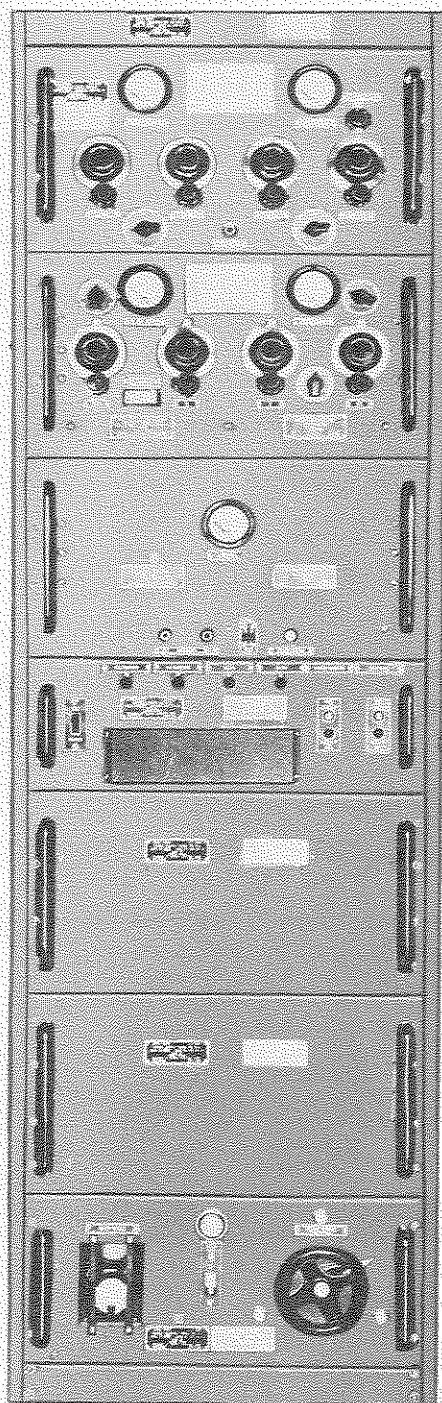


STATUS: Standard
CLASSIFICATION OF EQUIPMENT: Unclassified
USING SERVICE: Air Force
DATE OF THIS SHEET: 10 Jun 52

AN/FRC-TYPE

SERVICE TYPE NUMBER: SCR-643
RADIO SET



SCR-643

Radio Set SCR-643 is a complete fixed station, ground, radio transmitting equipment for point-to-point, and ground-to-air operation. Two Radio Transmitters BC-640 each provide one preset, crystal-controlled voice, or tone-modulated channel, in the v-h-f range 100 to 156 mc. This equipment is normally used to provide two transmitting channels for v-h-f Aircraft Control Net Systems.

This radio set consists of two radio transmitters (one of which is shown here) antenna equipment including masts, monitoring equipment, power unit, and shelter for the power unit.

Transmitters can be operated either locally, or from a remote point, by Control Unit RM-27.

Radio Set SCR-643 is normally operated in conjunction with Radio Set SCR-644, its companion receiving facility, from the operating site of which it may be controlled from distances up to two miles.

Such remote operation permits ON/OFF control, adjustment of audio input level, monitoring of audio input as well as monitoring the r-f output of the transmitter.

The transmitter input matches 72-ohm coaxial cable, such as RG-11/U, for operation of recommended Antenna Equipment RC-81.

Power requirements are supplied by Power Unit PE-99 or an equivalent source of 110 to 120 v, 50/60 cyc, 1 phase, ac.

AN/FRC-TYPE

SCR-643

:SERVICE TYPE NUMBER:

RADIO SET

INSTRUCTION LITERATURE:

TO 40SCR-643-2

CLASSIFICATION OF EQUIPMENT:Unclassified

USING SERVICE: Air Force

DATE OF THIS SHEET:10 Jun 52

MAJOR COMPONENTS

QUANT	NAME OF COMPONENT	DIMENSIONS (IN) INSTALLED	WEIGHT (LBS)
2	Transmitter BC-640-A	21-1/4 x 72-3/8 x 20	5 each
2	Antenna Equipment RC-81-A	28 x 12 x 38	4 "
1	Antenna AM-56-B or Antenna Mast MA-6	43-1/2 x 188 x 25-3/4	4,078
1	Monitoring Equipment RC-80-A	20-1/2 x 72 x 3	134
2	Power Unit PE-99-A (including one and one spare)	28 x 41 x 60	1,140 each
1	Shelter HO-3	48 x 66 x 60	2,000

OPERATIONAL CHARACTERISTICS

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

INSTALLATION: Designed for 19-inch relay rack.

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

CAN COMMUNICATE WITH: AN/ARC-1, -3, -5, -18, -28, -36; AN/CRC-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/VRC-1; BC-639, -787; MAR; MBS; R-137/GR; RBK; RBQ; RC-103, -256; RCK; RCO; SCR-522, -542, -574, -575, -607, -616, -624, -641, -644.

TECHNICAL CHARACTERISTICS

FREQUENCY RANGE IN MEGACYCLES: 100 to 156 simultaneous operation on two crystal-controlled preset channels, (one preset channel for each transmitter).

TYPE MODULATION: Am.

TYPE OF SIGNAL: Voice or tone.

POWER OUTPUT: 50 w (Nominal).

POWER REQUIREMENT: 5.5 kva with heaters) 110 - 120 v, 50/60 cyc, 1 phase, ac (supplied
2.5 kva without heaters) by PE-99, or equivalent power source).

PHYSICAL CHARACTERISTICS

Radio Set SCR-643 measures 120 x 84 x 84 inches, net weight 9,699 pounds, volume 490 cu ft.
Packed for domestic or export shipment: total weight 10,000 pounds, total volume 500 cu ft, 12.5 ship tons. Shipped in 16 packages both domestic and export.