

# Hardin 8" Deep Space Hunter

[Tom Trusock](#) – 2/2005

Seems like it wasn't that long ago I was shopping for my first scope. I remember I'd decided I wanted something with enough aperture to keep me busy for years (cause I knew I'd never have another), but it had to be affordable (this meant none of those wiz-bang features on them snazzy SCT's).

I'd lusted after TeleVue refractors for the longest time. Every issue of the astro rags, I'd tease myself looking long at those slim white Genesis refractors – but aside from the affordability issues, even then I knew it all came down to aperture.

I decided on an Orion dobsonian. In those days, the Orion dobs were a different animal altogether. Made in the USA, the tubes were cardboard (sonotube), the mirrors from Discovery, and overall they were less – shall we say – well dressed. My 8" came standard with one 26mm plossl, no finder whatsoever, Orion's patented nev-r-align single stalk secondary (a worse idea I've yet to see), a pressboard mirror cell with excellent thermal retention properties (excellent as long as you wanted to ensure the mirror would never get cold) and an eterna-twist helical focuser. To this day, I have a profound dislike for helical focusers.



<b>Reviewed:</b>	Hardin 8" Deep Space Hunter
<b>Features:</b>	<ul style="list-style-type: none"><li>• 8" F6 Hardin Dob</li><li>• 26mm and 9mm Astroia Plossls</li><li>• Eyepiece Rack</li><li>• End Cap / Dust Cover</li><li>• S&amp;T Messier Card</li><li>• Power Chart</li><li>• Available From: Hardin Dealers</li><li>• On loan from: DBA Astronomy</li><li>• Price: \$399</li></ul>

I honestly can't tell you how good the mirror was – the single stalk secondary worked well to actively prevent any sort of acceptable collimation, and the pressboard mirror cell made a very effective blanket thus ensuring the scope would never cool down. And yet, I was happy with it for many years, because as a beginner I was thrilled to be seeing anything.

While still faced with the same basic choice (refractor, compound or dob), today's newbies are better off than ever. No matter how you feel about the economy, the influx of Chinese equipment has had a positive short term effect

on the affordability of astronomy. Thanks to Synta, Guan Sheng and their resellers there's more reasonably priced equipment than ever. Mak's, achro's, apo's, newts – you name it, and you can get it for a sensible price. Even goto scopes are commonly available to the beginner today. It's hard to believe nowadays in this goto saturated market, but once upon a time goto was reserved the most expensive telescopes.

And yet, when faced with that choice, many amateurs are making the same decision my generation did – an 8" f6 dob. Why? It's simple to understand and will work right out of



the box – no batteries required, no fussing with GPS or computers, and best of all, it's the least expensive way to get a decent amount of aperture – if you are a visual observer you simply can't beat a newt in bang for the buck.

Beginners need success, and eight inches is big enough to show nice bright images right off the bat. Aperture fosters success when it come to deep sky viewing, it's that simple. An 80mm refractor is a wonderful instrument, but an 8" dob will show you more – hands down. Aperture always wins. With one exception – there's a lot to be said for an ultraportable scope that goes anywhere and can be deployed at a moments notice – but that's a line of thought for another article.

At first glance, there's a plethora of dobs available in today's market. But when one looks closely, the field narrows quite a bit. There are two main manufacturers responsible for this asian dobsonian invasion – Synta and Guan Sheng Optical. In this article we'll discuss the 8" Hardin Deep Space Hunter (GSO). The good folks at [DBA Astronomy Products](#) (Dale Penkala of Auburn, MI) provided Cloudy Nights with a sample for review.

## **Mechanics and Assembly**

The Hardin 8" f6 Deep Space Hunter (from Guan Sheng Optical) retails for \$395.00, and comes standard with a 2" rack and pinion focuser (aluminum), 2" to 1.25" eyepiece adapter, an 8x50 finder scope, moon filter and 25mm and 9mm plossl eyepieces. Weighing in at a mere 23 lbs for the OTA and 20 lbs for the base, it's easy to transport and setup.

The 8" arrived in two boxes, the OTA in one, and the disassembled base in the other. The mirror was shipped in the OTA similar to the 12" Hardin I reviewed last year. While I still cringe a bit every time I see that, I have to say that it seems to work quite well for them. I'd recommend that if you resell one of these you plan on shipping the mirror separately.

Assembly was straightforward and took around 30 minutes, requiring no more than a screwdriver, allen wrench (included) and pliers. In contrast to its bigger brother, the 12" (also reviewed in the CN reports) assembly of the 8" is easily accomplished by one individual.

Dale does not ship a set of pulling rings with the 8", and you are left with the stock nylon loops to pull the tension strings down onto the base. While these work, they have shown a tendency to break after a period of time. To avoid the possibility of a loaded spring coming back at your hand, I'd recommend that you immediately replace these with a set of [DBA pulling rings](#), or a couple of key chains from your local hardware store.

Once assembled, the scope gives a fine presentation. The white enameled tube is striking, and coordinates well to the base. Functionally, I tend to prefer a reflex finder, but I've always loved the look of an optical unit, and the 8x50 (straight through) is a good match for this aperture. This is one good looking telescope.



The design is a little different from its bigger brother. It's lacking the roller bearings, and floats on three pads. Oddly enough there is a metal plate covering the back of the mirror. I suspect it's to give a semblance of a closed tube in an attempt to keep dust from settling on the primary, but in reality I found it to be nothing but a hindrance to cool down times. I'd suggest removing it.

I should also note that the stock nut on the AZ axis should be replaced with a lock nut. I found the AZ nut to loosen with use and slip off. Dale informs me that while it's not standard with the Hardin scopes, he does ship a lock nut with each unit he sells.



Since these scopes are targeted at beginners, I find it instructive to check their collimation out of the box. This one (unsurprisingly) was significantly off. Even so, I found it to still give pleasing low power views of the moon and the brighter DSO's. Collimation, while not difficult, is hindered by the fact that the mirror is not center spotted. This is something else I'd recommend you take the time to do right off the bat. In fact, you might as well take the mirror out to spot it at the same time you remove the back plate. There was no collimation tool shipped with the scope, but beginners can make a simple sight tube by drilling a small hole in

the center of a film canister. While this technique isn't exact, it does allow for fairly

decent collimation with moderate and slower focal ratio telescopes. Still, I'd recommend investing in some collimation tools and plan to spend some time learning how to use them. This is the old – "You laid out your hard earned cash for the scope, so you might as well go a little extra and have it perform as best it can" theory.

The focuser is a 2" rack and pinion type. It's a pity that the standard crayford upgrade hasn't made it to this model yet. But still, it's serviceable although perhaps a little on the tall side (although, as it turned out, it still wasn't \*quite\* tall enough). While it appears to be lubricated with the standard glue/grease the Asian focusers are known for, I was surprised that it didn't freeze solid in cold weather, and should note, it may be something other than the usual. While I'm on the subject of cold, let me also note that the metal OTA gets COLD in the winter. Gloves are definitely recommended. While the focuser has a setscrew, the supplied low profile 2" to 1.25" adapter is compression ring based. Kudo's to GSO for starting the move to compression rings as evinced by their 12", but they really need to complete the process.

The 8x50 optical finder is a nice touch, but I think a beginners frustration factor will be lowered considerably if they take the time to add some form of reflex finder (Rigel, Red Dot, etc...). If you are shopping for a unity finder, I have a shootout of nine different ones in the [CN Reports accessories](#) section.

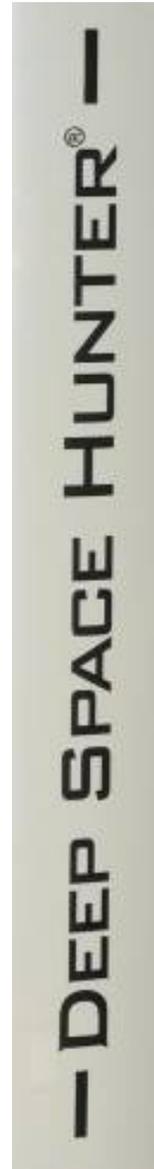
The scope ships with a number of accessories: decent quality 26mm and 9mm Astrola plossls, a S&T Messier card, a lunar map and a magnetic Power Chart to attach to the side of the ota. The power chart is a nice way to quickly tell what magnification you are using with the scope (as long as you use one of the eyepieces on the chart).

## Uhhh ohhhh

I was in for something of a surprise the first night I used it. Using their supplied 2" to 1.25" adapter, I couldn't get any of my eyepieces to focus without pulling them out at least an additional 1/4 inch. Scratching my head, I wondered if the primary had been shipped in a locked position, and made a mental note to recollimate it with the primary sitting as low on the adjustment screws as possible. Much to my surprise, I found out it already was.

A call into DBA, and a short while later Dale confirmed my suspicion - apparently, the mirrors had been ground to the wrong focal length. Unfortunately for Hardin and DBA, the problem was not limited to the review sample.

When Hardin realized the problem they had on their hands, they immediately issued an order to cease all sales of the 8" scopes until they figured out a fix.



Everyone makes mistakes, it happens. The real measure of a company is in how they solve those problems and keep their customers happy. By pulling these from the market until they could figure out a fix, Hardin and DBA showed they are willing to stand behind their products and that they have the customer's best interests at heart.

Given the fact that the focal length was not THAT much longer than it was supposed to be, they decided to manufacture an extension collar that replaces the one currently on the OTA. The new collar works fine, and effectively, should solve the issue.

I should note that I believe this issue was only with this one batch – chances are your Hardin will be unaffected.

### So ya want a computerized dob?

Some folks might be considering the Orion Intelliscope for its computerized pointing ability, so I would be remiss if I didn't point out that Hardin sells a kit to computerize the scope for \$300. In all honesty, though I wouldn't really recommend this particular kit mainly because the computer that it comes with contains a very small database – 224 objects, and only the messier catalog in its entirety.

For an additional \$130 dollars, you can buy the Sky Commander, encoders and a mount kit. The Sky Commander contains over 9000 unique targets and includes the following catalogs: Messier, NGC, IC, Bernard, Berkely, Collinder, Melotte, Trumpler, Uppsala Galaxy Catalog, and Saguaro Double Star Catalog. Another option, but again at an increased cost, would be one of the most powerful units on the market - the Argo Navis. For more on Sky Commander and the Argo Navis, as well as DSC's in general, see my review of the Argo, and A DSC Primer in the [CN reports section](#).

One final plus concerning the Sky Commander or Argo Navis (aside from their vastly larger catalogs) is their use of standard encoders. The Orion Intelliscope is unique in the industry in that it uses magnetic encoders that are not easily available for use on other scopes, thus if you add another scope down the road you'll probably have to look at getting a different computer.

### Optics, Observing and Upgrades

Optically, the Hardin is a fine performer and star tested quite well, showing only the expected surface roughness you typically see in a machine ground mirror. The moon, planet, and DSO's all looked like you would expect through an 8" mirror – bright and quite nice.

This is enough scope to keep an amateur astronomer busy for years to come. Eight inches of aperture gives you a stellar limiting magnitude of around 12.6 – you can figure about a mag less for diffuse objects like galaxies. This is literally thousands of objects - all the Messiers, multiple cloud bands on Jupiter, the Great Red Spot, details within the bands, the Rings of Saturn and the Cassini division are all within your reach. You'll get at least partial resolution of many of the brighter globulars, pull out the central star of many planetary nebulas and perhaps, under the best conditions even begin to see detail in some of the brighter galaxies.

This much aperture will grow with you as you learn to observe.

While I'm still not fond of the spring tension system (I'd prefer they just enlarge

the bearings and use counterweight system), I do have to say that it works. I found the best results were typically with one spring attached and the other detached. The motions

of the scope were decent, and allowed viewing at around 200x plus, depending on how finicky you want to be. With both springs attached, I had no balance issues at all – even with my 26mm Nagler t5 or my rather massive 40mm TeleVue widefield eyepieces. The Az motions (like the Alt) could be a little smoother, but there are a number of end user upgrades to remedy this if you so desire. Super Sliders, the Milk Jug Trick, Carnauba Wax and Armor all. These are all pretty well documented throughout the various internet forums (including our own).

Dampening times were decent, but not spectacular. It took anywhere from 2-4 seconds depending on the eyepiece in the scope at the time. The tall side boards could use a stiffener, but it's not absolutely necessary.

## Summary

I have to say I'd have been very happy with this as my first scope. Yes, there are a number of little things that could be improved, but most everything can easily be done by the end user. Think of this as a starter scope. Many of these mods will also help to introduce folks into the whys and hows concerning amateur telescope making. My first 8" f6 dob was certainly far worse, and consider you are paying several hundred dollars LESS for the Hardin than I paid for that old Orion.

I'm also impressed with how Hardin handled their little crisis with the mirrors. It tells me they value their customers and are willing to do what's right.

Overall, the 8" Hardin Deep Space Hunter is a good value for your money. It's a decent amount of aperture in a moderate sized package that comes nicely accessorized. What your dollar buys you today is simply amazing compared to just a few years ago.

With the addition of a collimator, a reflex or unity finder, some proper star charts, and the investment of a little time, this is enough scope to keep beginning amateurs happy for a long time to come.

The 8" dob is alive and well.

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<http://www.speednetllc.com/dbaastronomyproducts/>

**CN Reports – Accessories Section –**

<http://www.cloudynights.com/premium2/accessories.htm>