



# nPAE

PRECISION ASTRO ENGINEERING

# Eyepiece Turret Instructions





# First Time Setup

We recommend you set up for the first time at home during the day so that you can make any changes in comfort and with good lighting. Please read the instructions in full before setting up.

**DO NOT LOOK AT THE SUN WITHOUT APPROPRIATE EQUIPMENT.** Your nPAE turret does not contain features for solar observing and should not be used for solar observation without additional equipment.

**DO NOT INSERT** your nPAE turret into anything other than telescope equipment.

**DO NOT ALLOW** small children to play underneath or around your telescope set up.

**DO NOT HANG** any objects from the turret.

**ALWAYS** use the Cerberus case (included) to transport your turret.

**ONLY INSERT** telescope accessories into the Maia locks.

1. Set up your telescope either outside or facing through a window at a distant object so you can set the individual focus for each accessory.

2. Attach the turret to the focuser with the viewing aperture facing where you would look through. The logo on the back of the unit is aligned with the active Maia lock.

3. Place the accessory which normally puts your focuser roughly in the middle of its focus range into the active Maia lock and look through it, using the gross focus on your telescope to focus on a distant object. This will be referred to as your primary accessory.

4. To lock the accessory into the Maia lock twist the outer sleeve clockwise. It won't move much. While holding the collar tightly clockwise, tighten the thumb screw to lock your item in place.

5. Rotate the turret to the next Maia Lock you will be using and place the next accessory into it. Use the Maia lock's focuser to fine tune the focus for the accessory. Don't adjust the gross focus. Once you find the focus tighten the Maia lock to hold your accessory.

6. If you can't find a focused point move the Maia focuser to the half way position, then focus using the gross focus on your telescope. Once in focus and locked into place turn back to the primary accessory and use the Maia focuser to focus it. Some equipment such as SLR adaptors can require too much focus movement to be able to have them set up at the same time as an eyepiece. In this case we recommend you focus everything except that piece and use the gross focus on your telescope when you want to start imaging. It is also possible to completely remove the parfocal ring and place the accessory directly in the lock.

7. Repeat this procedure until all the accessories are loaded and set up. Be sure to tighten each Maia lock before rotating to the next opening. Depending on your mount and what you attached to the turret you may need to either rebalance using weights on your telescope or move the attachment point so that the whole assembly is balanced correctly.

8. Once you are happy with the balance and focus you can either remove the whole assembly of the turret and your accessory's or take note of which accessory goes into which Maia lock then remove each one. You are now ready to setup in the field.



# Setting up in the field/operation

1. Set up your telescope as you would normally, including alignment, then attach the turret. If needed re-attach the accessories.
2. To minimise any stray light interference, any empty Maia locks and the filter slot should not be left uncovered.
3. Point the telescope at the object you want to view and use the gross focus on your telescope.
4. If you carried out the first time set up all your accessories should now be in focus.
5. To change which accessory you use simply turn the turret to the desired accessory.
6. If you intend to use multiple filters, screw them into the quick change filter holders and check they fit into the turret. It is designed to accommodate M48x0.75 filters up to 10mm in thickness but each filter is different so it is best to check before you go out for a night's viewing. To swap filters, carefully remove the one in the turret and replace it with a prepared filter.

## FAQ/Troubleshooting

### **The Maia lock won't hold my item**

Some situations mean that when you tighten the Maia lock it does not engage with your accessory. This can happen if you have had to move the parfocal ring out to its maximum travel or if your accessory has a short neck going into the lock. In these cases you can completely remove the parfocal ring and place the accessory directly in the lock. Proceed with setting up the turret as normal, using this accessory as your primary accessory.

### **My accessory goes deep enough into the turret to impact the mirror assembly.**

In the reverse situation to above, some equipment have very long necks and will impact the mirror when fully inserted. In this case try using this equipment as the primary and set it up with the focus ring on the Maia extended enough to not impact the mirror.

### **The turret does not stay in the rotated position I want/it rotates when released**

If there is a large enough asymmetry in the weighting on the turret it may not be able to hold in position. Try re-ordering your accessories to get a more even balance. If this does not work see if there is anything on the accessories you could remove to lighten them such as camera straps on SLR's.

### **The turret rotation is very stiff/loose.**

The rotational resistance of the turret can be adjusted by loosening or tightening the four screws on the back plate. Ensure all 4 are to the same tightness or some may come loose over time.

### **My problem/Question is not listed here**

If there is something you want to ask or an issue you would like to resolve please check the website for videos and updates to the instructions or contact us directly through our website, email, twitter or through Facebook. Contact details are on the back cover of these instructions.





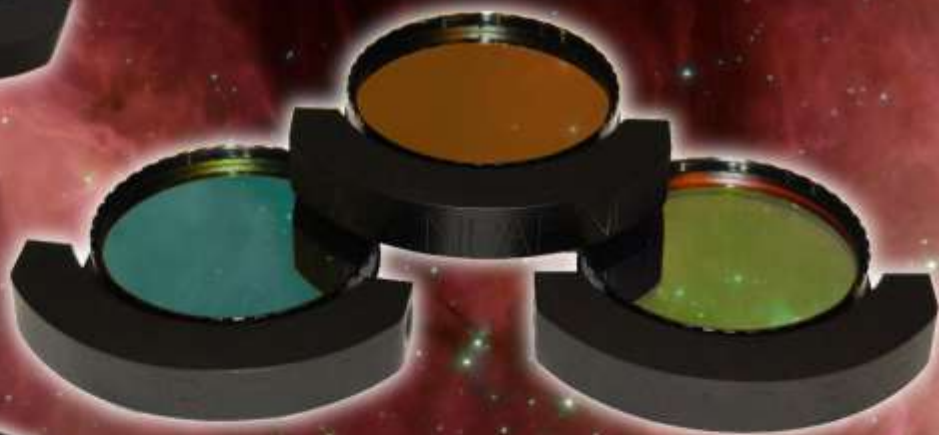
If you're searching for a tough case to protect your astronomy or camera equipment, the Cerberus Case is just what you're looking for. It's crush resistant, dust resistant, impact resistant and water resistant. Cerberus is rated at IP67 and IK-08.

*"The Cerberus Case would be an excellent choice for an eyepiece case or as a travel case for a small 6-8cm aperture scope and accessories for trips to dark distant lands as the dimensions comply with the most restrictive of hand baggage allowances."*



The Theia Filter changer is an in-line magnetic filter changer, a smaller alternative to a filter wheel. By loading up your filters in advance into our quick change filter holders you can rapidly swap from one to the other.

Extra Filter Holders  
Pack of 3 £50



1.25 and 2 inch Aluminium  
Dust caps. Packs of 2 starting  
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