

OPTICAL SIGHTS
PO1×20 P, PO1×20 P1
Service manual

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The service manual is designed to study the rules of operation and all technical feasibilities of sight, it is also contains information about specifications, design, mounting and zeroing, storage, maintenance and safety rules.

1 PURPOSE

Optical sights PO1x20 P, PO1x20 P1 (hereinafter referred to as the sight) are intended for aiming shooting on a range of a direct shoot from rifled and smooth-bore hunting weapon with a top mounting seat of the "Picatinny" rail type.

The illuminated reticle allows aiming at half-lights if the target is visible.

The sight operates at ambient temperature range from minus 40 to plus 40 °C and relative humidity up to 98% at 25 °C temperature.

2 SPECIFICATIONS

| | PO1×20 P | PO1×20 P1 |
|---|-----------|-----------|
| Magnification, x | 1 | 1 |
| Angular field of view, ° | 13 | 13 |
| Eye relief, mm | 100 | 100 |
| Exit pupil diameter, mm | 20 | 20 |
| Diopter adjustment, D | – | ±2.5 |
| Adjustment range of the sight, cm at 100 m: | | |
| – by height | ±80 | ±80 |
| – by direction | ±80 | ±80 |
| Overall dimensions, mm | 191×55×84 | 200×55×82 |
| Weight, kg | 0.5 | 0.55 |

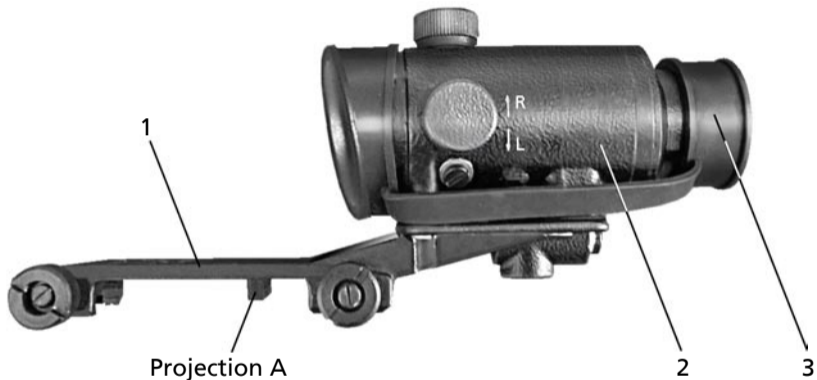
3 DELIVERY SET

| | |
|---------------------|---|
| Sight | 1 |
| Spanner-screwdriver | 1 |
| Bag | 1 |
| Service Manual | 1 |

4 DESIGN

4.1 The sight consists of the following parts:

- body 2 (Figure 1), with the built in lens, eyepiece, turning prism with the aiming reticle, zeroing mechanisms by height and by direction, light source;
- bracket 1 with a clamping unit for fixing the sight on the weapon.



Projection A

1 – bracket; 2 – body; 3 – cap

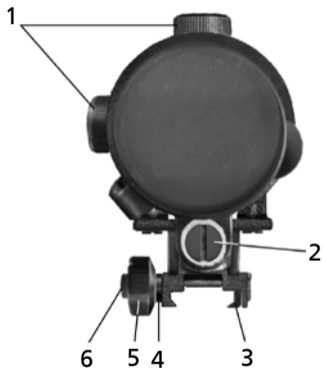
Figure 1 – **Sight PO1×20 P. Side view**



1 – eyepiece

Figure 2 – **Sight PO1x20 P1. Side view**

The clamping unit (Figure 3) consists of clamp 3, ring 4, nuts 5 and screw 6.



1 – caps; 2 – light source;
3 – clamp; 4 – ring;
5 – nuts; 6 – screw

Figure 3 – **Sight PO1×20 P or PO1×20 P1. Eyepiece view**

4.2 Cap 3 (Figure 1) is designed to protect the optical surfaces of the lens and eyepiece.

4.3 To illuminate the reticle in twilight light source 2 (Figure 3) is used including a luminous element, whose action is based on the effect of phosphor to emit visible light.

4.4 Sight P1×20 P1 has a mechanism of the eyepiece diopter adjustment to compensate poor vision of the shooter in the range from -2.5 to +2.5 diopters. Looking into the sight and rotate the eyepiece frame 1 (Figure 2) to achieve a sharp vision of the reticle.

4.5 The windage and elevation zeroing mechanisms (closed by thread caps 1 (Figure 3)) have a discrete move with a fixation through 0-00.25. When the caps are removed, the mechanisms look like screws with a wide slot.

Marks «↓D», «↑U»; «↓R», «↑L» are engraved on the body of the sight near the zeroing mechanisms.

The marks indicate that turning the adjustment mechanism screw on one click in direction of the arrow the aiming mark (see Figure 4) is shifted on 0-00,25 in the selected direction.

For example, to adjust the accuracy of shooting when zeroing the rifled weapon at the distance of 100 meters, turning the adjustment mechanism screw on one click shifts the point of impact on 2.5 cm in the selected direction.

5 MOUNTING ON A WEAPON AND ZEROING

5.1 The sight is mounted on a weapon, which has a special upper mounting seat of "Picatinny" type.

Overlap projection A (Figure 1) of the bracket with any slot of "Picatinny" rail and secure it with nuts 5 (Figure 3) using the key-screwdriver from the delivery set to mount the sight on a weapon.

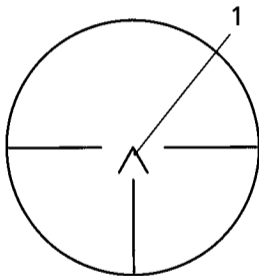
The sight must be securely fastened in the mounting seat.

5.2 For zeroing the sight on the weapon you need to do the following:

- mount the sight on the weapon mounting seat in accordance with 5.1;
- set weapon motionless (in the machine, on a tripod or other.);
- aim a weapon by optical sight at the point 100 meters distance if the weapon is rifled, and 35-50 meters if the weapon is smoothbore;
- note the position of the aiming mark (Figure 4);
- fire a shot;
- if the aiming mark top coincides with the point of impact, the sight is zeroed;
- otherwise unscrew caps 1 (Figure 3) and turn adjustment mechanism screw (by spanner-screwdriver or coin), to achieve the coincidence the aiming mark top (Figure 4) with the point of impact;
- fire a second shot and check that the aiming mark top coincides the point of impact;
- screw caps 1 (Figure 3).

To prevent failure of the sight during zeroing, it is prohibited to use excessive force on the adjustment mechanism screw in extreme positions.

CAUTION! DO NOT TURN ADJUSTMENT MECHANISMS AT MORE THAN ± 0.08 (± 80 CM/100M) FROM THE MIDDLE POSITION.



1 – aiming mark

Figure 4 – **Field of view**

6 OPERATION

Align the top of the aiming mark of the sight with the aiming point when firing.

The lines to the left and right from the aiming mark must be horizontal to prevent dumping.

7 STORAGE AND MAINTENANCE RULES

DO NOT disassemble the body of the sight!

Protect the sight from mechanical damage.

External optical surfaces are to be wiped with a clean soft cloth. Oil stains and coating can be removed with a cloth saturated with an alcohol.

Protect optical parts against scratches during storage and maintenance.

8 SAFETY RULES

Periodically check the reliability of the sight mounting on a weapon according to 5.1.

DO NOT bring an eye to the eyepiece lens closer than 100 mm to avoid damage.

9 ACCEPTANCE CERTIFICATE

Sight PO1×20 P_____, serial № _____, is manufactured in accordance with the requirements of mandatory state requirements, effective technical documentation and is found fit for operation.

Date of issue _____

Signatures _____

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Прицелы оптические ПО1×20 П, ПО1×20 П1.
Руководство по эксплуатации на английском языке