

Channel Surfing With My C8

“Hey Uncle Rod...!”

“What caused the Big Bang singularity?”

“Is there intelligent life beyond the Earth (or on it)?”

“What will happen to the stock market over the next decade?”

“How come I can have a wireless remote control for my TV, VCR, Playstation 2, even my air conditioner thermostat, but not for my telescope?”

Vexing question, that last one.

You know, I always wondered about that, even back in the days when a hand-paddle for a telescope consisted of four direction buttons and nothing else. What was so hard about implementing wireless control for a telescope? Yeah, yeah, somebody always teased me about this idea, asking if I'd like having the person next to me on the field at a star party finish guiding that three hour exposure I was just windin' up. But that didn't seem like a drawback to me. Portable phones, and even baby monitors (you can hear some...ah...interestin' conversations over an unprotected baby monitor “circuit,” I recall) have thousands of separate code-addresses that protect these devices from interference and interception. Why not scope hand controllers?



Well, yeah, sure, with modern electronics and digital technology just about anything is *possible*, but is it *desirable*? Is it needed? If you're like me, it darned shore is. As the scope slews to various parts of the sky and I change my viewing position to stay behind the eyepiece, I keep walking around the tripod, slowly throttling the poor scope with the HC cable until the slewing motors grind to a

wretched halt, victims of the dreaded strangulation-by-hand-paddle-cable syndrome.

So when would somebody finally free HCs from wires? Since ever'thing's going wireless these days, I predicted "soon," and, lo, about a year ago, it did come to pass. But only if you were a Meade owner. Whatever you may think about Meade in the quiet, brooding hours of the night, you have to admit one thing: they love electronic gadgets. Even so, I was amazed when they announced the wireless Autostar II, a real, full-function wireless remote control for the LX200 and RCX400 SCTs. Amazed and a little *P.O.ed*. What was a poor Celestron owner to do?

Oh, Celestron made some noise about, *"Well, there's the Nexremote program; you can use that with your laptop, and a wireless gamepad and receiver to achieve the same results."* That may be OK for some folks, but your Ridiculous Old Uncle is pretty computer-dumb, and doesn't always want to run *Nexremote* (which is a fine program), his planetarium program, his camera control program, and his auto guiding program all at once. *Sometimes* he doesn't want a laptop on the field at all. Enough is too much when you don't hardly know a byte from a nibble. *All I wanted was a remote HC, just like the one the Meade boys had. Sniff.*



"NO wireless telescope clicker for you!" I'd just have to continue on as I had, hoping one more cable tangle that brought the Nexstar 11's motors to a crunching halt wouldn't do any permanent damage. So I thought, anyway, until I opened an email from a nice cat at a little company in Canada called Belsico. "Would I be interested," the email asked, "in testing and possibly reviewing a WIRELESS HAND CONTROL FOR CELESTRON NEXSTARS?" What do y'all think I said?

My enthusiasm was tempered a little bit when I visited this Ontario company's website, <http://www.belsico.com/>. Oh, they looked like they were on the up and up, but it turned out that their product, the *Skyan* (I

still have a hard time sayin' that) Wireless Telescope Control System is *not* a replacement for the Celestron Nexstar hand controller. The only functions it implements are directional slewing, slewing speed changes, and focus control (via Robofocus or a similar system). "Well, dang it." Still, it *could* be useful, I decided, and told 'em to get the Skyan on its way to Chaos Manor South.

After a short while, a little-bitty box showed up at the Hallowed Halls. In this box were a little receiver module (**Plate 1**), a *tiny* HC (**Plate 2**), a pair of telephone/RJ type cables, and a manual on a mini CD disk. The whole shebang looked very simple, almost laughably simple—the manual, in these days of 300 page .pdf instruction guides, is a whopping *13 pages*. But, you know what? I *like* simple. *Simple is good* in this age of computerized scopes with umpteen jazillion functions that few of us really understand and still fewer of us really *need* to understand.

With everything laid out on the dining room table, Question One was, "which telescope?" I've got both GEM and fork mounted Nexstars, and my *understanding* was the Skyan would work with either type of mount. I figured I'd give it a go with the ASGT (CG5) first for a good reason. I'd been told that fellow Celestron maven Michael Swanson had also received a Skyan, and was preparing to test it on a fork-mount scope in alt-az mode. Mike is very capable and knowledgeable, so I didn't think there was any reason for me to duplicate his efforts. Thus, the ASGT. I *assumed* the Skyan would work with the mount, anyway. You know what they say about "ass-u-me," though, doncha?

Since I didn't see anything in the manual that explicitly stated that the Skyan could be used with the GEM Nexstars, the ASGT/CG5s and the CGEs, I figured it would be best to ask before I did anything stupid. I fired off an email to Belsico. I was told that it would work fine with my CG5; that the Skyan is for use on *any* Nexstar scope equipped with Celestron's "Aux" port.

Aye, there's the rub for some ASGT owners. As delivered, there *is* no auxiliary port on these telescopes. You've got a hand-controller port, an autoguide port, an RS-232 port, and that is it. There is only one easy solution: if you want to use the Skyan with your CG5, you'll have to shell out some dough for Celestron's Auxiliary Port module-adapter. This device, shown in **Plate 3**, snaps onto the HC holder on the tripod, and connects to the hand control socket on the electronics panel. This is not such a bad thing to have, since the Aux Port Module allows you to update the mount's Motor Control firmware should that ever become necessary, and also enables you to use Nexremote without the Nexstar hand control.

How do you connect the Skyan? The diagram in **Figure 1**, taken from the manual, shows that it's a pretty simple process. Plug one of the two cables included with the unit into the Aux-2 port on the scope, plug the other end into the

“telescope” connector on the bottom of the receiver module and, unless you want to connect a motorized focuser, you are done.

Sounds easy? Well, yeah, but I ran into a problem right off the bat. Two cables are in the package. They look identical, but *are* they? I mean, Robofocus? That’s way too fancy for my blood. What do I know from Robofocus? For all I knew it might use an RS-422 connection. Plugging the wrong cable into my mount might make it go up in a ball of fire that would do the Wicked Witch of the West proud.

A magnifying glass and a multimeter soon showed the two included cables to be identical, but they really should be labeled in some way, OR the documentation should say, “Connect either cable to the telescope port.” Instead, the manual says, “Connect the straight cable...” Well, I got news for you pards: *both* the cables are “straight.”

How is the manual otherwise? It’s OK, really. Does its job. Frankly, the Skyan is so simple that it doesn’t need much of a manual (again, that’s a *complement*). I do believe the person who wrote it *might* not have been a native English speaker--it sounds stilted in places--but it is far, far better than the instruction books in the boxes with most Chinese gear.

With everything connected, I applied power to the mount, and started mashin’ buttons on the teeny-weeny hand controller. Everything seemed to work. Thank god that--for once--there weren’t reams of obscure instructions to memorize. Want to change slewing speeds? Push the center “mode” button. The mode LED on the receiver lights, and there’s a nice loud BEEP! Change your speed using the up/down keys, the receiver beeps again, and the number in the LED window changes to indicate your speed (nice; I’m always forgetting which speed I’m set on with the normal HC). Other than that? Punch one of the directional buttons to slew the scope. Want to reverse the left right or up down buttons? Hold down both up-down or both left-right



Plate 3

buttons and the directions will be swapped. As with the “normal” HC, this only works for speeds of “6” and slower.

That’s it. Unless you want to use a focuser, of course, and that works very similarly. Wanna focus? Poke the mode button until the mode LED lights, and you’ll then find you can move your focuser with the left and right keys.

What makes all this happen? How do you power the Skyan hardware? The receiver is no problem. It draws current from the scope/mount. The HC is a different matter. Unfortunately, it uses one of those dratted little button batteries, a CR2032. Why “unfortunately dratted?” I seem to burn-out little batteries like this in a real big hurry, and they are usually not cheap to replace—leastways not unless I can find some down to the Dollar Store, which happens occasionally. According to the manual, the HC battery should last for “...a few months of observation.” We’ll see. I hope that ain’t wishful thinkin’. I note that the manual goes on to advise the user to “Avoid using long slews and long focuser travel frequently.”

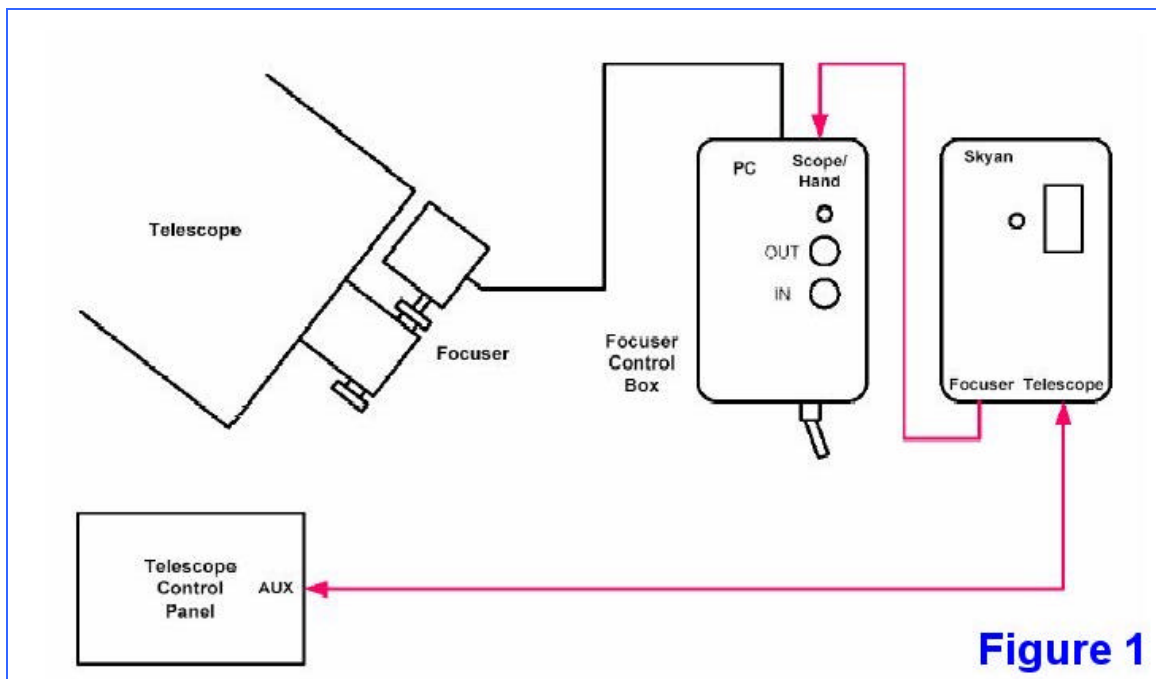


Figure 1

How about the “guy-at-the-telescope-next-to-you-finishing-your-guiding” problem? Since the Skyans leave the factory set to one of 1024 unique addresses, that’s not a likely scenario. The manual does note that *other* devices can potentially interfere with the Skyan, however. Like garage door openers. You’ve seen the TV commercial where the dude and his lady notice a switch in the house without an obvious purpose, and start toggling it. Cut to a shot of a garage door down the street pummeling a little old lady’s car. You don’t want that to happen to your CGE1400, do you? Course not. Luckily, you can change the Skyan’s address if necessary. Unluckily, this involves opening both the receiver

and the transmitter and cutting circuit card “traces.” DIP switches would be much better, and were what I expected. On the lucky side again, I would guess this would be a rare problem.

My initial impressions, overall? Purty positive. The receiver unit looked nice. It does have that “kit box” appearance—you know it’s from a small manufacturer and not a Meade or Celestron—but the silk-screening of the front panel is very nicely done and professional lookin’. The hand controller? Well, what can you say? *It just looks so darned cute.* On the website, it’s pictured next to a coin, but believe me, you are not going to realize just *howtiny* it is until you get one in your hands.

And that’s what started me worrying. Could something this small be truly useable? Would I be dropping it in the grass and losing it all night long? Would my fumble fingers always push the wrong (tiny) button? I hoped to find out with a trip to my club’s dark site in Tanner-Williams, Alabama (makes Mayberry look like Manhattan).

Then several months of typically stormy Gulf Coast late spring-early summer weather intervened.

While I was waiting for the skies to clear, I did do a little more playin’ around with Skyan in Chaos Manor South’s living room. I was curious to see what kind of range I could get out of the thing. 15 feet seemed about optimum for consistent operation, though some users have reported good results to 30 feet. I suspect the wee HC is gonna work best when its view to the scope is unobstructed—we ain’t talkin’ about 100K watts RMS here, obviously.

Then the opportunity finally came for me to get the C8/ASGT out for a little rummagin’ around in Sagittarius on a muggy Alabama summer’s eve. I didn’t have any trouble at all settin’ up the Skyan in the field, just plugged ‘er up and all was well. Oh, one thing I forgot to mention. You are warned not to use the Skyan for slewing to stars during your initial alignment. You still must use the normal Nexstar hand paddle for that. Which is not a big deal. Since the Skyan doesn’t have “Enter” or “Align,” you’re going to have to have the “real” HC in hand, anyway.

Well, anyhow, got the C8 aligned and sent it off to M22. After traveling more than half-a-sky’s distance, M22 was well within the field of a 16mm Uwan when the mount stopped. But it wasn’t quite centered. Time to give the Skyan a go. I fished the little paddle out of my picket, hit the mode button to reduce the slew speed to “4,” (it defaults to “7” at startup) and started mashin’ buttons.

Two things were immediately evident. First, the slewing buttons worked just as well as those on the normal HC. No difference. Got backlash values plugged in? You’ll still have ‘em. The other thing? Yes, those buttons are tiny. But someone

must have spent some time figuring out the ergonomics of the situation. I never once hit the wrong key by mistake. If I meant to hit the “left” button, my fat fingers always found the “left” button.

I know the hand control is no doubt an off the shelf item (Garage door opener? Remote entry for a car? Remote car starter like they use way up yonder in Canada in the wintertime?), but the people at Belsico chose a good one. How about losing the thing in the dark? I never did. Just slipped it back into my jeans pocket without a hitch. I suppose it’s possible, though. One solution would be for Belsico to seek out a unit with a housing molded in a light color. Another solution, and one I might implement, would be to hang the thing around your neck with a badge-hanger type strap. Hey, guys, how about including one in the package? You can put your logo on it.

Suffice to say I spent the rest of the evening without laying a finger on the normal HC’s direction buttons. How practical is the Skyan? Why bother? As mentioned early on, it is a Good Thing not to be tied to a cable when it comes to a hand control. I could stand up, stretch, walk over to a buddy’s scope, walk around my scope, etc., etc. without hog-tyin’ the poor C8 or having to find a place to set the HC down. The Nexstar hand control was left sitting on my observing table, and was only used when I wanted to slew to a new object.

Yes, I admit, I’d still like to see a wireless with all the Nextar functions, but you know something else? My evening with the Skyan pointed out a big, fat fact: I rarely use very many of the hand control’s many functions. Once I’m aligned, all I usually do is adjust object centering with the direction buttons and command slews to new objects. Since I tend to stay on each deep sky

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WORKS WITH ANY NEXSTAR EQUIPPED WITH AN AUX PORT.



EXACTLY DUPLICATES HAND CONTROLLER DIRECTION BUTTON ACTION.



GENUINELY MAKES OBSERVING MORE PLEASANT.



MANUAL COULD STAND A LITTLE WORK.



THE SKYAN HAND CONTROL IS A LITTLE SMALL.



OFFERS DIRECTIONAL CONTROL AND FOCUS CONTROL, NO OTHER FUNCTIONS SUPPORTED.

object for a purt-good while, it is not overly onerous to walk over to the observin' table, pick up the Nexstar paddle, and send the scope to the "next one" every 15 minutes or so.

All in all, I think it's the beginning of a beautiful friendship. Which will get even better once I can get the Skyan upgraded for use on the Nexstar 11 in alt-az mode. What's up with this "upgrade" business? As Mike Swanson discovered during his bout of Skyan testing, issuing a directional move command via the aux port on an alt-az mode Nexstar interrupts the mount's tracking update process. What this means in simple English Uncle Rod can understand is that Mike found that the scope might drift for as long as 30 seconds before tracking "kicked-in" again after hitting a Skyan button. Belsico has a fix for this, which is being implemented on all units.

Do you want a Skyan? I know you do. It's just so consarned high-tech and cool, how can you help it? It's also practical. **178 dollars** in U.S. dinero is not a huge amount to spend if it keeps one more innocent telescope from being boa-constrictorized to death by an errant hand control cable.

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