

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

OPERATOR, ORGANIZATIONAL, DS, GS, AND
DEPOT MAINTENANCE MANUAL

SIGNAL GENERATORS

SG-71/FCC, SG-71A/FCC, SG-71B/FCC,
AND SG-71C/FCC

This copy is a reprint which includes
current pages from Changes 1 and 2.

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**OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT, GENERAL SUPPORT
AND DEPOT MAINTENANCE MANUAL**

SIGNAL GENERATORS

SG-71/FCC, SG-71A/FCC, SG-71B/FCC AND SG-71C/FCC

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*This manual supersedes TM 11 5088, 13 December 1954, including all changes.

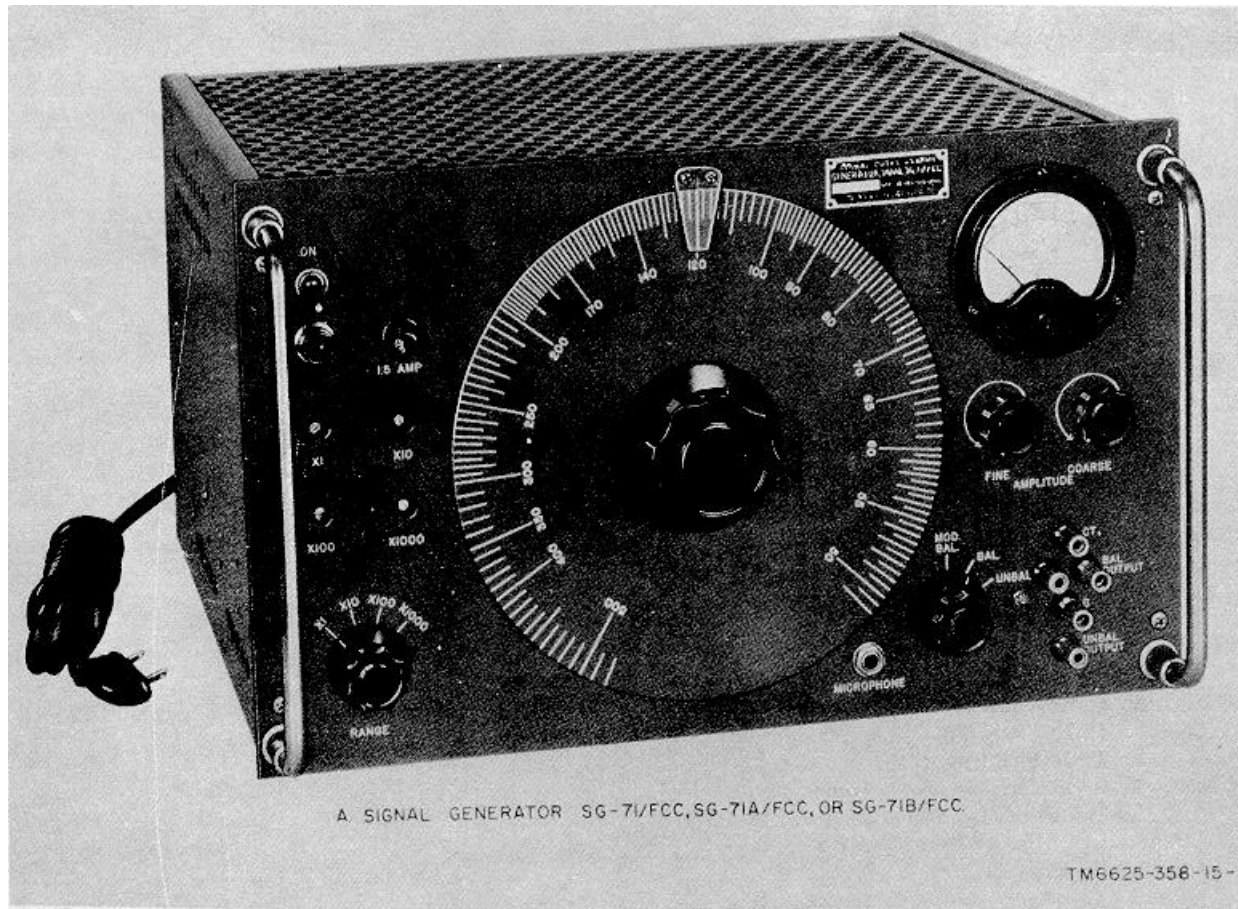


Figure 1-1. Signal Generators SG-71/FCC, SG-71A/FCC, and SG-71B/FCC.

CHAPTER 1

INTRODUCTION

Section I. GENERAL**1-1. Scope**

a. This manual describes Signal Generators SG-71/FCC, SG-71A/FCC, and 1-2) and covers their installation, operation, operator, organizational, General support, and depot maintenance. It includes operation under usual and unusual conditions, cleaning and inspection of the equipment, replacement of parts available to the operator and organizational repairman, and instructions appropriate to General support and depot maintenance categories for troubleshooting, testing, aligning, and repairing the equipment

b. Official nomenclature followed by (*) is used to indicate all models of the equipment item covered in this manual. Therefore, Signal Generator SG-71(*)/FCC represents Signal Generators SG-71/FCC, SG-71A/FCC, SG-71B/FCC, and SG-71C/FCC.

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 to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

1-3. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Maintenance forms, records, and reports which are to be used by maintenance personnel at all 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 (Report of Packaging and Handling Deficiencies) as prescribed in AR 700-58/NAVSUP PUB 378/AFR 714/MCO P4030.29, and DSAR 4145.8.

c. *Discrepancy in Shipment Report (DISREP) (SF 361).* Fill out and forward discrepancy in Shipment Report (DISREP) (SF361) as prescribed in AR 55-38/NAVSUPINST 4610.33/AFM 75-18/MCO P4610.19A, and DSAR 4500.15.

1-3.1. Reporting of Errors

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 Publications and Blank Forms) and forwarded direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-C, Fort Monmouth, NJ 07703.



Figure 1-2. Signal Generator SG-71C/FCC.

Section II. DESCRIPTION AND DATA

1-4. Purpose and Use

Signal Generator SG-71(*)/FCC, (fig. 1-1 and 1-2) is a portable test instrument which generates sine wave signals of medium power over the frequency range from 50 cycles per second (cps) to 500 kilocycles (kc) per second. It is used as a generator of test signals in measuring the bandwidth, attenuation, or amplification of telephone carrier systems. It is also used for service and development work, such as signal tracing, waveform analysis, distortion measurement, and acoustical tests, as well as for any other purpose served by oscillators operating in the audio, supersonic, and low radiofrequency ranges.

1-5. Technical Characteristics

Frequency range 50 cps to 500 kc, covered in four decade bands, X1, X10, X100, and X1000. Frequency dial calibrated on one scale from 5 to 500

Frequency stability ± 2 percent under normal room temperature variation warmup. Negligible frequency change with 10 percent line voltage variation.

Power output and rated load:

Balanced output 3 watts max (43 volts) into 600-ohm load from 5 to 500 kc. (Output is center-tapped and not grounded.)

Unbalanced output 6 volts max into 600-ohm load from 50 cps to 500 kc. (One side of output grounded.)

Frequency response:

Balanced output ± 1 db from 5 to 500 kc

Unbalanced output ± 1 db from 50 to 500 kc

Noise level Noise level in ea output channel is less than 0.1 percent of full output level

Distortion:

Balanced output Less than 1 percent at 1 watt into 600-ohm load from 10 to 100 kc; less than 3 percent at 3 watts