

INSTRUCTION
FOR TELESCOPIC SIGHT,
TYPE 1985, USED FOR
SNIPING RIFLE

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CONTENTS

1. Application(1)
2. Data(1)
3. Spare Parts, Accessories
and Tools(2)
4. Structure and Use(3)
5. Care and Maintenance(13)

Figs. 1,2 and 3

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1. Application

The present telescopic sight is an optical device that aids in aiming of a 7.62 mm sniping rifle at targets within a range of 1300 m. It can be used for rough ranging when the height of target is about 1.7 m.

Fitted with a infra-red sensitive screen, the sight serves to search for stronger infra-red targets at night.

2. Data

- (1) Magnification..... $4\times$
- (2) Field of view..... 6°
- (3) Dia. of exit pupil..... 6mm

- (4) Eye distance 70mm
- (5) Range setting scale..... 1000m
- (6) Deflection setting scale
..... ± 10 mil
- (7) Weight of sight..... 0.6kg

3. Spare Parts, Accessories and Tools

- (1) Sight box.....pc. 1
- (2) Canvas bagpc. 1
- (3) Eyeshield.....pc. 1
- (4) Waterproof bag.....pc. 1
- (5) SR44 Silver oxide cell (to be
provided by the user)pcs. 2
- (6) Bulb.....pcs. 2
- (7) Dust-proof cappc. 1
- (8) White velveteen 180×180

-pc. 1
- (9) Brush pc. 1
- (10) Instruction booklet.....copy 1
- (11) Product certificate and
quality record card copy 1
- (12) Big watch screwdriver.....pc. 1

4. Structure and Use

The telescopic sight consists of the objective lens, the main body assembly comprising the range drum, deflection drum, infra-red sensitive screen, bulb, cell container and switch, the eye lens and the dovetail seat (Fig. 1).

The optical system of the sight is composed of the objective lens, reticle, image converter and eye lens (Fig 2).

When observing through the eye lens, one can see both the erect target image and the reticle simultaneously.

1. Reticle (Fig. 3)

The reticle has a deflection measuring scale graduated from $0 \sim \pm 10$ mils at 1 mil small intervals and 5 mils large intervals. In the vertical direction of the reticle there are four aiming marks " $\wedge$ ", the uppermost of which shall be adopted when the range is within 1000 m. When the range is 1100 m, 1200 m and 1300 m, the rest three (from the upper to the lower) shall be used respectively while the range index shall be set at the position of "10" in advance. In any cases, the peak point of " $\wedge$ " shall be

aligned with the target during aiming.

The curved line at the lower left portion of the reticle is used for rough ranging when the target is 1.7 m in height. The numbers on the upper side of the curved line indicate range values in unit of hundred meters. Each end point of the segments of the curved line from right to left corresponds respectively to range values (in unit of meter) of 200, 225, 275, 325, 375, 425, 475, 525, 575, 625, 675, 725, 775, 825, 875, 925, 975 and 1000. Range can be measured as follows: Coincide the bottom end of the target with the target base line and locate the contact point where the top end of the target touches the

curved line, thus the range of the target is approximately estimated (See Fig.3).

2, The eyeshield assembly is composed of the elastic bayonet with eyeshield 1 and the drum 2 (Fig. 1).
Instruction for use.

As installation, make alignment of the imprint by turning 1 and 2 (as shown in the figure 1).

Then put the eyeshield assembly into 3 and turn 2 in the direction of arrow. And screw up.

When unlocking the eyeshield assembly, turn 2 to the imprint in the inverse direction of arrow (Don't overpass the imprint). Then the eyeshield assembly can be released from 3.

After the eyeshield assembly is unlocked, the eye lens is covered with 10.

3. The range drum 5 (Fig. 1) is a device for range setting. Its scale ring is graduated and numbered from "0" to "10" corresponding to the firing range from 0~1000m. In between each two graduations starting from the graduation "3" there is a position where the range index can be mechanically set and these in-between positions indicate in turn the firing ranges of 350m, 450m, 950m correspondingly.

The deflection drum 6 is a device for deflection correction. It has a deflection scale covering ± 10 mils by

1 mil divisions, and the position in between each two divisions where the deflection index can be mechanically set indicates 0.5 mil.

4. The dovetail seat 12 (Fig. 1) is a device by means of which the sight is mounted onto the rifle. The sight can be released free by shifting the handle 13 to position (II) and be fixed up by shifting the handle to position (I). If the handle is not able to be shifted to position (I) or when the handle has been set to that position (I) yet the sight still fails to be fixed onto the rifle's dovetail, in which case, move the set block 15 upward and adjust the toothed nut 16 right or left properly.

After zeroing-in of the sight moun-

ted on a rifle, if the range drum index or deflection drum index fails to be set at "0", release the two screws 4 on the top of the corresponding drum by using a screwdriver and adjust the scale ring to zero setting. Then screw up 4.

5. The infra-red sensitive screen (Fig. 1) can be put into service at night by turning counterclockwise the switch knob 9 to position, which sets the sensitive screen in motion. When the sight lines up with the infra-red target, there on the sensitive screen will appear a light-green luminous emission. By turning the switch knob clockwise to position, the sensitive screen is turned off,

Table-Excitation Time

Ser. No	Light Source	Distance to the Filter 5	Excitation Time	Remarks
1	Sun light		More than 20 min.	Not under direct irradiation of sun light in summer
2	Car lamp 6~12V, 20~40W	150mm	More than 20 min.	
3	Common incan- descent lamp 150~200W	200~300mm	More than 30 min.	

Before being put into service, the infra-red sensitive screen shall first be excited as follows: Turn the sensitive screen off to the non-working position, and irradiate the filter 5 (Fig. 2) with ultraviolet light source (such as day light or common incandescent light).

After the sensitive screen having been excited, the sight shall be kept in a darkroom or in its sight box at a temperature of not more than $+30^{\circ}\text{C}$ for at least 2 hours. At that time, the switch knob shall in no case be turned to the working position lest the sensitive screen be exposed to incandescent light and the sensitivity be reduced.

Note: In special circumstances,

a sight having been used in day time might be put into direct use without excitation since the sensitive screen of that sight has been already excited by the sun light, but the result is usually not ideal.

6. Open the cell container cover 11, fit in the SR44 silver oxide cell, operate the switch 14 as specified, so the electric power source is connected through for night illumination.

Cover the objective lens with the dust-proof cap 8 when the sight is not in use. Draw out the sun shade 7 when the sunshine is rather strong during the day and pull it back when not needed.

5. Care and Maintenance

Care and maintenance shall be exercised to keep the sight constantly under a good technical condition.

1. Keep the sight always clean either in use or during storage. Remove dust off the surface of the glass first with a clean brush and then wipe gently by using a piece of clean cloth. No dirty cloth, paper shall be used for wiping, nor cleaning by hand. If the sight shows peeling of decorative plating, apply a layer of rust-protective oil on the metal surfaces but not on the glass surface.

2. The sight shall be stored in a

well-ventilated store-house with temperature kept within $+5^{\circ}\text{C} \sim +30^{\circ}\text{C}$ and relative humidity not more than 70%. No acids, alkalines salts, batteries or other chemicals shall be admitted to this store-house.

During storage, the sight shall be kept away (at least 1.5m apart) from stoves or other heating facilities. The sight shall never be placed on any heating device.

Never hang the sight directly on the wall (at least more than 0.5m apart from the wall), nor lay the sight on the ground without wood pad for protection against moisture attack. It is most preferable to hang the sight on a wood stand or place

it on a wood shelf.

3. When the sight is taken into a warm room from the cold outside or vice versa, hold the sight box for a certain period of time (about 1 hr in the former case and about 15 min. in the latter case) before opening the box cover because severe temperature change will cause damage of the sight.

4. The sight shall be always handled gently. Never apply too much force or even impact the sight. Keep the sight in the sight box when not in use or when it is to be transported.

5. For the glass-and-metal jointed portion, thread connected portion, screw head portion, etc. where a layer of black sealing wax is applied,

care shall be taken not to wipe this sealing wax off during the course of cleaning or maintenance so that tightness of the sight is not disturbed.

6. Troubles, if found, shall be removed in time or the sight shall be sent to the factory for repair. No stripping by the user himself shall be practised for fear of damaging the sight.

7. In case of releasing, pay attention to screw up the bulb while using it.

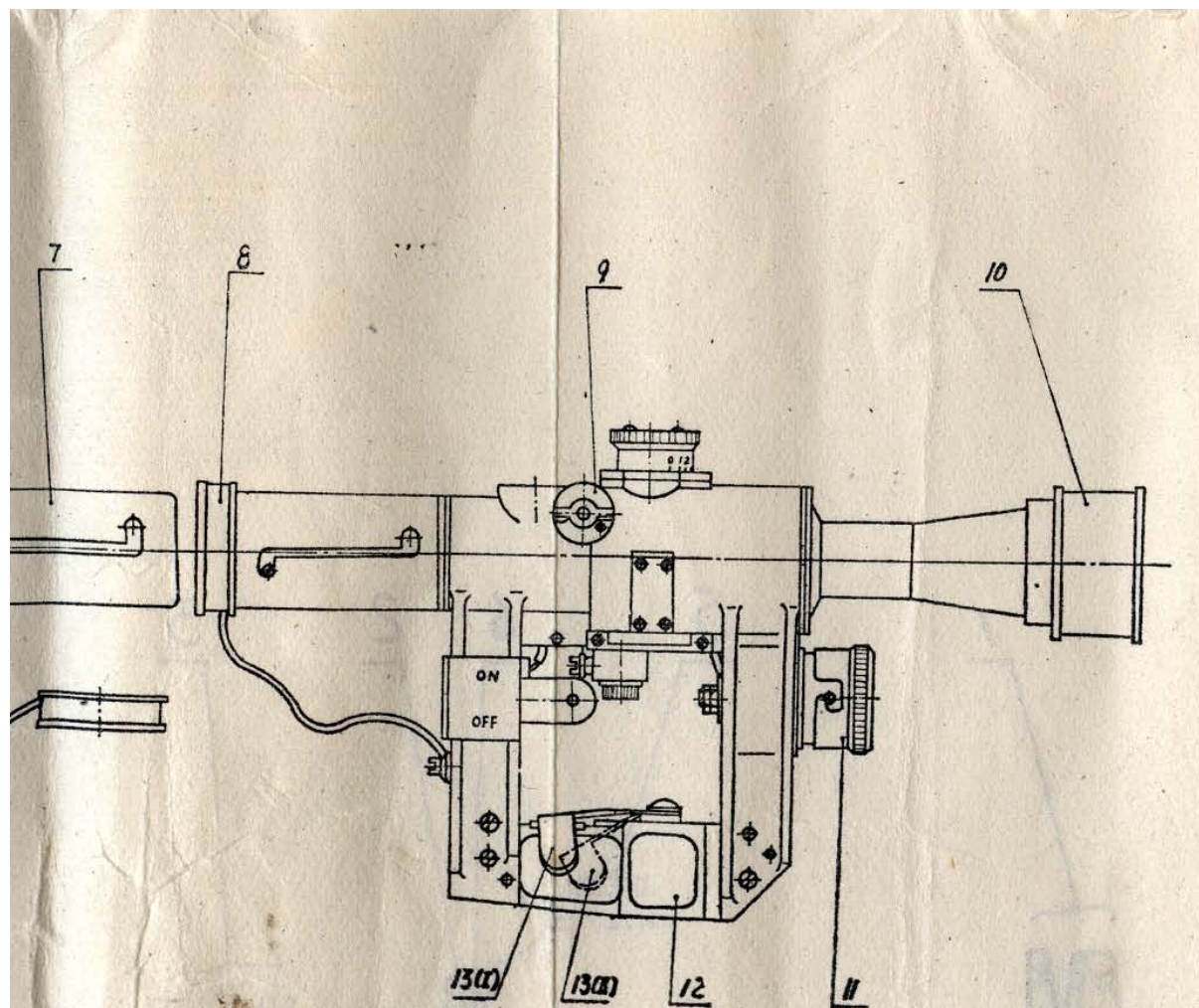
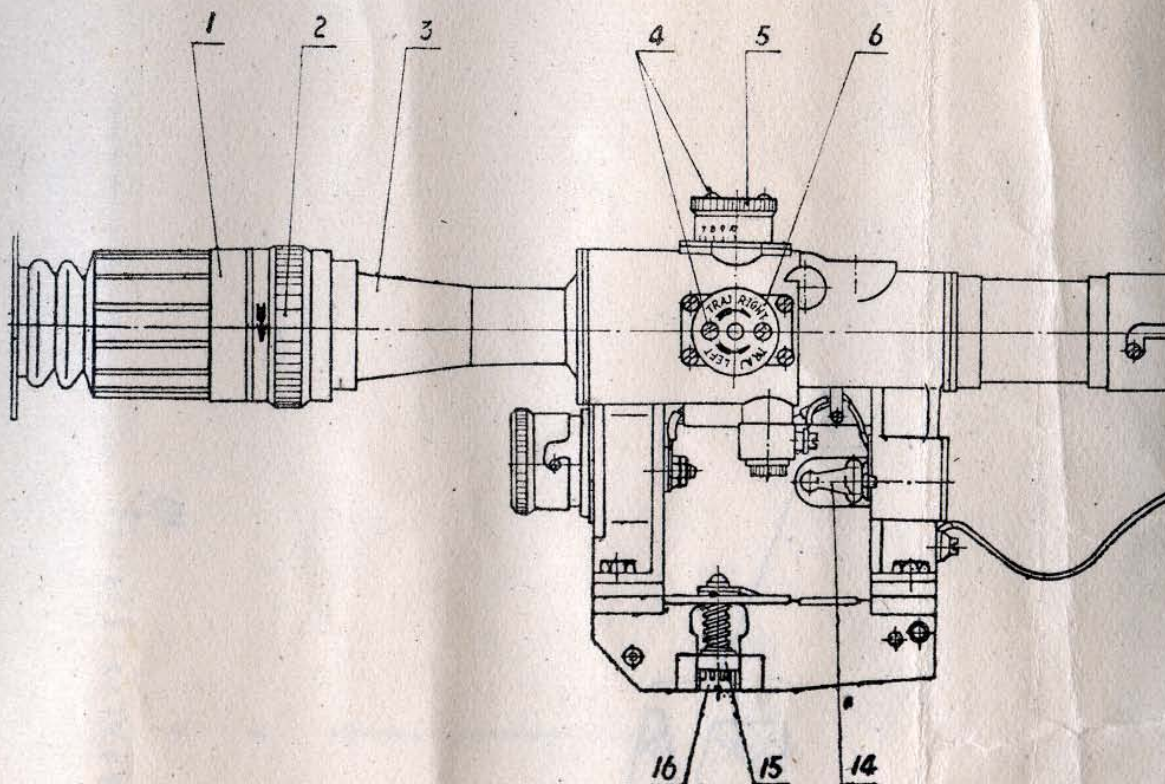


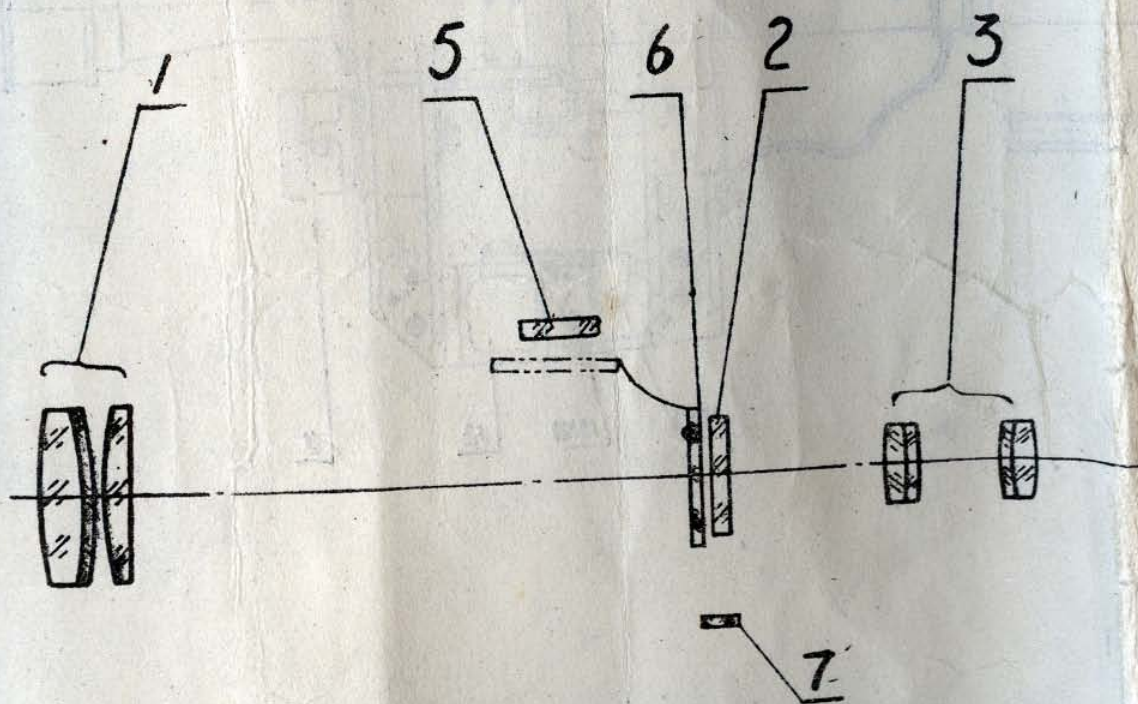
Fig. 1

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|-----------------------|----------------|---------------|
| 3. Eye lens barrel | 4. Screw | 5. Range drum |
| cap of objective lens | 9. Switch knob | 10. Dust- |
| 12. Dovetail seat | 13. Handle | 14. Switch |



Fig

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|-----------------------------------|--------------------------|---------------|
| 1. Elastic bayonet with eyeshield | 2. Drum | 3. |
| 6. Deflection drum | 7. Sun shade | 8. Dust-proof |
| proof cap of eye lens | 11. Cell container cover | |
| 15. Set block | 16. Toothed nut | |



1. Objective lens assembly 2. Beam splitter 3. Image conjugate plane
 5. Filter 6. Infra-red sensitive screen 7. Illuminator

Fig.2 Optical System



4. Eye lens assembly

inverting window

