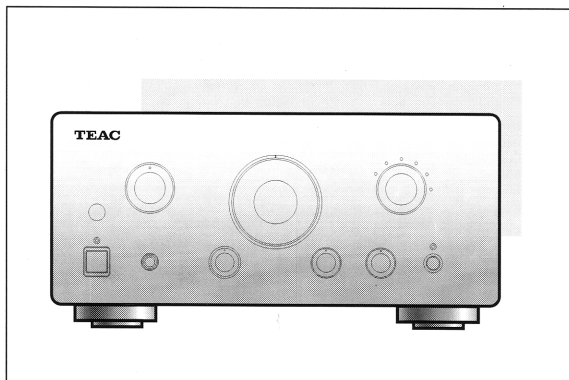


# TEAC

D00337700A




## SERVICE MANUAL

# A-H500

## Integrated Stereo Amplifier

### NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or no parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
-  Parts marked with this sign are safety critical components. They must be replaced with identical components- refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.  
[DM]: JAPAN [E]: EUROPE

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## Specifications

Power output	: 50W + 50W (80 $\Omega$ , 1KHz, 0.1%)	Frequency response	: 5Hz to 80KHz
Total harmonic distortion	: 0.03% (45W, 1KHz, 8 $\Omega$ )	Tone control	
S/N Ratio (Input Short)		Bass	: $\pm 10$ dB (100Hz)
Phono	: 67dB (IHF-A)	Treble	: $\pm 10$ dB (10KHz)
CD, Tuner, Aux, Tape	: 95dB (IHF-A)	Required speaker impedance	
CD direct	: 100dB (IHF-A)		: 4 $\Omega$ to 6 $\Omega$
Input Sensitivity/ Impedance		Power consumption	: 120W [DM]
Phono(MM)	: 2.8mV/10K $\Omega$		: 360W [EUR]
CD, Tuner, Aux, Tape	: 180mV/10K $\Omega$	Power requiremnts	: AC 100V, 50Hz [DM]
Maximun Input level			: AC 230V, 50Hz [EUR]
Phono	: 130mV	Dimensions (W $\times$ H $\times$ D)	: 285 $\times$ 131 $\times$ 319mm
CD, Tuner, Aux, Tape	: 9V	Weight(net)	: 7Kg
Channel Separation(Input Short)	: 65dB (1KHz, 1W, D.B.F)	<b>Standard accessories</b>	
Residual noise	: 0.5mV	Remote control unit	: 1
		Operator's manual	: 1

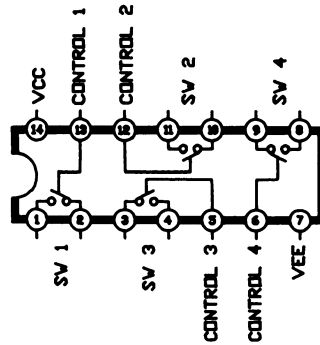
\* Improvements may result in specification or feature changes without notice.

# IC FUNCTION (MI-COM BVIANAM 1187A)

Pin No.	PIN NAME	I/O	DESCRIPTION
1	FUNC MUTE	O	Function, Mute ON/OFF Output
2	-20dB MUTE	O	-20dB Mute ON/OFF Output
3	POWER MUTE	O	Power Mute Output
4	SOURCE REC, OUT	O	Source recoding Output
5	OPTION	I	Option port "HIGH" LEVEL
6	OPTION	I	
7	PROTECT IN	I	Protect Input
8	STBY	O	Stand by LED ON/OFF Output
9	POWER ON/OFF	O	Power ON/OFF Output
10	AUX	O	Function LED ON/OFF Output
11	PHONO	O	Function LED ON/OFF Output
12	N/C		Non connection
13	TUNER		
14	CD	O	Function LED ON/OFF Output
15	TAPE 1		
16	TAPE 2/MD		
17	Vss	I	GROUND
18, 19	N/C	I	Non connection
20	RESET	I	Divice reset pluse input
21	XL 1	O	Crystal element connection terminal
22	XL 2	I	
23	TAPE 2 → 1	O	TAPE1,2 Recording Output
24	TAPE 2 → 1		
25, 26	KEY OUT	O	Key mqtrix singal IN/OUT PORT
27, 28	KEY IN	I	
29	TAPE2 REC IN	I	TAPE2,1 Recording Input
30	TAPE1 REC IN	I	
31	SOURCE REC, OUT	O	Source recoding Output
32, 34	N/C		Non connection
33	FUNC DOWN	I	Function UP/DOWN Input
35	FUNC UP	I	
36	BUS IN	I	System control simgal Input
37	REMOTE IN	I	Remote control simgal Input
38	N/C		Non connection
39	VDD	I	+5V
40	BUS OUT	O	System control singal Output
41	N/C		Non connection
42	VR UP	O	Volum UP/DOWN Output
43	VR DOWN	O	
44	CD DIRECT	O	CD Direct led ON/OFF Output

## IC BLOCK DIAGRAM

LC4966BH



TO-92L



1. Emitter  
2. Collector  
3. Base

KSA1175Y  
KSD1021Y  
KSR1206  
KSR1210

TO-92



1. Emitter  
2. Collector  
3. Base

KTC2878BT  
2SA1268GR  
2SAC3200GR  
KTA1266Y

TO-92



1. Drain  
2. Gate  
3. Source

KTK117Y

TO-92L



1. Emitter  
2. Collector  
3. Base

KSA916Y  
KSC2316Y

TO-126



1. Emitter  
2. Collector  
3. Base

2SA1209S  
2SC2911S

TO-220



1. Base  
2. Collector  
3. Emitter

2SC4883A  
2SD1585L  
2SA1859A  
KSD288Y

TO-220



1. INPUT  
2. GND  
3. OUTPUT

MC7812C

TO-3P

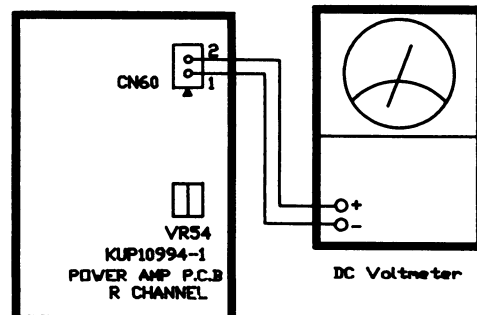
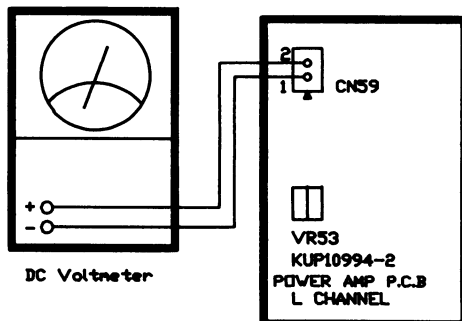


1. Base  
2. Collector  
3. Emitter

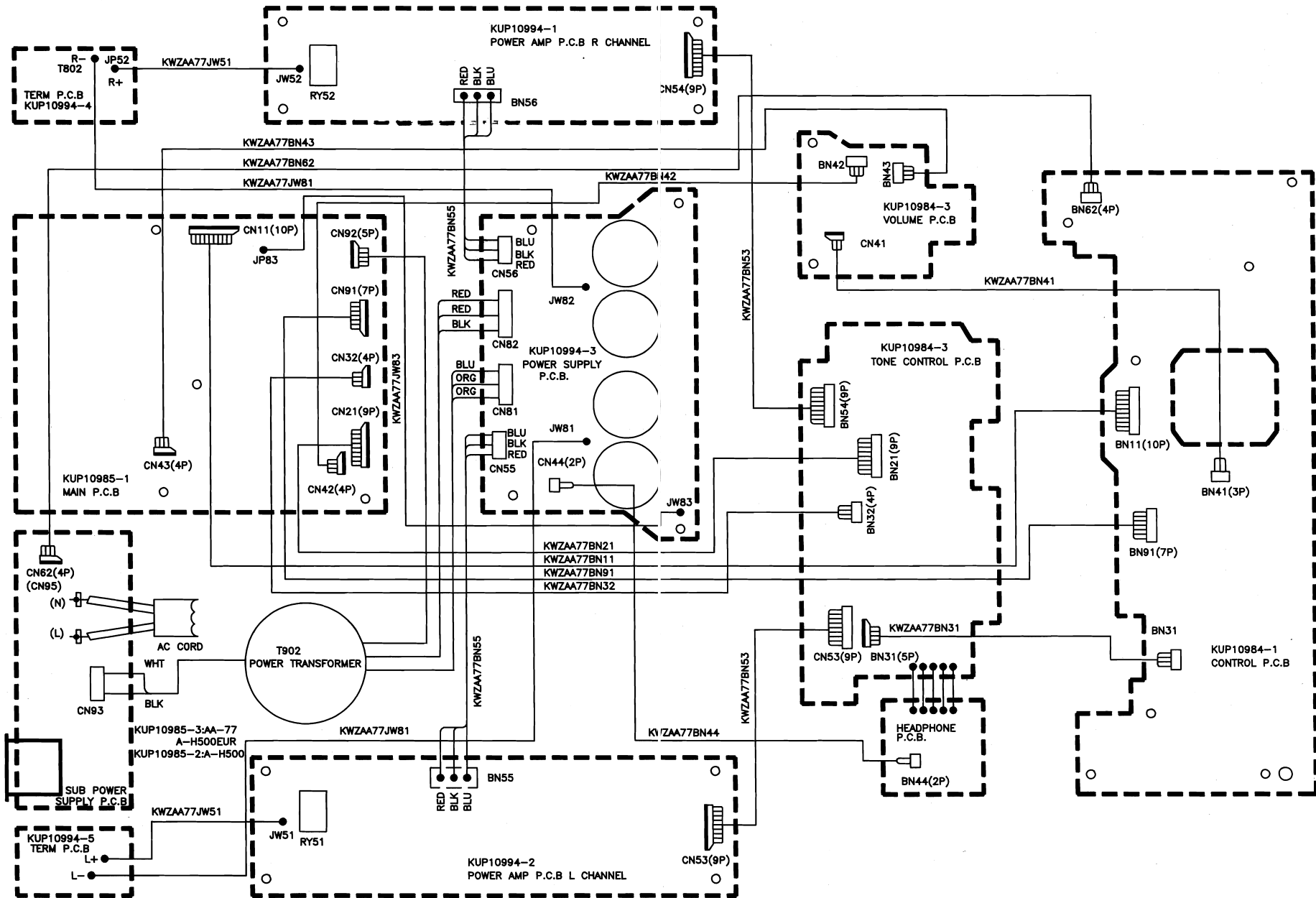
2SD7180  
2SB6880

## BIAS CURRENT ADJUSTMENT

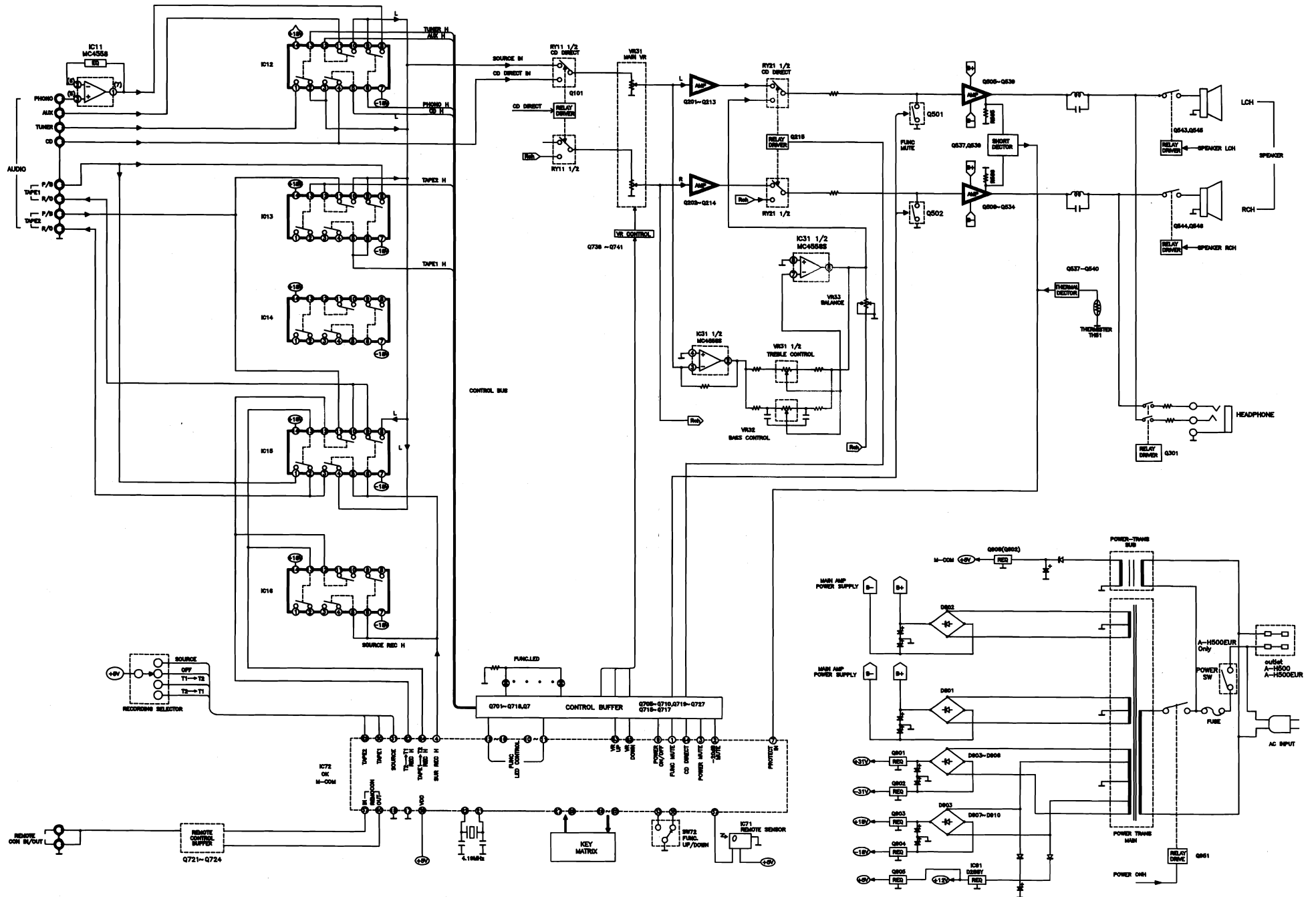
1. Test equipment connection is shown in figure.
2. Place unit volume is minimum position.
3. Adjust VR53("L"CH), VR54("R"CH) so that the DC Voltage is 11mV.



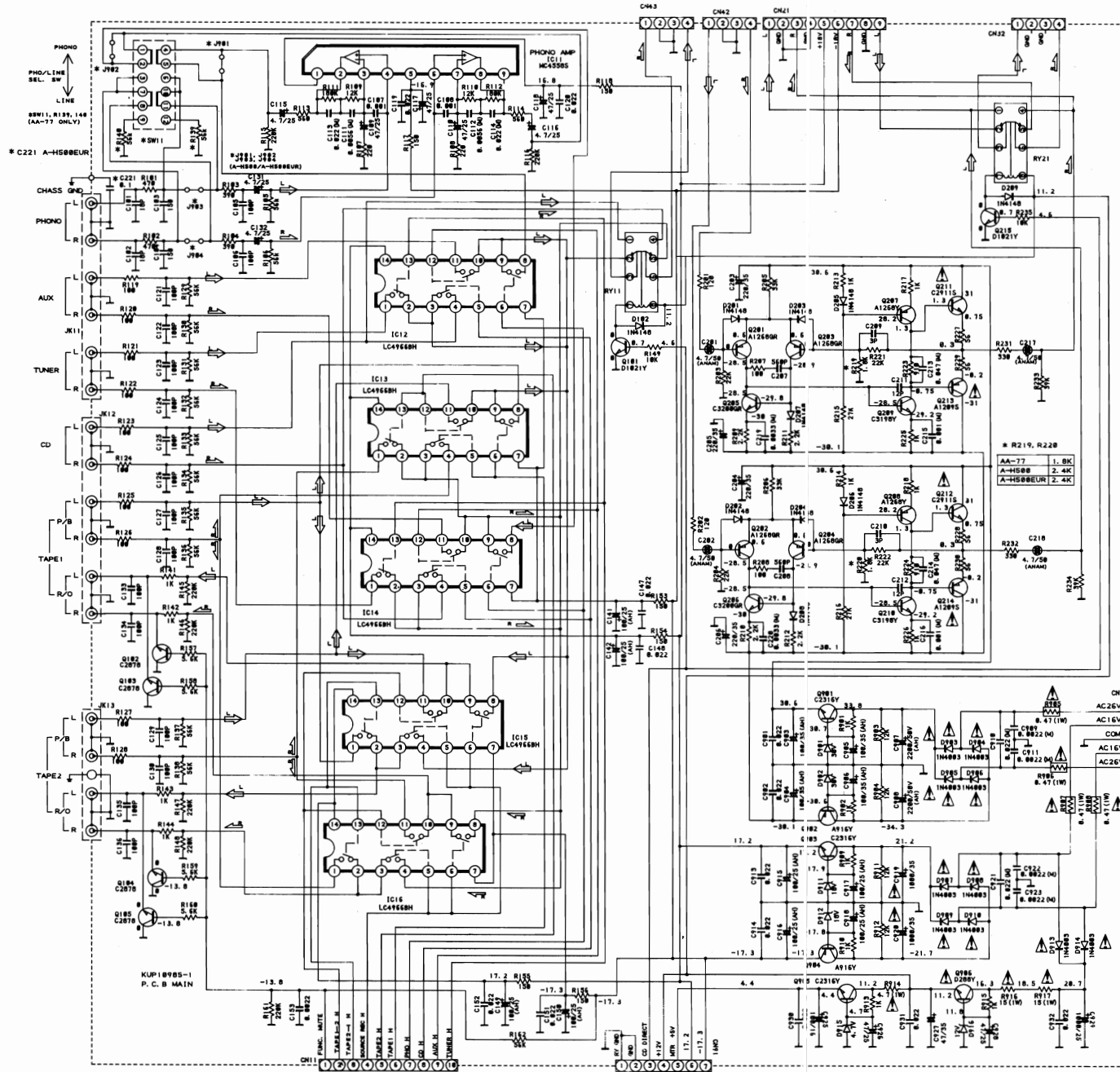
# WIRING DIAGRAM



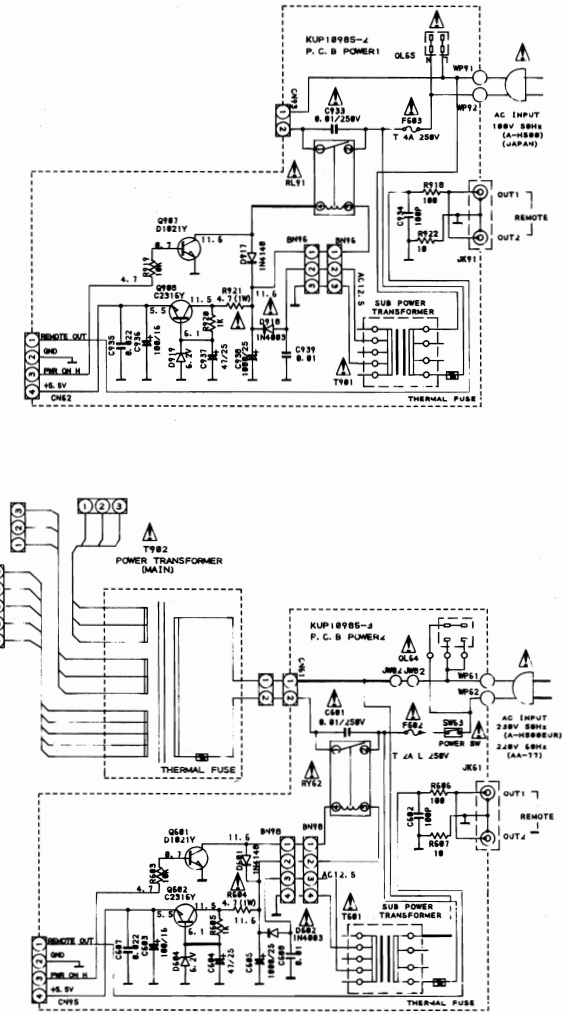
# BLOCK DIAGRAM

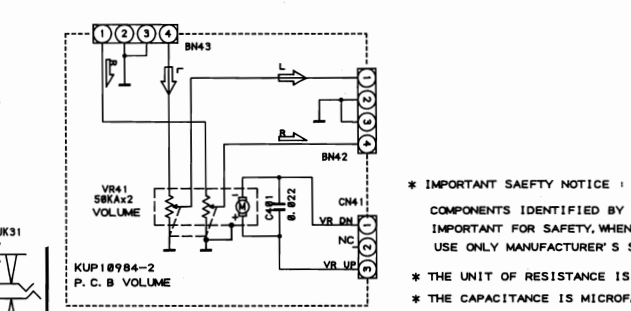
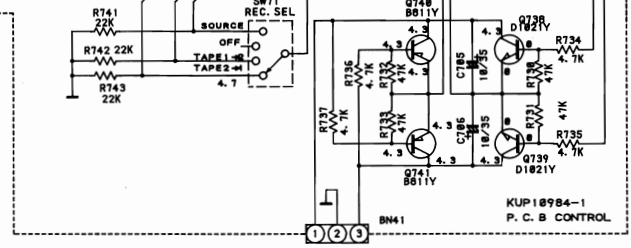
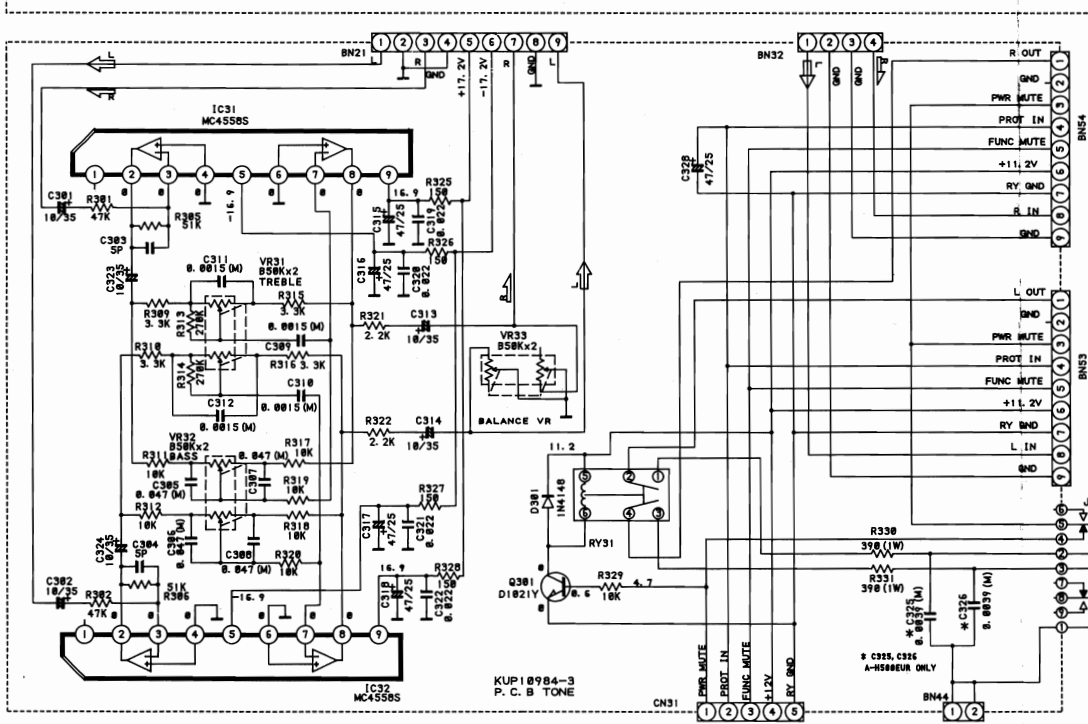
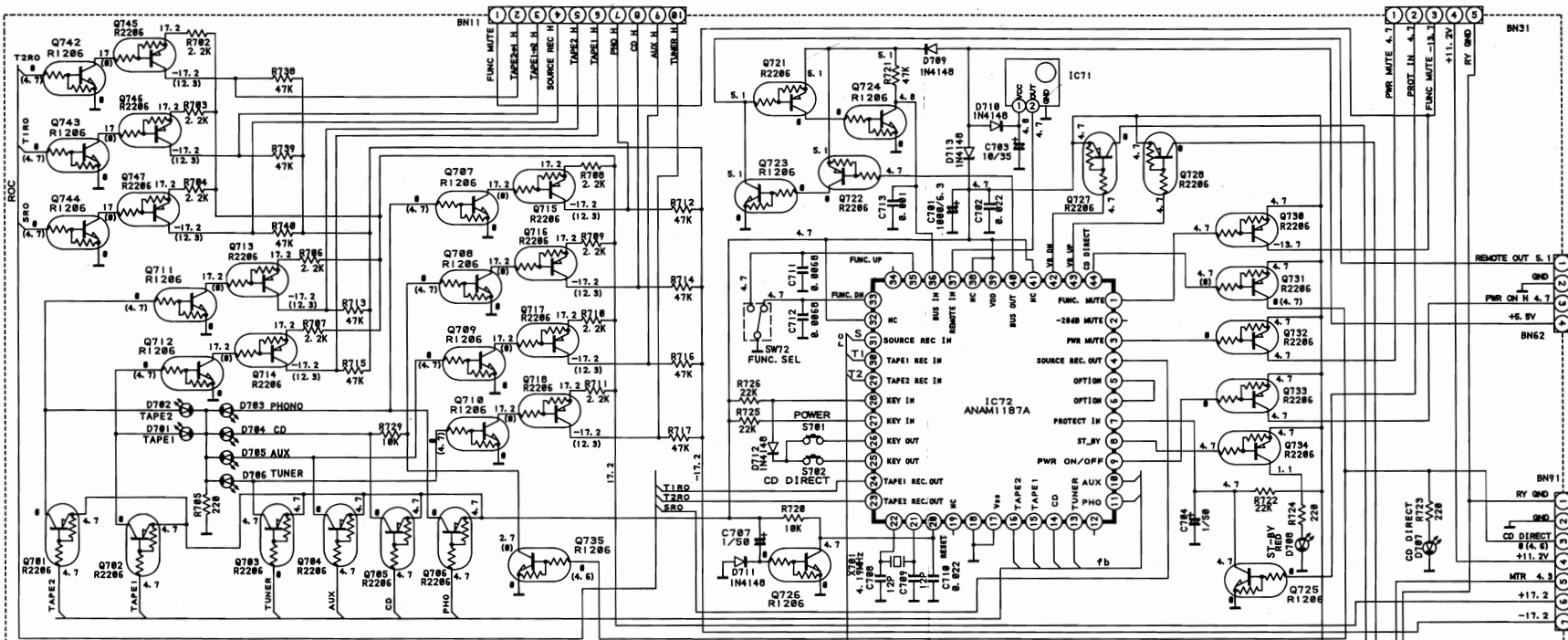


# SCHEMATIC DIAGRAM



- \* IMPORTANT SAFETY NOTICE \***
- \* COMPONENTS IDENTIFIED BY  $\Delta$  MARK HAVE SPECIAL CHARACTERISTICS. IMPORTANT FOR SAFETY, WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PART.
  - \* THE UNIT OF RESISTANCE IS OHM, K=1000 OHM, M=1000 KOHM.
  - \* THE CAPACITANCE IS MICROFARAD P=1000 FARAD.
  - \* THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.
  - \* ALL VOLTAGE ARE MEASURED WITH GROUND. DC VALUES WITH NO SIGNAL. AC RMS.

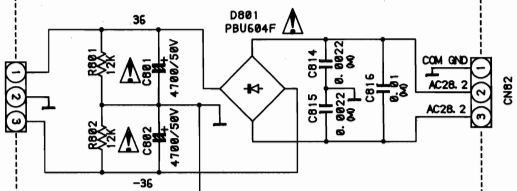
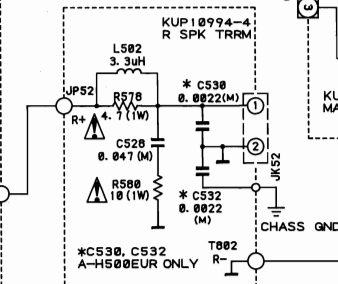
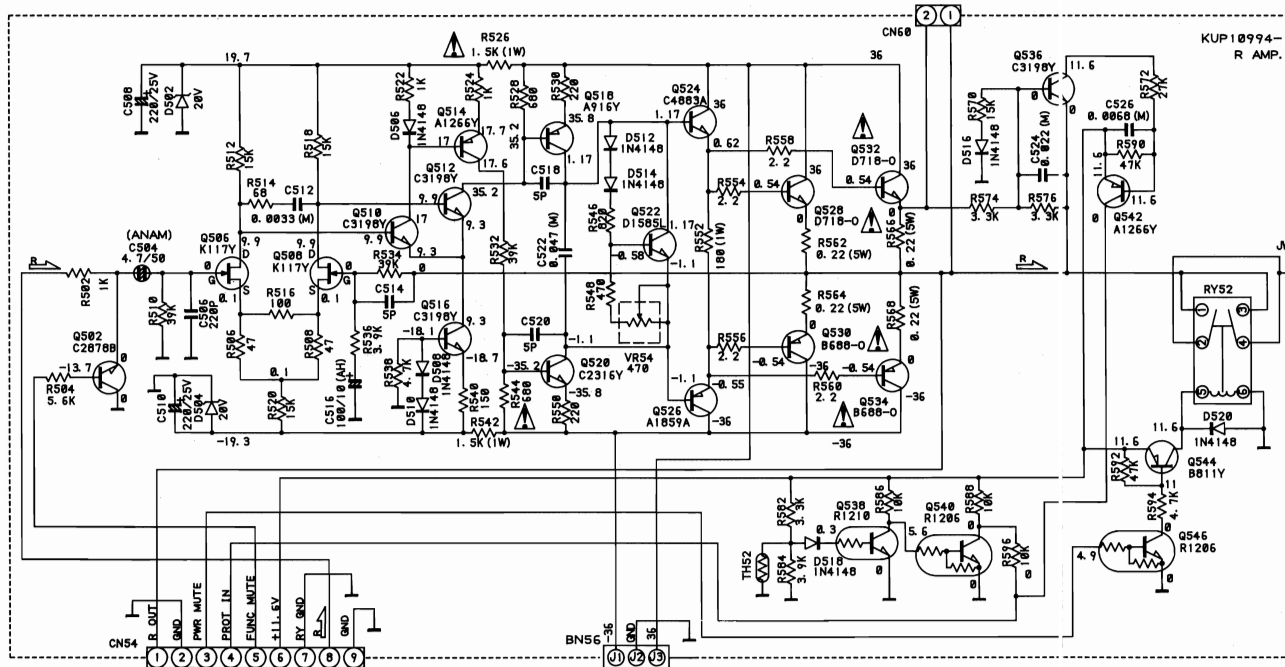
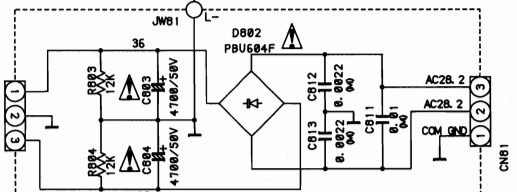
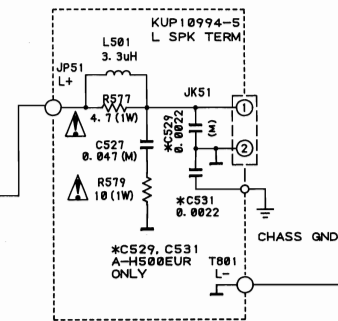
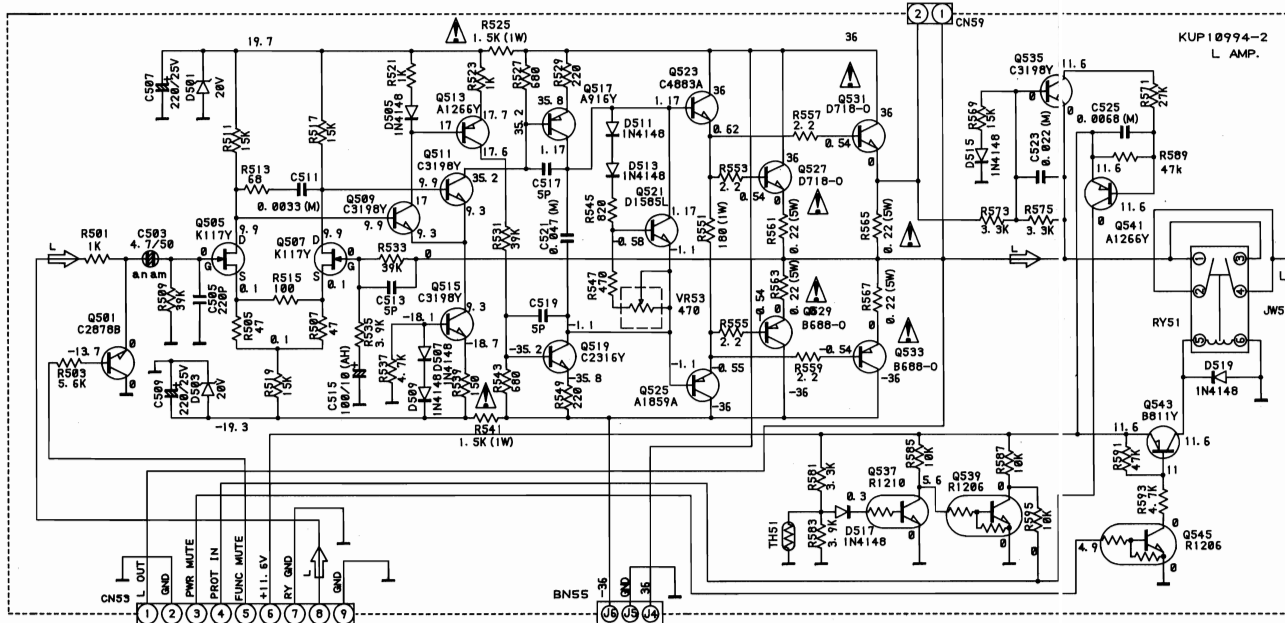




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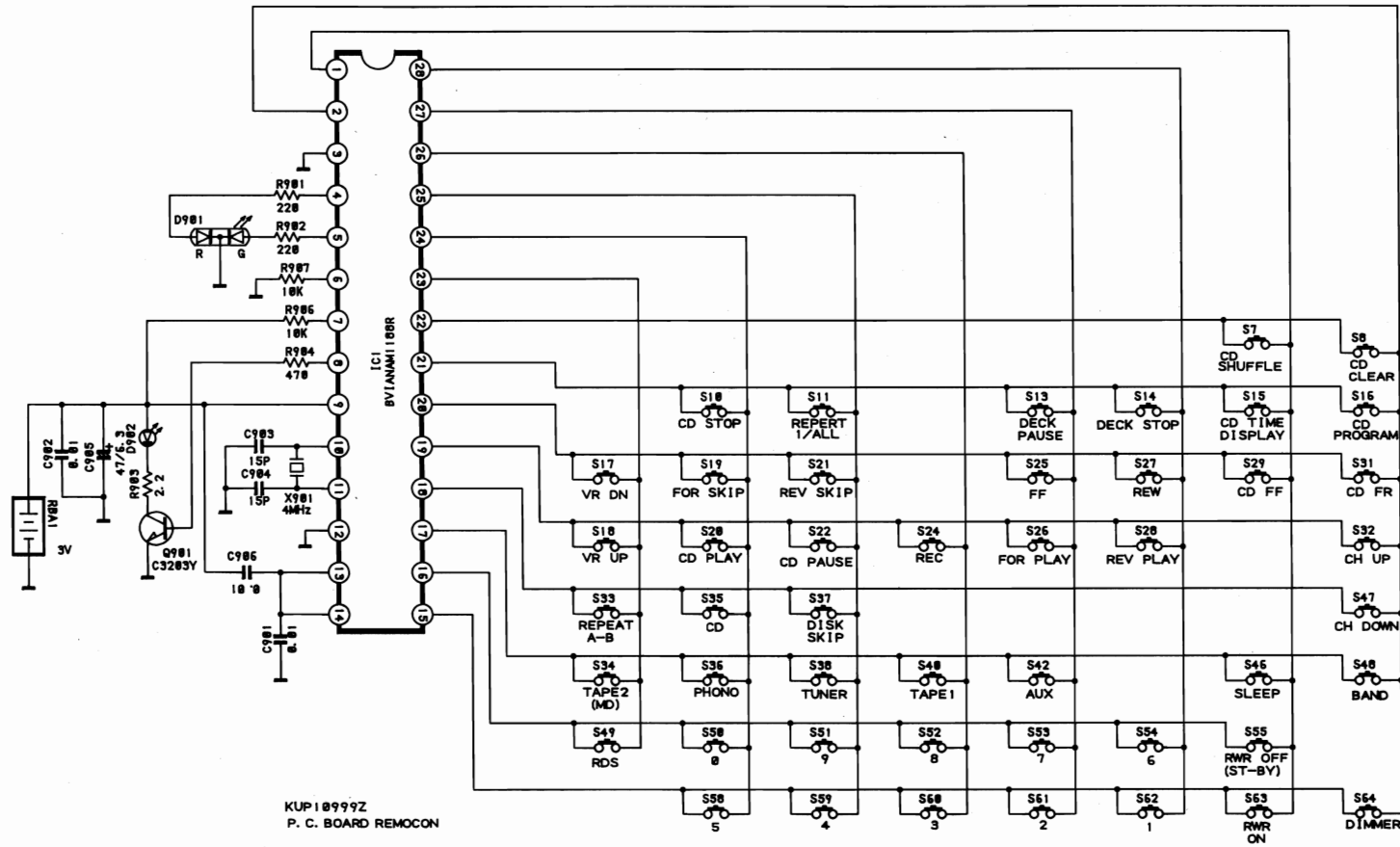
**\* THE UNIT OF RESISTANCE IS OHM, K=1000 OHM, M=1000 KOHM.**  
**\* THE CAPACITANCE IS MICROFARAD P=PICO FARAD**  
**\* THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.**  
**\* ALL VOLTAGE ARE MEASURED WITH GROUND.**  
 DC: VALUES WITH NO SIGNAL, NORMAL VOLTAGE.  
 ( ) VOLTAGE IS ACTIVE VOLTAGE.



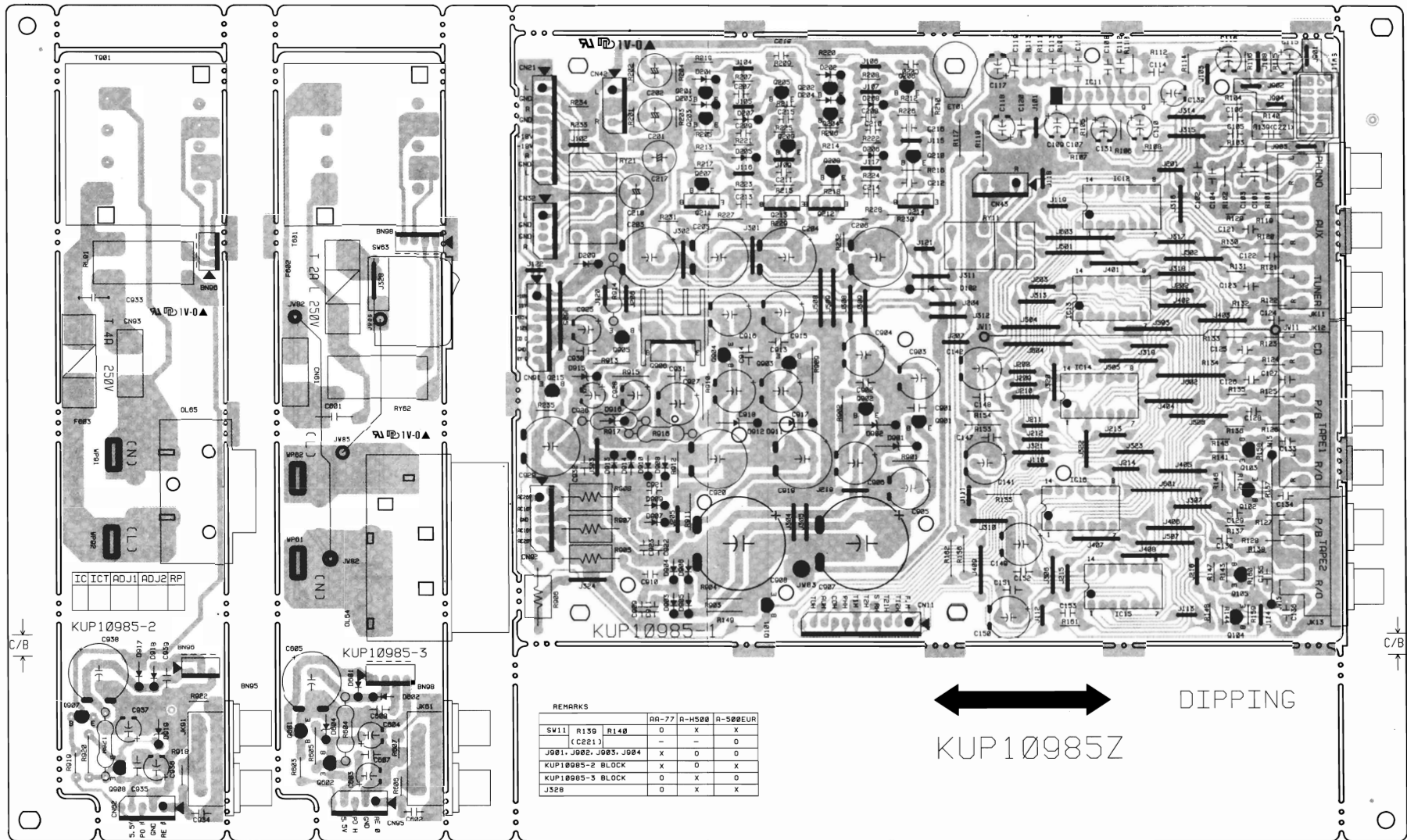


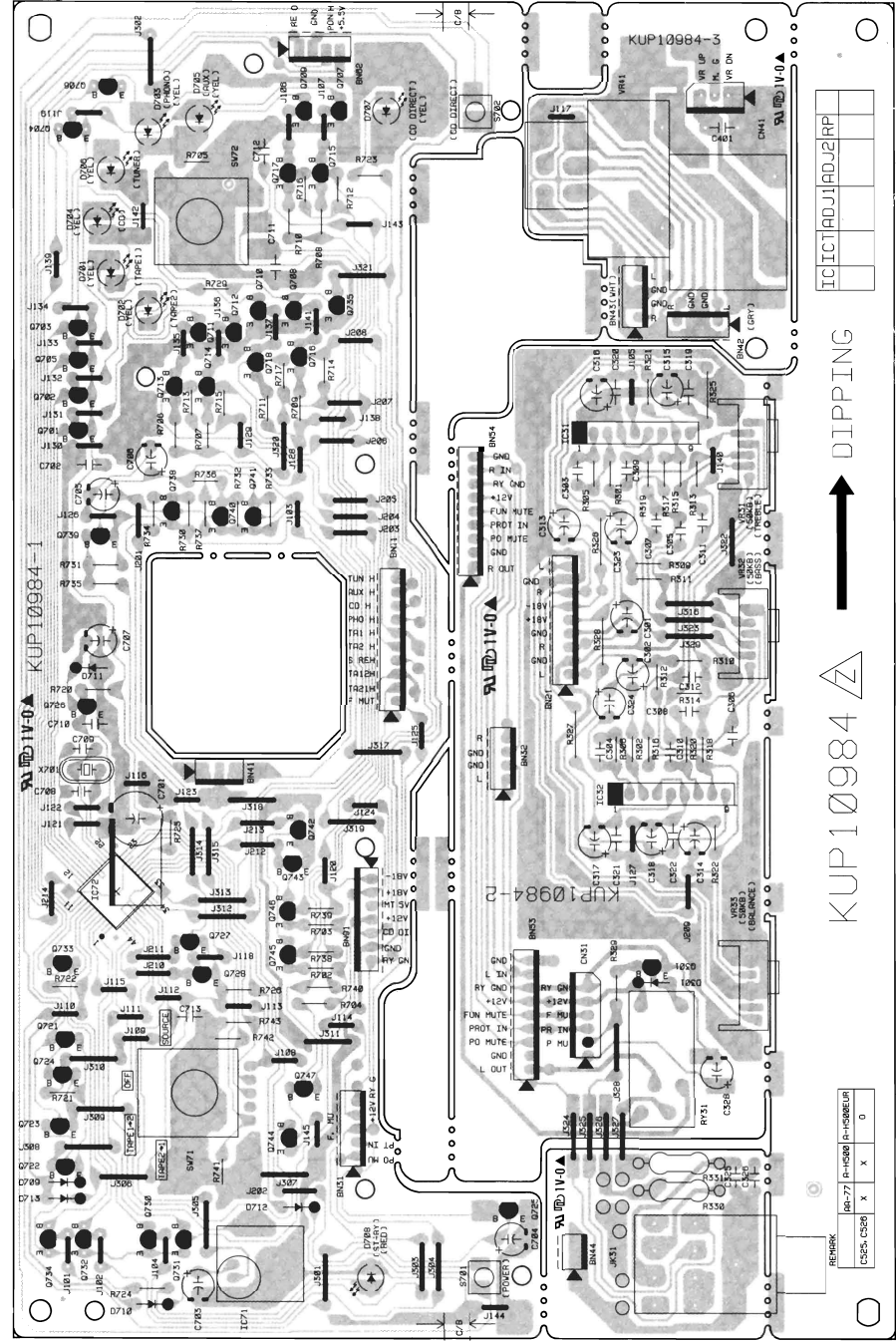
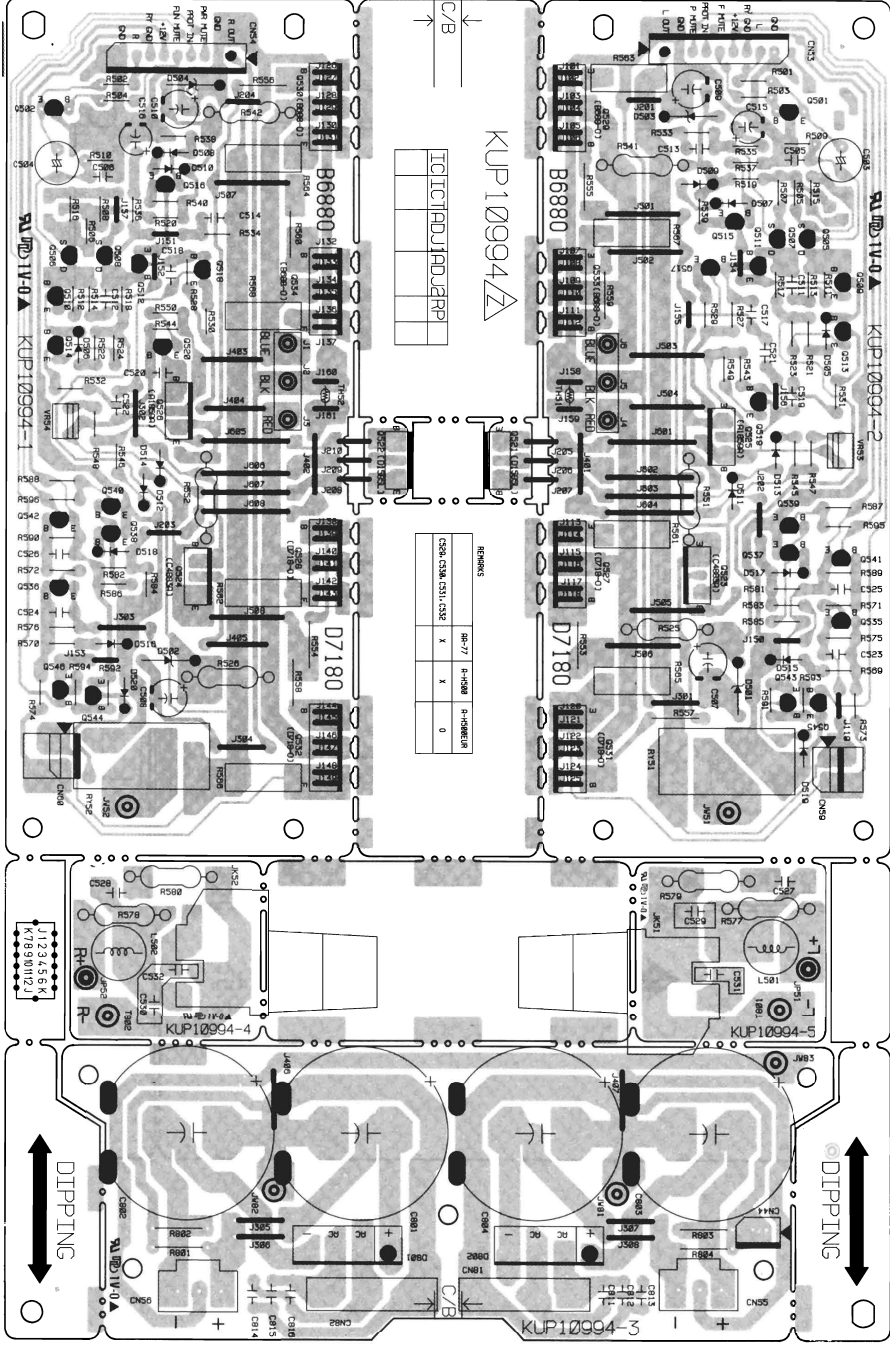
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 \* THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.  
 \* ALL VOLTAGE ARE MEASURED WITH GROUND.  
 DC: VALUES WITH NO SIGNAL  
 AC: RMS

# REMOTECONTROL SCHEMATIC DIAGRAM

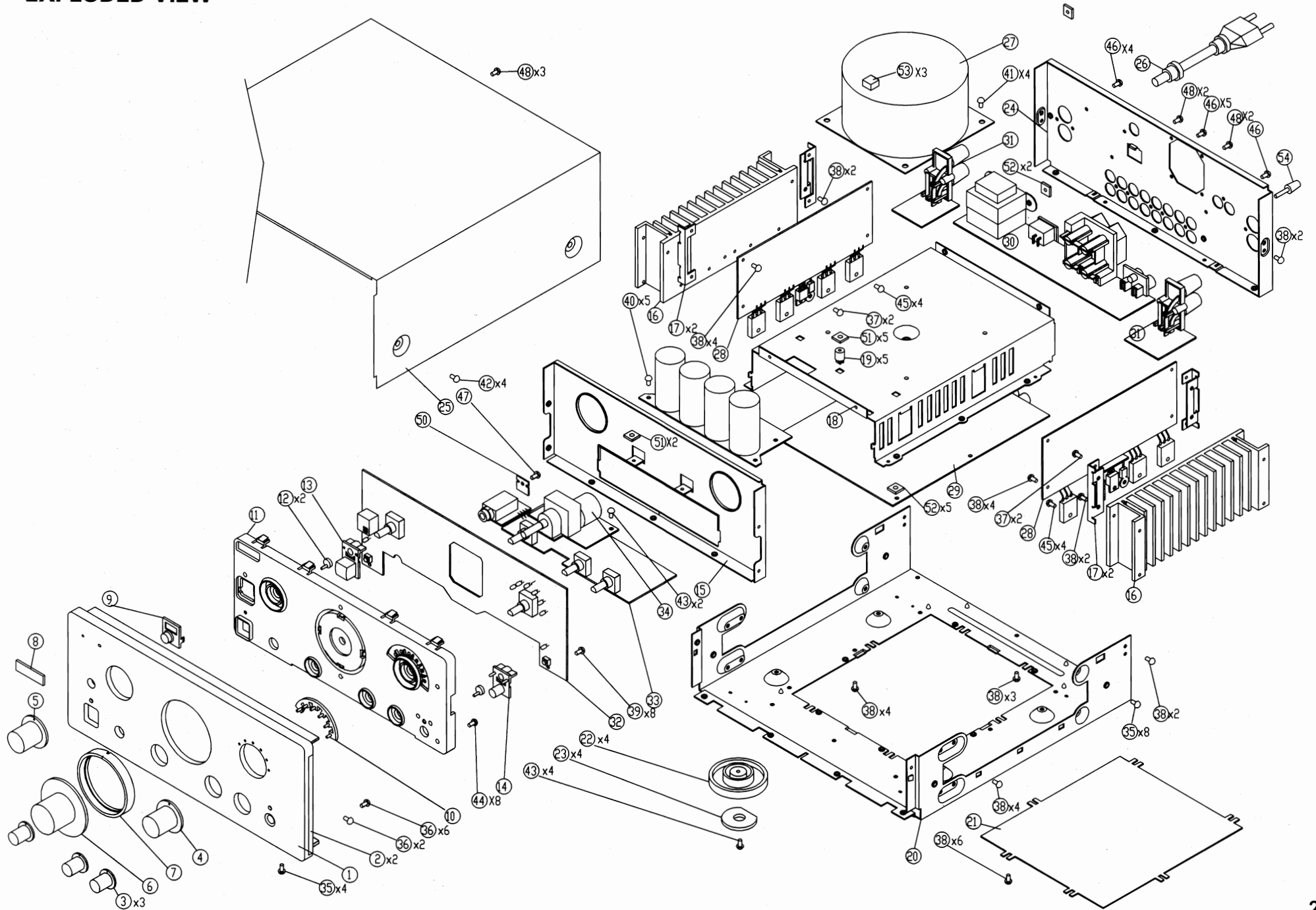


# PRINTED CIRCUIT BOARDS





# EXPLODED VIEW



## EXPLODED VIEW [A-H500]

Ref. No.	Part No.	Description	Remarks
1	9A06231600	PANEL,AL	
2	9A06231700	BAR,SIDE	
3	9A06228400	VOLUME CAP ASS'Y (C)	
4	9A06228300	VOLUME CAP ASS'Y (B)	
5	9A06228800	VOLUME CAP ASS'Y	
6	9A06228100	VOLUME CAP ASS'Y (A)	
7	9A06228600	HOUSING,VOLUME	
8	9A06224200	BADGE,TEAC	
9	9A06227600	SENSOR,WINDOW	
10	9A06319300	PANEL,MOLD	
11	9A06227400	INDICATOR,POWER	
12	9A06227500	INDICATOR	
13	9A06314500	KNOB,POWER	
14	9A06319200	KNOB,TACT	
15	9A06235100	CHASSIS, FRONT	
16	9A06232300	HEAT SINK	
17	9A06232100	BRACKET, HEAT SINK	
18	9A06232200	SUPPORT,TRANS	
19	9A06229100	MOUNT,PCB A4-92-1728	
20	9A06234900	CHASSIS, BOTTOM	
21	9A06235000	PLATE, BOTTOM	
22	9A06315500	FOOT	
23	9A06229300	CUSHION,FOOT	
24	9A06320100	PANEL,REAR [EUR]	
	9A06231100	PANEL,REAR [DM]	
25	9A06230900	CABINET, TOP	
26	9A01376900	BUSHING,AC CORD HEYCO(SR-5N-4)	
27	9A06232000	TRANS,TROIDAL [DM]	
	9A06326200	TRANS,TROIDAL [EUR]	
28,30,31	9A06232800	POWER PCB ASS'Y [DM]	
	9A06232810	POWER PCB ASS'Y [EUR]	
29	9A06232700	MAIN PCB ASS'Y [DM]	
	9A06232710	MAIN PCB ASS'Y [EUR]	
32,33	9A06232600	SUB PCB ASS'Y [DM]	
	9A06232610	SUB PCB ASS'Y [EUR]	
34	9A06237000	VOLUME,MOTOR RK6312MC282	
35	9A01397400	SCREW KTS3+8J	
36	9A06229000	SCREW,SPECIAL	
37	9A01535800	SCREW,KT3+8J	
38	9A01532600	SCREW,KT3+6J	
39	9A01377400	SCREW,KT3+10G	
40	9A05338500	SCREW,KT3+16J	
41	9A05984300	SCREW,KT4+6FFZ	
42	9A05338800	SCREW,KT4+6F	
43	9A05339200	SCREW,KTW3+8J	
44	9A06234700	SCREW,KTW3+6F	
45		SCREW,KTW3+10G	
46	9A01377300	SCREW,KT3+10GFZ	
47		SCREW,KTW3+10G	
48	9A01377200	SCREW,KT3+8JFZ	
49		vacant	
50	9A06319600	BRACKET	
51	9A06229600	RUBBER,PCB	
52	9A06229400	RUBBER,MECHA	
53	9A06321100	RUBBER,TRANS	
54	9A05917200	GROUND TERMINAL	

## INCLUDED ACCESSORIES

Ref. No.	Part No.	Description	Remarks
	9A063182-00	REMOTE CONTROL UNIT, RC-613 [EUR]	
	9A062357-00	REMOTE CONTROL UNIT, RC-612 [DM]	
	9A06054100	OWNERS MNL, A-H500 JAPAN	
	9A06054500	OWNERS MNL, A-H500 MULTI	

## ELECTRICAL PARTS LIST

## MAIN PCB ASSY

Ref. No.	Part No.	Description
	9A06232700	MAIN PCB ASS'Y [DM]
	9A06232710	MAIN PCB ASS'Y [EUR]
	9A06235300	PCB,MAIN
BN96	9A06238400	WIRE ASS'Y
C141,142	9A06226600	C.,ELECT
C149,150	9A06226600	C.,ELECT
C201,202	9A05322200	C.,ELECT A1HQ4R7B
C203-206	9A06226900	C.,ELECT
C217,218	9A05322200	C.,ELECT A1HQ4R7B
C219,220	9A05938000	C.,MYLAR 0.0033UF
C903-906	9A06226800	C.,ELECT
C907,908	9A06227100	C.,ELECT
C915-918	9A06226600	C.,ELECT
C919,920	9A06227000	C.,ELECT
C933	9A06224000	C.,CERAMIC
C938	9A06226700	C.,ELECT
CN11	9A05991400	WAFER
CN21	9A05892600	WAFER(9P)
CN42,43	9A05329300	WAFER MOLEX 5267-04A
CN62	9A05329300	WAFER MOLEX 5267-04A
CN91	9A05330000	WAFER MOLEX 5267-07A
CN92	9A05894700	WAFER(5P)
CN93	9A05329000	WAFER MOLEX35309-0210
D102	9A01390600	DIODE,1N4148T
D201-209	9A01390500	DIODE,1N4148MT
D601	9A01390500	DIODE,1N4148MT
D602	9A05194600	DIODE,1N4003SRT
D604	9A06236200	DIODE,ZENER MTZJ6.2BT
D901,902	9A05902200	DIODE,ZENER,30V
D903-910	9A05194600	DIODE,1N4003SRT
D911,912	9A06236400	DIODE,ZENER UZ18BMT
D913,914	9A05194600	DIODE,1N4003SRT
D915	9A06236100	DIODE,ZENER MTZJ4.7BT
D916	9A05359600	DIODE,ZENER MTZJ12BT
F602	9A05328200	HOLDER,FUSE KJCF5S
F603	9A05328200	HOLDER,FUSE KJCF5S
IC11	9A05195800	IC.,KA4558S
IC12,13	9A05971200	IC.,LC4966
IC14,15	9A05971200	IC.,LC4966
IC16	9A05971200	IC.,LC4966
JK11,12	9A06230400	TERMINAL,IN/OUT (G)
JK13	9A06230300	TERMINAL,IN/OUT
JK13	9A06326400	TERMINAL,IN/OUT
JK91	9A06230200	JACK,REMOTE(2P)
OL63	9A06224300	OUTLET [DM]
OL64		OUTLET [EUR]
Q101	9A03811700	TR,KSD1021-YTA
Q102-105	9A05896000	TR,KTC2878B
Q201-204	9A06236600	TR,KTA1268GRT
Q205,206	9A06236700	TR,KTC3200GRT
Q207,208	9A05895900	TR,KTA1266YT
Q209,210	9A05892800	TR,KTC3198YT
Q211,212	9A06225500	TR,2SC2911S
Q213,214	9A06225300	TR,2SA1209S
Q215	9A03811700	TR,KSD1021-YTA

## MAIN PCB ASSY

Ref. No.	Part No.	Description
Q601	9A03811700	TR,KSD1021-YTA
Q602	9A05196800	TR,KSC2316-Y-SHTA
Q901	9A05196800	TR,KSC2316-Y-SHTA
Q902	9A05196700	TR,KSA916-Y-SHTA
Q903	9A05196800	TR,KSC2316-Y-SHTA
Q904	9A05196700	TR,KSA916-Y-SHTA
Q905	9A05196800	TR,KSC2316-Y-SHTA
Q906	9A05937400	HEAT SINK ASSY
R905-908	9A05897200	R.,FUSE 0.47-OHM,1W
R914	9A05896400	R.,4.7-OHM,1W,METAL
R916,917	9A06234400	R.,15-OHM,1W,METAL
R921	9A05896400	R.,4.7-OHM,1W,METAL
RY11,21	9A06224500	RELAY G5V-2-DC12V
T601	9A06326700	TRANS,SUB [DM]
T901	9A06231900	TRANS,SUB [EUR]

## POWER PCB ASSY

Ref. No.	Part No.	Description
	9A06232800	POWER PCB ASS'Y [DM]
	9A06232810	POWER PCB ASS'Y [EUR]
	9A06235400	PCB,POWER
BN55,56	9A06238100	WIRE ASS'Y
C503,504	9A05322200	C.,ELECT A1HQ4R7B
C515,516	9A06226500	C.,ELECT
C801-804	9A06227200	C.,ELECT
CN44	9A05328900	WAFER MOLEX 5267-02A
CN53,54	9A05892600	WAFER(9P)
CN55,56	9A06230800	WAFER
CN59,60	9A06230600	WAFER
D501-504	9A06236300	DIODE, ZENER UZP20BM
D505-520	9A01390500	DIODE,1N4148MT
D801,802	9A06224900	DIODE, BRIDGE PBU604F
L 501,502	9A04875100	COIL, DC-D2100
Q501,502	9A05896000	TR,KTC2878B
Q505-508	9A06236800	F.E.T KTK117Y
Q509-512	9A05892800	TR,KTC3198YT
Q513,514	9A05895900	TR,KTA1266YT
Q515,516	9A05892800	TR,KTC3198YT
Q517,518	9A05196700	TR,KSA916-Y-SHTA
Q519,520	9A05196800	TR,KSC2316-Y-SHTA
Q521,522	9A05977200	TR.,2SD1585L
Q523,524	9A05977600	TR.,2SC4883A
Q525,526	9A05977500	TR.,2SA1859A
Q527,528	9A06225600	T.R 2SD7180
Q529,530	9A06225400	T.R 2SB6880
Q531,532	9A06225600	T.R 2SD7180
Q533,534	9A06225400	T.R 2SB6880
Q535,536	9A05892800	TR,KTC3198YT
Q537,538	9A05197000	TR,KSR1210TA
Q539,540	9A05196900	TR,KSR1206TA
Q541,542	9A05895900	TR,KTA1266YT
Q543,544	9A03747300	TR,KSB811-YTA
Q545,546	9A05196900	TR,KSR1206TA
R525,526	9A06234500	RES, METAL OXIDE FILM
R541,542	9A06234500	RES, METAL OXIDE FILM

**POWER PCB ASSY**

Ref. No.	Part No.	Description
R551,552	9A06234600	RES , METAL OXIDE FILM
R561-568	9A05896300	R.,0.22-OHM,5W
R577,578	9A05896400	R.,4.7-OHM,1W
R579,580	9A05338000	R,METAL OXIDE FILM 1W 10
RY51,52	9A06224600	RELAY G5Z-2A-DC12V
T801,802	9A06227300	PIN , G.T
VR53,54	9A06236500	RES , SEMI FIXED

**SUB PCB ASSY**

Ref. No.	Part No.	Description
	9A06232600	SUB PCB ASS'Y [DM]
	9A06232610	SUB PCB ASS'Y [EUR]
	9A06235200	PCB,SUB
BN11	9A06237200	WIRE ASS'Y
BN21	9A06237300	WIRE ASS'Y
BN31	9A06237400	WIRE ASS'Y
BN41	9A06237600	WIRE ASS'Y
BN42	9A06237700	WIRE ASS'Y
BN43	9A06237800	WIRE ASS'Y
BN44	9A06237900	WIRE ASS'Y
BN53,54	9A06238000	WIRE ASS'Y
BN62	9A06238200	WIRE ASS'Y
BN91	9A06238300	WIRE ASS'Y
C701	9A06023800	C.,ELECT 1000UF/6.3V
D701-707	9A05890300	LED,YELLOW SLR342YCF02
D708	9A05195000	LED,RED SLR342VCF02
D709-713	9A01390500	DIODE,1N4148MT
IC31,32	9A05195800	IC.,MC4558S
IC71	9A05834700	SENSOR REMOTE JC-75MK3
IC72	9A06326900	IC.,BVIANAM1187A
JK31	9A05316900	JACK HTJ064-05BG
Q301	9A03811700	TR,KSD1021-YTA
Q701-706	9A03745200	TR,KSR2206TA
Q707-712	9A05196900	TR,KSR1206TA
Q713-718	9A03745200	TR,KSR2206TA
Q721,722	9A03745200	TR,KSR2206TA
Q723-726	9A05196900	TR,KSR1206TA
Q727-734	9A03745200	TR,KSR2206TA
Q735	9A05196900	TR,KSR1206TA
Q738,739	9A03811700	TR,KSD1021-YTA
Q740,741	9A03747300	TR,KSB811-YTA
Q742-744	9A05196900	TR,KSR1206TA
Q745-747	9A03745200	TR,KSR2206TA
RY31	9A06224600	RELAY G5Z-2A-DC12V
S701,702	9A04882500	SW,TACT SKHV10910A
SW71	9A06326800	SW,ROTARY SRBV14065A
SW72	9A06224700	VR,ENCODOR EC16B1210
VR31-33	9A06236900	RES,VARIABLE
X 701	9A05192900	CRYSTAL, DC-D1800

**OTHERS**

Ref. No.	Part No.	Description
F602	9A06225800	FUSE 2C4000TLJ [DM]
F603	9A06320300	FUSE 2C2000TLE [EUR]
T 902	9A06232000	TRANS, TOROIDAL [DM]
T 902	9A06326200	TRANS, TOROIDAL [EUR]
	9A05892200	CORD,POWER
	9A06230100	CORD,AC

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TEAC UK LIMITED	5 Marlin House, Marlin Meadow, The Croxley Centre, Watford, Herts, WD1 8YA, U.K. Phone: 0923-819631
TEAC DEUTSCHLAND GmbH	Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany Phone: 0611-71580
TEAC FRANCE S.A.	17, Rue Alexis-de-Tocqueville, CE 005 92182 Antony Cedex, France Phone: (1) 42.37.01.02
TEAC NEDERLAND BV	Perkinsbaan 11, 3439 ND Nieuwegein, Nederland Phone: 03-402-30229
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