RD120A45 Giant Observation Binoculars

Thanks again for you to purchased our 120mm binoculars. Our 120mm binocular is a precision optical instrument with variable magnification, 30x and 50x, excellent for both long-range terrestrial and celestial observation. The 120 mm objective lenses maximize light collection resulting in extraordinarily bright and sharp images.

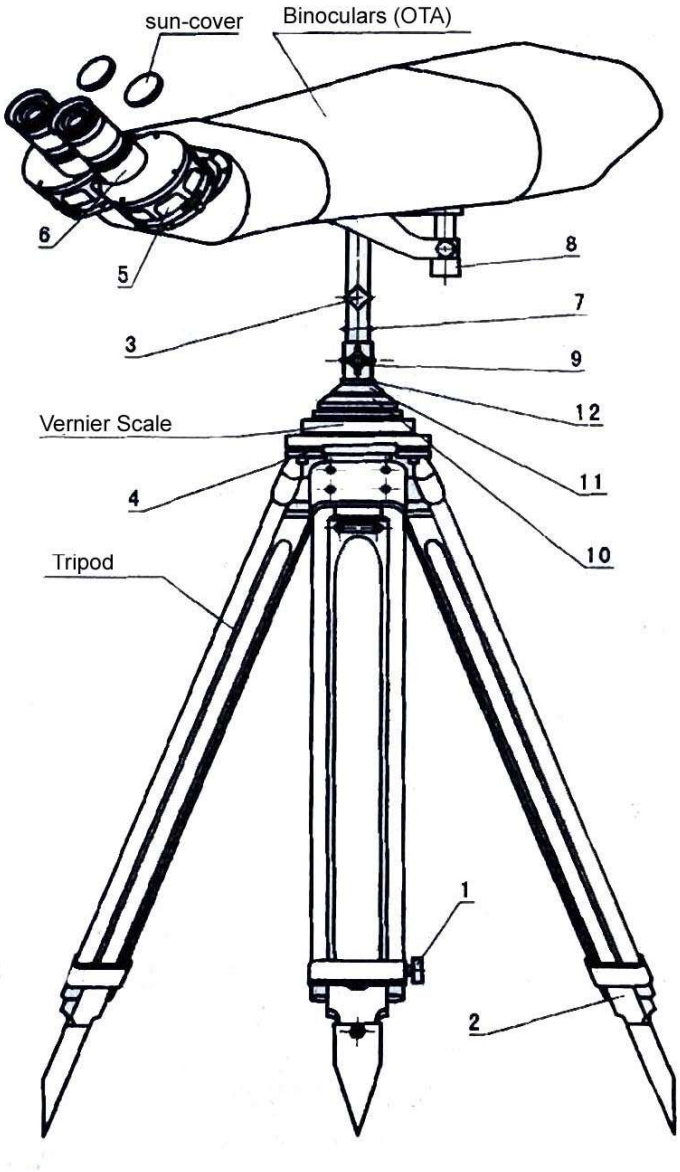
Whether used for work or pleasure, enjoyment of you purchased 120mm binoculars will be a result of silky smooth controls, crystal clear images, extraordinary light gathering ability, excellent depth perception, stereoscopic effect, individual focusing for each eye, superior quality, and the knowledge that you possess the ultimate spyglass.

MAIN SPECIFICATION OF THE BINOCULARs

Item	Item	RD120A45	
1	Magnification	30X	50X
2	Field of view (FOV)	2^0 24’	1^0 24’
3	Exit pupil	4.0mm	2.4mm
4	Eye relief	14mm	8.6mm
5	Aperture	120mm	
6	IPD (Inter-pupil distance) range	58-70mm	
7	Min. focus distance	35m	35m
8	Visibility Fixation	> ±10	
9	Resolution	≤2.5″	
10	Relative Brightness	16	5.76

11	Horizontal Rotary angle	360^0
12	Elevation angle of tripod	57^0
13	Azimuth angle of tripod	30^0
14	Binoculars Dimensions	780x300x215mm
15	Height from Eyepiece Center to basement	1250~1560mm adjustable
16	Operating Temperature	-20 ℃~+50℃

PARTS OF THE BINOCULARS



1. Locking thumbscrews
2. Movable Bracket
3. Binoculars/Stand Fast
4. Base Ring
5. Prism Assembly
6. Scale Ring
7. Elevation Knob
8. Fine Elevation knob
9. Butterfly Bolt
10. Scale Ring
11. Base Ring
12. Attachment Ring

SETTING-UP THE BINOCULARS

To avoid damage due to extreme and rapid changes in temperature, wait at least one hour before opening the STORAGE/ TRANSPORT CASE (when moving your binoculars from a cold to a heated environment. This will allow the temperature inside the container to equalize with the outside temperature at a moderate rate. Conversely, allow 15 minutes when moving from a warm to a cold area.

Do not drop or allow your binoculars to fall. Not only will damage, such as de-alignment, occur to the binocular but serious physical injury may also result if they land on people, pets, or property. Remember, never set your binoculars down in any way that will allow surface material to make contact with lenses. Leave your binoculars in their case until you are ready to mount them on your secured stand.

1. Setting-up the wooden Tripod

Your binoculars' wooden tripod was designed for use on soft materials such as dirt, sand, or gravel and will tend to slide on hard smooth surfaces such as wood flooring, ceramic tile, linoleum, or concrete. To avoid damage, care must be taken to ensure that the tripod does not slide or become unbalanced. This can be achieved by not trying to push or pull the tripod in an attempt to move it and by placing the tripod on an area rug or rubber padding. If the tripod must be moved after the binoculars are mounted to it, remove the binoculars before you attempt to move the tripod.

To avoid damaging your binoculars, property, or person it is important that the binoculars are not attached to the tripod during the setup and adjustment of the tripod. Begin by setting up the large tripod and making the necessary adjustments to the leg length. The leg length should be adjusted so that the male shaft on the tripod is vertical. To be sure that the legs of the tripod will not collapse once the binoculars are mounted on it, firmly tighten the THUMBSCREWS (Fig. 1) and BASE RING (Fig. 4) to ensure stability and balance before attaching the binoculars. Pull the tripod legs apart until the chain and ring that connects them is taunt and there is no sag in it.

2. Attaching the Binoculars to the tripod

Once you have located, setup, secured and adjusted the height of your stand you are ready to mount your binoculars. As you remove the binoculars from the case, fold down the female shaft on the underside and place it over the male shaft of the stand. Only when using the Wooden Tripod should you tighten the BINOCULAR/STAND FASTENING KNOB (Fig. 9) to lock the binocular and stand together or to restrict the binocular from rotating horizontally.

CUATION!

1. Do not setup your stand, make adjustments, or move your stand when binoculars are attached.
2. Do not set up your stand in a way that will allow it to become unbalanced easily. Achieve stability by spreading tripod legs far apart and screwing pedestals firmly to the floor.
3. Make sure all screws and locking mechanisms on your stand are firmly tightened.

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HOW TO USE

Our binoculars like most precision instruments, requires experience and a thorough understanding of operation and application before they can be used accurately and efficiently. When you are familiar with the following operating procedures, explain to first time users and those unfamiliar with the binoculars the following three steps that must be taken in order to enjoy the viewing experience and avoid frustration. Note: Do not use binoculars to look at the sun. Severe and permanent eye damage will result! Do not expose the binoculars to moisture such as rain and/or snow.

SELECTING THE MAGNIFICAITON

Our binoculars' magnification can be changed, from 30X to 50X or others 1.25" Oculars.(When you changed to 1.25" oculars need to use our interchange adopter) As subtle click a clear line of sight will indicate a successful change of magnification. We suggest you start with 25X.

ADJUSTING THE INTERPUPILLARY DISTANCE (IPD)

Since the distance between the eye (specifically, the distance between the center of the pupils) varies among individuals, the two eyepieces of the binoculars must be correctly aligned(adjusted). This is called adjusting the interpupillary distance. To adjust this distance, lift the binoculars up to your eyes (using both hands) and look through them at an object in the distance. Move the two halves of binoculars about the hinge until you see one clear circle of image through both eye.

ADJUSTING FOCUS

Since most people have a variance of vision from their eye to their right eye, you must adjust the focusing system. Use the following steps to achieve focus: 1) Close your right eye and look through the left side of the binoculars with your left eye at the subject matter. Rotate the center focusing wheel until image appears in sharp focus. 2)Close your left eye and look through the right eyepiece(called the adiopter). Rotate the right eyepiece until the image appears in sharp focus; 3) Look through both eyepieces with both eye open. Since you've already adjusted the right eyepiece, use only the center focusing wheel to refocus on a new object at a different distance.

Hint: eyeglasses worn for nearsightedness should be worn when using binoculars as you may not be able to reach a sharp focus at infinity without them.

BINOCULARS STORAGE & MAINTENANCE

The binoculars contain precision optical instruments and their service lives are directly affected by the maintenance. Proper storage and regular maintenance will ensure the telescopes perform at their best.

1. The telescopes should be stored in a warehouse where it is ventilated, dry and clean. Do not wipe any part of the telescope with your fingers, unclean cloth or any paper. Surface of metal components should be kept clean. Peeled-off or uncoated part of the surface should be covered with a layer of antirust oil to prevent rust. Grease should never be applied to the glass surface. Acid, alkali, salt, storage battery and other chemical-contained goods should not be stored together with the telescopes in the same warehouse. Stove or any other heating apparatuses should be kept at least 1.5 meters away from the telescopes in the warehouse. The telescope should never be heated over any heating apparatus.
2. The telescope should be handled gently and collision should be avoided. The telescope should be securely packed into the carton in the course of transportation. The telescope should be firmly mounted into the surface of a solid foundation.
3. If dust or other dirt has built up on the optics, remove it with an aurilave. Do not blow on the optics for fear that moisture may build up on the optics. Do not wipe the telescope with unclean cloth or stiff brush, otherwise the coating or mirrors may be damaged. Do not touch the optics with fingers. If any finger mark is left on the mirrors, use a solution of 50% anhydrous alcohol mixed with 50% ether and absorbent cotton balls (or gauze) to remove it. Apply the solution to the absorbent cotton balls (or gauze) and then apply the cotton balls (or gauze) to the optics. Low pressure strokes should go from the center of the lens (or mirror) clockwise or counterclockwise to the rim (go in only one direction; do not rub back and forth). Frequently change cotton balls (or gauze) until the lens (or mirror) is clean. The optics should be cleaned aperiodically. Do not apply organic solvents to the optics lest antireflection coatings on the lenses will be damaged.
4. The optical tube may be difficult to set at a desired angle after a long service time. This is due to the loosing of the two screws in the centers of component no. 9. Tighten them with the provided M6 hex wrench until the optical tube can be easily set to any possible position again.
5. If the telescope has a breakdown, please contact our professional staff for further testing or trouble-shooting, or send it back to the factory for repair. Do not dismantle the telescope by yourself for fear of causing unnecessary damage to the instrument.

Caution! Viewing the Sun may cause permanent eye damage. Do not view the Sun with your binocular!