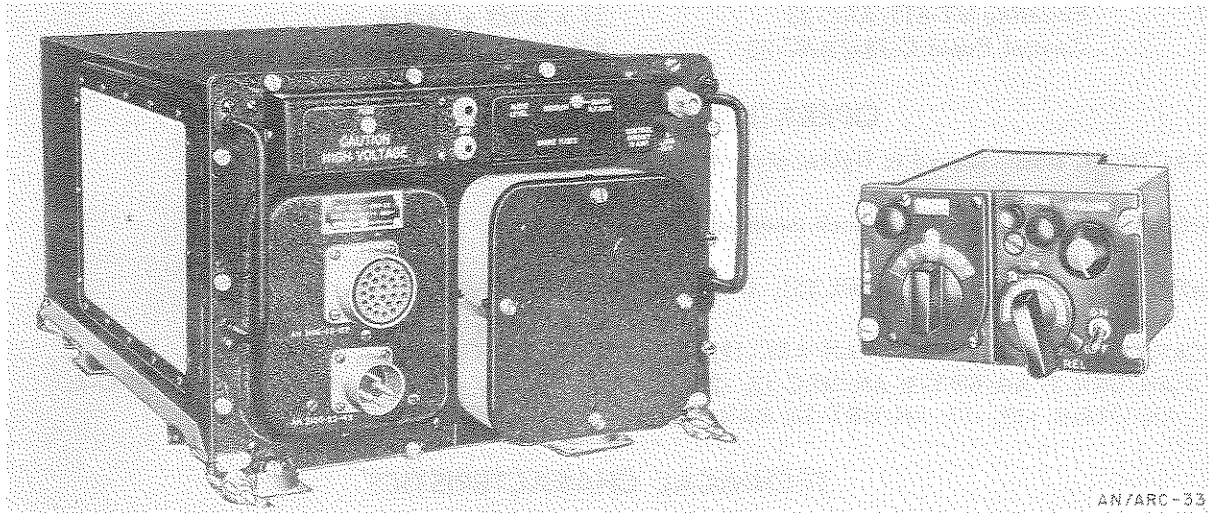


STATUS: Substitute Standard
CLASSIFICATION OF EQUIPMENT: Restricted
USING SERVICE: Air Force
DATE OF THIS SHEET: 9 Jun 52

AN/ARC-33

RADIO SET



Radio Set AN/ARC-33 is an airborne command set, combination receiver-transmitter unit for two-way air-to-air and air-to-ground communication in the u-h-f range. It is designed for aircraft use at altitudes as high as 50,000 feet, and is normally operated with remote Control Panel C-784/ARC-33 which automatically increases the gain of the modulator speech amplifier with increasing altitudes.

Both the transmitter and receiver in Radio Set AN/ARC-33 operate on any one of 20 preset crystal-controlled channels (of 1,750 available channels) spaced 100 kc apart in the u-h-f range 225.0 to 399.9 mc. One guard channel in the 238 to 248 mc range can, also, be simultaneously monitored while equipment is in normal operation.

It can use u-h-f type antennas such as are already installed in aircraft, e.g.; the flush-tail cap-type arrays having 52-ohm coaxial transmission lines, RG-8/U, and similar systems.

The AN/ARC-33 is interchangeable with the AN/ARC-27 communication wise and the physical characteristics are similar.

AN/ARC-33	INSTRUCTION LITERATURE: TO 16-30 ARC-33-2
	CLASSIFICATION OF EQUIPMENT: Restricted
RADIO SET	USING SERVICE : Air Force
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MAJOR COMPONENTS

QUANT	NAME OF COMPONENT	DIMENSIONS (IN) INSTALLED	WEIGHT (LBS)
1	Radio Receiver-Transmitter RT-173/ARC-33	15-3/16 x 10-3/8 x 21-1/2	83.36
1	Mounting MT-611/ARC-33	21 x 2-3/8 x 14-3/4	2.75
1	Control Panel C-784/ARC-33	5-3/4 x 3-3/8 x 7-5/8	3.43

OPERATIONAL CHARACTERISTICS

TACTICAL USE: Issued to fighter aircraft only.

INSTALLATION: Aircraft, shock mounted.

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

CAN COMMUNICATE WITH: AN/ARC-12, -19, -27, -30, -33, -34; AN/GRC-16, -27, -29, -30, -32; AN/GRR-7; AN/GRT-3; AN/MRC-12, -20, -22; AN/PRC-14, -17, -20; AN/TRC-32; AN/URC-4; AN/URR-9, -12, -13; AN/URT-10; MAR; MAY; R-278/GR; RDR; RDZ; SCR-616; TED.

TECHNICAL CHARACTERISTICS

FREQUENCY RANGE IN MEGACYCLES: 1,750 channels (spaced 100 kc apart) in the frequency range 225.0 to 399.9.
Designed to operate on any 20 preset crystal controlled channels, and one guard channel, in the range 238 to 248.

TYPE MODULATION: Am.

TYPE OF SIGNAL: Voice, tone.

POWER OUTPUT: Transmitter: 10 w (Nominal).
Receiver: 500 mw into a 600 ohm resistive load.

POWER REQUIREMENTS: 27.5 v, dc, at the following power levels:
Receiver operation: 350 w, (12.5 amp).
Transmitter operation: 434 w, (15.5 amp).
Peak operation: 602 w, (20.5 amp).

PHYSICAL CHARACTERISTICS

Radio Set AN/ARC-33 measures 26-3/4 x 10-3/8 x 21-1/2 inches, net weight 107.5 pounds, volume 2.25 cu ft. Packed for either domestic or export shipment: total weight 120 pounds, total volume 3 cu ft. Shipped in 2 packages.