# THÖR

# RIDGE
Installation Guide

# Contents

# SAFETY INSTRUCTIONS

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of un-insulated and/or potentially dangerous voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## IMPORTANT SAFETY INSTRUCTIONS
1. Read and understand this entire instruction guide.
2. Keep this guide available for reference.
3. Heed all warnings and precautions in this guide and notices marked on the product.
4. Do not use this product near water or damp environments.
5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
6. Provide for proper airflow around product. Do not install near products that produce high levels of heat. Do not expose the unit to direct sun light or heating units as the internal components' temperature may rise and shorten the life of the components.
7. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong.
8. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they connect to the product. Do not use the unit if the electrical power cord is frayed or broken.
9. Only use attachments/accessories specified by the manufacturer.
10. Unplug this product during lightning storms or when unused for long periods of time.
11. Refer all servicing to qualified service personnel. There are no user serviceable components inside the product.
12. The product shall not be exposed to moisture. Do not touch the unit with wet hands. Do not handle the unit or power cord when your hands are wet or damp.
13. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.

## CARE
- From time to time you should wipe off the front and side panels and the cabinet with a dry soft cloth. Do not use rough material, thinners, alcohol or other chemical solvents or cloths since this may damage the finish or remove the panel lettering.
- The manufacturer cannot be held responsible for damages caused to persons, personal possessions, or data due to an improper or missing ground connection.

## THOR LIMITED WARRANTY

All THOR AV LED products are warranted to the original purchaser to be free of defects in materials and workmanship for a period of two years from date of purchase. During this period, THOR AV will, at its discretion, repair the defective unit or replace it with a new or rebuilt one.

The warranty does NOT cover:
Damages caused by abuse, accident, improper use, improper handling, improper operation, improper installation/disassembly of the display or any other customer misconduct.
Damages due to installation of any unauthorized hardware, accessories, consumable parts or components.
Defects, malfunctions or damages caused during transportation.
Units on which the product serial number has been removed or altered.
Units that have been serviced by unauthorized personnel.

All implied warranties, including warranties on merchantability and fitness, are limited in time to the length of this warranty. Some states do not allow time limitations on implied warranties, so this limitation may not apply to you. THOR AV's liability is limited to the repair or replacement of its product. THOR AV shall in no way be held liable for incidental or consequential damages resulting from the use of their product or its software, including, without limitation, damages from loss of business profits, business interruption, loss of business information or other pecuniary loss. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

REPAIR POLICY
Please contact support@thorav.us to obtain an RMA number prior to returning your product to THOR AV. Do not return the product to the place of purchase. Write the RMA number on the outside of the shipping carton. Any product sent to us without a valid RMA number will be refused.

Shipping Address:
THOR AV
Attn: RMA Number
8821 Zealand Ave. N, Ste. B
Brooklyn Park, MN 55445 USA

Include the following with the product: a brief description of the problem, your name, return shipping address, phone number and the RMA number. Do not include any accessories. THOR AV is not responsible for any damage to or loss of the product during transit. We recommend that customers obtain a receipt and tracking number for all packages shipped to us. Turnaround time on repairs is generally ten business days. If you live outside of the United States, please contact your local distributor for warranty service.

WARRANTY SERVICE
You will be responsible for shipping charges to THOR AV and the product will be returned by THOR AV. We reserve the right to inspect any product that may be the subject of any warranty claim before repair is carried out. To qualify for warranty service, documentation showing the date of purchase may be required. Final determination of warranty coverage lies solely with THOR AV.

## Non-Warranty Service
If it is determined that the product does not meet the terms of our warranty, you will be billed for labor, materials, return shipping and insurance. There is a $80 USD minimum charge for materials and labor. Appropriate shipping charges will be applied. We require payment in advance of repair by credit card; we accept Visa and Master Card. In the event the charges are over the minimum charge, THOR AV will contact you and inform you of the cost of the repair before any work is completed.

# THOR:

## PARTS

### Flown Install

**Flybar 600mm**

600mm x 66.67mm  x  4.69mm
23.63" x 2.63" x 4.69"
4.5 kg / 9.92 lbs

**Flybar 1200mm**

1200mm x 66.67mm x 119mm
47.24" x 2.63" x 4.69"
8.5 kg / 18.74 lbs

**Flybar Bracket**

98mm x 75mm x 10mm
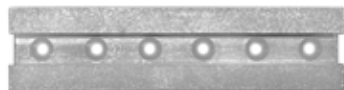3.86" x 2.95" x .39"
.18 kg / .34 lbs

**Flybar Endcap**

75mm x 48mm x 10mm
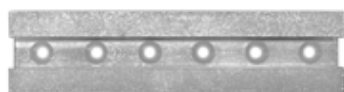2.95" x 1.89" x .39"
.09 kg / .12 lbs

### Wall Mount Install

**Wall Mount 1800mm Track**

1800mm x 38.1mm x 25.4mm
70.87" x 1.5" x 1.0"
2.45 kg / 5.4 lbs

**Wall Mount 2400mm Track**

2400mm x 38.1mm x 25.4mm
94.49" x 1.5" x 1.0"
1.8 kg / 4 lbs

**Wall XYZ Mount**

114.3mm x 63.5mm x 38.1mm
4.5" x 2.5" x 1.5"
.36 kg / .8 lbs

### Ground Stack Install

**Ground/Flybar 600mm**

600mm x 80mm x100mm
23.63" x 3.15" x 3.94"
4.63 kg / 10.1 lbs

Ground and Flown Install

**Ground/Flybar 1200mm**

1200mm x 80mm x 100mm
47.24" x 3.15" x 3.94"
9.53 kg / 21 lbs

Ground and Flown Install

**Rear Ground Truss 850mm**

850mm x 160mm x 105mm
33.46" x 6.3" x 4.13"
3.76 kg / 8.3 lbs

**Ladder Truss 765mm**

675mm 240mm x 50mm
26.58"x  9.45" x 1.97"
2.5 kg / 5.5 lbs

**Ladder Truss 1010mm**

1010mm x 240mm x 50mm
39.76" x 9.45" x 1.97"
3.18 kg / 7 lbs

**Locking Clamp**

240mm x 105mm x 116mm
9.45" x 4.12" x 4.57"
.64 kg / 1.4 lbs

**Rear Drawbar 1200mm**

1200mm x 50mm x 30mm
47.24" x 1.97" x 1.18"
1.81 kg / 4 lbs

# THOR:

**TOOLS**

## Flown Install
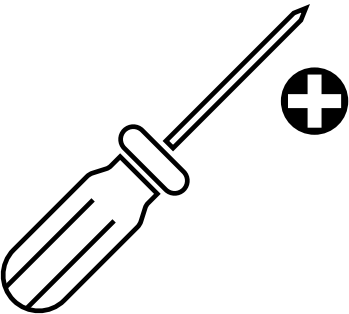
Large Phillips Screwdriver
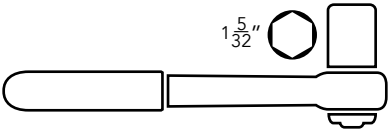
Thin Wall Socket 1-5/32"

$1\frac{5}{32}$"

## Ground Stack Install
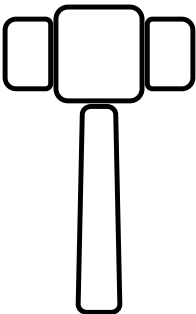
Rubber Mallet
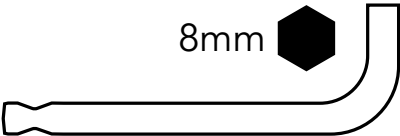
Hex Key 8mm
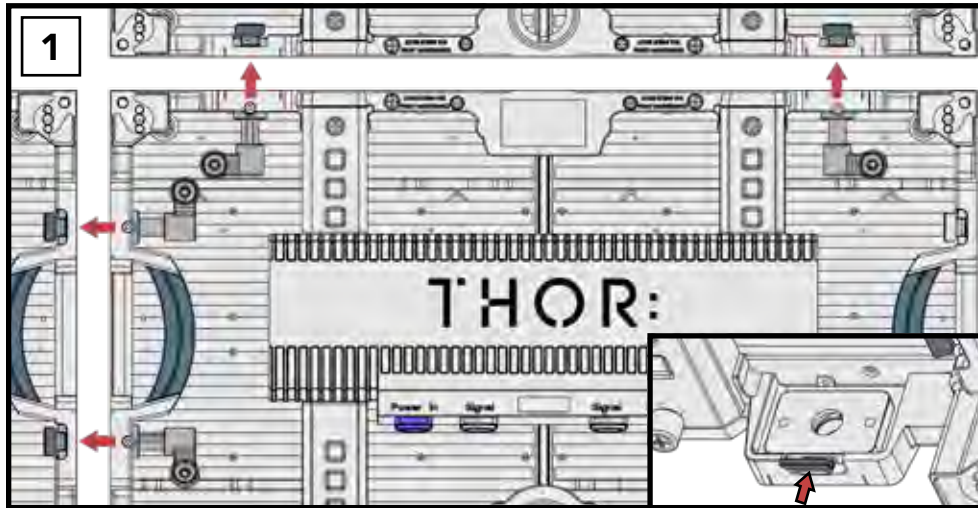
8mm
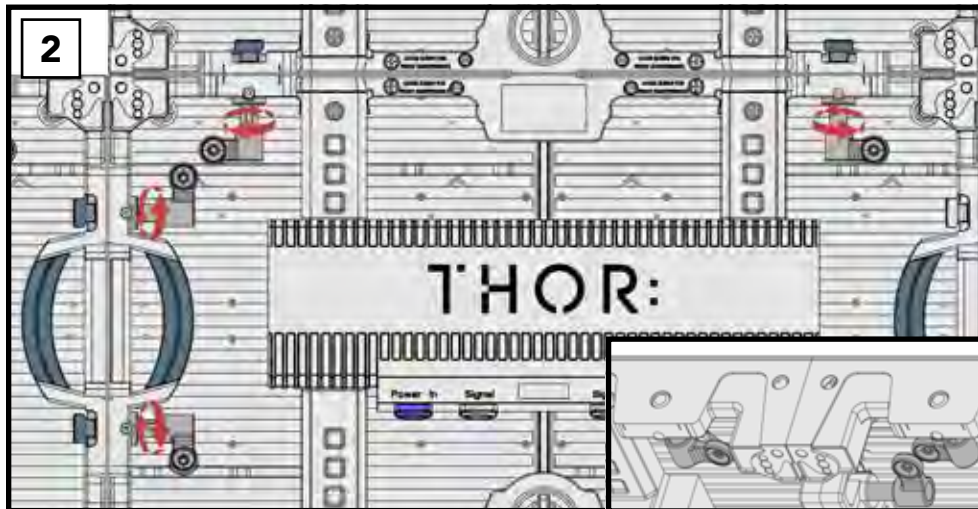
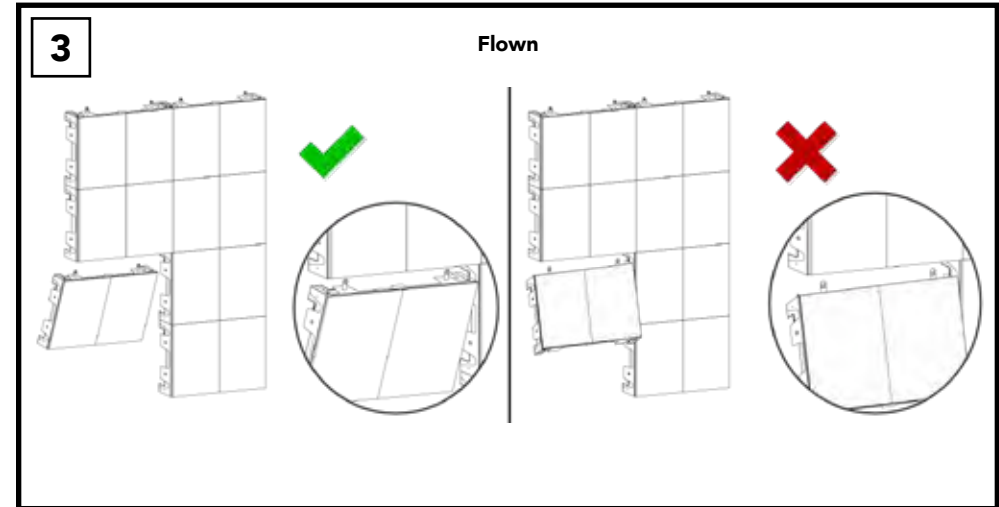## Wall Mount Install

Drill

Hex Key 3/16"

3/16"

# THOR:
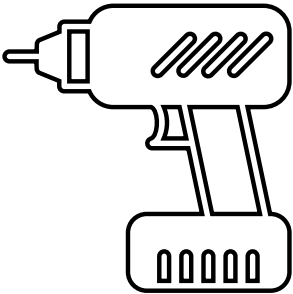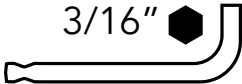
## LED PANEL ASSEMBLY

**1**



Insert top Latch Guide Pins into receiving holes on panel. Next, insert side Latch Guide Pins into adjacent panel. Push latch lever to lock or release Latch Guide Pins.

**3**

**Flown**



Connect panels at an angle to avoid top and side module edges from becoming damaged.

**2**



Twist Panel Latch Guide Pins to lock into place. Verify face of panels (LED Panels) are flush with each other before tightening into place.

**4**

**Ground Stack**
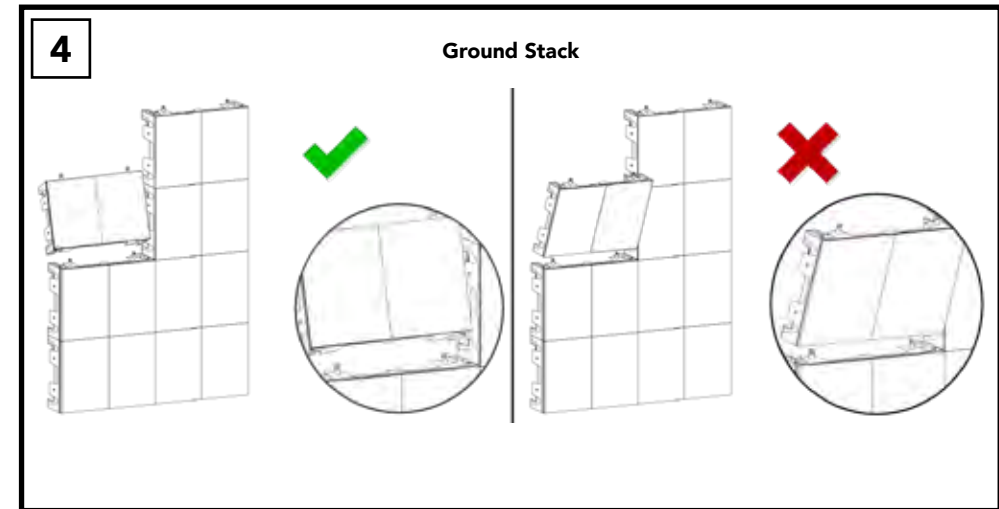


Connect panels at an angle to avoid bottom and side module edges from becoming damaged.

# THOR:
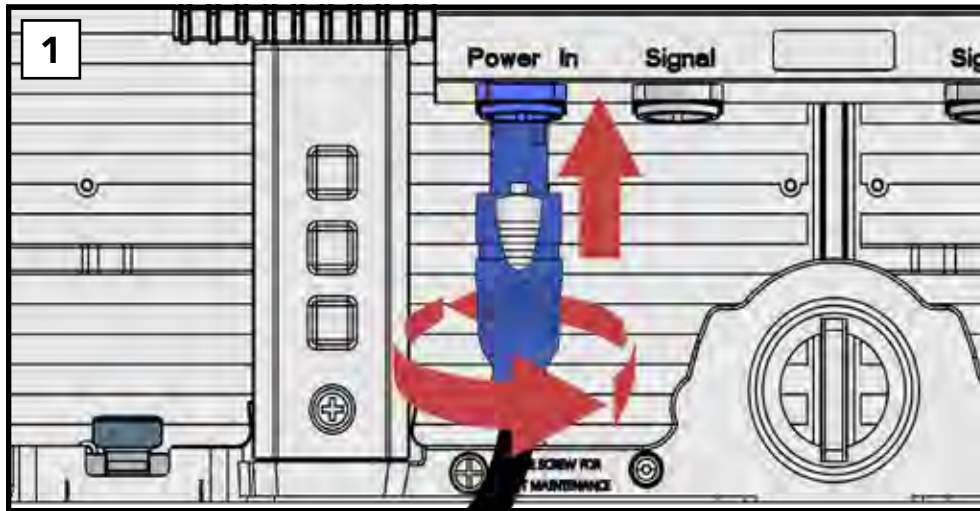
## POWER



Insert power cable and twist power cable clockwise until it clicks.
Disconnect power cable and pull back release button on the power connector. Twist power cable counter-clockwise and remove.
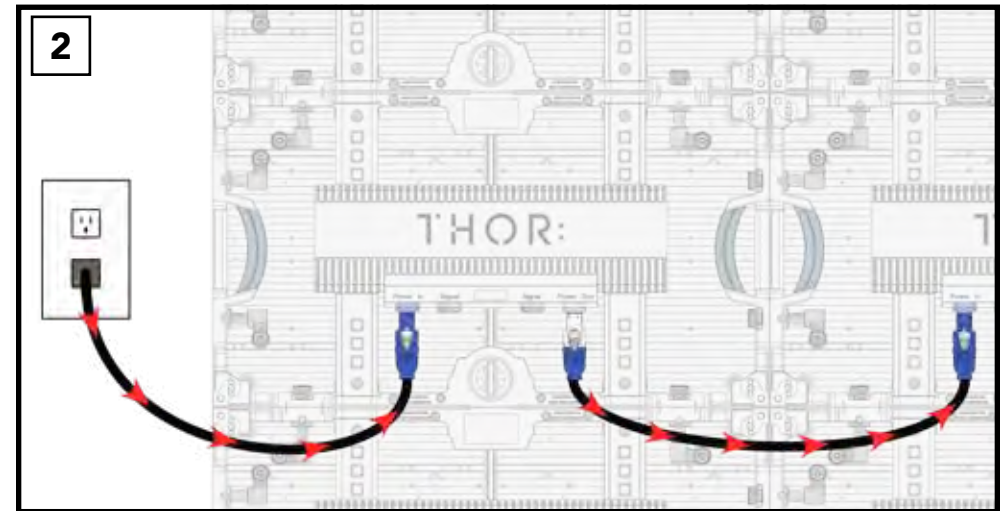


Panels chain together both horizontally or vertically. Power enters from Left Side (facing rear) or Right Side (facing front).
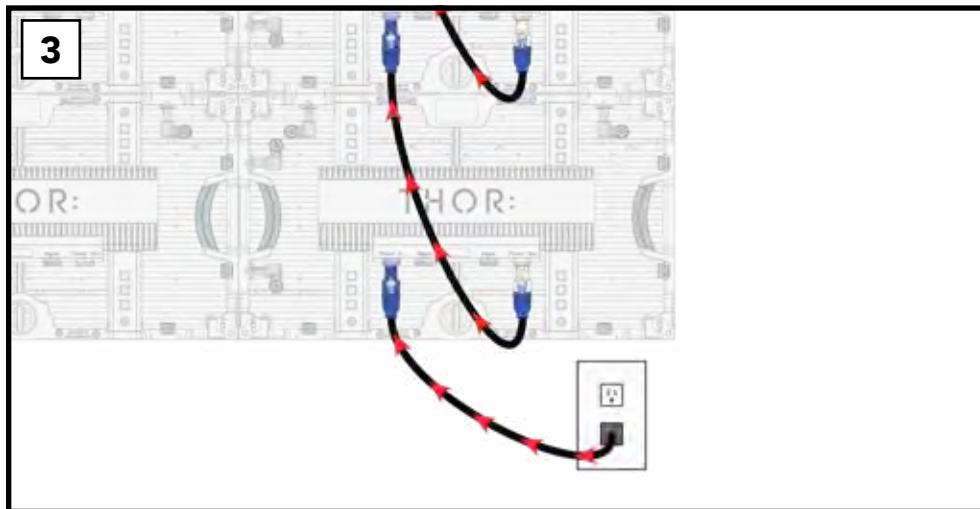


For panels chained vertiacally, power enters from Left Side (facing rear) or Right Side (facing front).

Power runs either horizontally or vertically but needs to run in one direction. This is IN and OUT.

Connect adjacent panels with the short jumper Neutrik cables. Blue is IN and White is OUT.

Connect power cable to circut. Then conncet to first power-in port. Refer to data sheet for load capacity.

## DATA
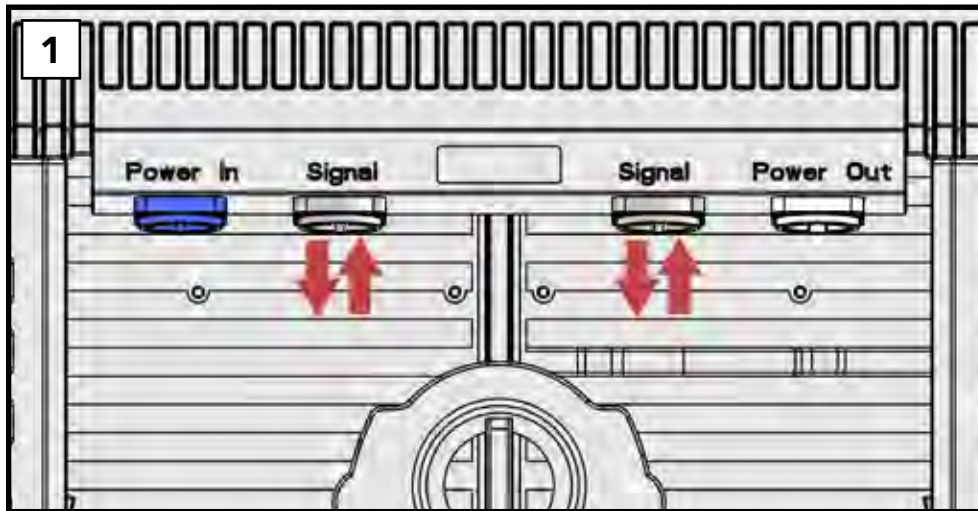


Each signal port can be input or output. If one signal port is the input data, the other port is the output data.
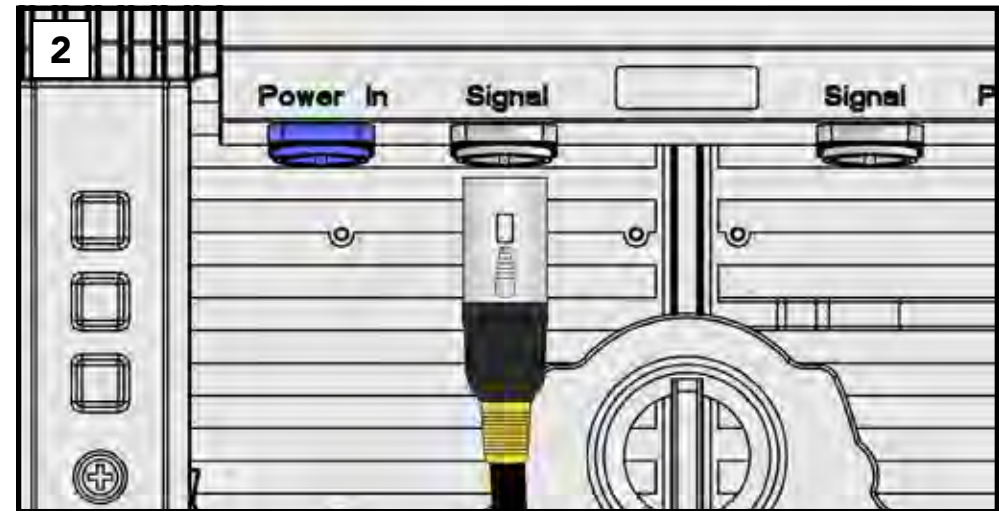


Plug in data cable: Push cable into data port until it clicks.
Unplug data cable: Push button on the socket to release cable and remove.
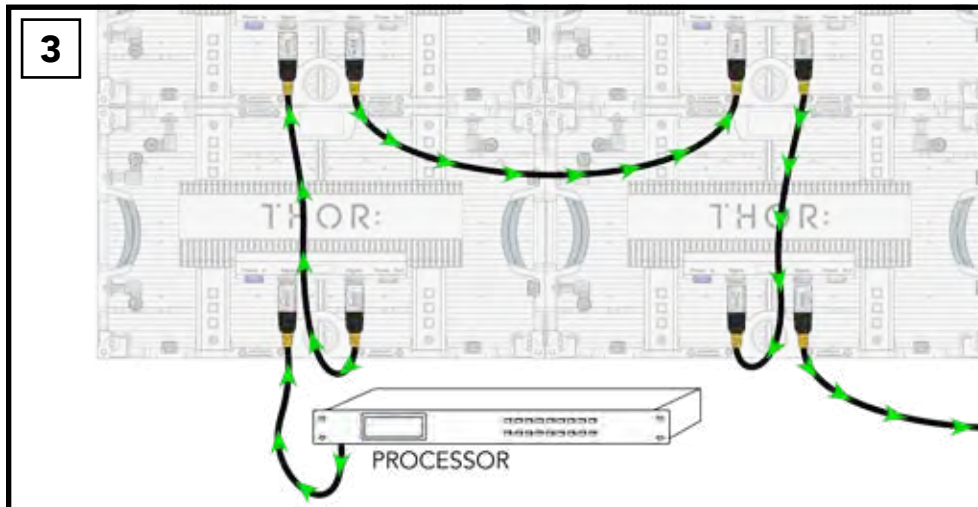


Panels can be chained vertically or horizontally. Be sure one each panel only has one signal in and one signal out.

Generally, one data port on the processor supports up to about 525,000 pixels, depending on your system solution.

If data redundancy is required, each Primary Data Run needs an additional (redundant) data cable; using two data ports on the processor.

When mapping on the control software, check the perspective defined by the software. With different perspective, the mapping direction will be reversed.

Maximum recommended cable length is 100 meters. If the project needs longer control distance, switch to fiber cables.

Connect Panels to the processor data ports with cables provided.
Connect control PC / laptop via the Ethernet/USB port to the processor.
Connect a video source to the processor's video input.

# THOR:

## FLOWN APPLICATION USING FLYBAR

**1**

LEVEL

1 ¾ in (4.5 cm)
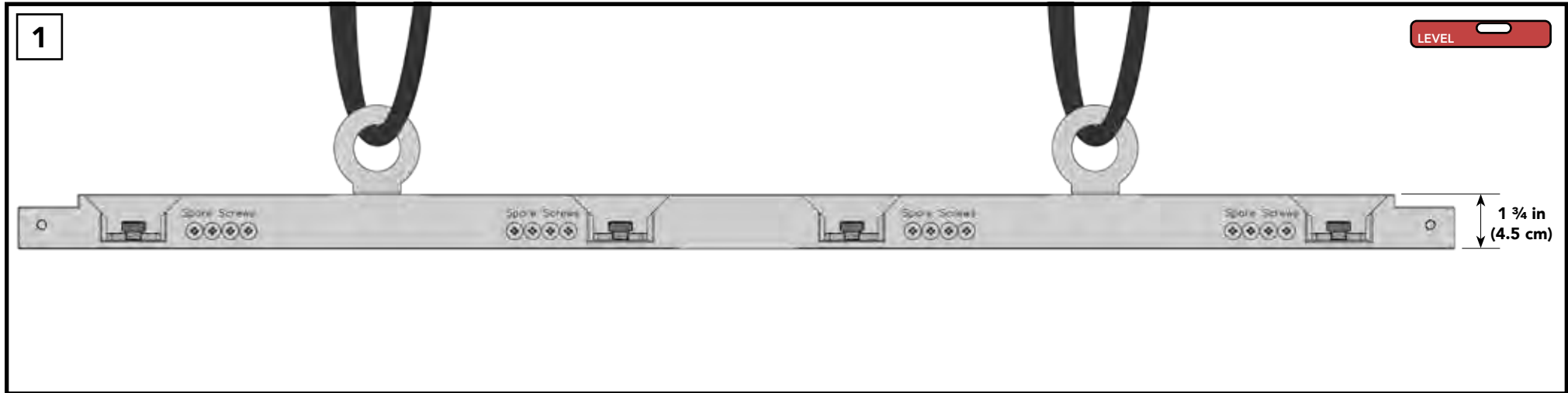
Secure and level Flybars to weight bearing structure using Eyebolt. Eyebolts are removable. Use a thin wall 1-5/32" socket on under side of Flybar.
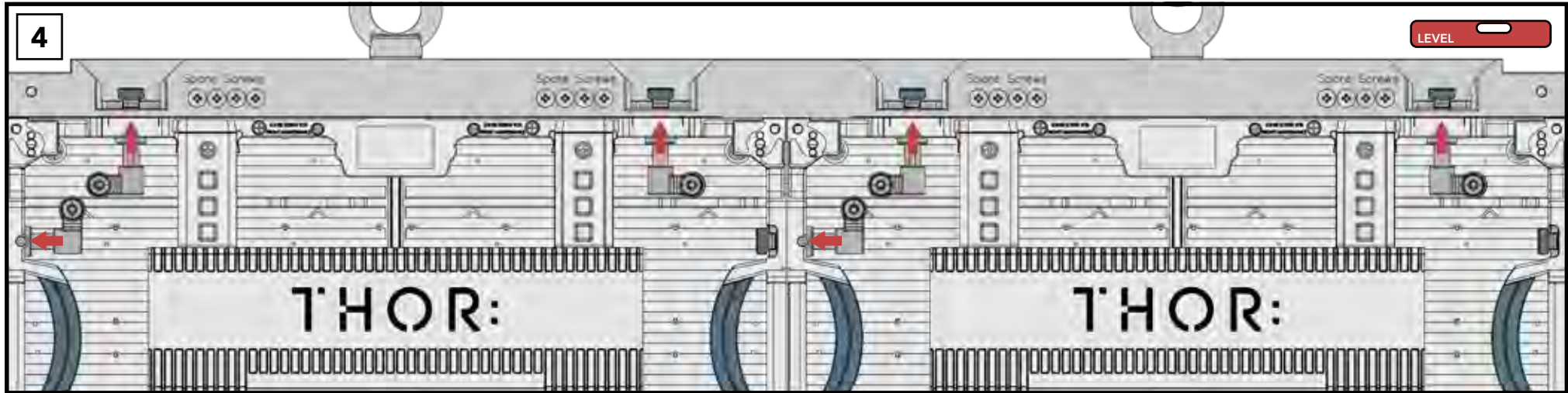
**2**
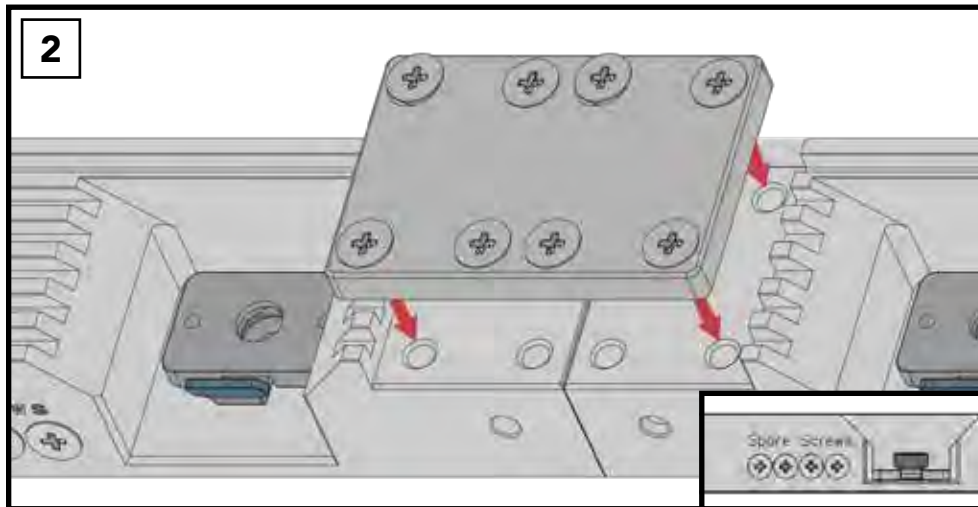
Spare Screws

Loosely secure Flybars together with Flybar Bracket. Use large phillips screwdriver and spare screws on Flybar.

**3**
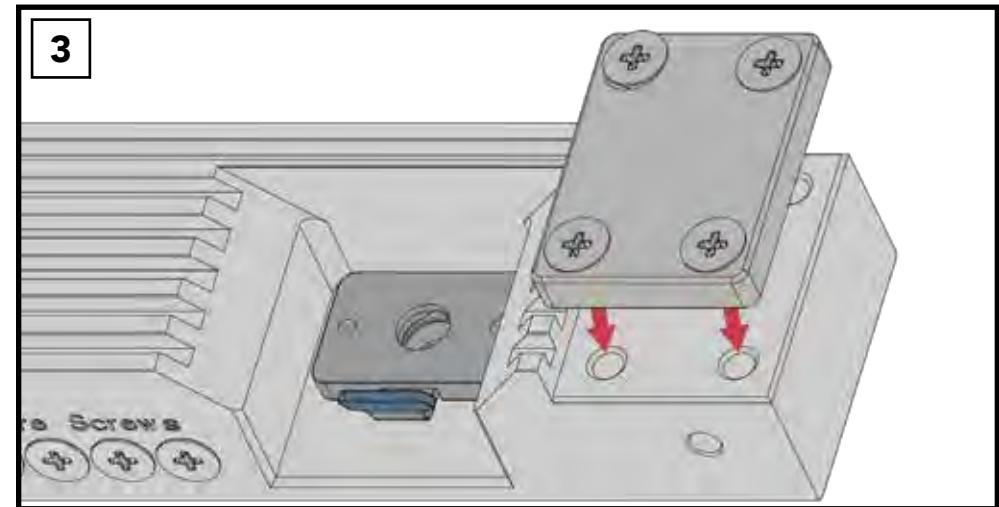
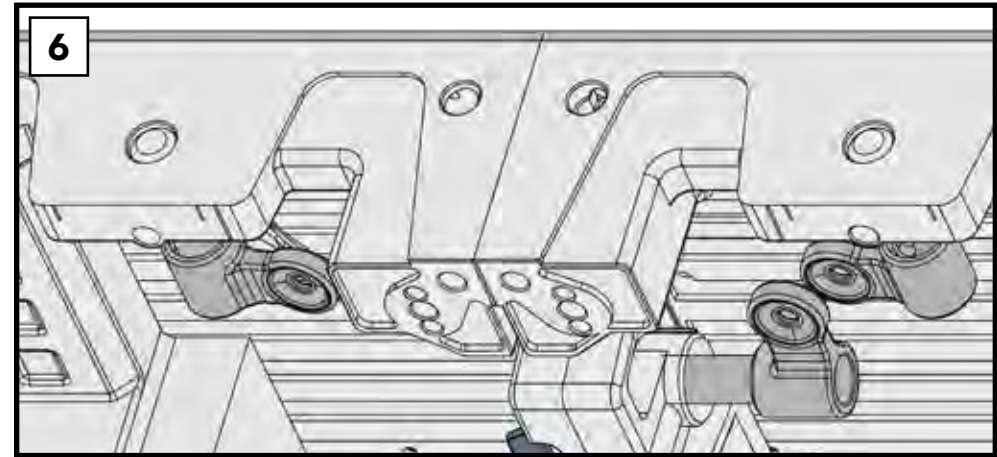Attach aesthetic End Cap to either end of Flybar assembly.

# THOR:

## FLOWN APPLICATION USING FLYBAR

**4**



Insert Latch Guide Pins into receiving holes on Flybar and adjacent panels. Align panels and lock into position by twisting the Latch Guide Pin. Do not over tighten. Continue until first row is complete. For additional rows, align panels and lock into position.

**5**
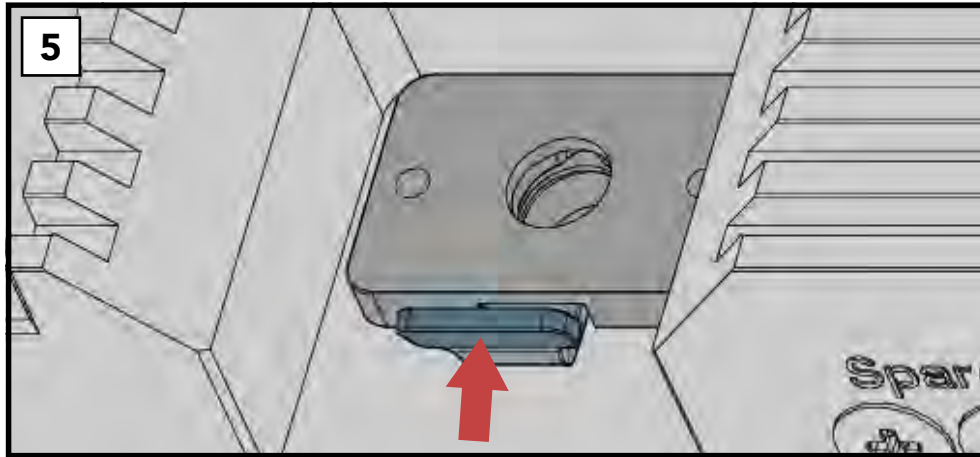


Push latch lever, on Flybar or panel, to lock or release Latch Guide Pins.

**6**



Check that face (LED Modules) of panels are flush with each other before tightening into place.

# THOR:

## FLOWN APPLICATION USING GROUND/FLYBAR

**1**
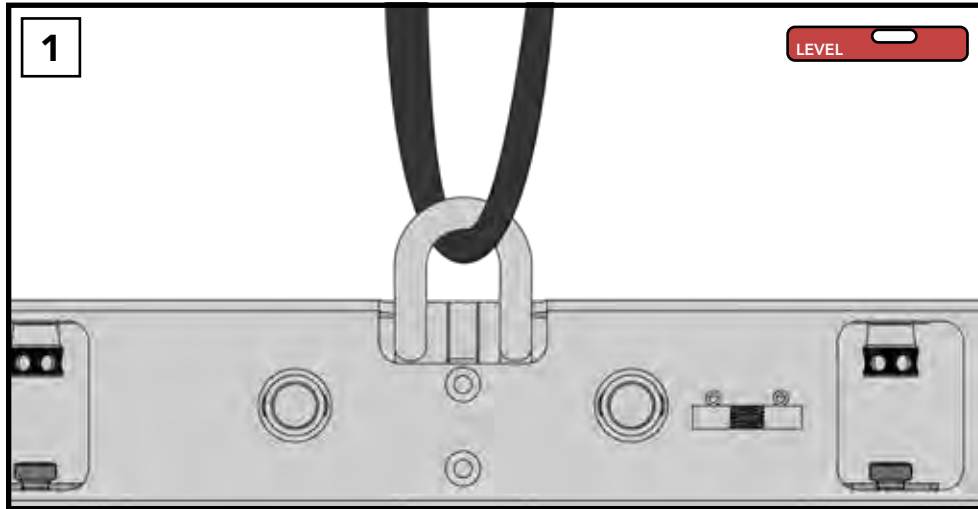
LEVEL

Secure and level Ground/Flybars to weight bearing structure using Eyebolt.
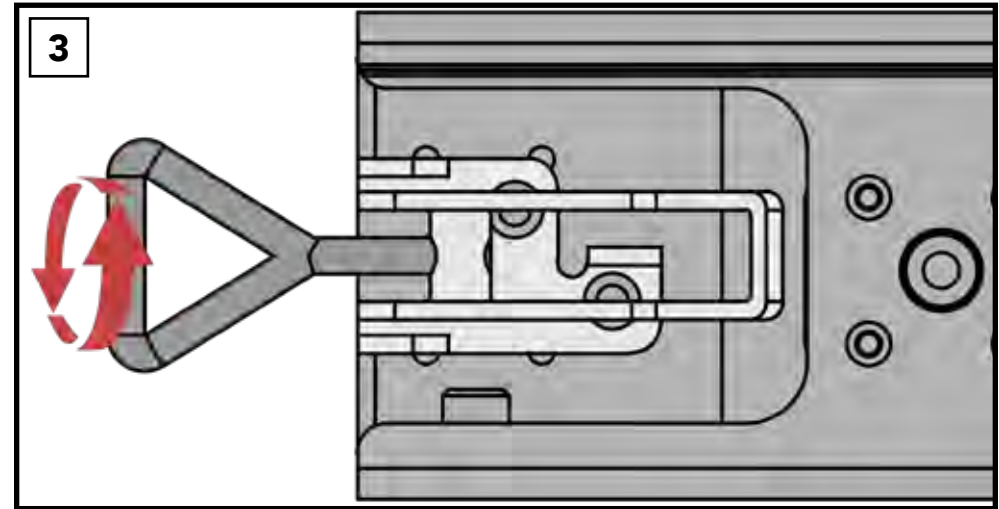
**3**

Attach Ground/Flybar Locking Triangle Eyebolt to adjacent Ground/Flybar and tighten or loosen as needed. Do not over tighten.

**2**
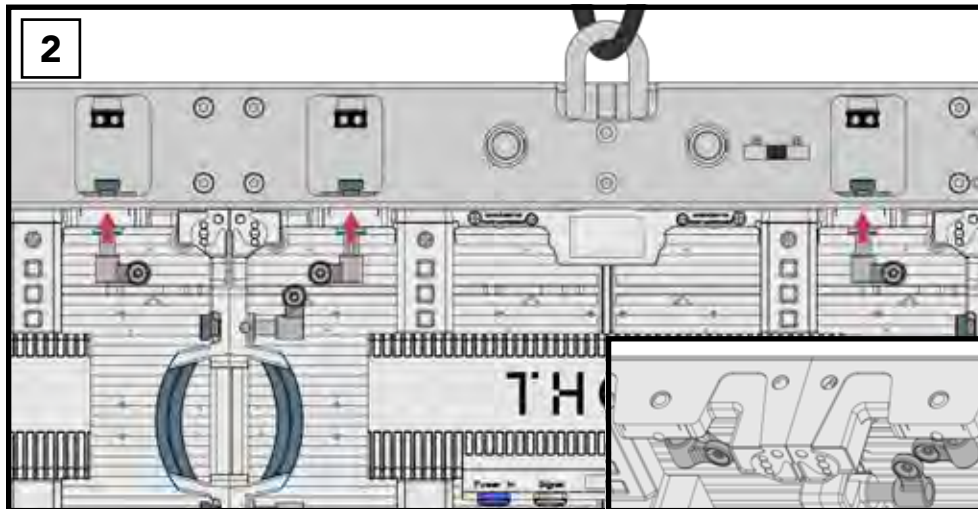
Insert Latch Guide Pins into receiving holes on Ground/Flybar and adjacent panels. Align panels and lock into position by twisting the Latch Guide Pin. Do not over tighten. Continue until first row is complete. For additional rows, align panels and lock into position.

**4**
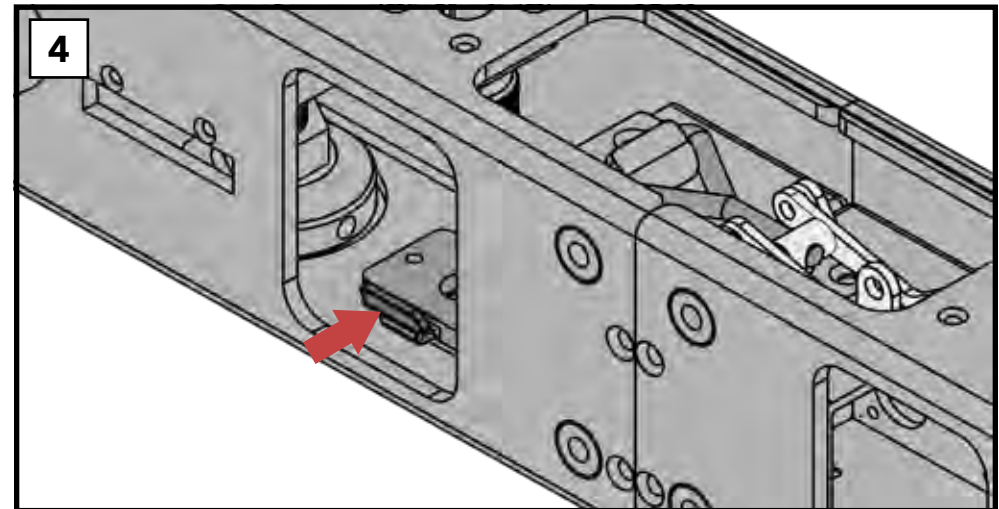
The receiving hole for the Latch Guide Pin locks panels into position. Push to lock or release.
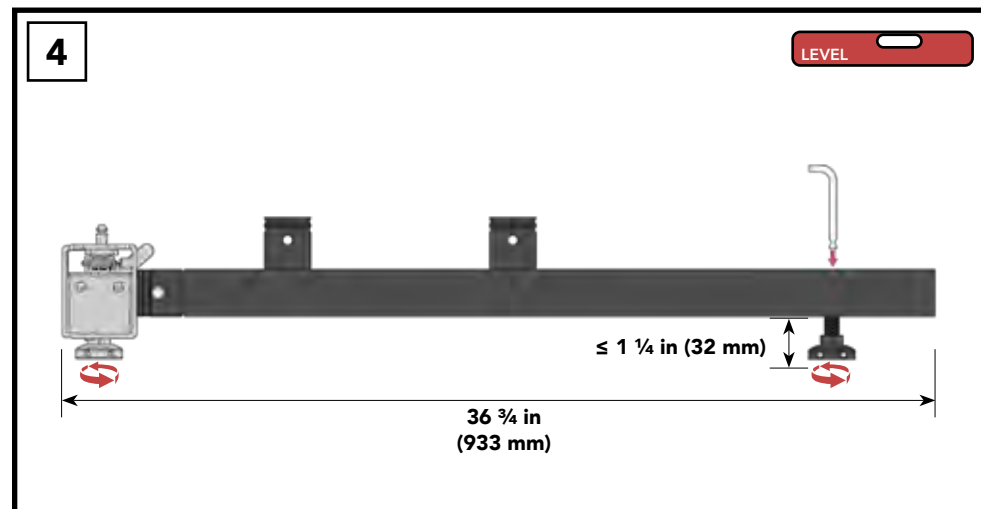
# GROUND STACK APPLICATION
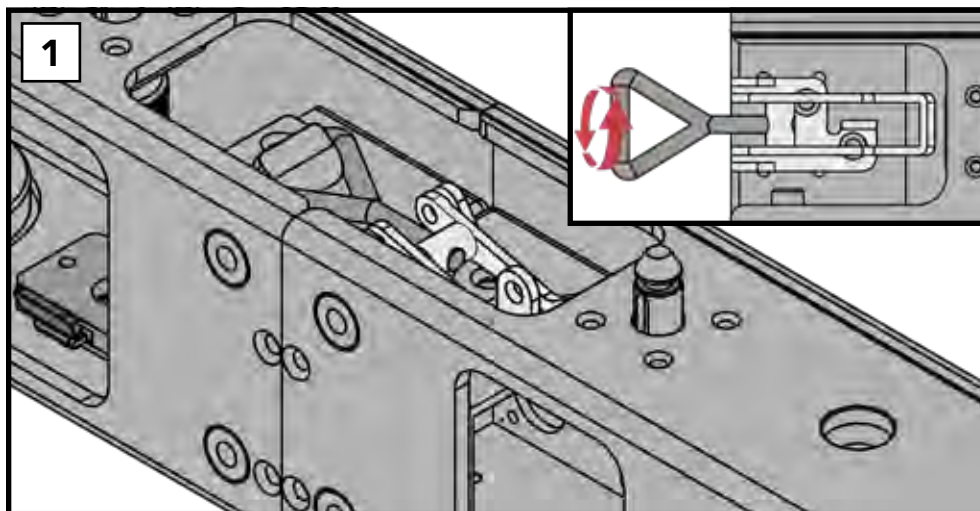


**1**

Attach Ground/Flybar Locking Triangle Eyebolt to adjacent Ground/Flybar and tighten or loosen as needed. Do not over tighten.



**3**

LEVEL

≤ 1 in (26 mm)
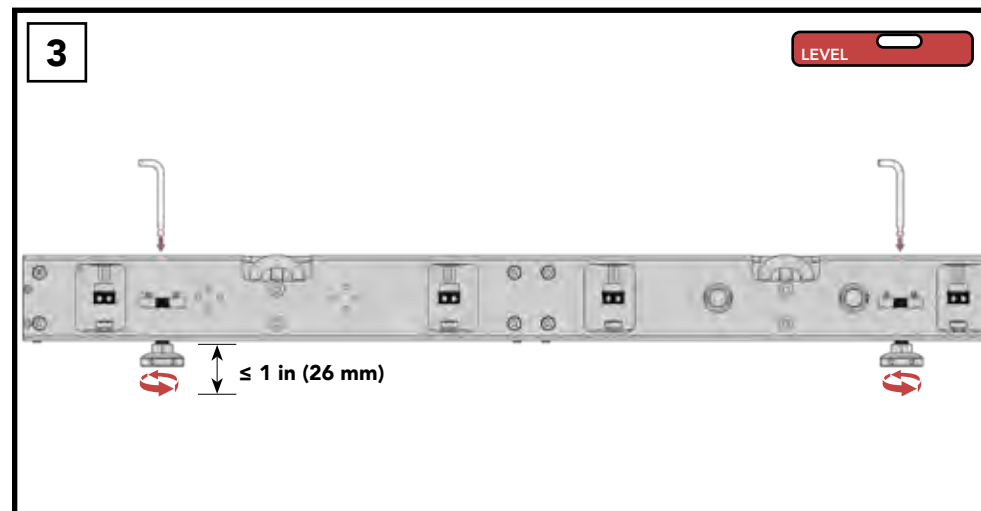
Level Ground/Flybars by twisting attached feet with 8mm hex key. Extends from 0-1 inch.
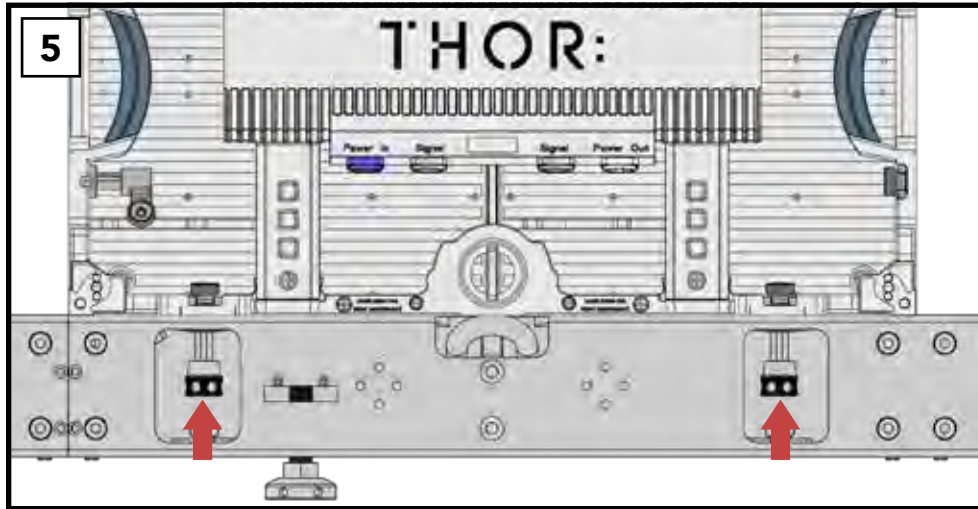


**2**

4 ¾ in (120 mm)

33 $^{15}/_{32}$ in (850 mm)
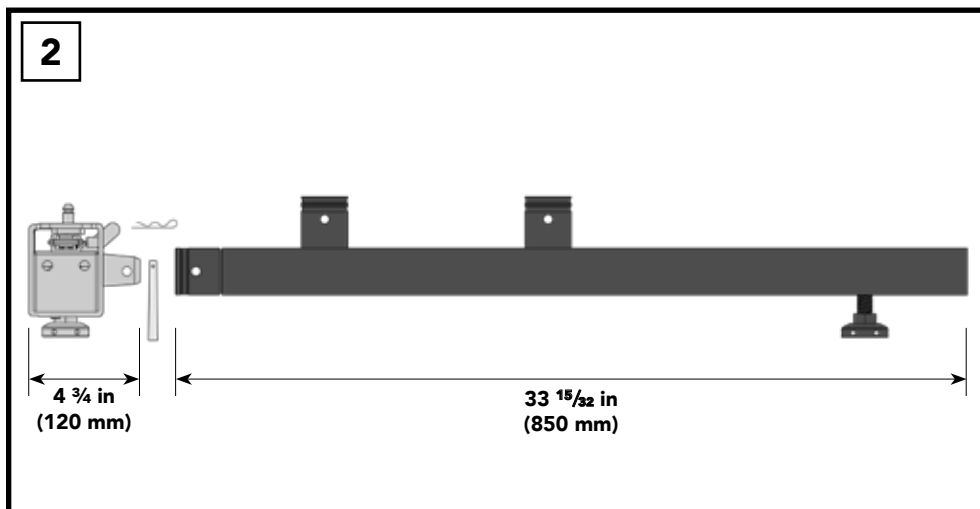
Connect Rear Ground Truss to Ground/Flybar using truss bolt and cotter pin. Truss Bolt can only be inserted one direction. Use rubber mallet to insert truss bolt completely before inserting Cotter Pin.



**4**

LEVEL

≤ 1 ¼ in (32 mm)

36 ¾ in (933 mm)

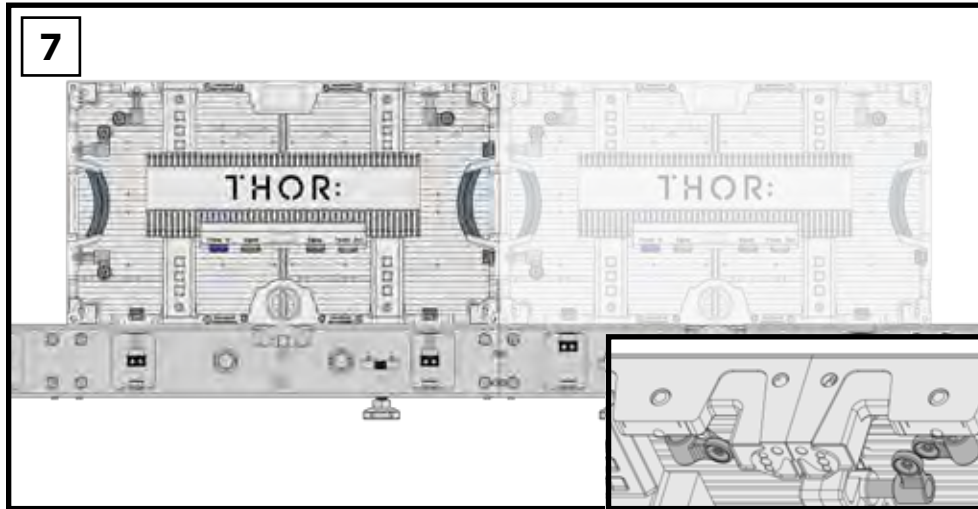To eliminate seams, level Ground Stack hardware. Adjust using 8mm hex key.

## GROUND STACK APPLICATION



Insert Latch Guide Pins into receiving holes on panel and twist to lock into place.
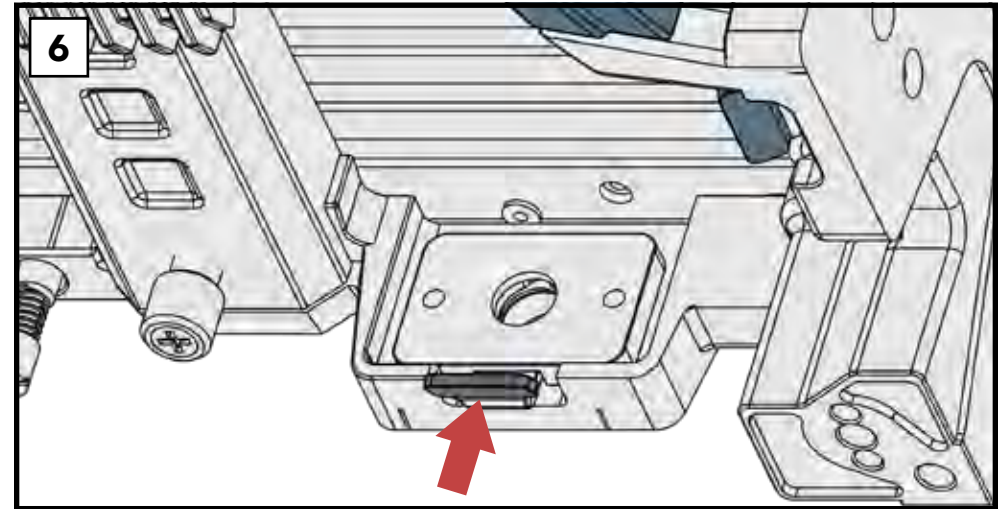


The receiving hole on panel, locks the Ground/Flybar Guide Pins into position. Push to lock or release.



Place another panels next to each other and insert Latch Guide Pins into receiving holes on panel and twist to lock into place. Check that face (LED Modules) of panels are flush with each other before tightening into place.
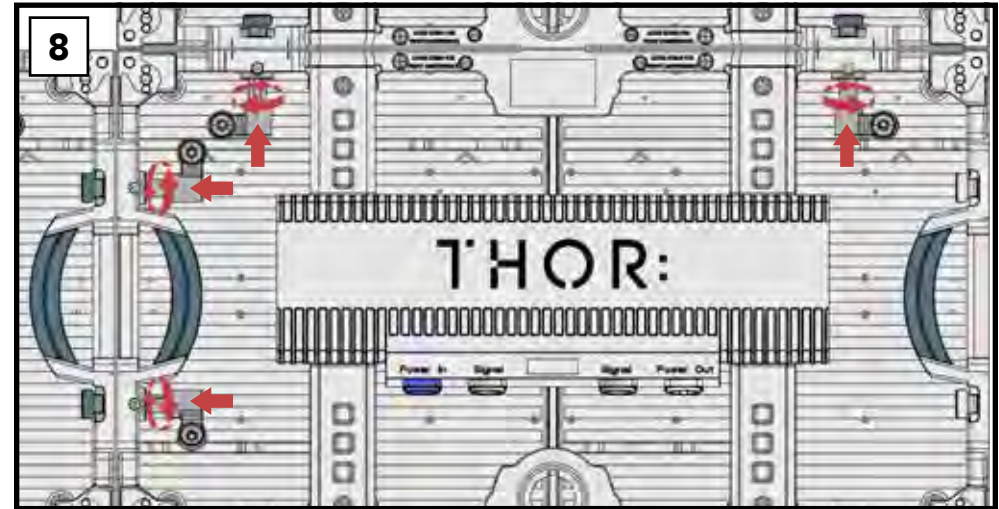


Insert Latch Guide Pins into adjacent panel. Aligning panels, lock into position by twisting the Latch Guide Pin. Do not over tighten. Continue steps 7-8 until first row is complete. For additional rows, align panels and lock into position.
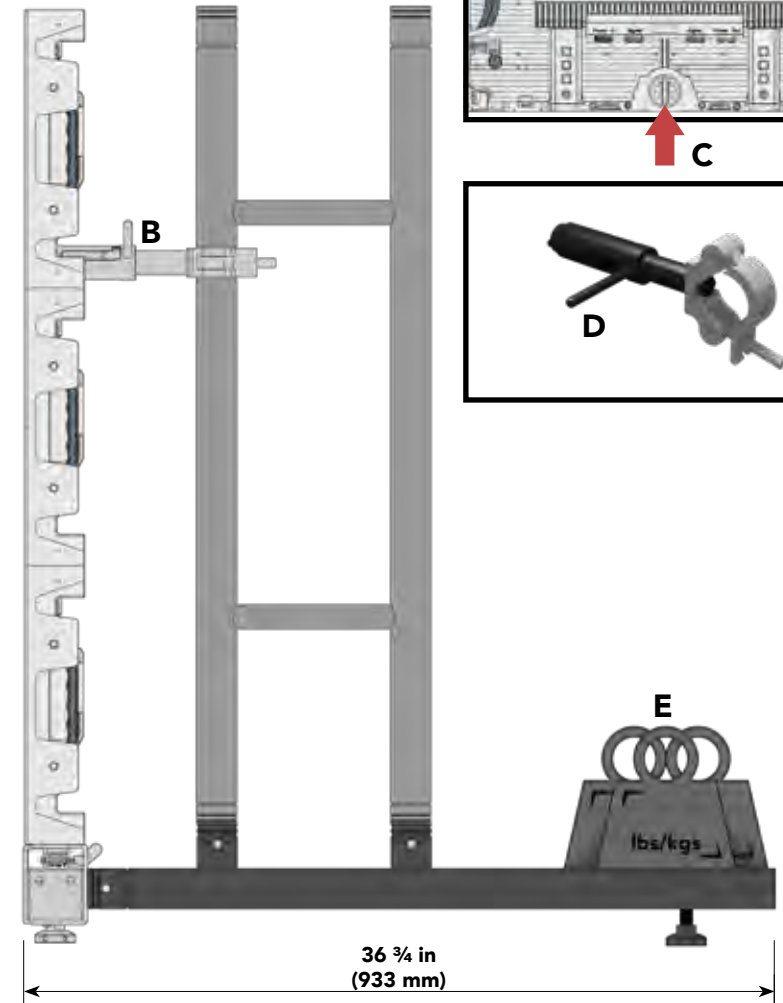
# GROUND STACK APPLICATION

**9**

**A**

36 ¾ in
(933 mm)
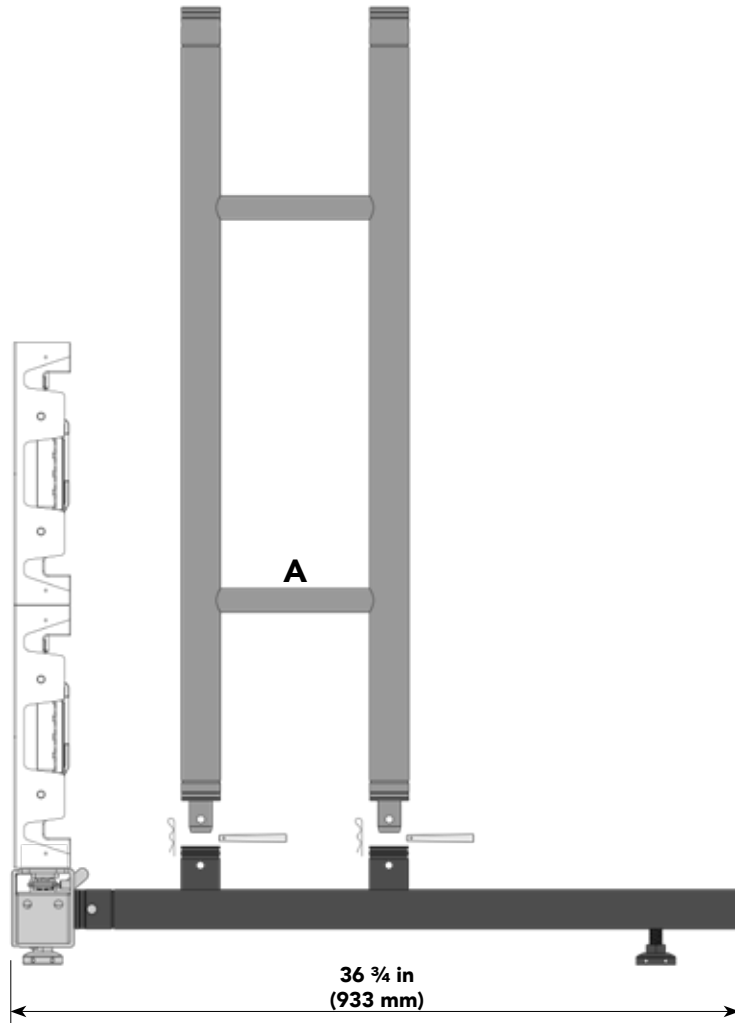
Connect Ladder Truss to Rear Ground Truss. Secure using truss bolts and cotter pins.
Ridge Ladder Truss - Triple *(Reference A)*.

**10**

THOR:

**C**

**B**

**D**

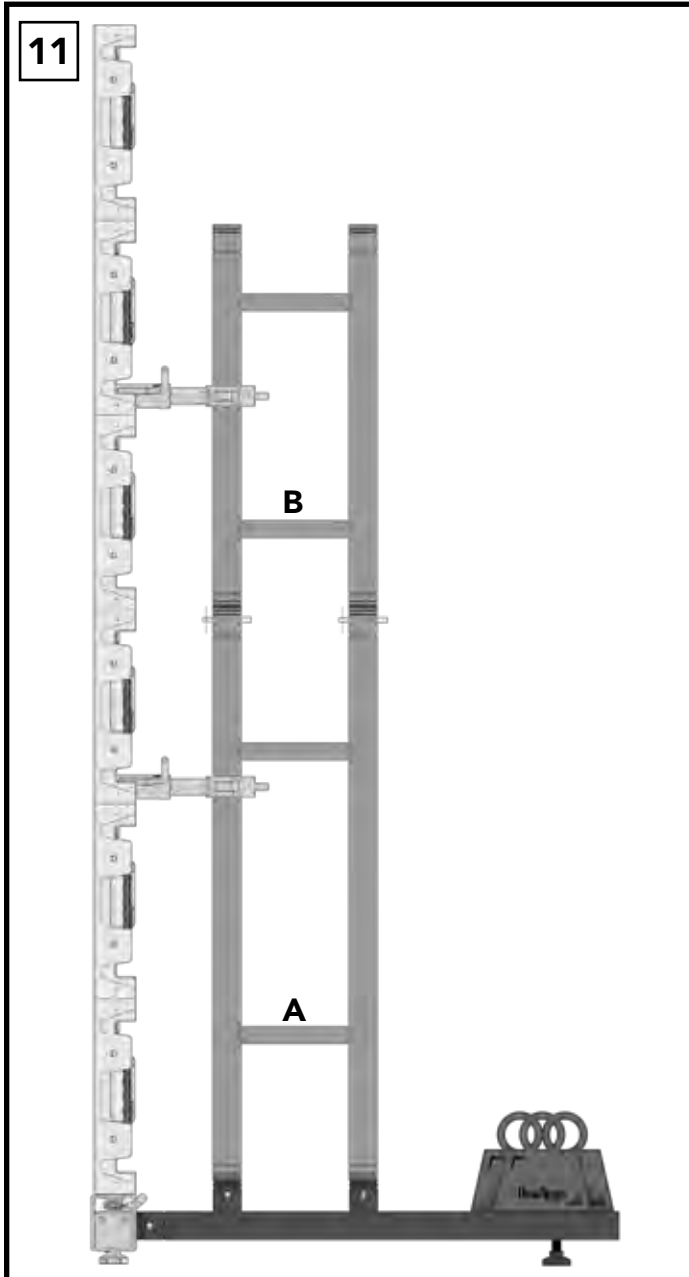**E**

lbs/kgs

36 ¾ in
(933 mm)

Loosely attach Locking Clamp to Ladder Truss. *(Reference B)*
Align and insert Locking Clamp with locking clamp socket on panel. *(Reference C)*
Use handle to twist and lock into position. *(Reference D)*
Tighten Locking Clamp to Ladder Truss. Add ballasting or anchoring. *(Reference E)*
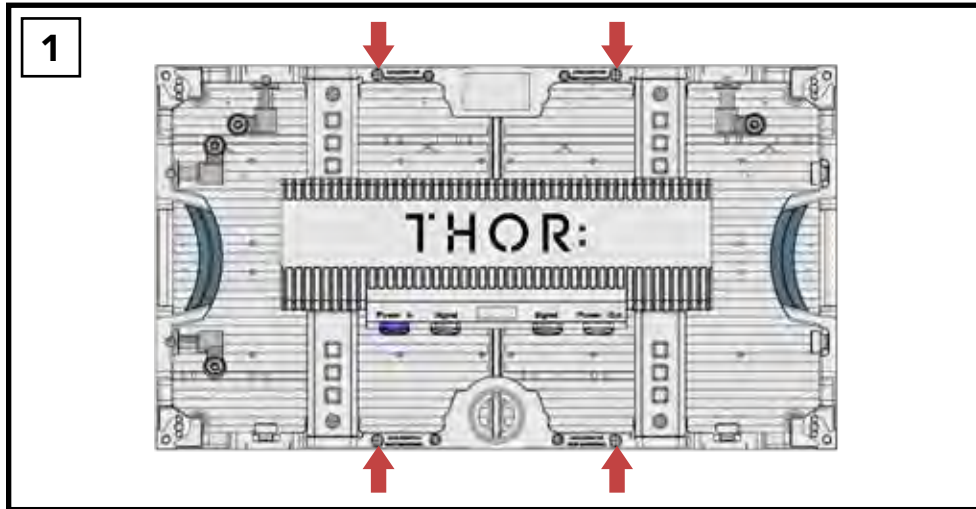
# THOR:

## GROUND STACK APPLICATION

**11**



Repeat steps 9-10 for each Ground/Flybar section.
Ridge Ladder Truss - Triple *(Reference A)*
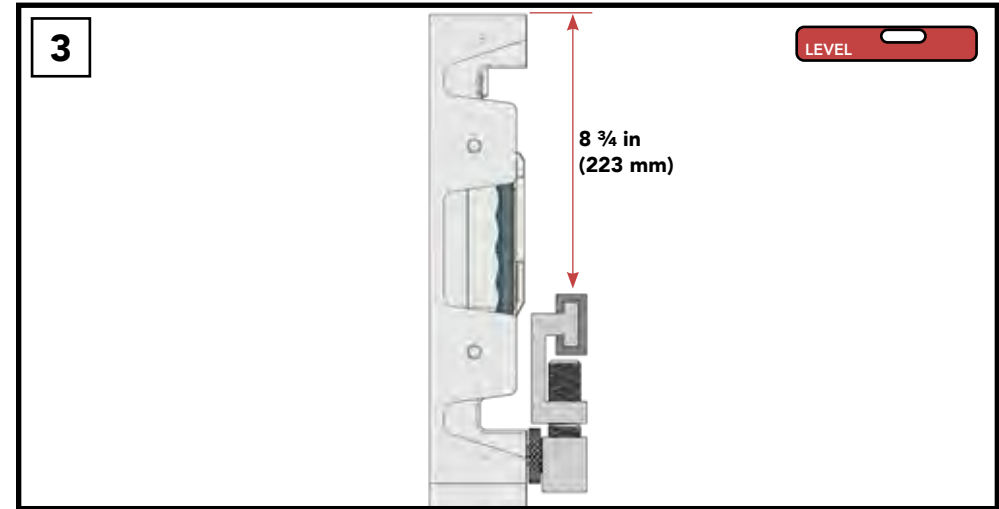Ridge Ladder Truss - Double *(Reference B)*

**12**
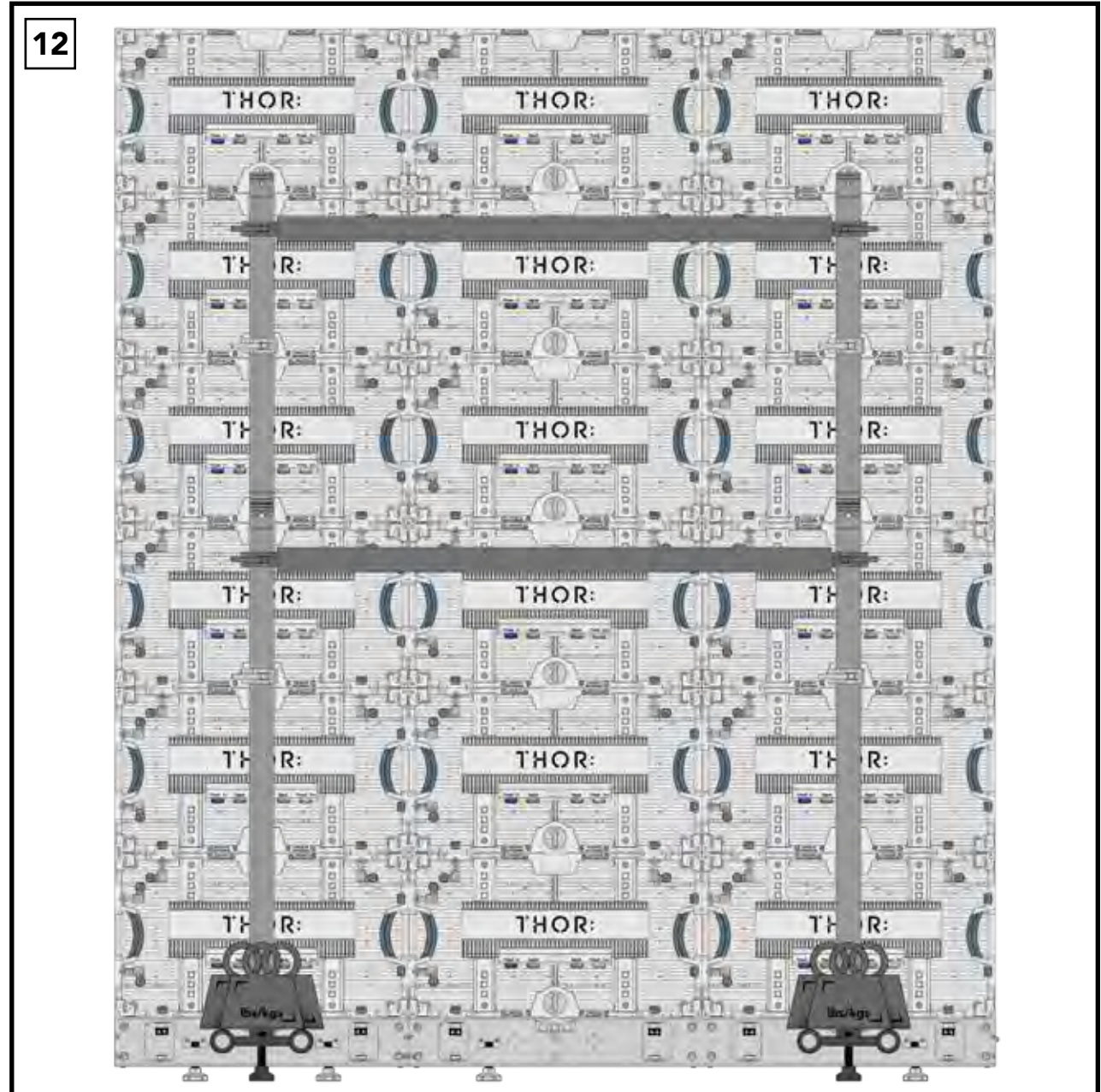


Attach Draw Bars to Ladder Truss columns. (Rear view)

# THOR:

## WALL MOUNT APPLICATION

**1**



Carefully remove modules from panel chassis by loosening thumb screws and safety cable. Use module removal tool or firmly push on rear side of module. Set aside.

**3**

LEVEL

8 ¾ in (223 mm)



Wall mount track has ¼" holes every 1". Attach first wall mount track to weight bearing wall 8 ¾" (22.23cm) below top of LED Wall using drill. Add additional tracks to first row. Verify row is level.

**2**

LEVEL

26 ½ in (675 mm)
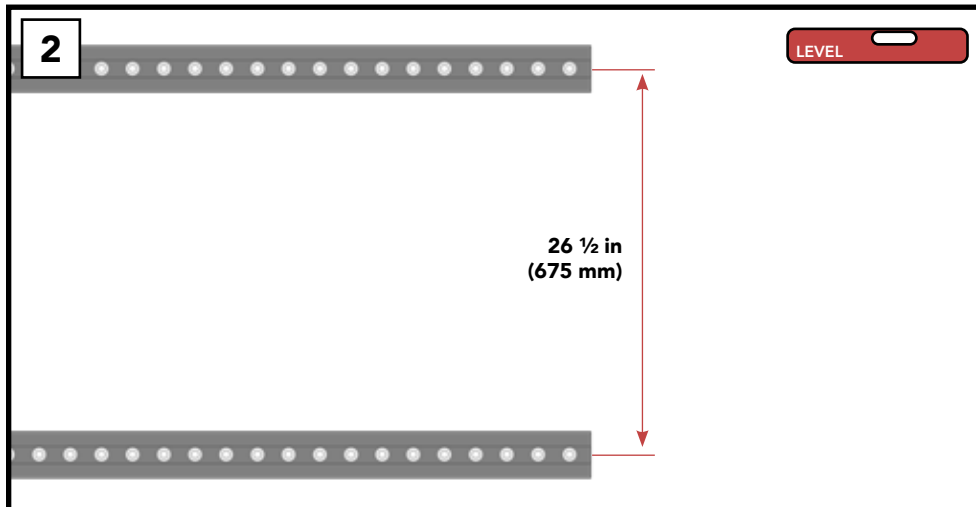


Attach second wall mount track 26 ½" (67.5cm) below the top wall mount track with drill. Add additional tracks to second row. Verify row is level. Repeat for additional track row.

**4**

Set Screw and X adjustment
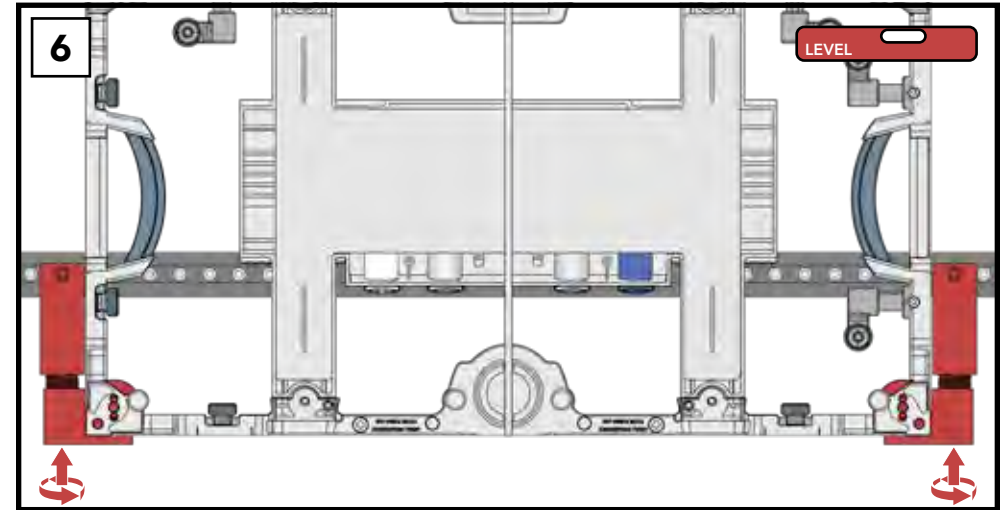
Z adjustment

Y adjustment
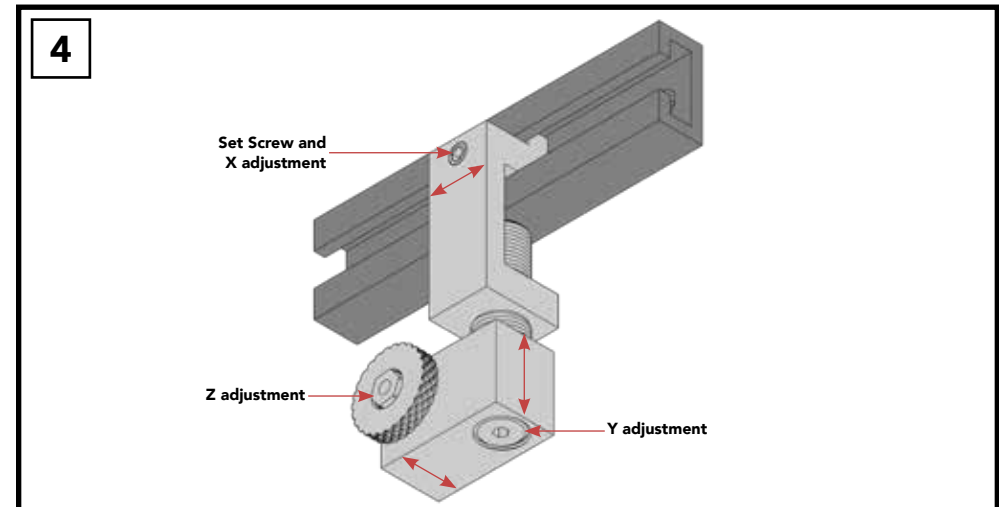


Add two XYZ Mounts to the top wall mount track (for first panel). Each XYZ Mount supports four panels. The XYZ Mount is added for every other panel. Adjust each XYZ Mount with $^3/_{16}$" hex key as needed. The Y adjusts up to 1" vertically. The Z adjusts forward and backwards.
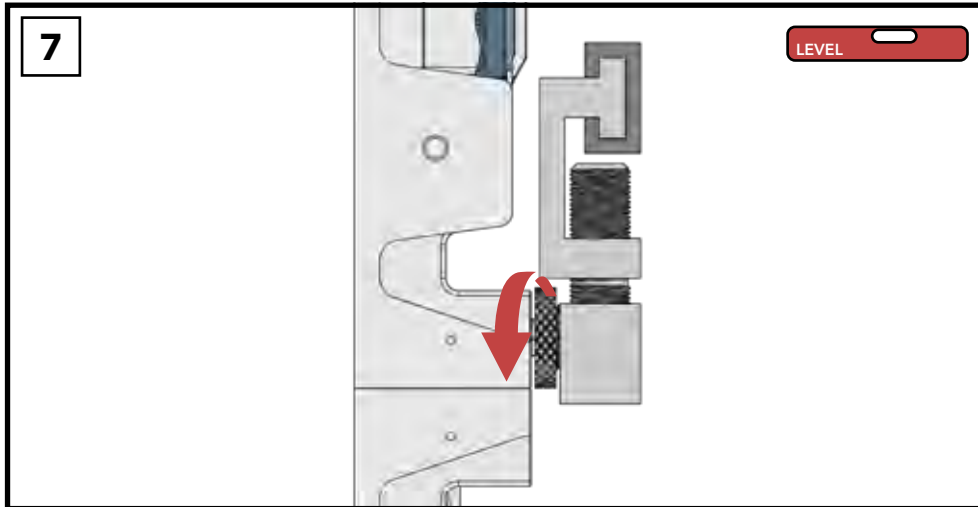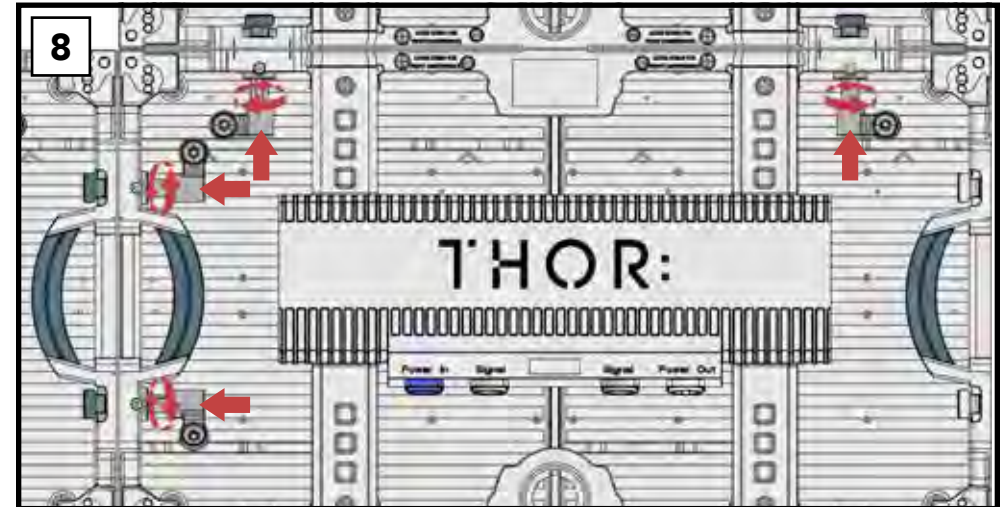
# WALL MOUNT APPLICATION



**5**

¼" bolt (included)
³⁄₁₆" hex key
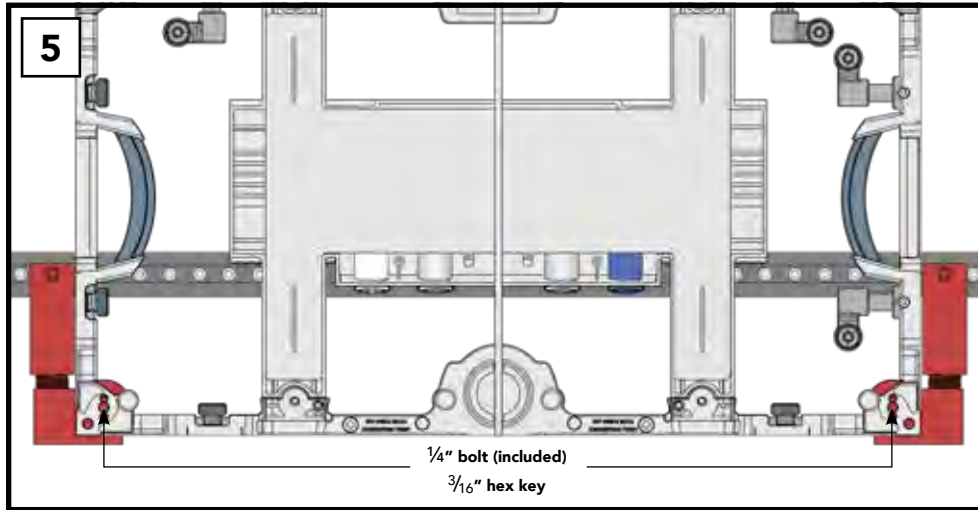
Attach the first panel to the XYZ Mounts by inserting a ¼" bolt into the corner of the panel chassis and threading with ³⁄₁₆" hex key into the XYZ Mount. Position the panel near the center of LED wall.
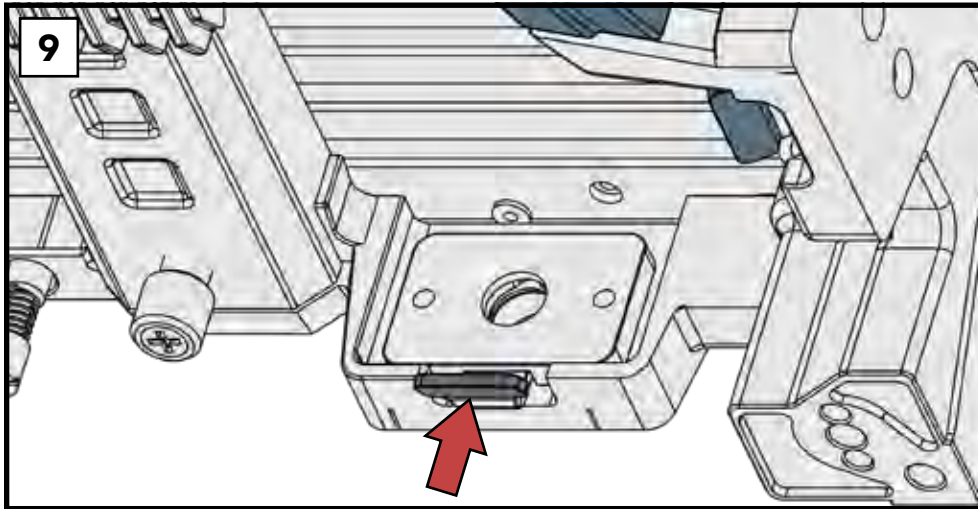


**6** LEVEL

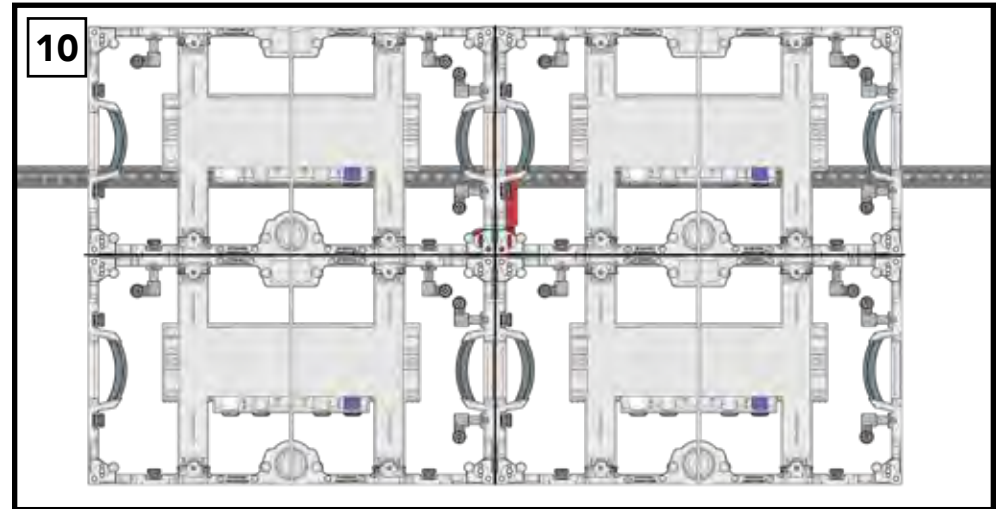The Y adjustment raises or lowers the panel chassis. Adjust to make level using ³⁄₁₆" hex key.



**7** LEVEL

The Z adjustment moves panel chassis forward or backward. Adjust as needed.
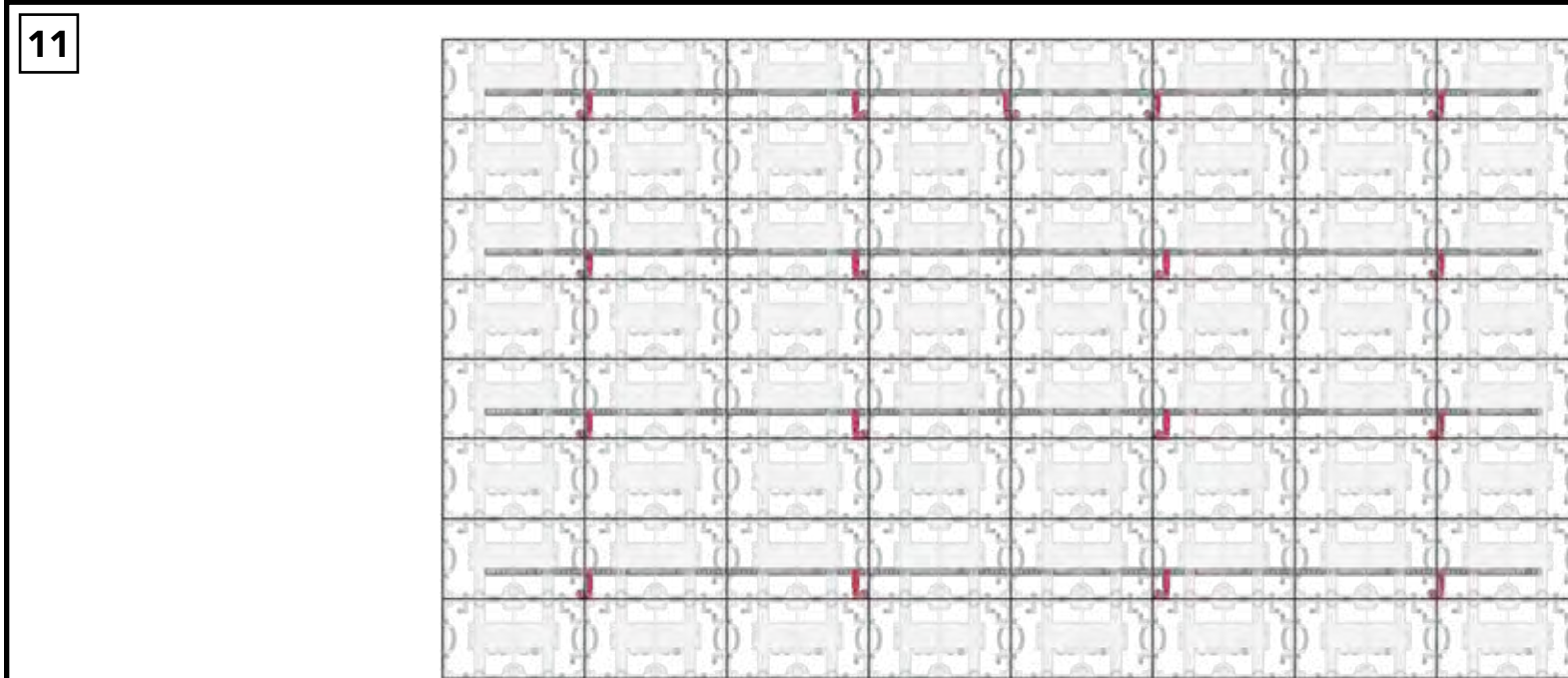


**8**

THOR:

# THOR:

## WALL MOUNT APPLICATION

**9**



The receiving hole on the panel locks the Latch Guide Pins into position. Push to lock or release.
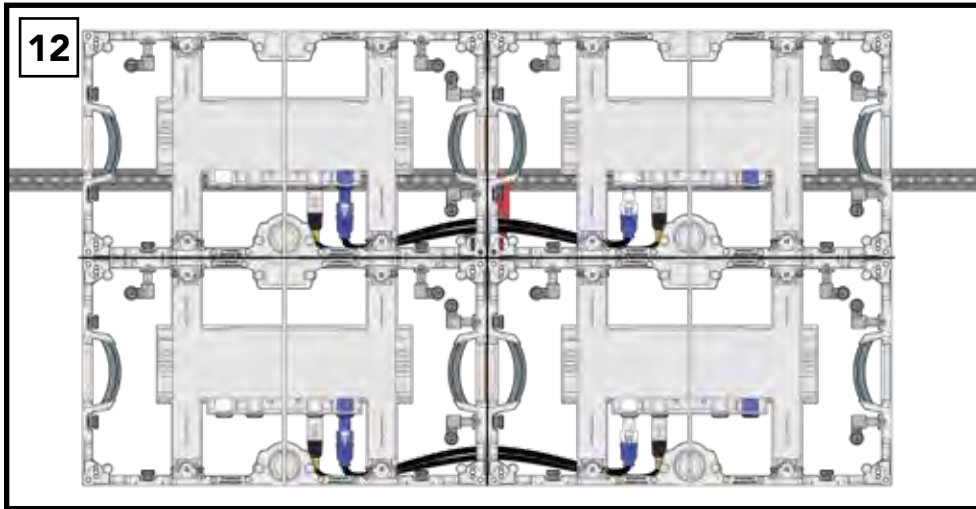
**10**



Each XYZ Mount supports four panels. Add additional XYZ Mounts as needed and continue adding panels to complete top two rows. Repeat with additional rows.
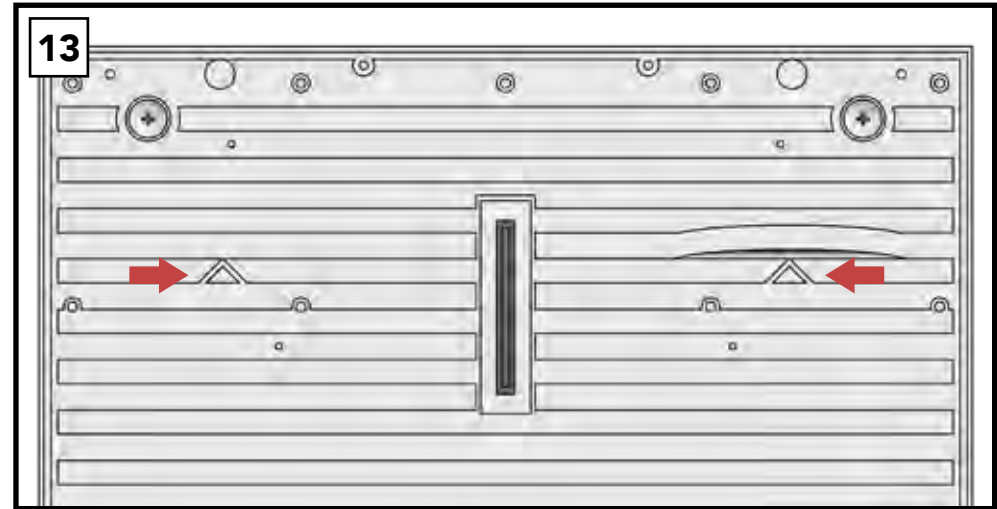
**11**


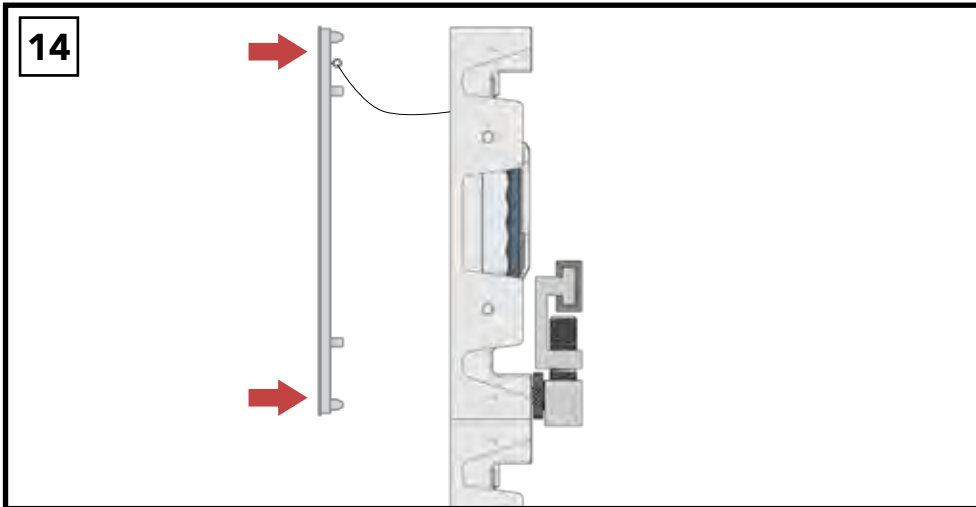
Front view

# THOR:

## WALL MOUNT APPLICATION

**12**

Connect power and data cable to a panel. Feed cables through to the next panel. Repeat for additional panels. *Power needs to run vertically, cross to next column and run vertically again.

**13**

Each module there are arrows pointing up to indicate proper installation onto panel chassis.

**14**

Carefully align modules with panels. Reattach safety cable and verify area is clear for attaching module.

**15**
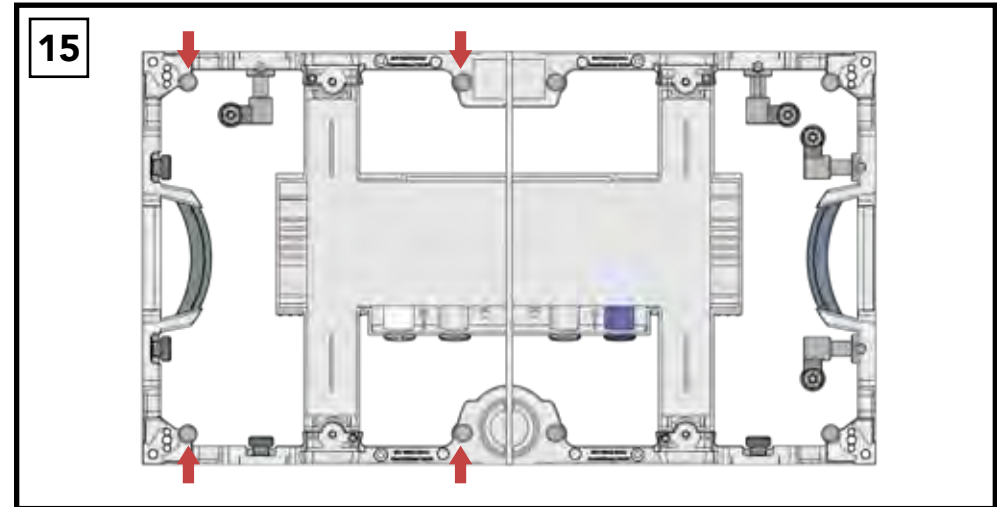
Four magnets hold each module in place. Twist adjustable magnets to make small adjustments for fine tuning.

# THOR:

## WALL MOUNT APPLICATION - LAYERED

**16**



**First Panel**

8 ¾"
(223 mm)

2' 2 ½"
(675 mm)

Front view