WARNING: READ ALL INSTRUCTIONS BEFORE HANDLING & USING THIS FIREARM.
Safety Rules

PLEASE READ THIS BEFORE HANDLING YOUR FIREARM.

The following safety rules are placed in this manual by Heckler & Koch, Inc. as an important reminder that firearms safety is your responsibility. Firearms can be dangerous and can potentially cause serious injury, damage to property or death, if handled improperly.

1. Never point a firearm at anyone, or in any direction other than a safe one, i.e., downrange.

2. Always treat all firearms as if they were loaded.

3. Keep your finger off the trigger until your sights are on the target.

4. Keep your finger off the trigger while loading or unloading the pistol.

5. Keep your finger off the trigger while pulling pistol out of the holster or holstering.

6. Be sure of your target and the back stop beyond.

7. Never give to or take a firearm from anyone unless the action is open.

8. Be sure that the ammunition you are using is factory loaded and is not damaged in any way.

9. Before firing, remove the magazine from the weapon, lock the bolt to the rear and check the barrel of your unloaded firearm for any possible obstructions.

10. Before firing any firearm unfamiliar to you, make sure that you understand how it functions. Unfamiliarity can cause serious accidents. Attend a certified training course on any firearm which you intend to use or with which you are not sufficiently familiar.

11. Wear hearing protection and eye protection when shooting your firearm.

12. Keep your hands and fingers away from the muzzle to avoid injury or burns.

13. Firearms and ammunition should be stored separately beyond the reach of children and untrained or irresponsible adults.

14. Avoid the use of alcoholic beverages before and during any shooting.

REMEMBER: A FIREARM HAS THE CAPABILITY OF TAKING YOUR LIFE OR THE LIFE OF SOMEONE ELSE! BE CAREFUL WITH YOUR FIREARM – AN ACCIDENT IS ALMOST ALWAYS THE RESULTS OF NOT FOLLOWING BASIC SAFETY RULES.
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1. **Description of Equipment**

1.1 **Designation**

Telescope sight 4 x 24 for G3 rifle

1.1.1 Drawing No. 330143
1.1.2 Stock No. 1240-12-144-0716
1.1.3 Item Name TELESCOPE, SIGHT, RIFLE
1.1.4 Developing Firm M. Hensoldt & Söhne Wetzlar
1.1.5 Manufacturing Firm M. Hensoldt & Söhne Wetzlar

1.2 **Purpose**

The telescope sight is designed for use of the G3 rifle as a sharpshooter weapon. It enables the rifleman to acquire and sight the target, and permits observation of enemy and effects on target even over major ranges. The maximum adjustable sighting range is 600 meters.

1.3 **Scope of Supply**

1.3.1 One telescope sight

Drawing No. 330143-9001
Stock No. 1240-12-144-0714
Item Name

1.3.2 Two rubber protection caps

Drawing No. 330108-0202
Stock No. 1240-12-129-4060
Item Name PROTECTION CAP, TELESCOPE SIGHT

(Figure 6)

- 20
- 21
- 12
- 22
- 21 = Telescope sight with mounting
- 12 = assembly and rubber protection caps
- 22 = Grey filter
- 27 = Container
- 28 = Tool kit w/ accessories
12 = Protection caps  
15 = Elevation adjustment control  
16 = Lateral adjustment control  
17 = Dioptrical adjustment control  
20 = Telescope sight

21 = Mounting assembly  
22 = Grey filter  
23 = Detent ring (Elevation control)  
24 = Detent ring (Lateral control)  
25 = Cover screws

1.3.3 One anti-dazzle filter

Drawing No. 330108-9003  
Stock No. 1240-12-144-0715  
Item Name FILTER, LIGHT, TELESCOPE

1.3.4 One container

Drawing No. 330143-9004  
Stock No. 1240-12-144-0713  
Item Name CONTAINER, TELESCOPE SIGHT

1.3.5 One tool kit with accessories

Drawing No. 335917  
Stock No. -  
Item Name TOOL KIT, complete

1.3.5.1 One tool kit holder

Drawing No. 335917-8010  
Stock No. 5140-12-146-5698  
Item Name TOOL KIT HOLDER

1.3.5.2 One screwdriver

Drawing No. 335917-8020  
Stock No. 5120-12-121-1092  
Item Name SCREWDRIVER, LONGITUDINAL SLOT TYPE 4.5 X 40 mm blade, 100 mm long

1.3.5.3 One dust brush

Drawing No. Acc. To TL 7920-024  
Stock No. 7920-12-120-0355  
Item Name BRUSH, DUST, OPTICAL LENSES 10 mm dia., quill-type holder
1.3.5.4 One lens cleaning rag

- **Drawing No.:** 80 x 115 mm gezackt
- **Stock No.:** 6640-12-124-6982
- **Item Name:** CLEANING RAG, LENS
  - Cotton, 80 x 115 mm

1.3.6 One holder (mount)

- **Drawing No.:** Acc. To HK 100 236
- **Stock No.:** 1240-12-140-9932
- **Item Name:** MOUNTING, TELESCOPE SIGHT, RIFLE

1.4 Technical Data

1.4.1 Optical Data

1.4.1.1 Telescope magnifying power (V) 4 x
1.4.1.2 Entry pupil diameter (EP) 24 mm
1.4.1.3 Exit pupil diameter (AP) 6 mm
1.4.1.5 Dioptrical adjustment +/- 2 dioptries
1.4.1.6 Angle of field of vision 5° 40’
1.4.1.7 Field of vision 100 m / 1000 m
1.4.1.8 Reticule layout Target mark with lateral graduation grid, according to FINABEL
1.4.1.9 Insert filter Grey (NG 4, 2.6 mm thick, approx. 94% absorption)
1.4.2 **Mechanical Data and Dimensions** (Figure 1)

1.4.2.1 Angular sight adjustment control, with detents for steps of 100 meters each

100 to 600 meters

1.4.2.2 Over travel for adjustment

+/- 1

1.4.2.3 Lateral adjustment control, with detents for steps of .25” each

+/- 2.5”

1.4.2.4 Over travel for adjustment

+/- 1

1.4.2.5 All telescope sights are adjusted to the same point at elevation setting “1” and lateral setting “0”

Permissible deviation +/- 0.5”

1.4.2.6 Total length of telescope sight assembly with rubber protection caps

230 mm

1.4.2.7 Rubber protection cap

38 mm diameter

1.4.2.8 Tube

29 mm diameter

1.4.2.9 Sight lens eyepiece

30 mm diameter

1.4.2.10 Distance between optical axis and sight tube holders

20.5 mm

1.4.2.11 Telescope sight tube holders

According to STANAG 2324

1.4.2.12 Mounting screws

M 6; 10.5 mm long

1.4.2.13 Container (outside dimensions)

Appr. 230 x 105 x 63 mm

1.4.2.14 Distance between optical axis and theoretical bore axis (due to mounting)

87.5 mm
1.4.3 Weight Data

1.4.3.1 Telescope sight Approx. 0.35 kilos

1.4.3.2 Telescope sight with mounting assembly Approx. 0.65 kilos

1.4.3.3 Telescope sight with mounting assembly and container with accessories Approx. 1 kilo

1.5 Structure

1.5.1 General

The telescope sight is a monocular telescope of linear structure with an inversion lens system. For the setting of the sight angle the target mark will be adjusted in elevation.

1.5.2 Optical Structure (Figure 2)

The incoming light beams pass through lens (1) and are generated on the first image plane. The reticule (2) with target mark is arranged in this image plane. The image of the first image plane is generated in the image plane of the eyepiece via two double-member inversion lenses (3 and 4), and observed through the eyepiece (5). A gray filter (6) can be inserted optionally in front of the eyepiece.

1.5.3 Mechanical Structure (Figure 3)

The telescope sight consists of the main tube (10) with the attached eyepiece sleeve (11). One rubber protection cap (12) each is attached on the sides of lens and eyepiece. Two attachment screws (13) are provided for the attachment to the mounting assembly.
4. **Maintenance Schedule**

<table>
<thead>
<tr>
<th>Item</th>
<th>Period</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>w, p, a</td>
<td>w = weekly</td>
</tr>
<tr>
<td>3.2</td>
<td>w, p, a</td>
<td>m = monthly</td>
</tr>
<tr>
<td>3.3</td>
<td>p, a</td>
<td>p = prior to use</td>
</tr>
<tr>
<td>3.4</td>
<td>m</td>
<td>a = after use</td>
</tr>
<tr>
<td>3.5</td>
<td>*</td>
<td>* = conditional</td>
</tr>
</tbody>
</table>

1.5.3.1 The following components are externally attached to the **main tube** (10): Elevation adjustment control (15), lateral adjustment control (16), dioptical adjustment control (17), and telescope sight holders (18) designed according to STANAG 2324. The eyepiece (1) and the reticule plate (2) with their mechanical mountings are installed in the interior of the main tube.

1.5.3.2 The **eyepiece sleeve** (11) contains the eyepiece (5) and the two double-member inversion lenses (3 and 4).

1.5.3.3 The **protection caps** (12) arranged on the eyepiece and lens sides of the unit also serve as protection against mechanical damage; when the sight is not used, they are closed by reversing.

1.5.3.4 The **attachment screws** (13) serve for the attachment of the telescope sight on the mounting assembly. They are provided with a self-locking Nylon insert.

2. **Operation**

2.1 **Transport** (Figure 6)

2.2 **Control Elements**

2.2.1 **Focus adjustment** of the image is made by the dioptical adjustment control (17). The adjustment tolerance range is +/- 2 dioptries.

2.2.2 The **reticule plate** is arranged according to Figure 4. The target marker with lateral graduation grid is designed according to the FINABEL principle.

2.2.3 The **angular adjustment** of the sight is effected by the elevation adjustment control (15).

2.2.4 **Lateral correction adjustment** is effected by the lateral adjustment control (16).
2.2.5 The **rubber protection caps** (12) prevent mechanical damage.

2.2.6 **Attachment** of the telescope sight to the mounting assembly is effected by means of the telescope tube holders (18) and the attachment screws (13).

2.2.7 A gray filter according to item 1.3.3 can be inserted in the protection cap on the eyepiece side as **anti-dazzle protection**.

**2.3 Installation of Telescope Sight and Adjustment to Weapon** (Figure 5)

2.3.1 Install the telescope sight (20) with mounting assembly (21) on rifle. Check that attachment is properly made.

2.3.2 Open the rubber protection caps (12) on the eyepiece and lens sides of the telescope by reversing them.

2.3.3 Adjust optimal focus on adjustment ring of dioptical adjustment control (17) by turning **from plus to minus**.

2.3.4 In the case of major dazzling effects caused by sun or snow, insert gray filter (22) in rubber protection cap on eyepiece side.

2.3.5 Adjust detent ring (23) of elevation adjustment control to 100 meters (Detent “1”) and detent ring (24) of lateral adjustment control to “0”.

2.3.6 Loosen cover screws (25) with screwdriver, item 1.3.5.2

2.3.7 Adjust rifle sight to 100 meters, and sight target 100 meters away over notch and bead sights.

2.3.8 Set target marker of telescope sight to the same target point by operating elevation adjustment control (15) and lateral adjustment control (16) with a coin. Check that the setting of the detent rings made according to item 2.3.5 remains undisturbed.

2.3.9 Fire trial shots and readjust target marker after each shot if necessary. The direction of turning for correction after each shot is indicated on the cover discs of the elevation and lateral adjustment controls (15 and 16).

2.3.10 Tighten cover screws (25) after completion of adjustment.

2.3.11 Elevation adjustment control (15) will now be set to detent 1 to 6 depending on target ranging between distances of 100 to 600 meters. For this the target marker is shifted and adjusted by elevation, whereby the sight angle corresponding to the respective range is also set.

**3. Maintenance**

3.1 Check optical parts for cleanliness. Dirty optical components shall be cleaned exclusively with soft dust brush and optical cleaning rag after steaming parts with breath; do not touch parts with fingers (dust brush and optical cleaning rags are supplied in accessory kit). Minor blemishes (scratches) on outside of optical lenses will not impair the function of the equipment. Cracked glass components, however, must be replaced (return equipment to base for repair).

3.2 Remove dust and dirt from outside mechanical surfaces with dry rag or brush. Remove major contamination (i.e. oil and grease) with a rag soaked with gasoline. Clean moving parts and precision ground faying surfaces with particular care.

3.3 Check controls and moving parts for easy and smooth operation. Oil slightly with a non-acid oil.

3.4 Disinfect rubber protection caps. Moisten clean rag with Sagrotan solution, and wipe rubber parts.

3.5 Touch up damage varnish after previous degreasing with an air-drying varnish RAL 9005.