

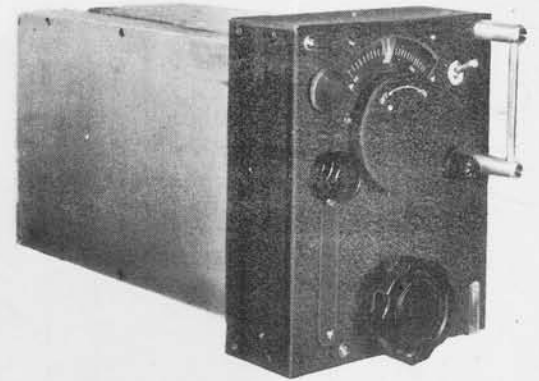
Radio Receiving Equipment AN/APR-4 is an airborne search receiver used to intercept enemy radar and communications signals in the 40 to 4000 mc. range, which includes the frequencies of all of the presently known enemy radar systems and many enemy communications channels. The equipment provides necessary information to determine effective countermeasures.

The set is an improved version of the SCR-587, comprises an assembly of three replaceable sub-assemblies; an r-f tuning unit; an i-f amplifier unit and a power supply. Two types of motor driven tuning units, with or without an adjustable sector sweep are available for the 40 to 1000 mc. range. These may also be tuned manually with a single dial control. Tuning Unit TU-59-A covering the 1000 to 3800 mc. frequency range is manually tuned with a two dial control. The i-f amplifier has controls for gain, automatic volume control and wide or narrow bandwidth operation. The set is designed for operation from an 80/115 volt, 60-2800 c.p.s., a.c. source and provides output for headphones, panoramic adapter and an analyzer.

The sensitivity of the set is such that it will receive signals from a much greater distance than that at which the radars it is searching will detect the plane in which it is installed. The accuracy of the frequency calibration is approximately 1% throughout its frequency range. In operation, search is conducted with the i-f adjustment set to wide band, about 4 mc. When an enemy signal is detected the i-f unit is switched to narrow band, about 0.5 mc., for greater signal discrimination. The detected signal can then be analyzed by means of Pulse Analyzer AN/APA-6, or AN/APA-11.

Test Equipments used in the maintenance and tuning of this equipment include Test Oscillator TS-47/APR, Signal Generators, Navy type LAE, LAF and LAG, General Radio Type 804C Signal Generator, Hickok type 110 Voltmeter and Test Set I-56-K.

Army Supply Program requirements as of 1 November 1944 were 1,580 for the calendar year and 1,017 for 1945.



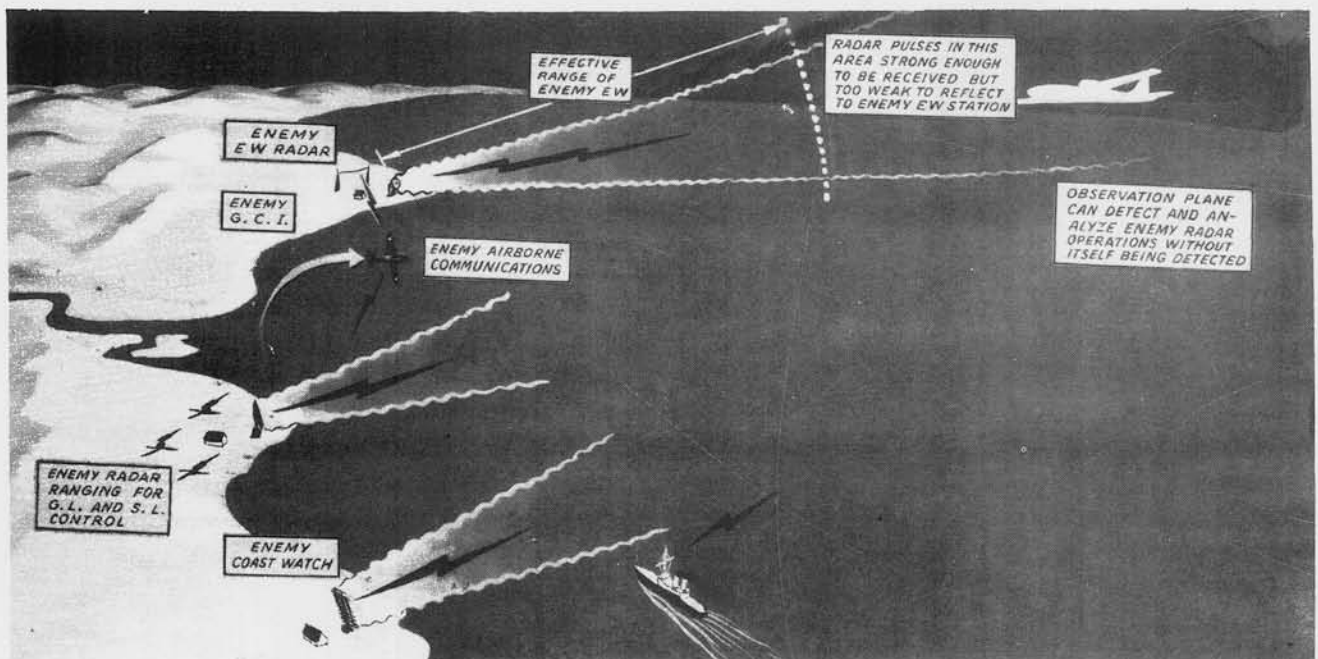
Tuning Unit TN-18/APR-4

POWER INPUT	110 WATTS A.C.
	10 WATTS D.C.
FREQUENCY RANGE	40 TO 4000 M.C.
TYPE OF SIGNAL	CW, MCW, RADAR PULSE
SENSITIVITY	50-100 MICRO-VOLTS
DIAL ACCURACY	± 1%

TUBE COMPLEMENT			
a. 1	6AC7	c. 2	955
1	6H6	d. 1	955
1	6AG7	*1	IN21B
2	5Y3GT	e. 1	703A
b. 2	9002	1	6E5
1	6AK5	f. 1	703A or 446A
		* 2	IN21B

*Crystals

- a. R-54/APR-4, b. TN-16/APR, c. TN-17/APR, d. TN-18/APR, e. TN-19/APR, f. TN-54/APR.



This equipment determines frequency and function of enemy detection and ranging radar over all known and probable enemy frequencies being used.



Antenna
AT-38/APT



Antenna
AT-49/APT

RADIO RECEIVING EQUIPMENT -AN/APR-4 TOTAL WEIGHT 100 LBS.

Component	Nomenclature	Size	Weight
Receiver	R-54/APR-4	8" x 10 1/4" x 21 3/4"	29 Lbs.
Tuning Unit	TN-16/APR-4	8" x 6 1/2" x 14 "	12 3/4 Lbs.
Tuning Unit	TN-17/APR-4	8" x 6 1/2" x 14 "	12 3/4 Lbs.
Tuning Unit	TN-18/APR-4	8" x 6 1/2" x 14 "	12 3/4 Lbs.
Tuning Unit	TN-19/APR-4	8" x 6 1/2" x 14 "	12 3/4 Lbs.
Tuning Unit	TN-54/APR-4	8" x 6 1/2" x 14 "	12 3/4 Lbs.
Antenna Stub	AT-38/APT	29" long	3 Lbs.
Antenna Cover	CW-33/APR-4	8 1/2" x 8 1/2" x 30"	2 Lbs.
Switching Assembly	AS-23/APR-4	3" diam.	
Case (3 required)	CY-31/APR	10 1/2" x 7 3/4" x 6 1/2"	7 Lbs.
Mounting Base	MT-171/U	2 1/4" x 10 5/8" x 22"	3 Lbs.
Antenna Assembly	AT-49/APT	7 1/2" x 8" diameter	3 Lbs.
and includes plugs and cable adapter.			