



By Al Pepling, LS

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## SECO Poles and Prisms

**T**ired of prism pole slippage and non-adjustable prism pole bubble levels? Tired of tilting prism target assemblies that slip as you are walking back to the instrument or having to lift the prism pole out of the tripod ring, or not being able to adjust the “spring” out of your setup and finding it has gone out of level by the time you are done turning your traverse angles and collecting your side shots? SECO has newer products that will solve these problems and allow you to work more efficiently.

Mike Dahl, VP of SECO asked me to try out the products over time and provide feedback to SECO during their use. You can bet I was happy to comply with their request.

Years ago, compression locking prism poles were the first type I used. They held well initially, but would start to slip if the threads were not kept clean and well lubricated. They tended to wear quickly, especially if made of softer brass. One manufacturer had a handle/grip that you compressed to set the pole height and then released it. After months of use these could slip too. When the multi-sectioned prism poles with the plastic lever clamps came on the scene, I was still using the older model. Finally I updated to the plastic lever clamps. On a topo, a slippage in the prism height is not a significant issue, but when setting steel for a multi-story building, or for bridge construction, or when trig-leveling for control, it is an issue.

My unscientific test was to set the prism height and then exert downward force on the top of the sliding prism pole. Unhappily, all of the above could be made to slip with enough downward pressure.



Rear Locking 62 mm Premier Prism Assembly

The plastic clamping models seemed to wear and slip the easiest. A rough rod handler also contributed to rod slippage.

SECO has a wide variety of prism poles and locking mechanisms. Now they have produced a prism pole with their QLV™ (Quick Lever with Vial) locking mechanism, and so far it has not slipped one iota during use. I repeated my unscientific test with the QLV and ceased my downward pressure when I became concerned that the pole itself would bend. (I left a divot in the bituminous pavement.)

It operates with less than a 45-degree lever movement with no apparent drag when unlocked and positive locking when engaged (**Figure 1**). Even better is that it is “field” adjustable or serviceable and you can vary the locking pressure to suit your taste. An Allen wrench is all that is necessary.

The “high-vis” 40-minute vial (**Figure 2**) is a part of the QLV. I particularly liked its design with the adjusting screws on the top. (There are additional models available as well). A small item, but a definite contributor to

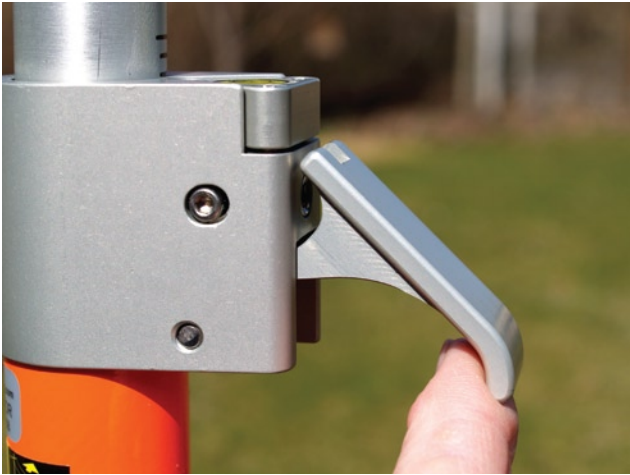


Figure 1



Figure 3



Figure 2

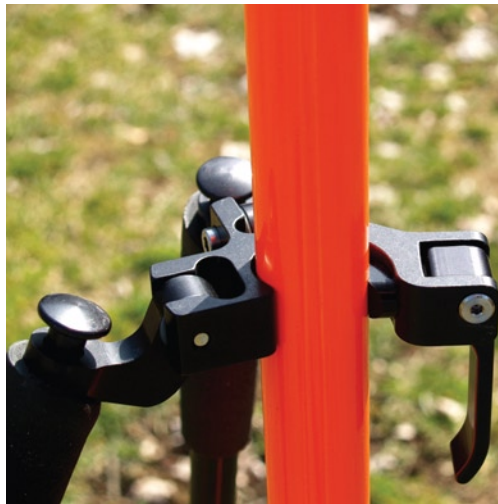


Figure 4



Figure 5

the quality of the whole assembly is the brass locking nut. Our junk box at work has a couple of the plastic variety and some plastic clamps in it.

My assessment is that the QLV prism poles will eliminate some sources of systematic errors and blunders over the long haul. Like any quality purchase, it has the potential to provide a great return on your investment.

The next part of the system is the Rear Locking 62mm Premier Prism Assembly with 6 x 9 in. target plate. The plate, yoke, and target mount are made of metal, a generally more robust material than those made of plastic. There are two notable improvements in my opinion. First is the target plate itself. The target pattern greatly aids in aiming the gun and is available in several colors. There is a small hole in the plate that aids in aiming the target at the instrument.

The second is actually in two parts. One is the slot with a socket head cap screw to provide very fine adjustment to the ease with which the target can be tilted. The second is the locking lever to prohibit movement once you aim the prism/plate assembly at the instrument (**Figure 3**). Prism pole or tripod, tribrach, and tribrach adapter, this target assembly is very aptly named!

The final component of this trio of products is the smart Quick Lever Bipod with Thumb Release Legs (**Figure 4**). *Quick* is definitely the operative word!

By the third setup I learned that I could reduce the amount of spring back tension in my setups by leaving the lever unlocked, planting the bipod legs in the ground and then plumbing up the prism pole, and finally locking the lever cam (**Figure 5**). The Delrin locking mechanism has an 80-durometer EPDM plug and won't mar, scratch or

crush your pole. These are much faster to set up than my old style rings with the fine threads bipods.

My initial reactions are of the quality and speed of these components. The materials speak to longevity and reduction of systematic errors with less effort than I presently employ. Longevity—my present bipods are SECO's older ring types with the little sprung levers on the clamping assembly that are so much more difficult to level up than the thumb press types now used, and I've had them in use for 15 or so years with minimal maintenance.

As to cost, you have to balance it against improved setup time and the potential for reducing systematic error. This reminds me of a sign I once saw in a shop, "The bitterness of poor quality lasts long after the sweetness of low price is gone!" You have to ask yourself: What is my reputation worth? *AS*