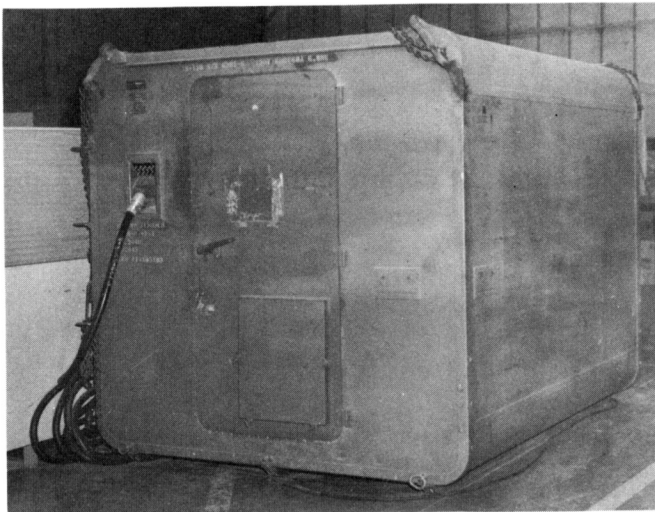


Chapter 6

TELETYPE EQUIPMENT



S-138 TELETYPE VAN

DESCRIPTION: The S-138 Teletype van provides a means of communications by a typewritten and a perforated printed tape copy. It is used to transmit and receive two full duplex encrypted messages over DC lines or radio carrier. This unit operates at speeds of 60 or 100 words per minute (WPM) and is capable of transmitting and receiving on DC lines of 20 or 60 milliamps neutral or 30 milliamps polar. This unit does not have means of furnishing line battery; it must be obtained from an external source.

<u>CAPABILITY:</u>	Two full duplex encrypted circuits.
<u>FREQUENCY RANGE:</u>	NA
<u>POWER INPUT:</u>	120 volts, 60 cycles, single phase alternating current, at approximately 3 KW.
<u>SITING CRITERIA:</u>	No special requirements.
<u>ERECTION TIME:</u>	Approximately 20 minutes.

PERSONNEL REQUIREMENTS: 2 each 291X0

<u>MAJOR COMPONENTS:</u>	<u>NOMENCLATURE</u>	<u>COMMON NAME</u>
	TH-5.....	Tone Converter 4 each
	UGC-32X.....	Teletypewriter 2 each.

MANUFACTURER: Teletype Corp
Kelloog Co.
Stromberg Carlson Corp.

COST: Aprx. \$8991.00

WEIGHT: 3,250 lbs.

CUBE: 443 cu. ft.

APPLICABLE TOs: 31W4-5-122 thru -125
31W4-1-06-1 and -2
31W4-2FG-144
31W4-2FG-181
31W4-2FG-192



Interior View S-138 Teletype Shelter



AN/TGC-14 (V) TELETYPEWRITER SET

DESCRIPTION: The AN/TGC-14(V) is a compact, rugged and portable teletypewriter compatible with all other teletypewriters used by the military. This set uses the standard Baudot system and is capable of 60, 75 or 100 words per minute (WPM) with equipment furnished. This set is an integral part of the AN/TSC-53 and AN/TSC-15 Radio Sets. It is used to monitor, receive/transmit and to communicate between locations via radio teletype, although it is possible to use this set with wire.

CAPABILITIES:

An hysteresis-synchronous alternating current motor is available for 115 volt, 60 cycles per second operation, and an additional motor is available for 115 volt, 400 cycles per second, single phase operation. For housing these components, either a tactical or non-tactical case is selected. Optional shock mounts, available for either case, are used for installation sites in which the equipment will be subjected to severe shock or vibration. The versatility is further extended by the patching

options which allow half-duplex (simple), full duplex, or off-line local operation. In addition, by proper patching, it will supply signal line current up to 100 milliamperes at 28 VDC. Operational speed can be varied; speed change gears for 60, 75 and 100 words per minute are supplied.

POWER INPUT: 115 VAC at 60 or 400 cps, single phase, 70 watts. Additional 200 watts required for heating device.

POWER OUTPUT: Signal line output may be installed into signal line of 20 to 80 milliamperes without any internal adjustments.

SITING CRITERIA: Availability of primary power source, signal line, and adequate facilities to make a good ground connection.

ERECTION TIME: Approximately 10 minutes.

PERSONNEL REQUIRED: 1 each 36350

<u>MAJOR COMPONENTS:</u>	<u>NOMENCLATURE</u>	<u>COMMON NAME</u>
	TT-297/UG.....	Teletypewriter Printer
	CY-2976/PG.....	Carrying Case
	MK-539/UG.....	Power Supply
	TT-318/UG.....	Keyboard
	PD-82/U.....	60 cps Motor
	PD-83/U.....	400 cps Motor

MANUFACTURER: Mite Corp.

COST: \$3,251.00

WEIGHT: 39 lbs.

CUBE: 1.43 cu. ft.

APPLICABLE TOs: 31W-2-TGC 14-1.....Operators' Instructions (Marine Corps TM 03315-15).



AN/UGC-32 TELETYPEWRITER

DESCRIPTION: The AN/UGC-32, commonly known as the ASR (automatic send-receive), provides a means for receiving typewritten page messages and manually originating messages between two or more stations which are similarly equipped, and connected by a telegraph or radio channel. The ASR also provides facilities for automatic transmission at maximum available line speed through a transmitter distributor, and manual preparation of fully perforated, typed tape, either at line speed or at an unmonitored off-line maximum speed of up to 106 words per minute. A keyboard selector switch determines the mode of operation. In addition, an auxiliary typing reperforator can receive and record incoming messages independent of the other components of the set.

CAPABILITY:

65 or 100 words per minute operation. Incoming-outgoing and blind tape cutting for terminal and/or relay operation. 20 or 60 milliamps neutral or 30 milliamps polar input from signal line to electronic keyer. This unit may be used in conjunction with the TH-5 or similar converter devices when conversion from DC to tone operation is required.

FREQUENCY RANGE: NA

POWER INPUT: 115 volts \pm 10%, 60 cycle, single phase AC. To avoid loss in receiving margin, frequency regulation must be within \pm one-half cycle for synchronous motor. 115 volts \pm 10% 50-60 cycles for series governed motor.

SITING CRITERIA: Equipment may be installed and operated in any permanent or temporary shelter so long as the unit is not exposed to the weather.

ERECTION TIME: Approximately 20 minutes.

MAJOR COMPONENTS:

<u>NOMENCLATURE</u>	<u>COMMON NAME</u>
AN/UGC-32.....	Teletypewriter
LP77YD/AJV.....	Typing Unit
LPR36BRP.....	Reperforator
LPR35BRP.....	Auxiliary Reperforator
LXD31.....	Transmitter Distributor
LAK47BRW.....	Keyboard
LMU39.....	Motor
LMU41.....	Motor
LAAC229BR.....	Cabinet
173824.....	Electrical Service Assembly

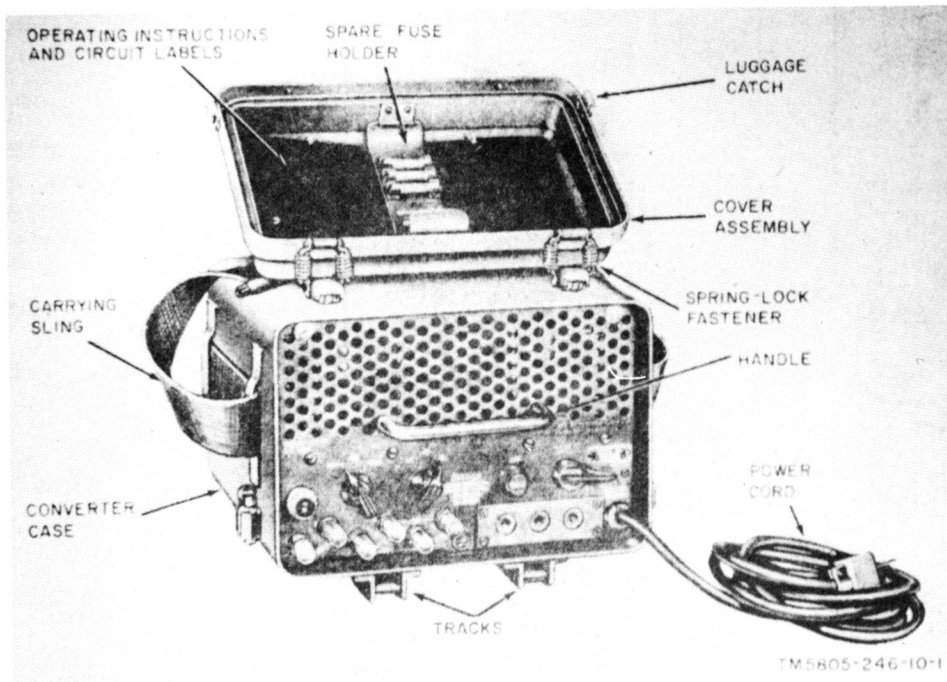
MANUFACTURER: Teletype Corp.

COST: \$3329.00

WEIGHT: 190 lbs.

CUBE: 23.47 cu. ft.

APPLICABLE TO: 31W4-5-172



TH-5/TG TELEGRAPH TERMINAL

DESCRIPTION: This unit is a rugged, compact, light-weight teletype converter. It converts the 20 milliamp DC mark-space from the teletype-writer to a tone which may be sent long distances on wire or radio. The send side converts a neutral DC mark-space current into voice frequency FSK (tone) signal. The receive side converts the voice frequency FSK (tone) signal to a 20 milliamp neutral mark/space DC current. The set also includes a telephone termination for coordination between users. Telephone set TA-312 may be connected to the terminal positions indicated on the TH-5/TG front panel. A 90-volt, 20-cps ring signal is available for telephone ringing.

CAPABILITY:

The TH-5/TG is capable of half or full duplex operation or may be wired for split operation, e.g., receive/transmit from two different stations. Telephone operation capability on TTY wire, when TTY is not in operation.

FREQUENCY RANGE:

Mark: 1325 cps; Space: 1225 cps.

POWER INPUT: 110 VAC @ 50-60 cps, single phase. Signal input is 20 milliamp.

SITING CRITERIA: Located near the teletypewriter it is used with.

ERECTION TIME: Approximately 10 minutes.

MAJOR COMPONENTS: TH-5 is an end item.

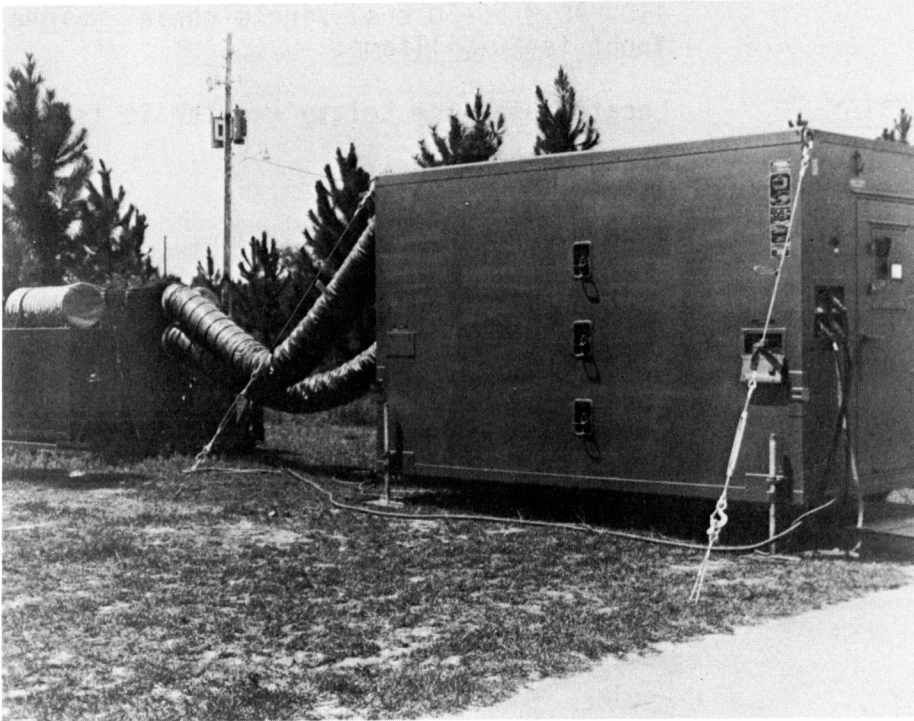
MANUFACTURER: Stromberg-Carlson.

COST: \$250.00.

WEIGHT: 16 lbs.

CUBE: .92 cu. ft.

APPLICABLE TO: 31W4-2TG-162-----Depot Maintenance Manual.



AN/TGC-27

TELETYPE COMMUNICATION CENTER

DESCRIPTION: The AN/TGC-27 consists of a deployable, air conditioned communications shelter equipped to perform the message preparation, transmission and reception functions for the Air Force Component Command Post (AFCCP)/Tactical Air Control Center (TACC) and Tactical Air Base (TAB). The AN/TGC-27 is capable of off-line preparation of teletype tapes; monitoring, patching and testing of equipment and circuits; and limited relay of incoming messages.

CAPABILITY: Three full duplex encrypted circuits.

FREQUENCY RANGE: N/A

POWER INPUT: 120/208 VAC, 3-phase, 4-wire, 50/60/400 Hz, 30 kilowatts.

SITING CRITERIA: The site area may have a slope no greater than ten percent. Special considerations for siting are not required.

ERECTION TIME: Approximately 30 minutes.

PERSONNEL REQUIREMENTS: 4 each 291X0

<u>MAJOR COMPONENTS:</u>	<u>NOMENCLATURE</u>	<u>COMMON NAME</u>
	S-422/TGC-27	Electrical Equipment Shelter
	OW-28/TGC-27	Communications Central Group
	OA-8468/TGC-27 or OA-8546/TGC-27	Air Conditioner Group

MANUFACTURER: Stelma Inc.
Div of Data Products
Stamford, Conn.

COST: \$68,000.00 (Estimated)

WEIGHT: 4980 - AN/TGC-27
1640 - OA-8468/TGC-27 or OA-8546/TGC-27

CUBE: 662 cu ft - AN/TGC-27
299 cu ft - OA-8468

APPLICABLE TOs: 33A1-12-747-1
31W2-2TSA37-2
31W2-2T-112
31W4-2T-102
33A1-3-424-2
31W4-2TGC-132
31W4-2TGC-142
31W4-4-5-182
31W4-4-5-183
31W4-4-5-184
31W4-4-5-82

31W4-4-5-83

31W4-4-5-84

31W2-2T-102

31W4-4-278-2

31W4-4-276-2

KAM 143 (CONFIDENTIAL CRYPTO)

KAM 144 (CONFIDENTIAL CRYPTO)

KAM 145 (CONFIDENTIAL CRYPTO)

KAM 175 (CONFIDENTIAL CRYPTO)

KAM 176 (CONFIDENTIAL CRYPTO)

35E9-102-1

35E9-102-3

35E9-102-4

35E9-101-21

35E9-101-23

35E9-101-24

35E9-102-11

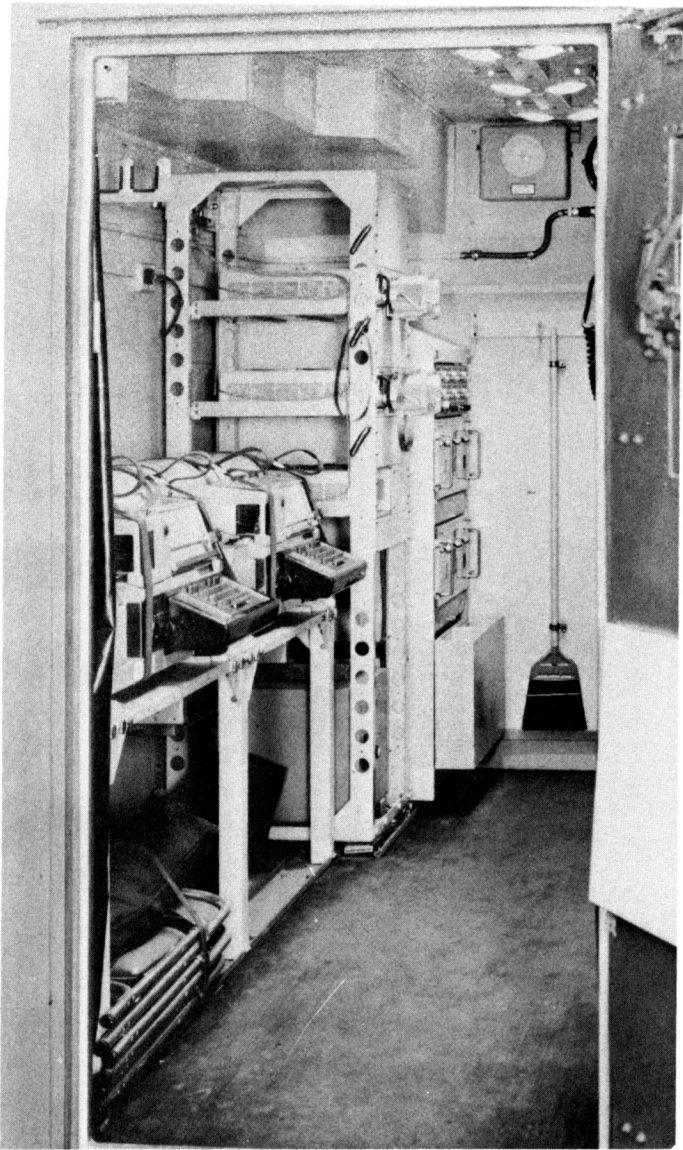
35E9-102-13

35E9-102-14

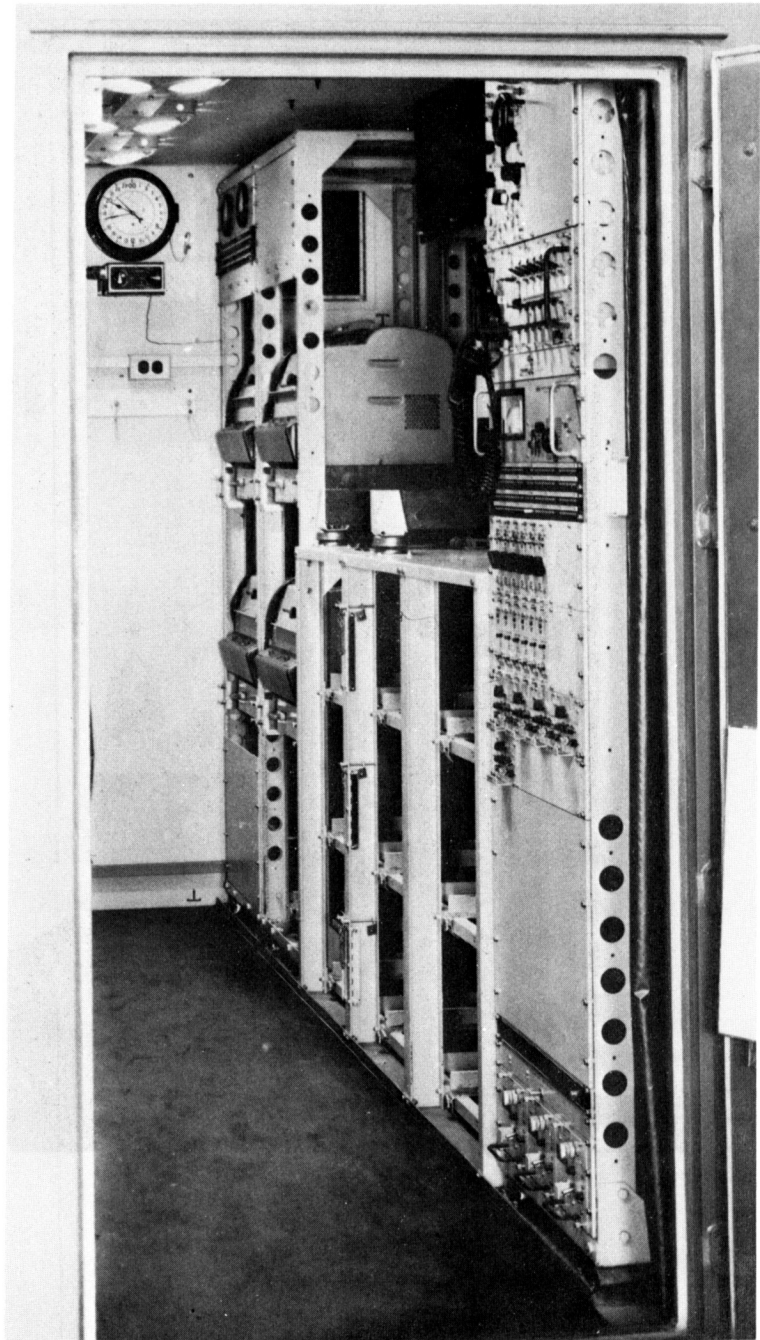
35E9-102-31

35E9-102-33

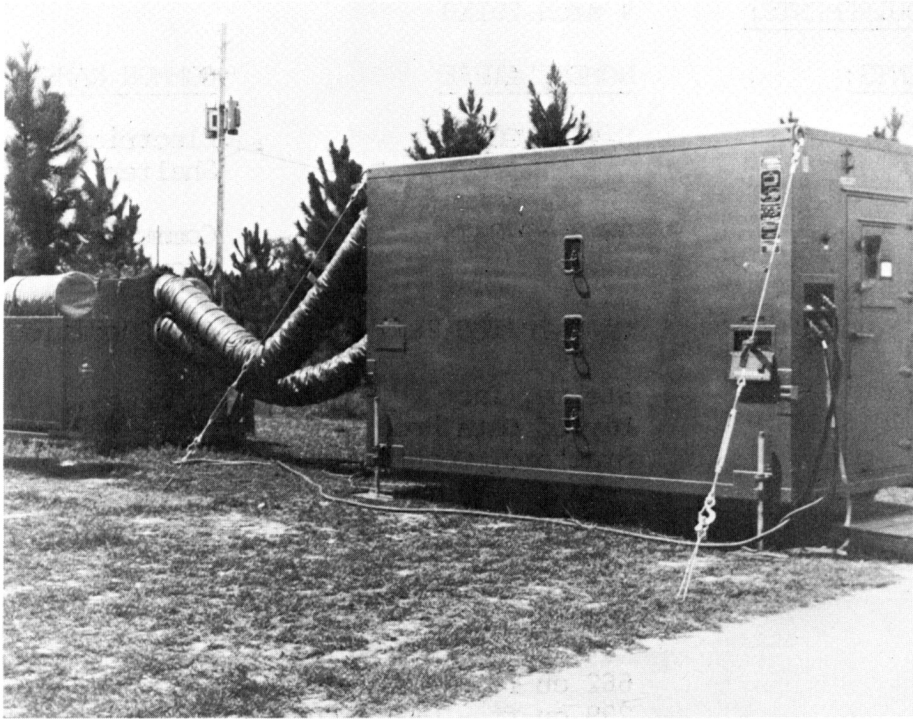
35E9-102-34



Interior View of AN/TGC-27



Interior View of AN/TGC-27



AN/TGC-28

TELETYPE COMMUNICATIONS CENTER

DESCRIPTION: The AN/TGC-28 consists of a deployable, air conditioned communications shelter equipped to perform the functions of message preparation, transmission and reception at the Control and Reporting Center (CRC) and the Control and Reporting Post (CRP). The AN/TGC-28 is capable of off-line preparation of teletype tapes; monitoring, patching and testing of equipment and circuits; and limited relay of incoming messages.

CAPABILITY: Five full duplex encrypted circuits

FREQUENCY RANGE: N/A

POWER INPUT: 120/208 VAC, 3-phase, 4-wire, 50/60/400 Hz, 30 kilowatts

SITING CRITERIA: The site area may have a slope no greater than ten percent. Special considerations for siting are not required.

ERECTION TIME: Approximately 30 minutes.

PERSONNEL REQUIREMENTS:

4 each 291X0

MAJOR COMPONENTS:

NOMENCLATURE

COMMON NAME

S-423/TGC-28

Electrical Equipment
Shelter

OW-39/TGC-28

Communications Central
Group

OA-8470/TGC-28

Air Conditioning Group

MANUFACTURER:

Stelma, Inc
Div of Data Products
Stamford, Conn

COST:

\$70,400.00 (Estimated)

WEIGHT:

4604 - AN/TGC-28
1640 - OA-8470/TGC-28

CUBE:

662 cu ft - AN/TGC-28
299 cu ft - OA-470/TGC-28

APPLICABLE TOs:

33A1-12-747-1

31W2-2TSA37-2

31W2-2T-112

31W4-2T-102

33A1-3-424-2

31W4-2TGC-132

31W4-2TGC-142

31W4-4-5-182

31W4-4-5-183

31W4-5-184

31W4-4-5-82

31W4-4-5-83

31W4-4-5-84

31W2-2T-102

31W4-4-278-2

31W4-4-276-2

KAM 143 (CONFIDENTIAL CRYPTO)

KAM 144 (CONFIDENTIAL CRYPTO)

KAM 145 (CONFIDENTIAL CRYPTO)

KAM 175 (CONFIDENTIAL CRYPTO)

KAM 176 (CONFIDENTIAL CRYPTO)

35E9-102-1

35E9-102-3

35E9-102-4

35E9-101-21

35E9-101-23

35E9-101-24

35E9-102-11

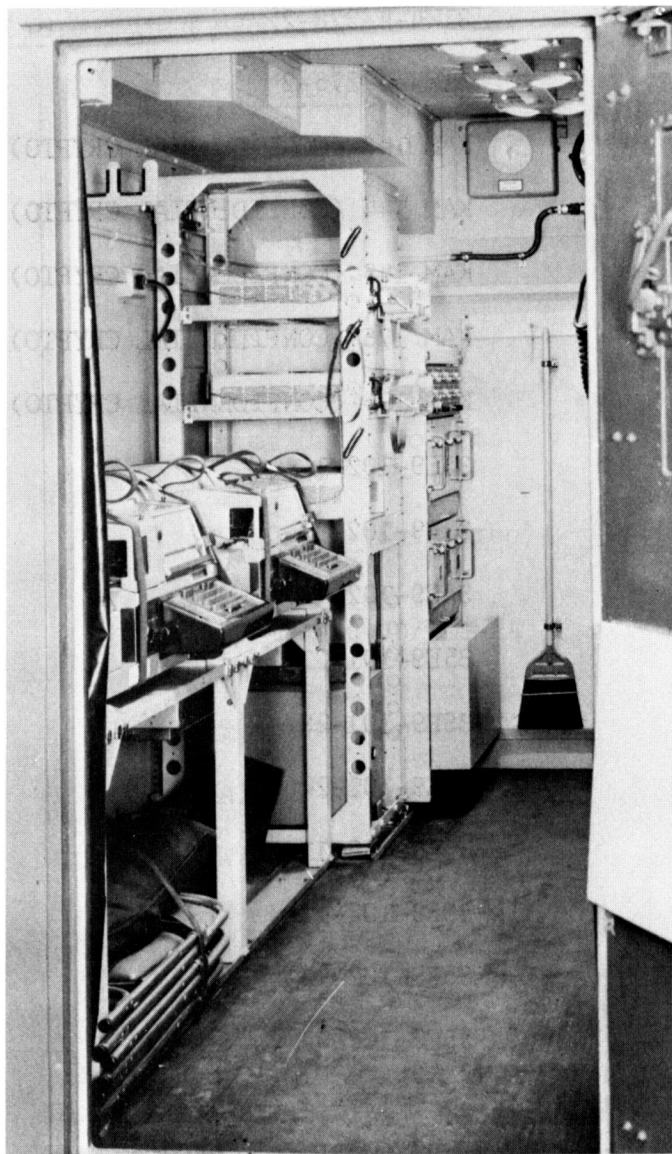
35E9-102-13

35E9-102-14

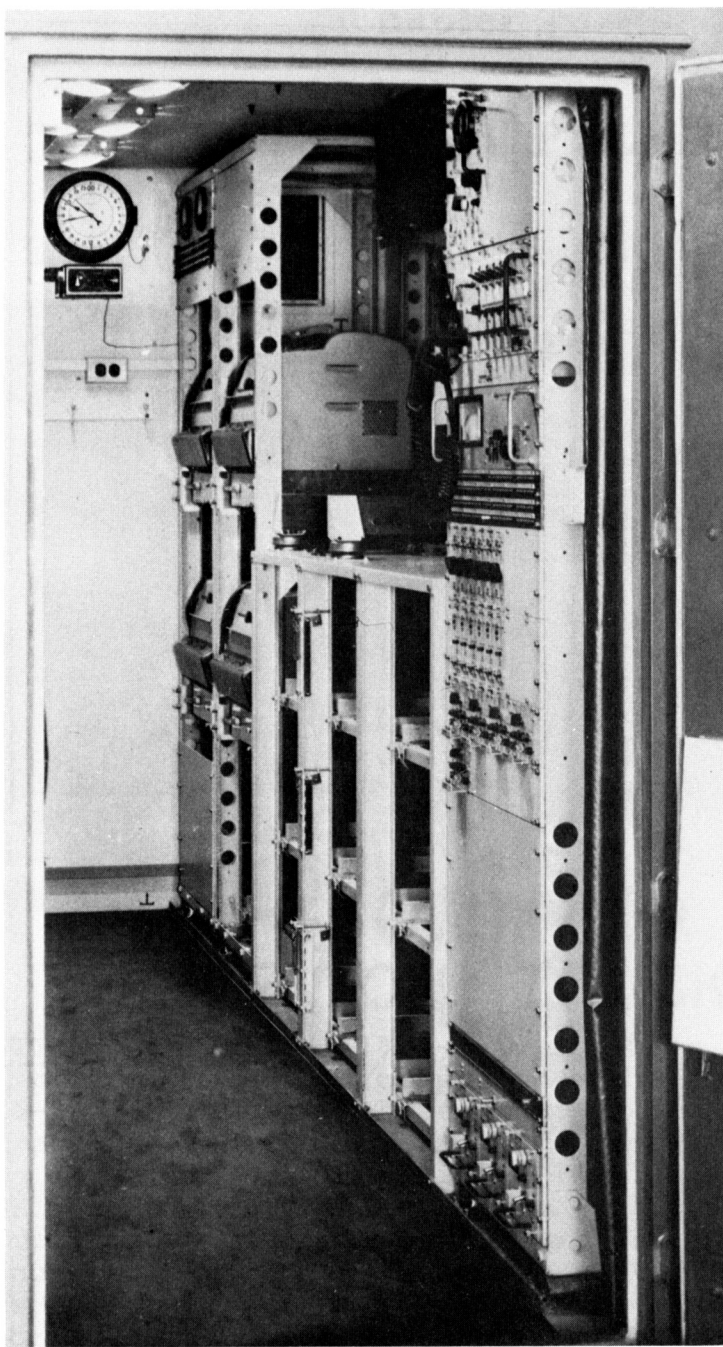
35E9-102-31

35E9-102-33

35E9-102-34



Interior View of AN/TGC-28



Interior View of AN/TGC-28