

NEXUS 21

TECHNOLOGY IN MOTION

Installation Manual for E-550



Exploded View

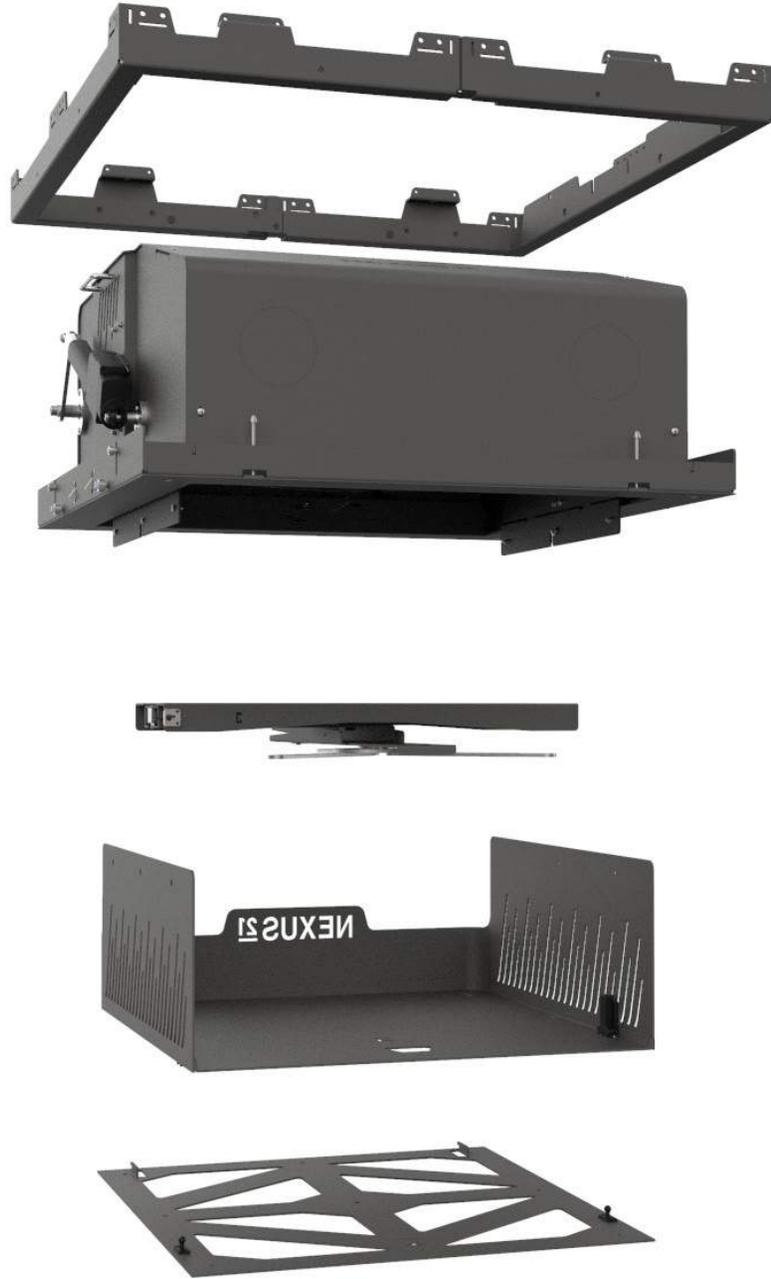


Table of Contents

Safety Information	Pg. 4
Parts List	Pg. 5
Hardware List	Pg. 6
Warranty Information	Pg. 7
Return Policy	Pg. 8
Before You Begin	Pg. 9
Installing the Actuation System	Pg. 12
Projector Mounting	Pg. 15
Ceiling Panel Attachment	Pg. 20
Projector Adjustment	Pg. 25
Setting a Travel Limit	Pg. 28
Integration & Control Information	Pg. 29

Safety Information

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 to 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.
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.

Safety Notice: *You are about to suspend a heavy load above your ceiling. Please be aware that you are responsible for the construction and mounting of the frame which will hold the lift system and the TV. You are also responsible for making sure your frame is strong enough (must be able to support at least 1000 lbs.), and that the lift system and your frame are safely secured above your ceiling. Failure to securely mount your frame to the structure of the building, and/or failure of your frame to support the lift system, can cause severe injury and/or property damage. If you are not qualified to perform the installation of the system, or if you are not sure if you are qualified, do not attempt to install it. If you are not an experienced professional, please hire one to perform this installation.*

Disclaimer: *Nexus 21 disclaims any liability for modifications, improper installations, or installations over the specified weight range. Nexus 21 will not be liable for any damages arising out of the use of, or inability to use, Nexus 21 products. Nexus 21 bears no responsibility for incidental or consequential damages. This includes, but is not limited to, any labor charges for the servicing of Nexus 21 products performed by anyone other than Nexus 21. Nexus 21 intends to make this and all documentation as accurate as possible. However, Nexus 21 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. Nexus 21 makes no representation of warranty, expressed or implied, regarding the information contained herein. Nexus 21 assumes no responsibility for accuracy, completeness or sufficiency of the information contained in this document.*

Parts List



E-550 Lift Mechanism



Carrier Shroud



Installation Bracket (Pre-Framed)



Interface Plate



Universal Adjustment Bracket



Universal Mounting Plate

Hardware List

1. Four (4) – 10-32 x 9/16" FHMS (Flat Head Machine Screw)
2. Four (4) – 10-32 x 1/2" ELHB (Extra Low Head Bolt)
3. Four (4) -- Set Screws
4. Sixteen (16) -- #8-1/2" FHWS (Flat Head Wood Screw)
5. One (1) – 1/8" T-Handle
6. One (1) -- Wrench

Warranty Information



Nexus 21 products are manufactured to the highest standards of quality and for that reason, we are proud to provide the industry's best and longest warranty:

10 years of full-replacement coverage on all motorized products.

5 years of full-replacement coverage on Apex Motorized TV Mount.

We have a full team of dedicated support specialists ready to assist you. So should any issues arise during the use or installation of the product follow the three easy steps listed below:

Step 1: Contact our support team, we will guide you through some basic troubleshooting to solve the issue remotely (via phone, video chat, or email).

Email: support@nexus21.com **Phone:** 480 - 306 - 5462 **Video Chat:** Ask your Support Specialist



Step 2: In the event that replacement parts are necessary to resolve your issue, our team will request the Name or Company Name of the original purchaser to initiate a Warranty Exchange.*

Note: Our systems are specifically engineered to be simple and easy to install and service. Most of the components are plug-and-play, making any necessary replacement of parts very easy.



Step 3: Once the Warranty Exchange has been processed, we will arrange shipment of the part(s) and cover the shipping cost within the continental United States and Canada (excludes HI, AK, and PR). Shipping and tracking information will be provided to you via email.

Note: International shipping costs will be covered up to a value of \$50, any additional shipping costs, including Duties & Taxes, are the responsibility of the customer or receiving party.

Our warranty does not cover the following:

- Electrical, Water, or Fire Damage
- Improper Use or Installation of the Product Outside of Nexus 21's Specifications
- Electrical or Collateral Damage resulting from environmental work or power outages
- Natural Disasters, Natural Phenomena, or other Acts of Nature
- Damage, deterioration, or malfunction resulting from accidents, misuse, or neglect
- Any other cause which does not relate to a product defect

Disclaimer:

Nexus 21 warrants all motorized products to be free from defects in material and workmanship for the term of the warranty. The warranty includes all parts, motorized components, electronics and metal parts. If a Nexus 21 product proves to be defective in material or workmanship during the expressed warranty period, Nexus 21 will replace the product free of charge. If the exact original purchase product is not available (due to upgraded designs or discontinuation of a model), the defective product will be replaced with a similar product of equal or greater value. The replacement part will then be covered by the balance of the time remaining on the customer's original warranty.

The Nexus 21 Full Replacement Warranty does NOT cover: any product on which the serial number has been defaced, modified or removed; damage, deterioration or malfunction resulting from accident, misuse, neglect, power surges, fire, water, lightning or other acts of nature, unauthorized product modification, failure to follow manufacturer's recommended installation instructions supplied with the Nexus 21 product, repair or attempted repair by anyone not authorized by Nexus 21, causes external to the product such as electric power fluctuations or failure, use of supplies or parts not meeting Nexus 21 specifications or any other cause which does not relate to a product defect.

*If the requested information cannot be provided or located on file, replacement parts may not be covered under the warranty.

Return Policy

Return Conditions:

- The product must be unused and complete. Full or partial assembly of the product may void eligibility for return.
- The product must be returned in its original packaging to ensure it is not damaged during shipping.
- Customers must call Nexus 21 and speak with a representative to initiate a return request.
- All returns are subject to an inspection process by a member of Nexus 21 Product Support before a refund is issued.
- Please allow a minimum of 2 weeks from the date the return is received for a refund to be processed.
- Any product that is deemed unfit for restock due to installation or shipping damage will not be eligible for a refund.
- Customers are responsible for shipping charges to send the product back to us.
- All returns must be processed back to the original form of payment used in the purchase of the item(s).

Nexus 21 ships each product encased in custom die-cut foam which is purpose engineered for vibration dampening to reduce any risks of shipping damage. It is mandated that all product returns be shipped back to Nexus 21 in its original packaging. If you do not have the original packaging, please contact our Product Support team at 480-306-5462. A new set of packaging materials can be requested and the cost will be deducted from the refund amount.

Within 30 Days of Delivery:

Returns requests initiated 30 days after delivery are eligible for a full refund of the purchase price. Shipping charges associated with your order are not eligible for refund. See return conditions above.

~

From 30 to 90 Days After Delivery:

Returns requests initiated 30 to 90 days after delivery are not eligible for a full refund of the purchase price and will be subject to a 25% restocking fee. Shipping charges associated with your order are not eligible for refund. See return conditions above.

~

After 90 Days of Delivery:

Returns requests made after 90 days of the delivery date will not be accepted.

To initiate a Return follow the steps listed below:

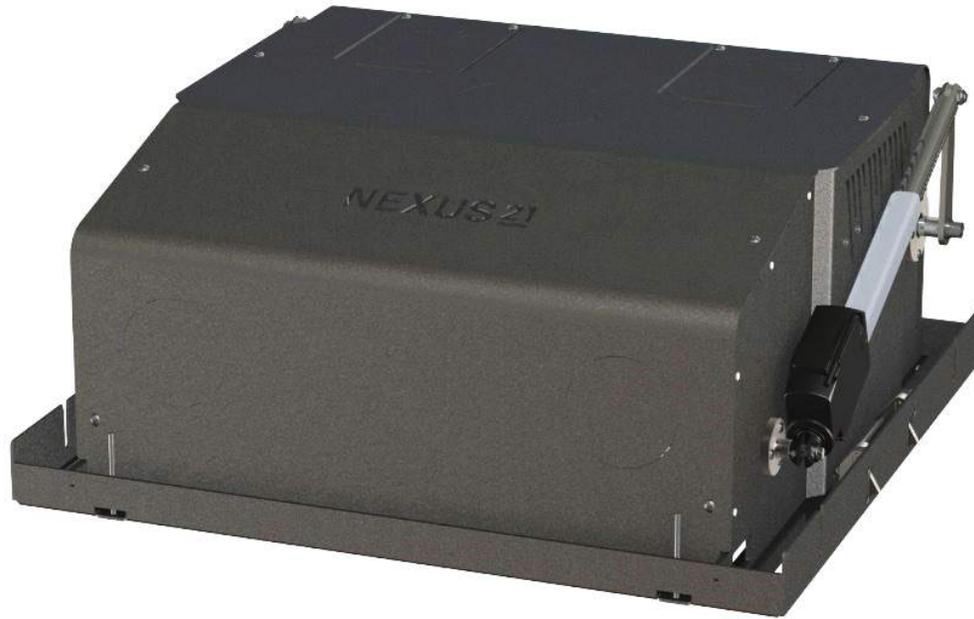
Step 1: Call 1-888-981-9919 and request to return your product(s).

Step 2: Your Account Manager will provide you with a link to a form for you to fill out digitally.

Step 3: Arrange shipment of the product to our office. Emailing the tracking information to support@nexus21.com can expedite the process.

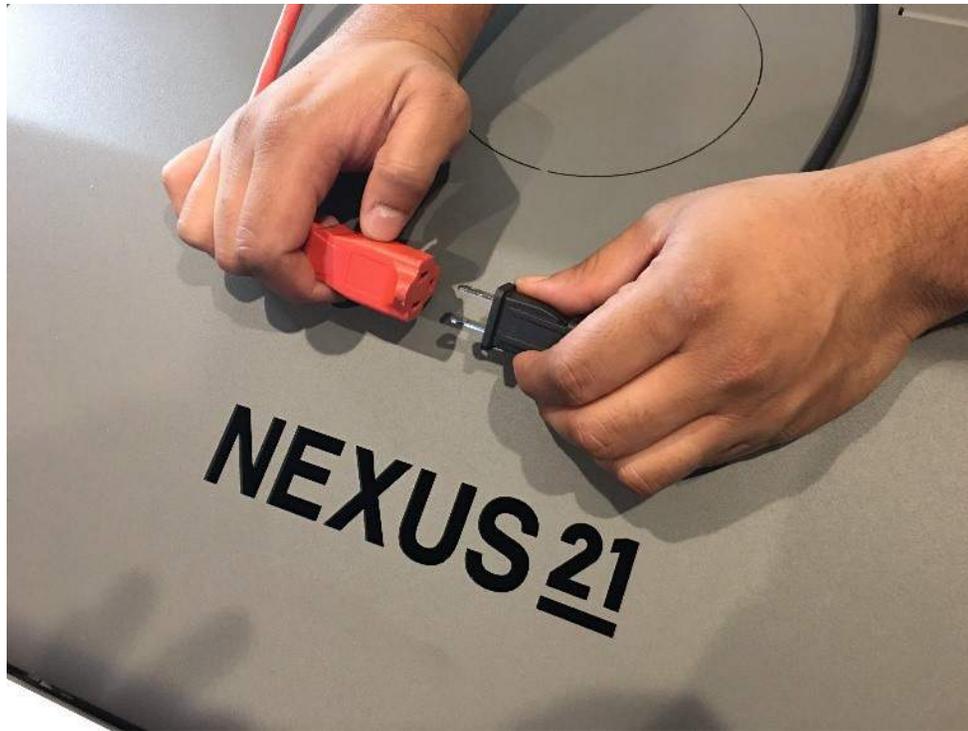
Once your product is received, please allow up to 2 weeks for us to inspect and process your return. You will receive a confirmation email indicating that your return has been successfully processed. Refunds may take 5 - 10 business days depending on your issuing bank.

Before you Begin

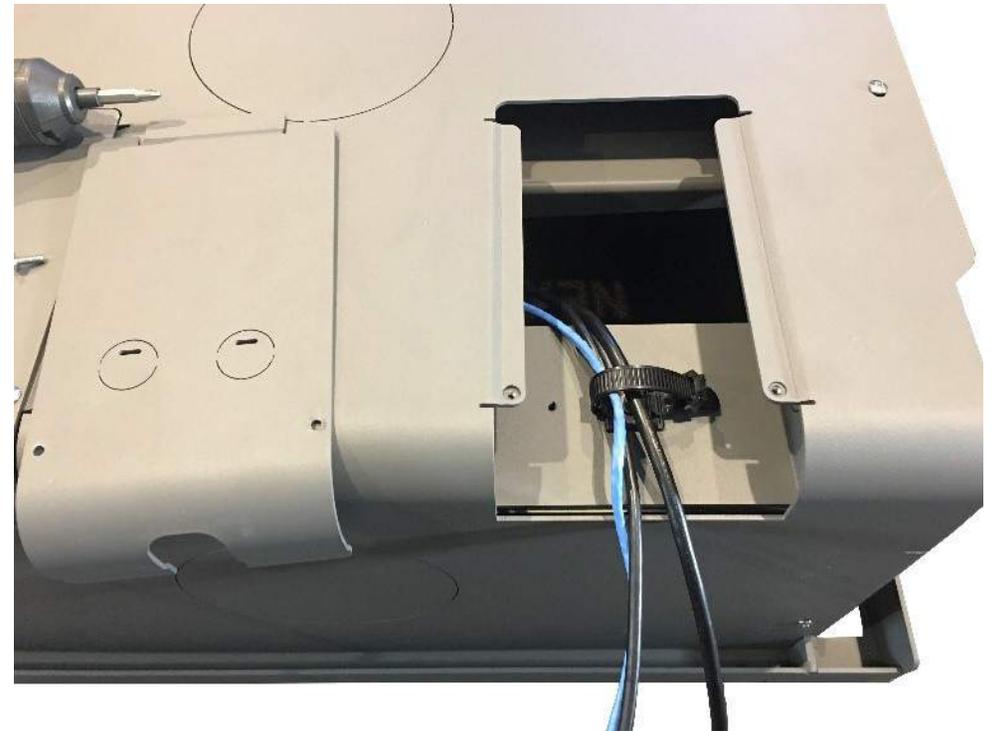


For these steps you will need the following:

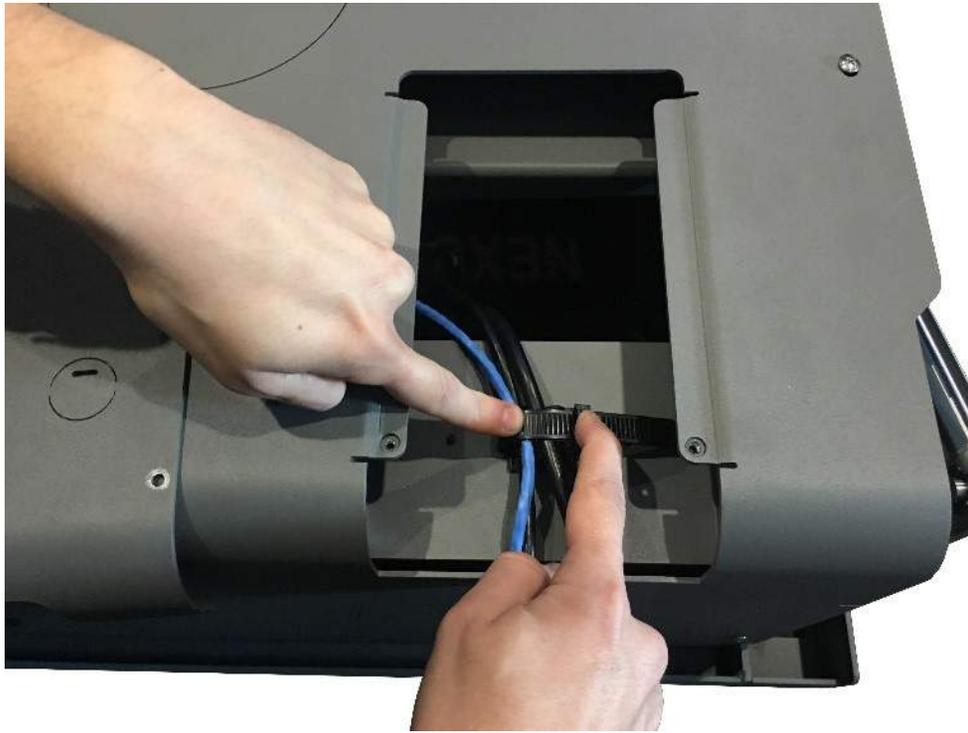
- E-550 Lift Mechanism
- Integration Cables (Not Provided)
- Audio Video Cables (Not Provided)
- Phillips Bit or Screw Driver (Not Provided)



Step 1: Connect the Power Cord for the system to an outlet located above the Installation Bracket.



Step 2: Remove the cover shown in the image above by removing both of the Phillips Screws, then pass all AV, Integration, and Power Cables for both the Projector and Lift System through the Cable Tie.



Step 3: Cinch the cables within the terminal using the Cable Tie and re-attach the cover by sliding the back end in first, pushing the front end down, then using both of the Phillips Screws to fasten it in place.

Note: Do not completely tighten the Cable Tie and leave about 2 ft. of length inside the E-550 Lift Mechanism to allow further cable management.

Installing the Actuation System



For these steps you will need the following:

- E-550 Housing
- (4) Fine Adjustment Screws
- T-Handle

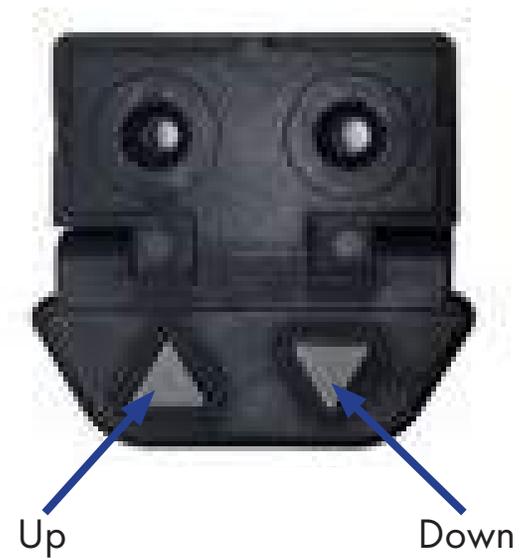


Step 4: Orient the E-550 Lift Mechanism so the front faces the direction you wish to project, then lift it up to snap it into the Installation Bracket.

Important Note: Ensure the Snap Feature is fully engaged before completely letting go of the mechanism.



Step 5: Partially fasten the (4) Fine Adjustment Screws using the provided 1/8" T-Handle.



Step 6: Lower the Control Panel using the provided T-Handle to remove both of the Flat Head Screws, press the DOWN button on the Wired Backup Switch to lower the Crossmember within the Housing, then replace the Control Panel.

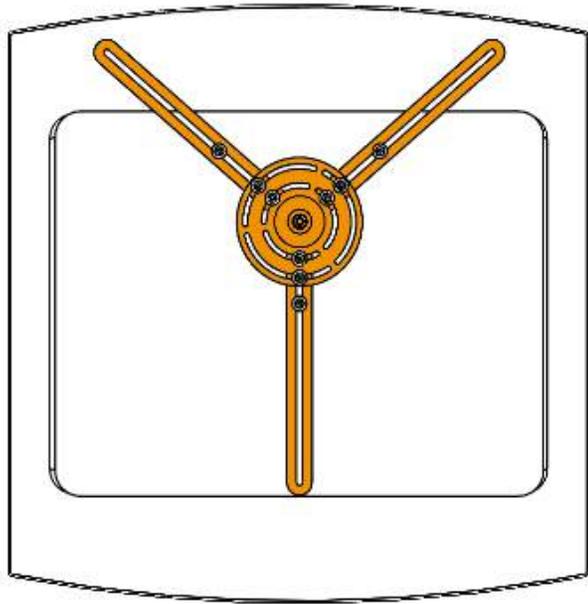
Note: If you are using IR or Contact Closure, setup the Universal Remote so you can operate the system without having to lower the Control Panel.

Projector Mounting



For these steps you will need the following:

- Universal Adjustment Bracket
- Universal Mounting Bracket
- Carrier Shroud
- (4) 10-32 x 9/16" FHMS Screws
- Projector (Not Provided)
- Projector Mounting Hardware (Not Provided)
- 1/8" T-Handle
- Wrench



Step 7: Remove the M8 Nyloc Nut and Flat Washer from the Adjustment Bracket, center the Mounting Bracket on the Projector and fasten it using the required mounting hardware specified by the Projector Manufacturer.

Important Note: Due to the large variety of Projectors, we are unable to provide the hardware required to mount the Projector to the Mounting Bracket. Contact the Projector manufacturer or reference the User Guide for screw sizing.



Step 8: Slide the Adjustment Bracket onto the Mounting Bracket stud so that the front of the Projector sits behind the flange, then fasten the two together using the previously removed M8 Nyloc Nut and Flat Washer and the provided Wrench.



Step 9: Press the Shoulder Bolts on the Projector Mount into the keyed holes of the Crossmember, then slide it forward to lock it into place.

Important Note: Slowly let go of the Projector to make sure it is secured within the keyed holes. Once the Projector Mount is in place, do not bump or move it until the next step is complete.

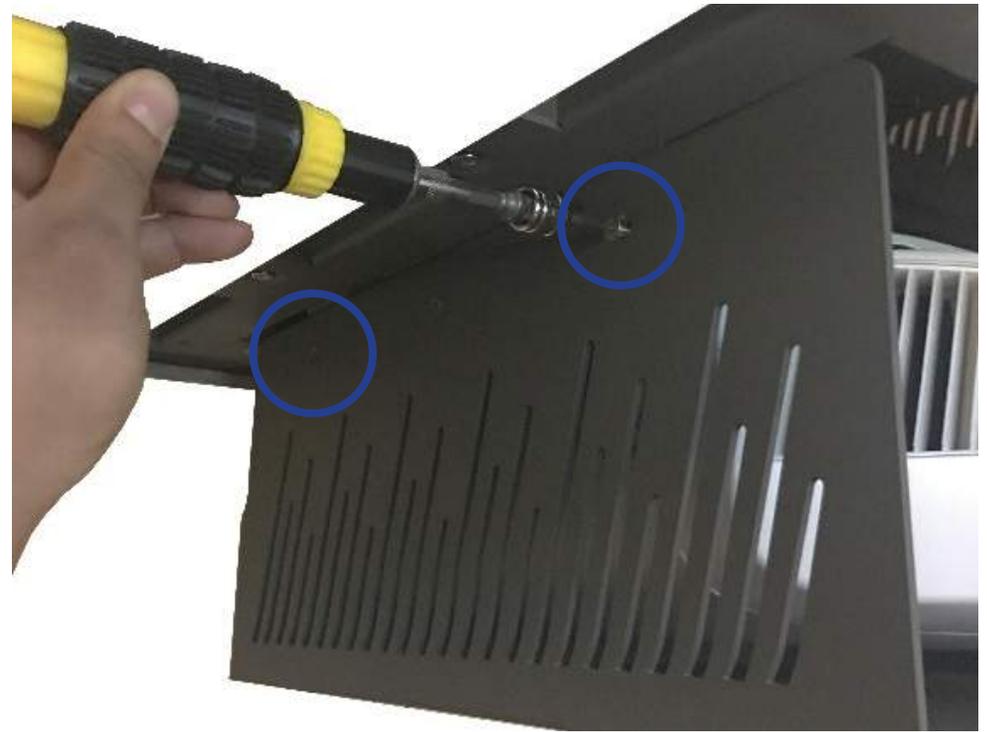


Step 10: Fasten the (4) Captive Hex Screws on the Projector Mount using the provided T-Handle to secure the it to the lift mechanism.

Note: There are (2) Captive Hex Screws on the left and right of the Universal Adjustment Bracket.



Step 11: Connect and manage any cables for integration or the projector and feed any excess cable back up and through the Left Cable Terminal.

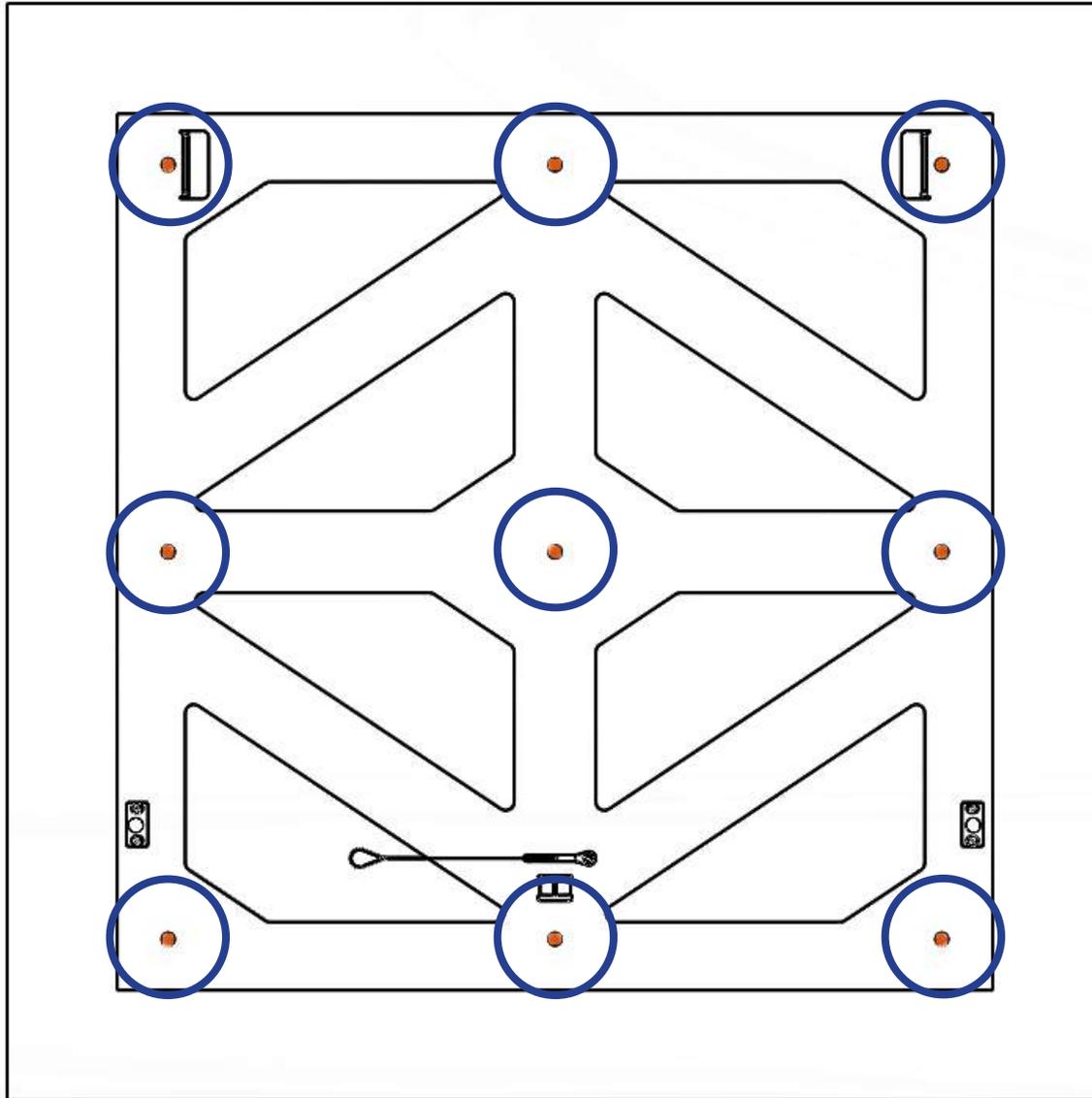


Step 12: Press and slide the Carrier Shroud up and into the L shaped slots located on the left and right side of the Crossmember then fasten it using (4) 10-32 x 9/16" FHMS Screws, (2) per side.

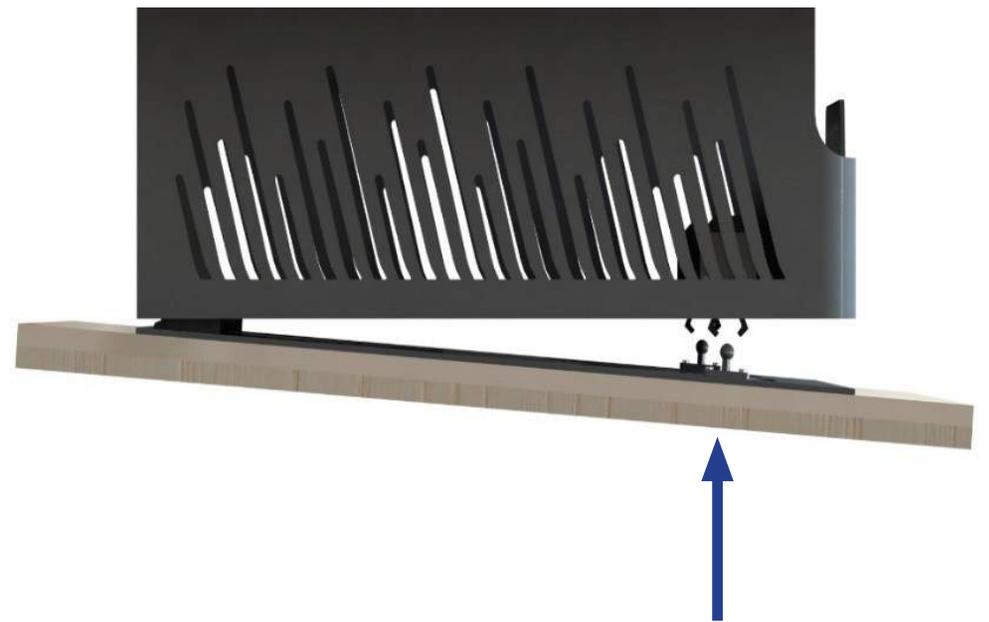
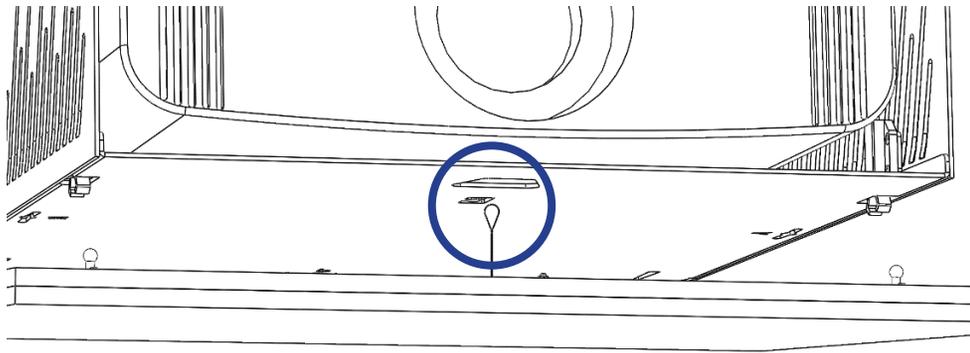
Ceiling Panel Attachment

For these steps you will need the following:

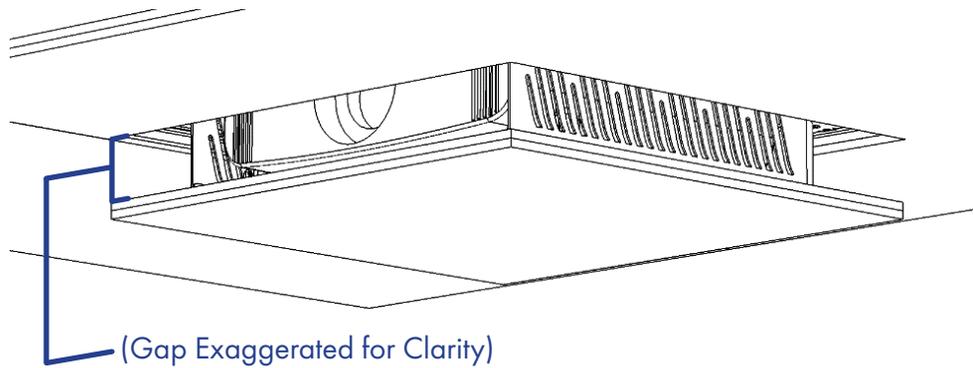
- Interface Plate
- Trim Ring
- Ceiling Panel
- (9) Wood Screws
- (4) Set Screws
- (4) 10-32 x 1/2" ELHB (Extra Low Head Bolt)



Step 13: Center and attach the Ceiling Panel to the Interface Plate using the provided Wood Screws or appropriate hardware/adhesive. Make sure to orient the front of the Ceiling Panel with the Front of the Interface Plate.

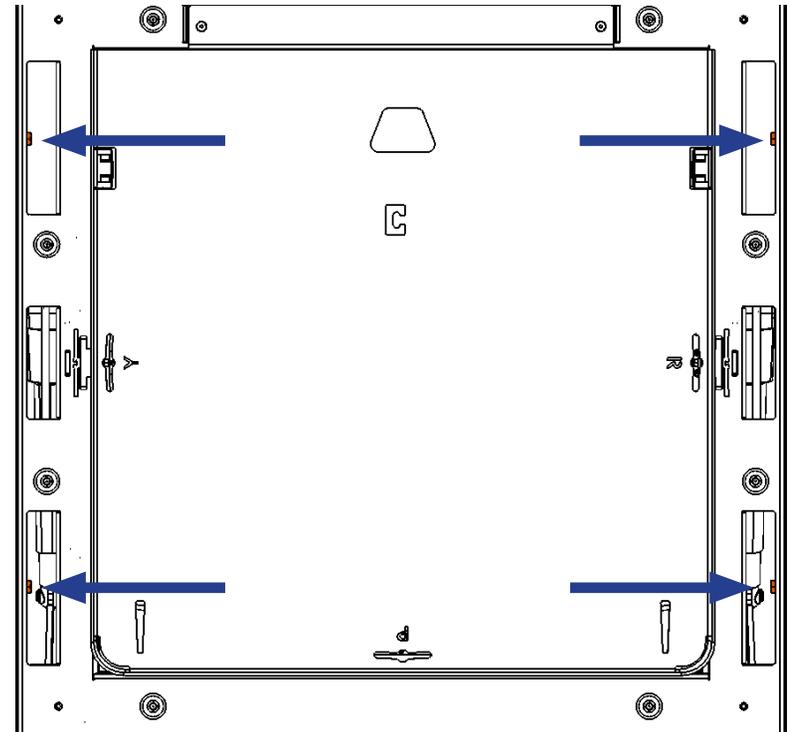


Step 14: Slide the Metal Tabs of the Interface Plate into the Slotted Holes on the Carrier Shroud, hook the Safety Lanyard onto the Carrier Base, then press the Pins into the Latches on the Carrier Shroud.

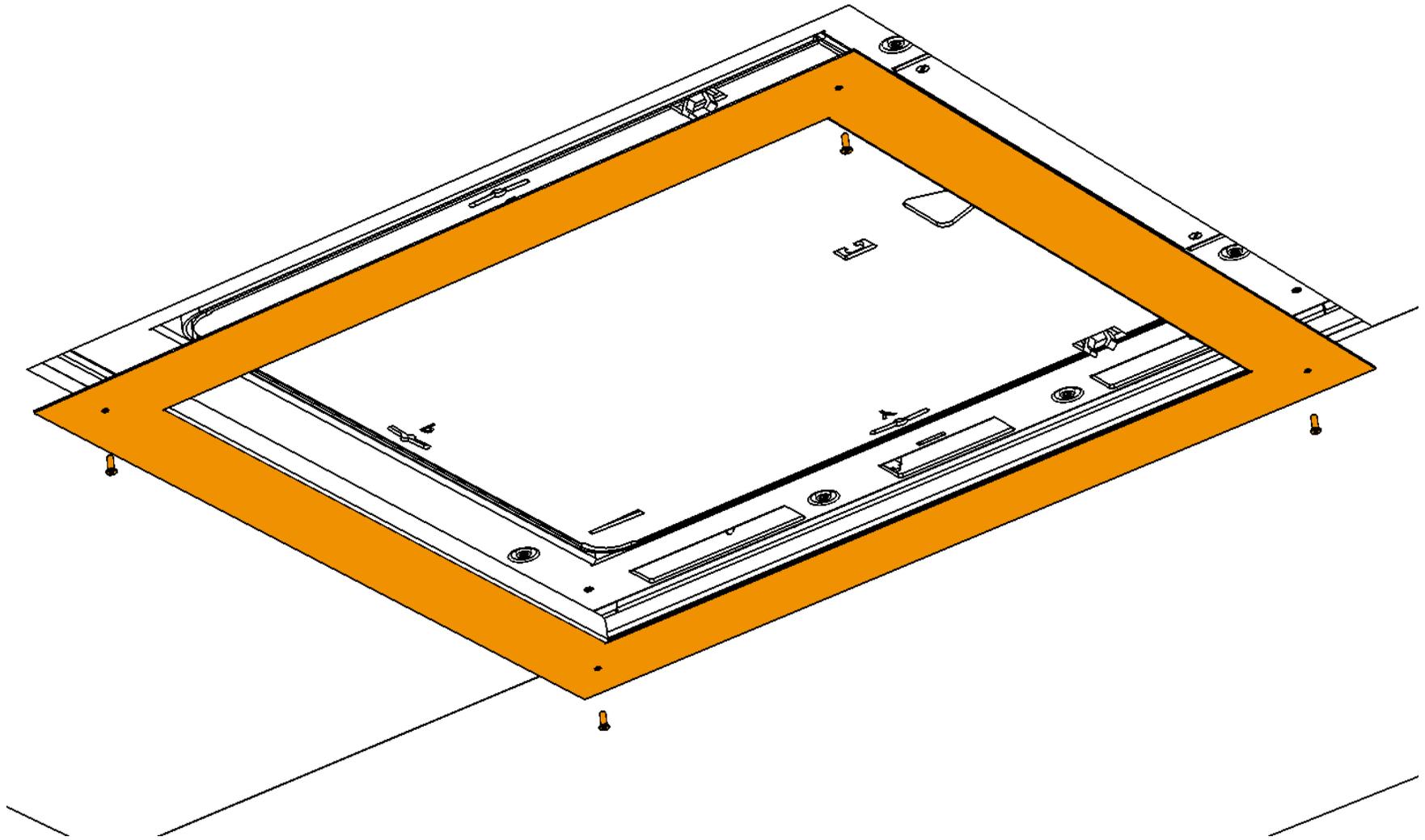


Step 15: Press the UP button to run the system into the ceiling to gauge the flushness of the Ceiling Panel relative to the surrounding ceiling. If adjustments are needed, run the system down, remove the Interface Plate then either tighten the Fine Adjustment Screws to move the Ceiling Panel UP, or loosen them to move the system DOWN.

Important Note: You must adjust the Fine Adjustment Screws in a Star Pattern and in Increments. Do not fully adjust each screw individually as this may potentially cause the system to wedge itself inside the Installation Bracket.

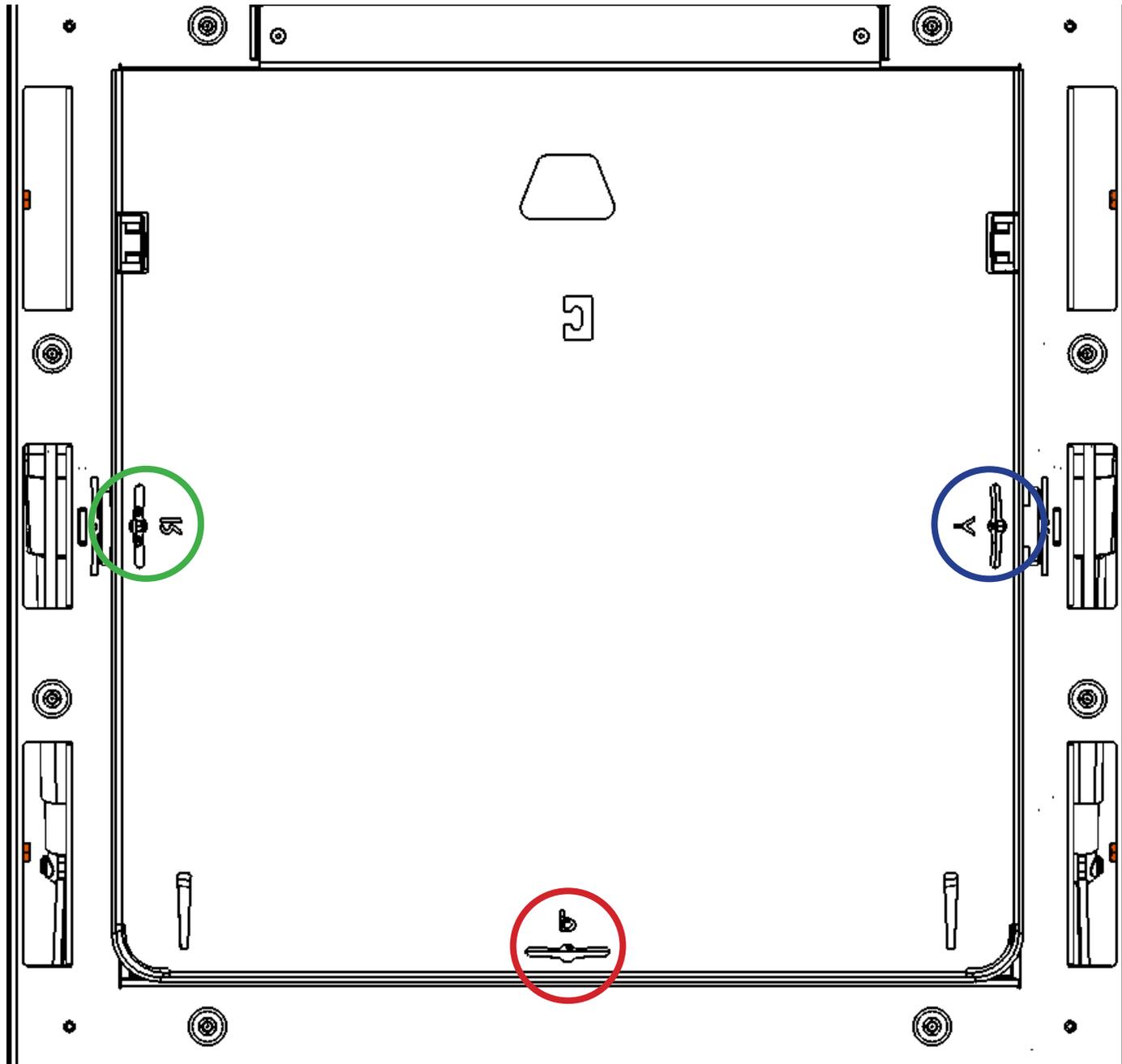


Step 16: Once the Ceiling Panel is flush, run the system down, remove the Ceiling Panel once more, and fasten the (4) Set Screws located in the four corners of Actuation System.



Step 17: Place the Trim Ring against the underside of the unit, fasten it using (4) 10-32 x 1/2" ELHB (Extra Low Head Bolt), then press the DOWN button run the system into the down position.

Projector Adjustment



Step 18: Adjust **Roll**, **Pitch**, and **Yaw** for Projector by placing a 1/8" T-Handle or 1/8" Allen Bit through the slotted holes on the underside of the Carrier Shroud. The type of adjustment is indicated by the letter next to each slot.



Step 19: Re-attach the Ceiling Panel by sliding the Metal Tabs of the Interface Plate into the Slotted Holes on the Carrier Shroud, hooking the Safety Lanyard onto the Carrier Base, then pressing the Pins into the Latches on the Carrier Shroud again.

Setting a Travel Limit

The E-550 System has 10" of travel [extension, drop, or stroke], if your installation requires less than the maximum travel of the system, follow the steps below to limit it:

1. Tap the EXTEND button to drop the Projector down to your desired position.
2. Tap the RETRACT button to stop the system once it reaches your desired position.
3. Plug the Travel Limiter into an available RJ45/Phone port on either the Control Box or RF Receiver.

Note: If you are using Contact Closure or IR, you can disconnect the Wired Backup Switch and place the Travel Limiter in its place.

4. Fully retract the system by pressing the RETRACT button then extend it again to test the position.

About Upper Limits:

The Upper Limit for the E-550 is mechanically limited to a maximum of 1.25" via the Fine Adjustment Screws. If you are having an issue where further adjustment is required, contact Technical Support at 480-306-5462 for assistance.



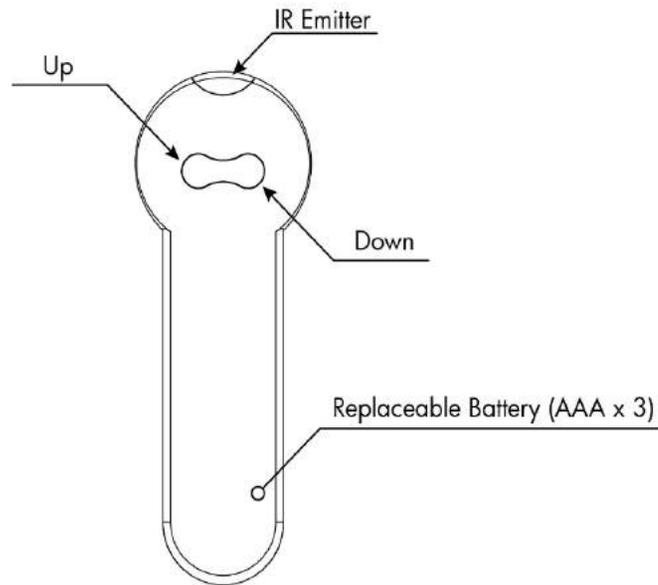
Integration & Control Information

This section of the manual contains information on IR, Contact Closure, and RF Controls.

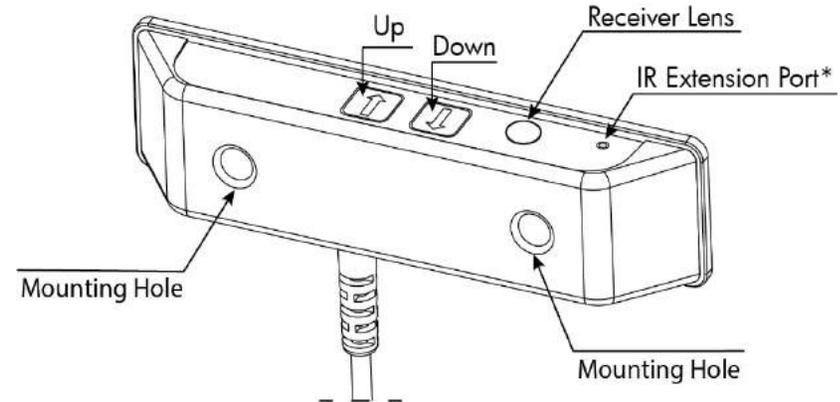
For IP Control integration information, please consult the manual that came with your IP Control Module.

Most controls for the E-550 are pre-attached to the Control Panel which can be accessed by following Step 6 of this manual.

IR Remote



IR Receiver



*The IR Extension Port is for use of the IR Extension Cable only. The IR Extension Cable can be used to extend the IR Receiver Lens. Contact your Account Manager for more information.

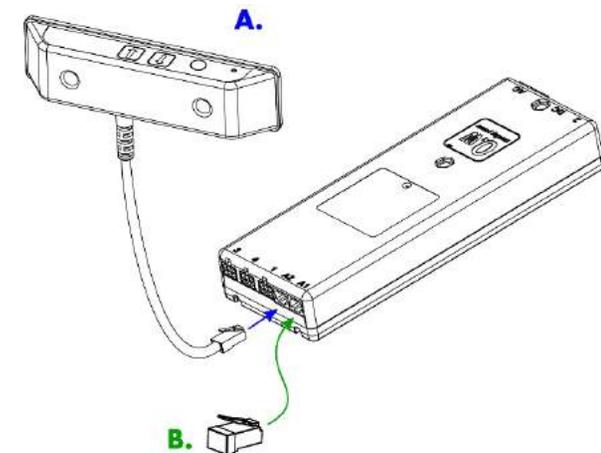
A. Connect the IR Receiver

Connect the IR Receiver to port A1 or A2 on the Control Box.

B. Setting a Height Limit (Optional)

Use the IR Remote to run your system to the desired extended position, then plug the Height Limit Insert into the Control Box.

Note: This will set the maximum extension for your system, to reset this, remove the Height Limit Insert and repeat these steps.



IR Control FAQ

Do you have IR Hex Codes for this lift?

EXTEND: 0000 006D 0000 000C 000C 0115 000C 0115 000C 0115 000C 00B7 000C 0115 000C 00B7 000C 00B7 000C 0115 000C 0115 000C 0115 000C 0255

STOP: 0000 006D 0000 000C 000E 0115 000E 00B5 000E 0115 000E 00B5 000E 0115 000E 00B5 000E 00B5 000E 0115 000E 0115 000E 0115 000E 0240

RETRACT: 0000 006D 0000 000C 000E 0115 000E 0115 000E 0115 000E 00B5 000E 0115 000E 00B5 000E 00B5 000E 0115 000E 00B5 000E 00B5 000E 0240

Note: "EXTEND" and "RETRACT" are indiscrete commands and can be used as a "STOP" if sent while the lift is traveling in the opposite direction of the command.

Are there any other ways to integrate this lift?

Yes, we offer 3 types of integration, IR, IP, or Contact Closure. For IP there is an additional cost, so contact your account manager for pricing. For Contact Closure, send an email to our technical support department and we will send you a document containing information about integrating via Contact Closure.

What if I don't have a universal remote or any way to integrate my lift?

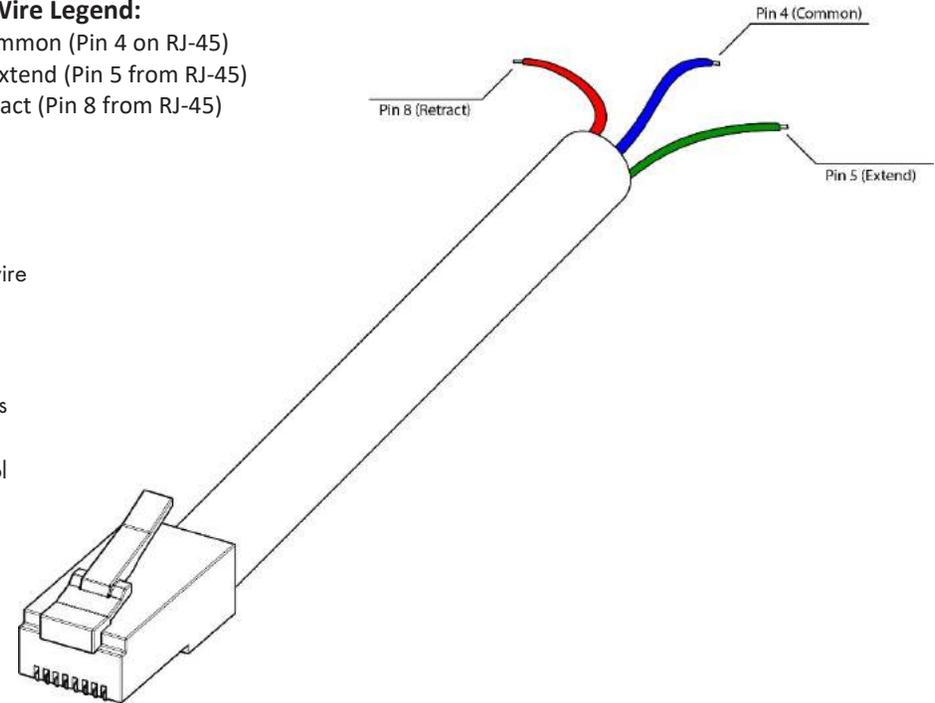
The CSI Control Kit is provided, only, for the purpose of integrating your lift into a Control System or using a Universal Remote. If you're not doing either of these things, we suggest using our RF Controls. To request a free control swap from CSI to RF, contact your account manager or technical support.

Contact Closure Integration requirements:

- Two **normally open** relays
- 750ms momentary pulse commands
- The lift uses one relay for "extend", and one relay for "retract".
- Make sure that the **BLUE** common wire runs between both relays with a jumper wire that you supply.
- When programming your control system, ensure that the relays use a momentary pulse of 750 milliseconds or more.
- The relays **CANNOT** latch. They must function similar to a light switch that always reverts back to neutral position.
- Connect the RJ-45 plug of the *Contact Closure Cable* to the Nexus 21 Lift Control Box using port A1. (Ports A1 and A2 can be used interchangeably.)

Colored Wire Legend:

- BLUE** – Common (Pin 4 on RJ-45)
- GREEN** – Extend (Pin 5 from RJ-45)
- RED** – Retract (Pin 8 from RJ-45)



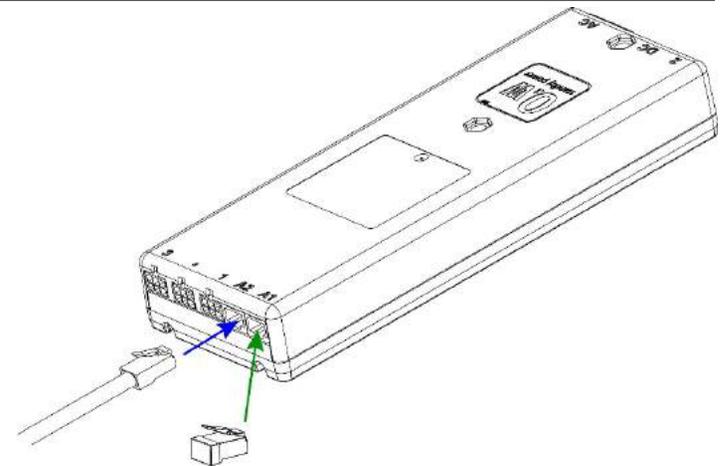
A. Connect the Contact Closure Cable

Connect your Contact Closure Cable to port A1 or A2 on the *Control Box*.

B. Setting a Height Limit (Optional)

Use the *Backup Switch* to run your system to the desired extended position, then plug the *Height Limit Insert* into the Control Box.

Note: This will set the maximum extension for your system, to reset this, remove the *Height Limit Insert* and repeat these steps.



Contact Closure FAQ

Technical Support

Phone: 480-306-5462

E-mail: support@nexus21.com

What if I only have one relay?

To ensure proper function, two relays must be used and both relays must be Normally Open. Latching the relay closed will cause the lift to receive continuous commands resulting in undesired operation or damage to the Control Box.

Do you support RS232 or 12v Triggers?

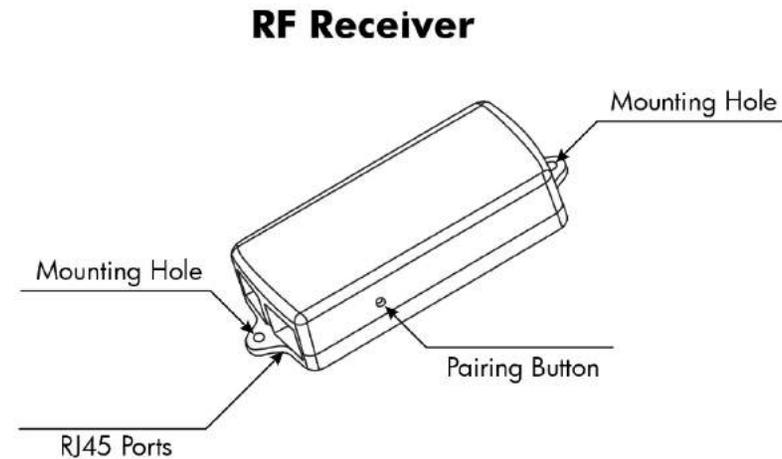
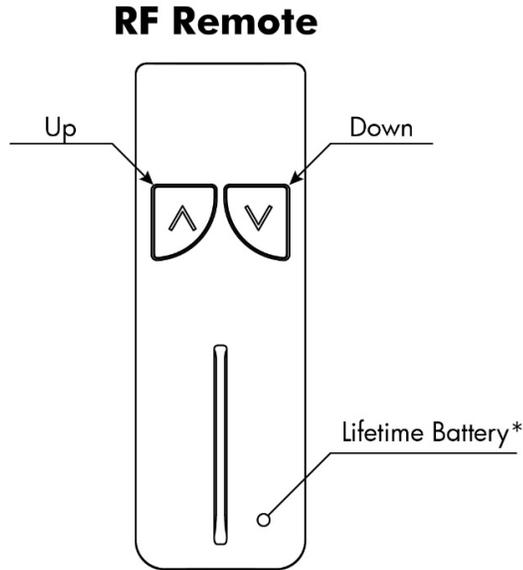
We typically get this question due to the request for feedback from the lift. We do not support RS232 or 12v triggers, however, if feedback is required, we do offer IP which provides the control system with positional feedback. For more information contact your Account Manager.

Are there any other ways to integrate this lift?

We offer 3 ways to integrate our lifts, IR, Contact Closure, or IP. The information for IR and Contact Closure is contained in this document. Information for IP can be obtained by contacting our technical support department. If you wish to integrate using IP, there is an additional cost, so contact your Account Manager for pricing.

What if I don't have a universal remote or any way to integrate my lift?

The CSI Control Kit is provided, only, for the purpose of integrating your lift into a Control System or using a Universal Remote. If you're not doing either of these things, we suggest using our RF Controls. To request a free control swap from CSI to RF, contact your account manager or technical support.



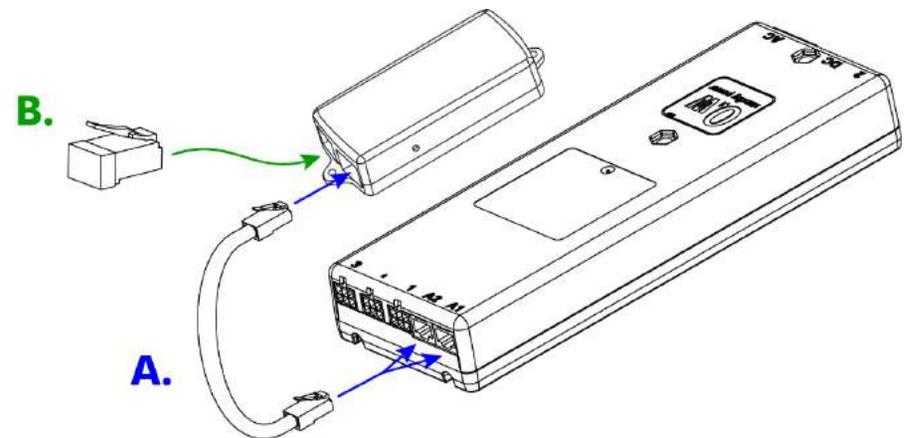
A. Connect the RF Receiver

Connect one end of the *RJ-45 Cable* to port A1 or A2 on the *Control Box* and the other end to the *RF Receiver*.

B. Setting a Height Limit (Optional)

Use the *RF Remote* to run your system to the desired extended position, then plug the *Height Limit Insert* into the RF Receiver.

Note: This will set the maximum extension for your system, to reset this, remove the *Height Limit Insert* and repeat these steps.



RF Control FAQ

Technical Support

Phone: 480-306-5462

E-mail: support@nexus21.com

How do I replace the batteries in my remote?

The RF Remote comes with a life-time battery and cannot be replaced. Try following the steps to resync your RF Remote to the RF Receiver, if that doesn't work contact our technical support department for a replacement.

How do I resync my RF Remote?

To resync your RF Remote, you'll need a paper clip or something similar.

- 1. Locate your RF Receiver, this should be inside the enclosure for your lift next to the Control Box.*
- 2. Locate the small hole on the side of the RF Receiver (see page 1 for reference).*
- 3. Push the button inside the hole on the RF Receiver while simultaneously pressing the Up button on your RF Remote. Continue to hold these buttons for 5 seconds before releasing.*
- 4. Test the function of your remote, if you still do not get any movement repeat these steps or contact technical support.*

How do I Integrate my lift system using RF?

The RF Controls are meant to be a standalone control for users without a Control System. If you need the ability to integrate, you will need to use the Control System Integration Kit, Contact Closure, or IP Control Module to integrate your lift.

We offer 3 types of integration, IR, IP, or Contact Closure. As a courtesy we offer a free control swap from RF to IR. For IP or Contact Closure, contact your account manager or our technical support department for more information.

www.nexus21.com

1 - 888 - 981 - 9919

