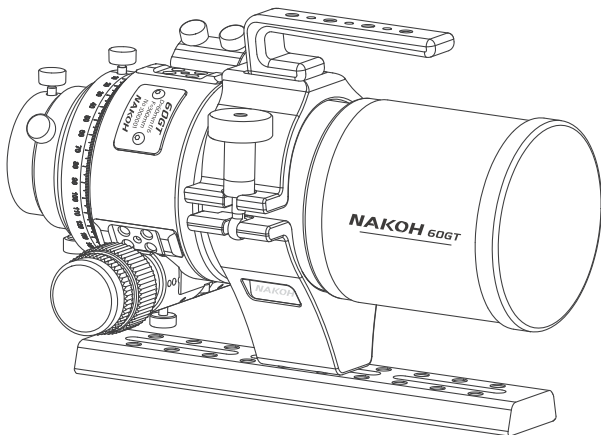


NAKOH

NAKOH 60GT Instruction Manual



Thank you for purchasing the NAKOH 60GT. To get the most out of your telescope, please read this manual and all accessory manuals carefully.

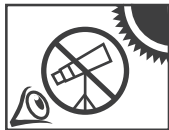
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Safety Precautions

⊘ WARNING

- Never point this telescope at or near the Sun. Viewing the Sun through this instrument, even for a moment, can cause immediate and permanent eye damage.



⚠ CAUTION

- Before use, ensure all components are securely fastened to prevent the telescope from falling or being damaged.
- Do not use or store the product in damp, high-temperature, or dusty environments.
- Do not disassemble the optical components or mechanical structure yourself, as this may affect performance and void the warranty.
- During transport, store the telescope properly to avoid severe shock or vibration.



Use by Children Requires Strict Supervision!

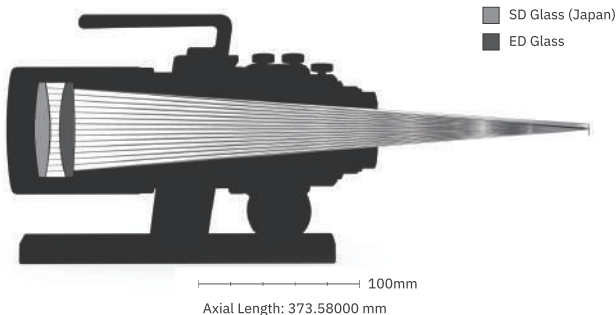
This product is not a toy. Children must always be under adult supervision when using this product. Ensure children understand and follow all safety rules, especially the warning against looking at the Sun.

Product Introduction

The NAKOH 60GT is a high-performance, portable apochromatic refractor. It features a triplet optical design that incorporates one SD glass element (made in Japan) and one ED glass element, which can effectively suppress chromatic aberration, delivering high-contrast images with pure color rendition and sharpness stars across the field.

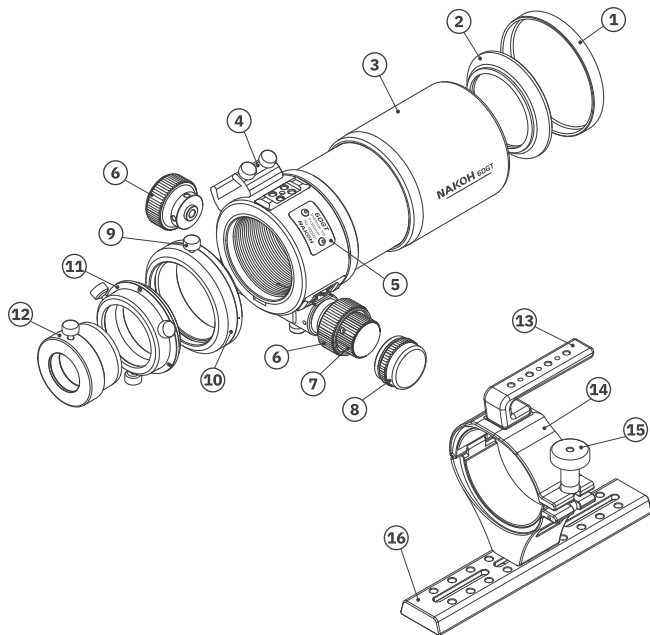
All optical surfaces are multi-coated with precision anti-reflection coatings. These coatings not only reduce light loss due to reflection, increasing light transmission, but also enhancing image contrast for clear, vivid viewing.

When paired with the 60GT corrector, this optical system is engineered to fully support a 44mm image circle. It delivers a flat field, producing sharp, high-quality images across a full-frame sensor while minimizing astigmatism and field curvature.



Specifications				
Optical Design	Aperture	Focal Length	Focal Ratio	Interface
Refractor	60mm	360mm	F6	31.7mm / 50.8mm

Name of Each Component



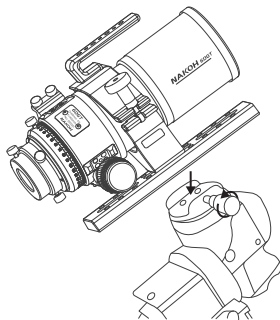
Name	
① Front Cap: Protects the objective lens from dust and damage	② Nameplate Ring: Displays logo, model, and specifications
③ Lens Hood: Blocks stray light to enhance image contrast	④ Finder Base: For mounting and securing the finder scope
⑤ Serial Number Plate: Displays unique product serial number	⑥ Coarse Adjustment Knob: For quickly focus, move, or find a focus position
⑦ Fine Adjustment Knob: For precise focus control	⑧ Fine Adjustment Knob Cap: Protects the fine adjustment knob

名称	
⑨ Rotator Locking Screw: Locks the telescope's rotation angle	⑩ 360°Rotator: Allows image orientation adjustment with precise graduations
⑪ 2-Inch Interface: For connecting large-diameter eyepieces or accessories.	⑫ 1.25-Inch Interface: For connecting standard-sized eyepieces or accessories
⑬ Handle: 100mm length with multiple mounting holes	⑭ Tube Ring: Angled design for a secure hold of the lens tube
⑮ Tube Ring Locking Screw: Thumb screw for tool-free operation	
⑯ 230mm Dovetail Plate: Standard Vixen-style with multiple holes. Compatible with most equatorial mounts and alt-azimuth mounts	

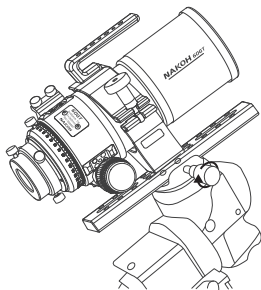
Dovetail Plate Installation

Please read these instructions alongside the user manual of your equatorial or alt-azimuth mount. Before use, always ensure the telescope is securely fastened.

The 60GT Dovetail Plate features the standard Vixen-style design, measuring 44mm in width and 230mm in length. Its multi-hole design allows for flexible adjustment of the tube ring position to balance the telescope. It is compatible with most commercially available equatorial and alt-azimuth mounts.



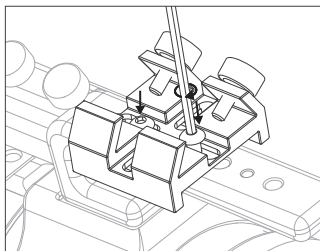
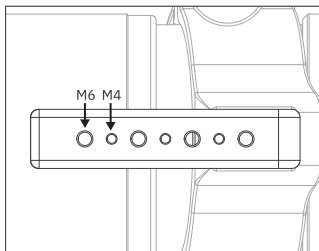
1. Loosen the locking screws on your equatorial or alt-azimuth mount.
2. Align the dovetail plate with the mounting slot.



3. Securely tighten the locking screws on the mount to prevent the telescope from slipping.
4. Be sure to consult the user manual of your mounts together.

Handle Installation

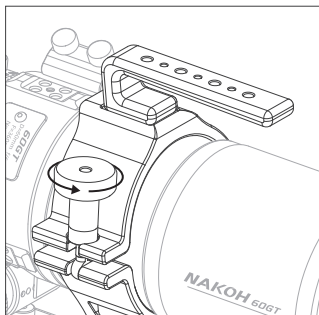
The 60GT handle features M4 & M6 threaded holes for attaching the finder base, dovetail plate, and other astronomical equipment.



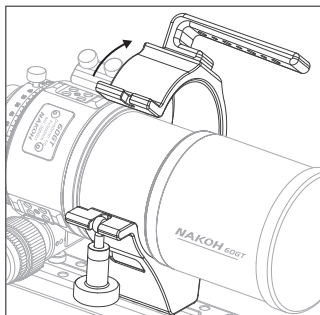
Secure accessories using M4 or M6 screws as required.

Tube Ring Installation

The 60GT tube ring employs a clamshell design. An enlarged thumb screw is provided for ease of use.



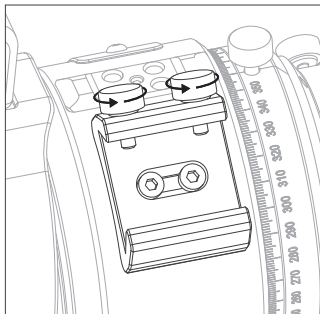
1. Loosen the thumb screw on the side of the tube ring.



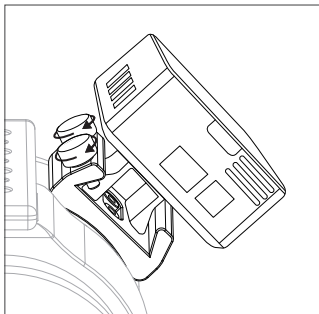
2. Once the screw is loosened, adjust the position of the lens tube as needed for your setup.

Finder Base Installation

The 60GT finder base is 35mm in length. Beyond mounting a finder scope, it serves as a multi-function expansion platform for connecting various devices.

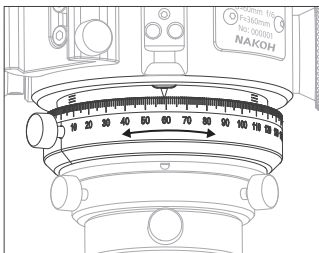
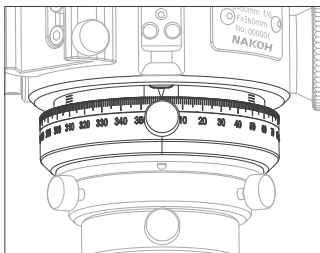


1. Loosen the two fixing screws on the finder base.



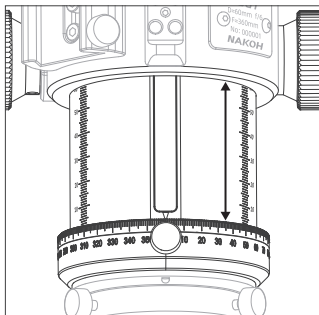
2. Attach the desired accessory to the base. After installation, securely tighten all fixing screws to ensure stability during use.

360°Rotator Usage

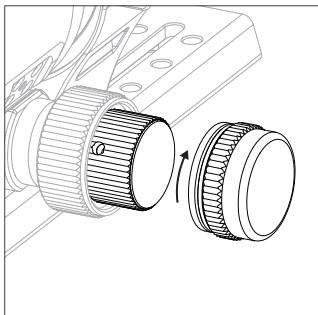


The rotator features fine graduations from 0° to 360°, with an engraved arrow indicator for precise angular positioning.

Focuser and Knob Usage

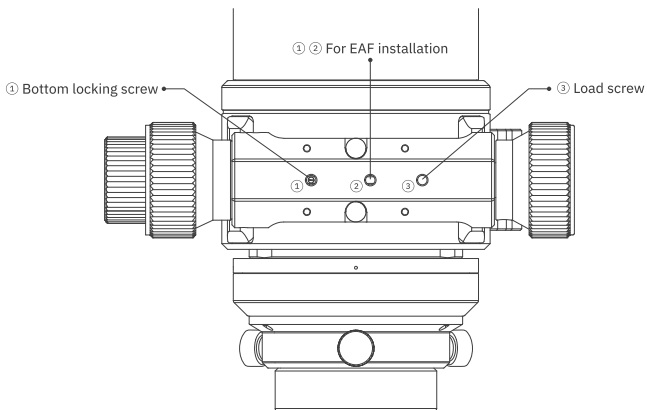


The 60GT focuser provides 60mm travel length, with scales engraved on both sides for intuitive operation.



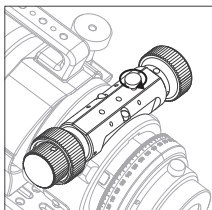
The metal fine adjustment knob cap can be used to effectively prevent damage during transport and storage.

Focuser Bottom Screw Usage

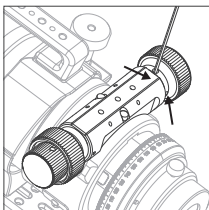


EAF Connection

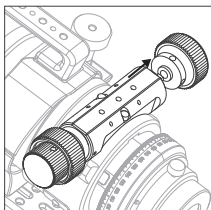
Please read this section alongside the manual of your EAF. All connecting parts used during installation are standard accessories provided with the EAF itself.



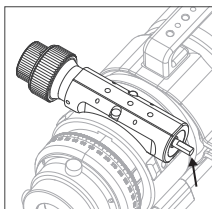
1. Flip the telescope over and unscrew the bottom locking screw.



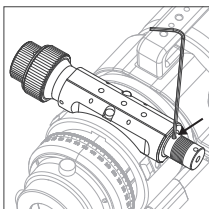
2. Using a 2mm allen wrench, loosen (do not remove) the coarse adjustment knob locking screw.



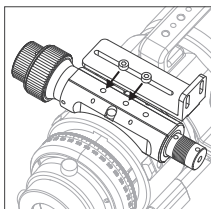
3. Remove the coarse adjustment knob.



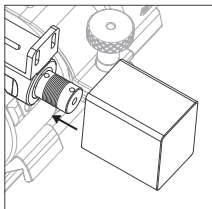
4. Rotate the adjustment knob on the opposite side until the shaft's flat surface is facing upward.



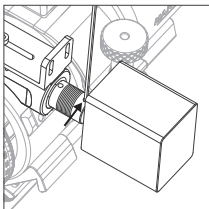
5. Select a 5-6mm flexible coupling (choose based on the connected device) and tighten its two set screws.



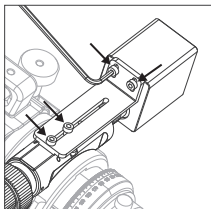
6. Install the EAF bracket, aligning its M4 fixing screw with the threaded hole indicated by the arrow.



7. Insert the EAF into the coupling.



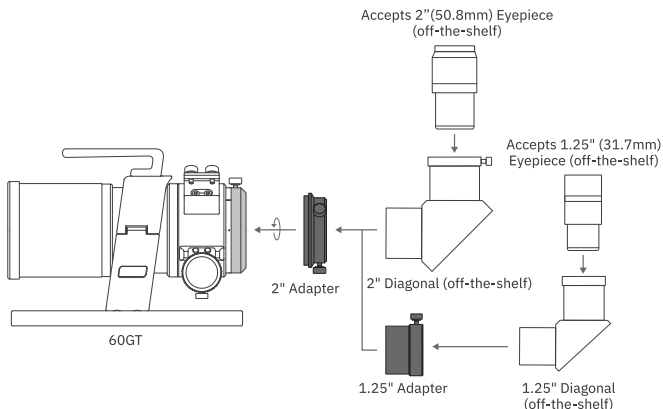
8. Tighten the EAF installation screw(s) to secure the unit.



9. Tighten the screw fixing the EAF to its bracket. Installation is now complete.

Visual Observing Setup

For visual observation, an eyepiece (off-the-shelf) is required. No image can be seen without an eyepiece. The magnification of the telescope is determined by the eyepiece used.



* To avoid back-focus problems caused by differing optical path lengths of various diagonal brands, universal 2-5cm extension tubes are recommended for use.

Magnification Formula

Magnification = Telescope Focal Length $\div$ Eyepiece Focal Length

Higher magnification reveals finer details but results in a narrower field of view and reduced image brightness. It is recommended to select an eyepiece with a suitable focal length for your observation target.

Example Calculation (using 4mm/15mm aperture eyepiece)

OTA	OTA focal length	4mm eyepiece focal length	15mm eyepiece focal length
60GT	360mm	$360 \div 4 = 90x$	$360 \div 15 = 24x$

Visual Observation Focusing

1. Install the diagonal and the low-power eyepiece. Use the coarse adjustment knob to locate the target.
2. Once the target is found, switch to a high-power eyepiece. Use the fine adjustment knob to achieve precise focus and observe the target.

Suggestions

- For first-time observations, start with a low-power eyepiece to easily locate the objects. Then, gradually switch to higher-power eyepieces for detailed observation.
- During nighttime observation, avoid applying strong force to the telescope to prevent vibrations that degrade observing quality.
- Choose an appropriate eyepiece focal length based on your observation target (e.g., Moon, planets, deep-sky objects).

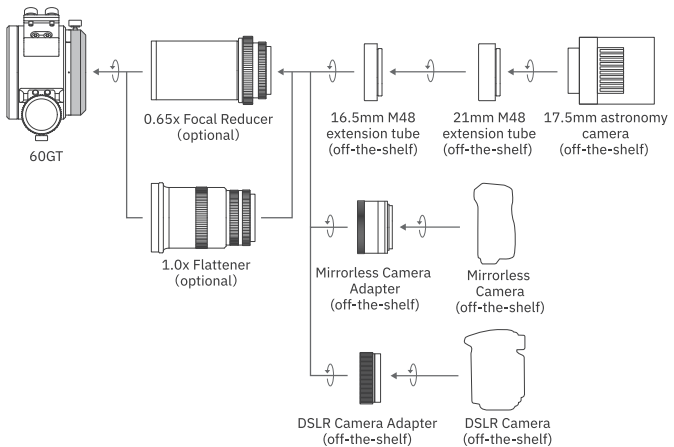
Precautions

- When using eyepieces, ensure they are clean and free of dust to avoid compromising observing quality.
- Avoid touching the optical surfaces of eyepieces with your fingers.
- After prolonged observation, eyepieces may dew up slightly. It is recommended to use a dew prevention device or wait for the lens temperature to stabilize before resuming observation.

Astrophotography Setup

For astrophotography, a flattener or reducer (optional) is required, and match the corresponding adapter according to your selected camera.

Connecting a camera directly to the 60GT will cause star distortion at the edges, compromising image quality. When using a flattener or reducer, the back focus distance for the 60GT must be adjusted to 55mm to ensure optimal optical performance.

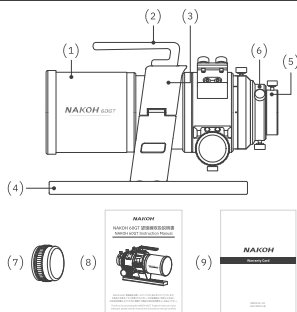


Specifications

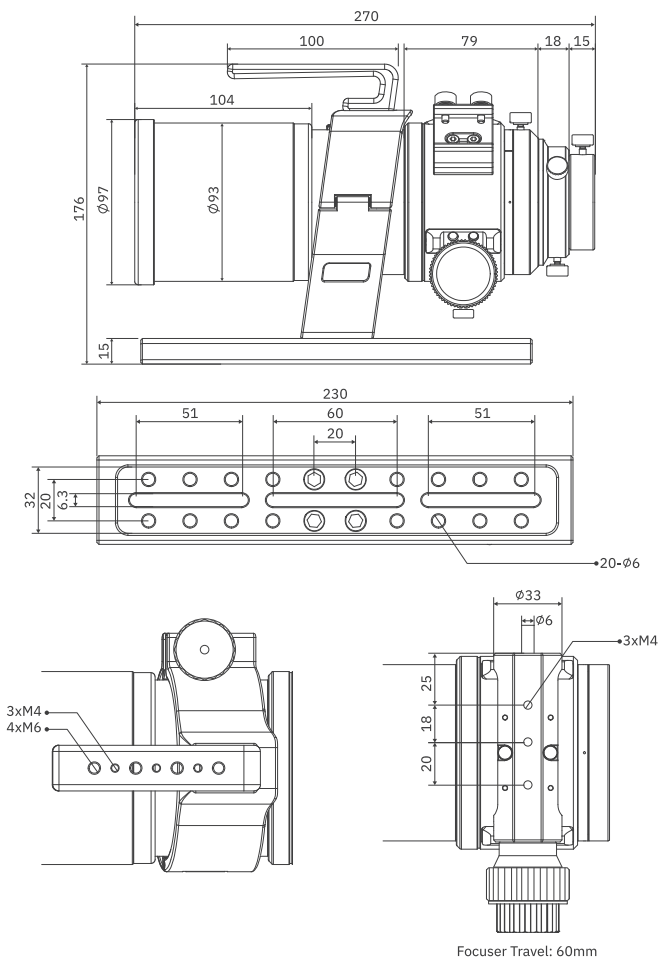
Parameters	
Aperture	60mm
Focal Length	360mm
Focal Ratio	F6
Objective Lens	triplet APO (incl. 1x SD Glass [made in Japan], 1x ED Glass)
Image Circle	φ44mm (with reducer / flattener)
Light Gathering Power	73x unaided eyes
Resolving Power	1.93 arc seconds
Limiting Magnitude	10.66
Tube Length	270mm
Weight	2.94kg
Rear-end Interface	31.7mm / 50.8mm (1.25-inch / 2-inch)
Optional Accessories	0.65x Reducer, 1.0x Flattener

Packaging List

(1) 60GT	1
(2) Handle	1
(3) Tube Ring	1
(4) Dovetail Plate	1
(5) 1.25-inch Adapter	1
(6) 2-inch Adapter	1
(7) Fine Adjustment Knob Cap	1
(8) Instruction Manual (this book)	1
(9) Warranty Card	1



Product Specifications(unit:mm)



Warranty & Contact Information

Warranty Policy

This product is covered by a one-year limited warranty from the date of purchase.

The warranty does not cover accidental damage, misuse, or normal wear and tear.

Please refer to the warranty card included with the product for detailed terms and conditions.

Technical Support

For any inquiries or repair services, please contact the store of purchase or Nakoh's authorized dealer in your country.

- Company Name: NAKOH CO., LTD.
- Add: La Casa Ueshio 902, 4-5-8 Ueshio, Tennoji-ku,
Osaka 543-0002, Japan
- E-mail: support@nakoh.co.jp
- Official Website: www.nakoh.co.jp
- Telephone: +81-6-7892-2731
- FAX: +81-6-7897-9116