

TM 9-6650-212-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL

TELESCOPE, OBSERVATION: M49, W/E

(6850-530-0960)

This copy is a reprint which includes current pages from Changes 1 and 2.
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HEADQUARTERS, DEPARTMENT OF THE ARMY

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TECHNICAL MANUAL }
 No. 9-6650-212-12 }

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This manual supersedes TM 9-6650-212-12,23 September 1959, including C1, 13 June 1963.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope.

a. These instructions are for use by operator, crew or organization. They apply to telescope, observation M49 and associated equipment (6650-530-0960).

b. Appendix A contains a list of current references, including supply and technical manuals, forms and other publications applicable to the telescope and associated equipment.

c. Appendix B contains the list of basic issue items that are required for stockage by operator/crew maintenance.

d. Appendix C contains the maintenance allocation chart.

e. The procedures for administrative storage of equipment is contained in chapter 4, A portion of these procedures are in accordance with the requirements of TM 740-90-1.

f. The procedures for destruction of Army materiel to prevent enemy use is contained in chapter 4. A portion of these procedures are in accordance with the requirements of FM 5-25.

1-2. Forms, Records, and Reports.

a. *Authorized Forms.* Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750.

b. *Recommendations for Maintenance Manual Improvements.* The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding Officer, Frankford Arsenal, ATTN : AMSWE-SMF-W3100, Philadelphia, Pa. 19137.

c. *Report of Accidents.* The necessary reports are prescribed in AR 38540.

d. *Equipment Improvement Recommendation.* Use the Equipment Improvement Recommendation section of DA Form 2407.

e. *Materiel Failure Report.* Failure of materiel will be reported in accordance with TM 38-750.

Section II. DESCRIPTION AND DATA

1-3. Description of Telescope.

a. Observation telescope M49 (fig. 1-1) is a 20-power telescope. It is characterized in its physical appearance by the offset porro-prism housing which gives the telescope its' bent tube shape.

b. The telescope is used for making ground observations of a target area and effectiveness of artillery fire. Having no reticle, it has limited use.

c. The basic components are the objective assembly, body tube, prism housing assembly, and eyepiece assembly with focusing sleeve.

d. This telescope does not have an adjustable sunshade. Instead, the front end of the body tube

extends approximately three-fourths of an inch beyond the objective, thereby providing a permanent sunshade. The telescope is furnished with an objective cover and an eyepiece cover cap (fig. 1-1). These are screwed into place to protect the lenses when the telescope is not in use.

1-4. Description of Associated Equipment.

a. *Tripod M15.* The tripod is constructed of heavy duty metal with adjustable legs and a strap made of duck cotton cloth and nylon webbing. The telescope is strapped in position in a cradle which in turn is supported on the tripod, which supports the instrument about 1-foot above the ground. The tripod provides for full rotation in

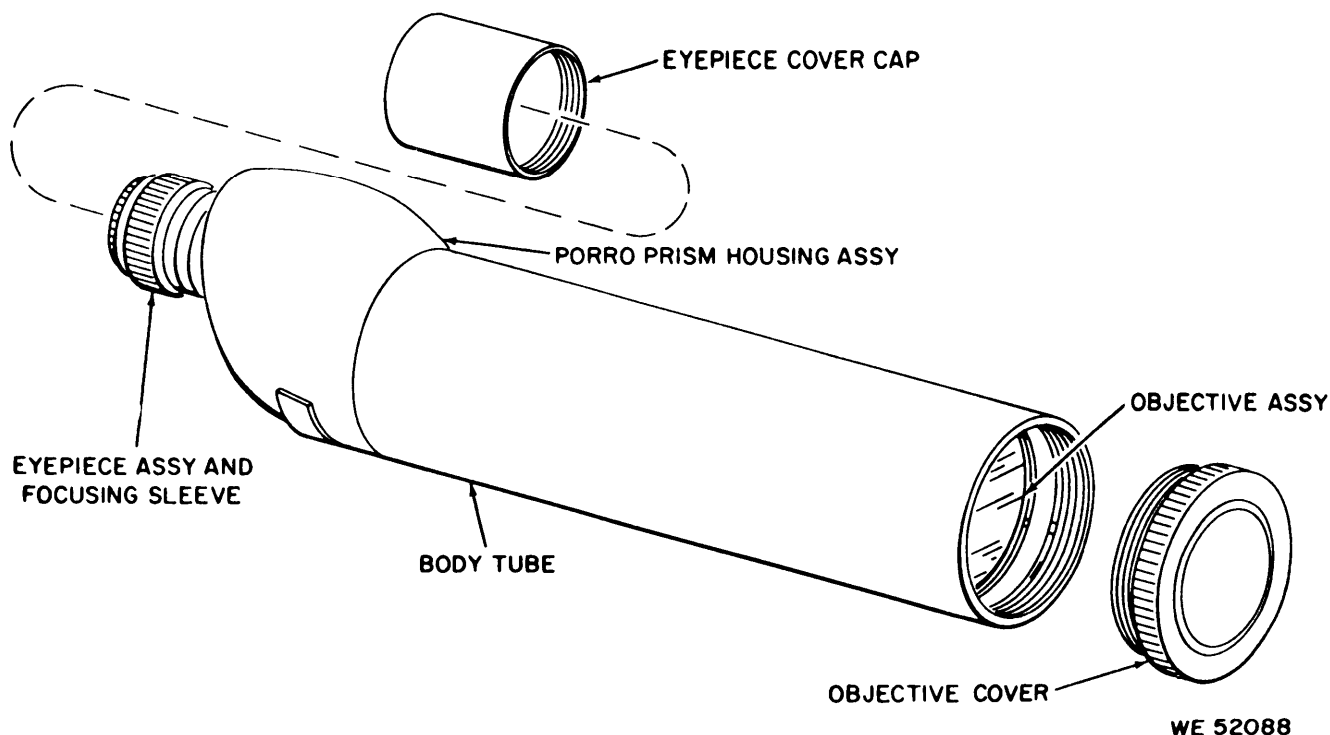


Figure 1-1. Telescope, observation M49.

azimuth of the cradle and telescope, and in conjunction with a thumbscrew for limited rotation in elevation.

b. *Carrying Case M42A1.* The carrying case is used for storing and transporting tripod M15. It is constructed of duck cotton cloth and nylon webbing. The case is mildew, processed and equipped with a leather strap, pads and reinforcement to protect the tripod. The letters MRT and CASE CARRYING M42A1 are stenciled on the case for identification.

c. *Telescope Case M164.* The carrying case is used to store or carry telescope M48 or M49 during transit. It is constructed of aluminum alloy and plastic moulding material. The case is equipped with a carrying strap and a double catch for securing the cover in closed position. A gasket is cemented to the cover to provide a waterproof seal for the case. Cellulose rubber packs are cemented at both interior ends of the case to pro-

tect the telescope from shock during handling and transit. Molded letters and figures CASE TELESCOPE M164 are used on the lid of the case for identification.

1-5. Tabulated Data.

Power of magnification.....	20X
Field of view.....	2°12'
Diameter of exit pupil.....	0.108 in.
E.F.L. of objective.....	14.211 in.
E.F.L. of eyepiece.....	0.716 in.
Length	14-1/2 in. (approx)
Weight	5 lb
Volume	0.3 cu. ft.

1-6. Identification Plate.

The identification plate is located on the prism housing. The plate indicates the name of the equipment, part number and serial number of the instrument.