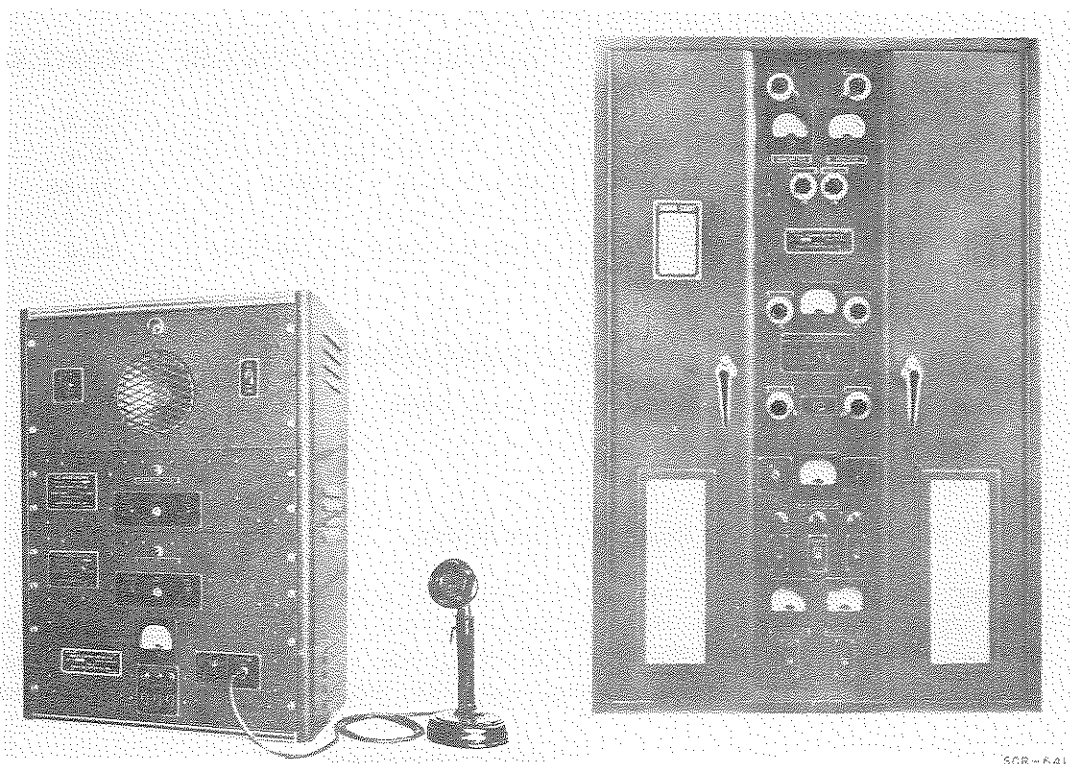


STATUS: Limited Standard  
 CLASSIFICATION OF EQUIPMENT: Unclassified  
 USING SERVICE: Air Force  
 DATE OF THIS SHEET: 10 Jun 52

**AN/FRC-TYPE**

SERVICE TYPE NUMBER: SCR-641  
 RADIO SET



Radio Set SCR-641 is normally used for two-way radiotelephone, ground-to-air and point-to-point communication. It is ground, fixed, station equipment operated at advanced air bases for aircraft traffic control.

This radio set consists of two separate units: Transmitter BC-797, complete with power supply and antenna which is designed to operate in the v-h-f range of 116 to 126.25 mc on a single preset, crystal-controlled channel; two receivers, one speaker, and one remote control unit.

Radio Receivers BC-1271 operate on a single preset, crystal-controlled channel in the v-h-f range 116 to 145 mc. The intermediate frequency is 6.125 mc which makes the receiver subject to interference from near-by transmitters operating on 6 mc.

Remote Control Unit RM-31 is normally located at the receiving position for ON/OFF control of the two receivers, and selection of one preset channel from either receiver. It also provides ON/OFF, and push-to-talk, single-channel operation of the transmitter. The transmitter may be operated up to a distance of 2-1/2 miles over 2 pairs of standard telephone lines.

Two Antenna Systems RC-254 are used; one connected to the transmitter, the other to the receivers with 72-ohm coaxial transmission line RG-11/U, or equal.

The power requirements are approximately 935 w of 115-v, ac.

**AN/FRC-TYPE**

INSTRUCTION LITERATURE:

TM 11-650

CLASSIFICATION OF EQUIPMENT:Unclassified

SCR-641

:SERVICE TYPE NUMBER

USING SERVICE: Air Force

RADIO SET

DATE OF THIS SHEET: 10 Jun 52

**MAJOR COMPONENTS**

QUANT	NAME OF COMPONENT	DIMENSIONS (IN) INSTALLED	WEIGHT (LBS)
1	Radio Transmitter BC-797	29-1/16 x 43 x 21	430.0
1	Remote Control Unit RM-31	19 x 7 x 9-3/16	28.0
2	Radio Receiver BC-1271-A	19 x 5-7/32 x 13-3/16	38.25
2	Antenna System RC-254-A	Not Available	175.0
1	Cabinet CH-203-A (includes speaker)	21-5/8 x 28-1/4 x 16-5/16	50.0

**OPERATIONAL CHARACTERISTICS**

TACTICAL USE: Issued to advanced air bases for airport traffic control.

INSTALLATION: Ground, fixed.

APPROXIMATE RANGE (IN MILES): (Nominal) Line of sight.

CAN COMMUNICATE WITH: AN/ARC-1, -2, -5, -18, -28, -36; AN/CRT-2; AN/FRC-7; AN/GRC-30;  
 AN/MRC-20, -22; AN/PRC-17, -20; AN/TRC-7; AN/TRQ-1; AN/URC-4; AN/URR-10; -12, -21; AN/URT-7,  
 -10; AN/VRC-1; BC-639, -640; MAR; MBS; R-137/GR; RBK; RC-256, -257; RCK; RCO; SCR-522, -542,  
 -573, -574, -575, -607, -616, -624, -641, -643, -644; TDG; TDQ; TDT; ARC Type 12; Wilcox 99A.

**TECHNICAL CHARACTERISTICS****FREQUENCY RANGE IN MEGACYCLES:**

Transmitter: 116 - 126.25 crystal-controlled.

Receiver: One preset, crystal-controlled frequency, from 116 - 145 for each receiver.

TYPE MODULATION: Am.

TYPE OF SIGNAL: Voice.

POWER OUTPUT: Transmitter: 45 w (unmodulated carrier).

Receiver: 1 w into a 600 ohm resistive load (Nominal).

POWER REQUIREMENTS:	BC-797:	750 w
	BC-1271 (2 each):	160 w
	RM-31:	25 w
	Total	935 w of 115 v, 60 cyc, 1 phase, ac.

**PHYSICAL CHARACTERISTICS**

Radio Set SCR-641 measures 50-11/16 x 43 x 21 inches, net weight 725 pounds, volume 29.75 cu ft, 0.6 ship ton. Packed for domestic or export shipment: total weight 870 pounds, total volume 32.73 cu ft, 0.9 ship ton. Shipped in 5 packages both domestic and export.