

Projector Rigging & Hardware

Disclosure & Overview

I (Cam) try not to do any projector rigging because I don't want to be liable for anything hung overhead. That said, I've hung many projectors either on my own, with a team, or supervising another vendor. My recommendations here are given with a massive stipulation: proceed at your own risk.

Pro Tips

Always try to install with a buddy and multiple ladders or a lift.

Little projectors are easy to install, and the weight is often low enough that you can even hang them in a drywall ceiling using toggle bolts or strong anchors. I always buy flexible projector mounts rather than fixed position projector mounts – even in a fixed installation environment. I do this because the positioning math that comes from a manufacturer's projection calculator has a margin of error. It's a slim margin typically, but having the flexibility to tilt, pan, and roll is often critical to getting things just right.

Medium sized projectors and greater often need something stronger to safely secure above head.

When you buy rigging hardware, they supply kit for tons of scenarios. Keep the leftover hardware in a bin from your mounts. When you have missing or stripped parts, or you need an extra leg, you've got some backup / a treasure chest.

Get security drill bits so you can use your own screwdriver or drill gun. Make sure to turn the torque all the way down and then back up to taste so that you don't fuck up your projectors. This is an acquired skill. Proceed at your own risk!

Read up on [Mastering Projector Reigging](#) @ vidvox.net written by ProjectileObjects for Projectors weighing less than 50 pounds.

How The Hardware Works

Projector mounts come in many shapes and sizes.

In a professional situation, you typically have five main elements:

1. A flange or cheeseborough that connects the projector pipe to a wall, ceiling, or another pipe
2. A projector pipe that lives between the projector mount and the flange element
3. A projector mount - this is where you have tilt, pan, and roll capabilities
4. An interface bracket - this is literally connected directly to the projector (in the tripod metaphor, this is the "plate").
5. The projector

There are versions of this where you attach the mount directly to the target surface instead of using a pipe and a flange. There are also versions of this where instead of pipe and flange, you might have threaded rod coming down from unistrut. A good projector mount gives you the ability to do any of those options.

There are also versions of this where elements 3 and 4 are combined into a projector cage.

Projector Cages

When you rent a projector for an event or temporary install, it is likely to come in a projector cage. This is recommended when you are mounting projectors to truss, and for ease of installation. Bigger projectors (typically 15k lumens or brighter), are frequently permanently installed inside of cages.

Cages are great for micro adjustments and ease of installation, but they add a lot of bulk. Good for gird, strut, and truss installations but not typically a good use of space in permanent installations that are in-wall, above ceiling, etc.

Projector Enclosures

Ocasionally, you'll work with a vendor or manufacturer to enclose the projector within a ceiling or wall or to put it outside. Ventilation is critical here. You'll either need to hook it up to building HVAC, or you'll need to build filtered intake, outtake fans and ventilation ports. I recommend working with a company that does this professionally because a wrong move here can void the warranty and kill your projector. If you're in a situation where you are forced to ignore projector manufacturer intake and outtake minimum physical clearances, you **need** ventilation.

Mount Manufacturers

There are many projector mounts out there. I have found that the two below are the best.

Peerless - they make great mounts for projectors <50 pounds, but they can have QA issues, so order in advance. More than once, I've received a mount with missing pieces. Or with all the screws pre-stripped! The mount you want is the PRG-UNV. Buy one extra for parts / return it if all the rest are good. The price is good. Some models are a little finicky with their adjustment wheels. That's what zip ties are for! The UNV mount is good because it adds a plate that you mount to the tripod that you can slide in or out of the mount attached to a pipe, ceiling, or wall. It's sort of like a quick release plate on a tripod.

Chief (Legrand AV) - they make great mounts for projectors of all sizes and weights. This is my favorite mount company. They have a really good portrait mount that holds projectors up to 75 pounds! Preferred. RPAU is their standard mount. VPAU is their 90°. Their mounts come in black/white/silver. They also sell great pipes, flanges, and solutions for weird situations - like hanging from a drop ceiling. They have a product for that. Pro-Tip from Projectile Objects: you can find these on ebay for \$50-100 less than B&H. Not sure if warrantied on resale.

To read more about rigging and projection mount best practices and tools of the trade, read on to [Projector Mounting Explainer](#).

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