

LX65 203mm (8") Review

Matthew DeSipio | April 24th, 2019

The LX65 series from Meade Instruments provides amateur astronomers with (1) a simple-to-use and portable deep sky visual observation rig and (2) a budget-friendly way to pursue planetary/lunar astrophotography. While refracting and reflecting telescopes have obvious advantages, the Maksutov-Cassegrain (Mak) and Advanced Coma-Free (ACF™) telescope designs provide an extremely manageable size while still offering large enough apertures and focal lengths to satisfy visual observers and planetary/lunar imagers.

The whole “manageable size” trait becomes increasingly more attractive with each use. I have never used an ACF™ telescope previously, but I really enjoy the advantages this optical design offers. Dobsonians clearly have some great advantages over ACF™ telescopes, but I really enjoy being able to hold an entire 8” telescope with one hand! But, this is just my opinion.

I purchased the 203mm ACF™ LX65 telescope with the intent on it being a dedicated planetary/lunar imaging telescope. However, the go-to capabilities and advanced electronics make this thing a breeze to setup and use for deep sky object hunting. For interested planetary & lunar imagers, the Meade 203mm LX65 ACF™ and Meade LPI-G advanced imaging camera provide roughly a 0.205”/pixel scale at 1x the focal length and a 0.103”/pixel scale with a 2x barlow (including the additional focal length provided by the 2” focuser I added). I chose to add a 2-speed crayford style focuser to enhance the planetary & lunar imaging experience and I strongly recommend it. The stock focuser is more than adequate for visual observations.

When my telescope finally arrived, my initial impression was: “it looks awesome”. I really do like how Meade designed the LX65 series. From the seemingly durable materials of construction choices to the color schemes, Meade sure designed one nice looking telescope & mount combination.

The LX65 mount allows for the addition of a second, smaller telescope on the other side of the mounting point of the main OTA. I have experimented with the Meade StarPro 80 telescope mounted with my 203mm ACF™ and it really was a lovely night! I would recommend buying a small, short focal length refractor telescope if you want to supplement your observations with a wider field of view.



Honestly, I have used a 42mm eyepiece with the 203mm ACF™ and found the view to be plenty wide enough for many of the larger DSOs (M45, M42, and M31). Still, adding a smaller, shorter focal length refractor (under ~7lbs.) is something to consider.



As far as the mount itself is concerned, the controls are very intuitive and the alignment process is easy. This is extremely important, even for experience amateur astronomers. The AudioStar® hand controller is very nice. The handle at the top of the mount is a convenient trait and I often find myself carrying the mount this way. I initially attempted to power the mount through the 12V input with my field battery, but it became frustrating. Honestly, just use 8 rechargeable C batteries, or else you will end up wrapping the power cord around the mount as the telescope spins around! Unless you need 12V accessories (for example, dew strips), try to stay away from unnecessary cords and power supplies.



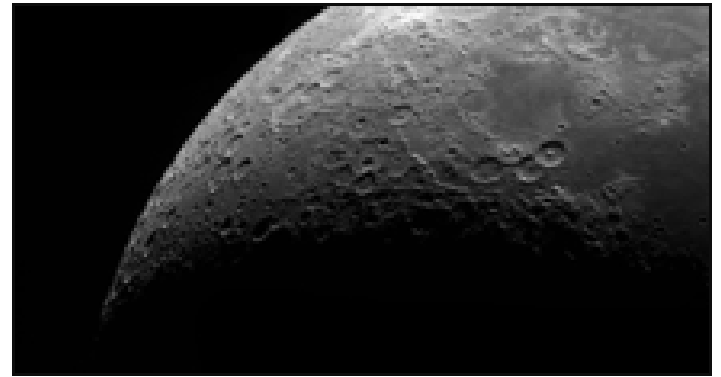
Overall, I really like the appearance and startup to shutdown operation of my LX65 203mm ACF™ telescope and mount. The 203mm (8") ACF™ is HUGE but still incredibly manageable and portable. Lunar imaging with this thing is so stress-free, I really feel relaxed during the image capturing process. Before I show some images, I want to summarize my LX65 findings:

1. The mount looks great. Handle is a nice feature. Relatively light. Tripod is easy to disconnect and reconnect quickly.
2. I enjoy the alignment procedure. Align with magnetic north, level the telescope, and center the alignment stars. Brilliantly simple.
3. The go-to capabilities and electronics allow for additional time observing or imaging, and less time hunting. Tracking is fabulous.
4. The 203mm ACF™ is huge and looks great. The coma-free optics are a pleasure, even with wide-field eyepieces (AFOV>68deg).
5. Use rechargeable C batteries!!! Avoiding unnecessary wiring cleans up the setup and allows for stress-free operation. You can barely tell electronics are present and this is very relaxing under the stars (just like the simple Dobsonian style).
6. Get an aftermarket 2" 2-speed focuser if you are interested in lunar or planetary imaging. An electronic focuser may be a nice alternative.



As far as imaging is concerned, I have only imaged the moon under poor seeing conditions so far. Despite this, the scope and mount did not disappoint! I used a Meade LPI-G advanced camera to capture the following images. Assume I stacked roughly 50% of 4000 total frames for all the of the images.

First up, a two-pane mosaic using no Barlow lens (that is, 1x the effective focal length).



Second, let's try a two-pane mosaic using a Meade 2x Barlow lens.



You know these are cool. I was very excited and am still eagerly awaiting better seeing conditions. Finally, let's look at a single image using a 2x Barlow lens.



Clearly this telescope can handle some serious magnification. Focusing was easy with the stable LX65 mount and the aftermarket 2" 2-speed focuser.