

AKAI

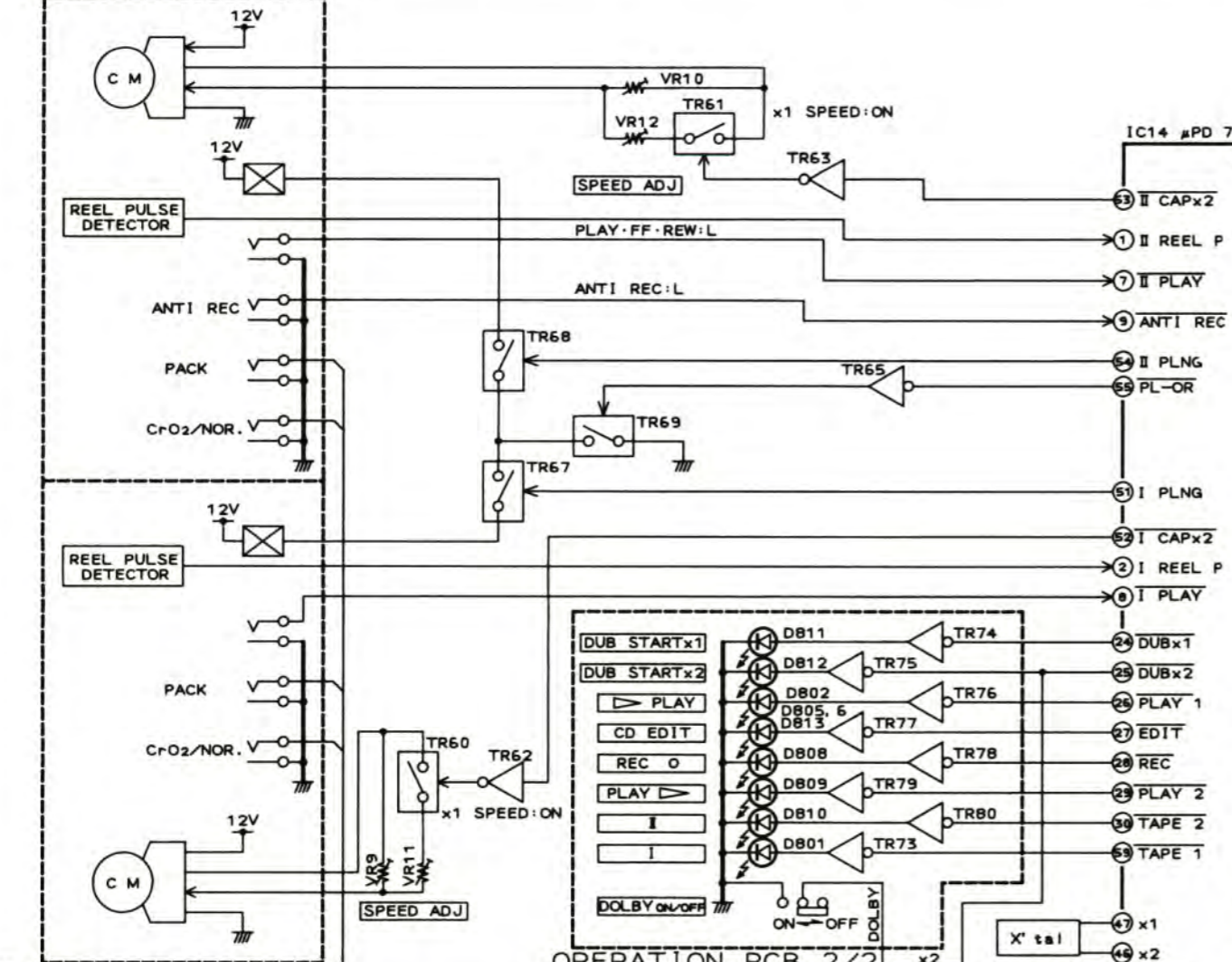
MODEL **AX-M400**

SCHEMATIC DIAGRAMS AND PC BOARDS

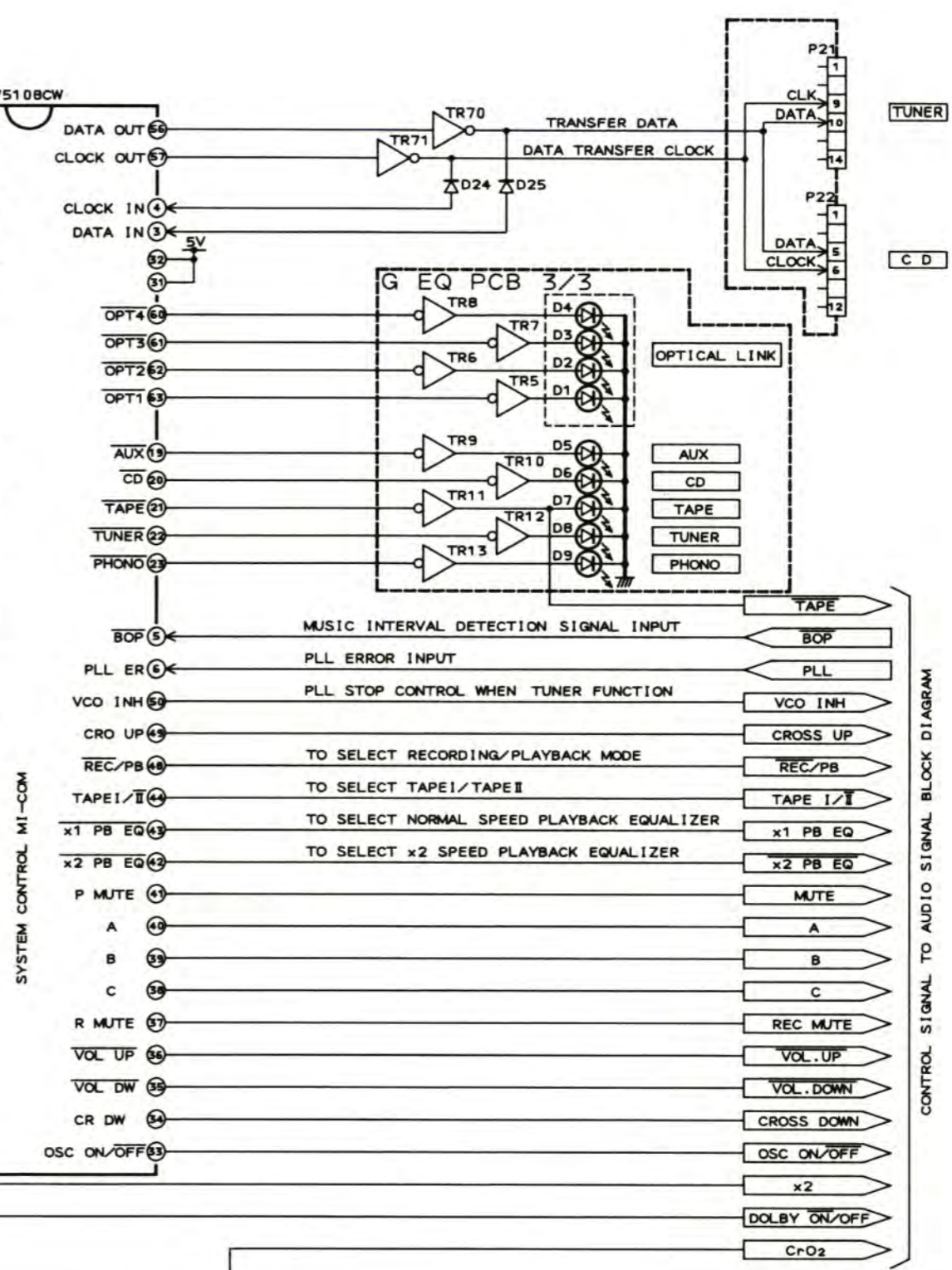
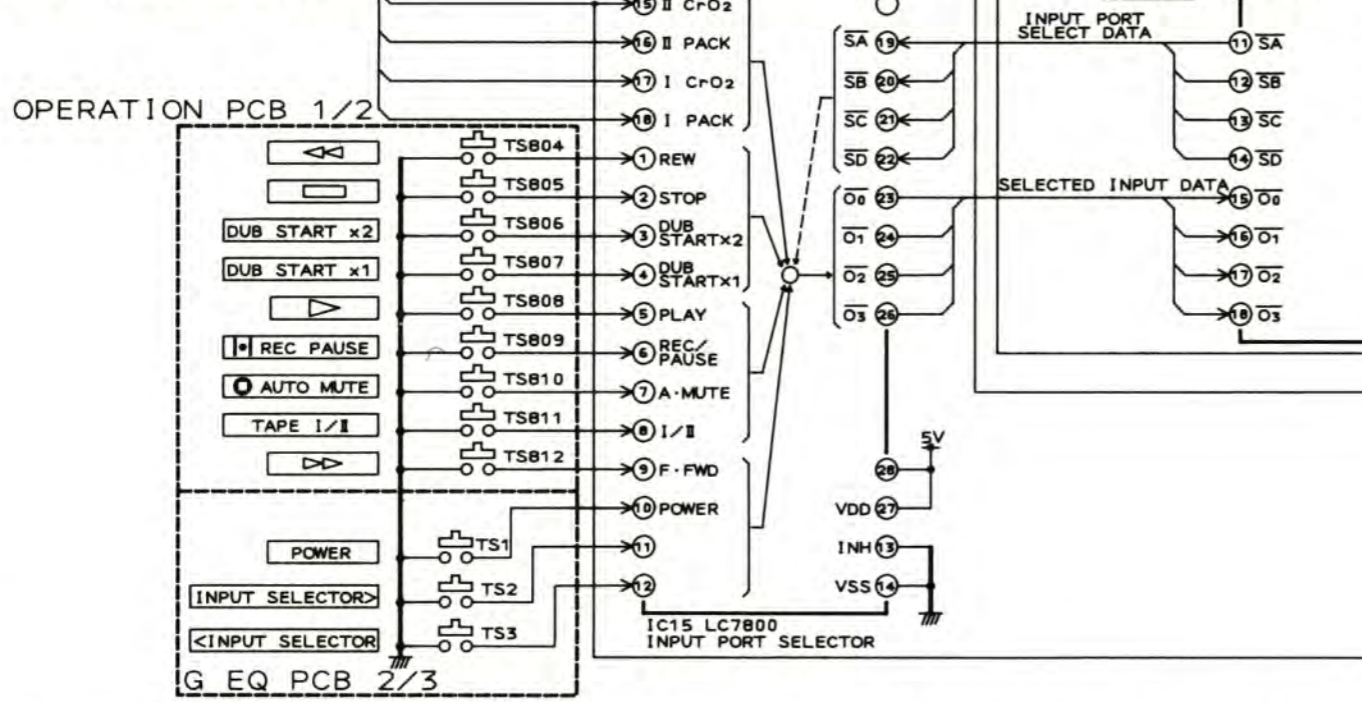
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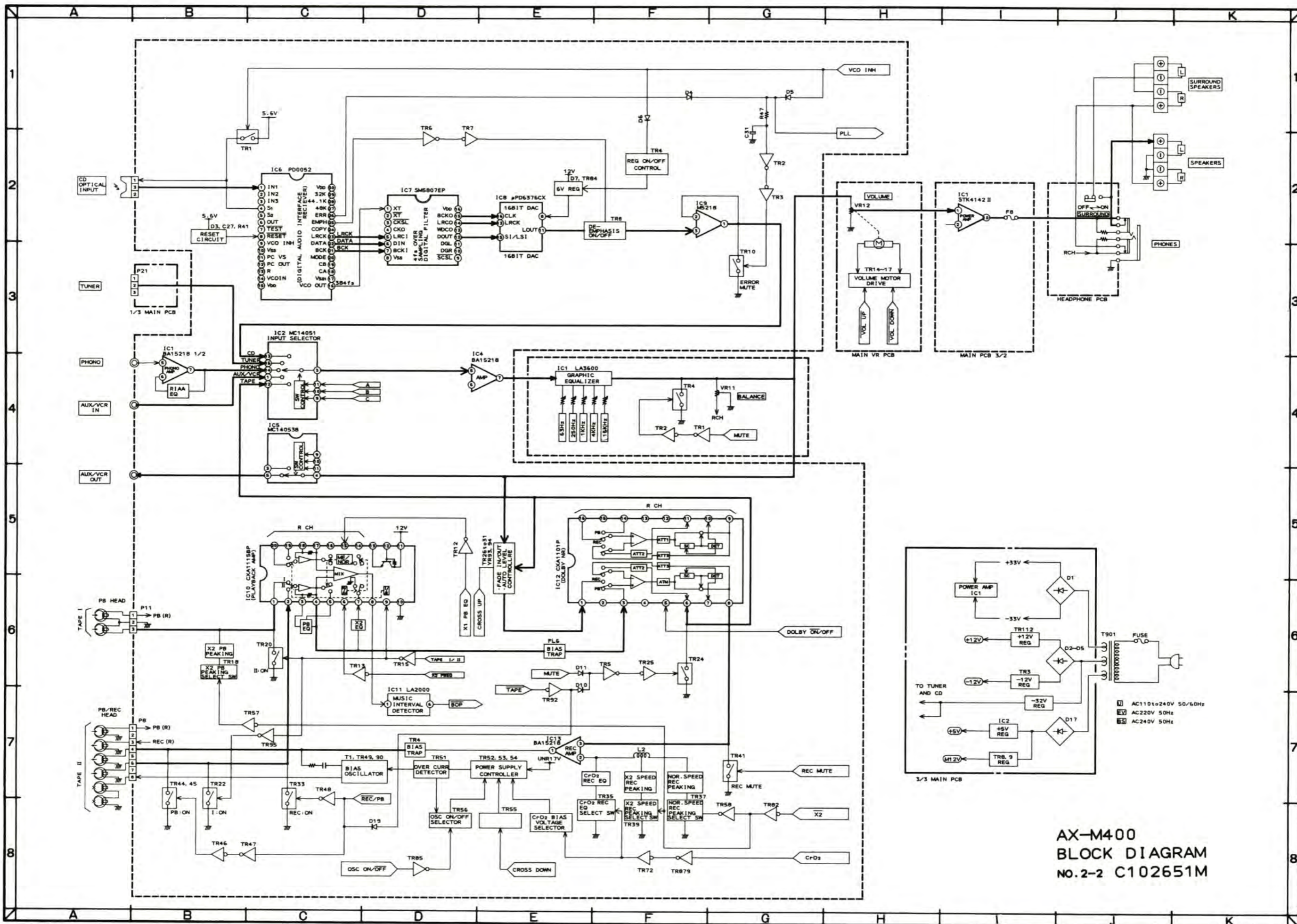
TAPE II MECHA. BLOCK



TAPE I MECHA. BLOCK

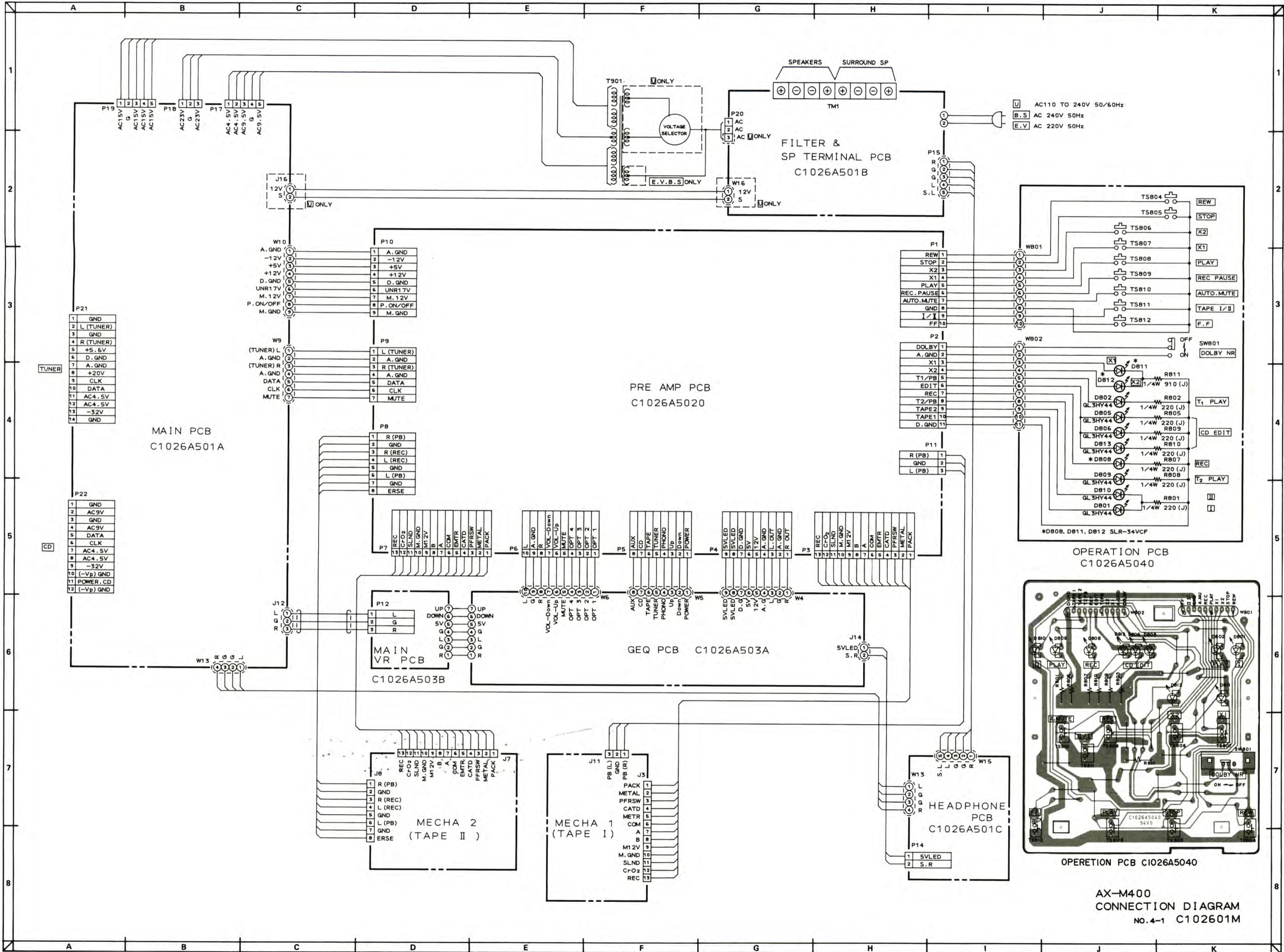


AX-M400
SYSTEM CONTROL
BLOCK DIAGRAM
NO. 2-1 C102652M



AX-M400
BLOCK DIAGRAM
No. 2-2 C102651M

- AC110 to 240V 50/60Hz
- ▣ AC220V 50Hz
- AC240V 50Hz



U AC110 TO 240V 50/60Hz
 B.S AC 240V 50Hz
 E.V AC 220V 50Hz

TUNER

CD

MAIN PCB
C1026A501A

PRE AMP PCB
C1026A5020

GEQ PCB
C1026A503A

MAIN
VR PCB
C1026A503B

MECHA 2
(TAPE II)

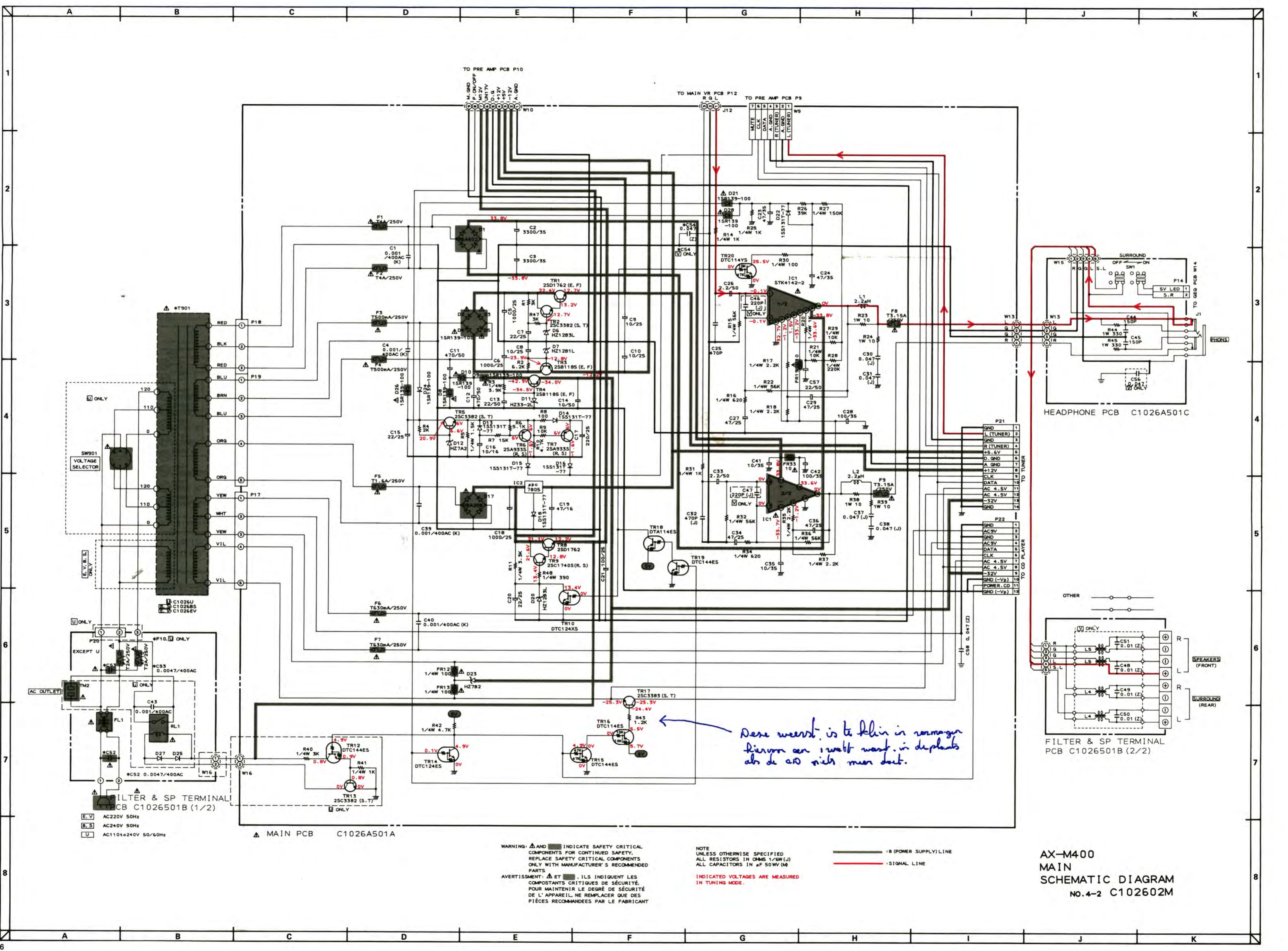
MECHA 1
(TAPE I)

HEADPHONE
PCB
C1026A501C

OPERATION PCB
C1026A5040

OPERATION PCB C1026A5040

AX-M400
 CONNECTION DIAGRAM
 NO.4-1 C102601M



WARNING: **Δ** AND **■** INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: **Δ** ET **■** ILS INDIQUENT LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

NOTE: UNLESS OTHERWISE SPECIFIED, ALL RESISTORS IN OHMS (Ω), ALL CAPACITORS IN μF 50V (M). INDICATED VOLTAGES ARE MEASURED IN TUNING MODE.

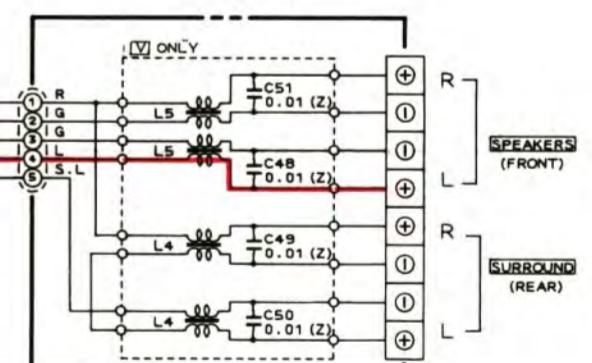
— (POWER SUPPLY) LINE
 — (SIGNAL) LINE

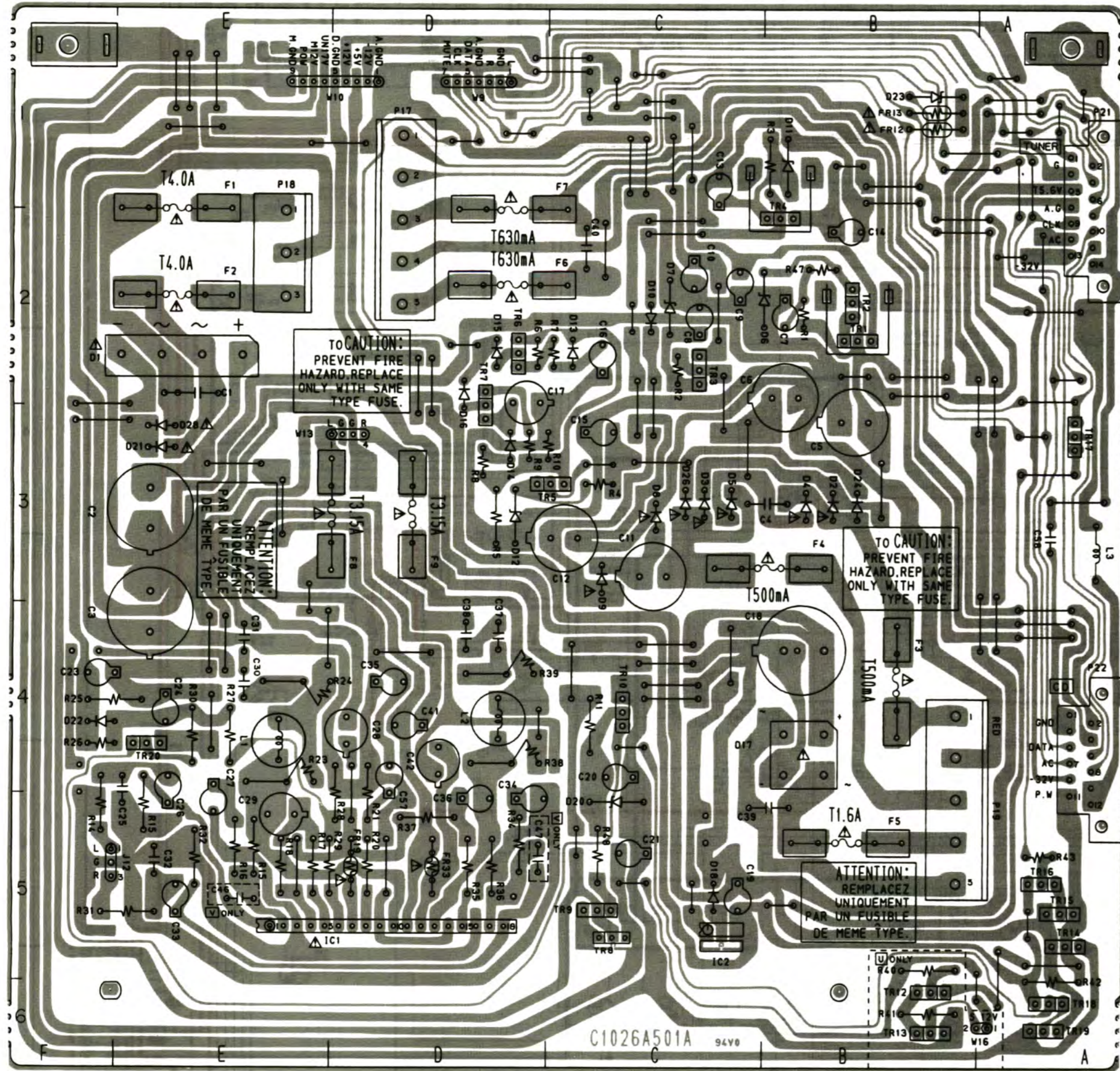
AX-M400
 MAIN
 SCHEMATIC DIAGRAM
 NO. 4-2 C102602M

Deze weerst. is te klein in normale filterom een 1 watt weerst. in plaats als de 0.1 niet meer doet.

P21	1	GND
	2	L (TUNER)
	3	GND
	4	R (TUNER)
	5	+5.6V
	6	A.GND
	7	+1.2V
	8	CLK
	9	DATA
	10	AC 4.5V
	11	AC 4.5V
	12	-3.2V
	13	GND
	14	GND

P22	1	GND
	2	AC9V
	3	GND
	4	AC9V
	5	DATA
	6	AC 4.5V
	7	AC 4.5V
	8	-3.2V
	9	POWER_CD
	10	GND (-Vp)
	11	GND (-Vp)

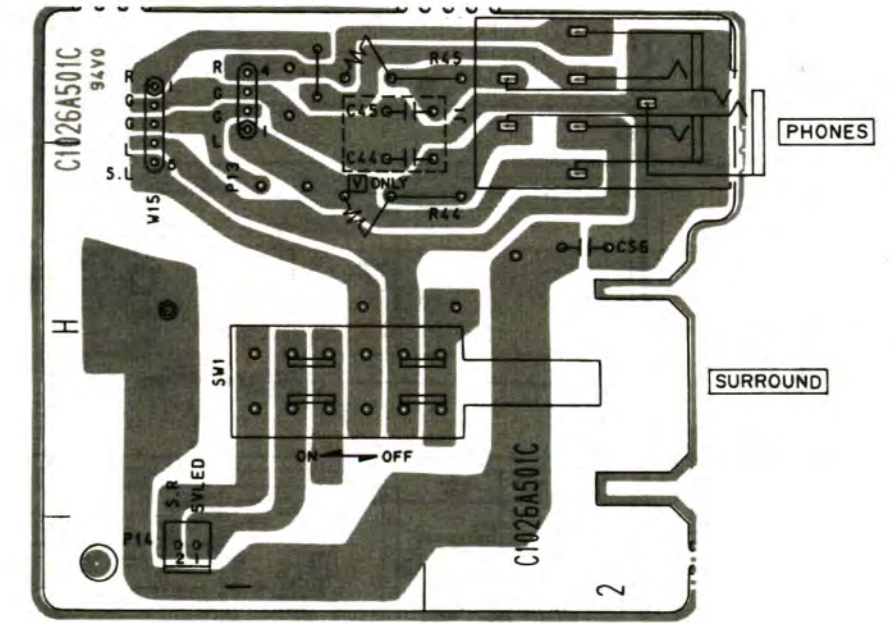




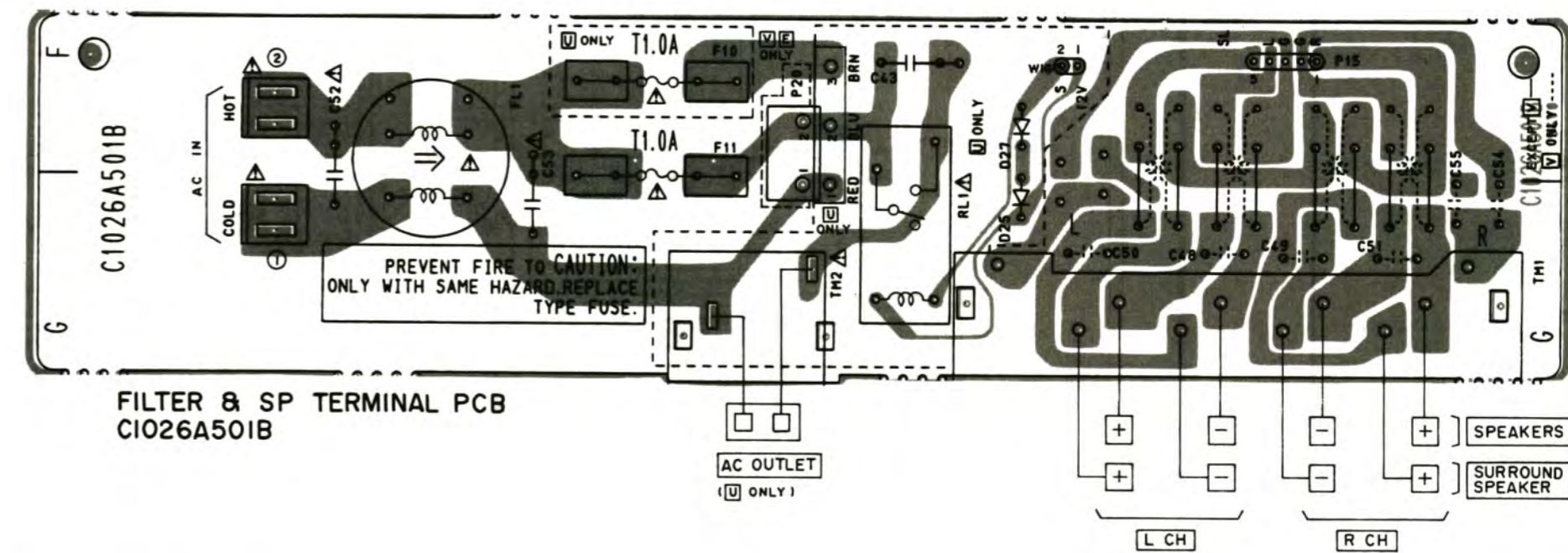
MAIN PCB C1026A501A

PRINCIPAL PARTS LOCATION

- | | | | |
|--------------|--|--------------|--|
| TRANSISTORS | | CONNECTORS | |
| TR1.....B2 | | J12.....F5 | |
| TR2.....B2 | | P17.....D1,2 | |
| TR3.....C2 | | P18.....E2 | |
| TR4.....B2 | | P19.....B5 | |
| TR5.....C,D3 | | P21.....A1,2 | |
| TR6.....D2,3 | | P22.....A5 | |
| TR7.....C5 | | W9.....D1 | |
| TR9.....C5 | | W10.....E1 | |
| TR10.....C4 | | W13.....D3 | |
| TR12.....B6 | | W16.....A6 | |
| TR13.....B6 | | | |
| TR14.....A5 | | | |
| TR15.....A5 | | | |
| TR16.....A5 | | | |
| TR17.....A3 | | | |
| TR18.....A6 | | | |
| TR19.....A6 | | | |
| TR20.....E4 | | | |

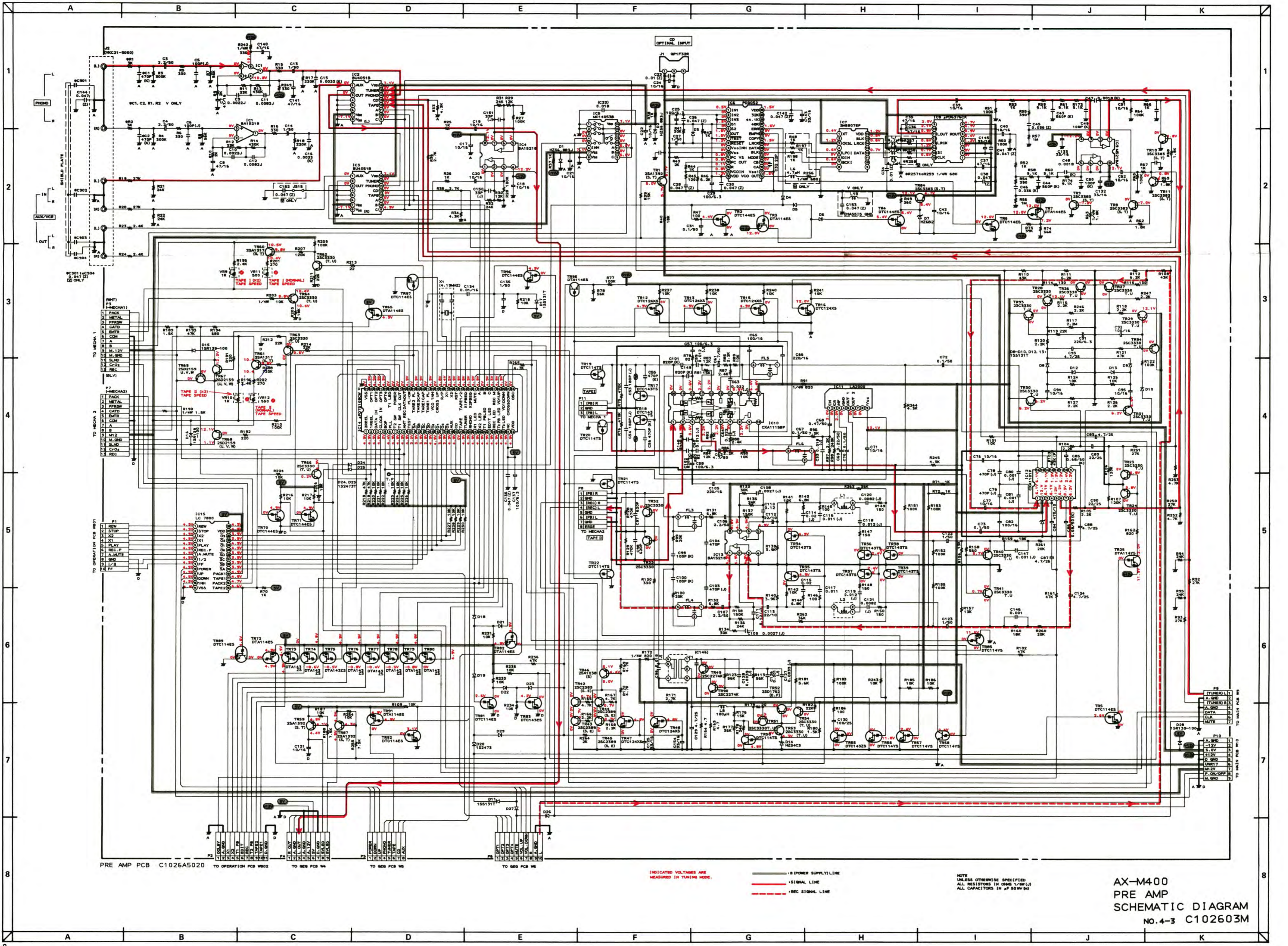


HEADPHONE PCB C1026A501C

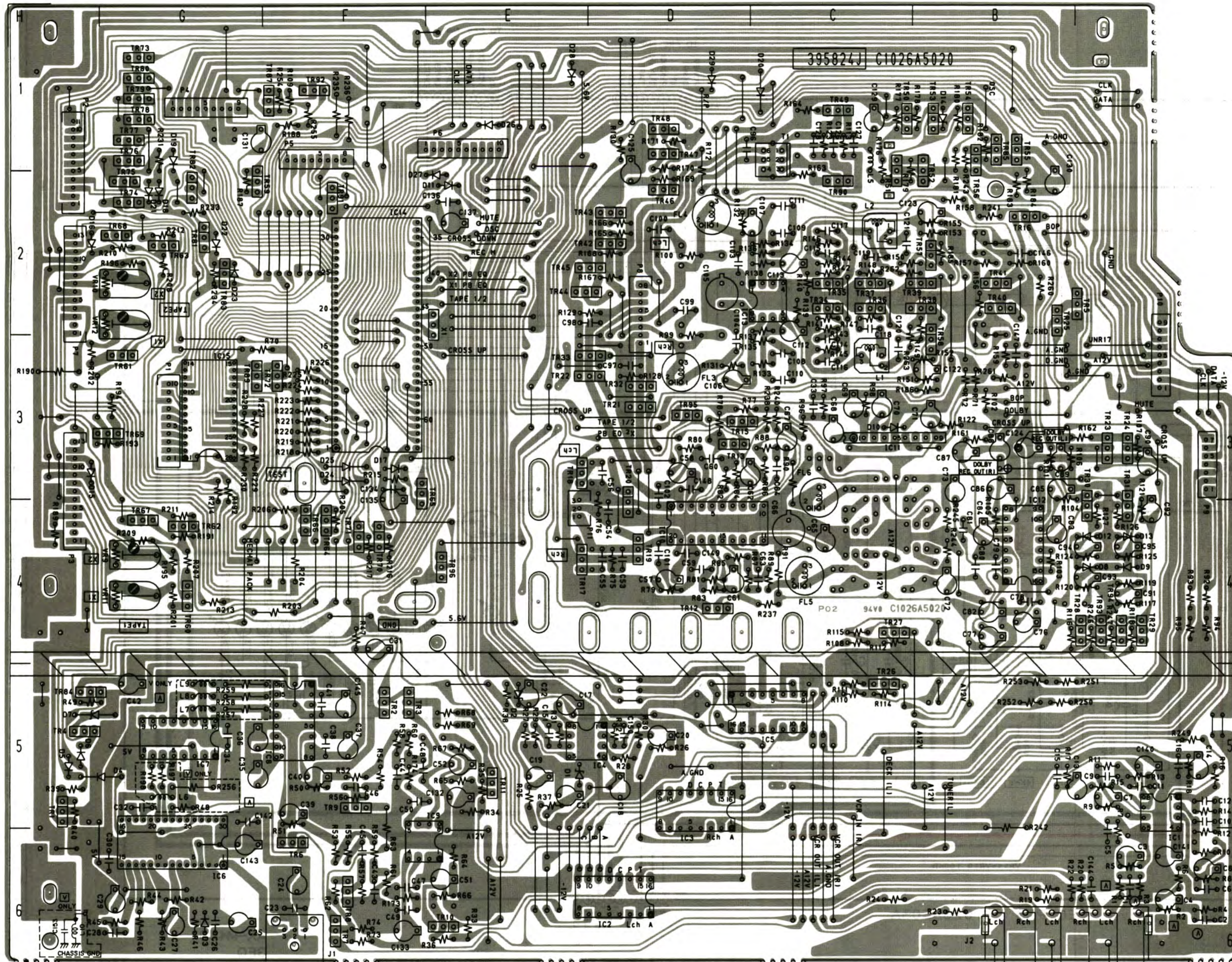


FILTER & SP TERMINAL PCB C1026A501B

WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT



AX-M400
PRE AMP
SCHEMATIC DIAGRAM
NO. 4-3 C102603M



PRINCIPAL PARTS LOCATION

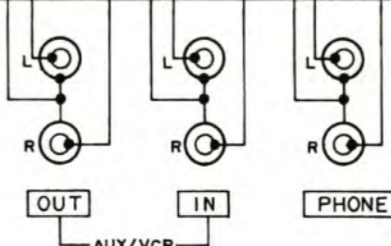
ICs		TRANSISTORS	
IC1.....A5	TR1.....H5	TR48.....D1	
IC2.....D6	TR2.....F5	TR49.....C1	
IC3.....D5	TR3.....F5	TR50.....C1	
IC4.....E5	TR4.....H5	TR51.....C1	
IC5.....C5	TR5.....A2	TR52.....B1	
IC6.....G6	TR6.....F6	TR53.....B1	
IC7.....G5	TR7.....F6	TR54.....B1	
IC8.....F5	TR8.....F6	TR55.....B1	
IC9.....F6	TR9.....F5	TR56.....B1	
IC10.....D4	TR10.....E6	TR57.....B2	
IC11.....C3	TR11.....E5	TR58.....B3	
IC12.....B4	TR12.....D4	TR59.....G2	
IC13.....C2	TR13.....D3	TR60.....G4	
IC14.....F2	TR15.....D3	TR61.....G3	
IC15.....G3	TR16.....B2	TR62.....G4	
	TR17.....E4	TR63.....G2	
	TR18.....E3	TR64.....F4	
	TR19.....D4	TR65.....F3	
	TR20.....D3	TR66.....F4	
	TR21.....D3	TR67.....G4	
	TR22.....E3	TR68.....G2	
	TR23.....A3	TR69.....G3	
	TR24.....A3	TR70.....F4	
	TR25.....B2	TR71.....F4	
	TR26.....C5	TR72.....F3	
	TR27.....C4	TR73.....G1	
	TR28.....A4	TR74.....G2	
	TR29.....A4	TR75.....G2	
	TR30.....A3	TR76.....G1	
	TR31.....A3	TR77.....G1	
	TR32.....D3	TR78.....G1	
	TR33.....E3	TR79.....G1	
	TR34.....C2	TR80.....G1	
	TR35.....C2	TR81.....G2	
	TR36.....C2	TR82.....G2	
	TR37.....C2	TR83.....G2	
	TR38.....B2	TR84.....H5	
	TR39.....B2	TR85.....B1	
	TR40.....B2	TR87.....F1	
	TR41.....B2	TR89.....G3	
	TR42.....D2	TR91.....F2	
	TR43.....D2	TR92.....F1	
	TR44.....E2	TR93.....A4	
	TR45.....E2	TR94.....A4	
	TR46.....D2	TR95.....D3	
	TR47.....D1	TR96.....E4	

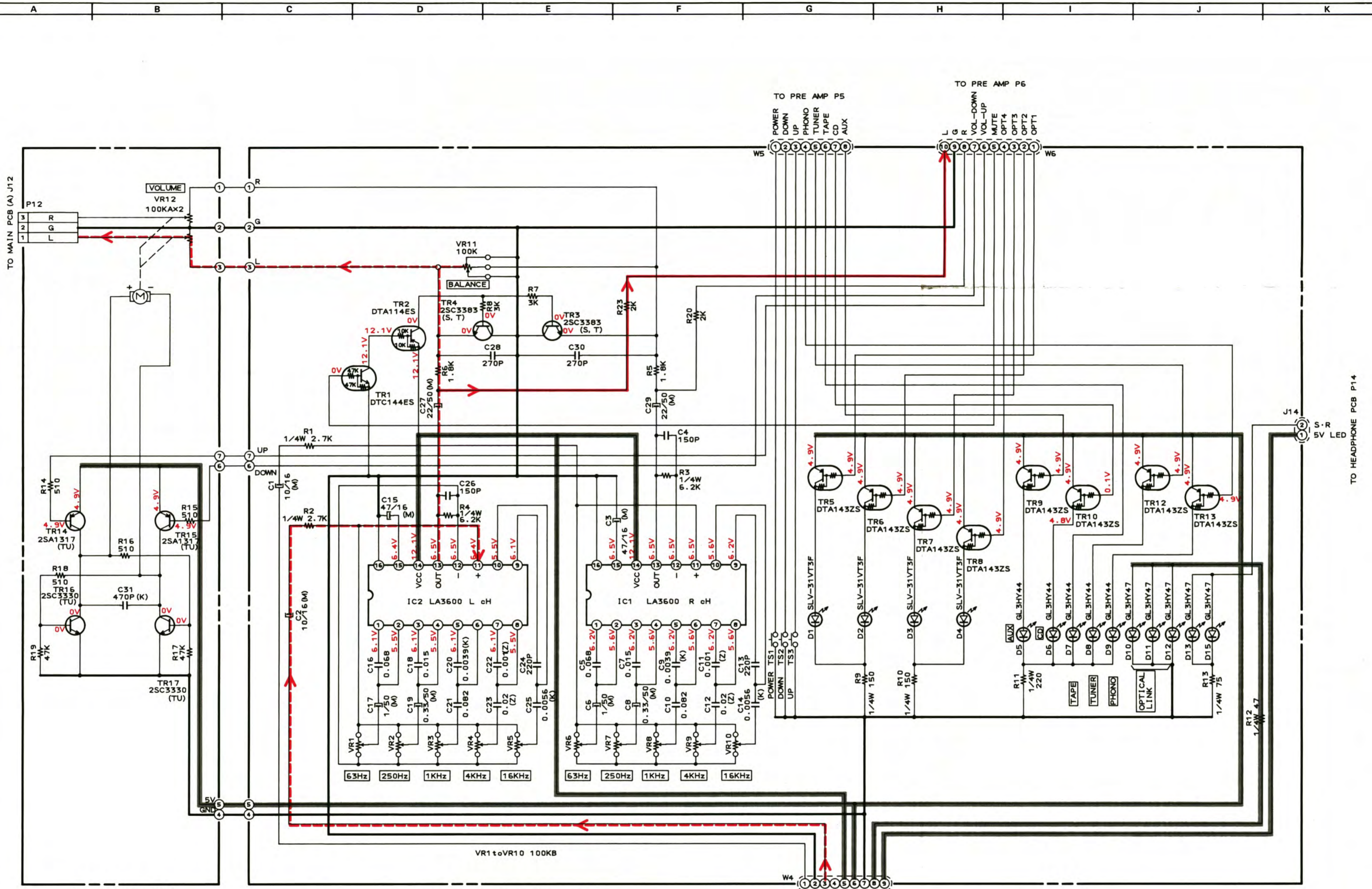
CONNECTORS

J1.....F6	TR18.....E3	TR64.....F4
J2.....B6	TR19.....D4	TR65.....F3
P1.....G3	TR20.....D3	TR66.....F4
P2.....H1	TR21.....D3	TR67.....G4
P3.....H3	TR22.....E3	TR68.....G2
P4.....G1	TR23.....A3	TR69.....G3
P5.....F1	TR24.....A3	TR70.....F4
P6.....E1	TR25.....B2	TR71.....F4
P7.....H2	TR26.....C5	TR72.....F3
P8.....D2	TR27.....C4	TR73.....G1
P9.....A3	TR28.....A4	TR74.....G2
P10.....A2	TR29.....A4	TR75.....G2
P11.....E3	TR30.....A3	TR76.....G1
	TR31.....A3	TR77.....G1
	TR32.....D3	TR78.....G1
	TR33.....E3	TR79.....G1
	TR34.....C2	TR80.....G1
	TR35.....C2	TR81.....G2
	TR36.....C2	TR82.....G2
	TR37.....C2	TR83.....G2
	TR38.....B2	TR84.....H5
	TR39.....B2	TR85.....B1
	TR40.....B2	TR87.....F1
	TR41.....B2	TR89.....G3
	TR42.....D2	TR91.....F2
	TR43.....D2	TR92.....F1
	TR44.....E2	TR93.....A4
	TR45.....E2	TR94.....A4
	TR46.....D2	TR95.....D3
	TR47.....D1	TR96.....E4

CD OPTICAL INPUT

PRE AMP PCB C1026A5020





MAIN VR PCB
C1026A503B

GEQ PCB C1026A503A

INDICATED VOLTAGES ARE
MEASURED IN TUNING MODE.

- :B (POWER SUPPLY) LINE
- : SIGNAL LINE
- - - : REC SIGNAL LINE

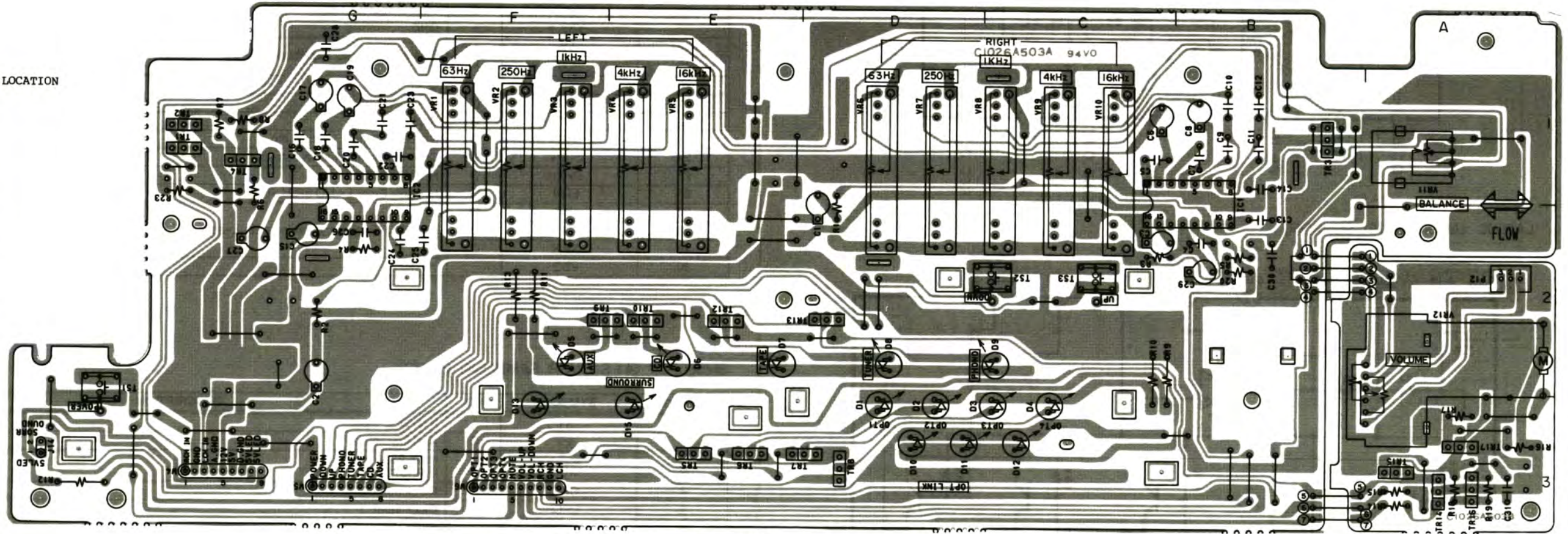
TO PRE AMP P4

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF 50 W (J)

AX-M400
GEQ
SCHEMATIC DIAGRAM
NO.4-4 C102604M

PRINCIPAL PARTS LOCATION

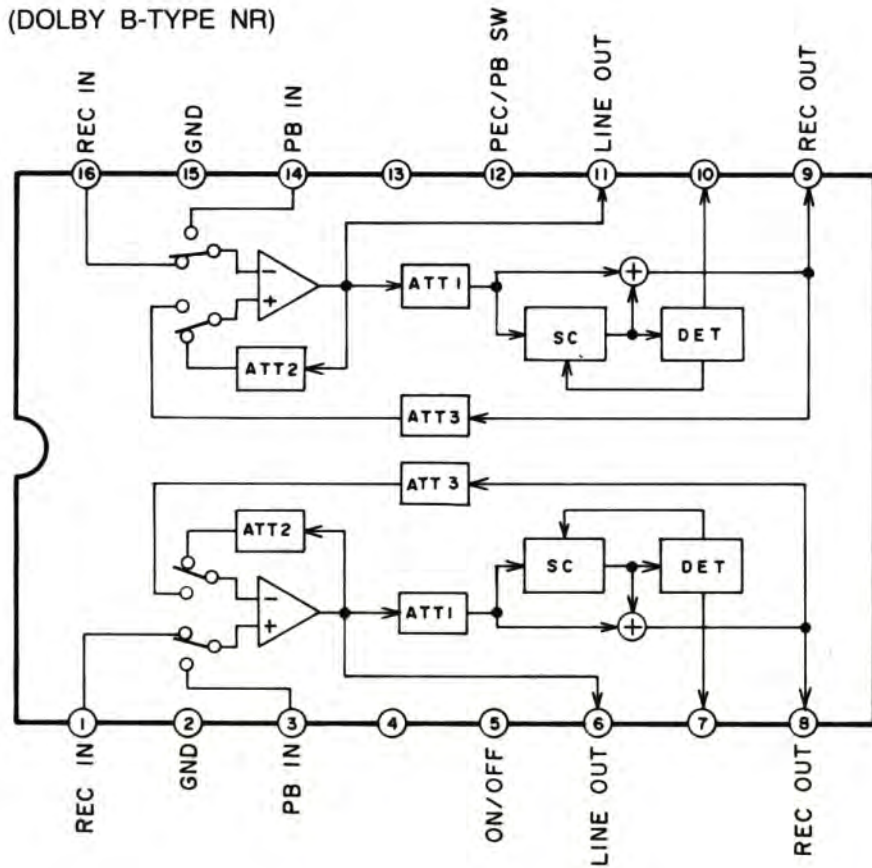
- ICS
- IC1.....B1
- IC2.....G2
- CONNECTORS
- J14.....H3
- W4.....H3
- W5.....G3
- W6.....F3
- TRANSISTORS
- TR1.....G1
- TR2.....G1
- TR3.....B1
- TR4.....G1
- TR5.....E3
- TR6.....E3
- TR7.....D3
- TR8.....D3
- TR9.....F2
- TR10.....E2
- TR12.....E2
- TR13.....D2
- TR14.....A3
- TR15.....A3
- TR16.....A3
- TR17.....A3



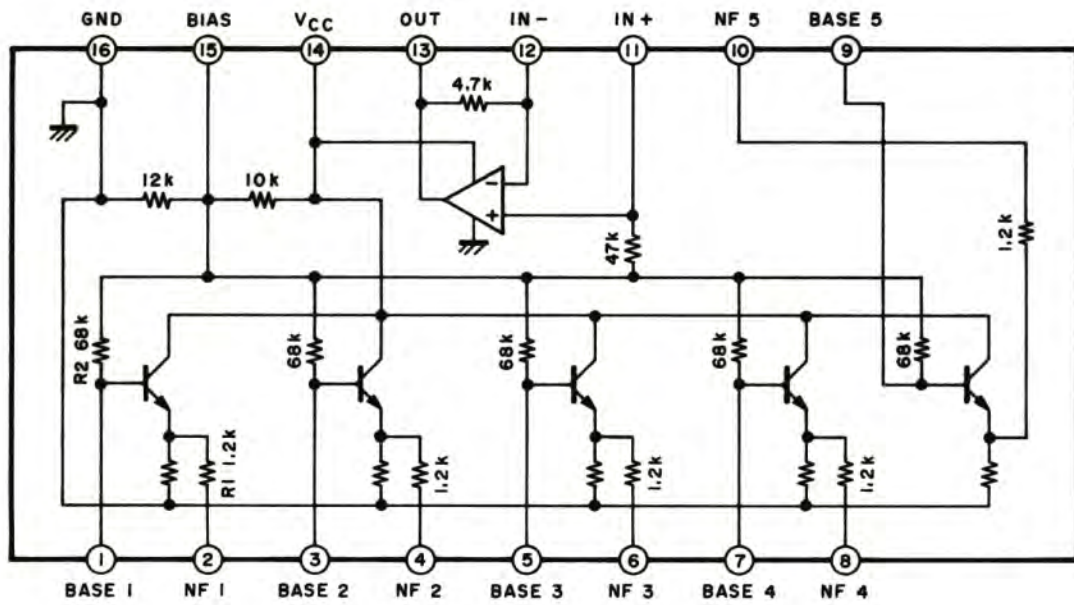
GEQ PCB C1026A503A

MAIN VR PCB C1026A503B

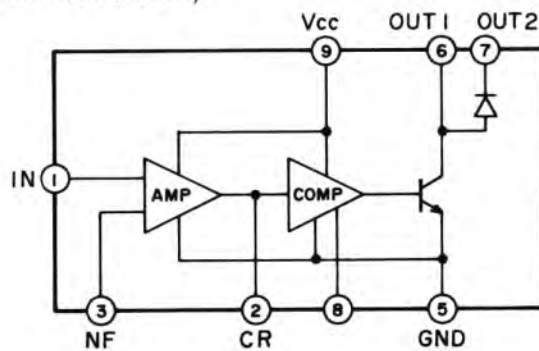
CAX1101P (DOLBY B-TYPE NR)



LA2000 (AUDIO LEVEL SENSOR)



LA3600 (5 BAND GRAPHIC EQUALIZER)

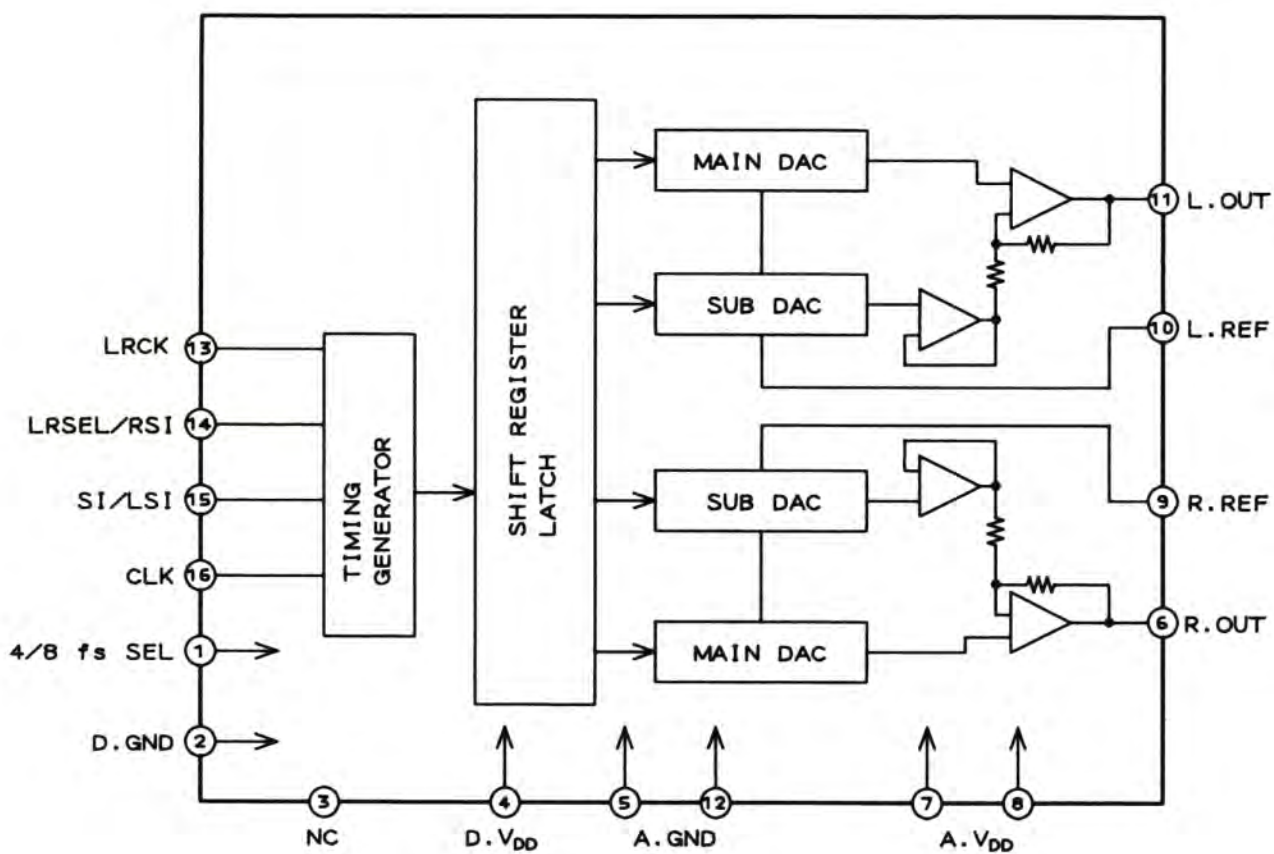


PD0052 (DIGITAL AUDIO INTERFACE RECEIVER)

PIN NO.	SYMBOL	I/O	DESCRIPTION
1	IN 1	I	Digital Audio Interface signal input.
2	IN 2	I	
3	IN 3	I	
4	S 1	I	Input select 1.
5	S 2	I	Input select 2.
6	OUT	O	Data output.
7	TEST	I	TEST MODE input.
8	RESET	I	Power "ON" Reset input.
9	VCOINH	I	VCO OSC Stop Control signal input.
10	VSS	-	GND
11	PCVS	I	External Resistor Connection Terminal for VCO.
12	PC OUT	O	Phase comparator output.
13	R	-	External Resistor Connection Terminal for VCO.
14	VCO IN	I	Control voltage input.
15	VDD 1	-	+B (+5 V)
16	VCO OUT	O	VCO Output (384 fs)
17	VSS 1	-	GND
18	CA	-	External Capacitor Connection Terminal for VCO.
19	CB	-	
20	MODE	-	GND
21	BCK	O	Bit clock output.
22	DATA	O	Data output.
23	LRCK	O	Data output. (H=L ch, L=R ch)
24	COPY	O	Copy inhibit information output.
25	EMPH	O	H: EMPHASIS
26	ERR	O	H: Parity Error, L= NO ERROR
27	48 K	O	Sampling Frequency data output. L=active
28	44.1 K	O	
29	32 K	O	
30	VDD	-	+B (+5 V)

SM5807EP (4 FS OVER SAMPLING FILTER)

PIN NO.	SYMBOL	I/O	DESCRIPTION
1	XT	I	X'tal OSC input.
2	\overline{XT}	O	X'tal OSC output.
3	\overline{CKSL}	I	H: 16.9344 MHz L: 8.4672 MHz
4	CKO	O	Clock output.
5	LRCI	I	Clock input.
6	D IN	I	Serial data input.
7	B CKI	I	Bit clock input.
8	VSS	-	GND
9	\overline{SCSL}	I	H: 192 fs L: 196 fs
10	DGR	O	R ch signal output.
11	DGL	O	L ch signal output.
12	D OUT	O	Serial data output.
13	WDCO	O	Control clock output. (352.8 kHz)
14	LRCO	O	Control clock output. (176.4 kHz)
15	BCKO	O	Bit clock output.
16	VDD	-	+B (+5 V)



μPD75108CN (SYSTEM CONTROL MI-CON)

PIN NO.	PORT NAME	I/O	ACTIVE	DESCRIPTION
1	SLIT-2	IN	L	TAPE 2 Reel pulse input.
2	SLIT-1	IN	L	TAPE 1 Reel pulse input.
3	XBUSI-D	IN	L	DATA in put (TUNER/CD).
4	XBUSI-C	IN	L	CLOCK in put (TUNER/CD).
5	BOP	IN	L	Sound detection input. L: No sound
6	PLL-ER	IN	H	PLL Error input. H: Error
7	PLY SW2	IN	L	TAPE 2 Play switch input. L: Play. FF. Rew.
8	PLY SW1	IN	L	TAPE 1 Play switch input. L: Play. FF. Rew.
9	ARECSW	IN	L	TAPE 2 Fwd anti-rec switch input.
10	TEST-S	IN	L	Test mode selection terminal.
11	XEXPO-3	OUT	L	Select output A for LC7800 input expander.
12	XEXPO-2	OUT	L	Select output B for LC7800 input expander.
13	XEXPO-1	OUT	L	Select output C for LC7800 input expander.
14	XEXPO-0	OUT	L	Select output D for LC7800 input expander.
15	XEXPI-3	IN	L	Data input 0 for LC7800 input expander.
16	XEXPI-2	IN	L	Data input 1 for LC7800 input expander.
17	XEXPI-1	IN	L	Data input 2 for LC7800 input expander.
18	XEXPI-0	IN	L	Data input 3 for LC7800 input expander.
19	FUNC-LA	OUT	L	Output for LED AUX indicator.
20	FUNC-LC	OUT	L	Output for LED CD indicator.
21	FUNC-LTP	OUT	L	Output for LED TAPE indicator.
22	FUNC-LTU	OUT	L	Output for LED TUNER indicator.
23	FUNC-LP	OUT	L	Output for LED PHONO indicator.
24	DUBX1-L	OUT	L	Output for LED X1 indicator.
25	DUBX2-L	OUT	L	Output for LED X2 indicator.
26	PLAY1-L	OUT	L	Output for LED PLAY indicator.
27	EDIT-L	OUT	L	Output for LED EDIT indicator.
28	REC-L	OUT	L	Output for LED REC indicator.
29	PLAY2-L	OUT	L	Output for LED PLAY indicator.
30	TAPE2-L	OUT	L	Output for TAPE 2 indicator.
31	NC			
32	VDD			+5 V
33	OSC	OUT	H	Bias OSC control. H: OSC ON.
34	CRD-DW	OUT	H	Cross down.
35	VOL-DW	OUT	L	To move main volume down.
36	VOL-UP	OUT	L	To move main volume up.
37	RMUT	OUT	H	TAPE 2 Rec mute.
38	FUNC-C	OUT	H	Select output C for function switching by annalog switch.
39	FUNC-B	OUT	H	Select output B for function switching by annalog switch.
40	FUNC-A	OUT	H	Select output A for function switching by annalog switch.
41	PMUT	OUT	H	For muting amp output. H: mute on
42	X2 PB70	OUT	L	For switching playback EQ. L: X2 speed (70 μs)
43	X1 PB70	OUT	L	For switching playback EQ. L: Normal speed (70 μs) X2 speed (120 μs)
44	PB 12	OUT		For switching playback between TAPE 1/2. H: TAPE 1 Playback
45	RESET	IN	L	Reset input.
46	X.Tal			X'tal OSC
47	X.Tal			X'tal OSC
48	RPB	OUT	L	For switching between REC and PB (TAPE 2).
49	CRO-UP	OUT	H	Cross up.
50	VCOINH	OUT	H	To stop digital I/O PLL when tuner is selected. H: STOP
51	PLNG-1	OUT	H	TAPE 1 Plunger output.
52	CAP-1	OUT	L	For switching capstain speed (TAPE 2). L: X2 speed
53	CAP-2	OUT	L	For switching capstain speed (TAPE 1). L: X2 speed
54	PLNG-2	OUT	L	Plunger output (TAPE 2).
55	PLNG-1	OUT	L	Plunger output (TAPE 1).
56	XBUSO-D	OUT	H	DATA output (TUNER/CD).
57	XBUSO-C	OUT	H	CLOCK output (TUNER/CD).
58	STB	OUT		To turn power off for unecessary parts during standby. L: Power on. H: Power standby.
59	TAPE1-L	OUT	L	Output for LED TAPE 1 indicator.
60	OPT-L4	OUT	L	Output for LED OPTICAL link 1 indicator.
61	OPT-L3	OUT	L	Output for LED OPTICAL link 2 indicator.
62	OPT-L2	OUT	L	Output for LED OPTICAL link 3 indicator.
63	OPT-L1	OUT	L	Output for LED OPTICAL link 4 indicator.
64	Vss			GND