

9246A and 9246P-41.7KC
MAGNETIC TAPE ELECTRONICS

Logic. Layouts,
Current and History

SDS 900533B

NOTE:

THIS DWG APPLIES TO BOTH THE AMPEX (A) & POTTER (P) MAG TAPE UNITS. FOR SIMPLICITY ONLY 9246A AND/OR 9246P DESIGNATIONS ARE SHOWN ON INDIVIDUAL PAGES. 9246A IMPLIES 9246A, 9246IA, 92462A, & 9346A. 9246P IMPLIES 9246P, 9246IP, 92462P & 92463P. THE FOLLOWING CHART INDICATES THE EFFECTIVITY OF INDIVIDUAL PAGES.

PAGE	CHG	PAGE	CHG	PAGE	CHG	PAGE	CHG	PAGE	CHG
1	C								
2	C								
3	C								
4	C								
5	C								
6	C								
7	C								
8	C								
9	C								
10	C								
11	C								
12	C								
13	C								
14	C								
15	C								
16	C								
17	C								
18	C								
19	D								
20	C								
21	C								
22	C								
23	C								
24	C								
25	D								
26	D								
27	D								
28	D								
29	D								
30	C								
31	C								
32	C								
33	C								
34	C								
35	C								
36	D								
37	D								
38	D								
39	D								

NOTES:

- REV LETTERS LISTED INDICATE STATUS OF EACH SHEET OF THIS MULTIPLE SHEET DRAWING.
- CHECK INDIVIDUAL SHEETS FOR REVISION LETTER AGAINST THIS SHEET BEFORE USING THIS DRAWING.

REFERENCE DESIGNATIONS ARE ABBREVIATED. PREFIX THE DESIGNATION WITH UNIT NUMBER OR ASSEMBLY DESIGNATION OR BOTH. (MIL. STD. 168)

PAGE NO.	AMPEX ONLY	POTTER ONLY	BOTH	92463P VARIATIONS
1			X	
2	X			
3			X	
4			X	
5			X	
6			X	
7			X	
8			X	
9			X	
10			X	
11			X	
12			X	
13			X	X
14			X	
15			X	
16			X	
17			X	
18			X	
19			X	
20			X	
21			X	
22			X	
23			X	
24			X	
25			X	
26			X	X
27	X			
28	X			
29	X			
30	X			
31			X	
32			X	
33			X	
34	X			
35	X			
36		X		X
37		X		
38		X		
39		X		

9246A, 9246P

MAG TAPE UNIT
PAGE 1

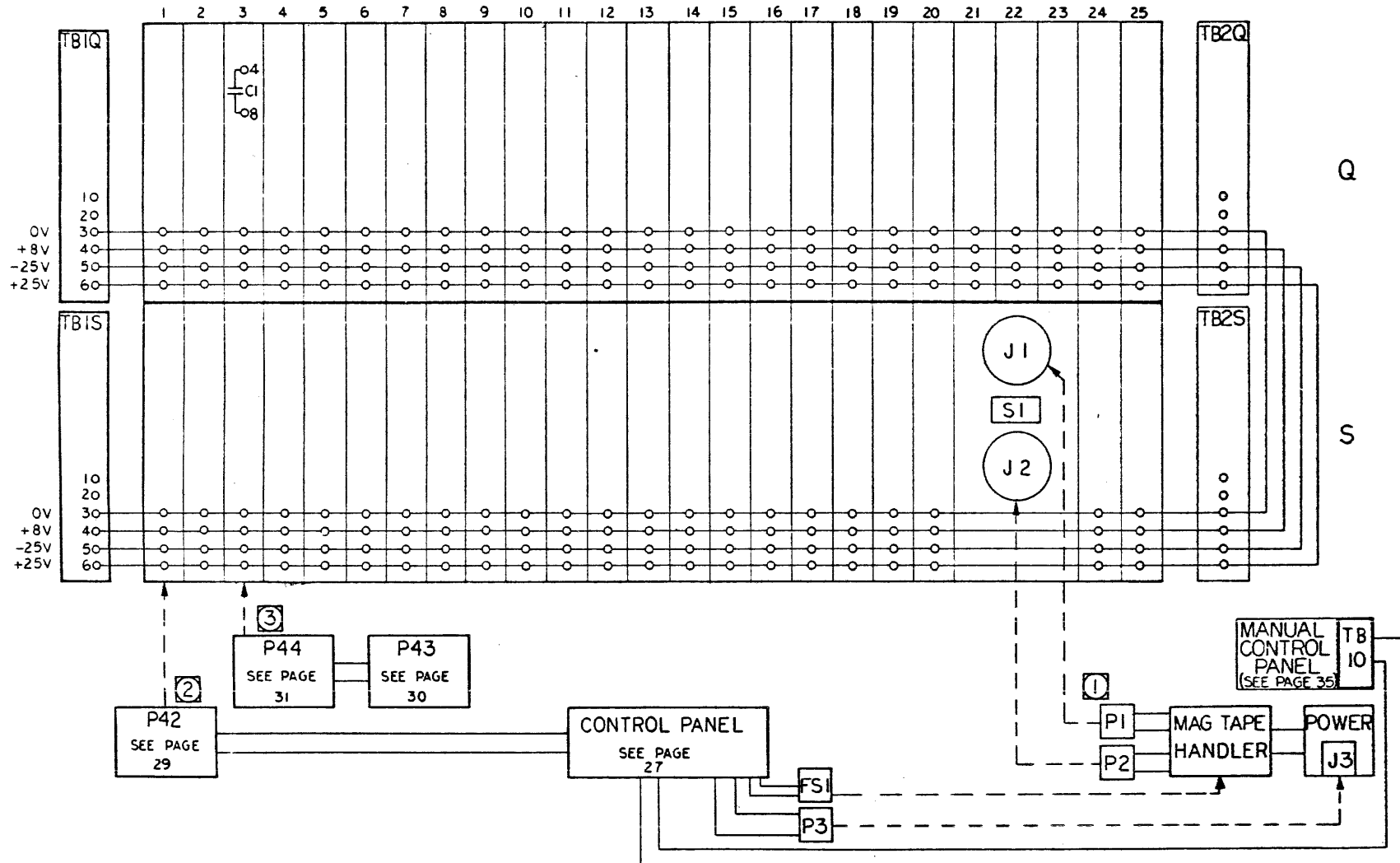
D

NOTES: UNLESS OTHERWISE SPECIFIED

③ RECEPTACLE J(3S) IS PROVIDED FOR THE P44 TO P43 CABLE. P43 CONNECTS TO RECEPTACLE J(24V) OF THE MODEL 9248 CONTROL UNIT OR TO J(2S) OF A SECOND MODEL 9246.

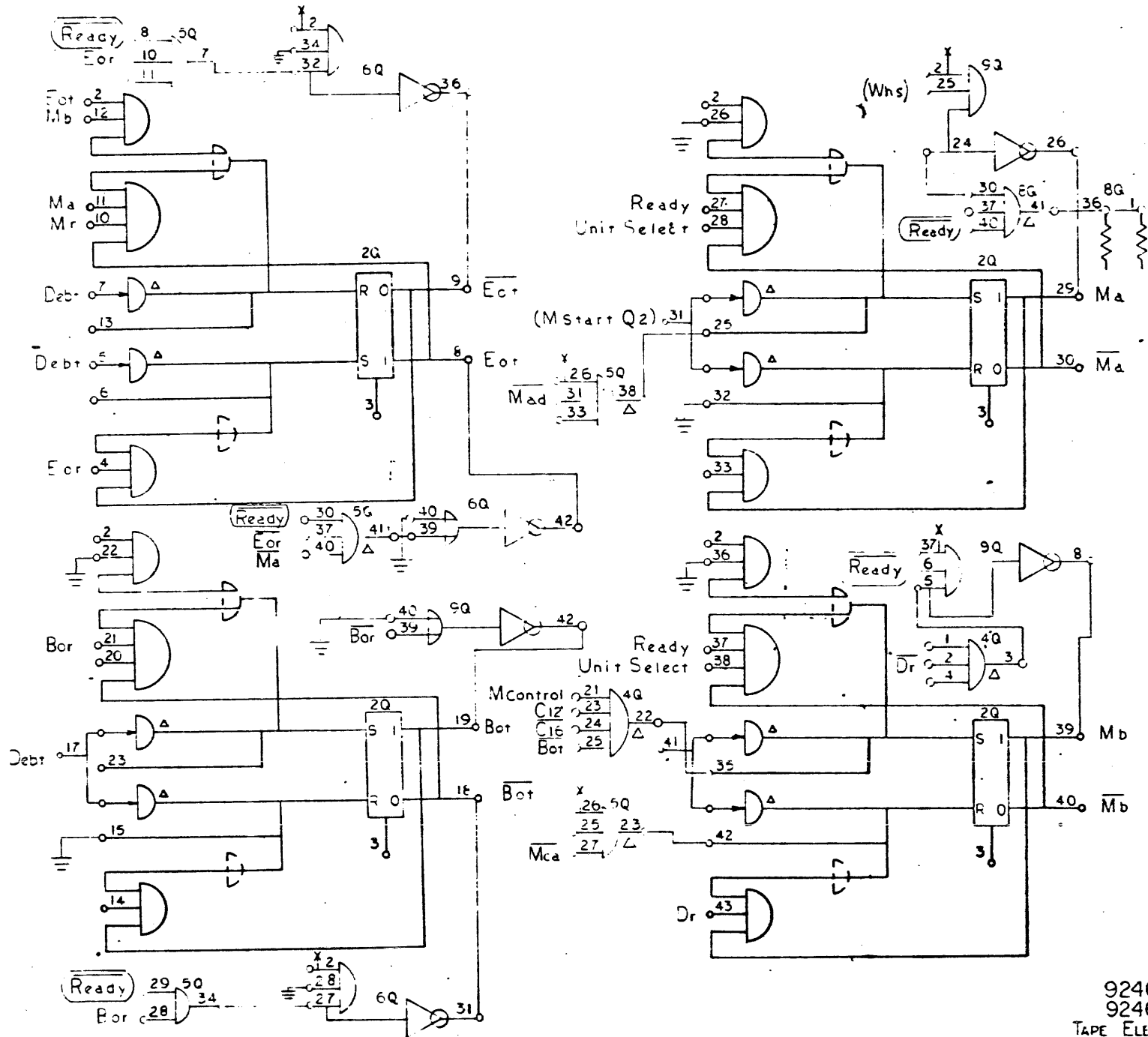
① RECEPTACLES J1 & J2 ARE PROVIDED FOR CONNECTION TO THE READ & WRITE HEADS OF THE MAG TAPE UNIT.

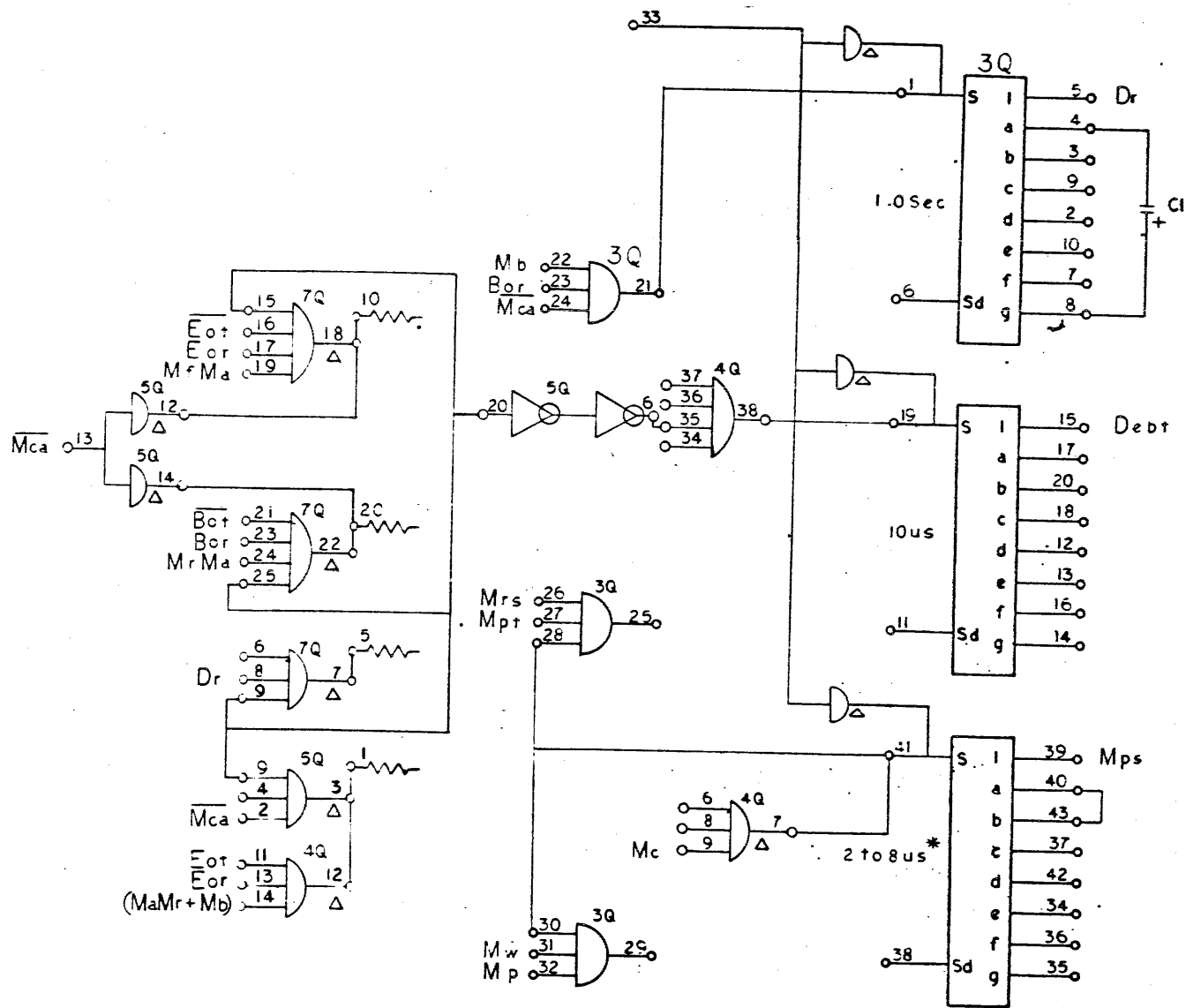
② RECEPTACLE J(S) IS PROVIDED FOR P42 FROM CONTROL PANEL.



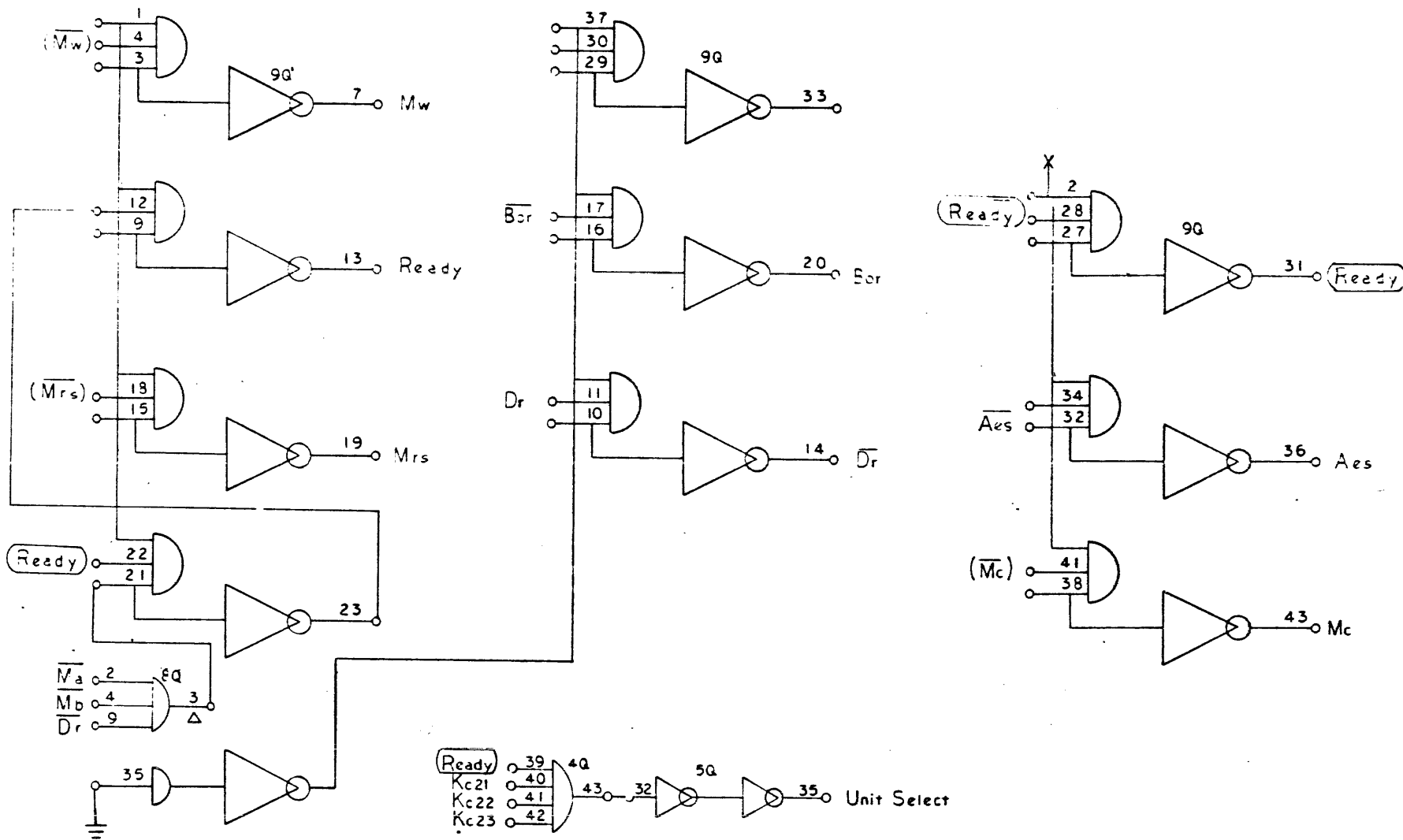
9246 DIRECTORY

Ae	19	<u>Eor</u>	28	M1s	9	<u>R6a</u>	26
<u>(Ae)</u>	24	Eor	22	M2s	9	<u>R6a</u>	26
Aes	5	Eor	22	M3s	9	R1a:	1:
<u>Aes</u>	26	Eor + Bor	22	M4s	16	R2af	1:
Aux. Contr. Panel	27	<u>Eor Bor</u>	19	M5s	10	R3af	16
<u>Bor</u>	28	Eot	4	M6s	10	R4af	14
Bor	6	Eor Indicate	8	M1t	11	R5af	14
<u>Bor</u>	22	File Protect Indicate	8	M2t	11	R6af	14
Bot	4	Forward Actuate	13	M3t	12	R1ar	17
Bot Indicate	8	(fB)	23	M4t	12	R2ar	17
Ch1 Read	26	(fB)	23	M5t	12	R3ar	17
Ch2 Read	26	(fB)	23	M6t	12	R4ar	17
Ch3 Read	26	K1 Set	8	M1w	13	R5ar	17
Ch4 Read	26	K2 Set	8	M2w	13	R6ar	17
Ch5 Read	26	Ma	4	M3w	13	R1y	20
Ch6 Read	26	Mad	22	M4w	13	R2y	26
Ch7 Read	26	<u>Mad</u>	22	M5w	13	R3y	26
Ch1 Write	13	(<u>Mad</u>)	24	M6w	13	R4y	26
Ch2 Write	13	Ma Mf	1:	Ready	6	R5y	26
Ch3 Write	13	Ma Mr	19	<u>Ready</u>	6	R6y	26
Ch4 Write	13	Ma Mr + Mb	19	Ready Indicate	8	R1z	26
Ch5 Write	13	Ma Test	19	Reverse Actuate	13	R2z	26
Ch6 Write	13	Ma TestV	19	Rpa	18, 19	R3z	26
Ch7 Write	13	Ma Test	19	(Rpa)	25	R4z	26
C12	20	Mb	4	<u>Rpa</u>	26	R5z	26
C13	20	Mc	6	Rpaf	18	R6z	26
C14	20	<u>Mca</u>	21	Rpar	18	(Slot)	23
C15	20	M Control	20	Rpy	26	<u>Slot</u>	7
C15	20	Mf	21	Rpz	26	Test	13
C16	20	Mp	21	R1a	16, 17, 19	Test	13
C16	20	Mps	5	R2a	16, 17, 19	Tha	26
C21	22	Mpt	11	R3a	16, 17, 19	Thd	26
C21	22	Mpw	13	R4a	14, 15, 19	Unit Select	6
C22	22	Mr	21	R5a	14, 15, 19	Write Activate	13
C22	22	<u>Mre</u>	11	R6a	14, 15, 19	W9 W11	21
C23	22	Mrs	6	(RTa)	25	W9 W11	21
C23	22	M Start Q2	20	(RZa)	25		
(Da)	24	Mw	6	(RTa)	25		
(Db)	24	M1	21	(R4a)	25		
(Dc)	24	M2	21	(R5a)	25		
Debt	5	M3	21	(R6a)	25		
Dr	5	M4	21	<u>R1a</u>	26		
Dr	6	M5	21	<u>R2a</u>	26		
		M6	21	<u>R3a</u>	26		
				<u>R4a</u>	26		

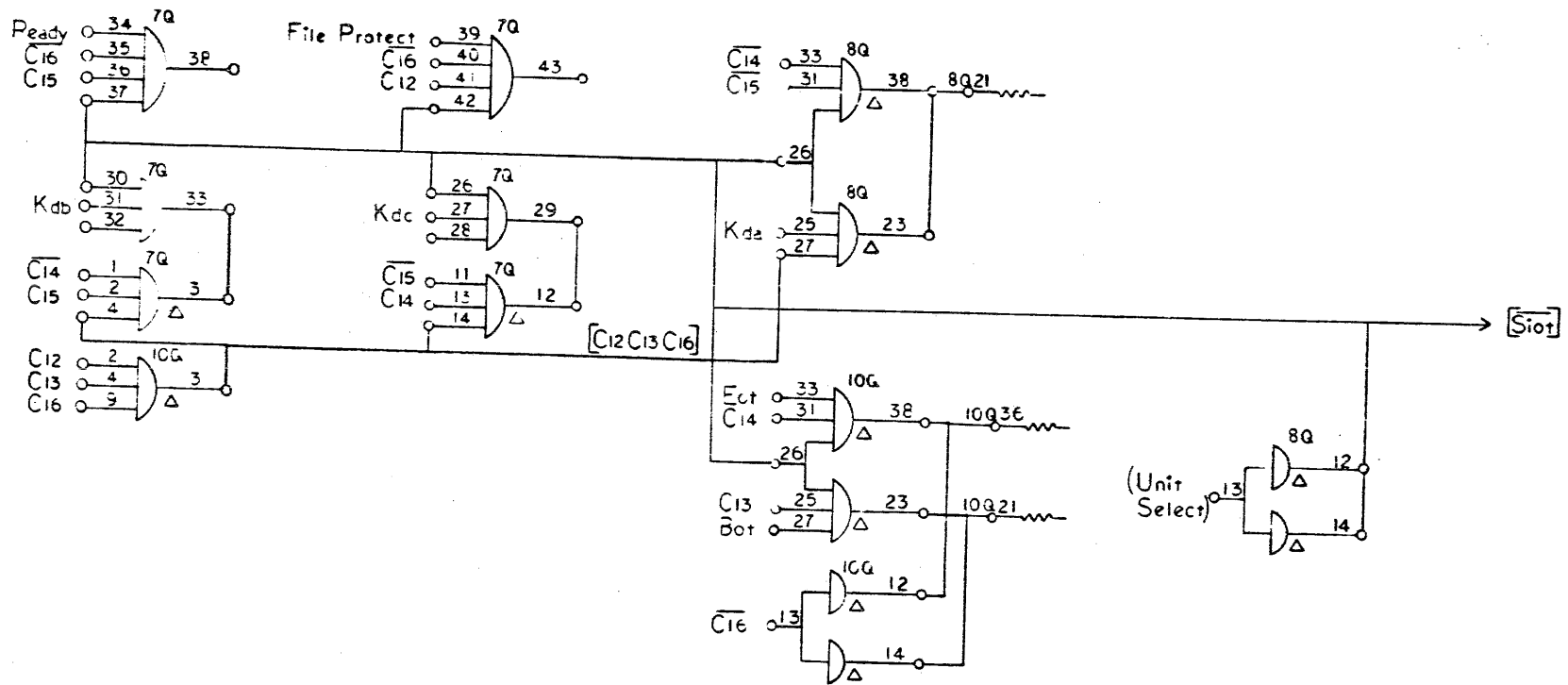




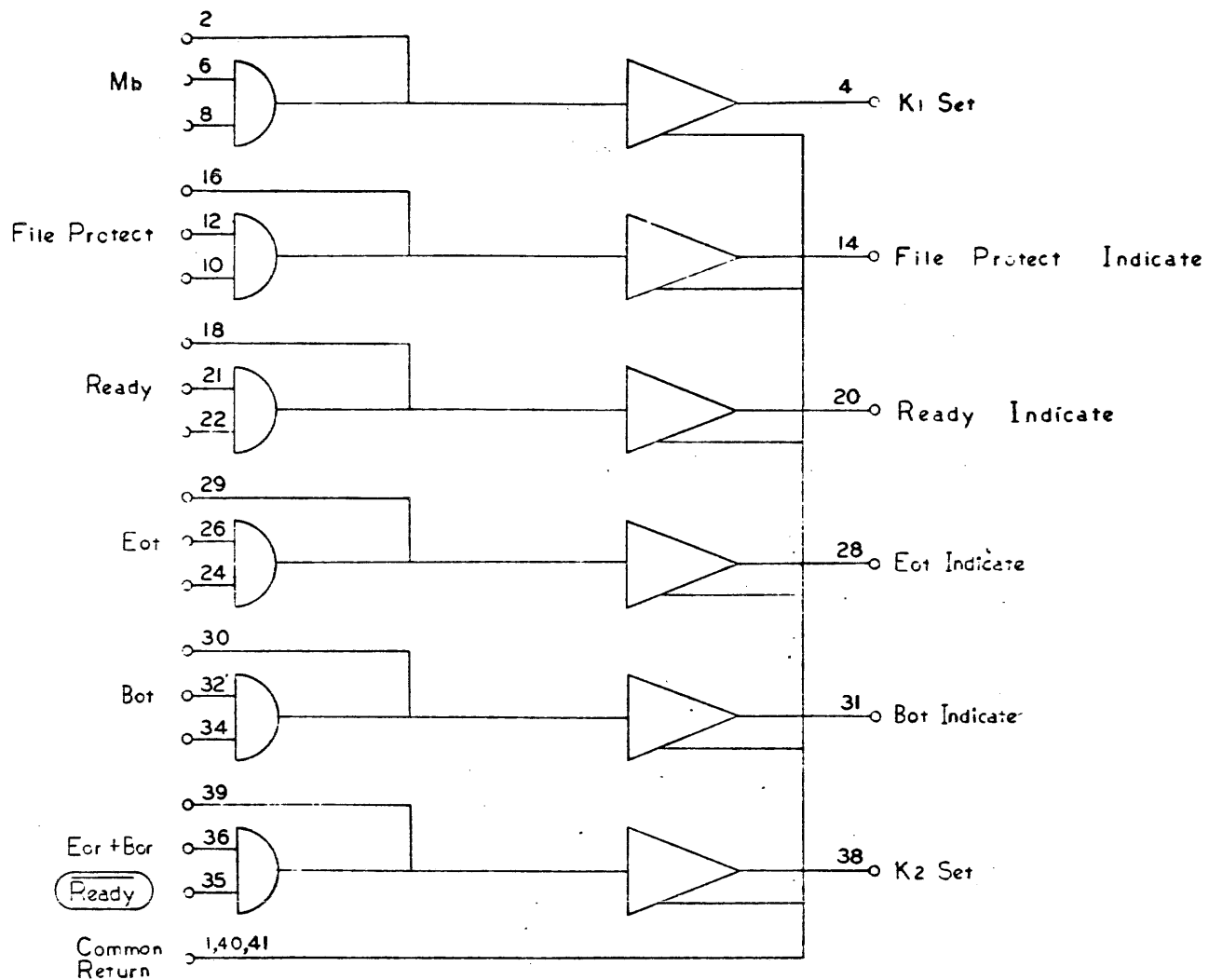
* SEE CALIBRATION PROCEDURE

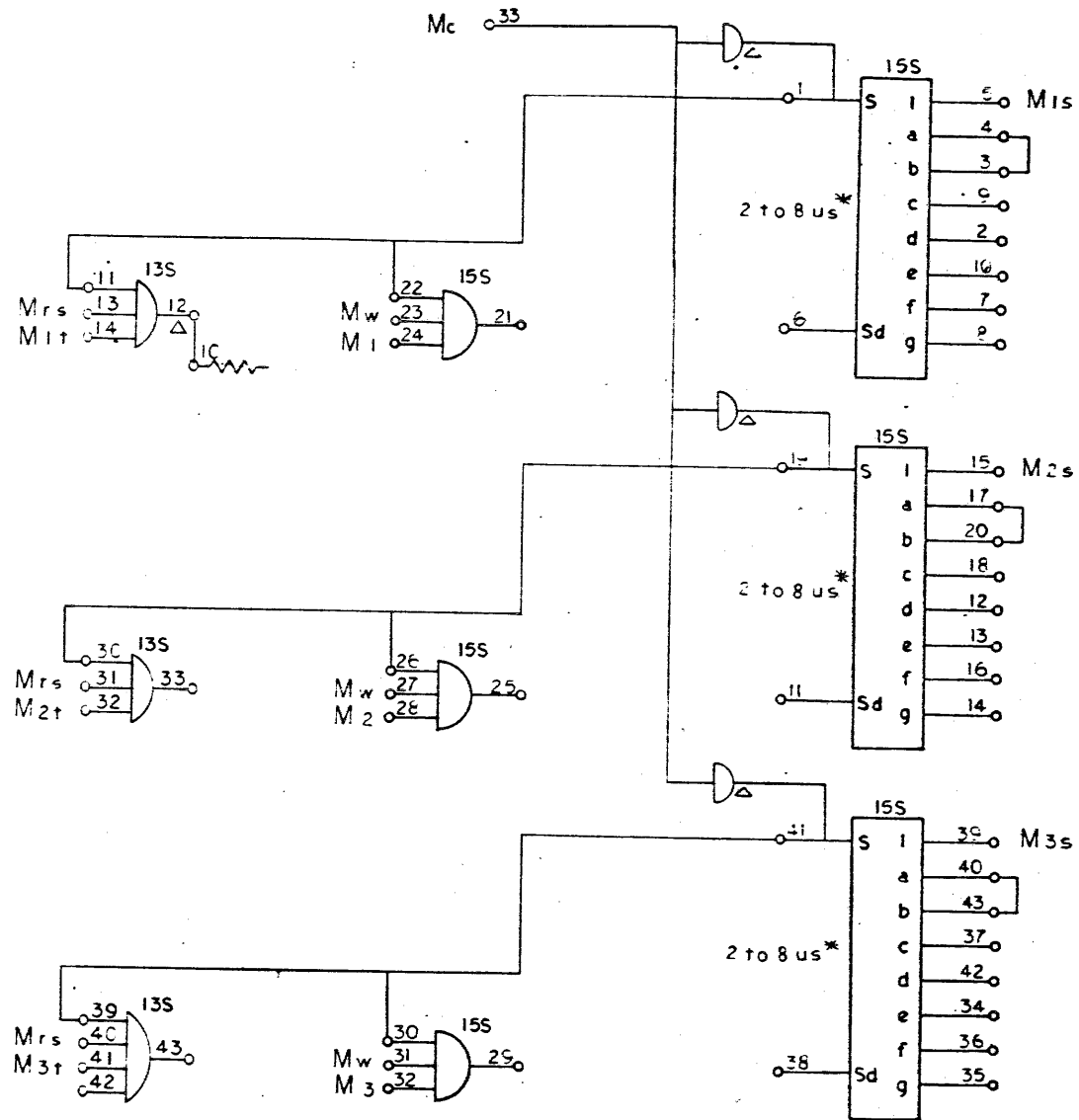


9246A
 9246P
 TAPE ELECTRONICS,
 PAGE 6
 D

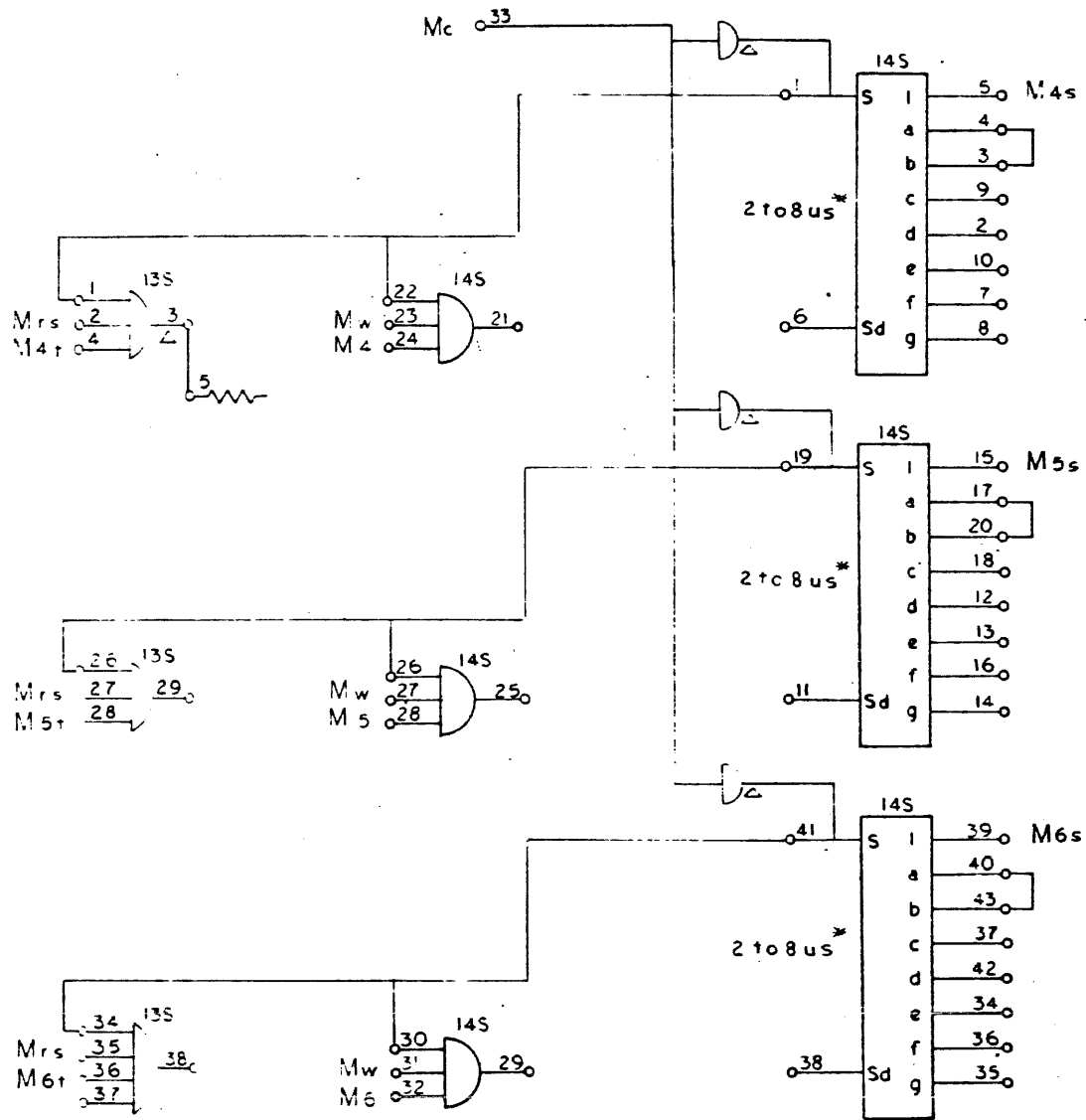


IQ

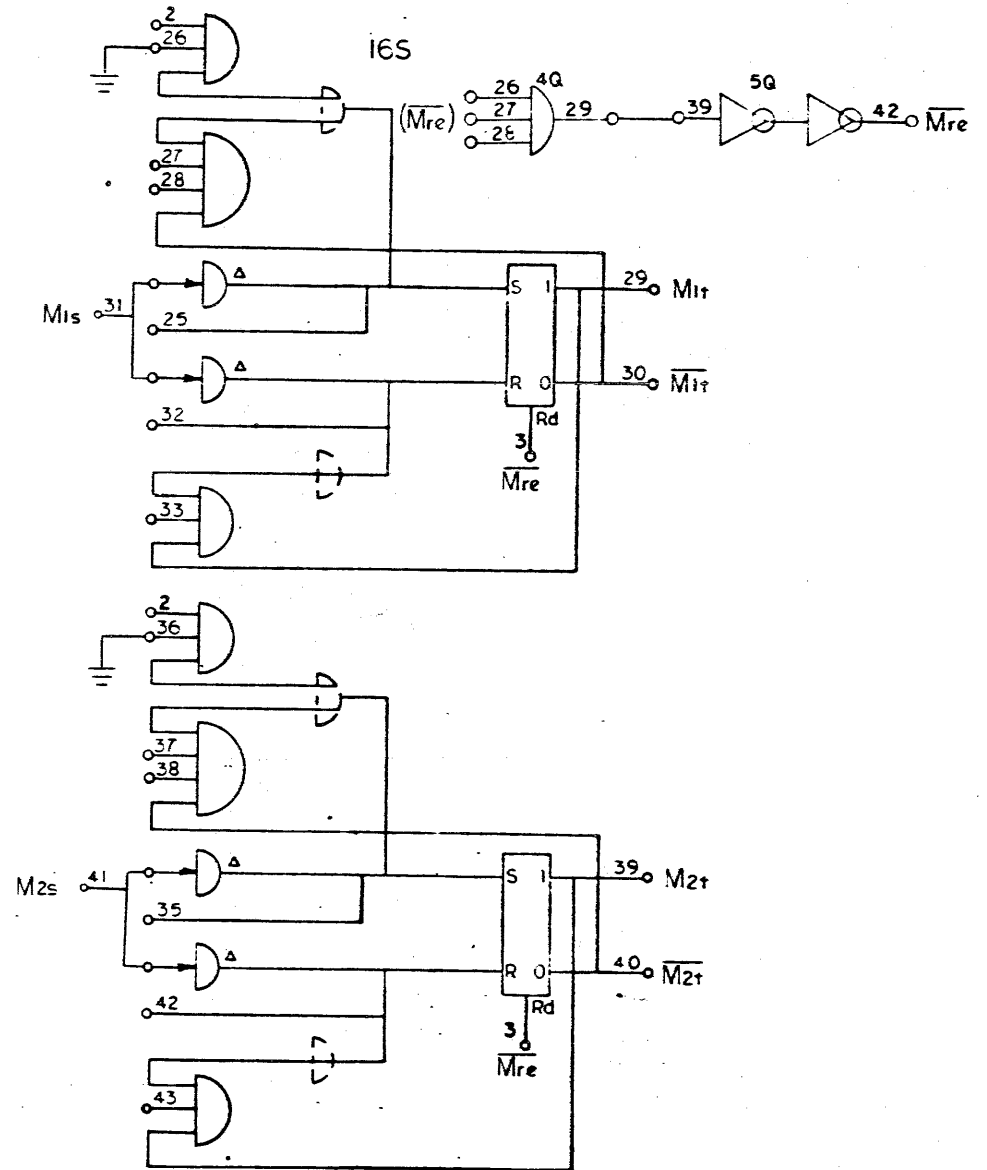
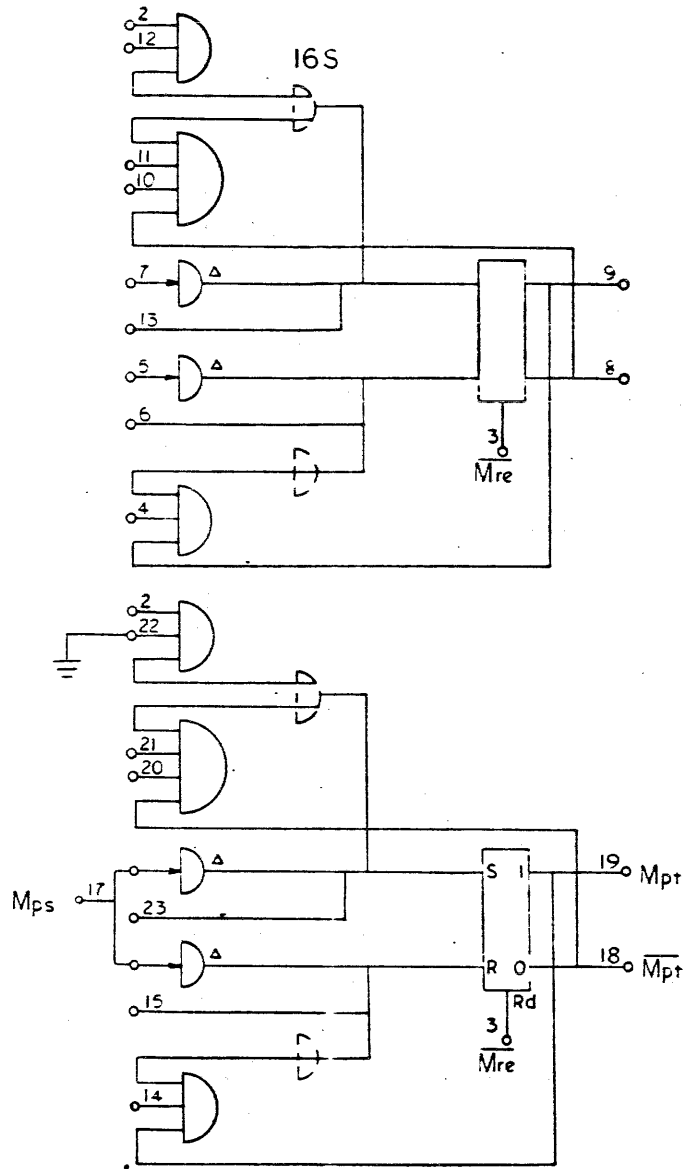


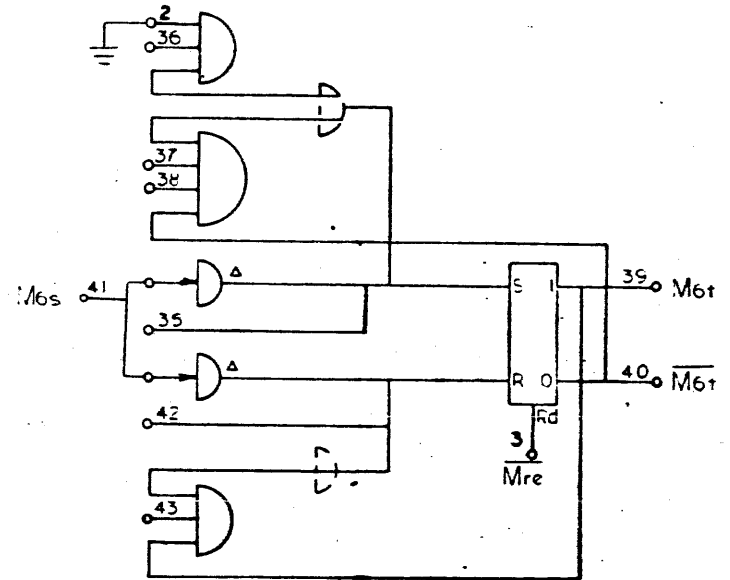
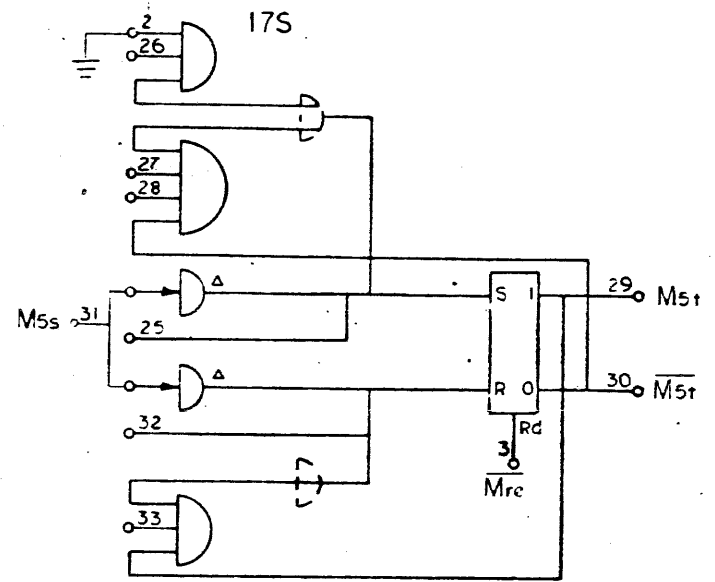
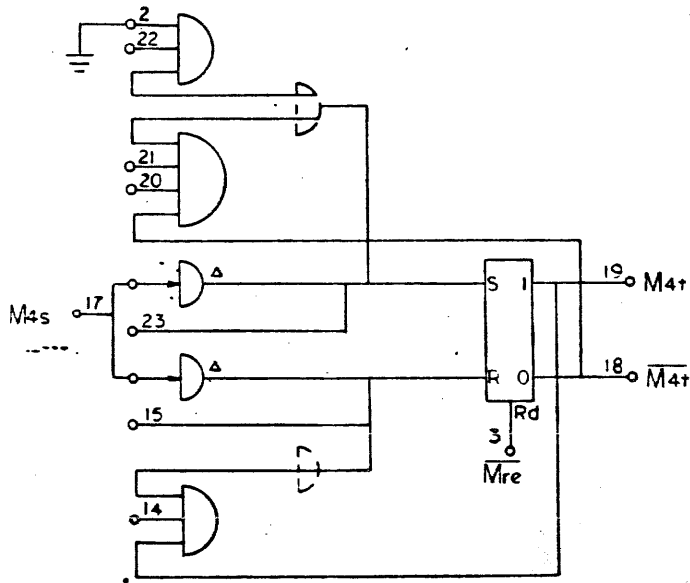
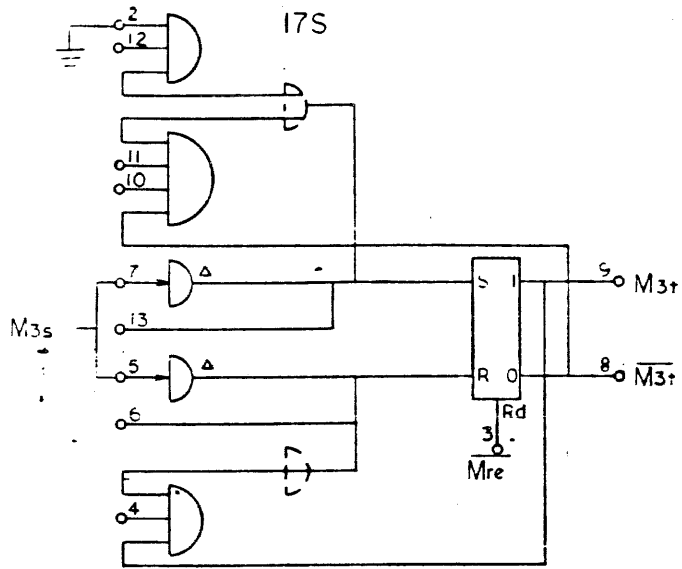


* SEE CALIBRATION PROCEDURE

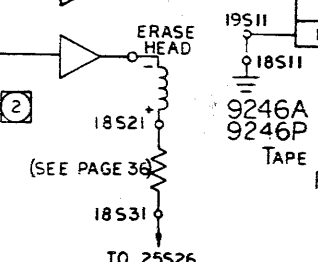
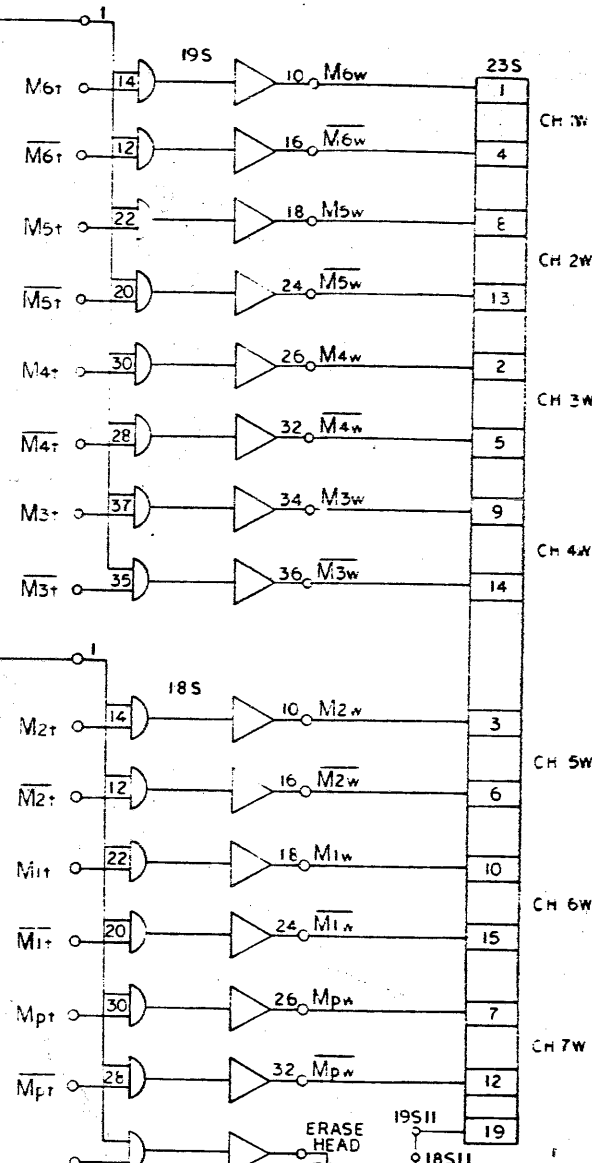
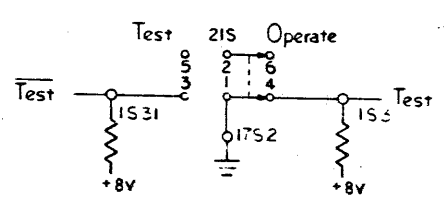
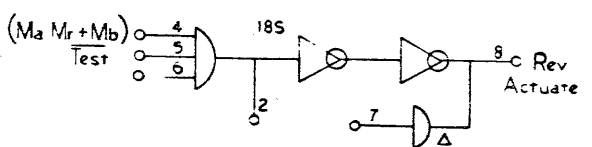
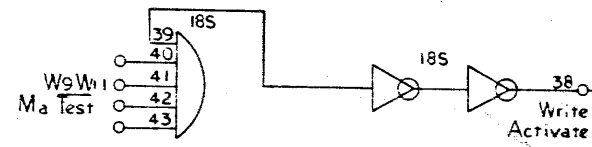
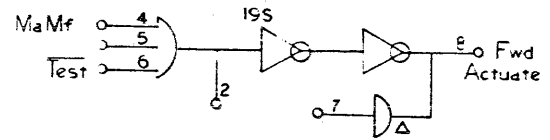
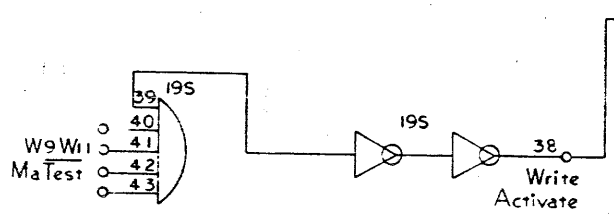
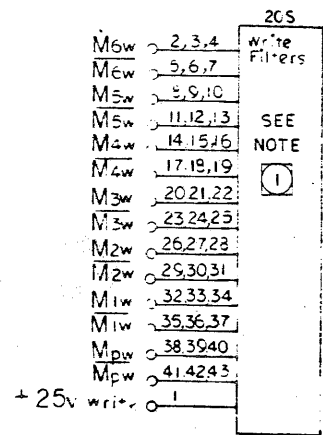
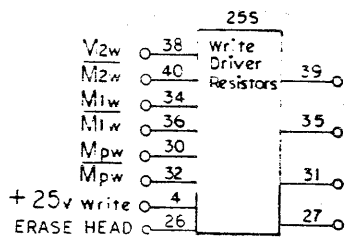
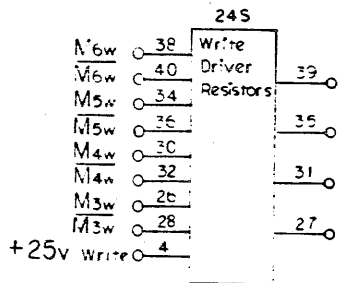


* SEE CALIBRATION PROCEDURE



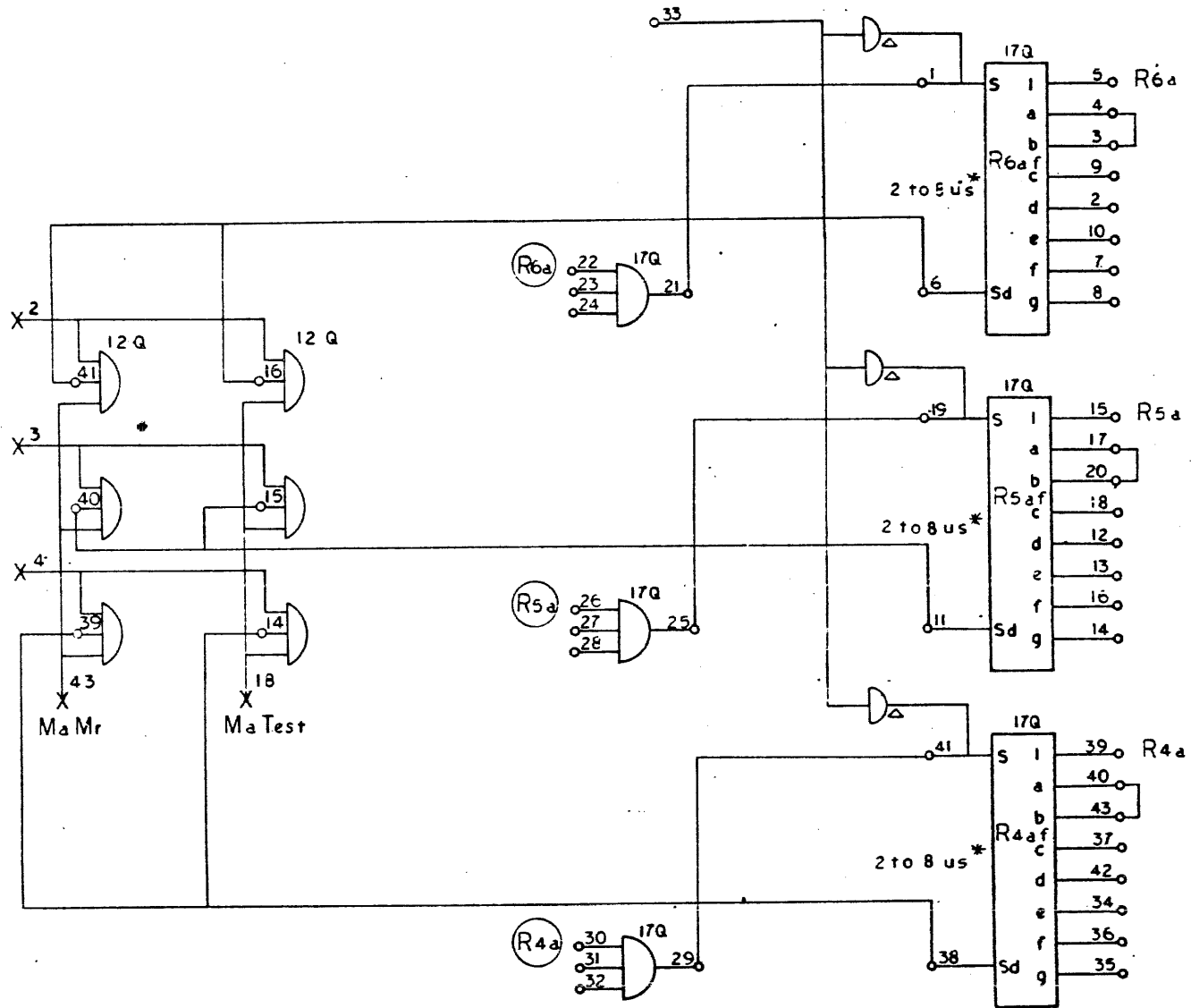


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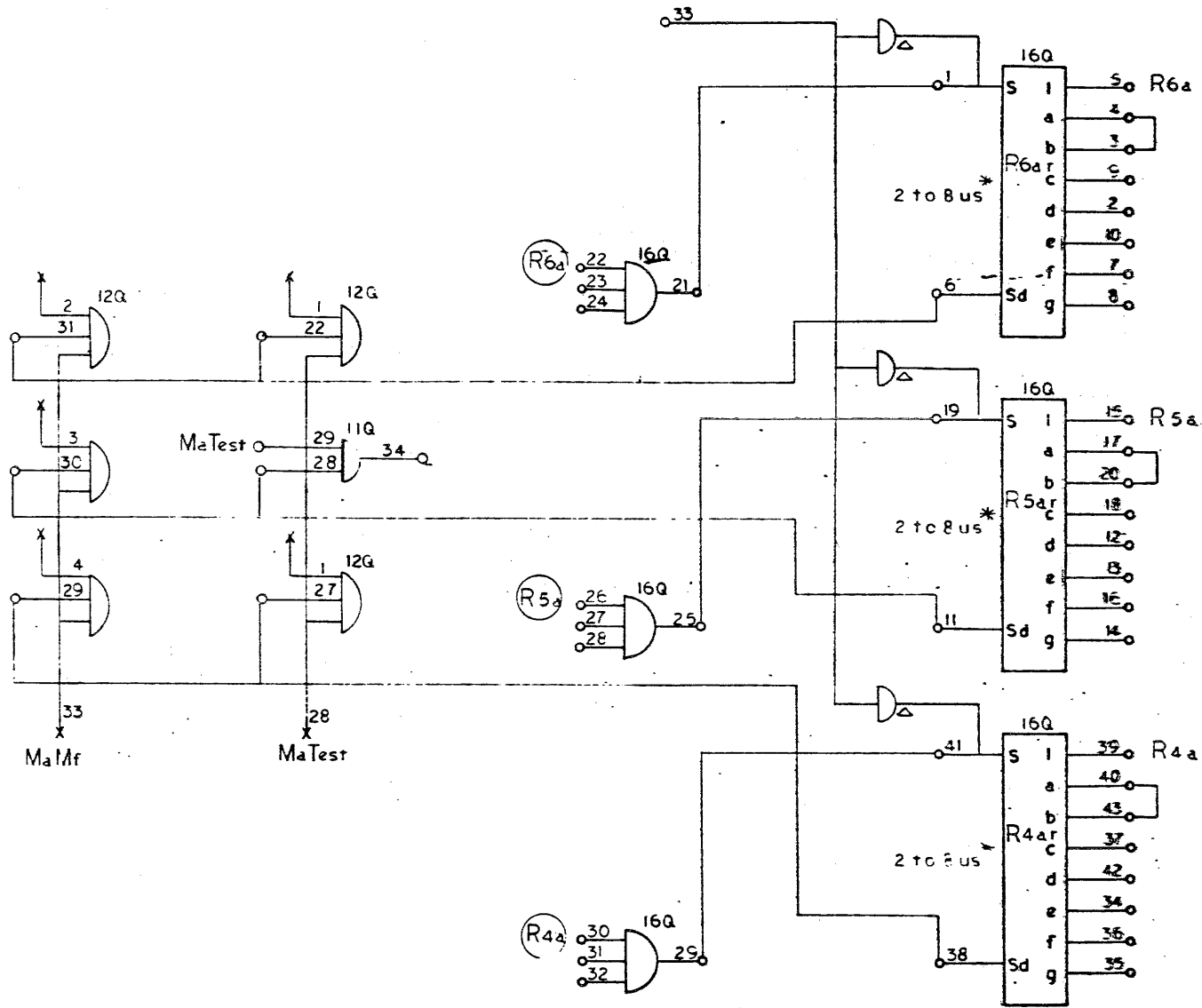


TAPE ELECTRONICS
PAGE 13
D

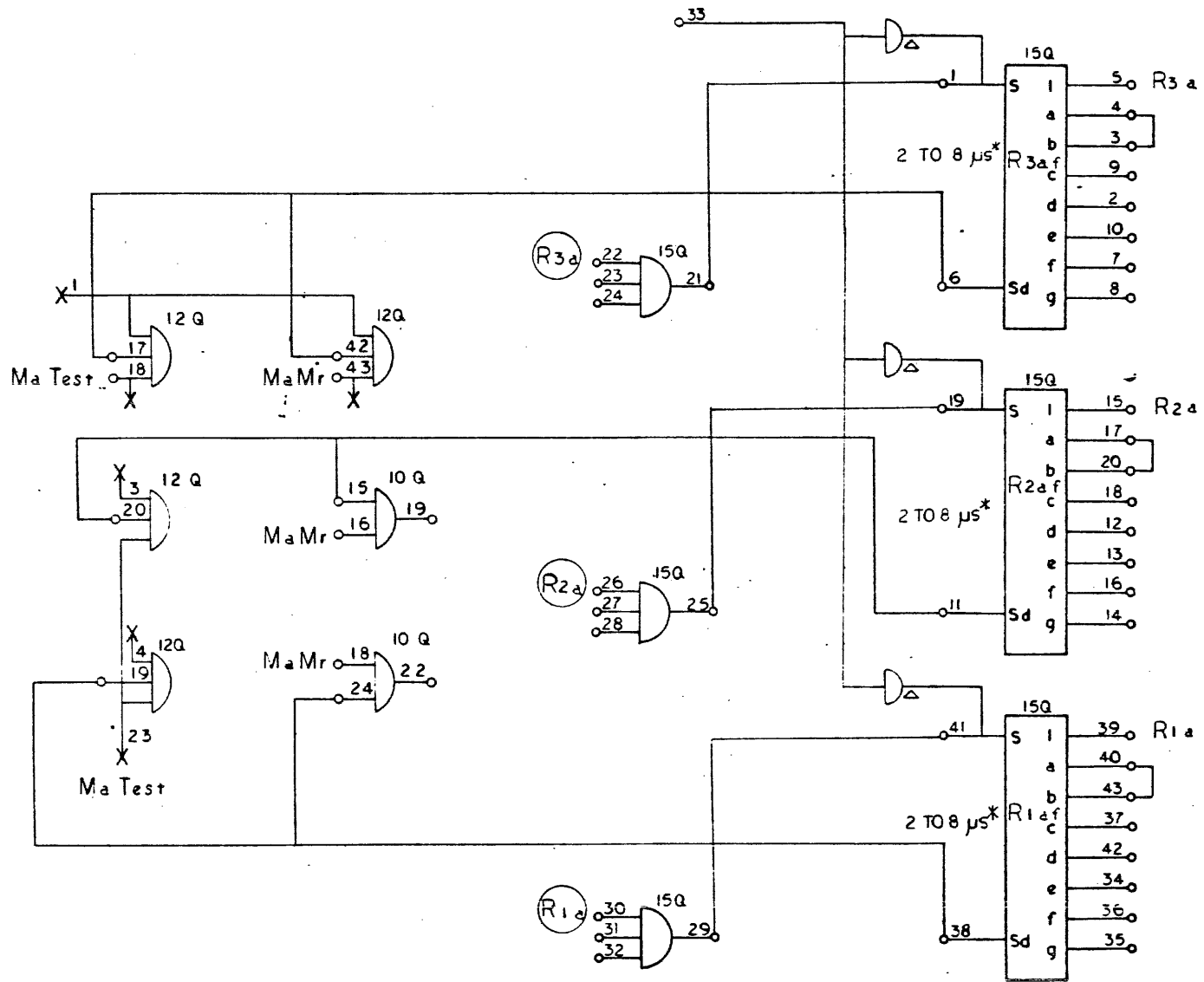
- NOTES:
 ① NOT USED IN 92463P.
 ② USED WITH 92463P ONLY.



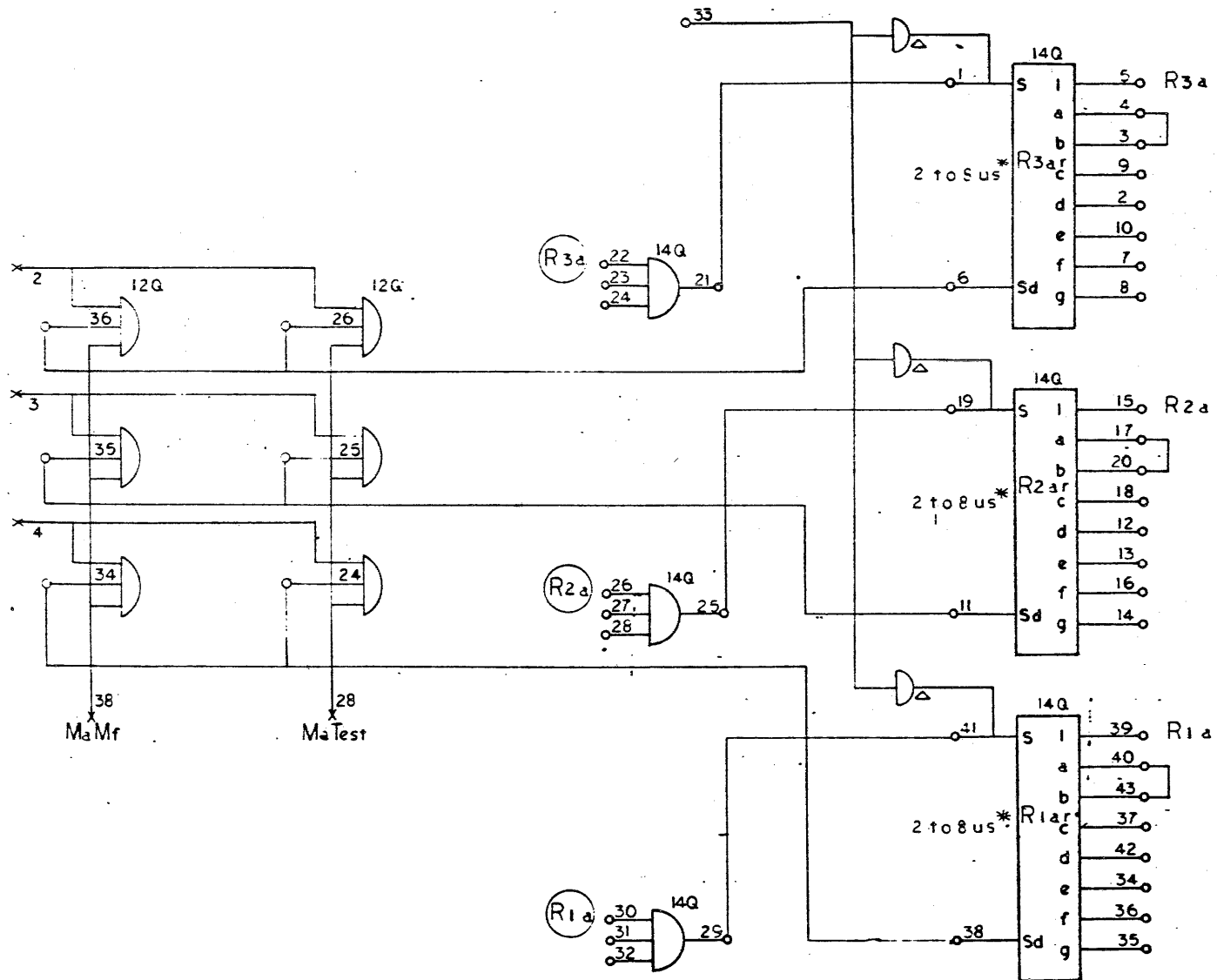
* SEE CALIBRATION PROCEDURE

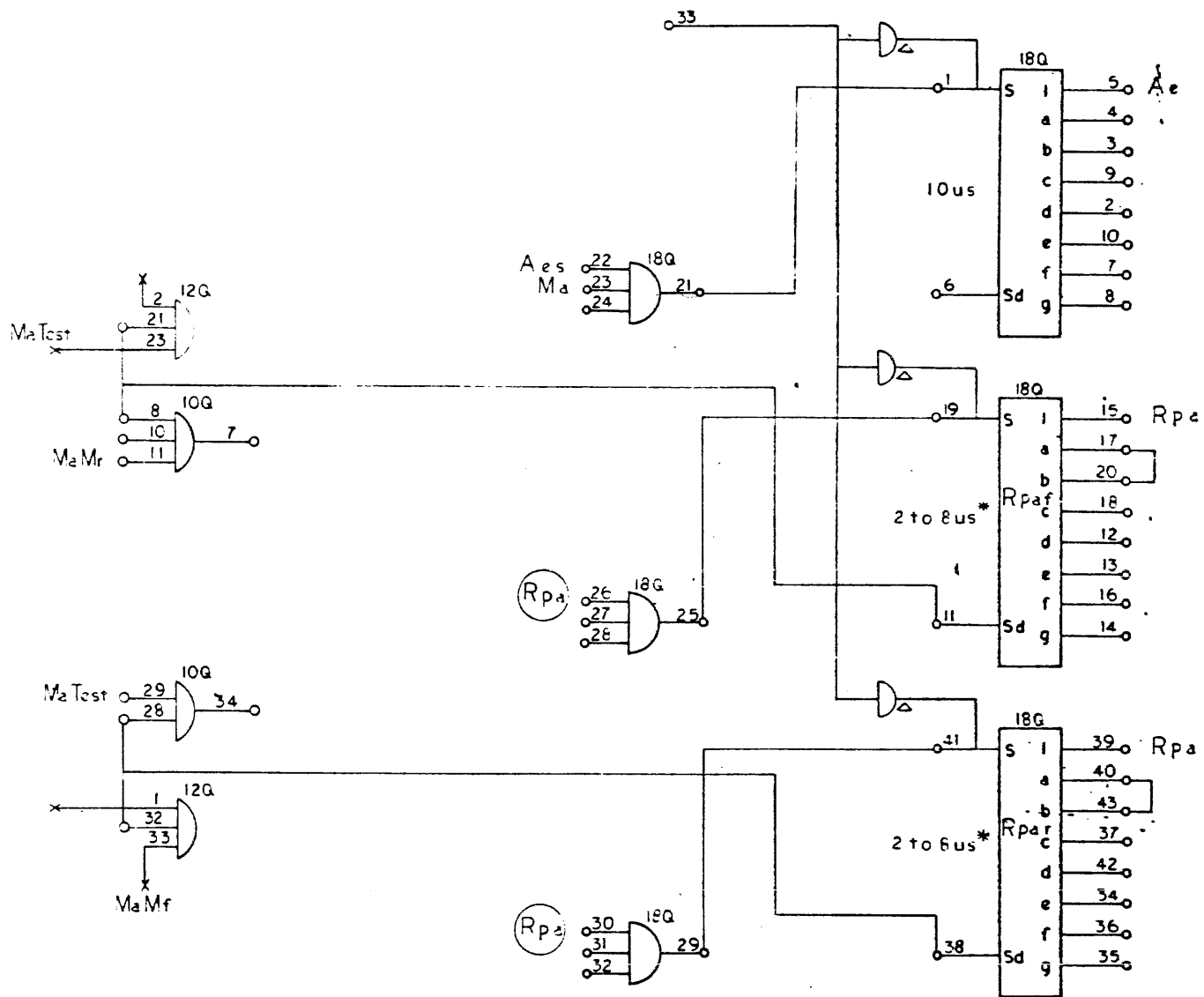


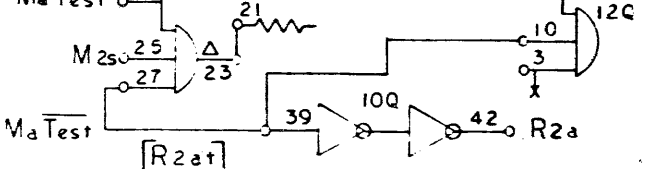
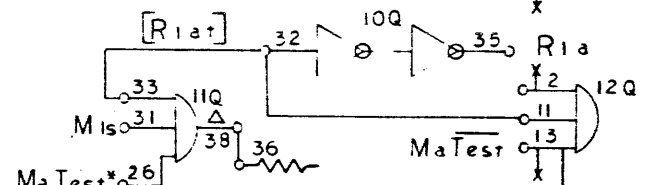
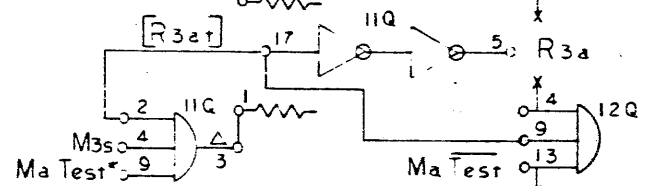
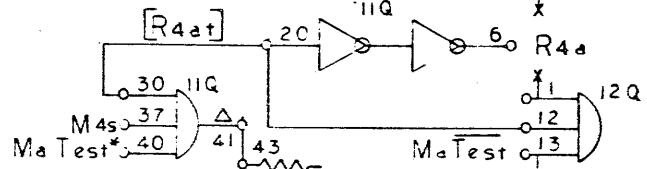
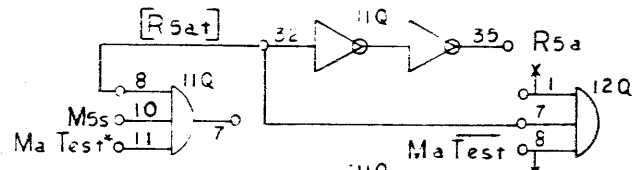
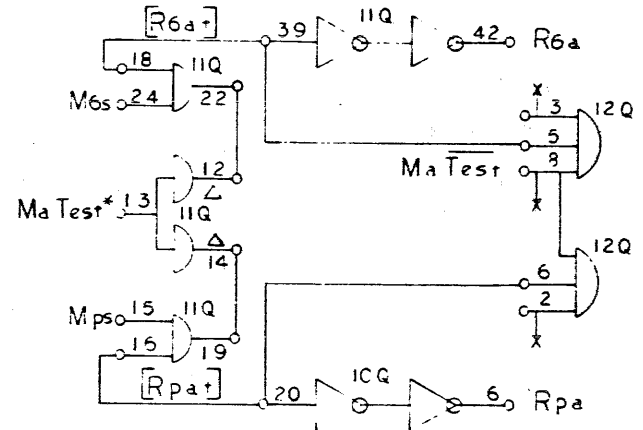
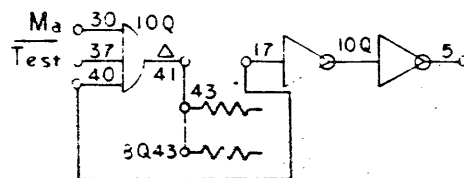
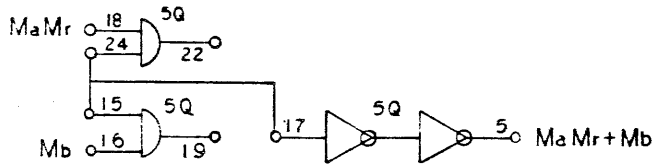
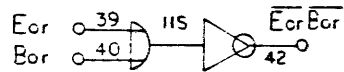
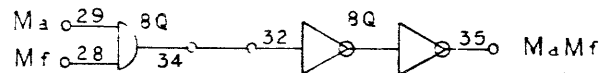
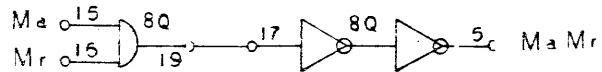
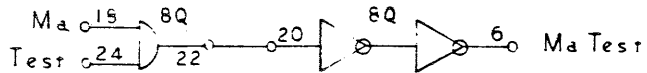
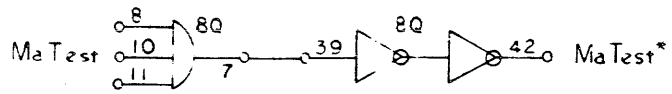
* SEE CALIBRATION PROCEDURE

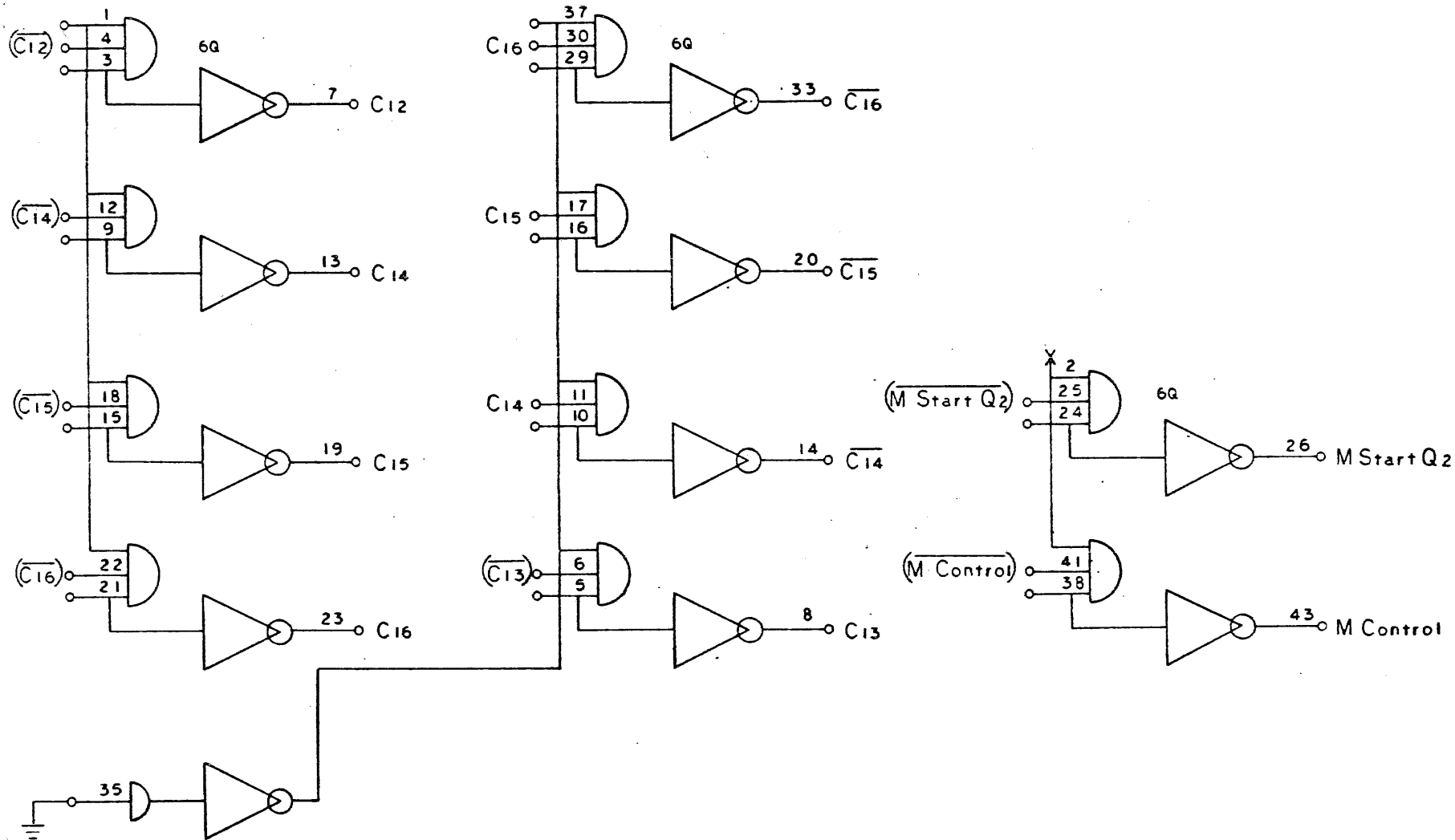


* SEE CALIBRATION PROCEDURE







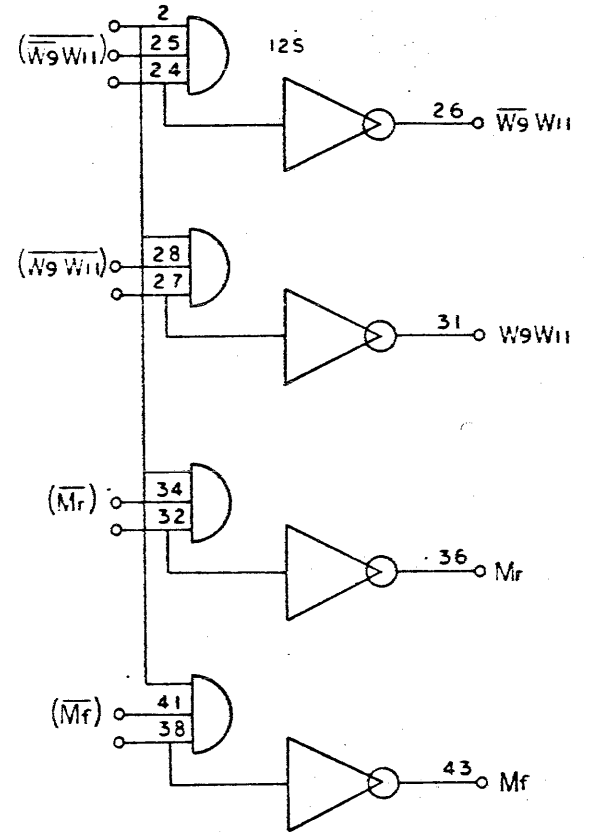
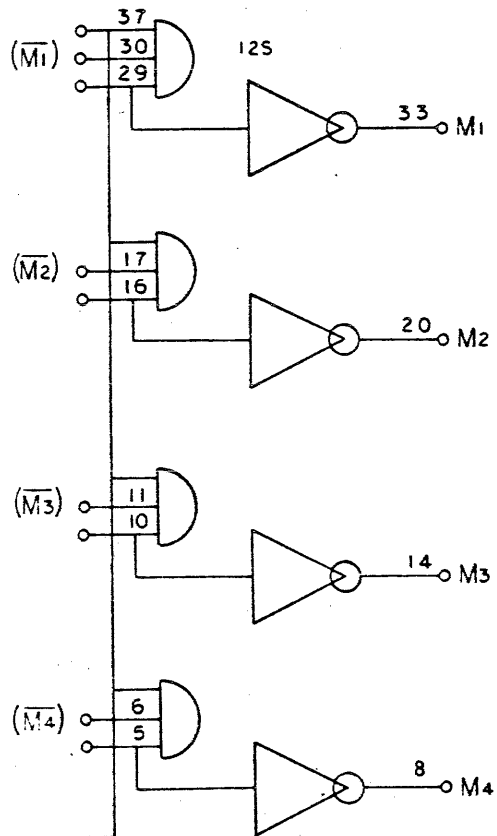
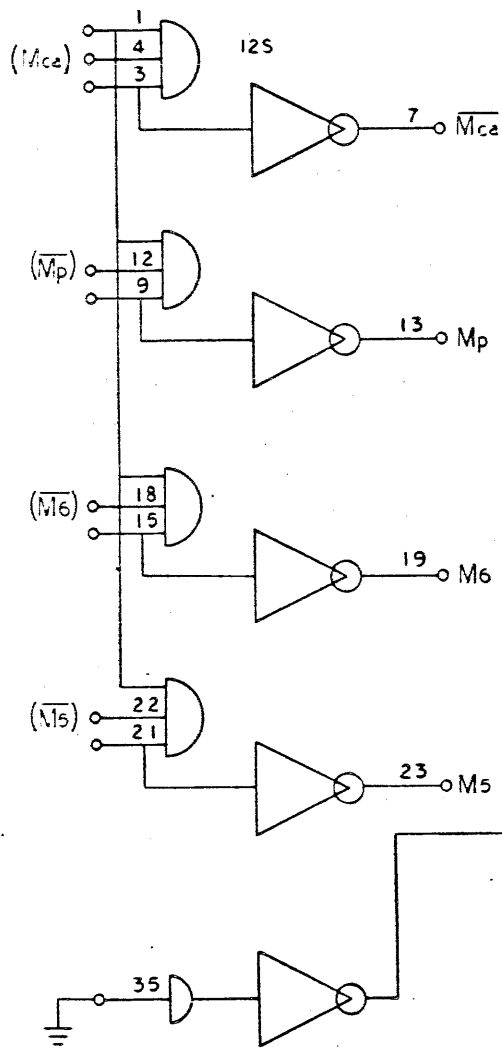


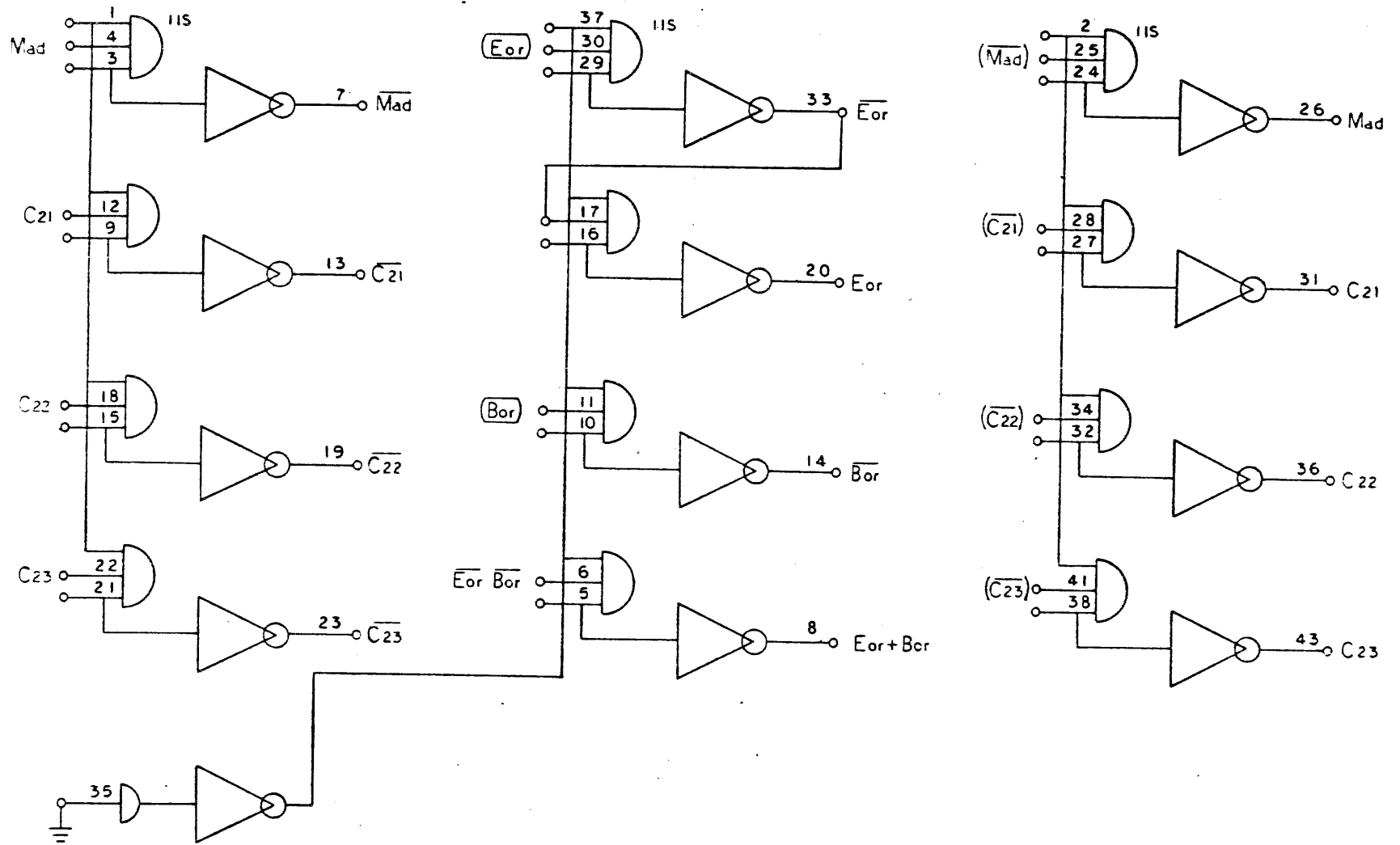
9246A
9246P

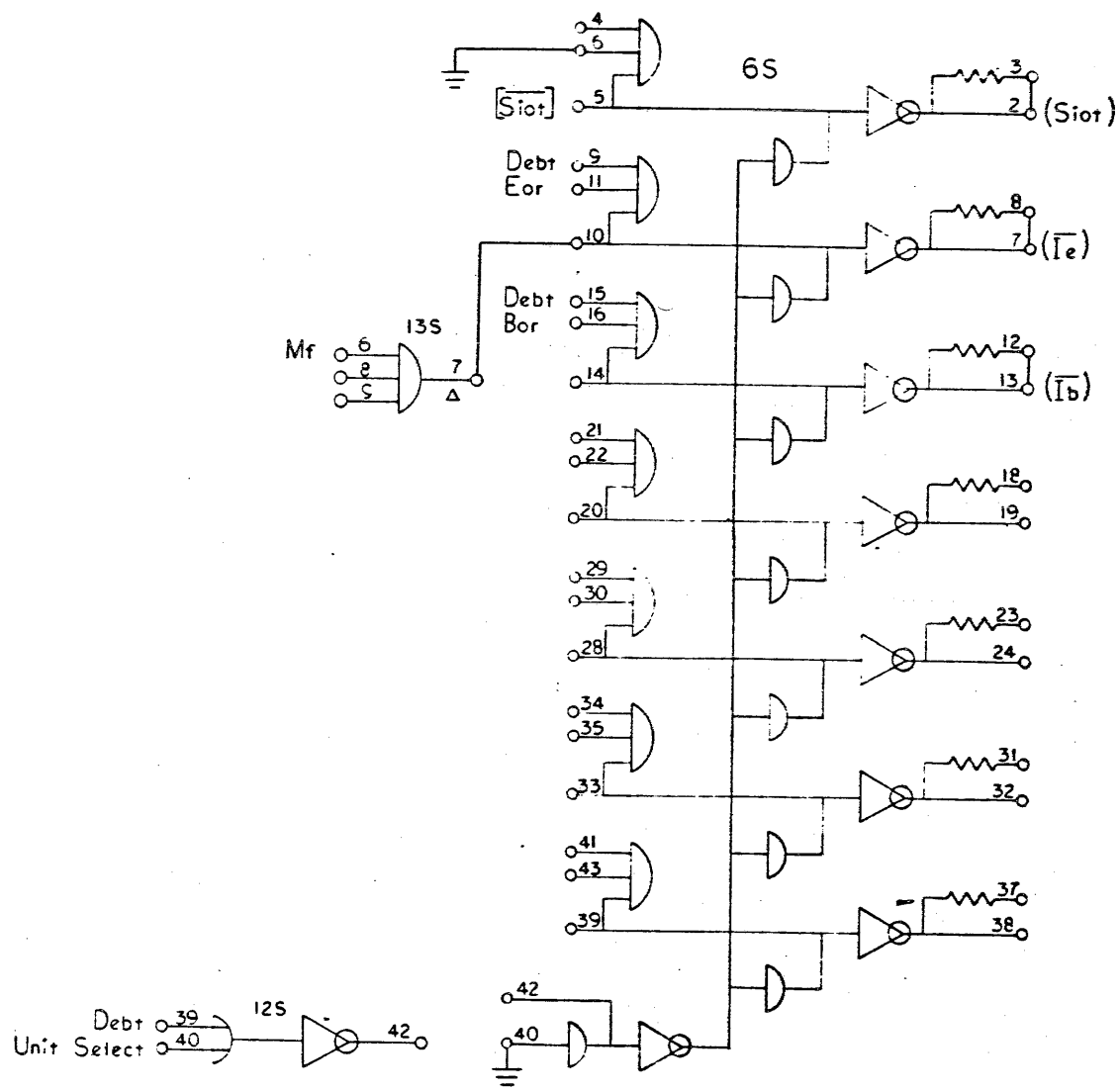
TAPE ELECTRONICS

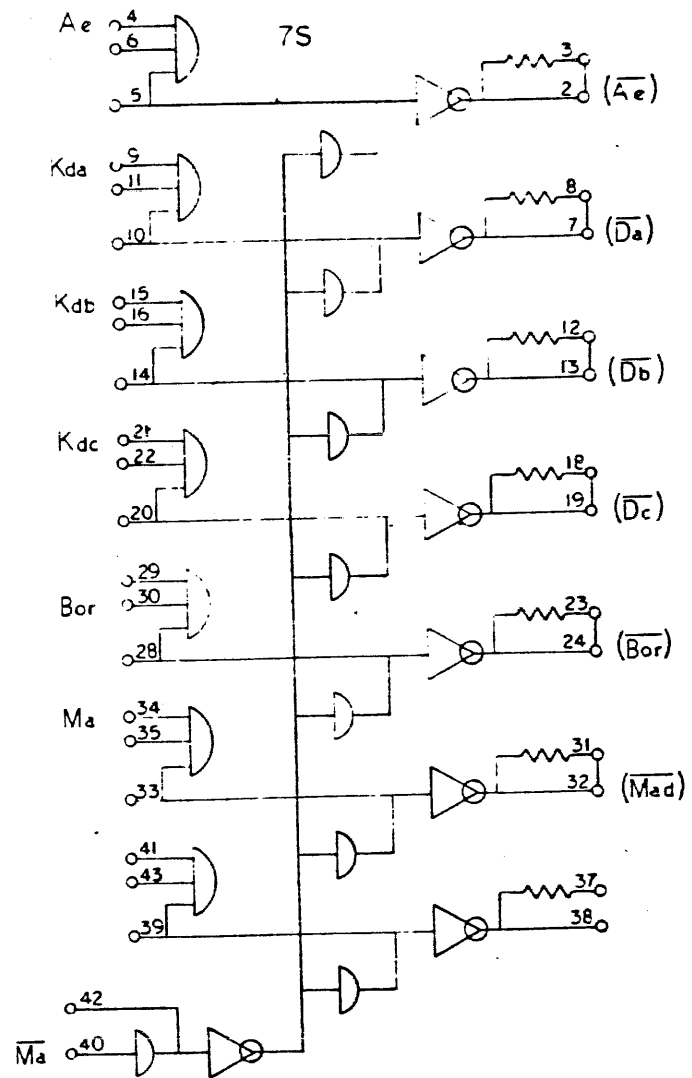
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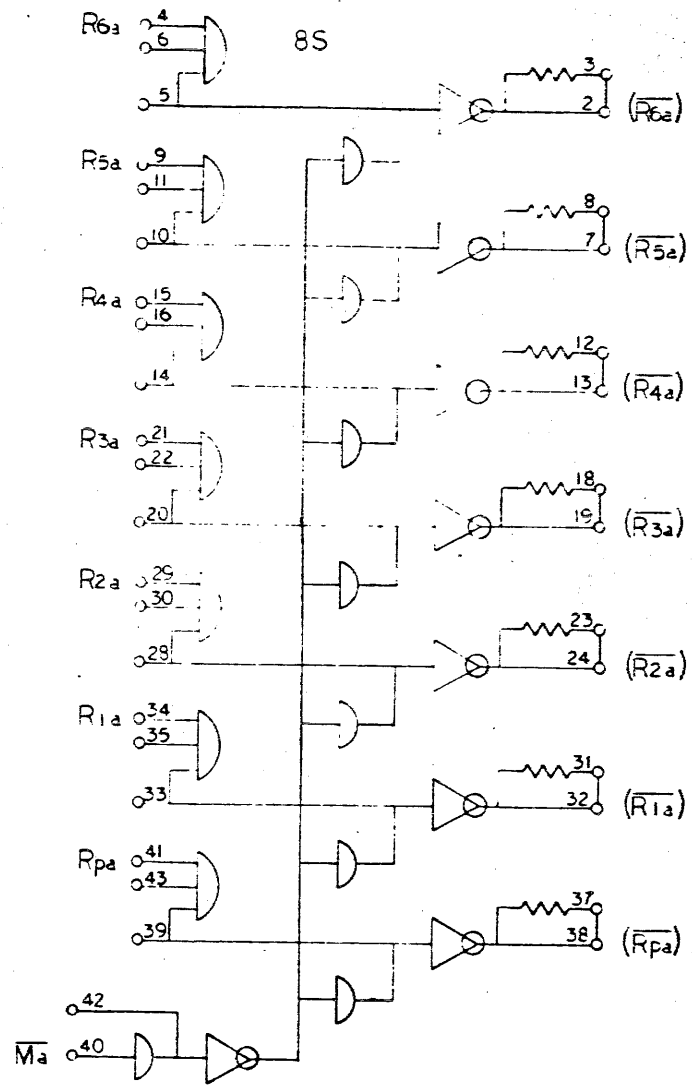
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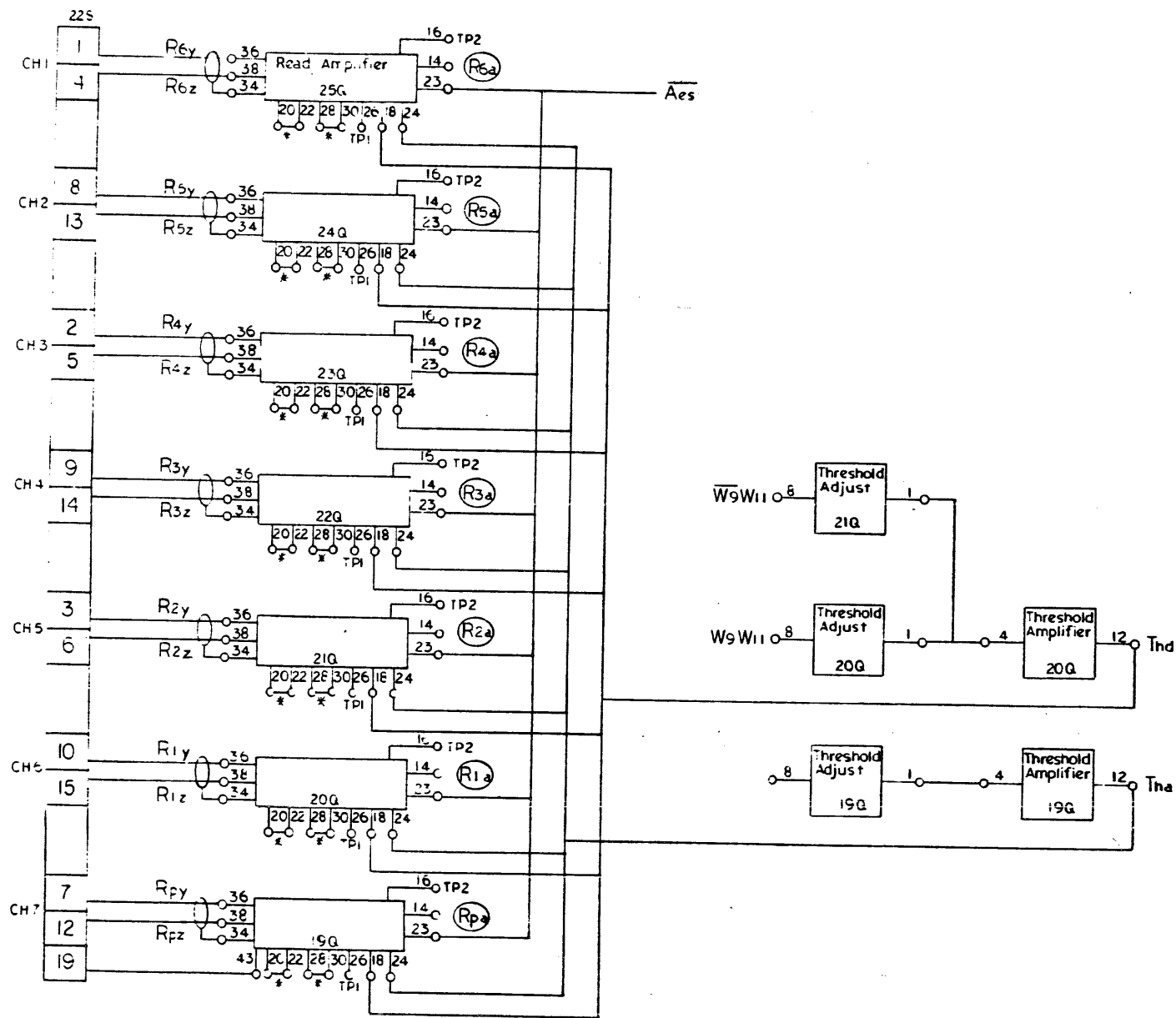






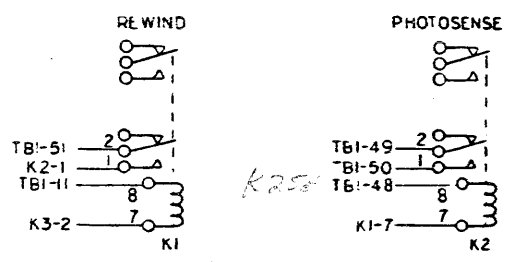
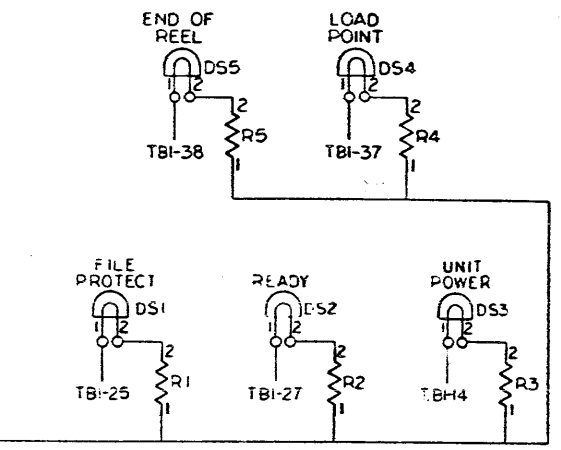
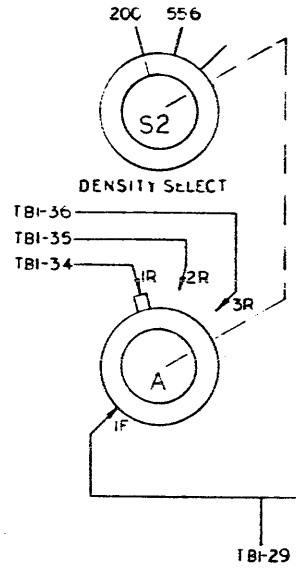
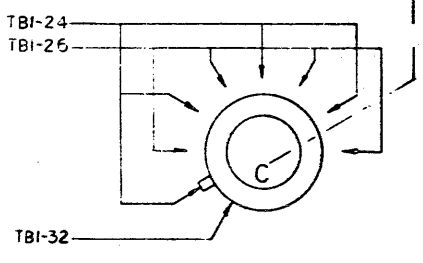
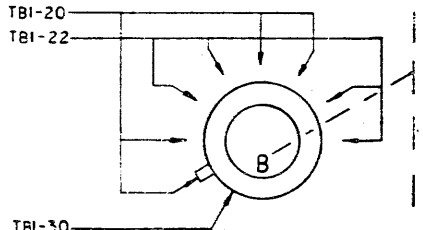
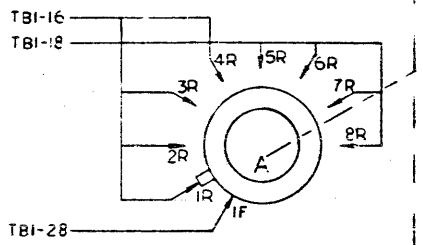
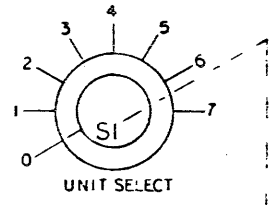




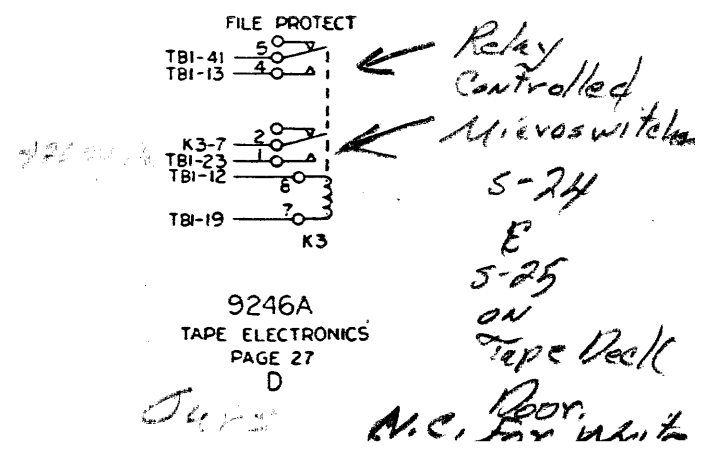


* JUMPERS 20-22 AND 28-30 ARE NOT USED IN 92463P.

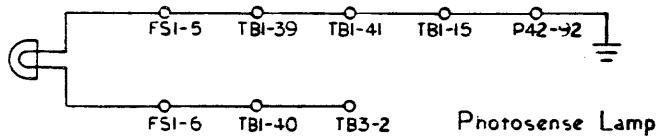
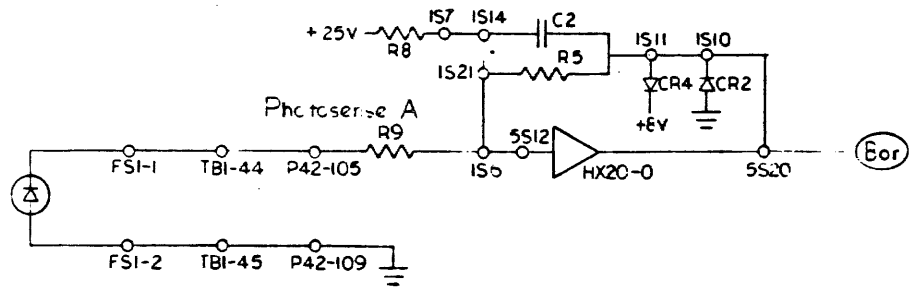
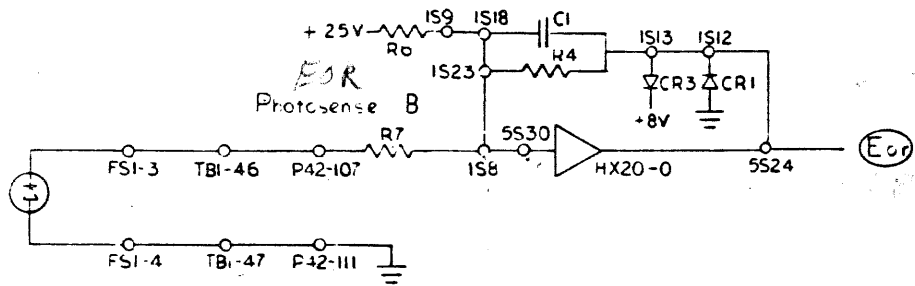
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P42-121	7	TBI-8
P3-M	8	
P42-115	9	TBI-10
P3-X	10	
P42-116	11	
P3-J	12	
P42-100	13	
P3-A	14	TBI-15
P42-92	15	TBI-39
P42-140	16	
P42-98	17	TBI-19
P42-39	18	
P42-96	19	
P42-138	20	
P42-131	21	TBI-23
P42-137	22	
P42-129	23	
P42-136	24	
P42-142	25	
P42-135	26	
P42-141	27	
P42-134	28	
P42-94	29	
P42-133	30	
P3-K	31	
P42-132	32	
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P42-127	34	
P42-125	35	
P42-123	36	
P42-103	37	
P42-101	38	
FSI-5	39	TBI-41
FSI-6	40	
FSI SHIELD	41	TBI-14
P42-104	42	
TBI0-4	43	
P42-105,-FSI-1	44	
P42-109,-FSI-2	45	
P42-107,-FSI-3	46	
P42-111,-FSI-4	47	
P42-114	48	
TBI0-2	49	
TBI0-1	50	
TBI0-3	51	

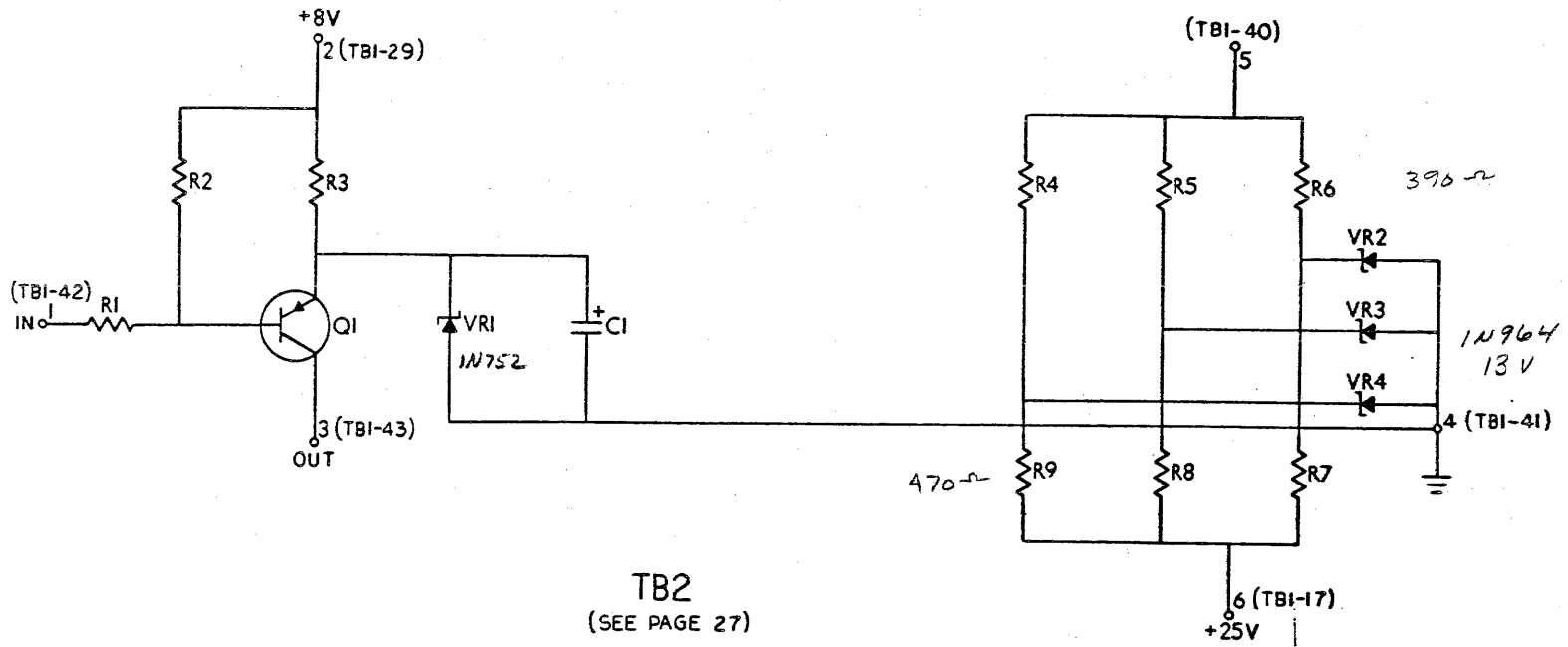


TB2
PHOTOSENSE
CONTROL
ASSY.
(SEE PAGE
29)



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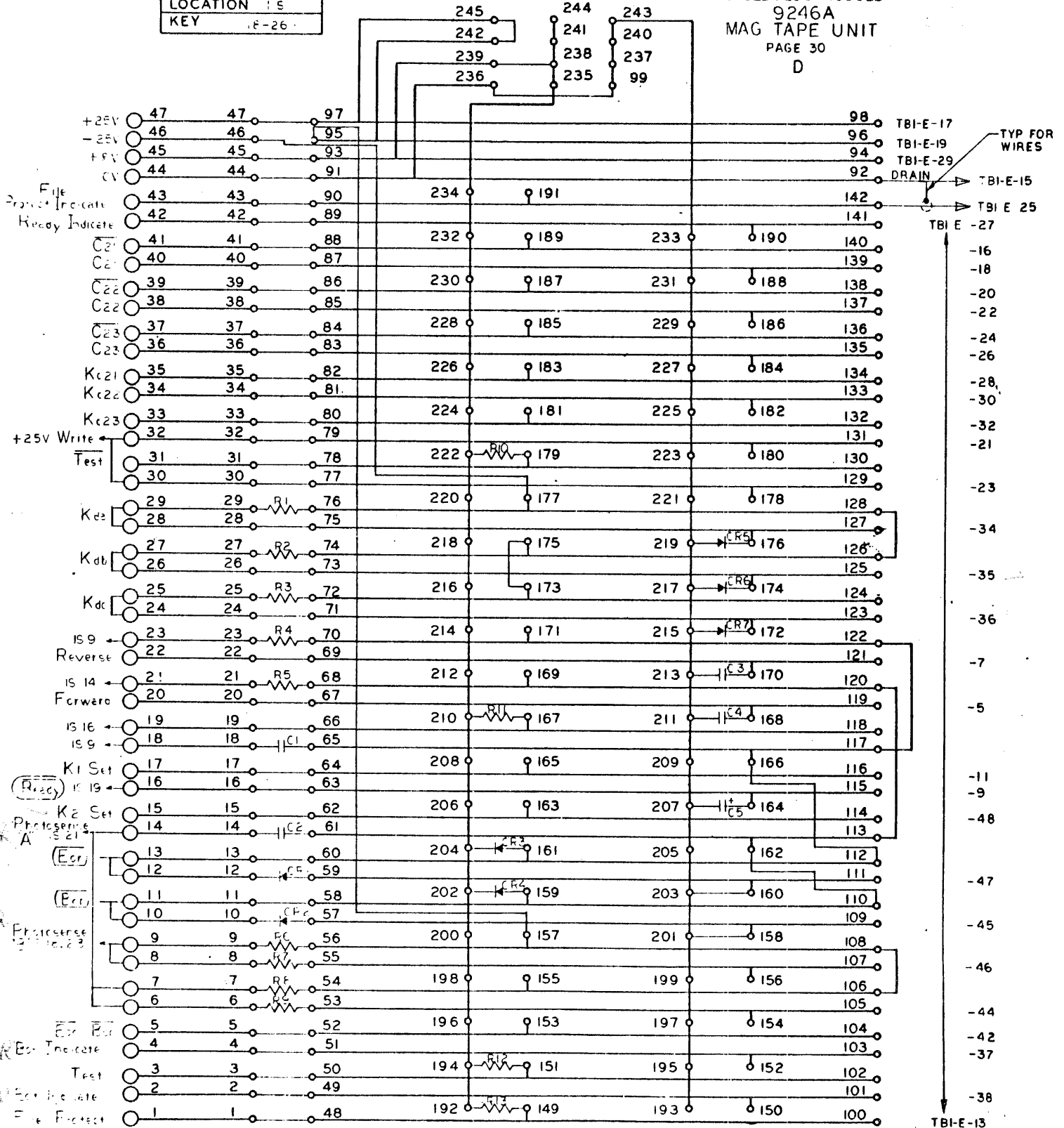




TB2
(SEE PAGE 27)

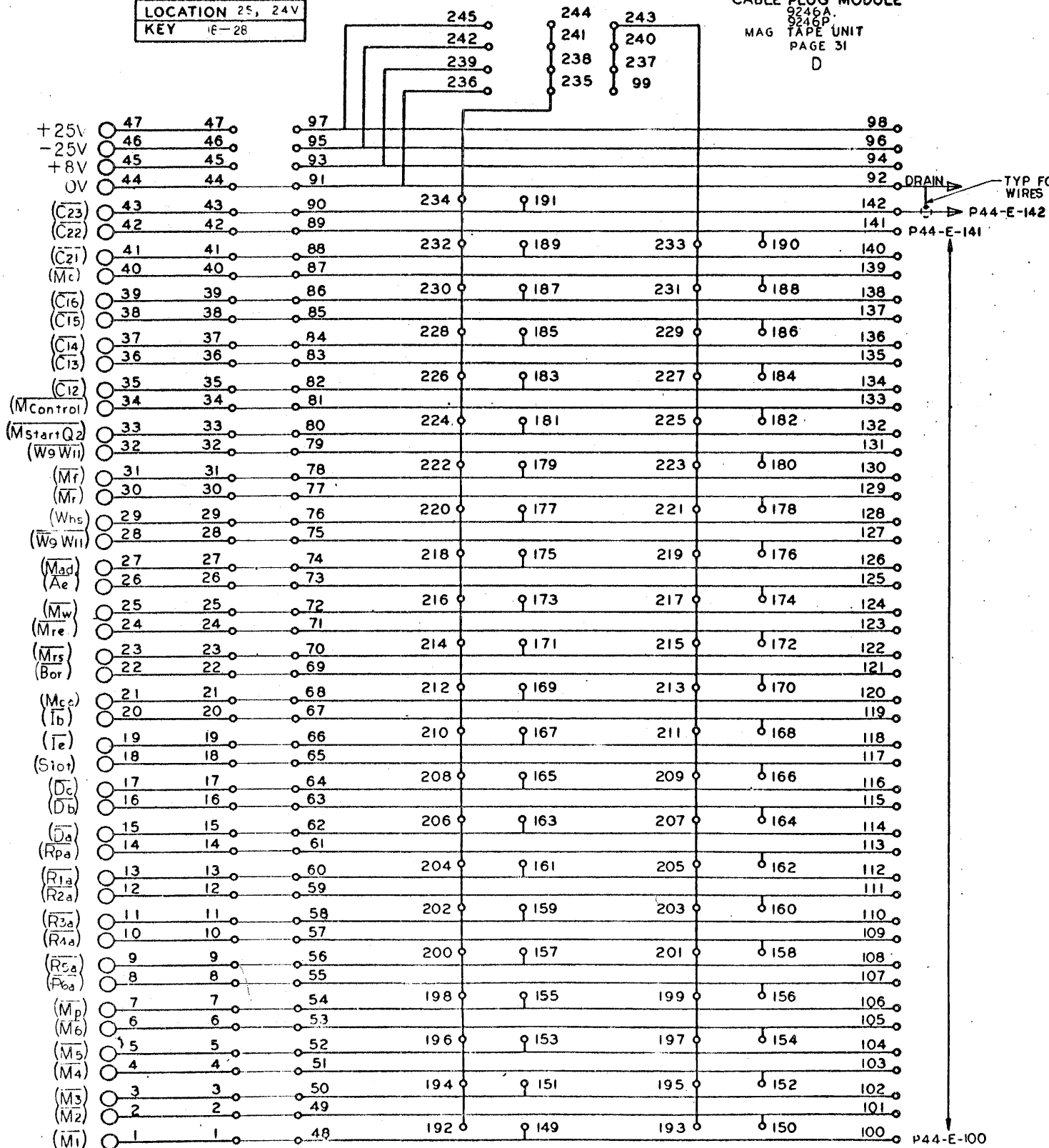
DESIGNATION	P42
LOCATION	1 S
KEY	E-26

CABLE PLUG MODULE
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DESIGNATION	P43
LOCATION	25, 24V
KEY	E-28

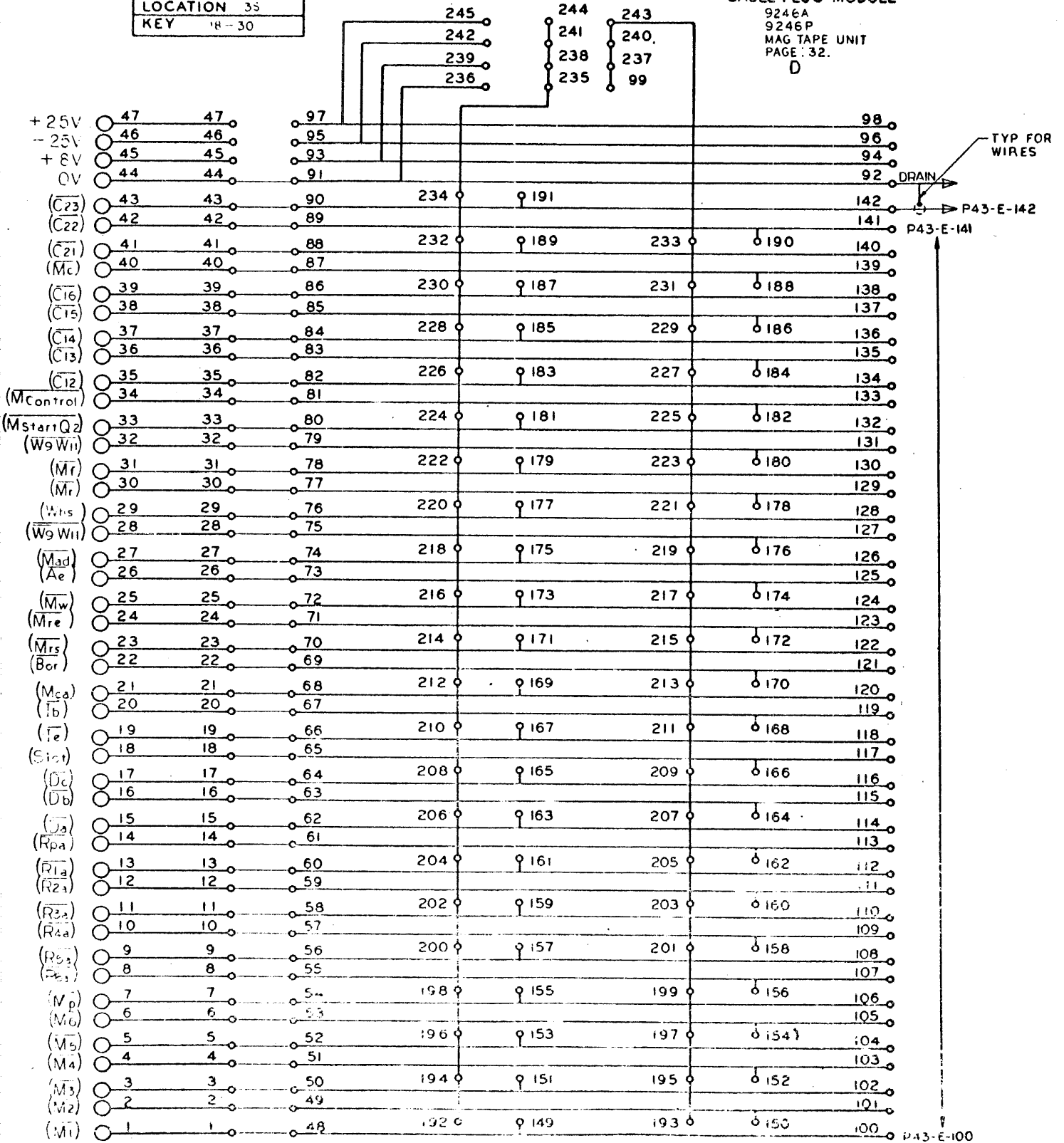
CABLE PLUG MODULE
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DESIGNATION	P44
LOCATION	35
KEY	18-30

CABLE PLUG MODULE

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	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Q	RX 10	F-17	OX 13	GC 10	BC 10	IH 12	GC 10	BC 10	IC 12	BC 10	BC 10	GC 11		OX 13	OX 13	CX 13	CX 13	CX 13	HK 60	HK 60	HK 60	HK 60	HK 60	HK 60	HK 60
S	P42 (A) UNITS	P42 ZK 57	P44	ZK 57	P42 (P) UNITS	AX 14	AX 14	AX 14			IC 12	IC 12	GC 10	CX 13	OX 13	FC 17	FC 17	AK 52	AK 52	ZK 56				ZK 51	ZK 51
					(NOT USED ON "P" UNITS)																				

9246A
9246P

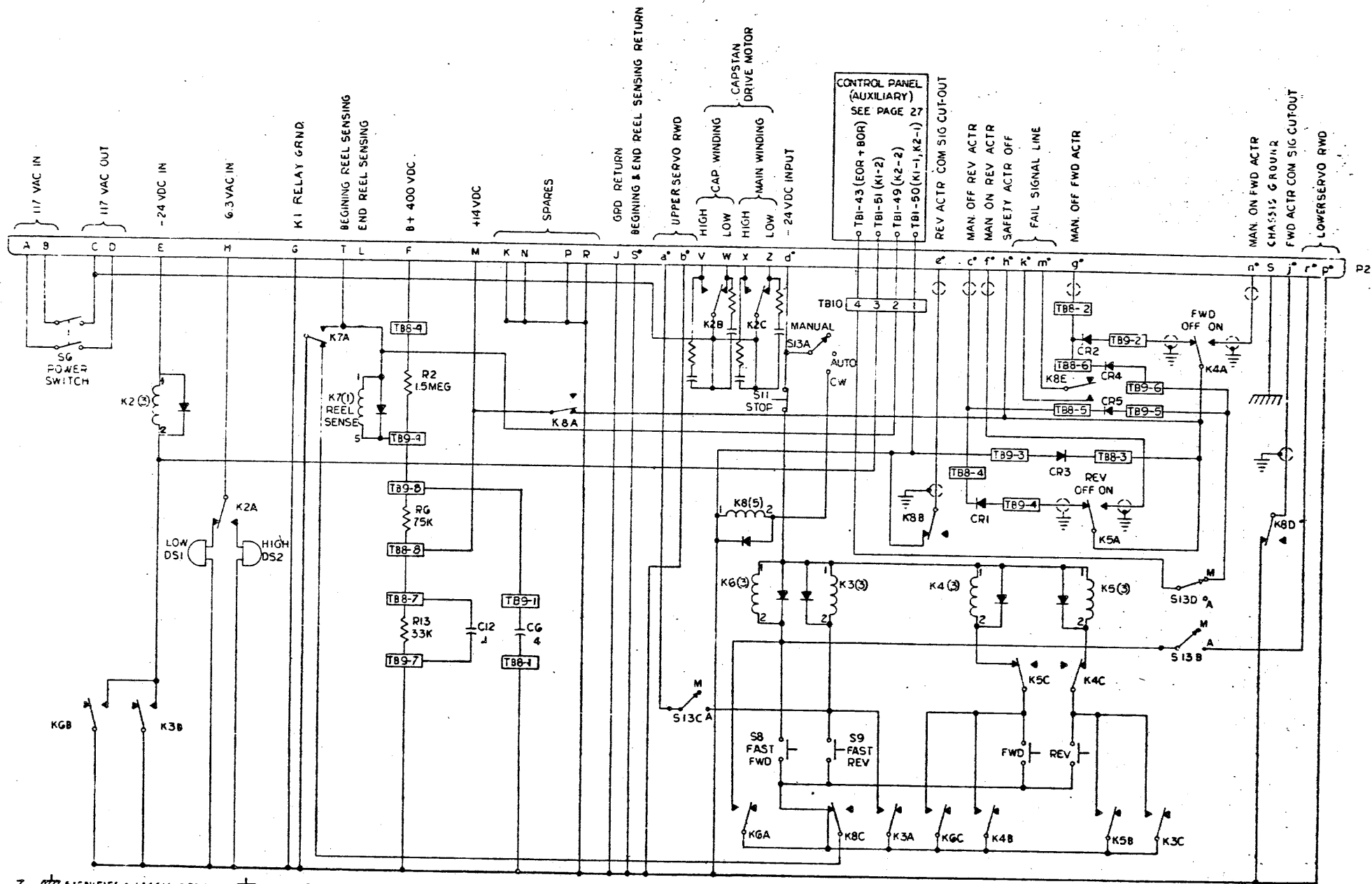
MODULE LIST

ITEM	DESCRIPTION	MODEL	QTY.
1	WRITE DRIVER	AK52	2
2	CABLE DRIVER	AX14	3
3	AND/OR BUFFER AMP	BC10	4
4	UNIVERSAL F.F.	FC17	2
5	GATE EXPANDER	GC10	3
6	GATE EXPANDER	GC11	1
7	OPERATIONAL AMP	HX20-0	1
8	READ AMP	HK60	7
9	AND INVERTER	IC12	3
10	ONE SHOT MULT.	OX13	8
11	RELAY DRIVER	RX10	1
12	RESISTOR	ZK51	2
13	TERM. MODULE	ZK56	1
14	TERM. MODULE	ZK57	1
15	TERM. MODULE	ZK58	1
16	AND INVERTER	IH12	1
17	UNIVERSAL F.F.	FH17	1

REPLACEMENT PARTS LIST

ITEM	DESCRIPTION	DESIGNATION	QTY.	SUPPLIER CODE (SEE INDEX)
1	RESISTOR, 3.3K \pm 2%	(P42) R1, R2, R3	3	16, 17
2	↑ 1 MEGΩ ↓	(P42) R4, R5, R6, R8	4	16, 17
3	↓ 1K ↓	(P42) R7, R9	2	16, 17
4	RESISTOR, 8.2K \pm 2%	(P42) R10, R11, R12, R13	4	16, 17
5	CAPACITOR, MYLAR .0033 μ F \pm 10%	(P42) C1, C2	2	26, 27, 74
6	CAPACITOR, MYLAR .0068 μ F \pm 10%	(P42) C3, C4	2	26, 27, 74
7	CAPACITOR, TANTALUM .47 μ F \pm 20% 50V	(P42) C5	1	23, 77
8	DIODE, SILICON SWITCHING IN914A	(P42) CR1 THRU CR7	7	4, 12, 13, 14
9	CONNECTOR, SOLDER TAIL 47 CONTACT \neq 7008-47	J(1Q) THRU J(25Q) J(1S) THRU J(20S) J(24S), J(25S)	47	82
10	RESISTOR, 1.8K \pm 2%	(TB2) R1	1	16, 17
11	↑ 15K ↑	(TB2) R2	1	↑
12	↓ 180Ω ↓	(TB2) R3	1	↓
13	↓ 390Ω ↓	(TB2) R4, R5, R6	3	↓
14	RESISTOR, 470Ω \pm 2%	(TB2) R7, R8, R9	3	16, 17
15	DIODE, VOLTAGE REGULATOR IN752	(TB2) VR1	1	2, 12, 13, 14
16	DIODE, VOLTAGE REGULATOR IN964A	(TB2) VR2, VR3, VR4	3	2, 6, 14, 65
17	CAPACITOR, TANTALUM 4.7 μ F \pm 20% 50V	(TB2) C1	1	23, 77
18	TRANSISTOR, SILICON SWITCHING 2N1132	(TB2) Q1	1	3, 10, 11
19	RECEPTACLE, 19 PIN # RSK 19-315L	J1	1	134
20	PLUG, 19 PIN # SK 19-32S	J2	1	134
21	SWITCH, ROTARY #102163	S1, S2	2	SDS
22	LAMP, INCANDESCENT #47	DS1 THRU DS5	5	84
23	RESISTOR, WW 10Ω \pm 5%	R1 THRU R5	5	99, 100
24	RELAY, DPDT # DOSX-7T * 80-6A/115 VAC	K1 THRU K4	4	78 79
25	SWITCH, TOGGLE, DPDT # 83054-SE	S1(S)	1	106
26	CAPACITOR, TANTALUM 4.7 μ F \pm 20% 50V	C1(Q)	1	23, 77

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MAG TAPE UNIT
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7. SIGNIFIES CHASSIS GRND. SIGNIFIES COMMON GROUND.
 6. USED WITH ASSY NO 310543710
 5. S3- D-E NOT USED.
 4. ALL DIODES ARE IN2069
 3. ALL RELAYS SHOWN IN DEENERGIZED POSITION
 2. ALL RESISTORS IN OHMS
 1. ALL CAPACITORS IN MICROFARADS

NOTES: UNLESS OTHERWISE SPECIFIED

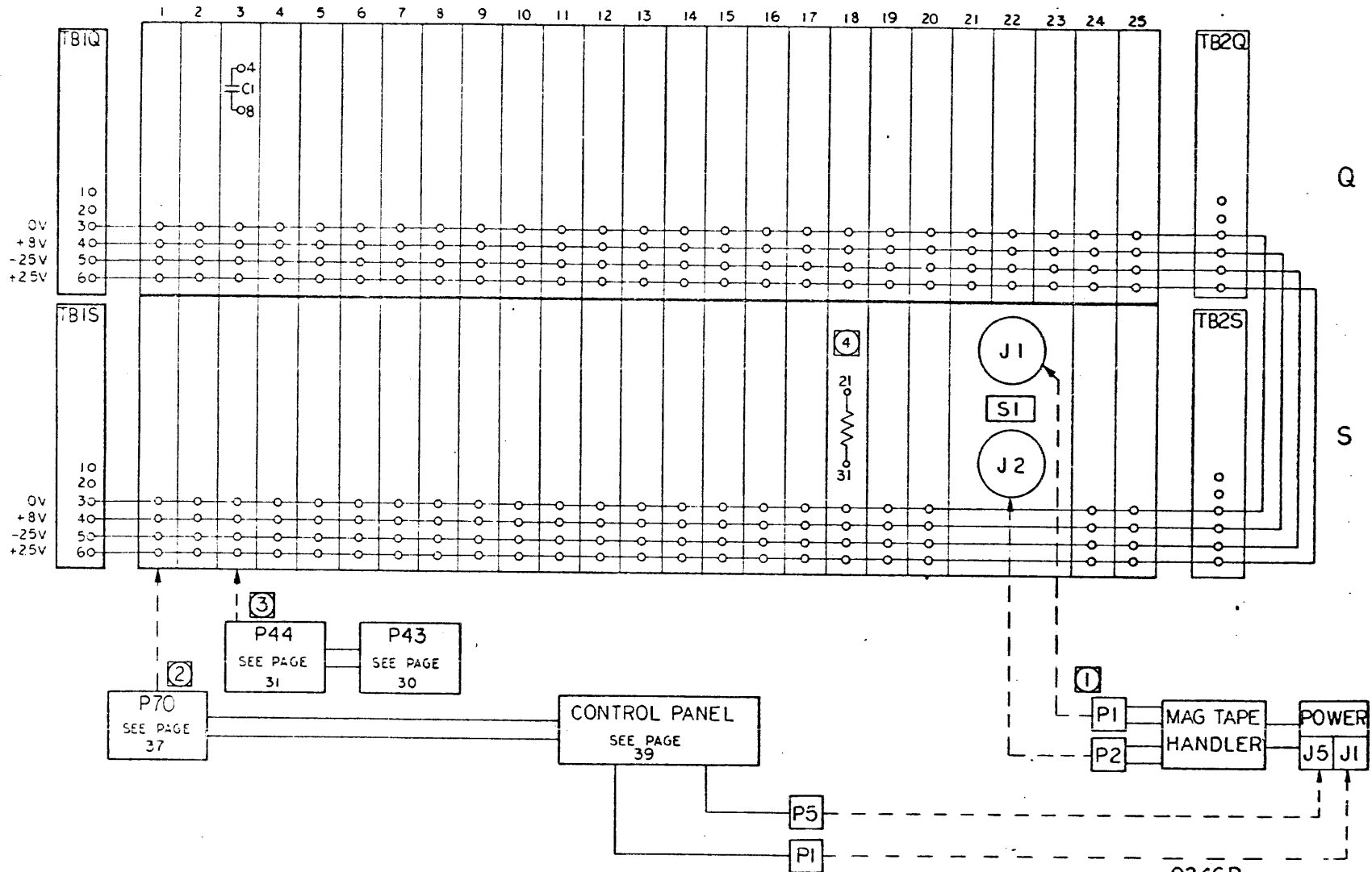
MANUAL CONTROL PANEL

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 MAG TAPE UNIT.
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NOTES: UNLESS OTHERWISE SPECIFIED

- ③ RECEPTACLE J(3S) IS PROVIDED FOR THE P44 TO P43 CABLE. P43 CONNECTS TO RECEPTACLE J(24V) OF THE MODEL 9248 CONTROL UNIT OR TO J(2S) OF A SECOND MODEL 9246.
- ④ USED ON 92463P ONLY, RESISTOR 100680-750.

- ① RECEPTACLES J1 & J2 ARE PROVIDED FOR CONNECTION TO THE READ & WRITE HEADS OF THE MAG TAPE UNIT.
- ② RECEPTACLE J(1S) IS PROVIDED FOR P70 FROM CONTROL PANEL.

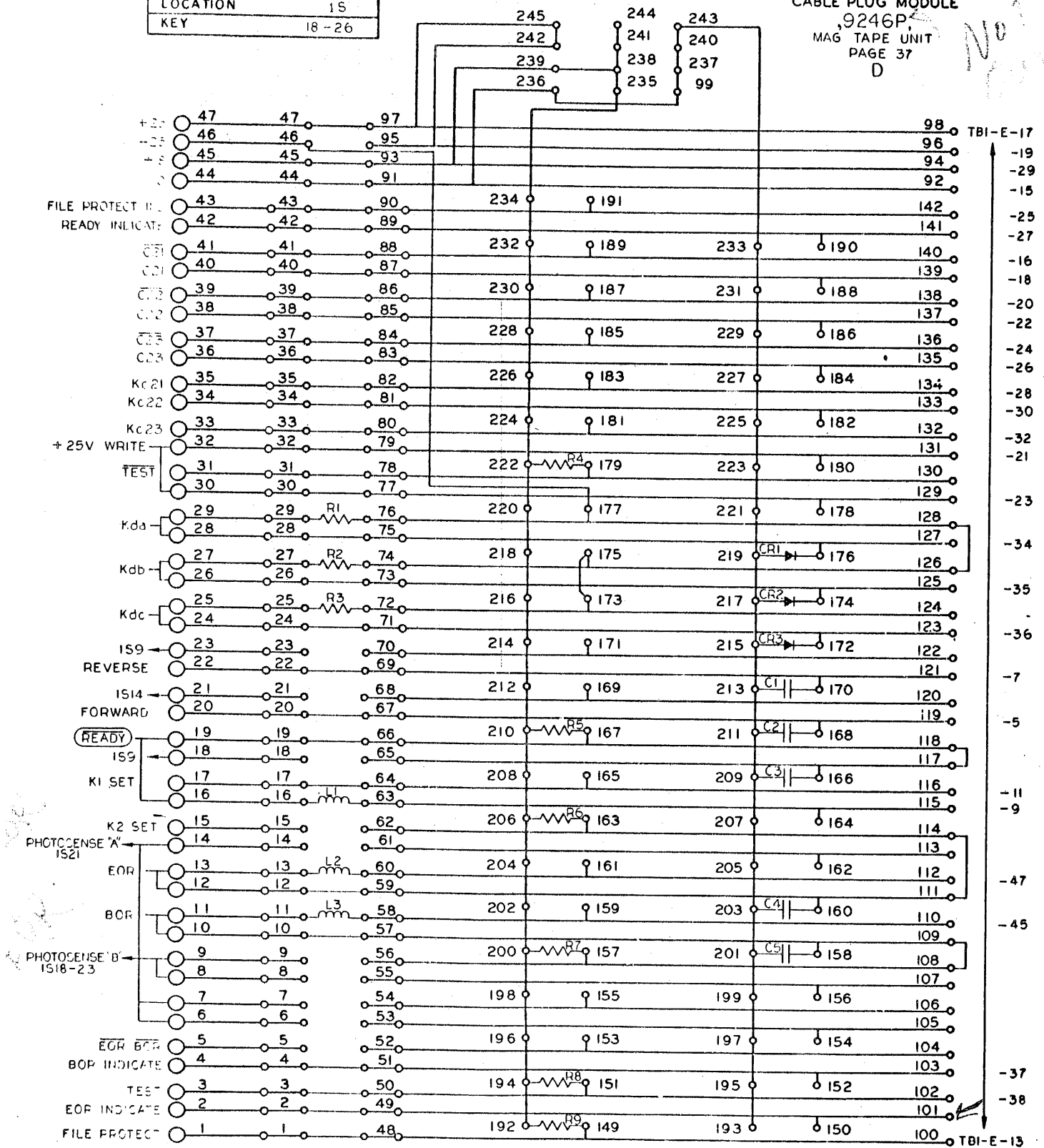


DESIGNATION	P70
LOCATION	1S
KEY	18-26

CABLE PLUG MODULE

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MAG TAPE UNIT
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NO 9



MODULE LIST

ITEM	DESCRIPTION	MODEL	QTY
1	WRITE DRIVER	AKS2	2
2	CABLE DRIVER	AX14	3
3	AND/OR BUFFER AMP	BC10	4
4	UNIVERSAL F.F.	FC17	2
5	GATE EXPANDER	GC10	3
6	GATE EXPANDER	GC11	1
7	READ AMP	HK60	7
8	AND INVERTER	IC12	3
9	ONE SHOT MULT.	OX13	8
10	RELAY DRIVER	RX10	1
11	RESISTOR	ZKS1	2
12	TERM. MODULE	ZKS6	1
13	TERM. MODULE	ZKS7	1
14	TERM. MODULE	ZKS8	1
15	AND INVERTER	IH12	1
16	UNIVERSAL F.F.	FH17	1

REPLACEMENT PARTS LIST

ITEM	DESCRIPTION	DESIGNATION	QTY.	SUPPLIER CODE (SEE INDEX)
1	RESISTOR, 3.3 K \pm 2%	(P70) R1, R2, R3	3	16, 17
2	RESISTOR, 1.8 K \pm 2%	(P70) R6, R7	2	16, 17
3	RESISTOR, 8.2 K \pm 2%	(P70) R4, R5, R9	3	16, 17
4	CAPACITOR, MYLAR .0068 μ F \pm 10%	(P70) C1, C2	2	26, 27, 74
5	CAPACITOR, MYLAR .0033 μ F \pm 10%	(P70) C4, C5	2	26, 27, 74
6	DIODE, SILICON SWITCHING 1N914A	(P70) CR1 THRU CR3	3	4, 12, 13, 14
7	INDUCTOR, MOLDED 10000 μ H \pm 5%	(P70) L2, L3	2	42, 90, 91
8	RECEPTACLE, 19 PIN #RSK 19-315L	J1	1	134
9	PLUG, 19 PIN #SKI9-32S	J2	1	134
10	SWITCH, ROTARY #102163	S101, S102	2	SDS
11	RESISTOR, WW 10 Ω \pm 5%	R1 THRU R5	5	99, 100
12	RELAY, DPDT #DOSX-7T #80-6A/115VAC	K1, K3	2	78 79
13	SWITCH, TOGGLE DPDT #B3054-SE	S1(S)	1	106
14	CAPACITOR, TAUTAJUN 4.7 μ F \pm 20% 50V	C1(A)	1	23, 77
15	CONNECTOR, SOLDER TAIL 47 CONTACT #7008-47	J(10) THRU J(25a) J(15) THRU J(20S) J(245), J(25S)	47	82
16	LAMP, MINIATURE #328	DS101 THRU DS105	20	83, 84
17	INDUCTOR, MOLDED 330 μ H \pm 5%	(P70) L1	1	42, 90, 91
18	RESISTOR, 560 Ω \pm 2%	(P70) R5	1	16, 17
19	CAPACITOR, MYLAR, .0010 μ F \pm 10%	(P70) C3	1	26, 27, 74

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* NOT USED ON 92463P

