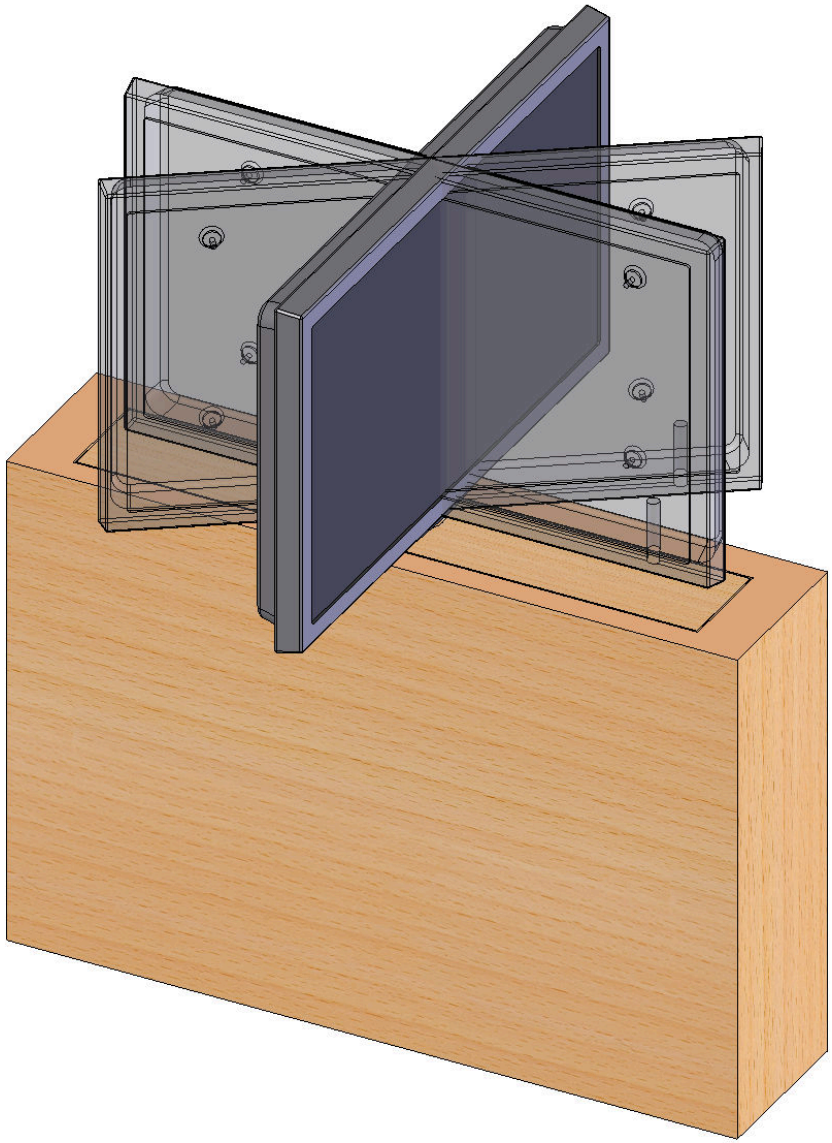
MLS Marine Lift Swivel Mechanism

Installation Instructions

ISSUE: 012

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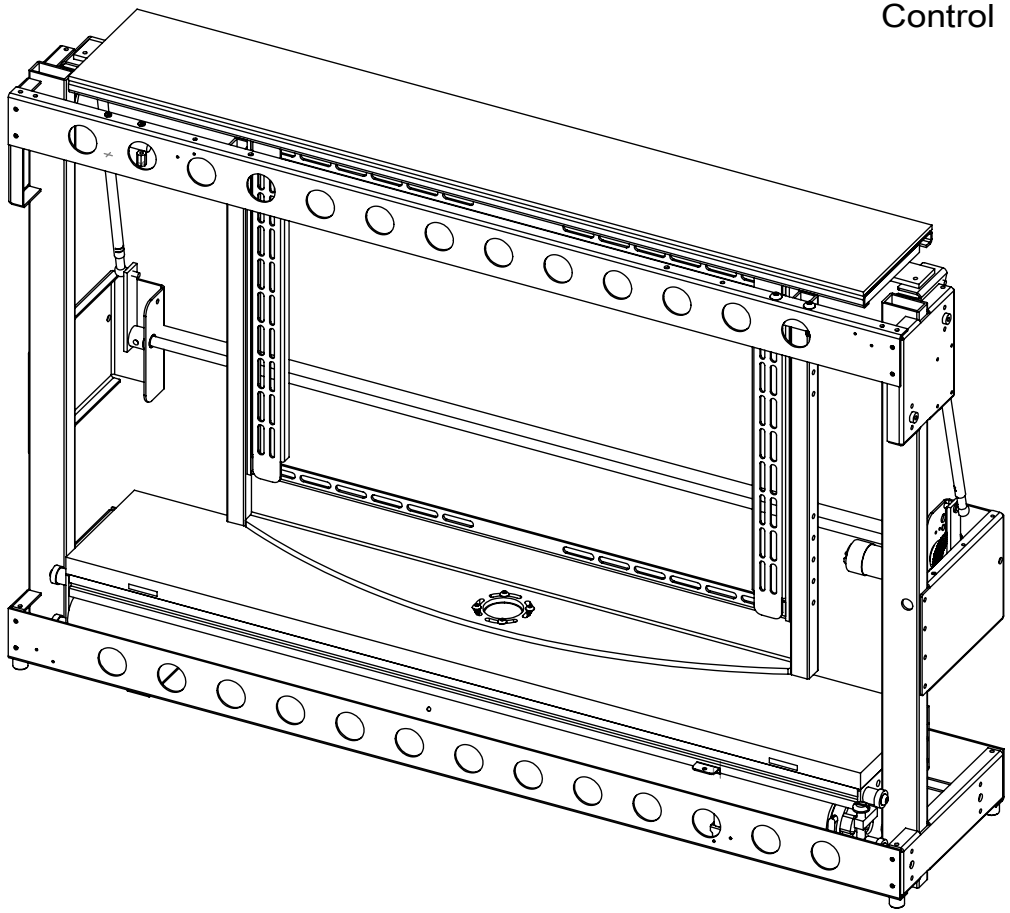
FUTUREAUTOMATION

MLS Marine Lift Swivel Mechanism Instruction Sheet

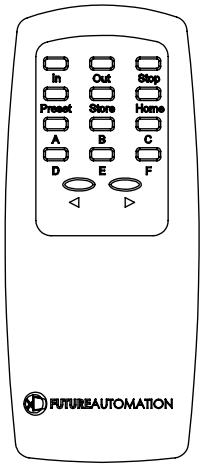
Your Pack Should Contain

1 ML - S

Marine Lift Mechanism

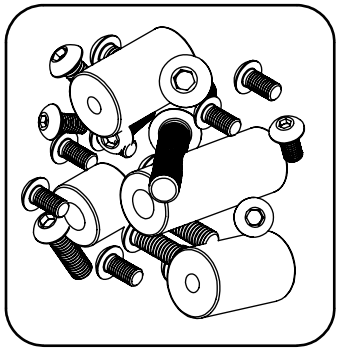


1 IR Remote Control



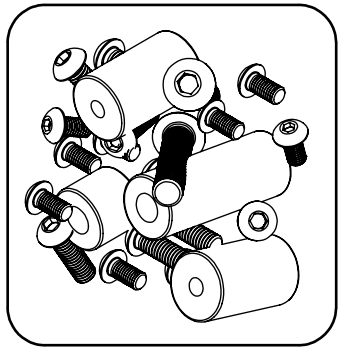
1 Standard ML Fixtures Pack

The contents of which can be found on Sheet 18



1 Fixtures Pack

Relating to the type of mount your screen requires



WARNING
It is the responsiblity of the installer to warn all potential end users of the dangers of interfering with mechanisms during operation

IMPORTANT
Mechanisms which lift or move weights need to be checked on a yearly basis for any damage which may result in an accident

FUTUREAUTOMATION

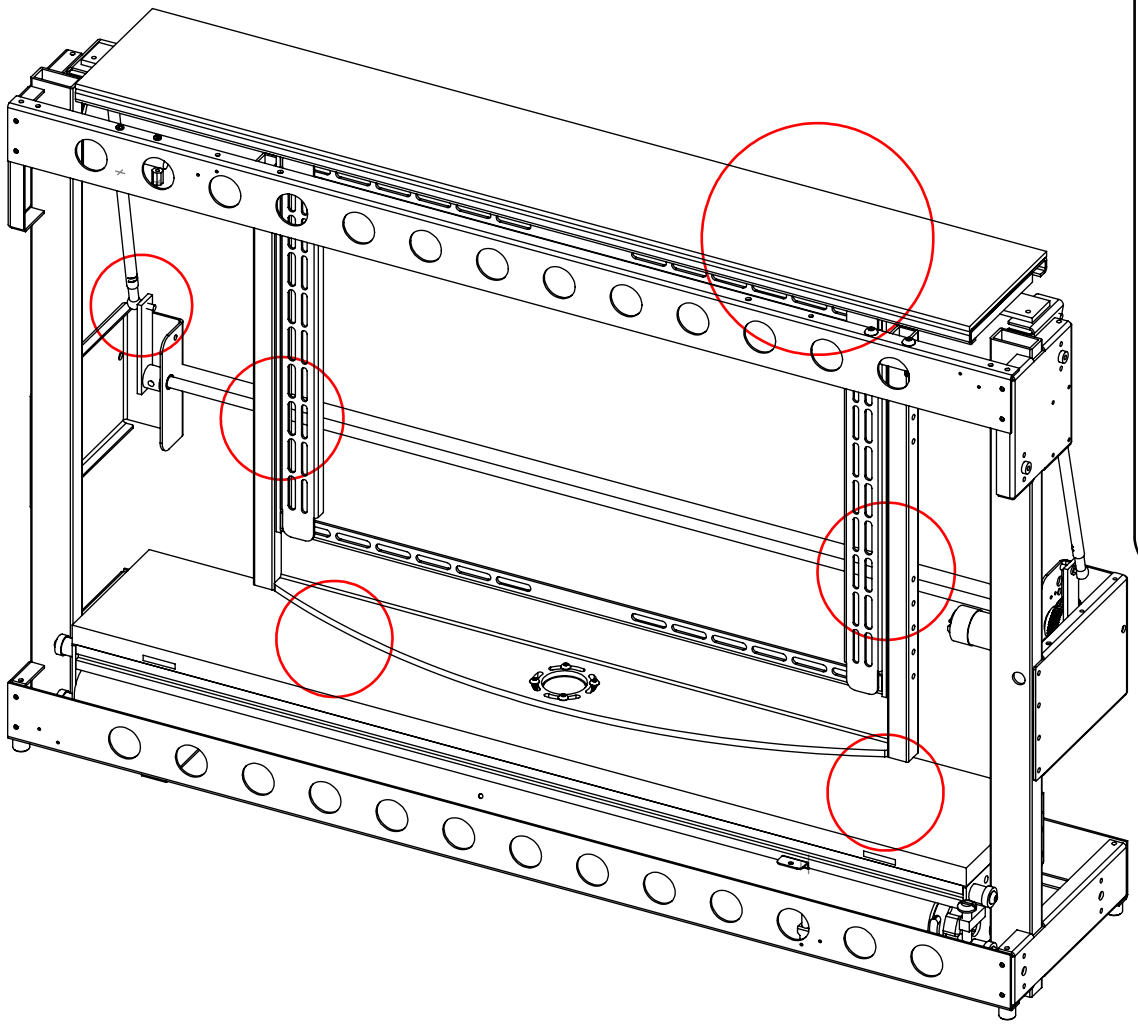
Stage 1

Check the operation of the mechanism

Firstly, remove the cable ties that keep the mechanism safe and secure during transit. There are usually 6 ties in the locations circled on the image, right.

However, on some models there may be more than 6 cable ties.

Once all the cable ties have been removed, then the mechanism can be powered up and tested.



CONTROLS

Connect the mechanism and check that the mechanism operates correctly.

IN - HIDE SCREEN

OUT - REVEAL SCREEN FACING FORWARD

STOP - STOP

PRESET - MEMORY

STORE + PRESET - STORE

HOME - HOME FROM ANGLE

< - PULSE LEFT

> - PULSE RIGHT

Refer to page 12 for full controls

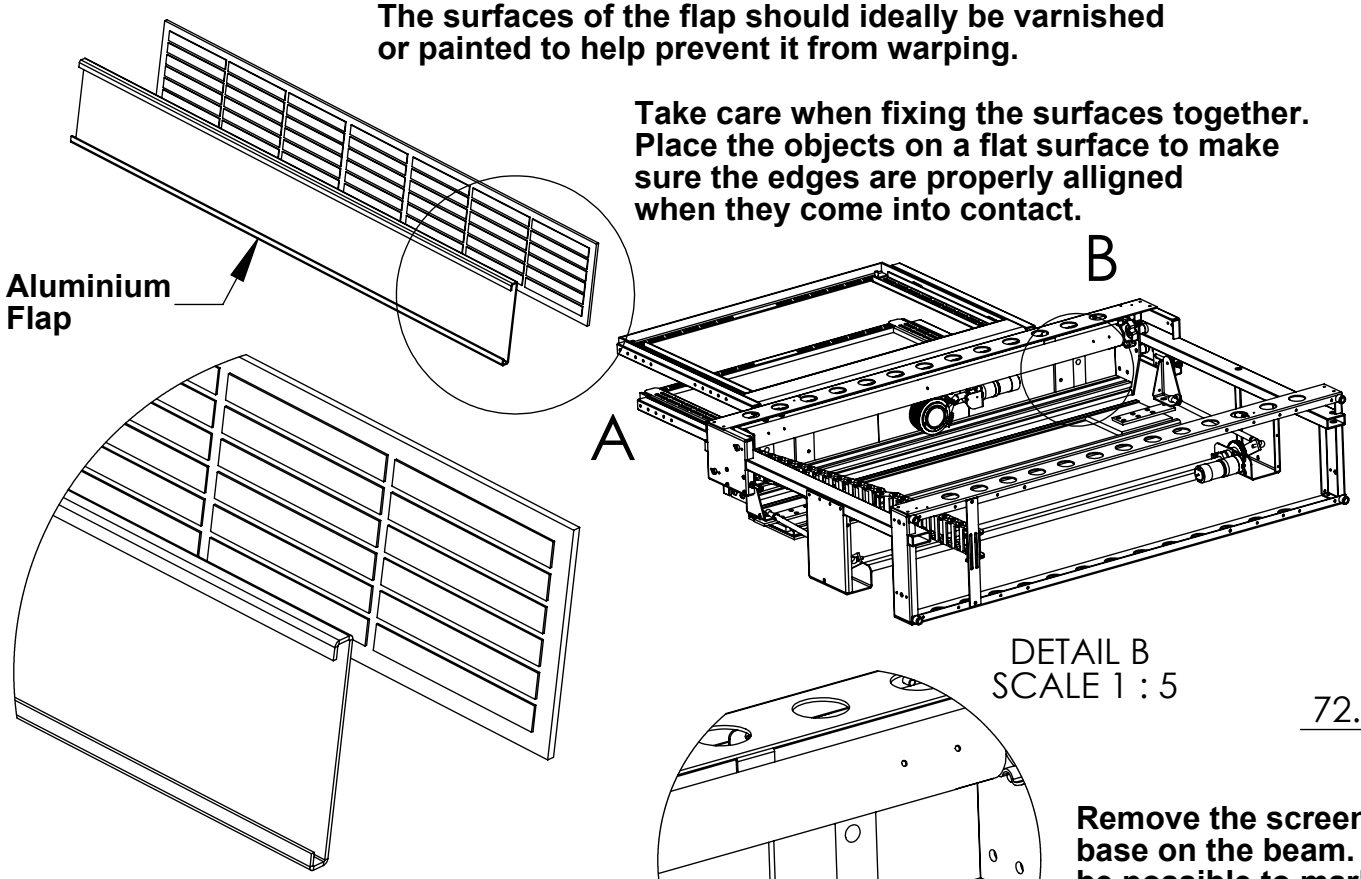
Stage 2

Fitting flap and base to mechansim

The 6mm flap and the base should be made as part of the cabinet.

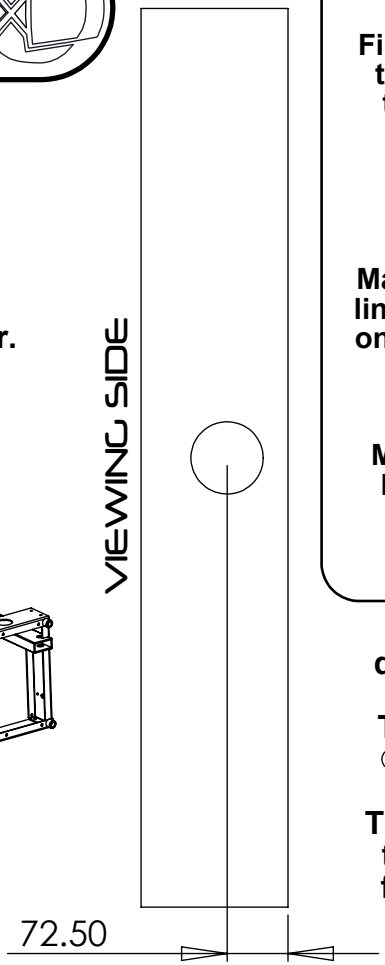
The surfaces of the flap should ideally be varnished or painted to help prevent it from warping.

Take care when fixing the surfaces together. Place the objects on a flat surface to make sure the edges are properly alligned when they come into contact.



DETAIL A
SCALE 1 : 5

DETAIL B
SCALE 1 : 5



FIXING

Firstly, before attempting to fix the base panel to the mechanism, it will be necessary to remove the mounting frame, for ease of working.

Make sure the base panel lines up squarely, directly on top of the lifting beam.

Always consult ML TECHNICAL SHEET before fabricating any flaps or base panels.

1 large hole to be drilled in base panel.

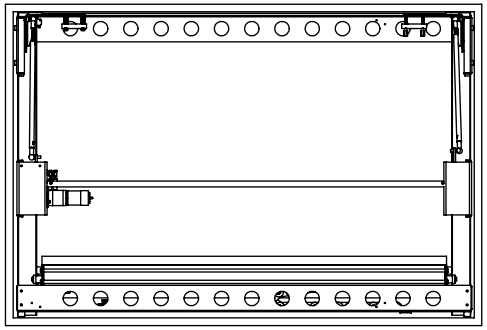
This hole should be ∅86mm to allow for adjustment later. The hole's centre has to be 72.5mm away from the back edge of the base panel.

Remove the screen mount from the mechanism and put the base on the beam. With the base panel on the beam, it will be possible to mark where the wood screws will need to go through the support plates into the base panel. Mark where the holes need to go and then drill a pilot hole for the screws. Then screw in the provided wood screws with washers.

Try to use as many self adhesive pads as possible to get the most secure fixture.

Stage 3

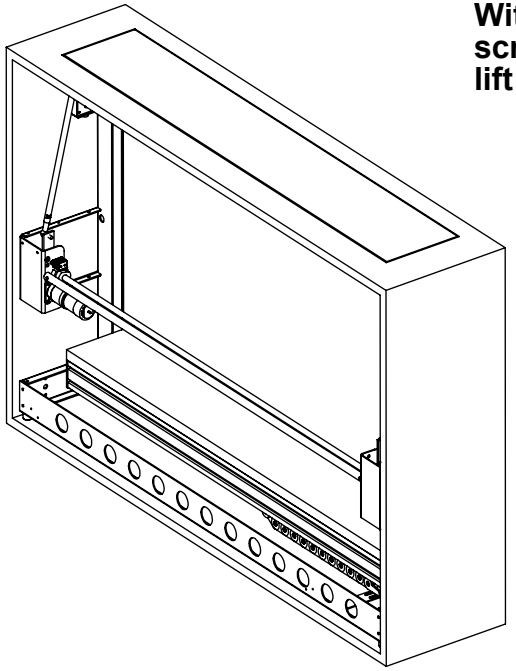
Fixing the lift in the cabinet

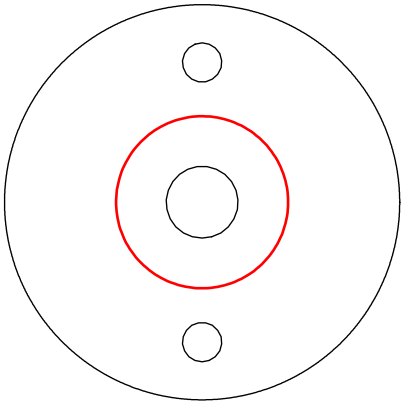


Place the mechanism within the cabinet. Raise the beam to the top and guide base through the opening in the top. IR remote STOP button will stop the lift.

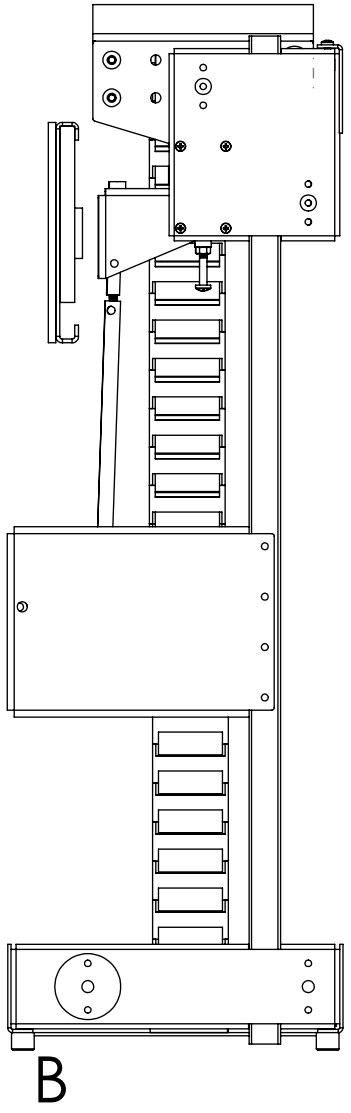
With the base properly located, use the 8 screws supplied, 4 on each side, to pin the mechanism in place, fixing its position left and right. These 8 screws should be screwed through the middle hole of each of the clusters of 3, shown below right.

With the lift fixed in position, use 8 wood screws on each side to secure the lift to the cabinet.





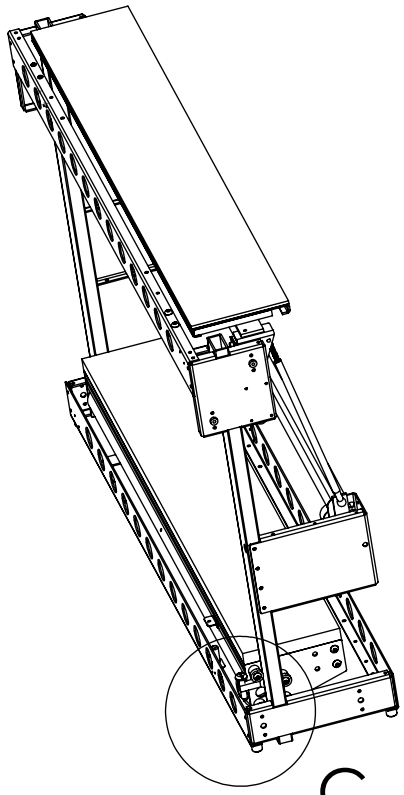
DETAIL B

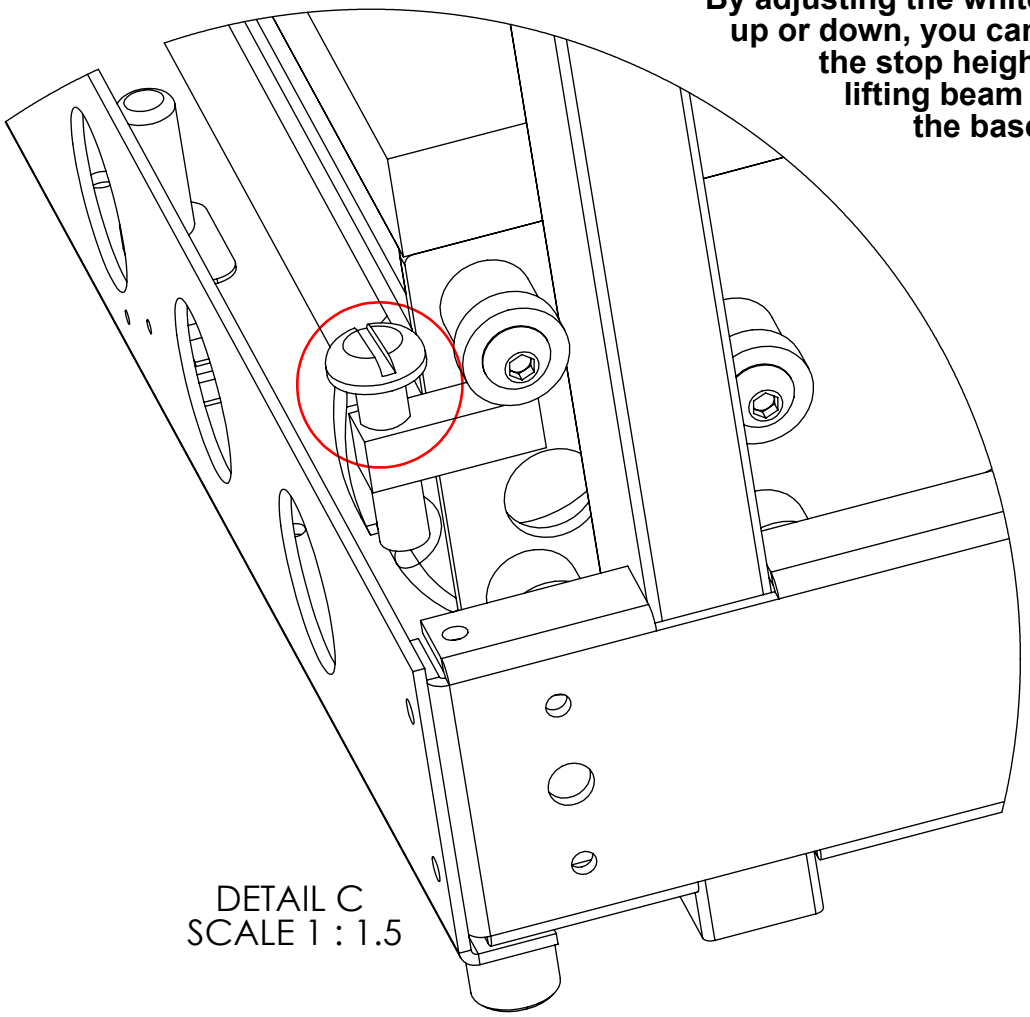


Stage 4

Adjusting the base panel height

By adjusting the white screw up or down, you can adjust the stop height of the lifting beam and so, the base panel.





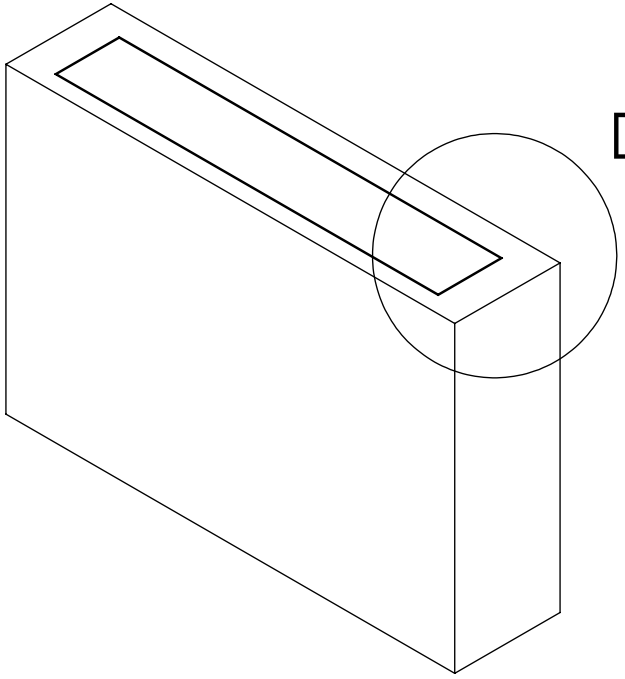
DETAIL C
SCALE 1 : 1.5

Stage 5

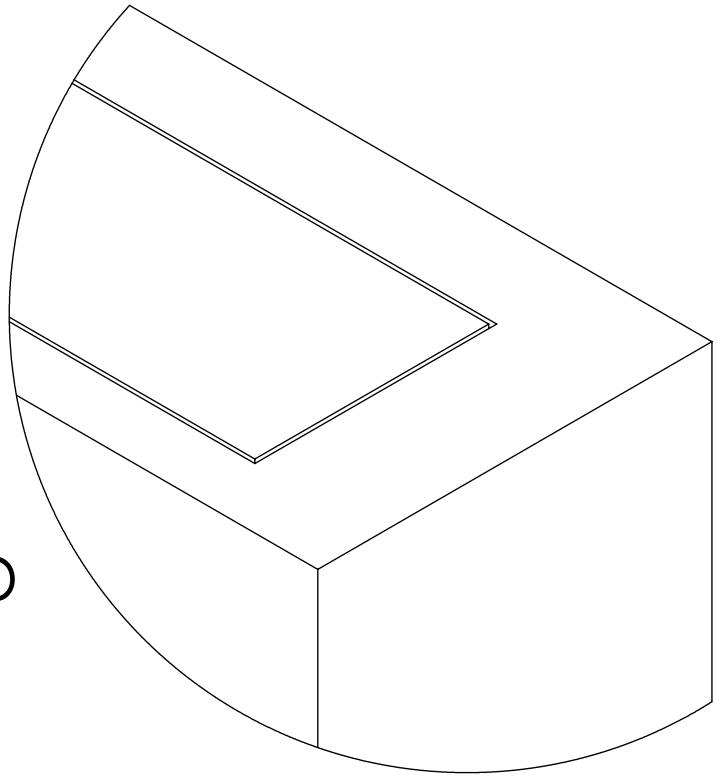
Positioning the base panel

Loosen off the wood screws on the under side of the lifting beam and move the base to the centre of the opening.

There should be a gap of about 3mm around the edges of the base panel to the cabinet.



D



DETAIL D
SCALE 1 : 4

MOUNTING THE FRAME

Once the base panel has been positioned correctly and properly secured, it is then possible to re-attach the mounting frame.

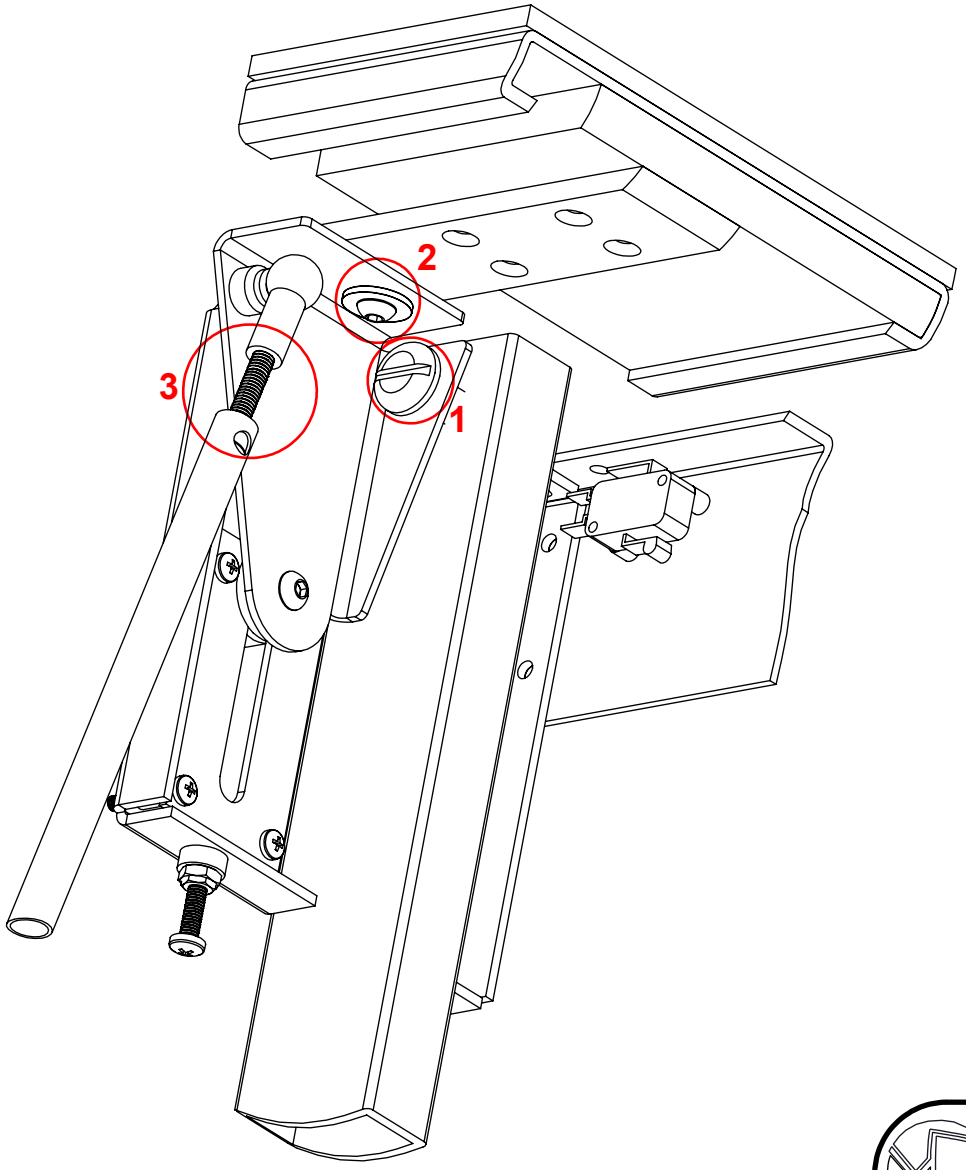
Firstly make sure the mechanism is in the 'Home' position.

Then the screen mounting frame can be bolted down.

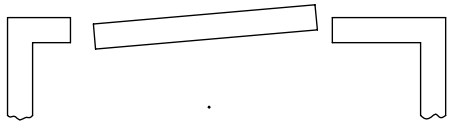
Make sure the mounting frame is square with the slot in the cabinet.

Stage 6

Adjusting the flap-up position



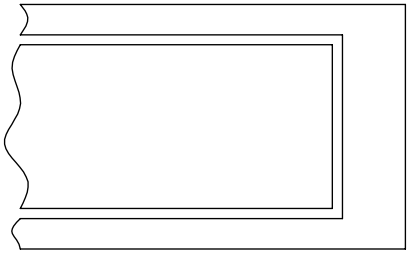
1



By adjusting the white screw, at each side of the lift, you can adjust the tilt of the flap.

2

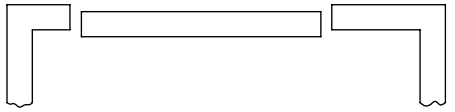
CABINET TOP - PLAN VIEW



By loosening the M6 bolts on each side under the flap, you can adjust the position of the flap in the hole in the cabinet top. Aim for a 3mm gap all round.

3

CABINET TOP - SIDE VIEW

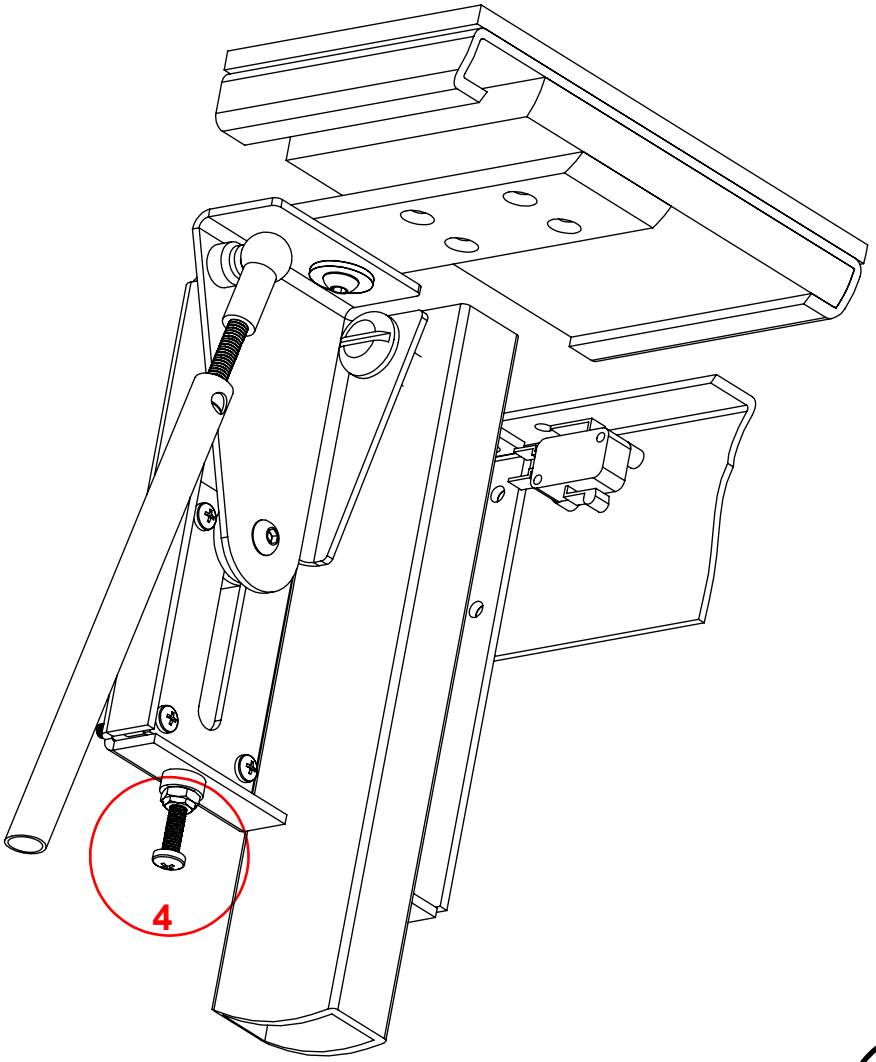


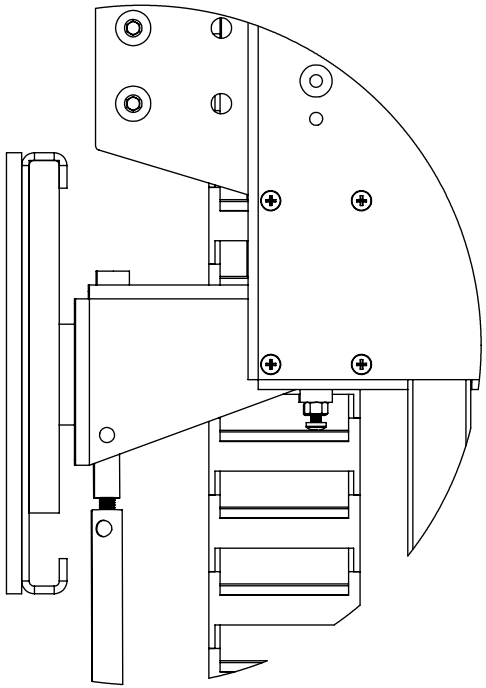
By winding the push rods on each side, you can adjust the height of the flap in order to get it level with the cabinet top. Be sure to lock the nut securely once adjusted. Make sure the black plate doesn't touch the inside of the cabinet. This can cause strain on the motor, leading to failure.

CABINET TOP - SIDE VIEW

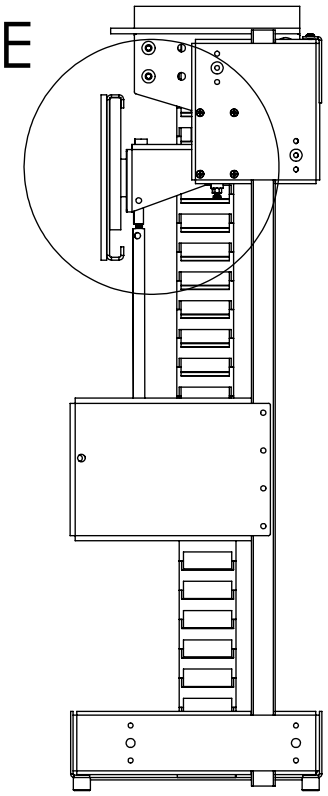
Stage 7

Adjusting the flap-down position





DETAIL E
SCALE 1 : 3

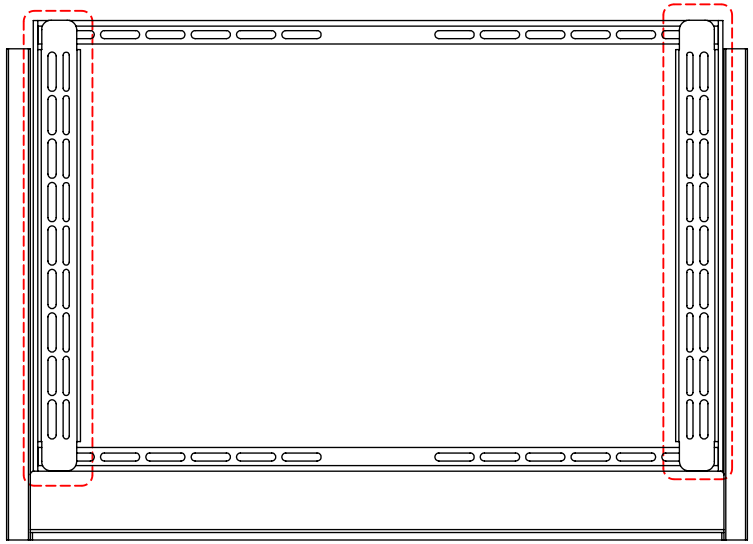


4 **By adjusting the bolts under each flap arm, it is possible to alter the angle the flap opens to. It is very important that when the flap is open, it rests in a vertical position, as shown above.**

Stage 8

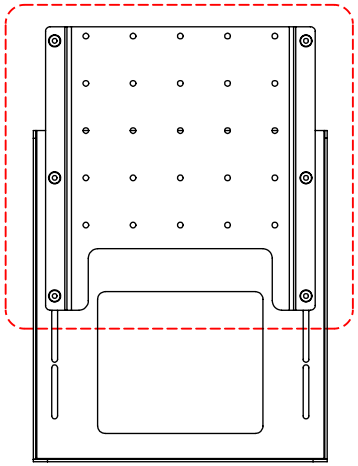
Checking the screen mount

With a standard marine lift, the supplied mounting type will be either a Group A or C framework, or a VESA 200 mount. Check that the type supplied suits the screen that is going to be mounted to the mechanism.



Group A or C Framework

Remove the uprights, hightlighted above, and fix them to the back of the screen using the appropriate fixings.



VESA 200 Mount

Remove the screen plate, hightlighted above, and fix it to the back of the screen using the appropriate fixings.

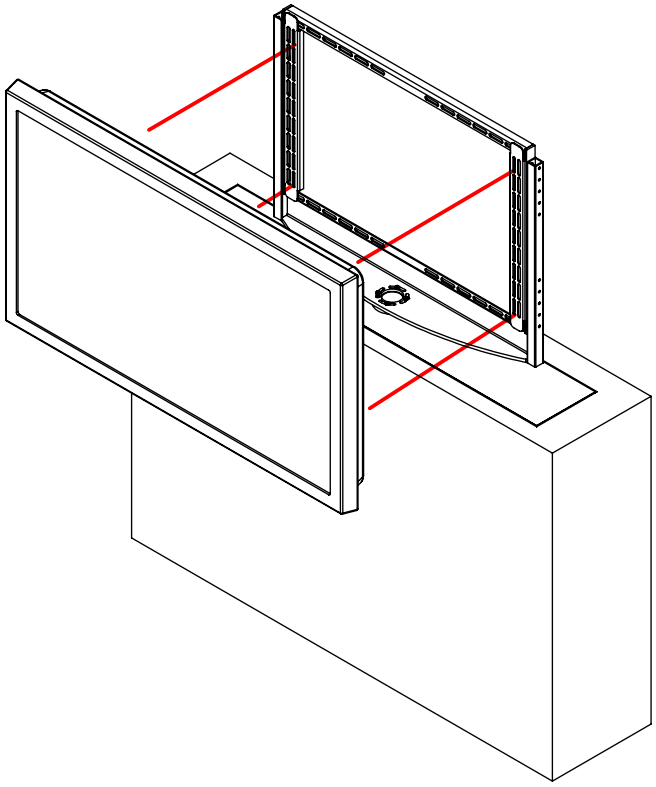
Stage 9

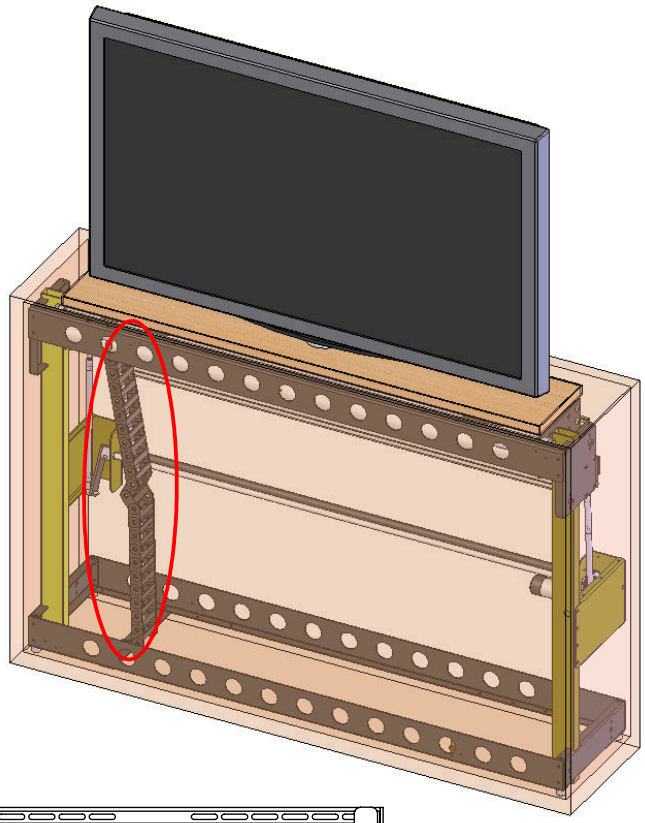
Fixing the screen to the lift

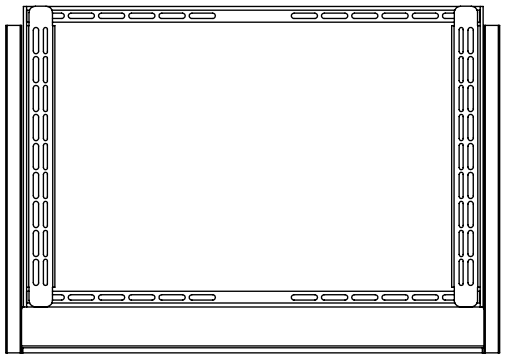
Before mounting any screen, press STOP on the IR remote in order to prevent any motor movements during the mounting procedure.

Make sure the swivel is in the HOME position!

Simply mount the screen on to the mount supplied with your mechanism. The example below shows a Group A framework.







CABLES

When the screen is in position, the cables can be connected and run down into the cabinet.

Pass the cables through the centre of the aluminium shaft at thye base of the framework. Once inside the cabinet, pass the cables into the cable management system. This resembles a black chain running from the beam to the base of the cabinet that the cables can be pushed inside to keep them tidy.

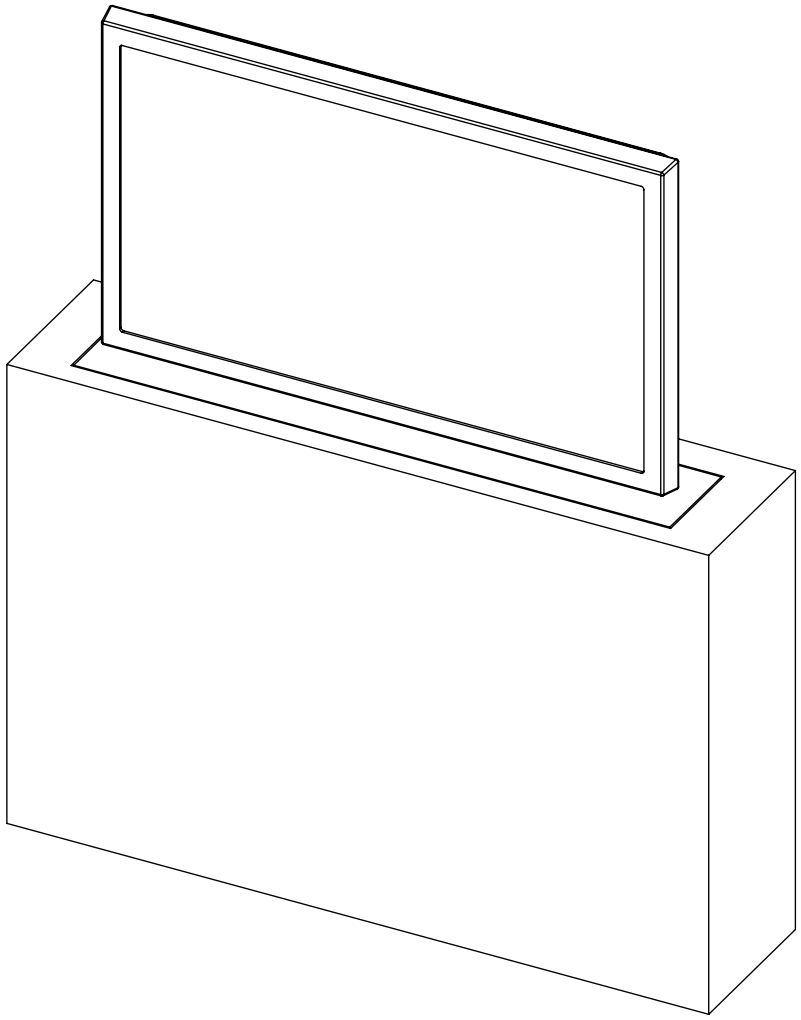
The cable management system is circled near left.

The height of the inner framework is adjustable. The inner uprights will slide inwards to allocate different mounting systems.

Stage 10

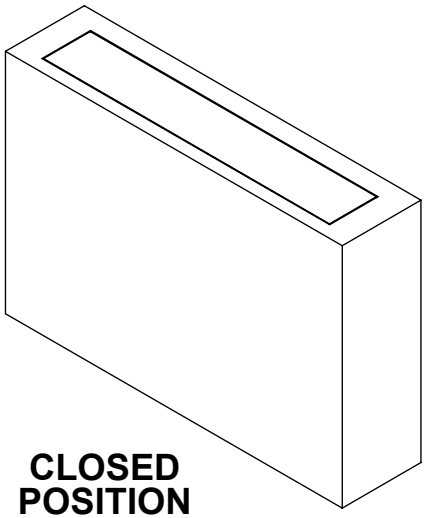
Fix the IR sensor and run the mechanism

The IR sensor can be located anywhere outside of the cabinet.



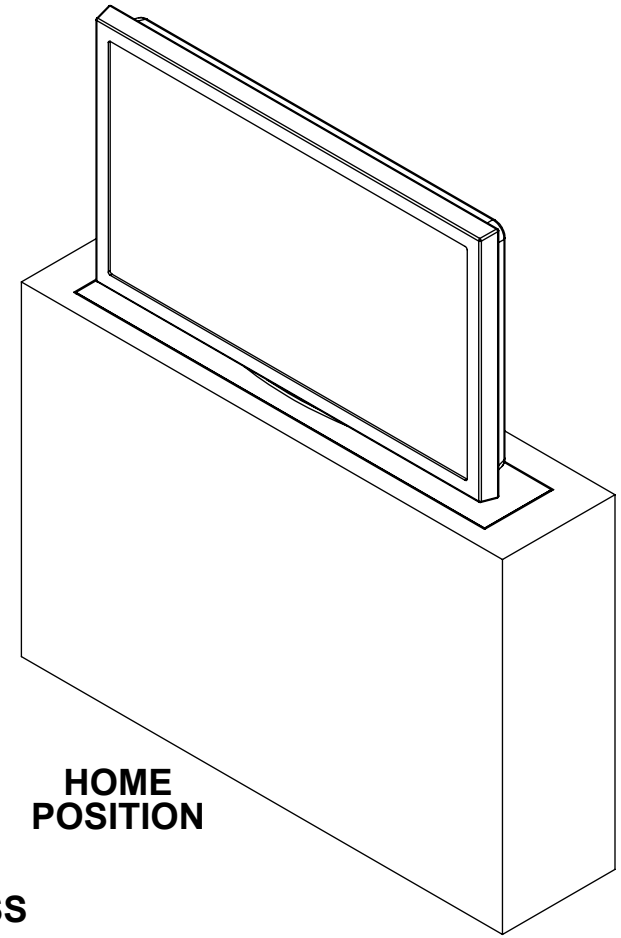
Controlling The Mechanism

Viewing from the front



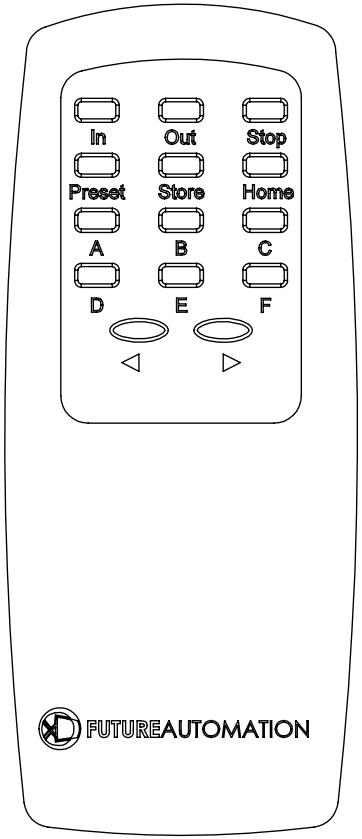
CLOSED POSITION

PRESS
OUT



HOME POSITION

PRESS
IN



REMOTE CONTROLS

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 preset and sets swivel 180 degree right and left

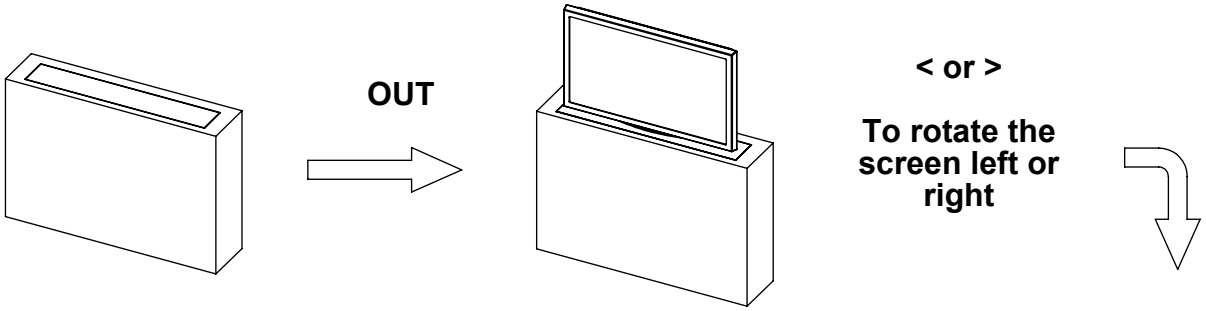
STORE + D within 1 sec sets left limit

STORE + F within 1 sec sets right limit

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

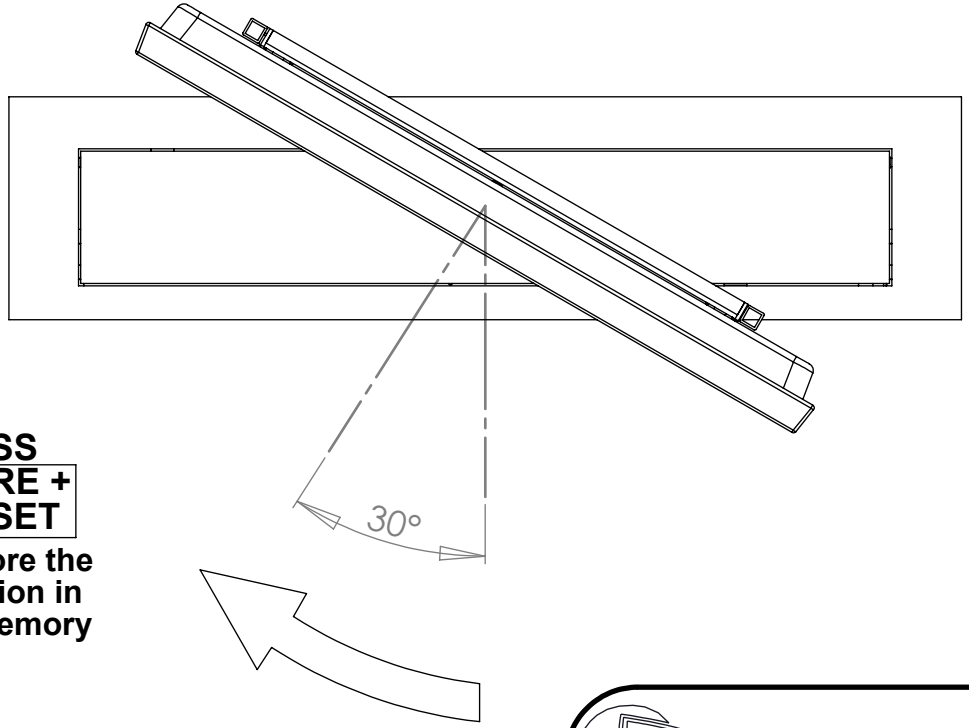
Controlling The Mechanism

Programming new memorised positions



< or >

To rotate the screen left or right



PRESS STORE + PRESET

To store the position in the memory

POSITION OPTIONS

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

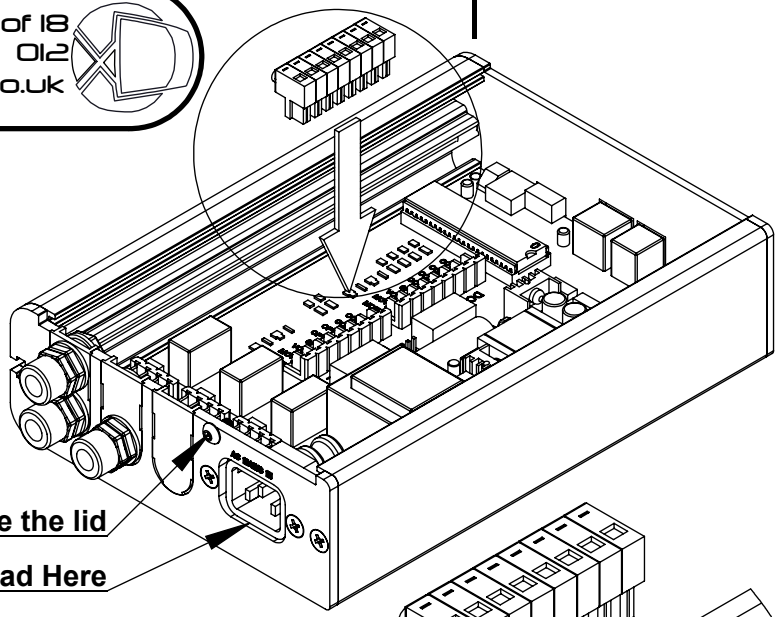
In order to program a position that it right of centre, simply press < to turn the screen to the right.

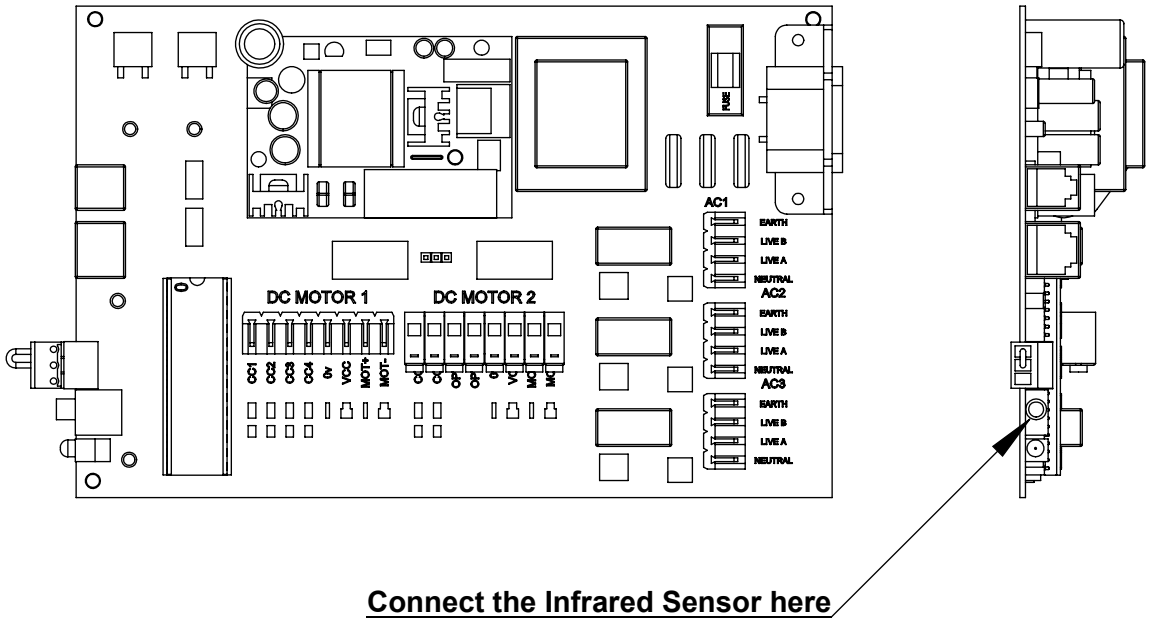
Then press STORE + PRESET to store the position in the memory.

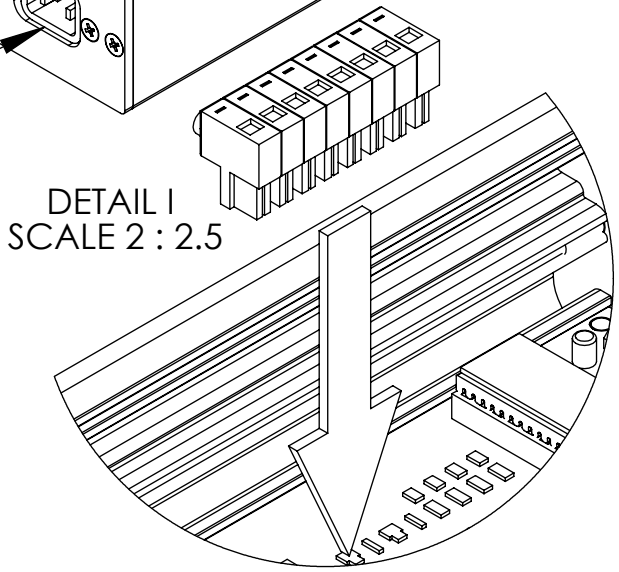
STORE + A-C
Also stored positions

Electrical Connections

The MLS mechanism must be connected to the AC1, DC1 and DC2 blocks of connections.



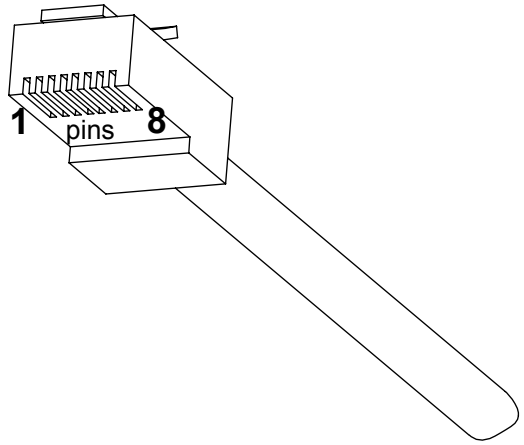




It is VERY important that when all of the electrical connections are made, the connector blocks are connected in the way shown above, with all the wires coming directly out the top of the connector blocks.

Contact Closure

Use an RJ45 connector in the CC1 socket on the control box to operate via contact closure.



Once the mechanism is moving, any contact closure input will cause the lift to stop. There will then be a short delay before another command can be issued. This feature should always be available to the end user for safety reasons.

The emergency stop connector should also be used to connect other safety devices or switches

PIN	568 B	568 A	DESCRIPTION	ACTION
1	W/G	W/O	12V SUPPLY CURRENT LIMITED	
2	G	O	12V LATCH	When 12V is attached, device will go OUT. When 12V is removed, device will go IN.
3	W/O	W/G	GROUND	
4			N/A	
5	W/BL	W/BL	DEVICE IN LATCHED	Momentary short to ground to make lift go UP and RIGHT. CC4
6	O	G	DEVICE STOP	Momentary short to ground to make lift go UP and LEFT. CC3
7	W/BR	W/BR	DEVICE OUT	Momentary short to ground to make lift go UP to HOME position. CC2
8	BR	BR	DEVICE IN	Momentary short to ground to make lift go IN. CC1

RS232

Use an RJ11 connector in the socket marked RS232 on the control box to operate using RS232.

DETAILS

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

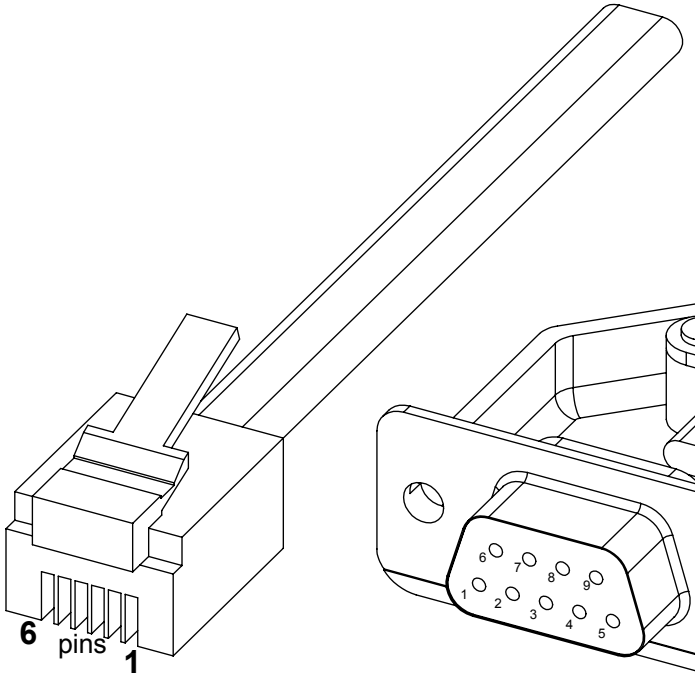
PROTOCOL

ASCI Command
fa_in = Device IN
fa_out = Device UP only
fa_stop = Device STOP

fa_store = STORE MEMORY position
fa_preset = Go to MEMORY position

fa_home = Device UP only
fa_right = Device UP and to RIGHT limit
fa_left = Device UP and to LEFT limit

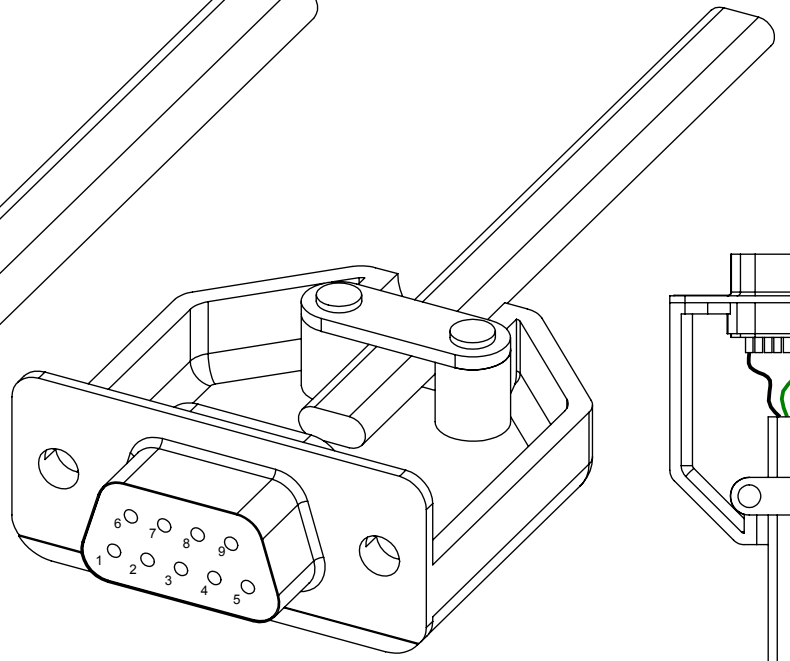
ALL COMMANDS FOLLOWED BY CARRIAGE RUTURN



PIN 1: TX

PIN 6: RX

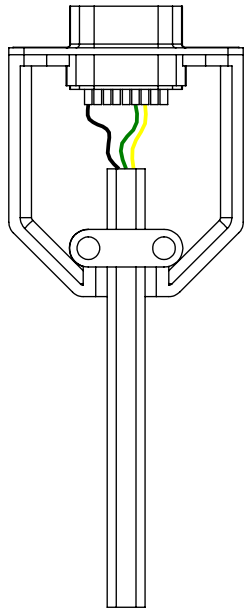
PIN 3&4: GROUND



PIN 2: RX

PIN 3: TX

PIN 5: GROUND

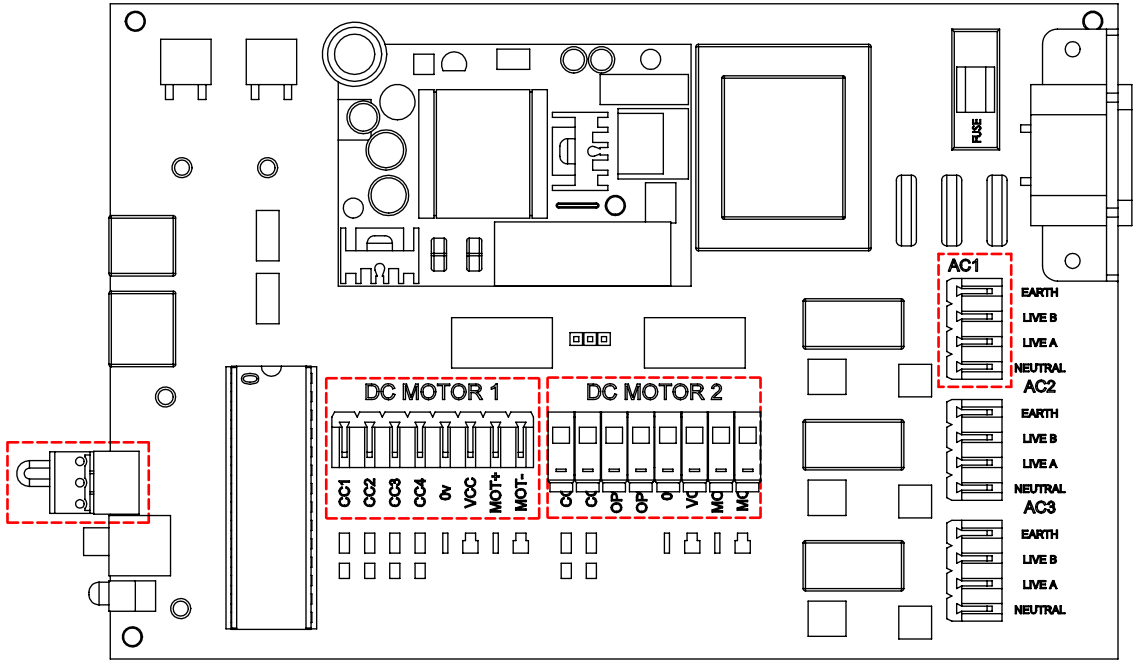


Operation Details

AC1
Gives an ouput of 240V(or 110V) to control the Marine Lift motor.

Outputs stay live for 60 seconds after the OUT or IN fuctions are selected.

EMERGENCY STOP
This connection will stop all functions of the mechanism once broken / removed.



DC1
A low voltage connection for the switches in the lift mechanism. The four LEDs indicate the state the mechanism is in.
CC1 Not Lit: Flap is OPEN
CC2 Not Lit: Flap is CLOSED
CC3 Not Lit: Beam is DOWN
CC4 Not Lit: Beam is UP

DC2
A low voltage connection for the switches in the swivel mechanism. The two LEDs indicate the state the mechanism is in.

Supplied Fixings

The fixings immediately below are the standard ML-S fixings supplied with every ML-S product. There will be one other pack of fixings supplied, containing fixings that are specific to the particular screen being mounted on the ML-S product.

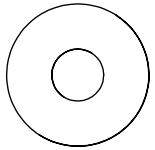
M6 x 25mm Pointed x 8



Wood Screws x 2



Penny Washers x 2



GROUP A		VESA	GROUP C	
M4 x 16mm x8	M5 Washers x8	M4 x 16mm x6	M4 x 16mm x4	M8 Washers x6
M5 x 12mm x8	M6 Washers x6	M4 x 20mm x6	M5 x 16mm x4	
M6 x 16mm x6		M5 x 20mm x4	M5 x 20mm x4	M8 Rawl Bolts x6
M8 x 16mm x6	Spacers 18 OD 8 ID 10mm x8	M5 x 30mm x4	M5 x 30mm x4	
M8 x 25mm x4	Spacers 18 OD 8 ID 15mm x4	M5 x 35mm x4	M5 x 50mm x4	Spacers 15 OD 6 ID 15mm x4
M8 x 30mm x4	Spacers 18 OD 8 ID 45mm x4	M6 x 20mm x4	M6 x 16mm x4	Spacers 15 OD 6 ID 30mm x4
M8 x 50mm x4			M8 x 60mm x6	Spacers 20 OD 6 ID 3mm x4
M8 x 60mm x4		Spacers 20 OD 6 ID 3mm x8		
M8 x 80mm x4				