

Manual

DSII Module with “Pressure Tuner” for LS152TH α -Telescopes

Congratulations and thank you on your purchase of a Lunt Solar Systems instrument! The Lunt Solar Systems are a new generation of solar viewing instruments utilizing the most current technologies to provide the highest quality contrast and resolution in their class.

Warning

There are inherent dangers when looking at the Sun thru any instrument. Please note the safety instructions in the manual of your LS152TH α telescope.

Handling and Cleaning

Please also note the relevant instructions in the manual of your LS152TH α telescope. These also apply to the DSII module.

The DSII Module with “Pressure Tuner” for LS152TH α Telescopes

The DSII module is an upgrade to the standard LS152TH α solar telescope.

The DSII module contains a specially designed re-collimating and refocus lens set that will only work in the LS152TH α . The module contains a precisely tuned narrowband interference filter in a sealed cavity. This filter will reduce the bandwidth of the LS152TH α to <0.5 Angstroms. The DSII system utilizes our advanced “Pressure Tuner” technology, allowing for easy tuning of the finest details.

The DSII module is designed to provide enhanced surface detail, allowing for higher contrast views of the filaments and active regions. Some dimming will be noted due to the narrowing of the bandwidth.

Attention: Because the DSII module was designed ONLY for use in LS152TH α telescopes, and in these telescopes all necessary energy filters are already installed, the DSII module has no extra energy filters. Therefore never use the DSII module without a LS152TH α telescope! IR and UV radiation can damage your eyes when the DSII module is used without LS152TH α telescope!

What is delivered with the system?

- DSII module for LS152TH α telescopes
- Internal Etalon with “Pressure Tuner”
- 6 thumbscrews for easy installation and removal
- Adapter rings for easy installation and removal
- Shipping box with die cut foam insert
- Instruction manual



Setting up the DSII module

Safety First!

- **Always check any solar telescope before use. Do not use any telescope or filter that appears to be damaged. Verify that all glass and filters are in place.**
- **The Blocking Filter diagonal or extension tube must always be used with the Lunt telescope or filter.**

At first follow the instructions for your normal LS152TH α telescope without DSII. If you have sharp focused the sun you would tune the built-in H-alpha filter. Note where the LS152Tha/PT was correctly tuned on its brass cylinder.

Installing the DSII module at the telescope: Take the LS152TH α back from the mount, and put it on a clean table.

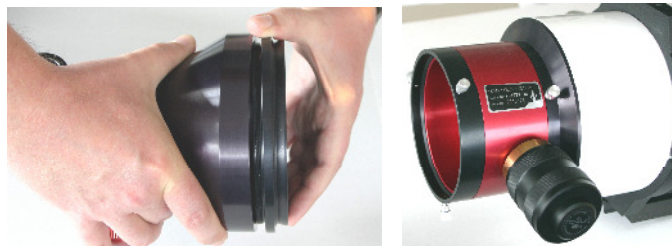
The installation of the DSII module is accomplished by first unthreading the cone/focuser from the back of the telescope.



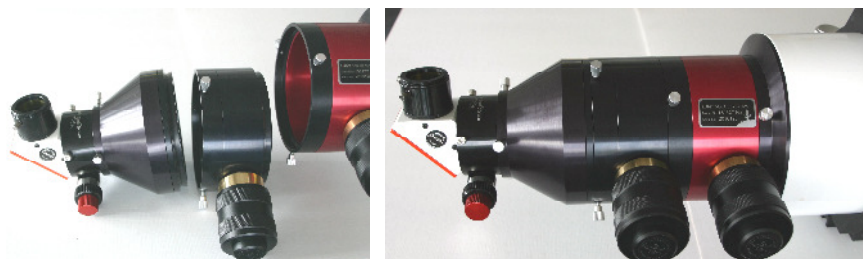
Then remove the adapter-rings from the DSII. Use the Allen wrench (delivered with the LS152THa telescope) to remove allen head set screws. Any allen head set screws can be replaced with the thumbscrews provided in packaging.



Thread the cone/focuser assembly onto the male adapter and thread the female adapter onto the red LS152THa pressure tune assembly.



Attach the DSII unit to the red LS152THa pressure tune assembly. Then attach the cone/focuser to the DSII unit.



The user may rotate the DSII into any position. Snug the allen head screws or aluminum thumbscrews onto the module and fasten it in place. Now the installation of the DSII module at the LS152THa telescope is finished.

Install the telescope now again on your mount, and point it to the sun. Move the handle of the originally Pressure-Tuner back into the position which you have previously noticed. Re-focus the system. The user may need to pull the blocking filter out of the focuser approximately 50mm to achieve rough focus. If more in-focus is needed the male/female adapter units between the DSII and cone/focuser can be removed and the cone/focuser unit can be directly threaded to the DSII unit (This will be necessary if using a B3400 and a 2" diagonal). By using the DSII unit you will have 50mm lower back-focus than without DSII unit. It will only be 24mm lower back-focus if you don't use the adapter units.

Tuning of the DSII module is accomplished by first re-setting the Pressure-Tuner cylinder as described in the telescope manual or to the previous gap setting. The user will note that the image will appear very dim when the DSII module is not "on band". Turn the Pressure-Tuner handle on the DSII module in, while viewing the sun through the scope. The user should see the image brighten as the system is adjusted so that both Etalon are tuned to the same wavelength band. Adjust the Pressure-Tuner for the best view of solar surface details. The user may now adjust the Pressure-Tuner on the LS152THa telescope to achieve the maximum contrast.

The DSII module is designed to provide an enhanced, narrowband, higher contrast view of the sun's surface. The user will note a dimming of the image while using the scope in the double-stack mode. This is a normal effect.

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