

Modular Flying Frame Kit Series

Installation Guide

MVFS-X461-T

The MVFS-X461-T Modular Flying Frame Kit is used on the NEC X46UN LCD screen to create a multiple screen video wall display. The MVFS-X461-T is attached to the rear of the screen and used as a frame to connect one screen to another. The frame's connecting bars and coffin latch easily and rigidly link one screen to another for a landscape or portrait modes.

Important: Rigging and mounting overhead system requires professional experience. **Improperly installed equipment can result in property damage, personal injury, death and/or liability to the installing contractor.** Do not suspend or mount if in doubt about the integrity of the structure.

Caution: Due to the wide variety of structures, environments, materials and rigging methods, the installing contractor must exercise good judgment in selecting the proper mounting area, rigging structures and hardware.

Follow these instructions for the most efficient and safest mounting results. Do not exceed the specified working load limit.

Package Contents:

- 1 pc MVFS-X461 Frame
- 1 pc Instruction sheet
- 4 pcs Phillips screw, M6-25mm long
- 2 pcs Upper stand-off button (yellow)
- 2 pcs Lower stand-off button (silver)
- 8 pcs Detent pin, 1/4x3/4" long
- 1 pc Detent pin, 1/4x2.25" long
- 8 pcs Nylock nut, 1/4-20
- 16 pcs Flat washer, 1/4
- 8 pcs Button head screw, 1/4-20x1.5" long

Step 1: Stand-Off Buttons

Installed the upper (yellow) and lower (silver) stand-off buttons to the LCD's rear mounting points using the supplied M6 screws. Install the yellow stand-off on the upper end and the silver stand-off on the lower end of the LCD. Tighten permanently (Figure 1).

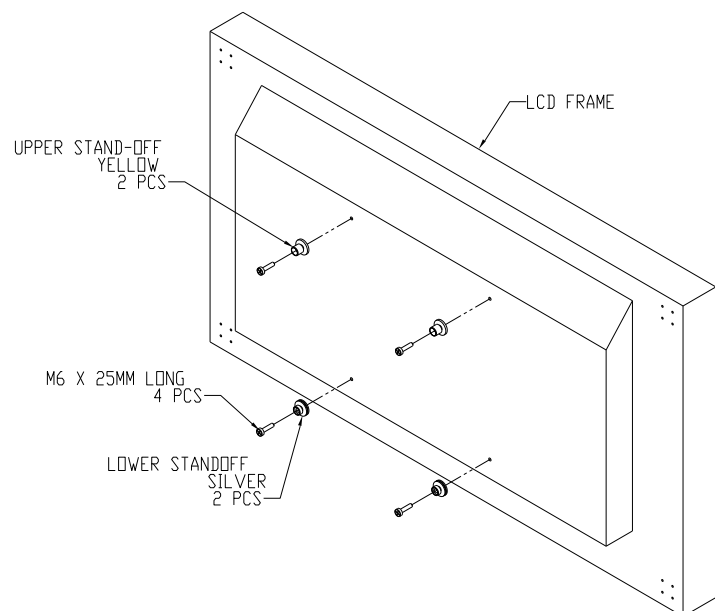
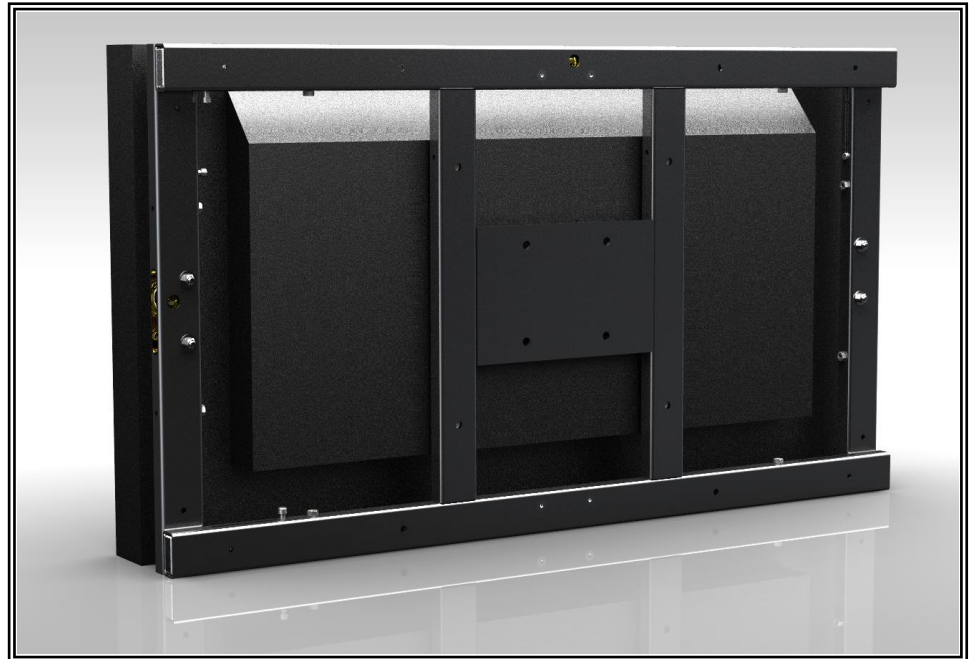


Figure 1

Wall Mounting Installation Guide

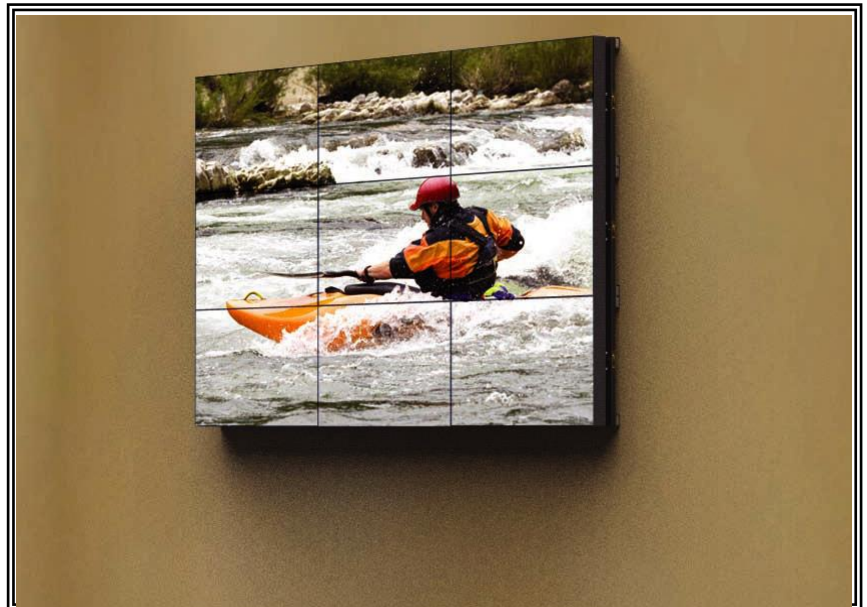
MVFS-X461-T

Step 1:

Decide the type of configurations for the video wall display (example. 2x2, 3x3, 4x4 or other configurations).

Step 2:

For landscape mode install the frames horizontally starting from the bottom row using the appropriate screws and washers for the wall. The large hole of the key hole slot must be on the upper left side (Figure 2 and 4). For portrait mode install the frames vertically starting from the bottom row using the appropriate screws and washer for the wall. The large hole of the key hole slots must be on the upper right side (Figure 3). The outer tubes of the frames must be butted together and are level and plum. Do not tighten mounting screws until the connecting bars and coffin latches are engaged.



Landscape mode: 3 Wide x 3 High Video wall display

Notes:

The wall must be able to support at least 5 times the weight of the video display.

Step 2: Connect LCD Frames

Using the screw on the connecting bars as a handle, slide the connecting bars out of the tube and into the tube of the next frame. Align the holes from the connecting bars to the hole of the tube then insert the provided $\frac{1}{4} \times \frac{3}{4}$ " long detent pins all the way into the connecting bars (Figure 4).

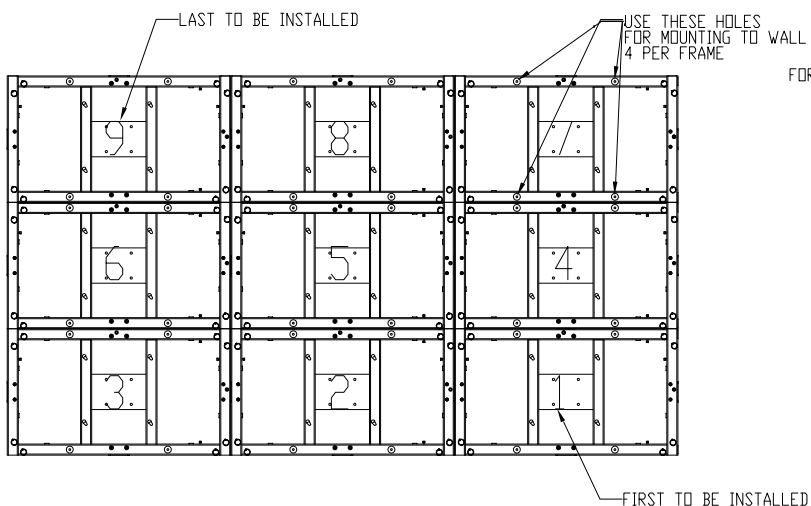


Figure 3 3x3 Landscape Orientation

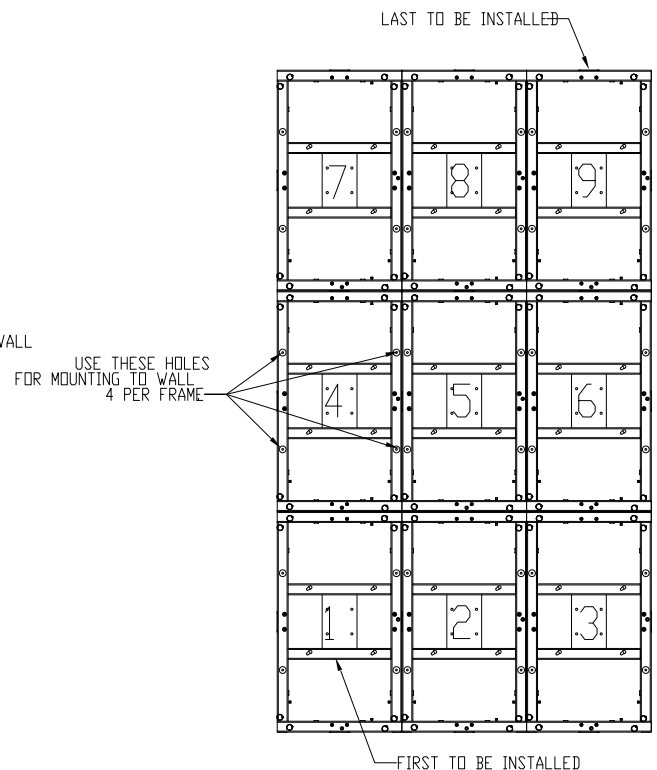


Figure 2 3x3 Portrait Orientation

Step 3: Optional

Use an M8 or 5/16" Allen wrench (not included) to rotate the coffin latch counter clockwise until it fully engage with the mating part (Figure 5).

NOTES:

When engaging coffin latch from the front rotate counter clockwise. If engaging coffin latch from the rear rotate clockwise.

Step 4: Install LCD

Install the LCD by aligning the stand-off buttons to the four large holes of the key hole slots of the frame then slowly slide downward. For landscape mode, start the LCDs installation from the bottom right and ends on the top left side of the video wall display (Figure 2 and 6 and 7). For portrait mode, start the LCD installation from the bottom left and ends on the top right side of the video wall display (Figure 3).

Step 5:

Lock the LCDs to the frames by inserting the 1/4"x2.25" long detent pin on the last installed LCD (Figure 7).

ROTATE
COUNTER
CLOCKWISE
TO ENGAGE

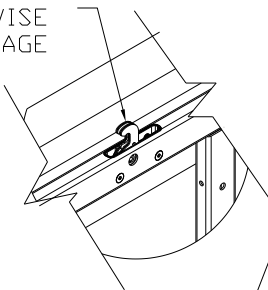


Figure 5

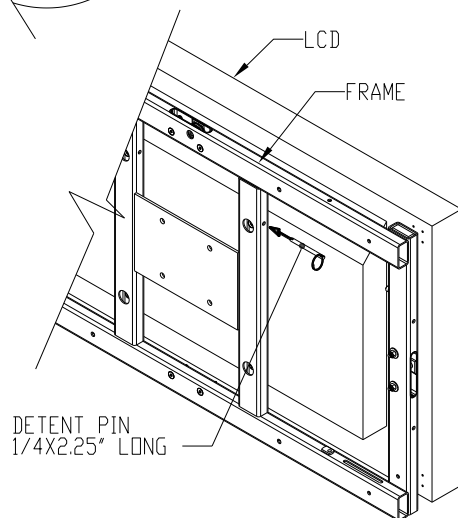


Figure 7

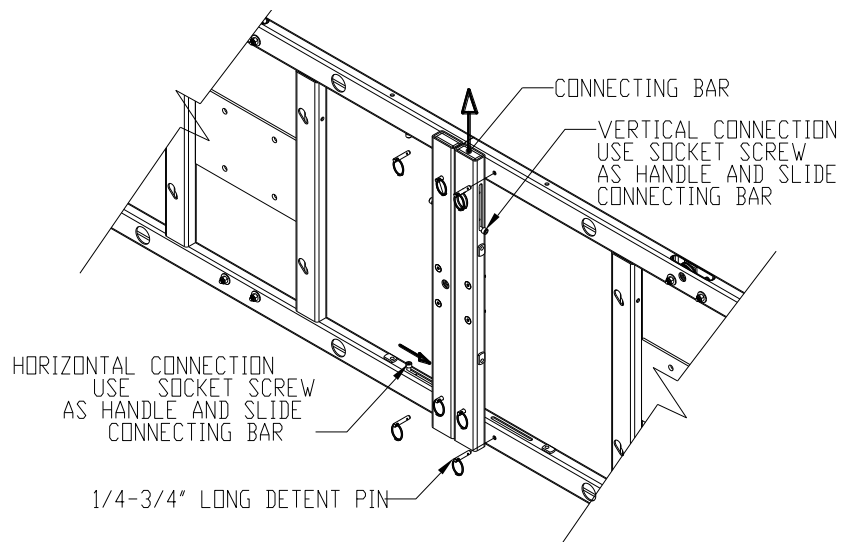


Figure 4

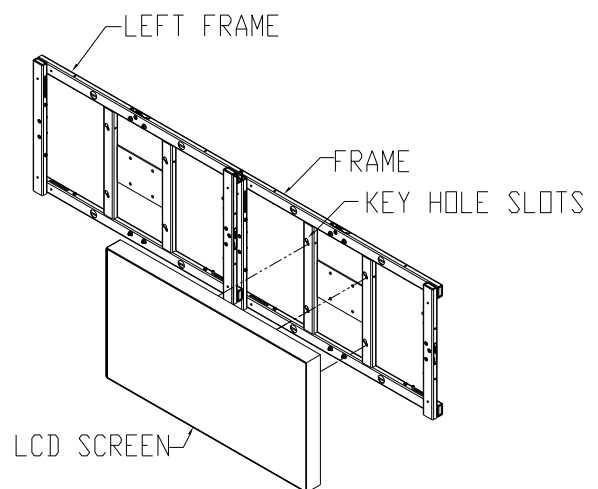


Figure 6

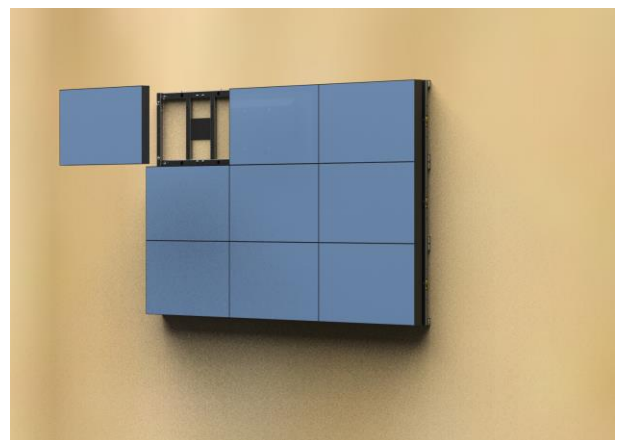


Figure 8

Rigging Installation Guide

MVFS-X461-T

Step 1:

Prepare selected rigging beam for suspending. See Rigging beam and Shackle Mount Instruction sheet for details.

Step 2:

Prepare first row of frames by placing them on the foot stands. Insert the pegs of the foot stand into the bottom holes of the frame. Align the holes from the foot stand's pegs with the holes on the tubes of the frame and secure insert $\frac{1}{4}$ " x 1.5" long quick release pin. Two foot stands per LCD (Figure 1).

Step 3:

Align the frames with foot stands side by side (edge to edge). Slowly slide out the horizontal connecting bars until the holes line up to the holes of the other frames tube. For permanent installation use the provided $\frac{1}{4}$ -20 x 1.25" long screw, nuts and washers to lock the connecting bars inside the tube. For quick assembly and disassembly installation, use $\frac{1}{4}$ x 1.5" grip quick release pins, sold separately (Figure 1).

Use an M8 or 5/16" Allen wrench to rotate the coffin latch counter clockwise until it engage with the mating part on the other frame. Rotate clockwise when engaging from the rear side of the frame.



3 wide x 3 high video wall display

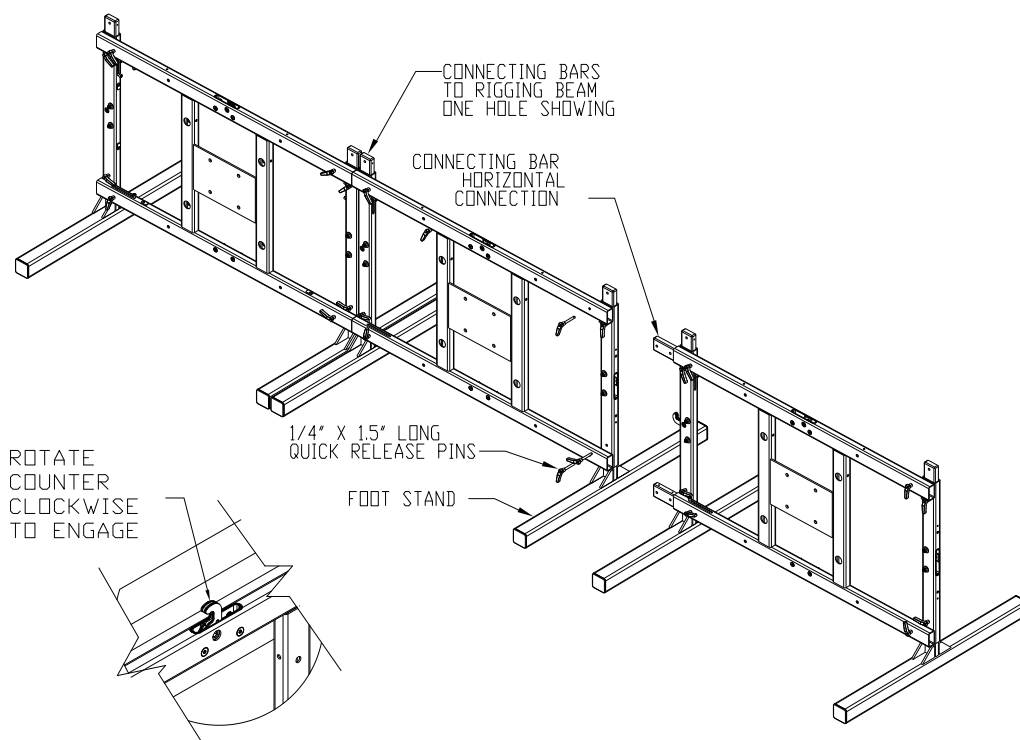


Figure 1A

Figure 1

Step 4: Install LCD to Frames

Install the LCDs to the frames starting from the right side. Align the stand-off buttons to the large hole of key-hole slots then slowly slide downward to lock (Figure 2). Insert the 1/4x2.25" long detent pin to the side holes of the tube where the key hole is located to lock the stand-off buttons from sliding out (Figure 2A).

NOTES:

For portrait mode, start the LCD installation from the left side. The large hole of the key-hole slots must be on the top right side.

Step 5:

Slide the connecting bars out from the top tubes of the frames until there is one hole visible (about 2 inches sticking out). Align the holes of the connecting bars to the holes on the tube then insert bolts, washer and nuts to lock connecting bar in position. For quick assembly and disassembly use 1/4" diameter x 1.5" long quick release pins.

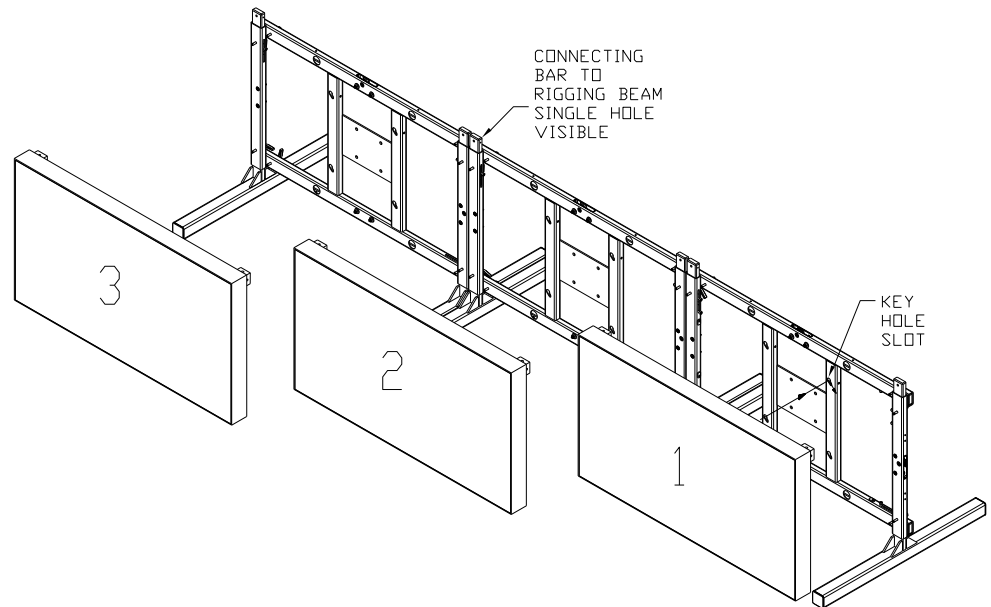


Figure 2

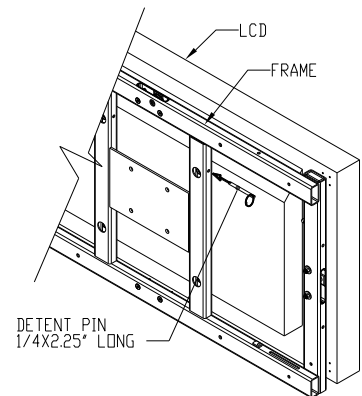


Figure 2A

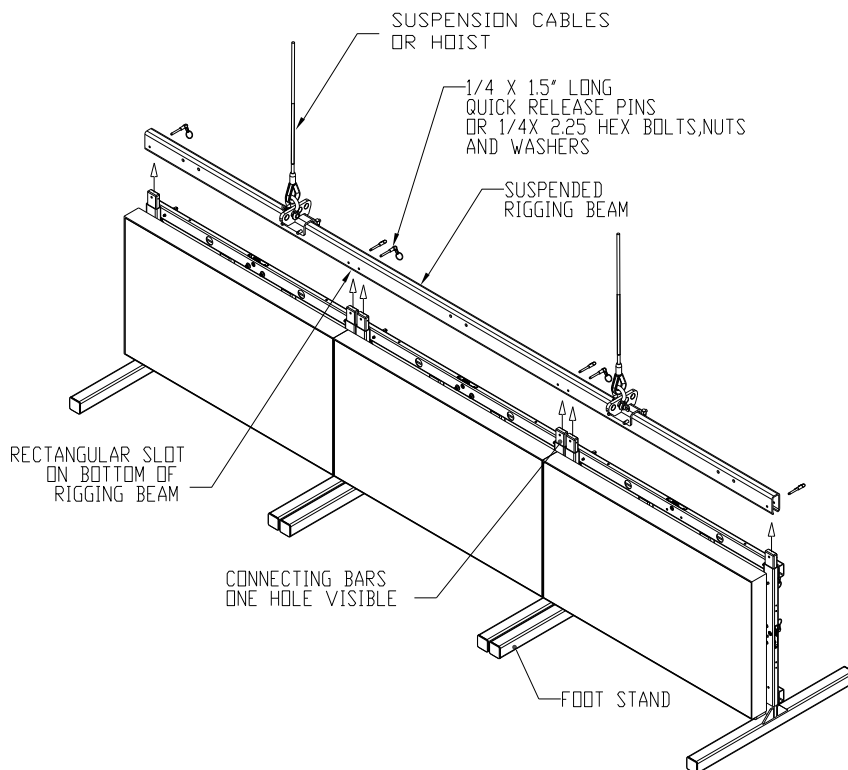


Figure 3

Step 6: Connect Frames to Rigging Beam

Attach rigging beams to frames by slowly lowering the rigging beam onto the connecting bars of the frames. Insert the connecting bars in the rectangular slots of the rigging beam until the holes of the connecting bars aligns with the holes of the rigging beam. Secure the connecting bars to the rigging beam using the 1/4-20x 2.5" long hex bolt, nuts and washer supplied with the rigging beam's hardware kit. **For quick assembly and disassembly, use 1/4" dia. x 1.5" long quick release pins (sold separately) (Figure 3).**

Step 7:

Slowly lift up the first row of LCD until about 35" above the floor then remove the foot stand by releasing the quick release pins.

Step 8:

Assemble the second row of LCD frames below the first row. Use the same procedure as step 2 to step 5.

Step 9:

For the second row of LCD, fully extend the top connecting bars out of the frame's tubes so there are two holes visible, about 3.5 inches sticking out.

Step 10:

Slowly lower the first row of LCDs until the second row of frames top connecting bars goes inside the vertical tubes on the bottom of the first row of frames. Line up the holes of the connecting bars to the holes of the frame's vertical tubes then lock connecting bars with the provided hex bolts, nuts and washers. Each end of the connecting bars should be secured from each frames with bolts, nuts and washer or quick release pins. ***For quick assembly and disassembly, use 1/4" dia. x 1.5" long quick release pins (sold separately) (Figure 4).***

Step 11:

Use an M8 or 5/16" Allen wrench to rotate the coffin latch on top of the frames clockwise (from the rear) to engage the latch connection between the first row and the second row of frames (Figure 1A).

Step 12:

Check all connections. Slowly lift up the first and second rows of LCD assembly until about 35" above the floor then remove the foot stand from the second row by releasing the quick release pins.

Step 13:

Assemble the third row of LCD frames below the second row of LCD frames. Use the same procedure as step 2 to step 4.

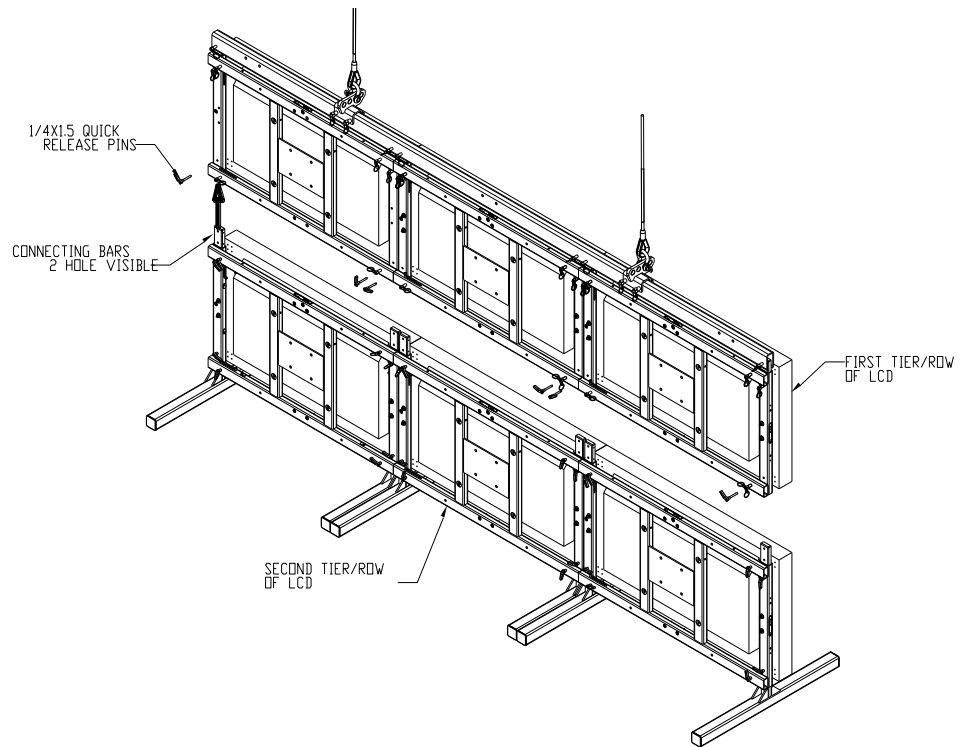


Figure 4

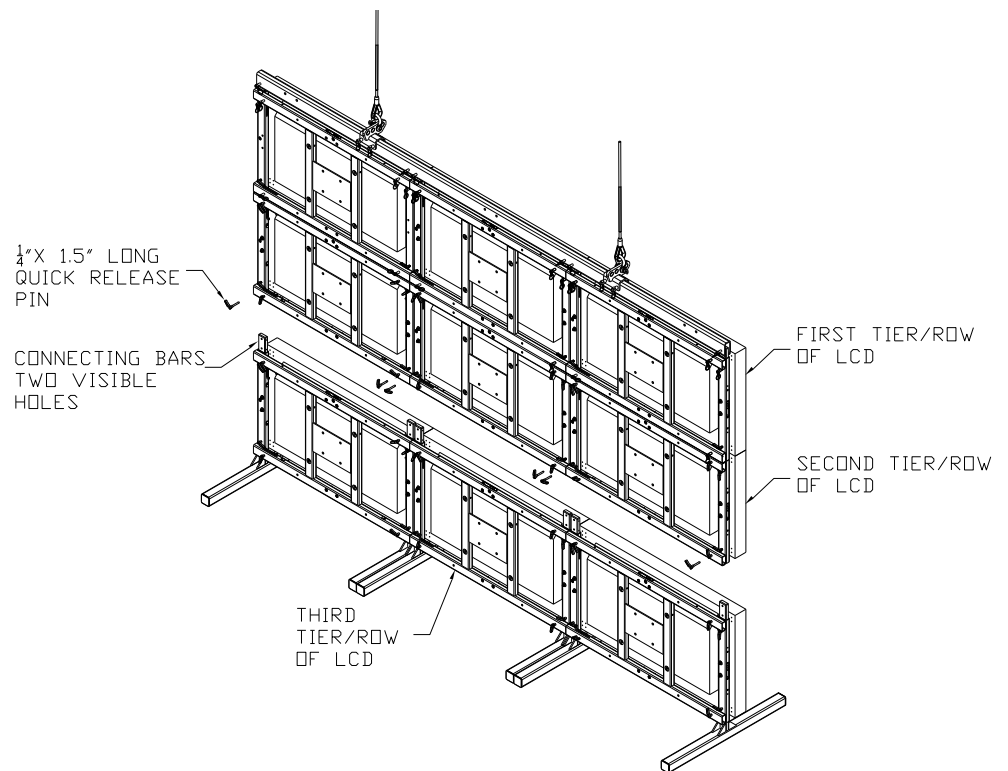


Figure 5

Step 14:

For the third row of LCD, fully extend the top connecting bars out of the frame's tubes so there are two holes visible, about 3.5 inches sticking out.

Step 15:

Slowly lower the first and second row assembly of LCDs until the third row of frames top connecting bars goes inside the vertical tubes on the bottom of the second row of frames. Line up the holes of the connecting bars to the holes of the frame's vertical tubes then lock connecting bars with the provided hex bolts, nuts and washers. Each end of the connecting bars should be secured from each frames with bolts, nuts and washer or quick release pins. *For quick assembly and disassembly, use 1/4" dia. x 1.5" long quick release pins (sold separately) (Figure 5).*



Figure 6

Step 16:

Use an M8 or 5/16" Allen wrench to rotate the coffin latch on top of the frames clockwise (from the rear) to engage the latch connection between the first row and the second row of frames (Figure 1A).

Step 17:

Check all connections. Slowly lift up the completed video wall display about 35" above the floor then remove the foot stand from the second row by releasing the quick release pins (Figure 6).

Step 18:

Repeat procedure for other lower rows of LCD.

Step 19:

Check all connections before hoisting the Video Wall display. Lift up the completed video wall display to desired height (Figure 6).

Free Standing Installation Guide

MVFS-X461-T

Step 1:

Prepare bottom row of frames by placing them on the foot stands. Insert the pegs of the foot stand into the bottom holes of the frame. Align the holes from the foot stand's pegs with the holes on the tubes of the frame and secure insert $\frac{1}{4}$ " x 1.5" long quick release pin. Two foot stands per LCD (Figure 1).

Step 2:

Align the frames with foot stands side by side (edge to edge). Slowly slide out the horizontal connecting bars until the holes line up to the holes of the other frames tube. For permanent installation use the provided $\frac{1}{4}$ -20 x 1.25" long screw, nuts and washers to lock the connecting bars inside the tube. For quick assembly and disassembly installation, use $\frac{1}{4}$ x 1.5" grip quick release pins, sold separately (Figure 1).



Use an M8 or 5/16" Allen wrench to rotate the coffin latch counter clockwise until it engage with the mating part on the other frame. Rotate clockwise when engaging from the rear side of the frame.

Step 3: Install LCD to Frames

Install the LCDs to the frames starting from the right side. Align the stand-off buttons to the large hole of key-hole slots then slowly slide downward to lock (Figure 2). Insert the $\frac{1}{4}$ x2.25" long detent pin to the side holes of the tube where the key hole is located to lock the stand-off buttons from sliding out (Figure 2A).

NOTES:

For portrait mode, start the LCD installation the left side. The largest hole of the key-hole slots must be on the top right side

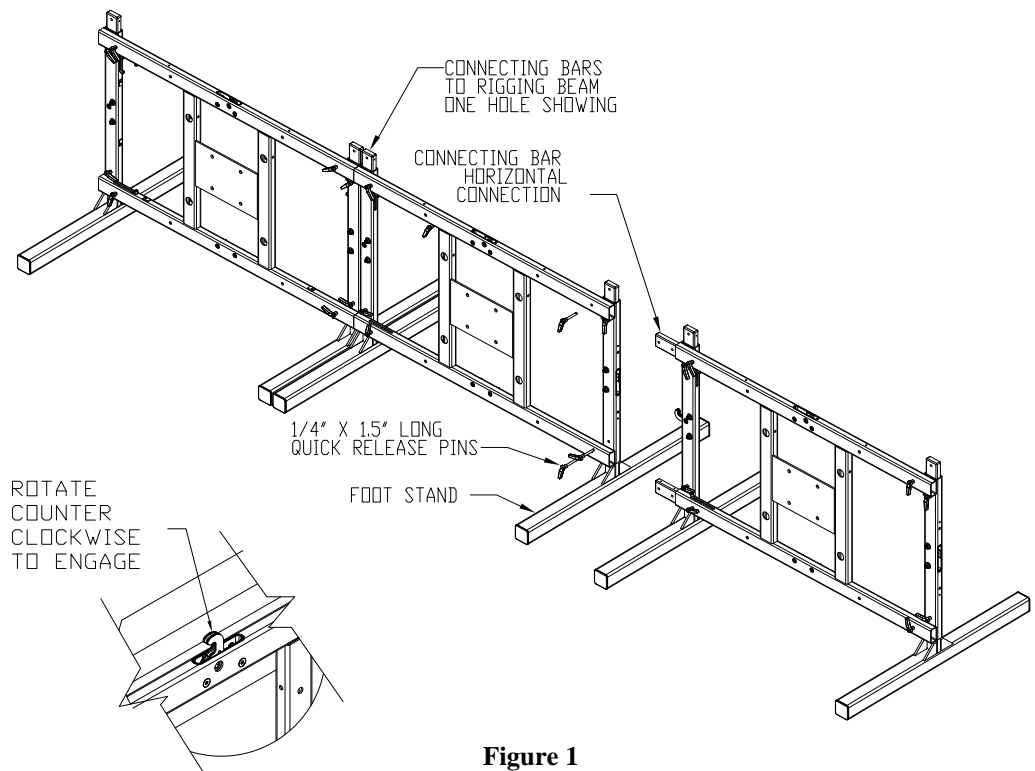


Figure 1A

Figure 1

Step 4:

Slide the connecting bars out from the top tubes of the frames until there are two holes visible (about 3.5" inches sticking out). Align the holes of the connecting bars to the holes on the tube then insert bolts, washers and nuts to lock connecting bar in position. For quick assembly and disassembly use 1/4" diameter x 1.5" long quick release pins.

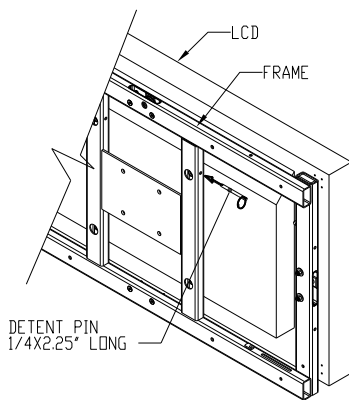


Figure 2A

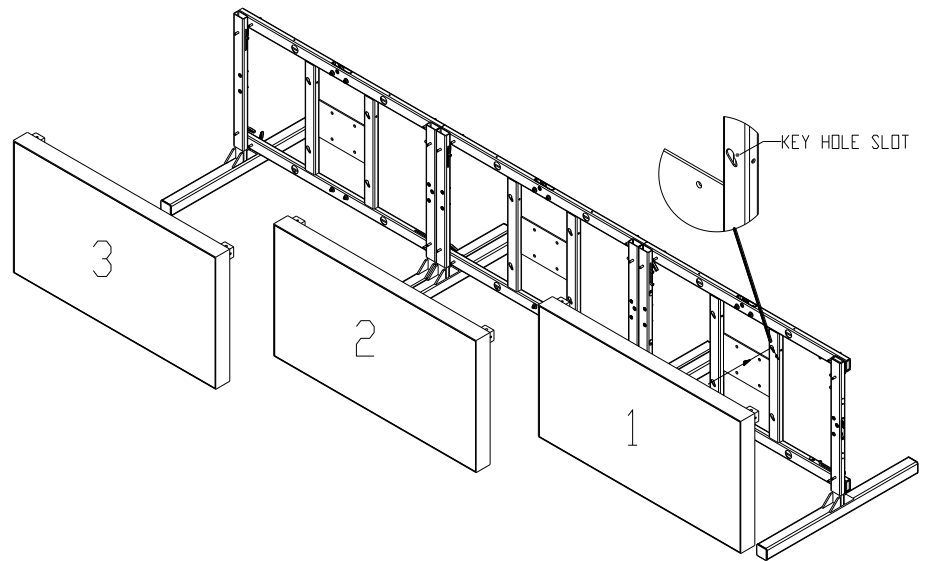


Figure 2

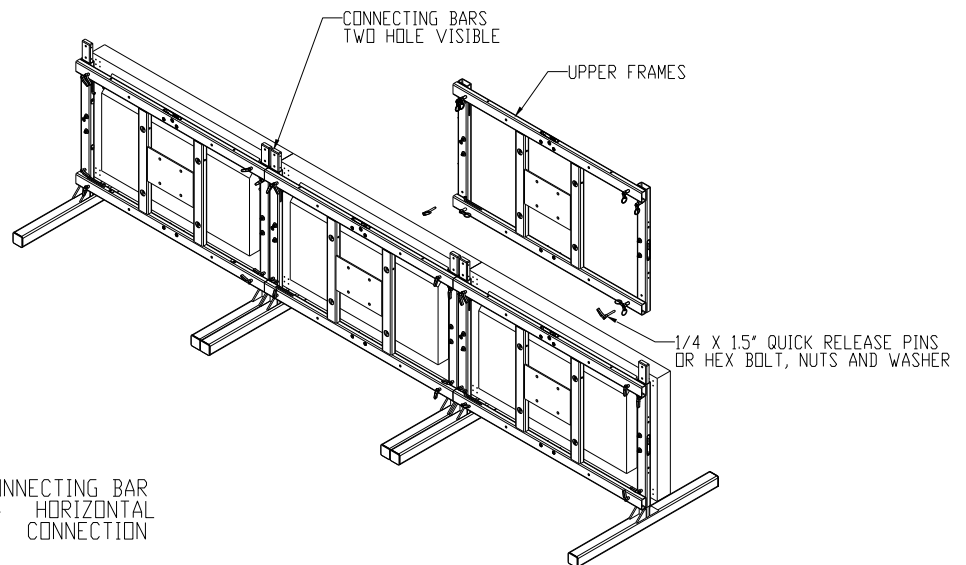


Figure 3 (Rear View)

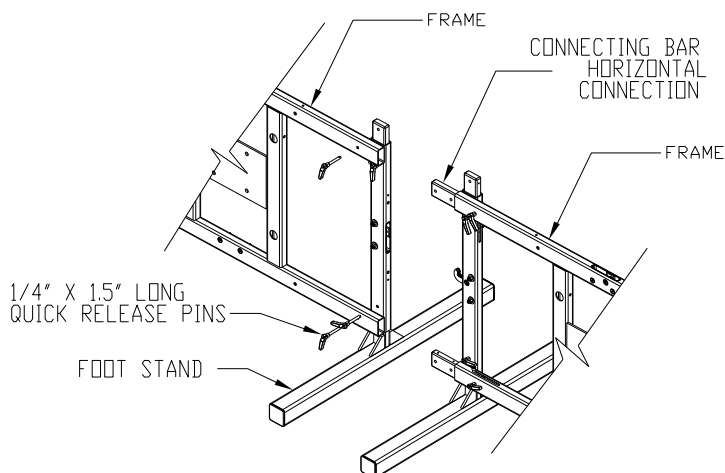


Figure 4

Step 5:

Attach the second row of frames individually on top of the bottom row. Place a frame over the extended connecting bars of the bottom frames until the holes of the tubes aligns with the holes of the connecting bars then lock connecting bars in position using the

provided bolts, washers and nuts. For quick assembly and disassembly use 1/4" diameter x 1.5" long quick release pins. Repeat process on the rest of the frames on the second row (Figure 3). Each end of the connecting bars must be secured from each frames with bolts, nuts and washer or quick release pins

Step 6:

Slide the top and bottom horizontal connecting bars of the frames side ways to securely connect one frame to another side by side (Figure 4). Use an M8 or 5/16" Allen wrench to rotate the coffin latch counter clockwise until it engage with the mating part on the other frame. Rotate clockwise when engaging from the rear side of the frame (Figure 4).

Step 7:

Install the second row of LCDs to the frame starting from the right side. Align the stand-off buttons on the large hole of the frame's key-hole slots then slide downward to lock (Figure 5). Insert the 1/4x2.25" long detent pin to the side holes of tube where the key hole is located to lock the stand-off buttons from sliding out (Figure 2A).

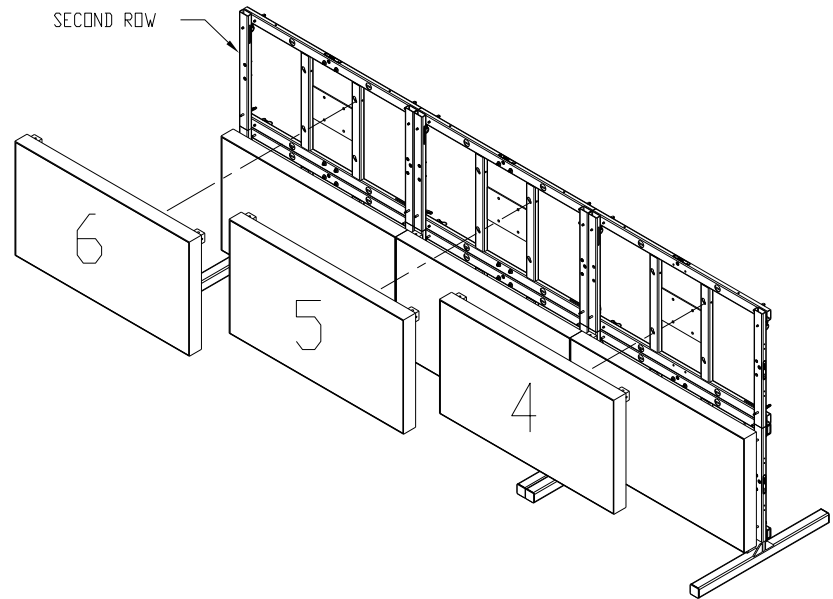


Figure 5

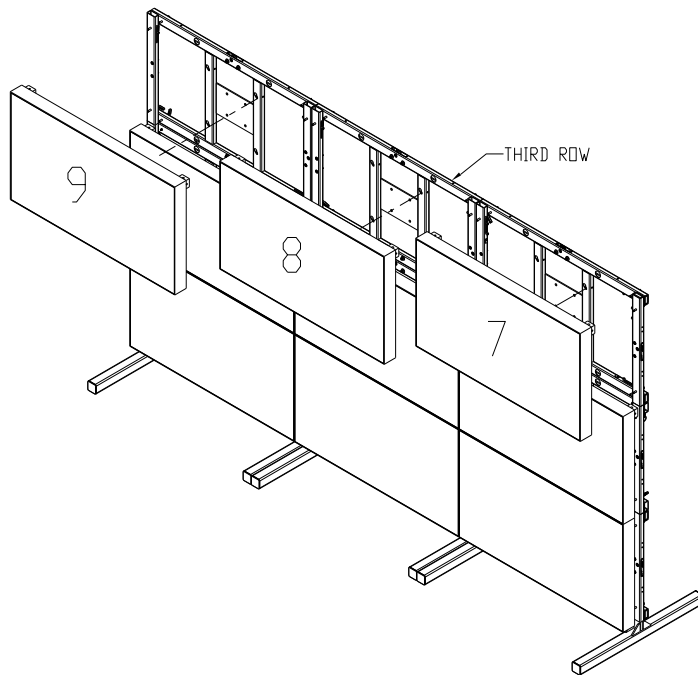


Figure 6

Step 8:

Repeat step 4, 5, 6 and 7 for the third row of LCD (Figure 6).

Step 9:

Attach the appropriate side strap to the sides of the free standing video wall display using the provide screws. See side strap Instruction sheet for details (Figure 7).

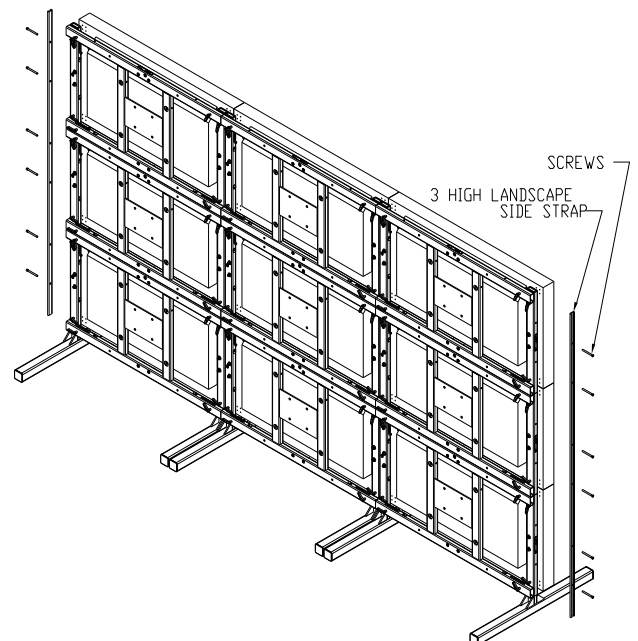


Figure 7

Step 9: Optional

Place counter weights on the rear of the foot stand to support the weight and prevent the video wall from tipping front ward. If necessary, remove the end caps on the foot stand tubes and add an extension tube support on the front and/or on the rear end tubes of the foot stand for more leverage.

Step 10:

Make sure assembly is secured, balanced and stable on the floor before leaving video wall display.

Dual Stand Installation Guide

MVFS-X461-T

Step 1:

Decide what configuration of video wall display to assemble then prepare dual stand per manufacturer's assembly instructions.

Note:

Installer must verify safe working load of stand before installation

Step 2:

Install the dual stand's sliding bracket to the poles of the stand (Figure 1). Depending on the configuration selected, it should match the quantity of sliding bracket with the LCD screen to be installed per stand.

Step 3:

Starting from the bottom, attach the frames to the sliding bracket of the dual stand using the provided screws and washers. Tighten permanently. *If screws and washers are not provided consult with the dual stand manufacturer for the required screw size and length needed* (Figure 2). Adjust the position of the lower frame by loosening the locking screw behind the sliding bracket then slowly slide the bracket down or upward to desired position. Tighten locking screws permanently.

Step 4:

Attach the upper frame to the next sliding bracket above the lower frame using the screws provided from the dual stand hardware kit. Adjust the position of the upper frame until the bottom tube touches the top tube of the lower frame (Figure 2).

Step 5: Connect Frames

Slide the top connecting bars of the lower frame into the vertical tubes of the upper frame until the first hole of the connecting bars lines up with the hole of the upper frame. For permanent install, insert the provided $\frac{1}{4}$ " x 1.25" long bolts, nuts and washers to lock connecting bars in position. For quick assembly and disassembly use $\frac{1}{4}$ " diameter x 1.5" long quick release pins. Each connecting bars should be lock to the frame with bolts or quick release pins (Figure 2).

Use an M8 or 5/16" Allen wrench to rotate the coffin latch counter clockwise (from the front) on top of the lower frame to engage latch connection between the bottom and the top frames. When rotating from the rear of the frame, rotate coffin latch clockwise (Figure 3).

Step 6: Install LCD

Install the bottom LCD first to the frame. Align the stand-off buttons to the large hole of key-hole slots then slide downward to lock (Figure 4). Insert the $\frac{1}{4}$ " x 2.25" long detent



pin to the side hole of tube where the key hole is located to secure the stand-off buttons from sliding out (Figure 4A). Repeat process for the upper LCD (Figure 5).

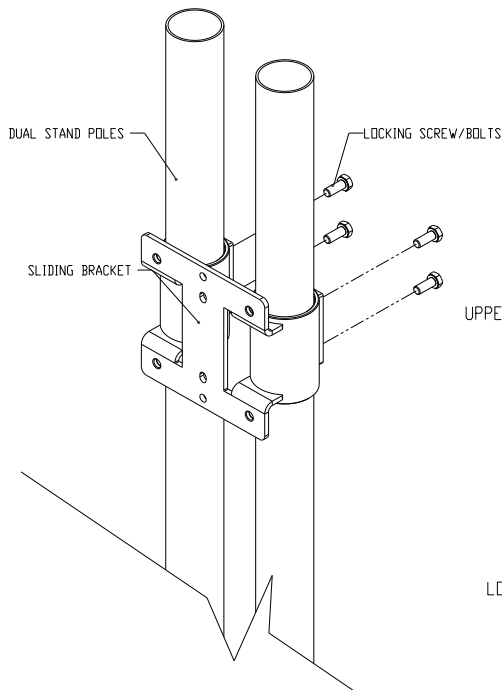


Figure 1

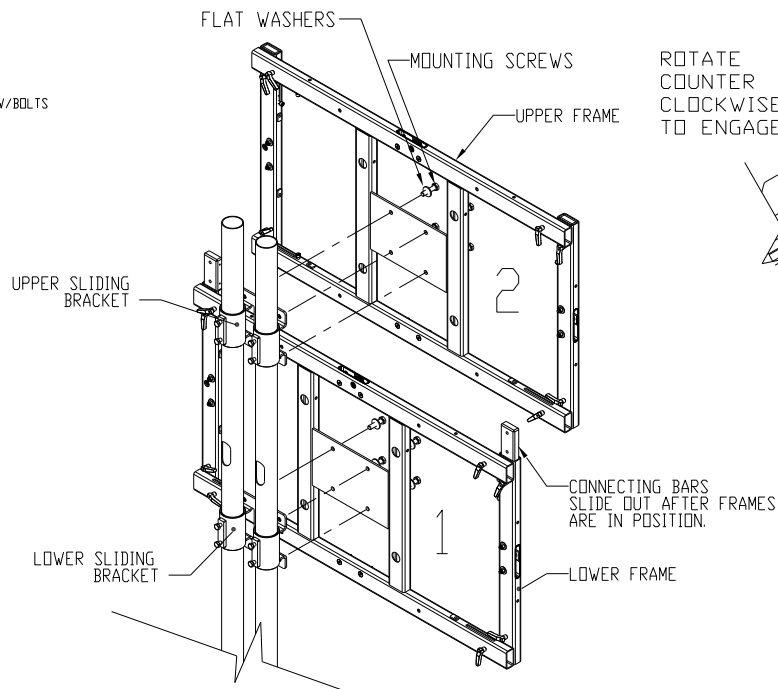


Figure 2

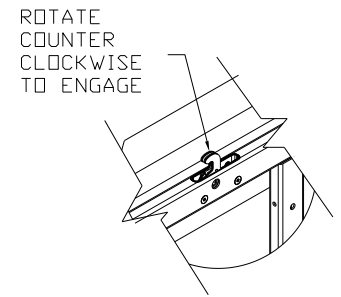


Figure 3

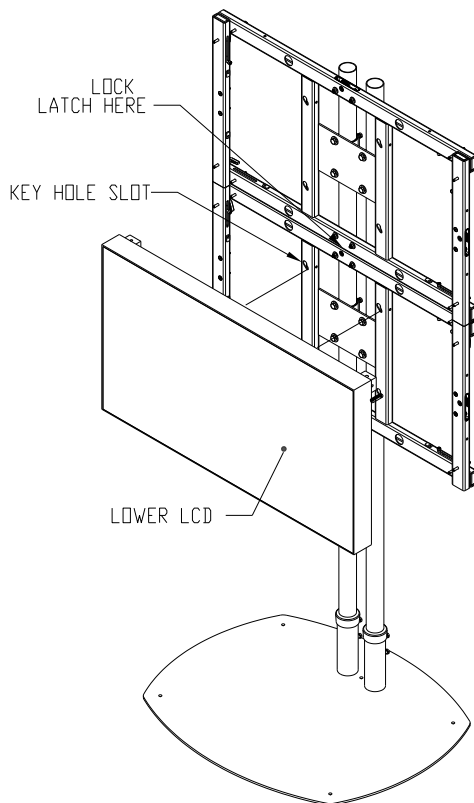


Figure 4

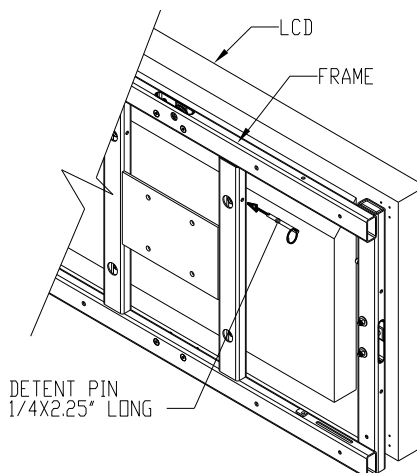


Figure 4A

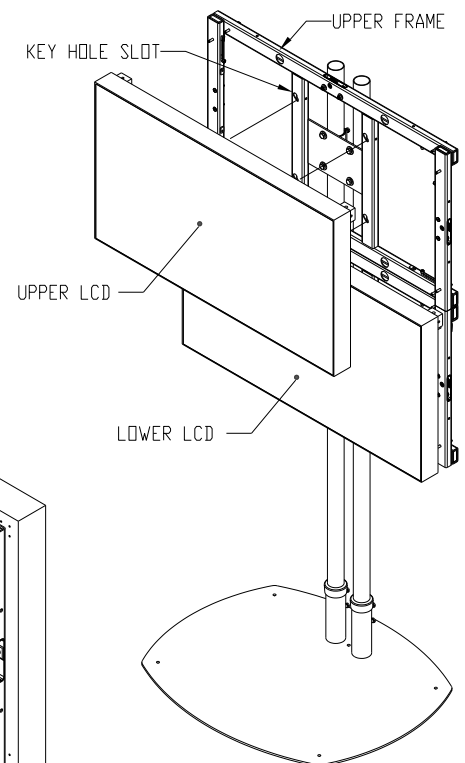


Figure 5

Dual Stand 2 wide X 2 high Video Wall Configurations

Step 7:

Follow step 2 to 5.

Step 8:

Position two assembled frames and stands side by side until the side edges of the frames touch. Make sure the frames are level in height. If necessary, adjust the frame's height location by loosening the sliding bracket' screw until frames from each stand are level.

Step 9:

Slide the horizontal connecting bars out of the tubes until the holes line up with the hole on the tube then insert bolts, washer and nuts to lock connecting bars to the tube. Slowly move and slide the other stand/frames assembly until the connecting bars goes inside the tubes of the other frames. Line up the holes of the connecting bars with the holes on the frame's tube the insert bolts, washer and nuts to lock connecting bars to the tube. For permanent install, use the provided 1/4"x 1.5" long bolts, nuts and washers. **For quick assembly and disassembly use 1/4" dia. x 1.5" long quick release pins (Figure 6).**

Use an M8 or 5/16" Allen wrench to rotate the coffin latch counter clockwise (from the front) on the side of the frames to engage latch connection between the frames. When rotating from the rear of the frame, rotate coffin latch clockwise (Figure 3).

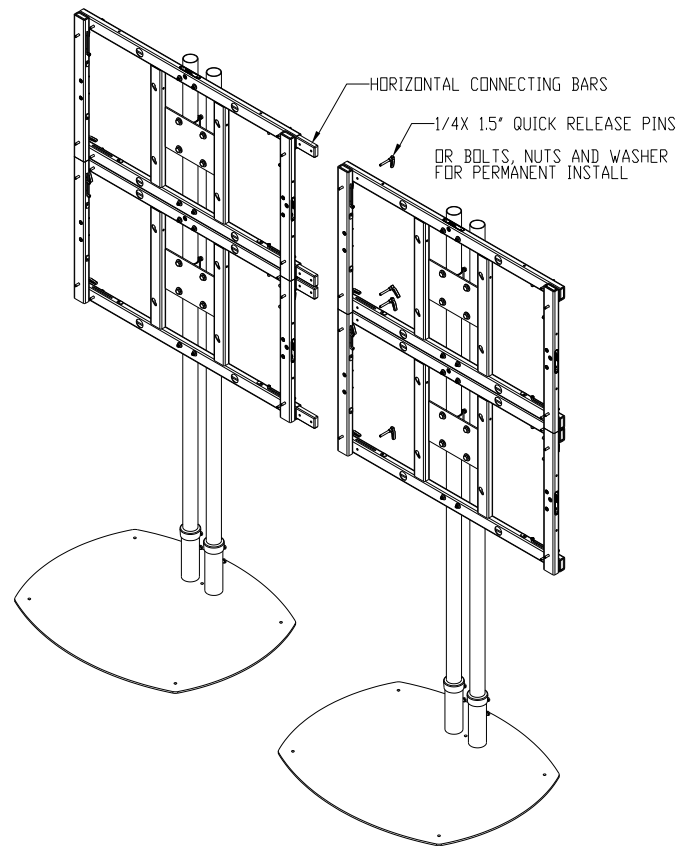


Figure 6

Step 10: Install LCD

Install the LCD starting from the bottom right and ends on the top left by aligning the stand-off buttons on the large hole of key-hole slots then slide downward to lock (Figure 7). Insert the 1/4x2.25" long detent pin to the side hole of tube where the key hole is located to secure the stand-off button from sliding out (Figure 4A).

Step 11:

Check all connections and stability of the stand before leaving video wall display.

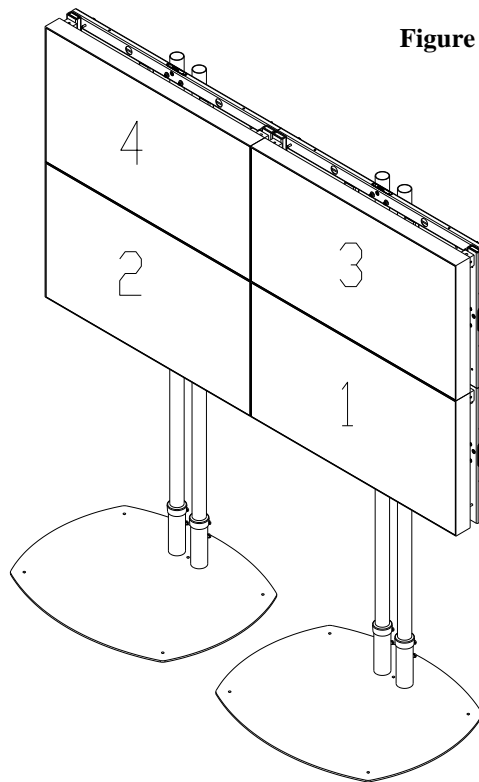


Figure 7

3 wide x 2 high Video Wall Configurations

Step 11:

Follow step 2 to 5.

Step 12:

Position two assembled frames and stands with at least 42" in between them.

Step 13:

Connect a lower center frames in between the two frames attached to the dual stands by sliding the horizontal connecting bars out of the left frames/stand assembly and lock into position with bolts, washer and nuts. Extend out the horizontal connecting bars from the lower center frame and insert inside the tubes of the right frames/stand assembly until the holes line up. Lock connecting bars to tubes using provided bolts, washers and nuts. Use 1/4" x 1.5" long quick release pins for quick assembly and disassembly (Figure 8).

Step 14:

Repeat process for the upper center frame (Figure 8).

Use an M8 or 5/16" Allen wrench to rotate the coffin latch counter clockwise (from the front) on the side of the frames to engage latch connection between the frames. When rotating from the rear of the frame, rotate coffin latch clockwise (Figure 3).

Step 15: Install LCD

Install the LCD starting from the bottom right and ends on the top left by aligning the stand-off buttons on the large hole of key-hole slots then slide downward to lock (Figure 9). Insert the 1/4x2.25" long detent pin to the side hole of tube where the key hole is located to secure the stand-off button from sliding out (Figure 4A).

Step 15:

Check all connections and stability of the dual stand before leaving video wall display.

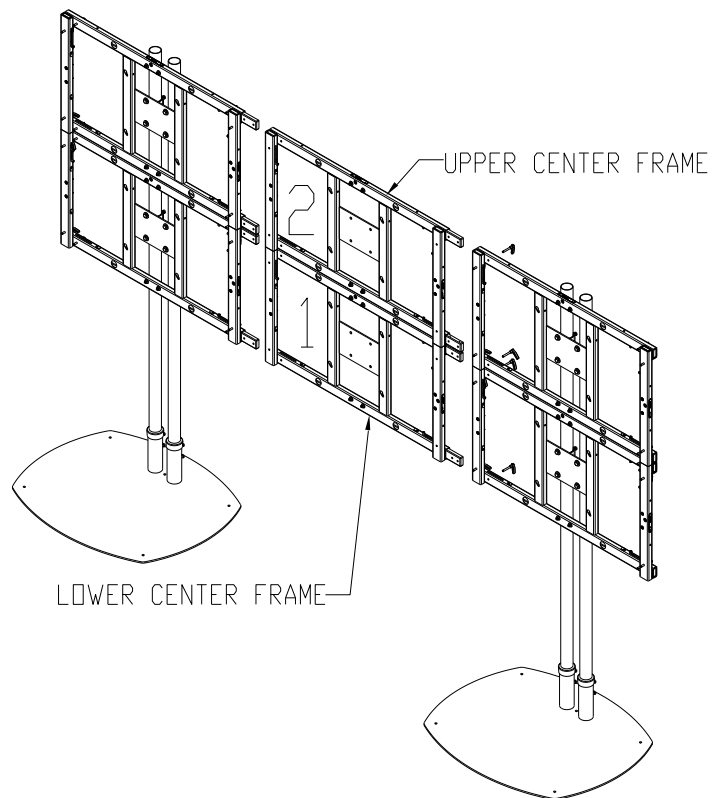


Figure 8

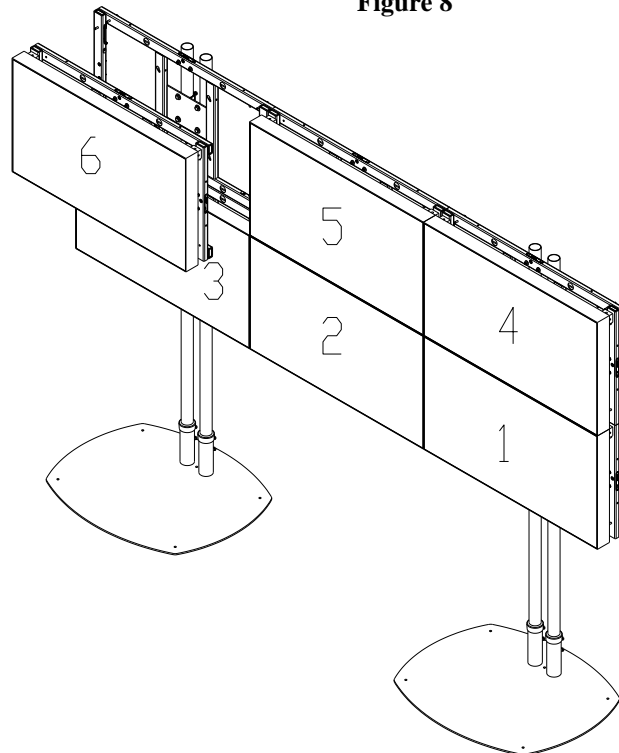


Figure 9