

# TM 11-5556

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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## SIGNAL GENERATOR SG-13/ARN



DEPARTMENT OF THE ARMY • SEPTEMBER 1956

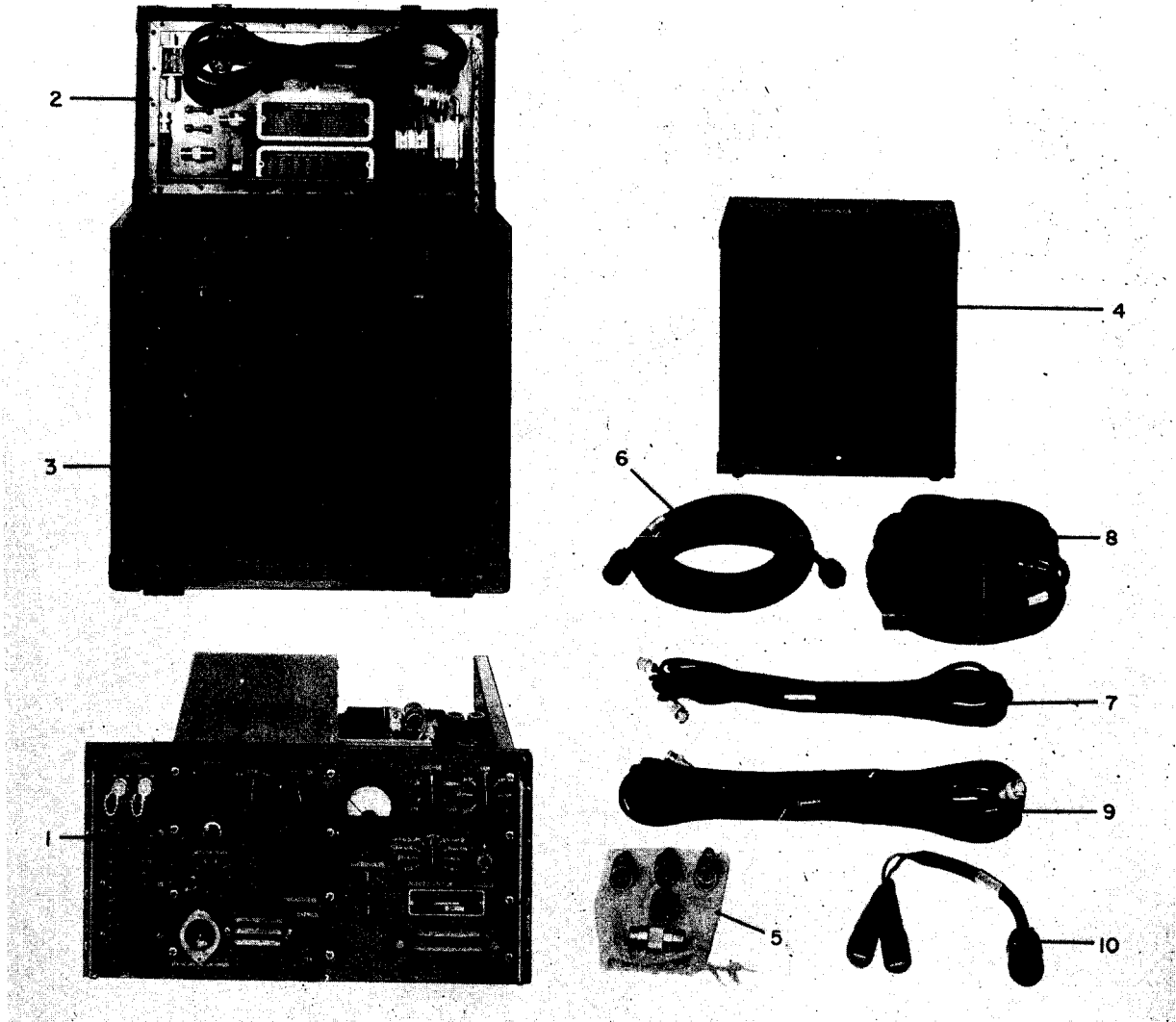
# S I G N A L      G E N E R A T O R      S G - 1 3 / A R N

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- 1 Signal Generator SG-13/ARN
- 2 Carrying case cover (See Figure 1-2)
- 3 Signal generator carrying case
- 4 Accessory Case CY-868/U
- 5 Adapter UG-29/U and four Adapters UG-201/U
- 6 Power Cable Assembly CX-1506/U (25 ft)
- 7 R-F Transmission Line CG-409A/U (25 ft)
- 8 Power Cable Assembly CX-1506/U (50 ft)
- 9 R-F Transmission Line CG-409A/U (50 ft)
- 10 Power Adapter CX-2489/U

Figure 1-1. Signal Generator SG-13/ARN

SECTION I  
DESCRIPTION AND LEADING PARTICULARS

1-1. INTRODUCTION.

1-2. This handbook contains the theory of operation and maintenance of Signal Generator SC-13/ARN (figure 1-1).

1-3. PURPOSE.

1-4. The signal generator is a portable test instrument for ramp testing of aircraft navigation, localizer and glide slope receivers.

1-5. EQUIPMENT SUPPLIED.

(See figures 1-1 and 1-2.)

1-6. The signal generator is supplied in two cases. Case 1 contains all equipment necessary for operation within 10 feet of the receiver under test and the power source. Case 2 contains additional equipment necessary for operation within 85 feet of the receiver under test and the power source. Table I lists all equipment supplied as part of Signal Generator SG-13/ARN.

TABLE I. EQUIPMENT SUPPLIED

| QUANTITY | NAME                          | GOVERNMENT TYPE DESIGNATION |
|----------|-------------------------------|-----------------------------|
| CASE 1   |                               |                             |
| 1        | Signal Generator              | SG-13/ARN                   |
| 1        | Antenna                       | AT-170/ARN                  |
| 1        | Power Cable Assembly (10 ft)  | CX-1095/U                   |
| 1        | R-F Transmission Line (10 ft) | CG-409A/U                   |
| 1        | Adapter                       | UG-201/U                    |
| 1        | Adapter                       | UG-29/U,                    |
| 1        | Adapter (impedance matching)  | UG-529/U                    |
| 2        | Fuse                          | 3AG                         |
| 1        | Bristol Wrench #10            |                             |
| 1        | Bristol Wrench #8             |                             |
| 1        | Bristol Wrench #6             |                             |
| 1        | Bristol Wrench #4             |                             |
| 1        | Phillips Screwdriver #2       |                             |
| 1        | Phillips Screwdriver #1       |                             |
| CASE 2   |                               |                             |
| 1        | Accessory Case                | CY-868/U                    |
| 1        | Power Cable Assembly (25 ft)  | CX-1506/U                   |
| 1        | Power Cable Assembly (50 ft)  | CX-1506/U                   |
| 1        | Power Adapter                 | CX-2489/U                   |
| 1        | R-F Transmission Line (25 ft) | CG-409A/U                   |
| 1        | R-F Transmission Line (50 ft) | CG-409A/U                   |
| 1        | Adapter                       | UG-29/U                     |
| 4        | Adapter                       | UG-201/U                    |

1-7. DESCRIPTION.

1-8. SIGNAL GENERATOR. The signal generator (figure 1-3) is mounted in a combination case having a waterproof snap-on cover (figure 1-2) that contains all accessories necessary for operation within 10 feet of the equipment under test. The signal generator is divided into two sections that have a common front panel.

a. The r-f section contains all the circuits necessary to produce the required r-f signals. It comprises a shielded r-f chassis, (2, figure 1-3) for producing r-f signals in 280 channels spaced at 100 kc

intervals in the range of 108.0 to 135.9 megacycles and a shielded univertter chassis (1, figure 1-3) for producing r-f signals spaced at 100 kc intervals in the range of 329.3 to 335.0 megacycles for glide slope testing. The r-f chassis also contains a piston type attenuator allowing the r-f output to be varied from 4 to 200,000 microvolt.

b. The audio section (3, figure 1-3) contains all the circuits necessary to produce the required audio signals for modulating the r-f carrier and the power supply for the signal generator. An audio selector switch is used to select the type of modulating signal desired.