

# 2024 Mini-prism Extension

Mar 4, 2024 While preparing the EDM crew for the 2024 Atlantic Coast Conference Indoor Championships in Boston, I had to locate a couple mini-prism extensions to be used when measuring the horizontal jumps. The extensions are used to raise the mini-prism reflector above the sand.

Marty Kahler had several custom made extensions so we used his from the ACC meet. Those extensions were made by Jo Jo Nadeau.



He used a bolt with  $\frac{1}{4}$ " x 20 thread and added a locking nut. He cut off the head of the bolt and used a grinder to create the point. Using this extension raised the mini-prism approximately 6".



The  $\frac{1}{4}$ " x 20 is a standard thread used by the mini-poles. It's also a standard size used in photography equipment for connecting the camera to a tripod.

I tried to locate similar bolts online that were partially threaded. I found bolts 6" or shorter usually had threads the full length of the bolt. Therefore, I would need longer bolts and cut them down. I would need to check with fastener companies for bolts that I could use. And, I would need to find some way to grind the end.

While searching online, I found camera extensions that I could use. Here's a link to an extension I purchased on Amazon for \$7.20

<https://www.amazon.com/dp/B09MFV3WTM>

The description for the item read:

*AUXPhome Metal Tripod Extender Tube Extension Rod/Tripod Pole - with 1/4inch-20 Female Threaded and 1/4inch-20 Male Threaded for Tripod Stabilizer for DSLR & SLR Cameras/Action Camera Adapter*

The extension has a male 1/4"x20 thread on one end of the 6" metal rod and a female 1/4"x20 thread on the other end.

I purchased a couple extensions and set up my mini-prism. The mini-prism attaches to the male end of the extension rod and the stainless steel, mini-prism tip attaches to the female end.



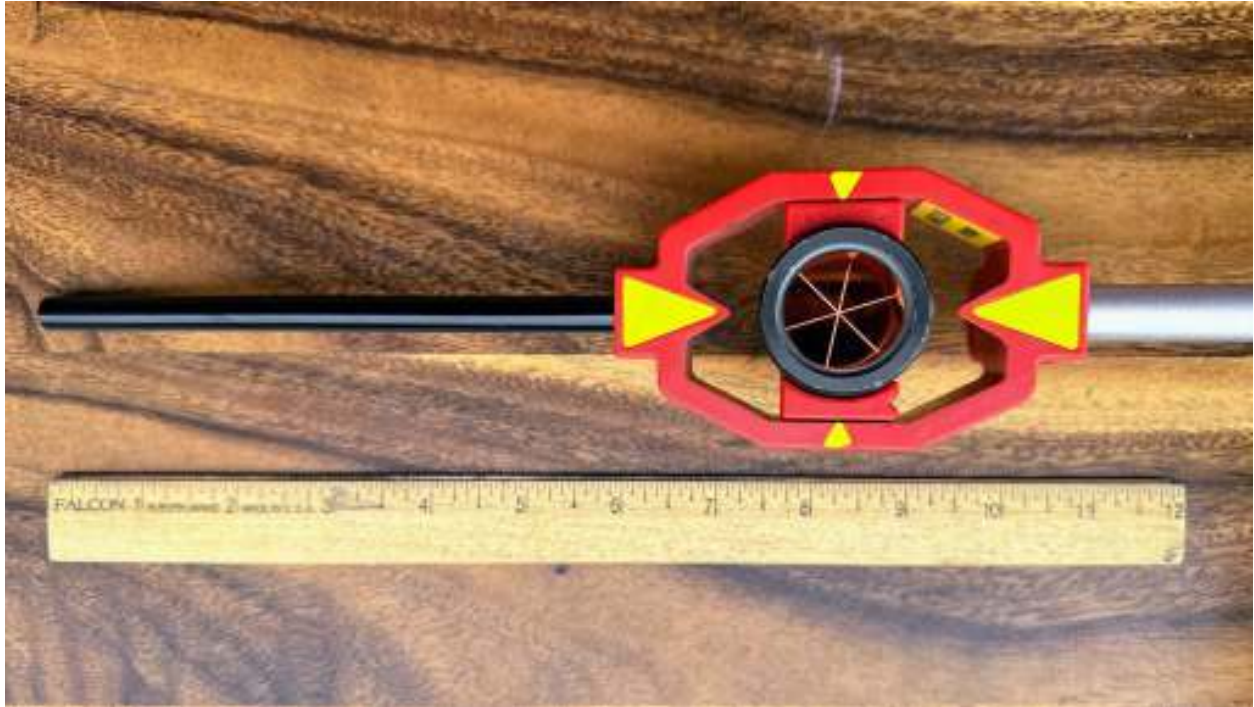
With the mini-prism stainless steel point, the reflector is 10" above the point.

The black 6" extension rod is 0.355" in diameter. That's thinner than the mini-prism point (0.470") and thinner than the 12"-long silver and red mini-prism rod pieces (0.575").

- extension rod  
6" long, 0.355" diameter (52mm L, 9.017mm D), male thread length 0.270" (6.8 mm)
- mini-prism point  
2" long, 0.470" diameter (50.8mm L, 11.938mm D), male thread length 0.325" (8.2 mm)
- mini-prism rod  
12" long, 0.575" diameter (300mm L, 14.605mm D), male thread length 0.270" (6.8 mm)

- set-screw in mini-prism rod  
0.775" length (19.2 mm)

With the extension rod in and stainless steel point place, the mini-prism is raised 8". That's a couple inches taller than Jo Jo's custom extensions. The mini-prism rod and extension without the stainless steel point. The female end of the extension rod might need to be capped to avoid sand from damaging the internal threads. A short 1/4" x20 bolt should work.



Alternatively, add a short camera tripod spike. I found 1" spikes on Amazon for \$7.99 for a package of 3.



<https://www.amazon.com/dp/B0C1YLRN3M>

*MY MIRONEY 3PCS Stainless Steel Camera Tripod Spikes 1/4" Tripod Feet Screw Adapter for Monopod Tripod*

Some years ago, the late Scott Rose asked his son to create a mini-prism extension. He found the mini-prism rods use set-screws to connect one rod to another.



If you had access to a few tools (ie. metal lathe/mill, drill press) , it would be possible to create custom rod extensions from round aluminum rods.

Thank you. -- Justin Kuo <[jkuo@usatfne.org](mailto:jkuo@usatfne.org)>

###