

Radio Set AN/ARQ-1 is an airborne, low frequency, direct-noise-amplified jamming set, operating in the 14 to 50 mc. frequency range, with approximately 20 watts of noise-modulated output.

The band width of the noise signal varies from 200 to 250 kc., depending on the operating frequency. The equipment consists essentially of a band-pass TRF amplification of a noise signal produced by a type 931A photo-multiplier tube. When receiving, the same amplifier is connected to the antenna, and the output fed to a detector and audio amplifier. In this manner, the transmitter is automatically tuned to the same frequency as the receiver.

Radio Set AN/ARQ-1 is smaller, lighter, simpler in operation and extends to a lower minimum frequency than the Dina and Dina Mate. Self-monitoring is provided, permitting search and jamming to be accomplished in a single equipment.

The equipment will have application in both the European and Pacific theaters in coping with airborne VHF, air-to-ground communication, navigation, and possibly ground communication links where desirable.

Power requirements consist of an input of 300 watts from an a.c. power source of 80-115 volts, 400-2600 c.p.s., and an input of 14 watts from a d.c. power source of 28 volts. Sensitivity of the set is 150 microvolts.

Army Supply Program requirements as of 30 April 1944 were 1,000 equipments for the calendar year 1944.



Fan Antenna for Radio Set AN/ARQ-1 is installed on B-17.

POWER INPUT	300 WATTS A.C.; 14 WATTS D.C.
POWER OUTPUT	20 WATTS (All sideband)
FREQUENCY RANGE	14-50 M.C.
SENSITIVITY	150 MICROVOLTS
OUTPUT BAND WIDTH	25 KC AT 14 MC TO 150 KC AT 50 MC

TUBE COMPLEMENT			
NO.	TYPE	NO.	TYPE
3	6SG7	1	931A
1	6AG7	1	2X2
1	807	1	5R4GY
1	6SJ7	1	5Y3GT
1	6J5		



Receiver-Transmitter RT-45/ARQ-1

## RADIO SET AN/ARQ-1

TOTAL WEIGHT 55 LBS.

Component	Nomenclature	Size	Weight
Receiver - Transmitter	RT-45()/ARQ-1	7 5/8" x 10 1/8" x 21 3/4"	40 Lb.
Mounting Base	MT-171/U	2 1/4" x 10 5/8" x 22 "	3 1/4 Lb.
Antenna System	AS-89/ART	72" x 1/2" Dia.	3 1/4 Lb.
Antenna Base	AB-29/ART (2 each)	6" x 7" Dia.	6 Lb.
Antenna	AS-97/ART	54" x 1/2" Dia.	3 1/4 Lb.

and includes plugs, adapters and cables

1 Dec. 1944