

TECHNICAL MANUAL

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

**SIGNAL GENERATORS
AN/URM-64 AND (NSN 6625-00-283-9621)
AND AN/URM-64A
(NSN 6625-00-553-0433)**

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WARNING

THIS EQUIPMENT EMPLOYS HIGH VOLTAGES WHICH ARE DANGEROUS AND MAY BE FATAL IF CONTACTED BY OPERATING PERSONNEL. EXTREME CAUTION SHOULD BE EXERCISED WHEN WORKING ON THE EQUIPMENT.



Figure 1-1. Signal Generator AN/URM-64

SECTION I

GENERAL DESCRIPTION

1. PURPOSE OF HANDBOOK.

The purpose of this handbook is to provide complete instructions for the operation maintenance, and repair of Signal Generator AN/URM44 and Signal Generator AN/URM-64A. The information contained in this handbook is applicable to all equipments manufactured under various contracts, as listed its section VI. Where essential differences exist between equipments, reference is made to the contract number and (if applicable) to the equipment serial numbers involved.

Note

Throughout this handbook, all references to Signal Generator TS-419/U also apply to Signal Generator TS419A/U, except where specifically noted.

2. PURPOSE OF EQUIPMENT.

Signal Generator TS-419/U is a portable, self-contained, directly calibrated generator of continuous-wave or pulse-modulated radio-frequency signals. It is used for providing an accurate signal source in testing the operation of radio and radar equipment operating in the band of frequencies from 900 to 2100 megacycles per second, and for receiver measurements and other applications that require less than one milliwatt of cw or pulsed type r-f signals in this band of frequencies.

3. GENERAL PRINCIPLES OF OPERATION.

Signal Generator TS419/U consists of four major circuits: an r-f oscillator, modulator and synchronizer, output system, and power supply. The r-f oscillator is keyed by the modulator and synchronizer to produce the desired type of output signal. The modulator may be operated independent of external synchronizing signals or may be synchronized either with positive or negative pulses, or with sine waves from an external source. An external source of positive or negative modulation can be applied to the modulator. The output system is used to establish and indicate the amount of r-f power output from the equipment. The power supply provides plate and filament power for the modulator and oscillator.

4. EQUIPMENT SUPPLIED.

See table 1-1 (figures 1-1 and 1-3) for equipment supplied with Signal Generator TS-419/U. See table 1-4 (figures 1-2 and 1-4) for equipment supplied with Signal Generator TS-419A/U.

5. EQUIPMENT REQUIRED BUT NOT SUPPLIED.

No equipment other than that listed in table 1-1 is required for operation of Signal Generator TS-419/U.

Table 1-1. AN/URM-64 EQUIPMENT SUPPLIED

Quantity Per Equipment	Name of Unit	Army-Navy Type Designation	Overall Dimensions (Inches)			Weight (Pounds)	Numerical Series of Reference Symbols
			Length or Depth	Width or Diameter	Height		
Major Unit							
1	Signal Generator	TS-419/U	14	17-3/8	10-7/8	43	101-299
Accessories							
1	Transit case	CY-686/U	13-1/2	21-1/16	16-1/2	18.0	A-108
*1	Transit case	CY-686A/U	13-1/2	21-1/16	16-1/2	26.5	A-108
1	Power cable	CX-337/U	72	1-1/2	—	0.75	W-101
1	R-f cable	CG-546/U	72	27/64	—	0.25	W-102
†2	Video cable	CG-409/U	72	27/64	—	0.25	W-103—W-104
3	Adapter	UG-255/U	1-5/8	3/4	—	0.06	E-166—E-168
3	Adapter	UG-201/U	1-9/16	3/4	—	0.06	E-169—E-171
3	Adapter	UG-273/U	1-5/8	3/4	—	0.06	E-172—E-174
3	Lamp		1-3/32	3/8	—	0.02	I-103—I-105
‡3	Fuse		1-1/4	1/4	—	0.02	F-105—F-107
§5	Fuse		1-1/4	1/4	—	0.02	F-105—F-109
1	Bead thermistor		1-1/8	5/32	—	0.02	TH-104

* Transit Case CY-686/U and Transit Case CY-686A/U are alternates.

† For Contracts NOa(s)-12279, N383s-75748, and N383s-77651. Length of cable is 96 inches, weight 0.35 pound.

‡ For Contracts N383s-5019A, NOa(s)-9748, N383s-45741, and N383s-67816. Quantity does not include spare fuses located on front panel.

§ For Contracts N383s-60879 and N383s-61060. Quantity does not include spare fuses located on front panel.