

Installation Instructions

CHH - Ceiling Hinge Heavy

Models - CH6, CH7 & CH8

Design Highlights

- Near Silent Motor System
- Modular Format Ensures Simple Installation
- Sized To Suit Options Available
- Range Of Standard Sizes

Thank you for choosing
futureautomation

CHH - Ceiling Hinge Heavy



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 from 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.

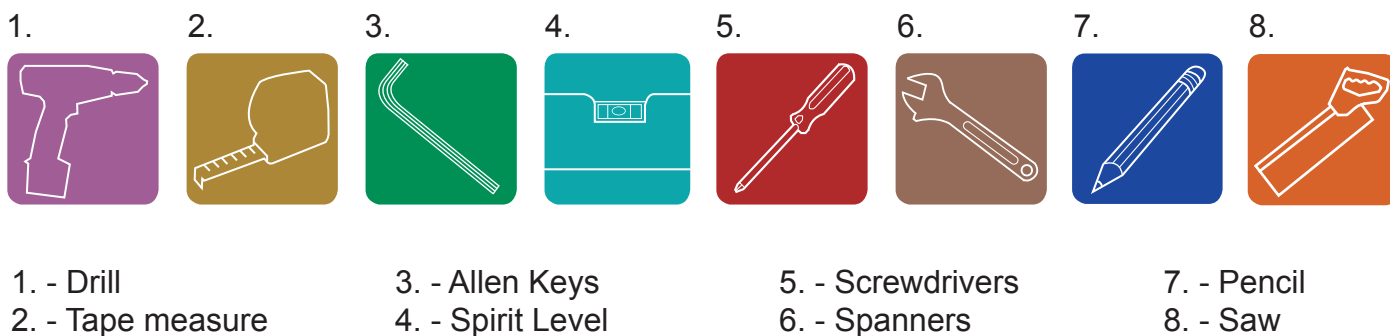
Future Sound & Vision trading as Future Automation intend to make this and all documentation as accurate as possible. However, Future Automation makes no claim that the information contained herein covers all details, conditions or variations, nor does it provide for every possible contingency in connection 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.

CHH - Ceiling Hinge Heavy

Contents	Page
Introduction	
Safety Information	1
Contents	2
Contents	3
Tool Indicator Icons	3
Installation	
Parts List	
Package Contents	4
Stage 1	
Control Box Setup	5
Stage 2	
Constructing the Frame	6
Stage 3	
Install the Gear Boxes	7
Stage 4	
Adding the Cross Braces	8
Stage 5	
Setting the Mechanism Height	9
Stage 6	
Adding the Ceiling Panels	10
Stage 7	
Adding the Side Trim Panels	11
Stage 8	
Securing the Pivot Tube	12
Stage 9	
Adjusting the Switches	13
Stage 10	
Mounting the Screen	14
Electrical Connections	
Electrical Connections In The Control Box	15
Contact Closure	16
Warning Lights	16
RS232	17
Wiring & Control Box Details	17
Operations	
Remote Control	18
Operation	18
Changing The Batteries	18
Trouble Shooting	19

CHH - Ceiling Hinge Heavy

Tool Indicator Icons



CHH - Ceiling Hinge Heavy

Package Contents

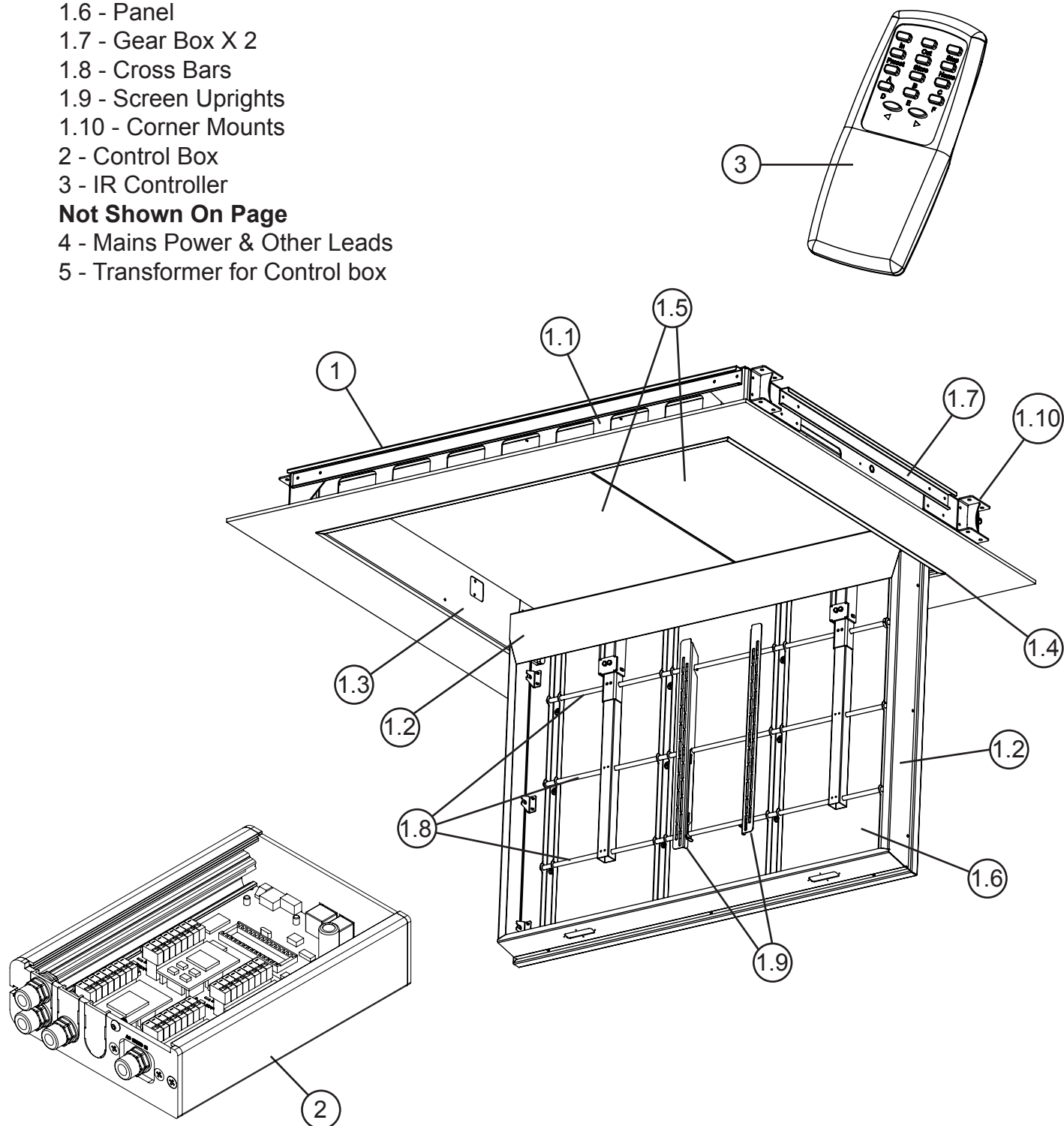
- 1 - Mechanism
- 1.1 - Front & Back Brace
- 1.2 - Screen Enclosure
- 1.3 - Left Trim Panel
- 1.4 - Right Trim Panel
- 1.5 - Ceiling Panels
- 1.6 - Panel
- 1.7 - Gear Box X 2
- 1.8 - Cross Bars
- 1.9 - Screen Uprights
- 1.10 - Corner Mounts
- 2 - Control Box
- 3 - IR Controller

Not Shown On Page

- 4 - Mains Power & Other Leads
- 5 - Transformer for Control box

Nuts & Bolts Multipack:


Various Fixing's

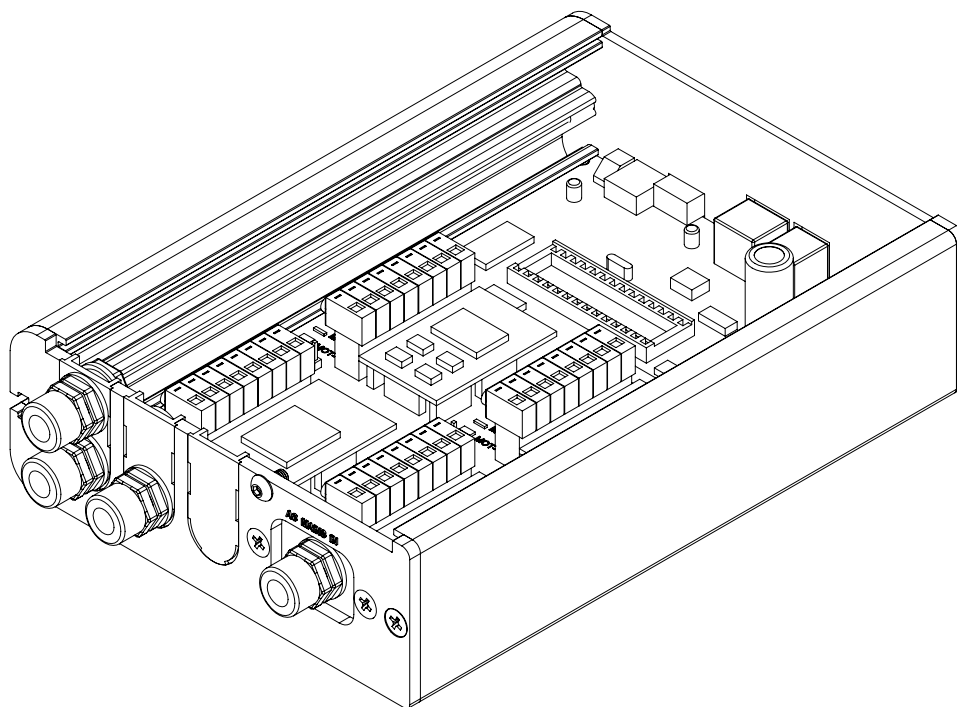


CHH - Ceiling Hinge Heavy



Control box setup

- THE BOX MUST BE EASY TO ACCESS! 
- Connect the control box to the mains power supply
- Connect the infrared remote sensor even if you are going to use switch control
- See operations page

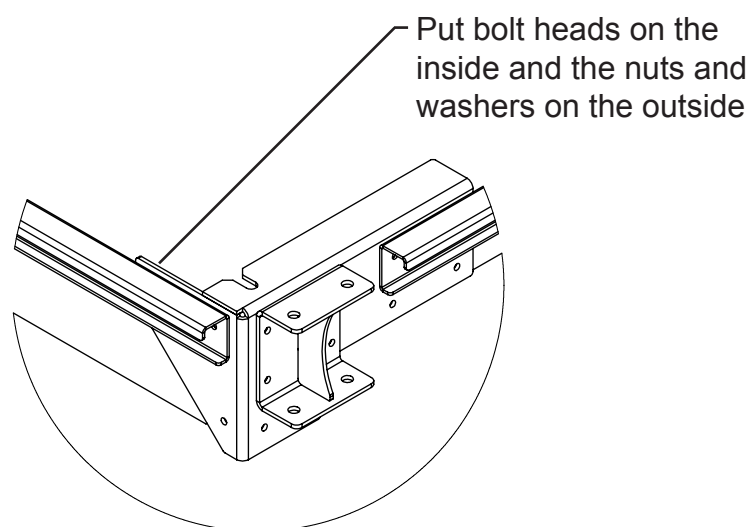
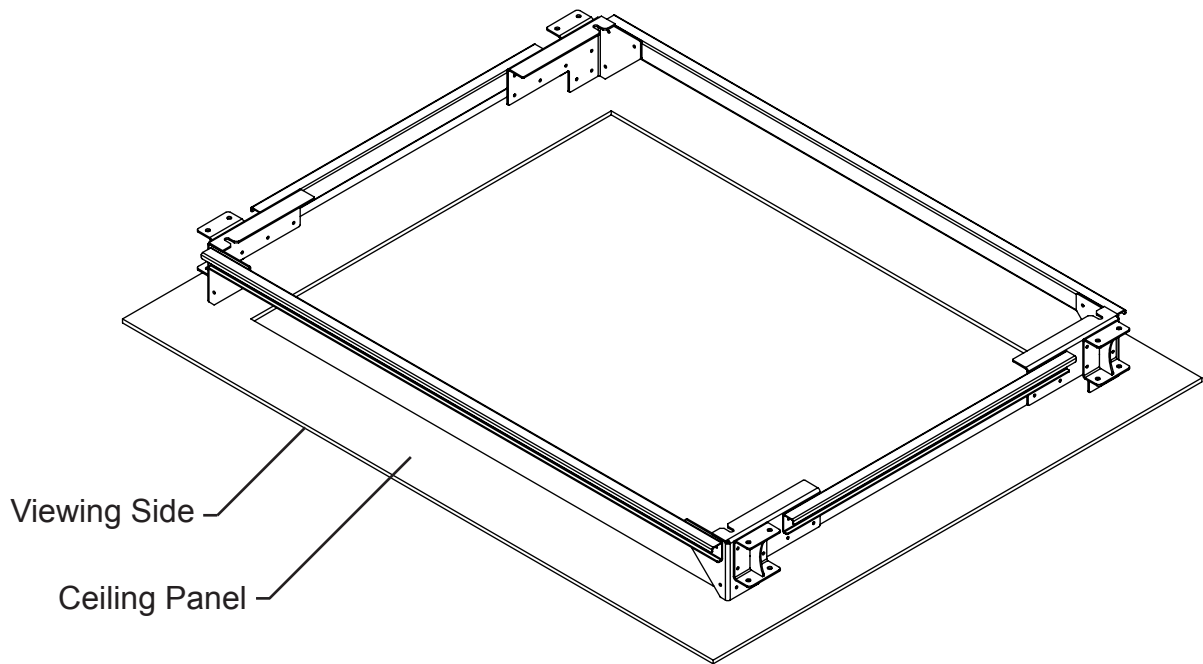


CHH - Ceiling Hinge Heavy



Constructing the Frame

Bolt the support framework together and fix in place. The finished ceiling can be in place at this stage. See technical sheet for position in relationship to the opening and the opening size.



Fixings -
16 No. M10 x 25mm Bolts
16 No. M10 Nuts

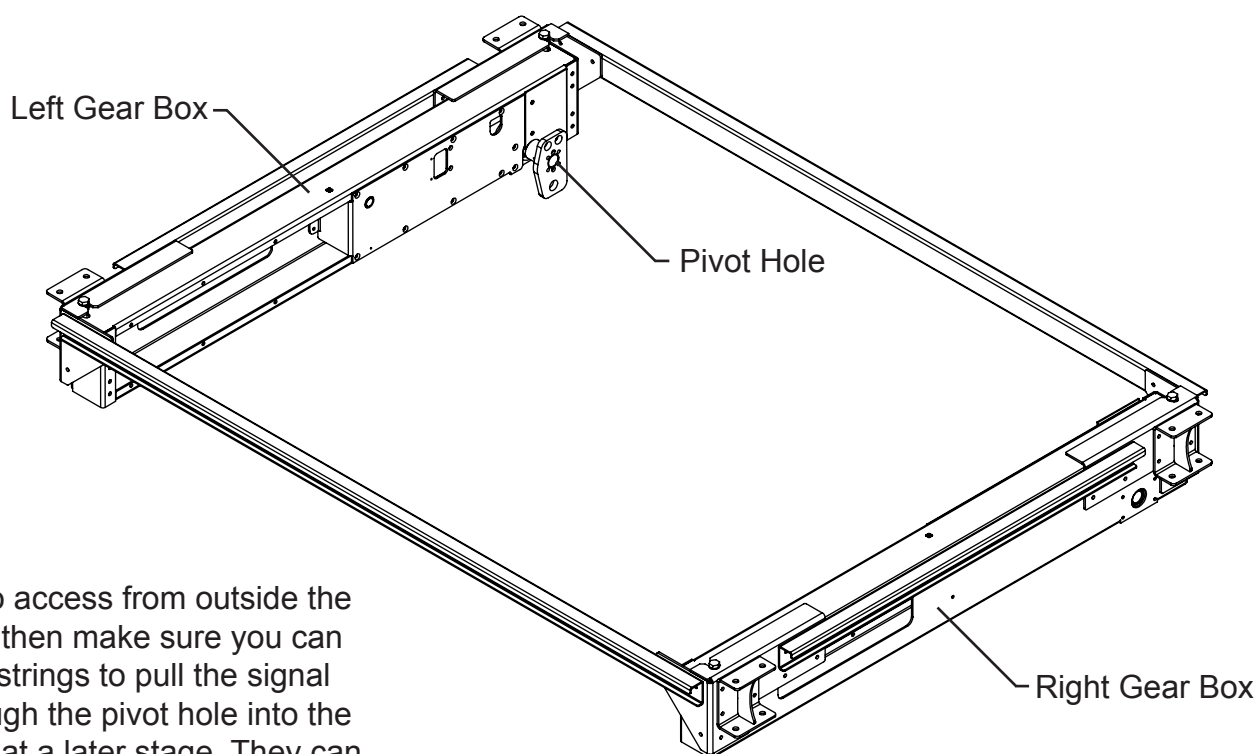
CHH - Ceiling Hinge Heavy



Install the Gear Boxes

Hook both gearboxes into place. Adjust so that the washer on the hanging bolts sits above the bracket. Height will be adjusted later.

Use the lock nut underneath to ensure the gearbox can not fall at this stage.

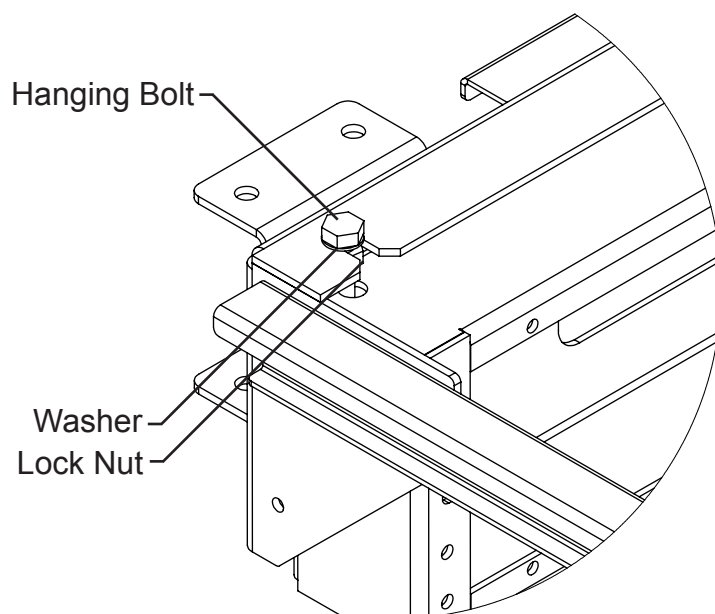


If there is no access from outside the mechanism then make sure you can get to draw strings to pull the signal cables through the pivot hole into the mechanism at a later stage. They can come from both sides.

There will be a cable coming from the left gearbox on all mechanisms. On larger versions a second cable will come from the right gearbox as well. Run these cables to the control box. It is important to install the control box in an easily accessible location away from the mechanism.



On mechanisms with cables from both gearboxes, only ever run as a pair.

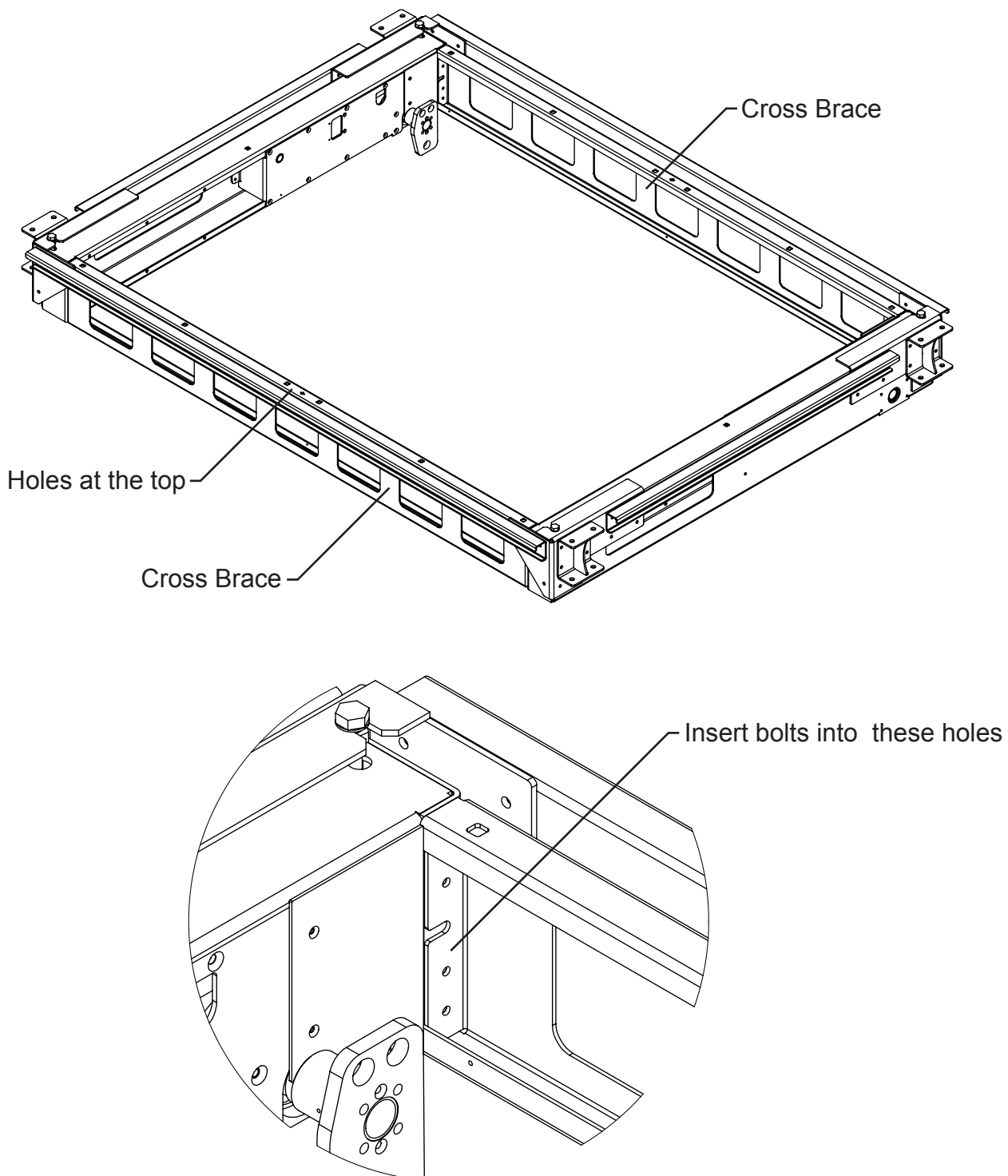


CHH - Ceiling Hinge Heavy



Adding the Cross Braces

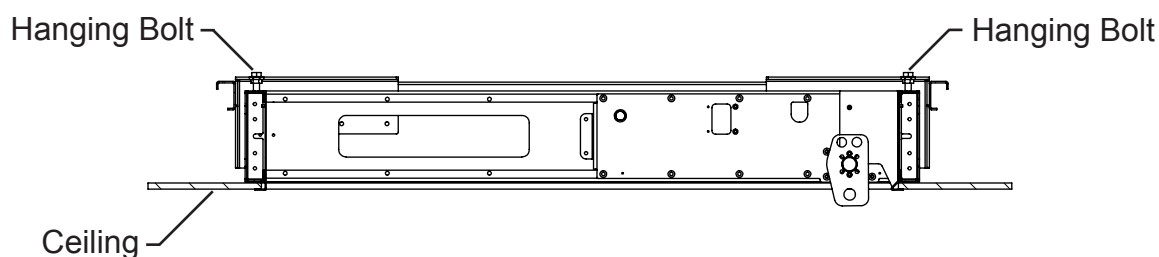
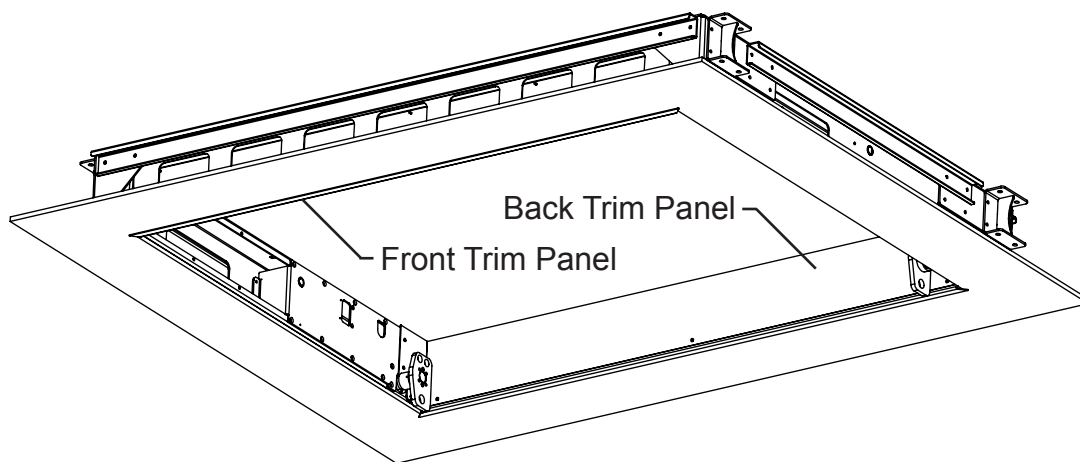
The two cross braces are identical. Fix one at the front and one at the back to hold the gearboxes together. Make sure the holes are at the top as shown. Use 4 No. M8x20 Bolts in each corner.



CHH - Ceiling Hinge Heavy



Setting the Mechanism Height



Add the front and back trim panels. Just use two M5 x 12 countersunk bolts in the front and two M5 x 12 button head bolts in the rear, removed bolts after this operation.

Adjust the main hanging bolts at each corner so that the mechanism is at the correct height in relationship to the finished ceiling height.

Check the mechanism is square, by measuring diagonals. Lock off the four lock nuts.

Remove the front and back trim panels.

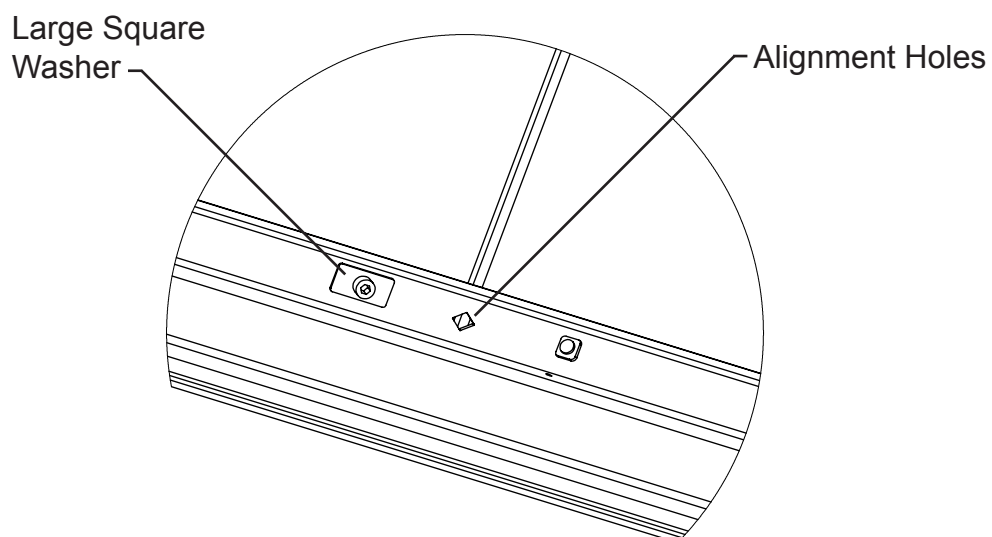
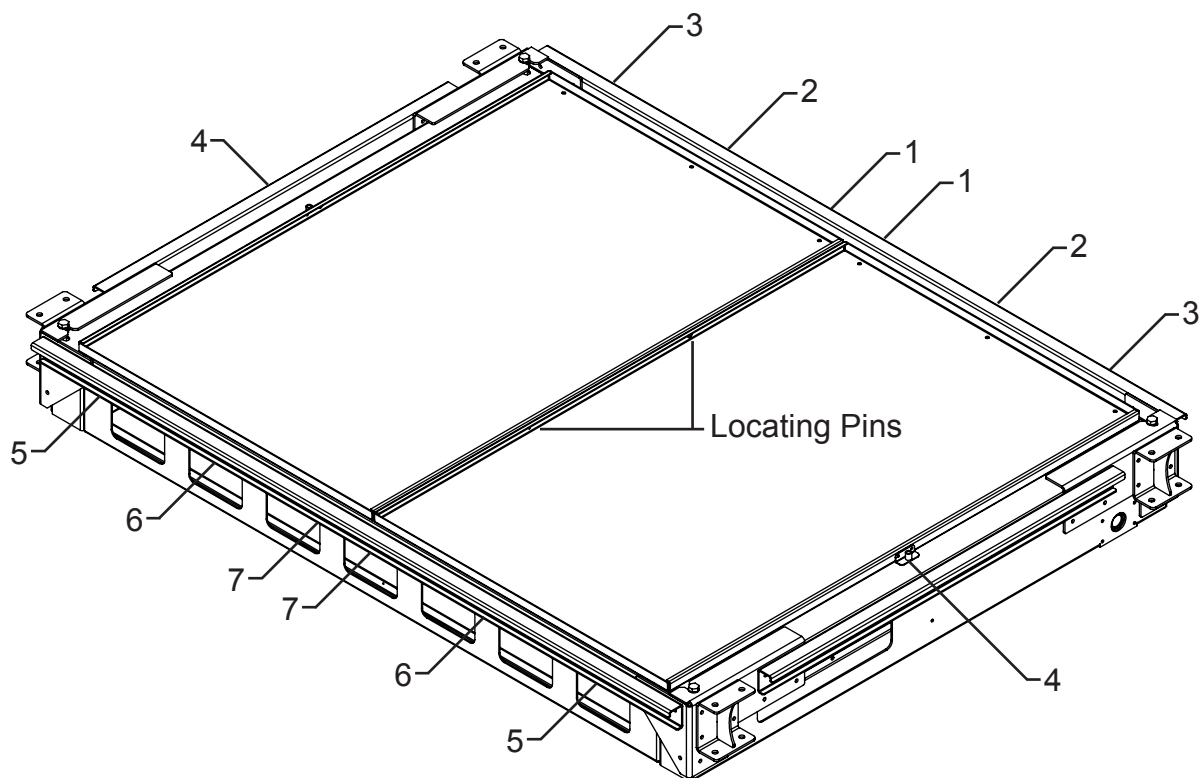
CHH - Ceiling Hinge Heavy



Adding the Ceiling Panels

The two ceiling panels are inserted from below. Line up the location pins in the centre and fix with seven fixings for each panel. Use the M8 x 20 bolts and the large square washers.

Use the aligning holes in each cross brace to get the panels centrally located.



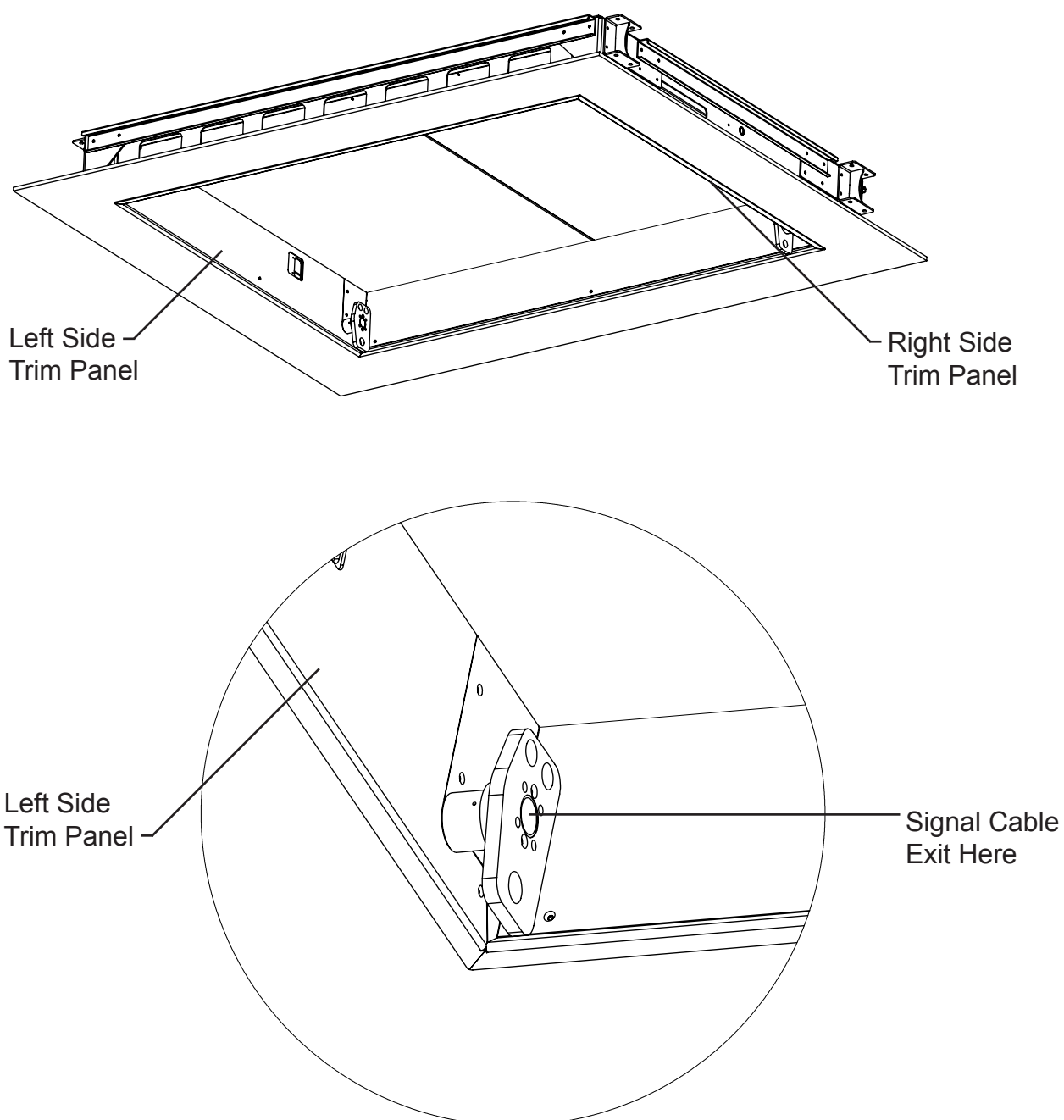
CHH - Ceiling Hinge Heavy



Adding the Side Trim Panels

If there is no access from outside the mechanism then make sure you can get to draw strings to pull the signal cables through into the mechanism at the next stage. They can come from both sides.

Add the side trim panels to create the complete ceiling box shown above.



CHH - Ceiling Hinge Heavy



Securing the Pivot Tube

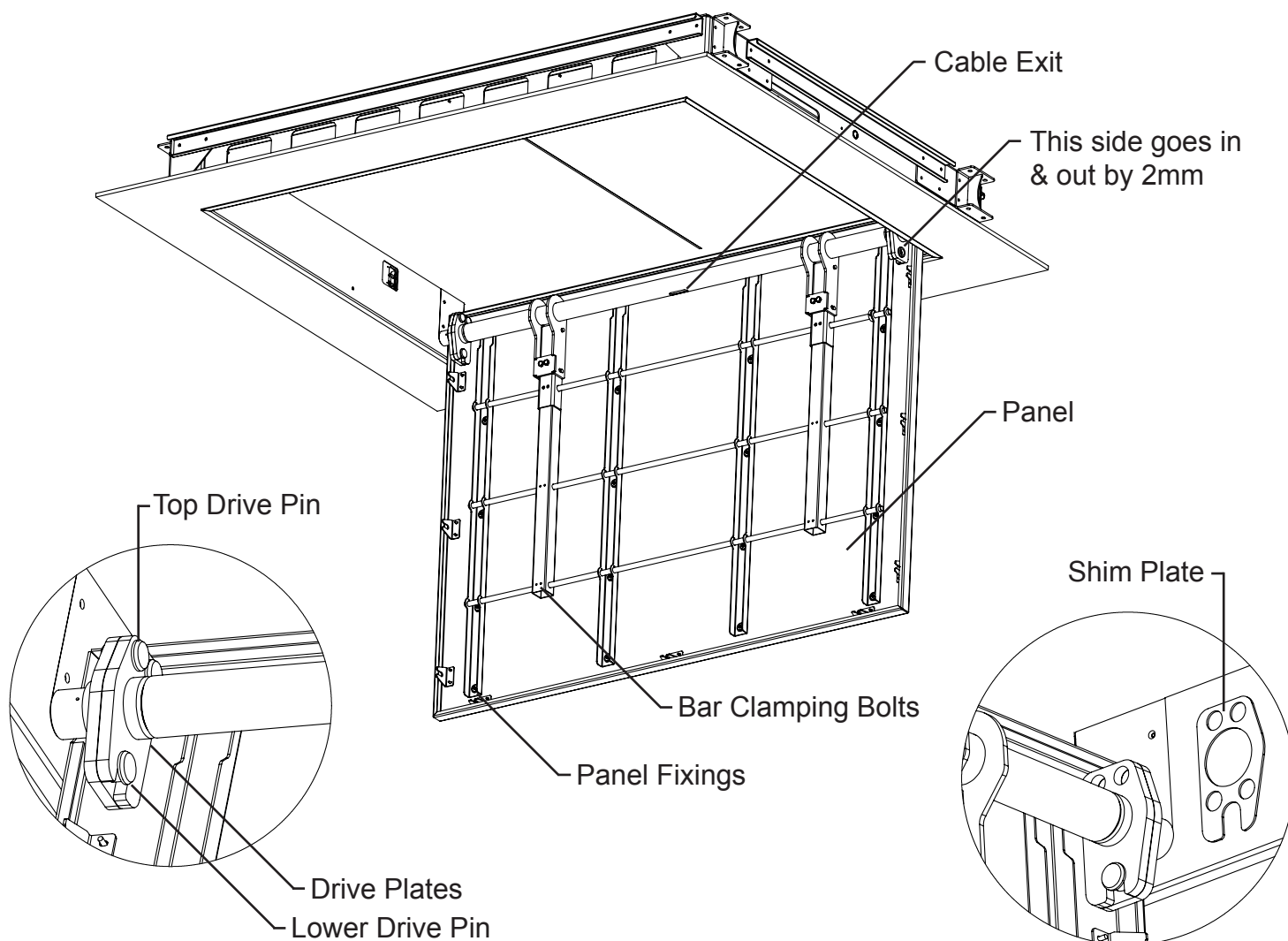
Place the two larger drive pins in the lower holes of the drive plate so that the pivot tube and frame can be hooked into place. Pull signal cable draw strings into the tube first. Tighten the left pin first. Add in the shim plate on the right hand side when just the lower drive pin is in place. The shim plate needs to be added on the right hand side to fill the gap between the drive plates. Add the smaller diameter drive pins at the top.

Add the top drive pins once the assembly is in place.

Tighten all drive pins.

The panel can be moved left and right by loosening the bar clamping bolts. It can also be squared by using the panel fixings.

The mechanism can be operated now. Use the remote control and try the IN, OUT and STOP buttons. No other buttons are used. CAUTION: always be ready to press the STOP button when moving for the first time. Check nothing is clashing as it moves. Watch the back edge as it drops out of the ceiling void.

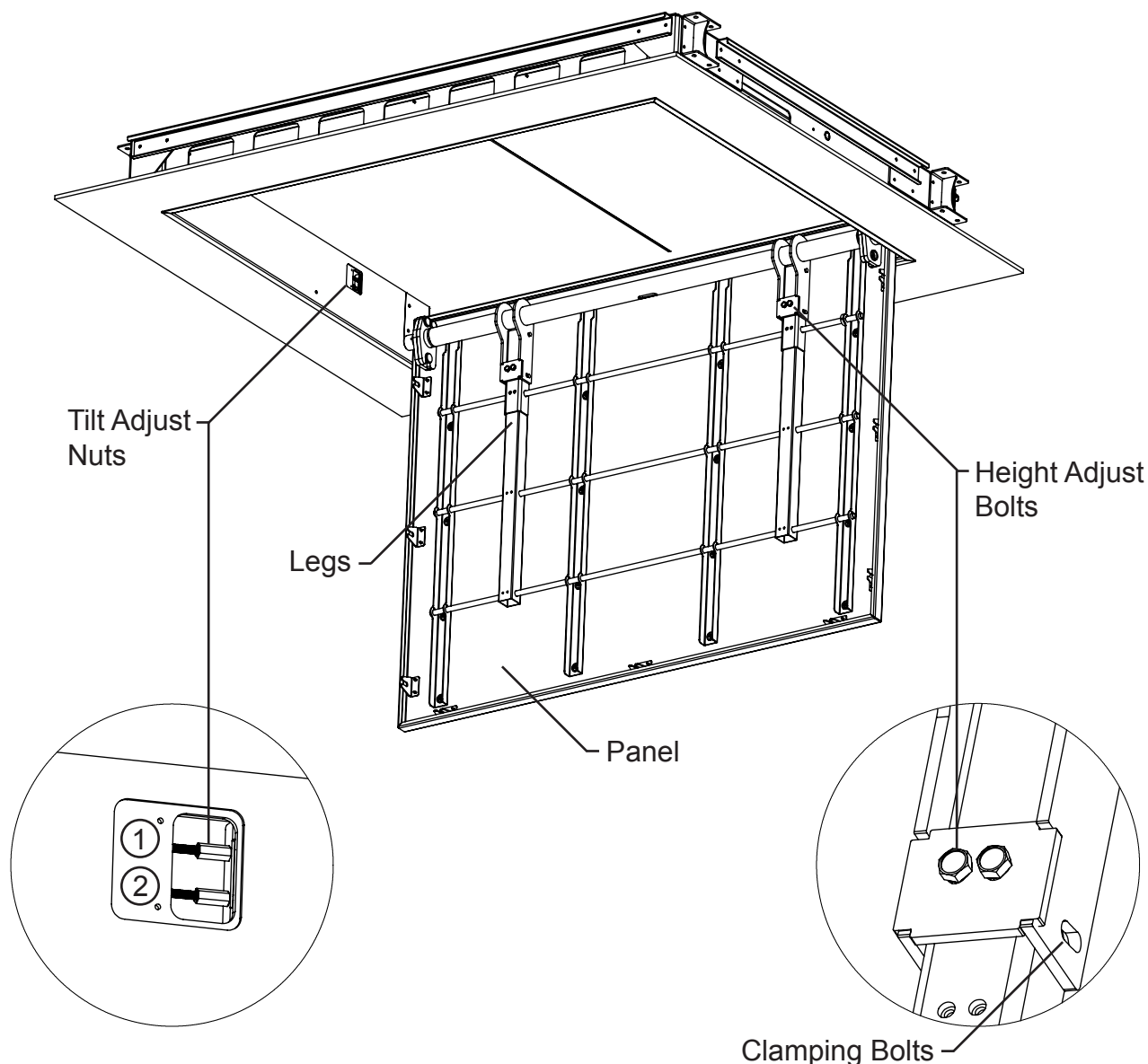


CHH - Ceiling Hinge Heavy



Adjusting the Switches

- ① -This nut adjusts the UP position. Use a spanner and turn up to make the panel stop higher. Turn down to make it stop lower.
 - ② -This nut adjusts the OUT tilted position. This is factory set to 90 degrees. Turn down to increase tilt angle.
- Always make sure the LED's in the control box go out when a switch is hit.



These Height Adjust Bolts adjust the difference in height of the two legs. Loosen the two clamp bolts on each leg before adjusting. Adjust when the mechanism is about half open.

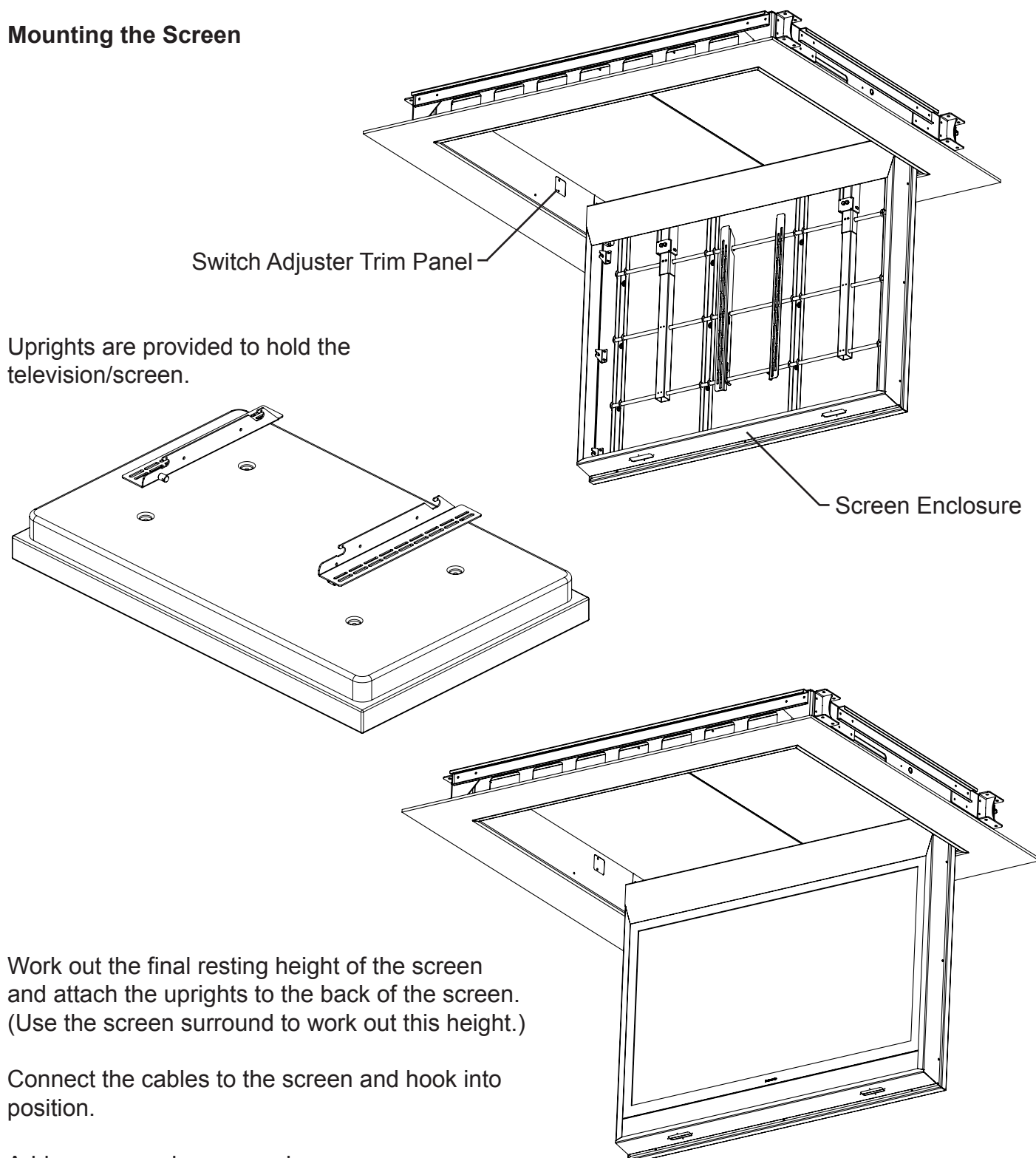


IMPORTANT: Always make sure one leg is at its highest position. Only one should be adjusted down slightly if need be. (some smaller versions have just one height adjust bolt in each leg)

CHH - Ceiling Hinge Heavy



Mounting the Screen



Work out the final resting height of the screen and attach the uprights to the back of the screen. (Use the screen surround to work out this height.)

Connect the cables to the screen and hook into position.

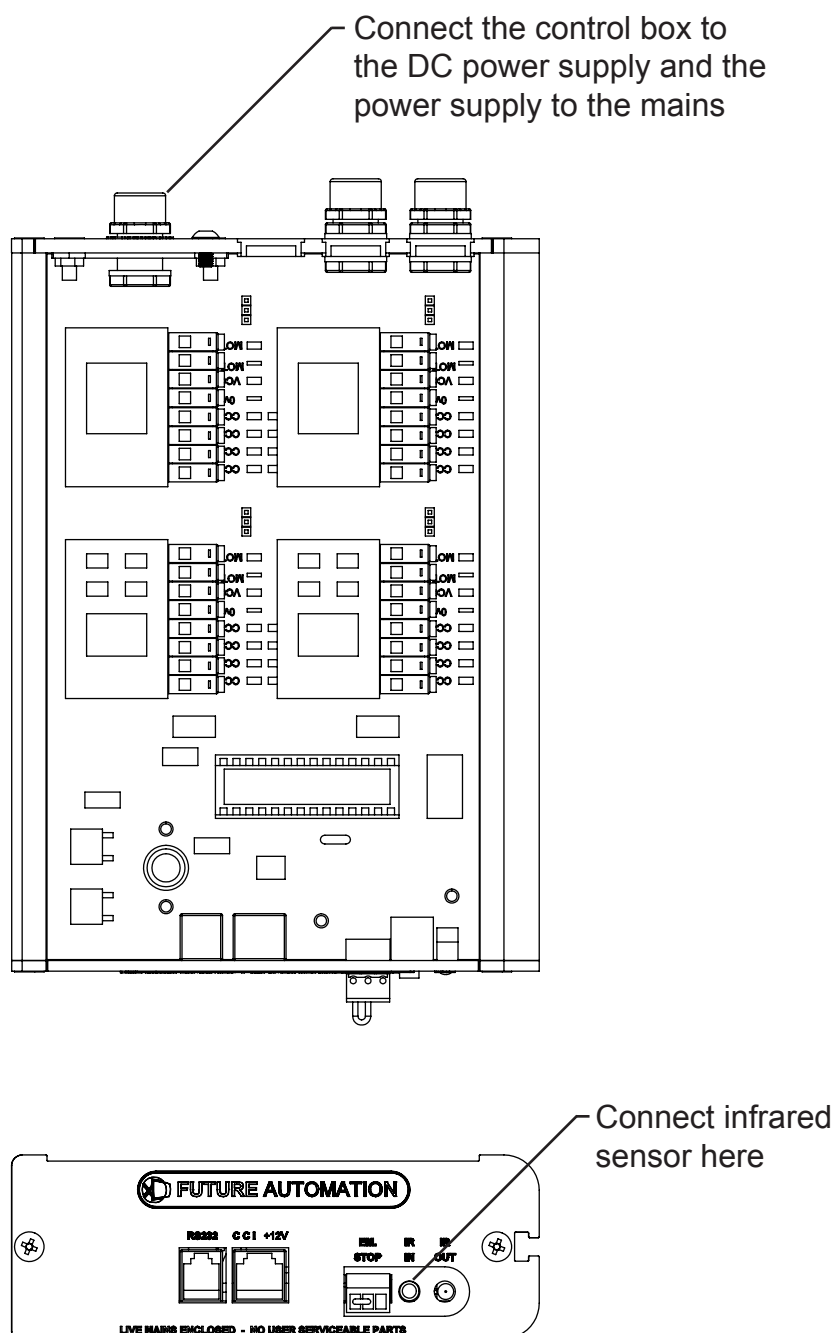
Add screen enclosure as shown.

Add trim panel to cover switch adjusters.

CHH - Ceiling Hinge Heavy



Electrical Connections & Control Box

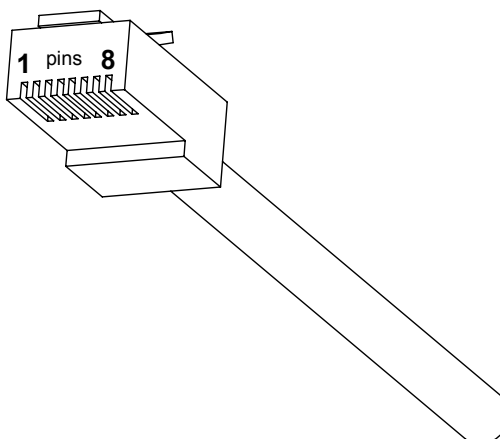


CHH - Ceiling Hinge Heavy

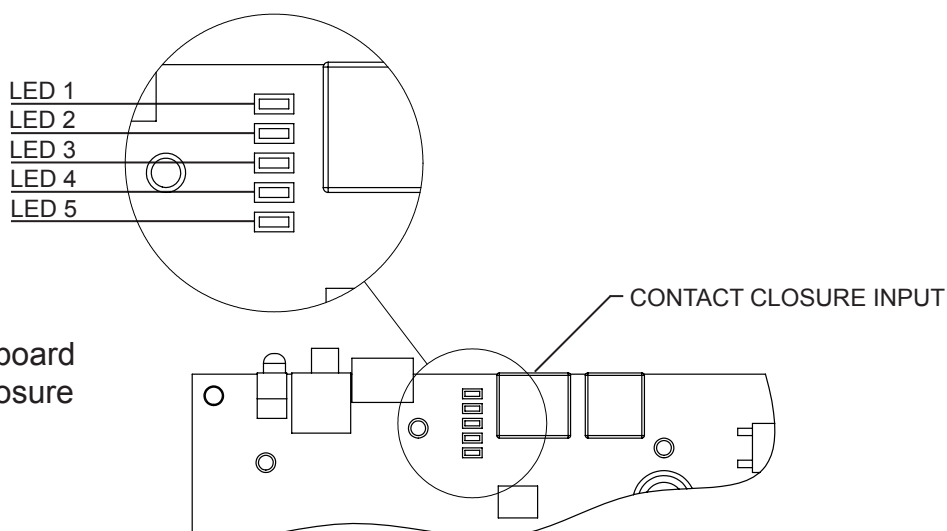


CH Contact Closure

- 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	12V TRIGGER	When 12V attached, device will go OUT. When 12V removed, device will go IN.	G	O	
3	GROUND	GROUND	W/O	W/G	
4		PIN 4 NOT USED	BL	BL	
5	DEVICE LATCH	Momentary short to GROUND (pin 3), device will go OUT. When short removed, device will go IN.	W/BL	W/BL	LED 4
6	DEVICE STOP	Momentary short to GROUND (pin 3), stops device in current position.	O	G	LED 3
7		PIN 7 NOT USED	W/BR	W/BR	LED 2
8	DEVICE IN	Momentary short to GROUND (pin 3), makes device go IN.	BR	BR	LED 1



NOTE:
Earlier versions of the control board may not have these contact closure LED indicators.

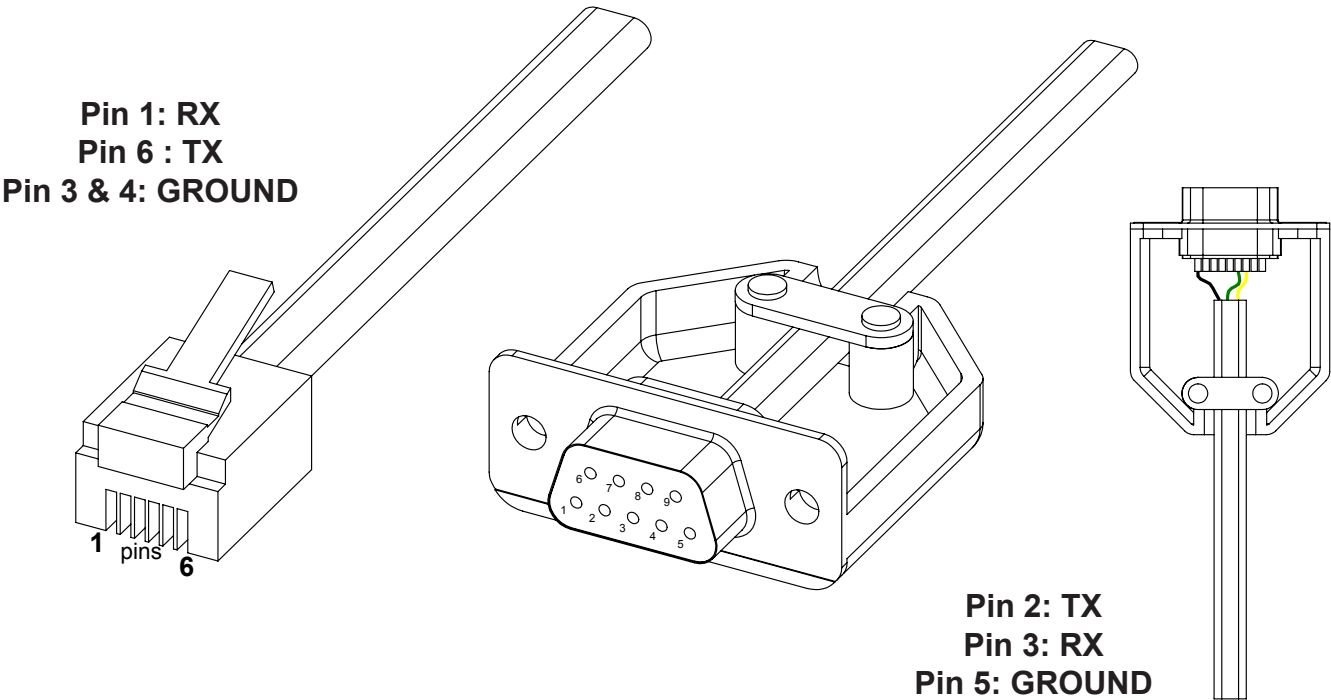
CHH - Ceiling Hinge Heavy



RS232
 - Use an RJ25 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

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



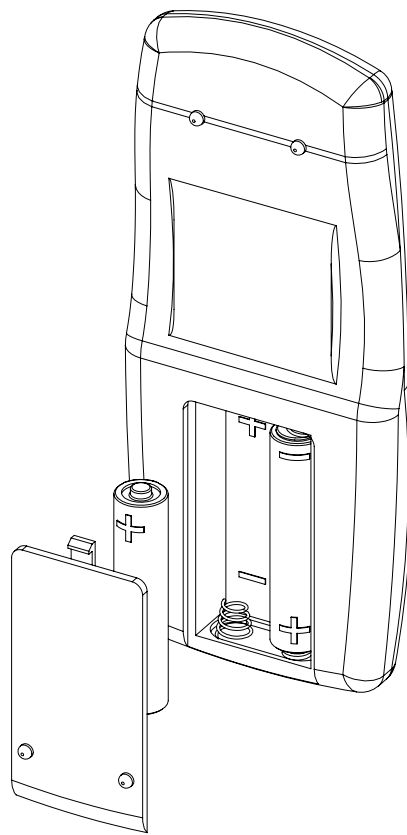
⚠ IMPORTANT Ensure protocol is entered exactly as written, including Carriage Return (Enter / ASCII 13).

COMMAND	ACTION
fa_in Carriage Return (Enter ↵)	Device IN
fa_out Carriage Return (Enter ↵)	Device OUT (90°)
fa_stop Carriage Return (Enter ↵)	Device STOP (At any position)

CHH - Ceiling Hinge Heavy



Replacing batteries



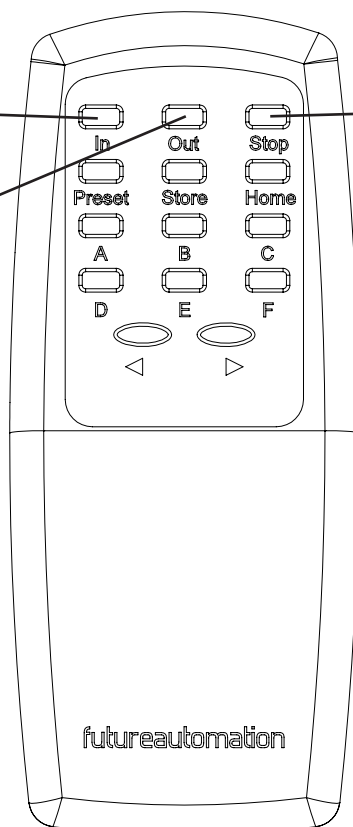
Future Automation IR Remote
Controller needs x2 AAA batteries
which are provided within the
packaging

Operation Buttons

In - Takes the screen into
the closed/in position

Out - Lowers the screen
into open/out position

Stop - Will stop the
operation at any point



Note

Only buttons indicated
are functional with the
mechanism

CHH - Ceiling Hinge Heavy



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

CHH - Ceiling Hinge Heavy



Notes...



Future Automation

Unit 2 Kimpton Enterprise Park
Claggy Road
Kimpton
Hertfordshire
SG4 8HP
United Kingdom

Tel: +44 (0) 1438 833 577
Fax: +44 (0) 1438 833 565
Email: info@futureautomation.co.uk
www.futureautomation.co.uk