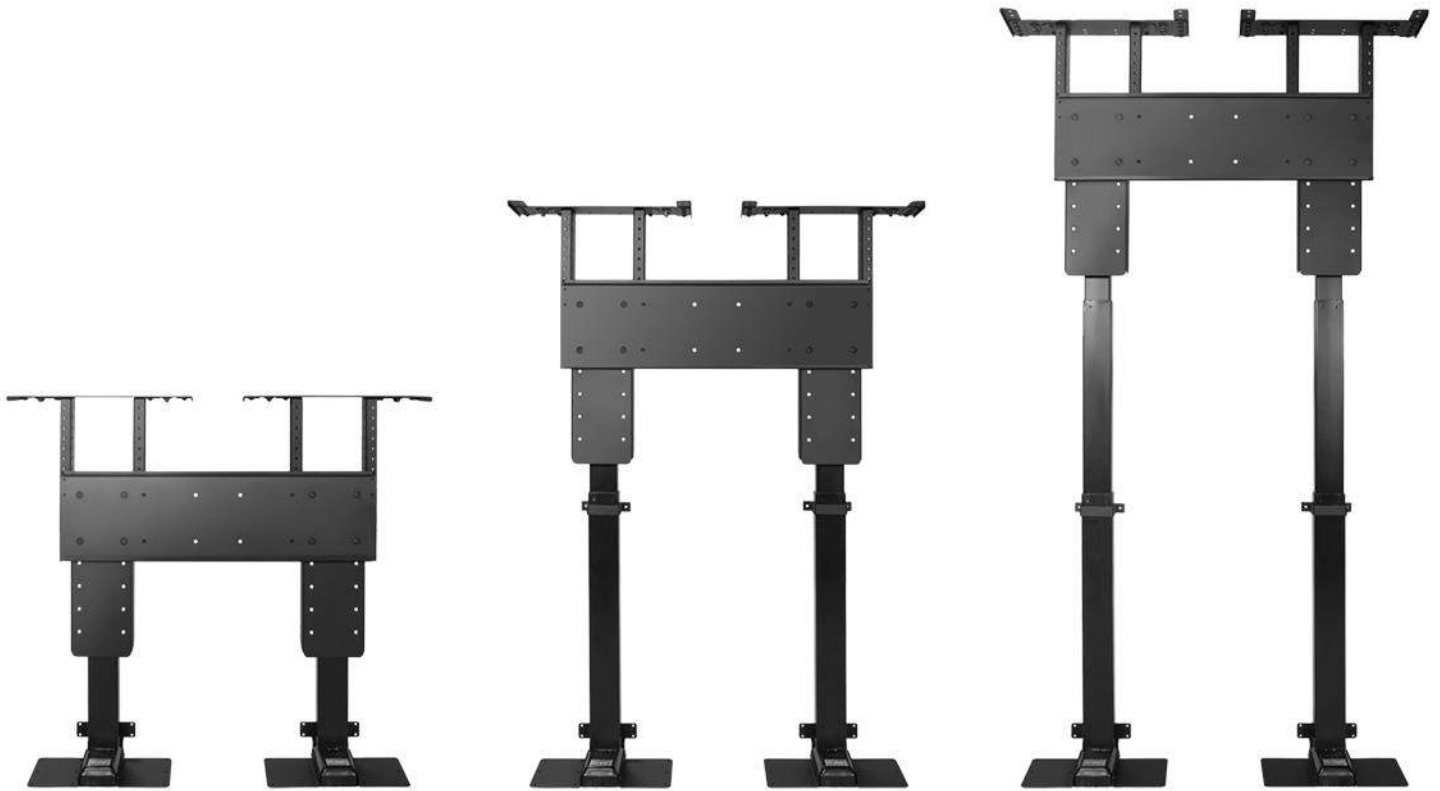


# nexus<sup>21</sup>

CONCEALMENT SYSTEMS

**TV Lift System Model DL-45  
Installation Instructions**



Below is a parts list describing all of the items included with the Model DL-45 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 (2)**  
(28 3/4" x 7" x 3 3/4")



**Column Clamp Base (2)**  
(5 1/8" x 7")



**Base Plate (4)**  
(6 1/4" x 2")



**Screen Support**  
(6.4" x 15.7")



**Column Clamp Extension (2)**  
(3" x 3 1/2")



**Lower Column Support (2)**  
(10" x 4" x 2 1/2")



**Top Plate (2)**  
(18" x 4 1/2" - 6 1/2")



**Screen Back Plate**  
(32" x 9")



**Vertical Mounting Bars (2)**  
(20" x 1")



**Top Support Bracket (2)**  
(14" x 2 3/4")



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



**Assorted Mounting Hardware**

### Cables

- **Motor Cables (2)** – Black cable with white, six-pin plugs. Use these cables to connect the Lift Columns to the Control Box (using slots #1 and #2 on the Control Box). There are 2 Cables total which are both 2m in length.
- **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.

### Hardware


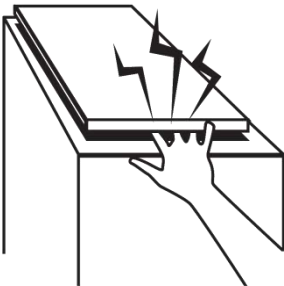
14. Eight (8) – 6mm x 12mm Flat Head Machine Screw
15. Eight (8) -- 6mm x 16mm Flat Head Machine Screw
16. Twenty-Eight (28) -- 6mm x 12mm Button Head Machine Screw
17. Eight (16) -- 3/8 - 16 x 3/4" Button Head Machine Screw (8 leftover)
18. Two (2) -- Screen Locks (In bag labeled PDM-0108)
19. Four (4) -- 1 1/2" x 1/4" Steel Threaded Taper Pins (For Floating Top)
20. Two (2) -- #10 x 1 3/4" Flat Head Wood Screw (For Backup Switch)
21. Forty-Four (44) -- #10 x 3/4" Truss Head Wood Screw (8 Leftover)
22. Two (2) -- #8 x 3/4" Flat Head Wood Screw (For IR controls only)
23. RF Controls or IR Controls (see explanation on page 5)
24. Two (2) -- Allen Wrenches – 4mm and 7/32"
25. Four (4) -- Square Multi Mount Washers
26. Four (4) – Lid Catch Brackets w/ (8) #10 x 3/4" THWS



## SAFETY INFORMATION



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

<p style="text-align: center;"><b>TV HAZARD</b></p> 	<p style="text-align: center;"><b>LID HAZARD</b></p> 
<p><b>CAUTION:</b> Avoid contact with the TV and Lift System during operation. Use with caution.</p>	<p><b>CAUTION:</b> 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. More info on page 25 &amp; 26.</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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*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.*

## 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 3<sup>rd</sup> 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 3<sup>rd</sup> party emitter (or flasher). Instructions for setting the TV Lift’s travel limit are on Page 22.

**NOTE:** If you are NOT planning on using a 3<sup>rd</sup> 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 22.

**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 23”.**

## 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 ¼” 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)!**

**TIP:** Inverted (drop-down) lift systems are available from Nexus 21. Contact Customer Service at (866) 500-5438.

### **Space requirements for the DL-45 Lift System are as follows:**

- Depth= TV Depth + 5.9” or a minimum of 10”, whichever is greater.  
Height = TV Height + 2”, or a minimum of 29.4”, whichever is greater.  
Width= TV Width + 2” or 42.25”, whichever is greater.



**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 TV will be just underneath the lid of the cabinet. A 1/8” gap between the lid and the Top Plate is ideal.

### **Lift System height and mounting position:**

The Top Support Brackets allow you to adjust the installation height of the Lift in ½” increments if necessary. When fully assembled in the standard configuration, the HEIGHT of the Lift will be a minimum of 29.4” up to a maximum of 37.4” with the Top Support Brackets in the highest position. See installation dimensions diagram on following page.

## 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 Taper 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 TV lowers.

**Which Lid Style Will You Use? (There are 2 Different Styles)- Hinged Lid is Compatible (Ask your Account Manager for Details)**

**Floating Lid (Floating Top)** – The whole top of the cabinet sits on top of the Lift System and raises/lowers with the TV. This is the standard Installation method, using the Top Plate 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 TV. That cut-out lid then sits on top of the Lift System and raises/lowers with the TV. This method uses the Top Plate and Threaded Taper Pins, but you must set up a “catch” for the cut-out lid so that when the TV lowers, the lid stops level with the rest of your cabinet top (like a manhole cover).

**Hinged-Lid (Hinged-Top)** – The top is hinged at the back of the cabinet, behind the TV. It is pushed open by the motion of the Lift System when the lift travels up, and closes by gravity when the lift travels down. This type of installation does NOT use the Top Plate or the Tapered Guide Pins, but **requires use of the optional Nexus 21 “Hinged-Top Guides” (purchased separately).**

# Table of Contents

The entire Lift System consists of two major systems, the Actuation System and the TV Support System.  
This instruction manual will cover how to build, install and connect the Lift.

## Installation & Assembly

(Page 7-8) **Assembling the Actuation System**

(Page 9-10) **Attaching the TV Support System**

(Page 11-15) **Installing the Lift System**

(Page 16-17) **Mounting the TV**

(Page 18-19) **Installing the Floating Lid**

(Page 20) **Creating a Lid Catch**

## Diagrams & Reference Material

(Page 21) **Dimensional Diagram**

(Page 22) **Reference Guide**

(Page 23) **Contact Closure Diagram**

# Assembling the Actuation System



For these steps you will need the following parts:

- (2) Lower Lift Columns
- (4) Base Plates
- (2) Lower Column Supports
- (2) Column Clamp Extensions
- (2) Column Clamp Bases
- (16) 6 x 12 mm BHMS Screw (8 per Lift Column)
- Small Hex Key

**Step 1:** Attach (2) Base Plates to each of the Lift Columns using (4) 6 x 12 mm BHMS Screws.



**Step 2:** Attach (1) Lower Column Support to each of the Lift Columns using (2) 6 x 12 BHMS Screws.





**Step 3:** Slide (1) *Column Clamp Extension* around the top of each *Lift Column* and position it to sit right above the Nexus 21 sticker.



**Step 4:** Place (1) *Column Clamp Base* inside the *Column Clamp Extension* for each *Lift Column* and fasten each pair together using (2) 6 x 12mm *BHMS Screws*.



You have successfully assembled the Actuation System.

# Attaching the TV Support System



## For these steps you will need the following parts:

- Actuation System
- (2) Screen Supports (1 Per Lift Column)
- (4) Top Support Brackets (2 Per Lift Column)
- (2) Top Plates (1 Per Lift Column)
- Screen Back Plate
- (8) 6 x 16mm FHMS Screws (4 Per Lift Column)
- (16) 6 x 12 mm BHMS Screws (8 Per Lift Column)
- (8) 6 x 12mm FHMS Screws (4 Per Lift Column)
- (8) 3/8 x 16 3/4" BHMS Screws
- Small Hex Key



**Step 5:** Attach (1) *Screen Support* to the top of each *Lift column* using (4) 6 x 16mm FHMS



**Step 6:** Attach (2) *Top Support Brackets* to the sides of each *Screen Support* using (8) 6 x 12mm BHMS.

**Note:** You must use all (8) 6 x 12mm BHMS screws on both sets of *Top Support Brackets*.

**Step 7:** Attach (1) *Top Plate* to the top of each set of *Top Support Brackets* using (4) 6 x 12mm FHMS.



**Step 8:** Connect both *Screen Supports* together by attaching the *Screen Back Plate*, using (8) 3/8 x 16 3/4" BHMS.



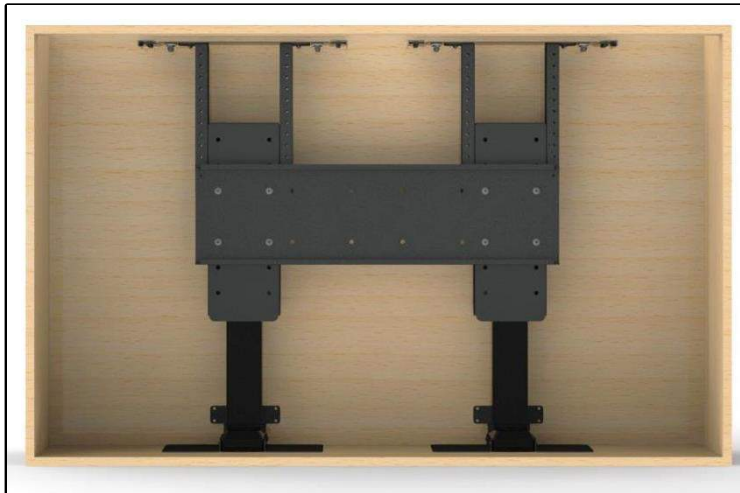
You have successfully attached the TV Support System.

# Installing the Lift System

For these steps you will need the following parts:

- The Lift System
- (36) #10 x 3/4" THWS Screws (18 Per Lift Column)
- (2) 2m Motor Cables (1 Per Lift Column)
- Wired Backup Switch
- Control Box
- IR or RF Controls
- Power Cord
- Drill w/ Philips Bit (Not Included)

**Step 9:** Place the Lift System inside your cabinet and center it within the enclosure.



**Step 10:** Fasten the Lower Support Brackets for the Lift System to the back of your enclosure using (4) #10 x 3/4" THWS Screws per Lift Column.





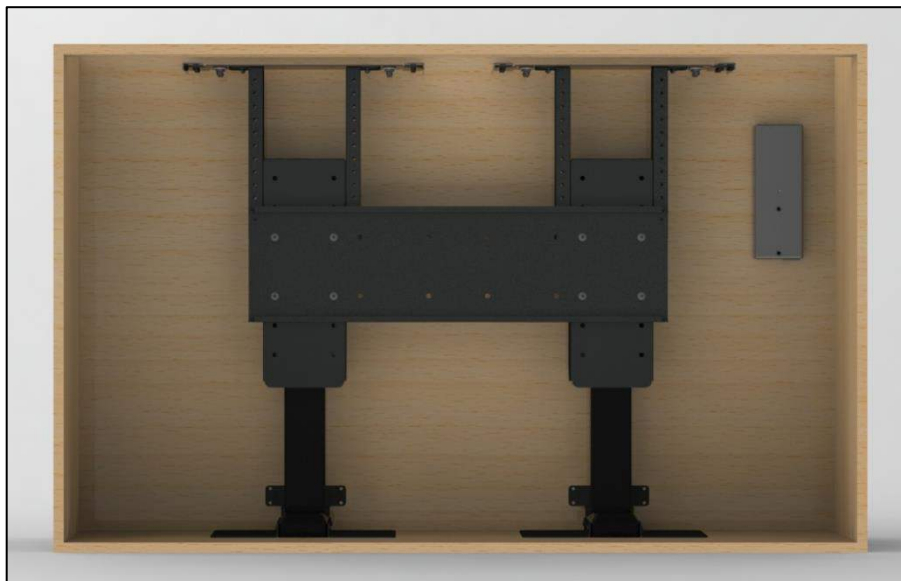
**Step 11:** Fasten the Column Clamp to the back of your enclosure using (2) #10 x  $\frac{3}{4}$ " THWS Screws per Lift Column.

**Step 12:** Fasten the Base Mount's for the Lift System to the bottom of your enclosure using (12) #10 x  $\frac{3}{4}$ " THWS Screws per Lift Column.



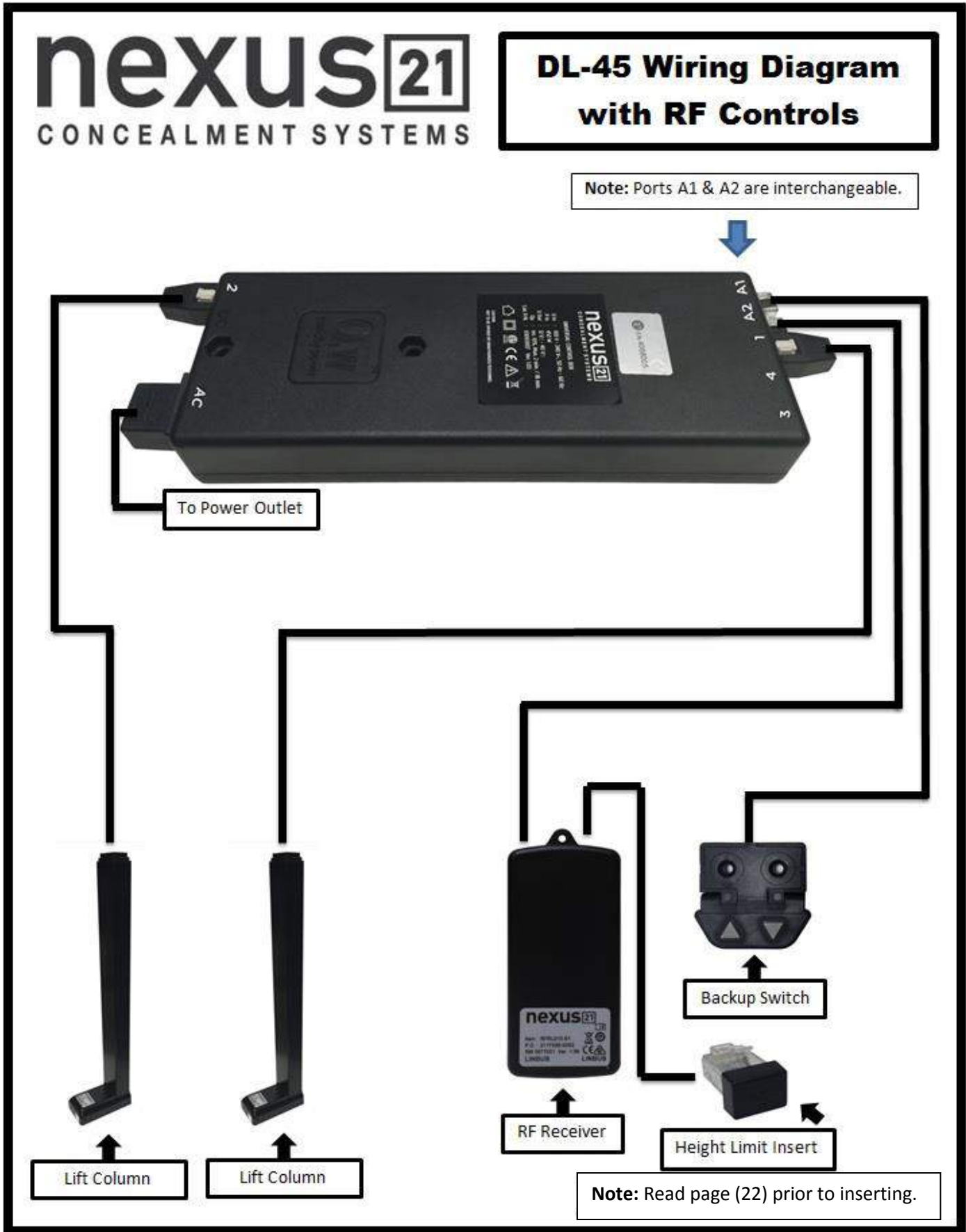
**Step 13:** Mount your Control Box to the inside of the enclosure using (2) #10 x 1  $\frac{3}{4}$ " FHWS Screws.

**Note:** We recommend mounting your Control Box near a point of access in case service is needed.





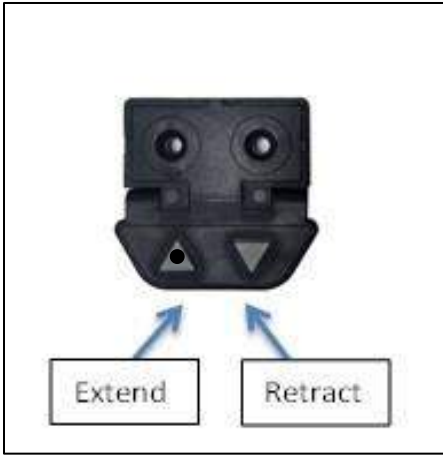
**Step 14:** Follow the Wiring Diagram for your designated Control Type (RF or IR), on the following pages, to connect your controls to the Control Box. Ensure the columns are connected to ports 1 & 2 on the Control Box using (2) 2.5m Motor Cables.



## DL-45 Wiring Diagram with IR Controls

Note: Ports A1 & A2 are interchangeable.





**Step 15:** 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.

**Step 16:** Fully extend the lift system to gain access to the Column Clamps.

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

**Step 17:** Fasten the Column Clamp of each Lift Column to the back of your enclosure using (2) #10 x  $\frac{3}{4}$ " THWS Screws.

You have successfully installed the Lift System.



# Mounting the TV

**Step 18:** Attach the Vertical Mounting Bars to the TV using the screws found in the bag labeled "TV Mounting Screws/Spacers." The length and size of the screw required will depend on whether the TV has a flat/unobstructed or irregular/obstructed back.



**A**

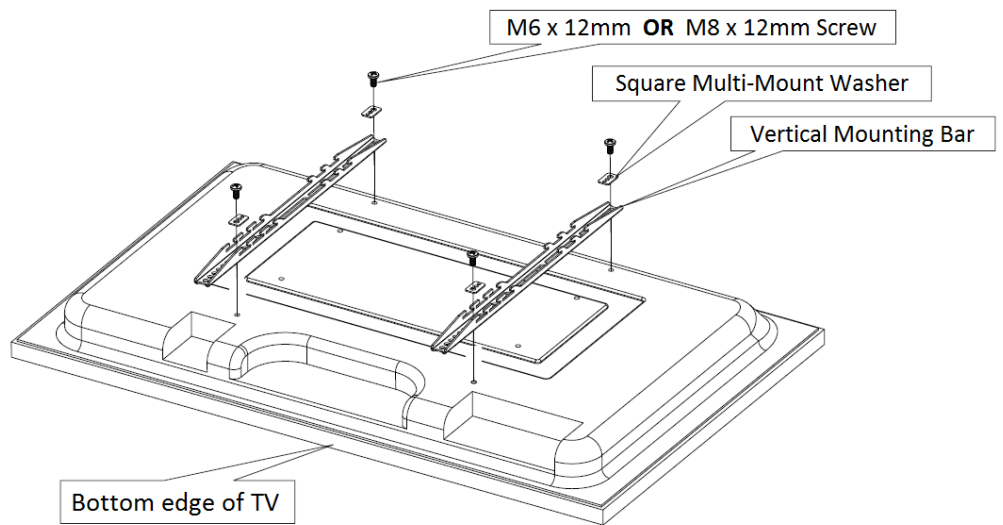
Flat/Unobstructed Back

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.

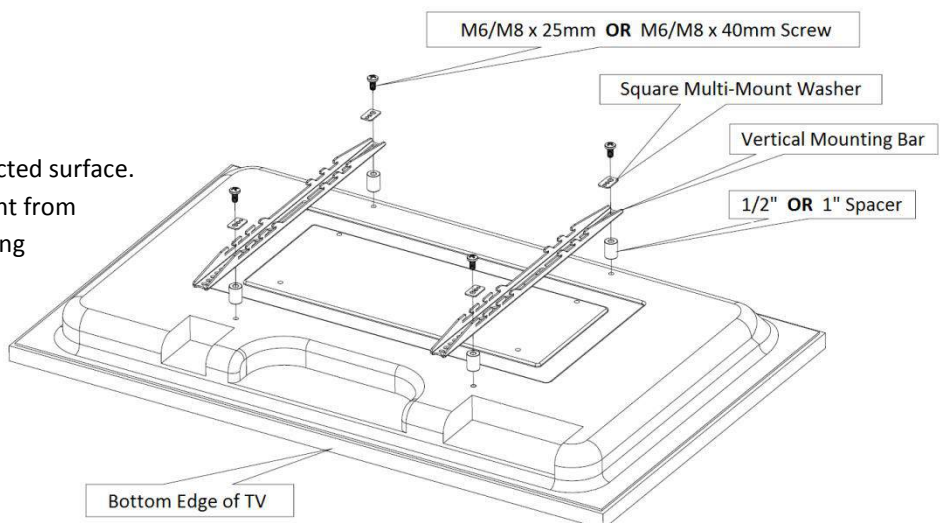
- 3) Using the four (4) spacers needed, (4) Square Multi-Mount washers and the TV mounting screws selected from the bag, attach and tighten the hardware.

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.**



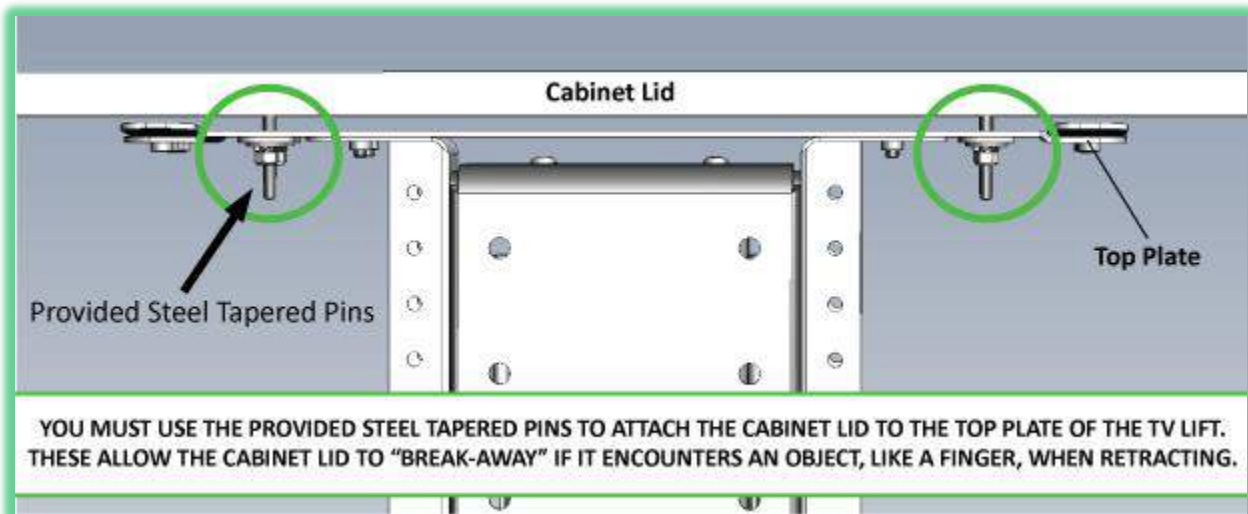
**Step 19:** Mount the TV to the front of the lift system by hanging the TV on the *Screen Back Plate*.



**Step 20:** Insert both *Screen Locks* into both *Vertical Mounting Bars*. Using (2) *Screen Locks*, place one *Screen Lock* on the bottom set of hooks for each *Vertical Mount Bar*. Using a Philips Head Screwdriver (not provided), tighten the *Screen Locks* against the bottom of the *Screen Back Plate*. This will ensure the TV does not slide left to right and eliminate the TV from being lifted off of the mount.



## Installing the Tapered Pins in 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 TV 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 TV.

**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 TV. 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 TV. You must set up a "catch" for the Cut-Out Lid so that when the TV 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.

# Installing the Floating Lid

**Step 21:** Fully retract the lift and place the Cabinet Lid onto the Top Plates so that it is centered in the cabinet opening.

**Step 22:** Run the Lift up using the IR or RF Controls and then back down. Make 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 23:** Run the lift all the way up, making sure the lid does not move out of place and locate “nesting holes” for each top plate. See photo to right for reference. 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 the nuts on the bottom side of the Top Plates are hand tight and centered before you mark your lid. You may use the 2 outer holes or all 4 holes.



**Step 24:** 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.

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

**Tip:** If you have a granite, marble or quartz lid, you can put a wood sub decking below and then drill into that.



**Step 25:** Using a Phillips head screw driver (not provided) screw each Tapered Pin into the holes drilled in step 16.

**Step 26:** 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.



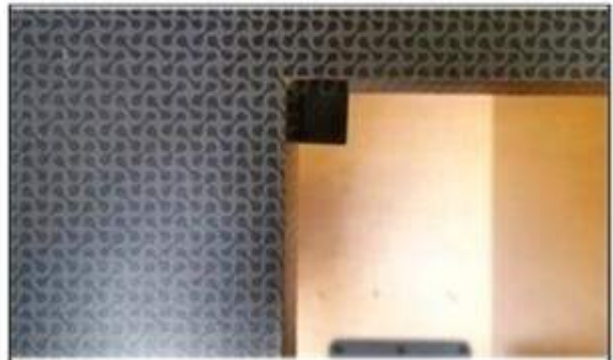
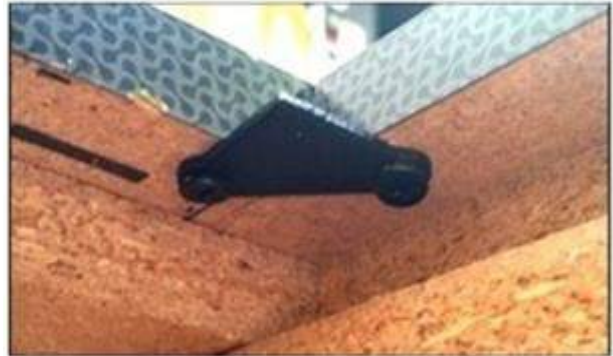
**NOTE:** The nests on the floating lid allow for up to 1/4" of tapered pin misalignment. Before you tighten down the nests, make sure your lid aligns perfectly with the cabinet opening and floats freely for safety.



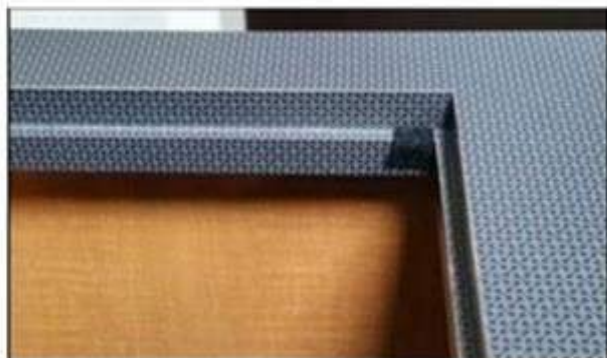
## How to Properly Install a Lid “Catch” with a Nexus 21 Lift System

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

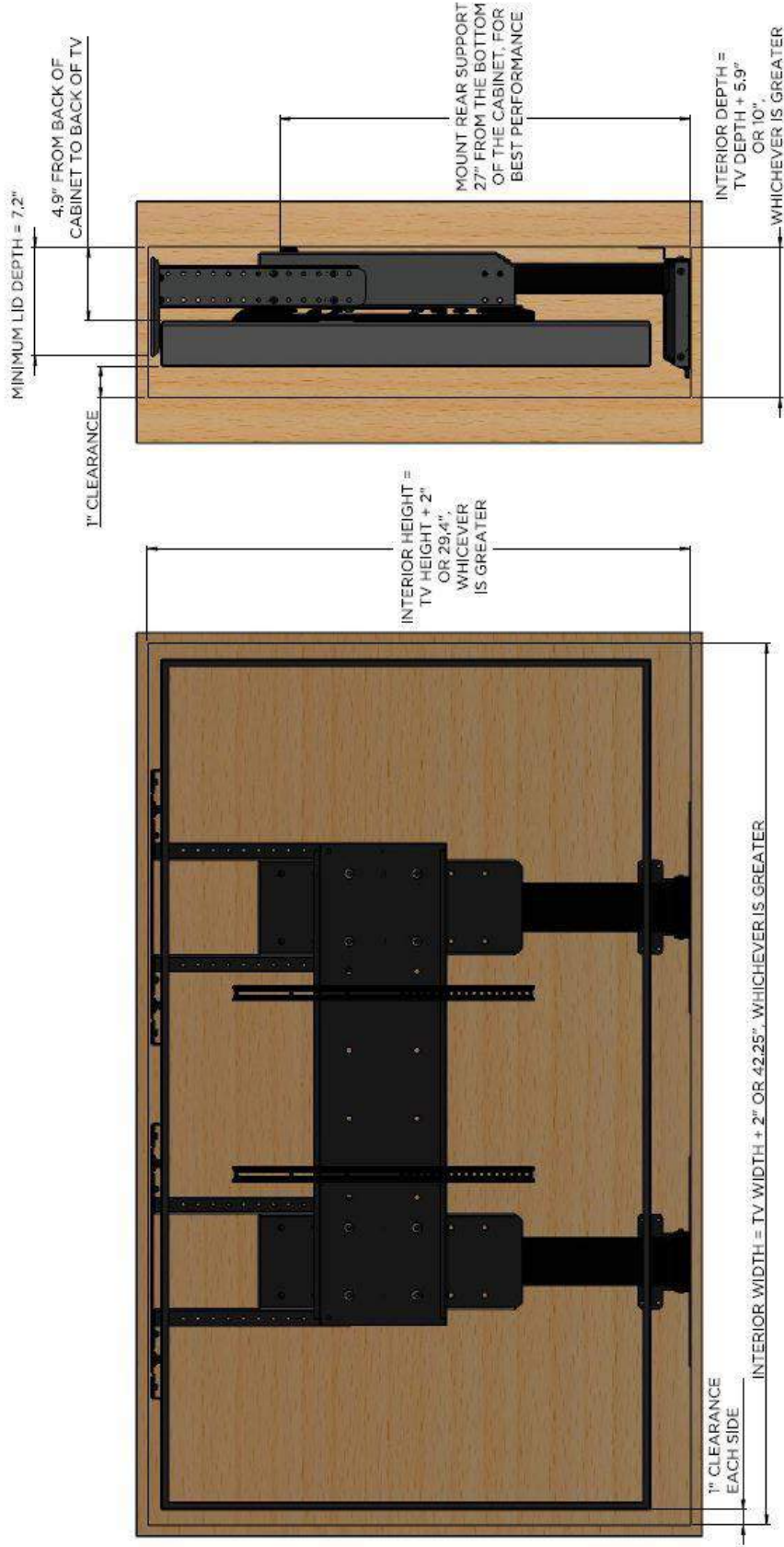
Down below are a few examples. Using the provided Lid Catch Brackets with (8) #10 x ¾” THWS attach the brackets to each corner of the lid opening. This will provide a support point for the lid to rest on while the lift is in the fully retracted position, assuring the lid is flush with the rest of the cabinetry every time.



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



# MODEL DL-45 DIAGRAM



- NOTES:
1. THE CABINET BOX SHOWN IN THE DIAGRAM IS FOR REFERENCE ONLY AND IS NOT PROVIDED WITH THE LIFT SYSTEM
  2. FOR THIS LIFT MODEL, THE LENGTH OF ITS TRAVEL [EXTENSION LENGTH OR STROKE] IS 38"
  3. FOR THIS LIFT MODEL, THE TOTAL WEIGHT CAPACITY IS 220 LBS
  4. HEIGHT OF THIS MODEL IS ADJUSTABLE IN 1/2" INCREMENTS UP TO 8" [MINIMUM HEIGHT = 29.4"; MAXIMUM HEIGHT = 37.4"]
  5. REAR SUPPORT CAN BE LOCATED AT ANY HEIGHT ALONG THE BACK OF CABINET, BUT THE HIGHER IT IS, THE MORE SUPPORT IT PROVIDES
  6. LID IS DESIGNED TO FLOAT WITH PROVIDED TAPERED PINS - LID MUST BE REMOVEABLE FOR SAFETY
  7. WHEN DETERMINING TV HEIGHT, ALWAYS USE MANUFACTURER SUPPLIED "TV WITHOUT STAND" HEIGHT
  8. LIFT MECHANISM IS POWDERCOATED BLACK STEEL. COLORS IN DIAGRAM ARE FOR CLARITY ONLY.

**nexus21**  
CONCEALMENT SYSTEMS

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UPDATED 03/08/16

## Reference Guide

### Lift Components:



Wired Backup  
Switch



Height Limit  
Insert



Control Box



IR Receiver



Motor Cable



RF Receiver

## Setting your Height Limit

### **Setting the Height Limit for IR and RF:**

1. Simply extend the lift to your desired height using *IR Receiver* or *Wired Backup Switch* and tap the down button to stop the lift at that height.
2. Then put the *Height Limit Insert* into either port A1 or A2 on the *Control Box*.
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* or *IR Receiver* 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](mailto:support@nexus21.com) for further troubleshooting.



# Connecting the Lift to your Home Control System

## 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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