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KIT 374

INSTALLATION INSTRUCTIONS

MODIFICATION OF TER-18KC

				S 1308
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COMPILED:	CHECKED:	APPD:	SHEET 1 OF 11	
TITLE: KIT 374 Modification of TER-18KC Installation Instructions				

I. EQUIPMENT EFFECTED:

TMC Model TER-18KC, Transmitting Antenna Dissipator

II. PURPOSE:

To allow the TER-18KC to dissipate more power by providing air cooling to the resistor units.

III. MATERIAL REQUIRED:

Table 1 lists the material supplied with the field change Kit.

Table 2 lists the tools necessary to accomplish this modification. These are standard tools and are not supplied with the Kit.

TABLE 1

ITEM	QTY	P/N	DESCRIPTION	SYMBOL
1	1	A-2177-4	Bd Assy, Capacitor	
2	4	AD103-10	Filter, Air	
3	2	BI100-51	Lamp, Neon	DS105,6
4	4	BL108	Fan, Axial	B101,2,3,4
5	6 ft	BS100	Solder, Tin Alloy	
6	1	CA409-148-6.00	Cbl Assy, Jumper	
7	1	CA643	Cable, Main	
8	1	CA644	Cable, Base	
9	2	CK517	Diagram, Schematic	
10	6	CM20F102G03	Capacitor, Fxd, Mica	C109,10,11,12,13,14
11	4	CP41B1FF405K	Capacitor, Fxd, Pap	C101,2,3,4
12	4	FH104-3	Fuseholder	XF101,2,3,4
13	4	FU102-2	Fuse, Ctg	F101,2,3,4
14	1	1N525	Instruction Manual	
15	1	LD974/MS2668	Panel, Meter	
16	8	MS1985	Bracket, Motor Mtg	
17	4	MS2662	Bracket, Cap Mtg	
18	1	NP362	Nameplate, Modif	
19	1	PL133NG	Connector, Recp, AC	
20	1	PL134NG	Connector, Pl, AC	
21	1	PL135NG	Connector, Pl, AC	
22	36"	PX100-1-263	Insulation, Slvg, Blk	
23	12"	PX104-1-034	Insulation, Slvg	
24	4	PX544-4	Insulation, Term Bd	
25	18"	PX830-12-1	Insulation, Slvg, Shrink	
26	2	RC42GF224J	Resistor, Fxd, Comp	R111,12
27	1	ST103-25-73	Switch, DPDT	S101
28	4	TM102-4	Terminal Bd, Barr	TB101,2,3,4
29	4	TS106-1	Lampholder	XDS105,6
30	1		Bag, Hardware, #1	
31	1		Bag, Hardware, #2	
32	1		Bag, Hardware, #3	

BAG, HARDWARE, #1 STEP IV C

ITEM	QTY	P/N	DESCRIPTION	USED TO MOUNT
1	4	LWE06MRN	Lockwasher, Ext	J103
2	3	LWE08MRN	Lockwasher, Ext	J102
3	16	LWS06MRN	Lockwasher, Split	TB101,2,3,4
4	8	LWS08MRN	Lockwasher, Split	Cap Brkt
5	8	MS154-1	Plate, Saddle	TB101,2,3,4
6	4	NTH0632BN8	Nut, H H	J103
7	3	NTH0832BN10	Nut, H H	J102
8	8	SCBP0632BN8	Screw, Machine, 1/2"	A-2177, J103
9	16	SCBP0632BN10	Screw, Machine, 5/8"	TB101,2,3,4
10	3	SCBP0832BN6	Screw, Machine, 3/8"	J102
11	8	SCBP0832BN8	Screw, Machine, 1/2"	Cap Brkt
12	2	SCFP0632BN8	Screw, Machine, Flat Head, 1/2"	J101 Brkt

BAG, HARDWARE, #2 STEP IV C-10

ITEM	QTY	P/N	DESCRIPTION	USED TO MOUNT
1	4	CA409-32-2.00	Cable, Assy, Jumper	
2	4	CU102-3	Clamp, Loop	Fan Cable
3	16	LWS08MRN	Lockwasher, Split	Fan Brkt-Base
4	32	LWS10MRN	Lockwasher, Split	Fan-Brkt
5	16	SCBP0832BN10	Screw, Machine, 5/8"	Fan Brkt-Base
6	32	SCBP1032BN7	Screw, Machine, 7/16"	Fan-Brkt
7	30	TE120-2	Lug, Spade	Fan Cable

BAG, HARDWARE, #3 STEP IV E

ITEM	QTY	P/N	DESCRIPTION	USED TO MOUNT
1	4	CU102-6	Clamp, Loop	Cable
2	4	FW08HBN	Washer, Flat	Cable Clamp
3	2	LWE04MRN	Lockwasher, Ext	TE102-2
4	4	LWE08MRN	Lockwasher, Ext	Cable
5	2	MS2059	Bracket, Term Mtg	
6	2	SCBP0440BN4	Screw, Machine, 1/4"	TE102-2
7	4	SCBP0832BN6	Screw, Machine, 3/8"	Meter Panel
8	4	SCBP0832BN8	Screw, Machine, 1/2"	Cable
9	2	TE102-2	Terminal, Turret	
10	2	TE149-120	Terminal, Lug, Solder	

TABLE 2

1. Screwdriver, Slot Blade
2. Screwdriver, Phillips
3. Pliers, Longnose
4. Pliers, Diagonal Cutting
5. Wrench, Adjustable
6. Wrench, Open End, Assorted Sizes
7. Nutdriver, Assorted Sizes
8. Soldering Iron

IV. PROCEDURE:

A. PREPARATION OF TER-18K:

1. Remove all monitor, control, power and ground lines from TER.
2. Remove the ten 1/4 x 20 bolts or screws securing the frame to to the base. Retain the hardware.
3. Cut the cable running along the center door channel from the base of the frame.
4. Remove the frame from the base.

B. PREPARATION OF THE BASE:

1. Remove the hardware securing J103 to the base. Remove J103 and the remaining portion of the cable.
2. Remove the round cover plate covering the 2-1/8 diameter hole next to the J103 hole.
3. Unsecure the base from the floor if applicable.

C. MODIFICATION OF BASE ASSEMBLY:

1. Refer to Figure 1 and Hardware Bag #1.
2. Mount the A-2177-4, By-Pass Capacitor Terminal Board Assembly, to the four 11/64 holes in the base plate in front of the ground nut. Mount with four 0632 x 1/2 screws from underneath the base. Position the board so that the terminals with the common ground wire are facing the front of the base.
3. Position CA664, Cable, Base, as shown in Figure 1. Secure the J101 bracket to the frame using two 0632 x 1/2 flat head screws. Pull the BRN, RED, ORN, YEL leads through the hole for mounting J103. Pull the GRN, BLU leads through the hole for mounting J102.
4. Connect the CA409-148-6.00, 6" WHI jumper cable to the ground lug of the PL133-NG, AC input jack, J102. Connect the GRN and BLU wires to the other two terminals. Secure J102 to the base using three 0832 x 3/8 screws, #8 lockwashers and nuts. Secure the lug of the ground jumper under one of the nuts.

5. Cut the #12 shrink tubing, PX830-12-1, into four 3/4" pieces and slip them over the ends of the BRN, RED, ORN and YEL wires for J103. Remove the connector, J103, from the old cable and solder to the new cable. BRN to Pin B, RED to Pin A, ORN to Pin D, and YEL to Pin C. Cover the pins with the tubing and shrink. Mount the connector to the frame using four 0632 x 1/2 screws, #6 lockwashers and nuts.
6. Solder the leads to the A-2177-4 board. Two wire to each capacitor terminal.
7. Mount the four terminal blocks, TB101 thru TB104, to the cross-members with the insluator, PX544-4, between the strip and the base, the saddle plate, MS154-1, between the strip and the hardware, with four each 0632 x 5/8 screws and #6 split washers.
8. Mount the four capacitor brackets, MS2662, to the cross-members using two each 0832 x 1/2 screws and #8 split washers. Mount the capacitors, CP41B1FF405K, to the brackets. Cut the #12 shrink tubing into eight 1" pieces and slip them over the RED/WHI capacitor wires. Solder the RED/WHI wires to the capacitors, cover with the tubing and shrink.
9. Mount the cable fanning strips to the terminal blocks.
10. Refer to Hardware Bag #2.
11. Cut the plastic sleeving, PX100-1-263, into four 8" lengths and slip over the wires of the blower motrs, BL108. Trim the wires to within 2" of the tubing and crimp the spade lugs, TE120-2, to the wires.
12. Mount the motor brackets, MS1985, to the blower using the 1032 x 7/16 screws and #10 split washers. Mount the blower bracket assembly into the frame using the 0832 x 5/8 screws and #8 split washers.
13. Connect the blower wiring to the terminal strips, TB101 thru TB104, using the jumpers, CA409-32-2.00, if necessary. Refer to CK517 for information.

14. Secure the base to the floor if applicable.
15. Remove the filter covers on the front and sides of the base and insert the air filters, AD103-10. Replace the covers.
16. This completes the modification of the base assembly.

D. PREPARATION OF FRAME ASSEMBLY:

1. Unclamp the cable from the center door post. Disconnect the cable from the door interlock switches.
2. Disconnect the RF connectors from the directional coupler to the filter assembly. Mark the cables for Forward and Reflected. Do not disconnect from the filter assembly.
3. Remove the two screws securing the filter assembly, A-2183-4, to the frame. Retain the hardware.
4. From inside the frame remove the six screws securing the entire front top panel to the frame. Remove the entire front panel with the meter panel, filter assembly and coupler cable, and the main cable from the frame. The rear panel may be removed from the frame to make this easier. Retain the hardware.
5. Cut the remaining portion of the main cable from the transmitter light and discard. Notice the method of mounting the light socket, terminal and bracket. Loosen the socket and remove from the panel. Cut the resistor and capacitor.
6. Disconnect the leads from the meter. Remove the meter from the panel.
7. Loosen the FWD-REFL switch and remove from the panel. DO NOT REMOVE THE LEADS from the switch.
8. Remove the screws securing the meter panel to the front panel. Discard the meter panel but retain the hardware.

E. MODIFICATION OF THE FRAME ASSEMBLY:

1. Refer to Figure 2 and Hardware Bag #3.
2. Mount the four fuseholders, FH104-3, to the Top FRONT PANEL as shown. Mount the two turret terminals, TE102-2 to the brackets, MS2059, with the solder lug, TE149-120, underneath with the 0440 x 1/4 screws and #4 lockwashers. Position the solder lug as shown in Figure 2 and secure with the lamp-holders, TS106-1. Mount the DPDT toggle switch, ST103-25-73, to the panel.
3. Connect the 2W, 220K resistors from the terminal on the lamp-holder facing the meter to the insulated turret terminal. Connect the resistor to the lower section. Leave the upper section for connection to the cable. Solder both ends.
4. Slip the spaghetti, PX104-1-034, over one side of the six .001 mica capacitors. Connect the capacitors between the ground lug under the turret terminal and the rear terminal on the fuseholders and the terminal without the resistor on the lampholders. The spagetti covered lead should be on the hot side. Solder the ground lug connections only.
5. Replace the FWD-REFL switch assembly and secure. The switch should be in the FWD position normally. Place the new meter panel, LD974/MS2668, against the top panel and replace the meter. Do not tighten the nuts. Fasten the panels together using the 0832 x 3/8 screws. Tighten the meter hardware. Reconnect the lines to the meter.
6. Position the main cable, CA643, along the bottom of the components mounted on the front panel. The breakout on the extreme of the cable with the WHI/BRN and WHI/RED wires should under the FAN 1 fuse. Connect the WHI/RED lead to the rear of FAN 1 fuse and solder. Connect the WHI/BRN to the side terminal and solder. On the FAN 2 fuse connect the two WHI/RED leads to the rear and the WHI to the side. On the POWER light connect the two WHI/RED leads to the terminal with the capacitor. Connect the BLU wire to the standoff.

On the TRANSMITTER light connect the BRN wire to the terminal with the capacitor. Connect the RED lead to the standoff. On FAN 3 fuse connect the two WHI/RED leads to the rear and the WHI/GRN to the side. On the FAN 4 fuse connect the WHI/RED to the rear and the VIO to the side. On the POWER switch connect the ORN wire to one of the common (wiper) contacts. Connect the YEL wire to the ON lug of the same side. Connect the two WHI/RED leads to the other common. Connect the GRN lead to that ON lug. Check to see that all connections are soldered.

7. Slip the loose end of the cable into the frame and resecure the front panel and the filter assembly. Reconnect the RF cables to the directional coupler. Clamp the cable to the center door channel using the four 7/16 clamps, 0832 x 1/2 screws, #8 flat washers, lockwashers. Wire the YEL wires to the COM and the N.O. at the interlock switches.
8. Remount the frame to the base and connect the plug on the cable.
9. Mount the Modification Kit nameplate to the unit.
10. This completes the modification of the load.

F. CHECKOUT OF UNIT:

1. Place an ohm meter across Pins C and D of J103 XMTR jack and check that the POWER switch and the door interlocks have a complete circuit when the switch is ON and the doors are closed. Turning the switch OFF or opening either door should open the circuit.
2. Connect the unit AC power. Turn the POWER switch on and insert one fuse at a time to check the operation of each fan.
3. Reconnect the ground, RF and Monitor lines.
4. See the instruction manual for operating instructions.
5. The unit is now ready for operation.

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REV: Ø				
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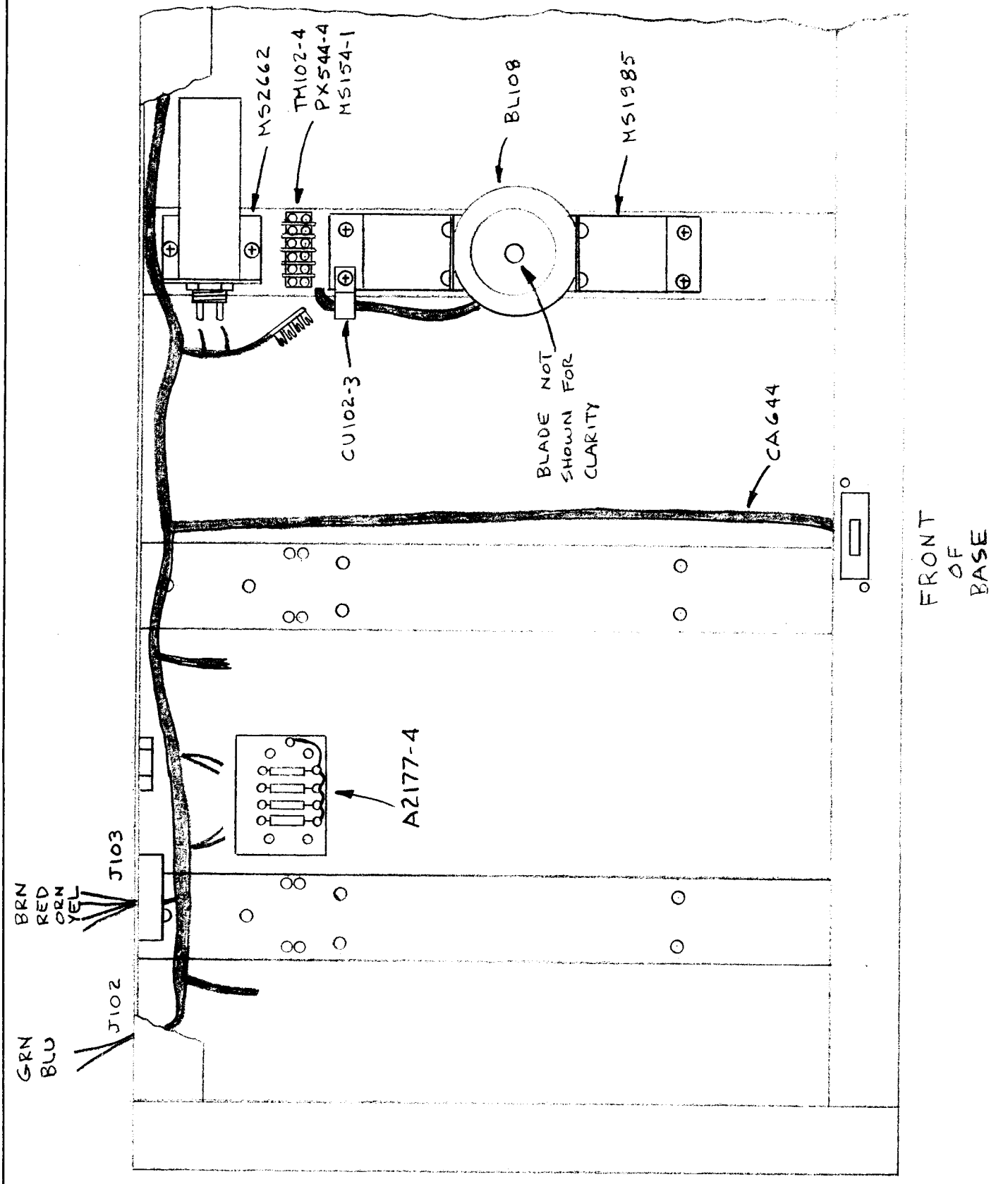

FIG. 1

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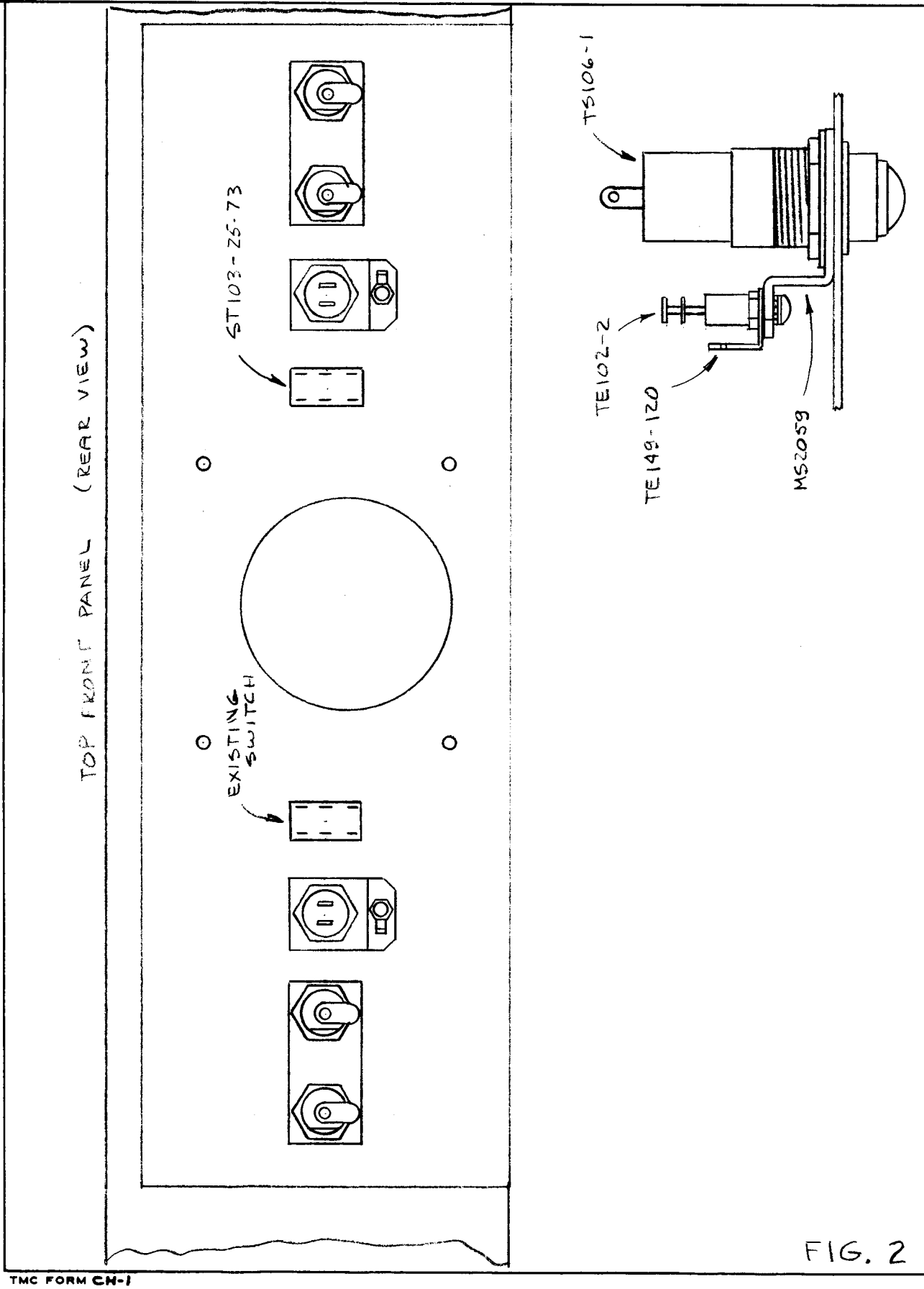

FIG. 2

REVISION SHEET

THE TECHNICAL MATERIEL CORP.
MAMARONECK NEW YORK

S 1308
LIST NO.

DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
12/4/72	Ø			ORIGINAL RELEASE FOR PRODUCTION	EJ