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CONCEALMENT SYSTEMS

**Display Lift System Model
M-25 Installation
Instructions**



Below is a parts list describing all of the items included with the Model M-25 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



Bayonet Bracket



Lift Column



Base Mount



Adapter Plate



Monitor Hanger



Control Box



Top Plate

Parts List, continued

Cables

- **Motor Cable** – Black cable with white, six-pin plugs. Use this cable to connect the Lift Column to the Control Box (using slot #1 on the Control Box). Six feet long.
- **Power Cable** – Connects Control Box to power outlet. Three feet long.
- **RF Cable** – Used to connect the RF Receiver to the Control box. Ends have Telephone-style connectors.



TIP: You may want to install a power strip (not included) in the bottom of your cabinet to plug in the Lift System Control Box, Display and any other components in the cabinet.

Hardware

9. Two (2) -- 1 ½" x ¼" diameter Steel Threaded Taper Pins
10. Four (4) -- #8 x ¾" Flat Head Wood Screws
11. Four (4) -- ¼" Flat Washers
12. Four (4) -- 6mm Hex Nyloc Nuts
13. One (1) – Bag of Assorted Display Mounting Screws
14. Two (2) -- #10 x 1 ¾" Flat Head Wood Screws
15. Eight (8) -- #10 x ¾" Truss Head Wood Screws
16. Eight (8) -- 6mm x 20mm Flat Head Machine Screws

Items that are included, but not shown in Parts View diagram on Supplemental Page A:

- RF Controls
- Four (4) -- Wire Management Clips
- One (1) -- Allen Wrench – 4mm
- One (1) -- "Snakeskin" Wire Management Sleeve – 3 feet long
- Four (4) -- Velcro end Ties, for use with Wire Management Snakeskin
- Four (4) -- Plastic Ties, also for use with Wire Management Snakeskin
- Four (4) -- Lid Catch Brackets w/ #10 x ¾ Truss Head Wood Screws

Wire Management



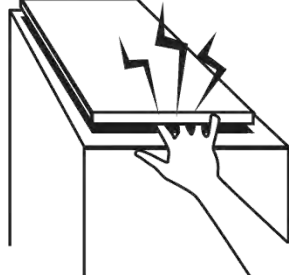
The Lift System has no exposed gears or moving parts that can damage your wires, so wire management is simple. We have included a three-foot long "SNAKESKIN" sleeve, which is a state-of-the-art wire bundling and protection system (the sleeve can be cut shorter if you wish). The System also includes 4 Velcro end ties and 4 plastic ties. Use the Velcro ties at the ends of the SNAKESKIN, to close the ends of the sleeve and to keep the wires together inside it. Use the plastic ties to fasten the cable bundle in a fixed position, so it moves up and down with the lift.



SAFETY INFORMATION



SEVERE PERSONAL INJURY AND PROPERTY DAMAGE CAN RESULT FROM IMPROPER INSTALLATION OR ASSEMBLY. READ THE FOLLOWING WARNINGS BEFORE BEGINNING:

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

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

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 mounting the RF controls are on page 10. Instructions for setting the Lift System travel limit are on Supplemental Page B.

These are the parts included with RF controls:



Backup Switch



RF Receiver



RF Handset



Height Limit Insert

Assembly and Mounting – Things to Think About First



SAFETY NOTICE:

- For proper support, the Lift System **MUST NOT** be attached to any material that is less than $\frac{3}{4}$ " thick. This applies to BOTH the back and bottom mounting points.
- The Lift Column is **ONLY** designed and rated for **VERTICAL, NON-INVERTED USE**. **DO NOT MOUNT THIS LIFT SYSTEM UPSIDE DOWN or SIDEWAYS (HORIZONTALLY, AS IN A LATERAL MOUNT)!**



Space requirements for the M-25 Lift System are as follows:

Depth = Display Depth + 3.6"

Height = Display Height + 1", or a minimum of 22.8"

Width = Display Width + 2"



IMPORTANT NOTE: The Lift System must be mounted **as high up as possible inside the cabinet**, so that when the Lift is in the fully "DOWN" position (fully retracted), the top of the Display will be just underneath the lid of the cabinet.

Lift System height and mounting position:

When fully assembled, the HEIGHT of the Lift will be 22.8" (configured for "floating top")

If the inside height of your cabinet is taller than this, you will need to mount the Lift **higher up inside the cabinet**



TIP: If you need to mount the Lift higher up inside the cabinet, you can cut a wood block or mount a small shelf inside the cabinet for the Lift column to sit on. Keep in mind that the Bayonet Bracket (part #3) will bear most of the weight.

About the Cabinet Lid (Cabinet Top)



SAFETY NOTICE:

- **WARNING! YOU MUST NOT DIRECTLY SCREW THE CABINET LID (TOP) TO THE LIFT SYSTEM!! THIS CREATES HAZARDOUS "PINCH POINTS" AND MAY AFFECT THE OPERATION OF THE LIFT OR CAUSE DAMAGE TO THE CABINET TOP.**
- For floating lids, **DO NOT USE SCREWS to attach the lid to the Lift System**. Instead, use the "Threaded Tapered Pins". This will keep the lid firmly in place, but will also allow it to **separate from the lift system** if anything (like a finger) gets in the way when the Display lowers.



Which Lid Style Will You Use? (There are 2 Different Styles)

Floating Lid (Floating Top) – The whole top of the cabinet sits on top of the Lift System and raises/lowers with the Display. This is the standard Installation method, using the Top Plate (part #7) and Threaded Tapered Pins.

Cut-Out Floating Lid (Top) – You will "cut out" part of your cabinet top, customizing it to the size of your Display. That cut-out lid then sits on top of the Lift System and raises/lowers with the Display. This method uses the Top Plate (part #7) and Threaded Tapered Pins, but you must set up a "catch" for the cut-out lid so that when the Display lowers, the lid stops level with the rest of your cabinet top (like a manhole cover).



TIP: There are several different methods for setting up the "catch", but the hardware to do it is not included with the Lift System because it is part of the cabinet. Hardware suggestions include: buy 4 small corner brackets and screw to underside of main top, with edges exposed to catch the corners of the cut-out lid. The same thing can be accomplished with 1" x 1" "cleats", which are strips of hardwood, mounted underneath, with edges exposed to catch the lid.

Table of Contents

This guide will walk you through the installation of the M-25 Lift System. It will cover how to build, install, connect, and integrate your Lift System.

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- 3) **[Initializing the Lift System](#)**
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Building the Lift System

Actuation Assembly

For these steps, you will need the following parts:

- Lift Columns
- Base Mount
- Bayonet Bracket
- (4) 6 x 20 mm FHMS Screws
- Small Hex Key



Step 1: Attach the *Base Mount* to the *Lift Column* using (4) 6 x 20 mm FHMS screws.

Step 2: Slide the *Bayonet Bracket* into the *Welded Metal Sleeves* of the *Lift Column*.

Step 3: Tap the *Bayonet Bracket* into the *Welded Metal Sleeves* of the *Lift Column*, using a Rubber Mallet.



Connecting the Lift System

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M-25 Wiring Diagram with RF Controls

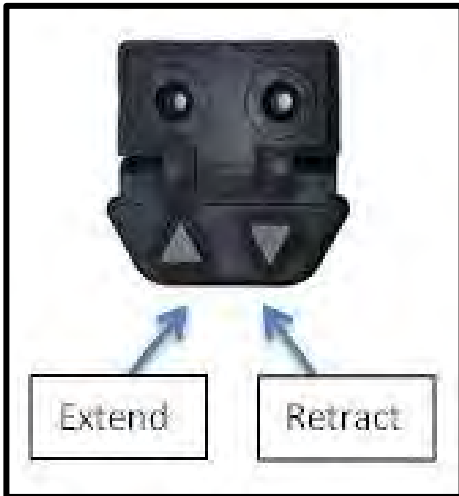
Note: Ports A1 & A2 are interchangeable.



Initializing the Lift System

Once the lift has been connected per the wiring diagram on the previous pages follow the steps below to Initialize the lift and run it to its resting height.

Important Note: You must follow the steps below as the collapsed height of the column will change after running the lift causing all measurements to be off by 2 to 6 mm.



Step 7: Press and hold the DOWN button on the *Wired Backup Switch* for a full 5 seconds.

Note: You should hear or see the lift jog up and down very slightly. If you do not hear or see any movement, release the down button and try this step again. It may take 2 or 3 tries.

Step 8: Hold the Lift Column in the upright position and press the UP button on the *Wired Backup Switch* to extend the lift column to its maximum travel.

Note: If you hear the Lift Column engage but do not see any movement, make sure the height limit insert is removed, repeat the step 7 and try again.

Step 9: While still holding the Lift Column, press the DOWN button to fully retract the lift.

You have successfully initialized the lift system.

Installing the Actuation Assembly

For these steps, you will need the following parts:

- Actuation Assembly
- Drill w/ Phillips Bit
- (8) #10 x $\frac{3}{4}$ " THWS Screws

Note: For the following steps disconnect the Motor Cable from the top of the Actuation Assembly. You will be instructed to connect it again later on.



Step 4: Position the *Actuation Assembly* inside your cabinet so that the top of it rests $\frac{1}{2}$ " below where the cabinet lid will rest, when the lift is in the retracted position.

Note: You may need to use a block or shelf to position the *Actuation Assembly* at the proper height.

Step 5: Attach the *Actuation Assembly* to the back wall of the cabinet using (4) #10 x $\frac{3}{4}$ " THWS Screws.

Step 6: Attach the *Actuation Assembly* to the cabinet using (4) #10 x $\frac{3}{4}$ " THWS Screws.

Note: If you used a block or shelf on Step 4, attach the *Actuation Assembly* to that instead.



Mounting the Lift Controls

For these steps, you will need the following parts:

- Wired Backup Switch
- RF Receiver
- Control Box
- (2) #10 x 1-3/4" FHWS Screws
- (2) #6 x 3/4" FHWS Screws (For RF Controls)



Note: Reconnect the Motor Cable to the top of the Actuation Assembly.

Step 7: Mount the *Control Box* to a nearby accessible location using (2) #10 x 1-3/4" FHWS Screws.



Step 8: Mount the *Wired Backup Switch* to a nearby accessible location using (2) #8 x 3/4" FHWS Screws.

Note: These will be the backup push buttons should the remote be lost or fail.

Step 9: Mount the *RF Receiver* in a nearby accessible location using (2) #6 x $\frac{3}{4}$ " FHWS Screws.



Mounting the Display to the Lift

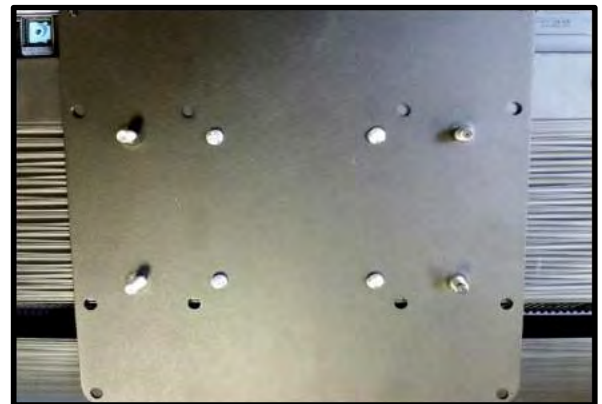
For these steps, you will need the following parts:

- Actuation Assembly
- Monitor Hanger
- Adapter Plate
- Top Plate
- Assorted Mounting Hardware
- (4) ¼" Flat Washers
- (4) 6mm Hex Nyloc Nuts
- (4) 6 x 12mm FHMS Screws
- (2) Plastic Wire Clips

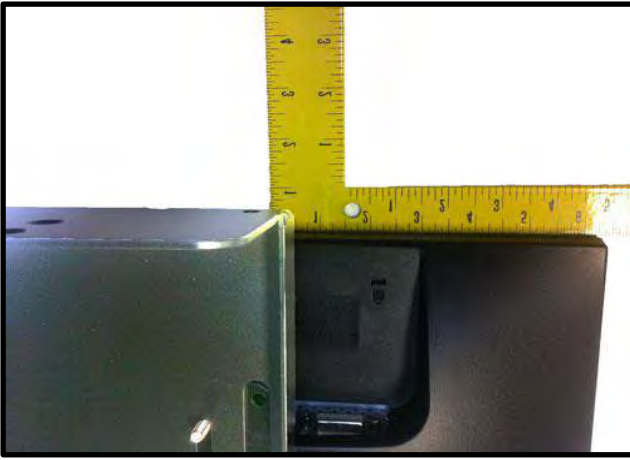


Step 10: Place the Display on a flat surface with the screen facing down and place the *Adapter Plate* on the back of the Display with the 4 threaded studs facing towards you.

Step 11: Align the *Adapter Plate* with the VESA Pattern/Mounting Holes on the back of the Display and fasten it using the appropriate sized bolts located in the *Assorted Mounting Hardware Pack*.



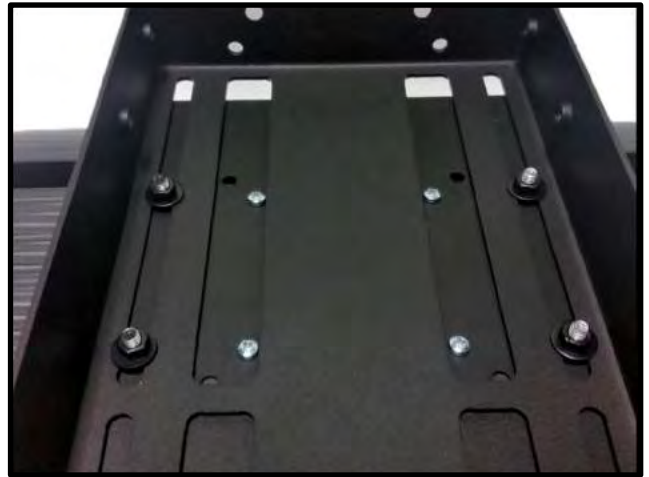
Step 12: Place the *Monitor Hanger* on top of the *Adapter Plate*, ensuring the 4 Threaded Studs on the *Adapter Plate* line up with the smaller slots on the *Monitor Hanger*.



Step 13: Position the *Monitor Hanger* on the *Adapter Plate*, so that the top edge of the *Monitor Hanger* sits $\frac{1}{4}$ " to $\frac{1}{2}$ " higher than the top of the Display.

Note: This step will determine the gap between the lid and the Display, the smaller the gap the better it will look.

Step 14: Fasten the *Monitor Hanger* to the *Adapter Plate* by placing (4) $\frac{1}{4}$ " Flat Washers and (4) 6mm Nyloc Nuts on the threaded studs of the *Adapter Plate*.



Step 15: Press the UP button on the Wired Backup Switch to Extend the lift then seat the Pigtail in the Square Cut-Out at the top of the *Actuation Assembly*. Ensure the pigtail is seated on the side the Display will be on.

Step 16: Align the *Monitor Hanger* with the 4 threaded holes on the top of the *Actuation Assembly*.

Note: You will need to move the Motor Cable and pigtail out of the way in order to get the holes to line up. To do this gently pull the Motor Cable to the side the Control Box is mounted to.



Step 17: Align the 4 holes in the center of the Top Plate with the 4 countersunk holes on the Monitor Hanger.



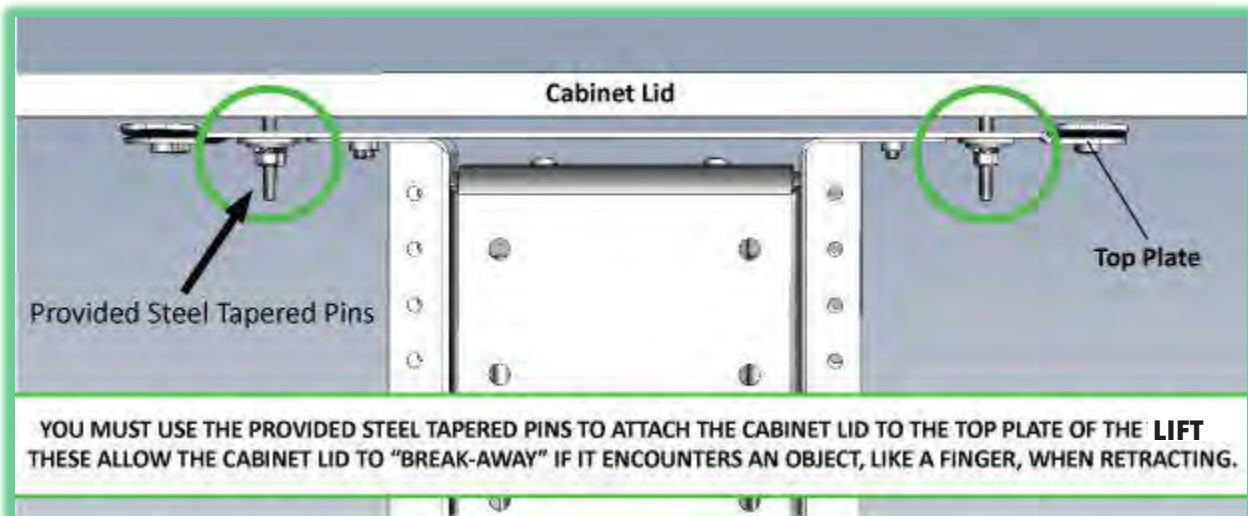
Step 18: Fasten the Top Plate and Monitor Hanger to the Actuation Assembly using (4) 6 x 12mm FHMS Screws.

Step 19: Place (2) Plastic Wire Clips on the interior of the Monitor Hanger at the top and bottom as shown in the photo, then secure the Motor Cable in the clips. (Monitor Hanger removed for reference)

Note: Make sure to place the Wire Clips on the side of that is closest to the Control Box as that is where the Motor Cable will run to.



Installing the Floating Lid



What Are the Tapered Pins, and Why Use Them?

The two 1½" x ¼" Steel Threaded Tapered Pins are used IN PLACE OF SCREWS to hold your cabinet top (lid) in place on the Lift System Top Plate (Part #8). The Tapered Pins will keep your lid firmly in place, but will also allow it to **separate from the lift system** if anything (like a finger) gets in the way when the Display lowers. See Safety Notice above. Please do NOT use screws with your cabinet lid.

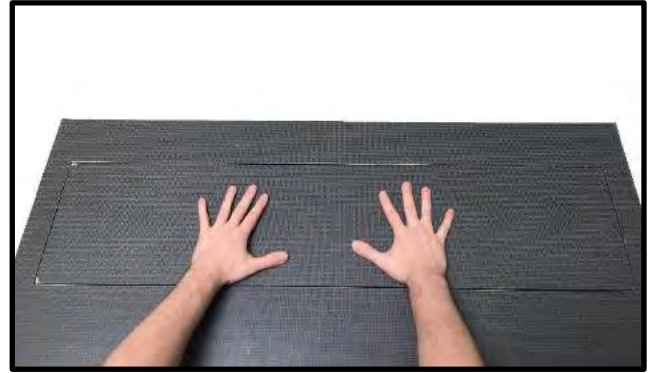
Before You Install the Tapered Pins, Here is a Reminder of the Two Types of Floating Lids (Floating Tops):

Floating Lid (Floating Top) – The whole top of the cabinet sits on top of the Lift System and raises/lowers with the Display.

Cut-Out Floating Lid (Top) – This option assumes that you have "cut out" part of your cabinet top, customizing it to the size of your Display. That cut-out lid then sits on the Top Plate of the Lift System, held in place by the Taper Pins, and raises/lowers with the Display. You must set up a "catch" for the Cut-Out Lid so that when the Display lowers, the Lid stops level with the rest of your cabinet top (like a manhole cover), and the Lift System continues down a little further into the cabinet (no more than ¼" to ½"). In this way, when the Lift System is fully retracted, the Cut-Out Lid will always be level, and the Top Plate of the Lift System will always be positioned just below the Lid. Since the Lid and the Top Plate are slightly separated from one another, but still very close, the Taper Pins (which are 1½" long) will still be hanging down through the holes in the Top Plate so when the Lift System moves, everything is properly aligned and the Lid rides smoothly up and down.

Step 20: Fully retract the lift, place the Cabinet Lid onto the Top Plate, and center it within the cabinet opening.

Note: It is fine if the Lid is resting lower than the Counter or Cabinet Top for now as you will be creating a lid catch in the next section of this manual.



Step 21: Run the Lift up using the RF Controls and then back down. Making sure that when the lift comes down, the Cabinet Lid drops into a centered position within the cabinet opening.

Note: You may temporarily tape your lid in place to prevent any shifting if needed.



Step 22: Run the lift all the way up again, making sure the lid does not move out of place and locate "nesting holes" for the *Top Plate*. Using a pencil or felt tipped pen, mark the position of each of the holes on the underside of the cabinet lid.

Note: Make sure nesting nuts are hand tight and centered before you mark your lid.

Step 23: Remove Cabinet Lid and drill two holes in the marked positions using a 7/32" drill bit, 1/2" deep, in the underside of the Cabinet Lid.

General Tip: You can wrap tape around the bit, 1/2" deep to ensure you don't go too far into the lid.

Granite Tip: If you have a granite, marble or quartz lid, you can put a wood sub decking below the granite and drill into that or bore a hole slightly larger than the Tapered Pin into the granite directly and epoxy the pin in.





Step 24: Using a Phillips head screw driver (not provided) screw each Tapered Pin into the holes drilled in step 16.

Step 25: Align the Tapered Pins with the holes you marked in Step 41 on the Top Plate and put the Lid on. Tighten the nuts on the underside of the hole where the Tapered Pins pass through the Top Plate.

Note: If you have any misalignment the nesting hole nuts from step 22 allow the floating lid to be adjusted up to 1/4" in every direction.



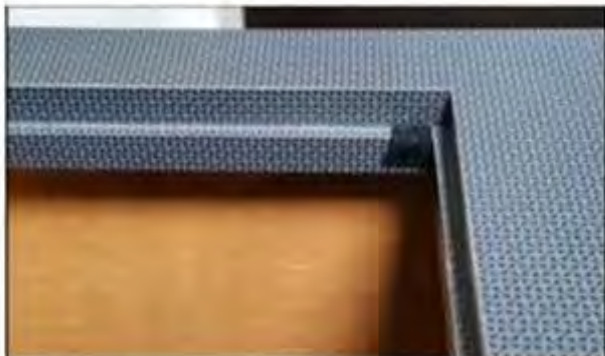
Installing a Lid Catch for the Lift System

There are multiple ways to properly create a "catch" for the lid to rest on, when the lift is in the fully retracted position.

Down below are a few examples. Using the provided Lid Catch Brackets with (8) #10 x $\frac{3}{4}$ " THWS attach the brackets to each corner of the lid opening. This will provide a support point for the lid to rest on while the lift is in the fully retracted position, assuring the lid is flush with the rest of the cabinetry every time.

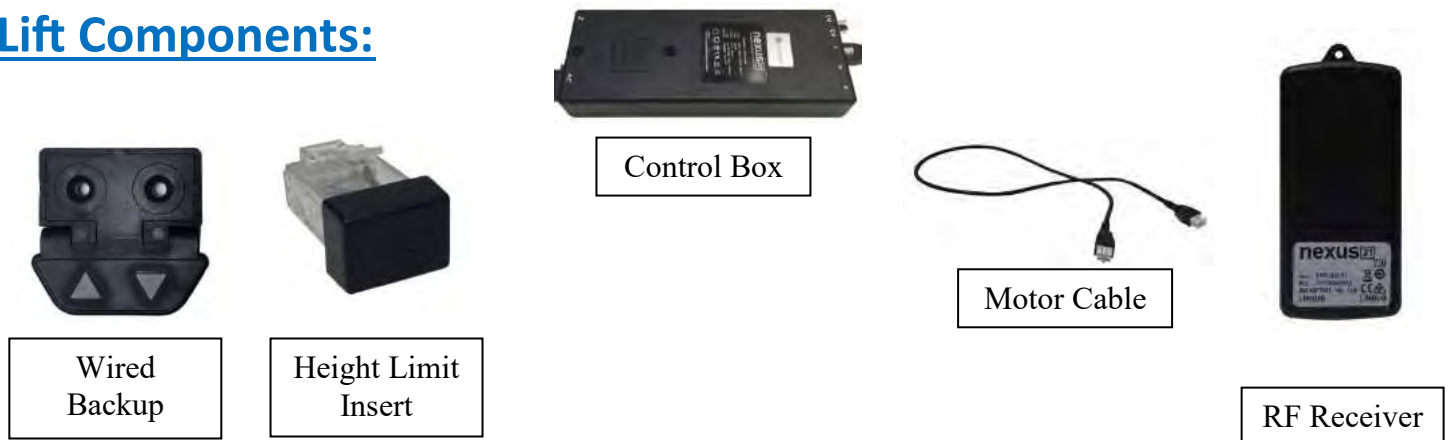


Here are a few other examples on how to create a "catch" or "lip" for the cabinet lid to rest upon.



Reference Guide

Lift Components:



Setting your Height Limit

Setting the Height Limit:

1. Simply extend the lift to your desired height using the *Wired Backup Switch* and tap the down button to stop the lift at that height.
2. Then put the *Height Limit Insert* into the open port on the *RF Receiver*.
3. Your remote will now obey the height limit you have set.

Common Procedures:

Reinitialize:

1. Fully retract the lift;
2. Once the lift is fully retracted, press and hold the down button on either the *Wired Backup Switch* for about 5-10 seconds. You should see a slight movement from the lift system.
 - a. **Note:** If you do not see the movement on the first attempt, release the down button and try these steps again. It may take 2 or 3 tries.

Resetting the Lift from Safe Mode (Safe Mode occurs when power is lost while the lift is extended):

1. The lift will only retract and it moves at half the speed.
2. Press and hold the down button until the lift fully retracts.
3. Then follow the steps to Reinitialize the lift.

Pairing your RF Remote:

1. Locate the pinhole on the side of the *RF Receiver*.
2. Using a paper clip, press and hold the button inside the pin hole and the down button on the *RF Remote* at the same time. Keep them both held for 5 seconds.
 - a. **Note:** The paper clip should only go a short distance into the *RF Receiver* to press the button. If your paper clip goes all the way in, reposition it and try again.
3. Release both buttons and try using your *RF Remote* again.
4. If the remote does not respond, please contact our Technical Support at 480-275-8613 or email us at support@nexus21.com for further troubleshooting.

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