ELECTRONICS SERVICE MANUAL

A-03 Amplifier

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TELEDYNE ACOUSTIC RESEARCH

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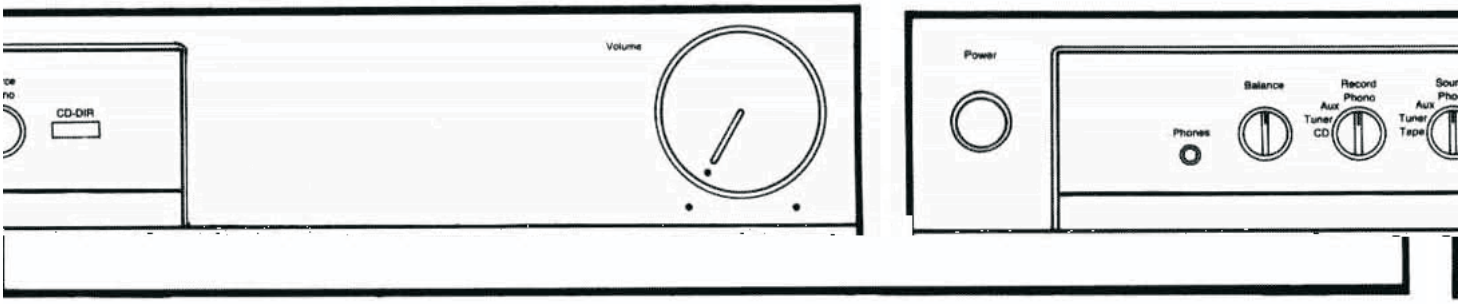
ACOUSTIC RESEARCH



Specification

Rated Continuous Power Output 20Hz-20kHz
- 8 ohms.....30W
- 4 ohms.....40W

Maximum Continuous Power Output:
- 8 ohms.....35W
- 4 ohms.....45W

IHF Dynamic Power Output:
- 8 ohms.....50W
- 4 ohms.....70W

Maximum Output Current:.....12A

THD 20Hz-20kH rated power:
- 8 ohms.....0.07%

IMD rated power:
- 8 ohms.....0.05%

Damping factory:
- 1kHz.....120

Input sensitivites for rated output 8 ohms 1kHz:
- CD, Tuner, Aux, Tape 150mV
- Phono MM.....2.5mV

Input Impedance:
- CD, Tuner, Aux, Tape (minimum).....10k ohms
- Phono MM 47k ohms/100pf

Signal-to-noise ratio IHF A Weighted, (refrated input)
- CD, Aux, Tape 96dB

Signal-to-noise ratio A weighted:
- Phono MM (ref 5mV).....80dB

Frequency response 15Hz-20kHz.....0 to — 0.3dB
- Phono RIAA error 20Hz-20kHz..... – 0.3dB

Maximum input 1kHz:
- CD, Tuner, Aux, Tape.....> 30V
- Phono MM.....160mV

Crosstalk between sources
- CD, Tuner, Aux, Tape.....75dB

Separation 1kHz:
- Tuner, Aux, Tape.....75dB
- CD.....85dB

Power Requirement.....120V/60Hz, 220, 240V/ 50Hz or 120, 220, 240V/ 50-60Hz (depending on destination

Power Consumption.....150W

Dimensions (overall).....430W x 93H x 354D $16^{15}/_{16}" \times 3^{13}/_{16}" \times 13^{15}/_{16}"$

Weight (net).....6.6 kg/14.52 lbs

• Specifications and design subject to possible modification without notice.

Bias Adjustment

Instruments: DC milli-voltmeter

Notes: Prior to Bias Adjustment, run about 5 minutes with rated output (8 ohm) and warm up Power Transistor and Heat Sink. Set Volume Control to Mininum.

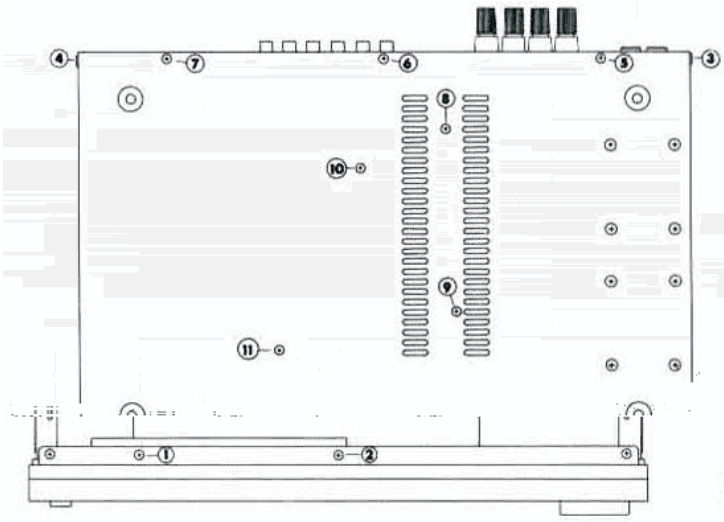
Step	Coupling		Adjust	Adjust for
	Plus Lead	Minus Lead		
1	TP1	TP3	VR601	DC milli-voltmeter reads 4 mV
2	TP2	TP4	VR602	

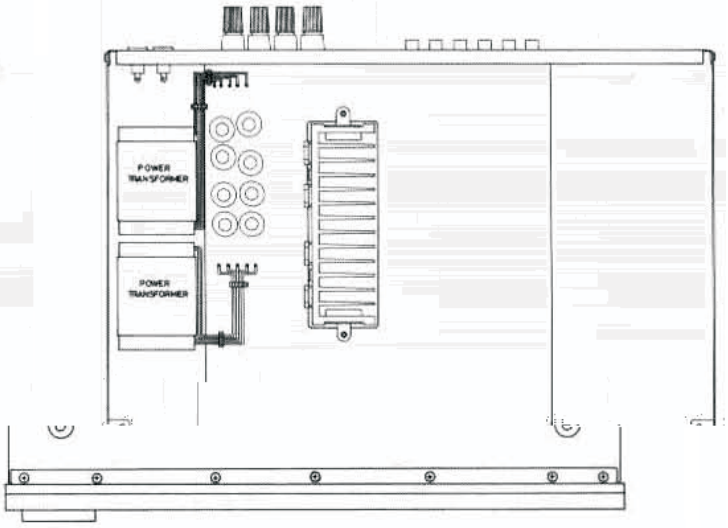
E PC BOARD

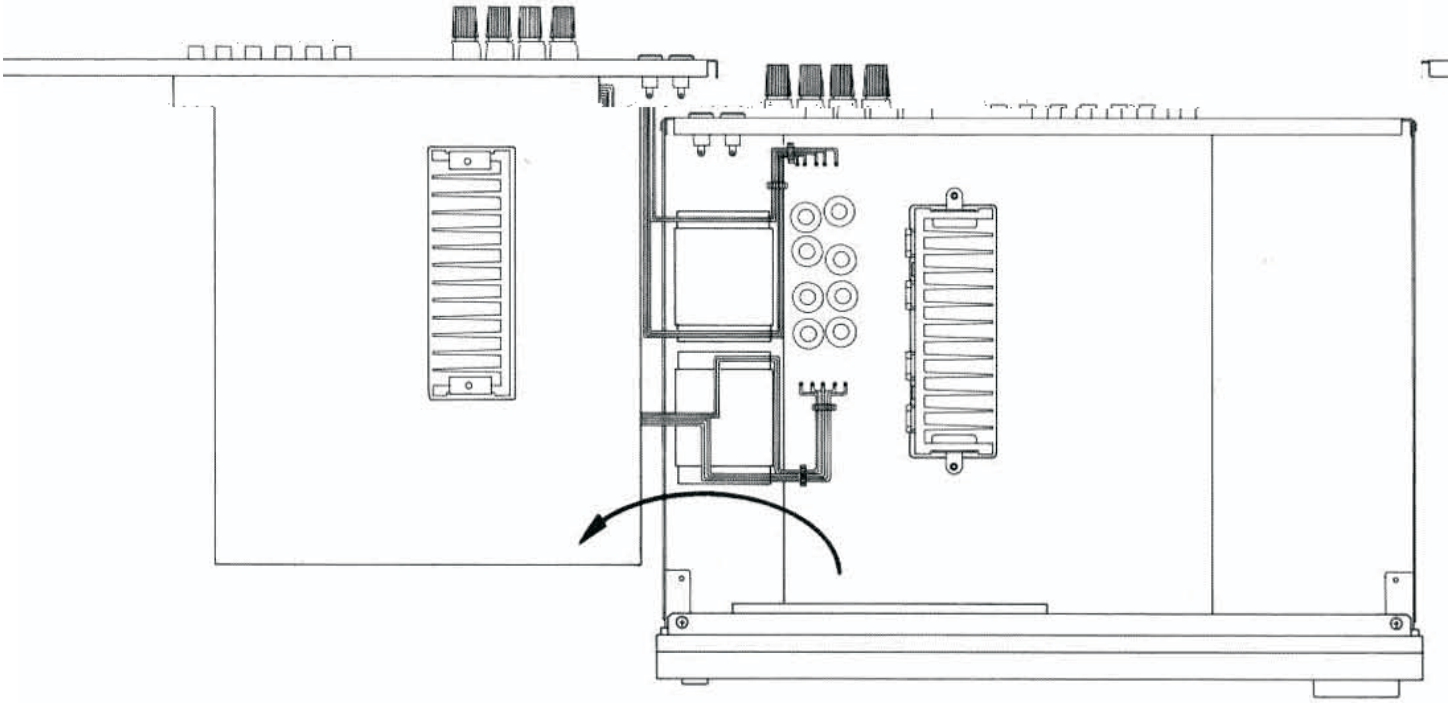
ws ① and ②.
from ③ to ⑪.
ırd the back, then lift and flip the PC board to the Transformer
of the PC board.
ate the Heatsink from PC board).

HINTS FOR REMOVING THE

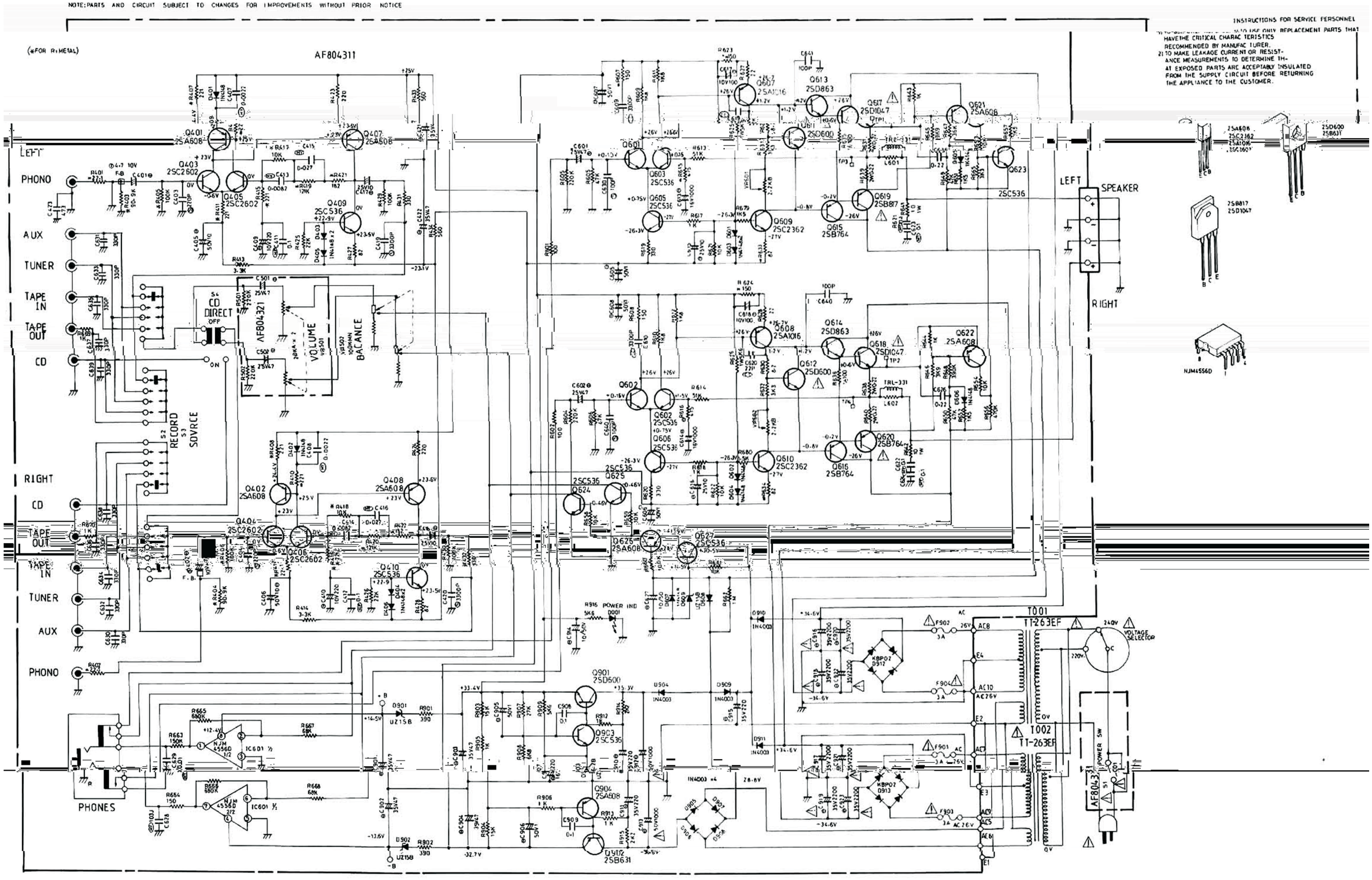
1. To remove the main PC board, first remove scre
2. Then ture the unit upside down, remove screws
3. Pull the back plate and the PC board assembly towa
   side would allow one to reach the soldering side
   (Note: When removing the PC board, not separ



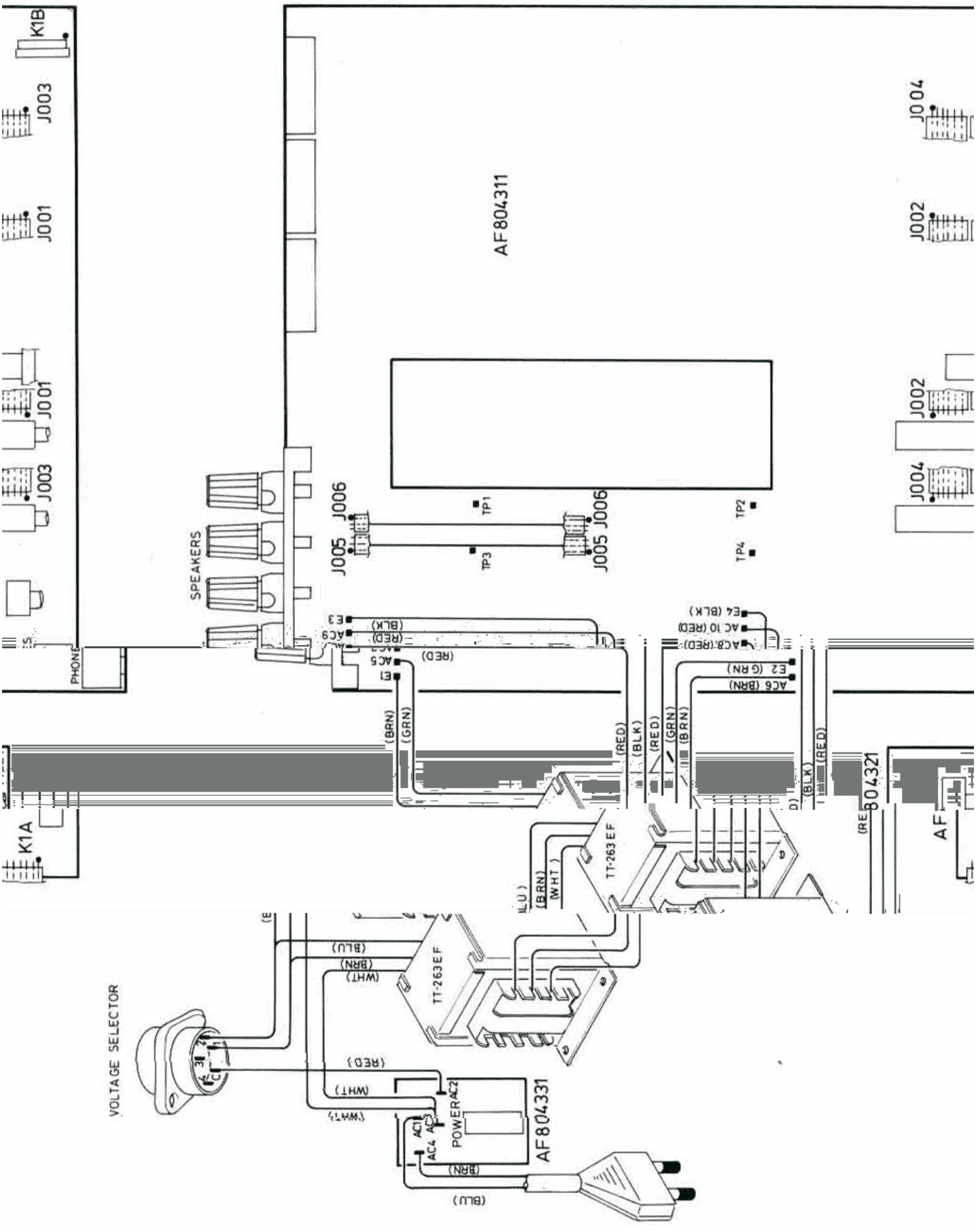




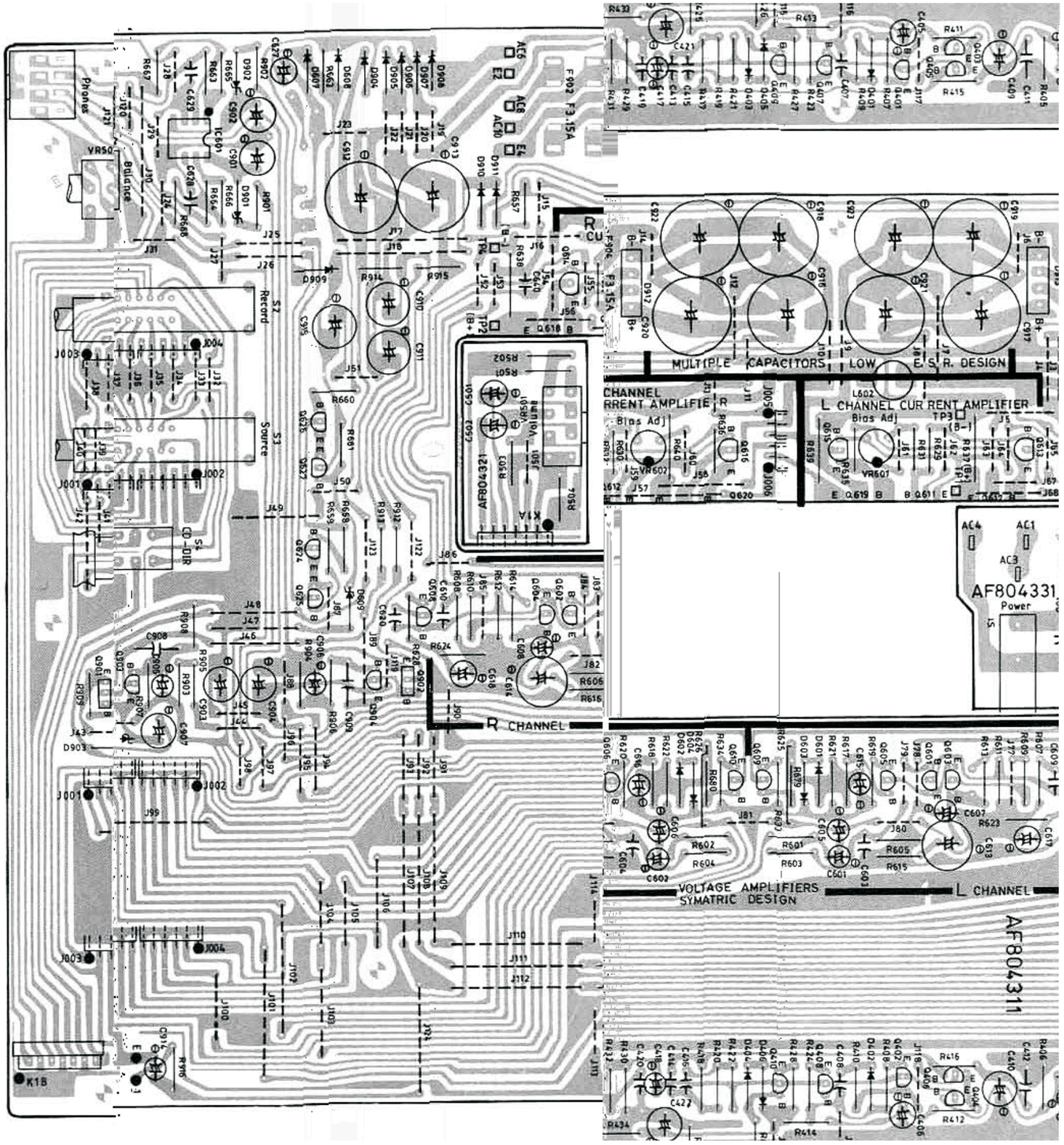
Schematic Diagram



Wiring Diagram



PRINTED CIRCUIT BOARDS



SYMBOL	PAI
1	AAI
2	AAI
3	KBI
4	SRI
5	OMI
6	SGI
7	SGI
8	OMI
9	---
10	KBI
11	KBI
12	OMI
13	AFI
14	KBI
15	SNI
16	SPI
17	---
18	AMI
19	FTI
20	SPI
21	---
22	BCI
23	SPI
24	AHI
25	PTI
26	ARI
27	VCI
28	SPI
29	CDI
	CDI
	CDI
30	AUI

R914,915	RD52201820	R,CARBON 2.2K J 1/4W
R916	RD55601821	R,CARBON 5.6K J 1/4W
C901-904	CE04706351	CAP,ELEC 47uF 35V
C905,906	CE01007504	CAP,ELEC 1uF 50V
C907	CE02205164	CAP,ELEC 220uF 16V
C908,909	CC01008458	CAP,CERAMIC 0.1uF 50V
R627,628	RD52209820	R,CARBON 22 J 1/4W
R629,630	RD58201829	R,CARBON 8.2K J 1/4W
R631,632	RD53301822	R,CARBON 3.3K J 1/4W
R633,634	RM28259811	R,METAL 82.5 F 1/4W
R635,636	RM91000926	R,METAL 100 J 1/2W
R637-640	RM10228226	R,METAL 0.22 2W
R641,642	RM11009120	R,METAL 10 J 1W
R643,644	RD51001823	R,CARBON 1K J 1/4W
R645,646	RD53901825	R,CARBON 3.9K J 1/4W
R647,648	RD53903822	R,CARBON 390K J 1/4W
R649,650	RD54702824	R,CARBON 47K J 1/4W
R651,652	RD51501820	R,CARBON 1.5K J 1/4W
R653,654	RD51002827	R,CARBON 10K J 1/4W
R655	RD53301822	R,CARBON 3.3K J 1/4W
R656	RD54703828	R,CARBON 470K J 1/4W
R657	RD51501820	R,CARBON 1.5K J 1/4W
R658,659	RD51002827	R,CARBON 10K J 1/4W
R660	RD51003820	R,CARBON 100K J 1/4W
R661	RD51002827	R,CARBON 10K J 1/4W
R662	RD21004822	R,CARBON 1M J 1/4W
R663,664	RD21500825	R,CARBON 150 J 1/4W
R665,666	RD26803824	R,CARBON 680K J 1/4W
R667,668	RD26802820	R,CARBON 68K J 1/4W

R617,618	RD51001823	R,CARBON 1K J 1/4W
R619,620	RD53300829	R,CARBON 330 J 1/4W
R621,622	RD51002827	R,CARBON 10K J 1/4W
R623,624	RM21500815	R,METAL 150 F 1/4W
R625,626	RM15601128	R,METAL 5.6K J 1W
C906,907	CC01008458	CAP,CERAMIC 0.1uF 50V
C910,911	CE02205358	CAP,ELEC 220uF 35V
C912,913	CE01004503	CAP,ELEC 1000uF 50V ⚠
C915	CE02205358	CAP,ELEC 220uF 35V
C916-923	CE02204354	CAP,ELEC 2200uF 35V ⚠
D901,902	DD20000090	DIODE RD-15E
D903	DD20000181	DIODE RD-6.2E
D904-911	DD80000010	DIODE 1N4003
D912,913	DD10000019	DIODE KBPC02 ⚠
Q901	TR40000069	TRANSISTOR 2SD600K
Q902	TR10000047	TRANSISTOR 2SB631
Q903	TR30000327	TRANSISTOR 2SC536
Q904	TR10000126	TRANSISTOR 2SA608K
F901-904	FU23000049	FUSE 250V 4A S ⚠
S2,S3	SH30000390	FUNCTION SW 4TR-2398
S4	SH11000306	1-KEY-PUSH SUL 4TR-2601

AF804321 PCB ASSEMBLU

R501,502	RD22203826	R,CARBON 220K J 1/4W
C503,504	CE04706259	CAP,ELEC 47uF 25V
VR501	RV10001383	R,VARIABLE 4TR-2650 20KAx2

AF804331 PCB ASSEMBLYY

S1	SH40000155	POWER SW C-4176A01 ⚠
C01	CK00000035	SPARK KILLER DE7150F472M ⚠