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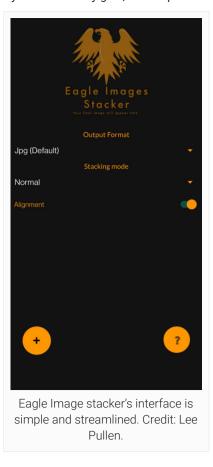


# Image Stacking on Your Phone: Eagle Image Stacker Review

Home » Reviews » Software » Image Stacking on Your Phone: Eagle Image Stacker Review

By: Lee PullenPublished: Oct 20, 2022

The idea is excellent: an app that allows you to stack astrophotos taken using your smartphone, thereby creating high-quality images with a minimum of fuss. Unfortunately, the reality of Eagle Image stacker doesn't currently reach this lofty goal, but the potential is there if development continues.



A strong idea



Astrophotography is a notoriously difficult and expensive hobby. It's common to spend thousands of dollars on equipment like telescopes, cameras, and software for processing. Eagle Image stacker (MSRP \$4.99) is an app for Android smartphones with the noble aim of lowering the bar of entry for beginners by making stacking easy and effective.

Experienced astrophotographers will be familiar with stacking: using software to combine many images of the same astronomical target, smoothing out speckly noise and improving the all-important signal-to-noise ratio. Deep Sky Stacker is a free option that can produce good results, while professional-level software such as PixInsight (MSRP \$260, review here) works wonders. But what about absolute beginners who want to dip their toe into astrophotography with a minumim of hassle, using smartphones to take photos of the night sky and stack them to produce good results? Is there an app for that? Eagle Image stacker aspires to be the answer.

Eagle Image stacker's interface is simple and accessible even to beginners. You select the file type you want your final image to be (e.g., JPEG); state whether you'll be stacking astrophotos or regular images; then use a toggle to tell the software whether or not you want it to align your images. Next, you use a large "plus" button to browse your phone's memory and choose which photos you want in your stack. You can also use a slider to change the "threshold", which allows you to fine-tune how many stars will be detected. There's a short help section that covers the basics. It's all easy to use and reassuringly intuitive. So how is it in action?

## Test 1: smartphone astrophotography

I was very excited to experiment with Eagle Image stacker for smartphone astrophotography. I use a OnePlus 7 phone, which is a few years old now, so not topspec but no slouch. Being in the center of a city, I have terrible light pollution to contend with, but the Summer Triangle was shining brightly overhead.

The more photos you take, the better for stacking. After 20, holding the camera as steady as I could, my arms were getting achey. I figured that would be the limit for curious beginners. After loading up Eagle Image stacker, I input the photos and set it to work. About 30 seconds later it produced a result, albeit a disappointing one. Clearly, Eagle Image stacker hadn't worked. No stars were visible in the stacked image, and it looked like a glitchy mess. I tried tweaking the threshold setting, but nothing impoved the outcome. Other attempts covering different parts of the sky yielded the same result.



Eagle Image stacker was unable to produce a result from smartphone photos taken from a city. Credit: Lee Pullen.

The most likely explanation is that the source photos contained insufficient data for Eagle Image stacker to work with. Maybe this was an unfair test then, and those blessed with dark skies may have more luck, but I think it's realistic to expect a beginner in a city to try exactly the same thing.

#### Test 2: mirrorless camera astrophotography

If Eagle Image stacker was having touble with astrophotos due to the lack of stars and data, perhaps it would work better with higher quality source images. For this test, I ditched the cameraphone and instead used my Nikon Z6 mirrorless camera with a 70-200mm lens attached to a sturdy tripod. I took 20 photos of the Andromeda Galaxy, then transferred the photos over to my phone and into Eagle Image stacker.



t fared better with photos taken using a mirrorless camera. Credit: Lee Pullen.

This was better, with noise levels visibly reduced.

#### Test 3: smartphone nightscape

Eagle Image stacker claims that it can be used both for astro and regular photography. With this in mind, I used my smartphone to snap another 20 photos, this time of the building site and cranes looming over my garden.



Night landscape noise levels were reduced. Credit: Lee Pullen.

The noise was reduced, but at the expense of sharpness in the image. Photographers will recognize the effect as being essentially the same as over-zealous noise reduction in post-processing.

#### The conclusion...

Given the results of my tests, I have to conclude that Eagle Image stacker doesn't currently offer enough benefits to recommend. I got the best results when I used a camera other than my phone, but anyone doing that may as well use one of the many well-established stacking options on their computer.

However, the developer has been busy releasing updates every few weeks, and this kind of software can be transformed over time. I hope it does become more effective, as the dream of good astrophotography with smartphones is still tantalising. I'd like to see the developer offer a free trial option outputting watermarked photos so people can try Eagle Image stacker for themselves. Perhaps in the future it will become a must-have!

**Plus:** Intuitive interface Regularly updated

### Minus:

Questionable effectiveness No free trial mode

#### **MSRP:** \$4.99

Website: https://play.google.com/store/apps/details?id=com.tssystems.librawtest&hl=en







About Lee Pullen

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Lee Pullen is a science writer and communicator from the city of Bristol, UK. He has a degree in Astronomy and a master's in Science Communication. He began his career writing for organisations including the Hubble European Space Agency Information Centre and the European Southern Observatory, as well as becoming Staff Writer for the International Year of Astronomy 2009, the world's largest ever science outreach initiative. Lee runs the website UrbanAstrophotography.com

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