

TM 11-6625-302-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

**ORGANIZATIONAL, DS, GS,
AND DEPOT MAINTENANCE MANUAL
INCLUDING
REPAIR PARTS AND SPECIAL TOOL LISTS
TEST SETS TS-190/U AND TS-190A/U**



HEADQUARTERS, DEPARTMENT OF THE ARMY

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Operator, Organizational, DS, GS, and Depot Maintenance Manual
TEST SETS TS-190/U and TS-190A/U

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***This manual supersedes TM 11-6625-302-12P, 7 November 1962, and TM 11-6625-302-35P, 7 November 1962.**

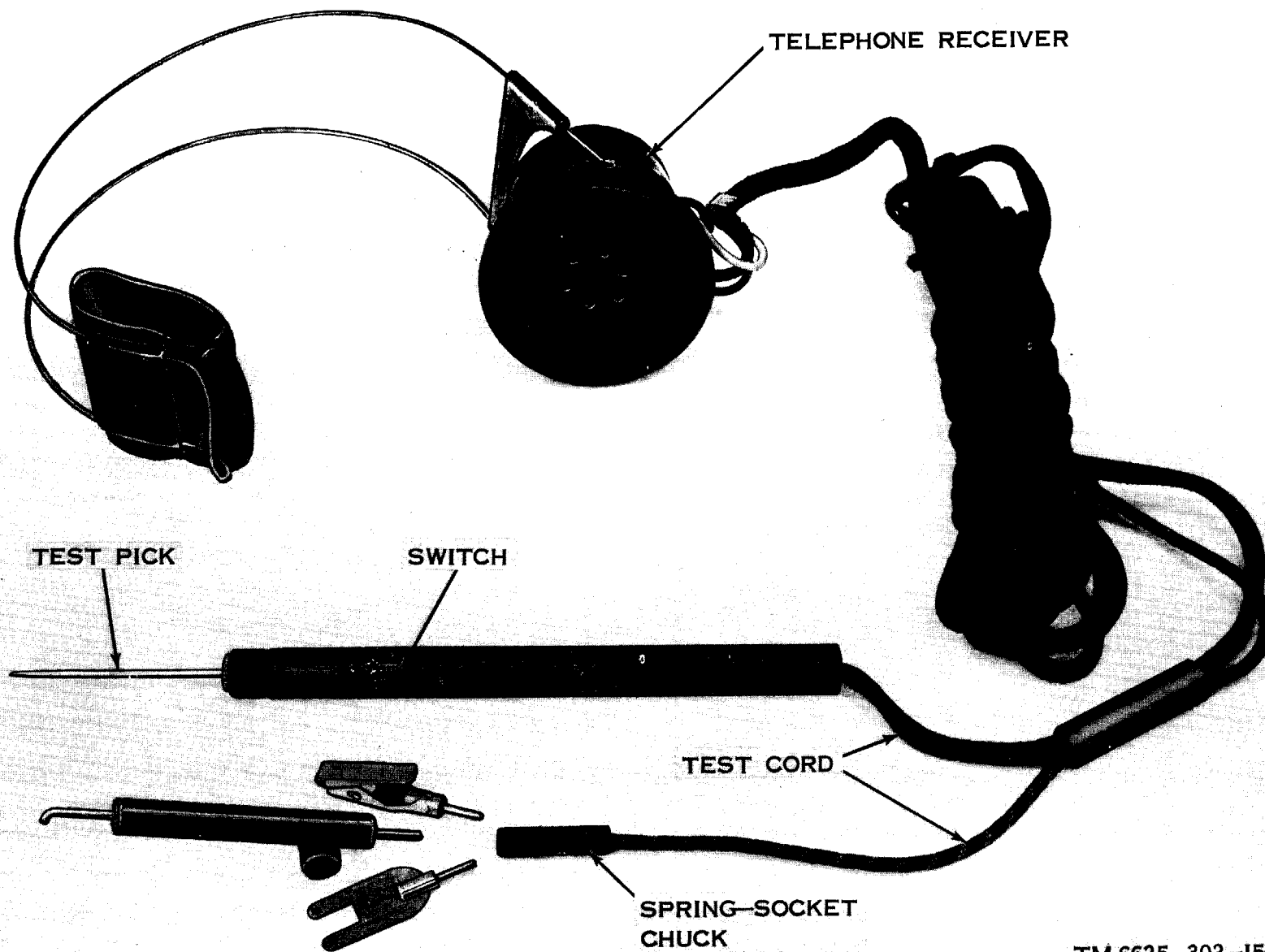


Figure 1-1. Test Set TS-190A/U.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope

This manual describes Test Sets TS-190/U and TS-190A/U and covers their installation; and operation, organizational, direct and general support, and depot maintenance. It includes cleaning and inspection of the equipment; replacement parts available to organizational, DS, GS, and depot maintenance personnel; and depot overhaul standards.

1-2. Index of Publications

Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to this equipment. DA Pam 310-4 is an index of current technical manuals, technical bulletins, supply manuals (types 7, 8, and 9), supply bulletins, lubrication orders, and modification work orders available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc.) and the latest changes to and revisions of each equipment publication.

1-3. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Use equipment forms and records in accordance with instructions in TM 38-750.

b. *Report of Damaged or Improper Shipment.* Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSAND A Publications (Navy), and AFR 71-4 (Air Force).

c. *Reporting of Equipment Manual Improvements.* Reporting of errors, omissions, and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U. S. Army Electronics Command, ATTN: AMSEL-MR-NMP-AD, Fort Monmouth, N.J., 07703.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

(fig. 1-1)

Test Sets TS-190/U and TS-190A/U are used in troubleshooting and maintenance of telephone and carrier equipment. These test sets are used in both direct current (dc) and alternating current (ac) circuits. In dc circuits, opens, grounds, and shorts are easily located. In ac (voice frequency) circuits, voice frequencies can be traced through in-

dividual telephone and telegraph carrier channels.

1-5. Description of Test Sets TS-190/U and TS-190A/U

TS-190/U and TS-190A/U consist of a single 1,000-ohm impedance telephone receiver mounted on a headband, with a flexible, 3-conductor test cord approximately 8½ feet long. Two of the conductors terminate in an

insulated test probe equipped with a test pick and a switch in the test probe handle for controlling the external resistance. The other conductor is terminated in a spring-socket chuck to which an alligator clip, a spade lug, or a short test prod may be inserted. A 50,000-ohm resistor is wired in series with one conductor connected to the telephone receiver. This resistor is normally in the circuit, but may be short circuited by depressing the switch. This external resistance protects the operator's ears against excessive clicks when testing for

potentials in dc circuits, and prevents loading a circuit when tracing ac signals.

1-6. Difference Between Models

The main difference between models is the method of mounting the 50,000-ohm external resistor. Some models of the TS-190/U have the resistor in the test probe, others have it mounted in an adapter which fits over the rear of the telephone receiver. The size of alligator clips and spade lugs varies on different order numbers.