IBERLANT

TECHNICAL MANUAL

for

TRANSMITTING ANTENNA DISSIPATOR

MODEL TER-18KA-50U

THE TECHNICAL MATERIEL CORPORATION
MAMARONECK, N.Y. OTTAWA, CANADA

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DISSIPATOR

MODEL TER-18KA-50U

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, N.Y. **OTTAWA, CANADA**

NOTICE

FOREWORD

The TMC TRANSMITTING ANTENNA DISSIPATOR Model TER-18KA-50U is not equipped with blowers to provide forced air cooling. However, to satisfy customer requirements blowers are installed on special order. The TER-18KA-50U with blowers installed is in effect identical to the Model TER-25KA-50U therefore, the technical manual for TER-25KA-50U will apply as written when the following information is noted:
All references to TER-25KA-50U should be read as TER-18KA-50U.

UNCLASSIFIED

TECHNICAL MANUAL

for

TRANSMITTING ANTENNA DISSIPATOR

MODEL TER-25K

THE TECHNICAL MATERIEL CORPORATION

MAMARONECK, N. Y. OTTAWA, ONTARIO

IN-525 ISSUE DATE: 8 May 1962

THE TECHNICAL MATERIEL CORPORATION
COMMUNICATIONS ENGINEERS
700 FENIMORE ROAD MAMARONECK, N. Y.

Warranty

The Technical Materiel Corporation, hereinafter referred to as TMC, warrants the equipment (except electron tubes,* fuses, lamps, batteries and articles made of glass or other fragile or other expendable materials) purchased hereunder to be free from defect in materials and workmanship under normal use and service, when used for the purposes for which the same is designed, for a period of one year from the date of delivery F.O.B. factory. TMC further warrants that the equipment will perform in a manner equal to or better than published technical specifications as amended by any additions or corrections thereto accompanying the formal equipment offer.

TMC will replace or repair any such defective items, F.O.B. factory, which may fail within the stated warranty period, PROVIDED:

1. That any claim of defect under this warranty is made within sixty (60) days after discovery thereof and that inspection by TMC, if required, indicates the validity of such claim to TMC's satisfaction.
2. That the defect is not the result of damage incurred in shipment from or to the factory.
3. That the equipment has not been altered in any way either as to design or use whether by replacement parts not supplied or approved by TMC, or otherwise.
4. That any equipment or accessories furnished but not manufactured by TMC, or not of TMC design shall be subject only to such adjustments as TMC may obtain from the supplier thereof.

Electron tubes*furnished by TMC, but manufactured by others, bear only the warranty given by such other manufacturers. Electron tube warranty claims should be made directly to the manufacturer of such tubes.

TMC's obligation under this warranty is limited to the repair or replacement of defective parts with the exceptions noted above.

At TMC's option any defective part or equipment which fails within the warranty period shall be returned to TMC's factory for inspection, properly packed with shipping charges prepaid. No parts or equipment shall be returned to TMC, unless a return authorization is issued by TMC.

No warranties, express or implied, other than those specifically set forth herein shall be applicable to any equipment manufactured or furnished by TMC and the foregoing warranty shall constitute the Buyers sole right and remedy. In no event does TMC assume any liability for consequential damages, or for loss, damage or expense directly or indirectly arising from the use of TMC Products, or any inability to use them either separately or in combination with other equipment or materials or from any other cause.

*Electron tubes also include semi-conductor devices.

PROCEDURE FOR RETURN OF MATERIAL OR EQUIPMENT

Should it be necessary to return equipment or material for repair or replacement, whether within warranty or otherwise, a return authorization must be obtained from TMC prior to shipment. The request for return authorization should include the following information:

1. Model Number of Equipment.
2. Serial Number of Equipment.
3. TMC Part Number.
4. Nature of defect or cause of failure.
5. The contract or purchase order under which equipment was delivered.

PROCEDURE FOR ORDERING REPLACEMENT PARTS

When ordering replacement parts, the following information must be included in the order as applicable:

1. Quantity Required.
2. TMC Part Number.
3. Equipment in which used by TMC or Military Model Number.
4. Brief Description of the Item.
5. The *Crystal Frequency* if the order includes crystals.

PROCEDURE IN THE EVENT OF DAMAGE INCURRED IN SHIPMENT

TMC's Warranty specifically excludes damage incurred in shipment to or from the factory. In the event equipment is received in damaged condition, the carrier should be notified immediately. Claims for such damage should be filed with the carrier involved and not with TMC.

All correspondence pertaining to Warranty Claims, return, repair, or replacement and all material or equipment returned for repair or replacement, within Warranty or otherwise, should be addressed as follows:

THE TECHNICAL MATERIEL CORPORATION
Engineering Services Department
700 Fenimore Road
Mamaroneck, New York

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CHANGE NO. 1 TER-25K

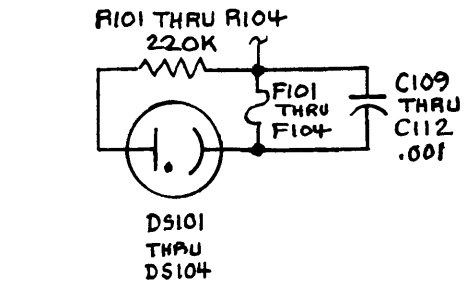
INSTRUCTION BOOK CHANGE NOTICE

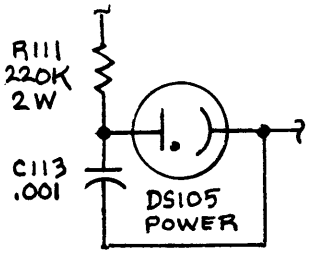
Date June 3, 1964

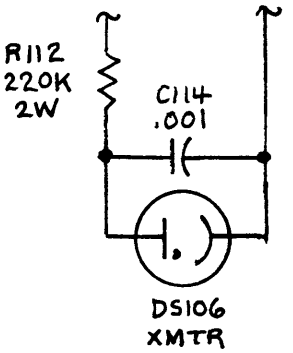
Manual affected: Transmitting Antenna Dissipator, TER-25K IN -525

Figure 4-1 (page 4-2). Relocate C109 through C114 capacitors as shown below: -

WAS







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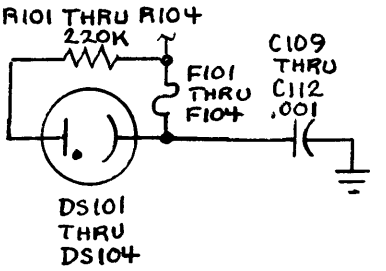

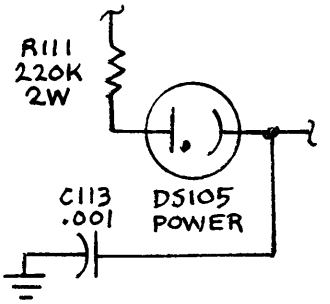

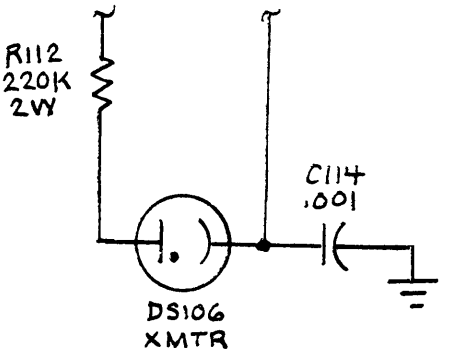

SHOULD ADDITIONAL COPIES OF THIS CHANGE NOTICE BE REQUIRED, PLEASE CONTACT:

THE TECHNICAL MATERIEL CORP., 700 Fenimore Road, Mamaroneck, New York

Attn.: Director of Eng. Services.

CHANGE NO. 2

INSTRUCTION BOOK CHANGE NOTICE

Date March 23, 1971

Manual affected: Transmitting Antenna Dissipator TER-25K **IN** 525

1. Page 1-1 paragraph 1-2, change to read as follows:

   The TER-25K is capable of dissipating RF energy in the order of 25 kilowatts average and 50 kilowatts peak envelope power (PEP) within the frequency range of d-c to 30 megacyles. The Unit, shown in figures 1-1 and 1-2, is housed in a heavy gauge steel cabinet equipped with locking casters for mobility and features door interlocks for personnel safety.

2. Table 6-1 (on page 6-1)

   (a) Change DISSIPATION RATING to

   50 kw peak envelope power (PEP)

   (b) Change FREQUENCY RANGE to

   d-c to 30 mc (TER-25KC wattmeter range 2 to 30 mc.)

   Table 2-1 (on page 2-3)

   (a) Add asterisk to TER-25KC-50U and TER-25K-70U.

   (b) On bottom of Table add: *Wattmeter frequency range 2 mc to 30 mc.

SHOULD ADDITIONAL COPIES OF THIS CHANGE NOTICE BE REQUIRED, PLEASE CONTACT:

THE TECHNICAL MATERIEL CORP., 700 Fenimore Road, Mamaroneck, New York 10543

Attn.: Head, Documentation Section

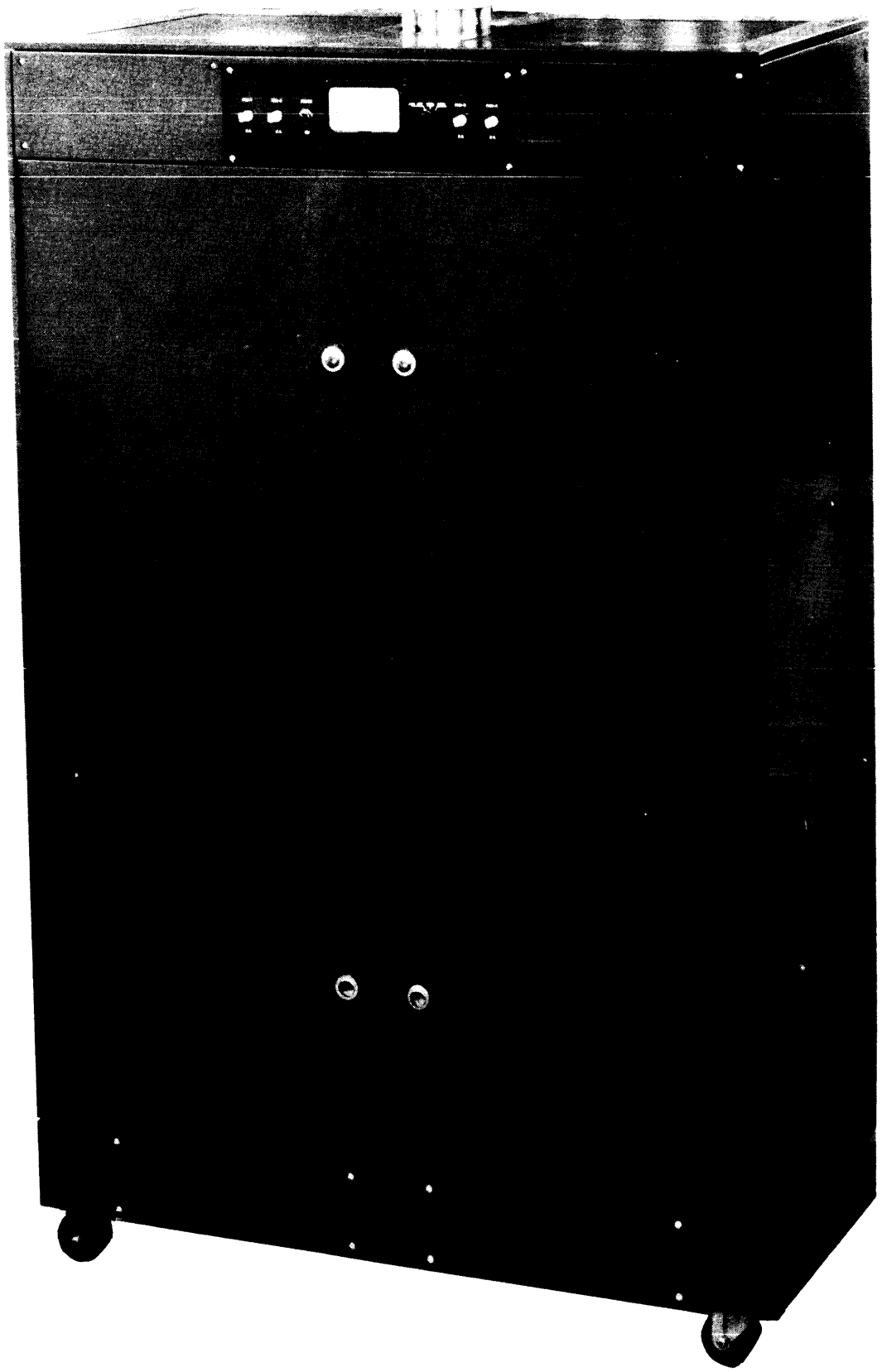

FIGURE 1-1. FRONT ANGLE VIEW, TER-25KC TRANSMITTING ANTENNA DISSIPATOR

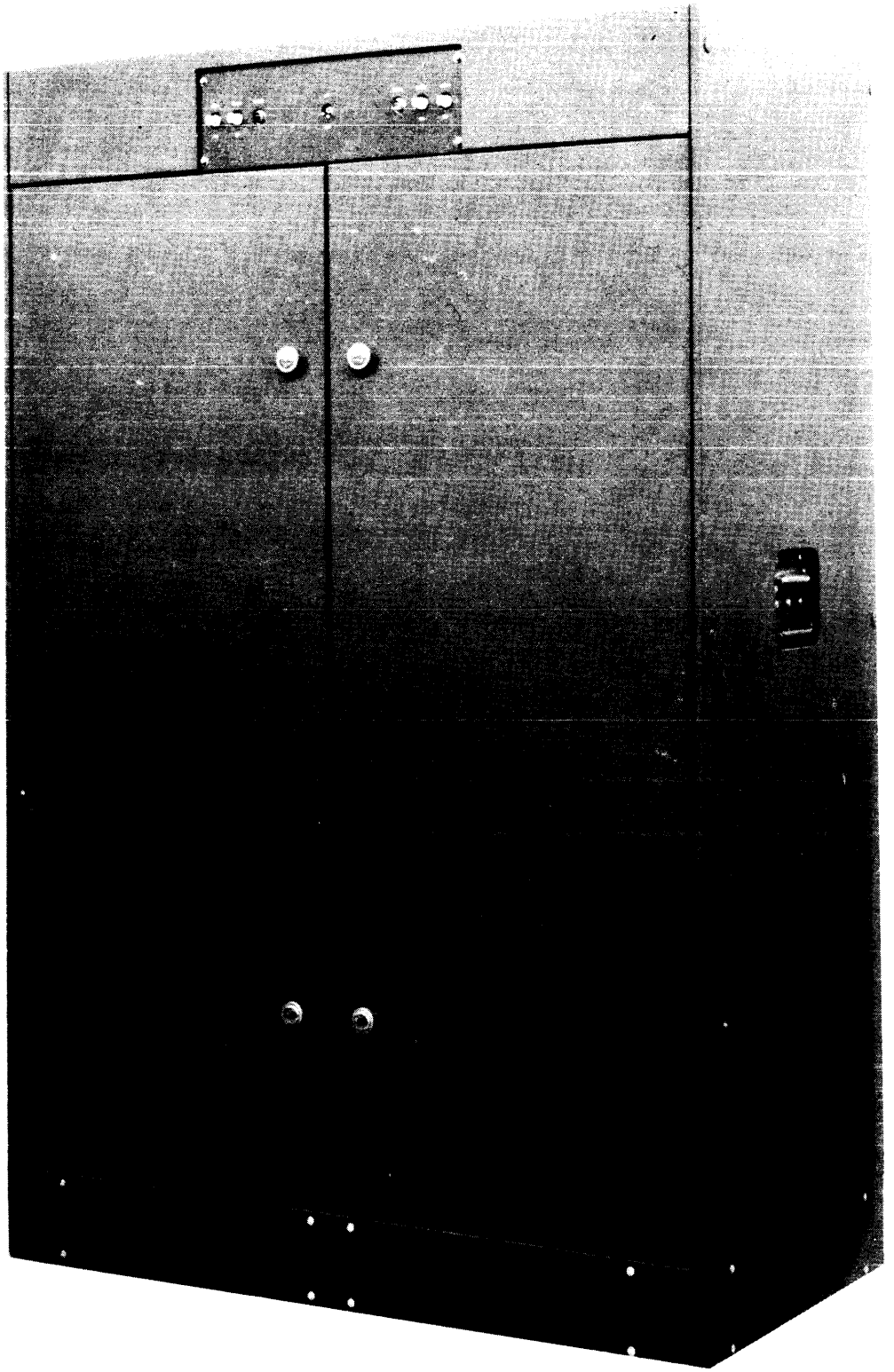

FIGURE 1-2. FRONT ANGLE VIEW, TER-25KA TRANSMITTING ANTENNA DISSIPATOR

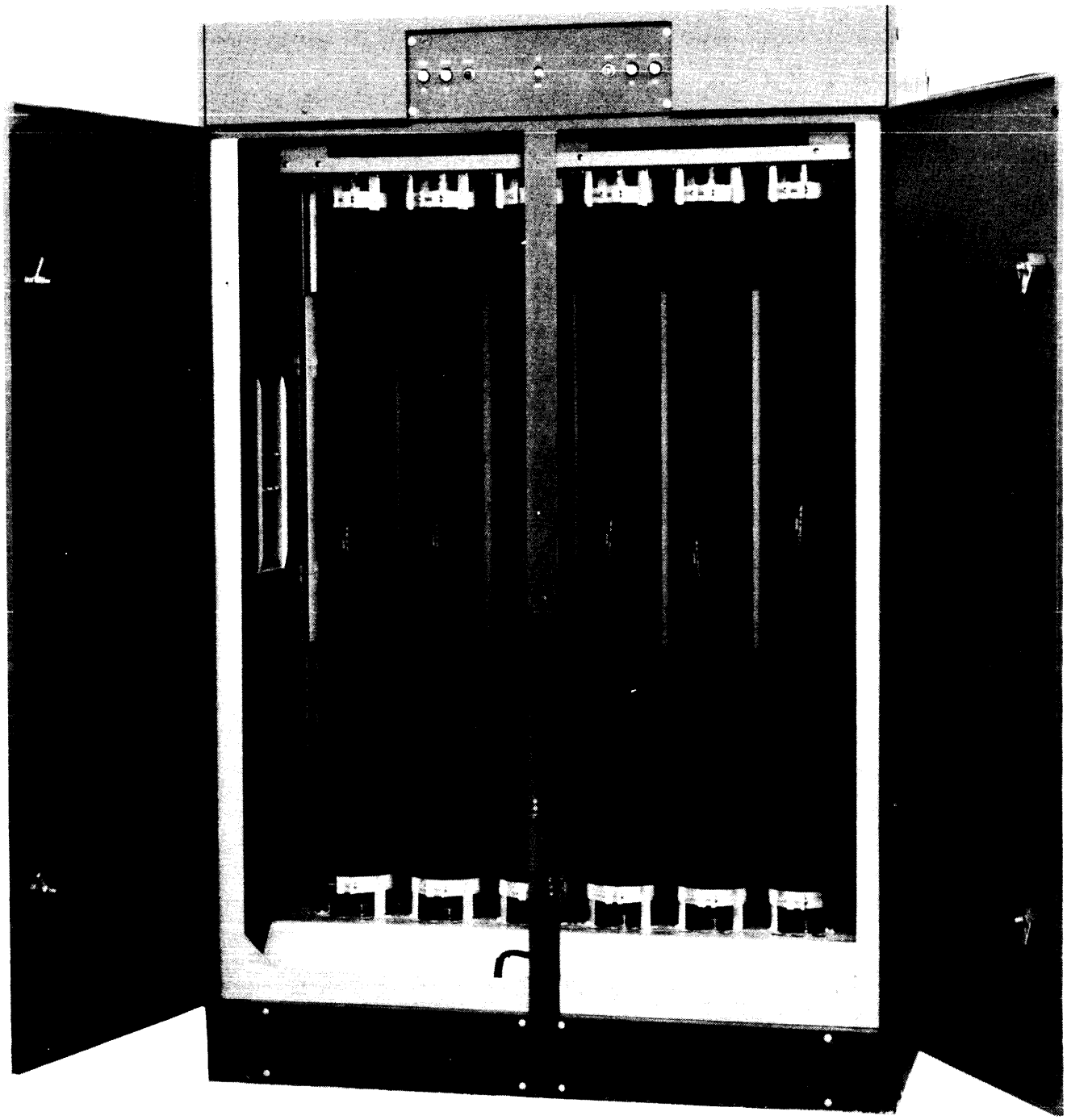

FIGURE 1-3. FRONT ANGLE VIEW, TER-25KA TRANSMITTING ANTENNA DISSIPATOR WITH DOORS OPEN

SECTION 1 - GENERAL DESCRIPTION

1-1 PURPOSE

Basically, the Model TER-25K Transmitting Antenna Dissipator is a flat resistive termination. It is used at transmitting sites as a dummy load for routine off-the-air tuning of transmitters or for termination of Rhombic, Sloping Vee, or other types of antennas requiring resistive termination.

1-2 DESCRIPTION

The TER-25K is capable of dissipating RF energy of the order of 25 kilowatts average and 59 kilowatts peak, over a frequency range of d-c to 30 megacycles. The unit, shown in figures 1-1 and 1-2, is housed in a heavy gauge steel cabinet equipped with locking casters for mibility and transmit interlocks for personnel safety. The resistive load of the TER-25K consists of the six low reactance glass resistors shown in figure 1-3. Cooling of these resistors is accomplished by means of four base-mounted fans that operate on 115 VAC or 230 VAC. As optional equipment the TER-25K may contain a directional radio-frequency wattmeter to monitor input power and reflected power for computation of VSWR. The TER-25K series is currently available in five basic models:

TER-25KA-50U	50-ohm unbalanced load
TER-25KC-50U	50-ohm unbalanced load with directional coupler and wattmeter
TER-25KA-70U	70-ohm unbalanced load
TER-25KC-70U	70-ohm unbalanced load with directional coupler and wattmeter
TER-25K-600B	600-ohm balanced load

In addition, the TER-25K may be equipped with a wide variety of RF fittings to mate this unit to many standard transmission systems. The complete part number includes a suffix indicating the type of fitting with which the unit comes equipped. For available fittings and ordering information, see Table 2-1, Installation Data. For listing of TER-25K specifications see Table 6-1.

NOTE

Dissipation ratings are for TER-25K operating with blowers on; with blowers off, TER-25K will dissipate up to 18 kilowatts.

SECTION 2 - INSTALLATION

2-1 GENERAL

The TER-25K is shipped in one crate and is completely assembled at the time of delivery. Each unit has been factory tested and arrives ready to be placed directly in service. No preliminary adjustments are necessary.

2-2 UNPACKING

When the unit is uncrated it should be inspected for any damage incurred in transit. Although the carrier is liable for any damage to the equipment, TMC will assist in describing and providing for repair or replacement of damaged items.

2-3 INSTALLATION

TER-25K is designed to be used indoors mainly for off-the-air tuning. Reference data for installation, including overall dimensions and weights, is shown in Table 2-1. Unless otherwise specified in order, TER-25K cooling blowers are wired to operate from a 115 VAC line voltage. If 230 VAC line voltage is used, change the four 2-amp fan fuses to 1-amp fuses and make the simple wiring modification per Figure 4-1 or 4-2. Blowers must be on in order to dissipate more than 18 kilowatts. J103 is available for a safety interlock system with the transmitter. In this system, opening either the left or right door on the TER-25K disables the transmitter and the XMTR light on the TER-25K goes out. Also, with the TER-25K POWER switch in OFF position, the transmitter becomes disabled, preventing transmitter output with the TER-25K blowers off. Refer to Figures 4-1 and 4-2 for appropriate

connections. A jack (J104) is located in the vicinity of the output, with accompanying plug (P104) for monitoring output on an ammeter, if desired. This circuit is designed to develop a representative voltage across a low impedance load (50-ohm), such as TMC's model FSA-2 Frequency Spectrum Analyzer.

TABLE 2-1. INSTALLATION DATA, TER-25K

TMC MODEL NUMBER	FREQUENCY RANGE	AVERAGE POWER (WATTS)	PEAK ENVELOPE POWER (WATTS)	DIRECTIONAL COUPLER AND METER	HEIGHT (INCHES)	WIDTH (INCHES)	DEPTH (INCHES)	APPROX. WEIGHT (LBS)	SHIPPING DATA: APPROX. VOLUME (CU.FT.)	SHIPPING DATA: APPROX. WEIGHT (LBS.)	2 BOWL ASSEMBLY TERMINALS (PORCELAIN WITH 1/2" RODS)	OPTIONAL MOUNTING PLATE CONNECTOR ASSEMBLIES: AX-276 (50Ω) LC Adapter	AX-277 (70Ω) LC Adapter	AX-278 (50Ω) EIA 1-5/8" to 3-1/8" Adapter	AX-279 (70Ω) EIA 1-5/8" to 3-1/8" Adapter	AX-300 (50Ω) QDL Adapter	AX-301 (70Ω) QDL Adapter
TER-25KA-50U	Dc to 30mc	25,000	50,000		70	44	22	420	52	625		X		X		X	
TER-25KC-50U	Dc to 30 mc	25,000	50,000	X	70	44	22	425	52	630		X		X		X	
TER-25KA-70U	Dc to 30 mc	25,000	50,000		70	44	22	420	52	625			X		X		X
TER-25KC-70U	Dc to 30 mc	25,000	50,000	X	70	44	22	425	52	630			X		X		X
TER-25K-600B	4-28 mc	25,000	50,000		70	44	22	420	52	625	X						

SECTION 3 - OPERATION

3-1 GENERAL

Basically, the TER-25K is a flat resistive termination. It requires no power supplies or tuning adjustments.

3-2 INDICATORS

Lights on the monitor panel at the top of the unit indicate circuit conditions as described in Table 3-1. A wattmeter with accompanying switch is included in the TER-25KC Models. With switch set in FWD position, forward power is indicated; in REFL position, reflected power is indicated. These two figures may be used to calculate VSWR.

TABLE 3-1. INDICATOR LIGHTS

PANEL MARKING	SYMBOL	LIGHT INDICATES:
FAN-1	DS101	Fan #1 fuse is blown and fan is off.
FAN-2	DS102	Fan #2 fuse is blown and fan is off.
POWER	DS105	A-c power supplied to fans.
XMTR	DS106	Transmitter in operation.
FAN-3	DS103	Fan #3 fuse is blown and fan is off.
FAN-4	DS104	Fan #4 fuse is blown and fan is off.

3-3 OPERATION

Both left and right doors and AC switch must be on (up position) before TER-25K can operate. In the on position (up), the AC switch supplies line voltage to the four blowers and enables the transmitter. As a safety feature, opening either door disables the transmitter although the blowers remain on. With doors closed, setting the AC switch to OFF disables transmitter and turns off blowers.

SECTION 4 - THEORY OF OPERATION

4-1 GENERAL

The TER-25K consists of 6 (six) 300-ohm ±5%, 3 kilowatt resistors. The resistors are special glass cylinders with a resistive element electro-fused into the glass. The protective coating is a baked-on silicone film. Electrical connections are made positive by fired-on silver bands. Operation above 18 kilowatts requires forced-air cooling (blowers on).

4-2 CIRCUIT ANALYSIS

Figures 4-1 and 4-2 show schematic diagrams for the TER-25K 50 and 70-ohm model C (with meter) and 50 and 70-ohm model A (without meter), respectively. J103 is part of the interlock circuit designed to interrupt power in the transmitter when the doors of the TER-25K are opened. Power present in the TER-25K is indicated by DS-105; transmitter operation is indicated by DS-106. Each fan has a protective fuse with a neon bulb to indicate a blown fuse. In model C units (see Figure 4-1) a wattmeter (M101) samples output through directional coupler DC101. This meter works together with S104 to indicate forward and reflected power. The wiring schematic for TER-25K-600B is currently in the development stage and is not available at the time of this publication. J104 and P104 are included for output monitoring purposes. J104 has a coil mounted in it in the vicinity of the output. A current is generated in the coil and, when a low impedance (50-ohm) monitoring device is attached across the output, a representative voltage will be read. TMC's model FSA-2 Frequency Spectrum Analyzer is generally used here.

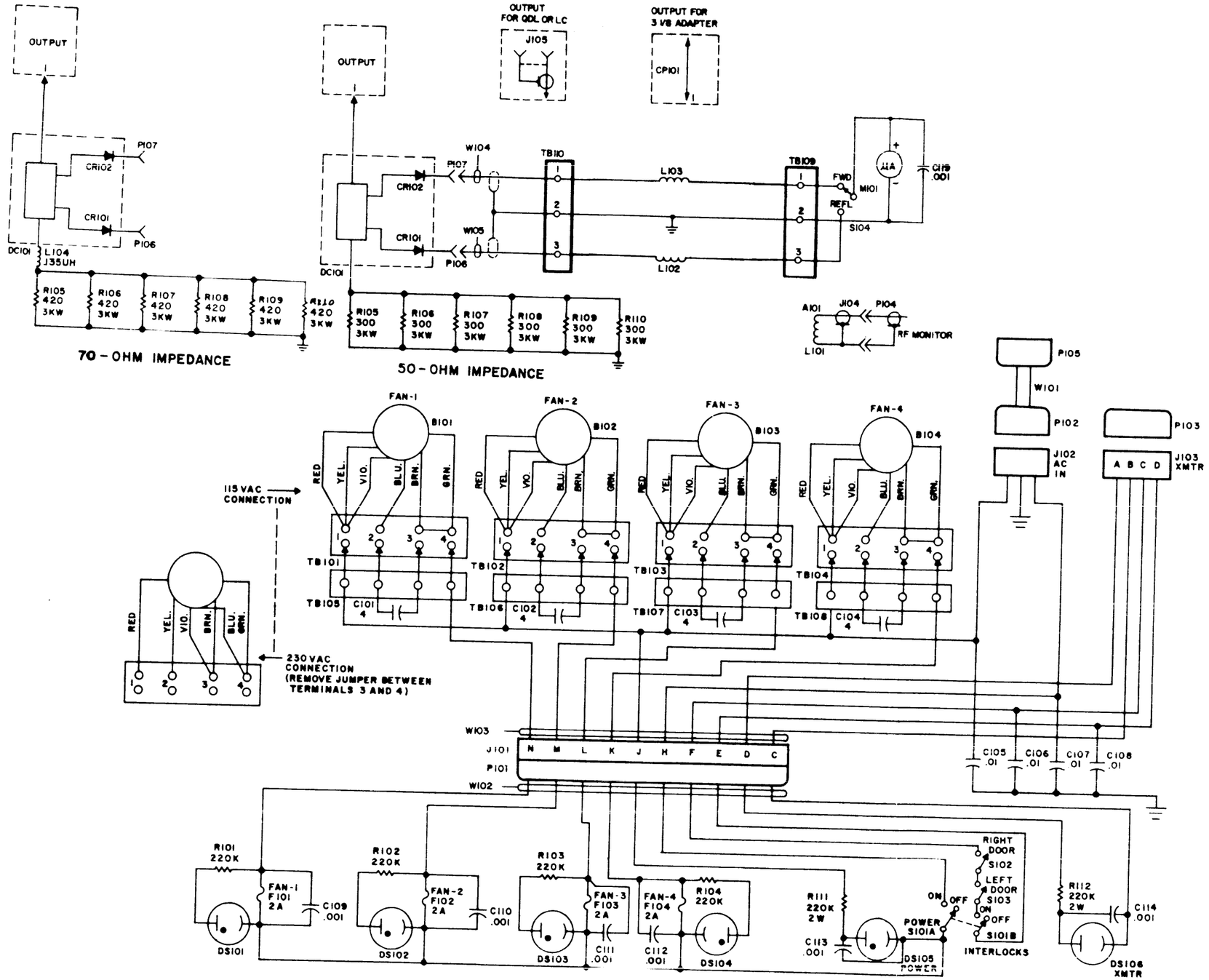

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FIGURE 4-1. SCHEMATIC DIAGRAM, TER-25KC-50U AND -70U

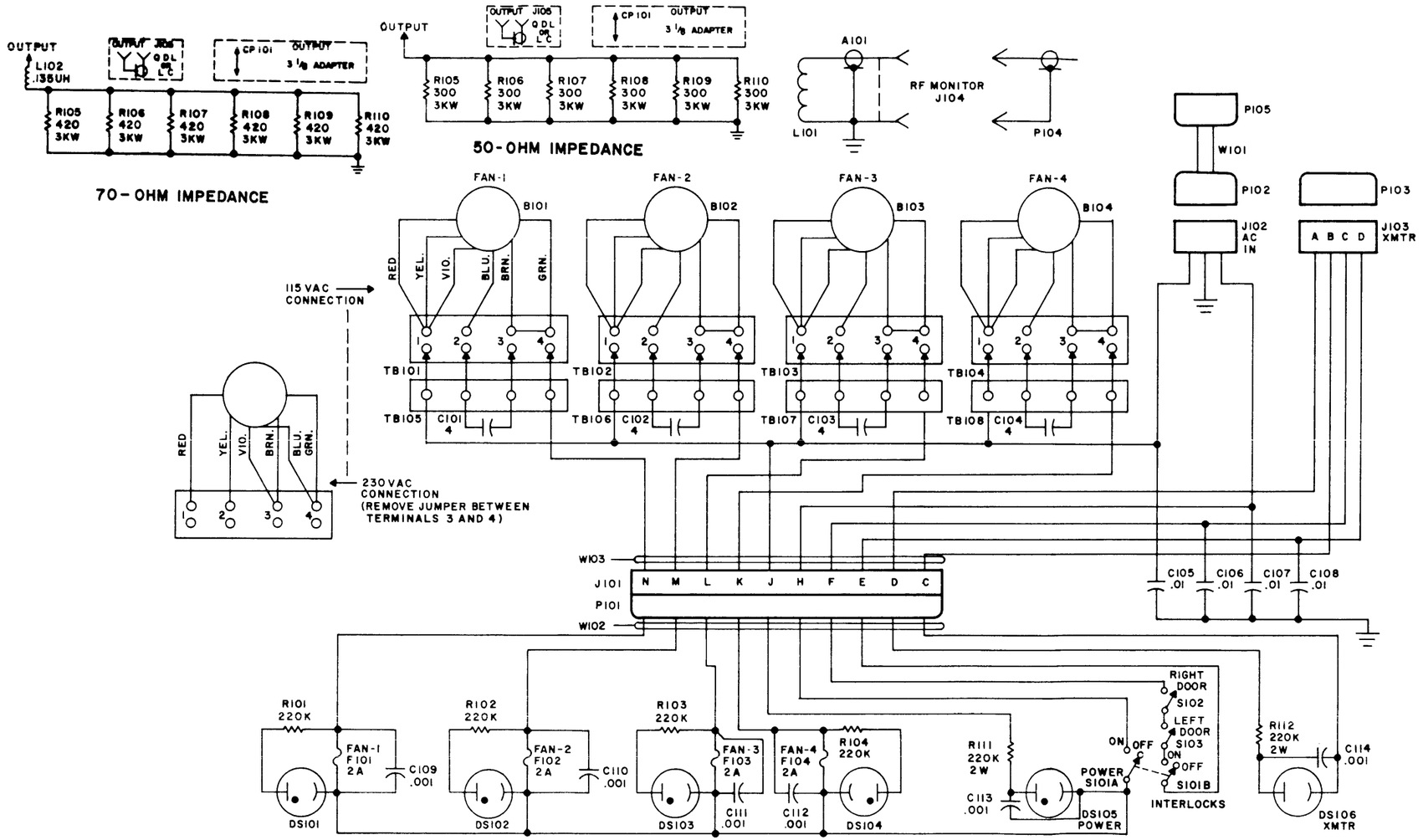

FIGURE 4-2. SCHEMATIC DIAGRAM, TER-25KA-50U AND -70U

SECTION 5 - MAINTENANCE

5-1 GENERAL

The TER-25K normally requires no maintenance other than a periodic cleaning of electrical connections and a check that all external and internal connections are properly tightened. Interlock switches should be periodically checked to insure personnel safety. The cooling system plays an important part in the performance and life of this unit; blower fuses and indicator lamps should be checked often by the operator. Direction of fan rotation is also important. When replacing a fan, refer to figure 4-1 or 4-2 for the correct wiring connections.

SECTION 6 - TECHNICAL SPECIFICATIONS

6-1 TECHNICAL SPECIFICATIONS FOR TER-25K

Table 6-1 lists technical specifications to which the TER-25K series of Transmitting Antenna Dissipators are built.

TABLE 6-1 TECHNICAL SPECIFICATIONS, TER-25K

ITEM	CHARACTERISTICS
FREQUENCY RANGE:	D-c to 30 mc.
DISSIPATION RATINGS:	25 kw average 50 kw peak
IMPEDANCE:	50Ω unbalanced, 70Ω unbalanced or 600Ω balanced (See Table 2-1)
COOLING:	Filtered air blower system by means of 4 base mounted fans.
INPUT TERMINALS:	Coaxial connectors on unbalanced units. Insulator bowls on balanced units. (See Table 2-1)
OPERATING TEMPERATURE:	-40^{o} C to $+75^{o}$ C ambient
AC POWER REQUIREMENTS:	115/230 VAC, 1 phase, 50-60 CPS. Approx. 400 watts.
INSTALLATION AND SHIPPING DATA:	See Table 2-1.
COMPONENTS AND CONSTRUCTION:	Equipment manufactured in accordance with JAN/MIL specifications wherever practicable.

SECTION 7 - PARTS LIST

INTRODUCTION

Reference designations have been assigned to identify all maintenance parts of the equipment. They are used for marking the equipment (adjacent to the part they identify) and are included on drawings, diagrams, and the parts list. The letters of a reference designation indicate the kind of part (generic group), such as resistor, amplifier, electron tubes, etc. The number differentiates between parts of the same generic group. Parts of the TER-25K are numbered in the 100 series. A socket associated with a particular plug-in device, such as electron tube or fuse, is identified by a reference designation which includes the designation of the plug-in device. For example, the socket for fuse F101 is designated XF101. Column 1 lists the reference designations (symbol) in alphabetical and numerical order. Column 2 gives the names and describes the various parts. Major part assemblies are listed in their entirety; subparts of a major assembly are listed in alphabetical and numerical order with reference to their major assemblies. Column 3 indicates how the part is used within a major component. Column 4 lists each Technical Materiel Corporation part number.

A parts list follows for TER-25KA-50U with variations noted for TER-25KC-50U, TER-25KA-70U and TER-25KC-70U.

TRANSMITTING ANTENNA DISSIPATOR
MODEL TER-25KA-50U

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
A101	PROBE ASSEMBLY, consists of J104 and L101	Output Monitor Connection	AJ-100
B101	BLOWER, axial: 115/230V, 50/60 CPS, single phase, 3400 RPM, reversible, 740 CFM	Cooling	BL-108
B102	Same as B101	Cooling	
B103	Same as B101	Cooling	
B104	Same as B101	Cooling	
C101	CAPACITOR, fixed: paper, 4 uf ±10%, 600 WVDC, Char. F	FAN-1	CP41B1FF405K
C102	Same as C101	FAN-2	
C103	Same as C101	FAN-3	
C104	Same as C101	FAN-4	
C105	CAPACITOR, fixed: mica, .01 uf ±10%, 500 WVDC, Char. B	RF bypass	CM35B103K
C106	Same as C105	RF bypass	
C107	Same as C105	RF bypass	
C108	Same as C105	RF bypass	

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
C109	CAPACITOR, fixed: mica, .001 uf ±10%, 500 WVDC, Char. B	RF bypass	CM20B102K
C110	Same as C109	RF bypass	
C111	Same as C109	RF bypass	
C112	Same as C109	RF bypass	
C113	Same as C109	RF bypass	
C114	Same as C109	RF bypass	
DS101	LAMP ASSEMBLY, consists of XF101 fuse holder cap with neon lamp.	FAN-1 fuse warning	FH-104-3 (cap only)
DS102	Same as DS101. Part of XF102 fuse holder cap.	FAN-2 fuse warning	
DS103	Same as DS101. Part of XF103 fuse holder cap.	FAN-3 fuse warning	
DS104	Same as DS101. Part of XF103 fuse holder cap.	FAN-4 fuse warning	
DS105	LAMP, neon: NE-51 T-3-1/4, miniature bayonet base, 110-125V, 1/25 watt	POWER light	BI-100-51
DS106	Same as DS105	XMTR light	
F101	FUSE, cartridge: 2 amp, slow-blowing, 1/4 dia. x 1-1/4 long	FAN-1 protection	FU-102-2

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
F102	Same as F101	FAN-2 protection	
F103	Same as F101	FAN-3 protection	
F104	Same as F101	FAN-4 protection	
J101	CONNECTOR, receptacle: 14-pin, female	Main wiring and base wiring disconnect	JJ-242-4S
J102	CONNECTOR, receptacle: AC 3-wire, male	AC input	PL-133-NG
J103	CONNECTOR, receptacle: male	XMTR connection safety interlock	MS3102A-14S-2P
J104	CONNECTOR, receptacle: RF coaxial, QDS series (part of A101). Not a replaceable item.	RF MONITOR jack	
L101	COIL, fixed: RF (2 turns of #12 magnet wire) Part of A101. Not a replaceable item.	Monitor Output pickup	
P101	CONNECTOR, plug: 14-pin, male, with hood	Mates with J101	PL-255-4P
P102	CONNECTOR, plug: AC, 3-wire, female	Mates with J102	PL-134-NG

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
P103	CONNECTOR, plug: Mil type MS3106B14S-2S, female	Mates with J103	MS3106B14S-2S
P104	CONNECTOR, plug: RF coaxial, series QDS	Mates with J104	PL-149
P105	CONNECTOR, plug: AC, 3-wire, male	Mates with line voltage supply	PL-135-NG
R101	RESISTOR, fixed: composition, 220K. Part of XF101. Not a replaceable item.	Voltage dropping DS101	
R102	Same as R101. Part of XF102. Not a replaceable item.	Voltage dropping DS102	
R103	Same as R101. Part of XF103. Not a replaceable item.	Voltage dropping DS103	
R104	Same as R101. Part of XF104. Not a replaceable item.	Voltage dropping DS104	
R105	RESISTOR, fixed: glass, 300-ohms ±5%, 3000 watts, 5 in. dia. x 48-1/4 in. long.	Part of 50-ohm load	RR-120-300
R106	Same as R105	Part of 50-ohm load	

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
R107	Same as R105	Part of 50-ohm load	
R108	Same as R105	Part of 50-ohm load	
R109	Same as R105	Part of 50-ohm load	
R110	Same as R105	Part of 50-ohm load	
R111	RESISTOR, fixed: composition, 220K ±10%, 2 watt	Voltage dropping DS105	RC42GF224K
R112	Same as R111	Voltage dropping DS106	
S101 A, B	SWITCH, toggle: DPDT; 6 amps at 125V; 3 amps at 250V	POWER switch	ST-103-25-73
S102	SWITCH, micro: SPDT, 15 amps at 120V	Right door interlock	SW-230
S103	Same as S102	Left door interlock	
TB101	TERMINAL BOARD, barrier: 4 binder head #6-32 thread screw terminals, bakelite insulation.	FAN-1 connection	TM-102-4
TB102	Same as TB101	FAN-2 connection	

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
TB103	Same as TB101	FAN-3 connection	
TB104	Same as TB101	FAN-4 connection	
TB105	TERMINAL BOARD, fanning: 4 solder terminals, left end feed, right angle type.	FAN-1 connection	TM-105-4AR
TB106	Same as TB105	FAN-2 connection	
TB107	Same as TB105	FAN-3 connection	
TB108	Same as TB105	FAN-4 connection	
W101	CABLE ASSEMBLY, power: length as per customer request. Consists of a-c cable, P102 and P105.	AC power cable	CA-645-1
W102	CABLE ASSEMBLY, harness: consists of harness and P101.	Main wiring harness	CA-643
W103	CABLE ASSEMBLY, harness: consists of harness, J101, J102, and J103.	Base wiring harness	CA-644
XDS105	SOCKET, lamp: for NE-51 T-3-1/4 neon lamp, with red lens	Socket for DS105	TS-106-1

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
XDS106	Same as XDS105	Socket for DS105	
XF101	HOLDER ASSEMBLY, fuse: for cartridge fuse 1/4 dia. x 1-1/4 long. Consists of holder, R101 and DS101.	Holder for F101	FH-104-3
XF102	Same as XF101. Consists of holder, R102 and DS102.	Holder for F102	
XF103	Same as XF101. Consists of holder, R103 and DS103.	Holder for F103	
XF104	Same as XF101. Consists of holder, R104 and DS104.	Holder for F104	
The parts list for TER-25KC-50U is the same as that for TER-25KA-50U, with the following additions:			
C115	CAPACITOR, fixed: mica, .001 uf ±10%, 500 WVDC, Char. B	RF bypass	CB20B102K
C116	Same as C115	RF bypass	
C117	Same as C115	RF bypass	
C118	Same as C115	RF bypass	
C119	CAPACITOR, fixed: mica, .01 uf ±10%, 500 WVDC, Char. B	RF bypass	CM35B103K

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
CR101	DIODE, detection: for directional coupler, 2-30mc, 60kw average. Part of DC101. Replaceable item.	Directional coupler detector	DD-103
CR102	Same as CR101	Directional coupler detector	
DC101	COUPLER, directional: 60kw, 2-30mc, 50-ohm impedance.	Directional coupler for wattmeter	DC-101
L102	COIL, fixed: RF, 2.5 mh ±10%, 100 ma	Choke	CL-140-1
L103	Same as L102	Choke	
M101	METER, output: 0-100 ua movement, 2000-ohms resistance, designed for use with DC101.	Output wattmeter	MR-147
P106	CONNECTOR, plug: P/O DC101	DC101 disconnect	PL-192
P107	Same as P106	DC101 disconnect	
S104	SWITCH, toggle: DPDT, on-none-momentary, 3 amps at 250V, 6 amps at 125V	FWD/REFL meter switch	ST-105

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
TB109	TERMINAL BOARD, barrier: 4 binder head #6-32 thd. screw terminals with solder lugs, bakelite insulation.	Filter disconnect	TM-100-3
TB110	Same as TB109	Filter disconnect	
The parts list for TER-25KA-70U is the same as that for TER-25KA-50U with the following substitutions and additions:			
S R105	RESISTOR, fixed: glass, 420-ohms ±5%, 3000 watts, 5 in. dia. x 48-1/4 in. long.	Part of 70-ohm load	RR-120-420
S R106	Same as R105	Part of 70-ohm load	
S R107	Same as R105	Part of 70-ohm load	
S R108	Same as R105	Part of 70-ohm load	
S R109	Same as R105	Part of 70-ohm load	
S R110	Same as R105	Part of 70-ohm load	
A L102	COIL, fixed: 135 uh	Compensating coil	CL-285

S = Substitution
A = Addition

The parts list for TER-25KC-70U is the same as that for TER-25KC-50U with the following substitutions and additions:

SYMBOL	DESCRIPTION	FUNCTION	TMC PART NO.
S R105	RESISTOR, fixed: glass, 420-ohms ±5%, 3000 watts, 5 in. dia. x 48-1/4 in. long.	Part of 70-ohm load	RR-120-420
S R106	Same as R105	Part of 70-ohm load	
S R107	Same as R105	Part of 70-ohm load	
S R108	Same as R105	Part of 70-ohm load	
S R109	Same as R105	Part of 70-ohm load	
S R110	Same as R105	Part of 70-ohm load	
A L104	COIL, fixed: .135 uh	Compensating coil	CL-285

S = Substitution
A = Addition

NOTE: For applicable optional mounting plate assemblies see Table 2-1. When reordering these assemblies, specify "AX" number.