

TECHNICAL MANUAL

**OPERATOR'S, ORGANIZATIONAL
DIRECT SUPPORT, AND GENERAL SUPPORT
MAINTENANCE MANUAL**

**SIGNAL GENERATOR
AN/USM-44B
(NSN 6625-00-176-5708)**

HEADQUARTERS, DEPARTMENT OF THE ARMY

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REPORTING OF ERRORS

You can improve this manual by recommending improvements using DA Form 2028-2 (Test) located in the back of the manual. Simply tear out the self addressed form, fill it out as shown on the sample, fold it where shown, and drop it in the mail. If there are no blank DA Form 2028-2 (Test) forms in the back of your manual, use the standard DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forward to the Commander, US Army Electronics Command, ATTN: DRSEL-MA-Q, Fort Monmouth, New Jersey 07703.

In either case a reply will be furnished direct to you.

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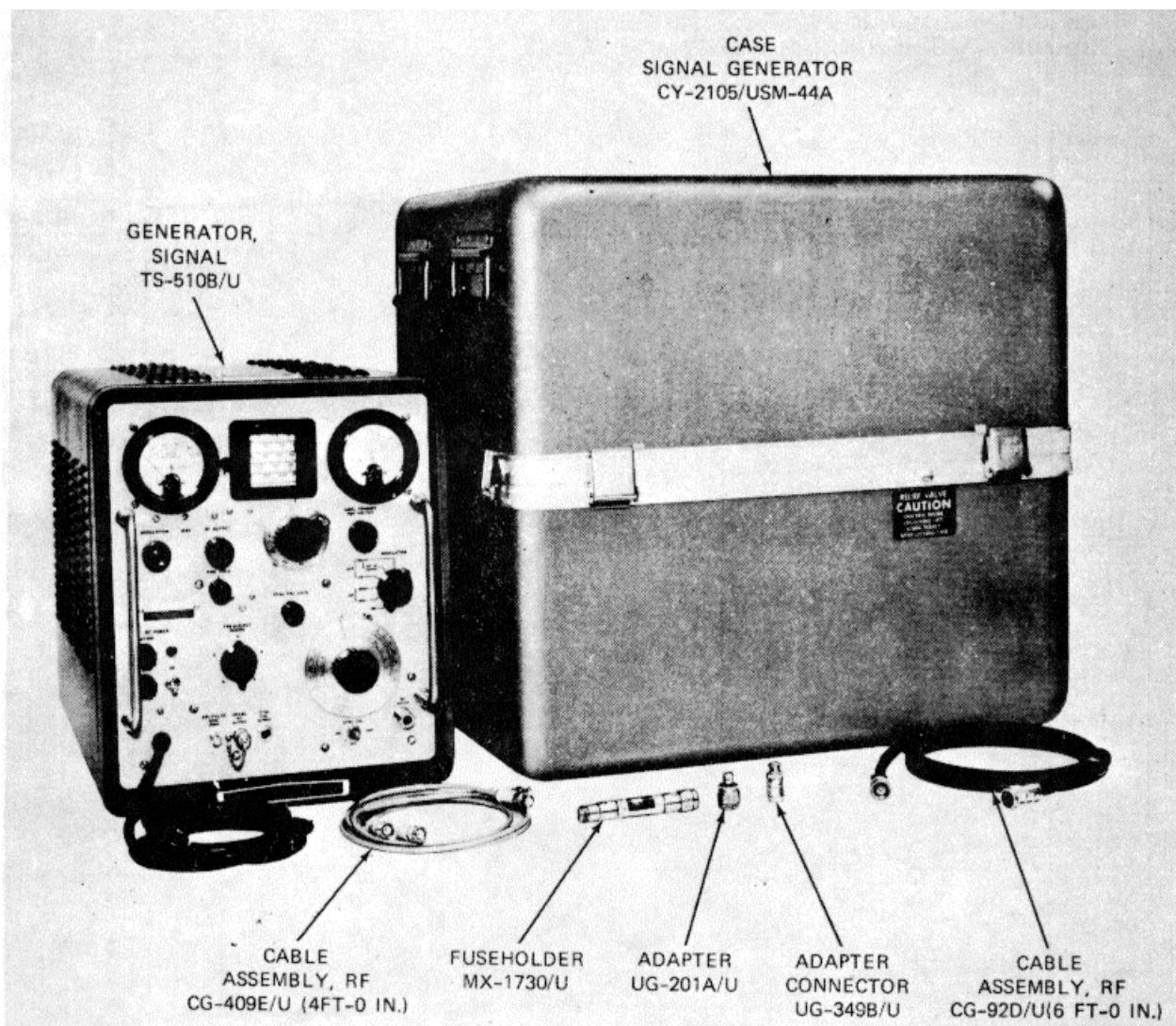
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Figure 1-1. Generator, Signal AN/USM-44B (less running spares)

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope.

- a. This manual describes Generator, Signal AN/USM-44B (fig. 1-1) and includes instructions for installation, operation, and operator, organization direct support, and general support maintenance.
- b. A list of references is contained in appendix A.
- c. The maintenance allocation chart (MAC appears in appendix B).

1-2. Indexes of Publications

- a. DA Pam 310-4. Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining the equipment.
- b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work order (MWO's) pertaining to the equipment.

1-3. Forms and Records

- a. *Reports of Maintenance and Unsatisfactory Equipment.* Maintenance forms, records, and report which are to be used by maintenance personnel at

Section II. DESCRIPTION AND DATA

1-6. Purpose and Use

The generator, Signal AN/USM-44B, comprised of Generator, Signal TS-510B/U and various adapters and cable assemblies, is a general-purpose, very high frequency (vhf) signal generator set that provides, radio frequency (rf) signals used to test, evaluate, and align radio receivers, filters, amplifiers, and similar electronic networks. The TS-510B/U provides continuous-wave (cw), amplitude-modulated (am), or pulse-modulated signals in the frequency range of 10 MHz to 480 MHz at calibrated output levels of 0.1 microvolt to 1.0 volt. A direct reading frequency dial is calibrated to an accuracy of 0.5 percent and internal crystal calibrator provides frequency check points at 1 MHz and 5 MHz intervals with an error of less than 0.01 percent. The TS-510B/U can be internally amplitude modulated at 400 Hz or 1000 Hz, externally amplitude modulated from 20 Hz to 20 kHz, and externally pulse modulated.

1-7. Description

Generator, Signal TS-510B/U (fig. 1-1) is the only major unit supplied as part of the AN/USM-44B. It is housed in a metal cabinet designed for mobile, bench-

maintenance levels are listed in and prescribed by TM 38-750.

b. *Report of Packaging and Handling Deficiencies.* Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 700-58/NAVSUPINST 4030.29/AFR71-13/MCO P4030.29A, and DSAR 4145.8.

c. *Discrepancy in Shipment Report (DISREP) (SF 361).* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33A/AFR75-18/MCO P4610.19B and DSAR 4500.15.

1-4. Administrative Storage

For procedures, forms and records, and inspections required during administrative storage of this equipment, refer to TM 740-90-1.

1-5. Destruction of Electronic Material

Demolition and destruction of electronic equipment will be under the direction of the commander and in accordance with TM 750-244-2.

Section II. DESCRIPTION AND DATA

top operation. The front panel is equipped with handles for easy moving. All connectors and operating controls are mounted on the front panel.

1-8. Description of Minor Components

The minor assemblies of AN/USM-44B are included in figure 1-1. Special functions of the minor assemblies are listed below.

a. *Fuseholder MX-1730/U.* The MX-1730/U fuseholder prevents accidental burnout of TS-510B/U attenuator during transceiver testing. It places a fuse element between the transceiver and the attenuator. Several watts of rf power could otherwise be applied to the output attenuator should the transceiver be accidentally switched to the transmit mode of operation. The MX-1730/U in no way limits the usable output of the TS-510B/U.

b. *Cable Assembly, RF CG-92D/U.* The CG-92D/U (6 ft-0 in.) cable has type N male connectors on both ends, and is used to connect the TS-510B/U rf-output to the equipment under test.

c. *Cable Assembly, RF CG-409E/U.* Two CG-409E/U (4 ft-0 in.) cables are terminated with male BNC connectors each end and are used to connect