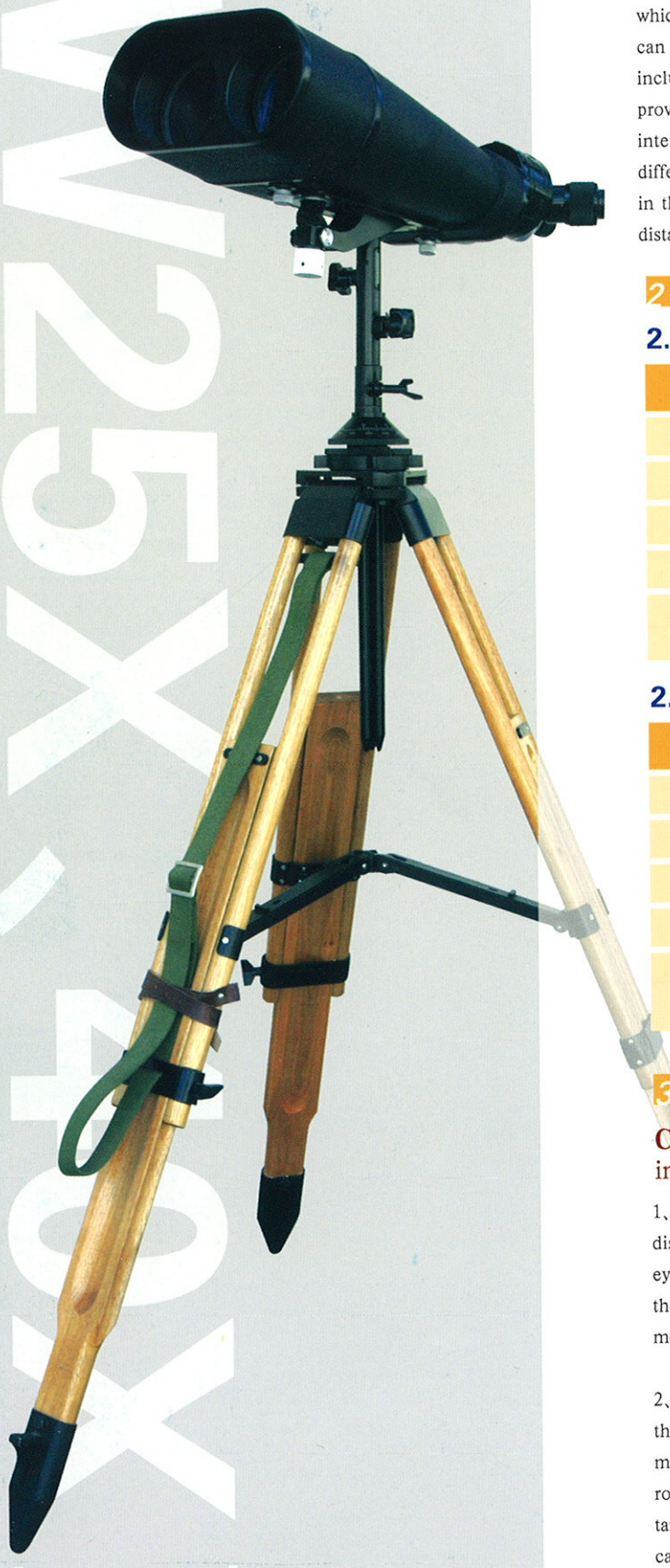
SW25X、40XI
25/62X100
TYPE BINOCULAR

OPERATION INSTRUCTION

SW25X、40XI



SW25X、40XI

1 Application

The binocular for 25x and 40x is a precision optical instrument with variable magnification, which is used for long distance observation under various climatic conditions. The binocular can also be used to measure roughly the distance and the height of target and the angle included between two targets. When it is used to observe various targets, the binocular provides a distinct image, comfortable viewing, real and stereo perception. The diopter and interpupillary distance of the binocular are adjustable, thus it can fit the observers with different diopters and interpupillary distances. Therefore, the binocular is of great assistant in the activities of amusement, hunting, shipping, fishery, forest fire prevention and long distance observation for various scientific research purposes.

2 Performance

2.1 Optical Performance

No.	Item	SW25X 40X Type
(1)	Magnification	25^X 40^X
(2)	Field of View	2° 30′ 1° 30′
(3)	Exit Pupil Diameter	¢4mm ¢2.5mm
(4)	Exit Pupil Distance	14mm 8.2mm
(5)	Range of Interpupillary Distance Adjustment	58 ~ 72mm

2.2 Structural Performance

No.	Item	SW25X 40X Type
(1)	Elevation Angle	57°
(2)	Depression Angle	30°
(3)	Azimuth Angle	360°
(4)	Weight (binocular host)	12Kg
(5)	Overall Dimension (binocular host) (L × W × H)	623 × 215 × 273(mm)

3 Structure and Operation

Caution: This binocular cannot be used to observe the sun directly in order not to burn your eyes and your skin.

1、The binocular host consists of objective assembly, prism assembly of interpupillary distance adjustment mechanism, 25x eyepiece on magnification change mechanism, 40x eyepiece on magnification change mechanism, left prism assembly. As shown in Fig 1, the complete set of the binocular consists of the binocular host, the elevation adjustment mechanism, the bigger tripod and the smaller tripod etc.

2、The optical system of the left tube is basically identical to the right tube's, except that there is a reticle in the right tube. The reticle is vertically and horizontally graduated in 1 mil for the bigger division and in 0.2 mil for the smaller division, and it may be used for rough measurement of the target distance, i.e., when the length (width or height) of the target to be measured is known, the distance from the observer to the object under observation can be roughly calculated with the divisions (generally known as included angle) covered the image of target on the reticle according to the following formula:

Distance (m)=Length of Target (m) ÷ Included Angle (mil) × 1000

3、The binocular has orange-yellow filters. They should be fitted on the eyepieces to decrease the dazzling of the strong sunlight when observing under the strong sunlight or to improve the contrast of object when observing in the thin fog.

4、In order to adapt the binocular to the observer's interocular distance, turn the right and the left prism assemblies to adjust the interpupillary distance of the binocular. Hold the handwheels and turn the sphere by 180° (location being perceived), resulting in the change of the magnification of binocular. To adapt the binocular to the diopter of the observer's eyes, turn the scale ring seats to carry out the adjustment.

5、The binocular should be fixed tightly on the tripod by a fastening handwheel 2 in Fig. 1. The rough and fine elevation adjustments may be made in observing an object. The quicker elevation adjustment in a bigger range may be made when handwheel 7 in Fig. 1 is loosened. For fine elevation adjustment, fine handwheel 1 in Fig. 1 is turned when handwheel 7 in Fig. 1 is fixed.

6、For measuring the included angle between objects, first loosen the handle 3 in Fig. 1, aim the center of the cross on the reticle at one object, make the zero division on the graduated dial 4 in Fig. 1 coincident with that on vernier dial 8 in Fig. 1, and clamp tightly with the handwheel 5 in Fig. 1, then aim the center of the reticle at the other object and read it out on the graduated dial.

SW25X40X

(Fig. 1)

1	Fine Handwheel
2	Fastening Handwheel
3	Handle
4	Graduated Dial
5	Handwheel
6	Dry Valve
7	Handwheel
8	Vernier Dial
9	Handwheel
10	Locking Handle
11	Movable Foot

7、Handle 3 in Fig. 1 should be tightened when no turning is required for the binocular in the observation of a fixed object.

8、If the binocular is to be placed on the platform in use, turn the handwheel 9 in Fig.1 on the bigger tripod, take down the binocular, and use them together with the smaller tripod.

Dry valve 6 in Fig.1 is used for sucking and filling dry nitrogen if special equipment is available.

4 Installation

4.1 Installation of Tripod

Three feet of the tripod, which have locking devices, can be lengthened and shortened freely. Release the handle 10 of locking devices, three movable feet 11 can be adjusted respectively according to the installation height and terrain, so that the tripod is basically leveled, and then finish the installation of tripod by using the locking handle. The installation of tripod should be done steadily and reliably.

4.2 Installation of Graduated Dial

Turn the handwheel 9 counter clockwise and insert the square shoulder at the bottom of the graduated dial into the square slot of the handwheel, and then turn the handwheel 9 clockwise to finish the installation of graduated dial.

4.3 Installation of Binocular Host

As shown in Fig., insert the seat hole of the elevation adjustment mechanism of the binocular into the graduated dial, and lock by turning the locking handwheel 2, and it is finished.

5 Storage and Maintenance

As a precision optical instrument, the binocular should be carefully kept and maintained to ensure it is always in good technical conditions.

1、The binocular should be kept clean either in use or in storage. After using, the surface of the glass should be cleaned with a brush first, and then lightly wiped with clean flannelet. Do not wipe it with fingers, dirty cloth or paper. The surface of the metal parts should be often kept clean as well. Any metal surface with paint peeled of or unpainted should be coated with grease to avoid rusting. Strictly forbid to apply any grease to the surface of the glass.

2、The binocular should be stored in a store-room where the temperature should be kept in the range of +5℃~30℃ , and the relative humidity should not be greater than 70%. The store-room should be kept ventilated and it is not permissible to store chemicals, such as acids, alkalis, salts and batteries etc. In storing, the binocular should not be kept near but at least 1.5 m from stove or other heating facilities, and it is strictly forbidden to bake the binocular on them.The binocular should not be placed directly on the floor without any mat, and should be kept at least 0.5 m away from the wall to avoid moisture. And it is better to have it suspended or place it on a wooden rack.

3、When the binocular is brought from the cold outside into a warm room or vice versa, do not open the container until the temperature inside and outside the container tends to the same after a period of time has passed (about one hour for the former and about 15 minutes for the latter) to avoid damage due to sharp changes in temperature.

4、The binocular should be handled with care, avoiding violent force or collision. When mounting, it shall be steady and reliable. When t is not used in the observing position, it should be covered with protective cover to protect it from strong sunlight, attack of sand-storm and moisture. During transportation, the binocular should be placed securely and reliably in the container.

5、The joints between the glass and the metal and other joints have been coated with sealing material which should not be wiped away in cleaning and in maintenance to prevent dust, moisture from entering the inner of binocular.

6、If any malfunctioning is found, it should be immediately checked so that the trouble is removed in time or sent back to the factory for repair. Never disassemble the binocular at will to avoid damage.

25/62X100

1 Application

25/62 × 100 Type binocular is a precision optical instrument used for long distance observation for frontier, public security reconnaissance, forest fire prevention and tourism scenic spots etc. This binocular has fairly high resolution and convenient operating mechanism, so that it provides a distinct image and comfortable viewing perception.

2 Main Optical Performance

No.	Item	25/62X100 Type
(1)	Magnification	25^{X} 62^{X}
(2)	Field of View	2° 30′ 1° 15′
(3)	Entrance Pupil Diameter	100mm 100mm
(4)	Exit Pupil Diameter	¢4mm ¢1.7mm
(5)	Exit Pupil Distance	14mm 14.8mm
(6)	Resolution	2.8 "
(7)	Range of Diopter Adjustment	± 5 diopters
(8)	Range of Azimuth Angle	360°
(9)	Range of Elevation	± 30°
(10)	Range of Interpupillary Distance Adjustment	58~72 mm

3 Binocular Composition

As shown in Fig., 25/62 × 100 type high magnification binocular consists of binocular host, azimuth and graduated dials, tripod, eyepieces (25x, 62x) (Different eyepieces can be equipped according to the customers'requirements.) etc.

Installation of Eyepiece

As shown in Fig., remove the dust protective caps, insert the eyepieces and turn the left and the right eyepiece focusing handwheels (74mm away from the prism seat), and then the observation is available.

Note: Our company adhere to the continuos development tactics,so we have the right not to notice previously if some change to any products described in this instruction.

25/62X100

4 Accessories

1	Tripod (with smaller tripod)	1 pc
2	Container	1 pc
3	Filter	2 pc
4	Brush	1 pc
5	Flannelet	1 pc
6	Protective Cover	1 pc
7	Operation Instruction	1 copy
8	Certificate	1 copy
9	25x, 62x Eyepieces (equipped for 25/62 × 100 type)	2 pairs
10	Handle(equipped for 25/62 × 100 type)	1 pc

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