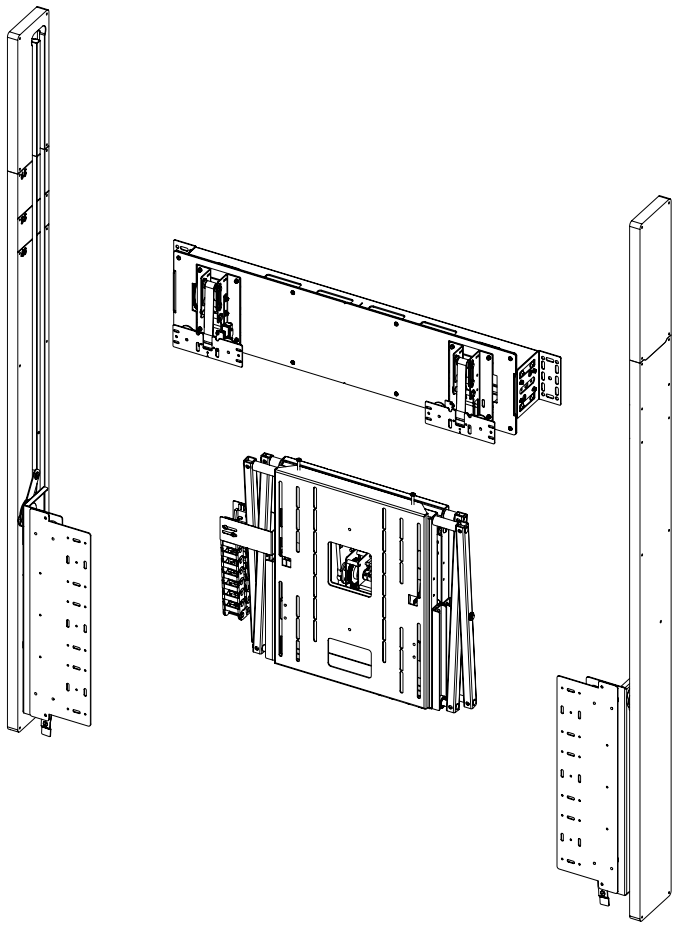
future automation

RPS-H-SA

RETRACTING HEAVY PANEL SYSTEM & SCREEN ADVANCE



INSTALLATION
INSTRUCTIONS

ISSUE **003**

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 **88LBS (40KG) 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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PACKAGE
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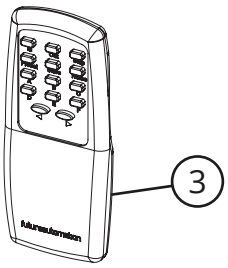
2 - CONTROL BOX

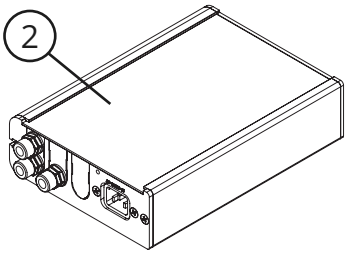
3 - IR REMOTE CONTROL

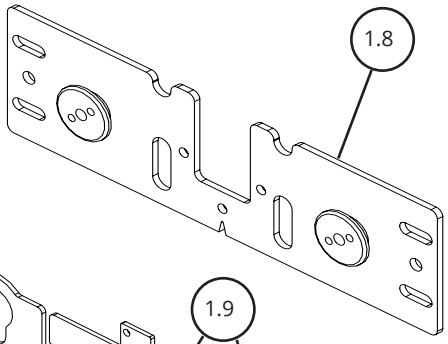
ITEMS NOT SHOWN ON PAGE

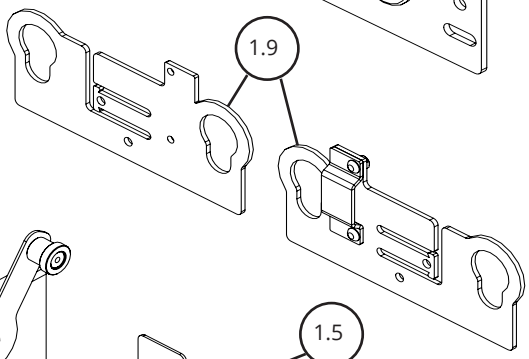
RPS ACCESSORY PACK:

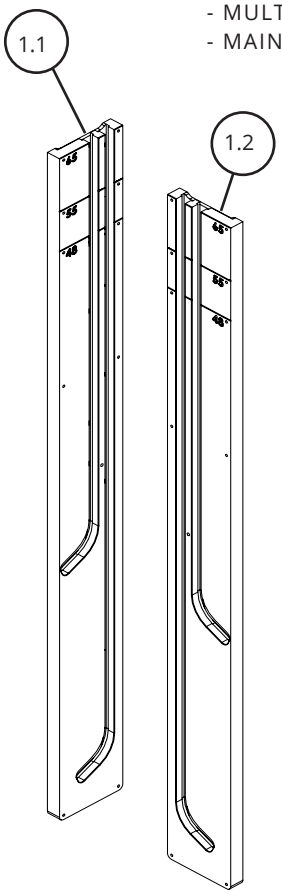
- 2X AAA BATTERIES
- MULTI-PACK NUTS, BOLTS & WASHERS
- MAINS POWER, IR AND CONTACT CLOSURE LEADS

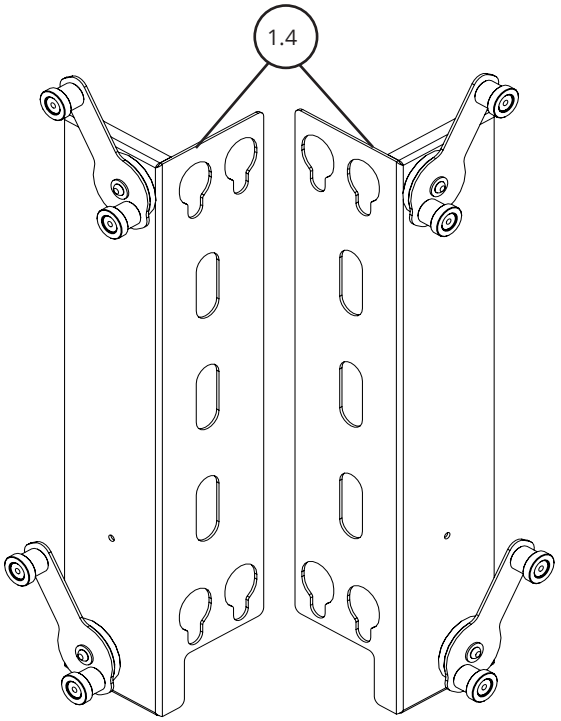


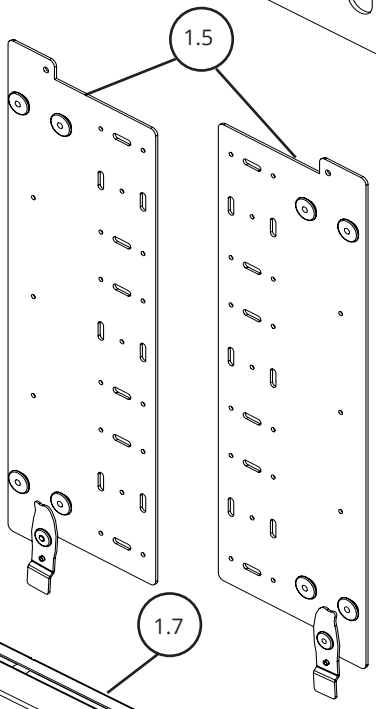


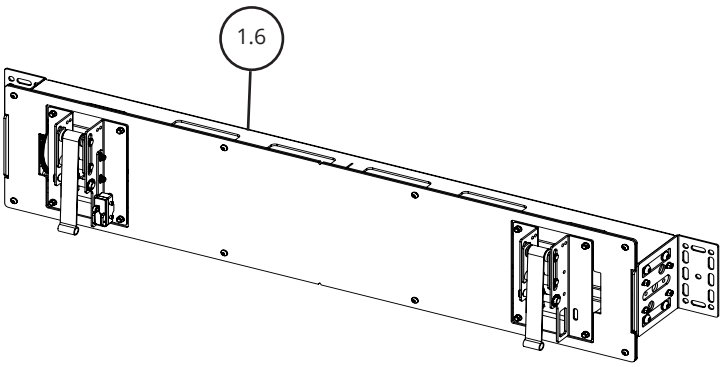


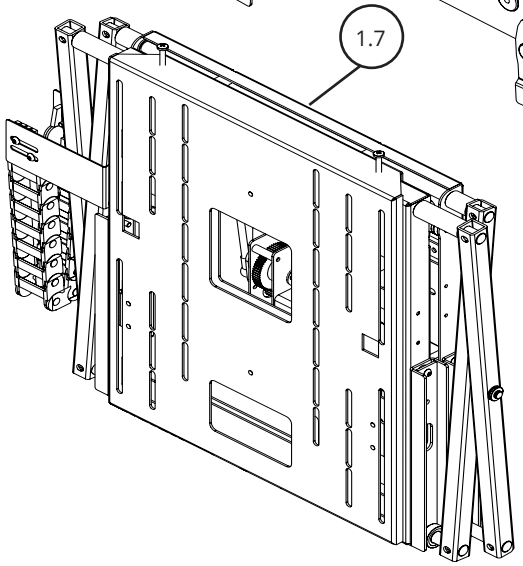










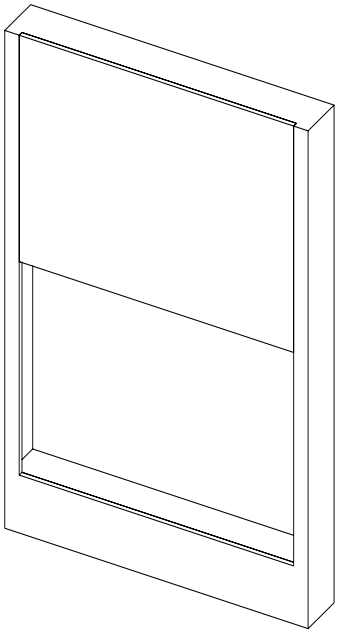


CABINET
PREPARATION

Enclosure height should accommodate height of screen and height of sliding panel.

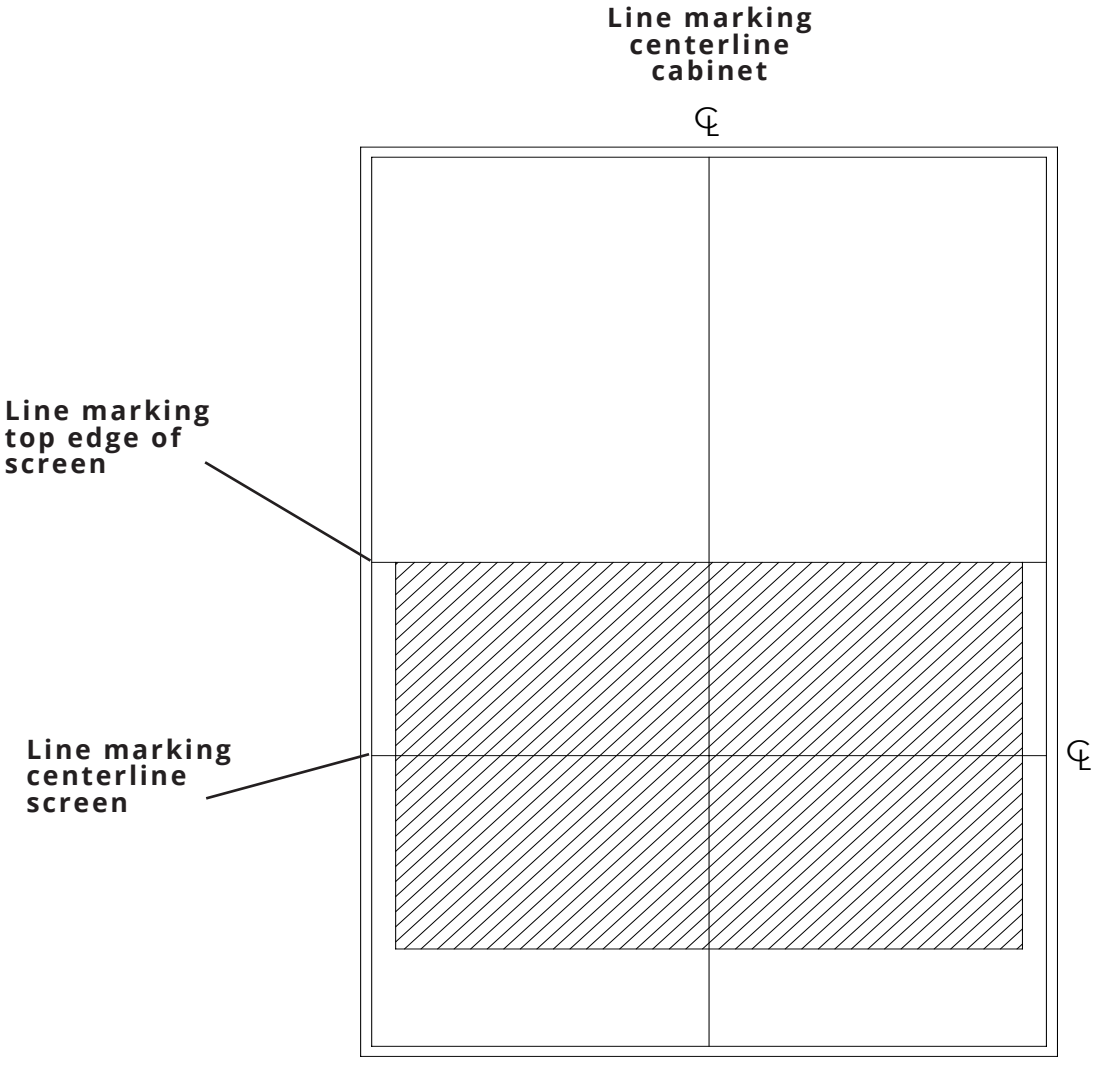
1

Ensure cabinet dimensions are correct. Refer to the technical sheet for correct dimensions.

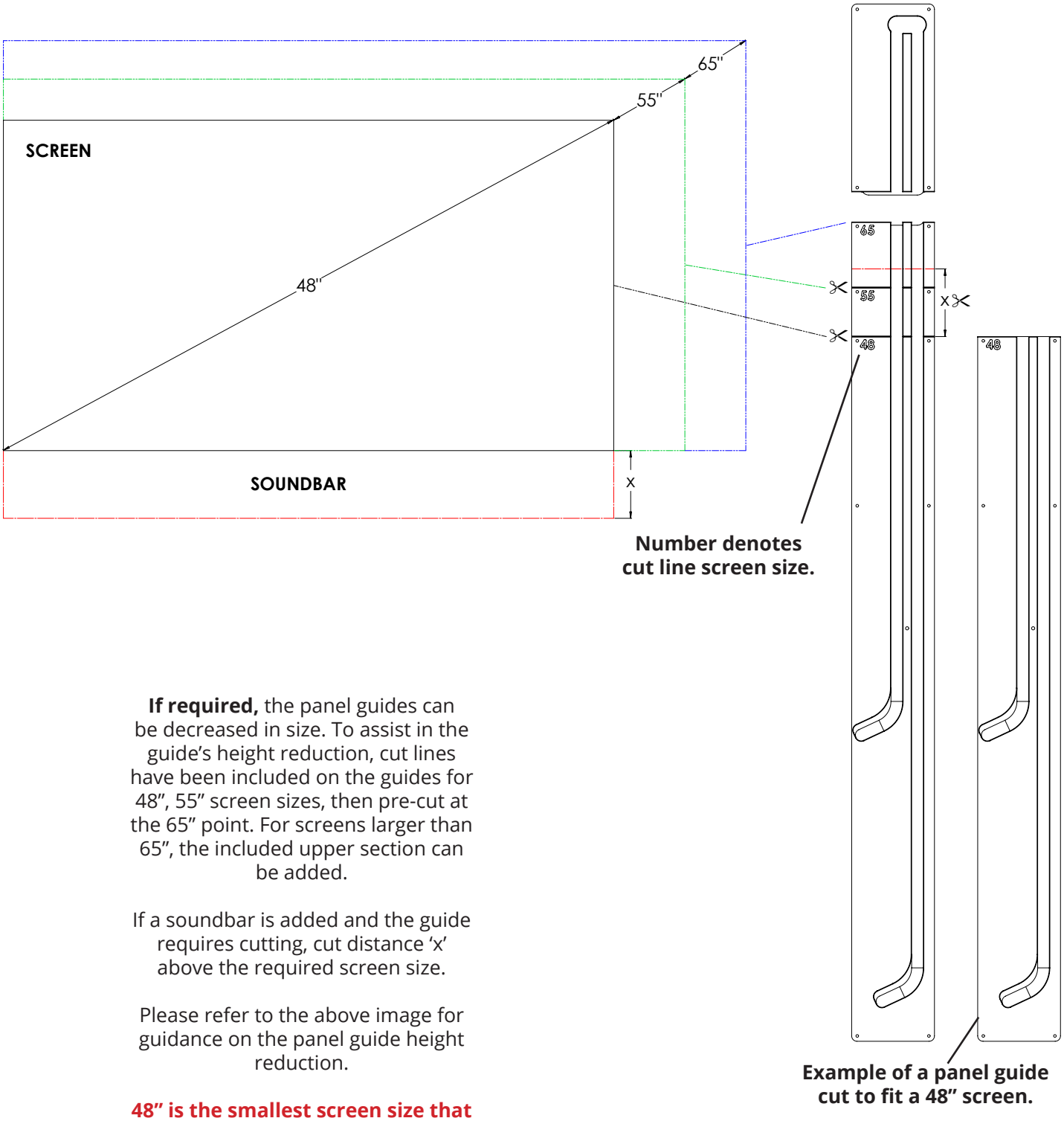


2

Mark up the top position of the screen inside the enclosure along with centre lines in preparation for display positioning.



PANEL GUIDE
HEIGHT REDUCTION



If required, the panel guides can be decreased in size. To assist in the guide's height reduction, cut lines have been included on the guides for 48", 55" screen sizes, then pre-cut at the 65" point. For screens larger than 65", the included upper section can be added.

If a soundbar is added and the guide requires cutting, cut distance 'x' above the required screen size.

Please refer to the above image for guidance on the panel guide height reduction.

48" is the smallest screen size that can be used with this mechanism.

PANEL MECHANISM
INSTALLATION 1.

1

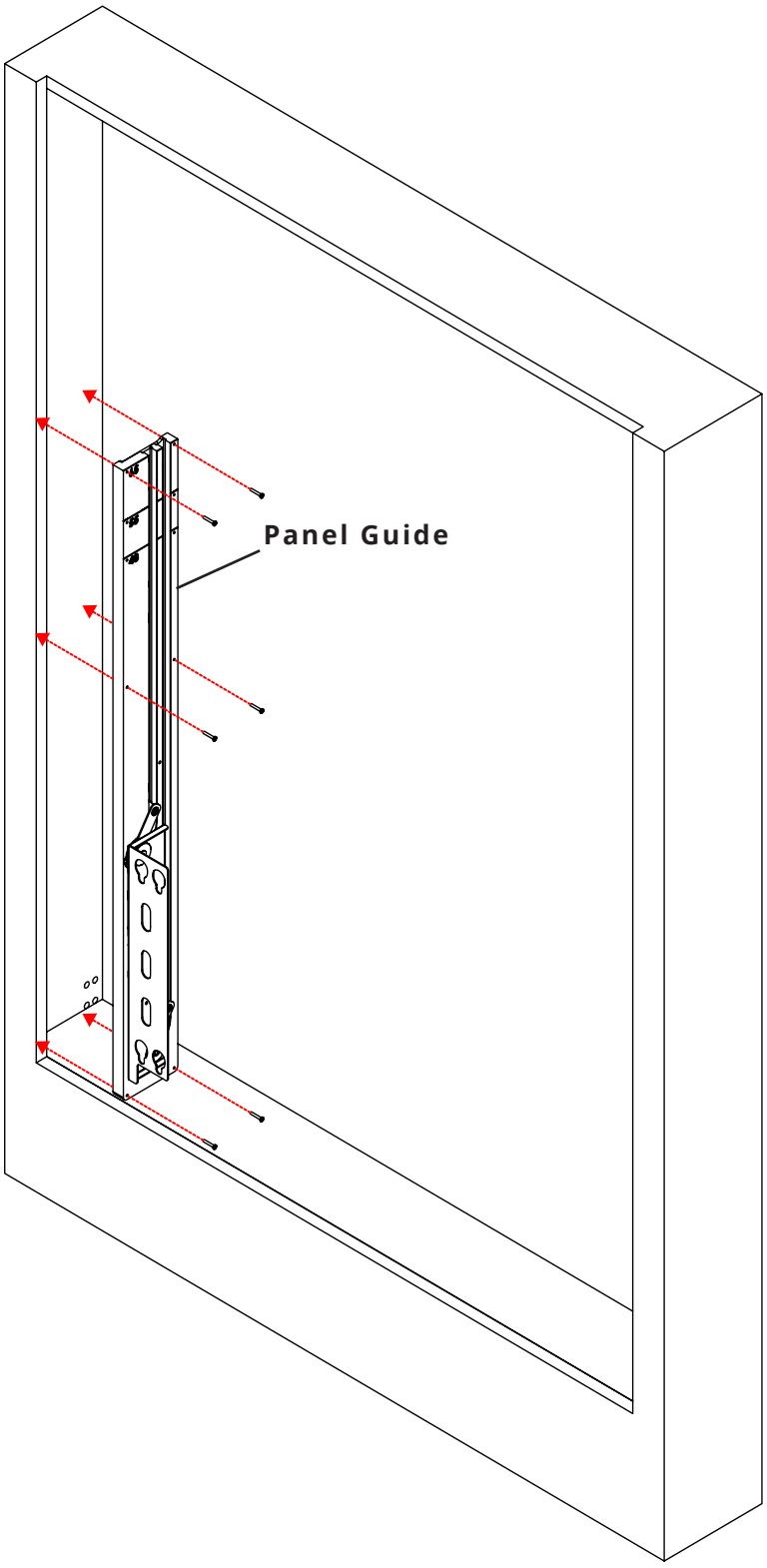
Mount the panel guide so that it is resting on the internal floor as well as the internal front face of the cabinet.

2

Fix the guide in place using appropriate fixings **(NOT INCLUDED)** whilst ensuring that the panel remains touching the aforementioned surfaces.

3

Repeat steps 1 & 2 for the opposing side's panel guide.



Panel guides must not shift whilst being fixed in place.

PANEL MECHANISM
INSTALLATION 2.

1

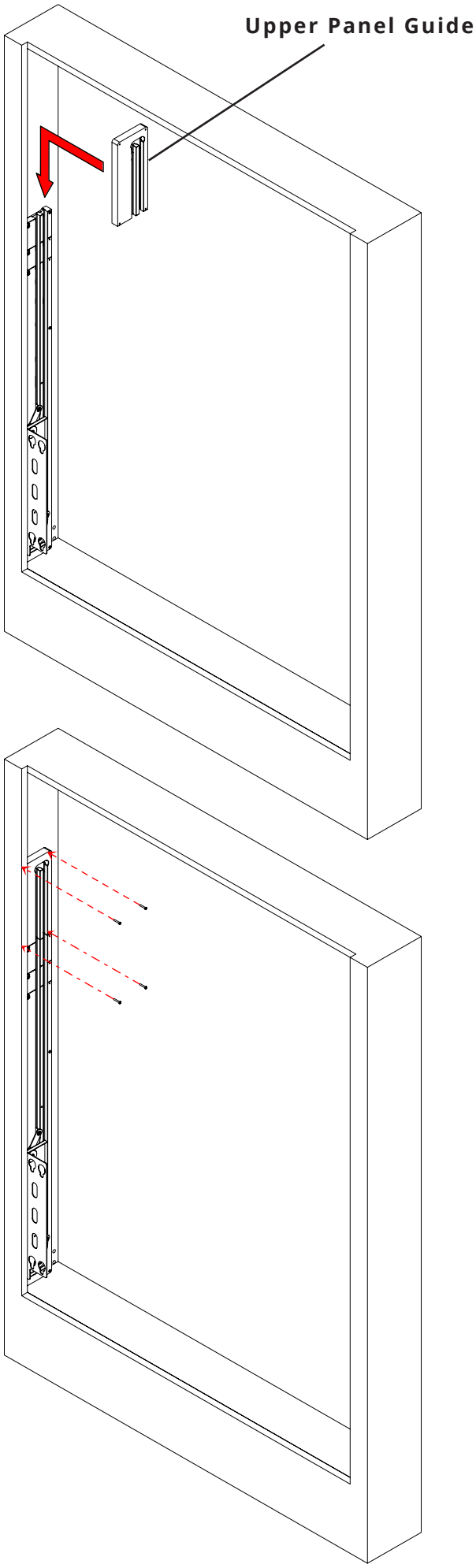
If the upper guide extension is required, insert the upper guide such that the guide slots align.

2

Fix the guide in place using appropriate fixings **(NOT INCLUDED)** whilst ensuring that the guide slots remain aligned.

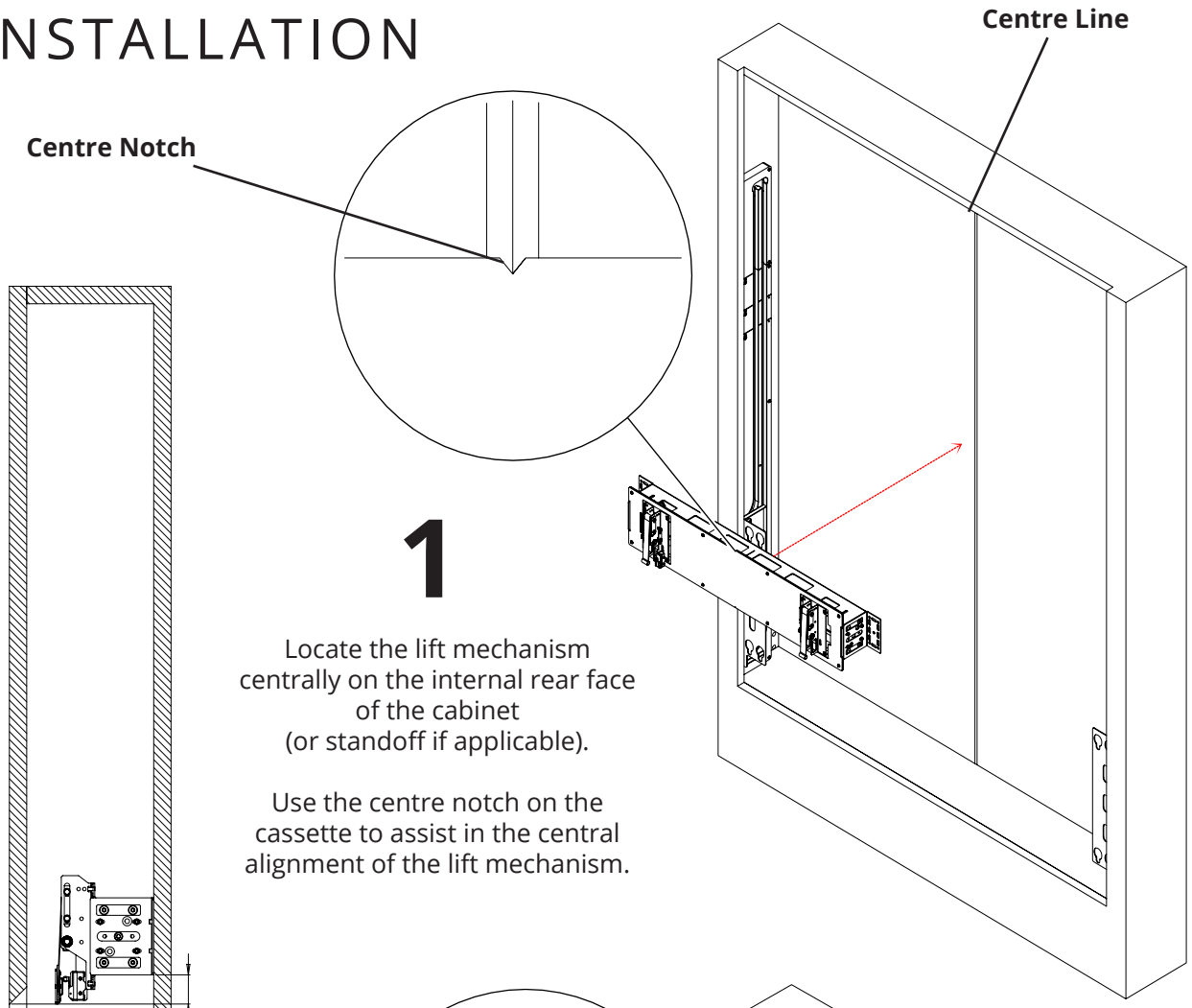
3

Repeat steps 1 & 2 for the opposing side's panel guide.



Panel guides must not shift whilst being fixed in place.

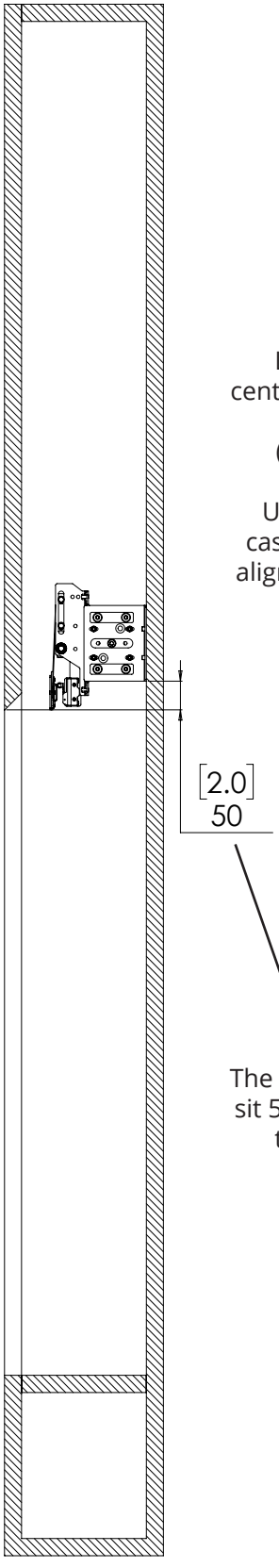
LIFT MECHANISM
INSTALLATION



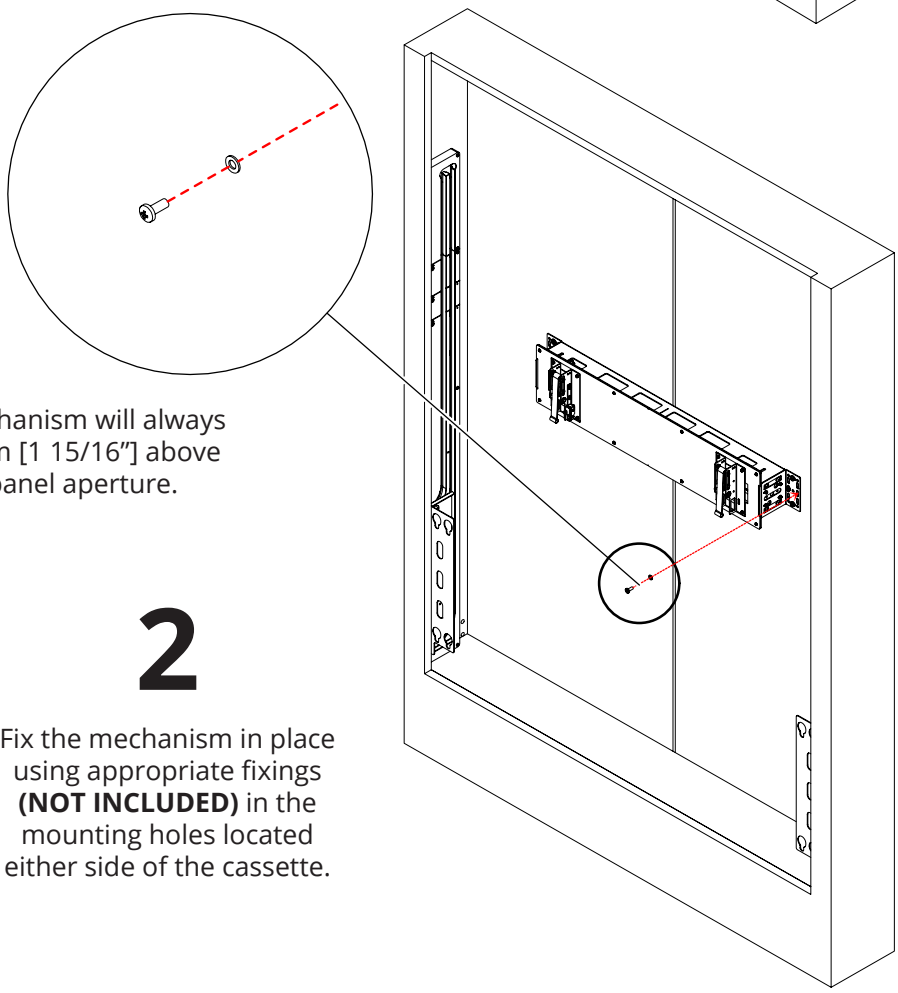
1

Locate the lift mechanism centrally on the internal rear face of the cabinet (or standoff if applicable).

Use the centre notch on the cassette to assist in the central alignment of the lift mechanism.



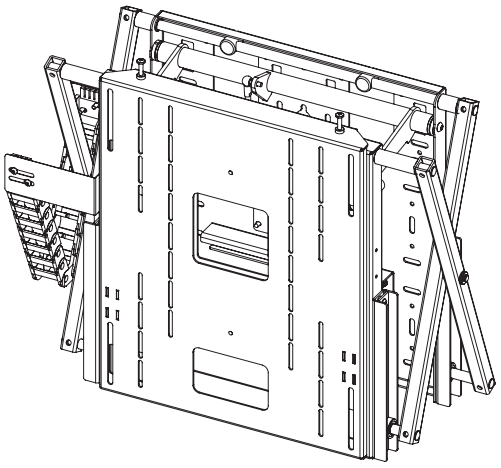
The mechanism will always sit 50mm [1 15/16”] above the panel aperture.



2

Fix the mechanism in place using appropriate fixings **(NOT INCLUDED)** in the mounting holes located either side of the cassette.

SCREEN ADVANCE
POSITIONING (SA)



1

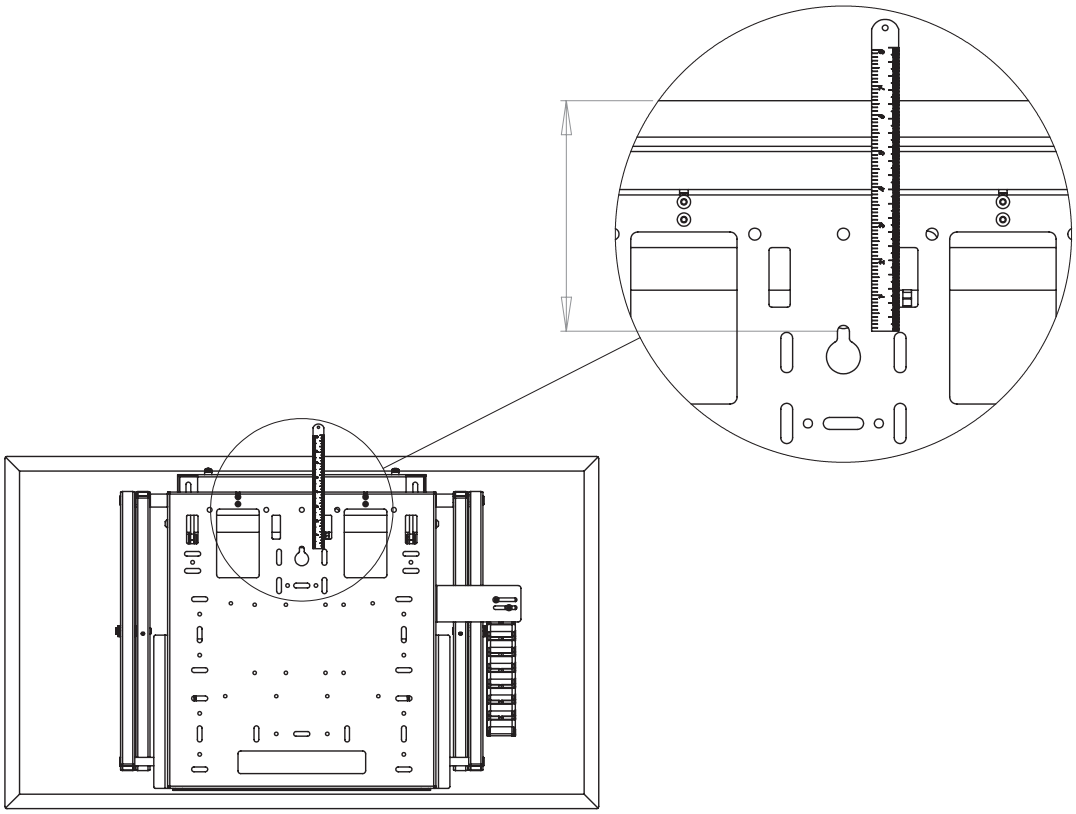
Offer display to Screen Advance mechanism.

2

Measure from the top of the display to the key-hole mount slot.

3

The measurement taken can be used to correctly position mechanism inside the enclosure.



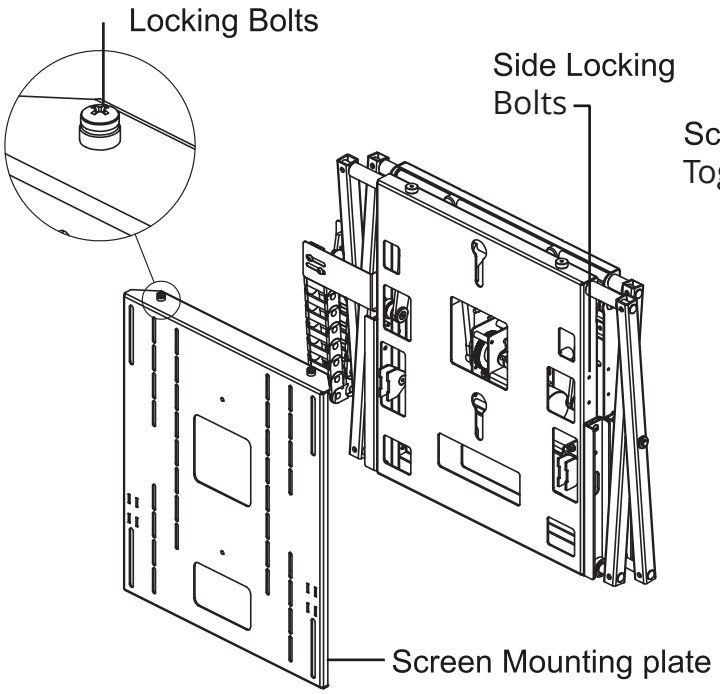
SCREEN ADVANCE
MOUNTING (SA)

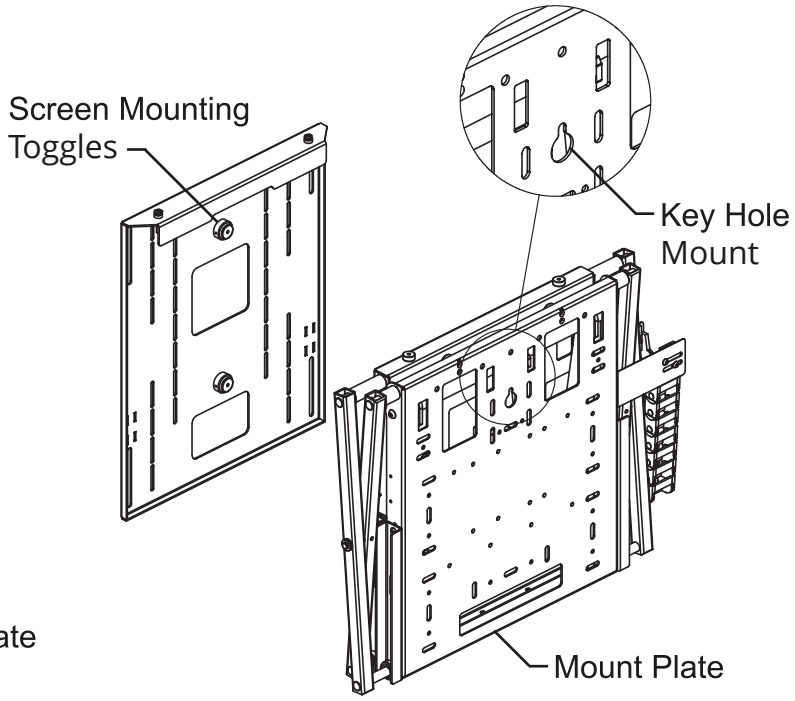
1 Remove the Screen Mount Plate by loosening the two Screen Mounting Toggles and lifting up and away.

2 Take Screen Advance Positioning measurement and mark position inside the enclosure.

3 Fix a screw into the wall with the head protruding at marked position, so that the SA can be freely supported inside the enclosure.

4 Attach Screen Mounting Plate to the back of the display using included M6 fixings



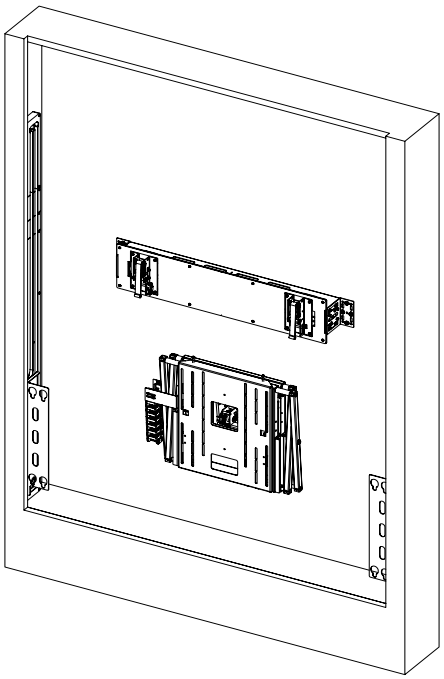


5 Mount the SA mechanism onto the protruding screw and check positioning is as desired.

6 With the mechanism in the IN position, fix through the front plate with the square clearance holes provided.
(FIXINGS NOT INCLUDED)

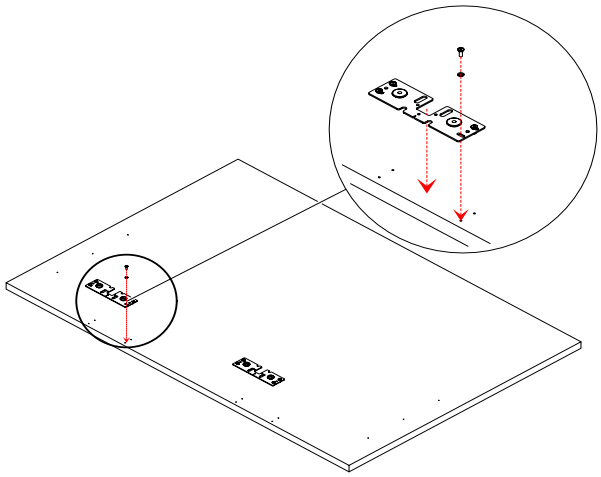
7 Feed necessary cables through the provided cable run.

8 Hook screen onto the SA using the Screen Mounting Toggles and securing the Locking Bolts into place.



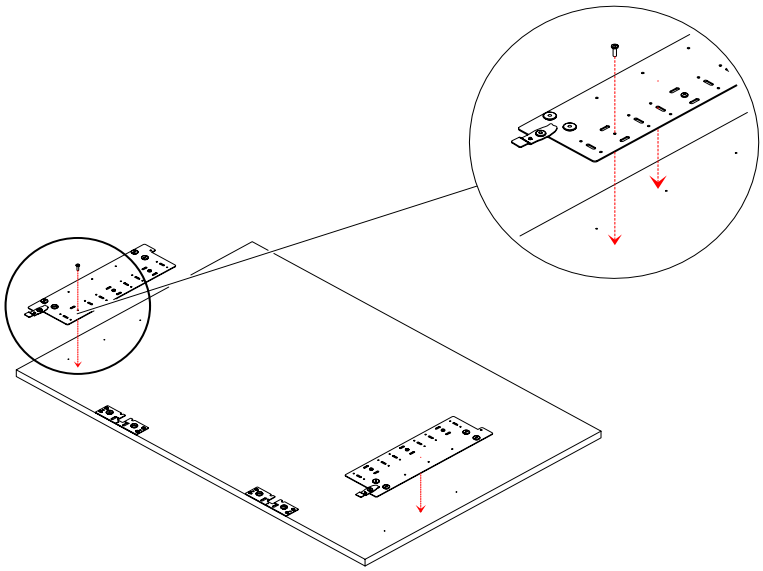
PANEL MOUNT
PLATE FITTING

See image at bottom of page for mounting dimensions.



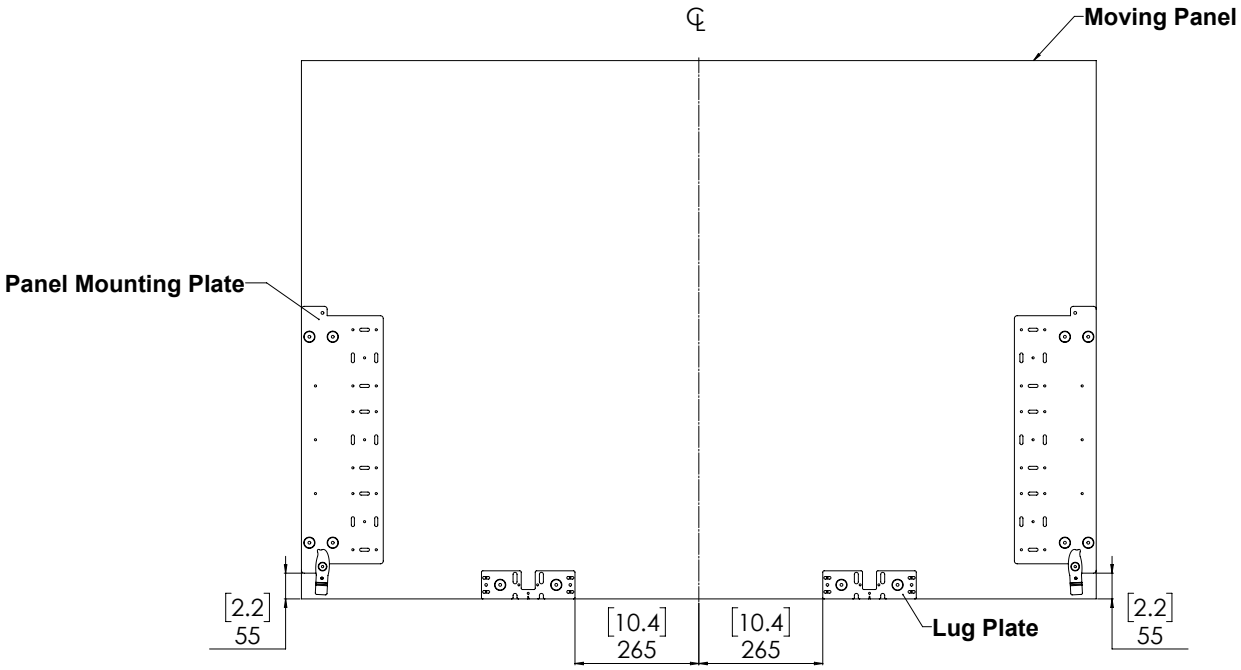
1

Using the lug plate from the lift plate sub-assembly, attach them so that they are flush with the bottom of the moving panel. Attach using appropriate fixings **(NOT INCLUDED).**

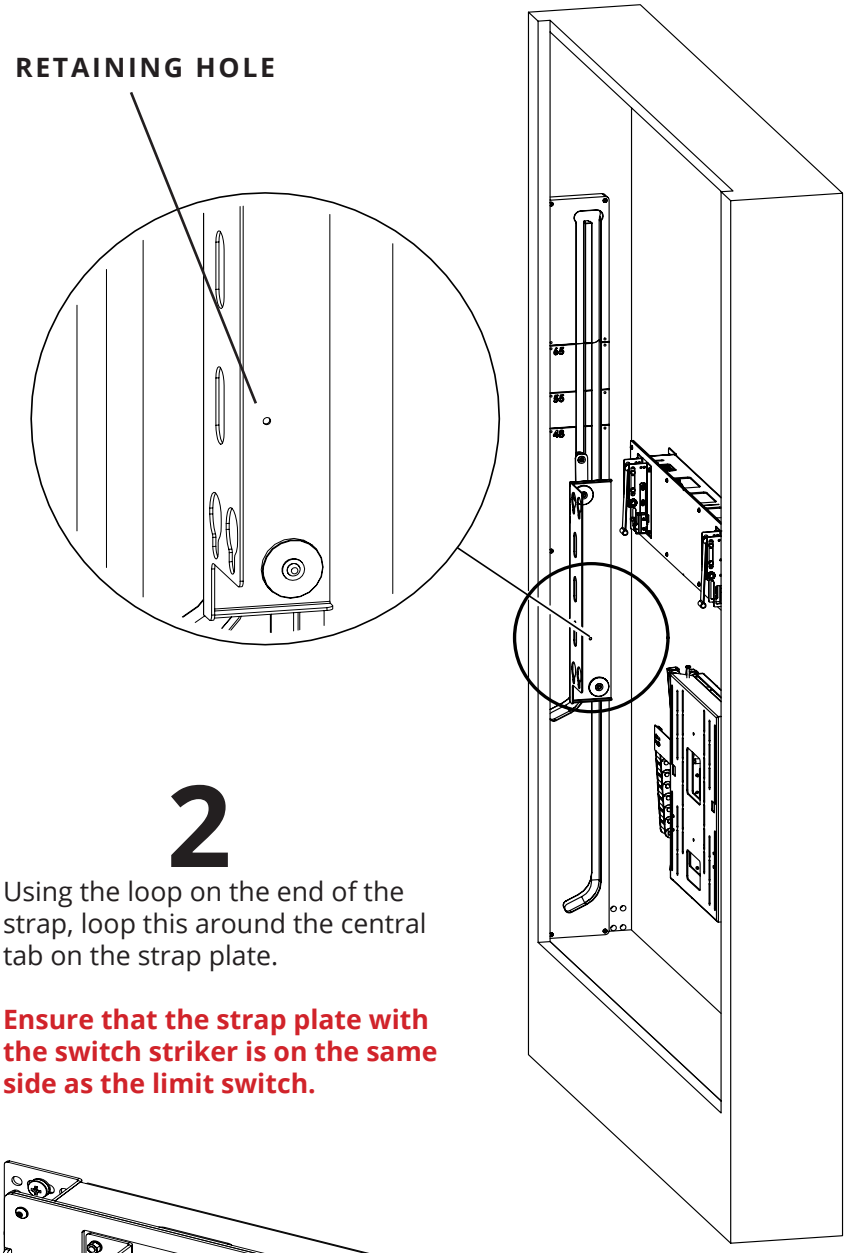


2

Locate the panel mount plates on the rear face as well as flush with the sides of the moving panel. Attach to panel using appropriate fixings **(NOT INCLUDED).**



PANEL
MOUNTING PREPARATION



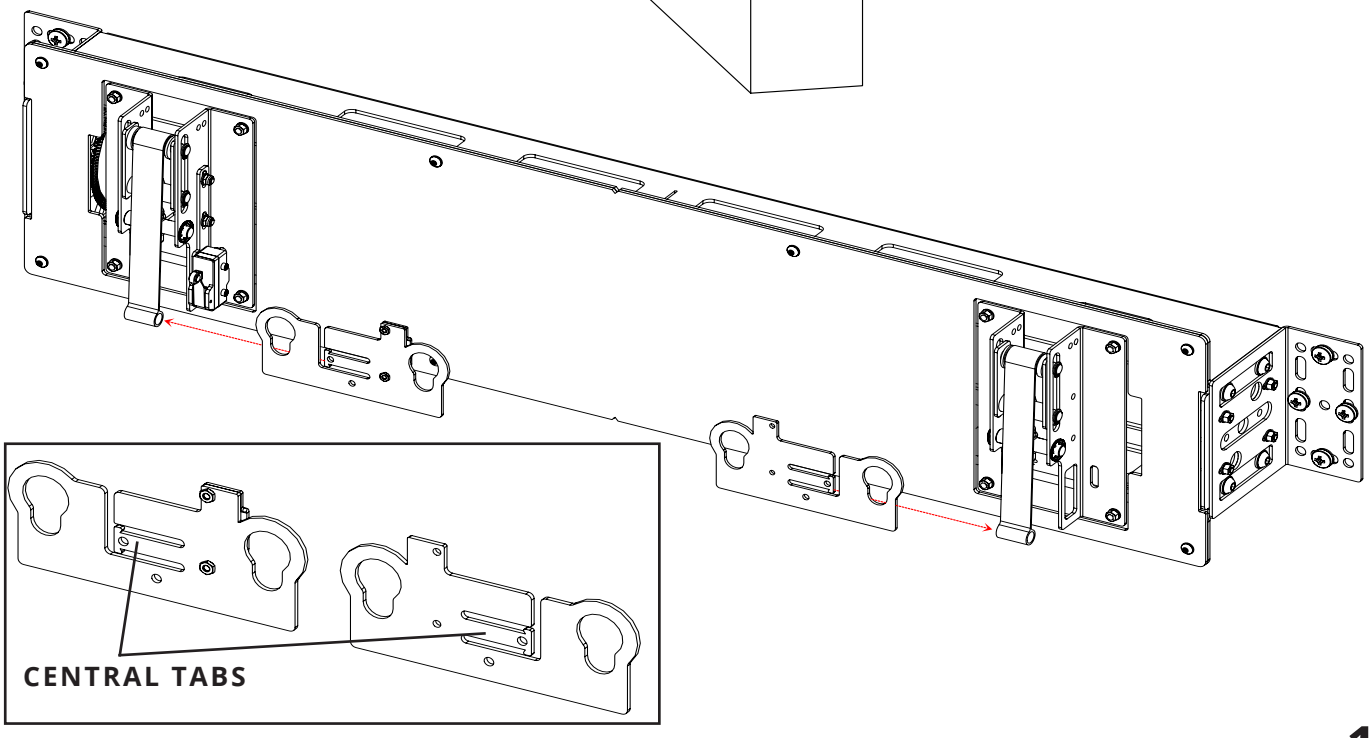
1

For both left and right sides, a retaining hole is provided on both the guide bracket and panel guide. When aligned, a tool (e.g. screwdriver) can be inserted through both holes in order to lock the bracket in place.

2

Using the loop on the end of the strap, loop this around the central tab on the strap plate.

Ensure that the strap plate with the switch striker is on the same side as the limit switch.



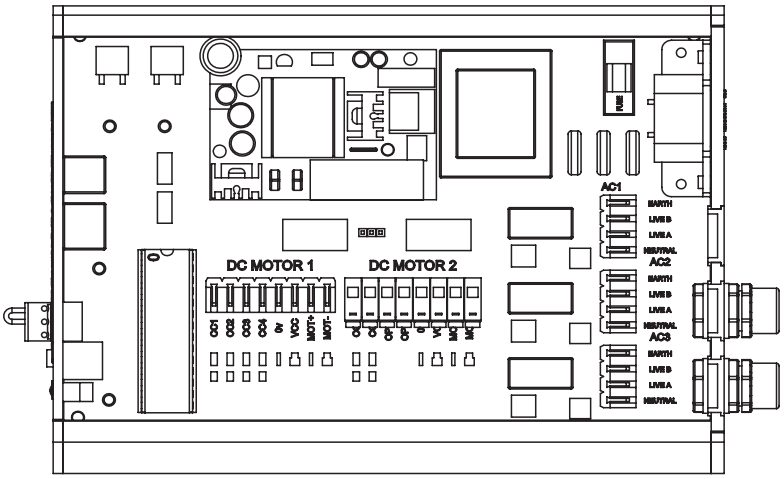
CONNECTION
WIRING

Before mounting the panel, the straps need to be lowered such that they sit below the moving panel when mounted. To lower the straps, plug in the cables as instructed below.

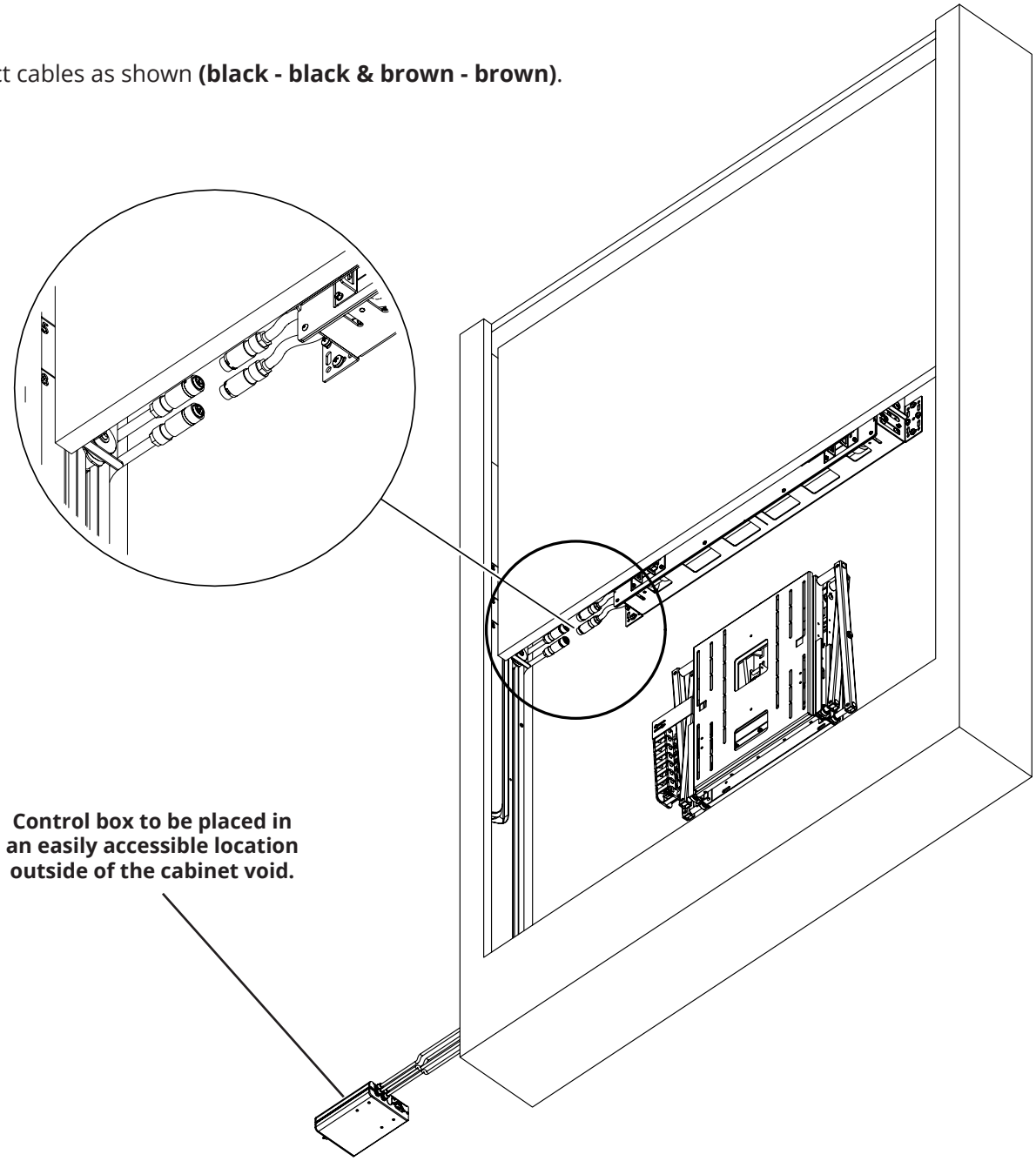
Insert the relevant connectors to their respective ports on the control box (refer to page 20 for controls).

Note that the cables are labelled.

DO NOT LOWER THE STRAPS MANUALLY!

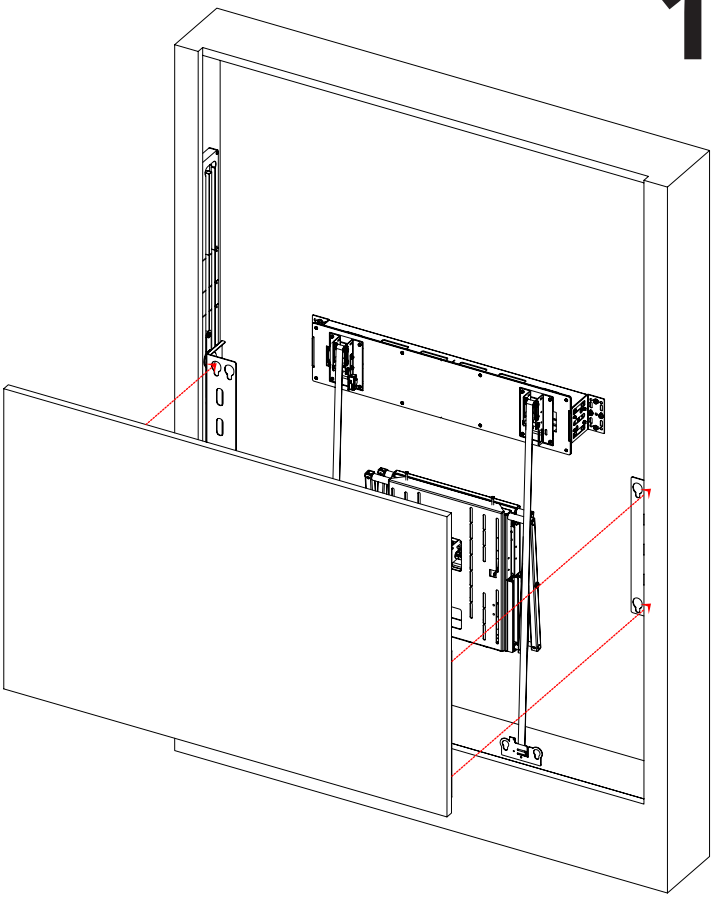


Connect cables as shown **(black - black & brown - brown)**.



PANEL
MOUNTING

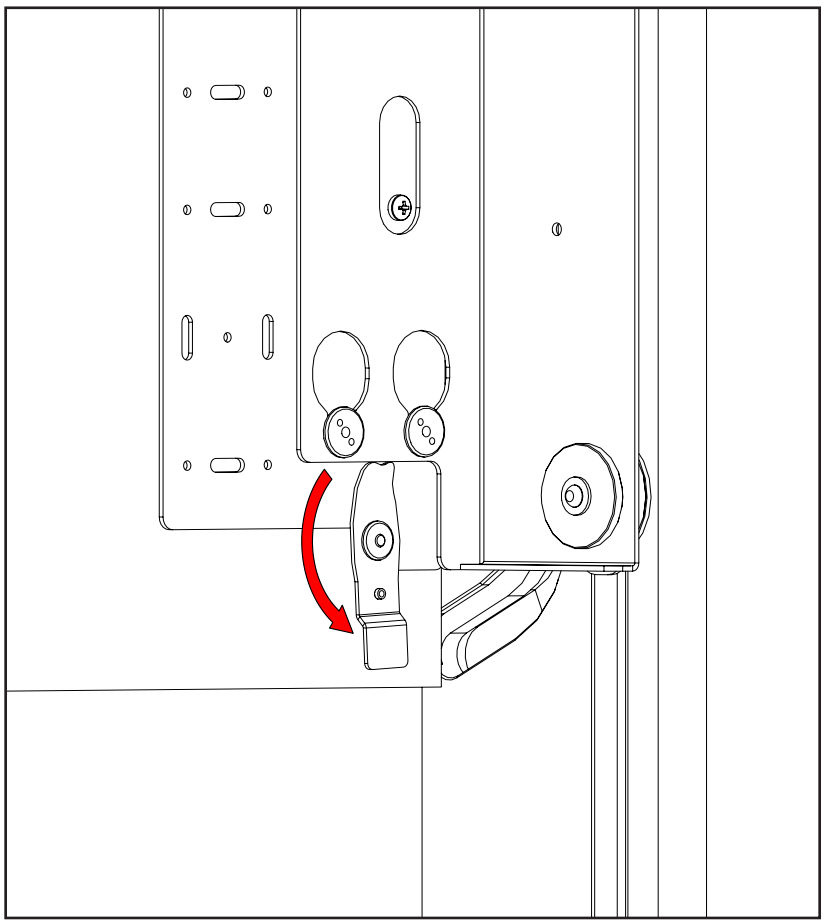
1 Insert the panel on to the guide brackets such that the lugs sit at the bottom of their respective holes.



Turn the lever located in the bottom corner of the panel to lock the moving panel in place.

2

Repeat for opposing side.

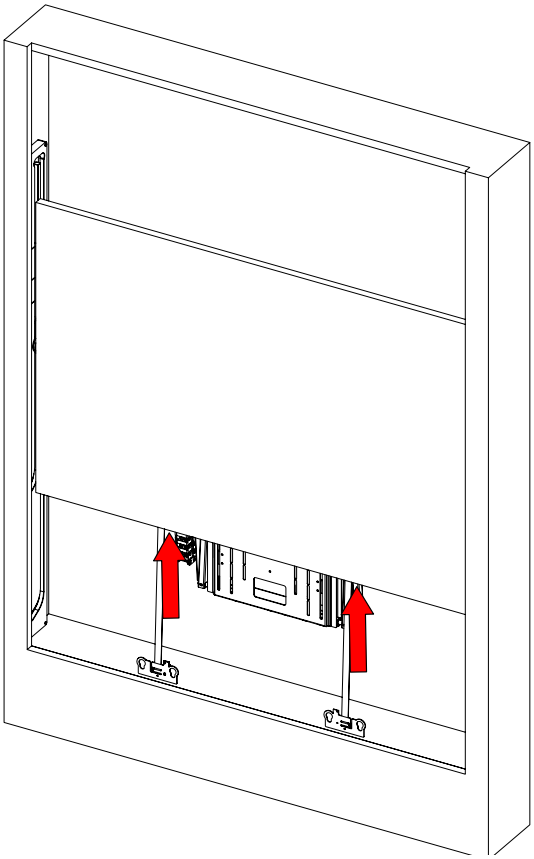


PANEL
STRAP PLATE MOUNTING

1

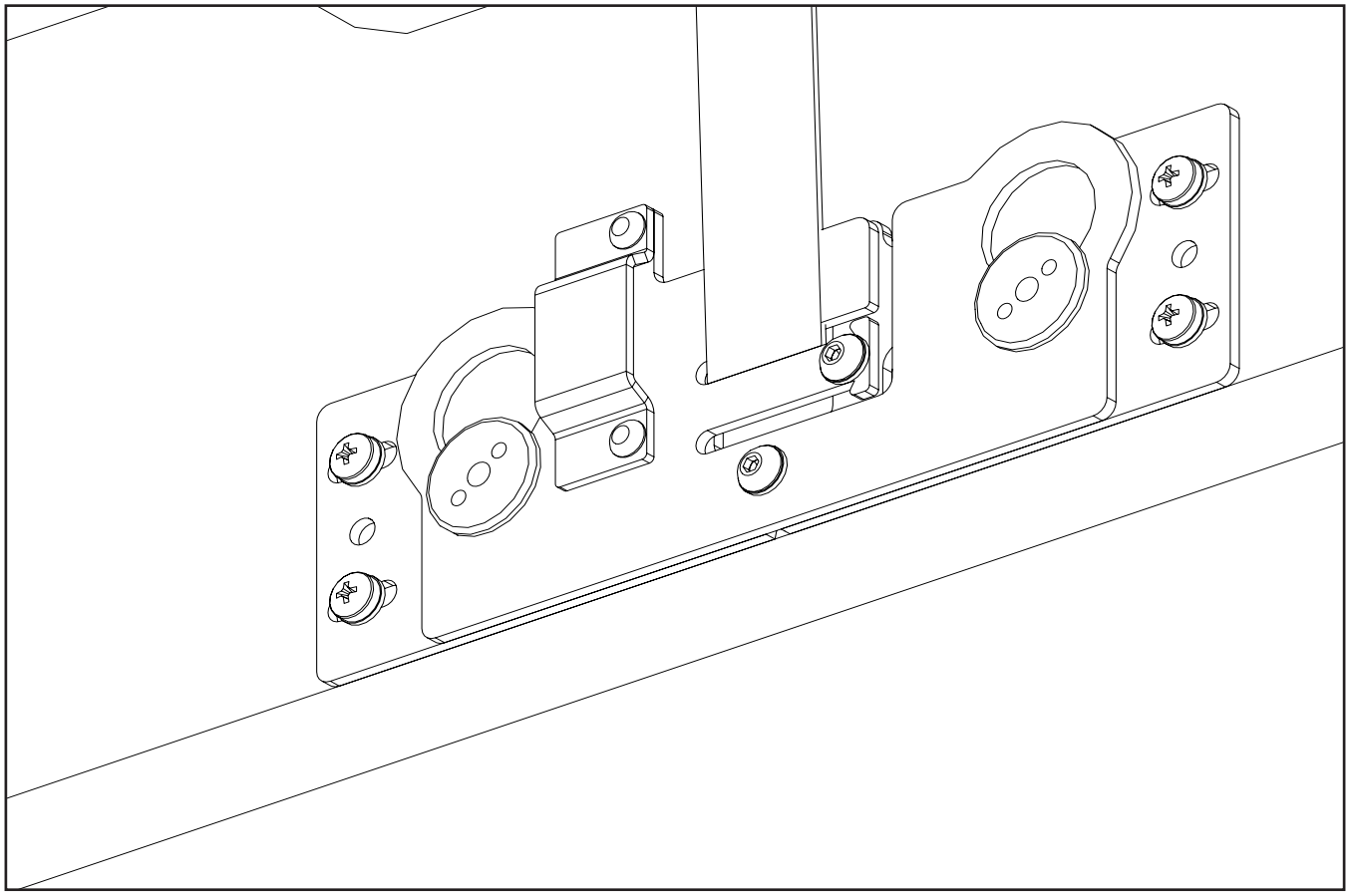
For both left and right sides, hook on the strap plate following the steps on **PAGE 17.**

(Refer to the image below for what the securely fitted plates should look like when mounted) .

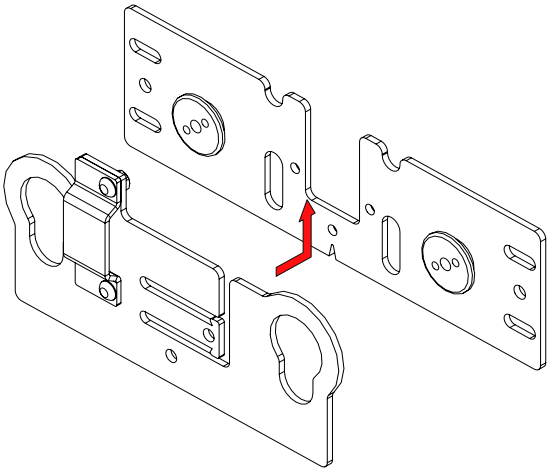


2

Now the panel lift plates are fitted, the tool being used to retain the panel guide brackets can be removed.

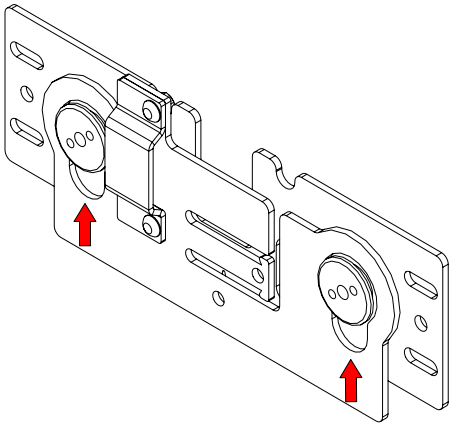


PANEL STRAP PLATE
MOUNTING GUIDE



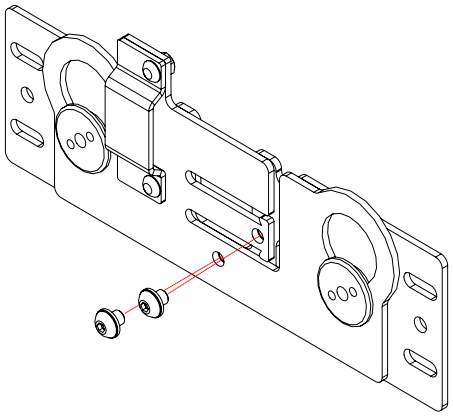
1

Insert the lugs from the lug plate through the holes on the strap plate.



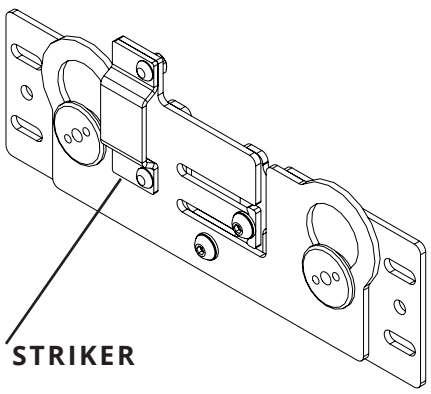
2

Slide the strap plate upward so that the lugs slide into the keyhole slots.



3

Insert x2 M4 bolts & washers to lock the lug plate and strap plate in place.



4

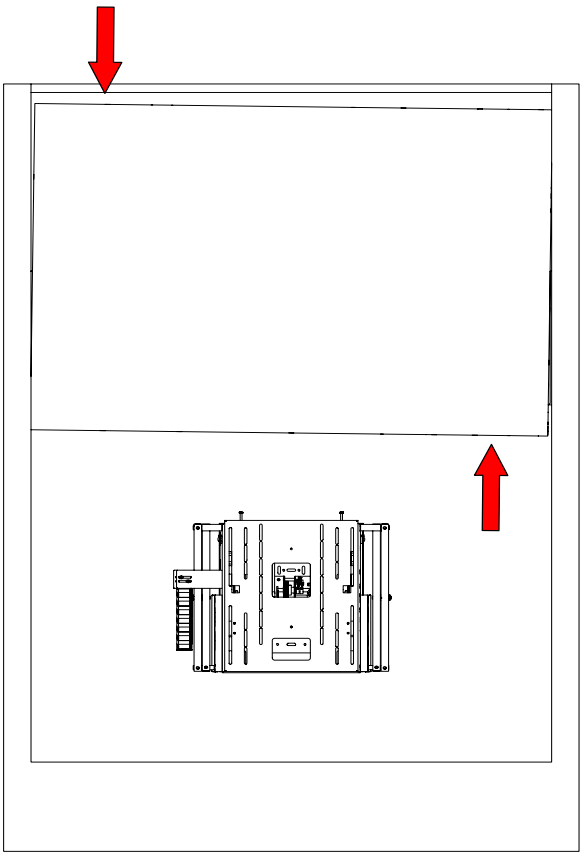
Repeat steps 1 through 3 for the opposing side strap and lug plate.

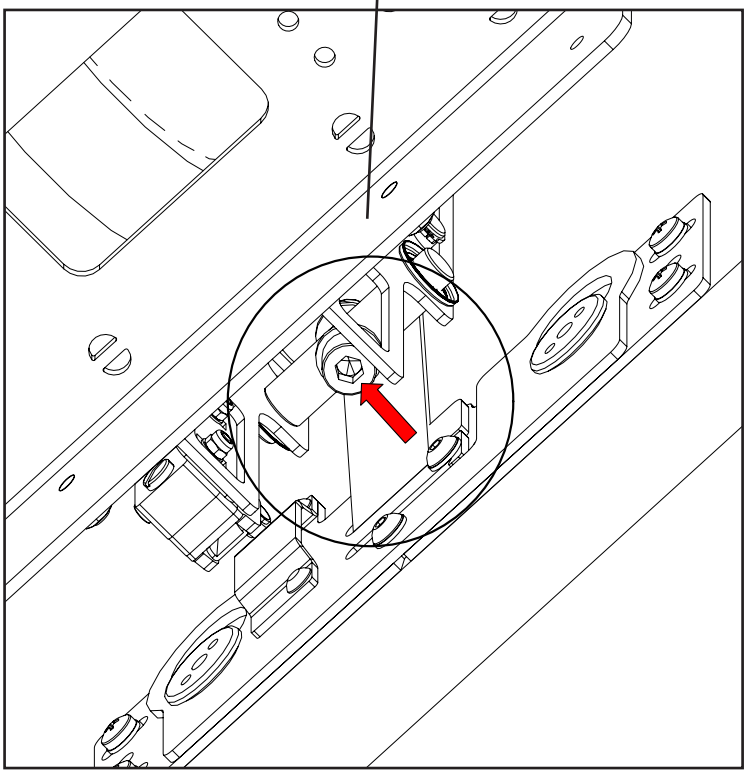
(The strap plate with the switch striker MUST go on the side of the mechanism with the limit switch).

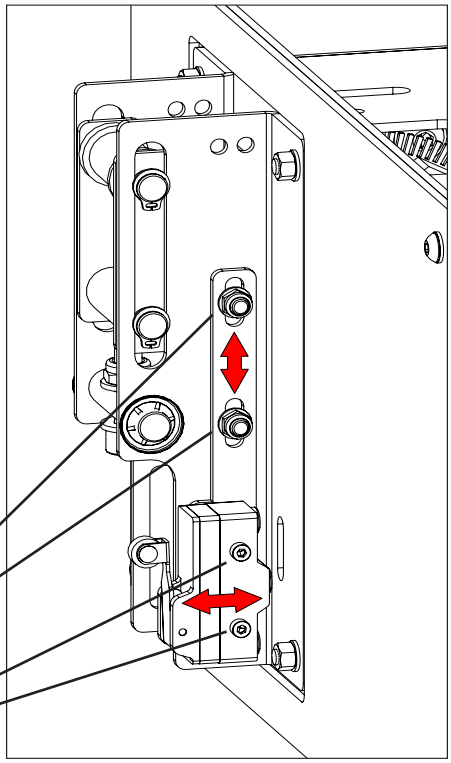
PANEL LEVELLING
& FINE ADJUSTMENTS

Strap adjustment can be found on the lift mechanism's left and right strap brackets. Rotate the bolt **clockwise to lower** and **anticlockwise to raise** the strap adjuster.

These adjusters can be used to both level the moving panel and or adjust the panel's final out position.







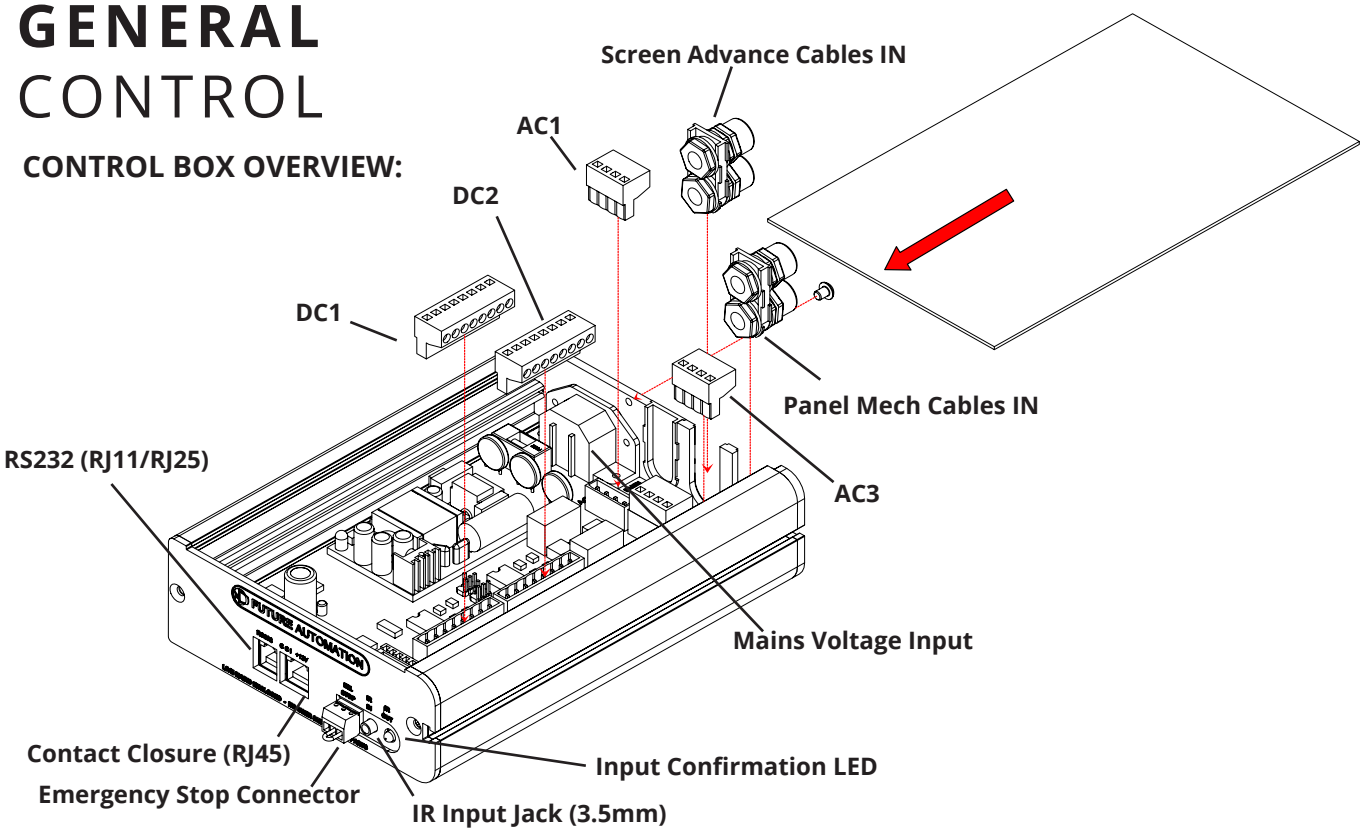
If necessary, the upper limit switch can be adjusted both forward & back, as well as up and down.

Loosen nuts to move bracket up/down

Loosen switch fixings to move bracket forward/back

GENERAL
CONTROL

CONTROL BOX OVERVIEW:

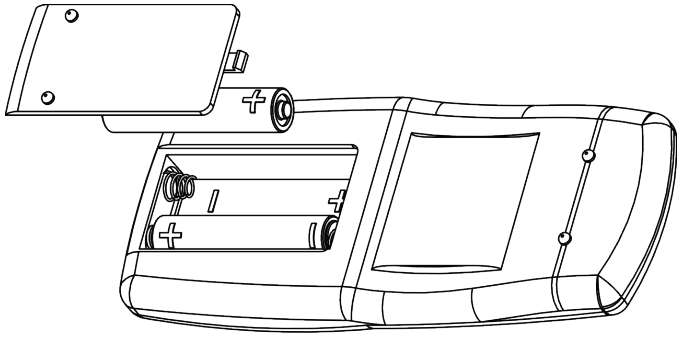


MECHANISM EMERGENCY STOP CONNECTOR

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)

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 site, 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:

Screen Advance Commands.

IN - Brings the mechanism into the enclosure, hiding the display.

OUT - Brings the mechanism out of the enclosure, revealing the display.

STORE, OUT - Stores the current location of the screen as the new OUT position.

STORE, STOP, OUT - Reset the OUT position to be just short of the service position.

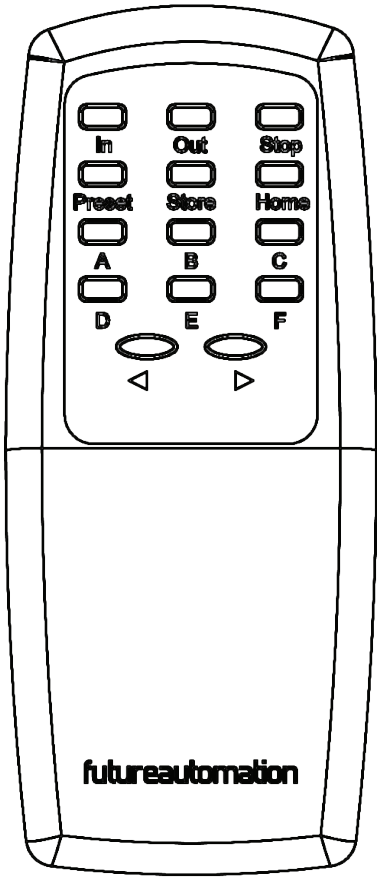
A - Pulses the mechanism IN to return to User Mode

B - Pulses the mechanism OUT into service mode to access rear of screen.

STORE, STORE, > - Advance screen forwards 1-2mm and store this position as the new OUT position.

STOP - Immediately stops the mechanism regardless of position.

STORE, STORE, HOME - Clear ALL programmed positions.



Panel Lift Commands.

STORE, IN - Stores the current location of the panel as the new IN position.

STORE, STOP, IN - Clears stored panel position and reverts to factory set position.

STORE, STORE, PRESET - Enters panel adjustment mode. Thereafter:

> - Adjusts the panel 10mm further **OUT**.

< - Adjusts the panel 10mm further **IN**.

F - Adjusts the panel 1mm further **OUT**.

D - Adjusts the panel 1mm further **IN**.

OUT - Exits panel adjustment mode. **Allow panel to fully retract before verifying the new panel out position.**

IMPORTANT NOTES

Only buttons indicated above are functional with the product. Any other button press will **STOP** the mechanism. No movement shall occur if an **IN** command is issued too close to the configured in position. This is to prevent the motor overrunning the configured **IN** position.

RADIO FREQUENCY
(RF)

If purchased with the Radio Frequency (RF) control option, this mechanism can be controlled via the supplied 4 button Radio Frequency (RF) Remote Control, paired with the in-built Radio Frequency (RF) sensor.

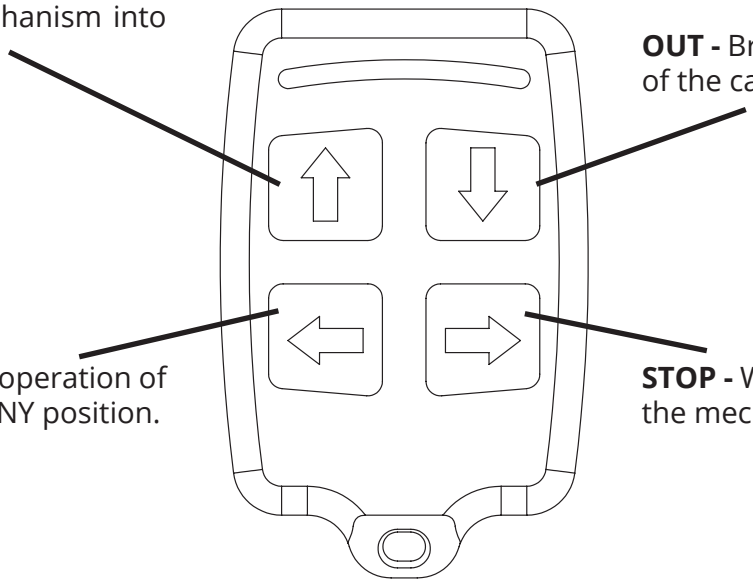
Confirmation of Radio Frequency (RF) input will be shown by a single flash of the large green LED located on the end of the control box.

Radio Frequency (RF) control does not require line of site, but signal can affected cabinet thickness, cabinet material or other electronic signals (i.e. strong WIFI signals).

Radio Frequency (RF) Remote Control Button Layout

IN - Brings the mechanism into the cabinet.

OUT - Brings the mechanism out of the cabinet.



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

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

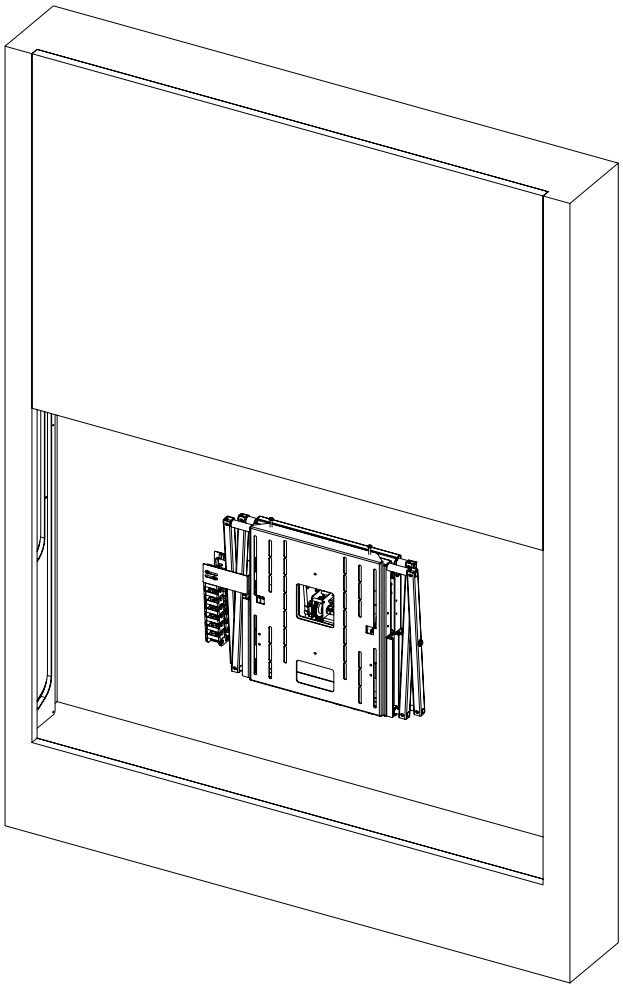
The Radio Frequency (RF) Remote Control can only be used to recall the above functions.

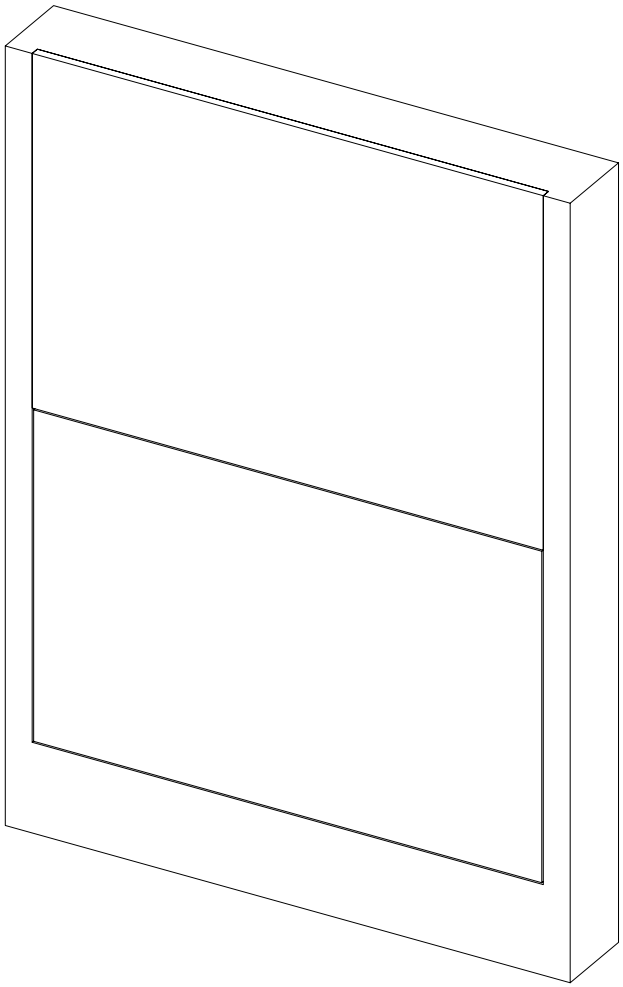
The mechanism limits and preset positions must be programmed using the supplied Infrared (IR) Remote Control.

IMPORTANT

Pressing any button while the mechanism is moving will STOP the mechanism.

SETTING THE MECHANISM
OUT POSITION (PANEL LIFT)



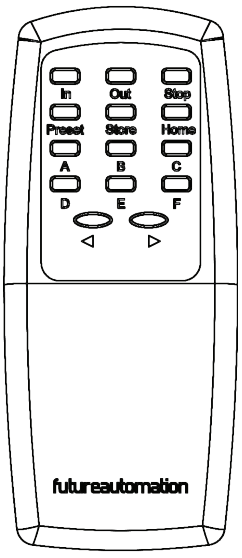


1 To set the panel's out position, press the OUT button so that the panel hits the upper limit switch. Once the limit switch is struck, press the IN button and then, once the panel reaches (or near) the desired position, press STOP.

2 Press STORE, followed by IN to set this position as the new out position for the panel. The position can be fine tuned by pressing STORE then STORE then PRESET, this will enter the panel adjustment mode. Please note that during fine adjustment, the panel will **NOT** move until adjustment mode is exited.

3 In adjustment mode, pressing **>** will lower the panel 10mm and **<** will raise the panel by 10mm. For fine adjustment, press **F** to lower panel by 1mm and **D** to raise by 1mm. To exit adjustment mode, press OUT and allow the panel to move its full travel before pressing IN to check the newly saved panel out position.

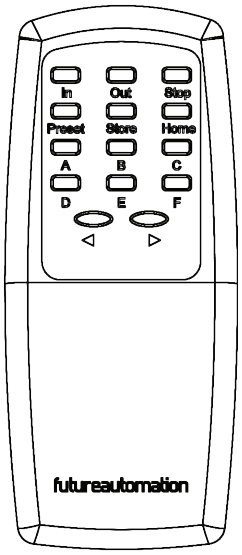
For example, the panel needs to be lowered by 25mm; whilst in adjustment mode press **<** twice and then **F** five times, then press the OUT button to save this position and exit adjustment mode. Finally press IN to check the newly saved out position.

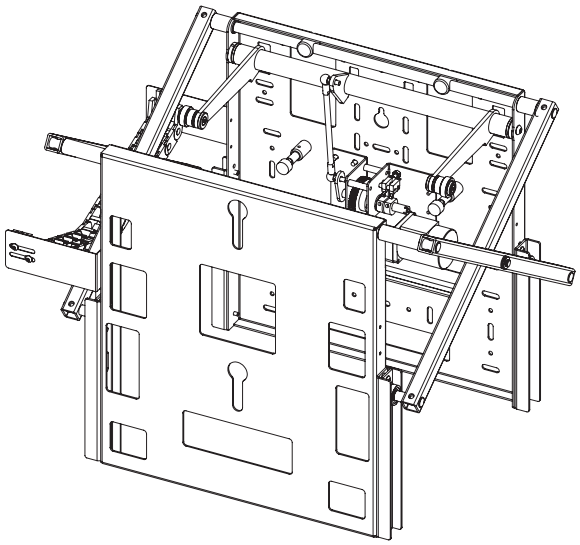


IMPORTANT

The panel motor will engage thermal cut out after 7 continuous operations

SETTING THE MECHANISM
OUT POSITION (SA)





1 To alter the OUT position of the screen advance, press the OUT button followed by the STOP button when the screen is at the desired position.

2 Press STORE, followed by OUT to set this position as the new OUT position. The position can be fine tuned by pressing STORE then STORE then >, this will move the screen forward 1-2mm and set this position as the new OUT position.

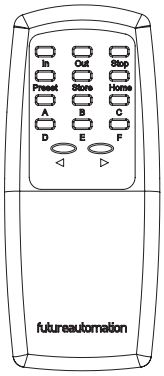
3 To reset the OUT position back to its default (maximum extension before hitting the service position) press Store then STOP then OUT.

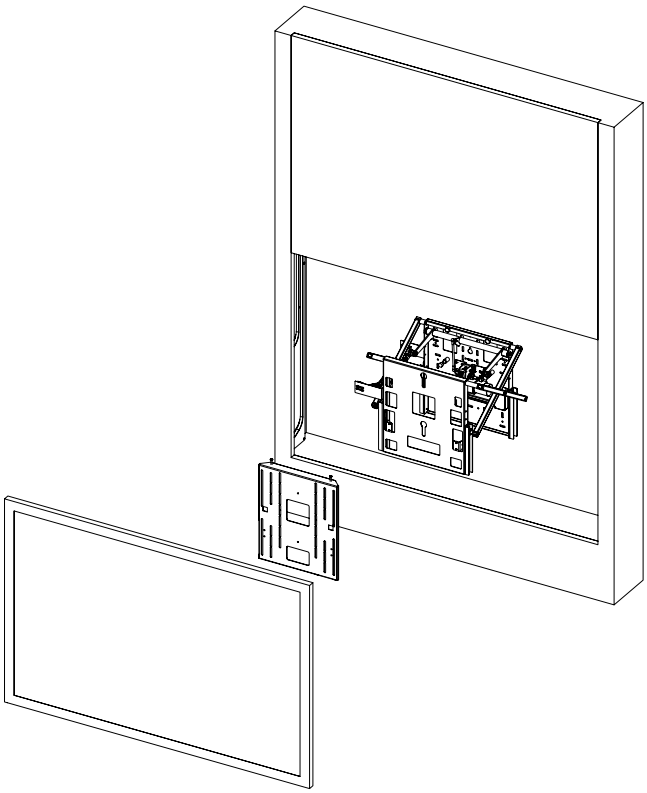
4 To enter service mode, push OUT to send the SA to its OUT position. Once in its OUT position, press B to pulse out to the Service Mode and then manually pull out the mechanism. Once adjustments are made push the mechanism back and press A to pulse the push arm back into the OUT position.

DISPLAY
FITTING

- Return the mechanism from service mode by pressing ‘A’ repeatedly on the IR remote. Once the mechanism cannot pulse any further, wait 2 seconds and the mechanism will return to user mode.

- Before fitting screen, make sure that the screen advance mechanism retracts far enough so that there will be no collision between the screen and the moving panel.





1

The mechanism should be fully extended before the screen can be fitted.

2

Press the ‘OUT’ button on the remote and wait for the RPS to fully extend.

3

Press ‘B’ on the IR remote repeatedly to pulse the mechanism fully out into its service mode.

4

Manually pull the mechanism out further so that the screen uprights can be bolted onto the frame.

5

Attach the screen uprights to the display and offer it to the mechanism.

6

Make final adjustments to the display by altering the height that the display is fixed to the upright slots, or adjusting the SA top bolt heads on the screen mount plate.

7

If further adjustments need to be made. Remove and reposition the display on the mounting uprights.

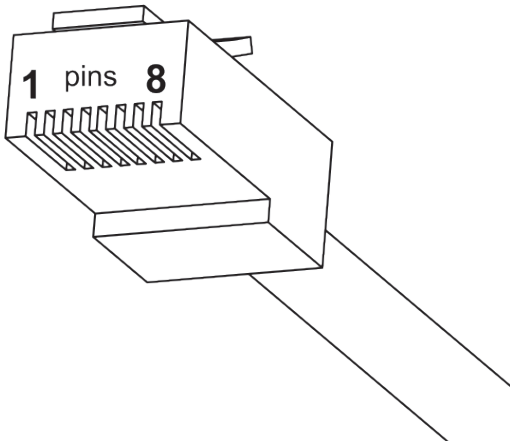
CONTACT CLOSURE

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.

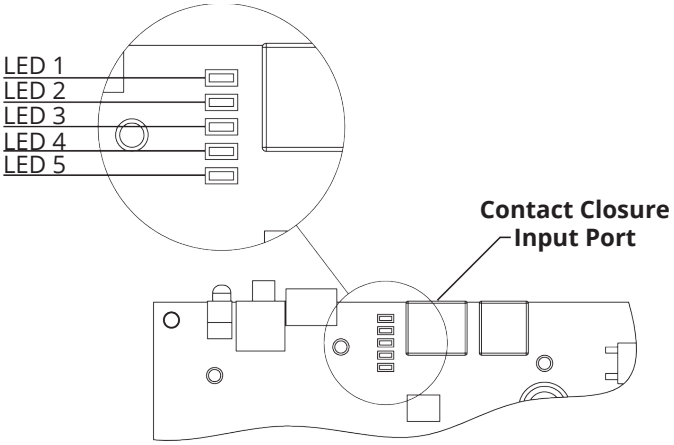
The mechanism's functions can be controlled by plugging this into the RJ45 port on the mechanism control board, then shorting pins 1-8 on this connector as shown in the Contact Closure Input Table below.

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

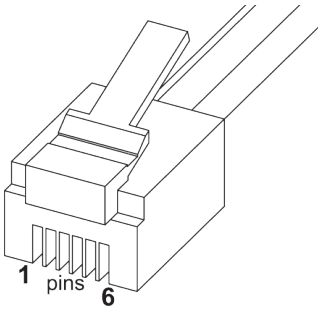
This Mechanism can be controlled via RS232, utilising a 6 Pin RJ11/RJ25 connector OR 9 Pin Serial connector attached to a length of 6 core cable.

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.

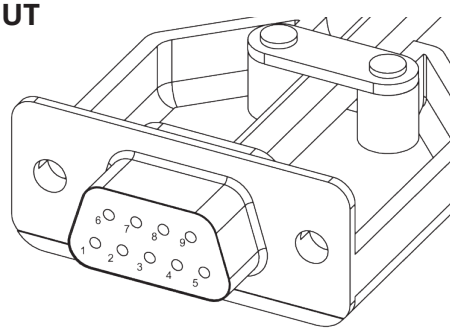
RJ11/RJ25 PIN LAYOUT

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

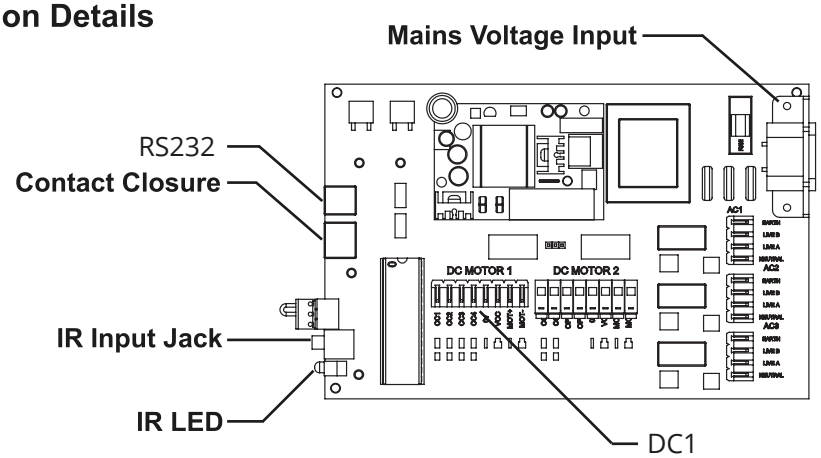
RJ11/RJ25	Func.	9 PIN Serial	Colour
PIN 1	TX-RX	PIN 2	Blue
PIN 3	GROUND	PIN 5	Green
PIN 4	GROUND	PIN 5	Red
PIN 6	RX-TX	PIN 3	White

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)

Operation Details



DC1
Low voltage power output for motor drive.LED's to show operation of limit switches and positional counters

NOTES:

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