

## The Upside Down Gemstone Globe...

By Larry Murray

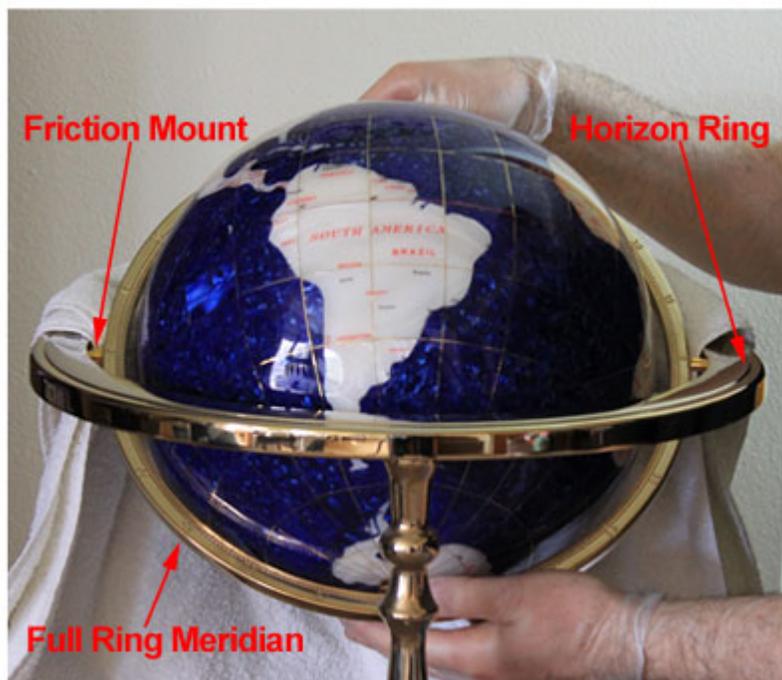
This article addresses a problem that inevitably arises at least once in the life time of every Gemstone Globe that implements a dual axis mount. From a maintenance standpoint this question is probably number two in frequency, right behind "[How do I clean my Gemstone Globe?](#)"

The original contact from the frustrated globe owner usually starts out with something like; I bought my Gemstone Globe on a cruise (or estate sale, or inherited it from my grandmother) and lately I keep finding it lying flat (or if they ignored the lying flat stage, by now the globe is actually turning itself upside down). It really bothers me that my globe doesn't stay upright like it used to do. What is wrong with my globe and what can I do to fix it?

To understand why the problem occurs, you first need to understand a little bit about the way Gemstone Globes are constructed. They are made of semi-precious stones which are cut into the shape of the individual countries and are then affixed to a plastic sphere. Once all of the land masses are crafted, a colored resin slurry is poured around the land masses to create the oceans. There are other finishing steps performed to create the finished Gemstone Globe but for this discussion the thing that is most important is to realize that the stones are typically heavier than the same volume of resin. This weight differential is important because as you know, the earth has far more land masses above the equator than there are below the equator. When rendering the Earth as a Gemstone Globe, this means there is a weight imbalance between the northern and southern hemispheres. In other words, all Gemstone Globes are top heavy!

The top heavy nature of your Gemstone Globe is normally overcome by the friction mount. This is the attachment point between the full ring meridian and the horizon ring. The friction mounting method is common to virtually all table top and floor globes that feature a full ring meridian.

While each manufacturer has their own method of implementing the friction



mount, every globe I have ever seen has had some common similarities. Over time, especially if you move the meridian as part of viewing your Gemstone Globe, the friction mount will wear with the result that it will loosen up. When the friction is reduced below the holding threshold, the pull of gravity on your globe will cause it to sag or eventually, to totally invert.



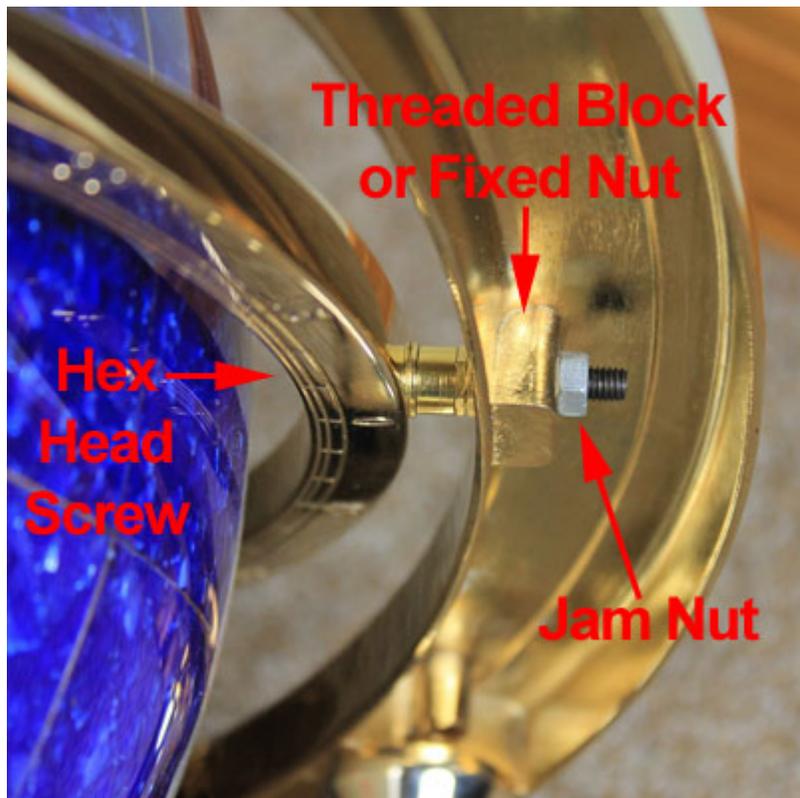
The cure for your sagging globe is to increase the friction in the mount between the meridian ring to the horizon ring. With a little bit of instruction, a person possessing reasonable mechanical aptitude can expect to make the necessary adjustment and restore the globe to its original condition.

The following examples show two different implementations of the friction mount. While your mount may be different in implementation, you should be able to make the required adjustment as long as you understand the principles involved.

#### Example 1:

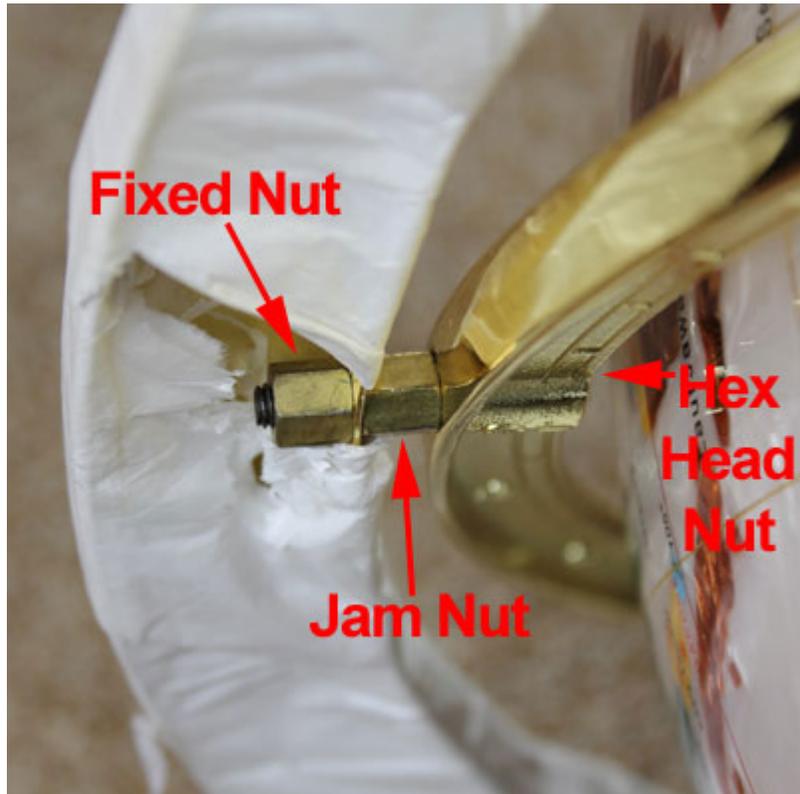
This view is the underside of an Alexander Kalifano Gemstone Globe friction mount. This mounting is typical of what you will find on both desk top and floor stand Kalifano globes that mount the globe ball inside a full ring meridian.

As you can see, the friction mount consists of a hex head screw which passes from the full ring meridian, through a bridging structure, and which is then secured to the horizon ring. The attachment consists of a fixed nut which is used to make the friction adjustment, and a jam nut which is used to lock the screw in place once the adjustment has been completed. In this particular Kalifano stand, the fixed nut is cast as a threaded block which is part of the horizon ring.



## Example 2:

This image shows the underside view of the friction mount on a “House” brand Gemstone Globe. There are a number of factories in China that produce Gemstone Globes on an OEM basis and these globes are typically sold as “House” brands. This mounting is typical of what you will find on globes coming from the various factories which are not producing the Alexander Kalifano brand globes. While the implementation may vary somewhat from factory to factory, they are all similar in design as well as function.



In most cases, to access the head of the adjusting screw, you will have to remove the globe from the meridian ring. The globe can be damaged when it is removed from the meridian ring so **EXERCISE EXTREME CAUTION WHEN REMOVING THE GLOBE**. To decrease the risk of damage, I suggest you read through the complete removal instructions before attempting to remove your globe ball.

In most stands, the globe is mounted to the meridian ring using a screw and a detachable mount, one at the north pole and a second at the south pole. When the screw is removed it allows the globe to move freely and it can drop or bang against the stand, resulting in scuffing or even cracking the globe surface. In addition, if one mounting screw is removed without supporting the globe it can stress the globe at the point where all of the weight is being held by the second mount. The result can be cracking or splitting in the area of the mount. I recommend you **PAD THE STAND AND SUPPORT THE GLOBE BEFORE REMOVING EITHER**



## GLOBE MOUNT.

The following sequence of images shows the removal of the globe from the stand. This example uses an Alexander Kalifano Gemstone Globe.

**NOTE:** When working with your Gemstone Globe, I recommend you use either vinyl gloves or soft cotton gloves to protect your globe from fingerprints.

### *Step #1:*

Loosen the hex head screw at the north pole. Do not remove the screw!

Leave the screw threaded far enough into the meridian that it will continue to support your globe for the next step.

**NOTE:** To improve the clarity and visibility of the photos, the towel used for padding the globe stand has been removed from the remaining images. When removing your Gemstone Globe ball, I recommend you leave the padding in place to protect your globe.



### *Step #2:*

Rotate your globe so its meridian is inclined about 10 to 15 degrees above the horizon ring. This will keep the loosened hex head screw at the north pole well above the top surface of the horizon ring while giving you access to the hex head screw at the south pole.



While supporting the globe ball, completely remove the hex head screw at the south pole.

***Step #3:***

While continuing to support the globe ball, completely remove the hex head screw at the north pole.



***Step #4:***

With both mounting screws removed, the globe ball is completely free of the full ring meridian and can be lifted clear to the stand. Be careful not to bump the globe against the meridian of horizon ring as such contact can irreparably damage the globe ball.

**NOTE:** The removable mounting studs are still inserted into the north and south poles of the globe. The mounting studs can be a relatively loose fit in the globe ball and may fall out



as the globe is moved. If the mounting studs fall, don't be startled and don't worry about trying to catch the falling mounting studs, rather make sure you maintain control of the globe at all times!

**Step #5:**

With the globe ball removed, you will have access to the hex head mounting screws which are in the recessed pockets cut into the full ring meridian.

Now that you have access to the friction mounting assembly, you can begin the adjustment. Refer to the following diagrams while making the adjustment to your globes friction mount assembly.

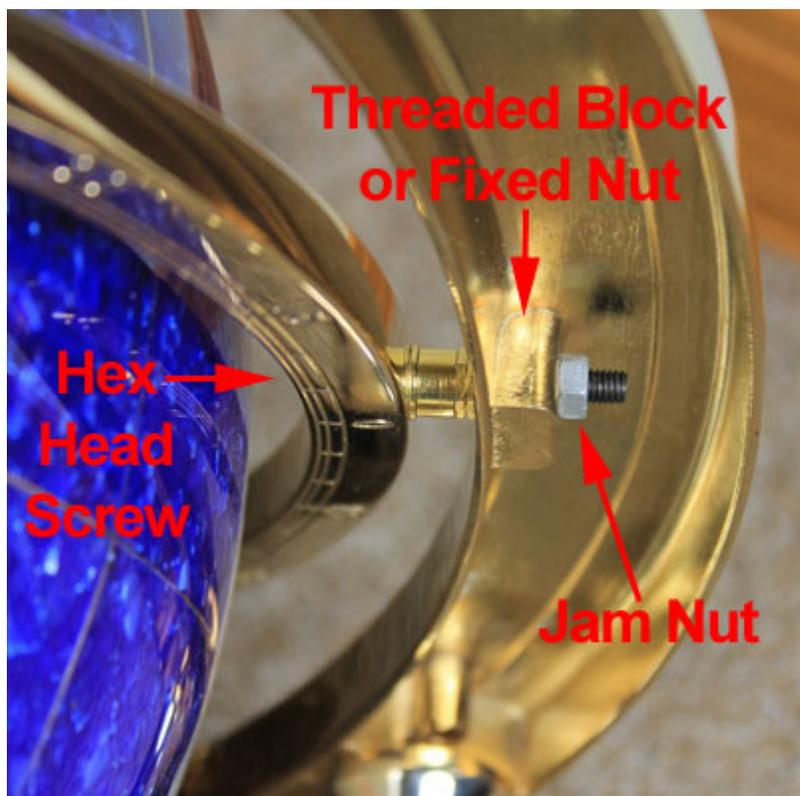


First, identify the fixed nut.

In my experience, the fixed nut is normally located against the inside of the horizon ring wall. The fixed nut provides the point against which the hex head adjusting screw is tensioned.

Second, identify the jam nut.

The jam nut can be located on either side of the fixed nut. The purpose of the jam nut is to lock the hex head adjusting screw



into position within the fixed nut.

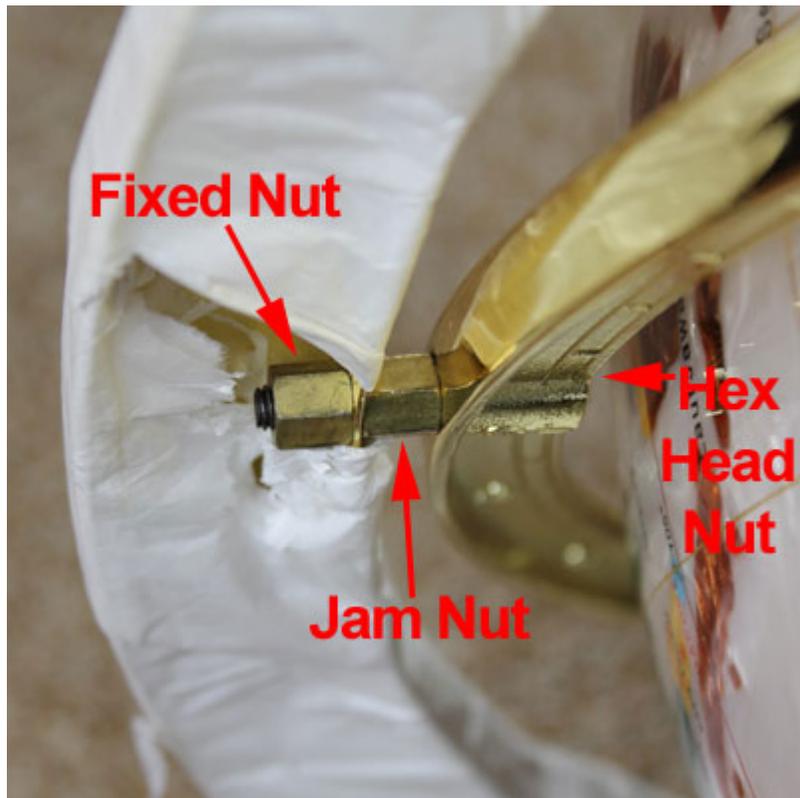
Third, while holding the hex head nut stationary, loosen the jam nut.

Fourth, while holding the fixed nut stationary, screw the hex head adjusting screw further into the fixed nut, thus making the connection tighter. (If you wish to loosen the friction applied to the mount, unscrew the hex head adjusting screw from the fixed nut, thus making the connection looser.)

Fifth, while holding the hex head adjusting screw stationary, tighten the jam nut against the fixed nut, locking the hex head adjusting screw into position. (If the fixed nut is loose rather than integrated into the stand, you may have to hold both the hex head adjusting screw and the fixed nut in a stationary position, while tightening the jam nut.)

Sixth, repeat the third, fourth, and fifth steps to adjust the tension for the other friction mount.

**NOTE:** You should balance the tension on both mounts so the friction is provided equally as opposed to having one mount provide all or most of the friction. This will provide a larger “wear surface” and will enable your adjustment to last longer before it has to be adjusted again. Balancing the tension between the two mounts also reduces the chance of over



tightening the mount and damaging the stand.

The objective in tensioning the mounts is to reach the point where the globe will hold in whatever position you place it. To some degree, the acceptability of the adjustment is determined by feel. If you tighten the mounts too much it can make it difficult to rotate the meridian ring and over tightening can even damage the stand. If the mounts are too loose then the globe will not stay in position. The objective is to hit the sweet spot between too loose and too tight.

Because the globe adds a significant amount of weight when it is installed in the meridian ring, you will find that you have to tension the mounts tighter than the friction level which is required to hold the meridian ring alone. The only way I have found to make the adjustment is trial and error. Set the tension where you think it feels about right, reinstall the globe, and test it for proper operation. If it is too loose, disassemble the globe and reset the adjustment to increase the tension. If it is too tight, and the meridian ring is too difficult to move, disassemble the globe and reset the adjustment to decrease the tension.

Once the adjustment is completed you should be able to move the meridian ring to any position and it should hold in place to allow you to view your Gemstone Globe at the desired inclination.

***About the Author:** Larry Murray considers himself to be an amateur globe enthusiast who enjoys not only studying World Globes but delights in sharing the results of his personal study and experience. Larry invites you to learn more about World Globes and Gemstone Globes on the World Wide Web. Share your knowledge or ask questions at the [Globe University](http://www.worldglobeu.com), part of the World Globe Universe at <http://www.worldglobeu.com>.*

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