

Building Heart Binoculars



Specifications

- Aperture Size = 80mm
- Focal Length = 400mm
- Focal Ratio = $f/5.0$
- Weight: 10.4 lbs
- Dawes Limit: 1.45"

Eyepieces

- [Astomaia Super Plossl](#) (2 @ \$65 each)
 - Eyepiece Specifications: | Tube = 2" | FL = 56mm | FOV = 52° |
 - Binocular Specs: | **Mag** = 7.1x | **FOV** = 7.3° | Exit Pupil = 11mm |
- [Baader Hyperion Zoom Mark IV](#) (2 @ \$400)
 - Eyepiece Specifications: | Tube = 2" | FL = 8mm – 24mm | FOV = 68° - 48° |
 - Binocular Specs: | **Mag** = 50x - 16.7x | **FOV** = 1.4° - 2.9° | Exit Pupil = 1.6 – 4.8mm |

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Analog Sky

- Website: <https://www.analogsky.co/>
- Products
 - Magic Binoculars (50mm)
 - Heart Binoculars (80mm)
 - Ember Binoculars (50mm Crafted Binoculars)
 - Sunny Solar Binoculars

Heart Binoculars

- Cost \$700 - \$1,000

Benefits

- 90° makes for more convenient viewing
- Multiple eyepiece Options
 - configurations/Magnification/field of view
- Multiple Mounting options
- Support for filters
- Adjustments
 - Collimation
 - IDP Adjustment
 - Horizontal & Vertical
- Print broken parts
- Custom Color selection based on filament you use

Challenges

- Printing your own parts
- Took about 3 weeks
- Some parts may not fit perfectly based on your printer
- Diagonal Assembly
- Supply your own eyepieces adds expense.
- Response to emails/issues is not good.

If I Were to Do This Again

- Purchase Full kit with 3D printed parts and print select parts (Knobs, handles, etc)
- Protect Diagonals from start ([First Contact Polymer](#))
- Pay very close attention to mirror assembly and adjustments

