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Which disadvantages noted on CI-700 mounts

Started by stanislas-jean , Jan 16 2014 07:28 AM

stanislas-jean

Posted 16 January 2014 - 07:28 AM

I know this is an old design prior to G11 issues (probably from 1998 to 2003 for CI-700).
I have the opportunity to get one with stepper motors.
Apart from the time being, which disadvantages were noted by users?
Stability with a 21kg OTA (as a C14) with axis diameters of 1 inch only,
cable connections,
electronic lack of reliability,
stepper motor burnt,
other topic.
Thanks a lot for your return experiences about.
I know this is not a goto but a JMI manual star pointer can be installed and would be enough for me.
Stanislas-Jean

rmollise

Posted 16 January 2014 - 08:47 AM

The stability is acceptable for visual or video imaging use with a C14.

The cables are OK.

I've never heard of them being unreliable electronically. Not much to go wrong.

Since when do steppers "burn out"?

stanislas-jean

Posted 16 January 2014 - 09:23 AM

Thanks Rod.
Stability is acceptable so with a 21kgs tube (I expect to set a Meade 12" SCT on with all accessories).
What makes hesitating me is the shaft diameters where the stability is in regards.
Can we adapt easily the G11 parts on the CI-700 (electronic boards, stepper motors, worm gears...)?
Do you think this is a step above when comparing to an EQ6 (where stepper motors failed sometimes with burning on RA axis)?
Stanislas-Jean

Eddgie

Posted 16 January 2014 - 09:43 AM

There are two areas of the Ci700 that can be an issue and one that is more of a bother.

The motors are small and can stall more easily than with the CGE or Losmady. Balance is more important, though not at all critical.

The next is that the clutch plate system is quite inferior to the G11 (thought to be fair, so is the CGEs, but it was not designed to be used as Push-To).

But the Dec clutch plate in particular could have problems with locking down an out of balance load.

There is a Ci700 User's Group on Yahoo, and while it is not active much anymore (I have not been there in 6 years I think), you can find more information about the clutch.

My own Ci700 worked well though. The Dec clutch was not at all smooth, but it was not bad enough that I ever felt the need to tear it down.

The problem is that the clutch could be uneven. In some orientations, if you put enough pressure on it to keep the tube from turning, it would no longer move by hand, so you had to unlock the clutch completely, move the scope, and re-lock.

In other positions, you could leave the clutch tension looser for small manual adjustments, but then if you moved it far enough away from that position, the drag could increase to the point where it no longer moved smoothly.

As I recall, there was a Ci700 User's Group that I think I even used to be a member of, and there was a lot of talk about this at one point with a tear down.

One person even re-machined the clutch faces.

Mine worked well enough though that I did not feel the need to fuss with it, but it was nowhere near as smooth as the Losmandy.

Why is this important? Well, in a push to mount, smooth movement is far more important than in the CGE where you have to move with the motors and the clutch can be locked and left alone.

None of this should stop you, but you wanted to know about disadvantages, and this one is a potential disadvantage. A well known issue with the CI700, but usually not bad in most, very bad in some....

The minor issue is that the legs are not adjustable for length. This means that it is what it is, and even to level, you have to use shims. I never bothered leveling, but for drift alignment, I think it is indeed important to be level so that the adjustments only work in one plane and one plane only. But for visual use of course, this does not matter.

Some of these were equipped with a kit that allowed the legs to be adjusted. Again, otherwise, if you want to level, you need to use shims which can be a hassle if you like to level with a load on the mount.

This makes it sound like I am cautioning you from the CI700 and that is not the case. I actually really liked mine. I used it with a very big refractor and it did better than the Atlas by a good stretch. The Atlas was Go-To though, so no issues with clutch.

I would join the Yahoo Group though and look at the DEC clutch issue. In most instances it is not at all a serious problem, but once again, as compared to the G11, not nearly as good for smooth movement.

rmollise

Posted 16 January 2014 - 10:09 AM

stanislas-jean said

Thanks Rod.

Stability is acceptable so with a 21kgs tube (I expect to set a Meade 12" SCT on with all accessories).

What makes hesitating me is the shaft diameters where the stability is in regards.

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Stanislas-Jean

While I know Losmandy manufactured component for these GEMs, I can't tell you what is interchangeable. Call them and ask.

Yes, this is a step up from an EQ-6, but not a huge step up.

stanislas-jean

Posted 16 January 2014 - 10:51 AM

Thanks Eddgie and Rod.

This is interesting return experience.

I am coming from an EQ6, for the SCT12 meade this is workable visually but I recognise at a limit of possibility.

The clutch friction is not according me a strong concern as already I am using the eq6 on non goto mode and clunch the axis when on the target. Anyway the CI700 clutch may be improved as the same way with the peterson kit for clunching the LX200 elevation axis when inserting some material softly greased (I will have to find the right material for limiting sliding).

I have also a SVP with the intelliscopes push to go pointer which is fine, available at JMI for the mount CI700. I was speaking of this for the push to go system.

When reading you, I understand the 20-21 kgs constitute a certain limit of decent acceptability and an improvement with regards to the eq6 use.

It seems the stepper motor has strong torque couple (noted 1.3 cm.kg) and may be the G11 get a little more. I verified the G11 motors are adaptable with the electronic board in relation.

I feel next saturday I am in position for the acquisition, there is no tripod with and the mount will go on the eq6 pier with an adaptation to undertake.

Thanks again for your informations.

Stanislas-Jean

Falcon-

Posted 16 January 2014 - 12:30 PM

While I can not give you large load information I can tell you I am quite happy with my CI-700's performance. The largest scope I have is a C8, (normally I have a 6" scope on the mount doing astrophotography) rather than something like a C14.

The clutches on mine have been perfectly fine (though of course I have fairly good balance).

As I understand it the 492 Digital Drive electronics are actually the same as the one from the GM8/GM9 rather than the G11. This is because the CI-700 has the same gear ratio as the GM8. Likely the only real difference between the CI-700/GM8/GM9 electronics board and the G11 board is a bit of programming, perhaps a swappable chip.

Mine also came with no tripod. Thankfully the CI-700 uses the same base as the GM8/G11 so you can get pier adaptors, tripod adaptors and Losmandy's own tripods easily enough. I used [one of these \(https://www.astronomics.com/losmandy-adapter-gm8-g11-mount-meade-field-tripod_p4381.aspx\)](https://www.astronomics.com/losmandy-adapter-gm8-g11-mount-meade-field-tripod_p4381.aspx) to mount my C-700 and just drilled an additional hole in the side to mount the electronics box.

Falcon-

Posted 16 January 2014 - 12:32 PM

I should add I have JMI's NGC-MAX dsc system on my CI-700. It works well enough, the main "downside" is that the encoders are less aesthetically pleasing than the rest of the mount. 😊

stanislas-jean

Posted 16 January 2014 - 04:28 PM

Thanks for your experience and informations you brought.

We can find in Europe, England and Germany, Losmandy parts also, the pier adaptor and the motors/ circuit board easily, the JMI kit also.

I had a look on your gallery, the sky at your observation site must be fine for DSO activity. Me here this is only almost planetary works that can encountered (30kms near Paris).

Good skies.

Stanislas-Jean

CCD-Freak

Posted 16 January 2014 - 10:16 PM

The CI-700 is a great mount for the money. I took mine apart and replaced the grease and worn clutch pads and it has been a real workhorse since then. I use mine for imaging with scopes up to 8" with great success. I have had 2 CI-700s and I "kinda" regret selling one.

John

CCD-Freak

Attached Thumbnails



(https://www.cloudynights.com/uploads/monthly_01_2014/post-37830-14074223291366.jpg).

CCD-Freak

Posted 16 January 2014 - 10:29 PM

Here is an image made with my CI-700, Orion 110ED and Atik-383L+OSC shown.
NGC2174 Monkey Head nebula.

John

CCD-Freak

Attached Thumbnails



(https://www.cloudynights.com/uploads/monthly_01_2014/post-37830-14074223298922.jpg).

stanislas-jean

Posted 19 January 2014 - 12:08 PM

Finally I bought the CI-700 for almost few.
It was tested quickly and seemed running normally.
At home, I discovered 2 main troubles:
- the RA motor didn't run again. I dismantled and saw that the unit was well remote by control box but the motor coggled without rotation only: it has to be replaced , a SAIA UBB2 12V. Fortunately it is still on stock at Johnson electric. The connector will have to be solded with the connector of the mount.
_ the worm gear consisting in a screw mounted on a side with a ball bearing and the second with a bare bearing made of brass. Lateral movements are stopped by...circlips. This means if you get balance trouble, the simple circlips can broke and the worm gear escaping easily. A little light celestron design, frankly not professionnall.
The power of the motor is not strong, only 1.8 watts. The notice said 0.5amps drain current so 0.25amps per axis. The motor will drain half this value on tracking.
For the rest this means well designed.
I would like to find a worm gear box and the bearings (under US standard, not easy to find in Europe) with 6,35mm axis diameter.
Thanks again for all your posts here.
Stanislas-Jean

CCD-Freak

Posted 20 January 2014 - 08:55 PM

These are the small ones that often are damaged by over-tightening the endplay. You need 2 per axis.

A7Y55-FSS3725G .250" BEARINGS currently \$6.61ea USD

They should have the larger bearing but I have not looked it up yet.

Stock drive products is where I got them and I be they ship worldwide. <https://sdp-si.com/eStore/Catalog> (<https://sdp-si.com/eStore/Catalog>).

John
CCD-Freak

Attached Thumbnails



(https://www.cloudynights.com/uploads/monthly_01_2014/post-37830-14074225361532.jpg).

stanislas-jean

Posted 21 January 2014 - 04:47 AM

Thanks a lot John.
This is a source that we have difficulty to find now in France.
I am investigating.
Stanislas-Jean

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