

## Starlight Instruments Latest Innovation is a First Class Winner

By John O'Neill

A company that rests on its laurel's will soon be put to rest. This certainly does not apply to Starlight Instruments, manufactures of the now famous Feathertouch focuser. Starlight Instruments has always been a step ahead of the competition by manufacturing precision rack and pinion, non-slip focusers and accessories, for those who only the best will do.

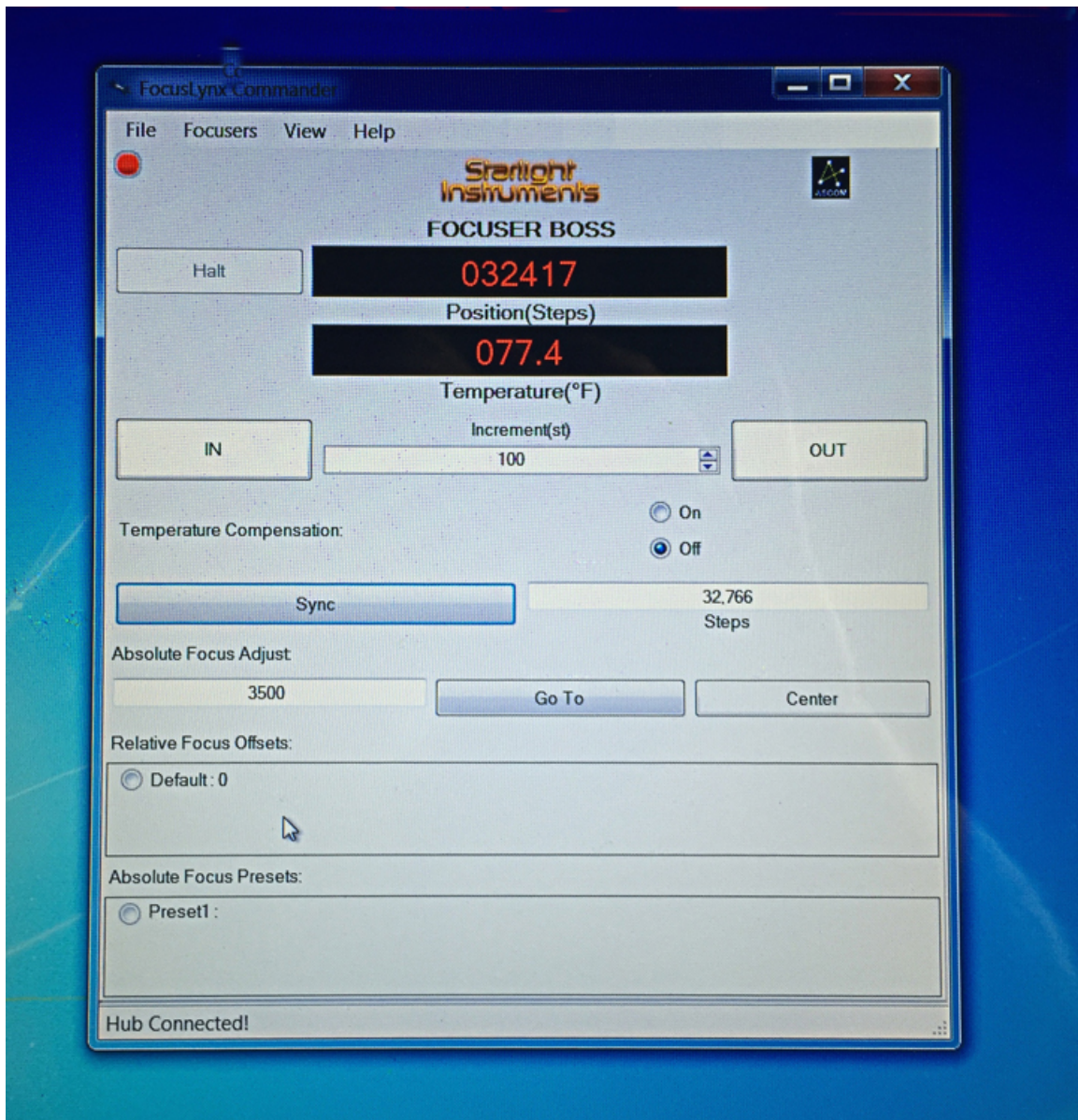
Introducing Starlight Instruments new innovative **Posi Drive Motor System**, putting ultra high resolution focusing within reach of discerning astro imagers everywhere. Their new design is based loosely on the Starizona system but now incorporates a special high precision motor and reduction system that produces 24,000 step resolution for every 1 inch of travel. The new design works on all Feathertouch 2" and larger focusers and is very easy to install.



New Posi Drive Motor System on a 3" Feathertouch

Initial testing on a star with the new focuser at the Winter Star Party (known for very steady skies) was the perfect venue to test the system. The focuser can be controlled by a hand controller or in my case a software program that has all the functions necessary to control the focuser from your computer.. A wireless system is also available.

The “***Focuser Boss II***” software program has all the features you could possibly need.



Screen shot of the new Focuser Boss II software for the Posi Drive Motor System





6 to 1 reduction gearbox

After Jon Joseph installed the Posi Drive Motor System on the scope, hooked up the cables to the control box, focuser and computer, we were ready to go. We started up the computer and the *Focuser Boss II* software installed without a problem. Turning on the control box the *Focuser Boss II* program automatically connected and we were ready to go. The first thing we did was test the focuser to make sure everything was connected properly. The ability to control the number of steps the focuser moves is one of its best features. As I mentioned earlier the new system has 24,000 steps per 1 inch of travel (2.54 cm) putting that another way .004 inch for every 100 steps. This resolution is only available on the most expensive systems on the market.

Putting in 500 steps you can notice the focuser move. Putting in 100 steps you can barely notice the focuser move. Change that to 50 steps and you can't. Once the clouds moved out we began testing the system using Maxim DL. Finding a nice star, we used a 500 step resolution setting to roughly focus the camera. We then dropped down to 100 steps to get a finer focus. Tiny stars not visible at 500 steps, appeared on the screen and got brighter as we neared focus. We then dropped down to 25 steps to nudge the focuser. As the focuser got closer and closer to perfect focus the image just snapped into perfect focus to a degree not even remotely possible using my old system or trying to do it by hand. Going past by approx. 300 steps the tiny stars disappeared. In all my years of imaging I have never experienced this kind of precision. Once a precise focus is achieved the software allows you to save that

setting to bring you to focus the next time you use it. *Focuser Boss II* also has Temperature Compensation plus other features that imagers will find very useful.

The Posi Drive Motor System is ridged and robust and can lift up to 56 pounds of imaging gear. A new drive disconnect system will allow for manual focus at the scope

**Starlight Instruments, Feather Touch's new Posi Drive Motor System, ultra high resolution focusing, in a class all by itself.**

