

STATUS: Commercial

CLASSIFICATION OF EQUIPMENT: Unclassified

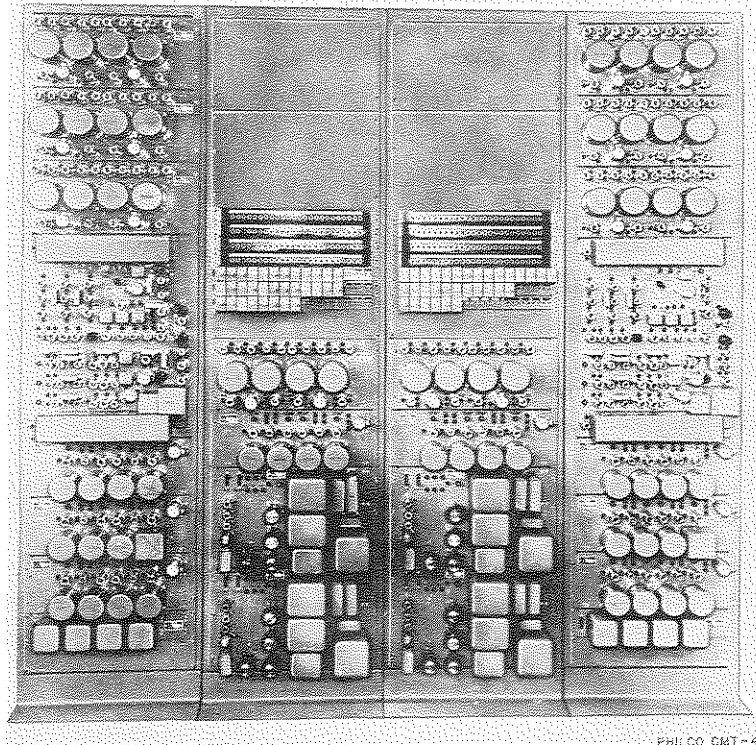
USING SERVICE: Air Force

DATE OF THIS SHEET: 7 Jun 52

AN/FGC-TYPE

COMMERCIAL TYPE NUMBER: PHILCO TYPE CMT-4

VOICE CARRIER EQUIPMENT



PHILCO CMT-4

Voice Carrier Equipment Philco Type CMT-4 is a 4- to 24-channel, multiplex pulse, a-m terminal facility which normally operates with AN/TRC-30 to form a microwave radio relay terminal station. This equipment is built on a four-channel basis and any combination of these units may be made to provide additional circuits up to a maximum of 24 channels.

For teletypewriter operation, any channel can be subdivided into 12 teletypewriter channels by using Philco CMT-2 teletypewriter equipment, or equal.

Normal output is on a four-wire basis; therefore, for voice operation, additional voice terminating equipment, (Philco VTE or equal) is required for party line, dial, or ring-down two-wire systems.

Each of the available 24 channels is from 50 to 3,300 cps but wide-band channels of 50 to 6,600 cps are also available.

This equipment is capable of handling telephone, telemetering, facsimile, and teletypewriter communications by adding auxiliary equipment.

Audio inputs are 600 ohms, balanced, at a normal level of -13 db. Facilities are available for insertion and drop-out of channels at relay stations.

Power requirements for a 24-channel duplex system are 1 kw of 117-v, 60-cyc, 1 phase ac.

AN/FGC-TYPE	INSTRUCTION LITERATURE: Not Available
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MAJOR COMPONENTS

QUANT	NAME OF COMPONENT	DIMENSIONS (IN) INSTALLED	WEIGHT (LBS)
1	Transmitter common band amplifier	19 x 15-3/4 x 15	Not Available
1	Receiver	19 x 15-5/8 x 15	" "
1 to 6	Demodulator units	19 x 8-3/4 x 15	" "
1 to 6	Modulator units	19 x 7 x 15	" "
2	Filament supplies	19 x 3-3/8 x 15	" "
4	Power supplies	19 x 12-1/4 x 15	" "
6	Jack fields and 2 attenuator fields	Not Available	" "
1 to 5	Racks (with equipment)	20-3/8 x 84-3/8 x 15	320 (each)

OPERATIONAL CHARACTERISTICS

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

INSTALLATION: Ground fixed.

CAN COMMUNICATE WITH: This is an auxiliary equipment used in conjunction with primary communication apparatus.

TECHNICAL CHARACTERISTICS

FACILITIES REQUIRED FOR TRANSMISSION: Telephone voice termination equipment, microwave radio relay equipment, teletypewriter carrier equipment, facsimile equipment, cable and wire.

FACILITIES AFFORDED: Four wire telephone circuits, 4 to 24 channels (narrow band, voice) 60 to 3,300 cps; or any two narrow band voice channels can be combined to form 1 wide band 50 to 6,600 kc channel.

FREQUENCY: Normal channel 50 to 3,300 cps. Wide band channels 50 to 6,600 cps.

TYPE OF MODULATION: Pulse amplitude modulation.

TYPE RINGING: 20 cyc (normally supplied by ancillary voice termination equipment).

POWER REQUIREMENTS: 24-channel, full duplex operation: 1 kw, 117-v ($\pm 5\%$) 60 cyc, 1 phase, ac.

PHYSICAL CHARACTERISTICS

Voice Carrier Equipment Philco Type CMT-4 measures 102 x 84-3/8 x 15 inches, net weight 1,600 pounds, volume 74.77 cu ft. Packed for either domestic or export shipment: total weight 1,840 pounds, total volume 80 cu ft, 2 ship tons. Shipped in 5 packages.

(Logistical data is for 24-channel duplex termination.)