

# MTR-90III Master Tape Recorder Schematic Diagrams

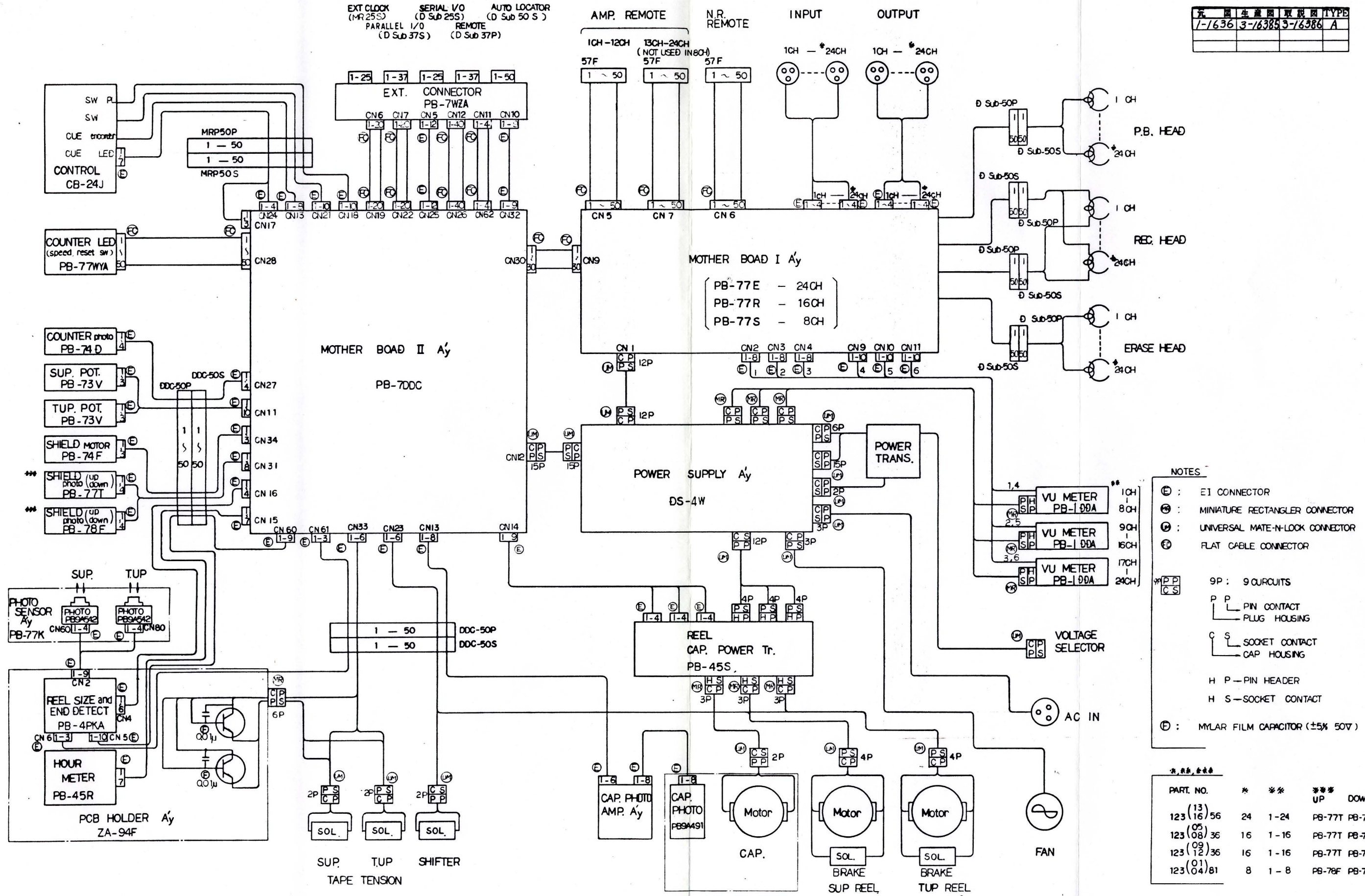
Type A-

OTARI PART NO.	DESCRIPTION	DRAWING NO.
148(01-04)56	INTERCONNECTION DIAGRAM	3-16386
T00740A	TAPE TRANSPORT ASSEMBLY	3-16388
PB-4PKA	REEL SIZE DETECT PCB ASSEMBLY	3-15363
PB-45R	HOUR METER PCB ASSEMBLY	4-30767
PB-7WYA	TAPE COUNTER DISPLAY PCB ASSEMBLY	4-47144
PB-46A	TACHO SENSOR AMP. PCB ASSEMBLY	4-31239
PB-77I	TACHO SENSOR PCB ASSEMBLY	4-13239
PB-45S	REEL MDA ASSEMBLY	4-30796
PB-16KA	REC. AND REPRO AMP. PCB ASSEMBLY	3-8445
PB-77E	MOTHER BOARD I ASSEMBLY	3-7068
	INPUT AND OUTPUT WIRE ASSEMBLY	4-30773
PB-77F	VU METER AMP. PCB ASSEMBLY	3-6946
PB-4HQB	REEL CONTROL PCB ASSEMBLY	3-15538
PB-45VA	CAPSTAN CONTROL PCB ASSEMBLY	3-7973
PB-47AB	TRANSPORT CONTROL PCB ASSEMBLY	3-16384
PB-4APA	MASTER CPU PCB ASSEMBLY	3-10435
PB-45YA	I/O PCB ASSEMBLY	3-7974
PB-45Z	TAPE COUNTER PCB ASSEMBLY	3-7070
PB-15L	BIAS CONTROL PCB ASSEMBLY	3-8036
PB-7DDC	MOTHER BOARD II ASSEMBLY	3-16358
PB-7WZA	EXT. CONNECTOR PCB ASSEMBLY	3-16435
DS-4W	POWER SUPPLY ASSEMBLY	3-16390
PB62G	REGULATOR PCB ASSEMBLY	3-7307
PB-62E	POWER SUPPLY PCB ASSEMBLY A	4-30764
PB-62F	POWER SUPPLY PCB ASSEMBLY B	4-30776
CB-112, CB-113	INTERCONNECTION DIAGRAM	3-7059
CB-245	CONNECTION DIAGRAM	3-6941
PB-770	CONNECTION PCB ASSEMBLY	4-30348
PB-46B	AMP. SWITCH PCB ASSEMBLY	4-30349
PB-46C	CONTROL PCB ASSEMBLY	3-6866
PB-46F (-45MB)	SPEED CALCULATOR PCB ASSEMBLY	3-7325
PB-77N	7 SEG. LED PCB ASSEMBLY	4-30123

Rev. 1

EXT CLOCK (MR 25S) SERIAL I/O (D Sub 25S) AUTO LOCATOR (D Sub 50S)  
 PARALLEL I/O REMOTE (D Sub 37S) (D Sub 37P)

元	國	生	産	機	電	機	TYPE
1-1636	3-16385	3-16386	A				



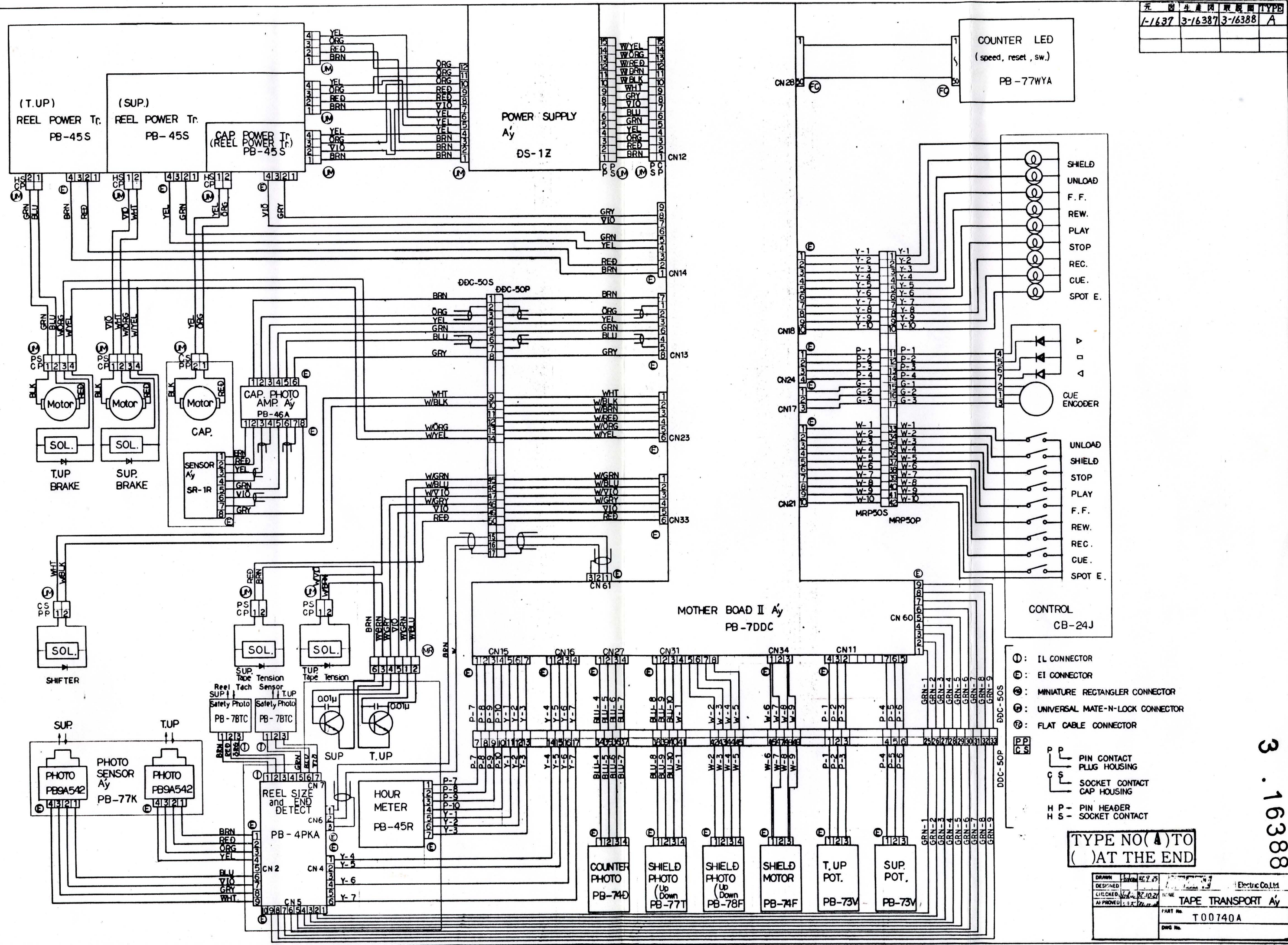
- NOTES
- ⊕ : E1 CONNECTOR
  - ⊙ : MINIATURE RECTANGLER CONNECTOR
  - ⊗ : UNIVERSAL MATE-IN-LOCK CONNECTOR
  - ⊖ : FLAT CABLE CONNECTOR
  - 9P : 9 CIRCUITS
  - P P : PIN CONTACT
  - PLUG HOUSING
  - C S : SOCKET CONTACT
  - CAP HOUSING
  - H P - PIN HEADER
  - H S - SOCKET CONTACT
  - ⊕ : MYLAR FILM CAPACITOR (±5% 50V)

PART. NO.	*	**	***	UP	DOWN
123 (13) 56	24	1-24	PB-77T	PB-78F	
123 (08) 36	16	1-16	PB-77T	PB-78F	
123 (12) 36	16	1-16	PB-77T	PB-78F	
123 (04) 81	8	1-8	PB-78F	PB-77T	

TYPE NO(A) TO  
 ( ) AT THE END

DRAWN	K. W. 02.2.15	DESIGNED		DATE	02.2.15
CHECKED		APPROVED			
Otaru Electric Co. Ltd.					
INTER CONNECTION Diagram					
PART No. 148 (01) 56					
DWG No.					
REV.	No.	DATE	OWN	APP	

3 16386

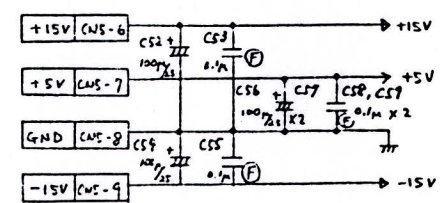
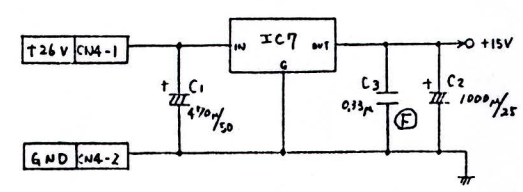
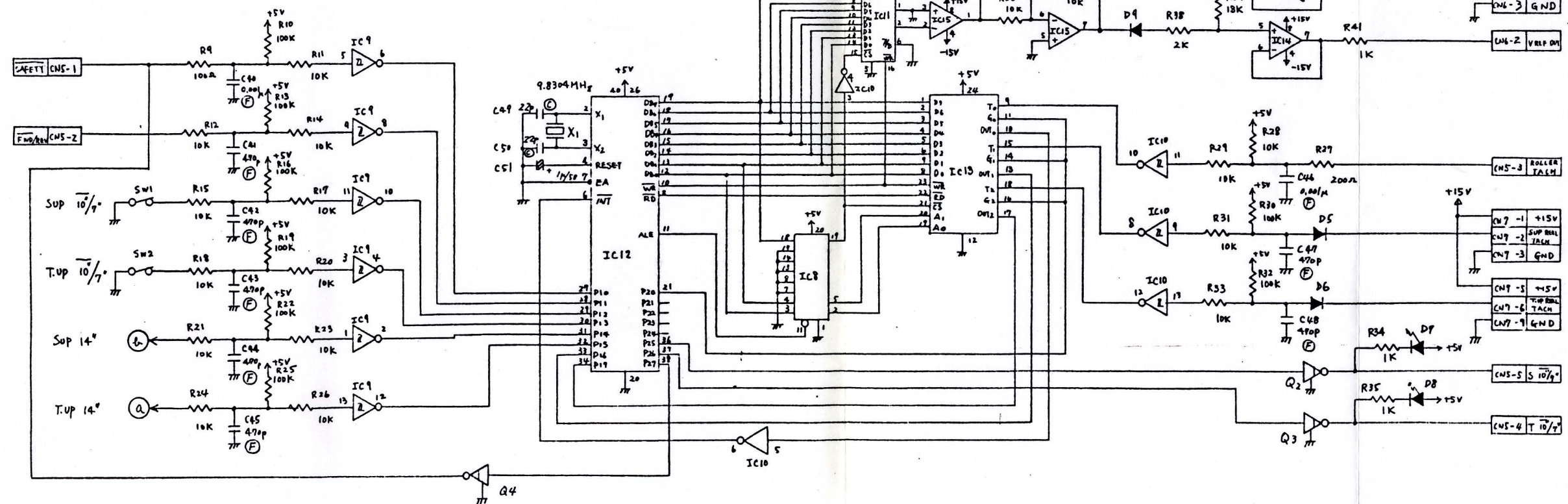
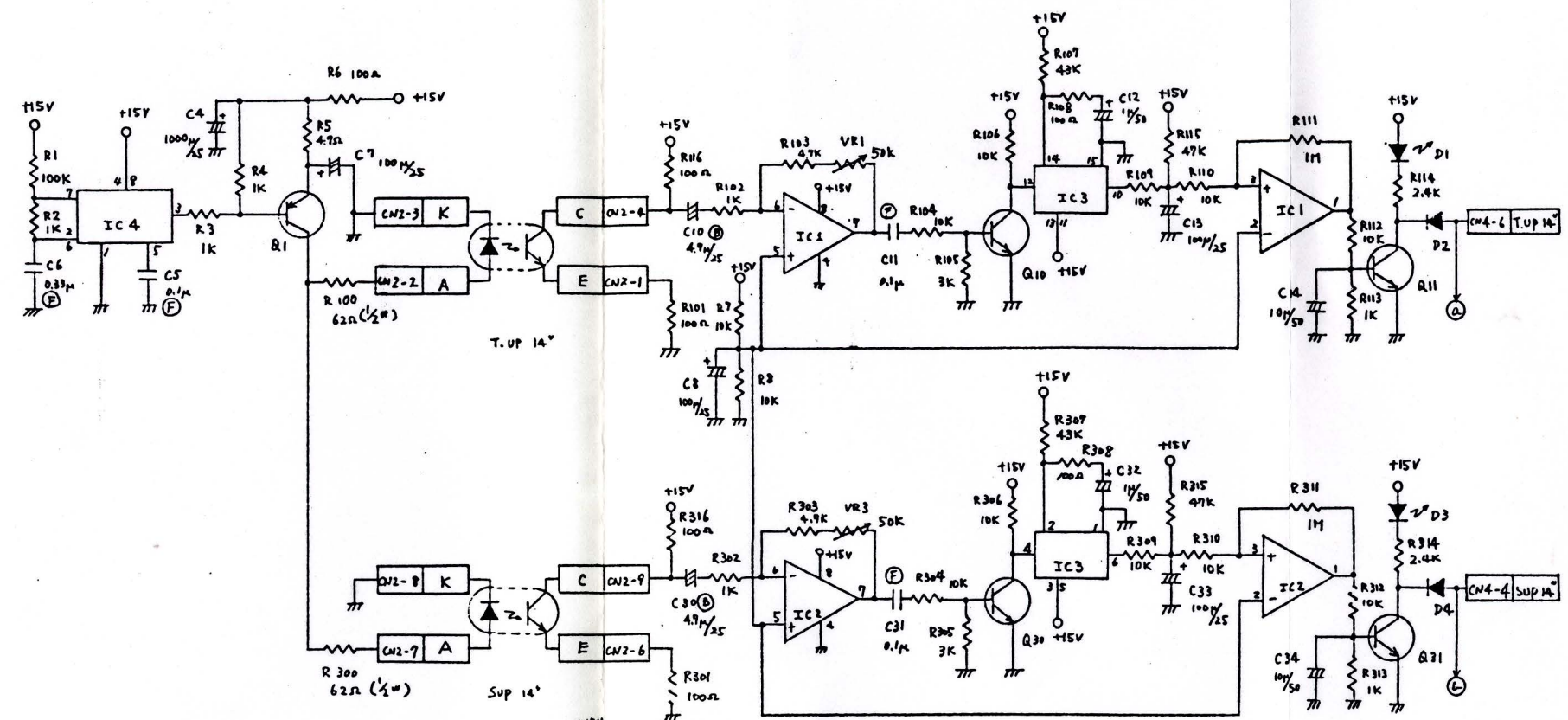


TYPE NO(A) TO  
( ) AT THE END

DRAWN	REV 2.5	DATE	1972.12.27	Electric Co., Ltd
CHECKED	REV 2.0	DATE	1972.12.27	
APPROVED	REV 1.0	DATE	1972.12.27	
TAPES TRANSPORT Ay				
PART No. T00740A				
DWG No.				

3. 16388

REF. NO.	OTARI PART NO.	DESCRIPTION
IC 1, 2, 14, 15	IMC 4558C	NPC 4558C
3	IMC 14538	MC 14538B
4	I-NB555V	NE555N
7	IMC78M15	MPC78M15H
8	IQ 373	TC74HC 373P
9, 10	IQ 14	SN74HC14N
11	T-0116	HP9528JN
12	PG-1591	R6MAY
13	IMSL 8253	M5MB2C53-FRS
A 1	QA1020Y	ZSA1020Y
10, 11	QC1685R	ZSC1685R
30, 31		
C 2, 3, 4	Q-0010	RTIN441S
D 1, 3, 7, 8	PNTLR124	TLR124
2, 4, 5, 6	PN-0199	IS158SLB5
9		



TYPE NO(A) TO  
( ) AT THE END

NOTES : UNLESS OTHERWISE SPECIFIED

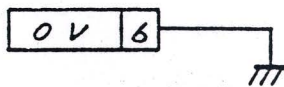
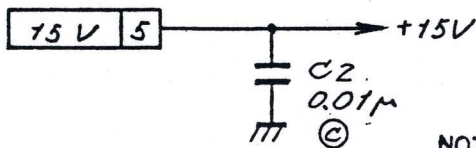
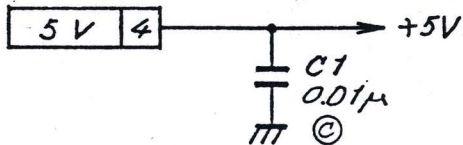
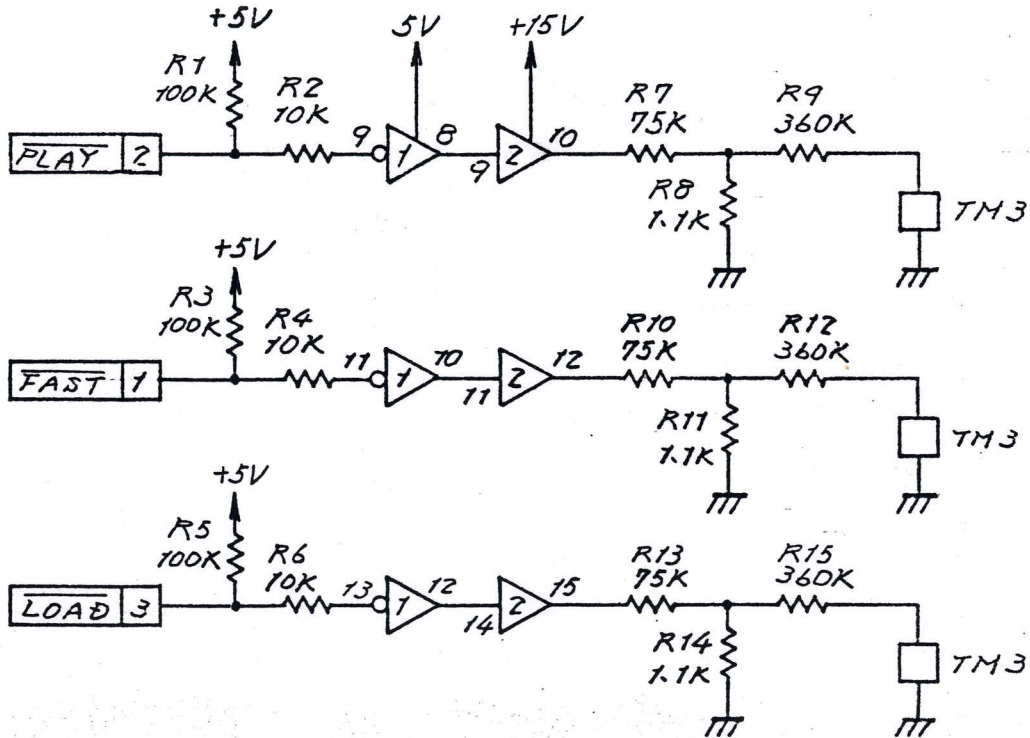
- RESISTANCE VALUES ARE IN OHMS, ±W, 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - ⊕ : ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊖ : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊙ : NYLAR FILM CAPACITOR(±5%, 50V)
  - ⊚ : POLYBTRENE FILM CAPACITOR(±5%, 50V)
  - ⊛ : CERAMIC CAPACITOR.
  - ⊜ : MICA CAPACITOR(±5%)
- TANTALUM ELECTROLYTIC CAPACITOR.
- POLYPROPYLENE FILM CAPACITOR(±5%)
- LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
- METALLIZED PAPER CAPACITOR(±10%)
- SPARK KILLER.
- SAFETY COMPONENT : REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

Otari Electric Co., Ltd.	
ASSY NO.	形式 PB-4PKA
PART NAME.	品名 1-111, I-111, PC A
DWG NAME.	図名 回路図
PART NO.	品番 PB4PK0A

MODEL HTS-90 I  
DWG NO. 3 15363

14504B (PIN 1 5V)  
(PIN 16 15V)  
(PIN 8, 13 0V)

REFERENCE NUMBER	OTARI PART NUMBER	DESCRIPTION	
IC	1	IMC 14069	MC14069UBCP
	2	IMC 14504	MC14504BCP
TM	1~3	ME49001	TM3



元	図	生産	取説	TYPE
4-30765	4-30766	4-30767	A	

NOTES : UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS,  $\frac{1}{2}$ W, 5%.
2. CAPACITANCE VALUES ARE IN FARADS, 50V.
3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - ⊖: ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊕: BIPOLAR ALUMINUM ELECTROLYTIC CAPAC FOR.
  - Ⓜ: MYLAR FILM CAPACITOR (±5%, 50V).
  - Ⓢ: POLYSTYRENE FILM CAPACITOR (±5%, 50V).
  - ⓐ: CERAMIC CAPACITOR.
  - Ⓜ: MICA CAPACITOR (±5%)

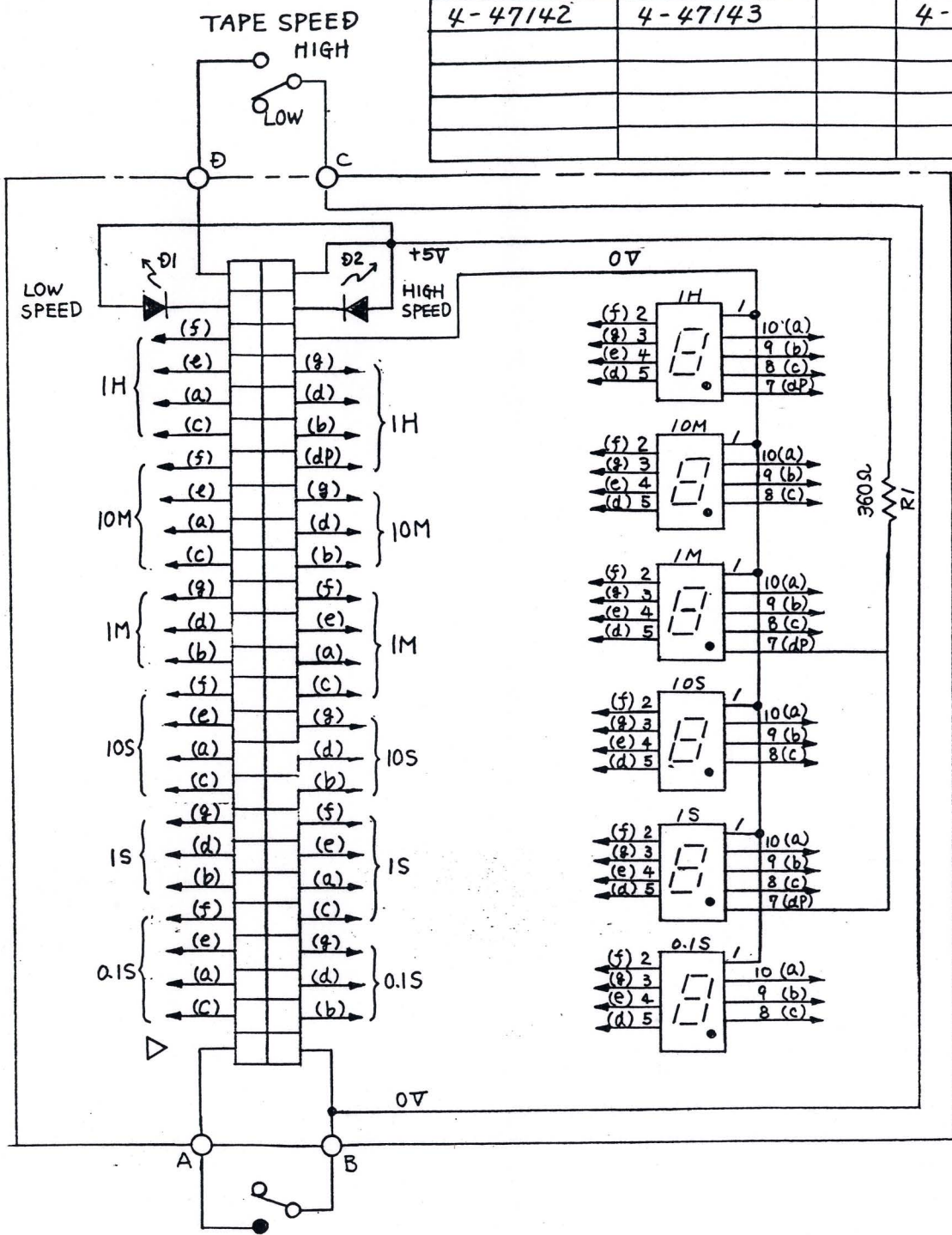
TYPE NO(A) TO  
( ) AT THE END

PCB PB9A489

△				DRAWN	タキワ 81.11.7	<b>OTARI</b> Otari Electric Co., Ltd.
△				DESIGNED	鈴木 71.11.8	
△				CHECKED		NAME
△				APPROVED		HOUR METER PCB Assy
△				MATERIAL		PART No.
△				FINISH		PB 45R 0A
MRK	REV. No.	DATE	DWN	APP	SCALE	DIMENSION mm
					/	THIRD ANGLE PROJECTION
						SHEET OF

MODEL A B C D E F H  
DWG. No. 4 30767

MOTOZU	SEISAN	LOT	TORISETU DWG. NO.
4-47142	4-47143		4-47144



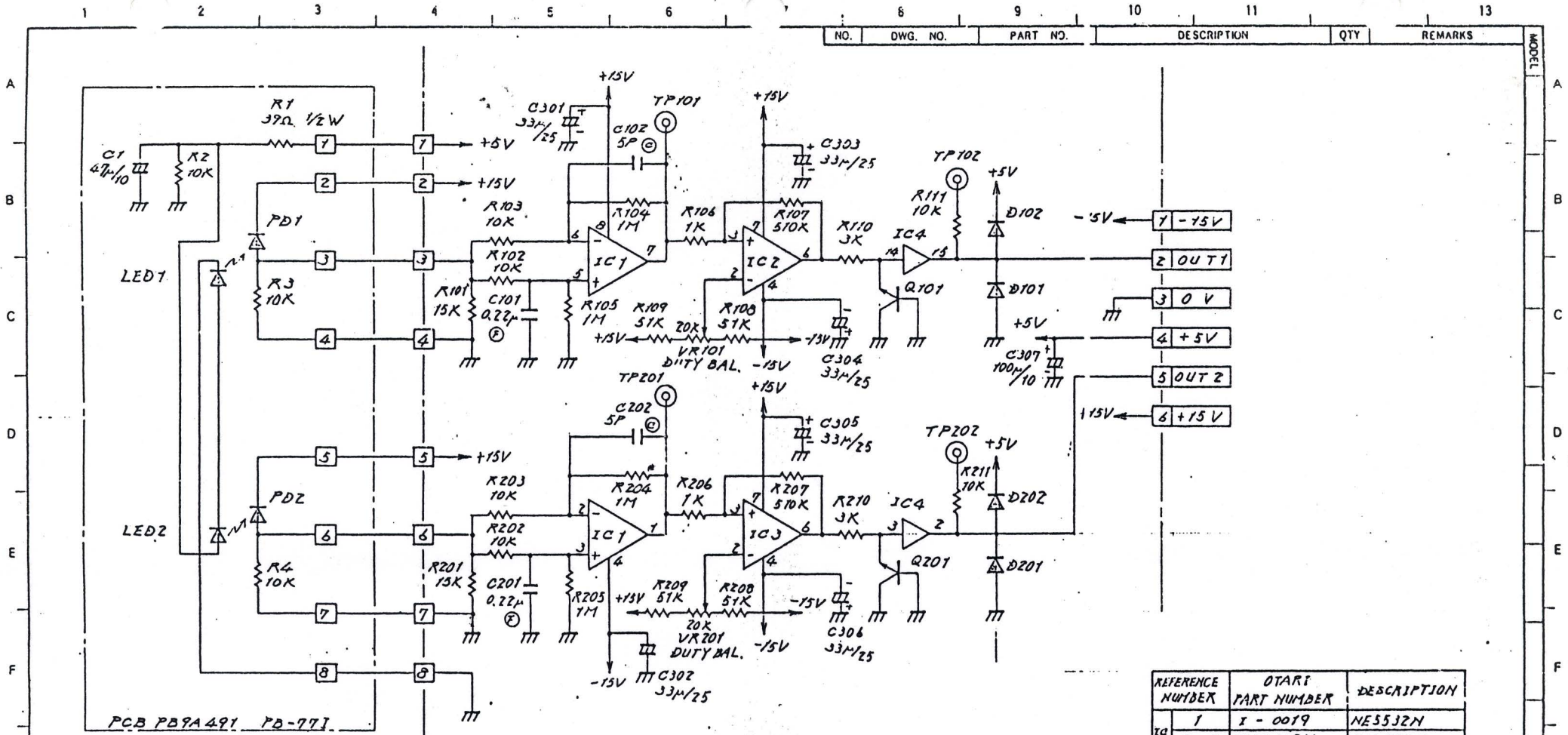
TYPE NO(▲) TO  
( ) AT THE END

REF. NO.	OTARI PART NO.	DESCRIPTION
Ⓓ 1, 2	PNTLY124	TLY124
7seg, LED	PN-P016	QDSP-7491

THIS SCHEMATIC DIAGRAM IS APPLIED TO

7				DRAWN	7-1	27 Sep '90	OTARI, INC.		
6				DESIGNED	1-1	27 Sep '90			
5				CHECKED	YVA	29 Sep '90	NAME SCHEMATIC		
4				APPROVED	5-3	29 SEP '90	TAPE COUNTER DISPLAY PCB ASSY		
3				MATERIAL			PART NO.		
2							PB7WY0A		
1				FINISH			SCALE		
MRN	REV NO	DATE	DWN	APP			DIMENSION	MM	SHEET
							THIRD ANGLE PROJECTION		OF

4-47144  
DWG. NO.



REFERENCE NUMBER	OTARI PART NUMBER	DESCRIPTION
1	I - 0019	NE5532N
2, 3	ILM318N	LH318N
4	IMC 14504	MC 14504DCP
Q101, 201	QC 2878	ZSC 2878
D101, 102, 201, 202	PNIS 1588	IS 1588
IC1, 2	PNLN 65	LN 65
PD 1, 2	PNBPW 34	BPW 34

元 圖 生 産 圖 取 説 図 TYPE
3-7051 4-30792 4-30791 A
4-31239 B

PCB PB9A492

IC4 { PIN 1 VCC +15V  
PIN 14 VDD +5V  
PIN 13 MODE 0V  
PIN 8 VSS 0V

**TYPE NO (▲) TO ( ) AT THE END**

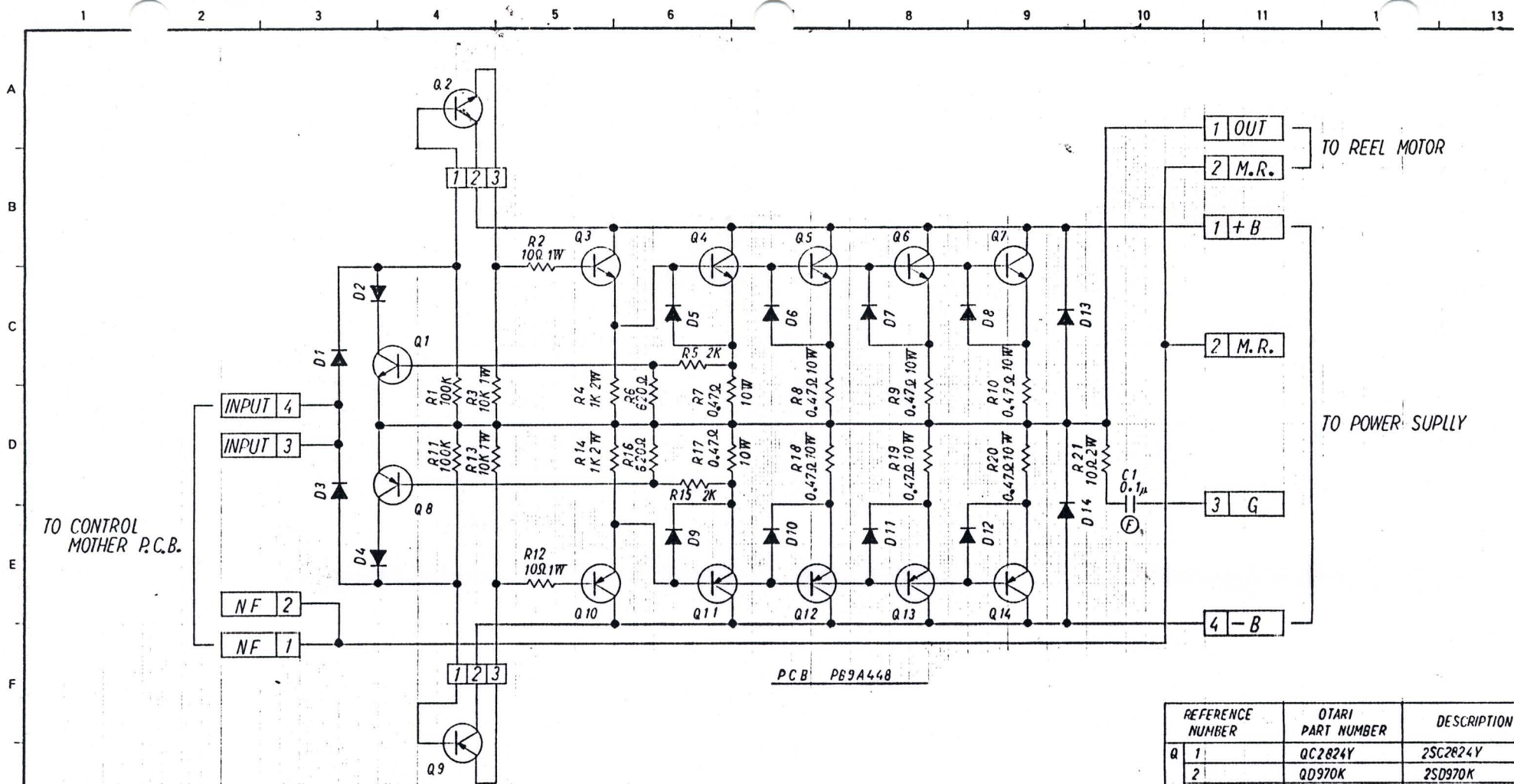
NOTES : UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS, ±W, 5%.
2. CAPACITANCE VALUES ARE IN FARADS, 50V.
3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - Ⓢ - ALUMINUM ELECTROLYTIC CAPACITOR.
  - Ⓛ - BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - Ⓜ - NYLAR FILM CAPACITOR(±5%, 50V)
  - Ⓟ - POLYSTYRENE FILM CAPACITOR(±5%, 50V)
  - Ⓢ - CERAMIC CAPACITOR.
  - Ⓜ - MICA CAPACITOR(±5%)

- Ⓢ : TANTALUM ELECTROLYTIC CAPACITOR.
- Ⓛ : POLYPROPYLENE FILM CAPACITOR(±5%)
- Ⓜ : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
- Ⓢ : METALLIZED PAPER CAPACITOR(±10%)
- Ⓢ : SPARK KILLER.
- ▲ : SAFETY COMPONENT ; REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

DRAWN	DESIGNED	CHEKED	APPVED	MATERIAL	DATE	REV. NO.	DATE	DWG. APP
<b>OTARI</b> Otari Electric Co., Ltd. NAME: TACHO SENSOR AMP. PCB PART NO.: PB46A0A SCALE: / DIMENSION mm SHEET OF / THIRD ANGLE PROJECTION								

DWG NO. 4-31239



PCB PB9A448

元	図	生産	取説	TYPE
3-7053	4-30795	4-30796		A

TYPE NO(A) TO  
( ) AT THE END

NOTES : UNLESS OTHERWISE SPECIFIED

- RESISTANCE VALUES ARE IN OHMS, 1W, 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - (A) : ALUMINUM ELECTROLYTIC CAPACITOR.
  - (B) : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - (F) : MYLAR FILM CAPACITOR (±5%, 50V)
  - (S) : POLYSTYRENE FILM CAPACITOR (±5%, 50V)
  - (C) : CERAMIC CAPACITOR.
  - (M) : MICA CAPACITOR (±5%)
- (T) : TANTALUM ELECTROLYTIC CAPACITOR.
  - (P) : POLYPROPYLENE FILM CAPACITOR (±5%)
  - (L) : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
  - (M) : METALIZED PAPER CAPACITOR (±10%)
  - (I) : SPARK KILLER.

REFERENCE NUMBER	OTARI PART NUMBER	DESCRIPTION
Q 1	QC2824Y	2SC2824Y
2	QD970K	2SD970K
3~7	QD552BN	2SD552BN
8	QA1184Y	2SA1184Y
9	QB791K	2SA791K
10~14	QB552BN	2SB552BN
D 1~4	PN1N444B	1N444B
5~12	PNG3J	G3J
13	PN6FD13	6FD13
14	PN6FC13	6FC13

△						DRAWN	1-10-77	1978-29-31
△						DESIGNED	1-10-77	1978-22-11
△						CHECKED		
△						APPROVED		
△								
△								
△								
MRK	REV. No.	DATE	DWN	APP				

**OTARI** Otari Electric Co., Ltd.

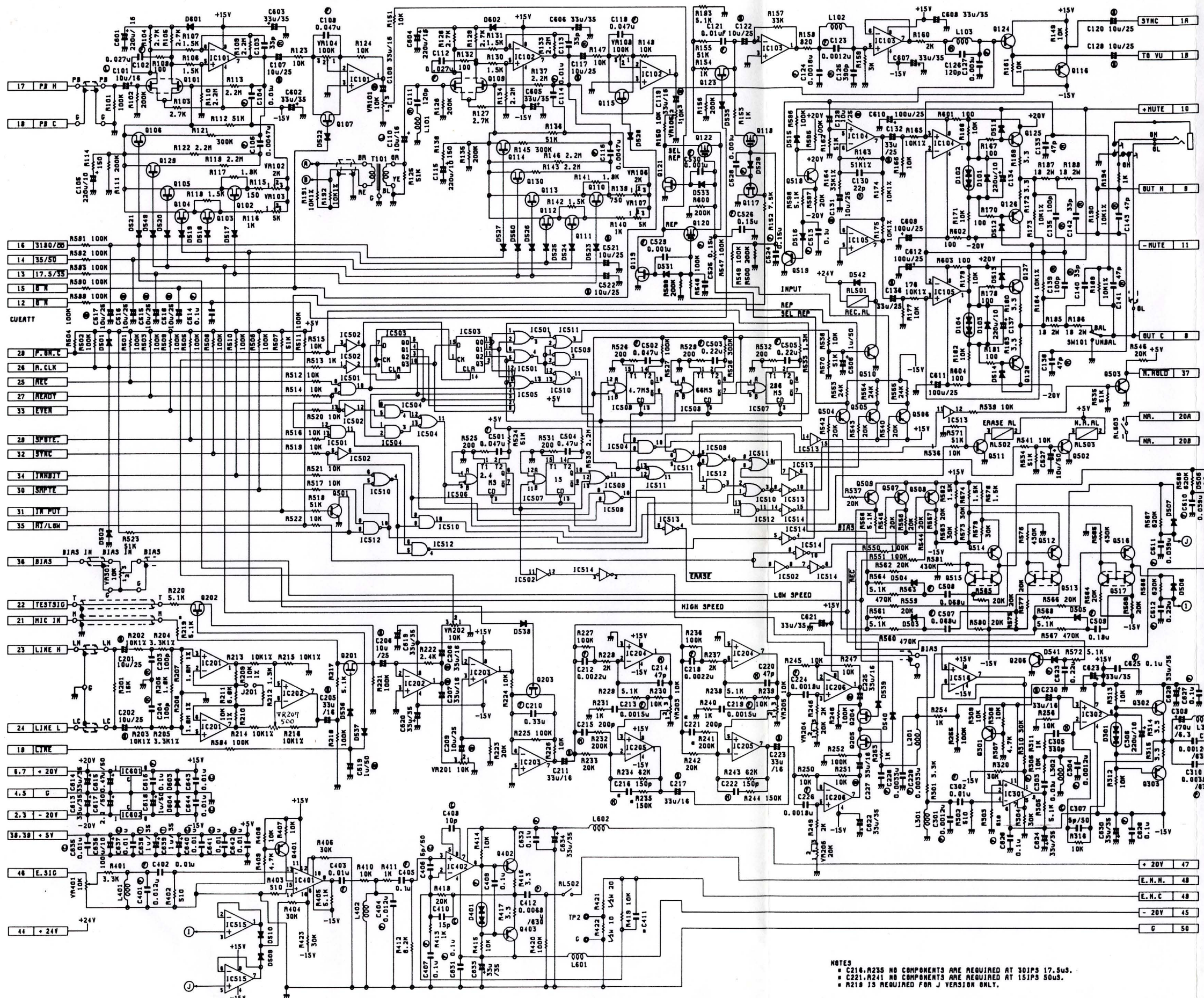
NAME REEL M.D.A. Assy

PART No. PB 45S 0A

DWG No.

96108 17



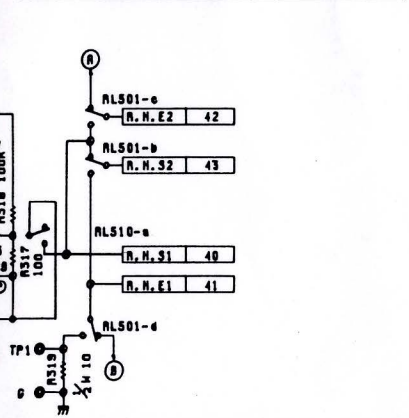


REFERENCE NUMBER	PART NUMBER	DESCRIPTION
IC 101-5, 201-6	J-0017	NJM4500D-X
301.401	J-0023	LM13600
302	LW100	LM100
402	I-0004	RES534H
501.500	JMC14001	MC14001BCP
502	JMC14008	MC14008BCP
503	JMC14015	MC14015BCP
504.511-2	JMC14011	MC14011BCP
505	JMC14078	MC14078BCP
506-8	JMC14530	MC14530BCP
510	JMC14001	MC14001BCP
513-4	JMC14504	MC14504BCP
515-6	ITL002CP	TL002CP
601	J-0024.26	U7815.H1SUC
602	J-0025.27	U7815.H1SUC

101.100	Q2K140L	25K140L
102-7, 110-5		
125, 128, 130	Q5K302L	25K302LorG
201.203	Q25J104V	25J104VorBL
118, 301, 401	Q110150A	25A10150A
504-8, 512, 514		
516, 518		
118, 120, 122	Q25K336	25K336
124, 501-3, 510	Q110150L	25C10150L
511		
125, 127	Q25344E	25C2344E
126, 128	Q11011E	25A1011E
208, 510	Q25278	25C278
302	Q251304	25C1304
303	Q110150	25A10150
402	Q251300	25C1300
403	Q110150	25A10150
513, 515, 517	Q252016	25C22016

D 101, 103, 501-41	PH-0100	FDN0015
548, 550		
102, 104, 301, 401	PKK-265	KB-265
542, 601-4	PMH-02	9H-1A-02
L 101-3, 201, 401-2	IM10072	FP10H-332K
301-3, 401	IM10071	FP10H-271K
402	IM10070	3640-271
T 101	TP21010A	

FUNCTION OF POTENTIOMETERS	
VR101	REP. LEVEL
VR102	REP. EQ HIGH SPEED
VR103	REP. EQ LOW SPEED
VR104	REP. LOW FREQ. COMP.
VR105	SEL. REP. LEVEL
VR106	SEL. REP. EQ HIGH SPEED
VR107	SEL. REP. EQ LOW SPEED
VR108	SEL. REP. LOW FREQ. COMP.
VR201	REC LEVEL
VR202	REC HIGH LEVEL
VR203	REC HIGH COMP. HIGH SPEED
VR204	REC PHASE COMP. HIGH SPEED
VR205	REC HIGH COMP. LOW SPEED
VR206	REC PHASE COMP. LOW SPEED
VR207	REC CHAN ADJ.
VR301	BIAS LEVEL
VR401	ERASE



TEST POINT	
TP1	BIAS CURRENT
TP2	ERASE
J201	OPER. NORMAL SHORT WITH OPTIONAL INPUT TRANSFORMER
SH101	BAL: BALANCED OUTPUT UNBAL: UNBALANCED OUTPUT

REFERENCE DESIGNATIONS					
IC100	Q200	AL503	R404	C411	Q100
Q100	L201	C310	IC510	C444	Q500
D104	VR207	IC402	Q510	Q532	Q543
L103	R256	Q403	Q550	Q534	Q546
T101	C230	Q401	R400	Q544	Q547
VR100	IC302	L402	C530	Q545	Q548
R104	Q303	VR401	IC602	R120	R144
IC43	D301	R423	D404		AS22
IC200	VR301	C412	L402		C520

NOTES: UNLESS OTHERWISE SPECIFIED  
 1. RESISTANCE VALUES ARE IN OHMS, K=1000, M=1,000,000  
 2. CAPACITANCE VALUES ARE IN FARADS, S=50V  
 3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS  
 4. POLYSTYRENE FILM CAPACITOR (25, 50V)  
 5. CERAMIC CAPACITOR  
 6. WICK CAPACITOR (25V)  
 7. TANTALUM ELECTROLYTIC CAPACITOR  
 8. POLYPROPYLENE FILM CAPACITOR (25V)  
 9. LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR  
 10. METALLIZED PAPER CAPACITOR (100V)  
 11. SPARK WILKINSON  
 12. SAFETY COMPONENT (REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON)

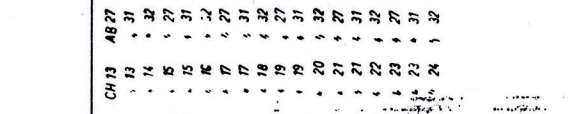
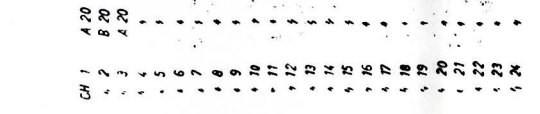
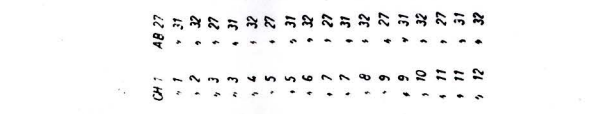
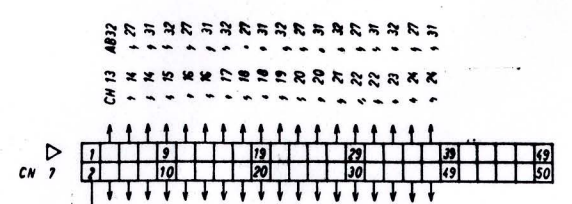
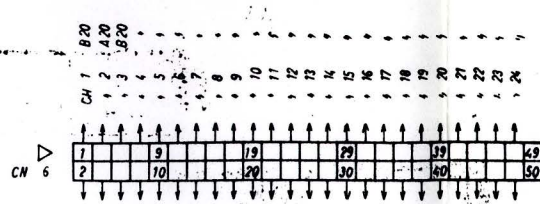
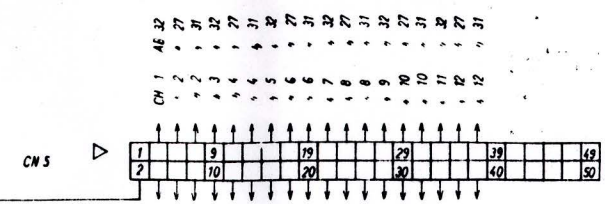
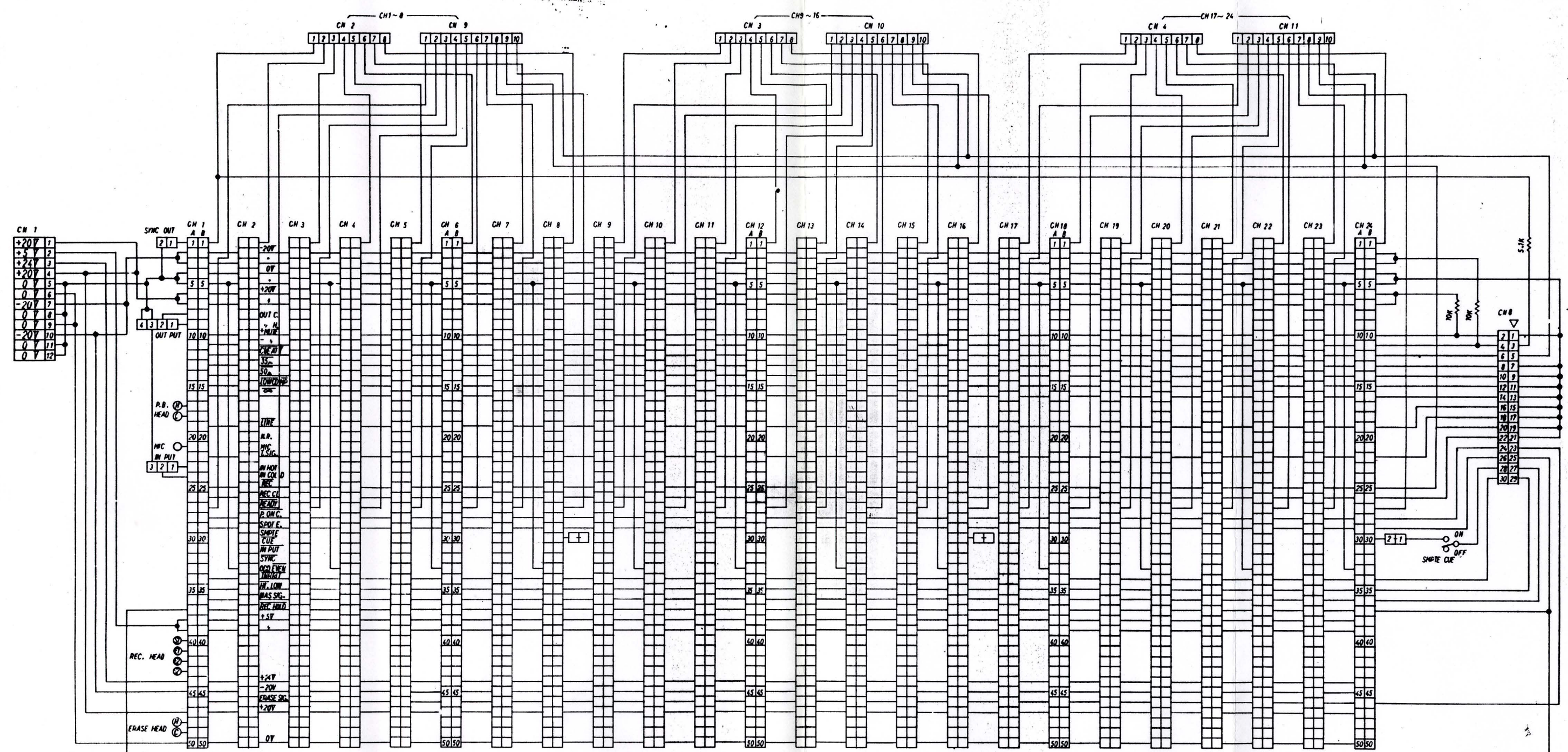
NOTES  
 \* C216, R235 NO COMPONENTS ARE REQUIRED AT 30IPS 17.5US.  
 \* C221, R241 NO COMPONENTS ARE REQUIRED AT 15IPS 50US.  
 \* R218 IS REQUIRED FOR J VERSION ONLY.

TYPE NO. (A) TO (C) AT THE END

NAME REC. & REPRO AMP.  
 P.C.B. ASS'Y  
 PART NO. PB16K0A  
 LOT

DWG. NO. 3-8445

TO VU METER AMPLIFIER PCB ASSY



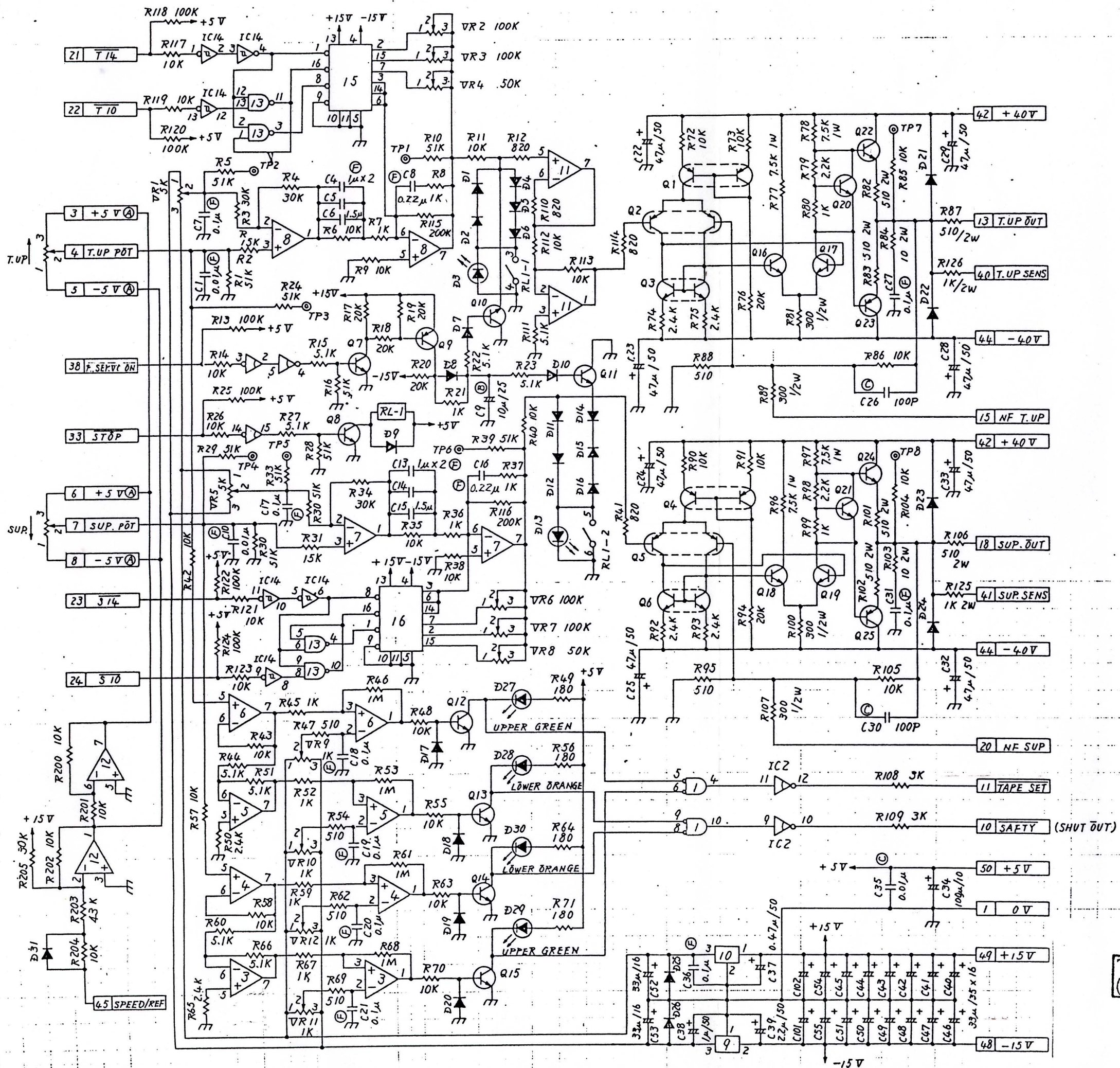
TYPE NO(A) TO  
( ) AT THE END

PCR PR9 A45R  
PB-77R 16CH  
PB-77S 8CH

MOTHER BOARD ASSY  
P877E0A







Ref No	Q/TARI Part No.	Description	
IC	1	1NC14001 NC14001B	
	2	1NC14049 NC14049UB	
	3-8, 11, 12	1NC4558C uPC4558C	
	9	1HC7905H uPC7905H	
	10	1HC7805H uPC7805H or uPC14305H	
	13	1NC14011 NC14011	
	14	1NC14584 NC14584	
	15, 16	1-0126 NJU7301	
	D	1, 4	0A995G 2SA995G
		2, 5	0A979G 2SA979G
		3, 6	0C2291G 2SC2291G
		7, 8, 12-15, 20, 21	0C18158L 2SC18158L
		9	0A10156R 2SA10156R
		10, 11	0C2878 2SC2878
		16-19	0C3421Y 2SC3421Y
		22, 24	0D525Y 2SD525Y
23, 25		0B595Y 2SB595Y	
PN		1, 2, 4-8, 10-12, 14-20, 3, 13	PN-0199 HA171
		9, 21-26, 31	PN-0285 ERA15-02
		27, 29	PNLN368P LN368P
	28, 30	PNLN46YP LN46YP	

TEST POINT	
TP1	PREAMP. OUTPUT T.UP
TP2	OFFSET T.UP
TP3	INPUT T.UP
TP4	INPUT SUP.
TP5	OFFSET SUP.
TP6	PREAMP. OUTPUT SUP.
TP7	OUTPUT T.UP
TP8	OUTPUT SUP.

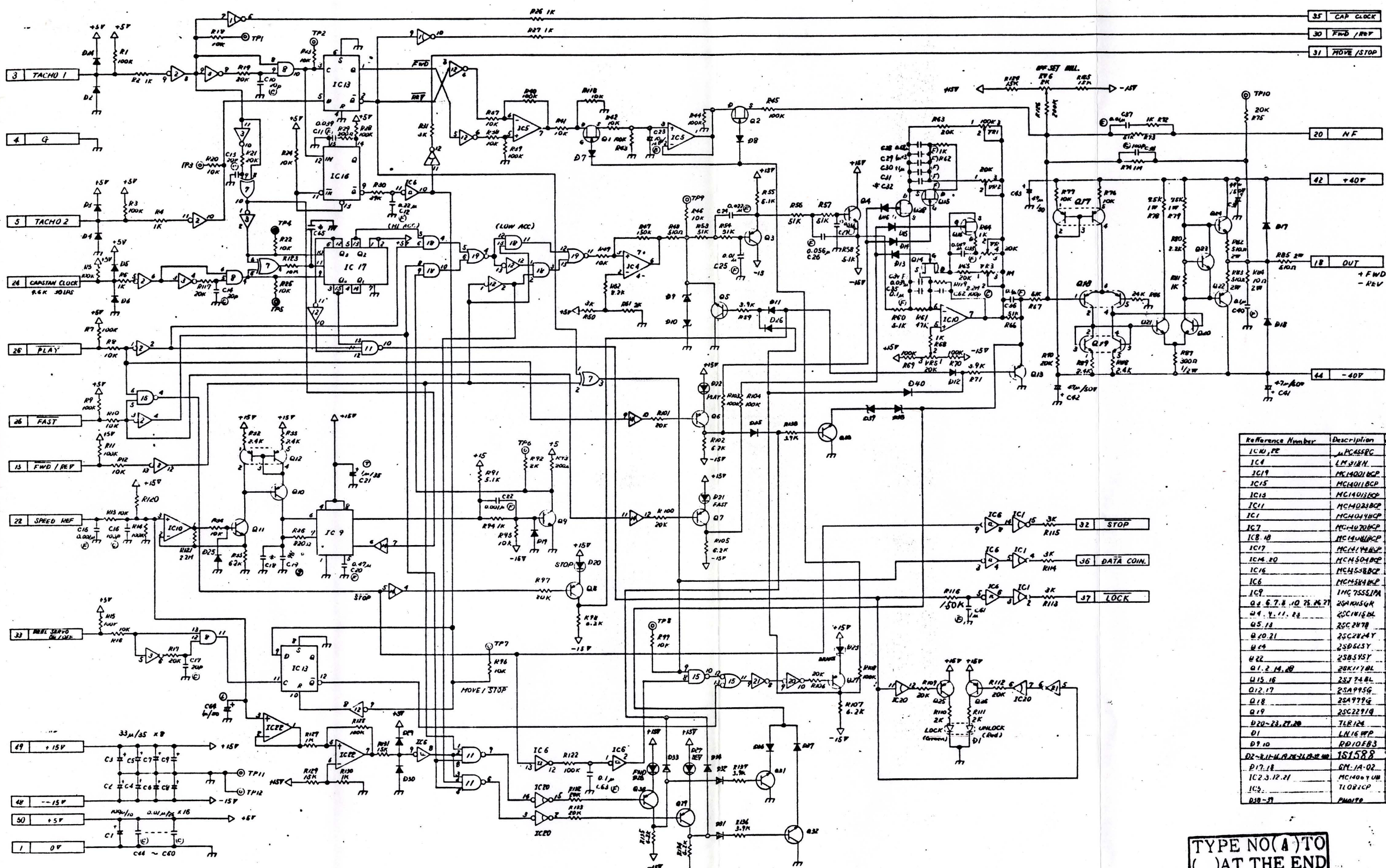
FUNCTION OF POTENTIOMETERS	
VR1	POSITION T.UP TENSION ARM
VR2	GAIN T.UP L
VR3	GAIN T.UP H
VR4	GAIN T.UP S
VR5	POSITION SUP. TENSION ARM
VR6	GAIN SUP. L
VR7	GAIN SUP. H
VR8	GAIN SUP. S
VR9	UPPER LIMIT T.UP TENSION ARM
VR10	LOWER LIMIT T.UP TENSION ARM
VR11	UPPER LIMIT SUP. TENSION ARM
VR12	LOWER LIMIT SUP. TENSION ARM

NOTES: UNLESS OTHERWISE SPECIFIED  
 1. RESISTANCE VALUES ARE IN OHMS,  $\pm 1\%$ , 5%.  
 2. CAPACITANCE VALUES ARE IN FARADS, 50%.  
 3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS:  
 \* : ALUMINUM ELECTROLYTIC CAPACITOR.  
 @ : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.  
 ( ) : MYLAR FILM CAPACITOR ( $\pm 5\%$ , 50M)  
 ( ) : POLYSTYRENE FILM CAPACITOR ( $\pm 5\%$ , 50M)  
 ( ) : CERAMIC CAPACITOR.  
 ( ) : MICA CAPACITOR ( $\pm 5\%$ )  
 ( ) : TANTALUM ELECTROLYTIC CAPACITOR.  
 ( ) : POLYPROPYLENE FILM CAPACITOR ( $\pm 5\%$ )  
 ( ) : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.  
 ( ) : METALLIZED PAPER CAPACITOR ( $\pm 10\%$ )  
 ( ) : SPARK KILLER.  
 ( ) : SAFETY COMPONENT: REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

TYPE NO(A) TO ( ) AT THE END

ASSY NO.	
形式	
PART NAME	REEL CONT PCA
DWG NAME	SCHEME
図名	
PART NO.	PB4HQ.0B

3. 15538



Reference Number	Description	QTY	PART NUMBER
IC10, 12	LMC4558C	1	LMC4558C
IC4	LM218N	1	LM218N
IC19	MC14001BCP	1	MC14001
IC15	MC14011BCP	1	MC14011
IC18	MC14013BCP	1	MC14013
IC11	MC14023BCP	1	MC14023
IC1	MC14049BCP	1	MC14049
IC7	MC14070BCP	1	MC14070
IC10	MC14081BCP	1	MC14081
IC17	MC14148BCP	1	MC14148
IC16, 20	MC14501BCP	1	MC14501
IC16	MC14518BCP	1	MC14518
IC6	MC14584BCP	1	MC14584
IC9	MC14585BCP	1	MC14585
Q1, 6, 7, 8, 10, 25, 26, 27	2SA1015GR	1	2SA1015GR
Q4, 9, 11, 22	2SC1015BL	1	2SC1015BL
Q5, 13	2SC2878	1	2SC2878
Q10, 21	2SC2824Y	1	2SC2824Y
Q14	2SD263Y	1	2SD263Y
Q22	2SB335Y	1	2SB335Y
Q1, 2, 14, 20	2SK1170L	1	2SK1170L
Q15, 16	2SJ74BL	1	2SJ74BL
Q12, 17	2SA995G	1	2SA995G
Q18	2SA977G	1	2SA977G
Q19	2SC2271G	1	2SC2271G
D20-23, 27, 28	TLR124	1	TLR124
D1	LN161WP	1	LN161WP
D10	RD10FB3	1	RD10FB3
D2-8, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50	1S1588	1	1S1588
D17, 18	6M-1A-02	1	6M-1A-02
IC2, 3, 12, 21	MC14069UB	1	MC14069UB
IC3	TL081CP	1	TL081CP
D10-17	PH01P	1	PH01P

元	生	取	取	取	TYPE
1-937	3-7074	3-7019			A
	3-7326	3-7327			B
	3-7972	3-7973			F

PB-45V	PB-45VA
C19	560P
	390P

\* C19 TO BE ADJUSTED  
 \* R120 NO COMPONENTS ARE REQUIRED  
 \* C65 REQUIRED

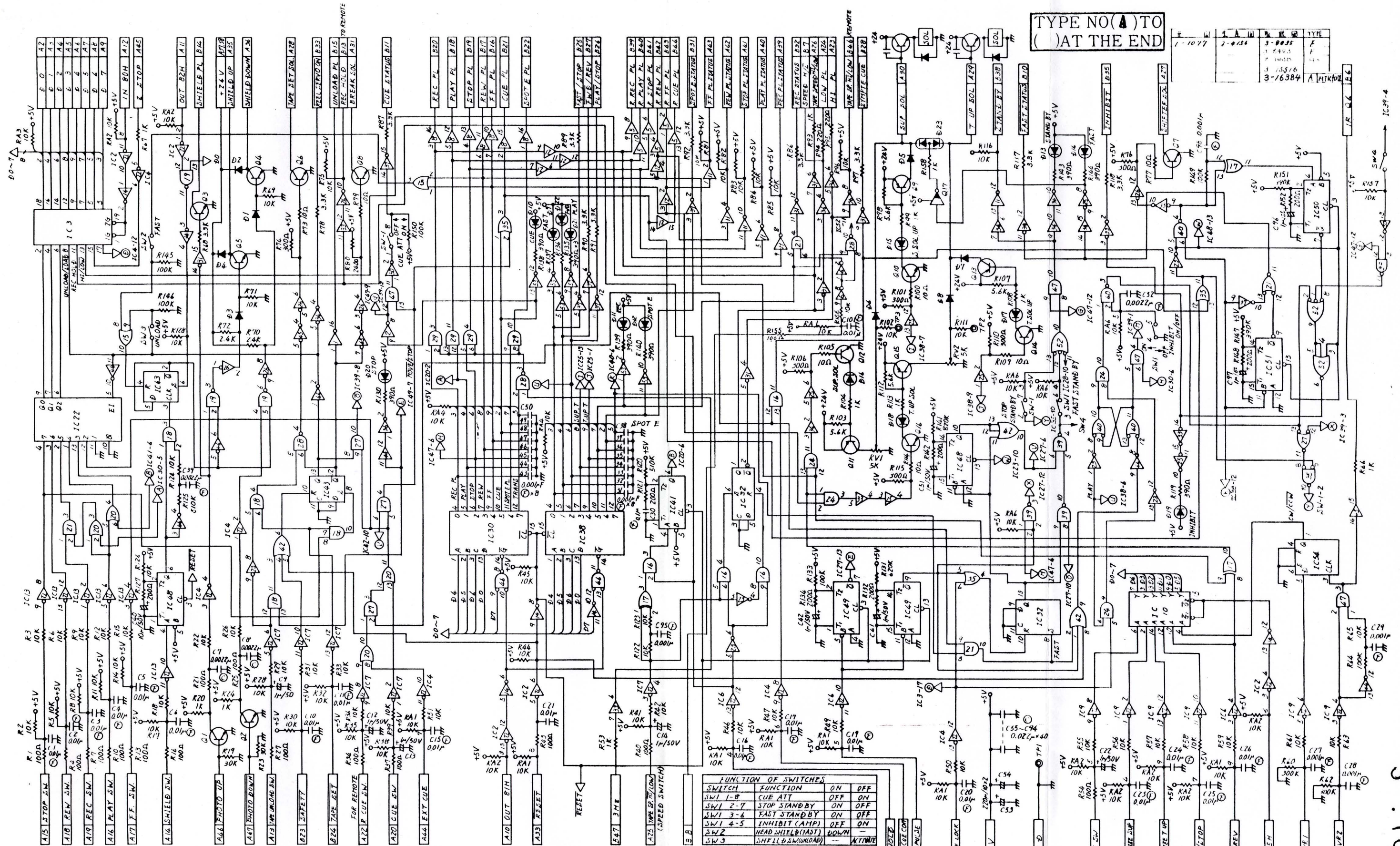
NOTES: UNLESS OTHERWISE SPECIFIED  
 1. RESISTANCE VALUES ARE IN OHMS, 1W, 50W.  
 2. CAPACITANCE VALUES ARE IN FARADS, 50V.  
 3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS:  
 □ ALUMINUM ELECTROLYTIC CAPACITOR  
 ○ POLYMER ALUMINUM ELECTROLYTIC CAPACITOR  
 ○ MYLAR 100V CAPACITOR (25%, 50V)  
 ○ PULS WITHSTANDING CAPACITOR (25%, 50V)  
 ○ CERAMIC CAPACITOR  
 ○ MICA CAPACITOR (250V)

TYPE NO(A) TO ( ) AT THE END

DRAWN	DESIGNED	CHECKED	APPROVED
PART NO. <b>PB 45V 0A</b> QTY.			

TYPE NO (▲) TO ( ) AT THE END

REV	DATE	BY	CHKD	APPD	TYPE
1-1077					
2-0156					
3-0035					
3-0035					
3-15516					
3-16384					



SWITCH	FUNCTION	ON	OFF
SW1 1-8	CUE ATT	OFF	ON
SW1 2-7	STOP STANDBY	ON	OFF
SW1 3-4	FAST STANDBY	ON	OFF
SW1 4-5	INHIBIT (AMP)	OFF	ON
SW2	HEAD SHIELD (FAST)	DOWN	UP
SW3	SHIELD SW (UNLOAD)		

REF. NO.	OTARI PART NO.	DESCRIPTION	REF. NO.	OTARI PART NO.	DESCRIPTION	REF. NO.	OTARI PART NO.	DESCRIPTION	LED INDICATOR	TEST POINT	FUNCTION OF POTENTIOMETERS
1, 8	1HA2004C	MPA2004C	28, 31, 40	1IC1401	1IC1401BCP	62, 10, 12, 14, 16	QC1815BL	28C1815BL	9	G	1 SUP SOL VOLTAGE
2	1AL514N	2N74LS14N	30, 38	1A254N	2N74LS25N	3-7	QC1384Q	28C1384Q	10		2 T. UP SOL VOLTAGE
3	1AL824N	2N74LS24N	21, 37	1IC14049	1IC14049BCP	8	QC2655Y	28C2655Y	11		3 VOLTAGE
4, 6, 7, 13	1IC14584	1IC14584BCP	32, 42, 54	1IC14013	1IC14013BCP	9, 11, 13, 15	QA1020Y	28A1020Y	12		1 T. UP SOL VOLTAGE
5, 25	1A07N	2N7407N	41, 48, 49, 51	1IC14538	1IC14538BCP	17	Q-0004	RT1P41S	13		2 SUP SOL VOLTAGE
10	1AL5167N	2N74LS167N	42	1IC14075	1IC14075BCP				14		
11, 26, 34, 53	1A06N	2N74LS06N	46	1AL504N	2N74LS04N				15		
12, 33, 34, 45	1IC14050	1IC14050BCP	19	1AL500N	2N74LS00N				16		
14	1AL504N	2N74LS04N	32	1IC14023	1IC14023BCP				17		
16, 20, 35	1IC14071	1IC14071BCP							18		
18, 21, 22, 27, 28	1IC14081	1IC14081BCP							19		
17	1IC14070	1IC14070BCP							20		
22	1IC14532	1IC14532BCP							21		
23, 44, 50	1IC14069	1IC14069BCP							22		

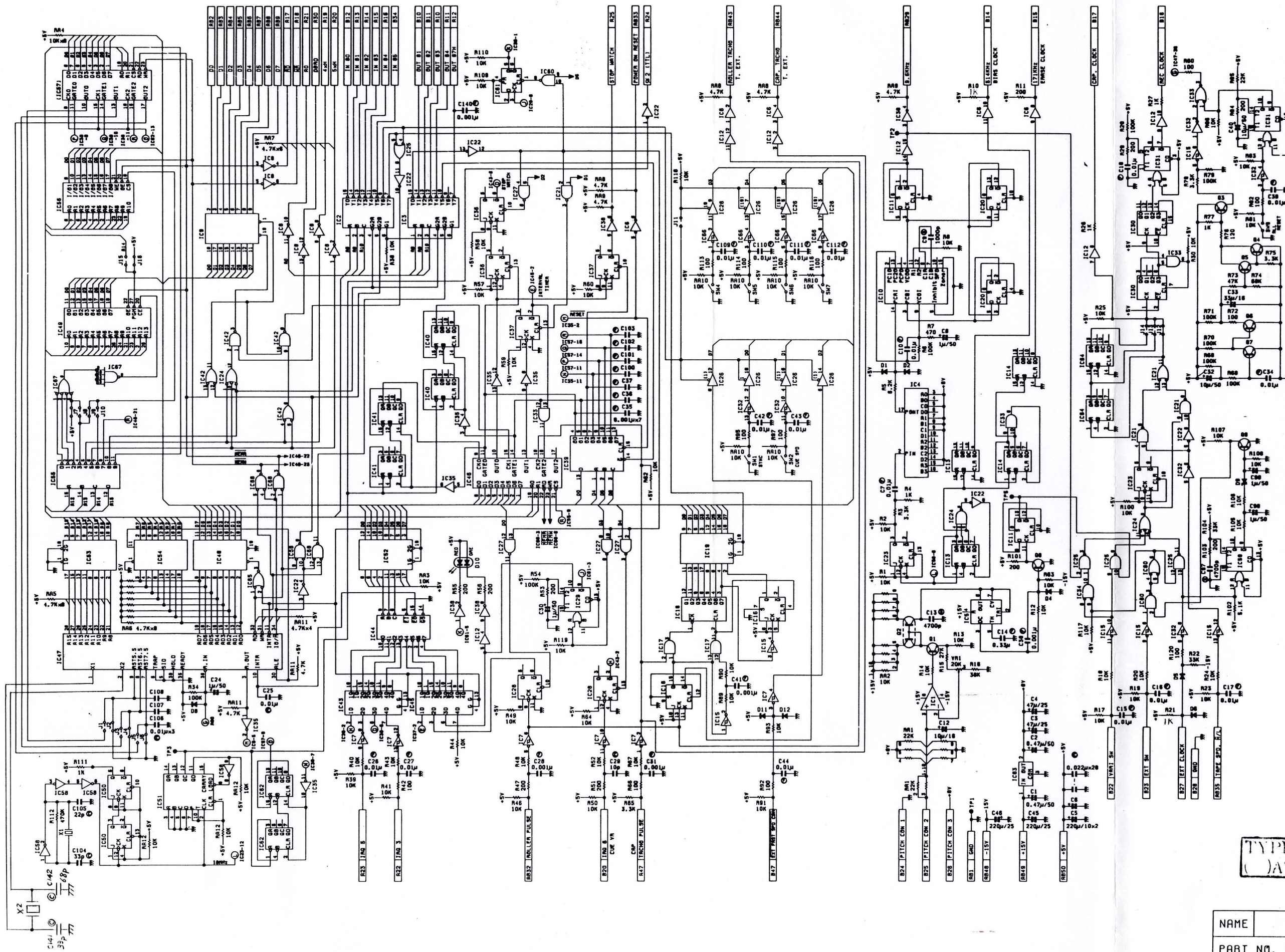
POTENTIOMETER	FUNCTION
IP 1	G
RV 1	SUP SOL VOLTAGE
RV 2	T. UP SOL VOLTAGE
RV 3	SUP SOL VOLTAGE

NOTES: UNLESS OTHERWISE SPECIFIED  
 1 RESISTANCE VALUES ARE IN OHMS, 1.5% TOL.  
 2 CAPACITANCE VALUES ARE IN FARADS, 50% TOL.  
 3 CAPACITANCE SYMBOL MARKS ARE AS FOLLOWS  
 4 ALUMINUM ELECTROLYTIC CAPACITOR  
 5 IMPREG. ALUMINUM ELECTROLYTIC CAPACITOR  
 6 FILM CAPACITOR (25%, 50% TOL.)  
 7 POLYSTYRENE FILM CAPACITOR (1%, 50% TOL.)  
 8 CERAMIC CAPACITOR  
 9 MICA CAPACITOR (1%, 50% TOL.)

THIS SCHEMATIC DIAGRAM IS APPLIED TO	REV. NO.	DATE	DWN.	APP.

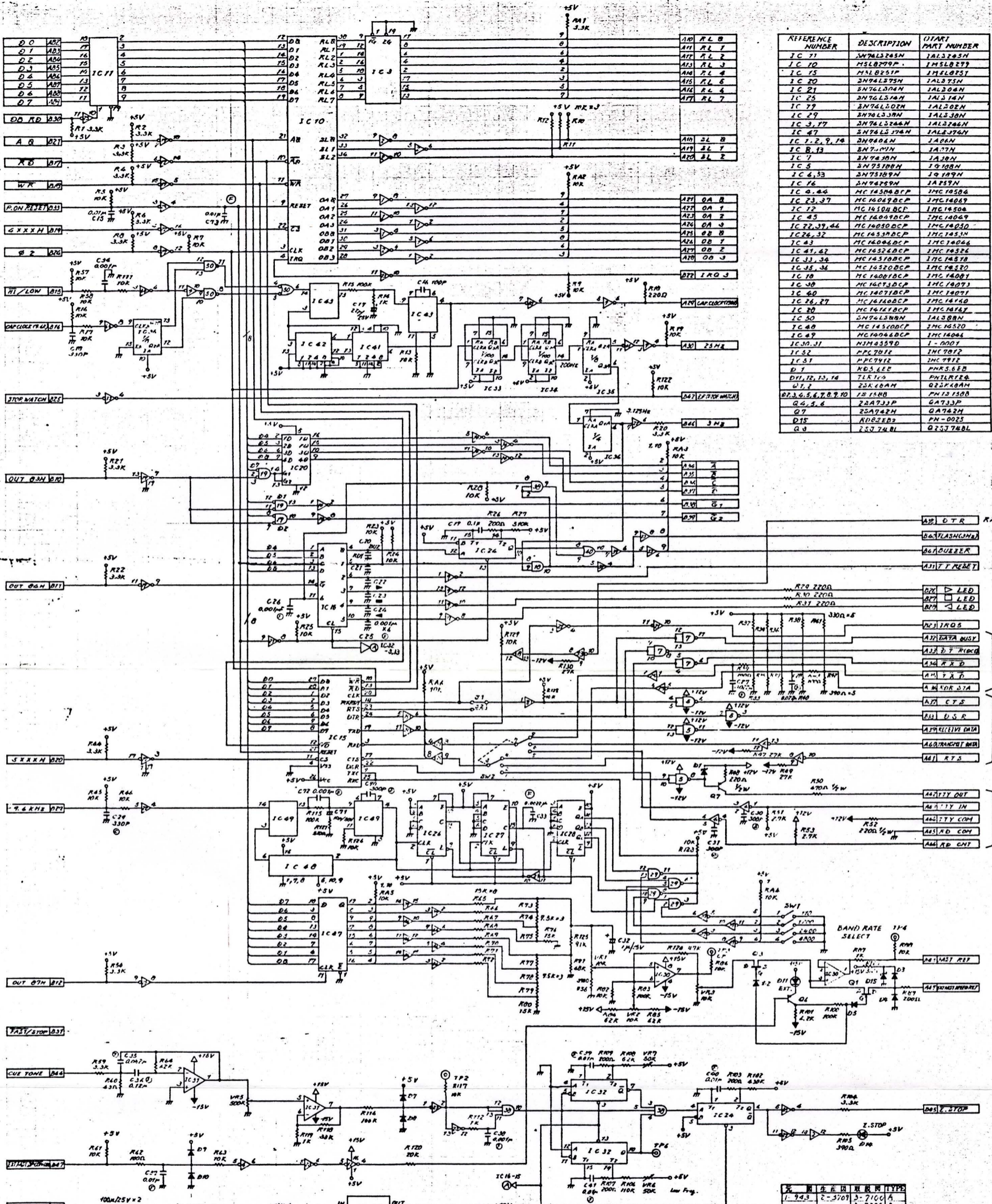
THIS SCHEMATIC DIAGRAM IS APPLIED TO: PB-47AB

OTARI Otari Electric Co. Ltd.  
 TRANSPORT CONTROL  
 PART NO: PB 47A/C



REFERENCE NO.	START PART NO.	DESCRIPTION
1	IC1	74HC00
2	IC2	74HC04
3	IC3	74HC10
4	IC4	74HC123
5	IC5	74HC138
6	IC6	74HC147
7	IC7	74HC153
8	IC8	74HC161
9	IC9	74HC163
10	IC10	74HC165
11	IC11	74HC166
12	IC12	74HC167
13	IC13	74HC168
14	IC14	74HC169
15	IC15	74HC170
16	IC16	74HC171
17	IC17	74HC172
18	IC18	74HC173
19	IC19	74HC174
20	IC20	74HC175
21	IC21	74HC176
22	IC22	74HC177
23	IC23	74HC178
24	IC24	74HC179
25	IC25	74HC180
26	IC26	74HC181
27	IC27	74HC182
28	IC28	74HC183
29	IC29	74HC184
30	IC30	74HC185
31	IC31	74HC186
32	IC32	74HC187
33	IC33	74HC188
34	IC34	74HC189
35	IC35	74HC190
36	IC36	74HC191
37	IC37	74HC192
38	IC38	74HC193
39	IC39	74HC194
40	IC40	74HC195
41	IC41	74HC196
42	IC42	74HC197
43	IC43	74HC198
44	IC44	74HC199
45	IC45	74HC200
46	IC46	74HC201
47	IC47	74HC202
48	IC48	74HC203
49	IC49	74HC204
50	IC50	74HC205
51	IC51	74HC206
52	IC52	74HC207
53	IC53	74HC208
54	IC54	74HC209
55	IC55	74HC210
56	IC56	74HC211
57	IC57	74HC21

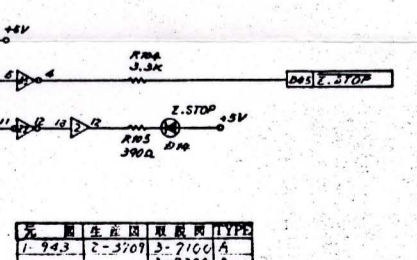
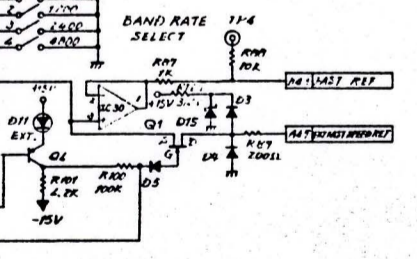




REFERENCE NUMBER	DESCRIPTION	PART NUMBER
IC 11	SN74LS245N	1A13245N
IC 10	MSL8279P	1M5L8279
IC 15	MSL8251P	1M5L8251
IC 20	SN74LS275N	1A13275N
IC 21	SN74LS244N	1A13244N
IC 25	SN74LS164N	1A13164N
IC 29	SN74LS02N	1A1302N
IC 29	SN74LS30N	1A1330N
IC 37	SN74LS244N	1A13244N
IC 47	SN74LS164N	1A13164N
IC 1, 2, 9, 19	SN7404N	1A1304N
IC 8, 13	SN7400N	1A1300N
IC 7	SN7402N	1A1302N
IC 5	SN74108N	1A13108N
IC 4, 33	SN74189N	1A13189N
IC 16	SN74259N	1A13259N
IC 4, 44	MC145386BQP	1MC145386
IC 23, 37	MC14069BCP	1MC14069
IC 12	MC14504BCP	1MC14504
IC 45	MC14049BCP	1MC14049
IC 22, 37, 44	MC14050BCP	1MC14050
IC 26, 37	MC14539BCP	1MC14539
IC 43	MC14046BCP	1MC14046
IC 41, 42	MC14524BCP	1MC14524
IC 33, 34	MC14510BCP	1MC14510
IC 35, 36	MC14520BCP	1MC14520
IC 18	MC14071BCP	1MC14071
IC 30	MC14073BCP	1MC14073
IC 40	MC14071BCP	1MC14071
IC 26, 27	MC14140BCP	1MC14140
IC 20	MC14141BCP	1MC14141
IC 50	SN74LS208N	1A13208N
IC 40	MC14510BCP	1MC14510
IC 49	MC14046BCP	1MC14046
IC 30, 31	NM48559D	1-0001
IC 52	MPC7012	1MC7012
IC 51	MPC7412	1MC7412
D 1	MS56EE	MS56EE
D11, D12, D13, D14	71K110	PN1K110
D 1, 2	2SK160AM	Q25K160AM
D3, 4, 5, 6, 7, 8, 9, 10	1S1580	PN1S1580
Q 4, 5, 6	2SA733P	GA733P
Q 7	2SA742M	GA742M
Q 15	AD82EB3	PN-0025
Q 9	2S374BL	Q25374BL

AB DTR	RS 232C
BA FLASCHWA	
BA QUEZER	
AJIT RESET	
DK LED	
DT LED	
DP LED	
NS1 JRS	
AJ DATA BUSY	
AJ D F RDCO	
A4 R X D	
A M Y R STA	
AJ C T S	
ES D S R	
AJ PRELIM DATA	
A6 TRANSMIT DATA	
AJ RTS	
AJITY OUT	
AJITY IN	
AJITY COM	
AJ RD COM	
AJ RD CNT	

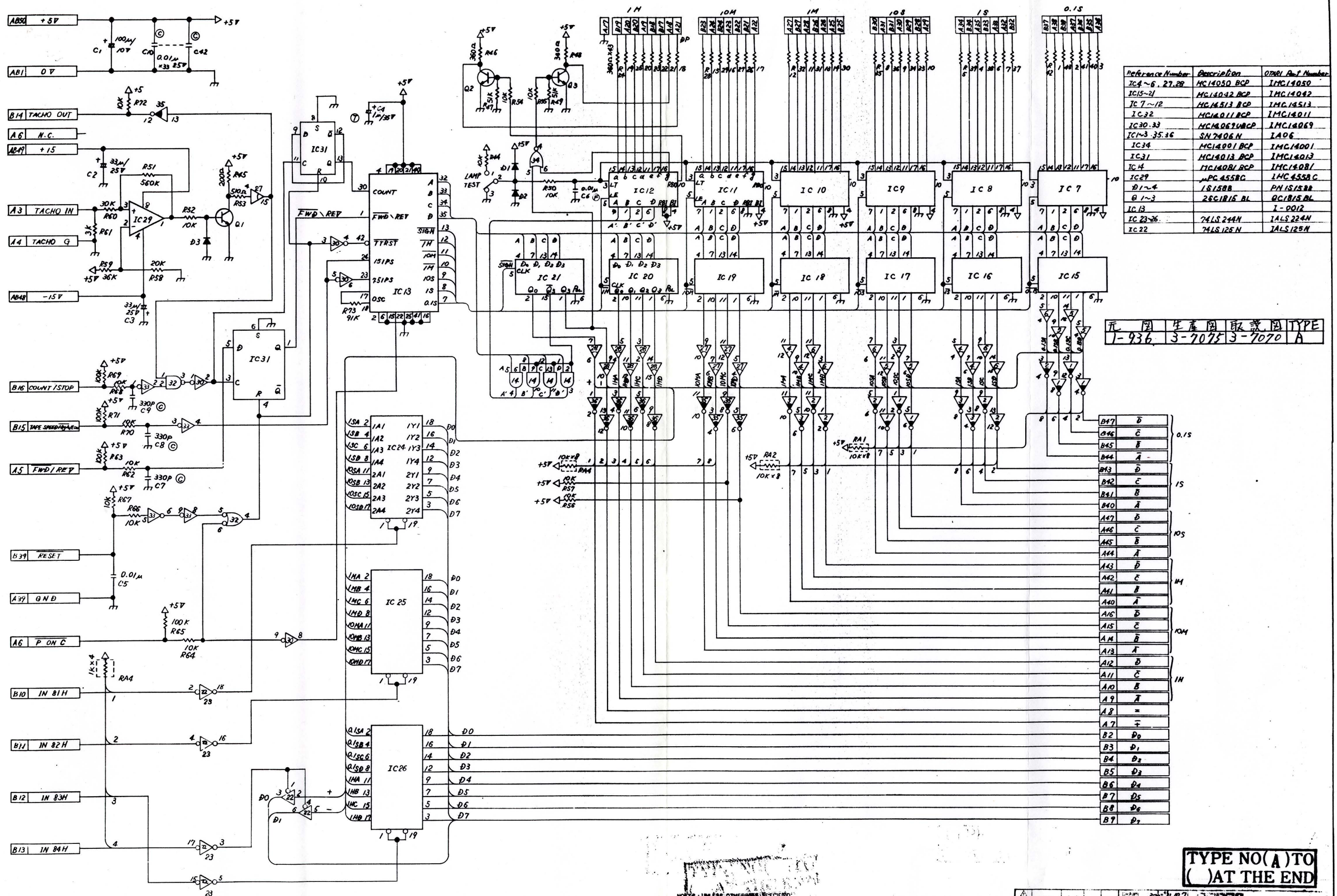
Signal	Level
AB DTR	RS 232C
BA FLASCHWA	TTL LEVEL
BA QUEZER	TTL LEVEL
AJIT RESET	TTL LEVEL
DK LED	TTL LEVEL
DT LED	TTL LEVEL
DP LED	TTL LEVEL
NS1 JRS	TTL LEVEL
AJ DATA BUSY	TTL LEVEL
AJ D F RDCO	TTL LEVEL
A4 R X D	TTL LEVEL
A M Y R STA	TTL LEVEL
AJ C T S	TTL LEVEL
ES D S R	TTL LEVEL
AJ PRELIM DATA	TTL LEVEL
A6 TRANSMIT DATA	TTL LEVEL
AJ RTS	TTL LEVEL
AJITY OUT	20mA CURRENT LOOP
AJITY IN	20mA CURRENT LOOP
AJITY COM	20mA CURRENT LOOP
AJ RD COM	20mA CURRENT LOOP
AJ RD CNT	20mA CURRENT LOOP



TYPE NO(A) TO	( ) AT THE END
1-943	2-3709
1-944	3-7100
1-945	3-7208
1-946	3-7303
1-947	3-7379

TYPE NO(A) TO	( ) AT THE END
1-943	2-3709
1-944	3-7100
1-945	3-7208
1-946	3-7303
1-947	3-7379

TYPE NO(A) TO	( ) AT THE END
1-943	2-3709
1-944	3-7100
1-945	3-7208
1-946	3-7303
1-947	3-7379



Reference Number	Description	Other Part Number
IC4-6, 27, 28	HC14050 BCP	IMC14050
IC15-21	HC14052 BCP	IMC14052
IC7-12	HC14513 BCP	IMC14513
IC32	HC14011 BCP	IMC14011
IC30, 33	HC14067MCP	IMC14069
IC13, 35, 36	SN7406N	IA06
IC34	HC14001 BCP	IMC14001
IC31	HC14013 BCP	IMC14013
IC4	HC14081 BCP	IMC14081
IC29	μPC4558C	IMC4558C
D1-4	1S158B	PN1S158B
B1-3	2SC1815 BL	QC1815 BL
IC13		I-0012
IC23-26	74LS24N	IALS224N
IC22	74LS125N	IALS125N

元 國 生 產 國 取 設 國 TYPE  
1-936 3-7075 3-7070 A

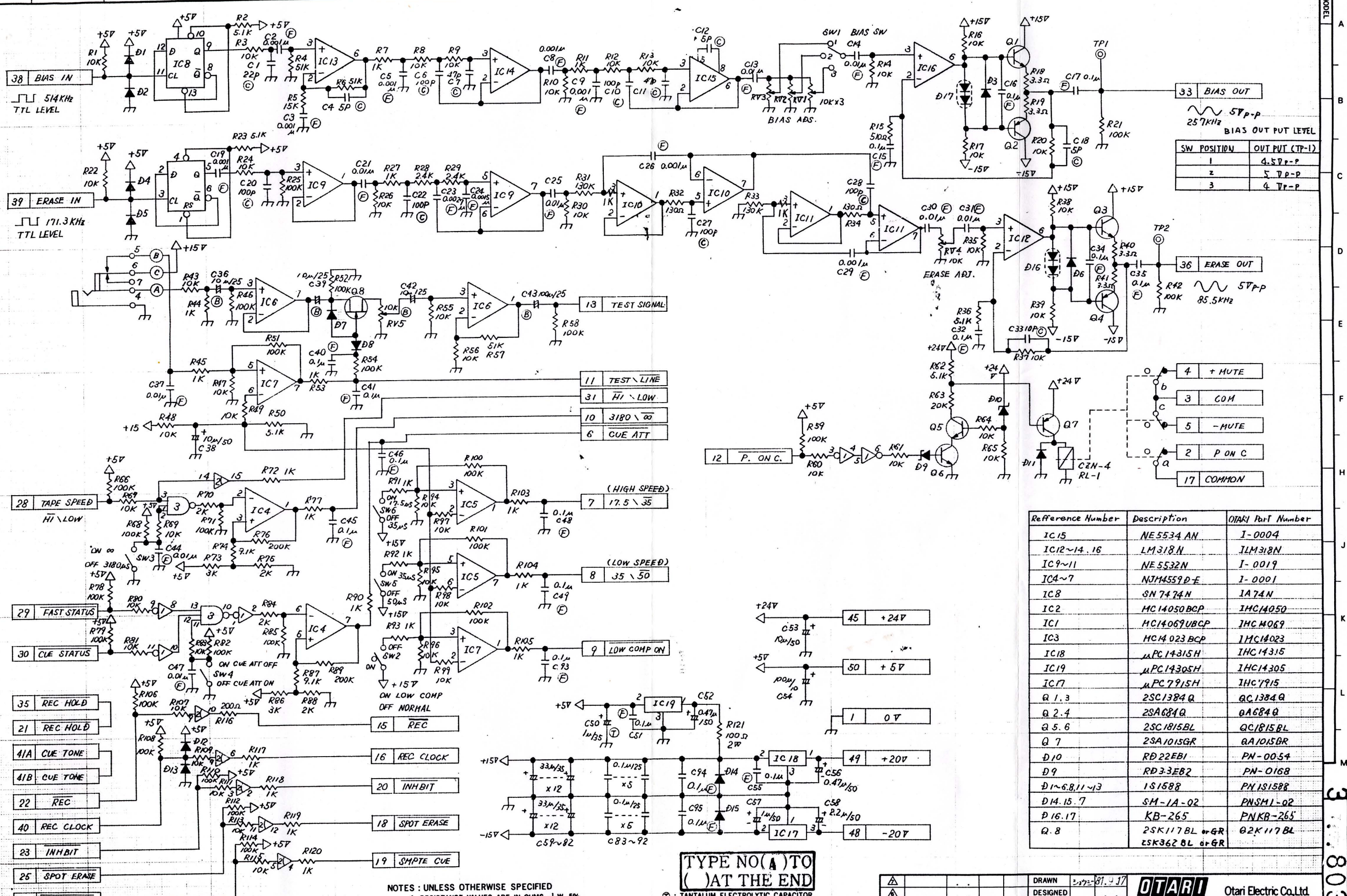
- B47 D
- B46 C
- B45 B
- B44 A
- B43 D
- B42 C
- B41 B
- B40 A
- A47 D
- A46 C
- A45 B
- A44 A
- A43 D
- A42 C
- A41 B
- A40 A
- A16 D
- A15 C
- A14 B
- A13 A
- A12 D
- A11 C
- A10 B
- A9 A
- A8 =
- A7 F
- B2 D0
- B3 D1
- B4 D2
- B5 D3
- B6 D4
- B7 D5
- B8 D6
- B9 D7

NOTES: UNLESS OTHERWISE SPECIFIED:  
 1. RESISTANCE VALUES ARE IN OHMS, ±1%, 5%.  
 2. CAPACITANCE VALUES ARE IN FARADS, 50%.  
 3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS:  
 (A) ALUMINUM ELECTROLYTIC CAPACITOR  
 (B) BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR  
 (C) NYLON FILM CAPACITOR (±5%, 50V)  
 (D) POLYESTER FILM CAPACITOR (±5%, 50V)  
 (E) CERAMIC CAPACITOR  
 (F) MICA CAPACITOR (±5%)  
 (G) TANTALUM ELECTROLYTIC CAPACITOR  
 (H) POLYPROPYLENE FILM CAPACITOR (±5%)  
 (I) LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR  
 (J) METALLIZED PAPER CAPACITOR (±10%)  
 (K) SAFETY KILLER  
 (L) SAFETY COMPONENT - REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

TYPE NO(A) TO ( ) AT THE END

SHAW-WALSH ELECTRIC CO. LTD. TAPE COUNTER  
 PART NO. PB 452 0A

3 . . 7070



SW POSITION	OUT PUT (TP-1)
1	4.5Vp-p
2	5Vp-p
3	4Vp-p

Reference Number	Description	OTARI Part Number
IC15	NE5534 AN	I-0004
IC12~14, 16	LM318N	ILM318N
IC9~11	NE5532N	I-0019
IC4~7	NJM4559D-E	I-0001
IC8	SN7474N	IA74N
IC2	MC14050BCP	IHC14050
IC1	MC14069UBCP	IHC14069
IC3	MC14023BCP	IHC14023
IC18	μPC14315H	IHC14315
IC19	μPC14305H	IHC14305
IC17	μPC7915H	IHC7915
Q1, 3	2SC1384Q	QC1384Q
Q2, 4	2SA684Q	QA684Q
Q5, 6	2SC1815BL	QC1815BL
Q7	2SA1015GR	QA1015GR
D10	RD22EB1	PN-0054
D9	RD33EB2	PN-0168
D1~6, 8, 11~13	1S1588	PN1S1588
D14, 15, 7	SM-1A-02	PNSM1-02
D16, 17	KB-265	PNKB-265
Q, 8	2SK117BL or GR 2SK362BL or GR	Q2K117BL

TYPE NO(A) TO ( ) AT THE END

NOTES: UNLESS OTHERWISE SPECIFIED

- RESISTANCE VALUES ARE IN OHMS, ±W, 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS:
  - ⊖: ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊕: BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊖: MYLAR FILM CAPACITOR (±5%, 50V)
  - ⊖: POLYSTYRENE FILM CAPACITOR (±5%, 50V)
  - ⊖: CERAMIC CAPACITOR.
  - ⊖: MICA CAPACITOR (±5%)

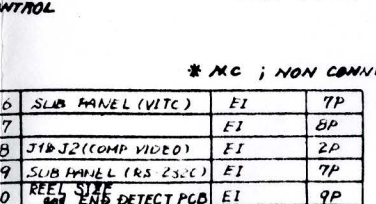
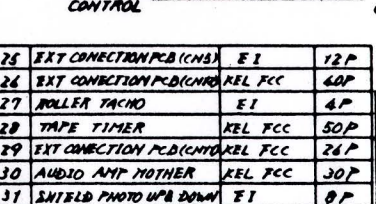
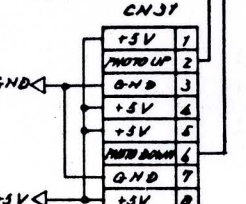
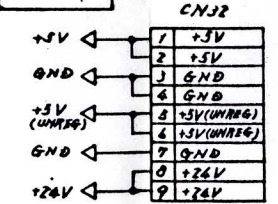
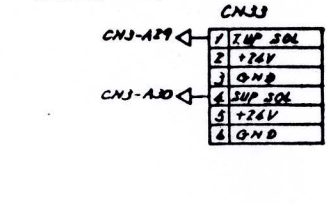
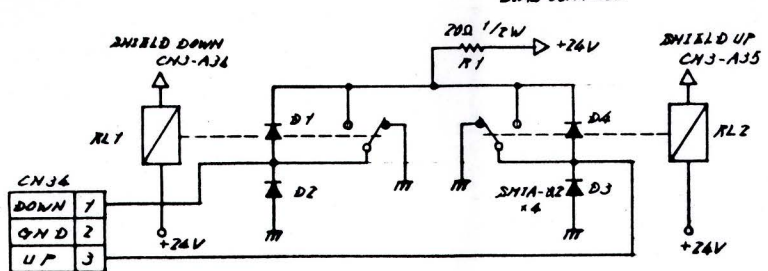
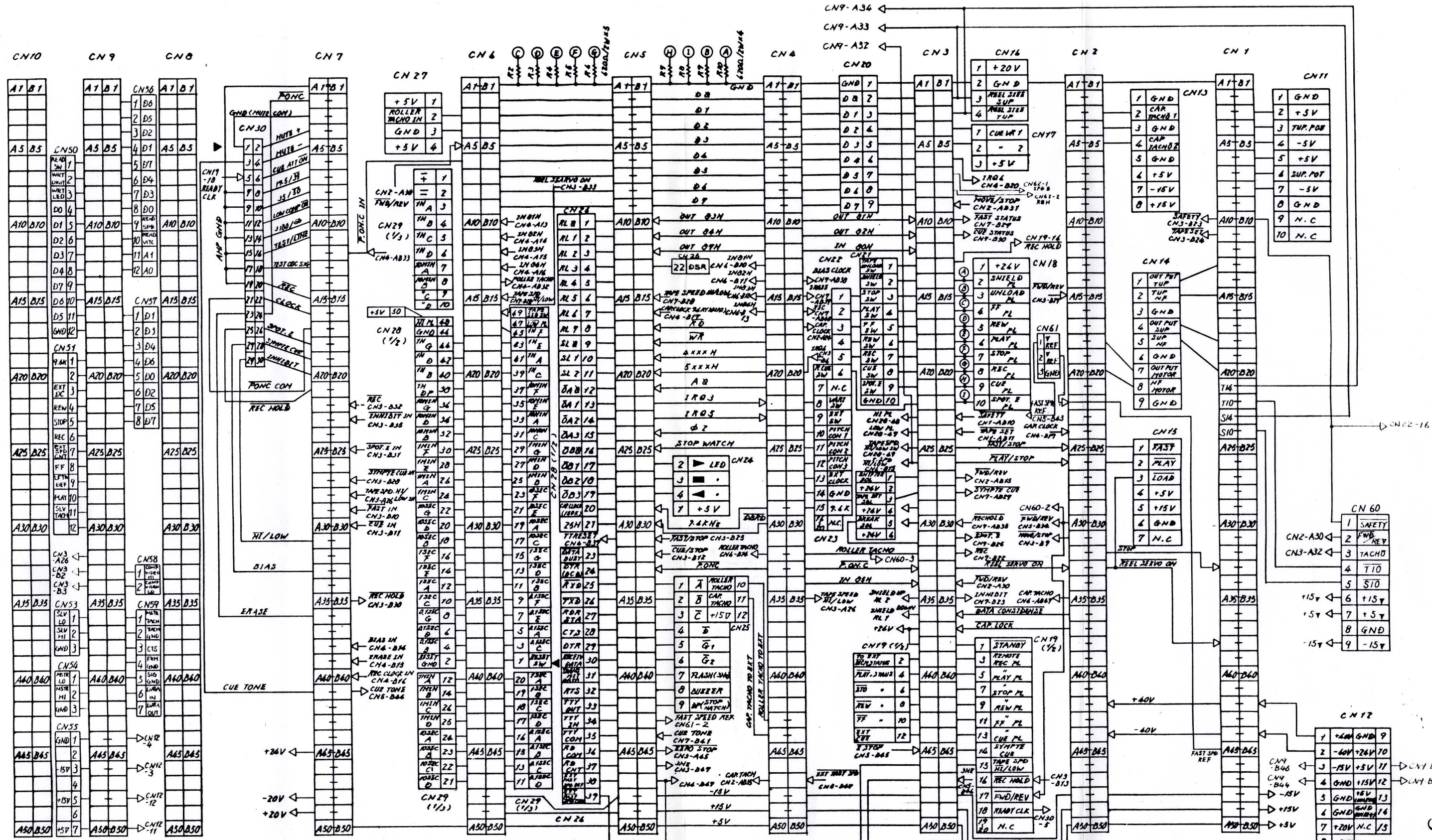
- TANTALUM ELECTROLYTIC CAPACITOR.
- POLYPROPYLENE FILM CAPACITOR (±5%)
- LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
- METALLIZED PAPER CAPACITOR (±10%)
- SPARK KILLER.
- SAFETY COMPONENT; REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

△						DRAWN	2-275-81.3 J7
△						DESIGNED	
△						CHECKED	449 812.2
△						APPROVED	

**OTARI** Otari Electric Co., Ltd.  
 NAME: BIAS CONTROL PCB ASSY  
 PART No.: PB 15L 0A  
 DWG No.: 2..3604

元	國	生	取	取	取	TYPE
2-3694	3-7054	3-7055	A~			
		3-8036	A~			

3036



CN#	TO	CN DESCR	PIN	17	CUE VR	EI	JP
1-10	CONTROL PCB	REL	100P	10	DECK CONTROL PL	EI	10P
11	TUPA SUP POT	EI	10P	17	EXT CONNECTION PCB(NC)	REL FCC	20P
12	POWER SUPPLY	U.M.	15P	20	N.C	EI	9P
13	CAP TACHO PCB	EI	8P	21	DECK CONTROL SW	EI	10P
14	MOTHER POWER TR	EI	9P	22	EXT CONNECTION PCB(CNT)	REL FCC	20P
15	HOUR METER PCB	EI	7P	23	EXCH SOL	EI	4P
16	REEL SIDE SENS PCB	EI	4P	24	CUR LBD PCB	EI	4P

25	EXT CONNECTION PCB(CNS)	EI	12P
26	EXT CONNECTION PCB(CNR) REL FCC	EI	40P
27	ROLLER TACHO	EI	4P
28	TAPE TIMER	REL FCC	50P
29	EXT CONNECTION PCB(CNR) REL FCC	EI	24P
30	AUDIO AMP MOTHER	REL FCC	30P
31	SHIELD PHOTO UP/DOWN	EI	8P
32	EXT CONNECTION PCB(CNR)	EI	9P
33	T. SUP SOL	EI	4P
34	SHIELD DRIVE	EI	3P
50	SUB PANEL PCB(REMOTE)	EI	12P
51	"	EI	12P
53	J4 CONNECTOR	EI	3P
54	J3	EI	3P
55	SUB PANEL PCB	EI	7P

CN#	TO	CN DESCR	PIN	17	CUE VR	EI	JP
1	SPD B	EI	17P				
2	REH	EI	17P				
3	+40V	EI	17P				
4	GND	EI	17P				

TYPE NO(A) TO ( ) AT THE END

3-16358	A	MTR-200
3-15376	Q	
3-10381	M	

OTARDI (Gen Electric Co. Ltd.)

NAME: MOTHER II

PART NO: PBTDD0A

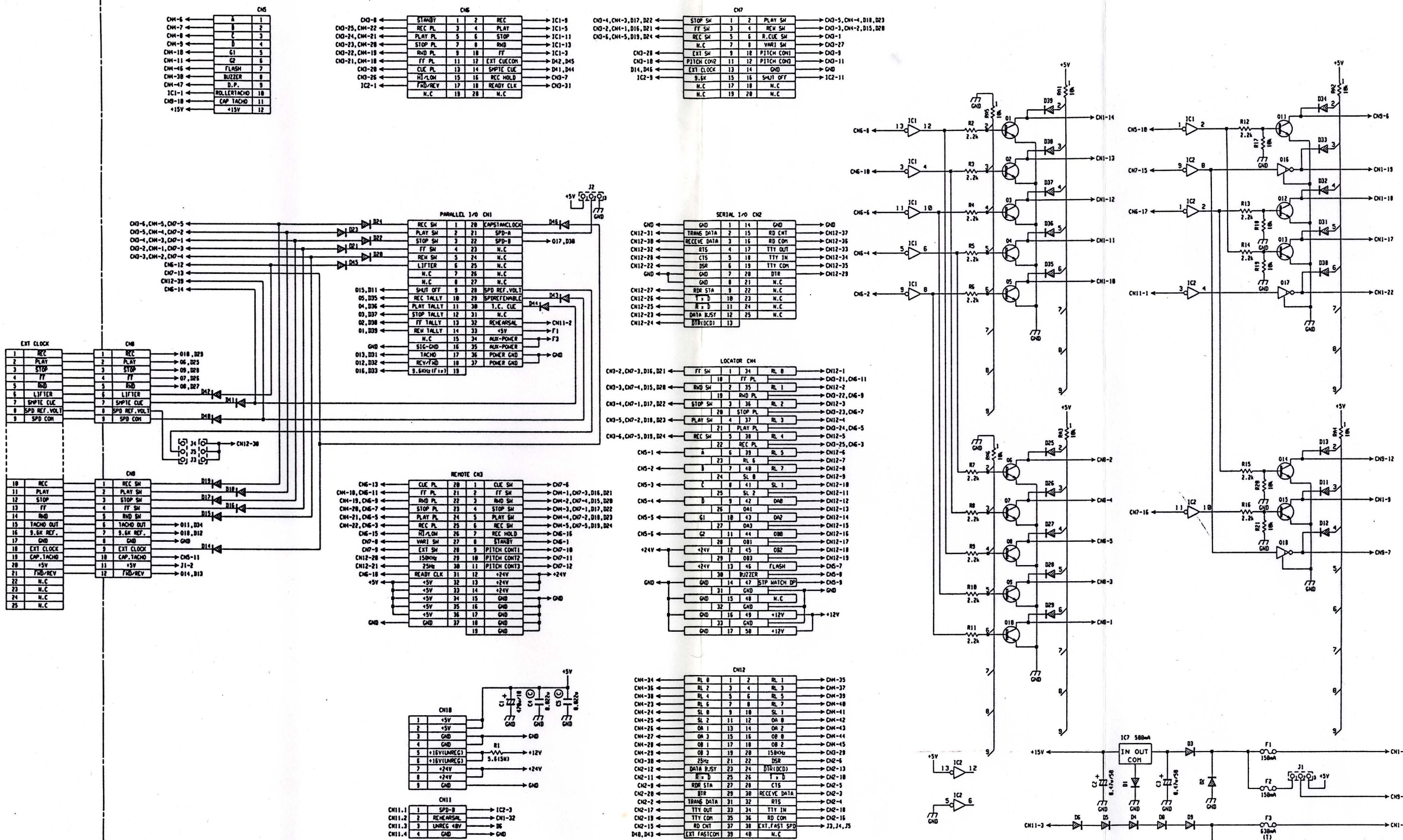
DESIGNED: [ ]

CHECKED: [ ]

APPROVED: [ ]

DATE: [ ]

16308



CH-6	A	1
CH-7	B	2
CH-8	C	3
CH-9	D	4
CH-10	G1	5
CH-11	G2	6
CH-16	FLASH	7
CH-18	B.U.Z.Z.E.R	8
CH-17	D.P.	9
IC1-1	ROLLERTACHO	10
CH-18	CAP TACHO	11
+15V	+15V	12

DQ-8	STANBY	1	2	REC	IC1-9
CH-25, CH-22	REC PL	3	4	PLAY	IC1-5
CH-24, CH-21	PLAY PL	5	6	STOP	IC1-11
CH-23, CH-20	STOP PL	7	8	RND	IC1-13
CH-22, CH-19	RND PL	9	10	FF	IC1-3
CH-21, CH-18	FF PL	11	12	EXT CUECOM	DA2, DA5
CH-20	CUE PL	13	14	SPITE CUE	DA1, DA4
CH-26	HI-FLON	15	16	REC HOLD	CH-7
IC2-1	REV/REV	17	18	READY CLK	CH-31
	N.C	19	20	N.C	

CH-4, CH-3, D17, D22	STOP SW	1	2	PLAY SW	CH-5, CH-4, D18, D23
CH-2, CH-1, D16, D21	FF SW	3	4	REV SW	CH-3, CH-2, D15, D20
CH-6, CH-5, D19, D24	REC SW	5	6	R.CUE SW	CH-1
	N.C	7	8	VARI SW	CH-27
CH-28	EXT SW	9	10	PITCH COM1	CH-9
CH-10	PITCH COM2	11	12	PITCH COM2	CH-11
D14, D48	EXT CLOCK	13	14	GND	CH-1
IC2-3	S.SK	15	16	SHUT OFF	CH-7
	N.C	17	18	N.C	
	N.C	19	20	N.C	

CH2-31	TRANS DATA	1	14	CH2	CH2-37
CH2-30	RECEIVE DATA	2	15	RD CNT	CH2-36
CH2-29	RIS	4	17	TTY OUT	CH2-33
CH2-28	CIS	5	18	TTY IN	CH2-34
CH2-27	ISR	6	19	TTY COM	CH2-35
CH2-26	GND	7	20	DTR	CH2-29
CH2-25	GND	8	21	N.C	
CH2-24	RDK STA	9	22	N.C	
CH2-23	T + D	10	23	N.C	
CH2-22	N + B	11	24	N.C	
CH2-21	DATA BUSY	12	25	N.C	
CH2-20	DIR/DCD	13			

CH3-2, CH3-3, D16, D21	FF SW	1	34	RL B	CH12-1
CH3-3, CH3-4, D15, D20	RND SW	2	35	RL 1	CH12-2
CH3-4, CH3-1, D17, D22	STOP SW	3	36	RL 2	CH12-3
CH3-5, CH3-2, D18, D23	PLAY SW	4	37	RL 3	CH12-4
CH3-6, CH3-5, D19, D24	REC SW	5	38	RL 4	CH12-5
CH5-1	A	6	39	RL 5	CH12-6
CH5-2	B	7	40	RL 7	CH12-8
CH5-3	C	8	41	SL 1	CH12-10
CH5-4	D	9	42	DA0	CH12-12
CH5-5	G1	10	43	DA2	CH12-13
CH5-6	G2	11	44	DA8	CH12-15
CH5-7	VARI SW	12	45	OB2	CH12-17
+24V		13	46	OB2	CH12-19
+24V		14	47	FLASH	CH5-8
+24V		15	48	B.U.Z.Z.E.R	CH5-8
GND		16	49	ISTP MATCH DP	GND
GND		17	50	N.C	GND
GND		18	51	N.C	GND
GND		19	52	N.C	GND
GND		20	53	N.C	GND
GND		21	54	N.C	GND
GND		22	55	N.C	GND
GND		23	56	N.C	GND
GND		24	57	N.C	GND
GND		25	58	N.C	GND

CH4-34	RL 8	1	2	RL 1	CH4-35
CH4-36	RL 2	3	4	RL 3	CH4-37
CH4-38	RL 4	5	6	RL 5	CH4-39
CH4-23	RL 6	7	8	RL 7	CH4-40
CH4-24	SL 8	9	10	SL 1	CH4-41
CH4-25	SL 2	11	12	OB B	CH4-42
CH4-26	OB 1	13	14	OB 2	CH4-43
CH4-27	OB 3	15	16	OB B	CH4-44
CH4-28	OB 1	17	18	OB 2	CH4-45
CH4-29	OB 3	19	20	1580Hz	CH2-29
CH3-30	25Hz	21	22	DSK	CH2-6
CH2-12	DATA BUSY	23	24	DIR/DCD	CH2-13
CH2-11	RIS	25	26	T + D	CH2-18
CH2-9	RDK STA	27	28	CIS	CH2-1
CH2-28	ISR	29	30	RECEIVE DATA	CH2-3
CH2-2	TRANS DATA	31	32	RIS	CH2-4
CH2-17	TTY OUT	33	34	TTY IN	CH2-18
CH2-18	TTY COM	35	36	RD COM	CH2-18
CH2-15	RD CNT	37	38	EXT.FAST SPD	J2, J4, J5
DA8, DA3	EXT.FASTCOM	39	40	N.C	

1	+5V			
2	+5V			
3	GND			
4	GND			
5	+16V(LAREG)	R1		+12V
6	+16V(LAREG)		5.6KΩ	+24V
7	+24V			
8	+24V			
9	GND			

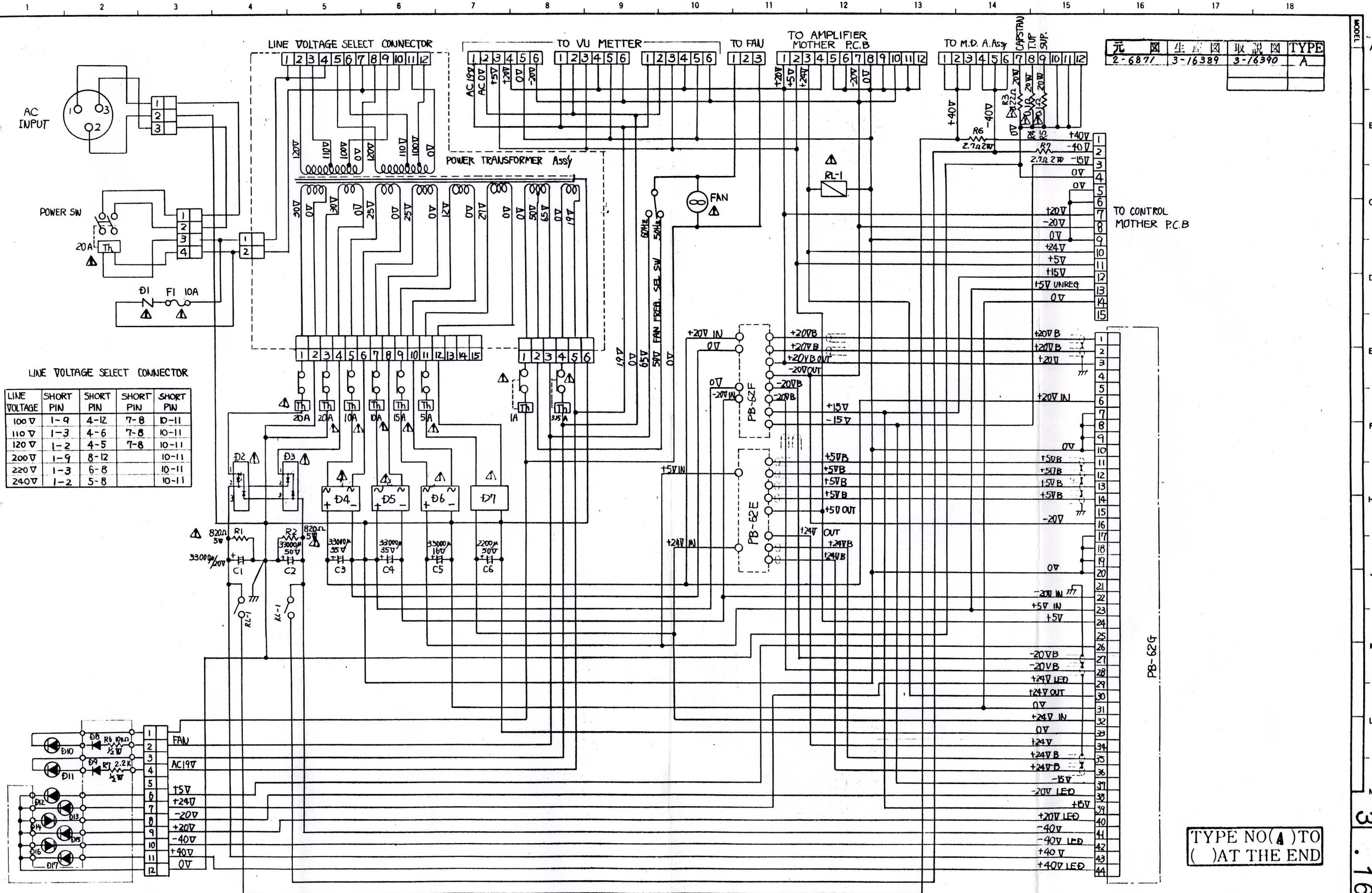
CH11-1	SPD-B	IC2-3
CH11-2	REHEARSAL	CH1-32
CH11-3	LAREG 4BY	B6
CH11-4	GND	GND

REF NO.	QIARI PART NO.	DESCRIPTION
IC 1, 2	7084	SN74HC04N
7	JAN7085	AN7085F
B 1-3	PM-0285	SM-120BZ
11-16E	PM-0199	1S150SLRS
1-15	QC3275	29C3275
15-18	Q-8011	0N120D

NOTES: UNLESS OTHERWISE SPECIFIED  
 1. RESISTANCE VALUES ARE IN OHMS, 1KΩ, 1MΩ, 10KΩ.  
 2. CAPACITANCE VALUES ARE IN FARADS, FOLLOW.  
 3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS:  
 ○ POLYMER ELECTROLYTIC CAPACITOR.  
 ⊖ POLYMER ALUMINUM ELECTROLYTIC CAPACITOR.  
 ⊖ POLYMER FILM CAPACITOR (150, 30V)  
 ⊖ POLYESTER FILM CAPACITOR (150, 50V)  
 ⊖ CERAMIC CAPACITOR.  
 ○ MICRO CAPACITOR (150)  
 ○ ELECTROLYTIC CAPACITOR.  
 ○ POLYPROPYLENE FILM CAPACITOR.  
 ○ 100μ LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.  
 ○ METALLIZED PAPER CAPACITOR (100V)  
 ⊖ 100μ FILM CAPACITOR (150, 50V)  
 ○ SAFETY COMPONENT - REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

NAME	EXT CONNECT PCA	SHEET 1 OF 1
PART NO.	PB7WZ0A	
APPLIED	PB-7WZA	

DWG. NO. 3 · 16435



LINE VOLTAGE SELECT CONNECTOR

LINE VOLTAGE	SHORT PIN	SHORT PIN	SHORT PIN	SHORT PIN
100V	1-9	4-12	7-8	10-11
110V	1-3	4-6	7-8	10-11
120V	1-2	4-5	7-8	10-11
200V	1-9	8-12		10-11
220V	1-3	6-8		10-11
240V	1-2	5-8		10-11

元	図	生	取	TYPE
2-6877	3-16389	3-16390		A

REFERENCE	OTARI P/N	DESCRIPTION
D	PN-0142	ER2-AZ0LS11
	2,3 PN-0203	RM30DZ-M
	4~7 PN-0005	KBCP 25-02
	8~9 PNSM1-02	SM1-02
	10~17 LU4015	DB-2
RL	RY2DA045	LK-2-24V

NOTES: UNLESS OTHERWISE SPECIFIED

- RESISTANCE VALUES ARE IN OHMS, ±W, 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - ⊖: ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊕: BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊖: MYLAR FILM CAPACITOR (±5%, 50V)
  - ⊕: POLYSTYRENE FILM CAPACITOR (±5%, 50V)
  - ⊖: CERAMIC CAPACITOR.
  - ⊕: MICA CAPACITOR (±5%)
- ⊖: TANTALUM ELECTROLYTIC CAPACITOR.
  - ⊕: POLYPROPYLENE FILM CAPACITOR (±5%)
  - ⊖: LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
  - ⊕: METALLIZED PAPER CAPACITOR (±10%)
  - ⊖: SPARK KILLER
  - ⊕: SAFETY COMPONENT; REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

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MRK	REV. No.	DATE	DWN	APP	

**OTARI** Otari Electric Co., Ltd.

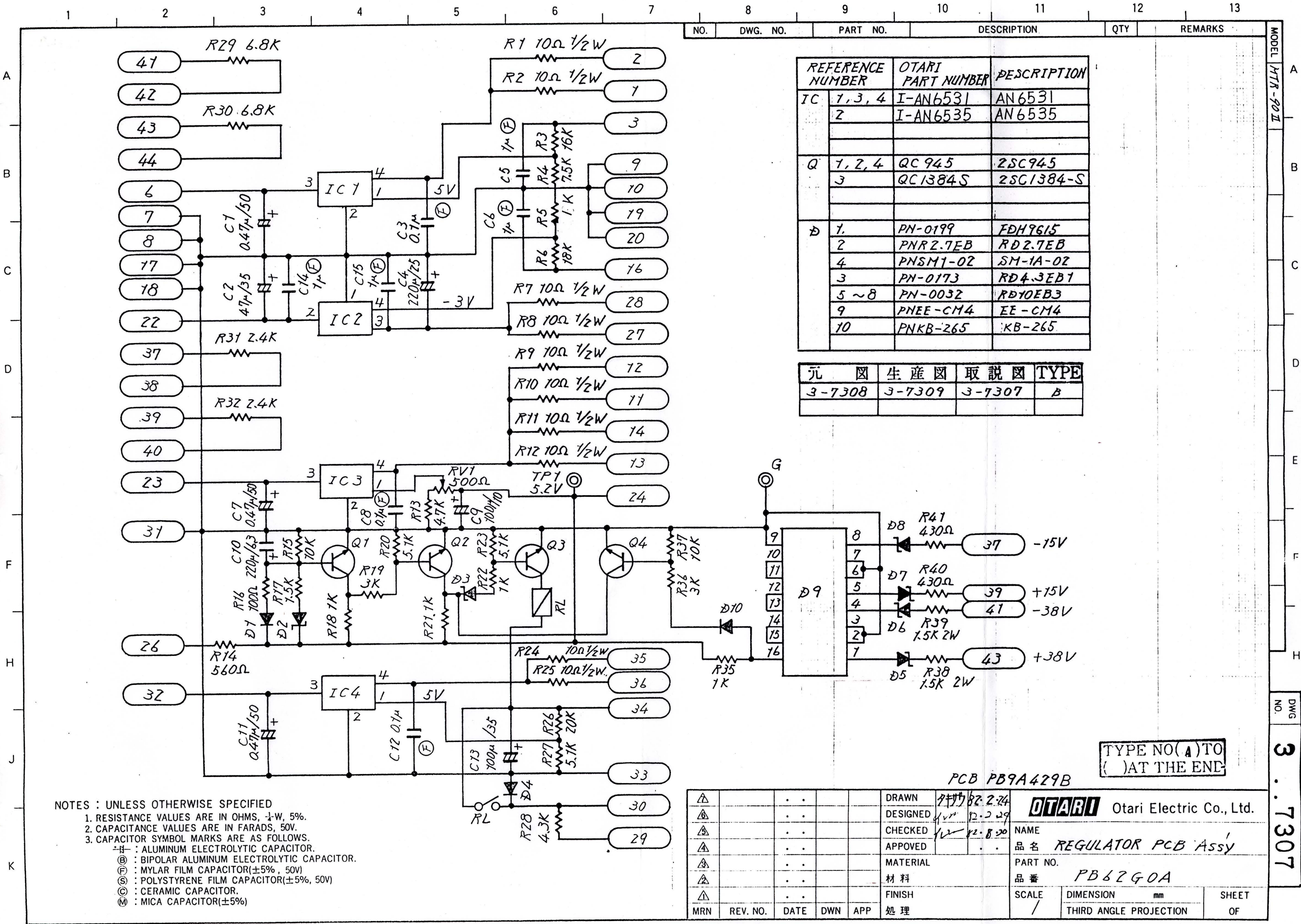
NAME: POWER SUPPLY Assy

PART No.: DS4W0A

DWG No.:

TYPE NO(A) TO ( ) AT THE END

MODEL 3-16390



NO.	DWG. NO.	PART NO.	DESCRIPTION	QTY	REMARKS
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REFERENCE NUMBER	OTARI PART NUMBER	DESCRIPTION	
IC	1, 3, 4	I-AN6531 AN6531	
	2	I-AN6535 AN6535	
Q	1, 2, 4	QC945 2SC945	
	3	QC1384S 2SC1384-S	
D	1	PN-0199 FDH9615	
	2	PNR2.7EB RD2.7EB	
	4	PNSM1-02 SM-1A-02	
	3	PN-0173 RD4.3EB1	
	5~8	PN-0032 RD10EB3	
	9	PNEE-CM4 EE-CM4	
	10	PNKB-265 KB-265	

元	図	生産	取説	TYPE
3-7308	3-7309	3-7307	B	

NOTES : UNLESS OTHERWISE SPECIFIED  
 1. RESISTANCE VALUES ARE IN OHMS, 1/2W, 5%.  
 2. CAPACITANCE VALUES ARE IN FARADS, 50V.  
 3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.  
 ±H : ALUMINUM ELECTROLYTIC CAPACITOR.  
 ⊕ : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.  
 ⊖ : MYLAR FILM CAPACITOR(±5%, 50V)  
 ⊙ : POLYSTYRENE FILM CAPACITOR(±5%, 50V)  
 ⊕ : CERAMIC CAPACITOR.  
 ⊖ : MICA CAPACITOR(±5%)

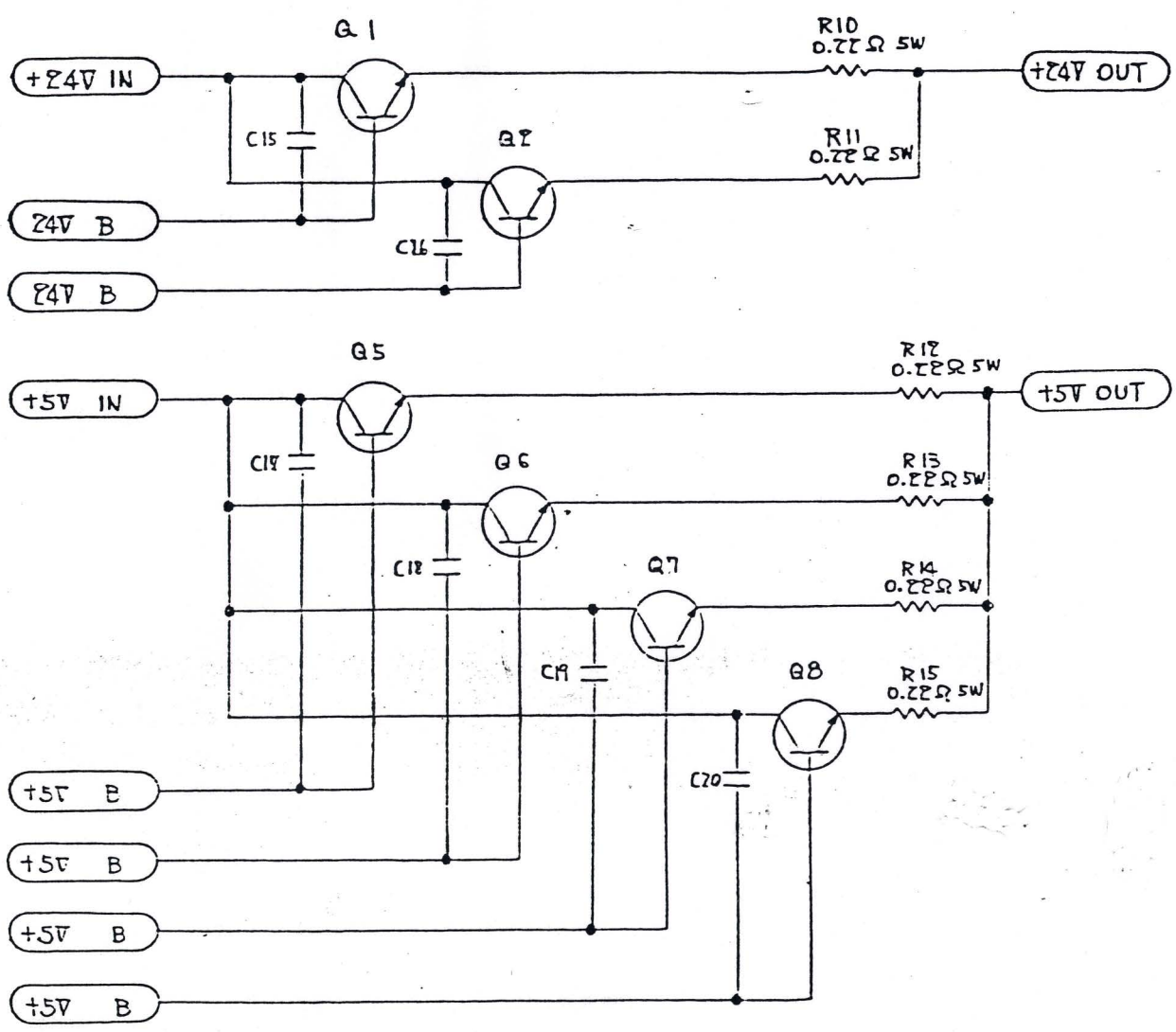
TYPE NO(A) TO ( ) AT THE END

PCB PB9A429B

△					DRAWN	野村 82.2.24	<b>OTARI</b> Otari Electric Co., Ltd. NAME 品名 REGULATOR PCB Assy PART NO. 品番 PB62G0A SCALE / DIMENSION mm SHEET OF THIRD ANGLE PROJECTION
△					DESIGNED	野村 82.2.29	
△					CHECKED	野村 82.8.20	
△					APPROVED		
△					MATERIAL		
△					材料		
△					FINISH		
△					処理		
MRN	REV. NO.	DATE	DWN	APP			

MODEL MTR-901  
 DWG NO. 3-7307

MODEL



Q1~2, 5~8 2SD552  
 C15~20 0.1μF 50V MYLAR FILM CAPACITOR  
 PCB PB9A 359

元	図	生産	取説	TYPE
4-30762	4-30763	4-30764	A	

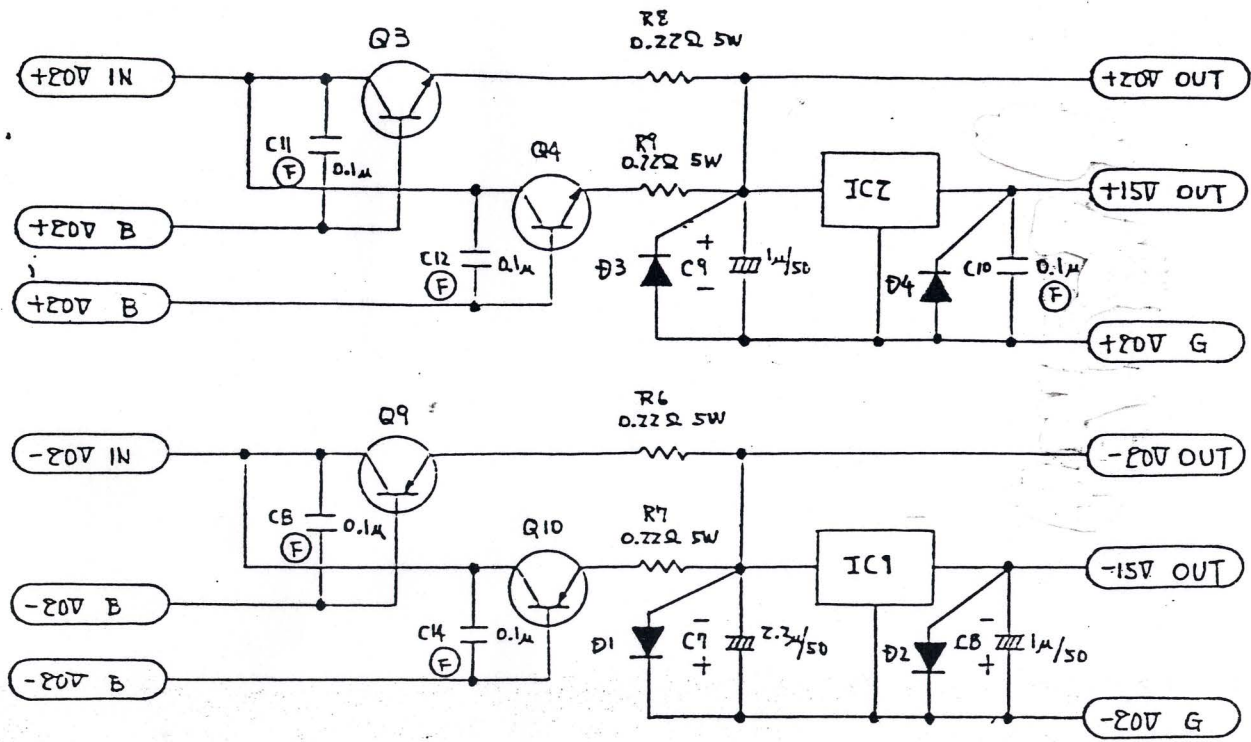
TYPE NO(A) TO  
 ( ) AT THE END

△				DRAWN		<b>OTARI</b> Otari Electric Co., Ltd. NAME POWER SUPPLY PCB Assy A PART No. PB-62E SCALE / DIMENSION mm THIRD ANGLE PROJECTION SHEET OF
△				DESIGNED	80.1.10	
△				CHECKED		
△				APPROVED		
△				MATERIAL		
△				FINISH		
MRK	REV. No.	DATE	DWN	APP		

DWG. No. 4 30764



MODEL



- Q 3~4 ZSD55Z
- Q 9~10 ZSB55Z
- IC1 μA7815KC
- IC2 μA7915KC
- Ⓢ MYLAR FILM CAPACITOR
- PCB PB9A 360
- D1~4 G3J

元	生産	取説	TYPE
4-30774	4-30775	4-30776	A

TYPE NO(A) TO  
( ) AT THE END

△			DRAWN		<b>OTARI</b> Otari Electric Co.,Ltd. NAME POWER SUPPLY PCB Ass'y B PART No. PB-6ZF	DIMENSION mm THIRD ANGLE PROJECTION	SHEET OF
△			DESIGNED	80.1.10			
△			CHECKED				
△			APPROVED				
△			MATERIAL				
△			FINISH				
MRK	REV. No.	DATE	DWN	APP			

DWG. No.

4 30776

TO AMP  
CH 1~12 (CH 13~24)

1 S (13 S)	1
2 R (14 R)	2
2 I (14 I)	3
3 S (15 S)	4
4 R (16 R)	5
4 I (16 I)	6
5 S (17 S)	7
6 R (18 R)	8
6 I (18 I)	9
7 S (19 S)	10
8 R (20 R)	11
8 I (20 I)	12
9 S (21 S)	13
10 R (22 R)	14
10 I (22 I)	15
11 S (23 S)	16
12 R (24 R)	17
12 I (24 I)	18
	19
	20
	21
	22
	23
	24
	25
	26
1 R (13 R)	27
1 I (13 I)	28
2 S (14 S)	29
2 R (15 R)	30
3 I (15 I)	31
4 S (16 S)	32
5 R (17 R)	33
5 I (17 I)	34
6 S (18 S)	35
7 R (19 R)	36
7 I (19 I)	37
8 S (20 S)	38
9 R (21 R)	39
9 I (21 I)	40
10 S (22 S)	41
11 R (23 R)	42
11 I (23 I)	43
12 S (24 S)	44
	45
	46
	47
	48
	49
	50

ZA-63F  
CONNECTION CABLE Ass'y A  
(CH 1~12, CB-113)

ZA-63I  
CONNECTION CABLE Ass'y B  
(CH 13~24, CB-113)

ZA-63H  
CONNECTION CABLE Ass'y C  
(CH 1~8, CB-112)

PB-46C  
CONTROL PCB Ass'y  
X 8 (CB-112)  
X 12 (CB-113)

PB-46E (CB-112), PB-46B (CB-113)  
AMP. SW PCB Ass'y

CB-245 DECK SW Ass'y

ZA-63G  
CONNECTION  
CABLE Ass'y B

1	CUE SW
2	FF SW
3	RWD SW
4	STOP SW
5	PLAY SW
6	REC SW
7	REC HOLD
8	STANBY
9	PITCH CON 1
10	" 2
11	" 3
12	+24 V
13	"
14	"
15	GND
16	"
17	"
18	"
19	"
20	CUE PL
21	FF PL
22	RWD PL
23	STOP PL
24	PLAY PL
25	REC PL
26	Hi/Low
27	VARI SW
28	EXT SW
29	150KHz (±30ips)
30	25 Hz
31	+5V
32	"
33	"
34	"
35	"
36	"
37	GND

\* R ; Ready  
I ; Input  
S ; Sel/Rep  
ex. 1 R ; CH 1 Ready

元	生	取	TYPE
2-3698	3-7058	3-7059	A

NOTES : UNLESS OTHERWISE SPECIFIED

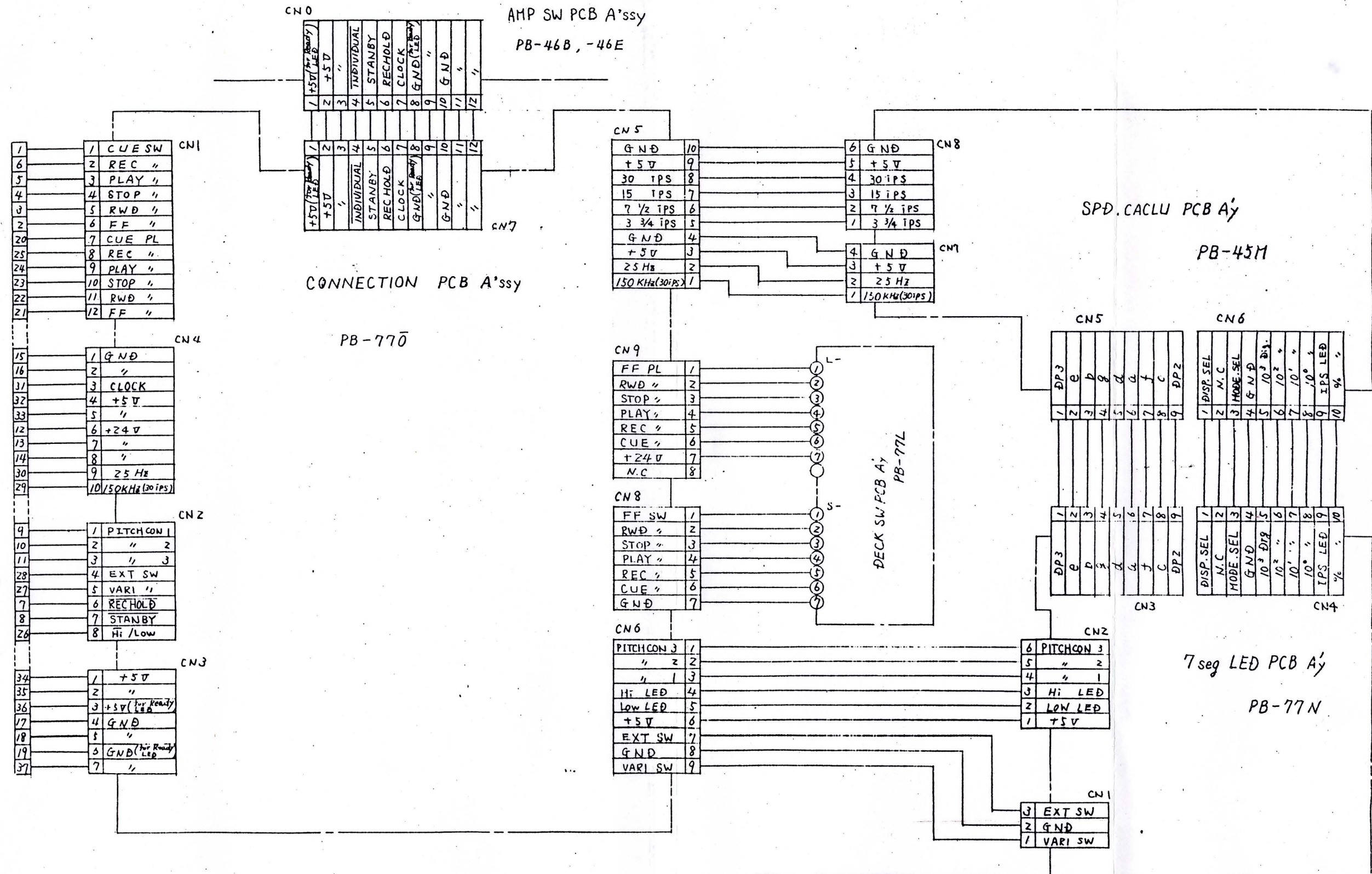
- RESISTANCE VALUES ARE IN OHMS, ±W, 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - ⊖ : ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊕ : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊖ : MYLAR FILM CAPACITOR (±5%, 50V)
  - ⊕ : POLYSTYRENE FILM CAPACITOR (±5%, 50V)
  - ⊖ : CERAMIC CAPACITOR.
  - ⊕ : MICA CAPACITOR (±5%)

- ⊖ : TANTALUM ELECTROLYTIC CAPACITOR.
- ⊕ : POLYPROPYLENE FILM CAPACITOR (±5%)
- ⊖ : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
- ⊕ : METALLIZED PAPER CAPACITOR (±10%)
- ⊖ : SPARK KILLER.
- ⊕ : SAFETY COMPONENT ; REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

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MRK	REV. No.	DATE	DWN	APP	

DRAWN	131 81.12.11
DESIGNED	131 81.12.11
CHECKED	
APPROVED	

<b>OTARI</b> Otari Electric Co., Ltd.	
NAME INTERCONNECTION DIAGRAM	
PART No.	CB-112, 113
DWG No.	3 7059



記号	規格	取説	TYPE
2-3641	3-6867	3-6868	
		3-6941	

NOTES : UNLESS OTHERWISE SPECIFIED

- RESISTANCE VALUES ARE IN OHMS, ± 1 W. 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - ALUMINUM ELECTROLYTIC CAPACITOR.
  - BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - MYLAR FILM CAPACITOR (±5%, 50V)
  - POLYSTYRENE FILM CAPACITOR (±5%, 50V)
  - CERAMIC CAPACITOR.
  - MICA CAPACITOR (±5%)

- ⊖: TANTALUM ELECTROLYTIC CAPACITOR.
- ⊕: POLYPROPYLENE FILM CAPACITOR (±5%)
- ⊖: LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
- ⊕: METALLIZED PAPER CAPACITOR (±10%)
- ⊖: SPARK KILLER.
- ⊕: SAFETY COMPONENT ; REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

MRK	REV. No.	DATE	DWN	APP

**TYPE NO(A) TO ( ) AT THE END**

**OTARI** Otari Electric Co., Ltd.

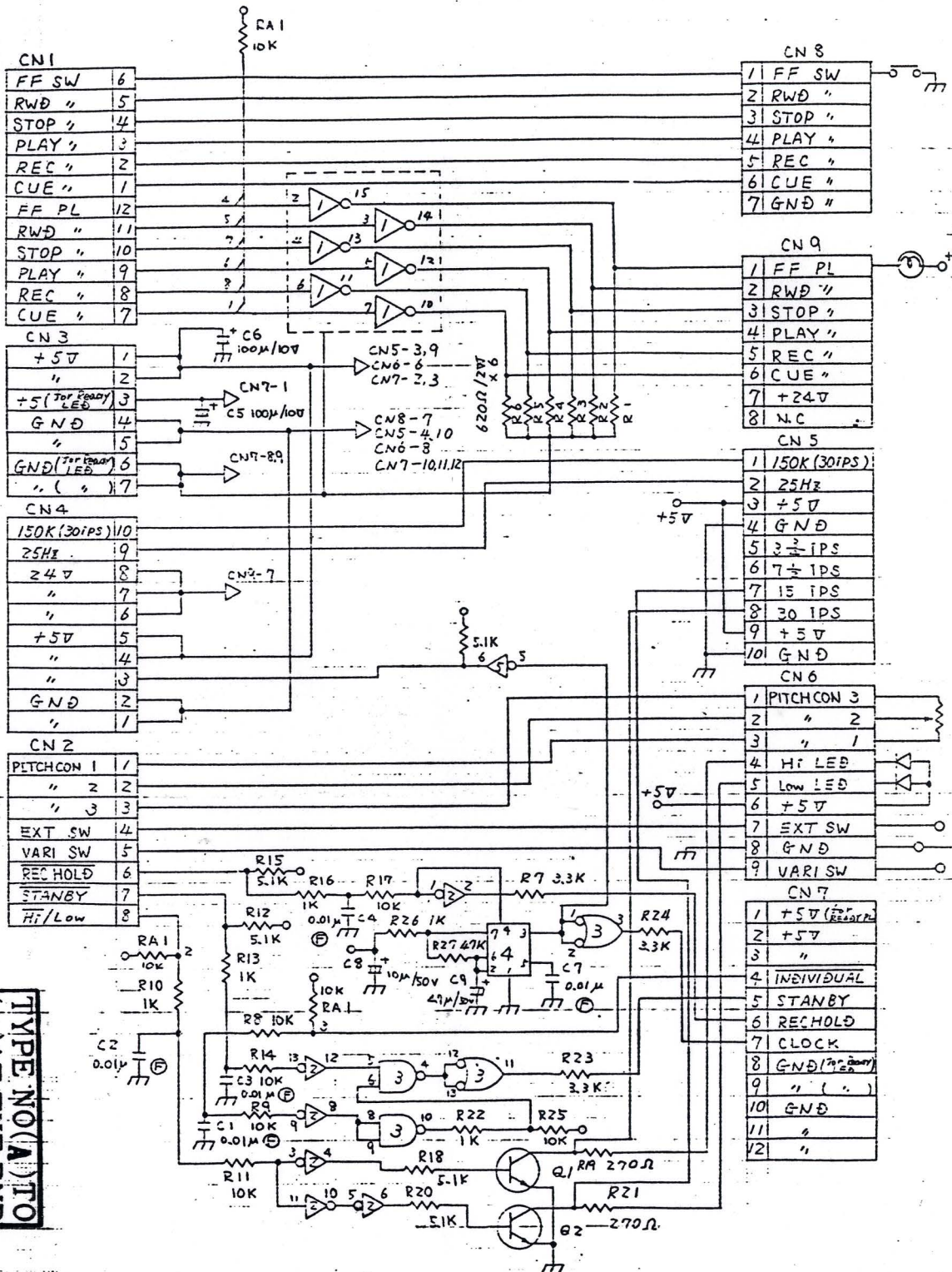
NAME  
CB-24S CONNECTION DIAGRAM

PART No.  
CB 2450A

DWG No.  
3 6041

- NOTES : UNLESS OTHERWISE SPECIFIED
1. RESISTANCE VALUES ARE IN OHMS, 1 W, 5%.
  2. CAPACITANCE VALUES ARE IN FARADS, 50V.
  3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS:
    - (T) : TANTALUM ELECTROLYTIC CAPACITOR.
    - (P) : POLYPROPYLENE FILM CAPACITOR (±5%).
    - (L) : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
    - (M) : METALLIZED PAPER CAPACITOR (±10%).
    - (A) : ALUMINUM ELECTROLYTIC CAPACITOR.
    - (B) : BIVOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
    - (C) : MYLAR FILM CAPACITOR (±5%, 50V).
    - (D) : POLYSTYRENE FILM CAPACITOR (±5%, 50V).
    - (E) : CERAMIC CAPACITOR.
    - (F) : MICHA CAPACITOR (±5%).

1. TANTALUM ELECTROLYTIC CAPACITOR.
2. POLYPROPYLENE FILM CAPACITOR (±5%).
3. LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
4. METALLIZED PAPER CAPACITOR (±10%).
5. ALUMINUM ELECTROLYTIC CAPACITOR.
6. BIVOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
7. MYLAR FILM CAPACITOR (±5%, 50V).
8. POLYSTYRENE FILM CAPACITOR (±5%, 50V).
9. CERAMIC CAPACITOR.
10. MICHA CAPACITOR (±5%).



TYPE NO(A) TO ( ) AT THE END  
 089/493A

REFERENCE No.	DESCRIPTION	OTARI PART No
IC 1	μPA2003C	IHA2003C
IC 2	MC14584BCP	IMC14584
IC 3	MC14011BCP	IMC14011
IC 4	ICM7555ZPA	I-0018
Q 1,2	ZSC1815 BL	QC1815 BL
IC 5	SN7406	IA06

元	生	取	TYPE
3-6869	4-30126	4-30127	
		4-30348	

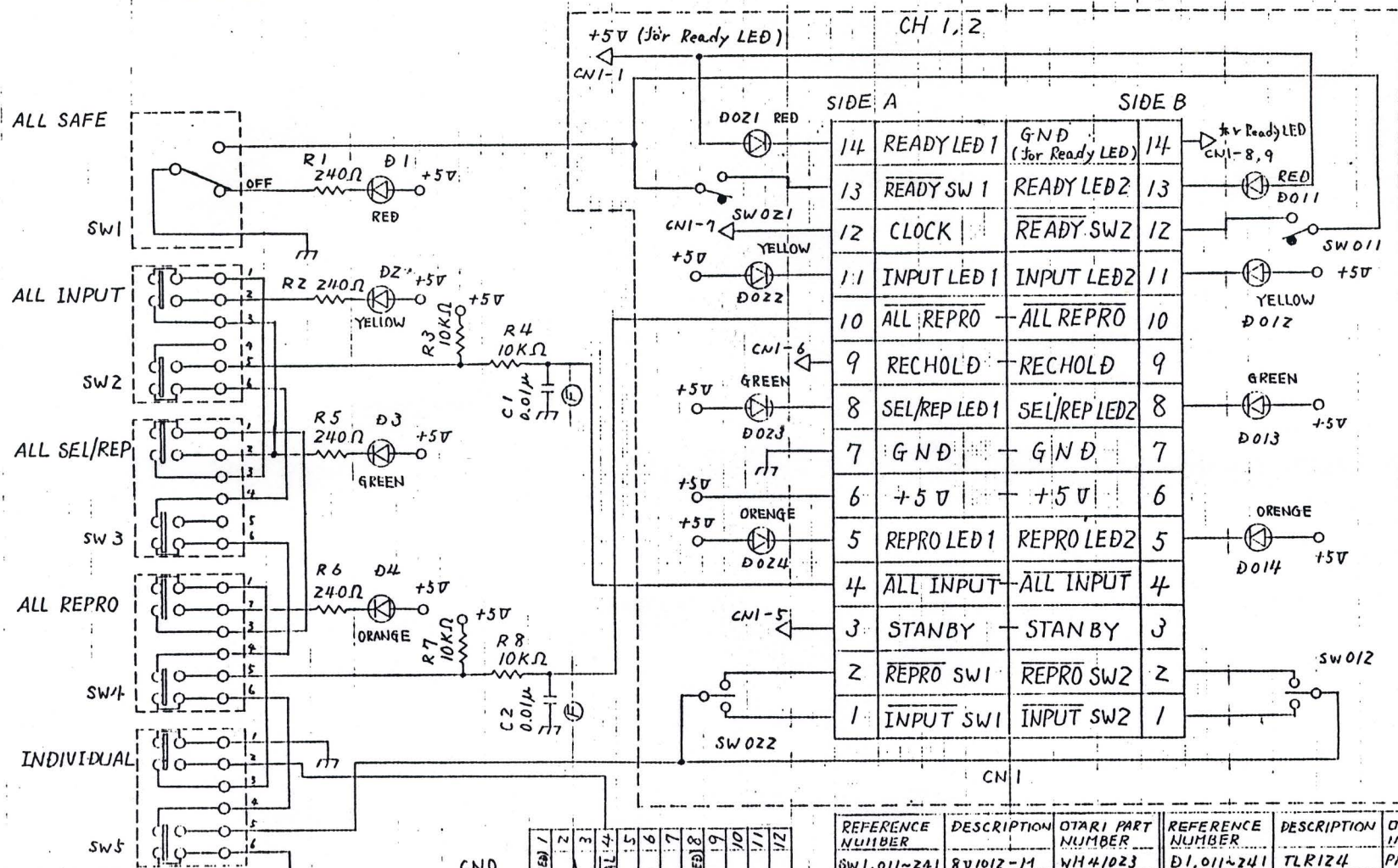
MKR	REV. No.	DATE	OWN	APP.

DRAWN	DESIGNED	CHECKED	APPROVED

OTARI Otari Electric Co., Ltd  
 CONNECTION PCB  
 PART No. PB7700A  
 DWG No. 87C348

MODEL 30348

品名	生産国	取説国	TYPE
J-6871	4-30124	4-30125	
		4-30349	



CH 3 ~ 24  
SAME AS CH 1, 2

**TYPE NO(A) TO  
( ) AT THE END**

NOTES : UNLESS OTHERWISE SPECIFIED

1. RESISTANCE VALUES ARE IN OHMS, 1 W, 5%.
2. CAPACITANCE VALUES ARE IN FARADS, 50V.
3. CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - (II) : ALUMINUM ELECTROLYTIC CAPACITOR.
  - (B) : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR
  - (F) : MYLAR FILM CAPACITOR (±5%, 50V)
  - (S) : POLYSTYRENE FILM CAPACITOR (±5%, 50V)
  - (C) : CERAMIC CAPACITOR.
  - (M) : MICA CAPACITOR (±5%)

- (T) : TANTALUM ELECTROLYTIC CAPACITOR.
- (P) : POLYPROPYLENE FILM CAPACITOR (±5%)
- (L) : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
- (M) : METALLIZED PAPER CAPACITOR (±10%)
- (S) : SPARK KILLER.
- (A) : SAFETY COMPONENT ; REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

1	+5V (for Ready LED)
2	"
3	"
4	INDIVIDUAL
5	STANBY
6	RECHOLD
7	CLOCK
8	SEL/REP LED 1
9	"
10	GND
11	"
12	"

REFERENCE NUMBER	DESCRIPTION	OTARI PART NUMBER	REFERENCE NUMBER	DESCRIPTION	OTARI PART NUMBER
SW1, 011~241	8V1012-11	WH41023	D1, 011~241	TLR124	PNTLR124
SW012~242	8V1022-11	WH42024	D2, 012~242	TLY124	PNTLY124
SW2~5	SUT.41A	WH12108	D3, 013~243	TLG124	PNTLG124
CN1~12	150-028-023	CN328038	D4, 014~244	TLB124	PNTLB124

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MRK	REV. No.	DATE	DWN	APP			

**OTARI** Otari Electric Co., Ltd.

NAME: AMP. SW PCB A4

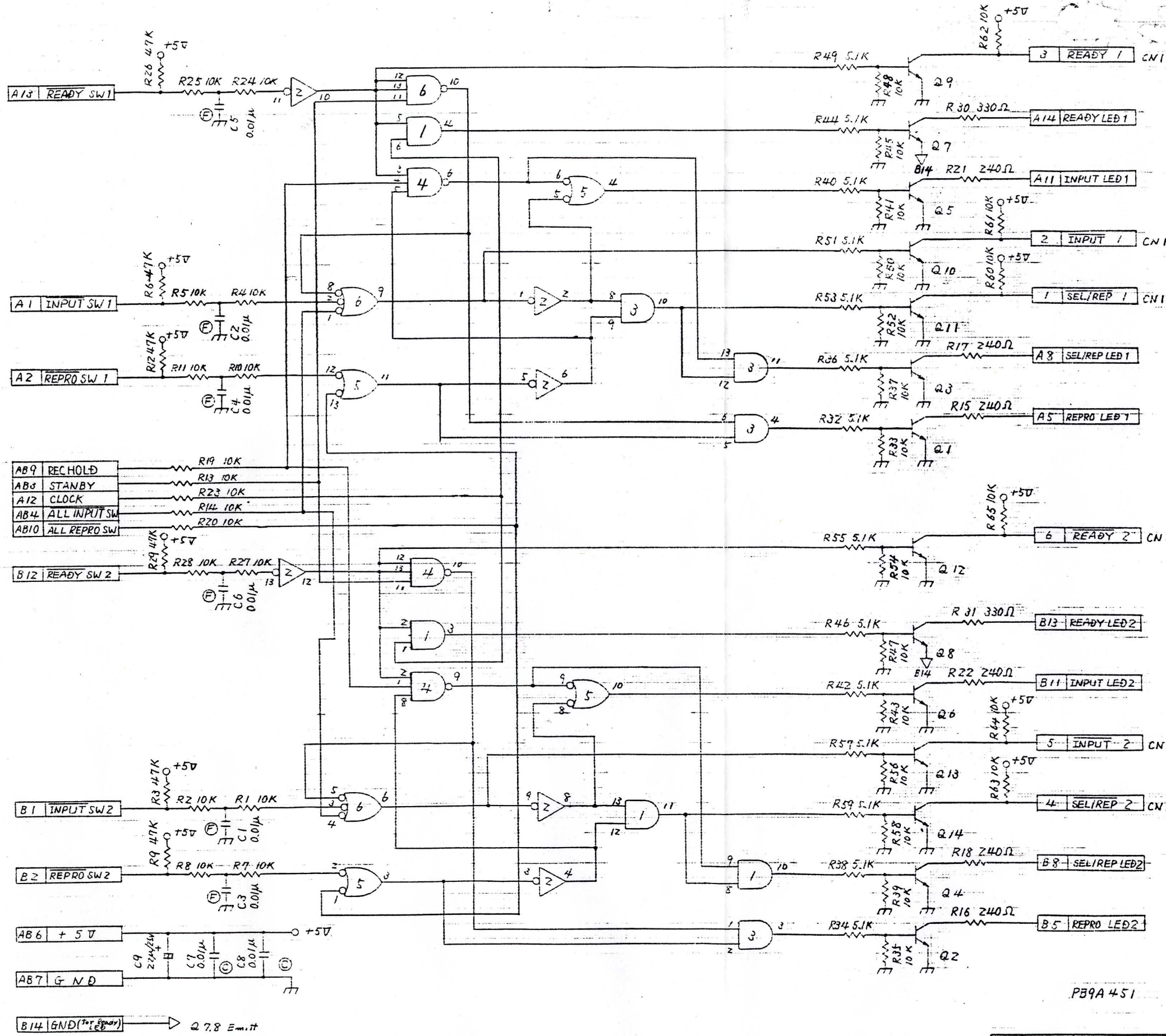
PART No. PB46B0A

DWG No. 4.30349

MODEL 1  
DWG. No. 4.30349

CH 2

CH 1



元	図	主	産	取	説	図	TYPE
2-3640	3-6865	3-6866					

REFERENCE NUMBER	OTARI PART NUMBER	DESCRIPTION
IC 1, 3	IMC14081	MC14081BCP
IC 2	IMC14069	MC14069BCP
IC 4, 6	IMC14023	MC14023BCP
IC 5	IMC14011	MC14011BCP
Q1~14	QE1815BL	ZSC1815BL

PB9A451

TYPE NO(A) TO ( ) AT THE END

NOTES : UNLESS OTHERWISE SPECIFIED

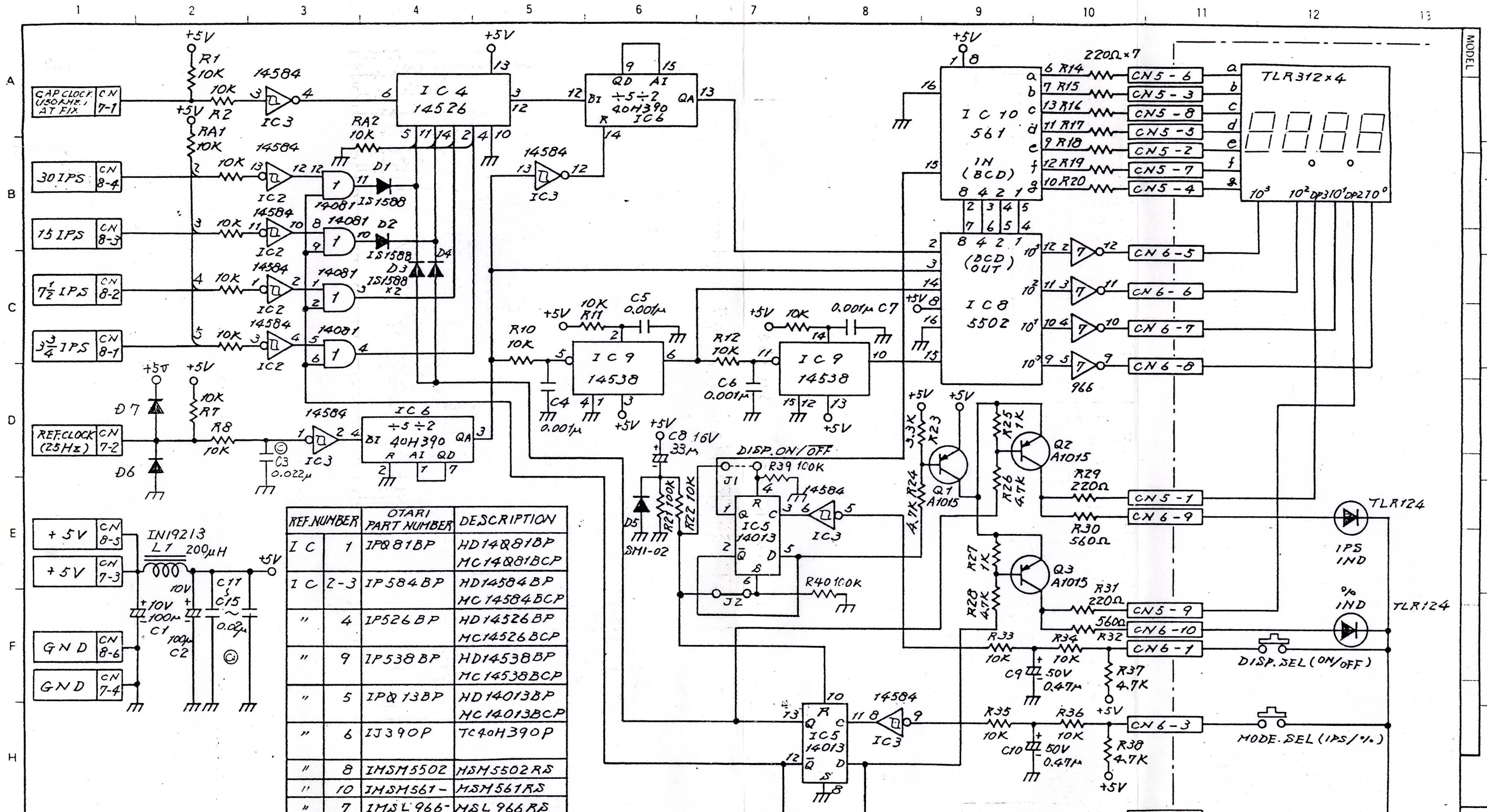
- RESISTANCE VALUES ARE IN OHMS, ±W. 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.
  - ⊕ : ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊖ : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - ⊙ : MYLAR FILM CAPACITOR (±5%, 50V)
  - ⊗ : POLYSTYRENE FILM CAPACITOR (±5%, 50V)
  - ⊘ : CERAMIC CAPACITOR.
  - ⊚ : MICA CAPACITOR (±5%)

- ⊕ : TANTALUM ELECTROLYTIC CAPACITOR.
- ⊙ : POLYPROPYLENE FILM CAPACITOR (±5%)
- ⊗ : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
- ⊘ : METALLIZED PAPER CAPACITOR (±10%)
- ⊚ : SPARK KILLER.
- ⊚ : SAFETY COMPONENT : REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

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MRK	REV. No.	DATE	DWN	APP	

DRAWN	131	81.7.21
DESIGNED	131	81.7.21
CHECKED		
APPROVED		

<b>OTARI</b> Otari Electric Co., Ltd.	
NAME	CONTROL PCB
PART No.	PB 46C & A
DWG No.	



REF. NUMBER	OTARI PART NUMBER	DESCRIPTION
IC 1	IPQ81BP	HD14Q81BP MC14Q81BCP
IC 2-3	IP584BP	HD14584BP MC14584BCP
" 4	IP526BP	HD14526BP MC14526BCP
" 9	IP538BP	HD14538BP MC14538BCP
" 5	IPQ13BP	HD14013BP MC14013BCP
" 6	IJ390P	TC40H390P
" 8	IMS5502	HSM5502RS
" 10	IMS561	HSM561RS
" 7	IMSL966	MSL966RS
Q 1-3	QA1015	2SA1015.GR.DLY 2SA1128.P.Q.R
D 1-4	PN151588	IS1588 IS953,FDH9615
" 5	PX2M1-Q2	SM1-02A

取説図	TYPE
3-7824	3-7188
3-7825	B~

TYPE NO(A) TO ( ) AT THE END

NOTES : UNLESS OTHERWISE SPECIFIED

- RESISTANCE VALUES ARE IN OHMS,  $\frac{1}{2}$ W, 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS.  
 # : ALUMINUM ELECTROLYTIC CAPACITOR.  
 B : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.  
 F : MYLAR FILM CAPACITOR ( $\pm 5\%$ , 50V)  
 S : POLYSTYRENE FILM CAPACITOR ( $\pm 5\%$ , 50V)  
 C : CERAMIC CAPACITOR.  
 M : MICA CAPACITOR ( $\pm 5\%$ )

- TANTALUM ELECTROLYTIC CAPACITOR.
- POLYPROPYLENE FILM CAPACITOR ( $\pm 5\%$ )
- LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
- METALLIZED PAPER CAPACITOR ( $\pm 10\%$ )
- SPARK KILLER.
- SAFETY COMPONENT ; REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

THIS SCHEMATIC DIAGRAM IS APPLIED TO PB-45MB-

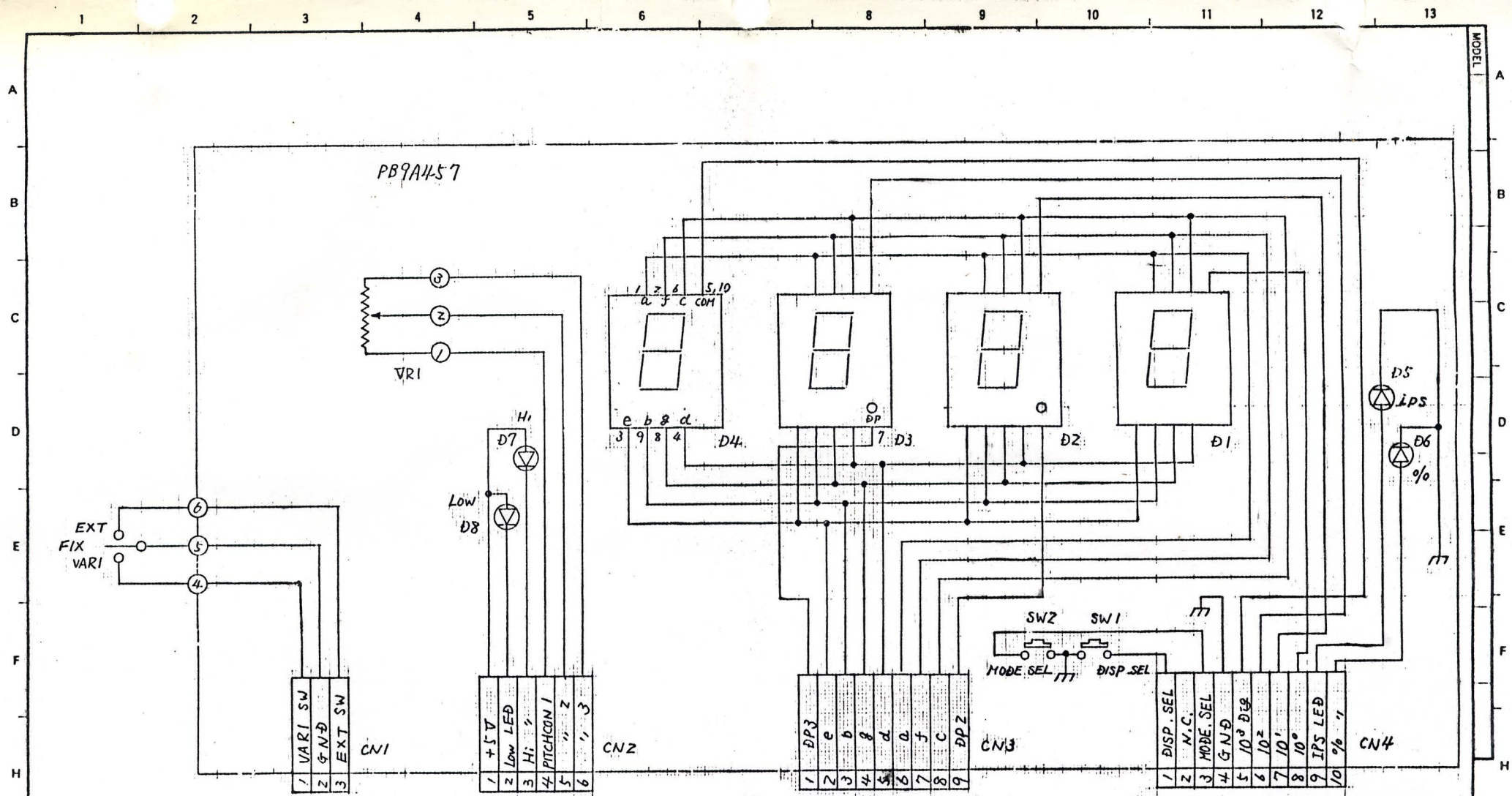
△					DRAWN	7/7/81.10.16
△					DESIGNED	1-9
△					CHECKED	1-9/81.10.28
△					APPROVED	K.22=PL.0.25
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MRK	REV. No.	DATE	DWN	APP		

**OTARI** Otari Electric Co., Ltd.

NAME *SPD. CALCU. PCB Ass'y*

PART No. *PB46FQA*

DWG No. *3..7325*



REFERENCE No.	UTARI PART No.	DESCRIPTION
D1 ~ 4	PN-0153	TLR 3120
D5 ~ 8	PNTLR102	TLR 102
VR1	RV 01/4026	ENS-1KAS20B14
SW1, 2	WH11123C	DPI-100

元	図	生産	取説	TYPE
3-6870	4-30122	4-30123		

TYPE NO. (▲) TO ( ) AT THE END

NOTES : UNLESS OTHERWISE SPECIFIED

- RESISTANCE VALUES ARE IN OHMS. 1/4 W. 5%.
- CAPACITANCE VALUES ARE IN FARADS, 50V.
- CAPACITOR SYMBOL MARKS ARE AS FOLLOWS:
  - (A) : ALUMINUM ELECTROLYTIC CAPACITOR.
  - (B) : BIPOLAR ALUMINUM ELECTROLYTIC CAPACITOR.
  - (F) : MYLAR FILM CAPACITOR (±5%, 50V)
  - (S) : POLYSTYRENE FILM CAPACITOR (±5%, 50V)
  - (C) : CERAMIC CAPACITOR.
  - (M) : MICA CAPACITOR (±5%)

- (A) : TANTALUM ELECTROLYTIC CAPACITOR.
  - (B) : POLYPROPYLENE FILM CAPACITOR (±5%)
  - (C) : LOW LEAKAGE CURRENT ELECTROLYTIC CAPACITOR.
  - (D) : METALLIZED PAPER CAPACITOR (±10%)
  - (E) : SPARK KILLER.
  - (F) : SAFETY COMPONENT ; REPLACE ONLY WITH THE SPECIFIED COMPONENT FOR SAFETY REASON.

MRK	REV. No.	DATE	DWN	APP
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DRAWN	131 81.7.21
DESIGNED	131 81.7.21
CHECKED	
APPROVED	
<b>OTARI</b> Otari Electric Co., Ltd.	
NAME 7 seg. LED PCB A <sub>y</sub>	
PART No. PB77N8A	
DWG No. 4-30123	

DWG. No. 4-30123