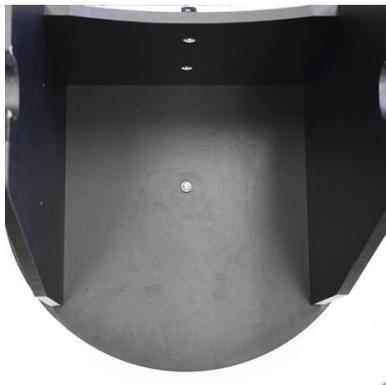




# FARPOINT

## Dobsonian Azimuth Upgrade Kit, FGS-AUK

Fits: Zhumell Z8, Z10, Z12 and similar Guan Sheng Dobsonians



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**Part Number: FGS-AUK**



Farpoint's Azimuth Upgrade Kit greatly improves the stability and function of your base. The base with kit installed has much smoother and consistent movements. The troublesome rocking of the ground board is eliminated. For Zhumell Z8, Z10, and Z12 telescopes and similar Guan Sheng Dobsonians.

## FGS-AUK Installation Instructions



## Included Parts List:

Item	Description	Qty.
(a)	Flanged Sleeve Bearing	1
(b)	Pivot Post	1
(c)	5/16-18 Nylon Insert Lock Nut	1
(d)	5/16 SAE Stainless Washer	1
(e)	5/16-18 Button Head Socket Cap Screw	1
(f)	Farpoint Astro Teflon Center Bearing	1
(g)	Farpoint Astro Teflon Foot Bearing	3
(h)	8-32 X 1 3/4 Stainless Flat Socket Head Cap Screw	3
(i)	#8 Stainless SAE Washer	3
(j)	8-32 Nylon Insert Lock Nut	3
(k)	3/32 Hex Wrench (Allen)	1

# Tools needed but not provided:

- Phillips screw driver
- Flat head screw driver
- Drill with 5/32" drill bit
- 3/16" Hex Wrench (Allen)
- 1/2" Wrench, Socket, or adjustable wrench



1. Remove the telescope tube from the base and set it aside for the moment. You will be working with the base.

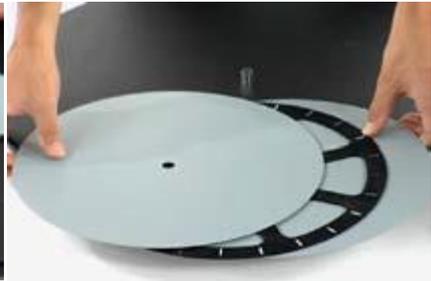
2. Working with the Dobsonian base, separate the base (has the rocker box) from the ground board (has the feet). To do so:



a. Unscrew the center Adjustment Bolt and remove it, including all washers and bearings. Set aside, they won't be needed.



b. Lift the base and separate it from the ground board. Set the base aside for the moment; you will be working with the ground board.



3. Leave the threaded center insert in place (it came already firmly fixed in the center hole of the ground board when purchased). Remove the two plates and the “wagon wheel” (with needle bearings) from the ground board. Set aside (they won’t be needed). Also set aside the Axle Sleeve (the plain tube resting on top of the center insert). The Axle Sleeve won’t be needed.





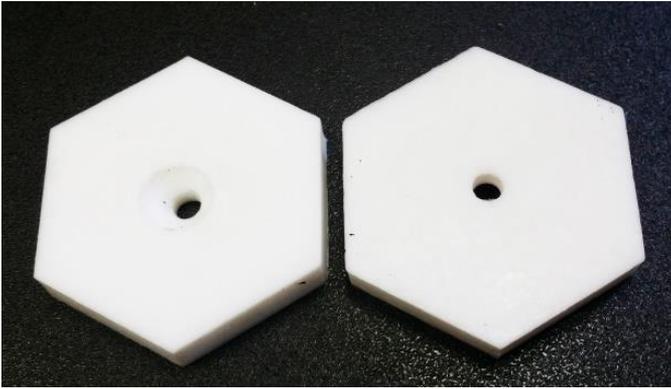
4. Flip the ground board over. Unscrew and remove the feet. Retain the feet. Set aside the foot screws (they won't be needed).



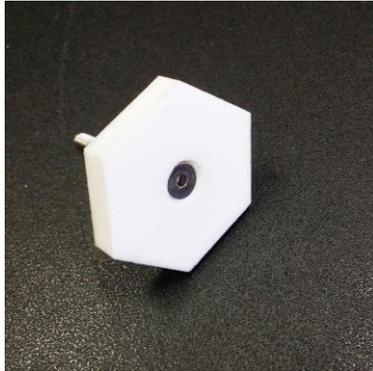
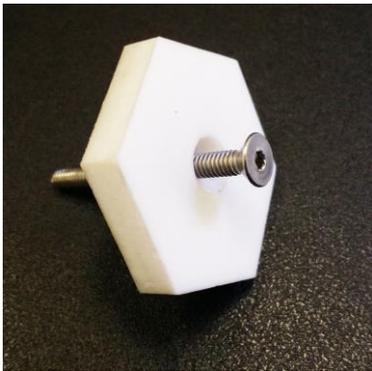
5. **IMPORTANT:** Drill out the holes that the foot screws were in with a 5/32" drill bit. If you skip this step, you will ruin the Teflon when you re-install and tighten the feet.

**Now you are ready to install Farpoint's FGS-AUK Azimuth Upgrade Kit.**

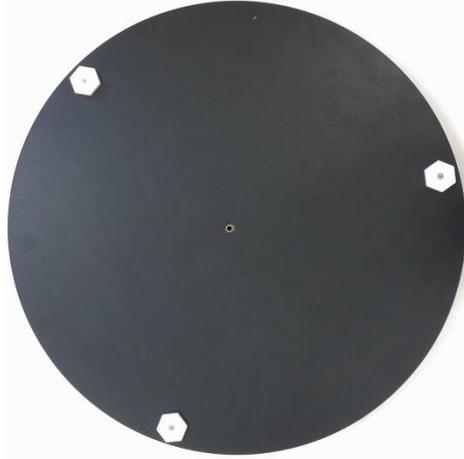
6. Attach the Teflon Foot Bearings (g) to the top of the ground board using the 8-32 X 1 3/4 Stainless Flat Socket Head Cap Screws (h). Note that the Teflon Foot Bearings (g) have two sides.



Gently screw the Teflon Foot Bearing onto the Socket Head Cap Screw so that the head of the screw sits flush with the Teflon Foot Bearing as shown. This is best done by hand, but you can use the included 3/32 Hex Wrench (k) if necessary. Don't overtighten; keep it quite loose but with the screw head just below the top of the bearing surface (as in the final picture below).



Now insert the screws with the Teflon Foot Bearings into the foot holes that you drilled out earlier. Note that you are going to **BOLT** the Teflon Foot Bearings onto the ground board. The screw (h) should slip through the ground board without you having to screw it in. **(This is why you drilled out the hole earlier using your 5/32" drill bit).**



The Teflon Foot Bearings should sit on the top side of the ground board facing up and the feet, washer, and lock nut will serve to bolt the bearings in place on the bottom side of the ground board. So the parts should fit like this (top to bottom):

8-32 X 1 ¼ Stainless Flat Socket Head Cap Screw (h)

Farpoint Astro Teflon Foot Bearing (g)

Ground Board

Foot

#8 Stainless SAE Washer (i)

8-32 Nylon Insert Lock Nut (j)

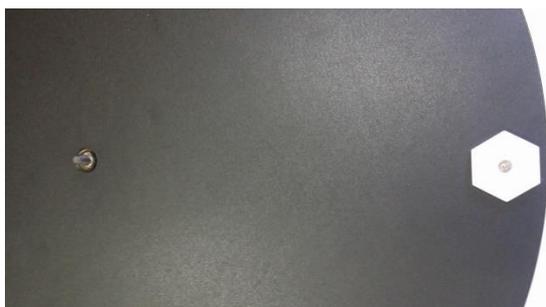
**Do NOT** overtighten or you will **RUIN** the Teflon Bearings!



7. Now gently tighten the assembly until it is just snug by turning the screw (h) with the included 3/32 Hex Wrench (k) while holding the 8-32 Nylon Insert Lock Nut (j) still. You will find that there is no easy way to get a socket in there or otherwise hold the lock nut while turning the screw. But this is a good thing because it will prevent you from overtightening the screw and

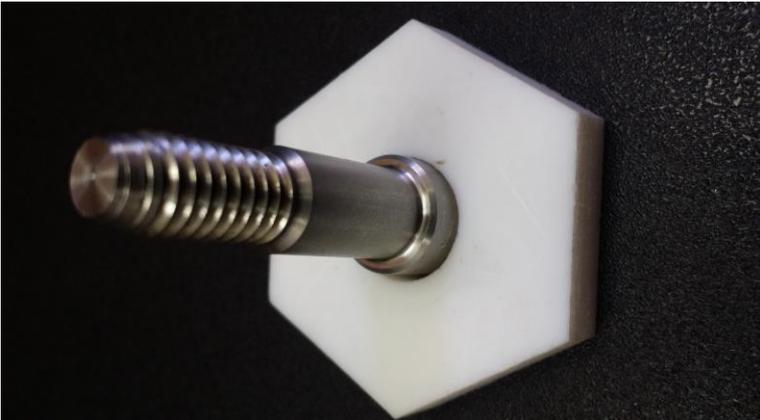
deforming the Teflon bearings. 😊 Start the lock nut by hand and then use a flat screwdriver to jam the lock nut against the foot while you finish tightening the screw with the 3/32 Hex Wrench (k). **Again, just make it hand snug, do not overtighten.**

8. Screw the 5/16-18 Button Head Socket Cap Screw (e) into the threaded center insert (already in the center of the ground board). Start the screw from the bottom (feet side) of the ground board so that the threads protrude on the top of the ground board. Tighten with a 3/16" hex wrench.





9. Screw the Pivot Post (b) onto the 5/16-18 Button Head Socket Cap Screw (e).



10. Place the Farpoint Astro Teflon Center Bearing (f) over the Pivot Post.



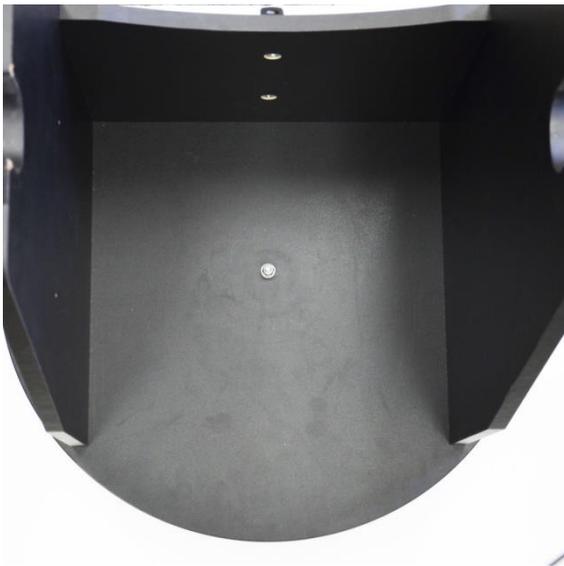
11. You are done with the ground board! Now place the base board (with the rocker box) on the ground board.



12. Place the Flanged Sleeve Bearing (a) over the Pivot Post (the flange should be up) and push it down into the center hole.



13. Put the 5/16 SAE Stainless Washer (d) on top of the Flanged Sleeve Bearing and secure with the 5/16-18 Nylon Insert Lock Nut (c).



Adjust the lock nut for optimum movement. You will find that it doesn't need to be very tight.

Put your OTA back on the base. **You are finished!** We think you will enjoy your Azimuth Upgrade Kit! You might be interested in these other Farpoint products for Dobsonian Telescopes. For more information, go to:

<https://farpointastro.com/product-category/dobsonian/>



### **Zhumell Z12 Light Shield**

Farpoint's snap-in light shield for Zhumell Z12 telescope and many other 12" Dobsonians with 14" OTA's.



### **Lifting Straps for 12" Zhumell Z12, Black**

Makes it easy to install or remove your OTA from the Base of your Zhumell Z12 or other Dobsonians with 14" diameter solid tube OTA's.



### **Farpoint 1.5 pound magnetic bag weight**

Farpoint's 1.5 pound magnetic bag weight sticks securely to the steel OTA of many solid tube Dobsonians.



*Zhumell Z12 with Farpoint FP322 Collimation Knobs and Spring Upgrade Kit and Farpoint FZ300 Counterweight Kit*

### **Knob & Spring Kit for 12" Zhumell Z12**

Upgrade to our knurled, 1.5" diameter collimation knobs for easy adjustment. Kit includes replacement springs to keep your primary mirror in alignment.