The Johnsonian Type V

An excecise in tracking a dobsonian

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" Hey Tom, how would you like to take a look at the new Johnsonian Type V EQ platform?", a benevolent astrobuddy recently asked.

"Sure. I've been thinking about getting an equatorial platform for a while now. It would be nice to get a close up look at one. You have one?"

"Yeah, I ordered one for my 12.5 inch scope that hasn't arrived yet, and it's just sitting here. It would be nice if someone was getting some use out of it."

Well, he didn't have to ask twice, and a week later the Type V showed up on my doorstep.

Never having used an EQ platform before, I was quick to do some research on the web, and to join the Johnsonian Platform Yahoo group (johnsonianplatform). I fast found that most platforms are latitude specific. That is: you define your location when the platform is being built, and the tracking should work fairly well within a couple of degrees either way, but if you say, live in New York and travel to Arizona frequently you will need to pick the latitude you want to use your platform at. The Johnsonian type V is the only platform on the market (that I'm aware of) that allows you to change your latitude. Although I don't typically take a dob with me when I travel, I was quick to appreciate how nice a feature that would be. The Type 5 adjusts between 25 and 55 degrees latitude with a switch for either northern or southern hemisphere operation, and supports scopes up to 16 inches in size.

The platform tilts 7.5 degrees off vertical to provide tracking through 15 degrees or about an hour. At the end of the platform run, it's simply reset by pushing the platform back the other way. The type V is

provided with a hand controller to allow for fine adjustments at the eyepiece. Additionally, the tracking speed itself can be adjusted via a potentiometer in the platform. A declination option can be added to allow for small adjustments in declination as well. The platform runs off either AC current via a wall transformer (included) or AA batteries. I had a small problem with the battery pack. The connections were flipped, and the plug needed to be inverted to work properly. A minor issue, but one that you may wish to file for future reference. Unlike most platforms on the market it is manufactured from aluminum stock instead of wood and weighs around 20 lbs.

The base of the platform, including circuit board, battery pack and drives.

One of my biggest concerns was that my 10" f7.5 truss dob might have too high of a center of balance, and become tippy at the extremes of the platform travel. I decided the best way to find out would be to write Johnsonian directly.

While I won’t quote the e-mails in this venue, I will say that they were fairly slow to respond, and that once they did respond their communications left something to be desired in that it did not answer my questions, it simply raised more. Further e-mails (requests for clarifications) went unanswered. Frustrated, I gave up and sought answers elsewhere. I am told they are much easier to reach via telephone, and from recent personal experience can tell you that if you can get ahold of them they will bend over backwards to give you a hand.

Reports in the fledgling Johnsonian Platform yahoo group were somewhat troubling. With many of the users reporting image destroying vibrations at high power there seemed to be an atmosphere of general dismay and concern.

To his credit, Sam Johnson was aware of the issues and shortly announced that a fix was in the works in the form of a new IC to micro step the motors. Further, he announced that this fix would be shipped free of charge to all platform owners. My friend contacted Sam to receive one, and shipped it to me. Installation was a simple matter, and my evaluation was performed with the new chip in place.

Sitting my 10" on top of the platform proved to be an experience in itself. Because of the multiple grooves in the platform (for the different latitudes), I quickly found that in order to get both drives in the same groove, I had to get down on hands and knees and poke my head down there to see what was what. Putting a small piece of tape on the sides of the platform to mark the correct grove helped, but didn't completely alleviate the issue. I'd like to stress that one should take care to ensure the drives are set in the same groove.

The underside of the top half of the platform, note the grooves for different latitudes

Once the bottom half of the platform is placed, and the top half is set upon it, it's time to move the scope onto the platform. While a smaller scope can just be placed on the platform already assembled, a larger scope (as in the case of my 10" f7.5) might require assembly on the platform or emplacement by two observers. Take care when placing your scope on the platform for the first time, as the top of the type V is not flat, it's ribbed, and you must be sure to place the feet of the dob base on the ribs. Some scopes may require removal of the feet or other modifications for use. Since I keep my scope fully assembled on a wheeled platform, the easiest thing was for a friend and I to lift the assembled scope onto the platform.

Once the scope is on the platform, and the platform is shoved all the way to the west, tracking can be

started. Movement of the scope is the same as it would be without the platform, but any object placed in the field of view will remain there for up to an hour.

After an hour or so, the platform is reset by grabbing the edge and returning it all the way to the west. This, unfortunately, was where I ran into problems. There is a knack for resetting the platform, which took me a little while to develop. The first few resets I tried resulted in the drive wheels hopping tracks (necessitating the removal of the scope from the platform, and the top of the platform placed on the bottom in the correct grooves again, and then reassembly of the scope on the platform), or shoving just a bit too far and popping one drive wheel out of the edge of the track. I'd like to note that talking to a couple of different folks assured me that Johnsonian is not unique in this. At one point I pushed a little to far, the platform slipped, and my scope began to slide off the top. I made a grab for the base of the scope and wound up catching it just in time. Ergo, some caution is warrented.

Outside of these issues, the platform performed very well and my scope wasn't in the least bit tippy (providing everything worked like it should), and my earlier concerns about the suitability of my scope for the platform were groundless.

Whether it was due to the new chip, the size and weight of my scope, or other reasons I can't say, but at 300x (the highest power I was able to use due to seeing limitations) there were no signs of the vibrations that other folks had complained of. Tracking was smooth and accurate, and slewing with the hand controller was a very enjoyable experience. It was a real change of pace and quite fun, to be able to simply slew the scope to an object, release it and have that object stay in the field until I wanted to move on. It certainly made sharing the scope with others an easier experience, one where I didn't have to constantly wonder if the object had moved out of the field of view. If you sketch, take notes or like to wander away from the eyepiece during a session you would find it very beneficial.

Since I typically observe alone, and leave my 10" f7.5 truss assembled in the garage and on a wheeled platform for easy access, I wound up mainly using the platform when I had a friend over. His assistance in setting up, while not invaluable, was nice and wound up making the difference in taking out the platform or not. I also found that with my new structure, hand tracking at extremely high powers is quite do able – the structure requires only the slightest of nudges, and even Dobson's hole only presents a minor problem. If I do get a platform at some point in the future, I, personally would prefer one that replaced the ground board and permanently fastened to the scope. I'd also like one that has a motorized reset feature or a deeper groove for the tracking motors. I'd like to encourage Sam (if he's reading this) to incorperate those features into his next design.

Sam Johnson has a valid entry in the equatorial platform market with good looks and solid performance at an affordable price. The Johnsonian Type V should definitely be considered by anyone who does a lot of traveling and would like to take their dob along for the ride.

Tom Trusock, a self-confessed equipment fanatic, observes the skies nearly every clear night from his home in Michigan's thumb in a vain attempt justify the cash he's spent on astro-toys.