

SANUS | SYSTEMS

THE UNION OF FORM AND FUNCTION

Assembly Instructions for VMPR1

Congratulations on your purchase! The VMPR1 ceiling mount provides a unique, simplified method of ceiling mounting inverted LCD/DLP projectors. Its low profile design offers roll, pitch and yaw adjustment. The ceiling mount is a steel-to-steel construction with adjustable height to maintain proper projector ventilation, holds registration for quick lamp changes and easy filter cleaning without losing registration.

⚠ Caution:

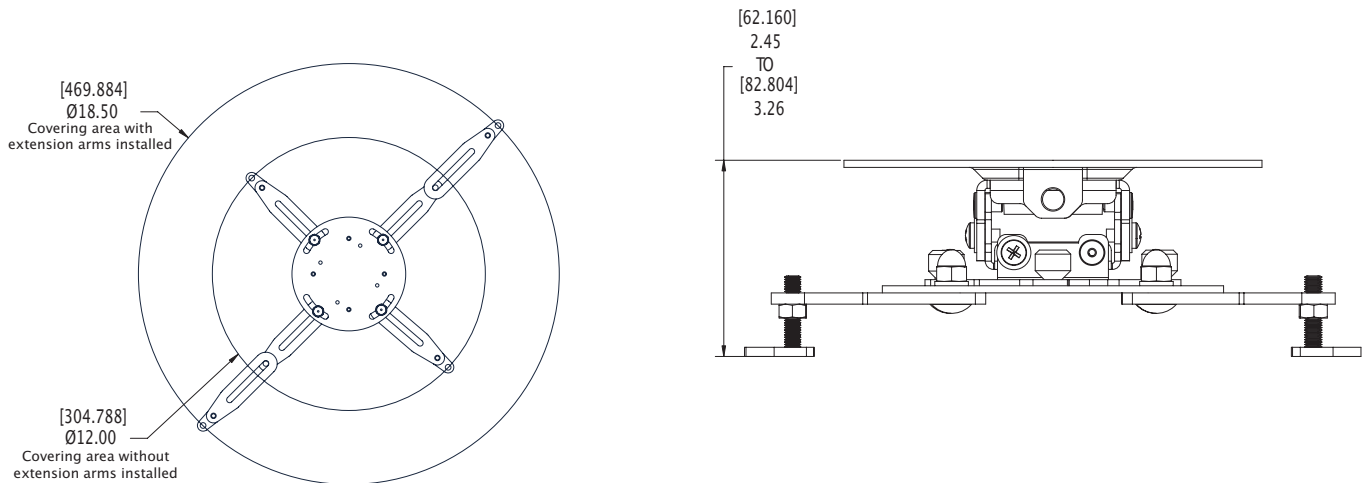
- The maximum weight to be installed on the mount is 50 pounds (22.68 Kg).
- To prevent damage to the mount, which could affect or void the Factory warranty, thoroughly study all instructions and illustrations before you begin to install the VMPR1.
- If you have any questions about this installation, contact Sanus Systems at 800.359.5520

Warning: Improper installation can result in serious personal injury! Make sure that the structural members can support a redundant weight factor five times the total weight of the equipment. If the structure can not support this weight, reinforce the structure before installing the VMPR1.

Required Tools: Open End Wrenches (M10 & M12). Phillips screwdrivers, No. 1 and No. 2. Allen Wrench (provided).

Note: Other tools may be required depending on the method of installation.

Dimensional Drawings:

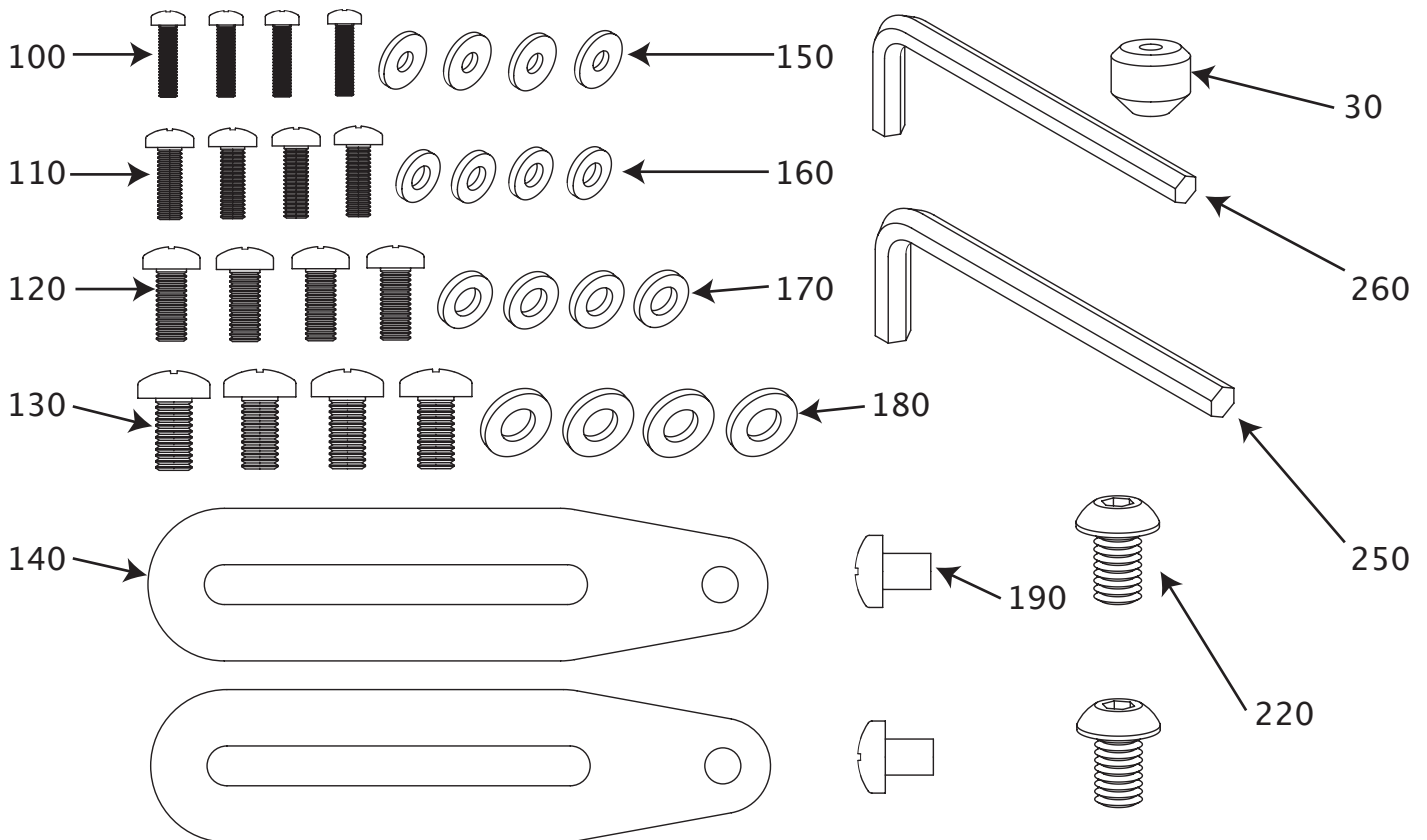
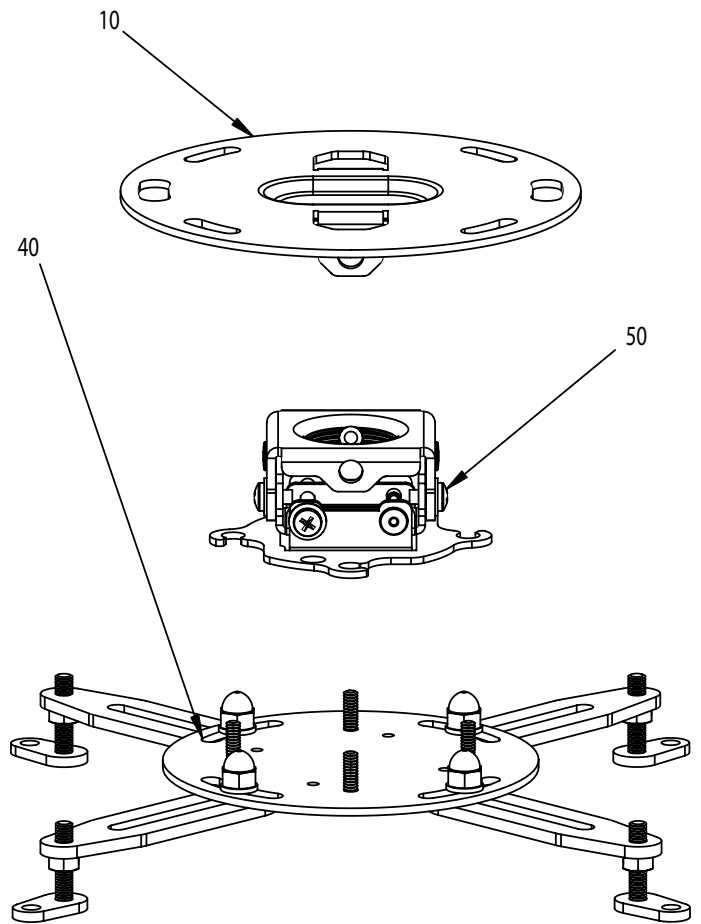


Step 1: Inspect the Unit Before Installing

Carefully inspect the VMPR1 for shipping damage. Please call Sanus if anything is missing or damaged. Our customer service department can assist you quickly with any missing or damage parts. Never use damaged parts! **Read all instructions before starting installation.** Lay out components to ensure you have all the required parts before proceeding (see "PARTS" on the next page).

Parts: Check carefully to make sure all parts listed are not missing or damaged!

Item	Nomenclature	Qty.
10	Flush Mount Bracket	1
30	10-24 Thumb Nuts	4
40	Bottom VMPR1 Adjustable Projection Portion	1
50	Top VMPR1 Adjustable portion	1
100	M3 x 12mm Phillips Head Pan Screw	4
110	M4 x 12mm Phillips Head Pan Screw	4
120	M5 x 12mm Phillips Head Pan Screw	4
130	M6 x 12mm Phillips Head Pan Screw	4
140	Adjustable Extension Arm	2
150	M3 Flat Washer	4
160	M4 Flat Washer	4
170	M5 Flat Washer	4
180	M6 Flat Washer	4
190	M6 x 8mm Phillips Pan Screw	2
220	5/16-18 x 1/2" Button Head Cap Screw	2
250	Allen Key	1
260	Allen Key	1



Step 2: Prepare the Ceiling

Because of the wide variety of possible mounting situations, we can only provide general guidelines for installation. Study the following information carefully, and adapt it as necessary to fit your specific installation. The “General Guidelines” below and the information on the following pages cover the most common mounting situations:

General Guidelines:

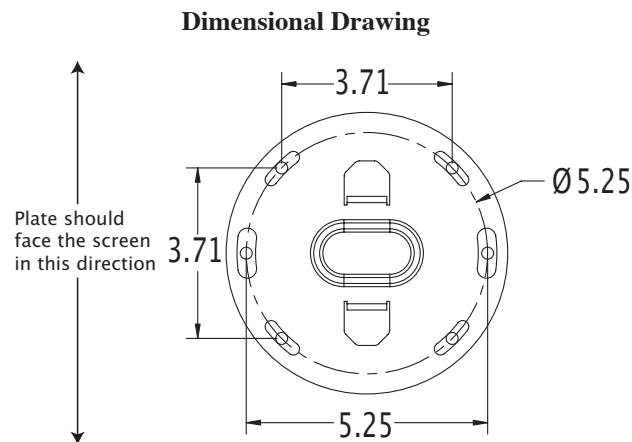
- Carefully determine the position of the mount, and its distance from the screen. This will require knowing the lens to screen distance (see projector specifications for set-up).
- Use the dimensions from the diagram below to drill hole locations in the ceiling.

The VMPR1 can be suspended from standard fasteners secured to a wood framing member.

WARNING: Improper installation can cause serious personal injury! Make sure the structural members can support a redundant weight factor five times the total weight of the equipment you intend to support overhead. If the structure cannot support a redundant weight factor five times the total weight of the equipment, the structure must be reinforced before you install the VMPR1.

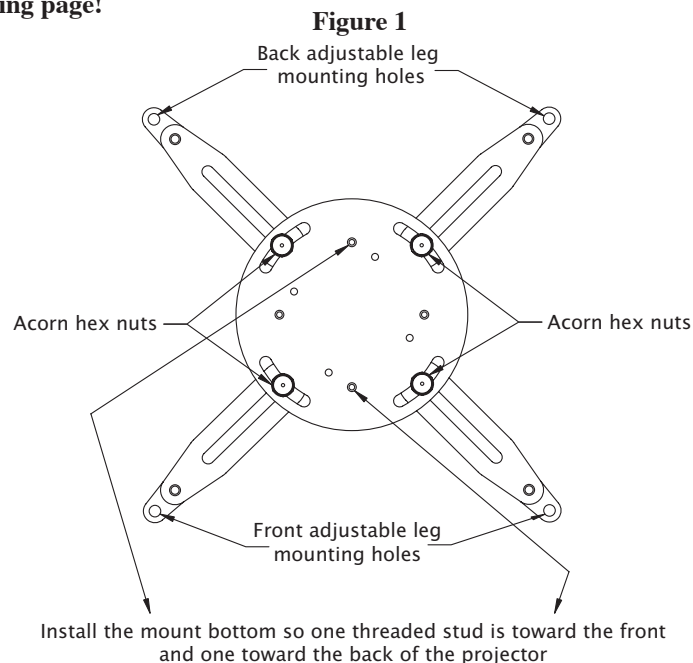
Standard Fasteners Flush Mounting to a Wood Framing Member

The VMPR1 can be secured to a wood framing member through the two larger slots (5.25” apart) in the ceiling bracket using two 3/8” lag screws for single stud mounting. If you have a solid back ceiling, you can use the four slotted holes (3.71” square pattern) in the ceiling bracket with four 1/4” diameter lag screws. If the area is accessible from above, you may also use four 1/4” diameter machine bolts, nuts, and washers. (see Dimensional Drawing below).



Step 3: Attach the bottom portion of the VMPR1 to the projector

Note: Please read text on following page!



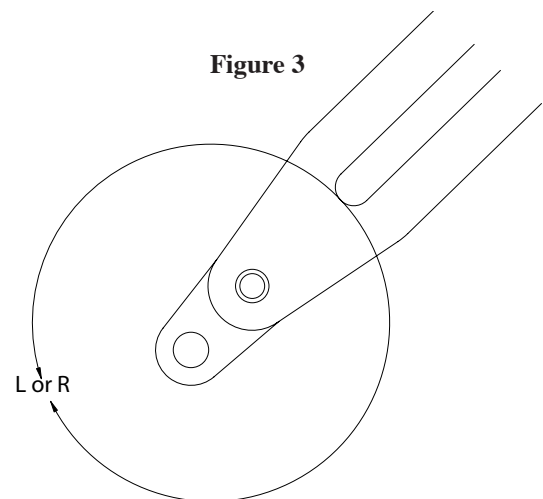
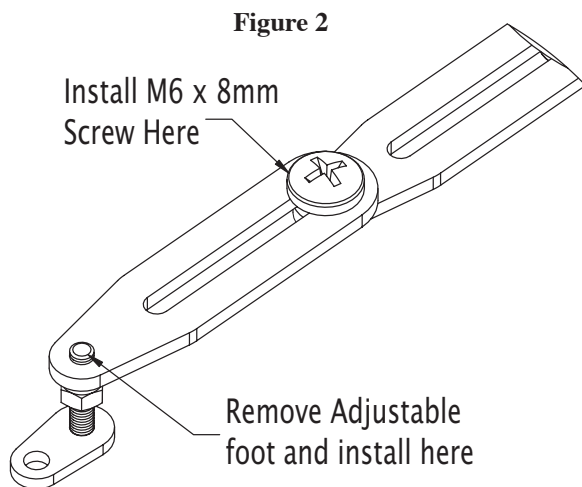
Attach the bottom portion of the VMPR1 to the projector as follows.

1. Loosen, but do not remove, acorn nuts securing arms. (see Figure 1 on previous page).
2. If necessary, add an extension to the arms (see Figure 2 below).
3. Adjust front and back legs to mounting points. If there are only three mounting points, remove one leg from the mount.
4. Adjust inserts (rotate right to raise, left to lower), making sure to allow for proper air ventilation and the mount is level with the projector. Hint: some inserts may need to be at different heights to keep the mount level (M3, M4, M5 and M6 screws and washers included) (see Figure 3 below).
5. If the mounting holes are closer than a five inch diameter, lower the feet all the way so the threaded stud will swing under the round plate.

Warning: You must use proper attaching hardware and installation procedures. Failure to use proper attaching hardware and installation procedures may result in equipment damage or serious personal injury.

6. Determine proper screw size and depth (M3, M4, M5 and M6 included) for projector mounting and correct washers (M3, M4, M5 and M6 included). Sanus makes every effort to include all mounting hardware. If proper screw size is not included with this unit, you must purchase the proper attaching hardware separately.
7. Secure (loosely) back two legs of VMPR1 to the projector at mounting locations.
8. Secure (loosely) front two legs of VMPR1 to the projector at mounting locations.
9. Move VMPR1 to the center of gravity of the projector.
10. Install the mount bottom so one threaded stud is toward the front and one toward the back of the projector. (see Figure 1 on previous page).
11. Tighten screws and acorn nuts securing the legs.
12. Tighten hex nuts on the threaded studs to secure inserts at proper positions.

Note: Install the mount bottom so one threaded stud is toward the front and one toward the back of the projector. (see Figure 1 on previous page)

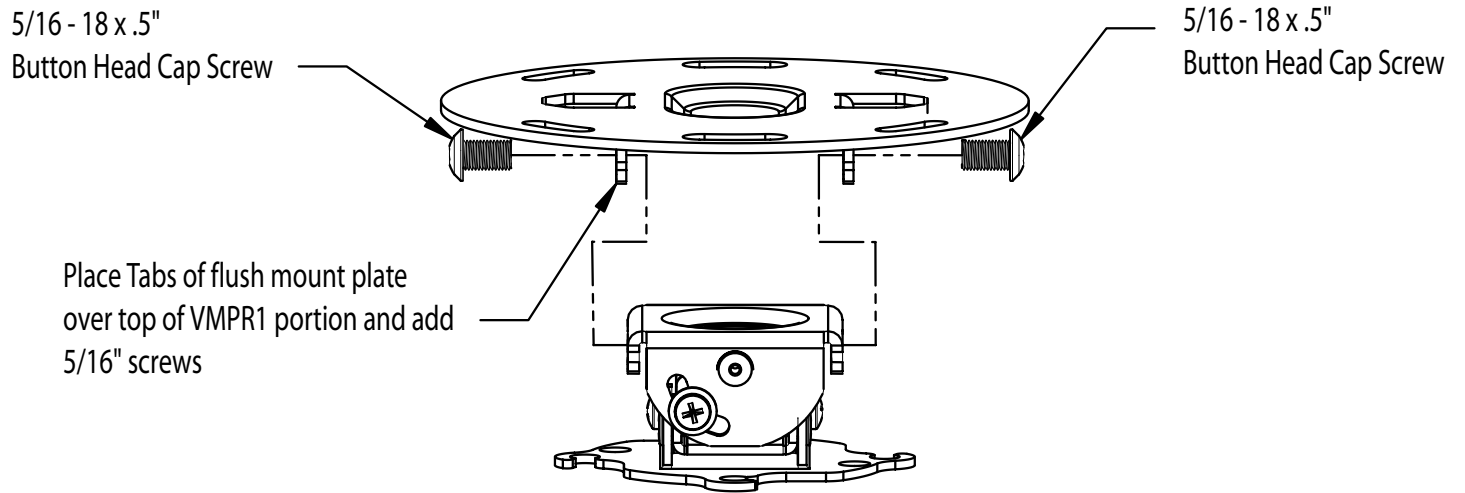


Rotate adjustable foot left or right
to make it taller or shorter, each
rotation is .0625" (.1587mm)

Step 4: Attach Flush Mount Plate to VMPR1

Place flush mount plate over top VMPR1 adjustable portion, line up holes in plate with holes in VMPR1 and secure using the two 5/16-18 x 1/2" button head cap screws provided. (see Figure 5).

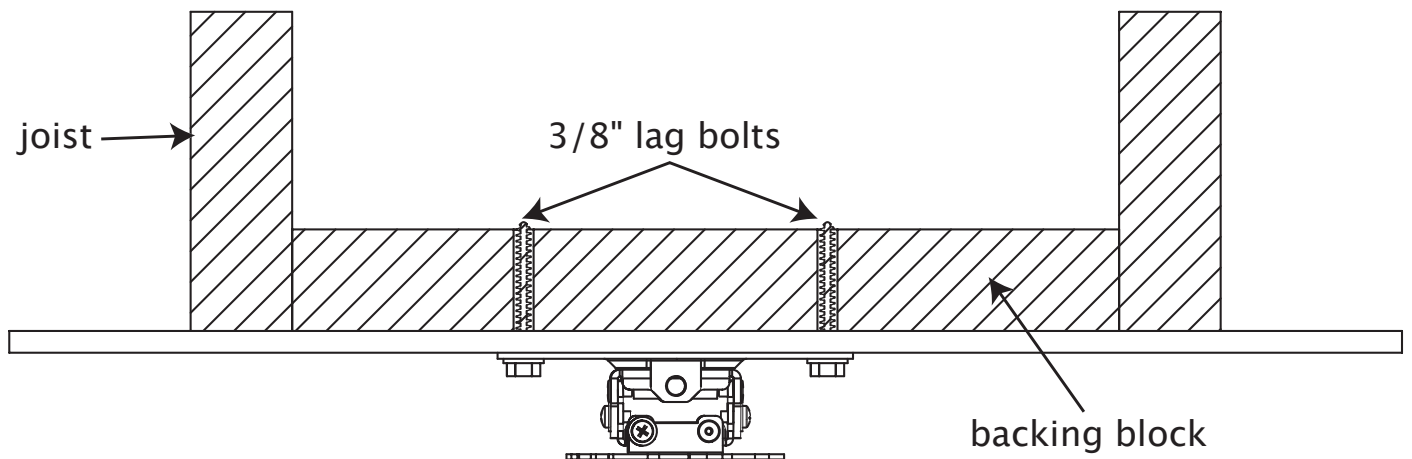
Figure 4



Step 5: Ceiling Installation Procedures

Proceed to mount the top assembly of the VMPR1 to the ceiling using one of the appropriate hardware combinations mentioned in Step 2. (see Figure 5 for installation).

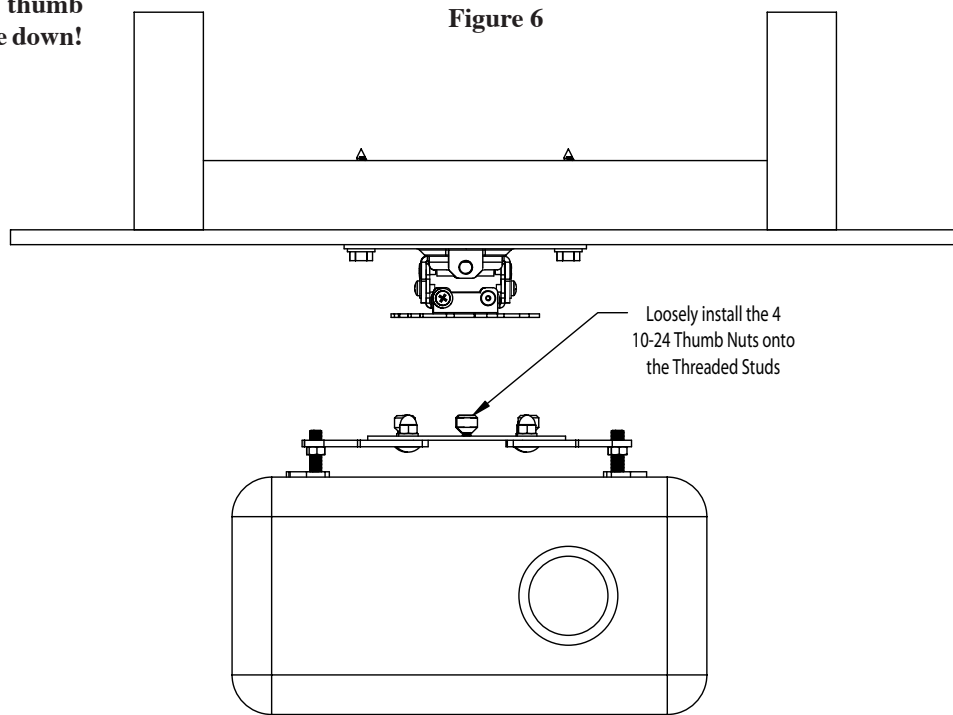
Figure 5



Step 6: Install 10-24 Thumb Nuts

Install, loosely, the 10-24 thumb nuts tapered side down on the 10-24 studs of the VMPR1. (see Figure 6).

Make sure 10-24 thumb nuts are tapered side down!



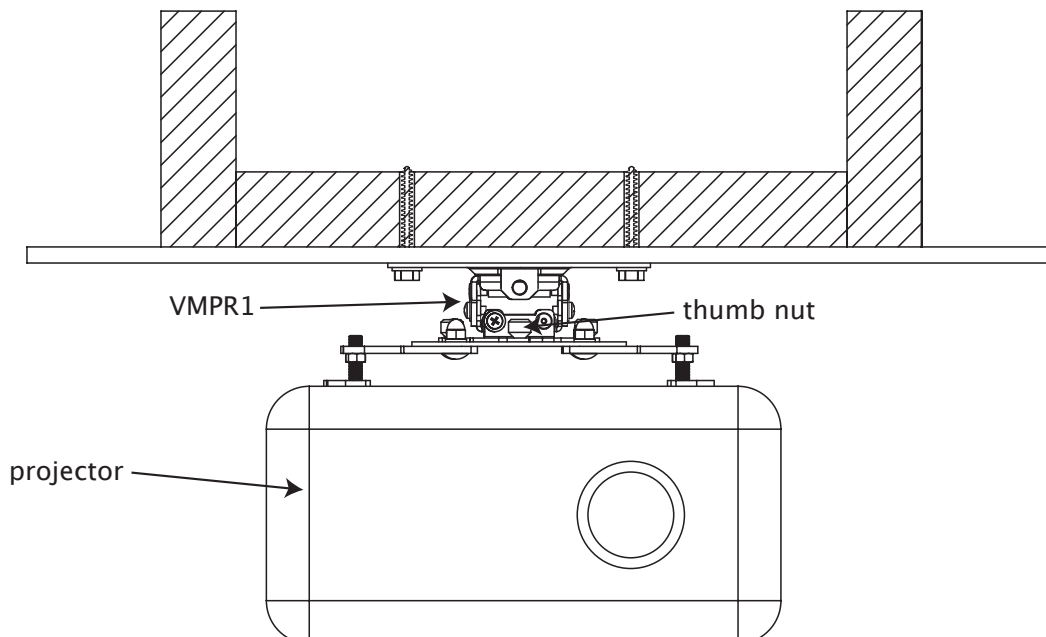
Step 7: Bracket Attachment

NOTE: It is not necessary to remove the thumb nuts from the studs to install and remove the projector.

The two halves of the VMPR1 attach by lifting and rotating screws of the bracket into the slot and four vee slots of the VMPR1. Secure the bracket using provided thumb screws and route cabling as necessary. Align the four locating slots of the VMPR1 with the 10-24 studs of the bracket and rotate the bracket on the VMPR1 to the limit of the slotted holes. Secure the Bracket to the VMPR1 using the thumb nuts (tapered side down). Route cables as necessary. (see Figure 7).

NOTE: The tapers of the thumb nuts should seat in the holes of the bracket.

Figure 7



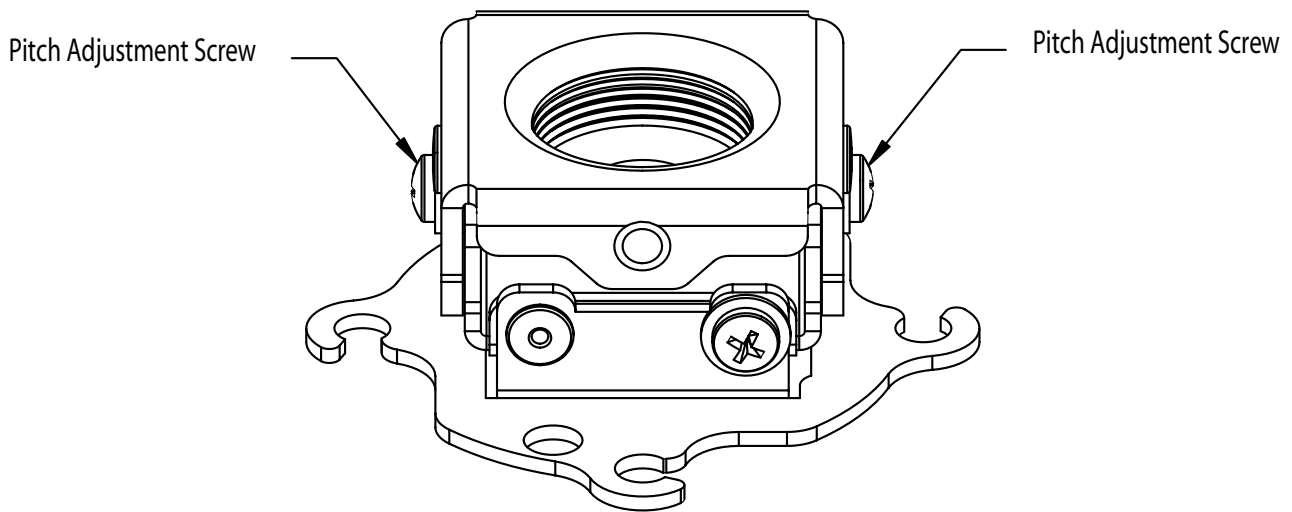
Step 8: Projector Alignment Instructions

The VMPR1 can be adjusted for vertical elevation (pitch), horizontal tilt (roll), and rotation (yaw). Once the desired position is located and all the screws of the VMPR1 are tightened, the projector may be removed from its location and replaced using the four thumb screws without losing the registration of the projector. Align the projector as follows:

Pitch Adjustment:

Adjust pitch using the 10-24X3/8" pitch adjustment screws located on each side of the adjustment plate. First, loosen the 10-24X3/8" pitch adjustment screws located on Figure 8. Next, adjust projector angle to desired pitch. Proceed to tighten the 10-24X3/8" pitch adjustment screws located on each side of the adjustment plate.

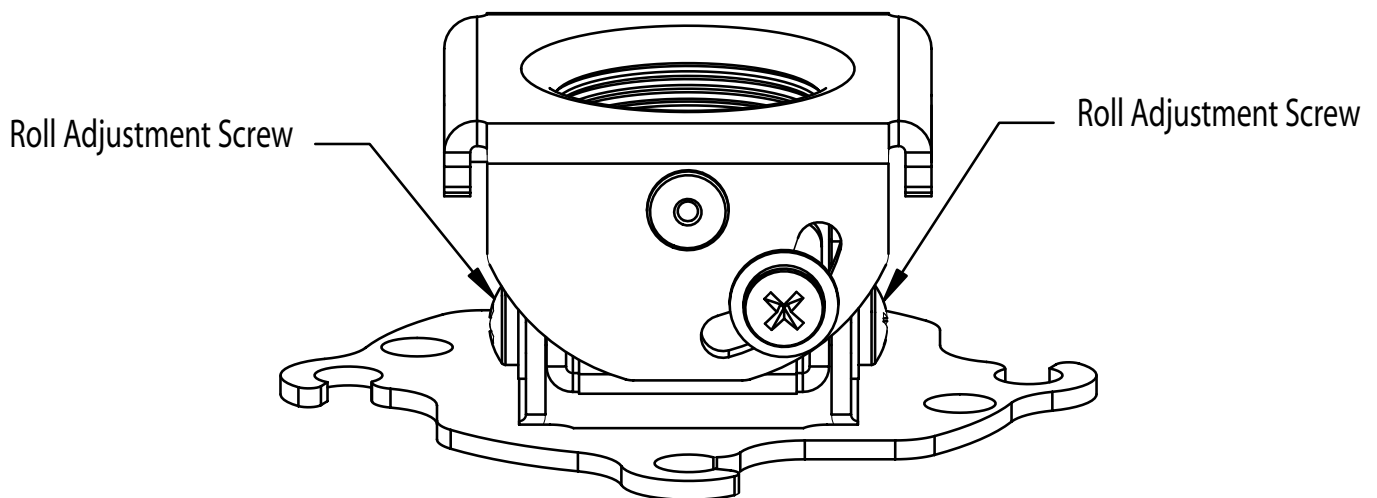
Figure 8



Roll Adjustment:

Adjust roll using the 10-24X3/8" roll adjustment screws, one on the front and one on the back, of the adjustment plate. First, loosen the 10-24X3/8" roll adjustment screws on each side of the adjustment plate. (see Figure 9.) Next, adjust projector to desired roll position. Proceed to tighten the 10-24X3/8" roll adjustment screws on each side of the adjustment plate.

Figure 9



Yaw Adjustment:

First, make sure screws in ceiling are slightly loose until projector is aligned. Next, adjust projector to the desired yaw position. Proceed to tighten the screws in the slotted holes. (see Figure 10).

Figure 10

