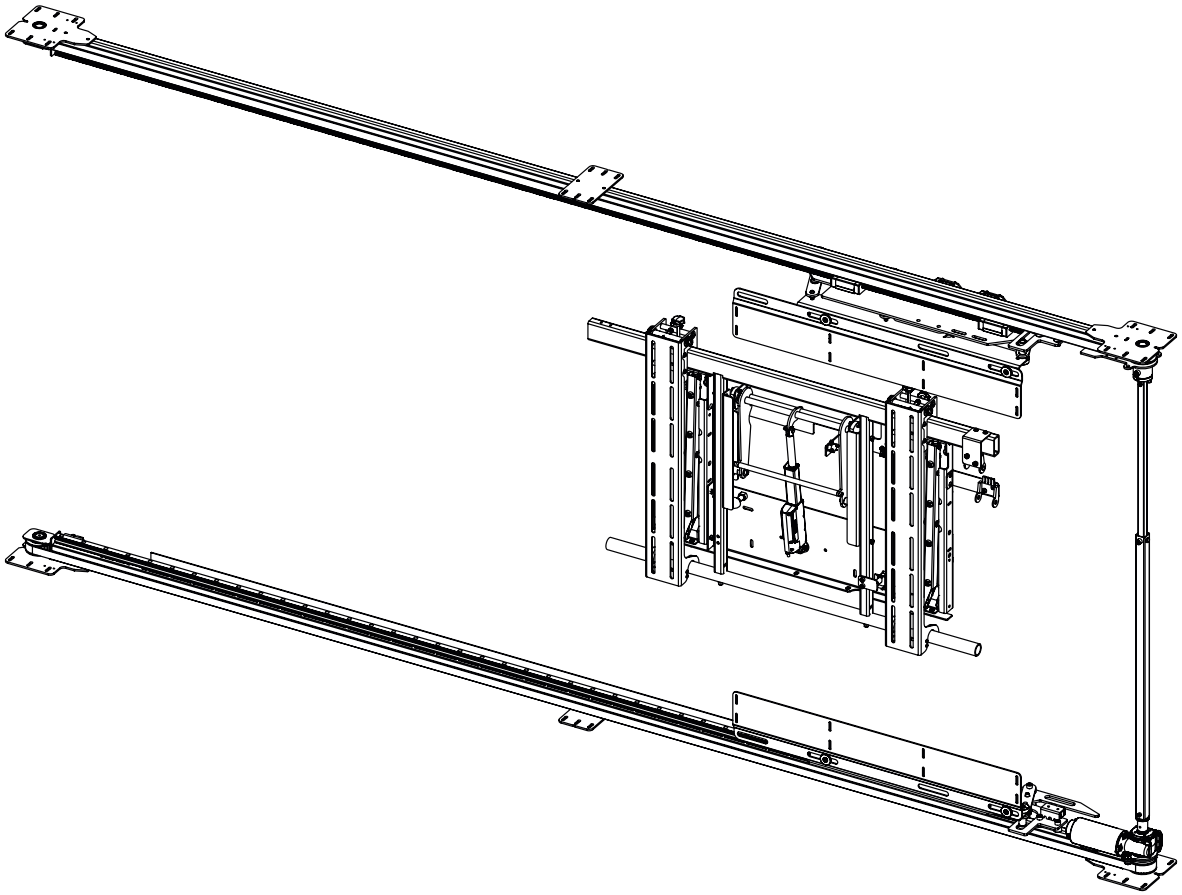
future automation

SPS-HZ

SLIDING PANEL SYSTEM HORIZONTAL
& ADVANCE BRACKET



INSTALLATION
INSTRUCTIONS

ISSUE **002**

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 panels weighing **15KG (33LBS) OR LESS**.
Only for use with screens weighing **100KG (220LBS) OR LESS**.

Use with heavier equipment/panels 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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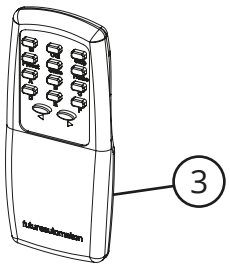
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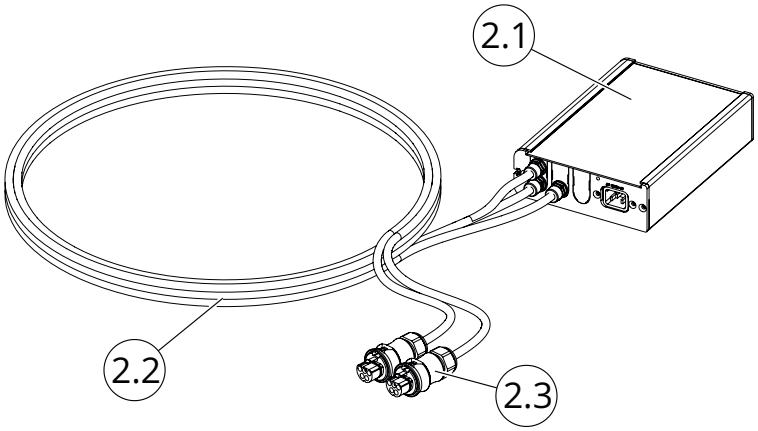
RS232 CONTROL 24

PACKAGE
CONTENTS



1 - SPS MECHANISM & AB OPTION
- 1.1 - PANEL MECHANISM BOTTOM (MOTOR SIDE)
- 1.2 - PANEL MECHANISM TOP (SLAVE SIDE)
- 1.3 - TELESCOPIC DRIVE SHAFT
- 1.4 - PANEL MOUNT PLATES
- 1.5 - ADVANCE BRACKET (AB)

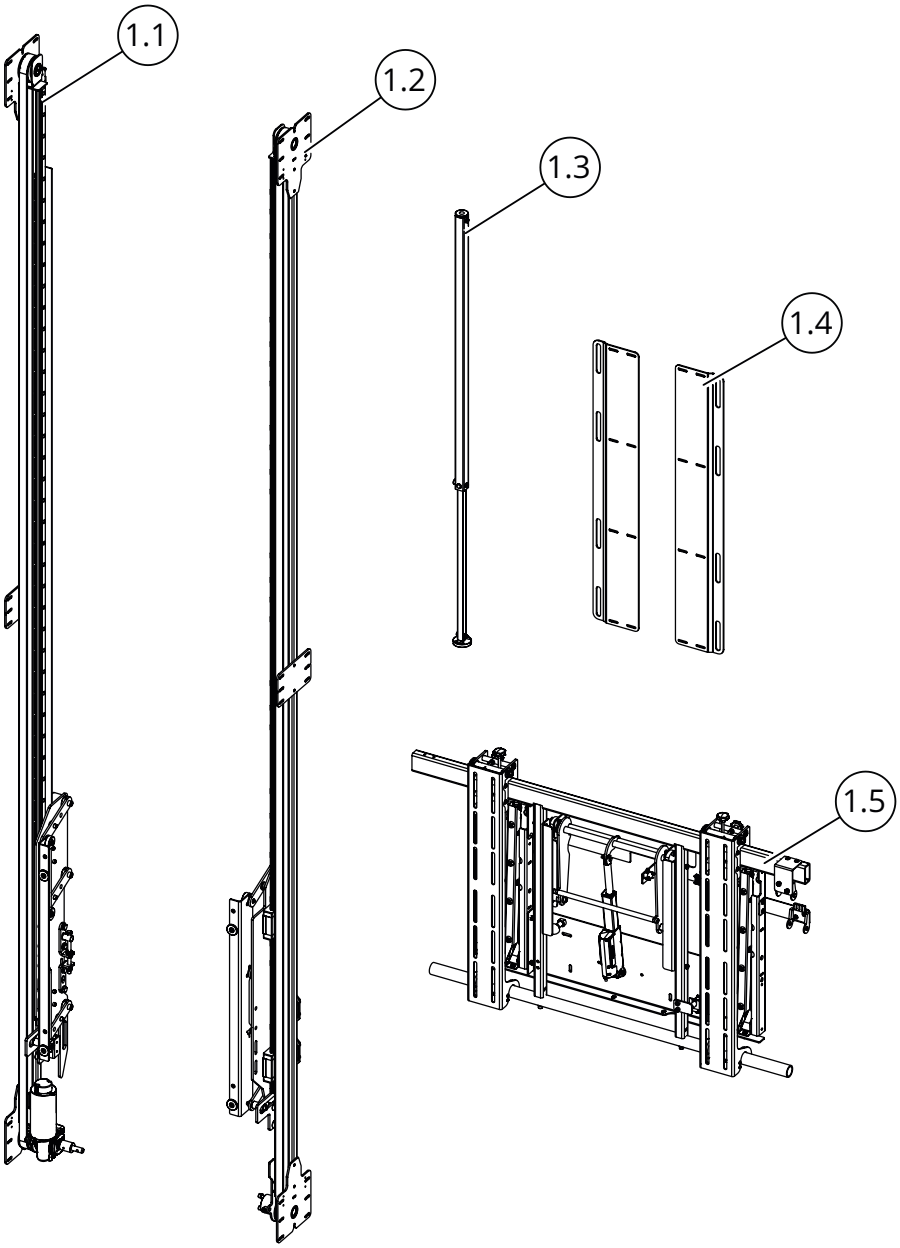
2 - CONTROL BOX
- 2.1 - CONTROL BOX
- 2.2 - 3M CABLE LOOM
- 2.3 - MECHANISM CABLE CONNECTORS



3 - IR REMOTE CONTROL

ITEMS NOT SHOWN ON PAGE

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



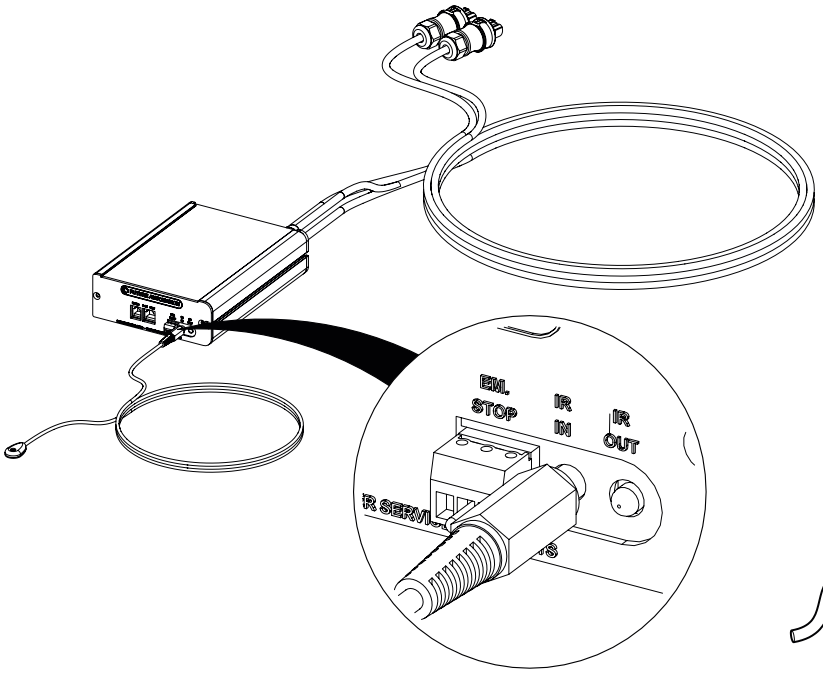
MECHANISM
PRETESTING

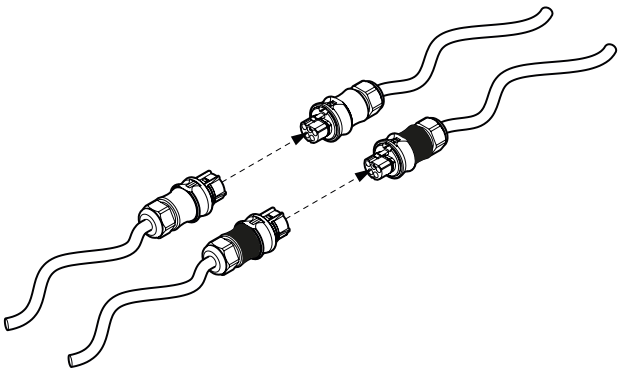
Before installing your mechanism, please check that:

- The product is in good condition
- All wiring is secure

1

Connect the control board to the SPS and AB using the mechanism cable connectors at the end of the cable looms. Connect the IR into the control box and ensure that the emergency stop is secure.



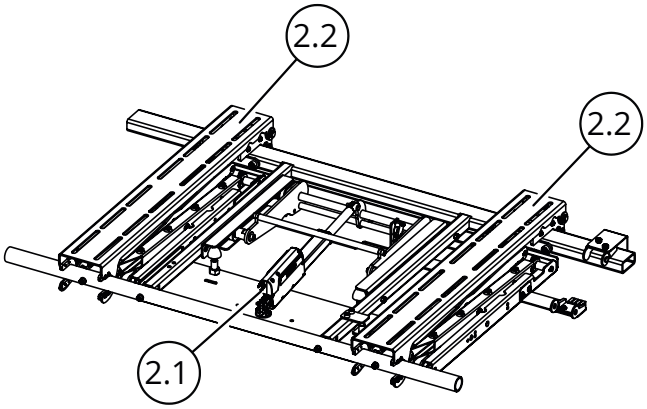


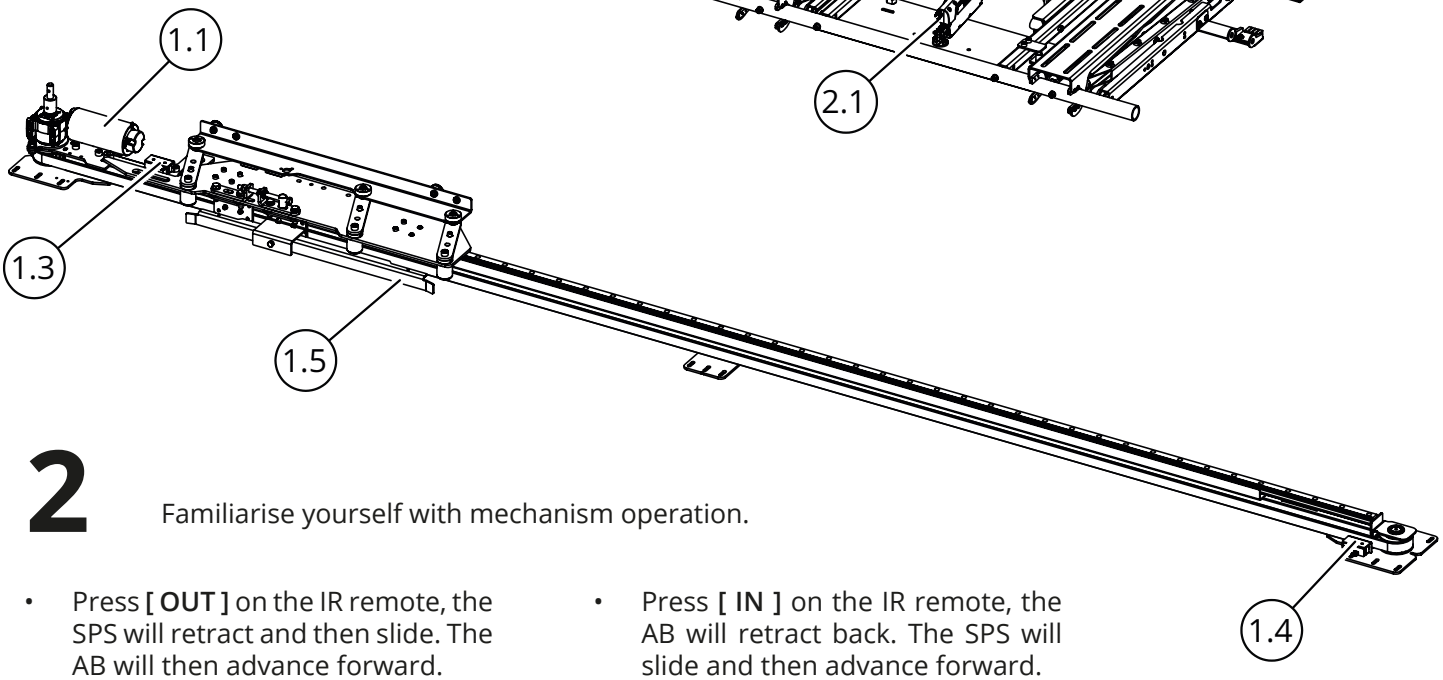
1 - SPS MOTOR SIDE

1.1 - DRIVE MOTOR
1.2 - MOVING PANEL BRACKET
1.3 - PANEL IN SWITCH
1.4 - PANEL OUT SWITCH
1.5 - UP SWITCH STRIKER

2 - ADVANCE BRACKET

2.1 - DRIVE ACTUATOR
2.2 - MOUNT UPRIGHTS





2

Familiarise yourself with mechanism operation.

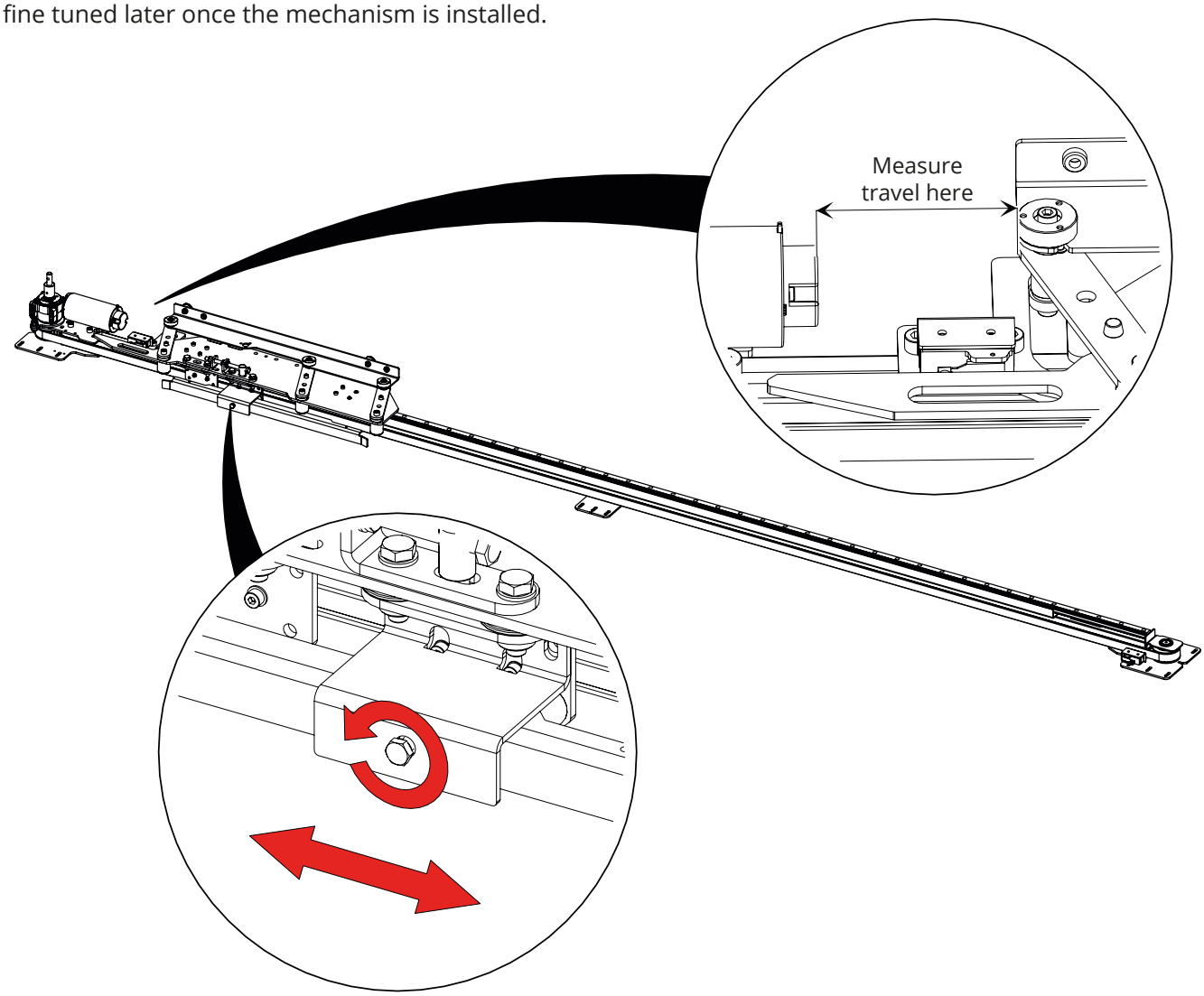
- Press **[OUT]** on the IR remote, the SPS will retract and then slide. The AB will then advance forward.
- Press **[IN]** on the IR remote, the AB will retract back. The SPS will slide and then advance forward.

MECHANISM
PRETESTING CONT.

Mechanism is factory set to travel the maximum travel.

3

Set up the mechanism travel by adjusting the out switch striker. **The mechanism travel should be set to be Panel Height + 25mm [1”]**. This can be fine tuned later once the mechanism is installed.



5

To adjust the OUT switch striker, loosen the bolt and slide the switch striker to the desired position.

Sliding the striker away from the motor reduces the travel and towards the motor increases the travel.

6

Ensure the clamp bolt is retightened once adjustments have been made.

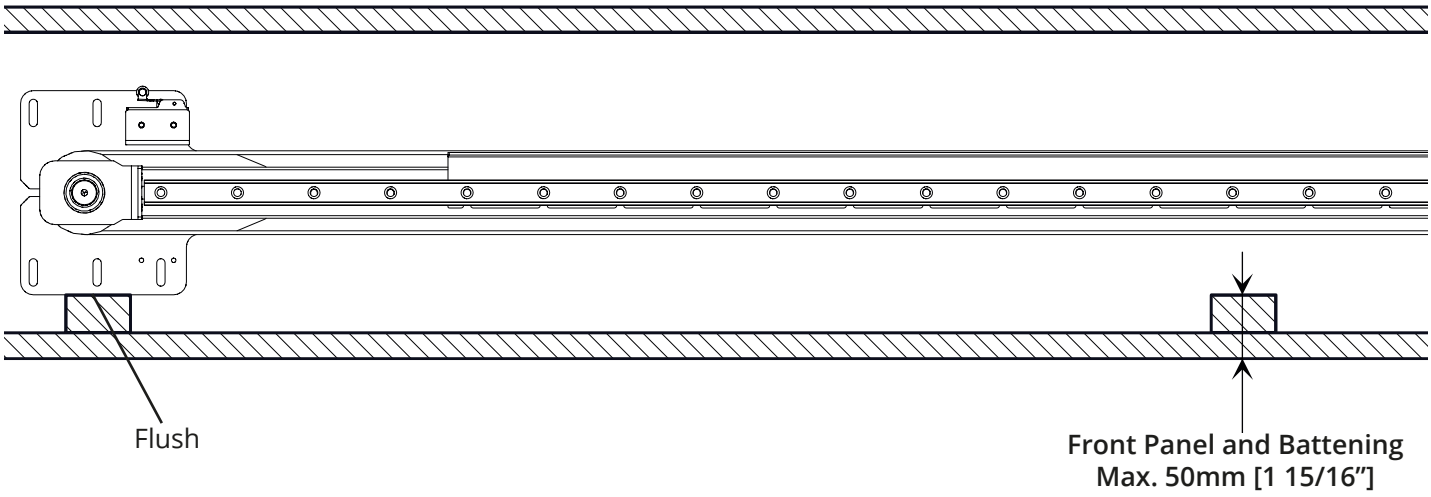
PANEL MECHANISM
POSITIONING

1

Mechanism needs to be positioned so the mount brackets are flush with the inside face of the front panel and battening.

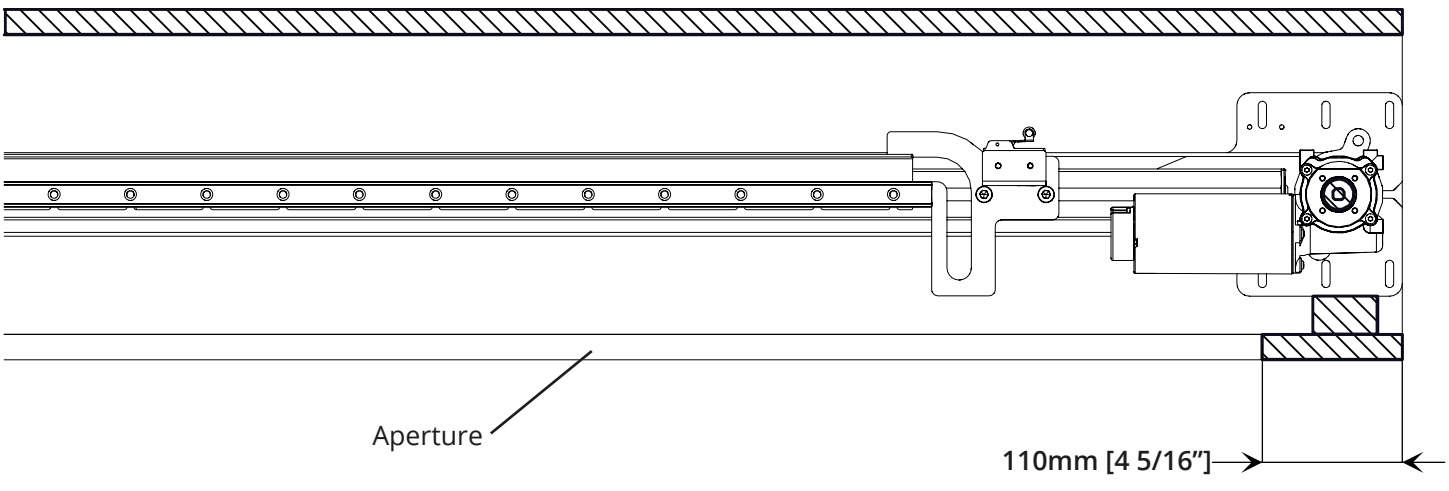
For moving panels thicker than 30mm [1 3/16”] move the mechanism back by the extras thickness above 30mm [1 3/16”].

Example : For a 40mm [1 9/16”] panel move mechanism 10mm [3/8”] back.



2

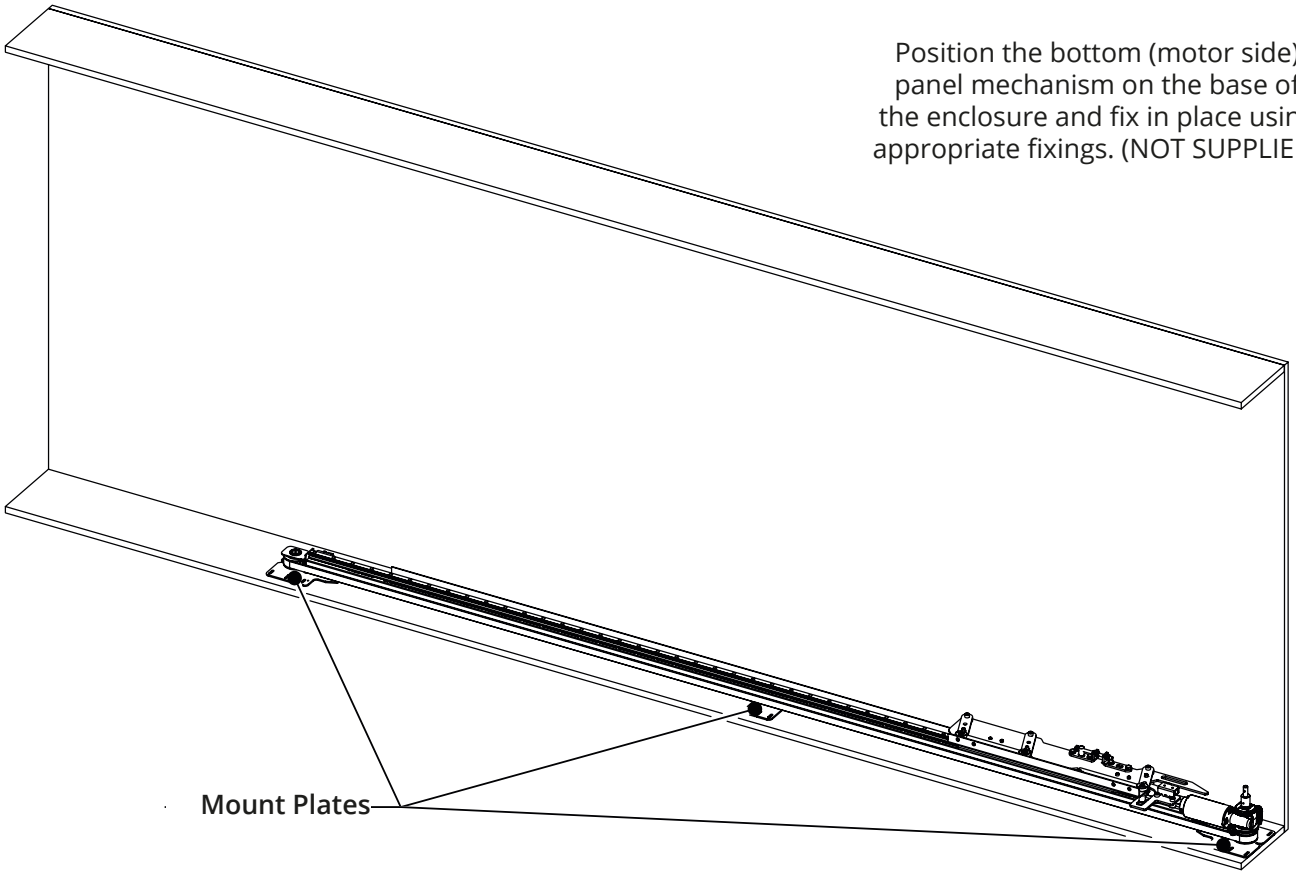
Position the motor side edge of the panel mechanism 110mm [4 5/16”] to the side of the aperture.

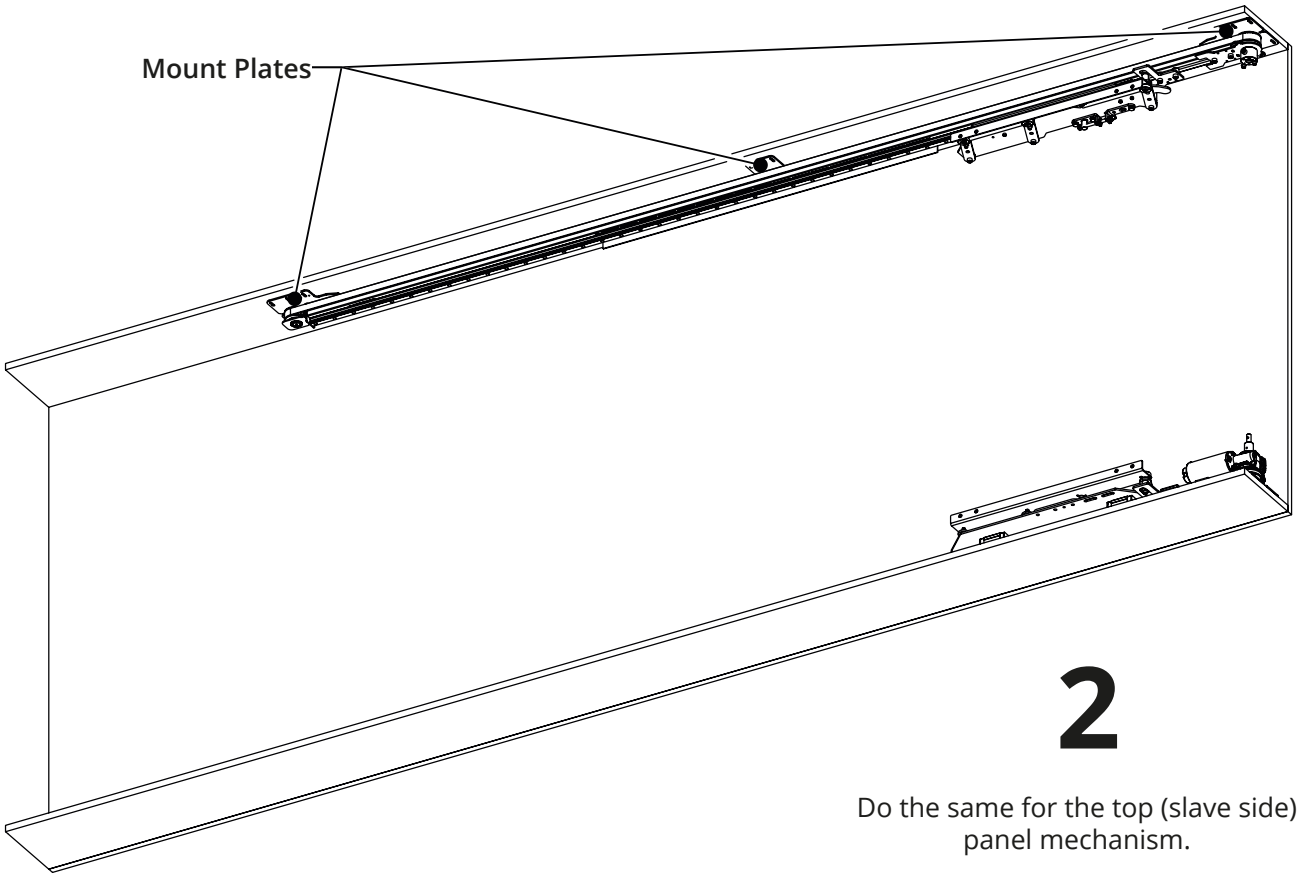


PANEL MECHANISM
INSTALLATION CONT.

1

Position the bottom (motor side) panel mechanism on the base of the enclosure and fix in place using appropriate fixings. (NOT SUPPLIED)

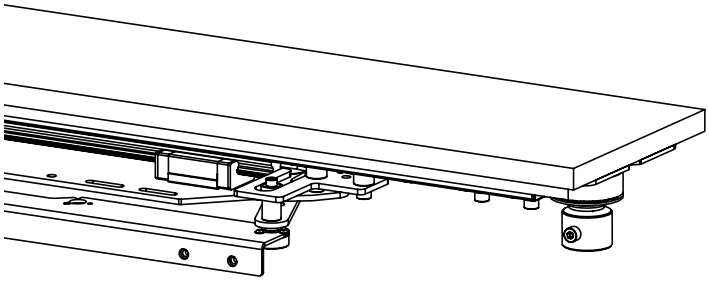


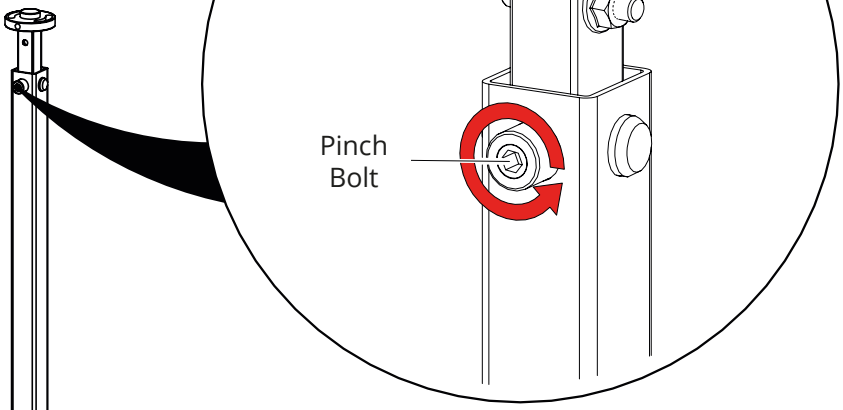


2

Do the same for the top (slave side) panel mechanism.

DRIVE SHAFT
INSTALLATION



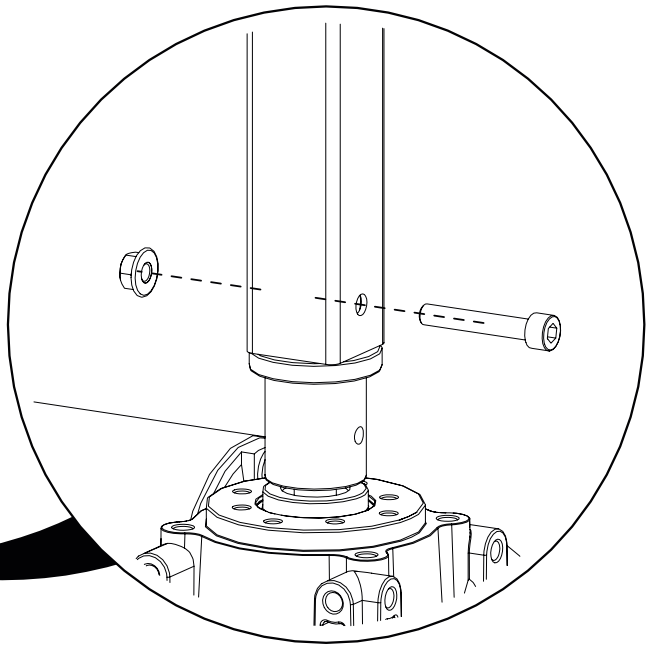


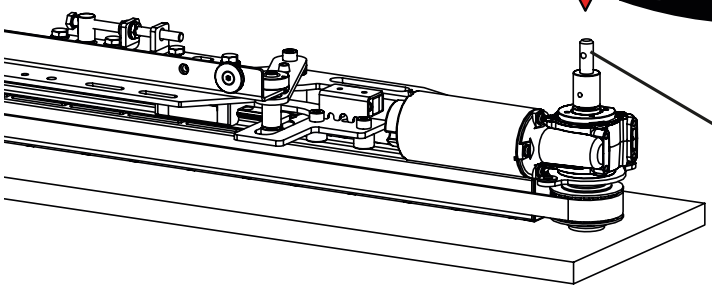
1

Loosen the pinch bolt. Extend the drive shaft between the two sides of the mechanism, so that it locates on the drive spigots.

2

Fix the drive shaft to the motor side using the M5 nut and bolt provided.





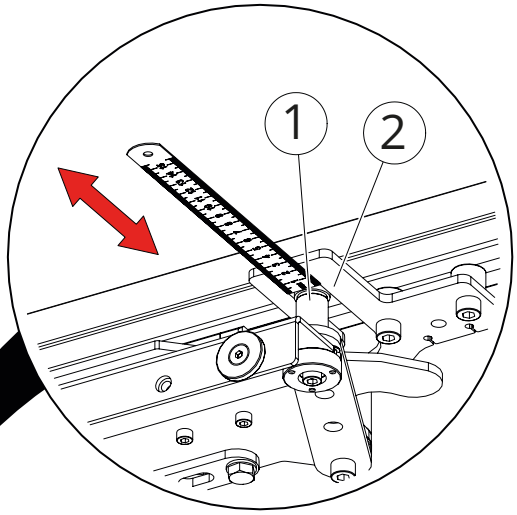
DRIVE SHAFT
INSTALLATION CONT.

3

Check that both the motor and slave side are level and have the same position (front to back).

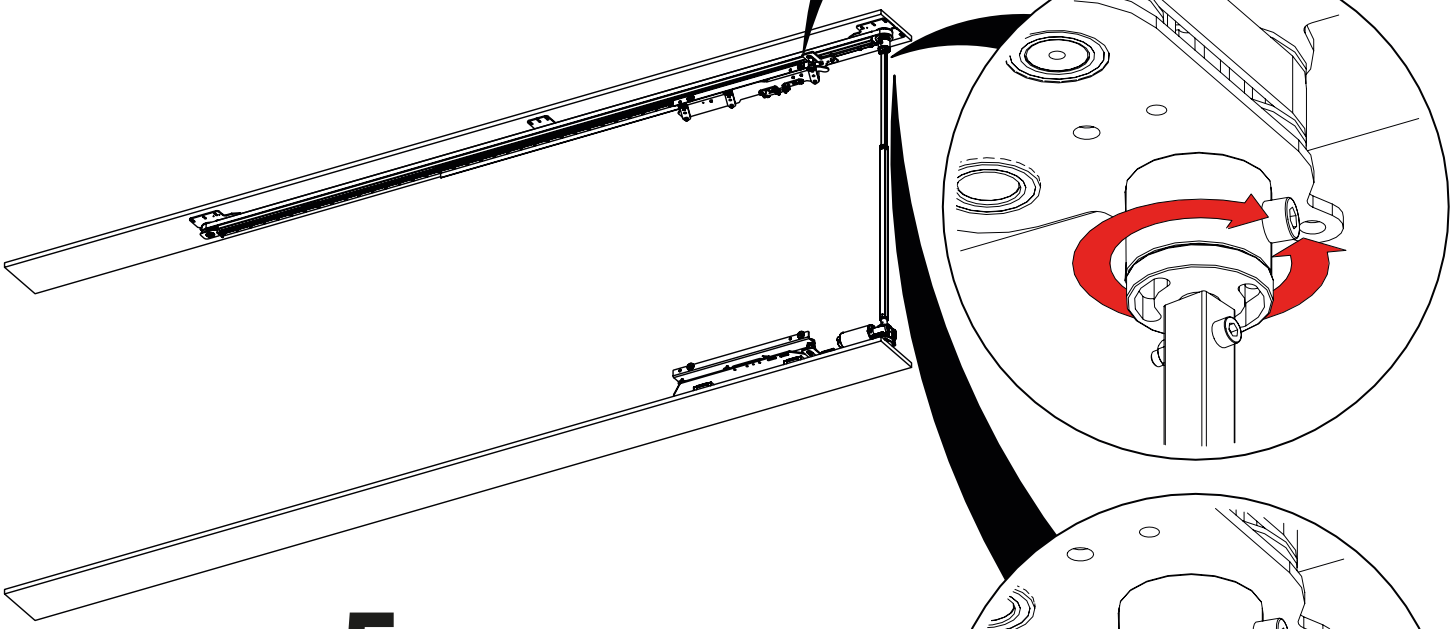
Measure from the guide pin to the front edge of the guide plate on both sides.

SLOTTED COUPLER ADJUSTMENT
1 - GUIDE PIN
2 - GUIDE PLATE



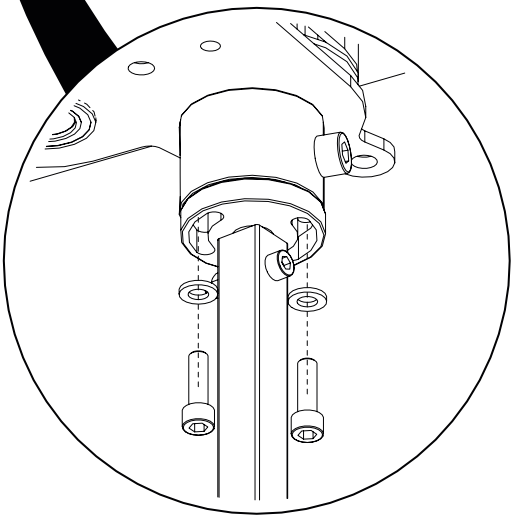
4

Adjust only the slave side so that it has the same advance as the motor side by rotating the drive shaft coupler.



5

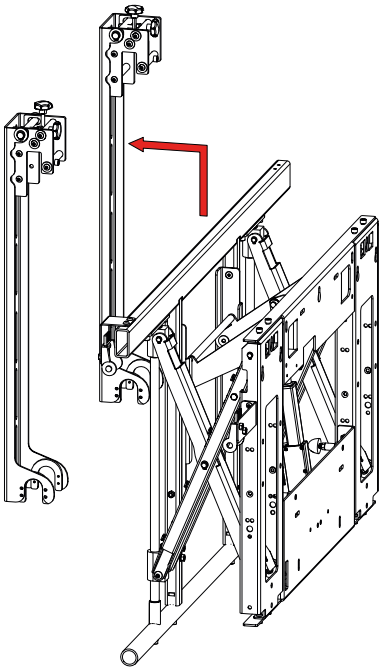
Once in position, bolt through the flange into the drive shaft coupler.



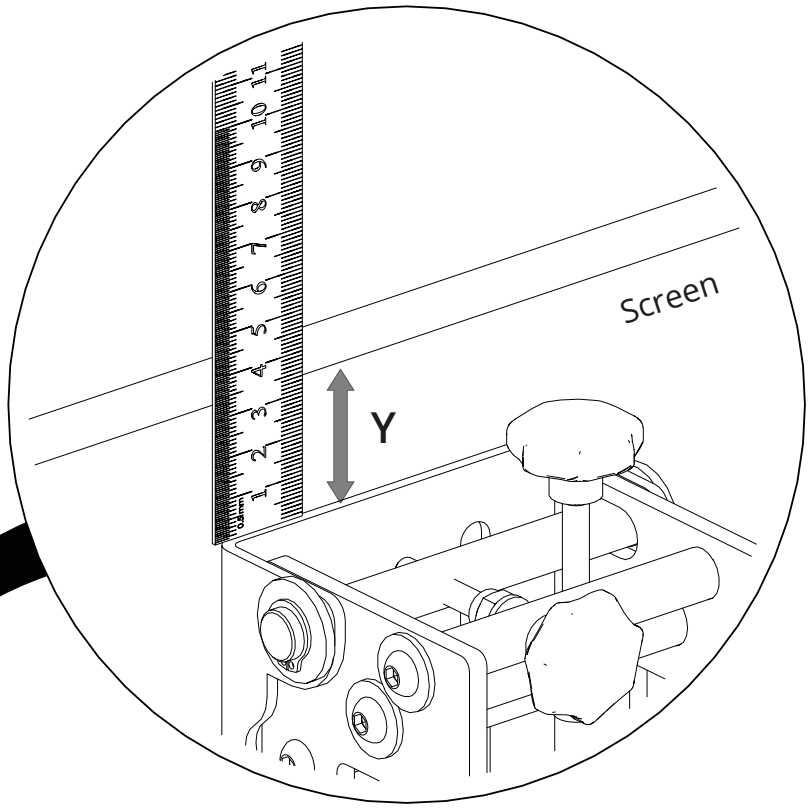
6

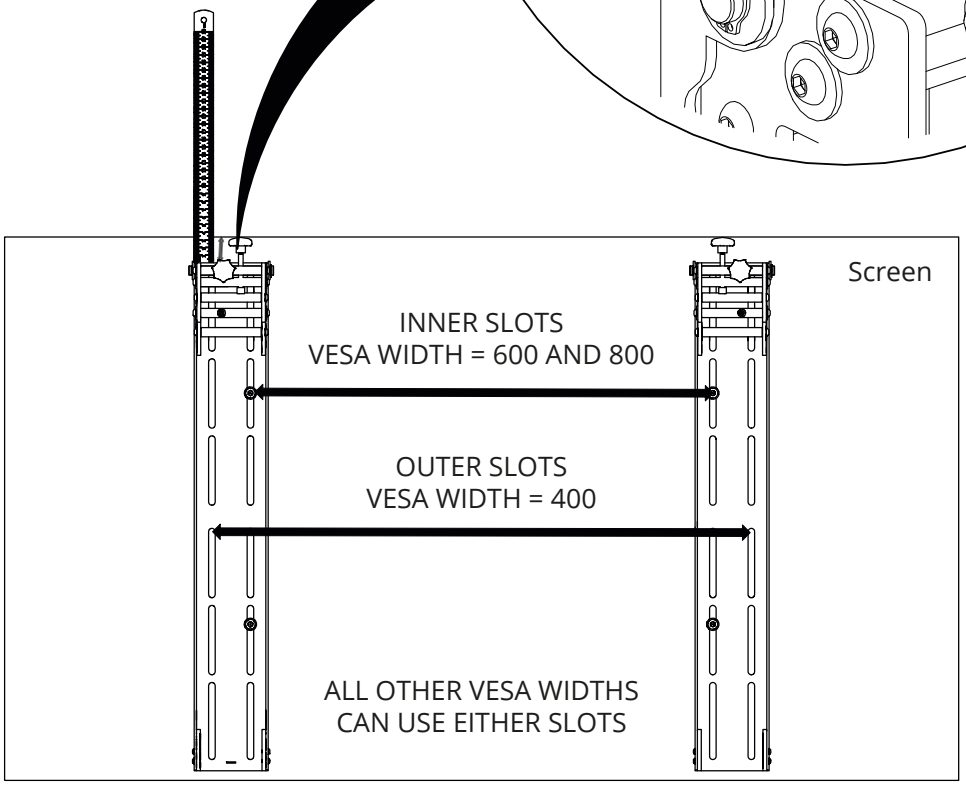
Ensure pinch bolt is retightened.

ADVANCE BRACKET
BOLTING SCREEN TO UPRIGHTS



1 Remove uprights from mechanism.





2

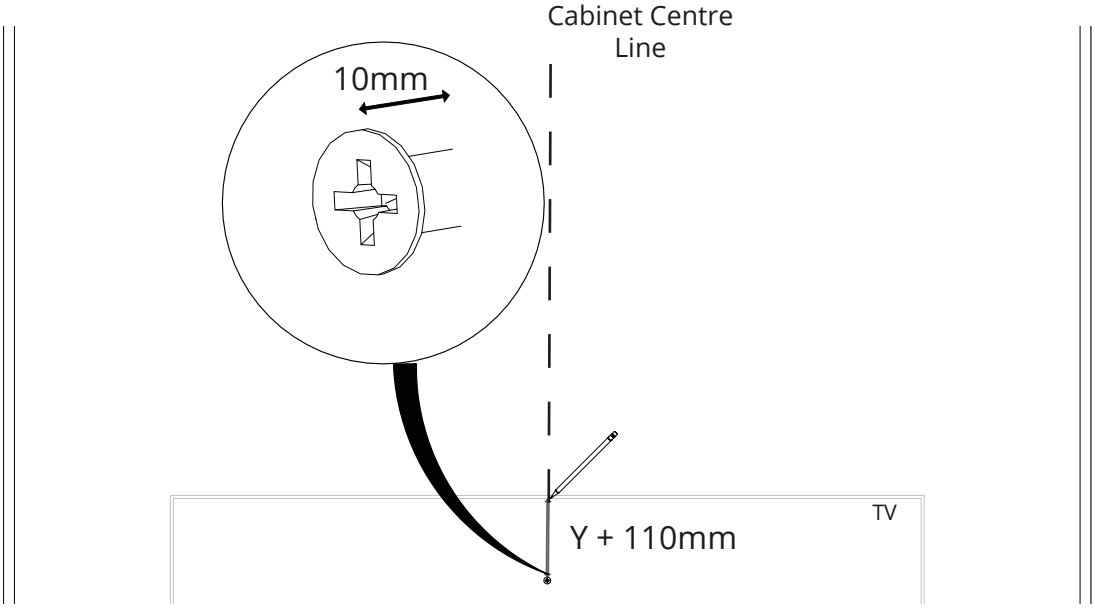
Select the correct slots.

Bolt uprights to screen.

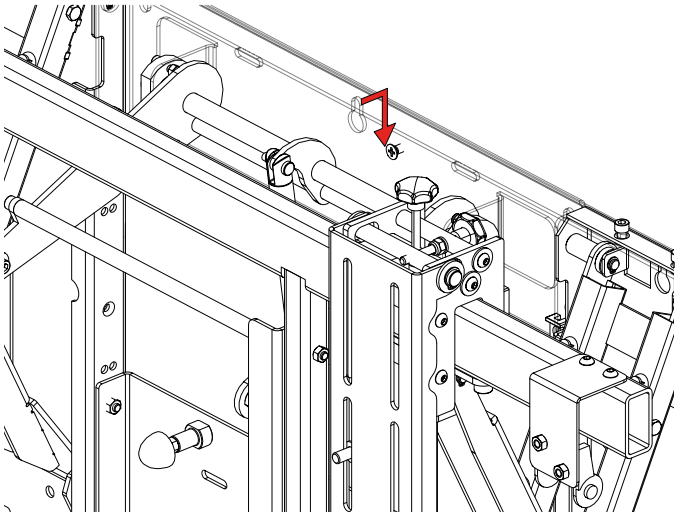
Measure from the top of the screen to the top of the bracket. This is dimension 'Y'.

ADVANCE BRACKET
MOUNTING TO CABINET

1

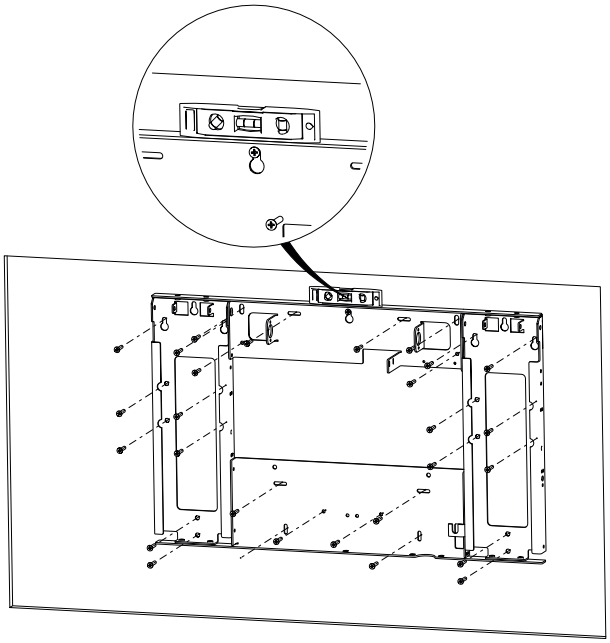


2



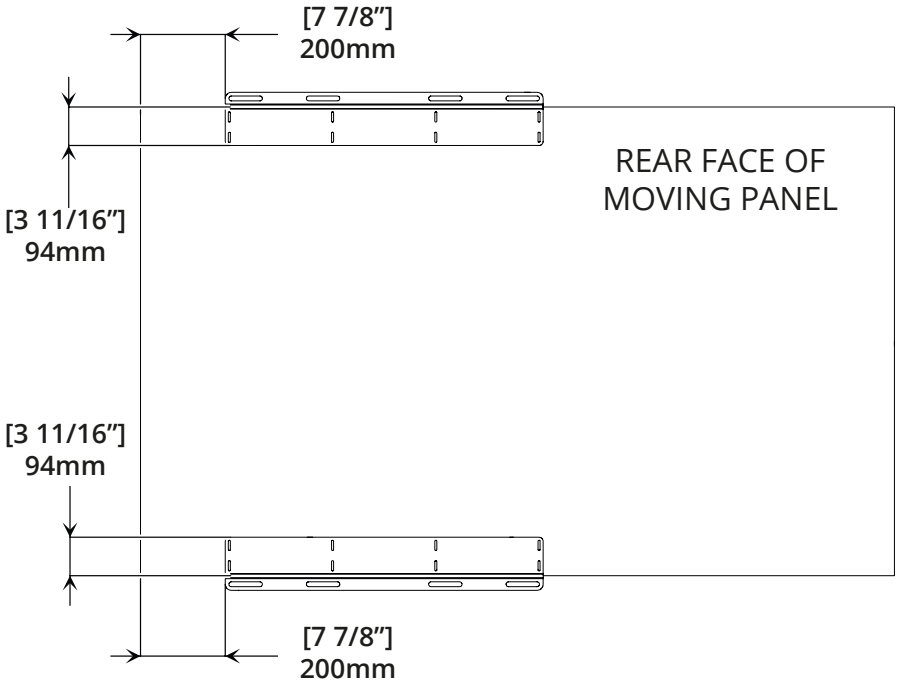
Hook bracket on single fixing.

3



Level bracket and then use other fixing points to secure bracket.

MOVING PANEL
MOUNTING



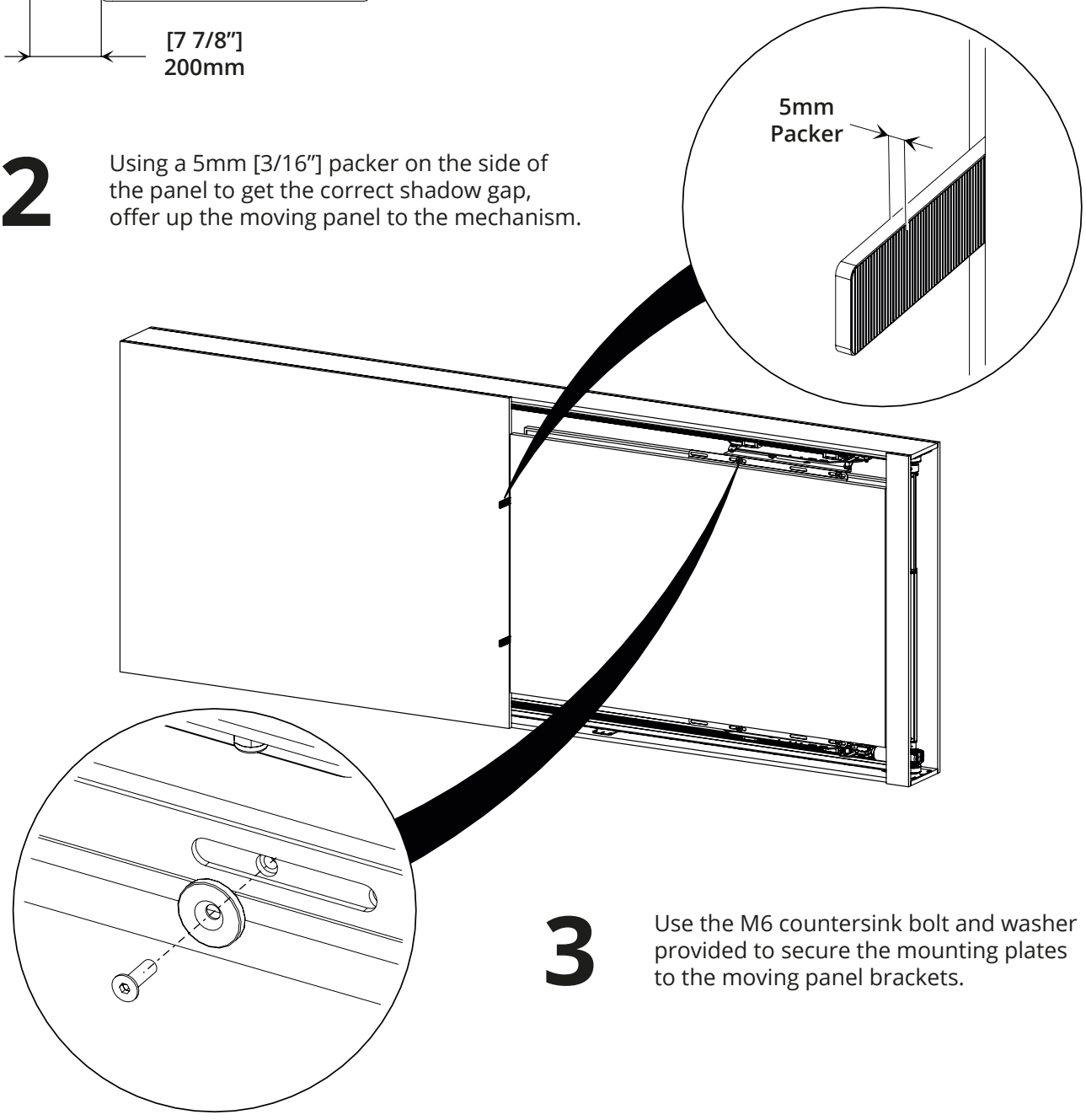
1

Use suitable fixings (NOT SUPPLIED) to attach the mounting plates to the rear face of the moving panel.

The moving panel has a minimum thickness of 30mm [1 3/16"]. For thinner panels a packer is needed behind the panel to increase it's depth up to 30mm [1 3/16"].

2

Using a 5mm [3/16"] packer on the side of the panel to get the correct shadow gap, offer up the moving panel to the mechanism.



3

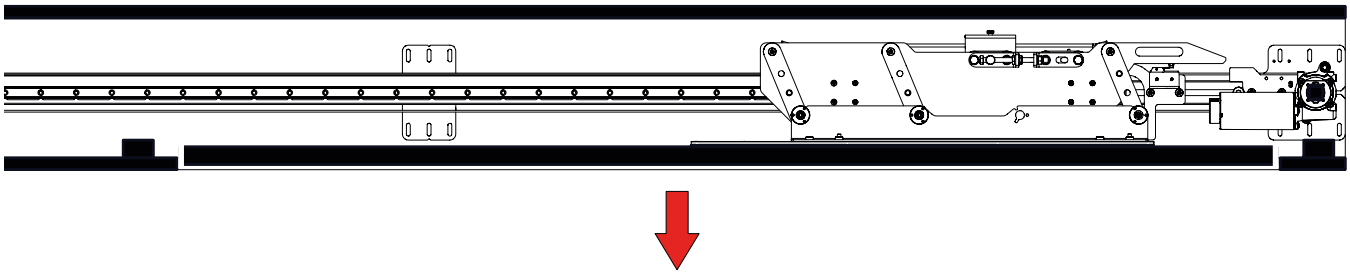
Use the M6 countersink bolt and washer provided to secure the mounting plates to the moving panel brackets.

IN POSITION
PANEL ADVANCE ADJUSTMENT

1 To adjust the moving panel 'IN' position, first ensure the mechanism is 'IN' by pressing **[IN]** on the IR remote.

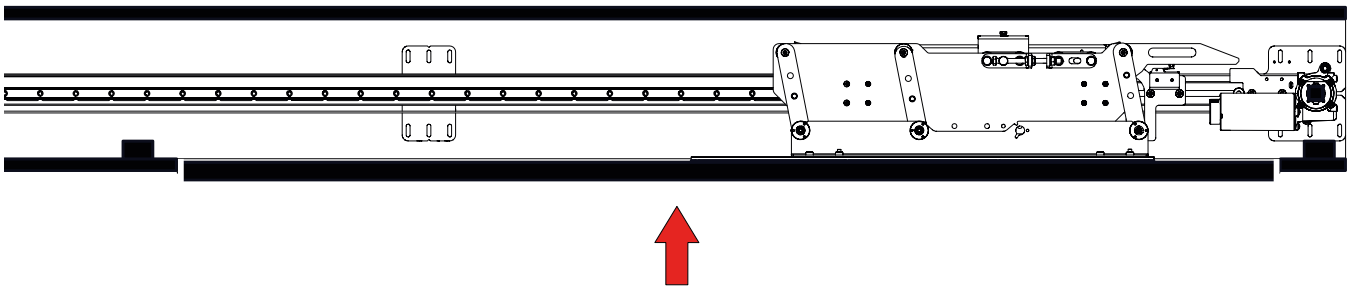
2

Move stored position 1mm OUT, press: **[PRESET]** + **[>]**
Example:
Move stored position 10mm OUT, press: **[PRESET]** + 10x **[>]**



3

Move stored position 1mm IN, press: **[PRESET]** + **[<]**
Example:
Move stored position 10mm IN, press: **[PRESET]** + 10x **[<]**



4 To check the adjustments made:

Press **[OUT]** on the IR remote.
Press **[STOP]** on the IR remote once the mechanism has come off of the in switch.
Press **[IN]** on the IR remote to move the panel to the new 'IN' position.

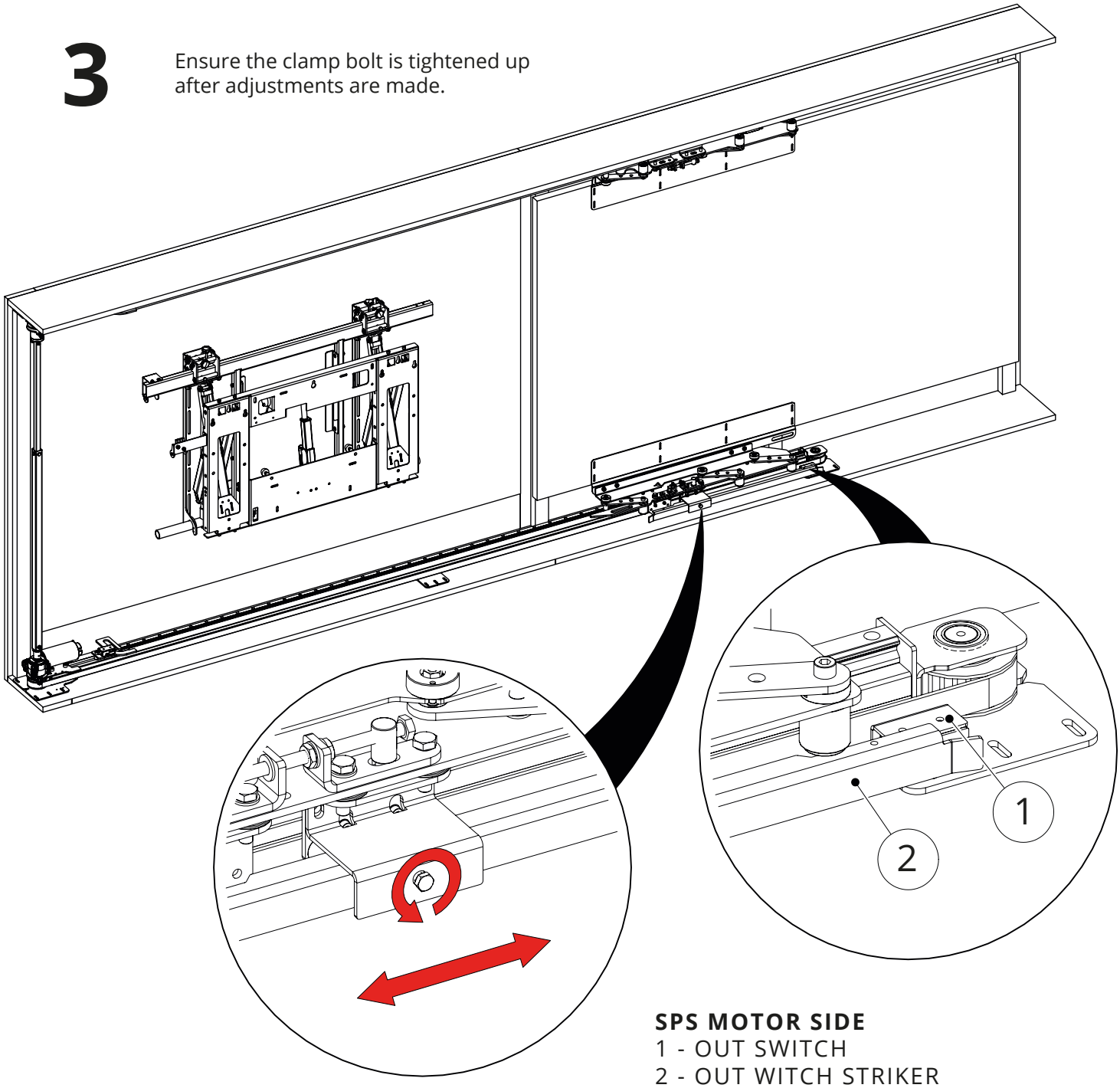
If further adjustment is required, repeat steps 2 or 3 as needed.

OUT POSITION
PANEL UP ADJUSTMENT

1 Panel OUT position should have been roughly set prior to installing the mechanism. (Sheet 6)

2 Loosen the clamp bolt. Sliding the striker up will reduce the mechanism travel and sliding down will increase the travel.

3 Ensure the clamp bolt is tightened up after adjustments are made.



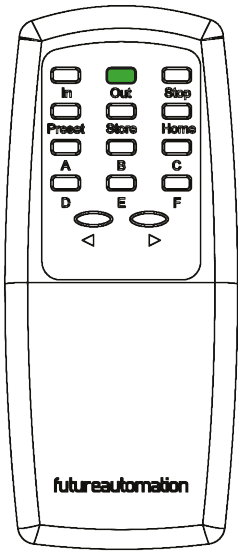
SPS MOTOR SIDE
1 - OUT SWITCH
2 - OUT WITCH STRIKER

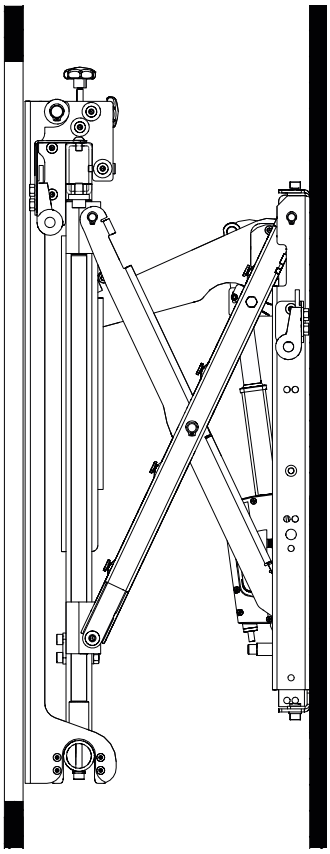
ADVANCE BRACKET
ATTACHING SCREEN

1

OUT

Press [**OUT**]

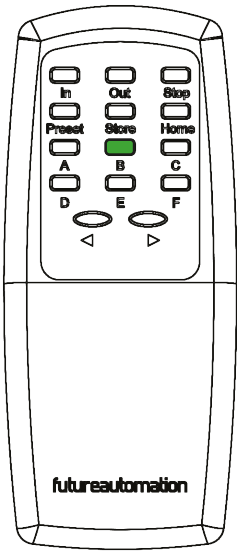


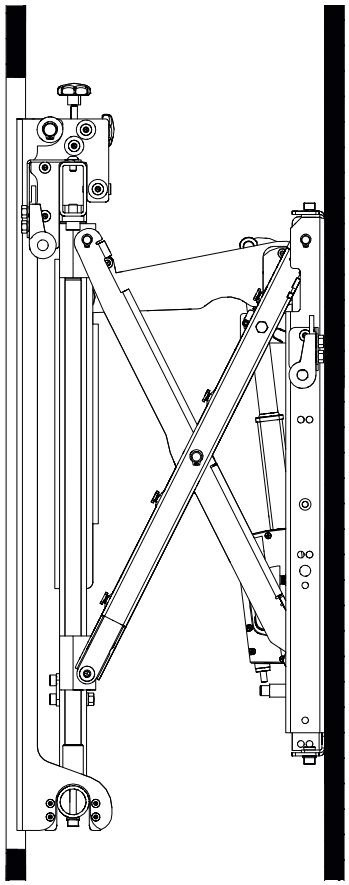


2

SERVICE

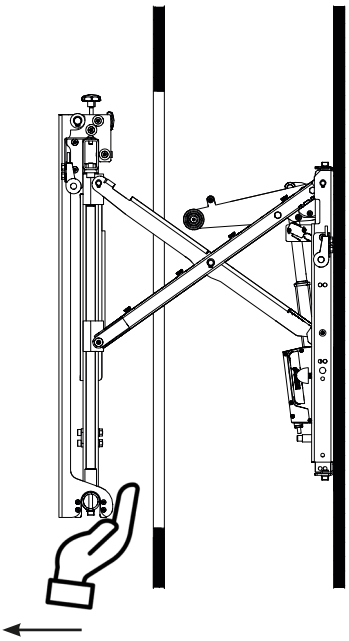
Press [**B**]





3

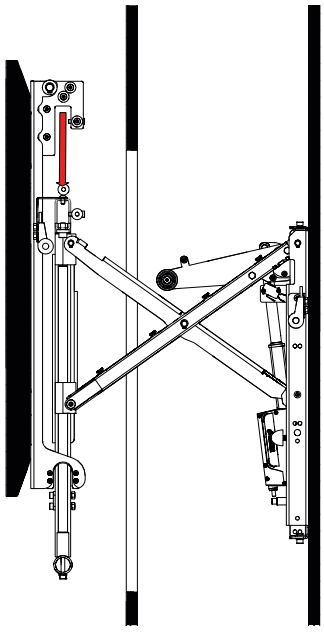
SERVICE FULLY OUT



Pull mechanism out until it stops.

4

HOOK SCREEN ON



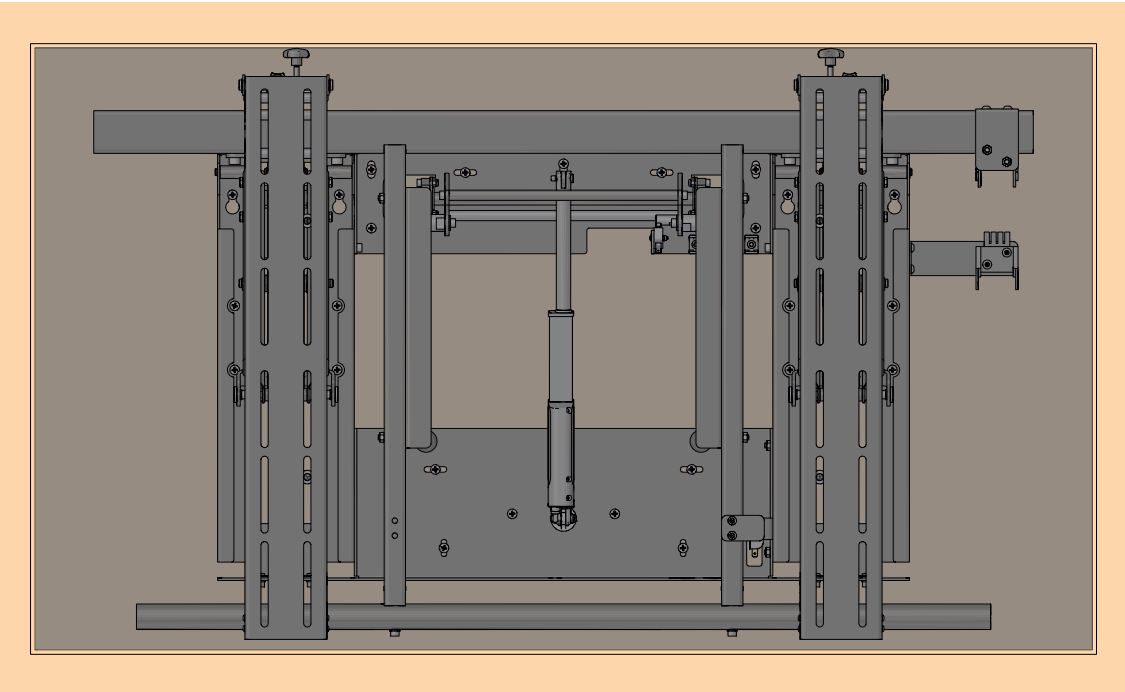
Hook screen onto mechanism.

ADVANCE BRACKET
ATTACHING SCREEN CONT.

5

IT IS IMPORTANT AT THIS POINT TO MAKE SURE SCREEN IS ADJUSTED INTO A POSITION THAT WILL ALLOW IT TO FIT THROUGH THE APERTURE.

SEE PAGE 19 FOR SCREEN ADJUSTMENTS.

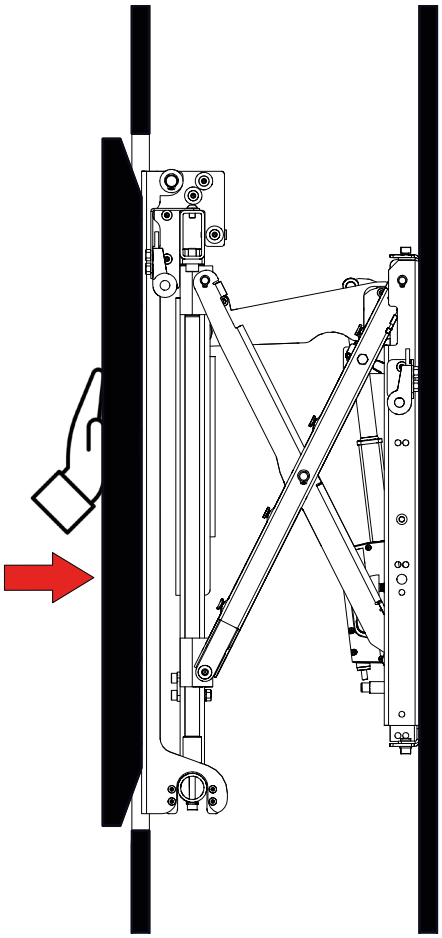


6

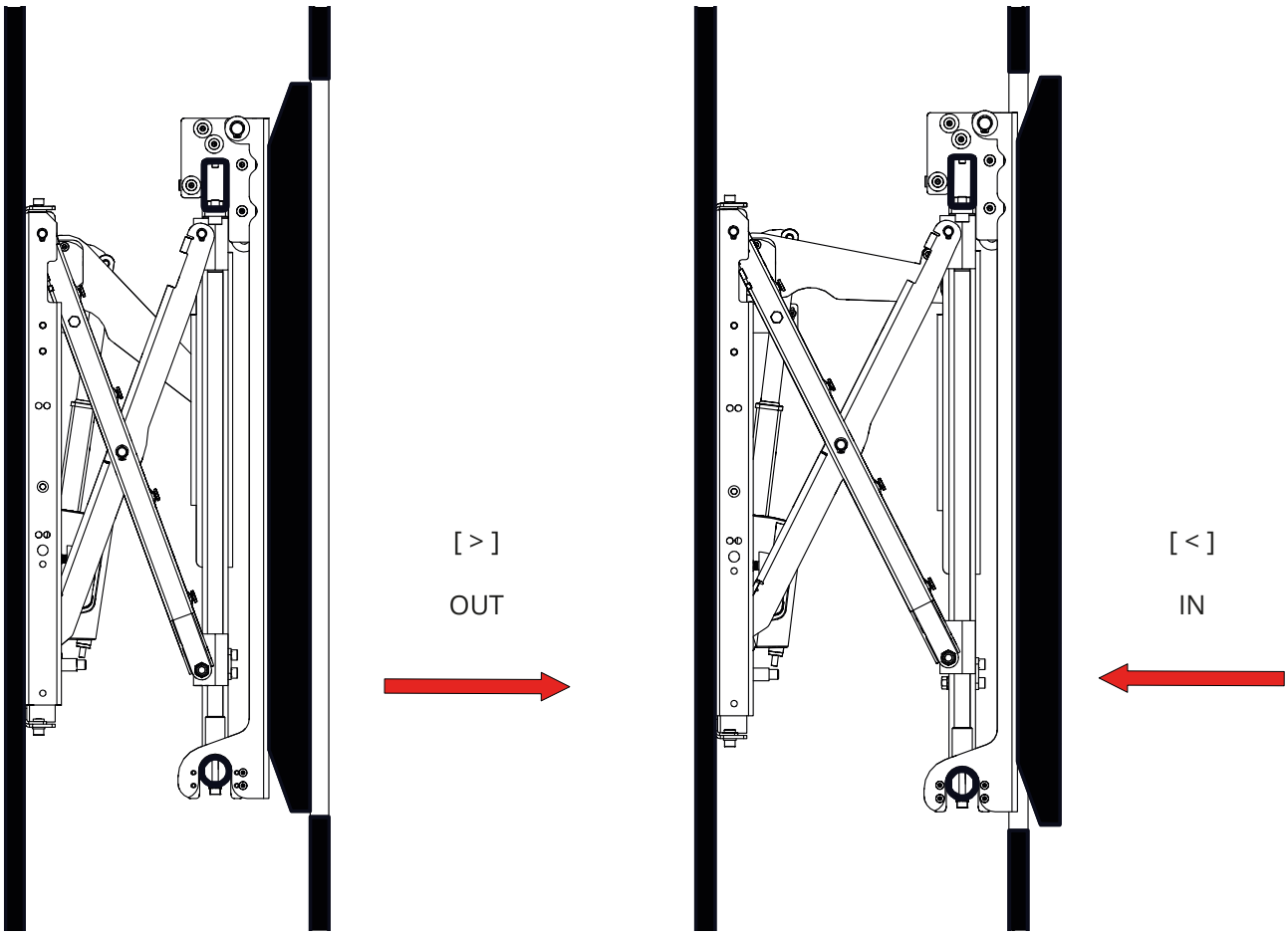
Gently push screen whilst
Holding [A]
until screen stops moving.

IT IS IMPORTANT AT THIS POINT TO MAKE SURE THE ROLLERS ARE BACK IN THE CHANNEL.

Check this by gently pulling screen out to make sure it is fully engaged.



ADVANCE BRACKET
SETTING OUT POSITION



MAJOR ADJUSTMENT

Press **[OUT]** or **[IN]** until the mechanism is near the desired position then press **[STOP].**

THEN

Press **[STORE]** then **[OUT]** to set the out position.

RESET OUT POSITION

Press **[STORE]** then **[STOP]** then **[OUT].**

MINOR ADJUSTMENT

Press **[STORE]** then **[>]** this will move the mechanism approximately 1mm **OUT.**

OR

Press **[STORE]** then **[<]** This will move the mechanism approximately 1mm **IN.**

Pressing **< or >** 5 times will move the mechanism approximately 5mm.

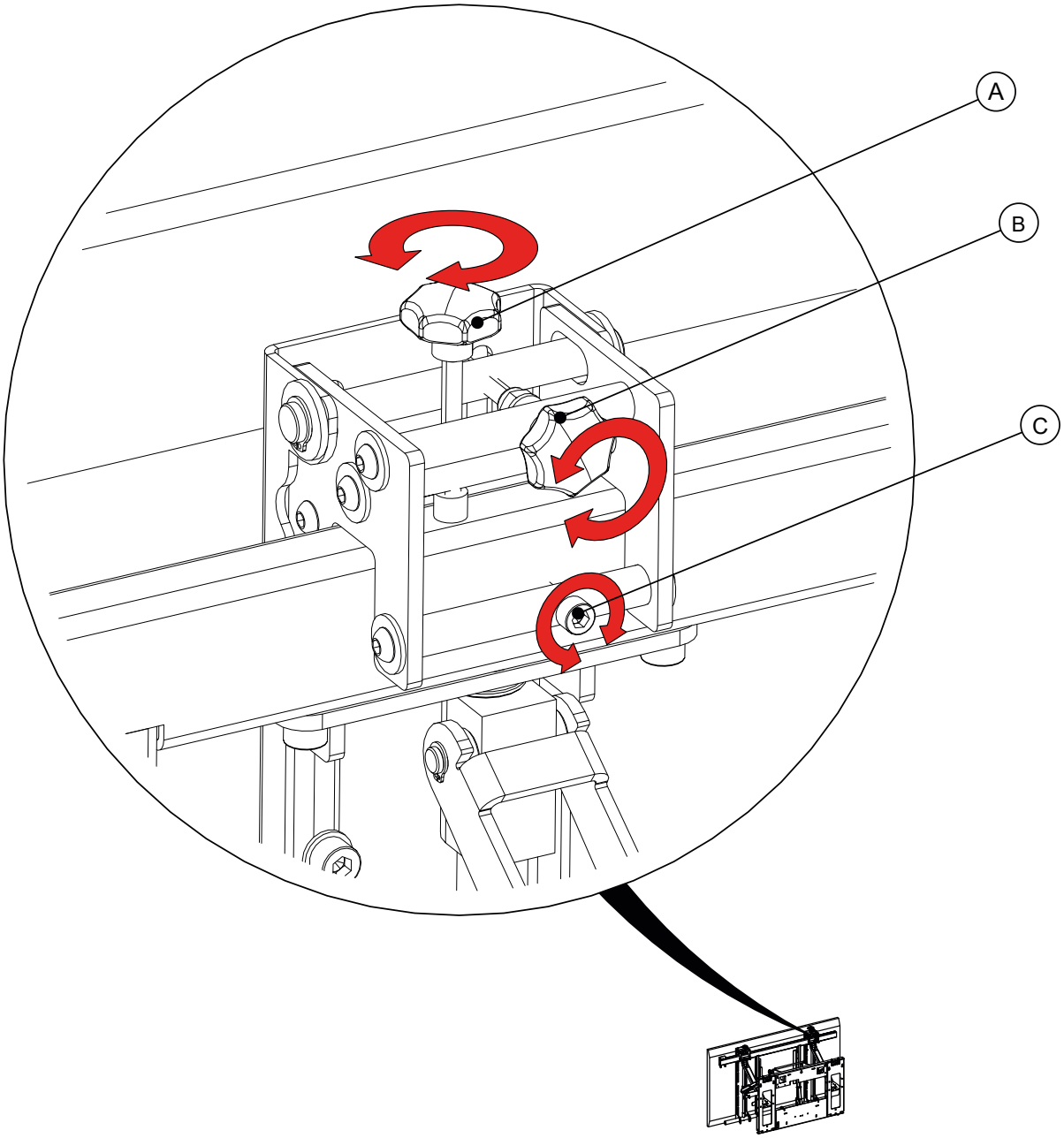
(Each button press must be made within 2 seconds)

The out position will not change until an **[IN]** command followed by an **[OUT]** has been made.

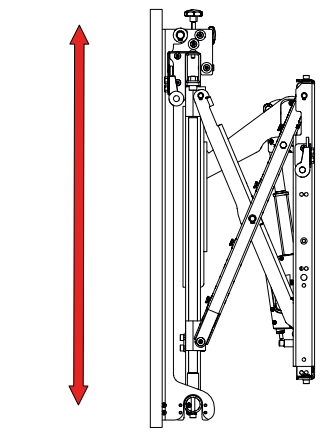
THEN

Press **[STORE]** then **[OUT]** to set the out position again.

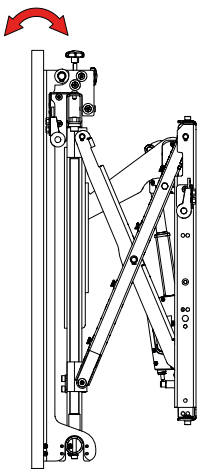
ADVANCE BRACKET
ADJUSTMENTS



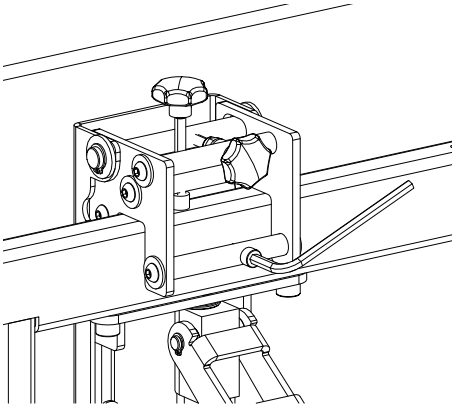
A



B



C

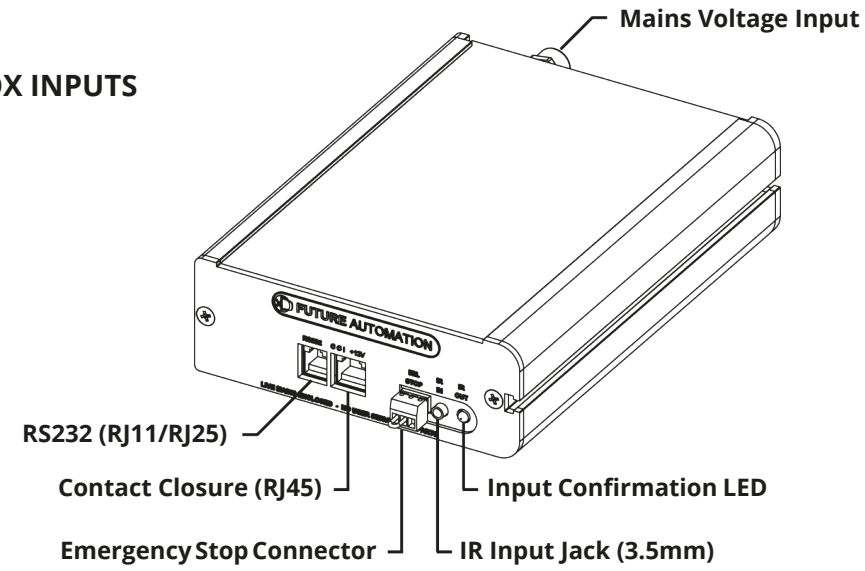


Only tighten pinch bolts once screen is adjusted in its final position.

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

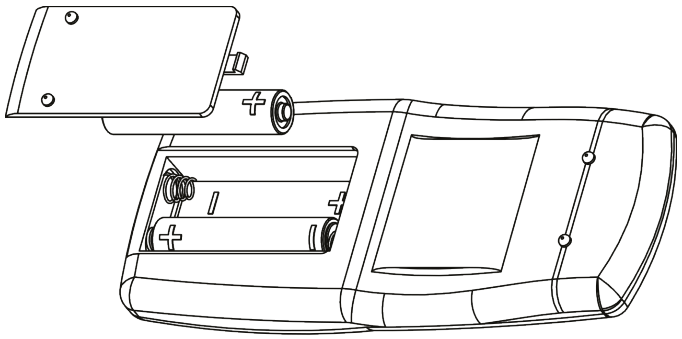
This mechanism features an Emergency Stop Connector, which MUST be plugged into the control box in the connector labelled above for the mechanism to operate. If this connector is not plugged in, the Input Confirmation LED will be permanently lit. As per the red plastic tag attached to the Emergency Stop 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 requires x2 AAA batteries to operate. These are provided with the mechanism in the Accessories Pack. These batteries can be replaced as 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

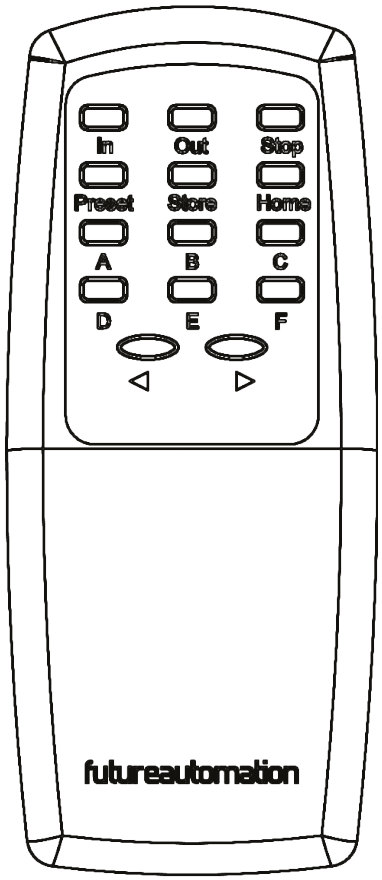
IN - Brings the mechanism into the enclosure, hiding the display.

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.

STORE, STORE, HOME - Clear ALL programmed positions.



STOP - Immediately stops the mechanism regardless of position.

A - Pulses the Advance Bracket IN to return to User Mode

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

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

PRESET, > or < - Enter Moving Panel 'IN' position adjustment. Further presses of **> or <** adjust the position by 1mm per press.

IMPORTANT

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

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.

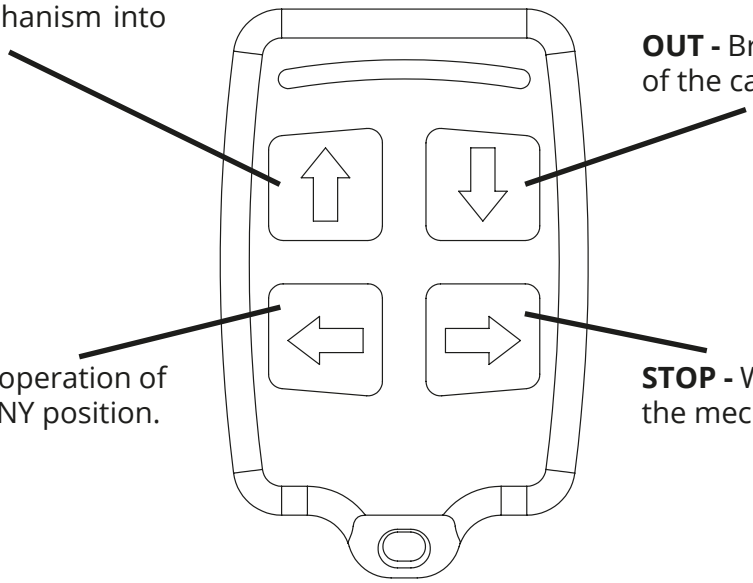
Confirmation of Radio Frequency (RF) input will be shown by a single flash of the large green LED located on the end of the control box.

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.

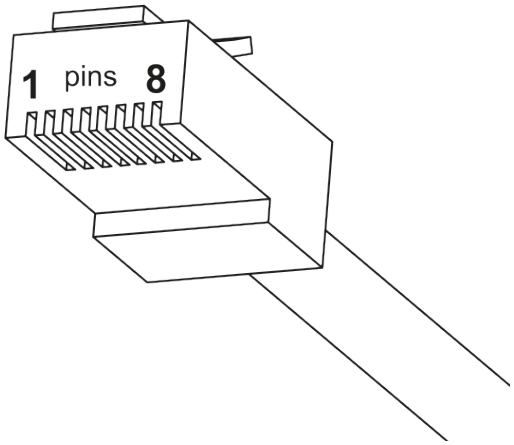
CONTACT CLOSURE

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.

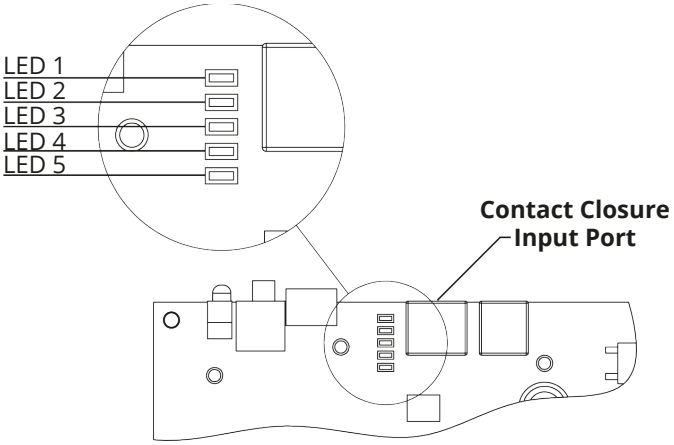
The mechanism's functions can be controlled by plugging this into the RJ45 port on the mechanism control board, then shorting pins 1-8 on this connector as shown in the Contact Closure Input Table below.

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

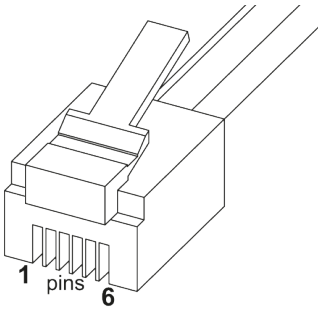
This Mechanism can be controlled via RS232, utilising a 6 Pin RJ11/RJ25 connector OR 9 Pin Serial connector attached to a length of 6 core cable.

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.

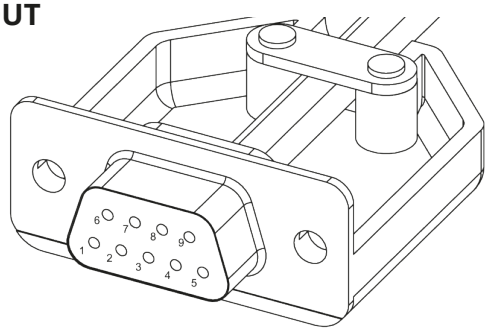
RJ11/RJ25 PIN LAYOUT

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

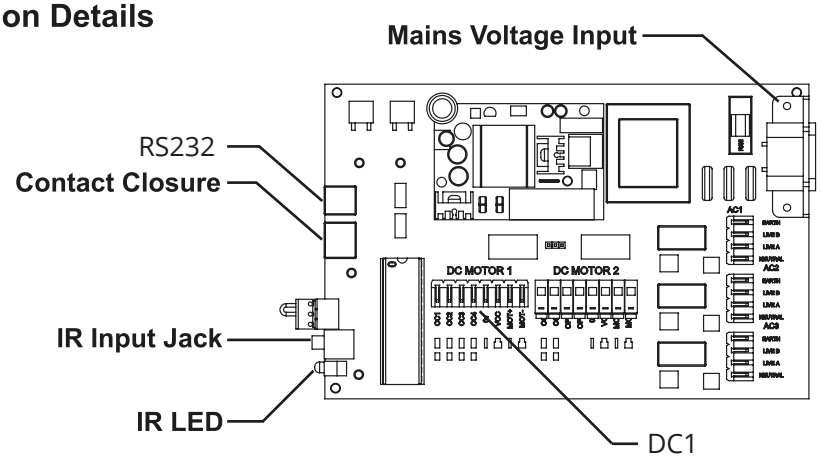
RJ11/RJ25	Func.	9 PIN Serial	Colour
PIN 1	TX-RX	PIN 2	Blue
PIN 3	GROUND	PIN 5	Green
PIN 4	GROUND	PIN 5	Red
PIN 6	RX-TX	PIN 3	White

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:

NOTES:



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