HIDDEN VISION
WWW.HVTVMOUNTS.COM

**v. 832**

# **BUILT-IN** FLIP-AROUND TV Mount

# MODELS: **M3BI-65-832 & M3BI-75-832**

# INSTALLATION INSTRUCTIONS

(Orders shipped after 7-1-2020)

## Table of contents



**** Refer to the CONSTRUCTION DRAWINGS FOR BUILT-IN APPLICATION document**

**Before starting you may want to check out these helpful references.**

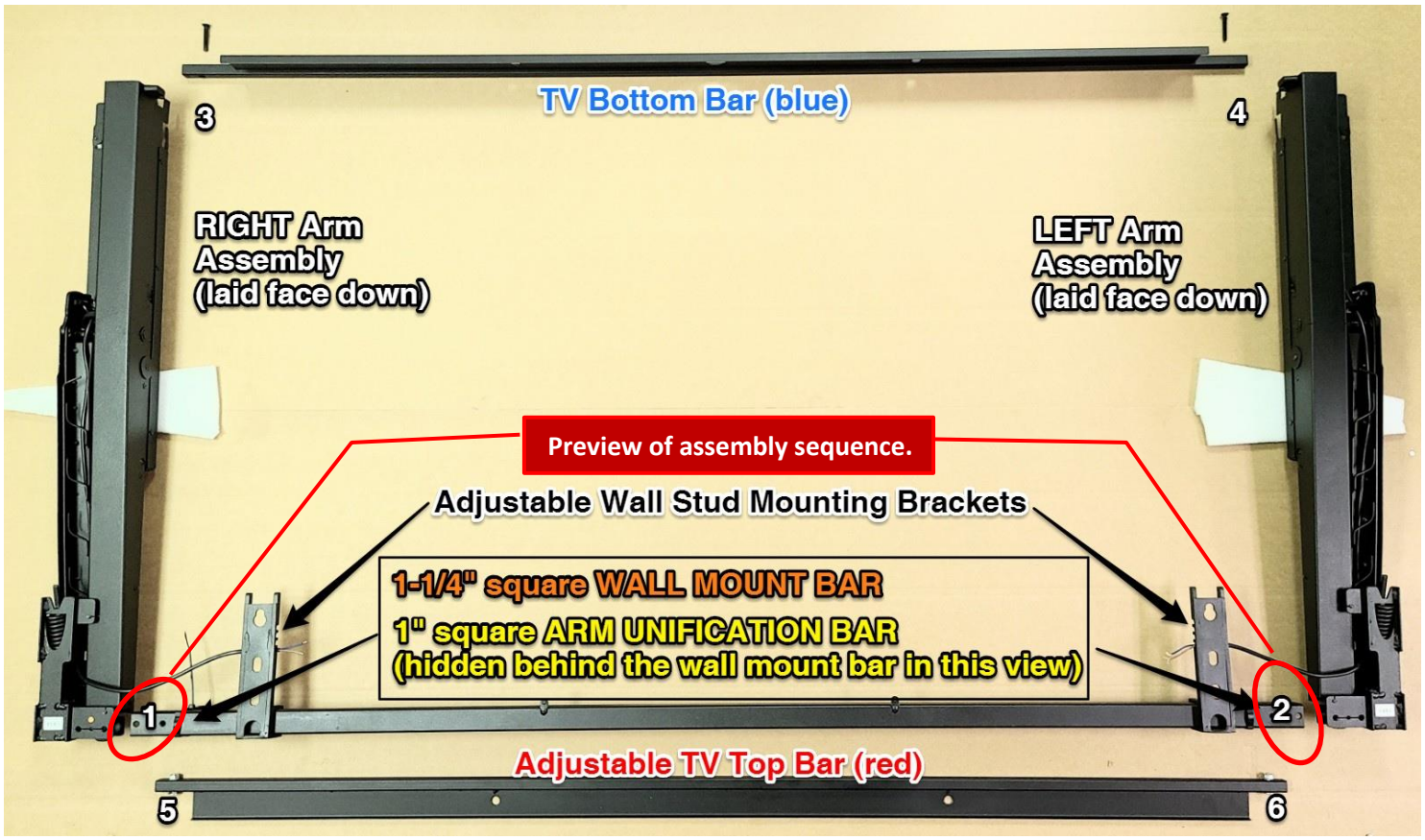
- **INSTALLATION OVERVIEW VIDEO**: The model shown in this video is a very similar model but NOT IDENTICAL. Please refer the instructions below for specific details relating to your model. https://youtu.be/GM1LVz5AKGg

**List of helpful 3rd party products**: Check out "Accessories" on our website for helpful products you may need. Also, for additional products that we do not sell, see the following document (http://bit.ly/m3helpfulproducts *(Note: you do NOT need to download DROPBOX. Look for the "direct download" option, normally found in the upper right corner of you screen)*

# STEP 2: Assembly

**Any questions? Please contact us! We'd love to help. Call the office 208-287-8882 or Mark's mobile 208-919-5969.**

**WARNING:**
- **SPRING LOADED**: Each arm assembly has powerful internal springs designed to counter the weight of a TV and Picture Frame.
- **NEVER operate the mount if it is not fastened to the wall**.



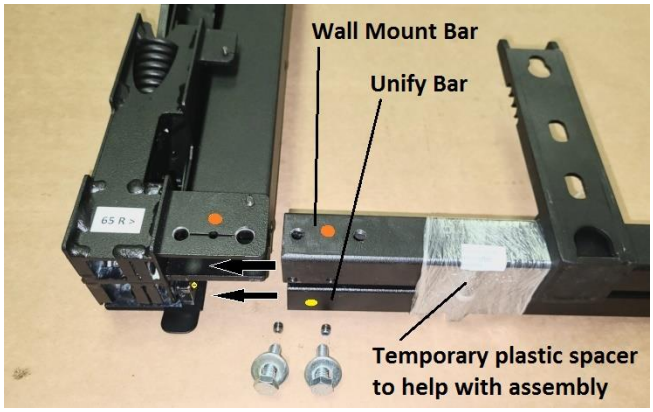

# Assembly SEQUENCE is IMPORTANT!

## Please follow the assembly sequence described below.

Note: We test fit all parts. If something doesn't seem to fit, DO NOT ENLARGE ANY HOLES. Call for assistance.

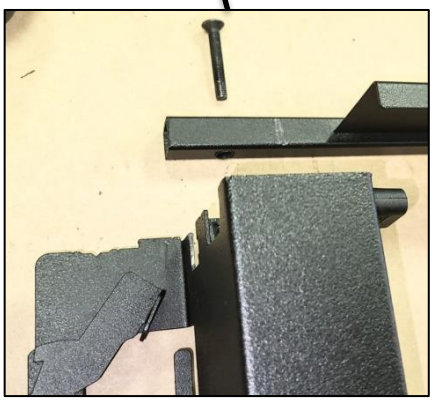
1. You will find the **Cover Plate** screwed to the **Wall Mount Bar (orange)**. Remove the Cover Plate and set it somewhere safe for future use. Note: you do not need to completely remove the screws holding the cover plate to remove it. Loosening the screws will allow the cover plate to be removed)
2. Leave the **Wall Mount Bar** (orange), and the **Wall Mounting Brackets** together. Also, we've wrapped the Arm Unification Bar and Wall Mount Bar together in a way that should help with assembly. The plastic wrap and/or zip ties holding these two bars together should be removed after assembly.
3. Layout the parts as shown in the illustration above. The view is from the wall side so the right arm is on the left and vice versa.
4. *The **Arm Unification Bar** and **Wall Mount Bar** are designed to be a tight fit and can be tricky to slide together. If you lay the arms on small pieces of the ½" thick packaging foam (like shown above) it will allow you to more easily manipulate the angle of the arm to find the sweet spot allowing you to seat the connections.*
5. Slide the **WALL MOUNT BAR (orange) and ARM UNIFICATION BAR (yellow)** on to the **RIGHT Arm Assembly** (which should be on the left since the arms are laid face down). Install but do NOT TIGHTEN the hardware. This hardware will be tightened in a specific sequence as the last assembly step. You may notice that the outer hole is smaller than the

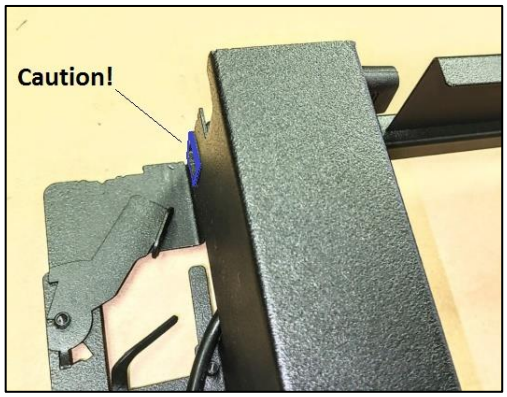
inner hole. <u>This is intentional, DO NOT MODIFY</u>! Manipulate the bar and arm to align and install the bolt through the smaller hole first.





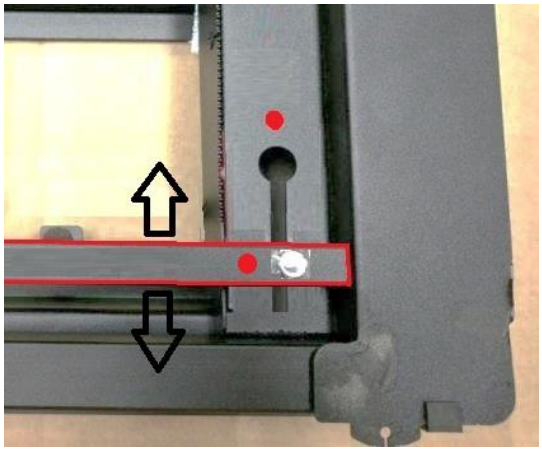
6. Repeat the previous steps with the LEFT Arm Assembly. **Do NOT tighten hardware yet.**
7. Fasten the **TV Bottom Bar** (**blue**) to the left and right arm assemblies. Verify that the ends of the square bar are not protruding more than 1/16". Adjust if needed then tighten the screws fully.



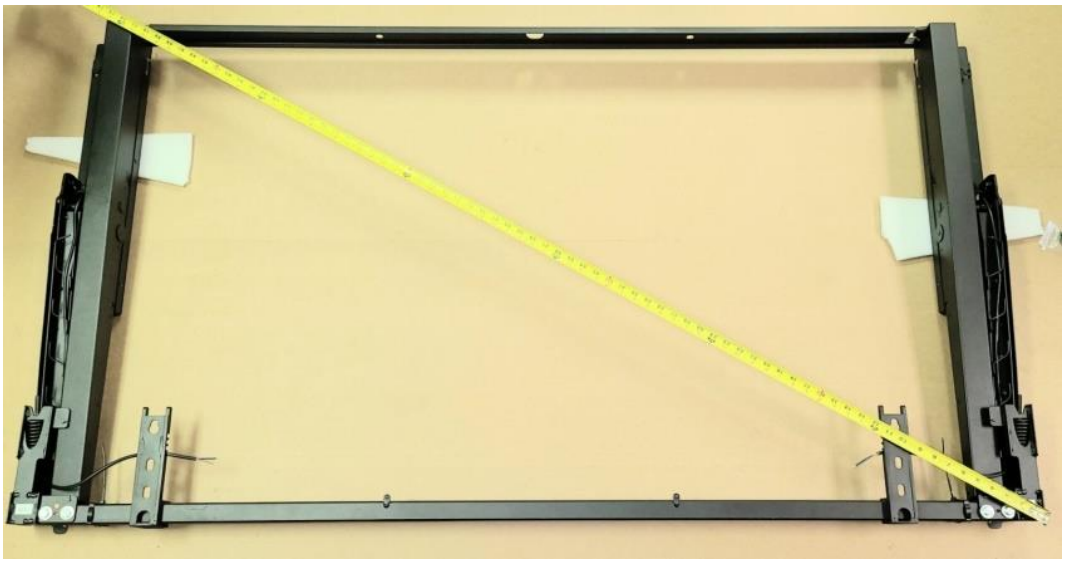



8. Flip the mount over.

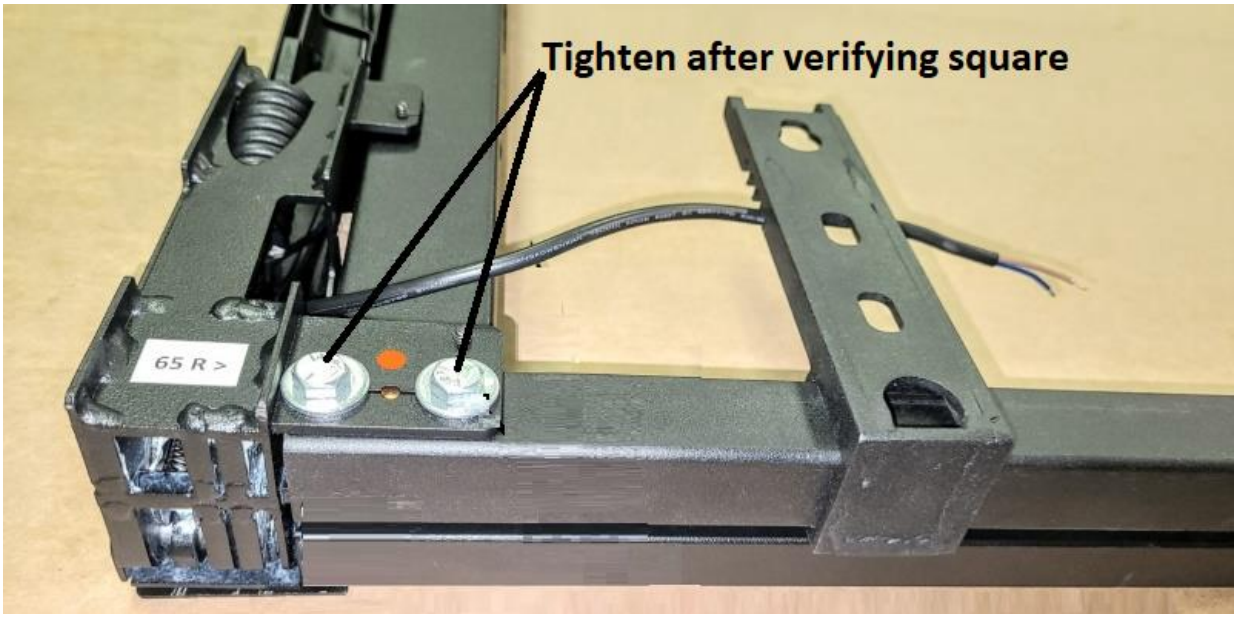
9. Install the **Adjustable TV Top Bar (Red)**. For now, position bar in the middle of the slot and tighten hardware. If the holes do not align DO NOT DRILL HOLES LARGER. The holes in the bar are spaced and sized correctly to force proper spacing between moving parts. If needed, force hole alignment.



10. Flip the mount back over. Measure diagonally to verify that the assembly is square. Adjust if needed.



11. Hold the assembly square and tighten the hardware connecting the Wall Mount Bar to the Left and Right Arm Assemblies.

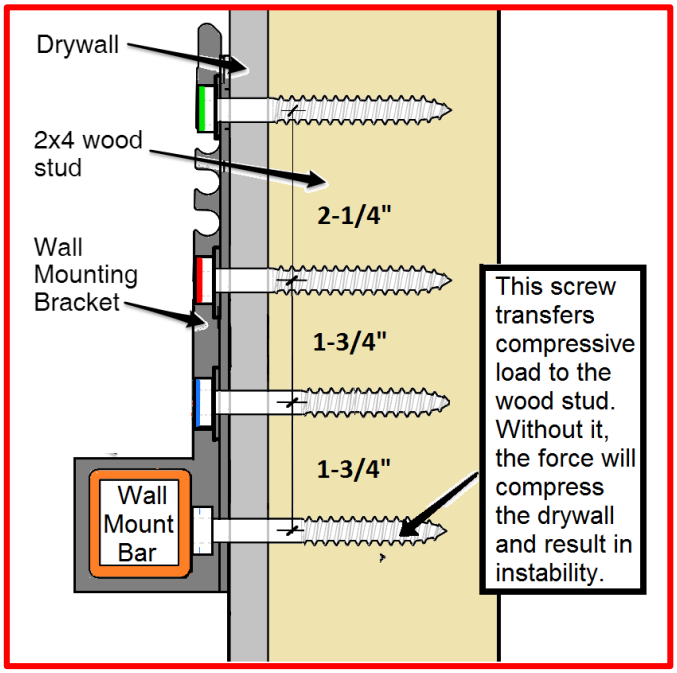


# STEP 3: Wall Mounting

**Any questions? Please contact us! We'd love to help. Call the office 208-287-8882 or Mark's mobile 208-919-5969.**

The wall mount brackets should be fastened to two vertically oriented structural members. The supplied lag bolts are intended for attachment to 2x4 wall studs. Attachment to alternative materials such as metal stud walls or concrete walls is possible but require special fasteners and, in some cases, additional support (not supplied). Please contact us with any questions. We are happy to help.

The integrity and adequacy of the structure to which this product is attached and the means by which this product is fastened to the supporting structure is the installer's responsibility. Mark Joseph Design / Hidden Vision is not liable for damage or injury caused due to inadequate support or improper installation. Call with questions.




**NOTE: This process is different than the version shown in the install video.**

1. The wall mounting brackets can be shifted left or right to align with your vertical structural supports. Refer to the table below for the maximum and minimum distance each stud can be from center.
2. Use the supplied **wall mount templates** and refer to the "Construction Drawings for Built-in Application" to determine the vertical placement of the wall mount brackets. Keep in mind, placement must be measured from the top of your recessed opening, not the bottom. Meaning, if your recessed opening is taller than what is shown in our drawings than the extra space should be below the mechanism.
3. Find **EXACT CENTER** of your wall stud (NOTE: It is very important that your lag bolts are installed in the CENTER of the wood stud. Use the supplied trim nail or drill bit to poke through your drywall to find the left and right edges of your stud. This way you can be sure to find the exact center of your stud. Don't rely on a stud finder alone.)
4. **You MUST predrill** all the lag bolt holes 3" minimum depth so not to split your wall stud.
5. **BEFORE** installing your TV mount, install the **compression lag bolts.** The head of the bolt should be positioned per the wall mounting bracket templates supplied in your parts box. When the mount extends away from the wall the bottom of the wall mount brackets apply a large compressive load in towards your wall. The compression lag bolts transfers the compressive load directly to your wall stud. Without these bolts, drywall may compress under the load, the mounts operation may be bouncy, and the angle of the wall mount bracket may change over time. If you are attaching to metal studs then alternative methods may be used. Please contact us for more information.

| Model # | S-max. | S min. | |
|---|---|---|---|
| M3-65-832 | 27.5" | 13" | S max. / S min. = The maximum/minimum distance from CENTER of your |
| M3-75-832 | 32" | 17" | studs to CENTER of the TV Mount |

# STEP 4: Cable Routing

**Any questions? Please contact us! We'd love to help. Call the office 208-287-8882 or Mark's mobile 208-919-5969.**

IMPORTANT: Cable routing is the most commonly underappreciated and overlooked step. There is **ONE CORRECT WAY TO ROUT CABLES!** DO NOT GUESS. Routing cables incorrectly will result in interference which will prevent the TV mount from moving to the full TV Viewing position and/or TV Hidden position. Look carefully at the following instructions. Call us with any questions.

- **NEVER operate the mount if it is not fastened to the wall**.
- **SPRING LOADED**: This mount is designed to operate with the weight of a TV and cover. If operated without the TV installed the fuses will likely blow. If they do, refer to the motor setup section of these instructions for details regarding fuse replacement.
- **PINCH DANGER**: There are multiple pinch points that can cause injury. Keep hands away from moving parts when the mount is being operated. Use caution and familiarize yourself with the movement and pinch dangers.

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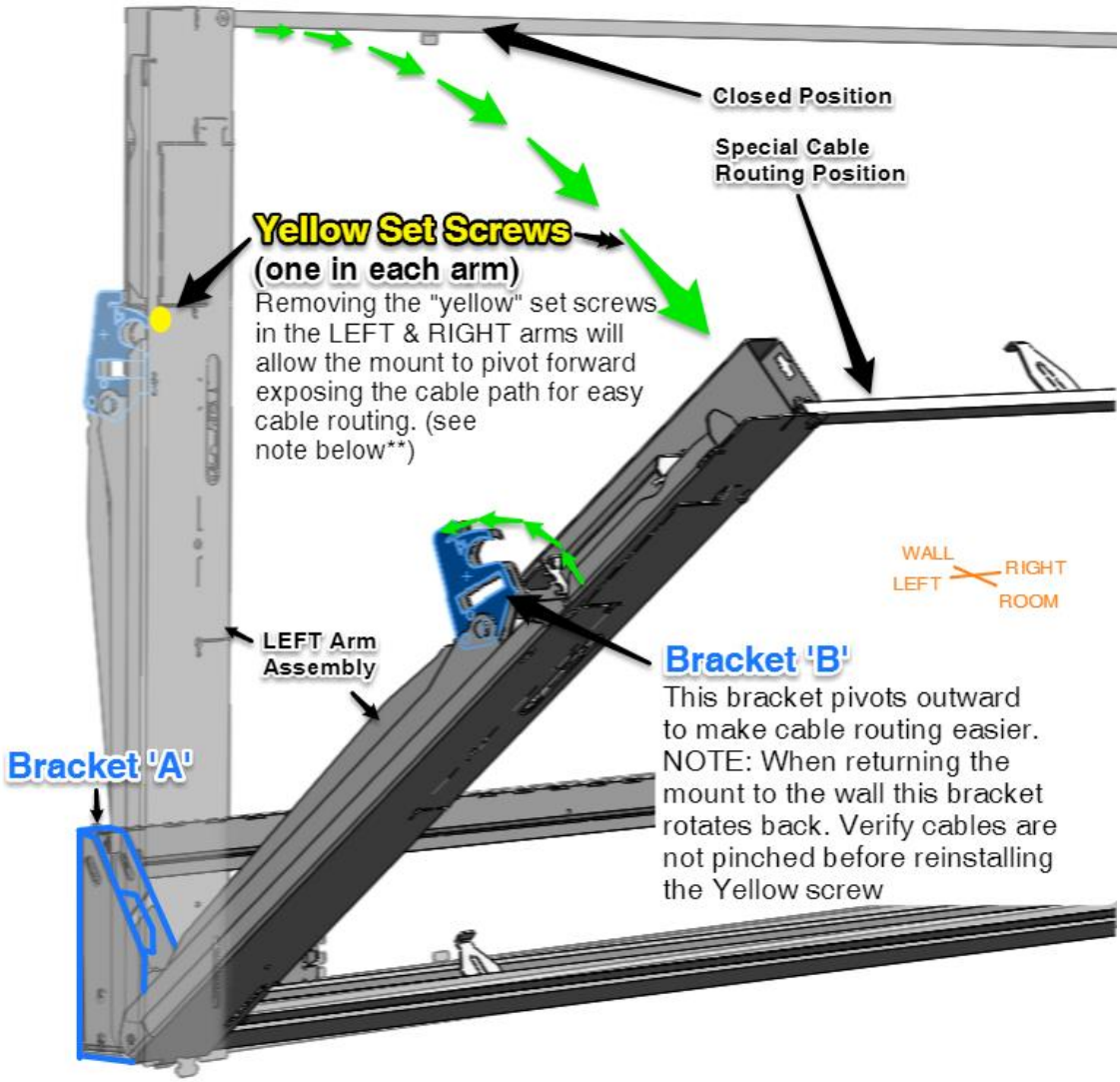
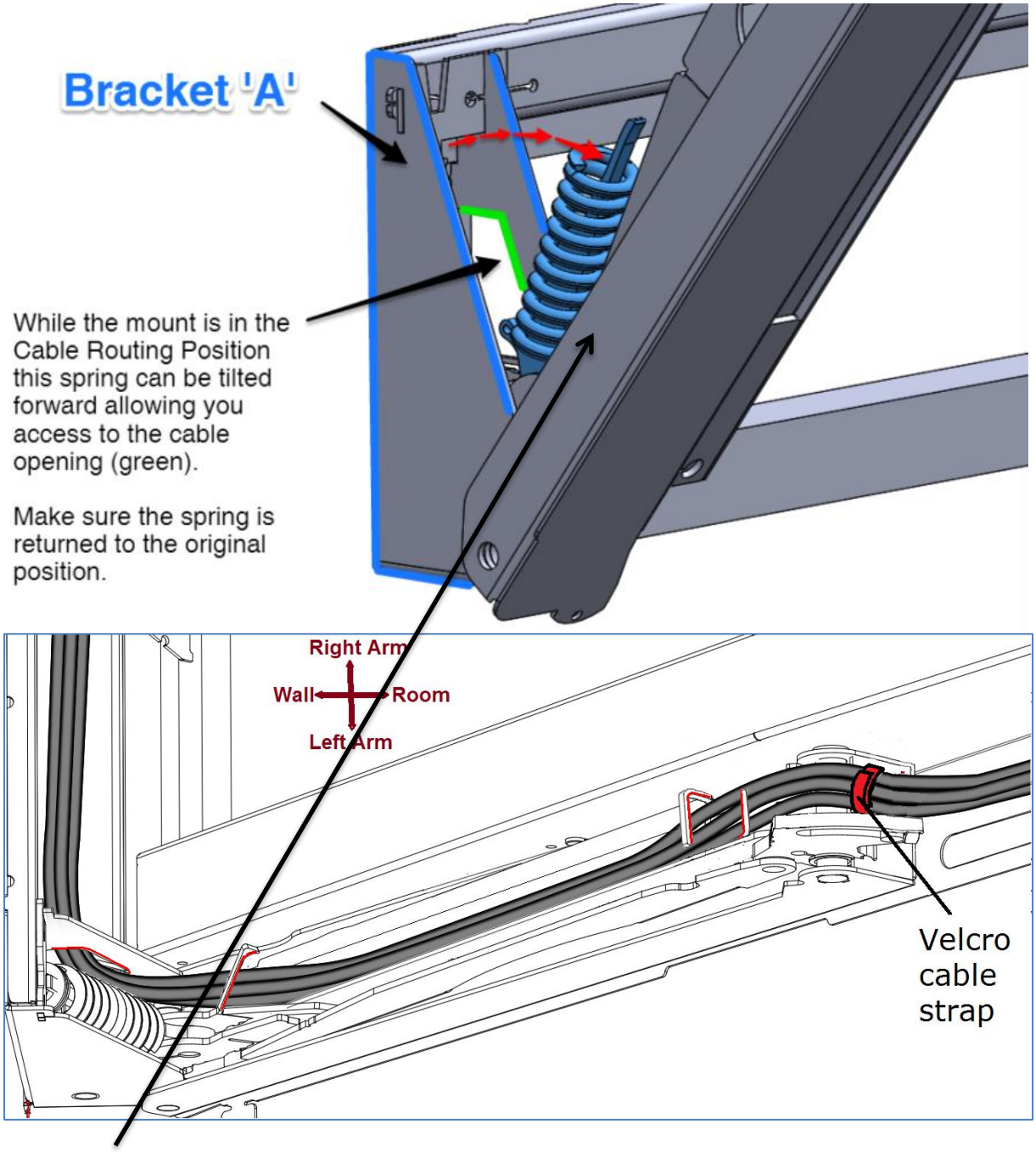
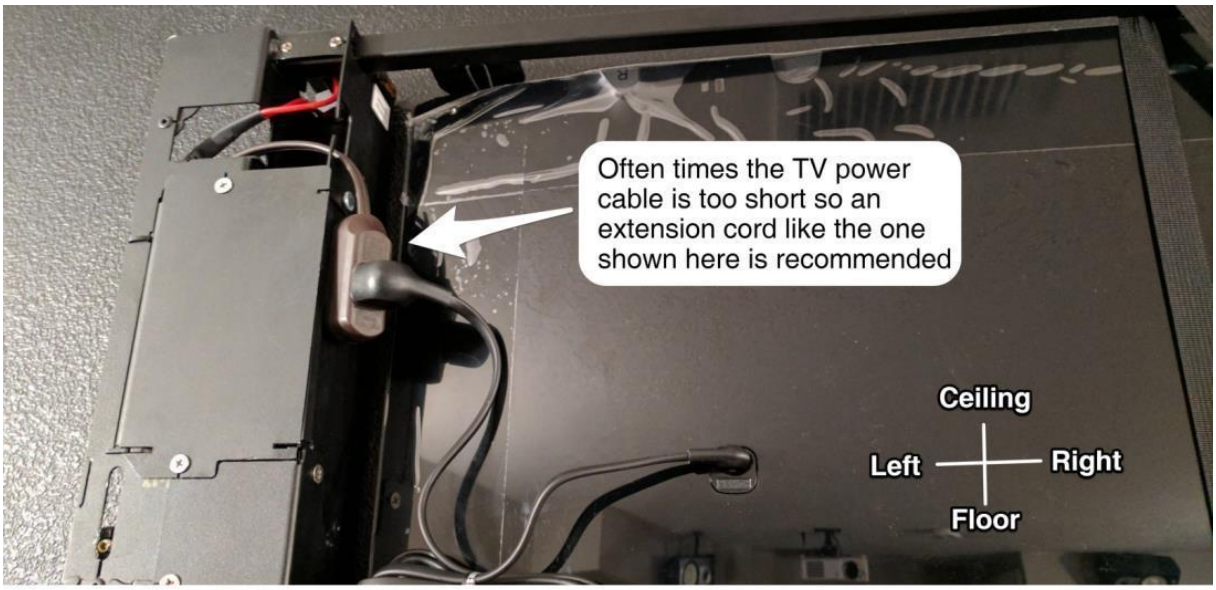
1. Hold the mount firmly against the wall (pushing near the top) and remove the "Yellow" set screw from BOTH the Left and Right arms.
2. With the Yellow screws removed, the mount is free to pivot forward about 45 degrees. This gives you access to the cable paths inside the arms. (see illustrations below)
3. Route cables following the motor wires. Cables should be tucked behind all the metal cable guide tabs and Velcro ties (exactly as the motor wires are). You can install 3 cables per side.

NOTE: Be careful not to allow any objects, such as discarded cable tie parts, to fall down inside the arm. This can cause interference when the mount returns to the closed position.





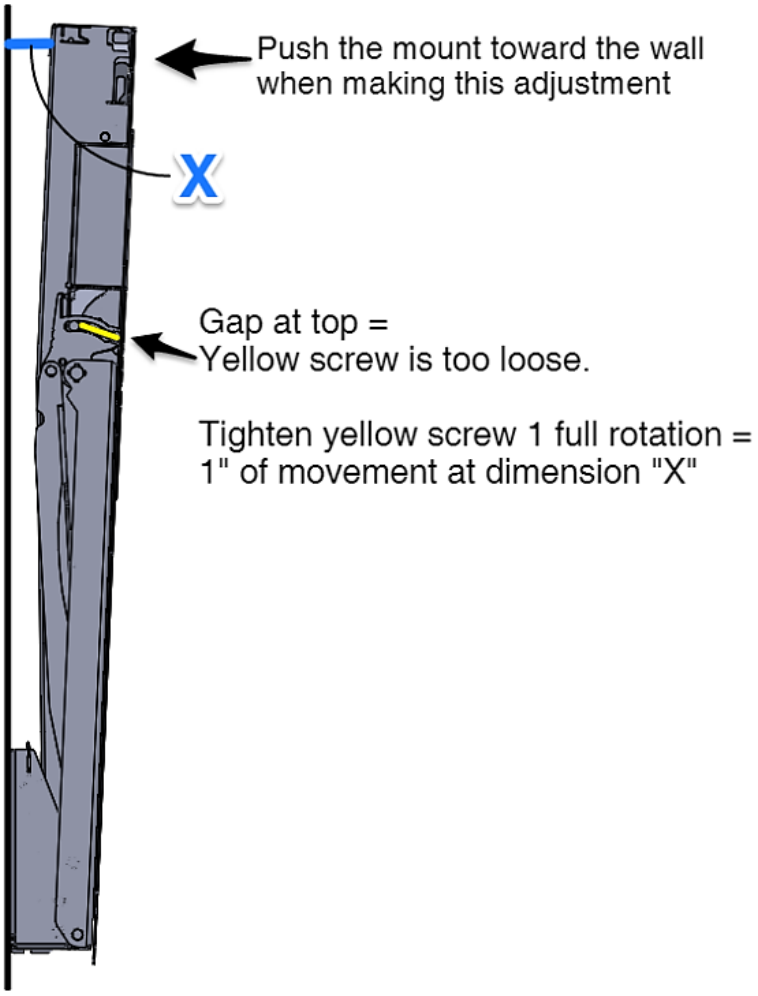




Showing the closed position, upper left corner, with the TV installed

# Re-installing the Yellow screws &
# ANGLE ADJUSTMENT IN “TV HIDDEN” POSITION

**Note: The YELLOW screw adjustment does NOT have an impact on the TV VIEWING angle.**

1. Push the mount back up against the wall. You will feel resistance from the springs as you approach the wall. If the resistance is significant check the following:
   a. Verify the coil spring at the base of each arm and the spacer washers on top of the spring (if there is one) are set back to the correct position.
   b. Verify your cables are not pinched.
2. Reinstall the yellow screws on BOTH sides BEFORE TIGHTENING either side fully. As you tighten the yellow screws **ALTERNATE between the left & right arms** so they are adjusted evenly. **Do not use a power tool to tighten the yellow screw.**
3. The yellow screw adjusts the angle of the mount in relation to the wall in the closed position. Too loose = Gap at the top (X). Too tight = Gap at the bottom (Y). Refer to the following illustrations.



# STEP 5: Motor Setup (skip to next step for non-motorized models)

**Any questions? Please contact us! We'd love to help. Call the office 208-287-8882 or Mark's mobile 208-919-5969.**

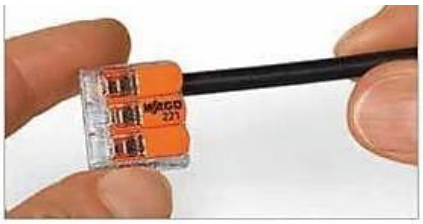
## IMPORTANT OPERATION NOTES FOR MOTORIZED MODELS

- **DO NOT OPERATE MOTORS WITHOUT THE TV INSTALLED**... with **this exception**: to test that both motors are properly hooked up before the TV is installed you may operate the motors to move the mount out **8" from the wall, NO MORE**, **then reverse direction** back to the wall. This is because the springs, which are meant to counter the TVs weight, will apply greater and greater force against the motors as the mount moves further from the wall.)
- **DO NOT ATTEMPT TO OPERATE A MOTORIZED MOUNT MANUALLY**. The motors cannot be overpowered manually.
- **BLOWN FUSES**? See the next page.

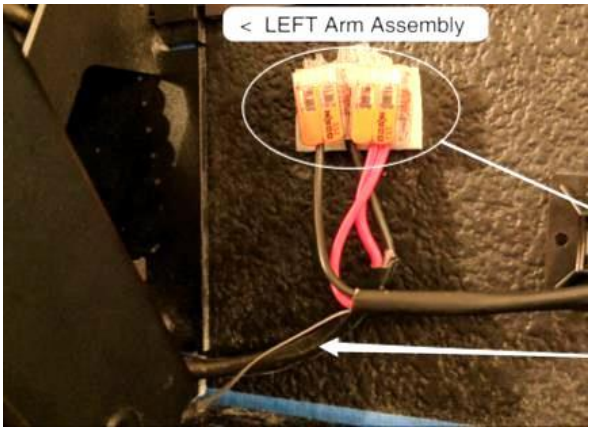
1. Wondering where to locate the electronics? Want to extend the motor wires? What power is required? Refer to the Cable & Power requirements within the Layout section of these instructions for answers to these questions.
2. If you're using our RF wireless remote controller, proceed on this page. If you are using our Smart Controller with Contact Closure and adhesive backed keypad you must refer to the instructions that were included in the motorized parts box (also found here: http://bit.ly/m3-smart-control)
3. There are 2 motors (one in each arm). Each motor has a pair of wires exiting the base of the arm. Connect the motor wires to the two pairs of wires coming from the controller. Match **RED** with **BROWN** and **BLACK** with **BLUE**. It does not matter which pair goes to which motor.

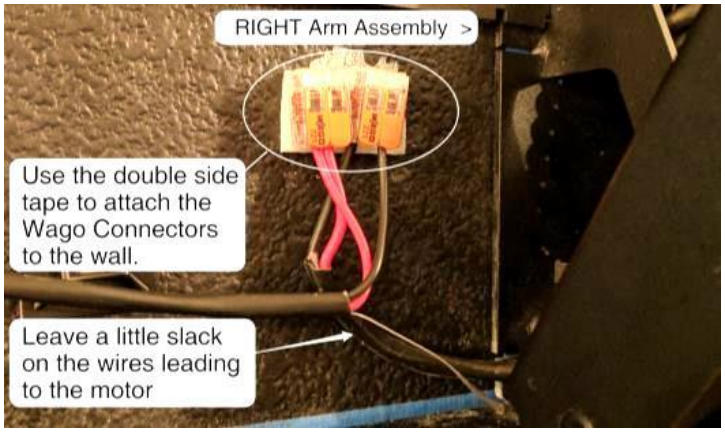
Strip the wire to **7/16" (11mm)** (refer to strip length guide printed on the side of the connector)

Lift lever to open clamping unit; insert stripped wire.



Lower the lever to close the clamping unit. Flip the housing over to visually verify that the exposed wire is contacting the metal clamp.




Controller type: **WiFi Smart Controller w/ Contact Closure**

4. If you are using our "Smart Controller" please refer to the instructions that were included in the box that your controller was packaged in. Please read the controller instructions thoroughly BEFORE plugging in the controller.

Controller type: 3 button **RF Wireless Remote**

5. Plug the power supply into 110 VAC - 220 VAC outlet.
6. The motors are now ready. Once your TV is installed you can operate the motors and flip the mount.
7. Wireless remote buttons: UP = TV Viewing position, DOWN = TV Hidden.

(Instructions for programing additional RF remotes: https://goo.gl/F7rsdp (the web address is case sensitive))

## BLOWN FUSES? Read this.

There are two motors (one in each arm assembly). Each motor has a dedicated fuse located near the motor to which it's attached. The specific location varies depending on your model.
NEVER install fuses with an amp rating higher than the ones supplied. We've included extra fuses for your convenience.

### Troubleshooting Blown Fuses:

The motor **FUSES are meant to blow if** the motors encounter unexpected resistance which may be caused by one of the following conditions.

1. **If operated without sufficient weight (most common)**
   - WHY: The arms are spring loaded to counter balance the weight of the TV and Picture Frame. Without this weight the motors will fight against the springs causing increased resistance which results in blown fuses.
   - IDENTIFY: 1) Both the LEFT & RIGHT fuses have blown **AND** 2) The left & right arms have progressed equally.
   - SOLUTION: Install the TV **OR** install 1" to 1-1/2" thick plywood substitute for the TV. This is often preferable for cabinet makers and contractors working on built-in projects. Replace the fuses following the steps below.
2. **If one of the two motors is not receiving power or is wired incorrectly**
   - WHY: If one of the two motors is not receiving power or wired incorrectly, the running motor will experience increased resistance and the fuse connected to the running motor will blow.
   - IDENTIFY: 1) One arm will have traveled further than the other **AND** 2) the fuse on the leading arm will be blown, but the fuse on the trailing arm will NOT be blown. Tip: Hold the fuse up to a light source and look closely for any break along the thin wire within the fuse.
   - SOLUTION: Inspect your wire connections to verify good connectivity and wire colors are correctly matched. Look for cut, damaged, or pinched wire. Replace the fuses following the steps below.
3. **If interference is encountered**
   - WHY: Interference will result in increased resistance on the motors and this will blow the fuses.
   - IDENTIFY: 1) If scenario 1 is NOT true **AND** 2) Both motor fuses are blown.
   - SOLUTION: Identify and resolve the interference. If the interference is not obvious, here's a list of possible culprits. Tip: A call to our tech support can make quick work of this task.
     - Identify the side that encountered interference. It will be the side that has traveled a lesser distance.
     - Are your cables exactly as described in the cable routing instructions? Any deviance can cause interference.
     - Did anything fall into the base of the arm? Objects like discarded cable ties can cause interference with moving parts at the base of the arm. Tip: Compressed air can be helpful to remove debris that can't be reached.

### Important Steps for replacing blown fuses:

1. **Remove BOTH motor fuses**. Identify and trash any blown fuses. (do not reinstall fuses yet)
2. **Set the controller to reverse the direction** of travel so that when you insert the fuses in the following steps the mount will move opposite the direction it was traveling when the fuses blew.
3. **Align arms** by briefly contacting the fuse of the leading arm until the leading arm is aligned with the trailing arm.
4. **Test each arm individually by briefly contacting the fuse to verify both motors are traveling in the same direction**. If a motor is running the wrong direction, then check that you have not connected the motor wires in reverse polarity. If there is no movement verify the fuse is good, look for cut or damaged wire, and inspect wire connections.
5. **Turn OFF power to the controller & install the new fuses in BOTH motors**. (Tip: It's sometimes easiest to just switch off the breaker to the outlet that powers your TV and controller.)
6. **Turn ON power**. Both arms should travel together in the direction you set before powering off the controller. If the motors move in the opposite direction than expected, you may not have changed your "Power on state" setting to "Resume previous state." Refer to the WiFi controller instructions for details on changing this setting.
7. **Cycle the mount a couple times to verify smooth operation**. If the fuses blow again please take advantage of our exceptional Tech Support! I'm sure we can help. Call 208-287-8882 x2

# STEP 6: TV Installation

**Any questions? Please contact us! We'd love to help. Call the office 208-287-8882 or Mark's mobile 208-919-5969.**

Verify there are no objects protruding from the wall or the cover plate that could damage the TV screen.


Choose a TV based on the following specifications.

| Maximum TELEVISION Dimensions | | | | | |
|---|---|---|---|---|---|
| **TV Mount Model #** | **Screen Size** | **Width** | **Height** | **Depth** | |
| **M3-65-832** | up to 65 | 57.75 | 33.3 | See Note | |
| **M3-75-832** | Up to 75 | 66.75 | 38.5 | See Note | |

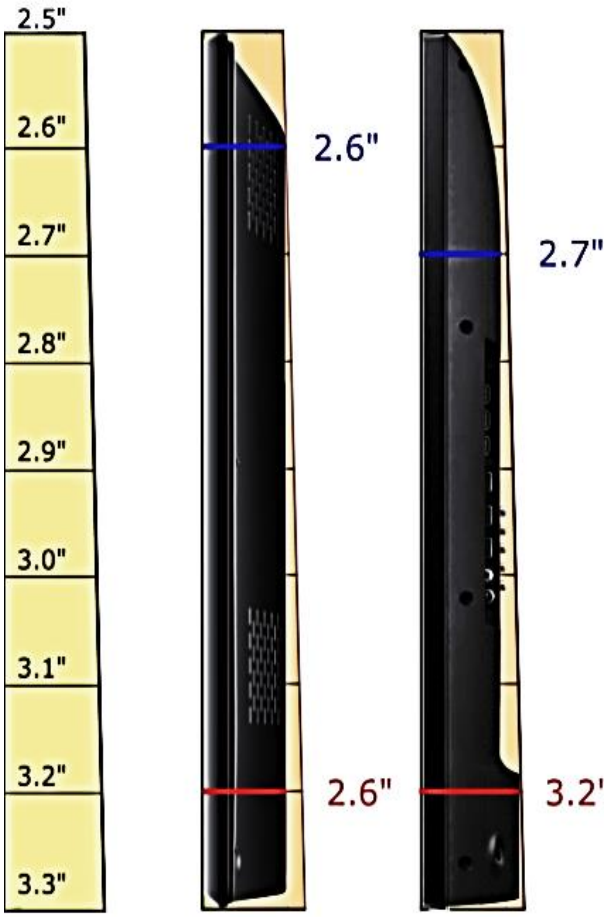
**Note Regarding TV Depth:**
If your TV is over 2.5" in depth then refer to the TV depth guide below to make sure it will fit.

**TV DEPTH GUIDE**

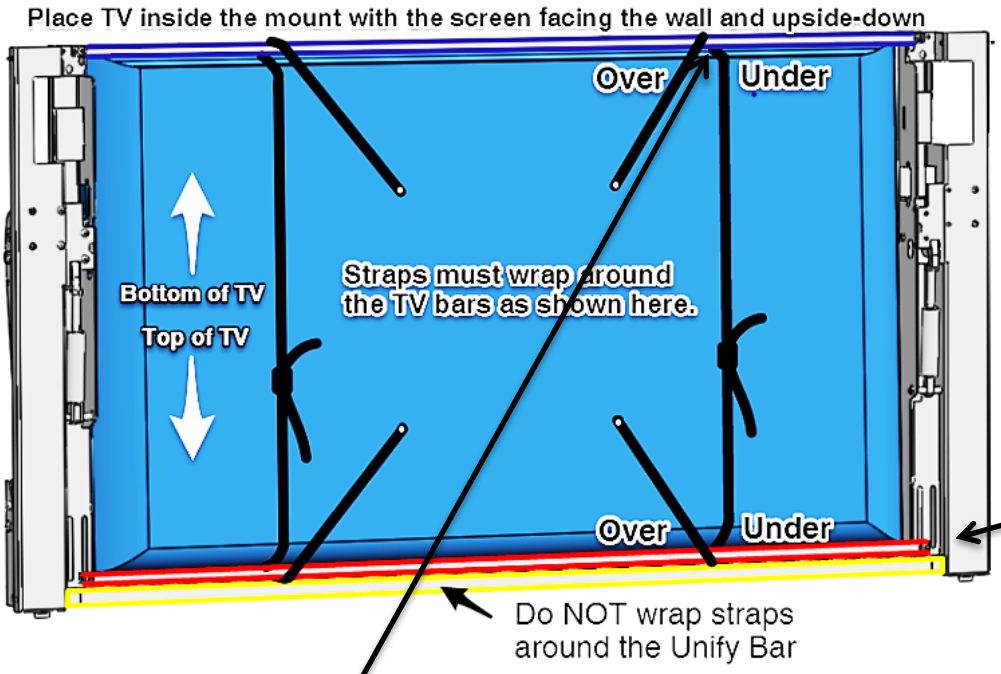
**Left image**: Shows the maximum TV depth at nine equally spaced points

**Middle image**: This image shows an example TV that is 2.6" deep. Note that the thickest part of the TV extends nearly to the top of the TV which limits the TV depth to 2.6".

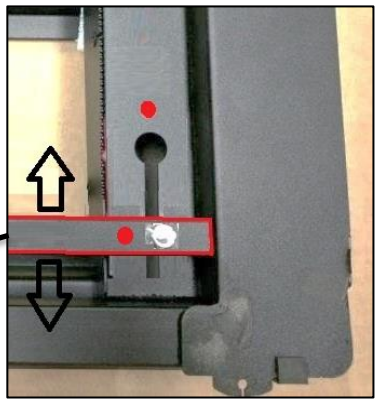
**Right image**: This image shows an example TV that is 3.2" deep. Note that this TV would fit because the thickest part of the TV is near the bottom.

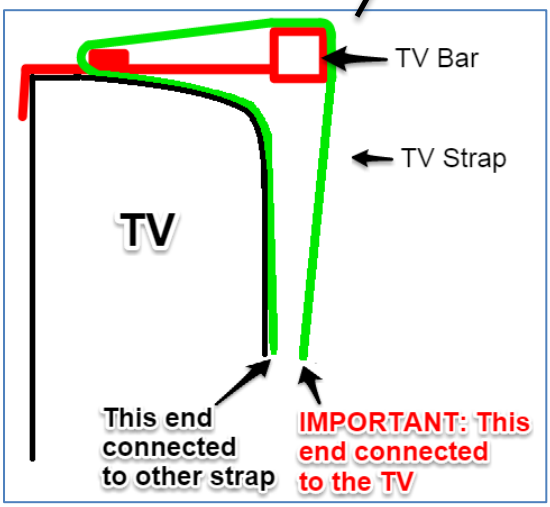


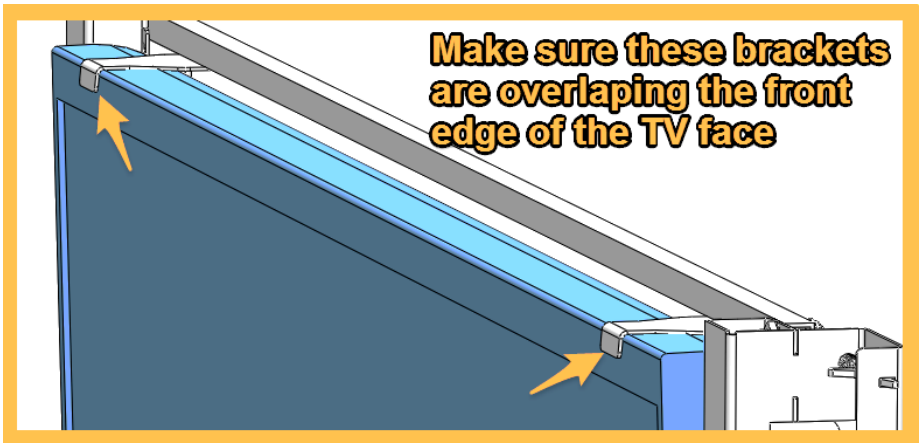
The TV bars are meant to hold your TV with minimal "Clamping" pressure. Tighten the TV straps just enough to pull the TV bar up against the TV. Excessively tightening the TV straps or the adjustable TV bar can damage your TV. (Think snug hold, not tightly clamped.)

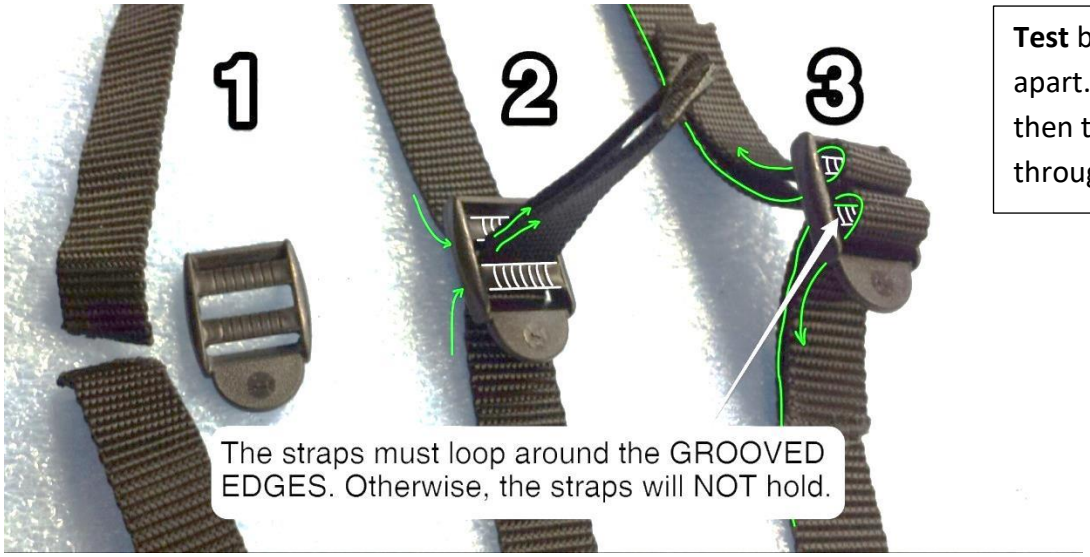



**The "RED" TV Bar slides up or down so it can be adjusted to fit your TVs height.**






**Test** by pulling the straps apart. If the straps loosen then the straps are not routed through the buckle correctly.

# PERFORMANCE ADJUSTMENTS

**Any questions? Please contact us! We'd love to help. Call the office 208-287-8882 or Mark's mobile 208-919-5969.**

The Damper Springs apply a force to resist movement towards the wall. This adjustment is used to slow/damper the motion as the TV mount approaches the wall in both the TV Hidden position and TV Viewing position. Use this adjustment to make the mount come to a smooth stop.

**WHEN** to evaluate if more or less spacers are needed: Evaluate with everything installed, including the TV, Picture Frame, and Mirror (if applicable). If you intend to install canvas and it is not yet installed it is ok to proceed with this evaluation. The weight of the canvas will have minimal effect.

**HOW** to add or remove spacers from the Coil Damper Springs: In your parts bag you will find gold/bronze colored washers, some 1/16" thick and some 1/32" thick for fine tuning. These are used to adjust the Damper Spring Force.

To add or remove spacers you'll need to operate the mount to a **part way open position** (where the arms are 90 degrees to the TV (Shown below)). Note: If you are using Contact Closure controller you will need to cut power to stop the mount in this position.

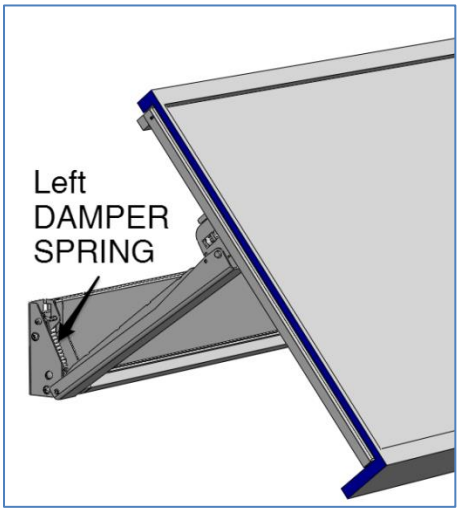
With the mount stopped in a partway open position, pull forward at the top of the spring, add or remove washers, then pivot the spring back towards the wall until it comes to rest.

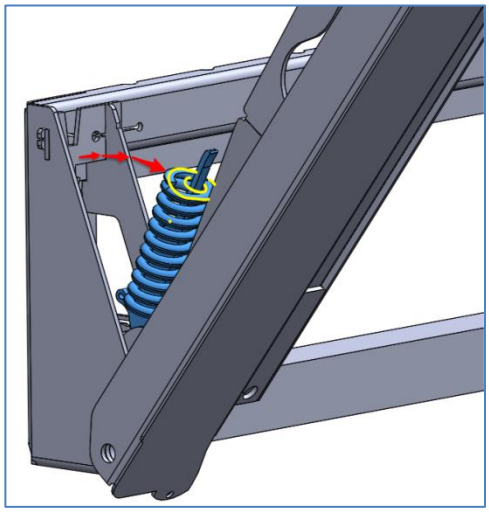
**WHY** add or remove spacers from the Coil Damper Springs: Adding or removing spacers from the coil spring at the base of each arm can help the following.

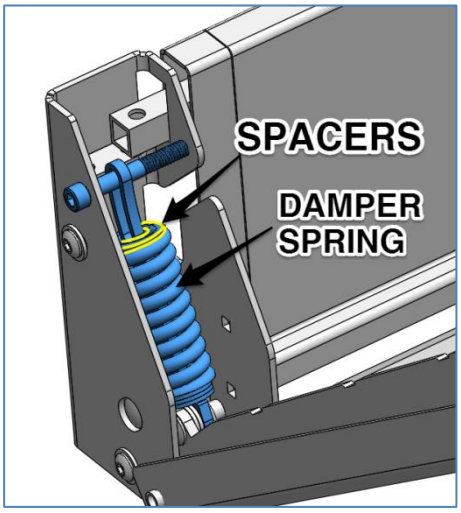
**MOTORIZED MODELS**

SYMPTOM: When the mount flips to the TV Viewing position, the TV mount approaches the wall too quickly and recoils/bounces back and forth after reaching the full open position.

REMEDY: Add spacers to the coil spring. Start by adding one additional thick spacer (1/16" thick) to both springs. Test. If this is too much, switch the 1/16" washers out for the 1/32" thick washers. Test and adjust from there.






For further adjustments / troubleshooting we encourage you to contact tech support. It will be time well spent.