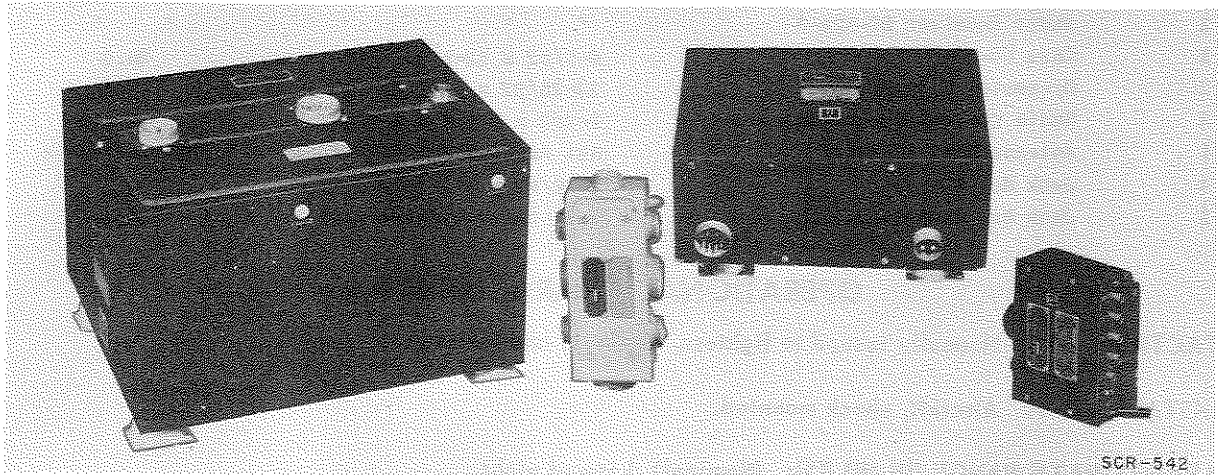


STATUS: Standard
 CLASSIFICATION OF EQUIPMENT: Unclassified
 USING SERVICE: Air Force
 DATE OF THIS SHEET: 7 Jun 52

AN/ARC-TYPE

SERVICE TYPE NUMBER: SCR-542
 RADIO SET



Radio Set SCR-542 is a two-way radiotelephone, v-h-f airborne receiver-transmitter for air-to-air and air-to-ground communication. However, it may be ground-operated for point-to-point and ground-to-air communication by adding Antenna AN-94, or equivalent. It is designed for remote operation only, with Radio Control Box BC-602.

This radio set consists of a radio transmitter and radio receiver housed together in a case.

The necessary power unit, antenna, remote control unit, jack boxes, and interconnecting cables are also supplied.

The transmitter and receiver each use four separate crystals (total eight crystals) to provide four preset operating channels for each unit in the v-h-f band.

An antenna change-over relay is incorporated in the set which permits using one antenna for both transmitting and receiving.

The transmitter provides 9 w output on either voice or tone modulation; the receiver provides 10 mw output into a 300- or 4,000-ohm resistive load.

Radio Sets SCR-542-A, SCR-522-A and SCR-624-B, are all identical in purpose and all similar units are mechanically interchangeable; the major differences are in the power supply requirements and method of installation.

Required power sources are: SCR-542-A; 322 w of 14-v dc. SCR-522-A; 336 w of 28-v dc. SCR-624-B; 325 w of 100-130/200-260-v, ac.

AN/ARC-TYPE		INSTRUCTION LITERATURE: TO 16-40SCR-522-2
SCR-542	:SERVICE TYPE NUMBER	CLASSIFICATION OF EQUIPMENT: Unclassified
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 Transmitter BC-625-A	Not Available	Not Available
1	Radio Receiver BC-624-A	" "	" "
1	Case CS-90-A	6-5/32 x 12-9/16 x 10-11/16	49.0
1	Dynamotor Unit PE-99-A	12-25/32 x 9-27/32 x 6-15/64	37.0
1	Radio Control Box BC-602-B	2-1/2 x 7-5/8 x 5-9/16	2.41
1	Antenna Mast AN-104-A	Not Available	Not Available
1	Jack Box BC-629-B	2-29/64 x 4-1/16 x 1-61/64	0.6
1	Jack Box BC-631-B	1-1/64 x 2-49/64 x 1-19/64	0.6

OPERATIONAL CHARACTERISTICS

TACTICAL USE: Normally issued to fighters, bombers, and trainers.

INSTALLATION: Aircraft, shock mounted.

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

CAN COMMUNICATE WITH: AN/ARC-1, -3, -5, -19, -28, -36; AN/CRC-2; AN/FRC-7; AN/GRC-30; AN/MRC-16, -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; M4R; MBS; R-197/GR; RBK; RBQ; RC-103, -256, -257; RCK; RCO; SCR-522, -542, -573, -575, -607, -616, -624, -641, -643, -644; TDG; TDQ; TDT; ARC Type 12; Wilcox 99A.

TECHNICAL CHARACTERISTICS

FREQUENCY RANGE IN MEGACYCLES: 100 - 156.

Receiver: 4 preset crystal-controlled channels.
Transmitter: 4 preset crystal-controlled channels.

TYPE MODULATION: Am.

TYPE OF SIGNAL: Voice or tone.

POWER OUTPUT: Transmitter: 9 w.
Receiver: 10 mw into 300 or 4,000 ohm resistive load.

POWER REQUIREMENTS: 322 w, 14 v (23 amp) dc.

PHYSICAL CHARACTERISTICS

Radio Set SCR-542 measures 30 x 15 x 21 inches, net weight 89.61 pounds, volume 3.8 cu ft.
Packed for either domestic or export shipment: total weight 118.26 pounds, total volume 4.07 cu ft.
Shipped in 2 packages both domestic and export.