

STATUS: Substitute Standard  
 CLASSIFICATION OF EQUIPMENT: Restricted  
 USING SERVICE: Air Force  
 DATE OF THIS SHEET: 7 Jun 52

**AN/ARC-21**

RADIO SET



Radio Set AN/ARC-21 and AN/ARC-21X are normally used in aircraft for air-to-ground and air-to-air communication and are designed primarily for long range aircraft communication at high altitudes. The transmitter and receiver are in a pressurized container to insure full power output at altitudes up to 50,000 feet.

This equipment operates on any 20 preset channels spaced 500 kc apart in the frequency range 2 to 24 mc.

The transmitter normally operates on cw or voice; when operated with Radio Teletypewriter TT-30/AGA-1 (and ancillary equipment) frequency shift keying is provided.

When operated with Antenna Coupler CU-145/ARC-21, it will load into a fixed wire or flush-mounted aircraft antenna.

Remote control is provided by means of Radio Set Control C-451/ARC-21.

Power supplies are available for operation from 115 v, ac at 380-1000 cyc or 27.5 v, dc.

These sets are substantially the same except that AN/ARC-21X has a 115-v, ac, 380-1,000 cyc Power Supply PP-298/ARC-21 instead of dc Dynamotor Assembly DY-50/ARC-21 used by the AN/ARC-21.

<b>AN/ARC-21</b>	INSTRUCTION LITERATURE: Not Available
	CLASSIFICATION OF EQUIPMENT: Restricted
RADIO SET	USING SERVICE: Air Force
	DATE OF THIS SHEET: 7 Jun 52

**MAJOR COMPONENTS**

QUANT	NAME OF COMPONENT	DIMENSIONS (IN) INSTALLED	WEIGHT (LBS)
1	Radio Receiver-Transmitter RT-128/ARC-21	18 x 18 x 26-1/2	128.00
1*	Dynamotor DY-50/ARC-21	7 x 8-1/2 x 14	31.25
1**	Power Supply PP-298/ARC-21	7 x 9 x 14	25.75
1	Radio Set Control C-451/ARC-21	7 x 6 x 5	5.25
1	Power Supply PP-297/ARC-21	17-1/2 x 10-1/2 x 20-1/2	27.75

\* Supplied with AN/ARC-21.      \*\* Supplied with AN/ARC-21X.

**OPERATIONAL CHARACTERISTICS**

**TACTICAL USE:** Normally issued to light, medium, heavy bombers and cargo aircraft.

**INSTALLATION:** Aircraft, shock mounted in pressurized container.

**APPROXIMATE RANGE (IN MILES):** (Nominal) Long.

**CAN COMMUNICATE WITH:** AN/ARC-2, -5, -8, -9, -21, -25, -26; AN/ARR-15; AN/ART-13; AN/CRT-3; AN/FRC-10; AN/FRR-3, -4, -7, -12, -28, -32; AN/FRT-5, -6, -15, -17, -18; AN/GRC-9, -13, -26; AN/GRR-2, -3, -5; AN/MRC-2, -6, -16, -20, -22; AN/PRC-7; AN/SRR-3, -8, -12, -13; AN/SRT-4; AN/TRQ-1; AN/URR-10, -22, -23; AN/URT-2, -3, -4; AN/VRC-1, -4; AN/VRR-2; BC-191, -312, -339, -342, -348, -401, -447, -610, -779, -794, -1004; MBS; MQ; OA-58/FRC, -59/FRC, -60A/FRT, -60B/FRT; R-62/PR, -80/PR, -96/SR, -129/U, -203/SR, -205/U, -206/PR, -208/FR, -209/FR, -210/U, -211/U, -213/SR, -274/FRR, -320/FRC, -388/URR; RAL; RAO; RAS; RBB; RBG; RBH; RBM; RBO; RBP; RBS; RC-52; RCF; RCG; RCH; RDE; RDM; REA; SCR-177, -188, -193, -244, -274, 281, -399, -499, -506, -536, -543, -585, -593, -607, -694, -704; T-4/FRC, -83/SR, -158/FRT, -159/FRT, -172/FR, -173/FR, -174/FR, -175/FR, -177/FR, -180/FR; TBA; TBC; TBK; TBL; TBM; TBN; TBO; TBU; TBX; TCB; TCC; TCE; TCH; TCK; TCP; TCS; TCZ; TDE; TDF; TDH; TDN; TDO; TEB; TEC; TEF; AR-98 (RCA); Collins 18S-4 (AF Model); Collins 32V-2, 75A-2; Fisher TS 25-3; Hammarlund SP-600-JX; Marconi TH-41-B; National HRO-50; Westinghouse Type MW; Wilcox 96D, 99A.

**TECHNICAL CHARACTERISTICS**

**FREQUENCY RANGE IN MEGACYCLES:** 44,000 channels spaced 0.5mc apart in the frequency range 2 - 24.

Crystal control is provided for any one of 20 preset channels.

**TYPE MODULATION:** Am.

**TYPE OF SIGNAL:** Cw, voice and frequency shift keying.

**POWER OUTPUT:** Transmitter: 100 w (Nominal).  
Receiver: 900 mw into 200 ohm impedance.

**POWER REQUIREMENTS:** DY-50/ARC-21: 1050 w, 27.5v, (60 amp) dc.  
PP-298/ARC-21: 1650 w, 115 v, 380-1000 cyc, 1 phase, ac.  
PP-297/ARC-21: 1680 w, 115 v, 60 cyc, 1 phase, ac.

**PHYSICAL CHARACTERISTICS**

Radio Set AN/ARC 21 measures 56 x 52 x 26-1/2 inches, net weight 218 pounds, volume 6.2 cu ft.  
Packed for either domestic or export shipment: total weight 250.7 pounds, total volume 6.8 cu ft.  
Shipped in 4 packages.