



AN/TRC-12

Figure 28. Radio Relay Set AN/TRC-12, showing Radio Receivers R-48/TRC-8 and Radio Transmitters T-30/TRC-8.

Status: Substitute standard. *Stock No.:* 2S5002-121. *Reference:* TM 11-618.

Radio Relay Set AN/TRC-12 consists of three Radio Receivers R-48/TRC-8 (two in use, one spare), three Radio Transmitters T-30/TRC-8 (two in use, one spare); four Antenna Assemblies AS-52/TRC-8, four Antenna Supports AB-48/TRC-8, three Power Units PE-75 (two in use, one spare), and sufficient spare parts for maintenance.

This equipment is intended for operation as a *relay station* of a single-channel or multichannel radio relay communication system when continuous operation is important.

Running spares and maintenance equipment have been selected to insure uninterrupted service in case of failure of a basic component.

Radio Relay Set AN/TRC-12 can be installed in 2 hours by four men.

Note. A complete radio relay system requires a Radio Terminal Set AN/TRC-11 at both ends, and from one to seven Radio Relay Sets AN/TRC-12 between them.

TECHNICAL CHARACTERISTICS

FREQUENCY RANGE: 230 to 250 mc.
NUMBER OF CRYSTALS: None.
PRESET FREQUENCIES: None.
ANTENNA: Four Antenna Assemblies AS-52/TRC-8.
 Half-wave dipole with 90° corner reflector, supported by 40-ft sectional mast. Antenna beam width, 80°.
TYPE MODULATION: Receiver: frequency ±100 kc deviation. Transmitter: frequency ±100 kc deviation (100 percent modulation).
FREQUENCY CONTROL: Tunable resonant line.
POWER SOURCE: Power Unit PE-75, or commercial power 120-v, 60-cyc.
POWER OUTPUT: 12 w.
RANGE: 25 to 100 mi, line of sight.
NUMBER OF TUBES: 23.

GENERAL APPLICATION

USE: To provide four-channel carrier telephone and telegraph carrier service or single-channel point-to-point radio relay service. Used to extend wire lines where speed of movement prohibits line construction, and to bridge water gaps.

TO COMMUNICATE WITH: Radio Set AN/TRC-8, Radio Terminal Set AN/TRC-11, and Radio Relay Set AN/TRC-12.
INSTALLATION: Transported by truck or trailer. Installed and operated as fixed field station.
TYPE OF SIGNAL: Voice or multichannel telephone, telegraph or facsimile, f-m.

PRINCIPAL COMPONENTS

<i>Name</i>	<i>Dimensions (in.)</i>	<i>Weight (lb)</i>
2 Radio Receivers R-48/TRC-8, cased with tools and operating components	23 x 16 x 19	126
2 Radio Transmitters T-30/TRC-8, cased with Power Pack PP-215/TRC-8	17½ x 16 x 24½	135
4 Antenna Assemblies AS-52/TRC-8, cased	33½ x 14 x 24	110
2 Power Units PE-75.....	36 x 19 x 27	325

WEIGHT AND VOLUME

	<i>Domestic pack</i>
Total weight (lb).....	3,150
Total volume (cu ft).....	101
Ship tons	2,525