

STATUS: Substitute Standard

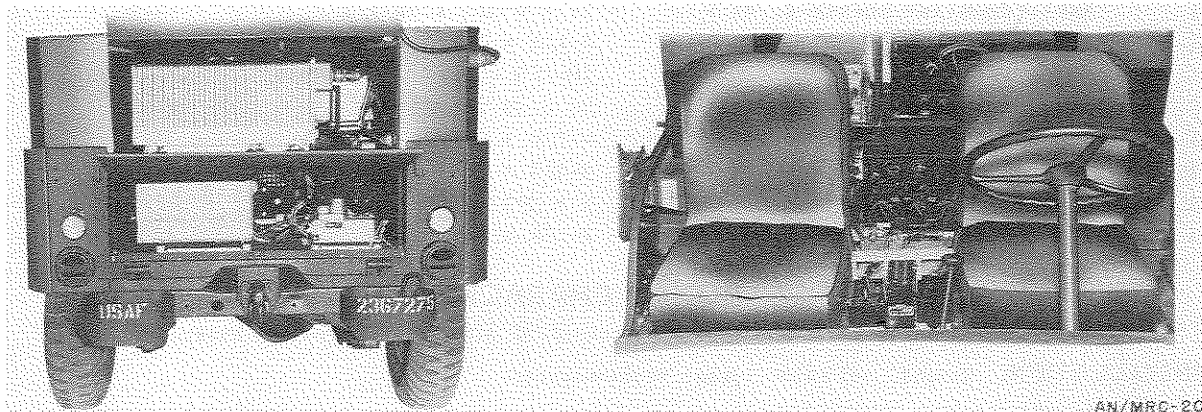
CLASSIFICATION OF EQUIPMENT: Restricted

USING SERVICE: Air Force

DATE OF THIS SHEET: 10 Jun 52

AN/MRC-20

RADIO SET



Radio Set AN/MRC-20 is a ground, mobile, two-way voice and tone-modulated communication equipment which operates over one of 11 preset (auto-tuned) channels in the 200 to 500 kc, and 2 to 18 mc range.

It provides eight crystal-controlled, preset channels in the 100 to 156 mc range, and any one of 18 preset, crystal-controlled frequency channels (from 1,750 available) spaced 100 kc apart in the 225 to 399.9 mc range.

All equipment, including power supply and antennas, is normally mounted in a 1/4-ton command reconnaissance vehicle (jeep). Facilities are provided for remote operation up to 1/2-mile.

Equipment consists of two radio transmitters, two radio receivers, and a radio receiver-transmitter plus associated accessory components.

Three antennas supplied are h-f antenna, 18 foot whip-type, u-h-f Antenna AT-208/URC-5 with mast, and a v-h-f antenna and mast.

Power is supplied by Power Unit PE-246. Power required is 1,700 w of 28.5 v dc. For emergency use, a 28-v, 35-amp hour storage battery will operate the equipment for approximately 30 minutes under normal conditions.

<h1>AN/MRC-20</h1>	INSTRUCTION LITERATURE: Not Available
	CLASSIFICATION OF EQUIPMENT: Restricted USING SERVICE : Air Force DATE OF THIS SHEET : 10 Jun 52

RADIO SET

MAJOR COMPONENTS

QUANT	NAME OF COMPONENT	DIMENSIONS (IN) INSTALLED	WEIGHT (LBS)
1	Radio Transmitter T-47A/ART-13	23-1/2 x 11-1/2 x 14-1/2	103.6
1	Radio Receiver-Transmitter RT-178/ARC-27	12-3/8 x 11-1/4 x 27-7/8	71.0
1	Radio Transmitter T-67/ARC-3	12-1/4 x 7-1/2 x 15	17.5
1	Radio Receiver R-77/ARC-3	11 x 6 x 15-1/2	17.0
1	Radio Receiver BC-348-Q, or R	18 x 9-1/2 x 10-1/2	41.0
2	Remote Control RC-261	4-1/4 x 4-1/4 x 8-1/2	21.0
1	Power Unit PE-246	16-7/8 x 20-1/2 x 24-3/8	113.0
3	Antenna Groups (HF, VHF, UHF)	30 x 18 (Approx.)	25.0
1	Radio Set Control C-626/ARC-27	6-3/8 x 9-9/16 x 5-1/4	11.2
1	Radio Set Control C-628/ARC-27	3-1/4 x 8-1/2 x 3	1.3
1	Control Unit C-87/ART-13	8 x 3-1/2 x 3-3/8	2.1
1	Control Box C-118/ARC-3	2-5/8 x 6 x 6-7/8	2.1

OPERATIONAL CHARACTERISTICS

TACTICAL USE: Used for ground support and control of aircraft at advanced bases.

INSTALLATION: Ground, vehicular (jeep) shock-mounted.

APPROXIMATE RANGE (IN MILES): Line of sight.

CAN COMMUNICATE WITH: AN/ARC-1, -2, -3, -5, -8, -9, -12, -18, -19, -21, -25, -27, -28, -30, -33, -34, -36; AN/ARR-15; AN/ART-13; AN/CRC-2; AN/CRT-3, -5; AN/FRC-7, -10; AN/FRR-3, -4, -7, -12, -28; AN/FRT-5, -6, -10, -15, -17, -18, -19; AN/GRC-9, -13, -16, -26, -27, -29, -30, -32; AN/GRR-2, -3, -5, -7; AN/GRT-2, -3; AN/MRC-2, -6, -12, -16, -20, -22; AN/PRC-7, -14, -17, -19, -20; AN/SRC-3; AN/SRR-3, -9, -11, -12, -13; AN/SRT-1, -3, -4; AN/TRC-7, -32; AN/TRQ-1; AN/URC-4; AN/URR-9, -10, -13, -21, -22, -23; AN/URT-2, -3, -4, -7, -10; AN/VRC-1, -4; AN/VRR-2; BC-191, -312, -329, -339, -342, -348, -365, -401, -447, -453, -610, -639, -640-D, -779, -787, -794, -1004; MAR; MAW; MAY; MBS; MQ; OA-58/FRC, -59/FRC, -60A/FRT, -60B/FRT; R-62/PR, -80/PR, -96/SR, -129/U, -137/GR, -203/SR, -205/U, -206/PR, -208/FR, -209/FR, -210/U, -211/U, -212/SR, -213/SR, -215/SR, -247/URR, -274/FRR, -278/GR, -320/FRC, -388/URR; RAK; RAL; RAO; RAS; RBA; RBB; RBC; RBG; RBH; RBK; RBL; RBM; RBO; RBP; RBQ; RBS; RC-52, -103-D, -256-C, -257-C; RCF; RCG; RCH; RCK; RCO; RDE; RDF; RDM; RDR; RDZ; REA; SCR-177, -188, -193, -244, -274, -281, -399, -499, -506, -522, -536, -542, -543, -573-A, -574-A, -575, -585, -593, -607, -616, -624, -641, -643-A, -644, -694, -704; T-4/FRC, -5/FRC, -83/SR, -158/FRT, -159/FRT, -171/FR, -172/FR, -173/FR, -174/FR, -175/FR, -177/FR, -180/FR; TAB; TAJ; TAQ; TBA; TBC; TBN; TBL; TBM; TBN; TBO; TBU; TBW; TBX; TCB; TCC; TCE; TCH; TCK; TCO; TCP; TCS; TCY; TCZ; TDD; TDE; TDF; TDG; TDH; TDK; TDN; TDO; TDQ; TDZ; TEF; TEC; TED; TEF; AR-88 (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: Transmission: 0.2 - 0.5, 2 - 18, 100 - 156, 225 - 299.9.
Reception: 0.2 - 0.5, 1.5 - 18, 100 - 156, 225 - 299.

TYPE MODULATION: Am. **TYPE OF SIGNAL:** Voice, tone (in the h-f and l-f ranges cw may be used).

POWER OUTPUT: Transmitters: 10 w (Nominal). Receivers: 0.5 to 3 w (nominal).

POWER REQUIREMENTS: 28 v, dc, at(60 amp) 1.7 kw using Power Unit PE-246 (supplied).
28.5 v, dc, (35 amp hour) battery, (supplied) will operate set 1/2 hour for emergency use.

PHYSICAL CHARACTERISTICS

Radio Set AN/MRC-20 measures 45-3/4 x 50-1/2 x 28", net weight 415.8 pounds, volume 10.4 cu ft. Packed for domestic or export shipment: total weight 498 pounds, total volume 11.5 cu ft. Shipped in 8 packages.