

STATUS: Commercial

CLASSIFICATION OF EQUIPMENT: Unclassified

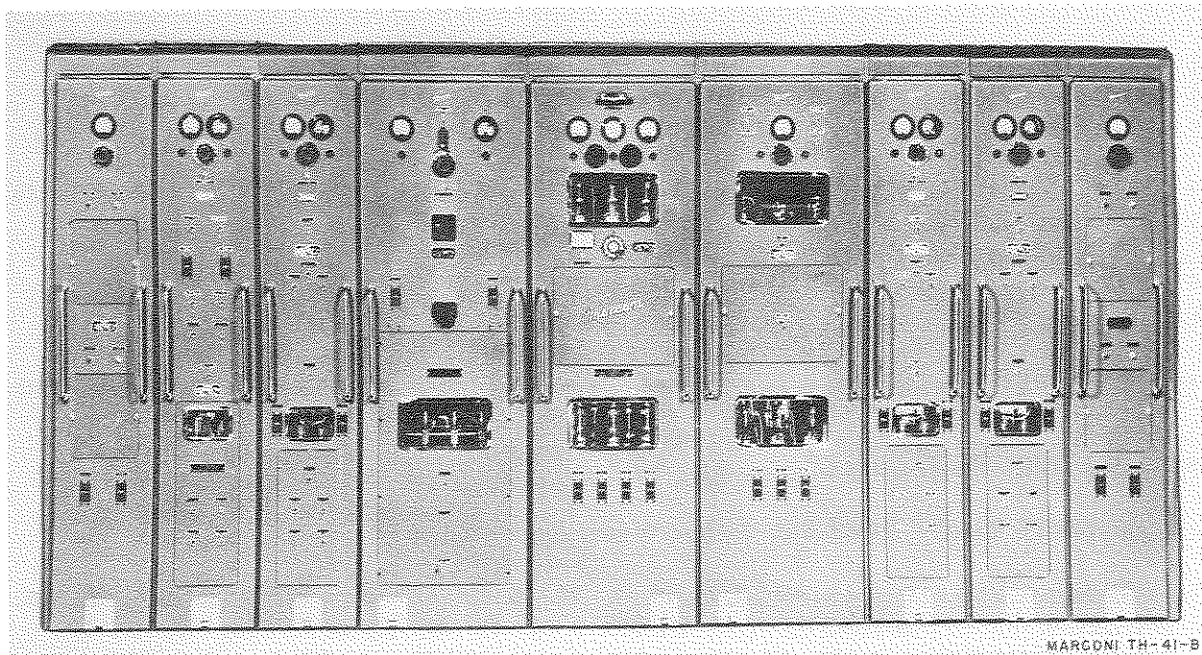
USING SERVICE: Air Force

DATE OF THIS SHEET: 11 Jun 52

AN/FRT-TYPE

COMMERCIAL TYPE NUMBER: MARCONI TH-41-B

RADIO TRANSMITTING EQUIPMENT



Radio Transmitting Equipment Marconi TH-41-B, is a high-power, c-w, frequency-shift keying, and a-m radio transmitter for ground fixed station use in long distance point-to-point communication.

This equipment consists of nine large cabinets containing the following: rectifier power supply, modulator, i-f/r-f unit, four h-f/r-f units, two r-f exciter units, and one separate remote control unit. Each r-f unit can be operated on up to 10 preset channels (either crystal or master oscillator frequency controlled), except the i-f unit which uses master oscillator frequency control only.

Three transmitting units can be operated simultaneously on either c-w or frequency-shift keying; when voice is used, only two units may be operated at a time (one unit modulated and the other on c-w or frequency-shift keying).

Complete remote control of all functions is provided by Master Remote Control Unit 141-398 from distances up to 5 miles over four pairs of standard telephone lines.

The transmitter r-f units are designed to operate into a 600-ohm balanced or unbalanced transmission line; however, an L type matching section is included in the h-f units to provide an impedance matching range of 70 to 2,500 ohms. The i-f unit uses a T type matching section for 72-ohm coaxial Radio Frequency Cable RG-34/U, or equivalent.

Power requirements are: 40.5 kva, 208/220 v, 3 phase, 60 cyc, ac.

AN/FRT-TYPE

INSTRUCTION LITERATURE:
Marconi Instruction Book
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MAJOR COMPONENTS

QUANT	NAME OF COMPONENT	DIMENSIONS (IN) INSTALLED	WEIGHT (LBS)
1	148-000 Rectifier Unit	24-1/2 x 81-1/16 x 37-1/2	2,780
1	148-002 Modulator Unit	24-1/2 x 81-1/16 x 37-1/2	1,320
5	148-006A, B, C, D, and 112973 Radio Transmitter	14-1/2 x 81-1/16 x 37-1/2	440 each
2	148-008 Dual Exciter Unit	14-1/2 x 81-1/16 x 37-1/2	Not Available
1	141-398 Master Remote Control Unit	19 x 8-3/4 x 10	" "
2	141-581 Auxiliary Remote Control Unit	19 x 5-1/4 x 3-1/8	" "
1	117-807 Remote Speech Amplifier Unit	19 x 5-1/4 x 12-9/16	" "
1	129-837 R.F. Tuner	Not Available	" "

OPERATIONAL CHARACTERISTICS

TACTICAL USE: Normally issued on any organizational level as project material in accordance with AFR 100-17.

INSTALLATION: Ground, fixed.

APPROXIMATE RANGE (IN MILES): Medium to long (depending on frequency).

CAN COMMUNICATE WITH: AN/ARC-2, -5, -8, -9, -21, -25; AN/ARR-15; AN/FRR-3, -4, -7, -12, -28; AN/GRC-9, -13, -26; AN/GRR-2, -3, -5; AN/MRC-2, -6, -16, -20, -22; AN/PRC-7, -10, -19, -20; AN/SRC-3; AN/SRR-3, -8, -11, -12, -13; AN/TRQ-1; AN/URR-10, -12, -22, -23; AN/VRC-1, -4, -22; AN/VRR-2; BC-312, -314, -342, -344, -348, -453, -779, -787, -794, -1004; MBS; MQ; OA-58/FRC, -59/FRC; R-62/PR, -80/SR, -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, -320/FRC, -388/URR; RAK; RAL; RAO; RAS; RBA; RBB; RBC; RBG; RBH; RBK; RBL; RBM; RBO; RBP; RBS; RCF; RCG; RCH; RDE; RDF; RDM; REA; SCR-177, -188, -193, -244, -274, -281, -399, -499, -506, -536, -543, -585, -593, -607, -614, -694, -704; TBO; TBX; TCH; TCP; TCS; AR-88 (RCA); ARC Type 12; Collins 18S-4 (AF Model); Collins 75A-2; Fisher TS 25-3; Hammarlund SP-600-JX; National HRO-50.

TECHNICAL CHARACTERISTICS

FREQUENCY RANGE IN MEGACYCLES: 0.08 - 0.2, single channel master oscillator frequency control. 2 - 28, 10 preset channels per unit. Either master oscillator or crystal control may be used.

TYPE OF SIGNAL: Cw, frequency-shift keying telegraphy, voice.

POWER OUTPUT: 5,000 w.

POWER REQUIREMENTS: 40 kva (approx) 40,000 w, 208/220 v, 3 phase, 60 cyc ac. 250 w, 115 v, 1 phase, 60 cyc ac, when master oscillator oven heaters are used. 150 w, 115/220 v, 1 phase, 60 cyc ac, when remote control equipment is used.

PHYSICAL CHARACTERISTICS

Radio Transmitting Equipment Marconi TH-41-B measures 126 x 81-1/16 x 37-1/2 inches, net weight 10,000 pounds, volume 135.7 cu ft. Packed for domestic or export shipment: total weight 11,000 pounds, total volume 150 cu ft, 3.75 ship tons. Shipped in 15 packages.