Installation Instructions

Lift Mechanisms

LSM S BE - Lift System Medium Swivel Box Enclosure

Design Highlights

-Quiet Smooth Lifting Action at Approximately 40mm [1.6”] per Second
-180 Degrees of Quiet, Fast Screen Rotation in Both Directions With Programmable Viewing Positions
-Full Cable Management
-Wide Range of Mounting Options
-24V DC Motor. Suitable for Direct DC Supply
-Marine Suitable Robust Beam

Thank you for choosing futureautomation

futureautomation

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LSM S BE - Lift System Medium Swivel Box Enclosure

Caution Warning

Beware of Moving Parts

Danger Electricity

Keep Hands Clear

Safety Disclaimer
Important Safety Instructions
Explanation of graphical symbols
-(Electric Shock Symbol) = The lightning flash within an equilateral triangle is intended to alert you to the presence of un-insulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute an electric shock to persons
-(Caution Symbol) = The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product
-(Tools Symbols) = The tools symbol within a coloured square are intended to highlight the required tools necessary for correct and safe installation of the product. These are intended as a
guide only, and it is at the installer's discretion as to which tools are used.

WARNING: RISK OF ELECTRIC SHOCK, ONLY AUTHORIZED INSTALLERS TO OPEN THE POWER CONTROL BOX.
WARNING: To reduce the risk of fire or electric shock, do not expose electrical parts to rain or moisture, unless the product has been specifically designed to do so.
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 the four times the weight of the component.
WARNING: Do not exceed the weight capacity. 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: Failure to provide adequate structural strength for this component can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the structure to which this component is attached can support five times the combined weight of all equipment. Reinforce the structure as required before installing the component.

Warnings:

1. **Read all technical instructions fully before installation and use. It is the installer's responsibility to ensure that all documentation is passed on the end user and read fully before operation.**
2. **Keep all documentation.**
3. **Heed all warnings.**
4. **Follow all technical specifications and instructions during installation.**
5. **Do not use near water unless the product has been specifically designed to do so.**
6. **Clean only with a dry cloth.**
7. **Do not defeat the purpose of the polarized or grounding type plug. A polarized plug has two blades, one wider than the other. A grounding type plug has two blades and a grounding prong. The wide blade or third prong are provided for your safety. If the provided plug does not fit your outlet, consult an electrician or contact the manufacturer.**
8. **Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where the exit from the apparatus.**
9. **Unplug the apparatus during lightning storms or when unused for long periods of time.**
10. **Only use attachments/accessories specified by the manufacturer.**
11. **Refer all servicing to qualified personnel. Servicing is required regularly on an annual basis, when the apparatus 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.**
12. **To completely disconnect the apparatus form the AC mains, disconnect the power cord plug from the AC receptacle on the power control box.**
13. **To prevent overheating, do not cover the apparatus. Install in accordance with the instructions.**
14. **UK, Ireland and Hong Kong only – The power cord is supplied with a 13A plug having an earthing pin. The apparatus is earthed and this pin is not required for safety, merely to operate the safety shutter of mains outlet.**
15. **No naked flames such as lit candles should be placed on the unit.**
16. **Observe and follow the local regulations when disposing of batteries.**
17. **Do not expose the unit to dripping or splashing fluids.**
18. **Do not place objects filled with liquid, such as vases, on the unit.**
19. **Do not expose the batteries to excessive heat such as sunshine, fire or the like.**
20. **For all mounted apparatus, the apparatus should be installed on solid wood, bricks, concrete or solid wood columns and battens.**
21. **Always turn off power at source before putting on or taking off parts and cleaning.**
22. **Do not use outdoors unless marked for outdoor use.**
23. **Exceeding the weight capacity can result in serious personal injury or damage to equipment.**

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.

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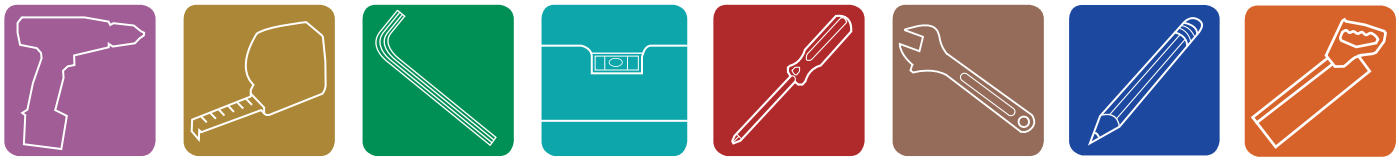
Tool Indicator Icons

1. 2. 3. 4. 5. 6. 7. 8.



1. - Drill
2. - Tape measure
3. - Allen Keys
4. - Spirit Level
5. - Screwdrivers
6. - Spanners
7. - Pencil
8. - Saw

Product Warranty

This product carries a warranty that covers the cost of labour and spare parts incurred by any defects in materials and workmanship under normal use during a two year period from date of purchase. Support for any problems that are not hardware faults are excluded from the warranty entitlement. This warranty does not affect your statutory consumer rights.

The following is excluded from warranty service:

- Malfunctioning caused by misuse or damage, accidental or otherwise, or service modification by persons not authorised by Future Automation, or the use of any non Future Automation supplied parts;
- Any electrical, or other environmental work external to your Future Automation mechanism including power cuts, surges or lightning strikes;
- 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;
- Use of the product over the specified weight capacity;
- Any damage to products during transit that is not checked and notified as “unchecked” or “damaged” upon receipt of delivery.

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

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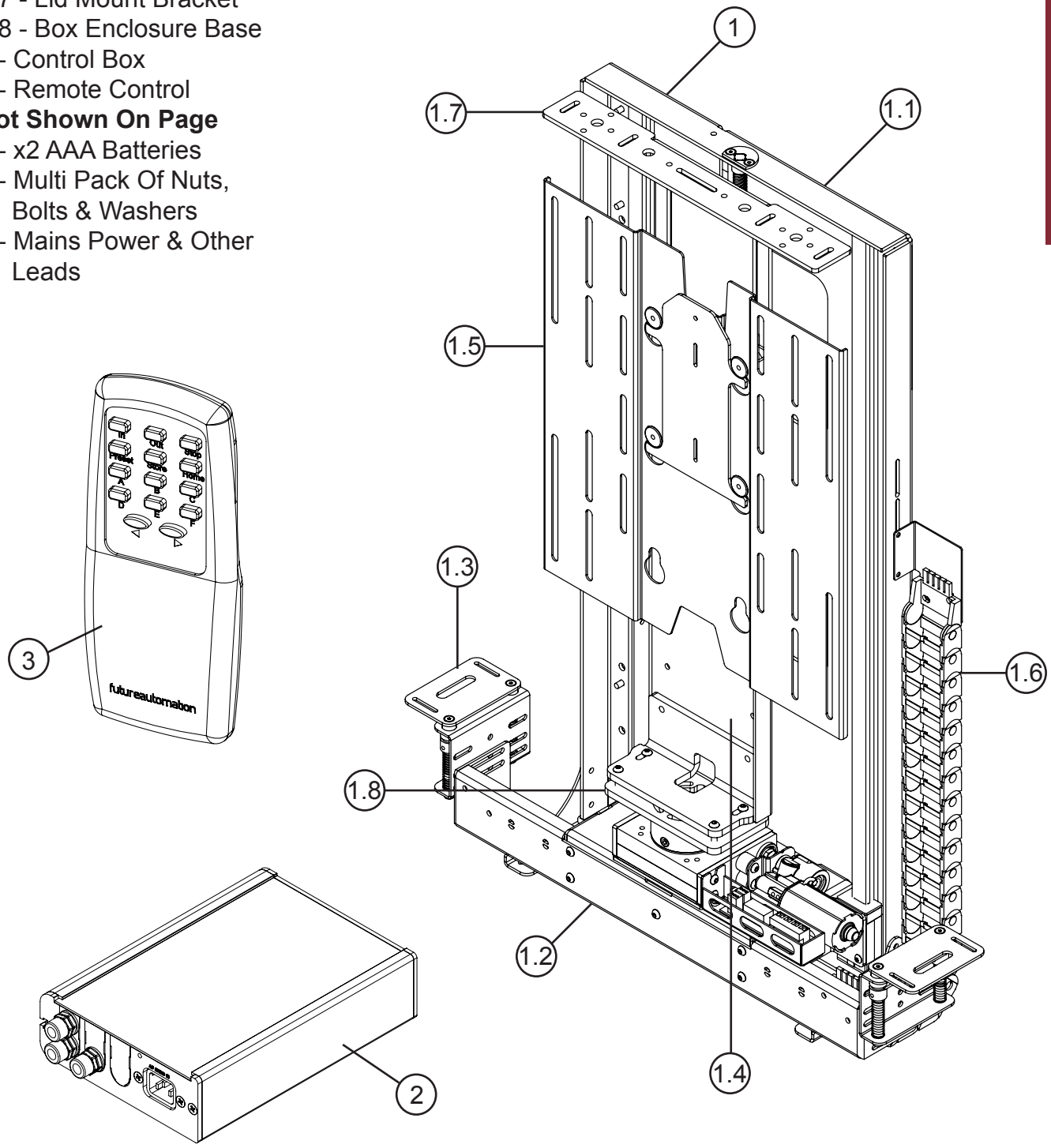
Package Contents

1 - Mechanism
1.1 - Back Plate
1.2 - Lifting Beam
1.3 - Base Panel Brackets
1.4 - KH Mount Upright
1.5 - Screen Mount
1.6 - Cable Management
1.7 - Lid Mount Bracket
1.8 - Box Enclosure Base
2 - Control Box
3 - Remote Control

Not Shown On Page

4 - x2 AAA Batteries
5 - Multi Pack Of Nuts, Bolts & Washers
6 - Mains Power & Other Leads

Nuts & Bolts Multipack:
A range of nuts, bolts, washers and spacers to help add in the mounting for your screen



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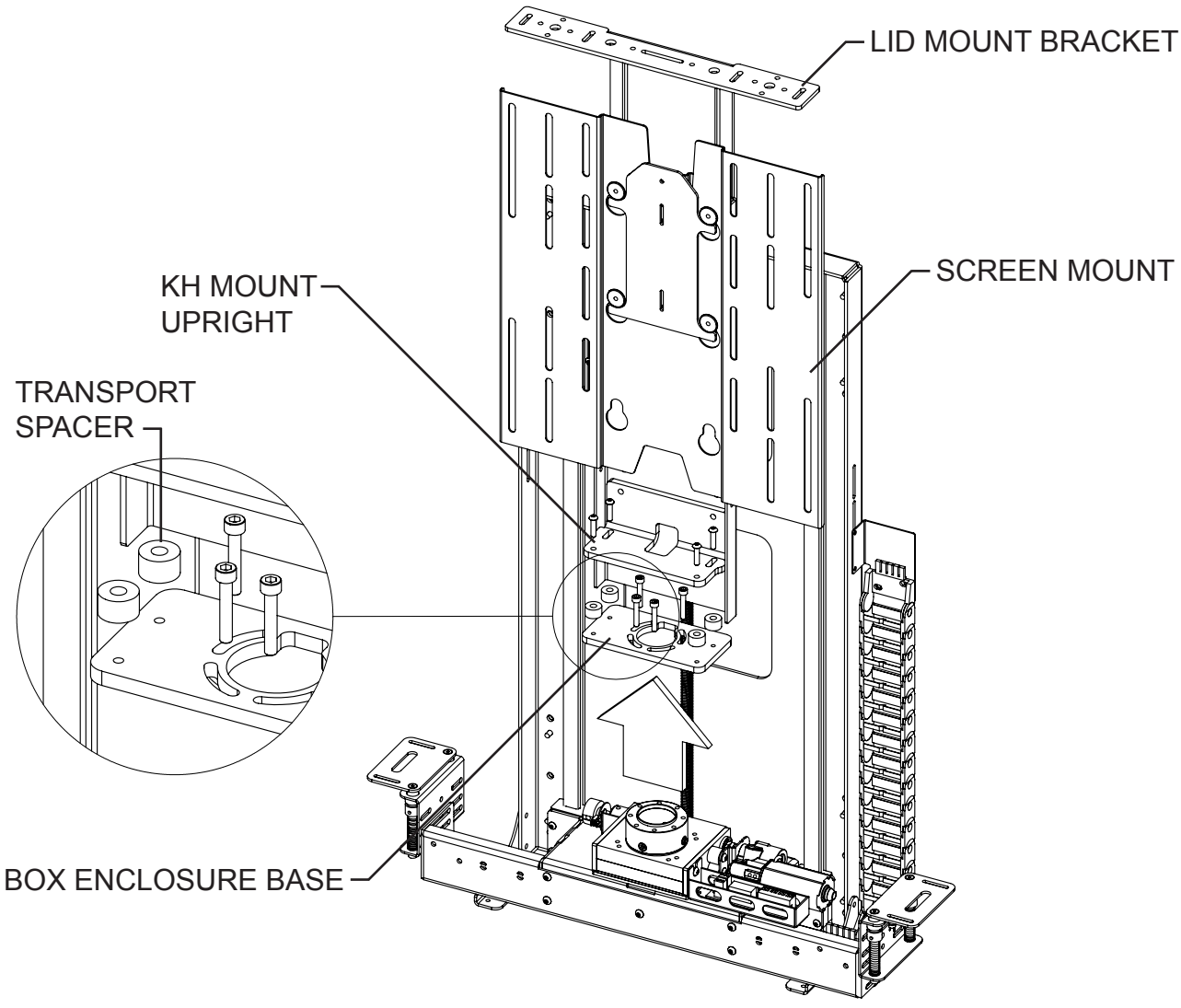
Before You Start

Check the Operation of the Mechanism.
Firstly, remove all the red cable ties which keep the mechanism safe and secure during transit. Once they have all been removed, the mechanism can be powered up and tested. Connect the supplied IR remote and check that the mechanism operates correctly before continuing with the installation.

Remove KH Screen Mount

Take the KH mount off the mechanism by removing the upright from the BOX ENCLOSURE BASE held by the 4 button head screws. In-between these parts are 4 TRANSPORT SPACERS which can be discarded.



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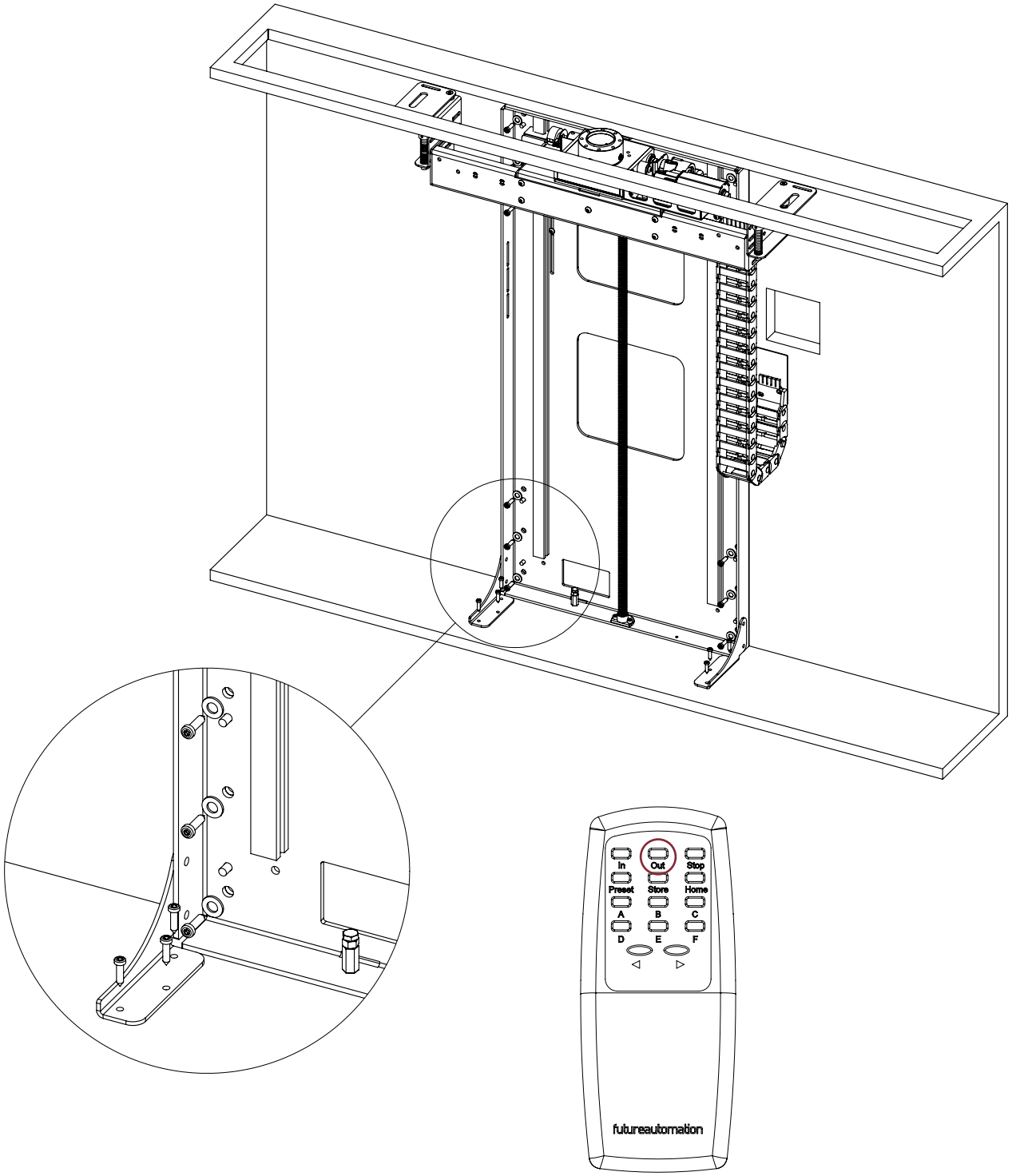
Fixing the Lift in the Cabinet

Place the mechanism centrally within the cabinet. Raise and lower the lifting beam as required to fix the lift where shown in all corners.



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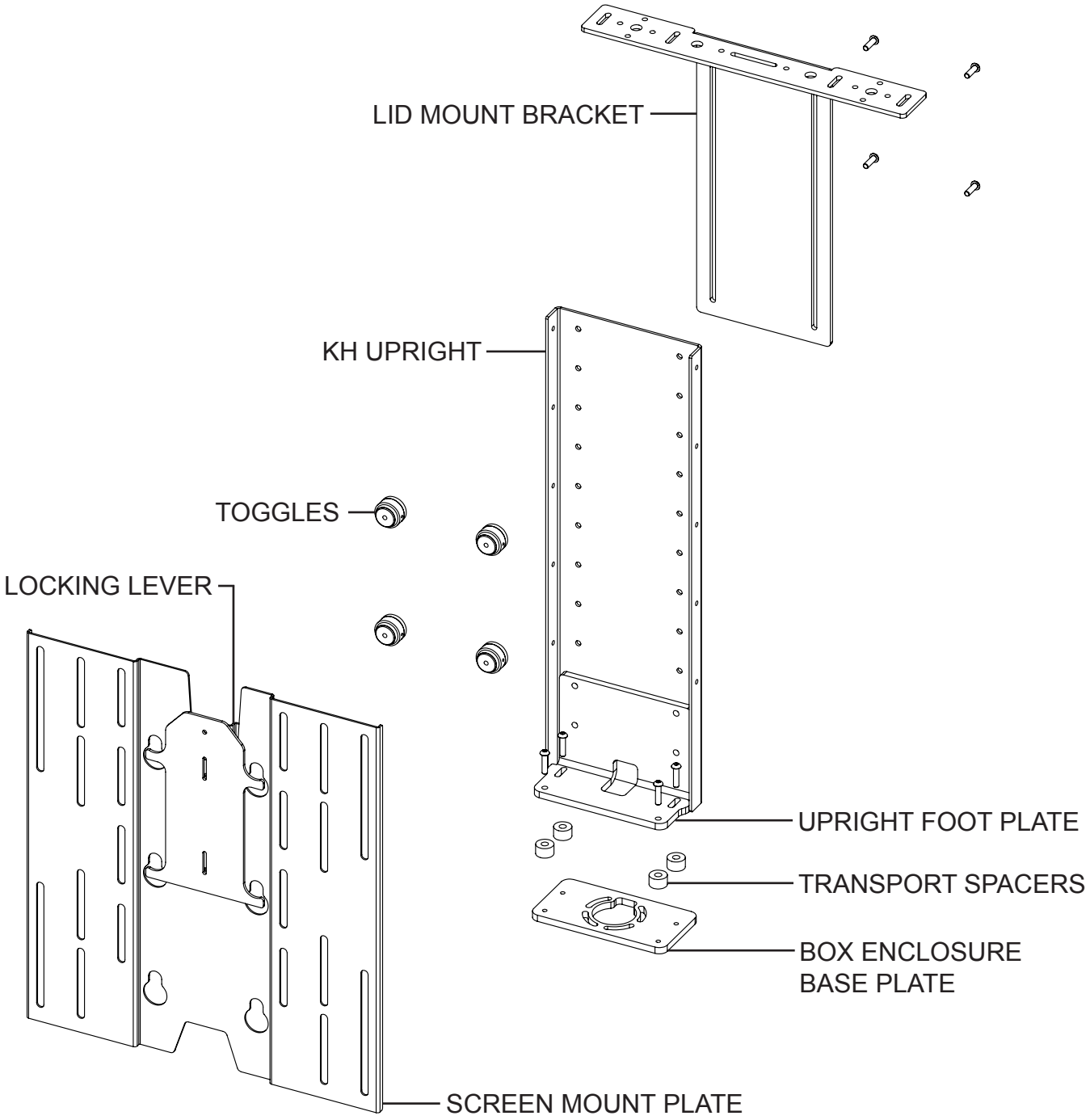
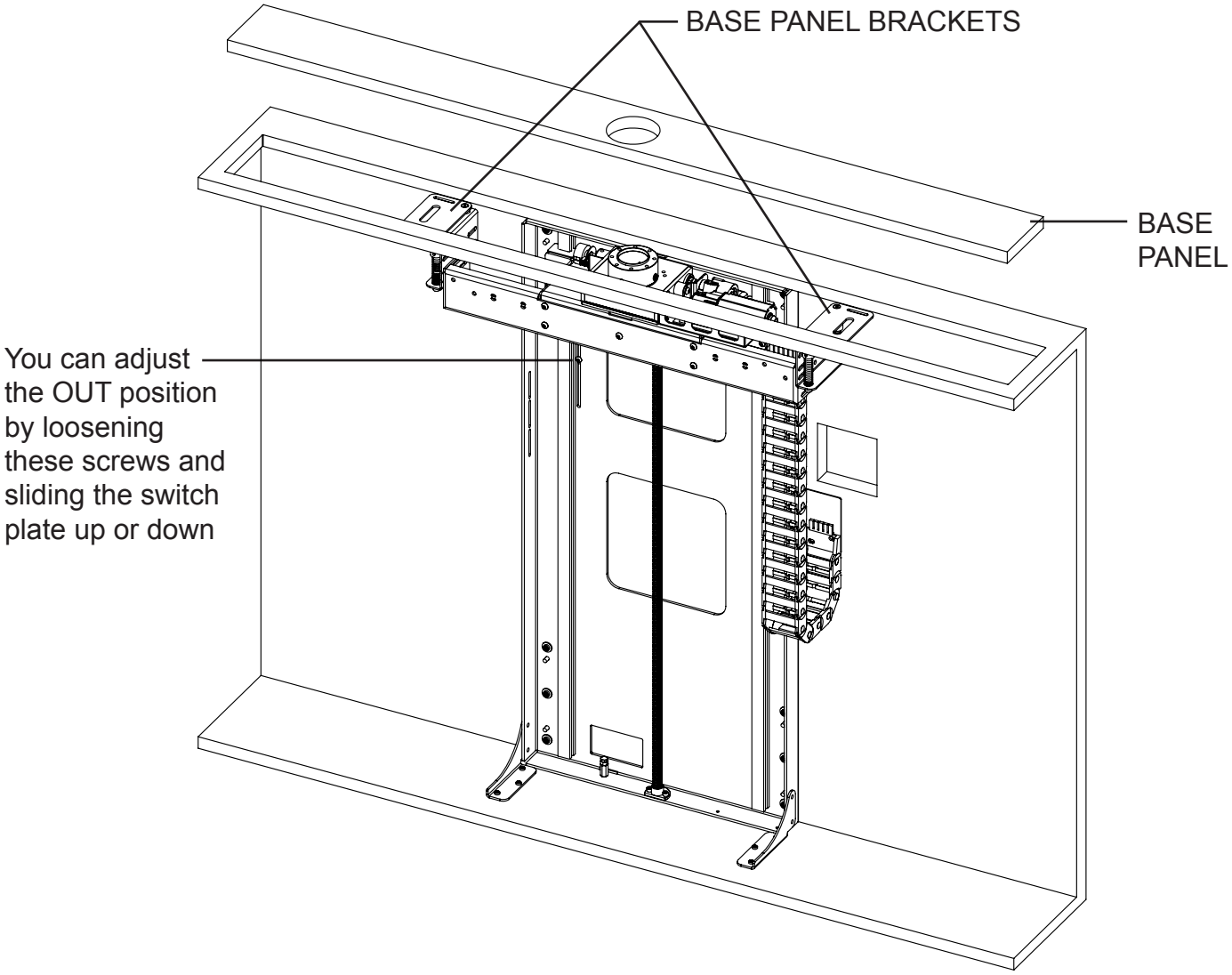
KH Upright Assembly

Below shows the KH UPRIGHT assembly. To release the SCREEN MOUNT PLATE rotate the top LOCKING LEVER and lift off the TOGGLES. The TOGGLES can adjust the height by moving up or down the KH UPRIGHT, these TOGGLE fixings also secure the LID MOUNT BRACKET which can slide up and down to fit box enclosure cabinetry.



Mounting the Base Panel

After the mechanism is in the correct position the next step is to lower the BASE PANEL into place and fix from the underside through the BASE PANEL BRACKETS. A good tip is to place the BASE PANEL in place and draw marks from the underside through the BASE PANEL BRACKETS, then fix using a wood screw and a large penny washer, this will allow you to adjust the position.



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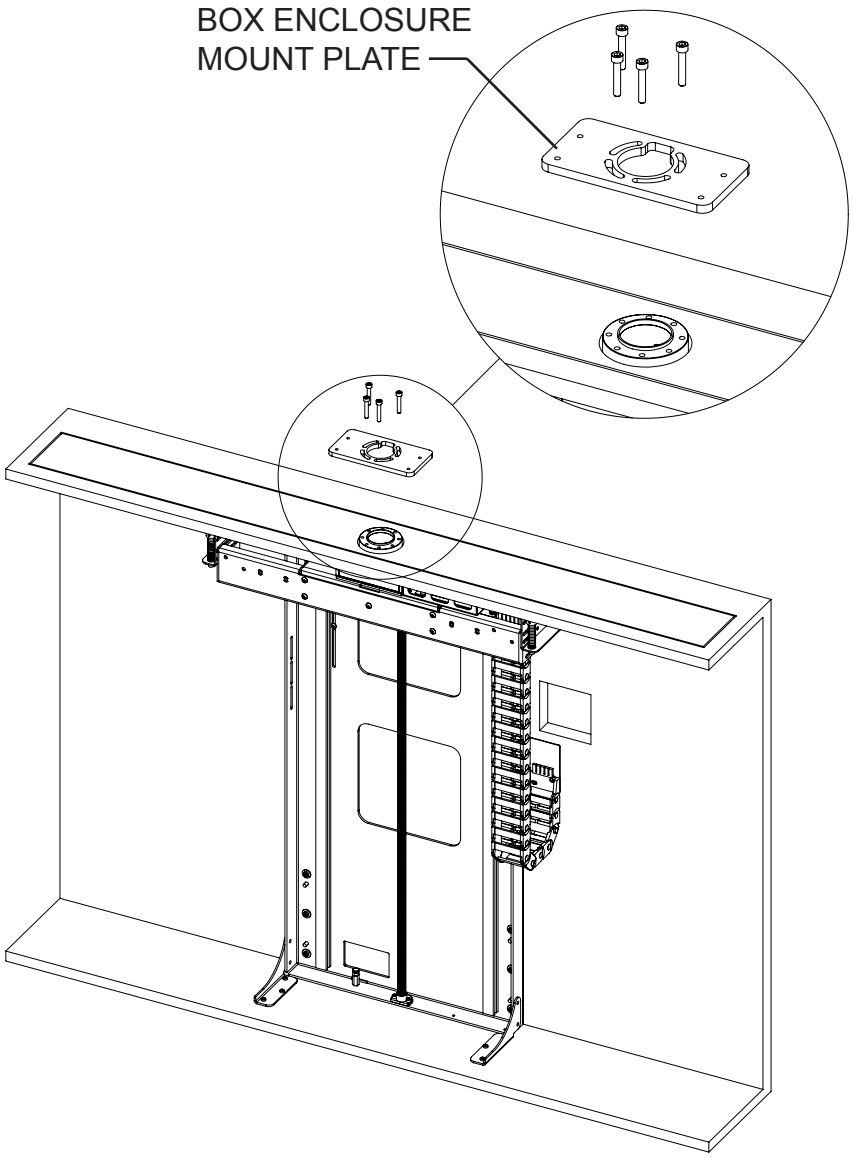
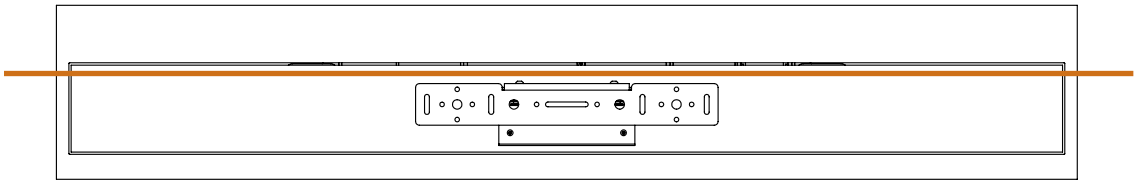
KH Upright Mounting

Fix the BOX ENCLOSURE MOUNT PLATE to the mechanism as shown to the right. Use as many cap head bolts as possible, some of the tapped holes might not be accessible.



Make sure when you re-mount the KH MOUNT UPRIGHT its square to the cabinet opening.



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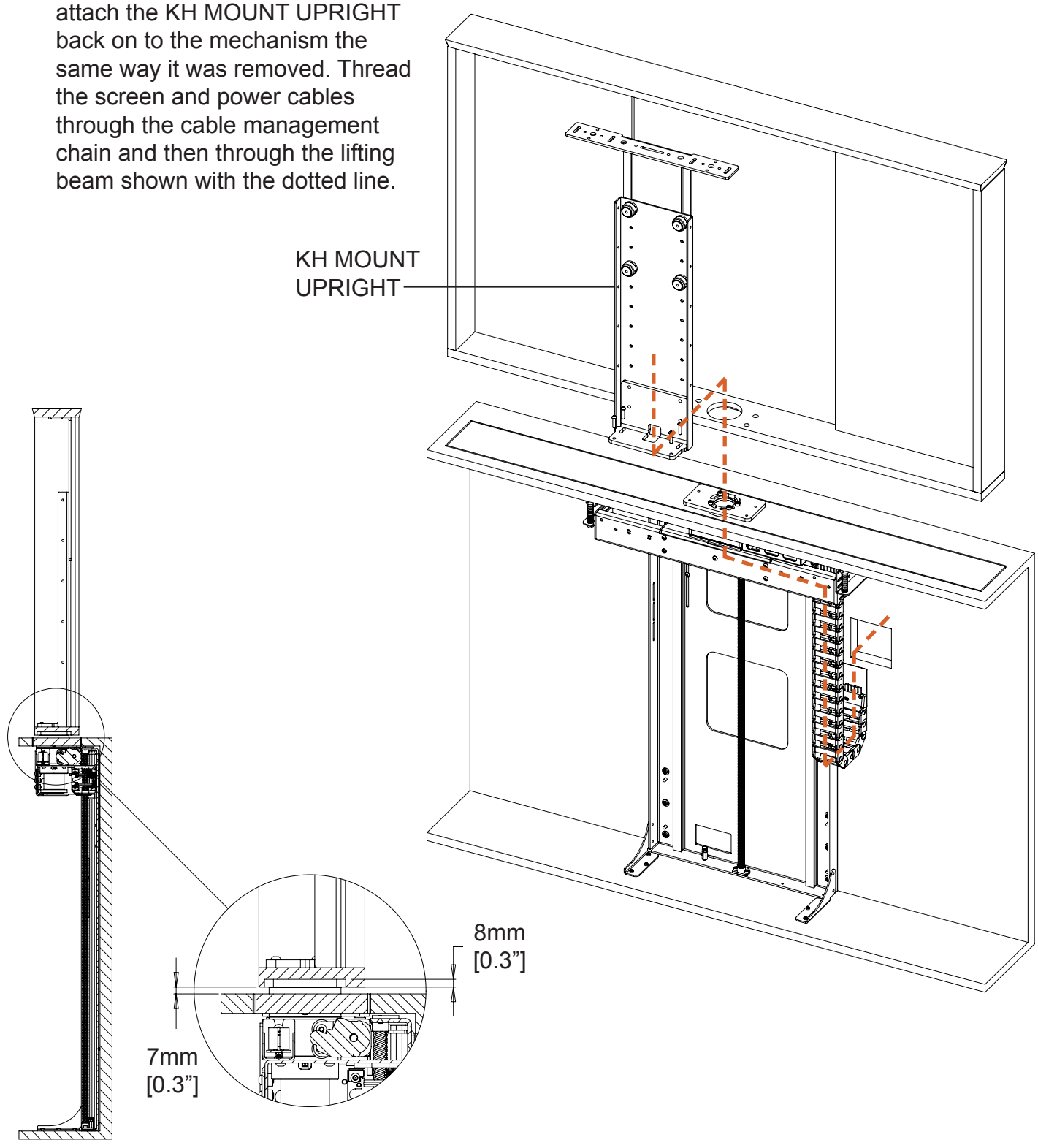
KH Upright Mounting & Cable Routing

With the screen plate removed, attach the KH MOUNT UPRIGHT back on to the mechanism the same way it was removed. Thread the screen and power cables through the cable management chain and then through the lifting beam shown with the dotted line.



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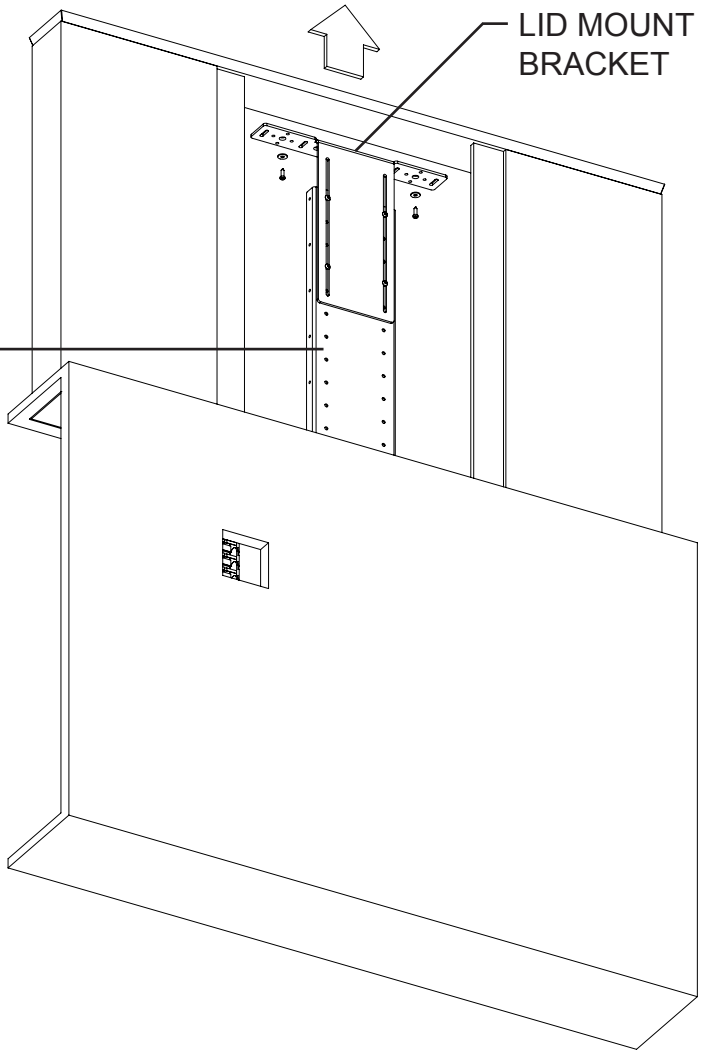
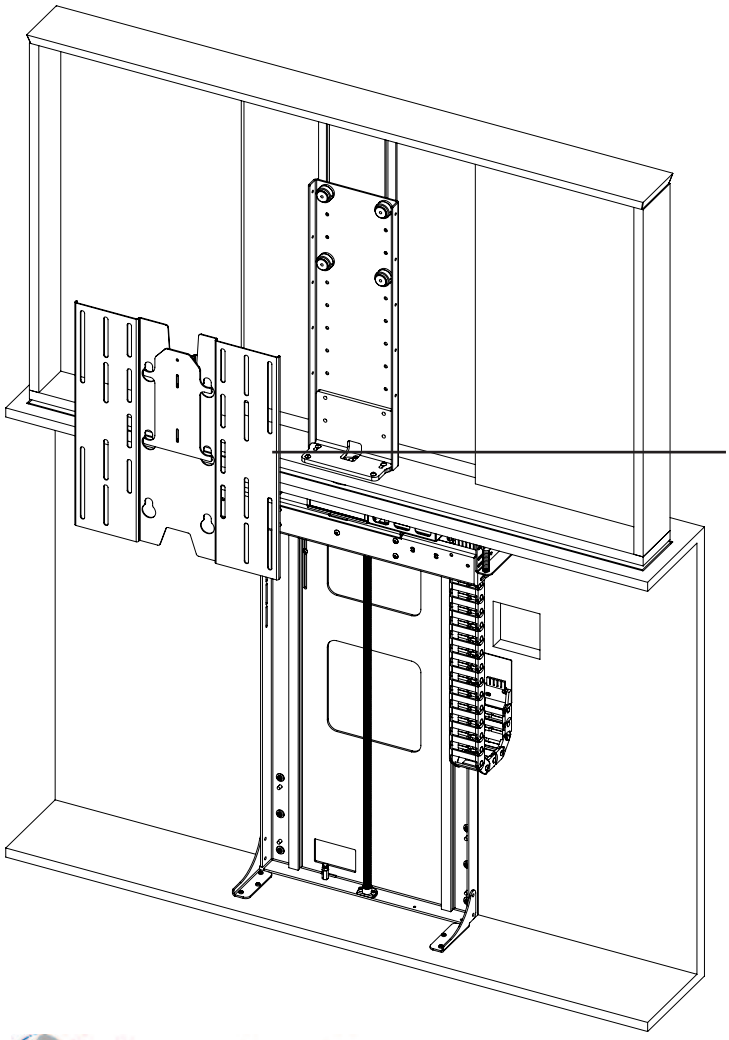
Screen Plate & Box Enclosure Mounting

Secure the BOX ENCLOSURE to the UPRIGHT by sliding the LID MOUNT BRACKET up and fixing to the enclosure top as shown.





Hook the SCREEN MOUNT PLATE on to the KH UPRIGHT over the TOGGLES and secure using the LOCKING LEVER.

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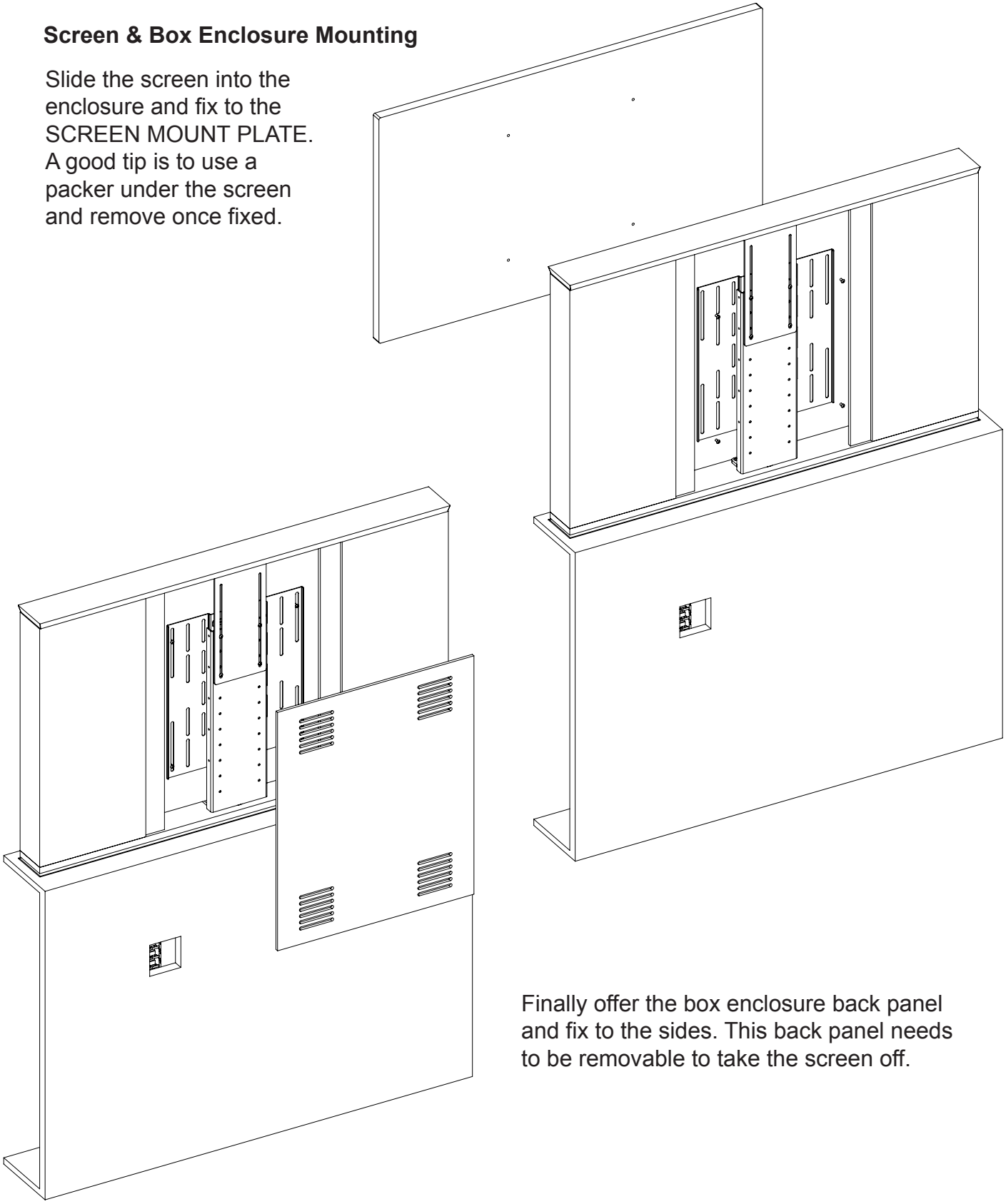
Screen & Box Enclosure Mounting

Slide the screen into the enclosure and fix to the SCREEN MOUNT PLATE. A good tip is to use a packer under the screen and remove once fixed.



Finally offer the box enclosure back panel and fix to the sides. This back panel needs to be removable to take the screen off.

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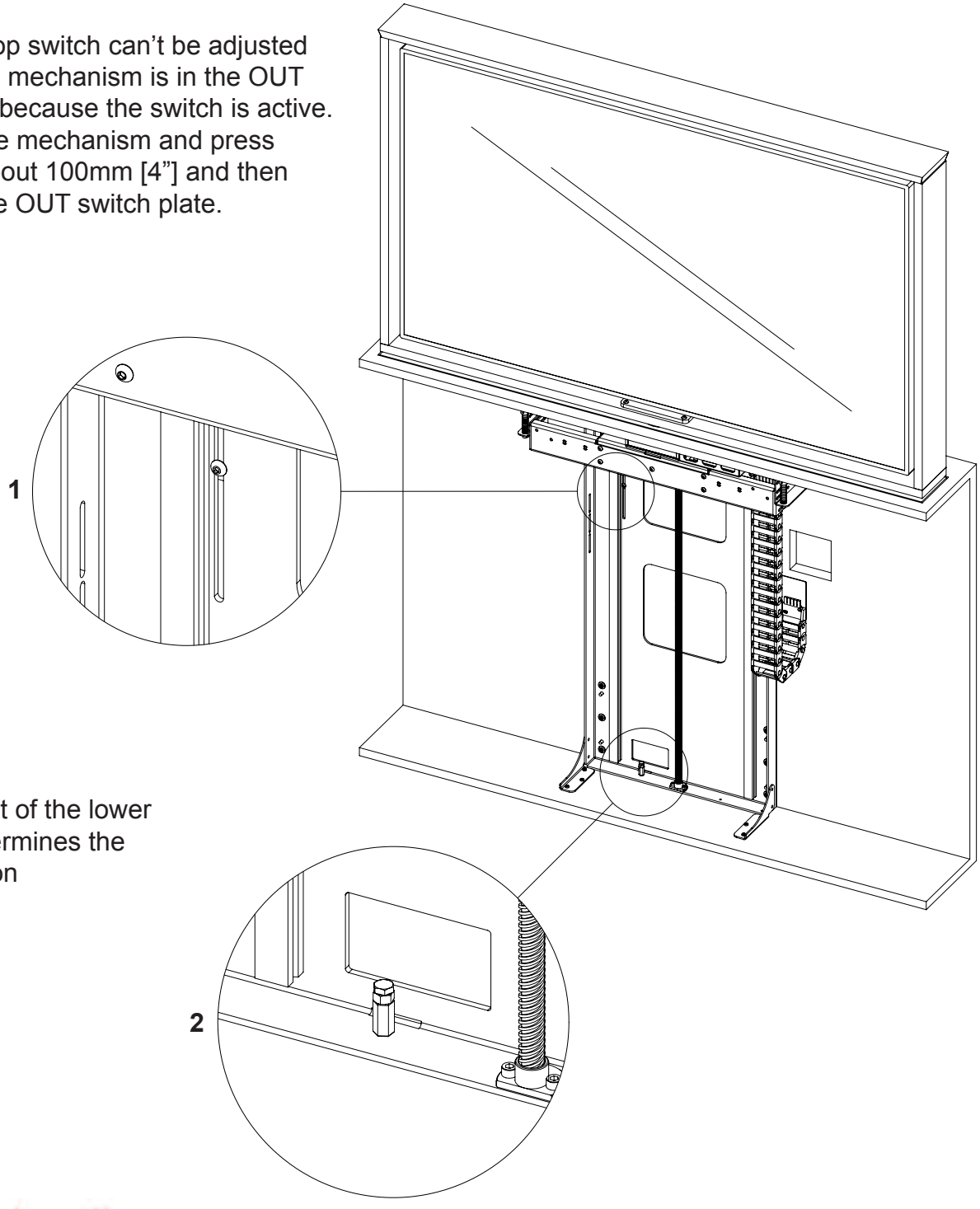
Switch Adjustments

You can adjust the IN and OUT position of the lifting beam. Detail **1** shows how to adjust the OUT position and detail **2** shows how to adjust the IN position. The IR sensor can be located anywhere outside of the cabinet.

1 - The top switch can't be adjusted when the mechanism is in the OUT position, because the switch is active. Lower the mechanism and press STOP about 100mm [4"] and then adjust the OUT switch plate.



2 - Height of the lower post determines the IN position

LSM S BE - Lift System Medium Swivel Box Enclosure

Controlling the Mechanism

IN - Takes the screen inside the cabinet

OUT - Takes the screen out of the cabinet facing forward

STOP - Stops the mechanism at any time

PRESET - Screen goes to learnt position

STORE - Programs current screen position to learnt position

HOME - Takes screen to forward facing position when screen is already in an angled position

< - Rotates screen left

> - Rotates screen right

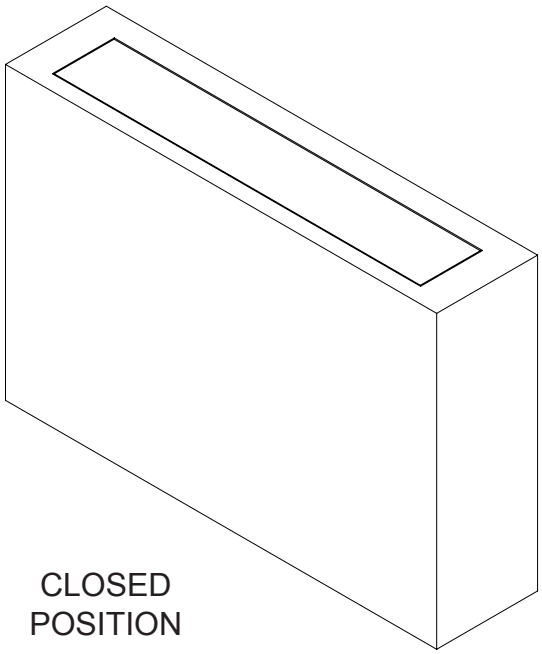
STORE + PRESET - Within 1 sec stores preset position

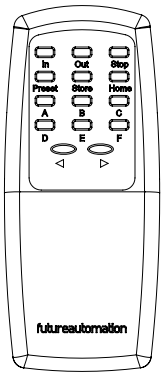
STORE + E - within 1 sec clears right & left limit and allows the swivel to rotate 180 degree right and left

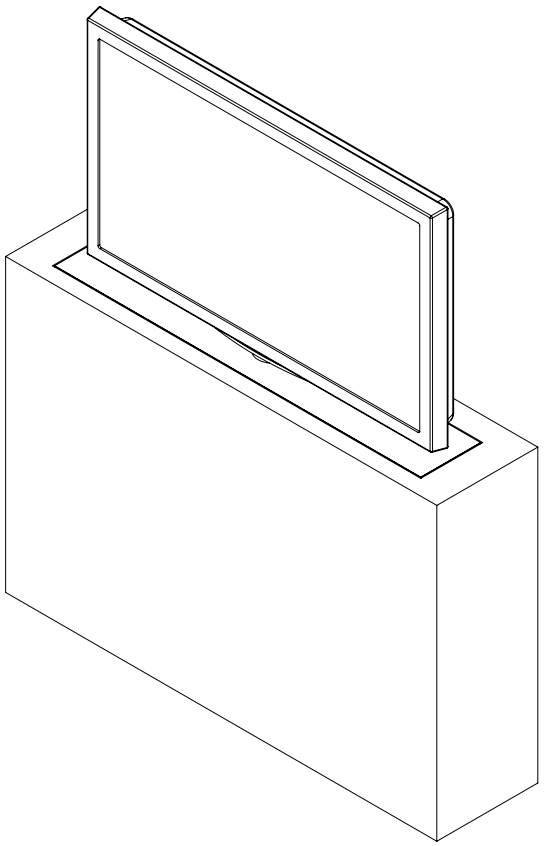
STORE + D - within 1 sec sets left limit

STORE + F - within 1 sec sets right limit

STORE + A-C - stores other positions A-C then takes it to those positions







CLOSED POSITION

PRESS **OUT**

OPEN POSITION

PRESS **IN**

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Controlling the Mechanism

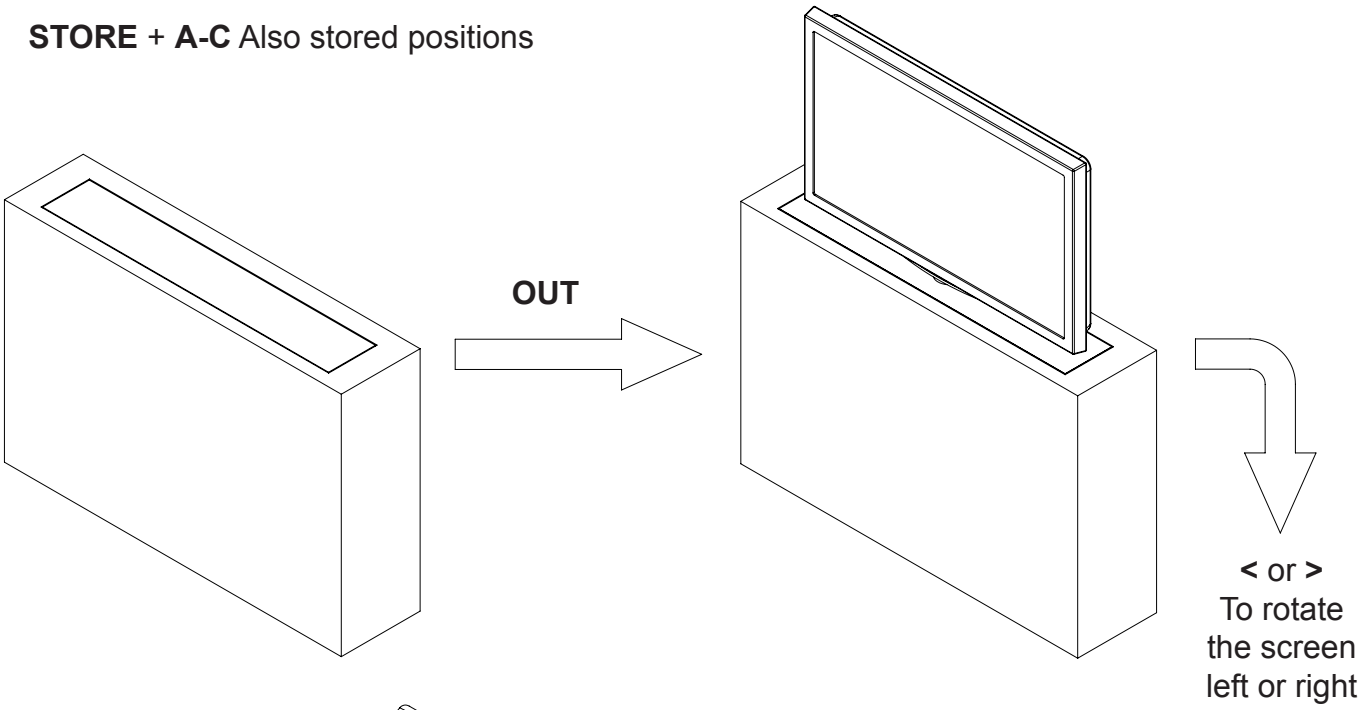
Programming new memorised positions.

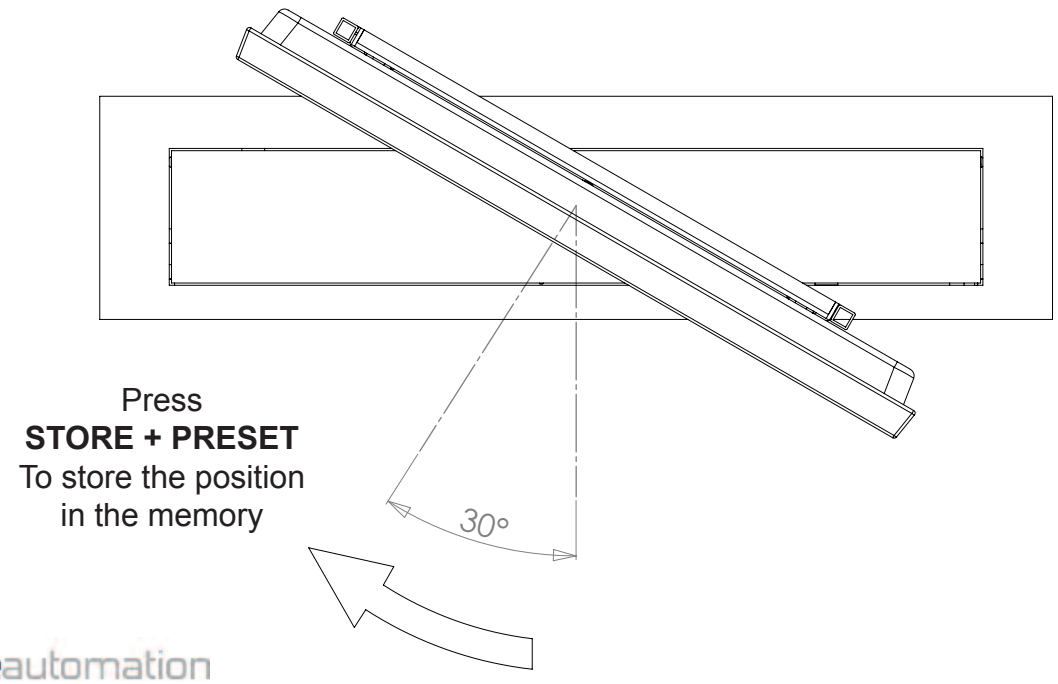
The example, shows the programming of a position that is left of centre.

In order to program a position that it right of centre, simply press **>** to turn the screen to the right.

Then press **STORE** + **PRESET** to store the position in the memory.

STORE + **A-C** Also stored positions





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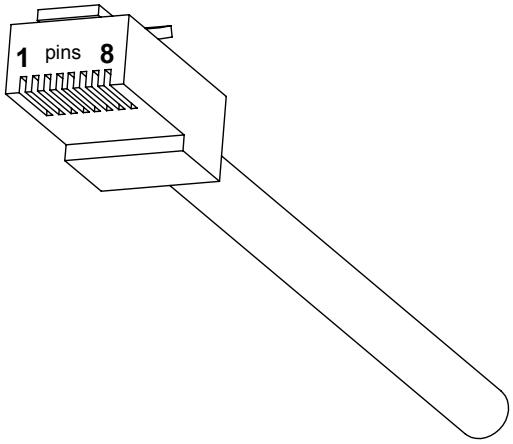
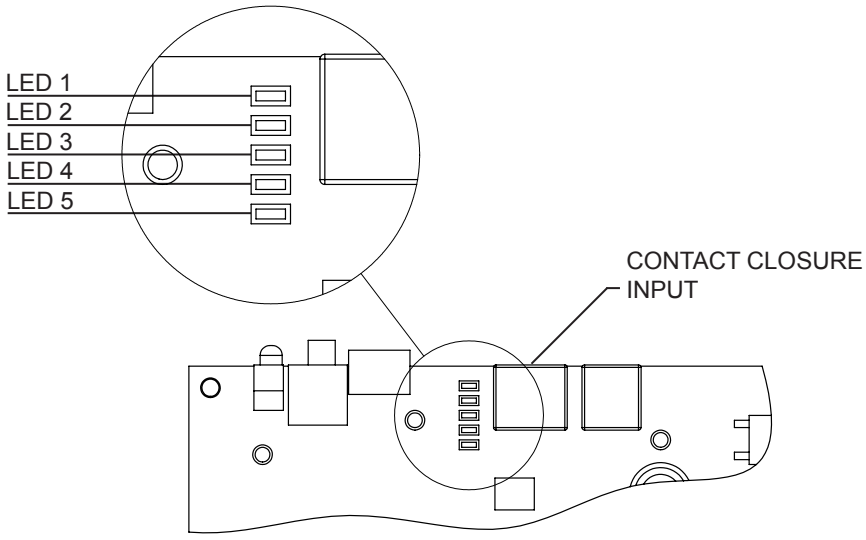
Contact Closure

- Use an RJ45 connector in the CCI socket on the control box to operate via contact closure



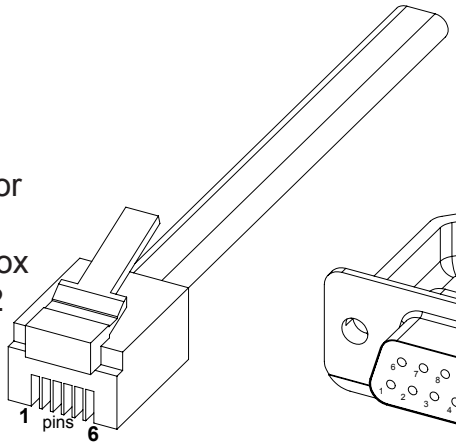
PIN	DESCRIPTION	ACTION	WIRE / CABLE		CONTACT CLOSURE LED INDICATOR
			568A	568B	
1	12V SUPPLY	12V SUPPLY - CURRENT LIMITED	W/G	W/O	
2		PIN 2 NOT USED	G	O	
3	GROUND	GROUND	W/O	W/G	
4		PIN 4 NOT USED	BL	BL	
5	DEVICE LEFT	Momentary short to GROUND (pin 3), will make device go LEFT.	W/BL	W/BL	LED 4
6	DEVICE RIGHT	Momentary short to GROUND (pin 3), will make device go RIGHT.	O	G	LED 3
7	DEVICE HOME	Momentary short to GROUND (pin 3), makes device go OUT / HOME.	W/BR	W/BR	LED 2
8	DEVICE IN	Momentary short to GROUND (pin 3), makes device go IN.	BR	BR	LED 1



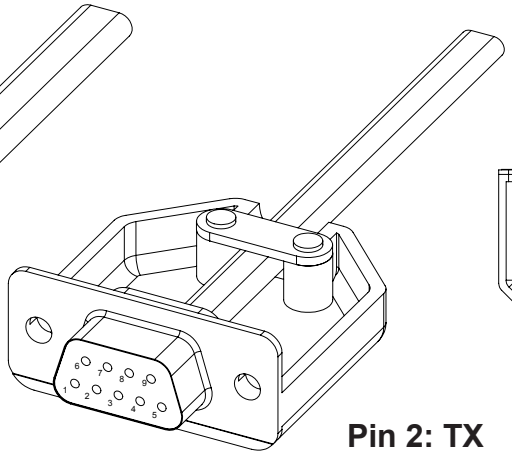
Any contact closure input whilst the mechanism is in motion will stop the movement and all other contact closure commands will be disabled for 1 second.

LSM S BE - Lift System Medium Swivel Box Enclosure

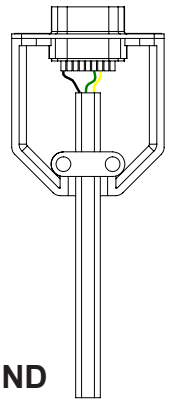
RS232
- Use an RJ25 connector in the socket marked RS232 on the control box to operate using RS232



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



Pin 2: TX
Pin 3: RX
Pin 5: GROUND



Details

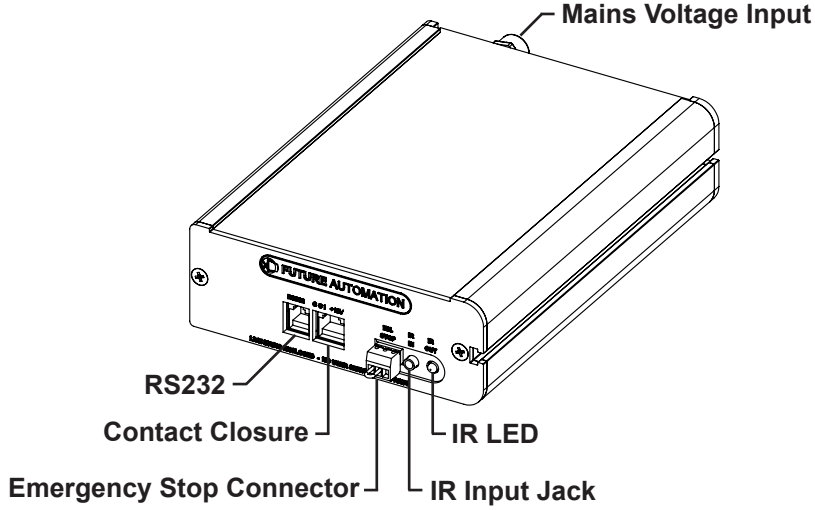
Baud rate:	9600
Stop bit:	1
Parity:	None
Databits:	8

RJ25		9 PIN D
PIN 1: RX	TO	PIN 2: TX
PIN 6: TX	TO	PIN 3: RX
PIN 3: GROUND	TO	PIN 5: GROUND
PIN 4: GROUND	TO	PIN 5: GROUND

IMPORTANT
Ensure protocol is entered exactly as written, including Carriage Return (Enter / ASCII 13).

PROTOCOL	ACTION
fa_in Carriage Return (Enter ↵)	Device IN
fa_out Carriage Return (Enter ↵)	Beam OUT no movement to swivel
fa_right Carriage Return (Enter ↵)	Device OUT RIGHT limit
fa_left Carriage Return (Enter ↵)	Device OUT LEFT limit
fa_preset Carriage Return (Enter ↵)	Device to PRESET memory position
fa_a Carriage Return (Enter ↵)	Device OUT to memory position a
fa_b Carriage Return (Enter ↵)	Device OUT to memory position b
fa_c Carriage Return (Enter ↵)	Device OUT to memory position c
fa_stop Carriage Return (Enter ↵)	STOPS the device at any position
fa_home Carriage Return (Enter ↵)	Device OUT swivel parallel

Connection Locations



LSM S BE - Lift System Medium Swivel Box Enclosure

Operation buttons for the IR remote

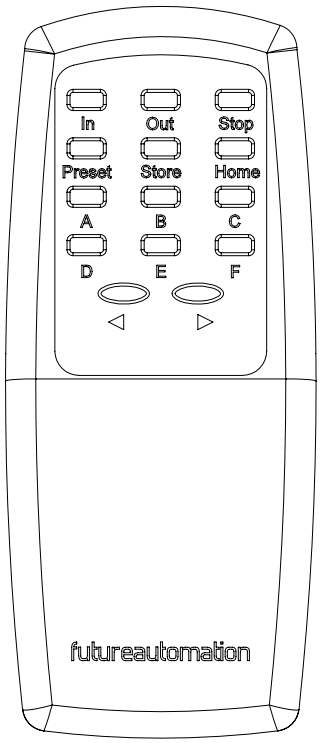
In - Brings the mechanism into the cabinet

Preset - Screen goes to learnt position

Store - Programs current screen position to learnt position

Out - Brings the mechanism out of the cabinet facing forward

Stop - Will stop the operation at any position



Home - Takes screen to forward facing position when screen is already in an angled position

< - Rotates Screen left

> - Rotates Screen right

Store + Preset - Within 1 sec stores preset position

Store + E - Within 1 sec clears preset and sets swivel 180 degree right and left

Store + D - Within 1 sec sets left limit

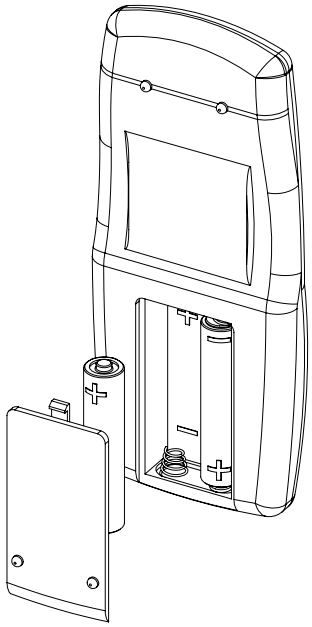
Store + F - Within 1 sec sets right limit

Store + A-C - Stores other positions A-C then takes it to those positions

Note
Only buttons indicated are functional with the product. Any button pressed when in motion mechanism will stop.

Replacing batteries

Future Automation IR Remote Controller needs x2 AAA batteries which are provided within the packaging



LSM S BE - Lift System Medium Swivel Box Enclosure

Lift System Medium Swivel Box Enclosure - Trouble shooting guide

Lift System Medium Swivel Box Enclosure - Trouble shooting

For information on our products please refer to our web site - **www.futureautomation.co.uk**
or for questions on installations and our product range please phone us on - **+44(0) 1438 833577** and ask for our technical support department

Notes...

LSM S BE - Lift System Medium Swivel Box Enclosure

Technical Overview

A general technical overview of the LSM S BE lift mechanism range

LSM S BE RANGE					
Product Size Range	LSM S BE 3	LSM S BE 4	LSM S BE 5	LSM S BE 6	LSM S BE 7
Product Dimensions	Width - 745mm [29.3"] Height - 769mm [32.3"] Depth - 165mm [6.5]	Width - 745mm [29.3"] Height - 820mm [32.3"] Depth - 165mm [6.5]	Width - 745mm [29.3"] Height - 880mm [34.6"] Depth - 165mm [6.5]	Width - 745mm [29.3"] Height - 950mm [37.4"] Depth - 165mm [6.5]	Width - 745mm [29.3"] Height - 1060mm [41.7"] Depth - 165mm [6.5]
Weight Approx	25Kg [55.1lb]	25Kg [55.1lb]	25Kg [55.1lb]	25Kg [55.1lb]	25Kg [55.1lb]
Power Consumption	250W - 500W	250W - 500W	250W - 500W	250W - 500W	250W - 500W
Power Consumption On Standby	100mA	100mA	100mA	100mA	100mA
Lifting Capacity	50Kg [110lb]	50Kg [110lb]	50Kg [110lb]	50Kg [110lb]	50Kg [110lb]
Lifting Capacity Marine	30Kg [66lb]	30Kg [66lb]	30Kg [66lb]	30Kg [66lb]	30Kg [66lb]
Standard Screen Mount Colour	Black	Black	Black	Black	Black
Max Television Size	Width - 564mm [26.6"]	Height - 675mm [26.6"]	Height - 735mm [28.9"]	Height - 805mm [31.7"]	Height - 915mm [36"]
Control	IR Remote, RF Remote, Contact Closure & RS232	IR Remote, RF Remote, Contact Closure & RS232	IR Remote, RF Remote, Contact Closure & RS232	IR Remote, RF Remote, Contact Closure & RS232	IR Remote, RF Remote, Contact Closure & RS232
Power Supply	240V or 110V	240V or 110V	240V or 110V	240V or 110V	240V or 110V
Control Of 3rd Party Product	Yes	Yes	Yes	Yes	Yes
Output Power Supply	Yes (12V)	Yes (12V)	Yes (12V)	Yes (12V)	Yes (12V)
Control Box Size (W,D,H)	150x210x52mm [5.9x8.3x2.0"]	150x210x52mm [5.9x8.3x2.0"]	150x210x52mm [5.9x8.3x2.0"]	150x210x52mm [5.9x8.3x2.0"]	150x210x52mm [5.9x8.3x2.0"]
Shipping Details Dimensions Approx (W,D,H)	1800x500x1200mm [70.9x19.7x47.2"]	1800x500x1200mm [70.9x19.7x47.2"]	1800x500x1200mm [70.9x19.7x47.2"]	1800x500x1200mm [70.9x19.7x47.2"]	1800x500x1200mm [70.9x19.7x47.2"]
Weight Approx	30Kg [66.1lb]	30Kg [66.1lb]	30Kg [66.1lb]	30Kg [66.1lb]	30Kg [66.1lb]

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