

Radio Set AN/ARQ-7 (Spotkie) is an airborne frequency setting jammer for use against German fighter control (CGI) operators in the frequency range of 38.6 to 43.2 mc. This equipment consists of a receiver and jamming transmitter so designed that the operation of tuning a victim signal to zero-beat on the receiver automatically sets the transmitter on the exact jamming frequency. Jamming is effected by throwing a switch from receive to jam.

A single manual control simultaneously varies the frequency of the receiver and transmitter. A two-position switch, labeled receive-transmit, applies plate voltage to either the receiver section or the transmitter and noise generator sections. The transmitter is straight forward in design; parallel 807 tubes are employed in the final stage to produce a noise modulated output of approximately 50 watts. The noise source is a gas tube.

The modulated signal is approximately 10 kc. in width. A three-wire fan antenna, or other broad-band antenna may be used.

Use of Radio Set AN/ARQ-7 prevents enemy radio directed fighters from intercepting our bombers and prevents the fighters organizing a concerted attack after locating our bombers. Amplifier AM-33/ART can be used to increase the range of this set with some reduced ease of operation.

Power is obtained from 80/115 volt, 400 to 2600 c.p.s., a.c. source and a 28 volt d.c. source. The power input of 500 watts produces an output of 50 watts over the frequency range of the set. Random noise modu-

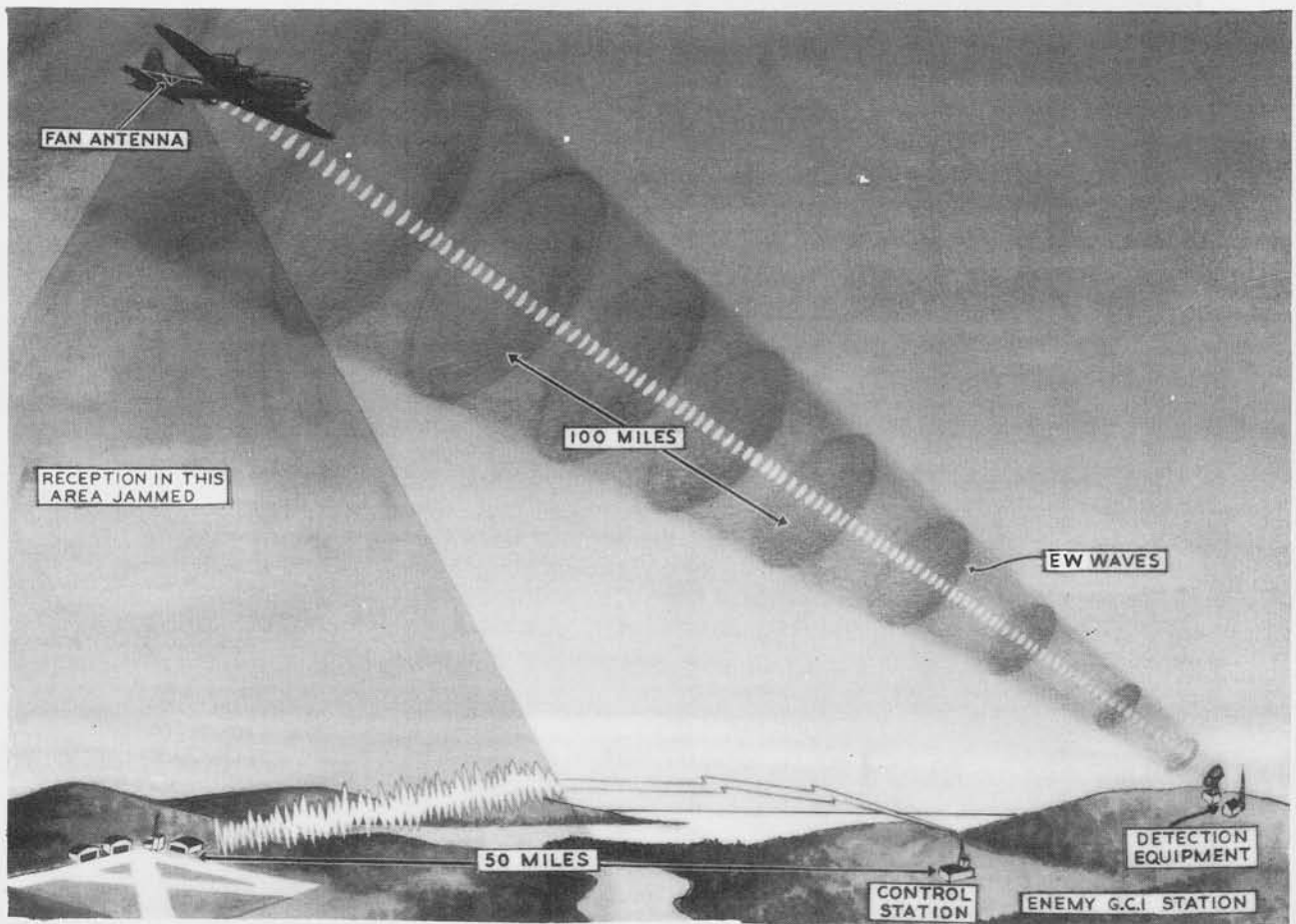
lation with a 10 kc. band width is used to jam enemy signals. Sensitivity of the receiver is 50 microvolts.

Army Supply Program requirements as of 1 Sept. 1944 were 360 for the calendar year 1944 and 1037 for 1945.

Test equipment used in maintenance of Radio Set AN/ARQ-7 includes Radio Frequency Wattmeter TS-118/AP, Signal Generator I-72, General Radio Signal Generator type 804-C and Hickok Voltmeter type 110.

POWER INPUT	400 WATTS A.C. & 100 WATTS D.C.
POWER OUTPUT	50 WATTS
FREQUENCY RANGE	38.6-43.2 MC.
SENSITIVITY	50 MICROVOLTS

TUBE COMPLEMENT			
NO.	TYPE	NO.	TYPE
2	807	2	6AC7
2	6V6GT/G	1	12SQ7
1	5R4GY	1	884
1	5U4G	1	6AG7
2	12SA7	2	6SK7
2	12SJ7	1	12SN7

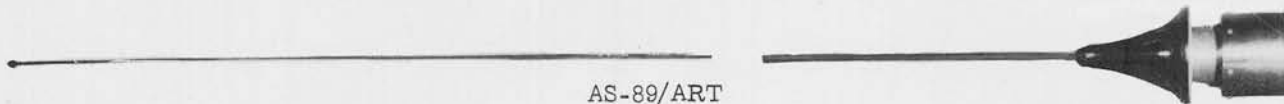


UNCLASSIFIED

Radio Set AN/ARQ-7 prevents enemy radio directed fighters from intercepting our bombers and prevents the fighters organizing a concerted attack after locating our bombers.



Receiver-Transmitter RT-49/ARQ-7



AS-89/ART

RADIO SET AN/ARQ-7

TOTAL WEIGHT 63 LBS.

Component	Nomenclature	Size	Weight
Receiver-Transmitter	RT-49/ARQ-7	7 5/8" x 10 1/8" x 21 3/4"	47 Lb.
Mounting Base	MT-171/U	2 1/4" x 10 1/4" x 22 "	3 1/4 Lb.
Antenna System	AS-89/ART	5" x 3 1/2" Dia.	5 Lb.

and includes plugs, adapters and cables