NEXUS 21

TECHNOLOGY IN MOTION

Installation Manual for L-85 & XL-85



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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: Avoid contact with the TV and Lift System during operation. The lid of your enclosure must be installed as described in the instructions, using the Lid Attachement Pins. Installing the enclosure lid in any other fashion will create hazardous pinch points that can cause serious personal injury. Do not, under any circumstances, allow any person or pet to position themselves underneath the TV at anytime.

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 & Hardware List



Parts & Hardware List



Power Cord



Control Kit (see pg. 41)



Hardware Pack (See Contents List Below)





Hardware Pack Contents:

M5 x 10 FHMS (12)	M6 x 12 FHMS (20)	M6 x 20 FHMS (8)	M6 x 10 BHMS (22)	M6 x 20 BHMS (2)
#8 X 3/4″ FHWS (10)	#10 X 1 3/4" FHWS (2)	#10 X 3/4" THWS (21)	M6 Wing Nut (4)	M6 Lock Washer (4)
1/4" Flat Washer (4)	Lid Attachment Pin (2)	3mm Hex Key (1)	4mm Hex Key (1)	Large Assorted TV Hardware
Zip Tie (12)	Snakeskin Tie (2)			

Warranty Information

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).

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: Use the provided link to fill out the Return Authorization form digitally.

Step 3: Arrange shipment of your product(s) to our office. Contact our support team at 480 - 306 - 5462 to request original packaging if you no longer have it.

Emailing tracking info to our support team can help expedite the return 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.

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.

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.

After 90 Days of Delivery:

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

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:

<u>10 years of full-replacement coverage on all motorized products.</u>

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

Should an issue arise with your system, just follow these three easy steps:

Step 1: Contact our support team by email or phone to troubleshoot your issue. Mostissues can be resolved over the phone and without the need of replacement parts.Email:support@nexus21.comPhone: 480 - 306 - 5462

Step 2: If a replacement part is necessary, we will verify the name or company name of the original purchaser^{*} and arrange shipment of the replacement part(s).

Note: Ground shipping covered for anywhere in the United States and Canada (excludes HI, AK, and PR). Expedited shipping available for an additional cost. International shipping covered up to \$50 USD, any additional shipping costs, including Duties & Taxes, are the responsibility of the customer or receiving party.

Step 3: Our support team will follow up to make sure you've received the part(s) and if needed schedule a time to walk you through the replacement.

Note: Due to the modular nature of our systems, replacing parts is a simple and easy process.

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 fram 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.

Lower Actuation System

Before you begin, consult the Dimensional Drawing for your lift system to ensure your cabinet dimensions are correct and ready for install.



1a. Attach the Base Mount to the base and rear panels of the cabinet using (9) $\#10 \times \frac{34''}{10}$ THWS.

1b. Attach the Rear Support to the rear of your cabinet, 15.75" (L-85) or 23.75" (XL-85) from the bottom of your Base Mount, using (12) #10 x 3/4" THWS.

Note: Use the center line cutouts on the Base Mount and Rear Support to assist with locating them inside your cabinet.



2a. Slide Lower Column Clamps around the Lower Column Assemblies with the holes on the outside, then seat the pigtails as shown ab

2b. Slide Lower Column Assemblies onto Base Mount Studs with the Pigtails facing outwards.

2c. Maneuver Lower Column Assemblies to place tongue of the Lower Column Clamps into their respective slots on the Rear Support.



3a. Attach the Lower Column Clamps to the Rear Support using (4) M6 x 12mm FHMS.

3b. Attach the Lower Column Assemblies to the Base Mount using (4) M6 Wing Nuts.



4. Place the Center Riser on top of the Lower Column Assemblies then attach it using (8) M6 x 20 FHMS.



5. Manuever the Lower Column Pigtails into slots on left and right sides of Center Riser.

Lower Cable Management



6. Mount your Control Box to the inside of your cabinet on the

<u>CB Side</u>, using (2) #10 x 1-3/4" FHWS.

Important Noticed dentify which side the AV ports are on for your TV; This will be the This will be the CB Side. For illustration purposes, the rest of this manual will show an installation with the AV Side on the left and CB Side on the right.



7a. Feed (3) 4.5m Motor Cables through one of the Lower Cable Tracks and label one of the cables "#1", leaving the other two cables unlabeled.
7b. Feed (1) 4.5m Motor Cable through the second Lower Cable Track, label this cable "#2", then feed any necessary AV Cables through this track.



8a. Attach one end of the Lower Cable Track with Cable #1 to the

<u>CB Side</u> of the Center Riser and Rear Support, using (4) M5 x 12 FHMS.

8b. Repeat this step for the other Lower Cable Track on the **AV Side**.



Upper Actuation System



10. Hang the Upper Column Assembly on the Center Riser as shown in the image above.

Note: The metal wings on the back of the Upper Assembly should sit behind the washers on the Center Riser, allowing you let go of the Upper Assembly without it falling.



Temporarily connect the (2) unlabeled 4.5m Motor Cables to the Upper Column Pigtails then label these Cable #3 and Cable #4.
 Note: Ensure there is plenty of slack available to allow extension of the Upper Columns.





12a. Connect all (4) Motor Cables to their corresponding ports on the Control Box. Cable #1 to Port 1, Cable #2 to Port 2, etc.

12b. Connect the Power Cord to the AC Port and the Backup Switch to Port A1 or A2.

12c. Tap the Down button on the Backup Switch, release, then press and hold it for 5 seconds to perform an 'Initialize'. During this time, you should observe a slight movement from your system indicating it has successfully been initialized. If you do not observe this movement, repeat this step.





13a. Press the Up button on the Backup Switch and raise the system until the bottom of the Screen Support is just above the top of your cabinet, then tap the Down button to stop it at this position.

13b. Fasten the Upper Column Assembly to the Center Riser using (6) M6 x 12 FHMS.

13c. Press the Up button again on the Backup Switch to fully extend the system.

Upper Cable Management



14a. Temporarily disconnect Cable #3 and #4 from the Upper Assembly, then feed them up through the L-shaped end on one of the Upper Cable Tracks.
14b. Attach the L-Shaped end of this Upper Cable Track to the top surface of the Center Riser on the CB Side using (2) M6 x 10 BHMS.
14c. Attach the other end of the Upper Cable Track to the CB Side of the Upper Assembly using (2) M6 x 10 BHMS.



15a. Reconnect Cable #3 and #4 to the Upper Assembly, then open the Plastic Cable Channel on

<u>CB Side</u> of the Upper Assembly.

15b. Place the cables into the Plastic Channel without them overlapping, then snap it shut. Feed any remaining slack down through Track and towards the Control Box.

the Upper & Lower Cable



AV Side, up through the remaining Upper Cable Track.

16b. Attach the L-shaped end of the Upper Cable Track to the top surface of the Center Riser on the

AV Side using (2) M6 x 10 BHMS.

16c. Attach the other end of the Upper Cable Track to the

<u>AV Side</u> of the Upper Assembly using (2) M6 x 10 BHMS.



17. Press the "Down" button on the Backup Switch to lower the system to its fully retracted position then back up to test your cab slack as needed. When finished, leave your system in the retracted position and proceed to the next step.

le management, adjusting the



18a. Measure the thickness of your lid and add 1/4" to it. Write that measurement here: ____

18b. Place a level or straight edge across the top of your opening. The bottom of the level or straight edge will be used to locate

your Lid Supports.

18c. Position your Lid Supports along the left and right sides of the Upper Assembly so the tops of them rest a distance equal to the measurement taken in step 18a below your level or straight edge, then attach them using (4) M6 x 10 BHMS per Lid Support.

Note: If necessary, (2) M6 x 10 BHMS can be used per Lid Support, instead of (4).



19. Attach the Lid Plate to the Top of the Lid Supports using (4) M6 x 12 FHMS. Ensure the Arrow is pointing towards the front of the cabinet.

TV Mounting

This system has been tested to run within the following specifications:

Min Screen Size = 50"

Max Screen Size = 86"

Max Weight Capacity = 175 lbs (TV + Lid + Soundbar)

Failure to install your application within these specifications will void your warranty.



20a. Raise your lift, align the template with Screen Support Holes, then fold or cut the template to be flush with the <u>bottom</u> of the Lid Plate.
20b. Measure 1" from the new top of the Template and draw a line. This line indicates the position for where the top of the TV will go.

20c. Align the line you just drew with the top of the TV.



21a. Attach Vertical Bars to Screen Backplate, ensure the spring-loaded latch on each Vertical Bar is engaged with the Screen Back Plate.

21b. Place the Vertical Bars and Screen Backplate on the back of the TV, and position the Vertical Bars over the VESA Holes.

21c. Adjust the vertical position of them both until the (6) smaller holes of the Screen Backplate, line up with the lines on the Template and the Vertical Mounting Bars align with the VESA Holes on your TV.

21d. Mark the holes for the Screen Backplate on the template and the holes for mount your TV on the Vertical Mounting Bars. **32**



22a. Disconnect the Screen Back Plate from the Vertical Bars and attach it to the holes on the Screen Support that correspond with the marked holes on your Template using (6) M6 x 12 FHMS Screws.

Note: You can disengage the spring-loaded latch on the Vertical Bars by pulling on the straps at the bottom or pushing the tab at the top.

22b. Attach the Vertical Mounting Bars to your TV using the marked holes.

If using a Soundbar, follow the informational sheet included with it first.



23. Hang your TV on the Screen Backplate, ensure the spring-loaded latch on each Vertical Bar is engaged with the Screen Back Plate.

Lid Attachment

This system has been tested to run within the following specifications:

Min Screen Size = 65"

Max Screen Size = 86"

Max Weight Capacity = 175 lbs (TV + Lid + Soundbar)

Failure to install your application within these specifications will void your warranty.





24a. Ensure the holes on the Lid Plate and Pin Receiver are centered with one another and the Pin Receiver Nuts are tight.

24b. Place the Lid Adapter on the top of the Lid Plate, aligning the Lid Pins with the holes on the Pin Receivers.


25a. Fully retract your lift system by pressing the "Down" button on the Backup Switch.

25b. Remove the (4) M6 x 10 Flat Head Screws for the Lid Plate Extensions and adjust them towards the front of the cabinet leaving

25c. Place your lid within the opening of your cabinet so that it rests on the Lid Catch and ensure there is an even gap between th way around.

a 1" gap or more.

e lid and the opening all the



26a. Press the "Up" button on the Backup Switch to partially extend the lift ~18" then press "Down" to stop it.

26b. Use a pencil or sharpie to mark the smaller of the two holes in the four corners of the Lid Adapter, then remove your lid from the Lid Plate and flip it over.



27a. Align the Lid Adapter with the marked holes, then affix your lid to the Lid Adapter using the provided #8 FHWS and countersunk general contractor for an appropriate adhesive.

holes or consult a

27b. Place your lid back on top of the Lid Plate then retract your lift to ensure there is still an even gap all the way around.

Note: If any adjustment is necessary, raise the lift, loosen the pin receiver nuts, lower the system, then adjust the lid position until there is an even gap all the way around.









28a. Press the "Down" button on the Backup Switch to lower your system, then press "Up" to stop it at your desired height.

28b. Plug the Height Limit Insert into an available RJ45 port on the Control Box to limit the extension to the current position of the system.

Note: Using a Height Limit Insert is not required if you are using the full travel of the system.

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.

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IR Control User Guide



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. Page 1 of 4



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 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 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 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.

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NEXUS²¹

Contact Closure User Guide

TECHNOLOGY IN MOTION

Colored Wire Legend:

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

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.)



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.

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Contact Closure FAQ

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.

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RF Control User Guide



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.



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RF Control FAQ

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.



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