	1	TI	AC :	SPE	CIF	ICA	TIC	NC		*****	NO. S	95	6	
REV: D	AB	CID							7					
COMPILED	· JZ	<u></u>	CHE	CKED:	En	25	人	APPE:	her	Willay	SHEET	1	OF	11
TITLE:								1		5/20/05				
Typed	by mp 5	/14/6	5			,				<i>, ,</i>				

KIT-238

MODIFICATION OF MCG-1

TO

MCGA-1

1M - 8-64-AINS.

TMC SPECIFICATION

NO. S 956

REV: JABCD APPD: SHEET 2 OF 11

TITLE: KIT-238 - MODIFICATION OF MCG-1 TO MCGA-1

I. PURPOSE

To convert MCG-1 to the MCGA-1

II. MATERIALS SUPPLIED

ITEM	QTY.	TMC PART NUMBER	DESCRIPTION
1	4	SCBP0632BN10	Scr, Machine
2	14	NTH0632BN8	Nut, Pln, Hex
3	14	гw об нви	Wash, Flat
14	4	LWE 06 MRN	Wash, Lk, Ext.
5	14	SCBPO440BN6	Scr, Machine
6	14	итно440ви6	Nut, Pln, Hex
7	14	LWE 04 MRN	Wash, Lk, Ext.
8	6"	BS 100	Solder, Tin Alu
9	25"	CD101-1MW	Cord, Nylon Lacing
10	1	Drill - 11/64	Drill, Twist
11	1	Drill - 3/8	Drill, Twist
12	1	TP 113R 1-1/16	Punch and die 1-1/16
13	1	TP 131	Stamp Kit
14	14	FW 31 HBN	Wash, Flat
15	1	Drill - 9/64	Drill, Twist
16	1	CK-984	Schematic Diagram
17	1	CA-1123	Cable Assembly
18	1	S W-3 99	Ledex, Switch Ass'y
18.1	2	RC20GF101K	100 ohm 1/2 watt resistors (Symbols R6059,R6060)

1M-8-64-AINS.

Ť	MC SPECIFICA	TION	NO. S	756
REV: DABCD				
COMPILED: JZ	CHECKED:	APPD:	SHEET	3 OF 11
TITLE: KIT-238 - MO	DIFICATION OF MCG-1 T	O MCGA-1		
Typed by mtp 5/	14/65			

II. MATERIALS SUPPLIED - Cont'd

ITEM	QTY.	TMC PART NUMBER	DESCRIPTION
19	20"	MWC22(7)U-0	Insulated Wire - BLACK
20	1	DD-111-1	Suppressor, Arc
21	5"	PX 100-1-053	Sleeving
22	1	NP 362-44	Plate, Ident. Coml
23	3	1N1200A	Scond Dev, Rect. (CR6∞5,6,7)
24	1	DRILL,1/4 DIA.	Drill,Twist

III. MATERIALS REQUIRED BY INSTALLING ACTIVITY

- 1. 1/2" electrical drill.
- 2. Center Punch.
- 3. Soldering Iron.
- 4. #2 Phillips Screw Driver.
- 5. Volt ohmmeter Simpson 260 or equivalent.

IV. WIRING PROCEDURE

- l. Add holes on front chassis for Item 18 using Item 10 as indicated in Figure 1.
 - 2. Switch preliminary wiring
 - a. All contact numbers and deck symbols are indicated as follows:
- 1) Switch is read in reference to the Ledex end; i.e. the Ledex is the front of the switch.
- 2) Deck symbols (A, B, C) are alphabetical starting from the Ledex end; i.e. the first wafer from the Ledex is A, the second is B etc.
- 3) All contacts are numbered beginning at the top of the switch, and in a counter-clockwise direction. See Figure 5.

TMC FORM SPEC 1

TM	C SPECIFICATION	ON	NO. 5 956
REV: ABCD			
COMPILED: JZ	CHECKED:	APPD:	SHEET 4 OF 11
TITLE: KIT-238 - MOD	OFFICATION OF MCG-1 TO 1	MCGA-1	
Typed by mtp 5/17	7/65		

IV. WIRING PROCEDURE - Cont'd

b. Connect jumpers (Item 19) to the switch as follows:

From 12B to 7B Solder 4C Solder 3B

- c. Connect short jumper from pin 2 of Ledex to A3 (solder) front of wafer switch as shown in Figure 6.
- d. Cover leads of Item 20 with Item 21. Connect leads of Item 20 to pins 1 and 2 of Ledex. Make sure the Red dot of Item 20 is connected to pin 2 (solder). Leave enough lead lengths so that Item 20 can be dressed under th Ledex.
- 3. Add holes on rear panel for the connector on Item 17, using Items 15, 11, and 12 as shown in Figure 3.
- 4. Stamp the inside and the outside of the back panel using Item 13 as shown in Figure 4.
- 5. Insert cable end of Item 17 through grommet hole (near J6015). Dress cable as shown in Figure 7, and spot tie to existing cables with Item 9.
- 6. Insert cable end of Item 17 through grommet hole on front chassis (Figure 8) and wire cable to S6001 as follows:

Wire Color	Deck	Pin #
Violet	С	10 Solder
Grey	c	12 Solder
Orange	С	11 Solder
Yellow	С	9 Solder
Green	A (rear)	4 Solder
White	A (rear)	3 Solder
Blue	A (rear)	2 Solder
Black	Ledex	1 Solder

INC FORM SPEC 1

1M-8-64-AINS.

	TMC SPECIFICATION No. s 956																							
REV:	OA	BC	D																					
COMPIL	COMPILED: CHECKED: APPD: SHEET 5 OF 11																							
TITLE:	TITLE: KIT-238 - MODIFICATION OF MCG-1 TO MCGA-1																							

IV. WIRING PROCEDURE - Cont'd

7. Connect remaining wires as follows:

Wire #	Switch S6001
14	B - 3 solder
13	B - 1 solder
15	B - 2 solder
12	B - 4 solder
19	B - 8 solder
16	B - 5 solder
17	B - 6 solder
18	B - 12 solder
Red Wire from J6015-K	C - 8 solder
Red Wire from L6001	C - 5 solder
Red Wire from J6015-P	C - 6 solder

- 8. Install J6016 connector end of Item 17 to back panel using Items 5, 6, and 7.
 - 8.1. Remove SW343, Symbol S6001 from front panel. Retain knob.
- 9. Mount Item 18 using Items 1, 2, 3, 4 and 14 as shown in Figure 2. Make sure the shaft is facing the front panel. Mount knob removed in Step 8.1.
- 10. Turn S6001 (Item 18) so that notch on wafer A, rear, is at pin 2. Mount selector knob so that arrow points to INT.
 - 11. Mount Item 22 to any convenient place on the front panel.
 - 12. Mount R6060 (Item 18.1) to S6001C term. 1 & 2 and the other end to gnd.
 - 13. Mount R5049 (Item 18.1) to S6001B term. 9 & 10 and the other end to gnd.
 - 14. Drill holes as shown in Figure 7 using Item 24.
- 15. Mount CR6005, 6, 7 in holes drilled in Step 14. Insulate diodes from chassis and mount with anode end on top side of chassis.
 - 16. Stamp top & bottom sides of chassis as shown in Figure 7 using Item 13.
 - 17. Connect leads from CA1123 as follows to anodes of diodes

Blue - CR6005 Wht - CR6006 Grn - CR6007

18. Connect wires from CA1123 as follows to cathodes of diodes

Blue - CR6005 Wht - CR6006 Grn - CR6007

TM	C SPECIFICATI	ON	NO. S	756	
REV: DABCD					
COMPILED: JZ	CHECKED:	APPD:	SHEET	6 OF	11
TITLE: KIT-238 - MOD	IFICATION OF MCG-1 TO	MCGA-1			
Typed by mtp 5/17	/65				

V. TEST PROCEDURE - POWER OFF

1. Place Selector knob to INTERNAL position. Observe the following resistance:

From	То	Resistance
J6013 center pin	Ground	100 ohms
L6001	Pin K J6015	0 ohms
J6016 Pin D	J6016 Pin B	0 ohms
Т6002 В1	J6011 Center Pin	0 ohms
T6001 yellow dot	J6003 Center Pin	0 ohms
J6002 Center Pin	Ground	100 ohms
J6016 - J	J6016 - H	INF
J6016 - H	J6016 - F	0
J6016 - Н	J6016 - E	7 ohms <u>+</u> 20%

2. Place Selector knob to AFC position. Observe the following resistance:

From	To	Resistance
J6013 Center Pin	Ground	100 ohms
J6015 Pin P	J6015 Pin K	0 ohms
J6016 - A	J6016 Pin B	0 ohms
J6014 Center Pin	J6011 Center Pin	0 ohms
J6001 Center Pin	J6003 Center Pin	0 ohms
J6002 Center Pin	Ground	100 ohms
J6016 Pin H	J6016 Pin F	INF
J6016 Pin J	J6016 Pin F	0 ohms

TMC FORM SPEC 1

1M 8 64 AIN

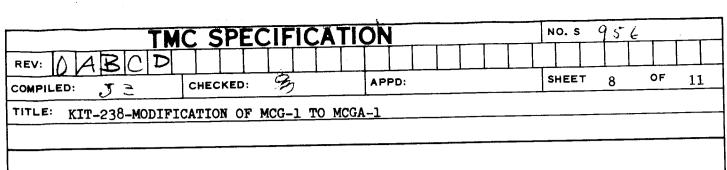
TM	NO. 5 956		
REV: AARCD	C SPECIFICAT		
COMPILED: JZ	CHECKED:	APPD:	SHEET 7 OF 11
TITLE: KIT-238 - MOD	IFICATION OF MCG-1 T	O MCGA-1	
Typed by mtp 5/17	/65		

V. TEST PROCEDURE - POWER OFF - Cont'd

3. Place Selector knob to SYN position. Observe the following resistance:

From	To	Resistance
J6013 Center Pin	Ground	INF
J6013 Center Pin	J6011	0 ohms
J6016 - В	J6016 - C	0 ohms
J6002 Center Pin	J6003 Center Pin	0 ohms
J6002 Center Pin	Ground	INF
J6016 Pin H	J6016 Pin F	INF
J6016 Pin J	J6016 Pin H	0 ohms

M . 8.64-AINS



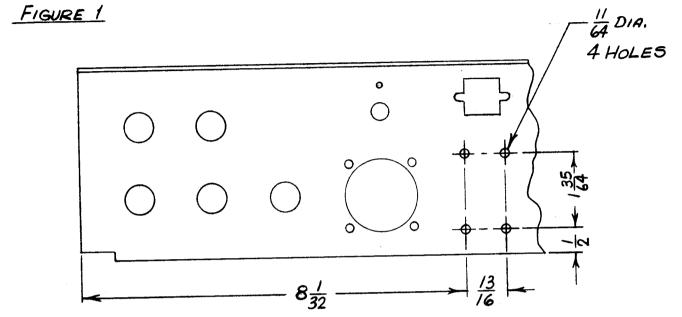
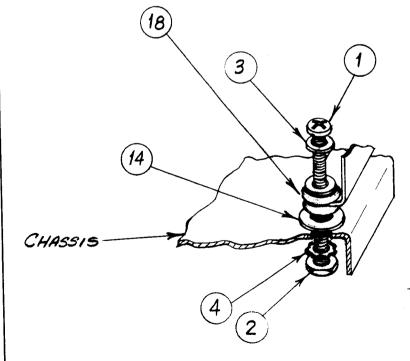


FIGURE 2



TYPICAL MOUNTING

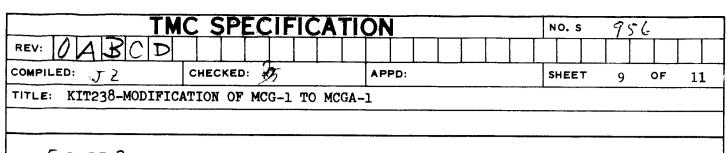


FIGURE 3

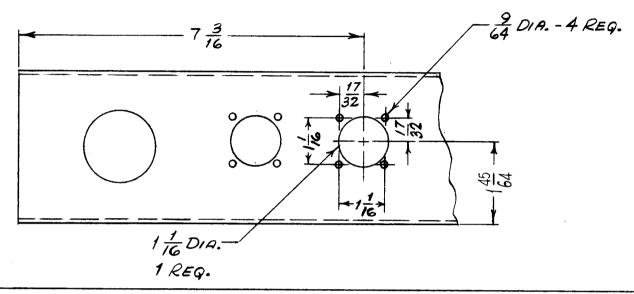
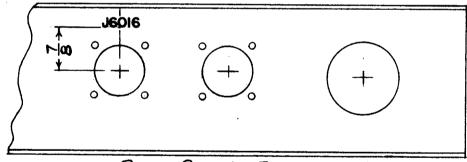
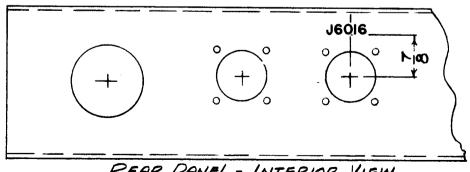


FIGURE 4



REAR PANEL - EXTERIOR VIEW



REAR PANEL - INTERIOR VIEW

TMC SPECIFICATION

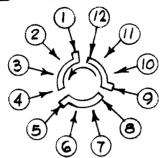
NO. S 956

REV: OARCD

COMPILED: J2 CHECKED: APPD: SHEET 10 OF 11

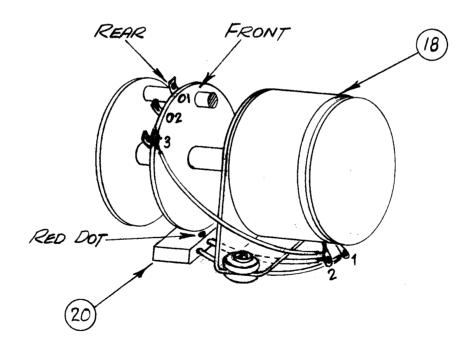
TITLE: KIT 238 MODIFICATION OF MCG-1 TO MCGA-1

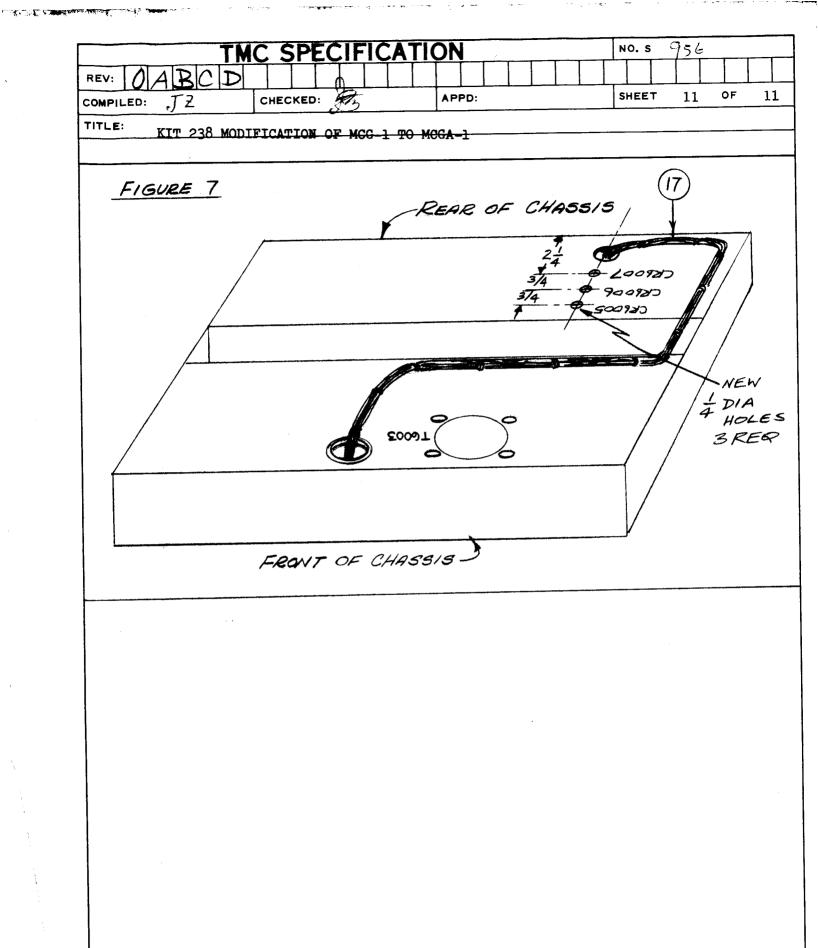
FIGURE 5



SWITCH VIEWED FROM LEDEX END. CONTACTS ARE NUMBERED IN A COUNTER- CLOCKWISE DIRECTION.

FIGURE 6





THE FORM SPEC

1M-8-64-AINS.

REVI	SION	SHEET		THE TECHNICAL MATERIEL CORP. S-956 MAMARONECK NEW YORK LIST N	<u>,</u>
DATE	REV.	SHEET	EMN #	DESCRIPTION	APP.
5/20/6		1 of		O=ORIGINAL RELEASE FOR PRODUCTION.	
6/23/6				Revised shts. 1, 2, 3, 4, 5, 9, 10 as per EMN	
0/23/0.	<u> </u>	5,9,10	, - 1 - 0 -		
7/22/65	В	4	14515	Revised per EMN	16
12/31/6		ali	15478	Revised per EMN	S
5/2 3 /66		3,5,6,1	16272	Revised per EMN	28
<u> </u>					
					u .
				•	
				·	
	1 -				
	1				
	1				
	1				
	†				
—		_	1		

1