



NPZ

NOVOSIBIRSK INSTRUMENT-MAKING PLANT, JSC

COLLIMATOR SIGHT

PKU-2

SERVICE MANUAL



INTRODUCTION

The Service Manual is intended to study design and operating rules of collimator sight PKU-2 (PKU-2-01, PKU-2-02) and its modifications.

The Service Manual states

- purpose;
- technical characteristics;
- information on the sight design and operation required for correct operation and use of its technical capabilities to the full extent.

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COLLIMATOR SIGHT PKU-2

1. DESCRIPTION AND OPERATION

1.1 Sight Purpose

The PKU-2 collimator sight (hereinafter referred to as the “sight”) is designed to observe territory and to perform aimed firing from hunting smoothbore and rifled weapons that have top mounting seat of “Picatinny” rail type.

The aiming mark illumination allows aiming at dusk and in the night time provided that target is visible.

The sight shall be operated within ambient temperature range from minus 40 to 50 °C and with relative air humidity of up to 80 % at temperature of 25 °C.

The sight is produced in the following modifications:

PKU-2 – is collimator sight with quick-detachable mounting mechanism (handle for fixing).

PKU-2-01 – is collimator sight mounting with hexagonal slot screw and fixing strap. The screw is tightening with a special spanner.

PKU-2-02 – is collimator sight mounted with nut and fixing strap. Nut is twisted without special tool.

1.2 Specifications

Magnification, x	1
Field of view, degrees	9
Diameter of the sight exit protective glass, mm	18
Eye relief, mm	70
Adjustment range of the sight	$\pm 0-10$
Elevation of the sight optical axis over the plane of the bracket mounting seat, mm	19
Number of the brightness adjustment steps	12
Power supply	1xCR2032
Aiming mark size	4MOA` (1,2mRad)
Overall dimensions, mm	62x59x51
Weight, kg	
• PKU-2, PKU-2-02	0,15
• PKU-2-01	0,14

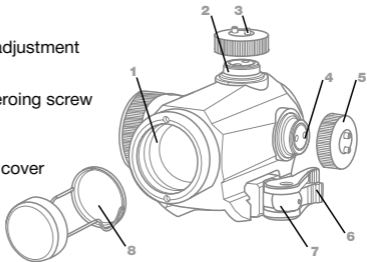
1.3 Complete Set

Description	Quantity	Note
Sight	1	
Hex-nut wrench, S=4 MM	1	for PKU-2-01
Napkin	1	
Box	1	
Service Manual	1	

1.4 Controls

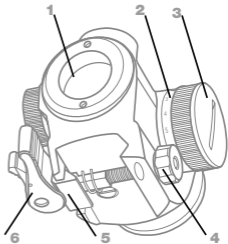
PKU-2

- 1** – objective
- 2** – elevation adjustment screw
- 3** – cap
- 4** – azimuth zeroing screw
- 5** – cap
- 6** – clamp
- 7** – pivot
- 8** – protective cover



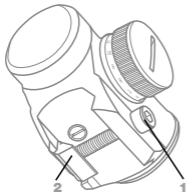
PKU-2

- 1** – protective cover
- 2** – body of battery compartment
 - sight activation
 - sight deactivation
 - adjustment of the aiming mark brightness
- 3** – cover of battery compartment
- 4** – adjusting nut
- 5** – strap
- 6** – handle



PKU-2-01

- 1** – hexagon head screw
- 2** – strap

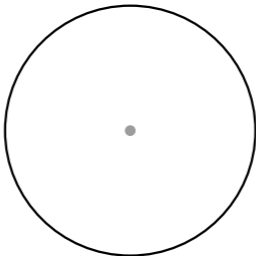


PKU-2-02

- 1** – rail
- 2** – nut



1.5 Field of View



1.6 Sight Operation

Sight operation shall start with installation of power supply source which requires the following:

- screw out the cover of the battery compartment;
- insert battery CR2032 with the «+» sign directed outwards;
- screw on the cover of the battery compartment.

The sight can be activated by turning the battery compartment body clockwise (according to engraving on the cover of the battery compartment).

The aiming mark brightness can be adjusted by rotation of the battery compartment body either towards the numbers rise (to increase brightness) or towards the numbers decline (to decrease brightness).

The adjustment screws are intended for sight – to – weapon matching and can be shifted incrementally through fixable positions.

Caps are provided to protect the adjustment screws against dust and moisture. Protrusions on the caps are used as a winder to rotate the adjustment screws when matching sight to weapon.

Protective cover is provided to protect objective and protective glass against dirt and mechanical damages.

Clamping fixture intended to fasten the sight to weapon having mounting seat of “Picatinny” rail type is located on the body lower part.

2. INTENDED USE

2.1 Operating Limitations

- study the Service Manual prior to using the sight;
- protect the sight against mechanical damage;
- do not touch the outer surfaces of the optical parts with hands, protect them against damages and scratches;
- put protective cover onto the objective lens and protective glass in case of breaks in the sight use;
- cover the adjustment screws with caps.



NEVER USE A WEAPON WITH AN UNRELIABLY FIXED SIGHT ON IT.

2.2 Preparing Sight for Use

When preparing the sight for use, proceed as follows:

- perform the visual inspection, wipe the optical surfaces with napkin if required;
- wipe the sight mounting seat;
- insert battery CR2032 with the «+» sign directed outwards;
- switch on the sight and set the best for eye brightness of the aiming mark.

2.3 Sight Use

2.3.1 Mounting Sight on Weapon

To mount the sight on a weapon, proceed as follows:

PKU-2:

- wipe the sight mounting seat on the weapon from dust and dirt;
- by pressing the clamp, turn the handle and disengage the adjusting nut by pressing the pivot;
- for secure mounting of the sight on the weapon turn the adjusting nut then turn the handle.

PKU-2-01:

- wipe the sight mounting seat on the weapon from dust and dirt;
- unscrew the hexagonal slot screw with the spanner from the kit so the slider allows mounting the sight on the weapon while the pivot should fall into one of the Picatinny rail slots and tighten the screw.

PKU-2-02:

- wipe the sight mounting seat on the weapon from dust and dirt;
- unscrew the nut so the strap allows mounting the sight on the weapon while the pivot should fall into one of the Picatinny rail slots and screw the nut.



ATTENTION

THE SIGHT SHALL BE RELIABLY FIXED ON THE WEAPON MOUNTING PLACE.

2.3.2 Sight Adjustment on Weapon

Perform sight adjustment on weapon proceeding as follows:

- mount the sight on the weapon mounting seat as per 2.3.1;
- aim weapon through the sight at an aiming point 100 m away, if the weapon is rifled, or 35 to 50 m away, if the weapon is smoothbore;
- make a shot;
- if the sight aiming mark coincides with the point of impact, the sight is considered adjusted;
- otherwise, obtain the aiming mark coincidence with the impact point by rotation of the adjustment screws. Rotation of the adjustment screws by elevation and azimuth by one clack corresponds to shift of the impact point upwards (downwards), left (right) by 2.6 cm when firing at 100 m;

- shoot again and check if the sight aiming mark coincides with the impact point.

In order to avoid sight failure, do not apply excessive force to the adjustment screws at the extreme positions.

Put caps onto the adjustment screws after the adjustment performance.



ATTENTION

CAUTION! NEVER MOVE ADJUSTMENT BY MORE THAN $\pm 0-15$ (± 150 cm per 100 m or ± 55 clackes) FROM THE MIDDLE POINT

2.3.3 Sight Adjustment on Weapon

When firing, match the aiming mark with the aiming point.

3. STORAGE AND MAINTENANCE RULES

! DO NOT DISASSEMBLE THE SIGHT DURING OPERATION!

The sight shall be protected against mechanical damages in order to avoid destruction of the optical parts.

Wipe the outer optical surfaces with a clean soft napkin; remove grease stains and deposits with cotton wool or napkin wetted with alcohol.

In the course of storage and operation, protect the sight from scratches; store the article with protective cover mounted on the objective and protective glass.

The temperature range from +5 to 40 °C and relative humidity of 85 % is the best storage condition.

4. ACCEPTANCE CERTIFICATE

Collimator sight PKU-2 _____, serial number _____
is manufactured in accordance with technical documentation
and is fit for operation

Date of issue _____

Signatures _____

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