSTALLATION
INSTRUCTIONS

ISSUE **025**

SAFETY
DISCLAIMER

IMPORTANT SAFETY INSTRUCTIONS BELOW

WARNING: Failure to provide adequate structural strengthening, prior to installation can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure the structure to which the component is affixed can support four times the weight of the component and any additional apparatus mounted to the component.

WARNING: Do not exceed the weight capacity for this product as listed below. This can result in serious personal injury or damage to the equipment. It is the installer's responsibility to ensure that the total combined weight of all attached components does not exceed that of the maximum figure stated.

WARNING: Risk of death or serious injury may occur when children climb on audio and/or video equipment or furniture. A remote control or toys placed on the furnishing may encourage a child to climb on the furnishing and as a result the furnishing may tip over on to the child.

WARNING: Risk of death or serious injury may occur. Relocating audio and/or video equipment to furniture not specifically designed to support audio and/or video equipment may result in death or serious injury due to the furnishing collapsing or over turning onto a child or adult.

WARNING – RISK OF INJURY!

Only for use with equipment weighing **110LBS (50KG) OR LESS**.

Use with heavier projectors/equipment may lead to instability causing tip over or failure resulting in death or serious injury.

Bracket Suitable for Residential and Commercial Use.

ADDITIONAL WARNINGS:

1. Keep all documentation/instructions after fitting.
2. Read all technical instructions fully before installation and use. It is the installer's responsibility to ensure that all documentation is passed on to the end user and read fully before operation.
3. Do not use near water or outdoors unless the product has been specifically designed to do so.
4. Protect any cables or cords being used near this bracket from being walked on or pinched to prevent damage and risk of injury.
5. Use this product only for its intended purpose as described in the product instructions and only use attachments/ accessories specified by the manufacturer.
6. Do not operate the product if it is damaged in any way, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. Contact the original installer/manufacturer to arrange repair or return.

WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons:

1. Clean only with a dry cloth and always unplug any electrical items being used in conjunction with this product before cleaning.

Future Sound & Vision trading as Future Automation intend to make this and all documentation as accurate as possible. However, Future Automation makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection with the installation or use of this product. The information contained in this document is subject to change without prior notice or obligation of any kind. Future Automation makes no representation of warranty, expressed or implied, regarding the information contained herein. Future Automation assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.

PRODUCT WARRANTY
& RISK ASSESSMENT

WARRANTY INFORMATION

WARNING - The warranty offered for this product shall be annulled if the product is used improperly or in a way that is in breach of our Terms of Service.

Future Automation provides warranty for the mechanism you purchased for the period of **24 months** from the date of purchase, provided that it isn't used for unintended purposes.

Under the warranty, Future Automation aims to either solve the issue remotely (via telephone or email support) or if the mechanism requires a part, arrange a visit to your premises by a Future Automation approved engineer or send replacement items where appropriate.

Warranty repairs will be carried out as quickly as possible, but subject to parts availability. This warranty period is respectively extended for the period of a repair.

A malfunctioning product must be cleaned and placed into suitable packaging to protect against transit damage before organising delivery to a repair workshop.

All the complaints about defects must be submitted to the vendor/installer that sold this product, rather than directly to the manufacturer.

Any part of your system that needs to be replaced during a warranty repair becomes the property of Future Automation.

The warranty does not cover the following:

- Damages resulting from improper product use or maintenance.
- Repairs carried out by unauthorized persons.
- Natural wear and tear during operation.
- Damages caused by the buyer.
- Accidental damages caused by a customer or damages caused as a result of careless attitude or usage, or damages caused by natural disasters (natural phenomena).
- Any electrical, or other environmental work external to your Future Automation mechanism including power cuts, surges etc.
- Additional items not supplied by Future Automation although they may have been supplied together by the retailer
- Any 3rd party software products controlling your mechanism
- Any transfer of ownership. Warranty is provided only to the initial purchaser.
- Compensation for loss of use of the product, and consequential loss of any kind.

A separate Safety and Servicing Information document is provided with these instructions (additional copies can be found at www.futureautomation.co.uk/safety), and this document **MUST** be filled out by the approved Future Automation Dealer who is installing the product. This Warranty Sheet must be held by the end user for the duration of the products life and will be referred to during servicing or warranty queries.

The Safety and Servicing Information document also contains two Service History Forms that must be filled in by the approved Future Automation dealer who is performing the first required yearly service of this product.

One copy of the Service History Form must be held by the customer (along with the Warranty Sheet) and a duplicate copy must be held by the approved Future Automation dealer that performed the service. Missing and/or mismatching documents may delay or invalidate warranty claims.

Additional Service History Forms can be found on the Future Automation website for further yearly services.

RISK ASSESSMENT INFORMATION

It is the installer's responsibility to perform a risk assessment of installed products. Future Automation can provide guidelines to installers/dealer about what should be included in a risk assessment, but due to the individual nuances of each location/site, Future Automation cannot provide a full list of areas to risk assess.

For full risk assessment and safety information please view our Safety and Servicing guide available at www.futureautomation.net/safety

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1.6 - MOTOR COVER
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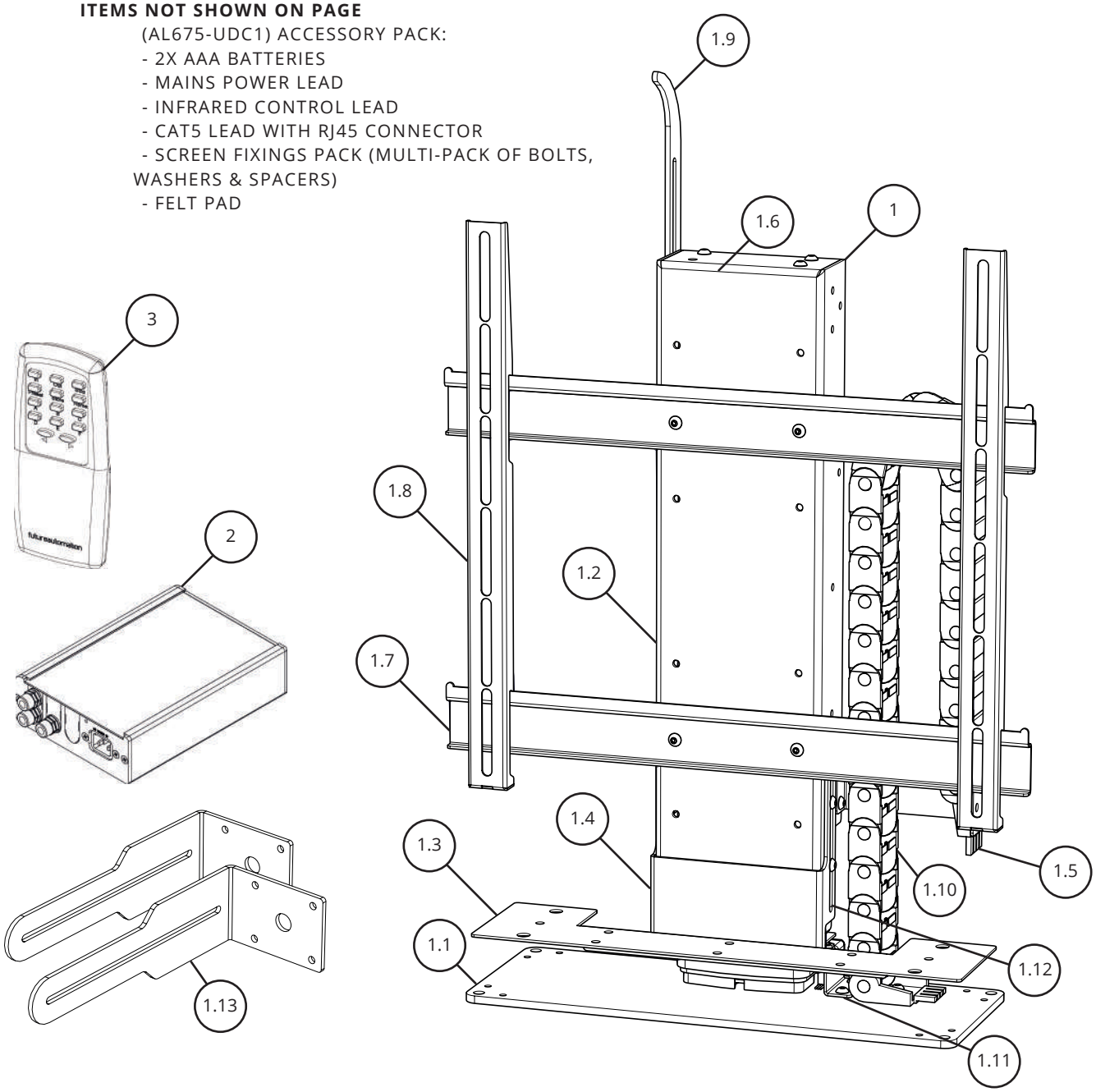
1.8 - SCREEN UPRIGHTS
1.9 - PUSH BAR
1.10 - CABLE MANAGEMENT CHAIN
1.11 - BOTTOM SWITCH ASSEMBLY
1.12 - BOTTOM SWITCH STRIKER
1.13 - FIXED LID BRACKETS

2 - CONTROL BOX & WIRING LOOM (SIZE & STYLE MAY VARY)

3 - INFRARED (IR) REMOTE CONTROL

ITEMS NOT SHOWN ON PAGE

(AL675-UDC1) ACCESSORY PACK:
- 2X AAA BATTERIES
- MAINS POWER LEAD
- INFRARED CONTROL LEAD
- CAT5 LEAD WITH RJ45 CONNECTOR
- SCREEN FIXINGS PACK (MULTI-PACK OF BOLTS, WASHERS & SPACERS)
- FELT PAD



MECHANISM
QUICK-START GUIDE

Some Future Automation mechanisms may ship with the control box disconnected to prevent damage during transit. In order to operate the mechanism, the control box will need to reconnected, then have mains power applied along with the desired control method.

RECONNECTING THE CONTROL BOX

To reconnect the mechanism control box, follow the below steps:

1. Make sure the power is disconnected from the control box.
2. Remove the retaining screw and washer from the end of the control box to allow removal of the control box lid. (Image 1 Below).
3. Slide off the control box lid to reveal the control board inside.
4. Locate the green connector on the end of the loom leading from the lift mechanism. This plug will have a small tag attached stating the correct connecting socket on the control board (e.g. “AC1”, “DC2”...) (Image 2 Below).
5. Plug the green connector into the corresponding socket on the control board. This plug is handed and will only connect correctly one way. Do NOT force the connector into the socket, this can cause serious damage to the control board and mechanism.
6. Route the wiring loom out of the end of the control box by inserting the black plastic inserts into the slots provided. (Image 3 Below).
7. Slide the control box cover back over the control board and replace the fixing screw and washer.

Image 1.

Image 2.

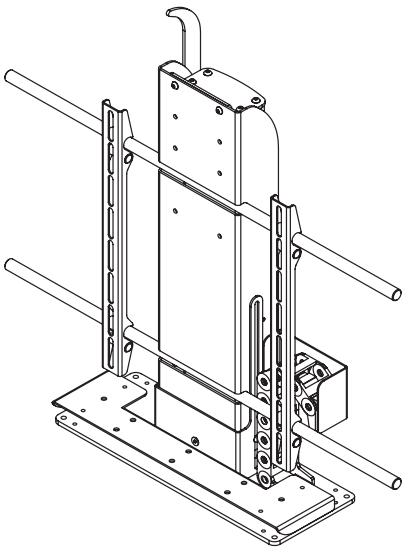
Image 3.

Image 4.

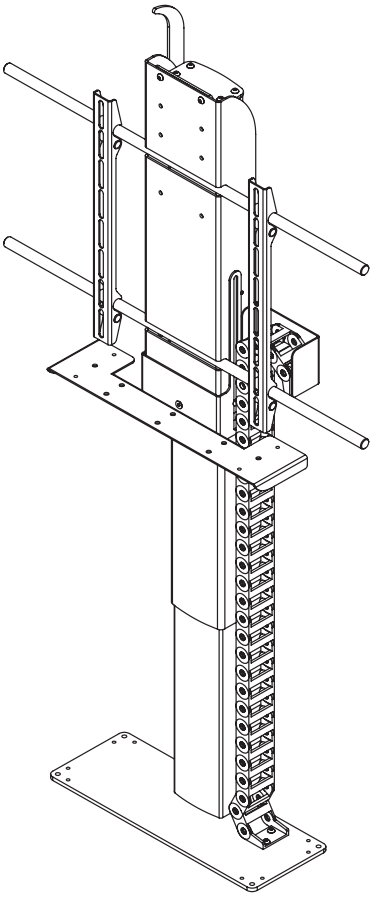
IMPORTANT

For the mechanism to operate, the green three way safety connector with the loop of wire attached, must also be plugged into the end of the control box. (Image 4 above). If this connector is not plugged in, a bright red LED will be visible inside control board and the Input Confirmation Input LED will be permanently illuminated.

INITIAL TESTING



FULLY CLOSED POSITION



FULLY OPEN POSITION

Before installation of the AL675-UDC1 mechanism, the following should be checked.

1 There is no damage to any part of the AL675-UDC1 mechanism, control board or wiring

2 All internal and external mechanism wiring is secure.

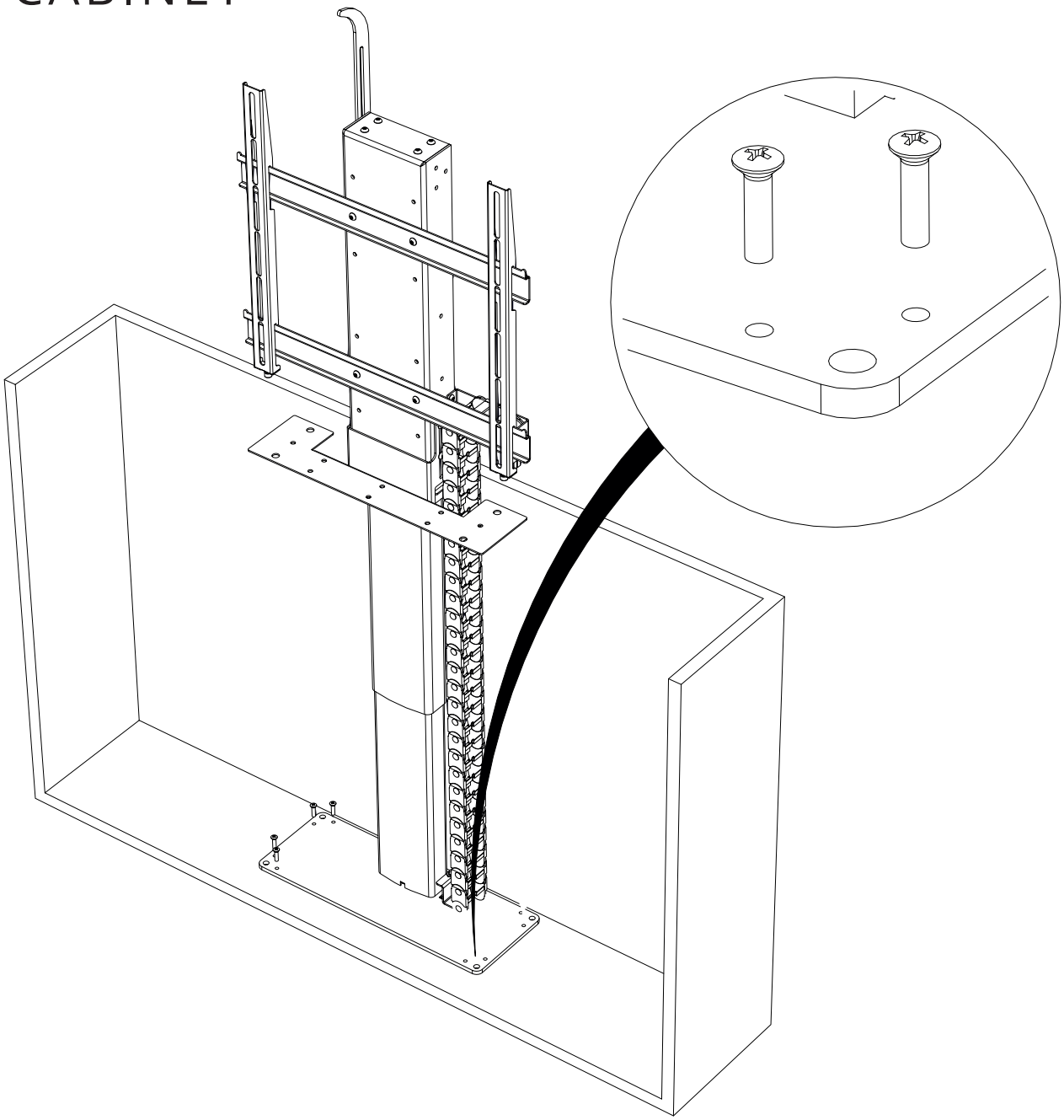
3 The mechanism is in the fully CLOSED position.

4 The mechanism operates correctly. This can be tested by moving the mechanism between the CLOSED and OPEN positions using the IR Remote (Refer to “Quick-start Guide” and Page 5 for Operating Instructions).

⚠

WARNING: THE AL675-UDC1 MECHANISM DOES NOT HAVE AN ANTI-JAM CAPABILITY. THE MOTOR DRIVE SYSTEM WILL CONTINUE TO MOVE UNTIL A LIMIT SWITCH IS CONTACTED. KEEP HANDS AND ANY OBJECTS CLEAR OF MECHANISM DURING OPERATION TO REDUCE RISK OF DAMAGE OR INJURY.

FIXING TO
THE CABINET



1 Take the mechanism to its fully OPEN position
(Refer to “Quick-start Guide” and Page 5 for Operating Instructions)

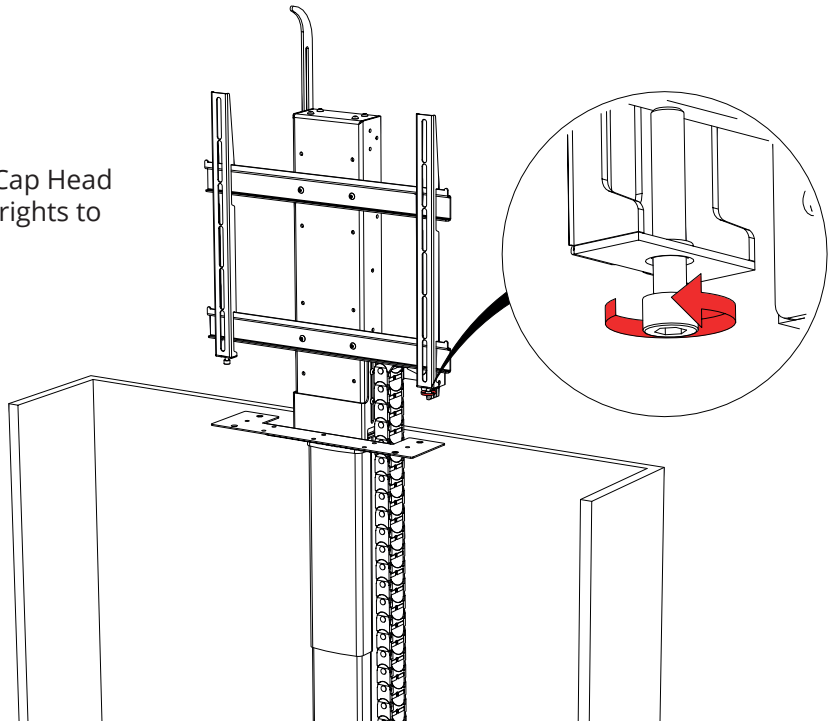
2 Disconnect the power to the mechanism
and place centrally into the cabinet.

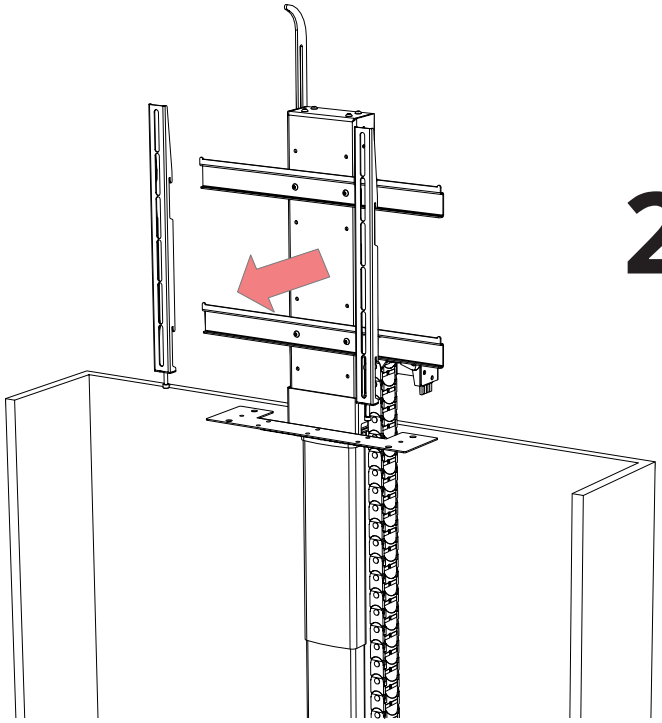
3 Using the latest AL675-UDC1 Technical Sheet, correctly locate the mechanism in relation to the sides and back of the cabinet.

4 Secure the mechanism into the base of the cabinet using suitable fixing (not supplied). The mechanism can be secured via 4 x 8.5mm Ø fixing holes or via 8 x 5mm Ø fixing holes as shown below (fixing quantity and type will depend on cabinet material).

REMOVING THE
SCREEN UPRIGHTS

1 Loosen off the 2 x M6 x 35mm Cap Head bolts that secure the Screen Uprights to the Horizontal Mounting Plates.



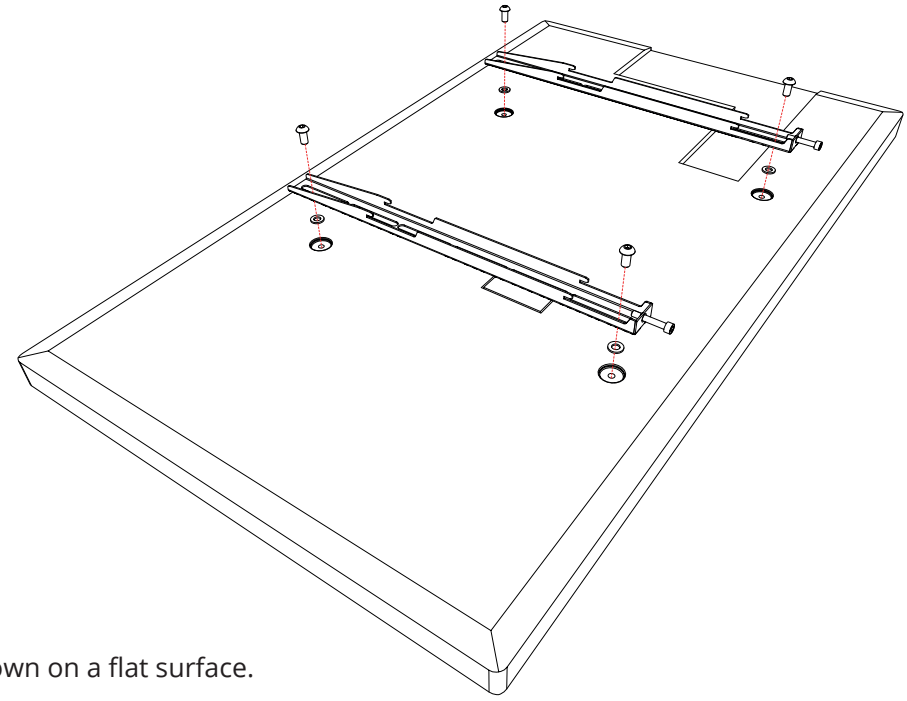


2 Lift up the Screen Uprights and remove then from the Horizontal Mount Plates.

3 Run TV power and signal cables into the cabinet and up through the AL675-UDC1 Cable Management Chain.

4 Operate the mechanism to its fully CLOSED and fully OPEN position to check for snagging or obstruction of any cables (Refer to “Quick-start Guide” and Page 5 for Operating Instructions).

SCREEN
MOUNTING

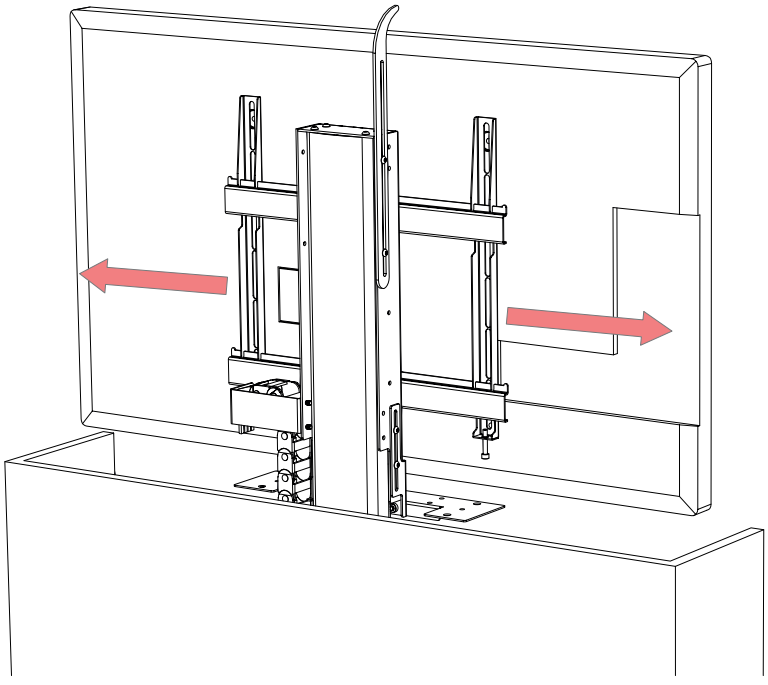


1 Lay the screen down on a flat surface.

2 Place the two Screen Uprights on the back of the screen and fix into the TV's VESA mount holes using the fixing provided.

3 (OPTIONAL) Depending on the depth of the screens mounting holes and the profile of the back of the screen you may need to use the provided spacers.

4 Hook the screen and Screen Uprights back on to the Horizontal Mounting Plates and align the screen centrally to the mechanism.

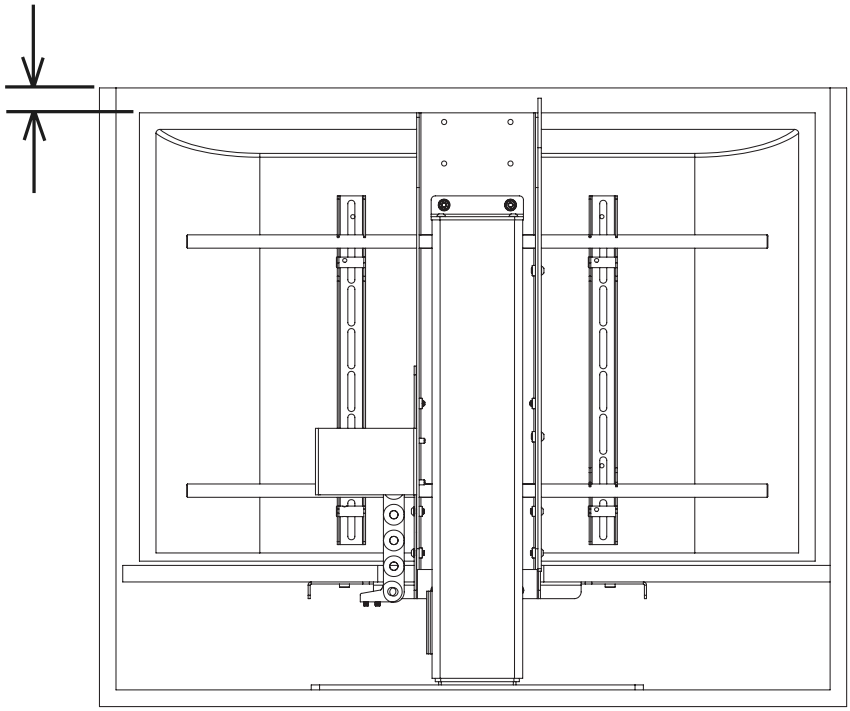


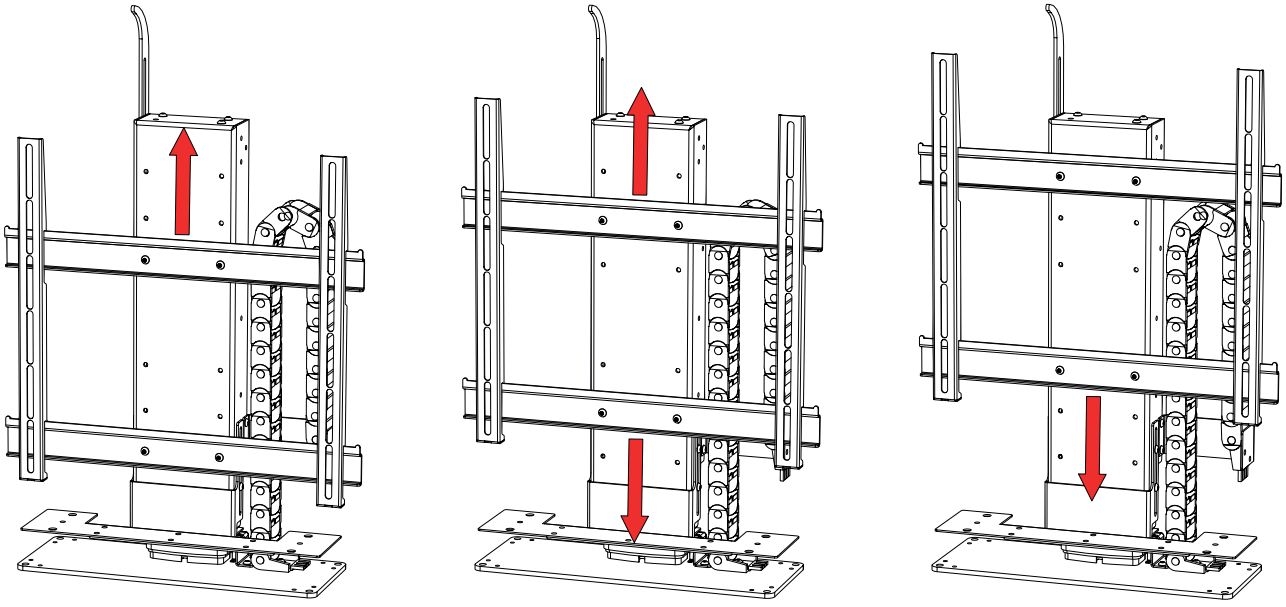
SCREEN
ALIGNMENT

1 Lower the mechanism to the fully CLOSED position
(Refer to “Quick-start Guide” and Page 5 for Operating Instructions).

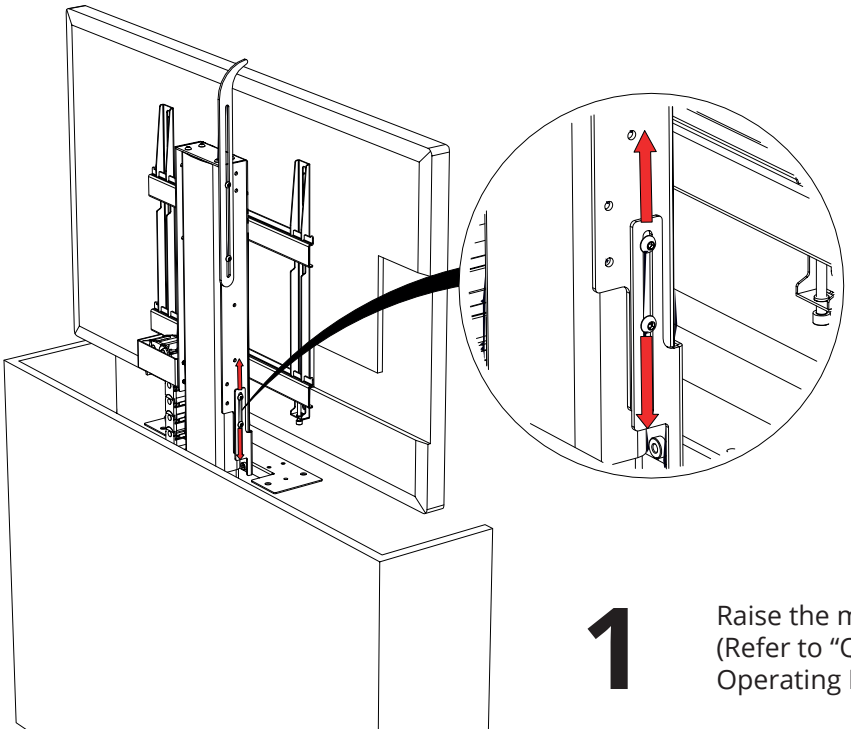
2 Using the slots on the Screen Uprights, adjust the screen height so the top of the screen sits below the cabinet lid and the bottom of the screen sits above Base Shelf.

3 If the slots on the Screen Uprights do not provide enough adjustment, the Horizontal Mount Plates can be moved up/down on the motor cover between 3 set of fixing holes.





INSERTING
THE SHELF

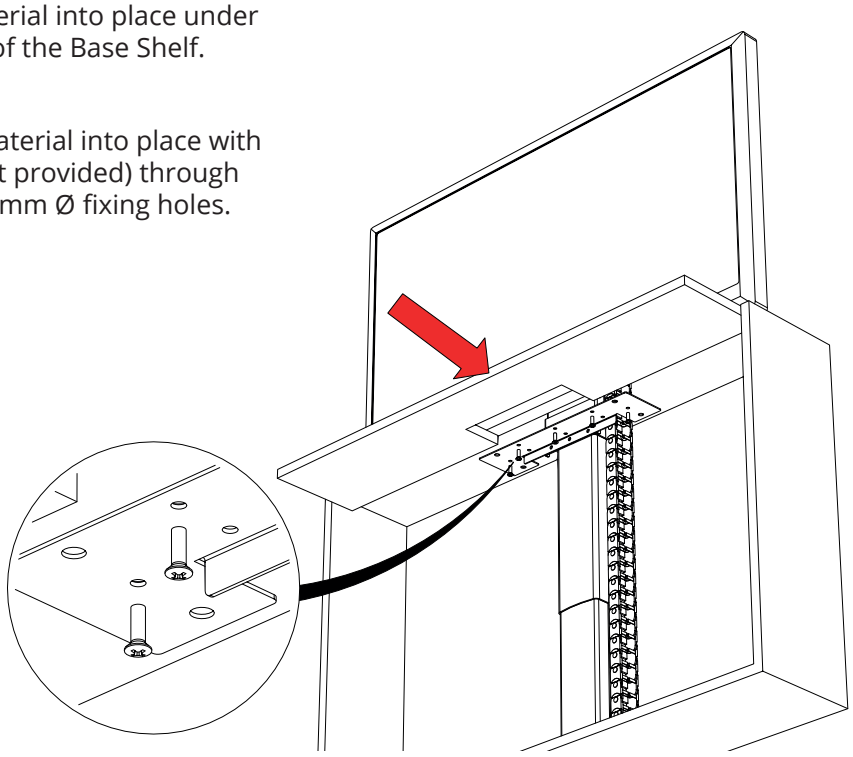


1 Raise the mechanism to the desired OPEN position (Refer to “Quick-start Guide” and Page 5 for Operating Instructions).

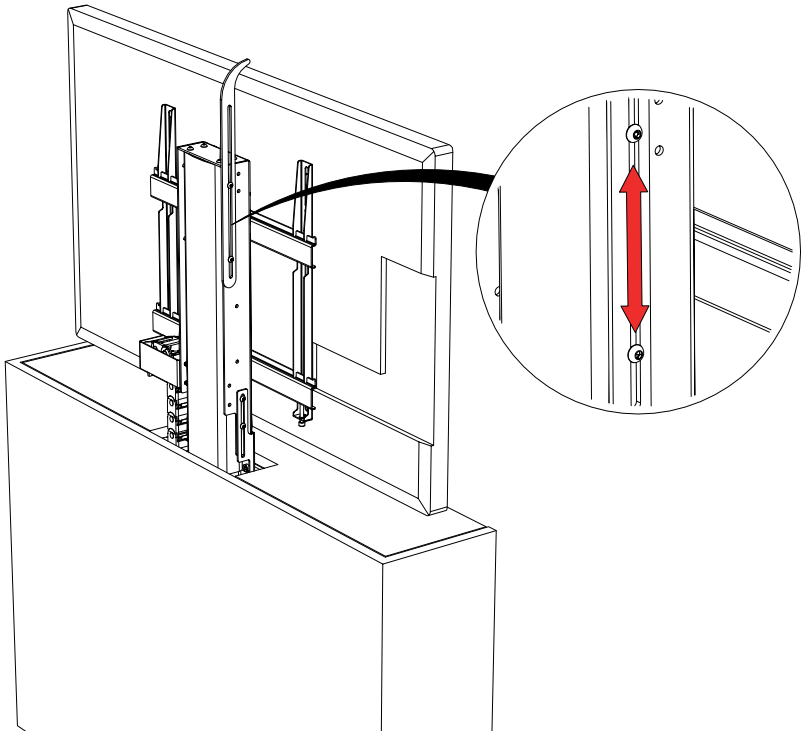
2 Adjust the fixings on the Shelf Bracket to determine the height of the shelf. Change the height of the shelf so that it fills the void at the top of cabinet neatly and sits flush to the top cabinet surface.

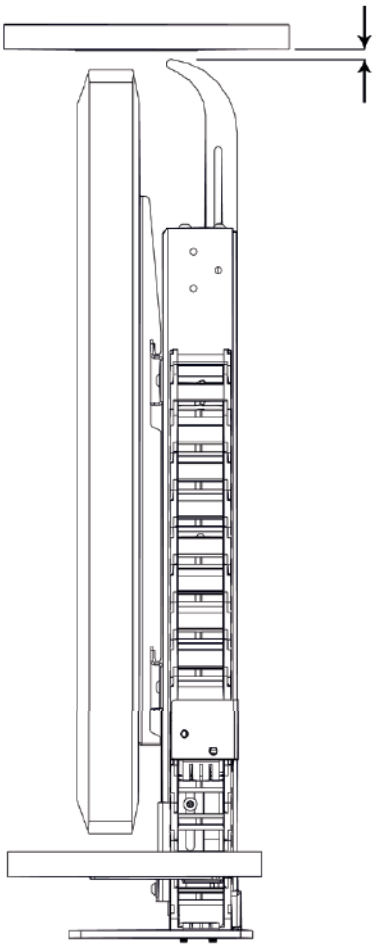
3 Slide the shelf material into place under the screen on top of the Base Shelf.

4 Secure the shelf material into place with suitable fixings (not provided) through the 6.5mm Ø or 10mm Ø fixing holes.



ADJUSTING THE
PUSH BAR





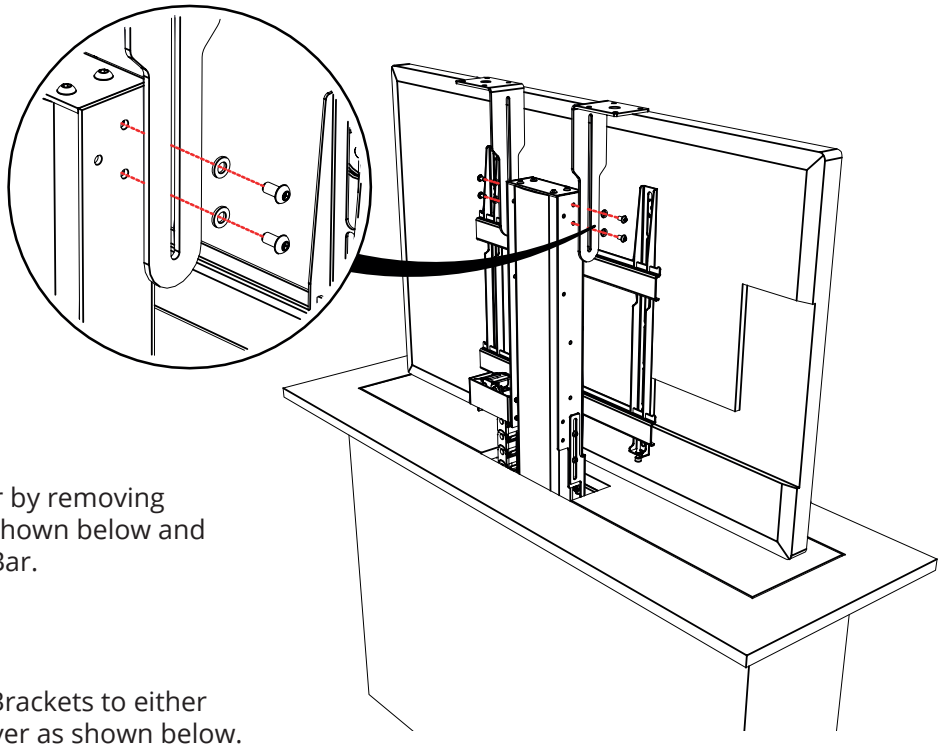
1 Attach the supplied Felt Pad to the underside of the lid so it sits above the Push Bar (Make sure the push bar contacts the Felt Pad during its normal movement to avoid marking the underside of the cabinet lid).

2 Adjust the Push Bar by loosening the 2 securing bolts shown below and sliding the bar up or down.

3 Adjust the Push Bar so its sits just below underside of the cabinet lid when the mechanism is in the fully CLOSED position.

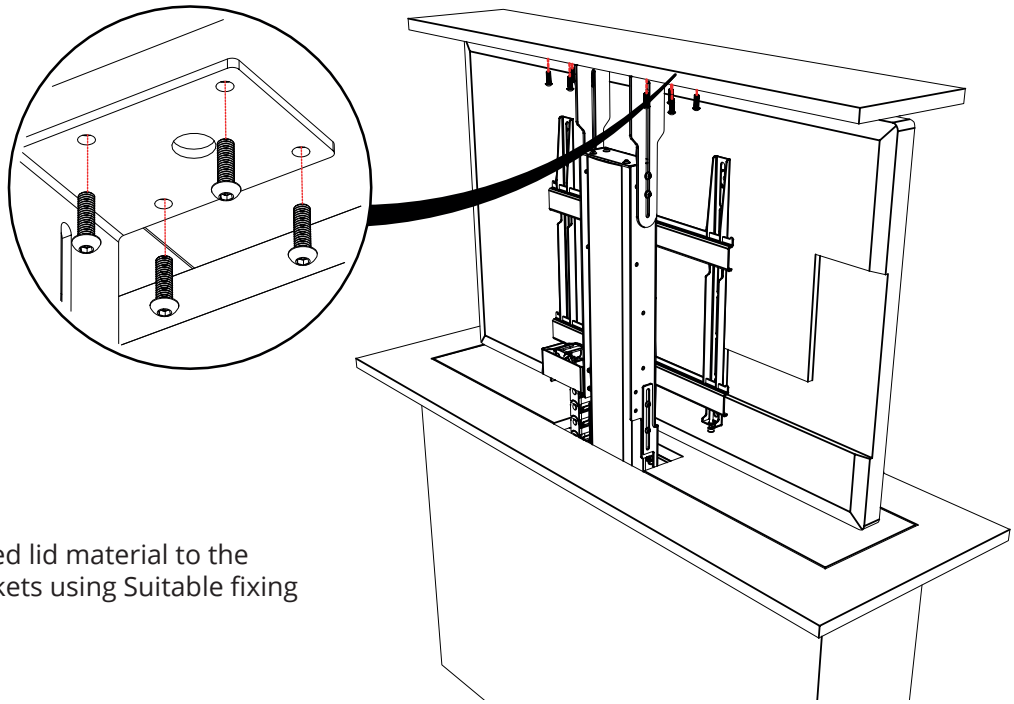
FITTING FIXED
LID BRACKETS

This optional step shows how to use a fixed lid cabinet rather than a hinged lid cabinet;



1 Remove the Push Bar by removing the 2 securing bolts shown below and discarding the Push Bar.

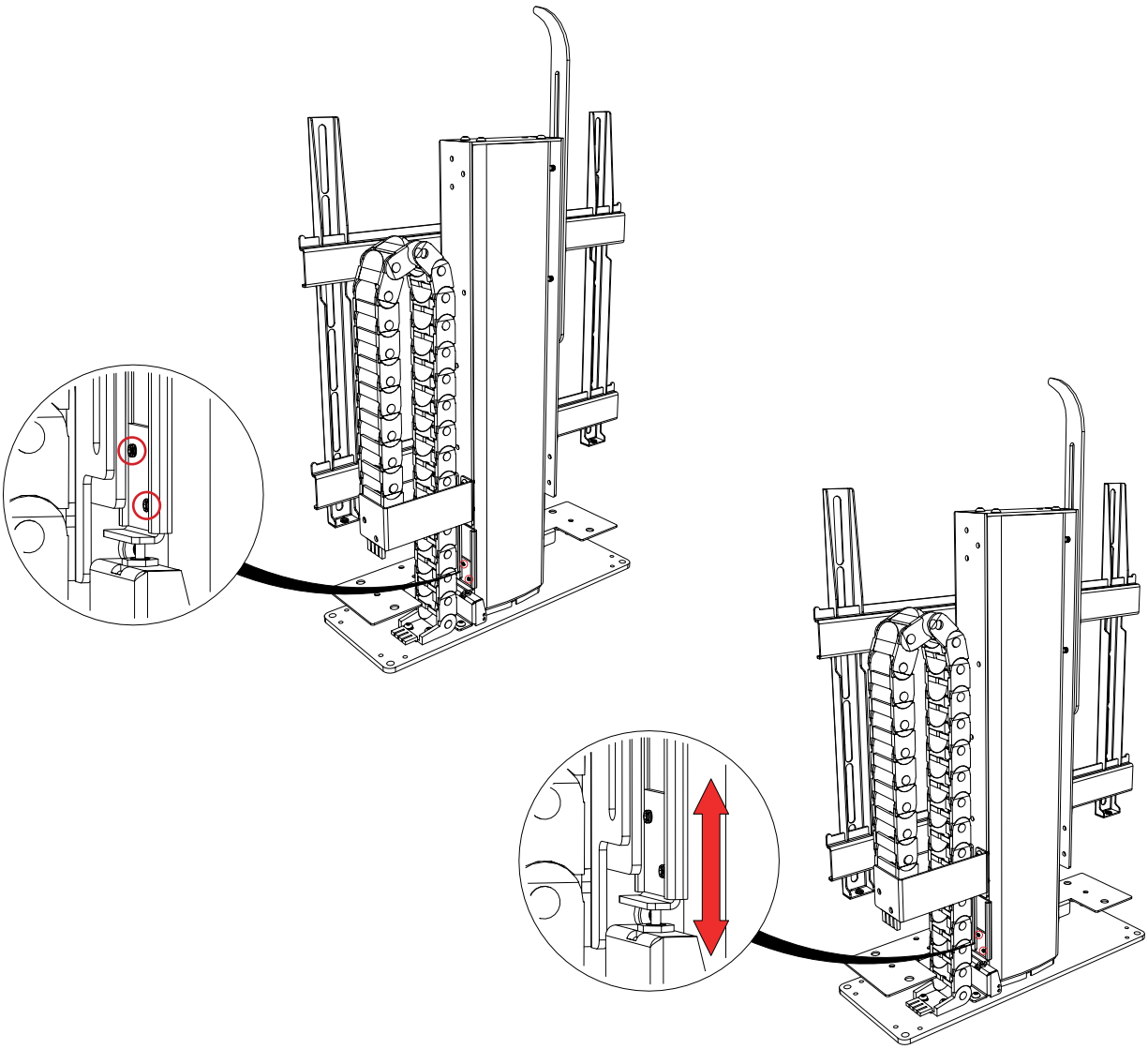
2 Attach the Fixed Lid Brackets to either side of the Motor Cover as shown below.



3 Attach the fixed lid material to the Fixed Lid Brackets using Suitable fixing (not supplied).

4 Adjust the Fixed Lid Brackets up/down by loosening the 2 bolts securing each bracket an sliding the fixed lid up/down until it sits level with the surrounding joinery when the mechanism is in the fully CLOSED position.

ADJUSTING MECHANISM
IN POSITION



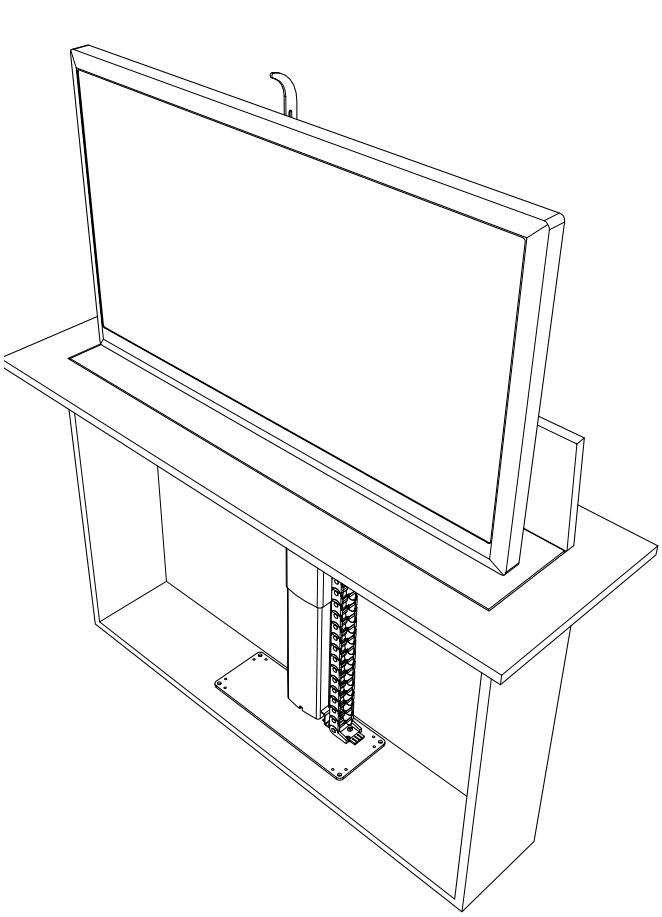
1 Loosen the two grub screws that hold the Bottom Switch Striker in place.

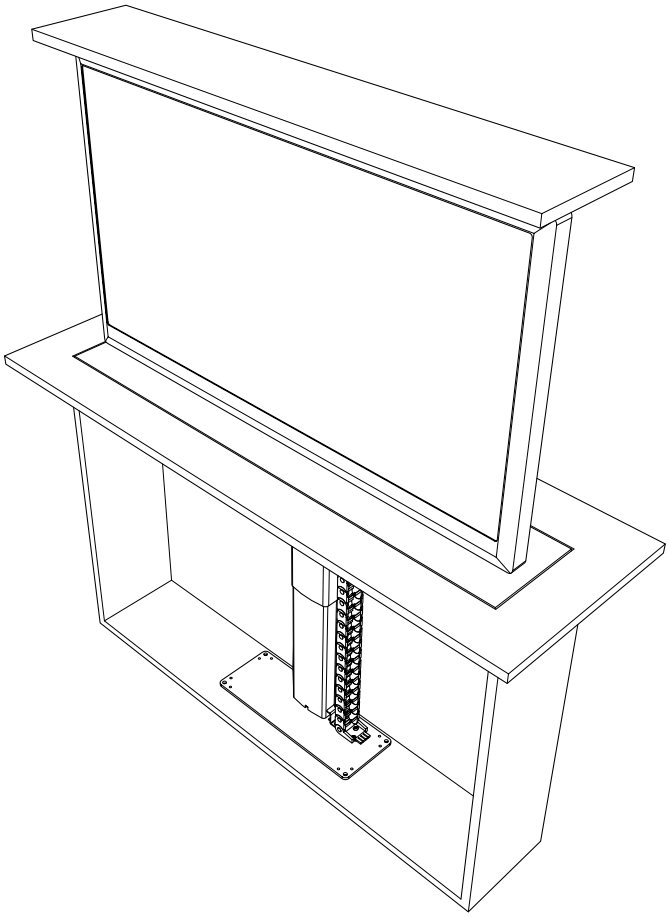
2 Slide the Bottom Switch Striker Up/Down to lower or raise the mechanisms IN position

3 To raise the mechanisms IN position, lower the Bottom Switch Striker and re-tighten the securing grub screws.

4 To lower the mechanisms IN position, raise the Bottom Switch Striker and re-tighten the securing grub screws.

FINAL
CHECKS





1 Check that the cabinet and mechanism are square and level.

2 Check that the mechanism runs smoothly to its fully OPEN and fully CLOSED positions.

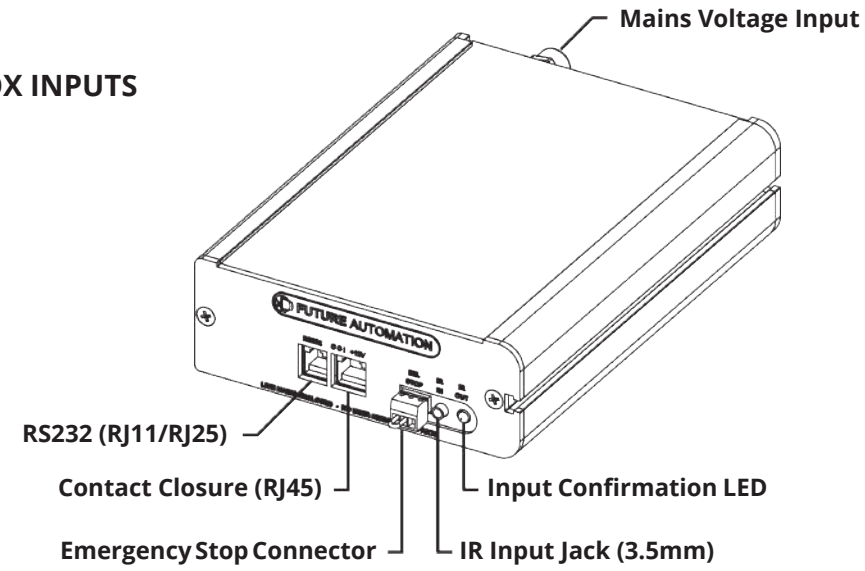
3 Check that all joinery has necessary clearance when moving to prevent any obstruction of the mechanism.

4 Check that the mechanism is located correctly in the cabinet so that the hinged lid does not open past 90°

GENERAL
CONTROL

This mechanism has multiple standard control methods, each of which requires a different input method to the control box. For ease, the input sockets on the control board are labelled below.
(Control box size and style may vary to image shown)

CONTROL BOX INPUTS

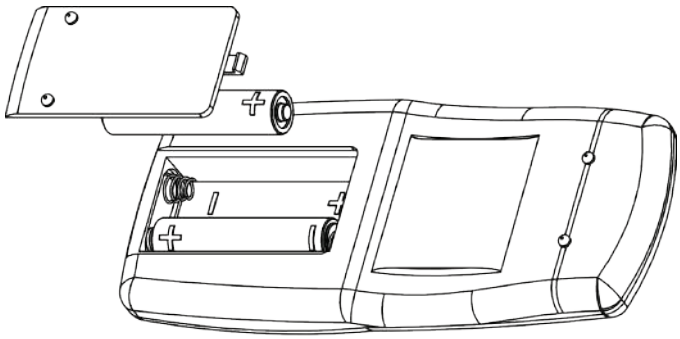


MECHANISM EMERGENCY STOP CONNECTOR

This mechanism features an Emergency Stop Connector, which MUST be plugged into the control box in the connector labelled above for the mechanism to operate. If this connector is not plugged in, the Input Confirmation LED will be permanently lit. As per the red plastic tag attached to the Emergency Stop Connector (and shown below), the small loop of wire in this connector is designed to be replaced by a third party safety mechanism.

REPLACING MECHANISM BATTERIES

The standard Future Automation Infrared (IR) remote control required x2 AAA batteries to operate. These are provided with the mechanism in the Accessories Pack. These batteries can be replaced as the per the image below.



INFRARED
(IR)

Infrared (IR)
This Mechanism can be controlled via the supplied 14 button Infrared (IR) Remote Control, paired with the supplied Infrared (IR) lead and sensor.

The mechanism's functions can be controlled by plugging the Infrared (IR) lead and sensor into the 3.5mm IR Input Jack shown on the General Mechanism Control page.

Confirmation of Infrared (IR) input will be shown by a single flash of the large green LED located on the end of the control box.

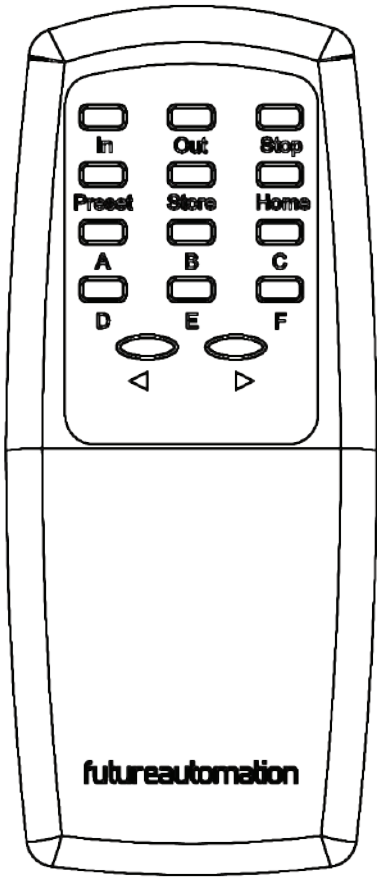
As Infrared (IR) control works over line of sight, the Infrared (IR) sensor must be directly viewable from what ever location the remote control is being used from.

Infrared (IR) Remote Control Button Layout

IN - Brings the mechanism into the cabinet.

OUT - Brings the mechanism out of the cabinet to the programmed OUT position.
(If no OUT position has been programmed, the mechanism will raise to its maximum OUT position)

STOP - Will stop the operation of the mechanism at ANY position.



Storing Positions

STORE -> OUT - Pressed sequentially within 2 seconds of each other. Set current mechanism height as OUT position.
(Mechanism will begin to close automatically and must fully close to set this position. Any interruption will cancel the process)

STORE -> STOP -> OUT - Pressed sequentially within 2 seconds of each other. Clear current mechanism OUT position.

IMPORTANT
Only buttons indicated above are functional with the product. Any other button press will STOP the mechanism.

RADIO FREQUENCY
(RF)

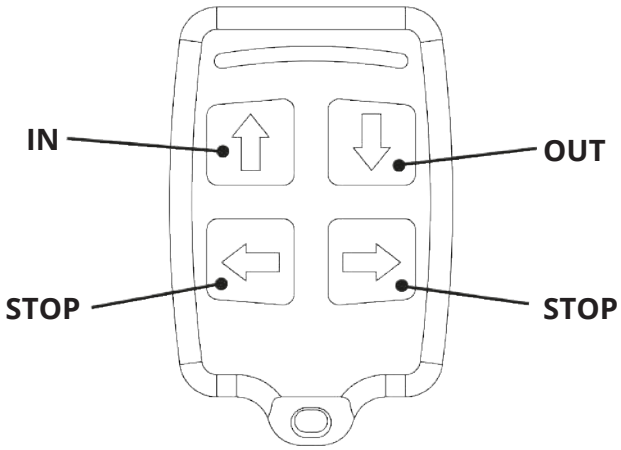
(OPTIONAL) Radio Frequency (RF) and TV Power

This Mechanism can be controlled via an optional 4 button Radio Frequency (RF) Remote Control, paired with an internal Radio Frequency (RF) aerial.

Confirmation of Radio Frequency (RF) input will be shown by a single flash of the large green LED located on the end of the control box.

As Radio Frequency (RF) control does not require line of sight, the control box can be placed out of sight, however the material and thickness of material used for the cabinetry may affect reception.

Radio Frequency (RF) Remote Control Button Layout



IN - Brings the mechanism into the cabinet.

OUT - Brings the mechanism out of the cabinet to the programmed OUT position.
(If no OUT position has been programmed, the mechanism will raise to its maximum OUT position)

STOP - Will stop the operation of the mechanism at ANY position.

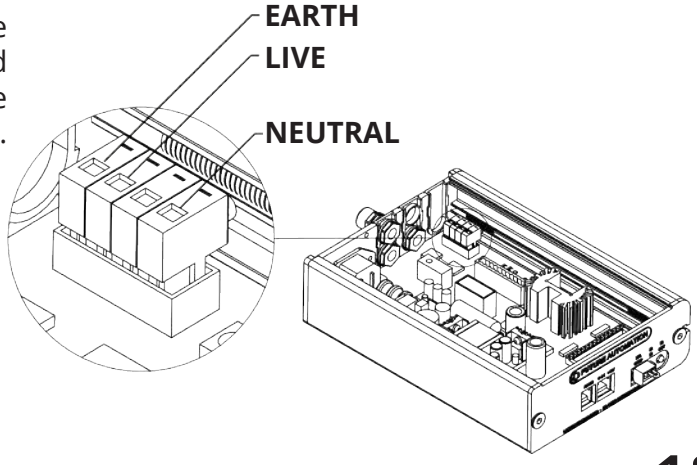
Storing Positions

OUT - Press the RF Limit Button inside the control box for under 5 seconds. Press and hold the RF Limit Button inside the control box for 5-10 seconds and release. The LED on the control board should flash. The OUT limit is now set.
(Mechanism will begin to close automatically and must fully close to set this position. Any interruption will cancel the process)

IN - Press and hold the RF Limit Button inside the control board for more than 10 seconds then release. The LED on the control board should flash and the OUT position has now been cleared.

TV Power Supply

It is possible for screen power to be wired via the control box to allow the screen to turn on and off with the operation of the mechanism. Use the connector shown here to take power to the screen.



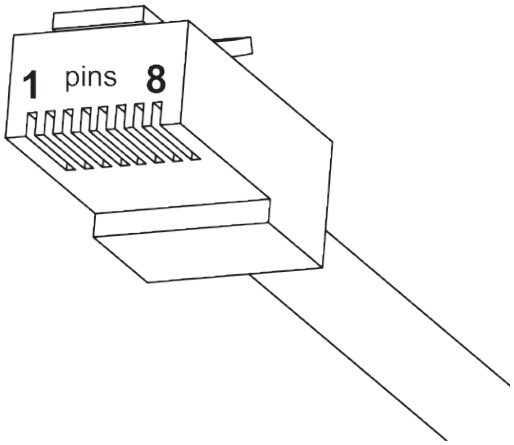
CONTACT
CLOSURE

This Mechanism can be controlled via Contact Closure, utilising an 8 Pin RJ45 Connector attached to a length of CAT5 (Type 568A or 568B) cable.

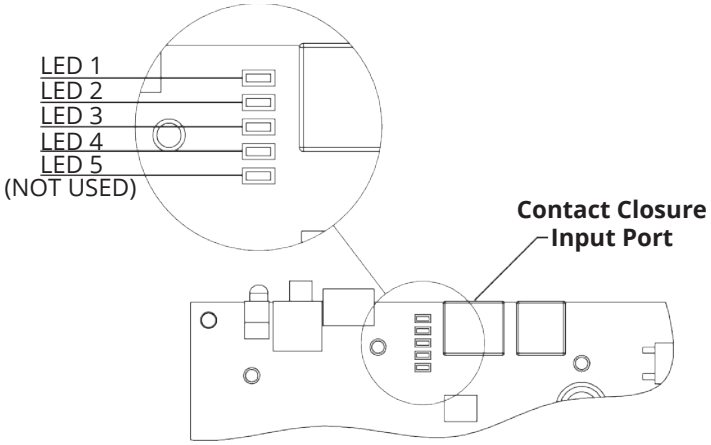
The mechanism's functions can be controlled by plugging this into the RJ45 port on the mechanism control board, then shorting pins 1-8 on this connector as shown in the Contact Closure Input Table below.

Confirmation of Contact Closure input will be shown by a single flash of the large green LED located on the end of the control box, as well as illumination of the corresponding Contact Closure LED on the printed circuit board as shown below.

RJ45 PIN LAYOUT



CONTACT CLOSURE LED LAYOUT



CONTACT CLOSURE INPUT TABLE

PIN	DESCRIPTION	ACTION
1	12V SUPPLY	12V SUPPLY - CURRENT LIMITED
2	12V LATCH	WHEN 12V ATTACHED, DEVICE WILL GO OUT TO PRESET POSITION. WHEN 12V REMOVED, DEVICE WILL GO IN.
3	GROUND	GROUND
4		
5	DEVICE LATCH	SHORT TO GROUND (PIN 3), DEVICE WILL GO OUT TO PRESET POSITION, REMOVE SHORT DEVICE WILL GO IN.
6	DEVICE STOP	MOMENTARY SHORT TO GROUND (PIN 3), STOPS DEVICE IN CURRENT POSITION.
7	DEVICE OUT	MOMENTARY SHORT TO GROUND (PIN 3), MAKES DEVICE GO OUT.
8	DEVICE IN	MOMENTARY SHORT TO GROUND (PIN 3), MAKES DEVICE GO IN.

WIRE/CABLE TYPE		LED INDICATOR
568A	568B	
W G	W O	
G	O	
W O	W G	
B	B	
W B	W B	LED 4
O	G	LED 3
W BR	W BR	LED 2
BR	BR	LED 1

RS232
CONTROL

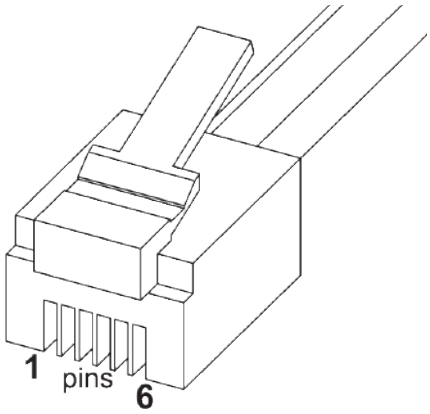
This Mechanism can be controlled via RS232, utilising a 6 Pin RJ11/RJ25 connector OR 9 Pin Serial connector attached to a length of 6 core cable.

The mechanism's functions can be controlled by plugging this into the RJ11/RJ25 port on the mechanism control box, then inputting the RS232 commands shown in the RS232 Input Table below.

Confirmation of Contact Closure input will be shown by a single flash of the large green LED located on the end of the control box.

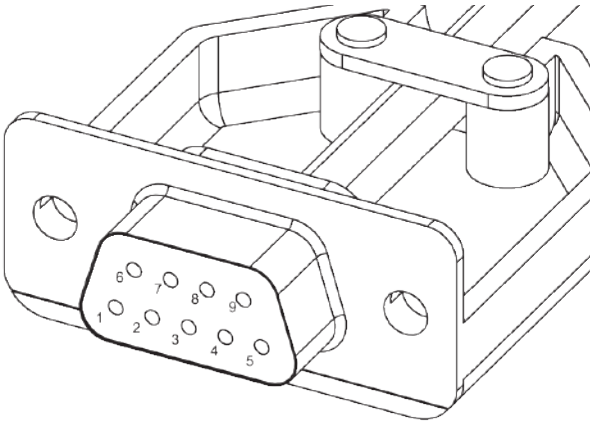
RJ11/RJ25 PIN LAYOUT

PIN 1: RX
PIN 6: TX
PIN 3 & 4: GROUND



SERIAL PIN LAYOUT

PIN 2: RX
PIN 3: TX
PIN 5: GROUND



RS232 PROGRAMMING DETAILS

Baud Rate: 9600

Stop Bit: 1

Parity: None

Databits: 8

RJ11/RJ25	Func.	9 PIN Serial	Colour
PIN 1	TX-RX	PIN 2	Blue
PIN 3	GROUND	PIN 5	Green
PIN 4	GROUND	PIN 5	Red
PIN 6	RX-TX	PIN 3	White

RS232 INPUT TABLE

IMPORTANT - Ensure all protocols are entered exactly as written below, including Carriage Return (ENTER / ASCII 13)

Protocol	Action
fa_in Carriage Return (Enter / ASCII 13)	Device IN
fa_out Carriage Return (Enter / ASCII 13)	Device OUT
fa_stop Carriage Return (Enter / ASCII 13)	Device STOP (At any position)

NOTES:

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