

nexus²¹

CONCEALMENT SYSTEMS

TV Lift System Model L-75i Installation Instructions



Below is a parts list describing all of the items included with the Model L-75i Lift System.

Before beginning assembly and installation, please make sure that you have all items included on the list. If any parts are missing or damaged, please contact Nexus 21. Our contact information is shown at the top of this page.

Parts List



Lift Columns (3)
(Marked A, B, and C)
(22" x 4")



Bayonet Sleeves (2)
(6 1/8" x 3 1/4")



Screen Support Bracket
(6 1/4" x 17 1/2")



Lid Plate
(7 1/2" x 30")



Bayonet Bracket
(4 3/4" x 5 1/4")



Center Riser Bracket
(20 3/4" x 18 1/4" x 5")



Rear Support Bracket
(24" x 3")



Screen Back Plate
(36" x 7 3/4")



Front Cover
(21 3/4" x 20" x 2 3/4")



Lower Cable Track Bracket
(2 3/4" x 3 3/4")



Upper Cable Track Bracket
(3 1/8" x 2 3/8")



Center Cable Track Bracket
(7 1/2" x 30")

Parts list continued

Parts List, continued



Control Box
(10 1/2" x 3 3/4" x 1 1/2")



Lid Support Brackets (2)
(14" x 2 3/4")



Cable Tracks (2)
(Short – Upper, Long – Lower)



Vertical Mounting Bars (2)
(7 1/2" x 30")



Top Beam Support
(22" x 5 5/8")



Assorted Hardware Pack

Cables & Other Parts

- **Motor Cables (3)** – Black cable with white, six-pin plugs. Use these cables to connect the Lift Columns to the Control Box (using slots #1, #2, and #3 on the Control Box). There are 3 Cables total, in 2 different sizes, two 2m and one 2.5m.
- **Power Cable** – Connects Control Box to power outlet. Three feet long.
- **RF Cable (only present if you ordered the RF version of the Lift System)** – Use to connect the RF Receiver to the Control Box. Ends have RJ-45 connectors. One foot long.
- **"Snakeskin" Cable Management Wrap** – this is a 48" length of black cable wrap material. You may or may not use Snakeskin depending on your install preferences.
- **Ten (10) Cable Ties** – you will use these with the Snakeskin Wrap to help keep your wires in order.
- **Extension Pak** – This will give you 7' of additional cable to extend your back up switch to closer location.

Contents of hardware pack that is labeled "L-75i HARDWARE"

- Seventeen (17) -- 6mm x 12mm BHMS
- Two (2) -- 6mm x 16mm BHMS with Two (2) 1/4" Washers
- Twelve (12) -- 6mm x 20mm BHMS
- Four (4) -- 3/8"-16 x 3/4" BHMS
- Four (4) -- #8 x 3/4" FHWS
- Two (2) -- #10 x 1 3/4" FHWS
- Eight (8) -- #10" x 3/4" THWS
- Four (4) -- 6mm x 12mm FHMS
- Twelve (12) -- 6mm x 20mm FHMS
- Eight (8) -- 6mm x 40mm FHMS
- Eight (8) -- 5mm x 12mm FHMS
- Four (4) -- Square Multi-Mount Washers
- Two (2) -- Screen Locks
- Four (4) -- Allen Wrenches – 3mm, 4mm, 3/16" and 7/32"

Contents of hardware pack that is labeled "LID STABILIZATION PACK"

- Four (4) – Shoulder Bolts
- Four (4) -- Lid Stabilization Springs
- Four (4) -- Brass Threaded Inserts
- Eight (8) – 1/2" Nylon Spacers

----- END OF PARTS LIST -----


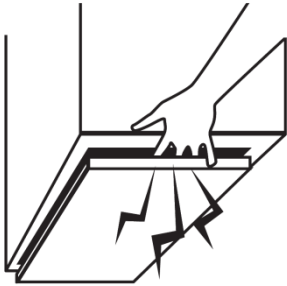


SAFETY INFORMATION



SEVERE PERSONAL INJURY AND PROPERTY DAMAGE CAN RESULT FROM IMPROPER INSTALLATION OR ASSEMBLY.

READ THE FOLLOWING WARNINGS BEFORE BEGINNING:

TV HAZARD	LID HAZARD
 <p>CAUTION: Avoid contact with the TV and Lift System during operation. Use with caution.</p>	 <p>CAUTION: The lid of your enclosure must be installed as described in the instructions, using the Steel Threaded Tapered Pins. Installing the enclosure lid in any other fashion will create hazardous pinch points that can cause serious personal injury.</p>

WARNINGS:

1. Do not use this product for any application other than those specified by Nexus 21.
2. 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.
3. Follow all technical specifications and instructions during the installation.
4. Only use attachments/accessories specified by the manufacturer.
5. Close supervision is necessary when this system is being used by, or near, children, or disabled persons.
6. It is the responsibility of the installer to warn all potential users of the dangers of interfering with the mechanism during operation.
7. Read all technical instructions fully before installation and use. It is the installer's responsibility to ensure that all documentation is passed on the users and read fully before operation.
8. 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 Lift System is affixed can support four times the weight of the system.
9. Risk of electric shock. Do not attempt to open the Control Box.
10. To reduce risk of fire or electric shock, do not expose parts to rain or other liquids.
11. Protect the power cord from being walked on or pinched.
12. Keep all documentation.
13. Heed all warnings.
14. Clean only with a dry cloth.
15. Refer all service questions to Nexus 21 if the system does not operate normally.

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Types of Controls for Nexus 21 Lift Systems

All Nexus 21 Lift Systems come standard with a **wireless remote control** and receiver. We offer a choice of two different types of remotes: IR and RF (both of which are explained in detail below). Our standard control type is RF, so unless you specifically requested the IR version when you made your purchase, you probably received the RF controls with this Lift System. The method of installation for each type of remote control is slightly different, so you should now identify which type of remote you have by reading below, and then follow the instructions for that type of remote.

NOTE: If you will be using the Lift with a home control system (like the ones made by companies such as Crestron or Control 4) the most common form of control is to WIRE IT DIRECTLY to the relays of your home control system. This direct-wire method is called **Integration by Contact Closure**, and is accomplished by using the Contact Closure Hardware that is supplied with the IR Control Kit to connect the Lift to your home control system.

Before You Begin the Installation: Identify Your Control Type

IR (Infrared) – This control option allows you to utilize a 3rd party universal style remote control to raise and lower the TV Lift. Your universal remote will “learn” the IR codes from the provided IR Handset, which will enable you to control the lift. The universal remote will then communicate with the “eye” located on the IR Receiver via your 3rd party emitter (or flasher). Instructions for setting the TV Lift’s travel limit are on Page 26.

NOTE: If you are NOT planning on using a 3rd party Universal Remote, switch to the RF setup. (There is no charge for swapping)

These are the parts included with IR controls:



Contact Closure Hardware



IR Receiver



IR Handset



Height Limit Insert

RF (Radio Frequency) - This system utilizes a wireless remote control handset that sends a radio signal to the RF Receiver. The radio signal can go through cabinet walls and does not require line-of-sight. Instructions for setting the Lift System travel limit are on Page 26.

TIP: Planning to integrate the TV Lift with your UNIVERSAL REMOTE CONTROL? The RF version of the Nexus 21 controls won't do it. Switch to IR.

These are the parts included with RF controls:



Backup Switch



RF Receiver



RF Handset



Height Limit Insert

Integration by Contact Closure – To direct-wire the TV Lift controls to a home control system (Crestron, Control 4, AMX, etc.) you will use the Contact Closure Hardware. You won't use any Nexus 21 receiver or handset for this type of control because you will use the handset or control pad that comes with your home control system. **Instructions for setting up the System using Contact Closure are on “Page 29”.**

Assembly and Mounting Instructions – DETAILED STEPS

Preparing the Enclosure Box

BEFORE BEGINNING, PLEASE READ THE SAFETY NOTICE ON THE FIRST PAGE OF THIS DOCUMENT

The Enclosure Box for the TV and Lift System should be constructed of materials no less than ¾" thick. We recommend a high-grade plywood or combi-core material. **The back and top of the enclosure are the parts that must be able to support the weight of the lift and TV, so MDF or particle board materials are not suitable for use in this project.**



The Enclosure Box dimensions depend on the size of your TV. Please review the Installation Dimensions Drawing on page 24 & 25 before beginning. **IF YOU HAVE THE SPACE, WE RECOMMEND INCREASING EACH DIMENSION BY 1" TO MAKE FOR EASIER INSTALLATION AND SERVICE ACCESS.**

The End, Front and Back panels of the Enclosure Box should be attached to the underside of the Top Cover, so that the Top Cover is resting on top of the four panels. This provides the maximum strength for holding the Lift and TV in its inverted orientation.

Step 1: Cut the five panels (#1 – 4) from ¾" plywood. Paint the inside of the panels a dark color before assembly. This will help camouflage the Enclosure Box after it is installed.

Step 2: Determine where the electrical power will feed into the Enclosure Box. Cut out the appropriate sized opening near the top of the End Panel nearest the power feed. We recommend using a 110V duplex outlet and conduit that conform to the building code for your location.

Step 3: Create a hinged front panel.

- a) This will provide convenient access to the electrical connections in the Control Box after installation.
- b) Put hinges and a latch (not provided) on the outside of the door so it opens **OUT**.
- c) Re-attach the Access Door to the Back Panel.

Step 4: If a ventilation fan (not provided) is needed (in climates where attic temperatures exceed 110 degrees F), cut the opening for the fan near the top of the End Panel opposite the electrical feed. This will vent into the attic.

Table of Contents

This Lift Model consists of three major systems, the Upper Actuation System, the Center Actuation System and the TV Mounting System. This instruction manual will cover how to build, install and wire the Lift.

Installation and Assembly

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(Page 11) **Assembling the Center Actuation System**

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Supplemental Information

(Page 24-25) **Dimensional Drawings**

(Page 26) **Setting a Height Limit**

Wiring Diagrams

(Page 27) **L-75i IR Wiring Diagram**

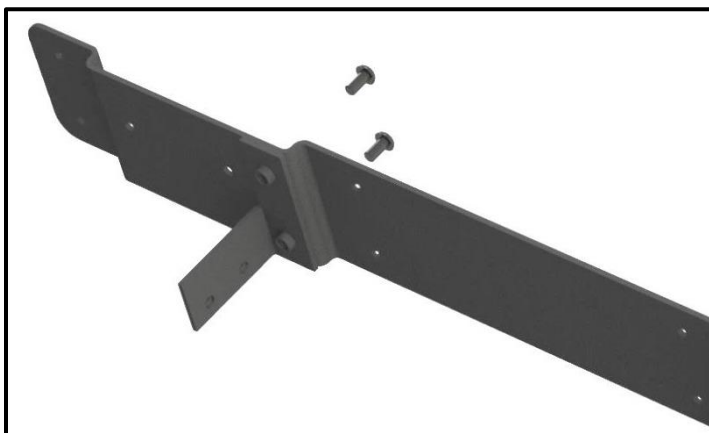
(Page 28) **L-75i RF Wiring Diagram**

(Page 29) **Contact Closure Integration**

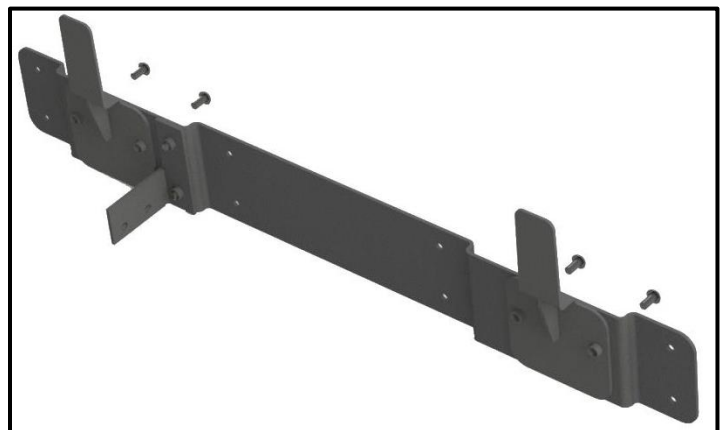
Assembling & Installing the Upper Actuation System

For these steps, you will need the following parts:

- (2) Bayonet Sleeves
- (2) Lift Columns (Labeled A & B)
- Rear Support Bracket
- Top Beam Support
- (1) Cable Management Track
- (6) 6mm x 12mm BHMS
- (8) 6 x 40mm FHMS Screws
- (2) 5mm x 12mm FHMS
- (8) 10 x ¼" THWS Screws



Step 1: Attach the *Upper Cable Track Bracket* to the *Rear Support Bracket* using (2) 6 x 12 mm BHMS screws.



Step 2: Attach the (2) *Bayonet Sleeves* to the *Rear Support Bracket* using (4) 6 x 12 mm BHMS screws.



Step 3: Stand both *Lift Columns A & B* upright and seat the pigtail grommets for each *Lift Column* so that they are both facing each other.

Note: Columns A & B are interchangeable.

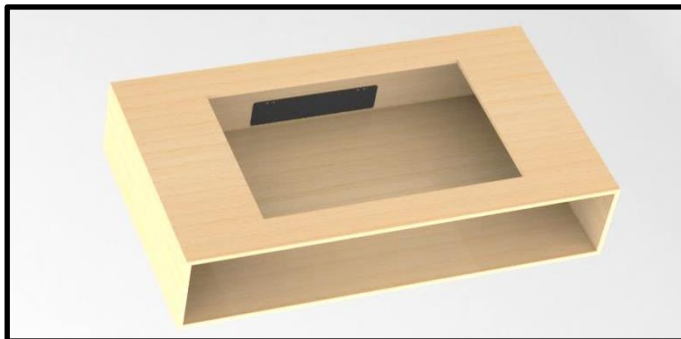
Step 4: Slide the tabs of the *Rear Support Assembly* down into the welded metal sleeve on each *Lift Column*.



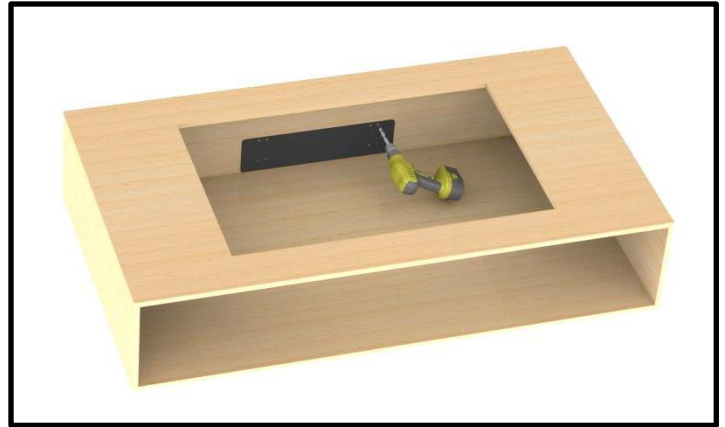
Step 5: Using a rubber mallet, tap each of the *Bayonet Sleeves* into the welded metal sleeves of each *Lift Column* until they are flush with the top of the metal sleeve on the *Lift Columns*.

Step 6: Center the *Top Beam Support* on the top panel on the interior of the enclosure.

Important Note: Ensure the edge of the *Top Beam Support*, farthest from the mounting holes is $\frac{1}{2}$ " away from the back panel of the enclosure. See right photo for reference.



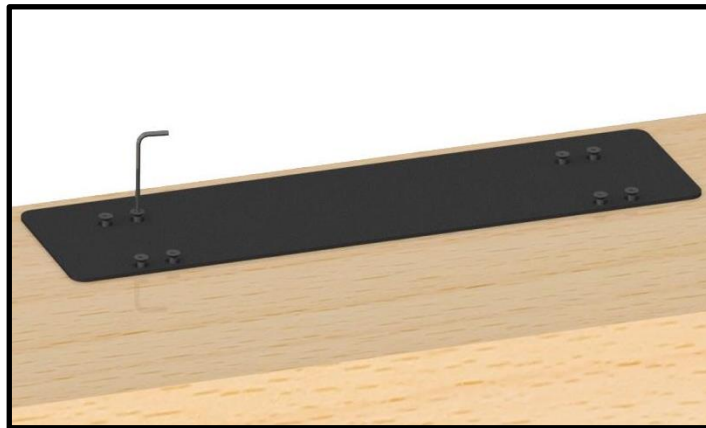
Step 7: Using a 7/32" Drill Bit, drill out all (8) mounting holes for the *Top Beam Support*.



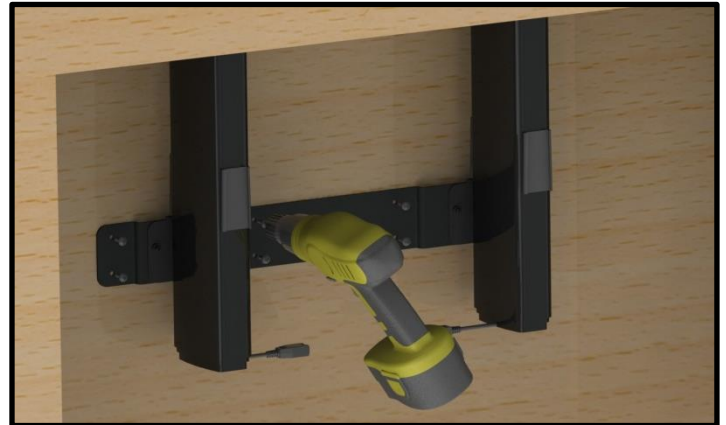
Step 8: Now place the *Top Beam Support* on the top panel on the exterior of the enclosure, aligning it with the (8) drilled holes.

Step 9: Place the *Upper Lift Columns* with the attached *Rear Support Bracket* into the enclosure. Align them with the holes drilled for the *Top Beam Support* and using (8) 6 x 40mm FHMS Screws, through bolt them to the top panel. You will need a 2nd person to hold the lift system while the screws are fastened.

Note: Leave these screws slightly loose to assist with attaching the Center Actuation System.



Step 10: Level each *Lift Column* horizontally within the enclosure, then fasten the *Rear Support Bracket* to the back panel of the enclosure using (8) 10 x ¼" THWS Screws.



Step 11: Attach the *Upper Cable Management Track* to the *Center Cable Track Bracket* on the *Rear Support Assembly* using (2) 5mm x 12mm FHMS. Ensure the *Upper Cable Management Track* bends initially then hangs.



The Upper Lift Columns are now successfully installed.

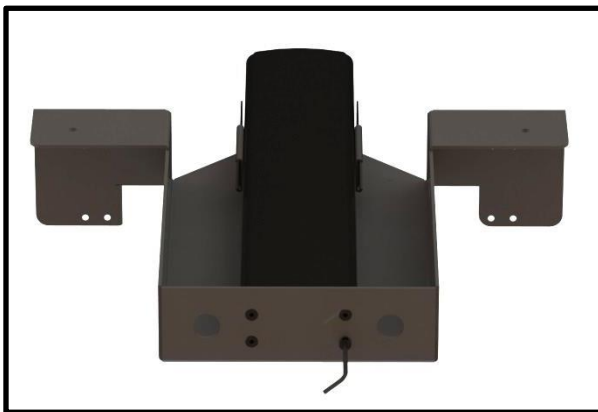
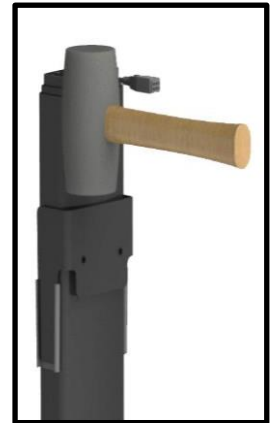
Assembling the Center Actuation System



For these steps, you will need the following parts:

- Center Riser Bracket
- (1) Lift Column (Labeled C)
- Center Cable Track Bracket
- Bayonet Bracket
- (8) 6mm x 20mm FHMS
- (4) 5 x 12mm FHMS Screws
- Small Hex Key and 5mm Hex Key
- Rubber Mallet (Not Included)

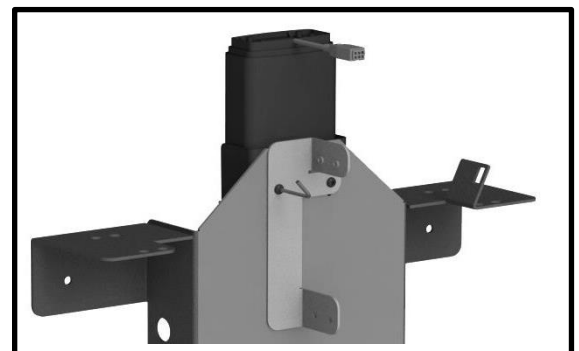
Step 12: Slide the *Bayonet Bracket* into the welded metal sleeves of the Center *Lift Column C*. Using a rubber mallet, tap the *Bayonet Bracket* into the welded metal sleeves until they are flush with the top of the metal sleeve on the *Lift Columns*.



Step 13: Attach the Center *Lift Column C* to the Center *Riser Bracket* using (4) 6 x 20mm FHMS Screws.

Step 14: Attach the *Center Cable Track Bracket* to the back of the *Center Riser Bracket* using (2) 6 x 16mm BHMS Screws and (2) ¼" Flat Washers. Now seat the pigtail grommet for the Center *Lift Column C* so that it is facing the back panel of the enclosure.

Note: The *Center Cable Track Bracket* should look identical to the photo. (Color Changed for reference).

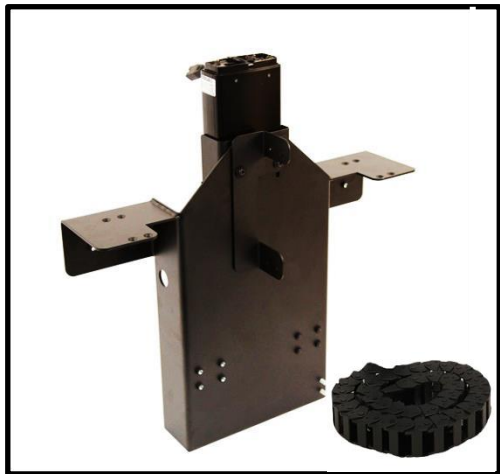


The Center Actuation System is now assembled and ready to be installed.

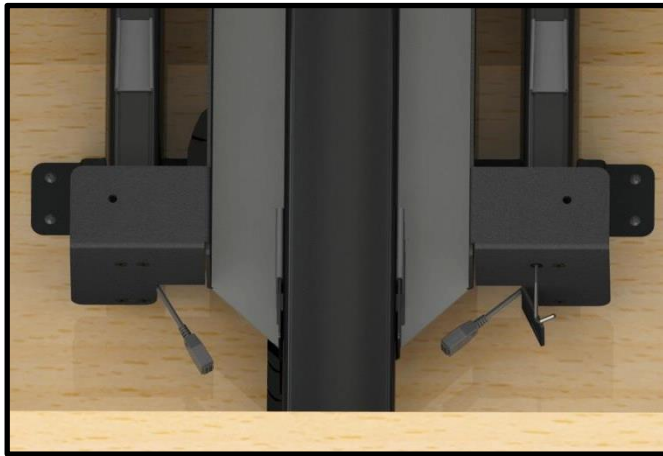
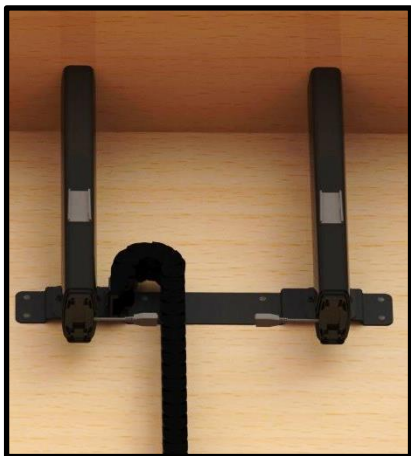
Installing the Center Actuation System

For these steps, you will need the following parts:

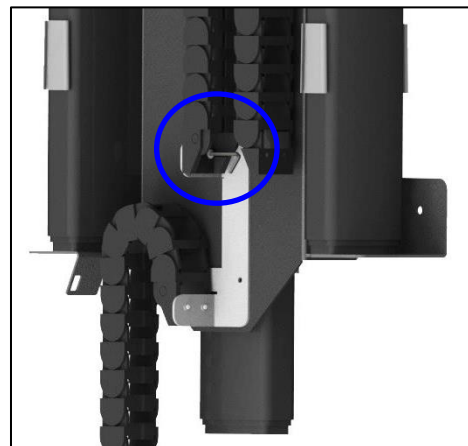
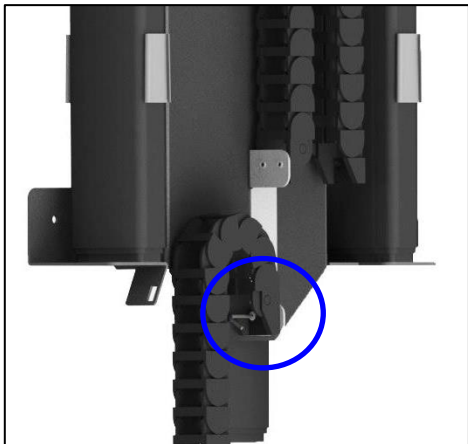
- Center Actuation System
- (8) 6mm x 20mm FHMS
- (4) 5 x 12mm FHMS Screws
- (1) Cable Management Track
- Small Hex Key and 5mm Hex Key



Step 15: Attach the Center Actuation System to Upper Actuation System using (8) 6 x 20mm FHMS Screws. After the Center Actuation System has been attached fasten the screws for the *Top Beam Support*.



Step 16: Attach the *Upper Cable Management Track* to the Upper Tab of the *Center Cable Track Bracket* using (2) 5 x 12mm FHMS Screws.



Step 17: Attach the *Lower Cable Management Track* to the Lower Tab of the *Center Cable Track Bracket* using (2) 5 x 12mm FHMS Screws.

You have successfully installed the Center Actuation System.

Calibrating and Synchronizing the Actuation Systems



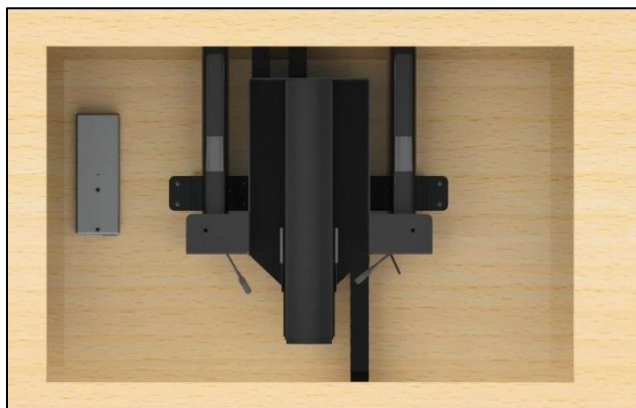
For these steps, you will need the following parts:

- (2) 2000mm Motor Cables
- (1) 2500mm Motor Cable
- Control Box
- Power Cord
- Wired Backup Switch
- (2) #10 x 1 3/4" FHWS Screw

In order to calibrate and synchronize the systems together, you will need to mount your *Control Box* to the enclosure.

We recommend mounting the *Control Box* on the left side of the enclosure to make cable management easier.

Note: All installations are different and the *Control Box* may be mounted base upon your preference and electrical outlet accessibility. Longer *Motor Cables* are available upon request.

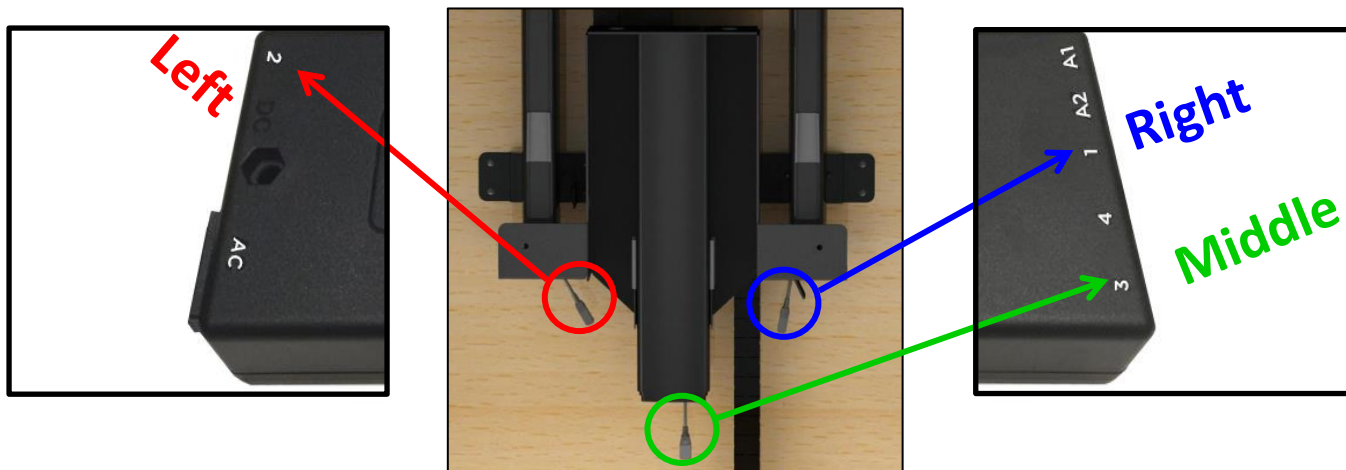


Once your *Control Box* is mounted you are ready to connect the *Motor Cables* to each *Lift Column*.

Note: You will not need to route the *Motor Cables* through the *Cable Management Tracks* at this time as this will be covered in later steps. We do recommend marking each cable with a tag to label which port it is connected to thought.

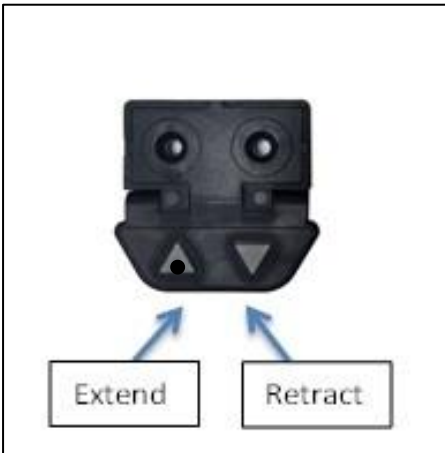
Step 18: Locate the pigtails for the Upper *Lift Columns* (A & B) and connect the Upper Right *Lift Column* to port 1 and the Upper Left *Lift Column* to port 2 on the *Control Box* using the (2) 2000mm *Motor Cables*. Refer to page (25 and 26) for a **Wiring Diagram**

Step 19: Locate the pigtail for the Center *Lift Column* (C) and connect it to port 3 on the *Control Box* using the 2500mm *Motor Cable*.



Step 20: Connect the *Wired Backup Switch* to either port A1 or A2 on the *Control Box*.

Note: You may use the bag labeled *Extension Pack* to increase the length of the *Wired Backup Switch* for easier use or to remotely mount it.



Step 21: Press and hold the button without the raised dot on the *Wired Backup Switch* for 10 seconds. You should see a slight movement from the lift system but do not release the button until 10 seconds have elapsed.

Note: If you do not see the movement on the first attempt, release the down button and try this step again. It may take 2 or 3 tries.

Ensure no cables are tangled on any brackets of the Lift System, then extend the Lift System by pressing the button with the raised dot on the *Wired Backup Switch* to fully extend the lift.

Note: If you need to stop the lift at any time you may do so by pressing the button without the raised dot.

You have now successfully calibrated and synchronized the Lift System.

Managing the Motor Cables

Now that the lift has been calibrated and extended it will be easier to fish the Motor Cables through their respective Cable Management Tracks.

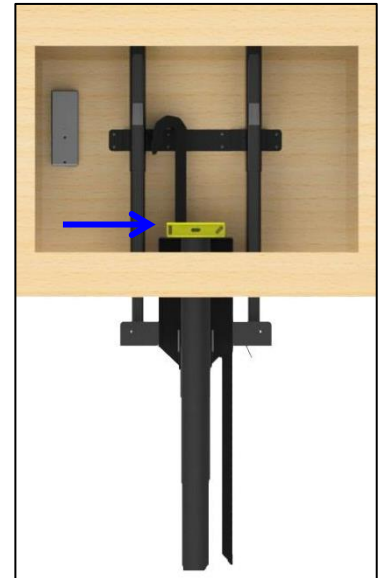
Step 22: Before doing this however, ensure the Lift System is level relative to the enclosure by placing a level on the top of the *Center Riser Bracket*.

Note: If your lift is not level, you may need to check the level of the Upper Columns again. If the Upper Columns are level, loosen the screws to the Center Actuation System $\frac{1}{4}$ turn and retry the step 30 again.

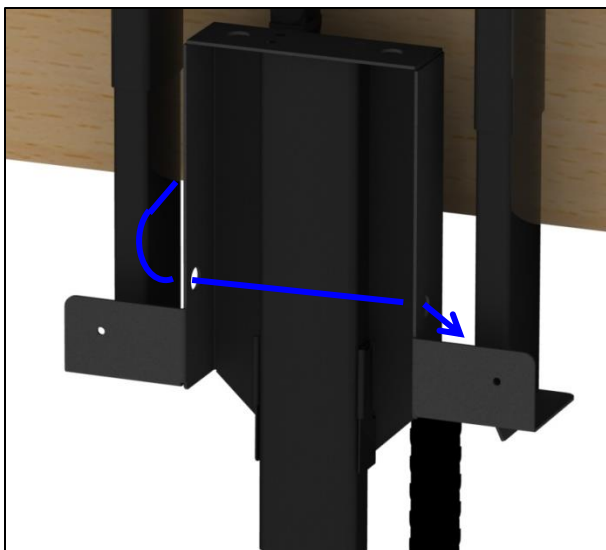
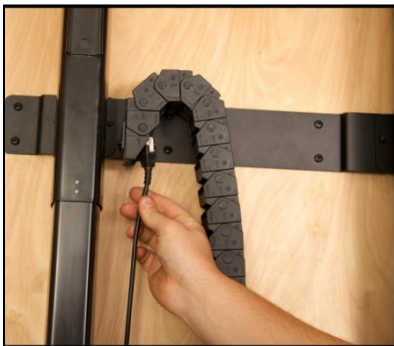
Once the level of the Lift System has been checked, you are now ready to route the *Motor Cables* through the *Cable Management Tracks*.

Step 23: Disconnect all of the *motor cables* from the pigtails on each of the *Lift Columns*, leaving them only connected to the *Control Box*.

Note: We recommend marking each cable with a tag to label which port it is connected to.



Step 24: Take the *Motor Cables* connected to ports 1, 2, and 3 on the *Control Box* and fish them through the *Upper Cable Management Track* one by one.



Step 25: Take the **Motor Cable** connected to **port 1** and run it through the hole on the left side of the *Center Riser Bracket*, across the front of the *Center Lift Column*, and through the hole on the right side of the *Center Riser Bracket* then connect it to the *Upper Right Lift Column's* pigtail.

Step 26: Take the **Motor Cable** connected to **port 2** and connect it to the Upper Left *Lift Column's* pigtail.



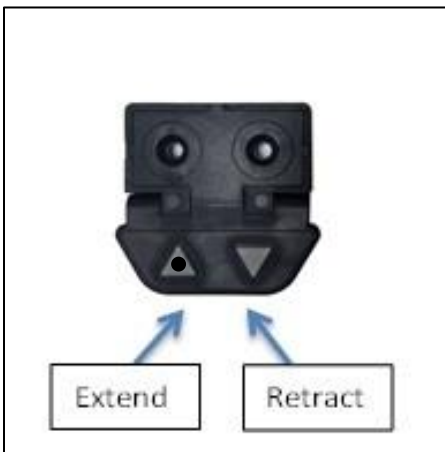
Step 27: Take the **Motor Cable** connected to **port 3**, fish it through the *Lower Cable Management Track*, and connect it to the Center *Lift Column's* pigtail.



You have successfully connected and managed the Lift Systems cabling.

Re-Calibrate & Re-synchronizing the Lift System

After the *Motor Cables* are routed and re-connected to each column you will need to reinitialize them again.



Step 28: Fully retract the lift by pressing the button without the raised dot on the *Wired Backup Switch*.

Note: The Lift may be in “Safe Mode” which means you will need to keep the button without the raised dot on the *Wired Backup Switch* held until the lift fully retracts.

Once the lift is fully retracted, press and hold the button without the raised dot on the *Wired Backup Switch* for 10 seconds. You should see a slight movement from the lift system but do not release the button until 10 seconds have elapsed.

Note: If you do not see the movement on the first attempt, release the down button and try this step again. It may take 2 or 3 tries.

You have successfully re-synchronized and reinitialized the lift system.

Assembling the TV Support System

For these steps, you will need the following parts:

- (2) Top Support Brackets
- (2) Lift Columns (Labeled A & B)
- Screen Support
- Screen Back Plate
- (6) 6mm x 12mm BHMS
- (4) 3/8"-16 3/4" BHMS



Step 29: Attach both *Top Support Brackets* to the *Screen Support* using (6) 6 x 12mm BHMS Screws. As long as the *Top Support Brackets* are in-line, you can use any set of holes. Adjustments will be covered in a later section.

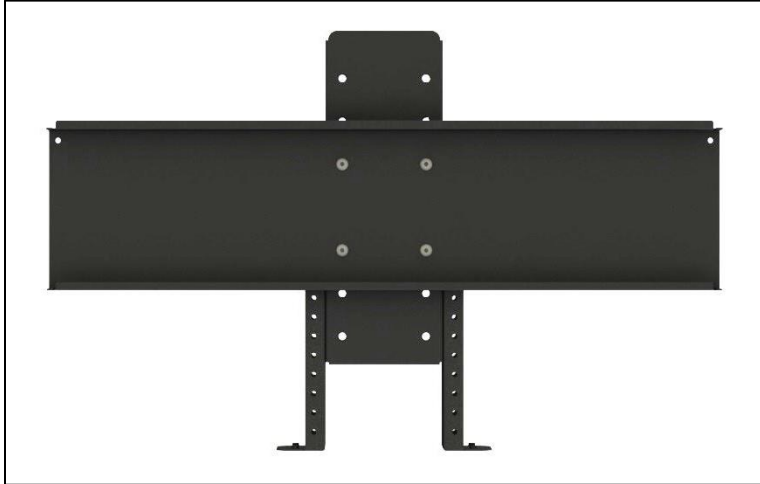
Note: You must use ALL (6) 6 x 12mm BHMS Screws to attach the *Top Support Brackets*.

Step 30: Attach the *Screen Back Plate* to the *Screen Support* using (4) 3/8"-16 3/4" BHMS. Once again use any sets of holes as adjustments will be covered in a later section.



You have successfully assembled the TV Support System.

Installing the TV Support System



For these steps, you will need the following parts:

- TV Support System
- (4) 6 x 20mm BHMS

Step 31: Attach the TV Support System to the Center *Lift Column* using (4) 6 x 20mm BHMS. Once again making sure the pigtail for the Center *Lift Column* is facing the back panel of the enclosure.



You have successfully installed the TV Support System.

Preparing the TV & Adjustments



For these steps, you will need the following parts:

- Lower Cable Track Bracket
- Vertical Mounting Bars
- Front Cover
- Lid Plate
- (5) 6 x 12mm BHMS Screws
- (4) 6 x 12mm FHMS Screws
- TV Mounting Hardware

Before you mount the TV to the Lift System you will need to know more about adjustability of the lift.

There are 2 points of adjustment on the L-75i; The *Top Support Brackets*, which can be adjust up and down in $\frac{1}{2}$ " increments up to a total of 8" and the *Screen Back Plate* which can also be adjusted up or down depending on the mounting pattern of your TV.

Step 32: Attach the *Vertical Mounting Bars* to the TV using the screws found in the bag labeled "TV Mounting Screws Hardware." The length and size of the screw required will depend on whether the TV has a flat/unobstructed or irregular/obstructed back.

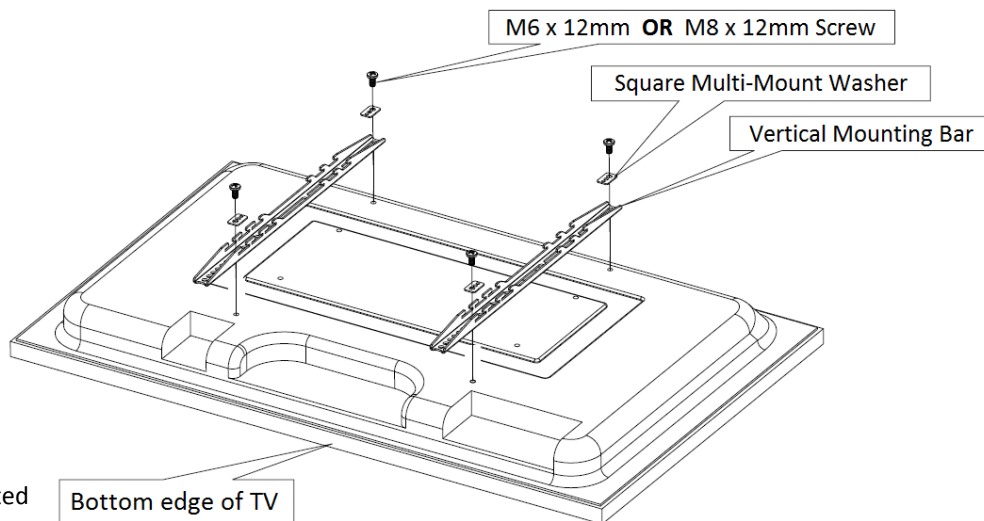


A Flat/Unobstructed Back

Diagram "A" installation procedure:

- 1) Place the flat screen TV face down on a protected surface.
- 2) Position the Vertical Mounting Bars equidistant from the bottom and top of the TV, with the slots facing toward the top of the TV.

- 3) Using the four (4) Square Multi-Mount washers and the TV mounting screws selected from the bag, attach and tighten the hardware.



DO NOT OVERTIGHTEN HARDWARE. DAMAGE TO TV MAY RESULT.

B**Irregular/Obstructed Back**

Diagram "B" installation procedure:

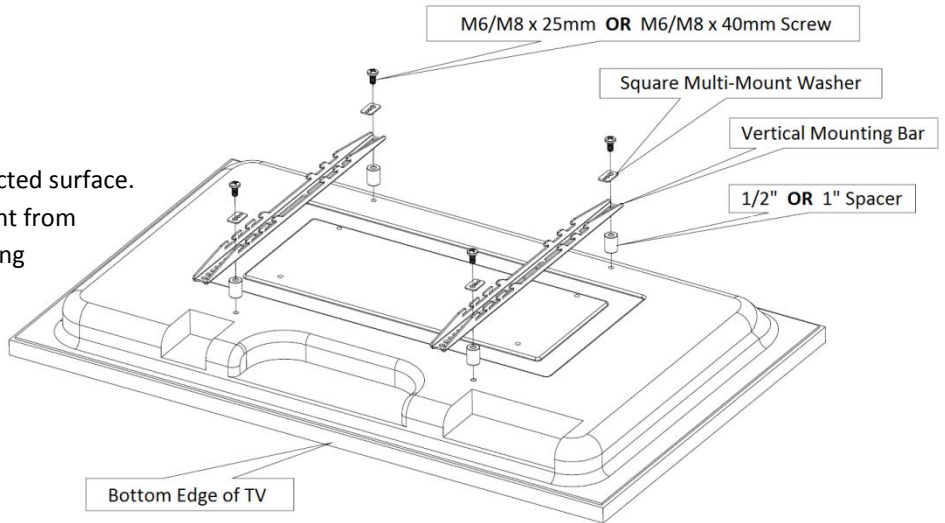
- 1) Place the flat screen TV face down on a protected surface.
- 2) Position the Vertical Mounting Bars equidistant from the bottom and top of the TV, with the slots facing toward the top of the TV.

- 3) Using the four (4) spacers needed,
- 4) Square Multi-Mount washers and the TV mounting screws selected from the bag, attach and tighten the hardware.

The hardware will be used in this order (as shown in the diagram above):

TV, Spacers, Vertical Mounting Bars, Square Multi-Mount Washers, TV Mounting Screws.

DO NOT OVERTIGHTEN HARDWARE. DAMAGE TO TV MAY RESULT.

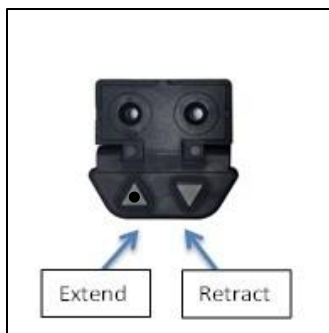


Step 33: Hang the TV on the *Screen Back Plate* by the *Vertical Mounting Bars*. Ensure both sets of hooks are on the channels of the *Screen Back Plate*. You may need to adjust the *Screen Back Plate* at this point to adjust the viewing position of the TV.

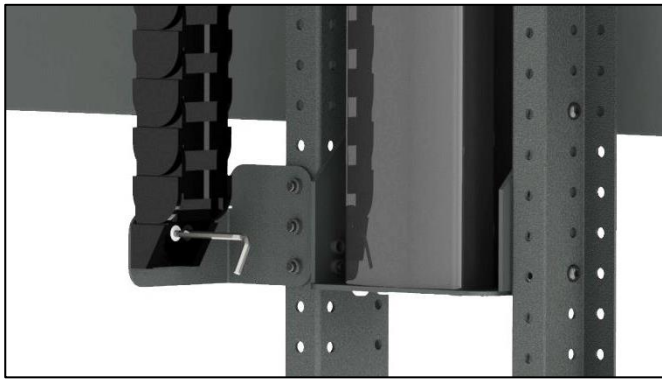
Step 34: Once the TV has been mounted and adjusted to its final viewing position, adjust the *Top Support Brackets* so that they are ¼" to ½" above the bottom of the enclosure.



Step 35: Once you have made the necessary adjustments to the *Top Supports*, remove the TV from the lift.



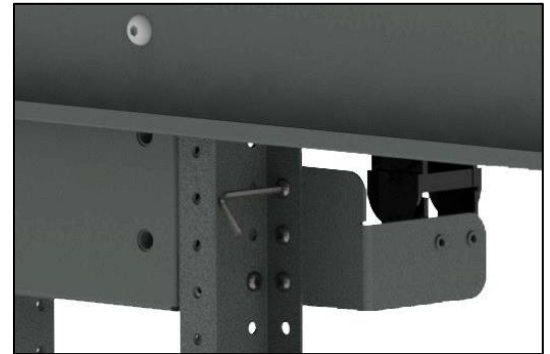
Step 36: Fully extend the lift by pressing the button with the raised dot on the *Wired Backup Switch*.



Step 45: Attach the *Lower Cable Track Bracket* to the *Lower Cable Track* using (2) 5 x 12mm FHMS.

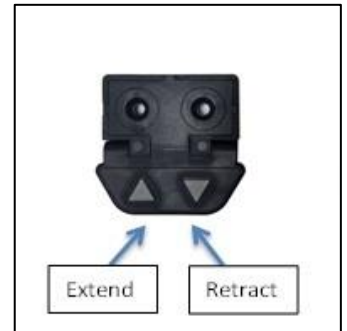
Step 37: Attach the *Lower Cable Track Bracket* to the *Right Top Support Bracket* using (3) 6 x 12mm BHMS Screws.

Note: Ensure the *Lower Cable Management Track* does not have any slack, but is not so tight that it deforms the radial bend at the top of it.



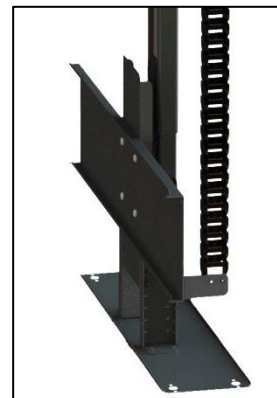
Step 38: Attach the *Front Cover* to the *Center Riser Bracket* using (2) 6 x 12mm BHMS Screws.

Step 39: Retract the lift by pressing the button without the raised dot on the *Wired Backup Switch*.



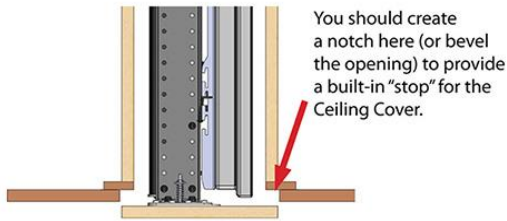
Step 40: Attach the *Lid Plate* to the *Top Support Brackets* using (4) 6 x 12mm FHMS Screws.

Note: The *Lid Plate* will overhang on the back end of the lift so that the mounting holes in the 4 corners of the *Lid Plate* sit behind the TV.

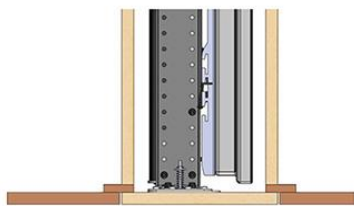


Installing the Lid & Lid Stabilization Assembly

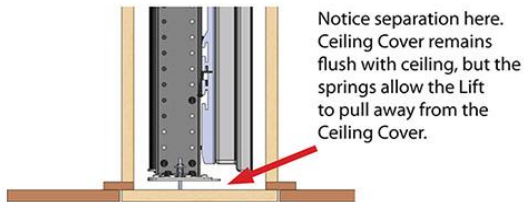
Side view of Lift System and Ceiling Cover, showing function of Lid Stabilization hardware



Side view of Lift System and Ceiling Cover, shown in the "almost closed" position.



Ceiling Cover is now fully closed. Notice that the cover stops flush with the ceiling because of a notch that was created around the edge of the opening.



Once the Ceiling Cover is closed, the lift system is able to retract a little further into the Enclosure Box, thanks to the Lid Stabilization Springs.

For these steps, you will need the following parts:

- (4) Shoulder Bolt
- (4) ½" Nylon Spacers
- (4) Lid Stabilization Springs
- (4) Brass Threaded Inserts
- Your Lid

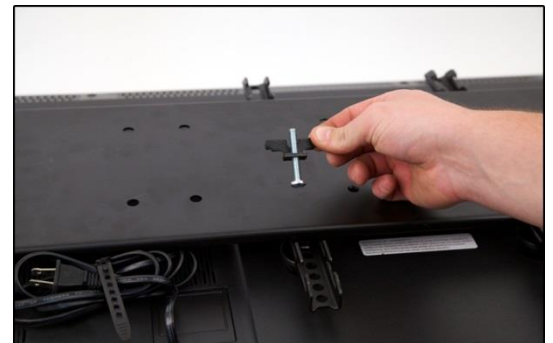
Important Info: You must have your TV mounted when installing your lid as the additional weight from the TV may cause the lid to shift throwing all measurements off.

The Lid Stabilization Assemblies are spring loaded so the Ceiling Cut-out will stop level with the ceiling and allow the Lift to travel an additional 1/8" – 1/2" up into the ceiling. You should create a "stop", or "lip" above the ceiling, around the edge of the opening for your Ceiling Cover to pull up against, like an upside-down manhole cover. The illustration on the left shows how it should work, and details for assembly are shown on the following pages.

Most Contractors use a 45 degree bevel on both the lid and the ceiling cutout so the lid self-centers when retracting into its recess.

There are other ways of doing this. This is just a recommendation and it may or may not be able to be done based on the material of the lid.

Step 41: Re-hang the TV on the *Screen Back Plate* and place the *Screen Locks* in the bottom set of hooks of the *Vertical Mounting Bars*.

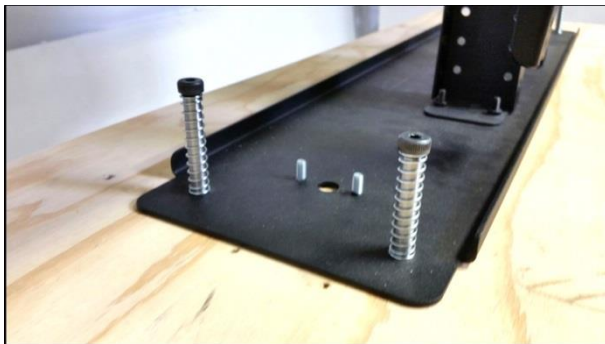


Step 42: Fasten the *Screen Locks* using a philips screw driver, this will secure and lock the TV onto the *Screen Back Plate*.

Step 43: Mark and drill (4) ½” holes on your Lid Material: Hold your lid piece (your ceiling cut-out piece) up to the *Lid Plate* (which you have already installed on the Lift, and is now hanging out of the ceiling). The *Lid Plate* has 4 holes that are used to attach your lid piece. Mark the position of the holes on your lid piece. Drill four holes ½” deep using a 1/2” drill bit.

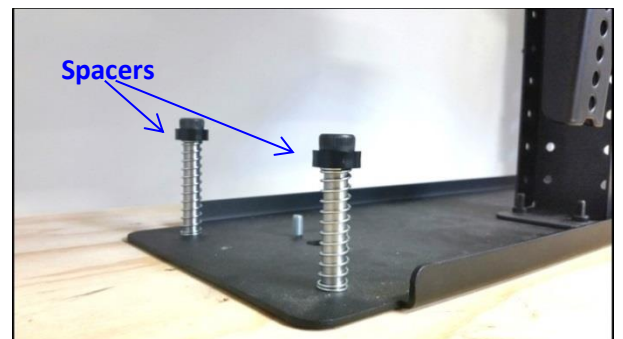


Step 44: Screw the Four (4) *Brass Inserts* into the (4) ½” holes using a flat head screwdriver or keep the brass insert screwed to the bolt and use a 3/16” Allen Wrench to drive the brass insert into the lid. Tighten them down until the tops of the *Brass Inserts* are flush with the surface of the lid piece.



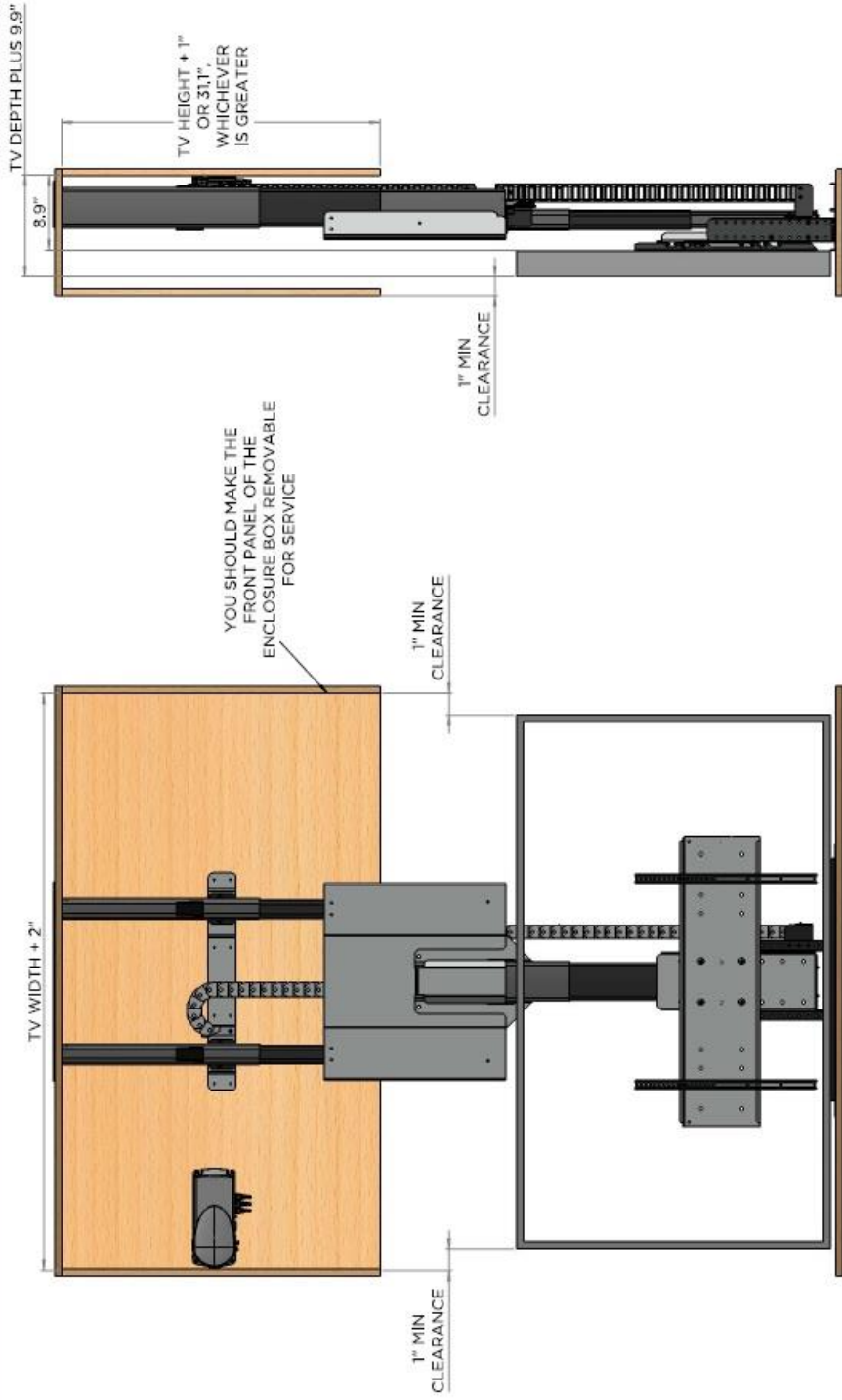
Step 45: Attach your lid to the bottom of the *Lid Plate*. Screw the (4) *Shoulder Bolts* with springs attached through the *Lid Plate* into the *Brass Inserts* previously installed in step 27b.

NOTE: Depending on the weight of your lid material you may need to use a nylon spacer between the top of the spring and the head of the bolt, to tighten the tension of the spring which will give the lid more stability preventing the lid from sagging. (Example photo to the right.)



You have successfully installed the lid and lid stabilization assembly.

MODEL L-75i DIAGRAM



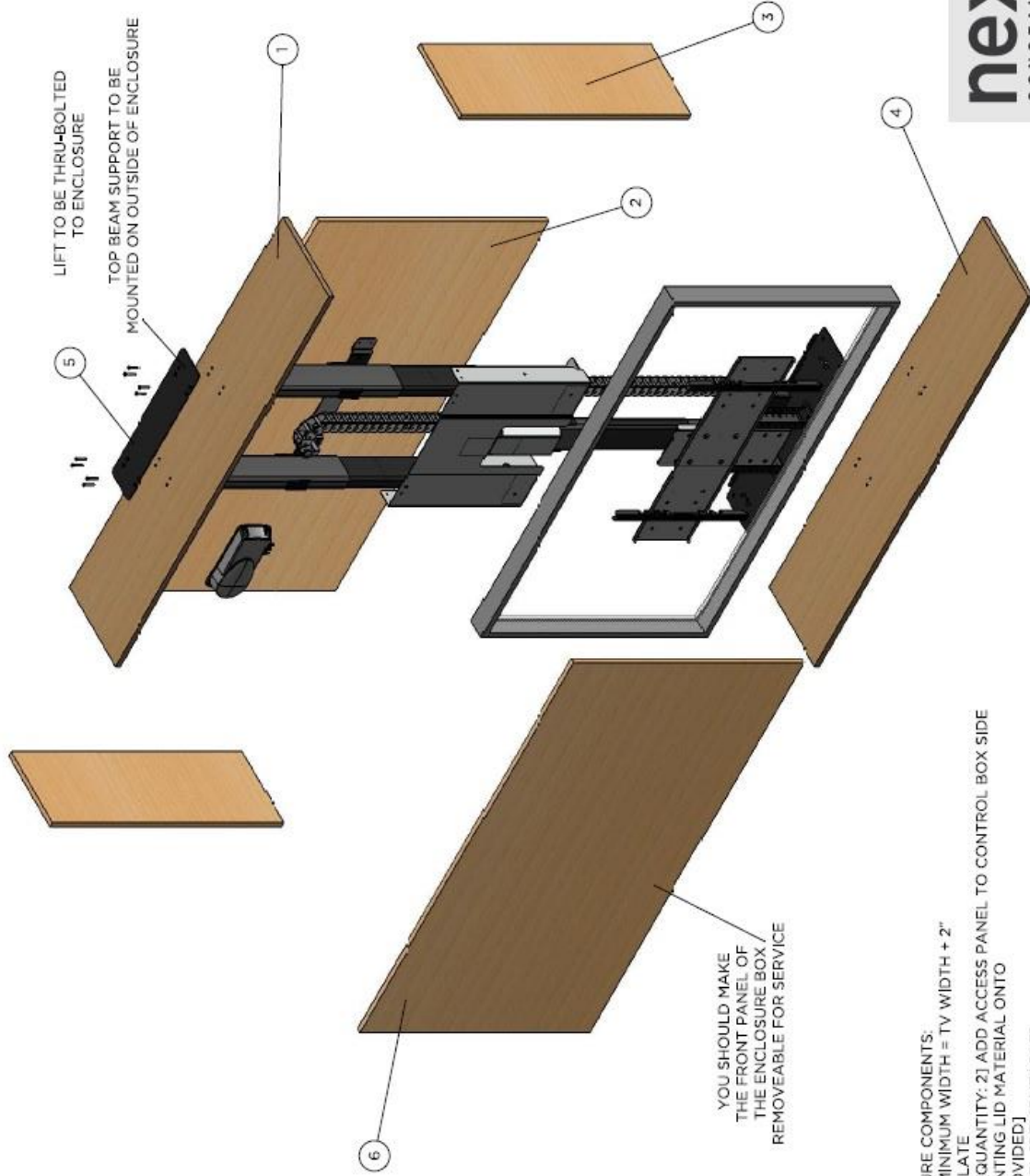
NOTES:

1. NEXUS 21 RECOMMENDS THIS INSTALLATION BE COMPLETED BY A LICENSED CONTRACTOR
2. THE BOX SHOWN IN THE DIAGRAM IS FOR REFERENCE ONLY AND IS NOT PROVIDED WITH THE LIFT SYSTEM
3. LIFT SHOULD BE ENCAPSULATED IN A BOX TO PREVENT EXPOSURE TO HARSH ATTIC ENVIRONMENT
4. FOR THIS LIFT MODEL, THE LENGTH OF ITS TRAVEL [EXTENSION LENGTH OR STROKE] IS 52"
5. FOR THIS LIFT MODEL, THE COMBINED TOTAL WEIGHT CAPACITY [INCLUDING TV AND LID] IS 100 LBS
6. THE COMBINED WEIGHT OF TV AND LIFT MECHANISM SHOULD BE LESS THAN 250 LBS
7. THE APPROXIMATE WEIGHT OF THE DEMONSTRATED ENCLOSURE, LIFT AND TELEVISION IS 325 LBS
8. SYSTEM SHOULD BE TIED INTO TRUSSES - PER ARCHITECTURAL DRAWINGS
9. ELECTRICAL HOOKUP TO BE INSTALLED PER AUTHORIZED BUILDING CODES
10. HEIGHT OF THIS MODEL IS ADJUSTABLE IN 1/2" INCREMENTS UP TO 8" [MINIMUM HEIGHT = 31.1"; MAXIMUM HEIGHT = 39.1"]
11. LID IS DESIGNED TO FLOAT WITH PROVIDED SPRING LOADED PINS - LID MUST BE INSTALLED PROPERLY FOR SAFETY
12. WHEN DETERMINING TV HEIGHT, ALWAYS USE MANUFACTURER SUPPLIED "TV WITHOUT STAND" HEIGHT
13. LIFT MECHANISM IS POWDERCOATED BLACK STEEL, COLORS IN DIAGRAM ARE FOR CLARITY ONLY.

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MODEL L-75i DIAGRAM



- L-75i LIFT SYSTEM ENCLOSURE COMPONENTS:
1. ENCLOSURE TOP PLATE: MINIMUM WIDTH = TV WIDTH + 2"
 2. ENCLOSURE MOUNTING PLATE
 3. ENCLOSURE SIDE PLATE [QUANTITY: 2] ADD ACCESS PANEL TO CONTROL BOX SIDE
 4. LID SUB PLATE FOR MOUNTING LID MATERIAL ONTO
 5. TOP BEAM SUPPORT [PROVIDED]
 6. ENCLOSURE ACCESS PANEL [REMOVEABLE]

NOTE: ALL MATERIALS MINIMUM THICKNESS IS .75"

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Please follow this procedure if you would like to limit the distance that your TV Lift extends.

To set your Travel Limit with IR Controls:

If you want the lift system to always go to its full extension, do NOT use the Height Limit Insert. Simply leave it unplugged and the system will always travel to the full extension. To limit the travel, follow the procedure below:



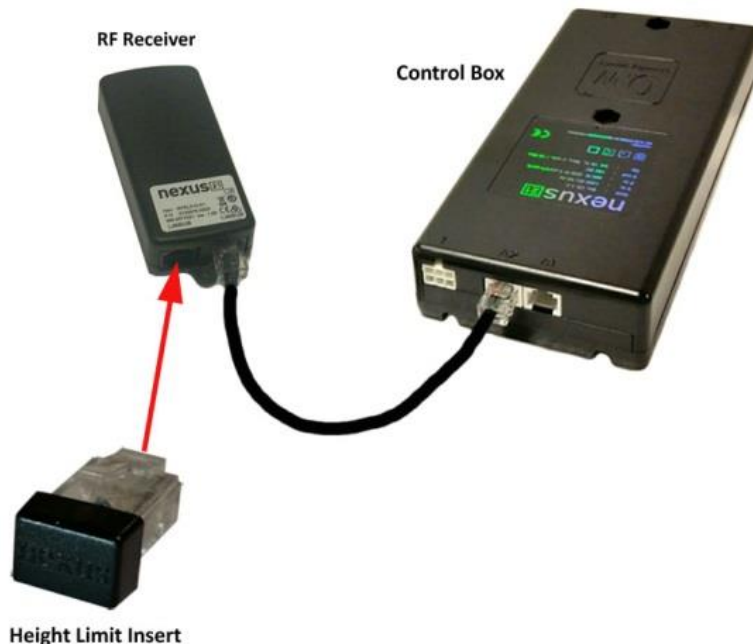
1. Using the IR Receiver, run the lift system to the ideal height limit position and stop it there.

2. With the lift system stopped, plug the Height Limit Insert into the available RJ45 port on the Control Box. This will set the height limit at this position for both the IR Remote (or 3rd party universal remote) and the IR Receiver.

3. If the height limit is set at the incorrect position, remove the Height Limit insert and repeat the procedure.

To set your Travel Limit with RF Controls:

If you want the lift system to always go to its full extension, do NOT use the Height Limit Insert. Simply leave it unplugged and the system will always travel to the full extension. To limit the travel, follow the procedure below:



1. Using the Wired Backup Switch, run the lift system to the ideal height limit position and stop it there.

2. With the lift system stopped, plug the Height Limit Insert into the available RJ45 port on the RF Receiver. This will set the height limit at this position for both the RF Remote and Backup Switch.

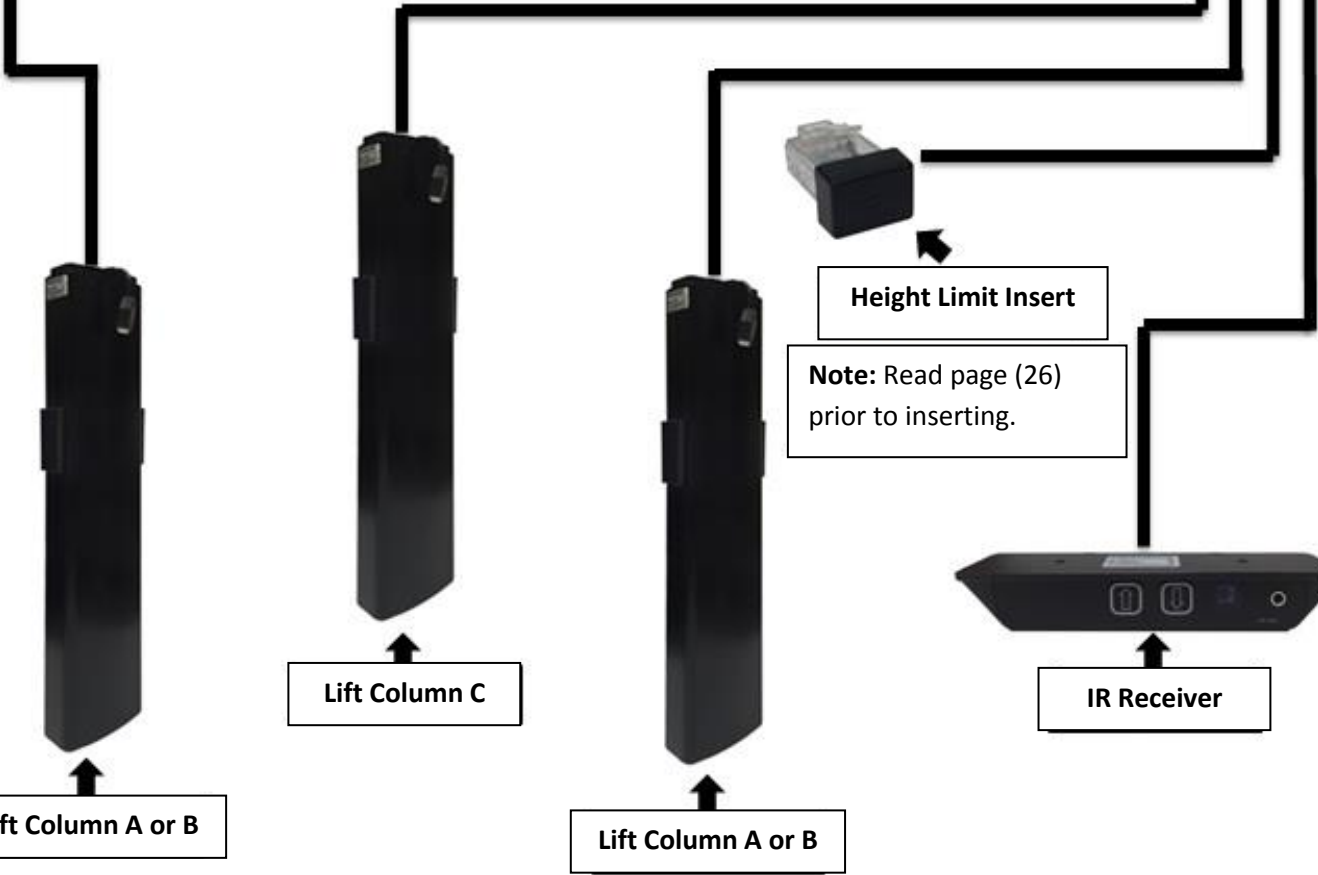
3. If the height limit is set at the incorrect position, remove the Height Limit insert and repeat the procedure.

L-75i Wiring Diagram with IR Controls

Ports A1 & A2 are interchangeable



To Power Outlet



Height Limit Insert

Note: Read page (26) prior to inserting.

Lift Column A or B

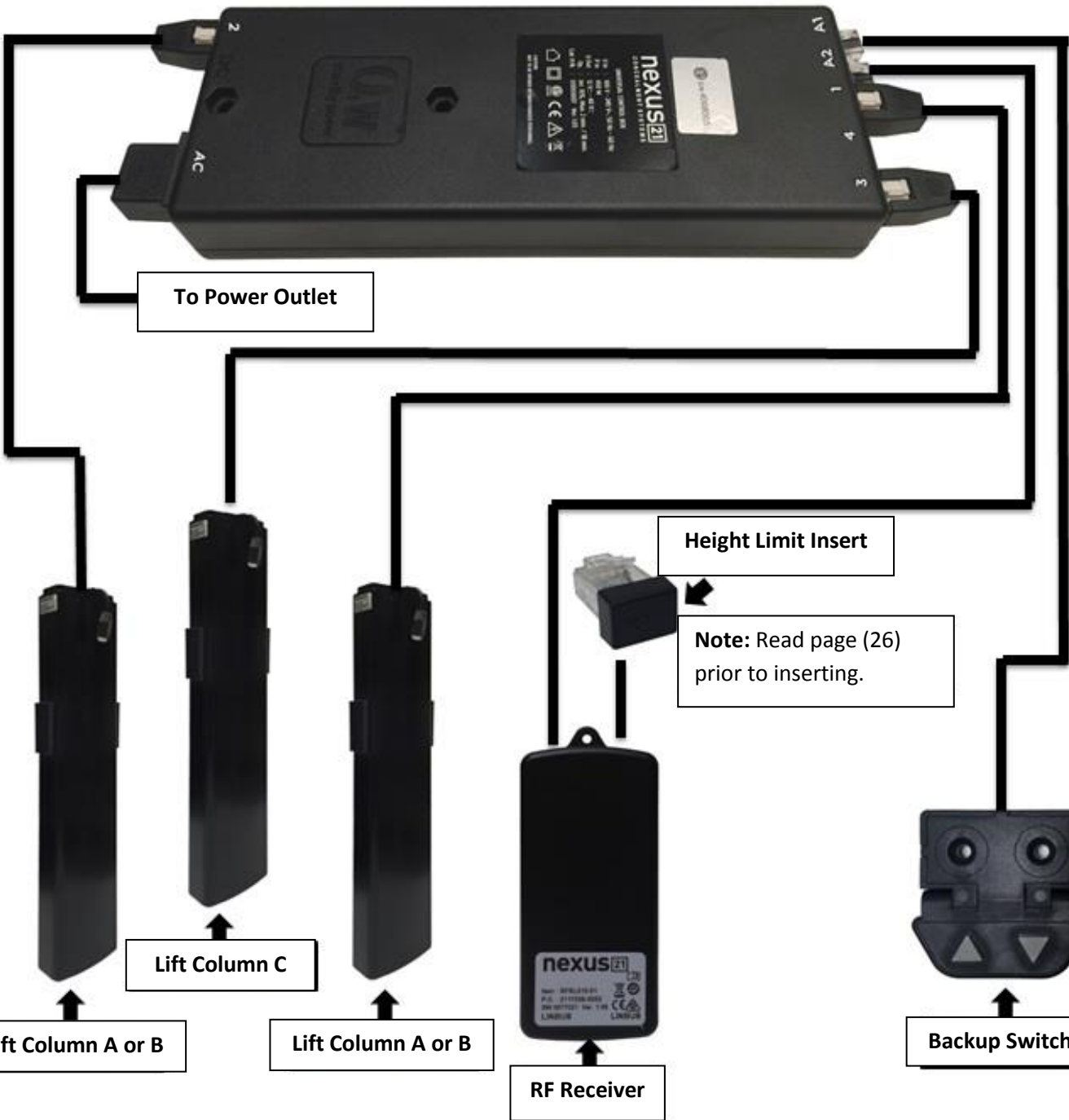
Lift Column C

Lift Column A or B

IR Receiver

L-75i Wiring Diagram with RF Controls

Ports A1 & A2 are interchangeable



Connecting the Nexus 21 Lift System to Other Control Systems

Use these instructions if you need to wire the Lift System directly to a Home Control System, like those made by Crestron, AMX, Control 4, RTI, etc. A common term for this method of integration is "connection by contact closure."

Contents of Contact Closure Hardware Pack:

Step 1: Contact Closure Hardware Pack

This pack contains the following parts:

1 – Contact Closure Cable, RJ-45 to Relays

1 – Height limit Insert



Contact Closure Cable, RJ-45 to Relays



Height Limit Insert

Step 2: Connecting the Lift System to the Control System

Using the *Contact Closure Cable* to connect the three wires directly to the relays on your control module (see image below). Then connect the RJ-45 plug on the *Contact Closure Cable* to the Nexus 21 system, using either one of the two RJ-45 ports on the side of the Nexus 21 Control Box.

The colored wires function as follows:

BLUE = common (Pin 4 from RJ45) **GREEN** = Extend (Pin 5 from RJ45) **RED** = Retract (Pin 8 from RJ45)

Wire combinations for the relays:

The lift system uses two relays. One for "extend" and one for "retract." The common wire runs between both relays, by using the **BLUE common wire**, together with a jumper wire you supply.

Relay 1 Extend: **BLUE** common wire with **GREEN** normally open.

Relay 2 Retract: **BLUE** common wire (use jumper) with **RED** normally open.



Close-up View of RJ-45 Pins



Step 3: Setting a Height Limit for the Lift System

Begin with the Height Limit Insert UNPLUGGED. Then send the "UP" command from your control system and run the Lift System up to your desired height. Once the Lift System is at the desired height, send the "DOWN" command to stop the lift at the point. Now PLUG the Height Limit Insert into the available RJ45 port on the Nexus 21 Control Box. The Lift will now remember the height and always stop at that point. To change, unplug the Height Limit Insert and repeat Step 3.

For technical support or to ask questions, call Nexus 21 Customer Service, toll-free at (866) 500-5438.

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