

NAD

306

MODEL

SERVICE MANUAL

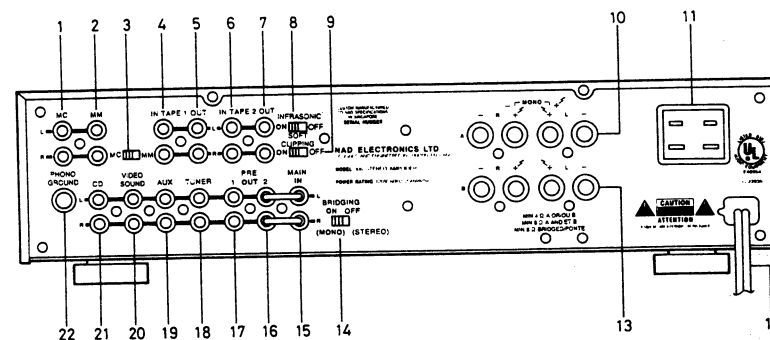
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SERVICE SAFETY PRECAUTIONS (UL)

- Use exact replacement parts for critical locations, marked "▲".
- Return lead dress to original position, and re-install protective covers.
- Before returning to customer, test for shock hazard; use either method A or B:
 - Leakage test, "cold".
 - Unplug AC cord; turn power switch ON.
 - Connect one lead of High Voltage Insulation Tester to both prongs of AC plug.
 - Touch other lead to all exposed metal parts.
 - Impedance measurement must be 0.3-5.0 Megohms.
 - Leakage test, "live".
 - Plug unit directly into AC outlet; do not use isolation transformer.
 - Connect one lead of Leakage Current Tester to earth ground.
 - Touch other lead to all exposed metal parts.
 - Leakage measurement must be less than 0.5 milliamps.

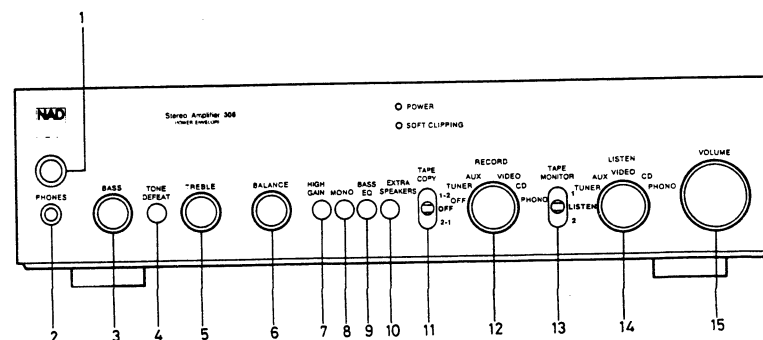
REAR PANEL

- | | |
|--------------------------|------------------------|
| 1. MC Input. | 12. AC Line Cord. |
| 2. MM Input | 13. Speakers B. |
| 3. MC/MM Selector. | 14. Bridging On/Off. |
| 4. Tape 1 Input. | 15. Main Amp Input. |
| 5. Tape 1 Output. | 16. Pre Amp Output 2. |
| 6. Tape 2 Input. | 17. Pre Amp Output 1. |
| 7. Tape 2 Output. | 18. Tuner Input. |
| 8. Infrasonic On/Off. | 19. Aux Input. |
| 9. Soft Clipping On/Off. | 20. Video Sound Input. |
| 10. Speakers A. | 21. CD Input. |
| 11. AC Outlet.(AH) | 22. Phono Ground. |



FRONT PANEL

- | | |
|-----------------|-----------------------------|
| 1. Power. | 8. Mono. |
| 2. Phones. | 9. Bass Equalizer |
| 3. Bass. | 10. Extra Speakers. |
| 4. Tone Defeat. | 11. Tape Copy. |
| 5. Treble. | 12. Record Output Selector. |
| 6. Balance. | 13. Tape Monitor. |
| 7. High Gain. | 14. Listen Input Selector. |
| | 15. Volume. |



Specifications

NAD 306 Stereo Amplifier

Power Amplifier Section

CONTINUOUS AVERAGE POWER

OUTPUT AT 8 OHMS (minimum 50W (17dBW)

RMS power per channels, both channels driven, with not more than the rated distortion)

Rated distortion (THD) 20Hz-20kHz 0.03%

Clipping power, 1kHz (maximum continuous power per channel) 60W

Dynamic Headroom at 8 ohms 5dB

Dynamic power (maximum) 8 ohms 160W

short-term power per 4 ohms 200W

channel) 2 ohms 250W

Damping factor ≥ 100

Slew rate 30V/ μ sec

T.H.D. and AMPTE.I.M. <0.03%

distortion from 250mV to rated output

Input Impedance 30kohm + 820P

Input sensitivity for 50Watts out 1V

Power amp gain +26dB (20X)

Preamplifier Section

Phono Input

Input Impedance MM 47kohm + 200P

MC 100ohm + 1 μ F

Input Sensitivity (1kHz) MM 2.6mV

MC 120 μ V

Signal-to-Noise Ratio with MM 80dB

cartridge connected, A-weighted MC 78dB

Input Overload at 1Hz MM 230mV

MC 10mV

RIAA Accuracy ± 0.5 dB

High-Level Inputs (CD, Video, Tape)

Input Impedance R=10kohm,

C=300pF

Input Sensitivity 170mV

Signal-to-Noise ratio, A-weighted 97dB re 1W out

Input Overload >10V

Frequency Response 20Hz-20kHz

± 0.3 dB

Outputs

Preamp output impedance 220ohm

Tape output impedance Source

Z+2000ohm

Controls

Treble ± 7 dB at 10kHz

Bass ± 9.5 dB at 50Hz

Bass Equalization +4.2dB at 37Hz

Infrasonic Filter

20Hz -0.15dB

12Hz -2.4dB

-12dB/octave

Physical Specifications

Width x Height x Depth 420 x 95 x 350mm

16 1/2 x 3 3/4 x 13

3/4 in

Net Weight

8.9kg

Power Consumption

50/60Hz at 110,115

220-240V 260VA

Specifications are those in effect at the time of printing. NAD reserves the right to change specifications or designs at any time without notice.

DISASSEMBLY INSTRUCTION

1. Remove six screws (A) holding the metal case.
2. Remove six knobs and eight screws (B) holding the front panel.

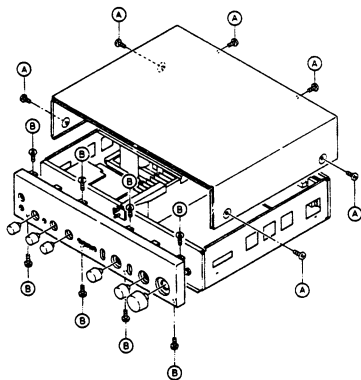


Figure 1

3. Remove three screws (C) and five screws (D) holding the front chassis.
4. Remove three screws (E) and two rotary switches nuts holding the switch PCB.
5. Remove three screws (F) holding the power supply PCB.
6. Remove six screws (G) holding the pre amplifier PCB.

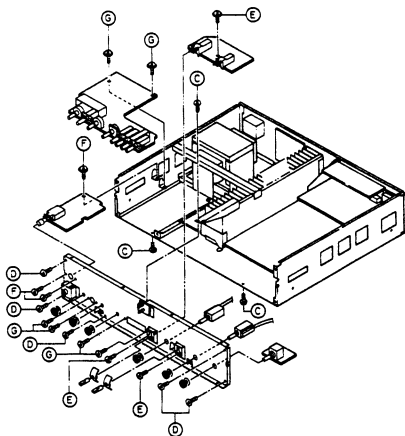


Figure 2

7. Remove two screws (H) holding the TRFM frame.
8. Remove four screws (I) holding the speaker PCB.
9. Remove four screws (J) holding the Rectifier PCB.
10. Remove five screws (K) holding the jack PCB and equalizer PCB.
11. Remove a screw (L) holding the PCB bracket.
12. Remove eight screws (M) holding the main amplifier PCB.

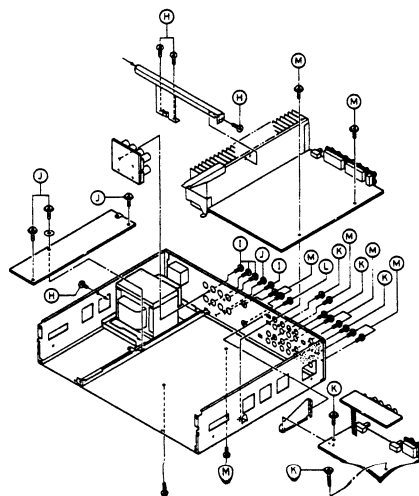


Figure 3

ALIGNMENT METHOD

MAIN AMPLIFIER ALIGNMENT

IMPORTANT NOTES:

- 1) After repair, it is recommended to use current limiter (40-80W lightbulb) in series with AC mains line, for initial turn-on.

A. IDLE CURRENT ADJUSTMENT

1. Connect DVM across R-479. (Between TP1 and TP3)
2. Turn on the adjust VR-401 for reading of $7\text{mV} \pm 1\text{mVDC}$.
3. Repeat, using R-480 (Between TP2 and TP4), adjust VR-402.

B. FINAL ADJUSTMENT

1. Leave power on minimum 10 minutes.
2. Repeat idle current adjustments.

C. THIS ADJUSTMENT SHOULD ONLY BE DONE AFTER REPLACEMENT OF R479/480 OR THE CURRENT SENSE TRANSISTORS

1. Set both VR403 and VR404 to MINIMUM resistance (fully clock wise).
 2. Connect a 4 ohm loads to each speaker output.
 3. Apply a signal to the CD input at 1kHz and adjust the level and volume settings in order to achieve an output signal of 60 to 64 Watts in the 4 ohm loads (15.5 to 16 Volts RMS).
 4. Adjust VR403 (VR404) very slowly until the output signal is just clipped and the level drops by 0.25 to 0.5 Volts and stays stable at this level for at least 10 seconds.
- The circuit has a time constant of a few seconds, so a fast adjustment may result in clipping at too low a level.

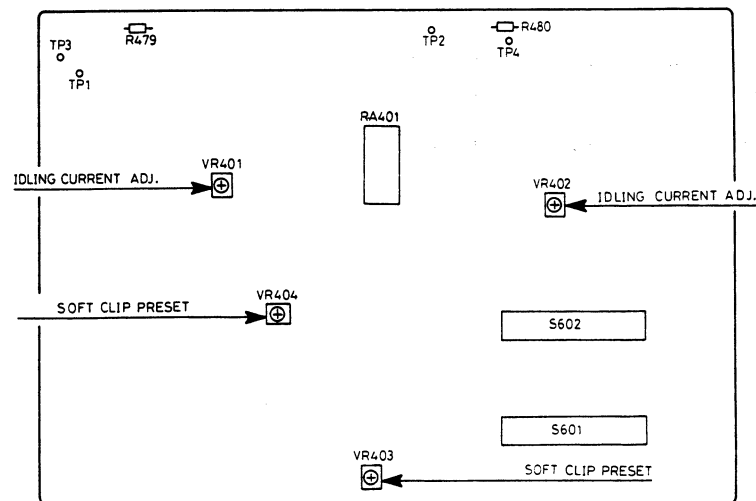
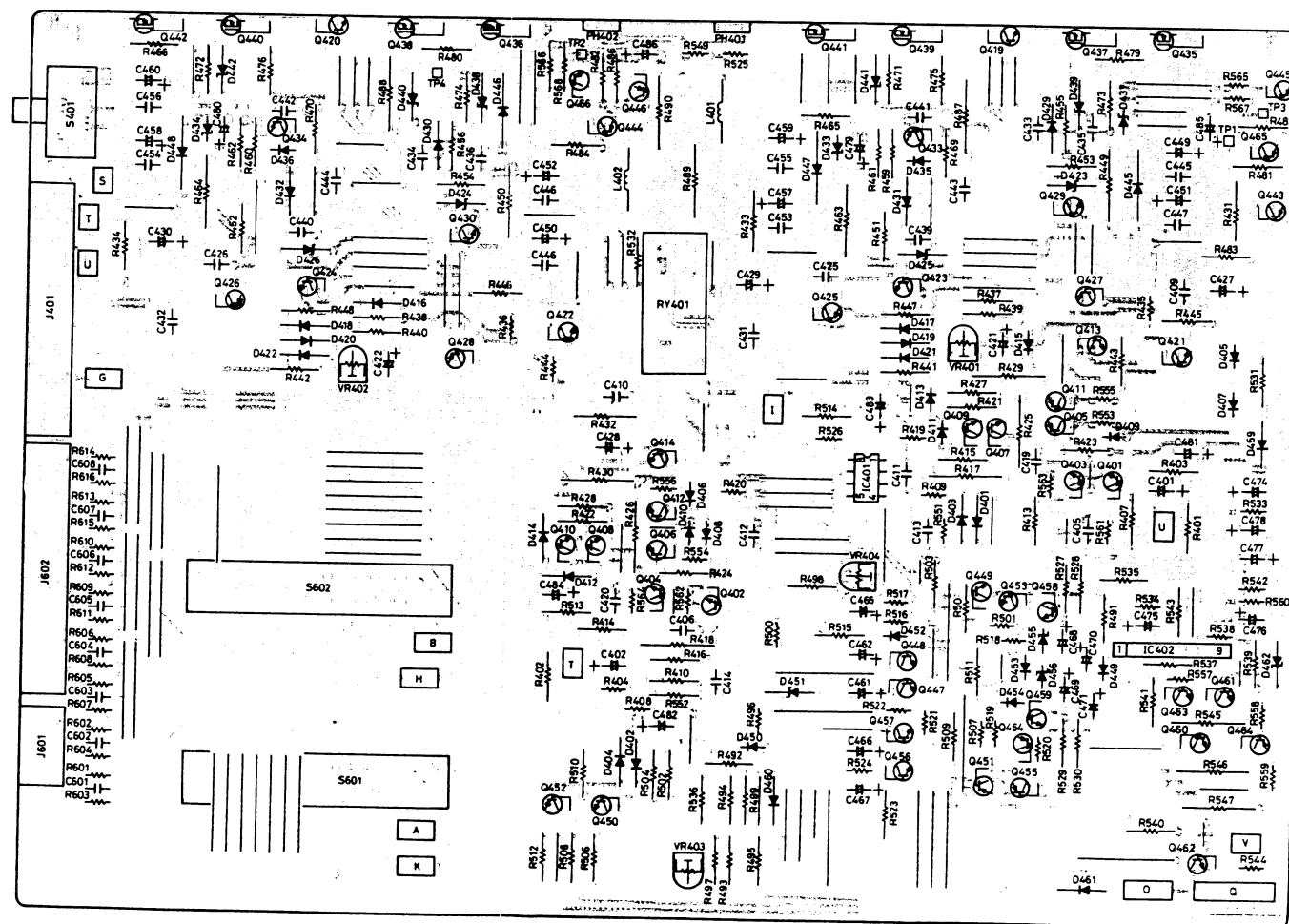
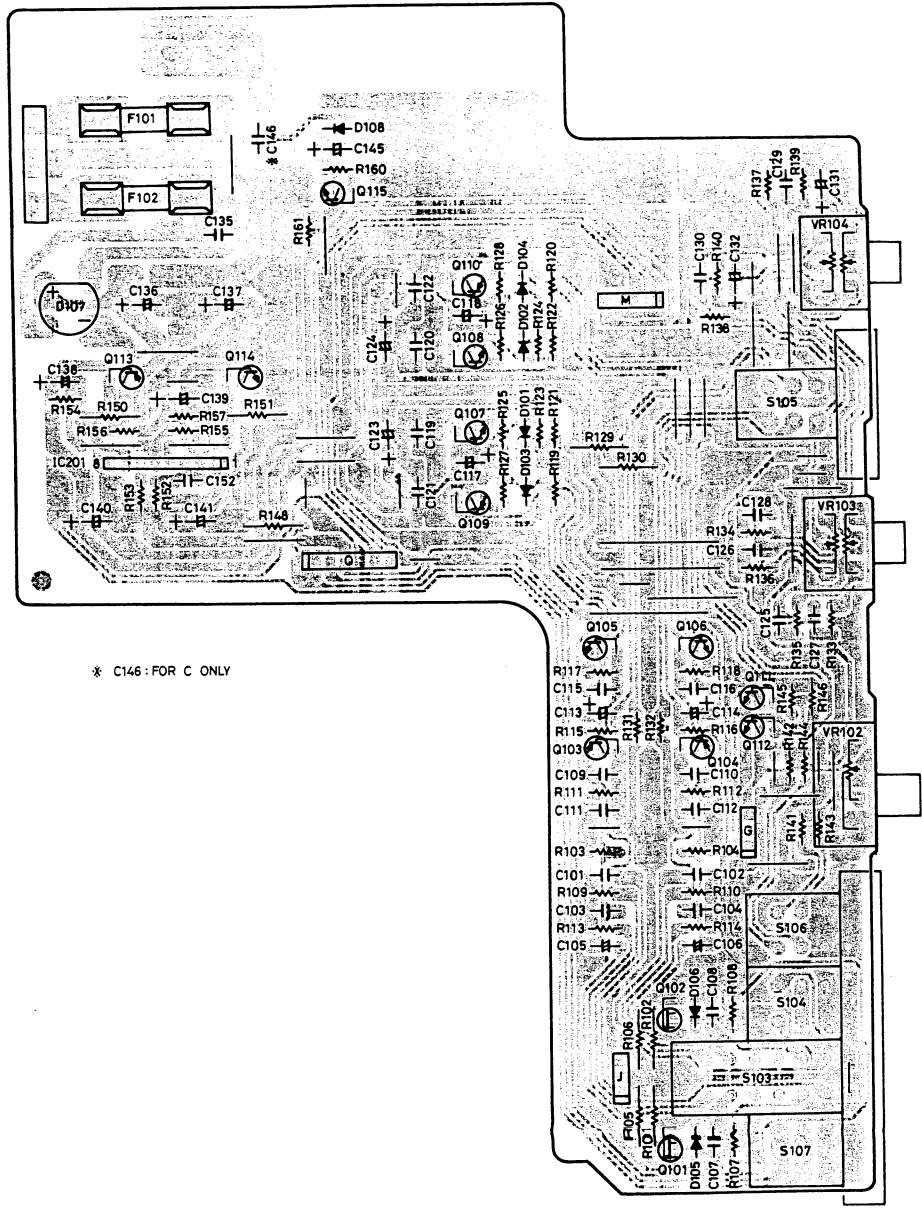


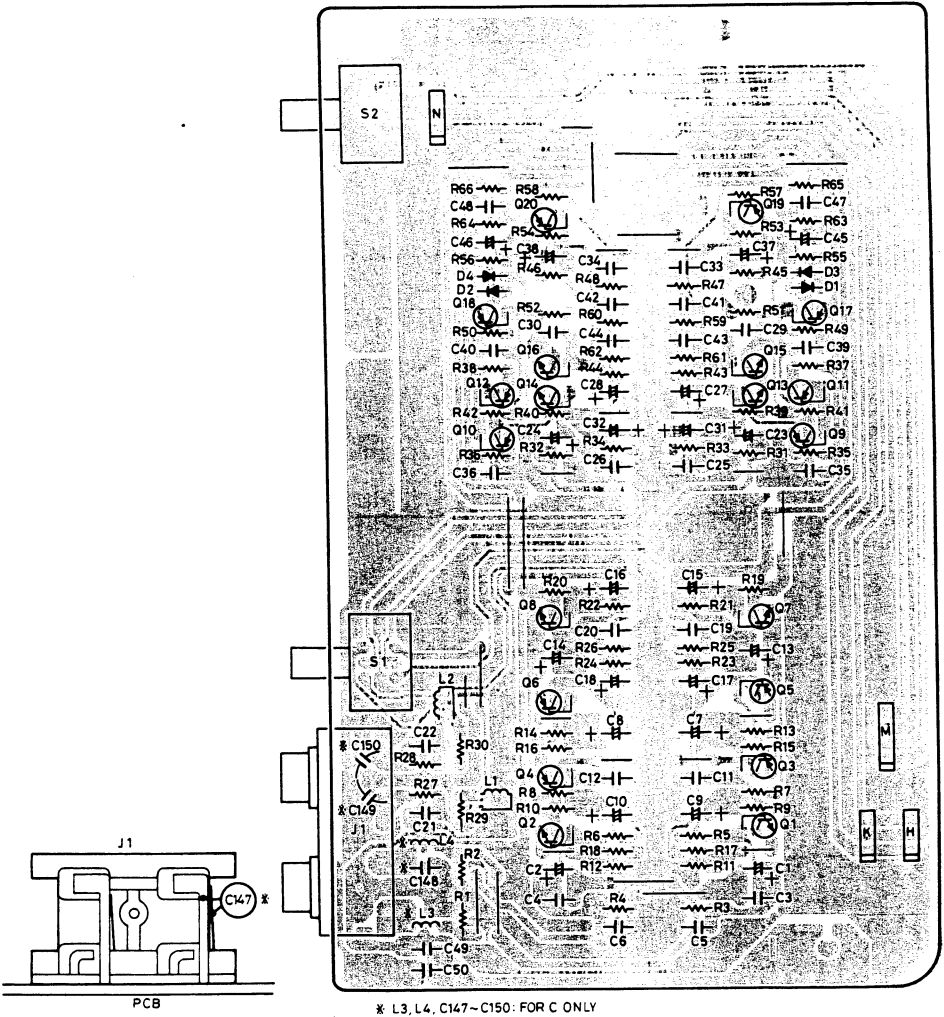
Figure 4 Amplifier Alignment Point



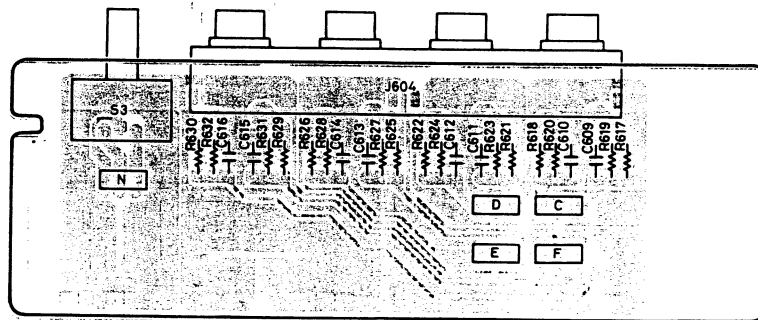
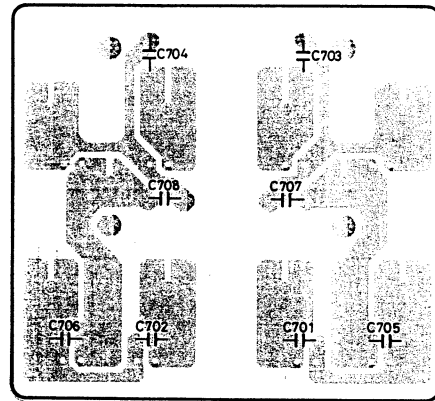
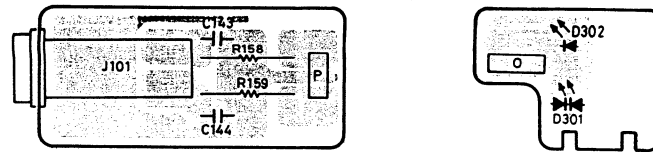
PREAMPLIFIER PCB LAYOUT



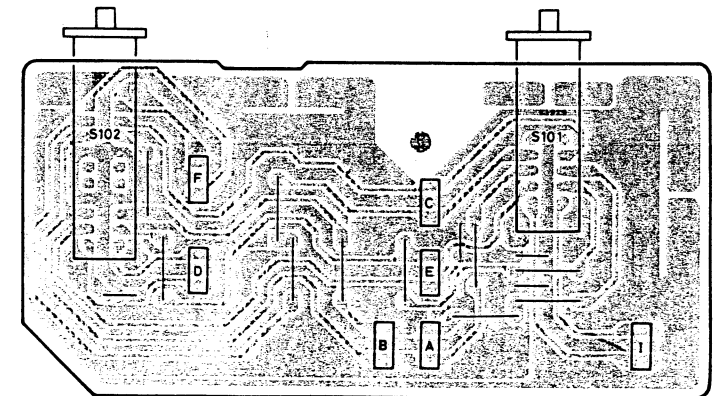
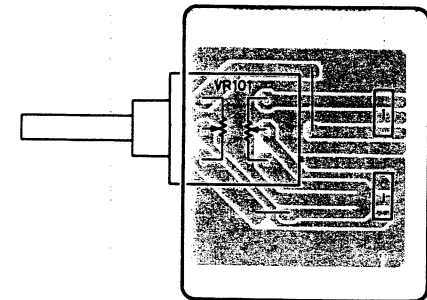
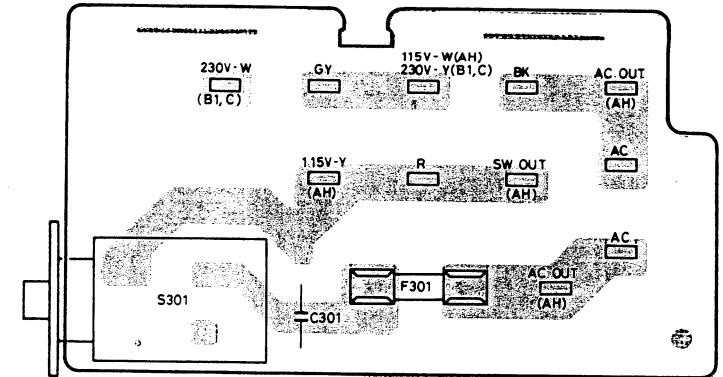
EQUALIZER PCB LAYOUT



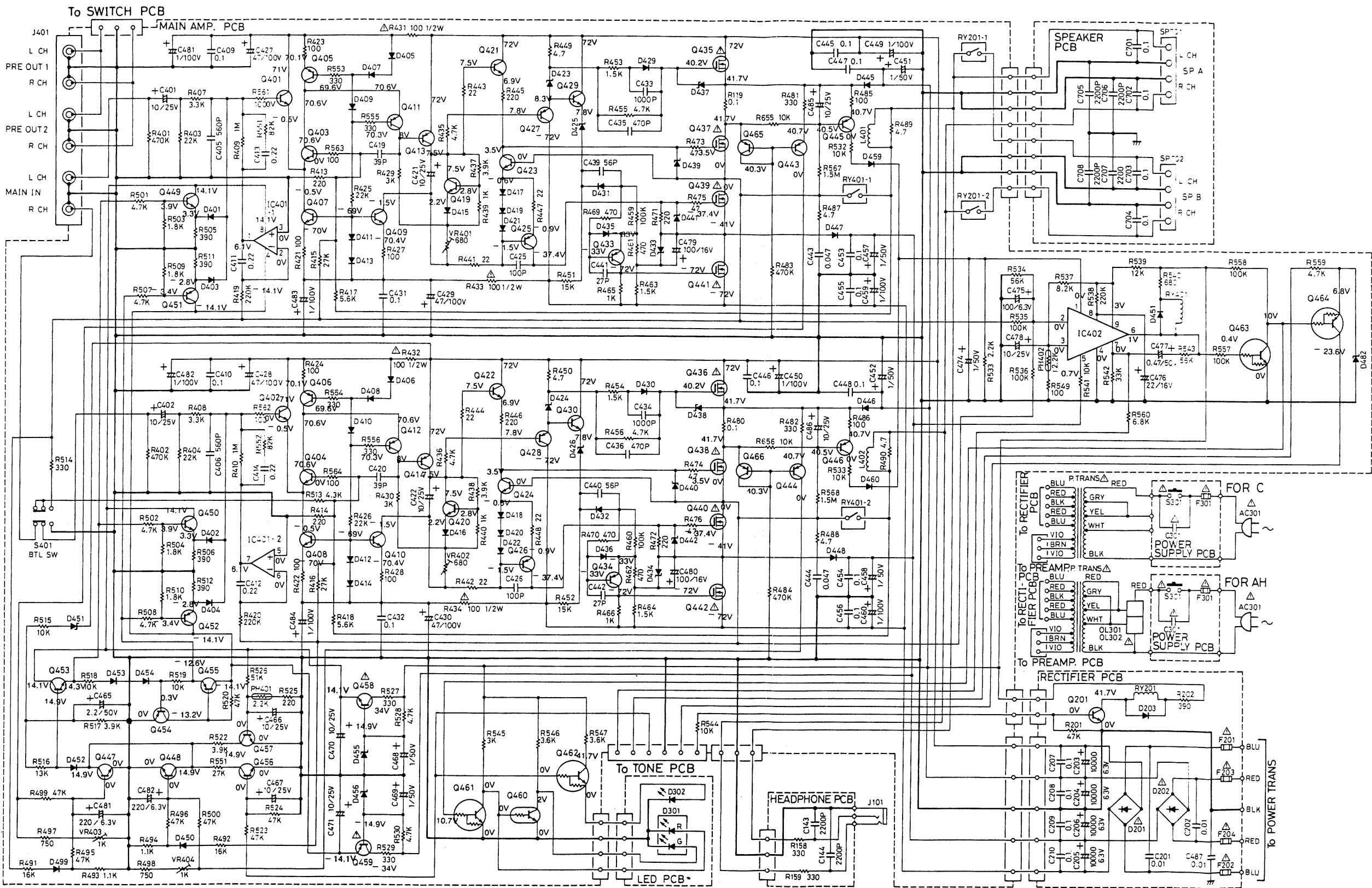
HEADPHONE, LED, SPEAKER, JACK PCB LAYOUT



POWER SUPPLY, VOLUME, SWITCH PCB LAYOUT



NAD306 POWER AMPLIFIER SCHEMATIC DIAGRAM

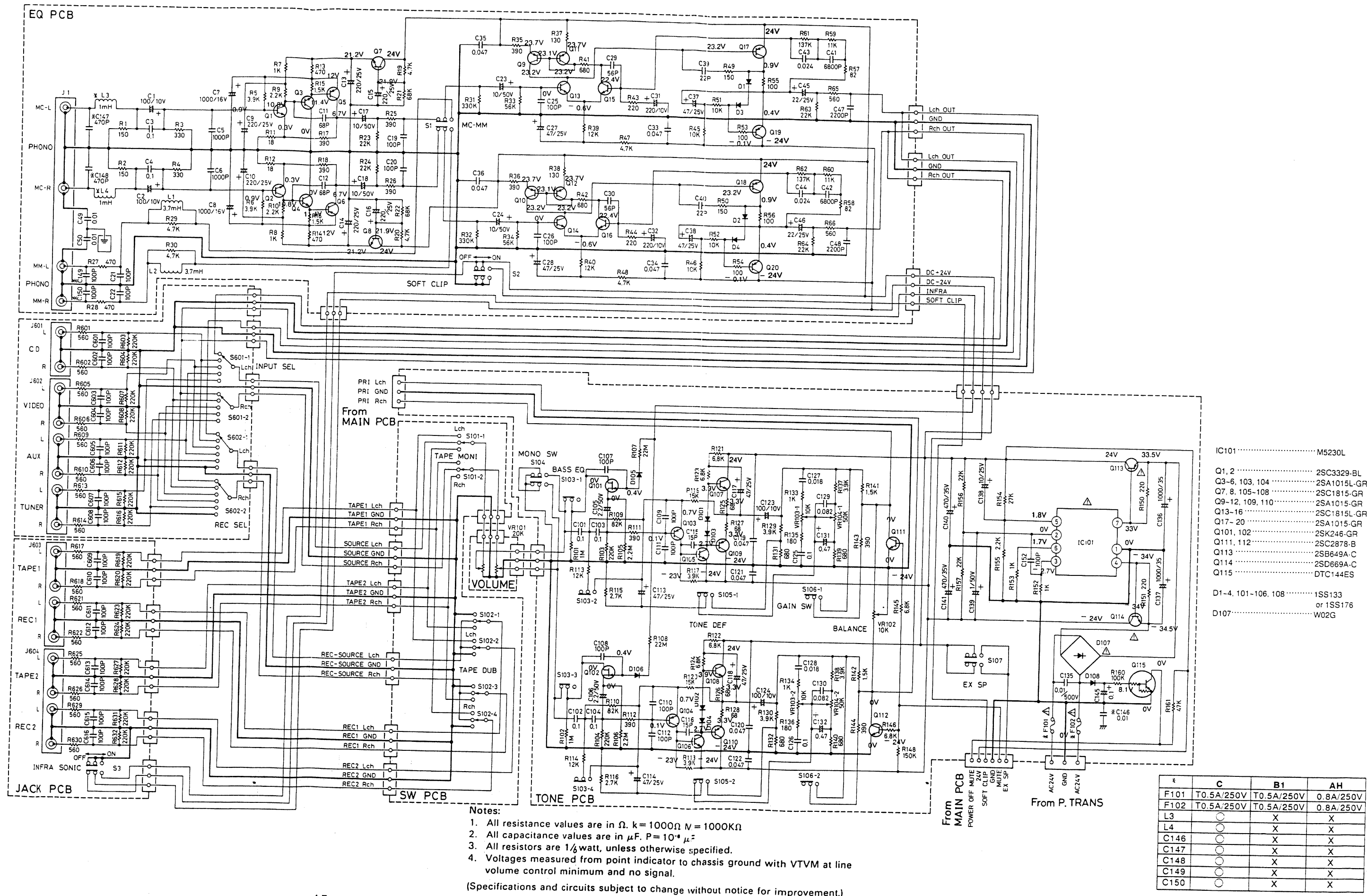


- IC401 NJM72BD
IC402 TA737P
- Q401-404, 413, 414, 2SC2240-BL
423, 424
Q405, 406, 411, 412, 2SA970-BL
443-446, 465, 466
Q407-410 2SC3167-E
Q419, 420 2SC4137-V
Q421, 422, 429, 430, 458 2SD69A-C
Q425-428, 459 2SB69A-C
Q433, 434 2SA1170-E
Q435-442 IRFP240
Q451-453 DTC114ES
Q460 DTC13TS
Q464 DTA114WS
- D201, 202 GBPC302
D203, 401-422, 429-432, 1SS13
435, 436, 449, 450, or 1SS176
452-454, 459-461
D301 TLG26, LED
D302 TLR14, LED
D423, 424, 451, 455, 456 RD15SB2
D425, 426 RD13SB2
D433, 434 RD75SB2
D437-442 RD12SB2
D445-448 BY50C100
D462 RD68SB2

Notes:
1. All resistance values are in Ω . k = 1000 Ω M = 1000K Ω
2. All capacitance values are in μ F. P = 10 μ F
3. All resistors are 1/8 watt, unless otherwise specified.
4. Voltages measured from point indicator to chassis ground with VTVM at line volume control minimum and no signal.
(Specifications and circuits subject to change without notice for improvement.)

	C	B1	1H
F201	T5A/250V	T5A/250V	5A/152V
F202	T5A/250V	T5A/250V	5A/152V
F203	T5A/250V	T5A/250V	5A/152V
F204	T5A/250V	T5A/250V	5A/152V
F301	T2.5A/250V	T2.5A/250V	6.3A/250V

NAD306 PREAMPLIFIER SCHEMATIC DIAGRAM



TRANSISTOR LEAD IDENTIFICATION

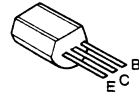
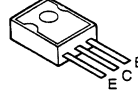
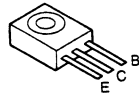
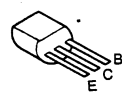
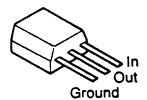
DTC144ES
DTC143TS
DTC144WS

2SA1015-GR
2SA1015L-GR
2SC1815-GR
2SC1815L-GR
2SC2878-R
2SC3329-BL

2SB649A-C
2SD669A-C

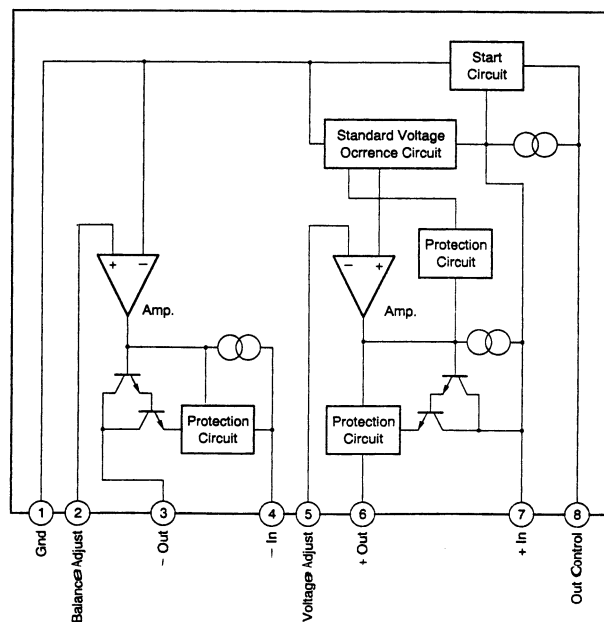
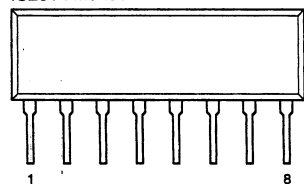
2SC4137-V

2SA1370-E
2SC3467-E

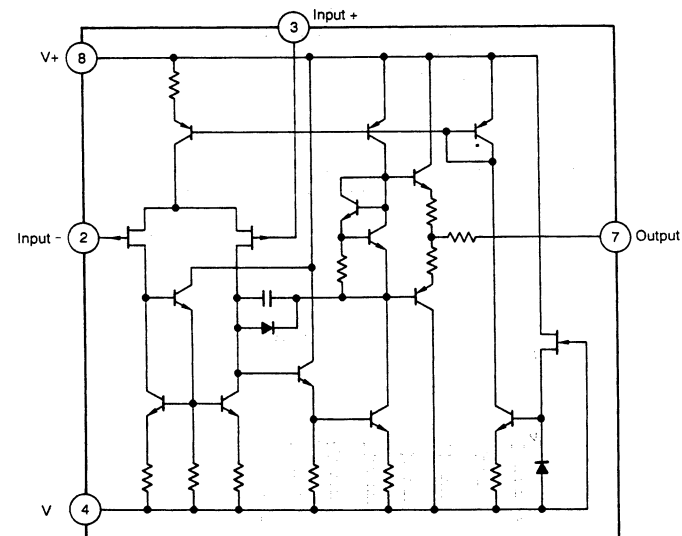
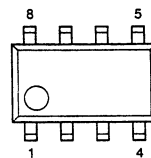


IC IDENTIFICATION AND INTERNAL CIRCUITRY

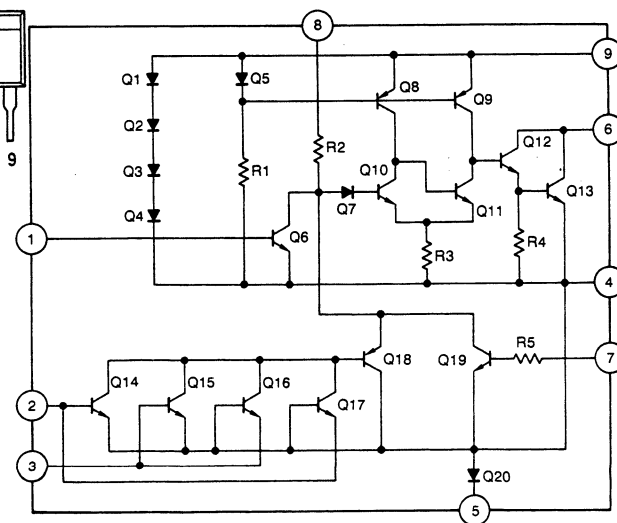
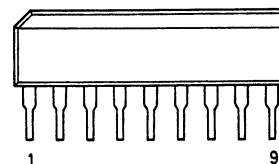
IC201 : M5230L



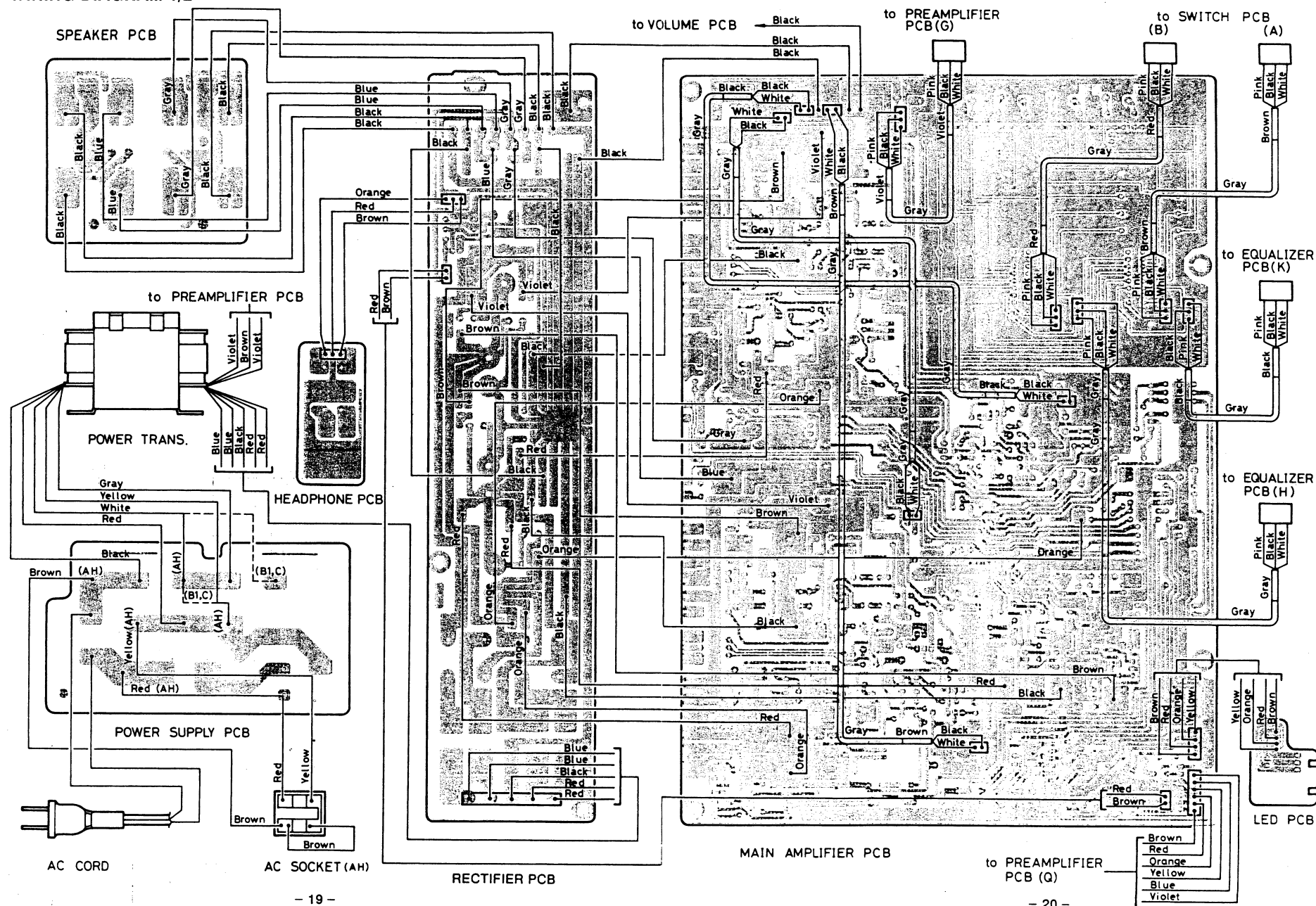
IC401 : NJM072BD



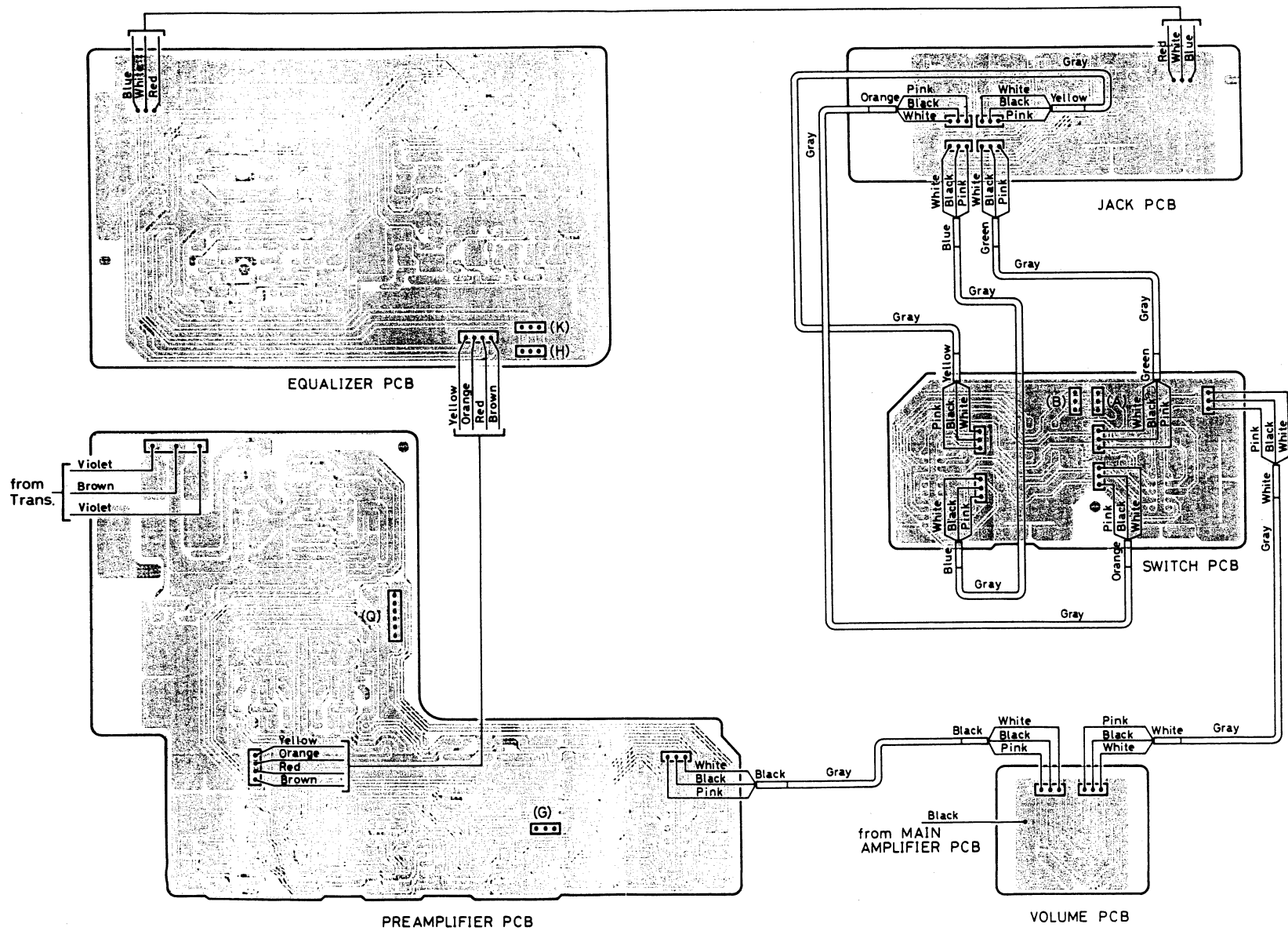
IC402 : TA7317P



WIRING DIAGRAM 1/2



WIRING DIAGRAM 2/2



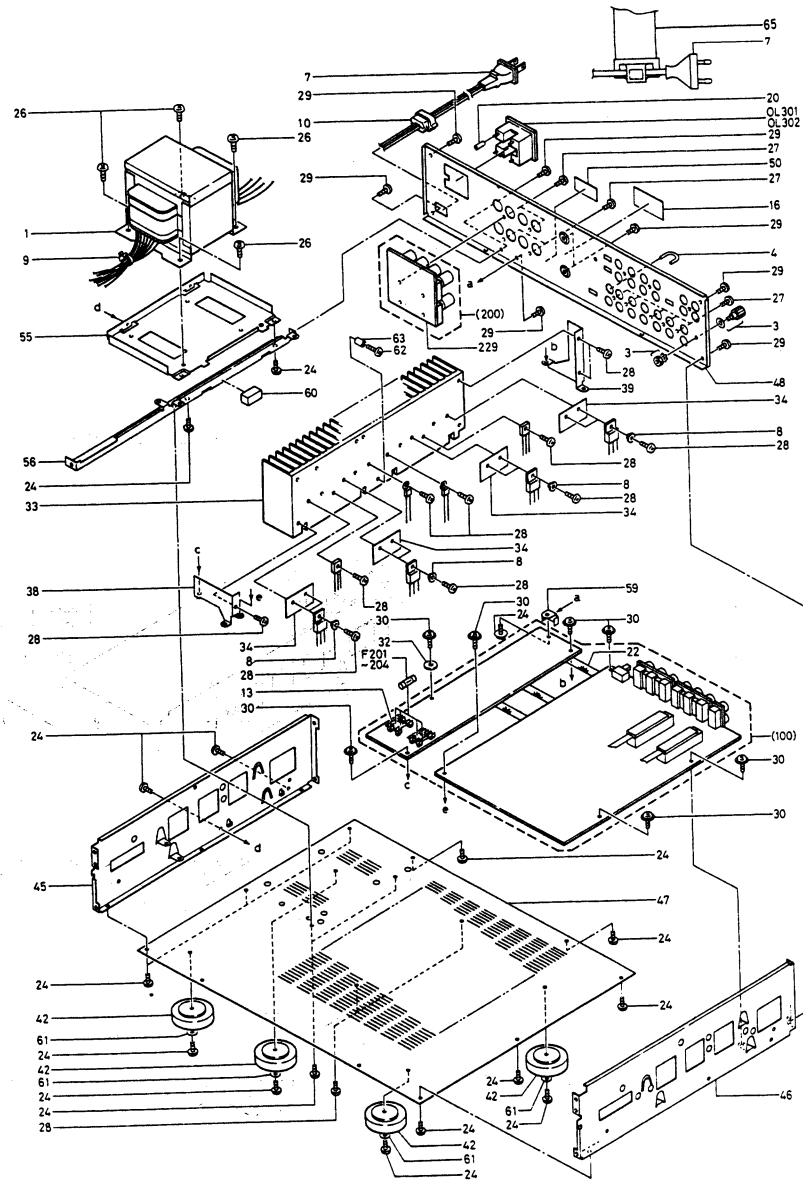
ELECTRICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
Diodes			Capacitors			Resistors			Relays		
D1-4	0915-003-9-50	1SS133	C1, 2	0937-811-0-16	EL, 100 mfd, 10V, ±20%	R1, 2	0926-811-5-12	RN, 150 ohm, 1/4W, ±1%	RY201	0026-085-0-00	Relay
D101-106	0915-003-3-50	1SS176	C3, 4	0933-451-0-44	CF, 0.1 mfd, 50V, ±5%	R3, 4	0926-813-9-12	RN, 330 ohm, 1/4W, ±1%	RY401	0026-085-0-00	Relay
ΔD107	0915-003-3-50	1SS176	C5, 8	9335-451-0-24	CC, 1000 pfd, 50V, ±5%	R5, 6	0926-813-9-22	RN, 3.9k ohm, 1/4W, ±1%			
D108	0915-003-9-50	1SS133	C7, 8	0938-921-0-26	EL, 1000 mfd, 16V, ±20%	R7, 8	0926-861-0-24	RD, 1k ohm, 1/6W, ±5%			
ΔD201, 202	0913-012-2-00	GBPC802	C9, 10	0937-832-2-16	EL, 220 mfd, 25V, ±20%	R9, 10	0926-862-2-23	RD, 2.2k ohm, 1/6W, ±2%			
D203	0915-003-3-50	1SS176	C11, 12	9303-206-8-04	CC, 68 pfd, 50V, ±5%	R11, 12	0926-811-8-02	RN, 18 ohm, 1/4W, ±1%			
D301	0916-029-8-00	TLSG126	C13-16	0937-832-2-16	EL, 220 mfd, 25V, ±20%	R13, 14	0926-864-7-14	RD, 470 ohm, 1/6W, ±5%			
D302	0916-030-4-00	SLR-34YY3F	C17, 18	0937-851-0-06	EL, 10 mfd, 50V, ±20%	R15, 16	0926-861-5-24	RD, 1.5k ohm, 1/6W, ±5%			
Δ401-422	0915-003-9-50	1SS133	C19-22	9303-201-0-14	CC, 100 pfd, 50V, ±5%	R17, 18	0926-813-9-12	RN, 390 ohm, 1/4W, ±1%			
D423, 424	0915-010-7-52	RD15ESB2	C23, 24	0937-851-0-06	EL, 10 mfd, 50V, ±20%	R19, 20	0926-864-7-24	RD, 4.7k ohm, 1/6W, ±5%			
D425, 426	0915-010-6-52	RD15ESB2	C25, 26	9303-201-0-14	CC, 100 pfd, 50V, ±5%	R21, 22	0926-866-8-34	RD, 68k ohm, 1/6W, ±5%			
Δ429-432	0915-003-9-50	1SS133	C27, 28	0937-834-7-06	EL, 47 mfd, 25V, ±20%	R23, 24	0926-862-2-34	RD, 22k ohm, 1/6W, ±5%			
D433, 434	0915-010-1-52	RD7.5ESB2	C29, 30	9303-205-6-04	CC, 56 pfd, 50V, ±5%	R25, 26	0926-863-9-13	RD, 390 ohm, 1/6W, ±2%			
D435, 436	0915-003-9-50	1SS133	C31, 32	0937-812-2-16	EL, 220 mfd, 10V, ±20%	R27, 28	0926-864-7-13	RD, 470 ohm, 1/6W, ±2%			
Δ437-442	0915-010-5-52	RD12ESB2	C33-36	0933-454-7-34	CF, 0.047 mfd, 50V, ±5%	R29, 30	0926-864-7-24	RD, 4.7k ohm, 1/6W, ±5%			
Δ445-448	0913-007-8-00	BY500-100	C37, 38	0937-834-7-06	EL, 47 mfd, 25V, ±20%	R31, 32	0926-863-3-43	RD, 330k ohm, 1/6W, ±2%			
D449, 450	0915-003-3-50	1SS176	C39, 40	9303-202-2-04	CC, 22 pfd, 50V, ±5%	R33, 34	0926-865-6-33	RD, 56k ohm, 1/6W, ±2%			
D451	0915-010-7-52	RD15ESB2	C41, 42	9335-456-8-24	CQ, 6800 pfd, 50V, ±5%	R35, 36	0926-863-9-14	RD, 390 ohm, 1/6W, ±5%			
Δ452-454	0915-003-3-50	1SS176	C43, 44	9330-672-4-34	CQ, 0.024 mfd, 100V, ±5%	R37, 38	0926-861-3-14	RD, 130 ohm, 1/6W, ±5%			
D455, 456	0915-010-7-52	RD15ESB2	C45, 46	0937-832-2-06	EL, 22 mfd, 25V, ±20%	R39, 40	0926-861-2-34	RD, 12k ohm, 1/6W, ±5%			
Δ459-461	0915-003-9-50	1SS133	C47, 48	9335-452-2-24	CQ, 2200 pfd, 50V, ±5%	R41, 42	0926-865-8-14	RD, 680 ohm, 1/6W, ±5%			
D462	0915-010-0-52	RD6.8ESB2	C49, 50	0931-551-0-39	CC, 0.01 mfd, 50V, ±80%, -20%	R43, 44	0926-862-2-13	RD, 220 ohm, 1/6W, ±2%			
IC's			Switches			R45, 46	0926-861-0-34	RD, 10k ohm, 1/6W, ±5%			
ΔIC201	0911-106-5-00	M5230L	S1-3	0028-246-0-00	Slide Switch	R47, 48	0926-864-7-24	RD, 4.7k ohm, 1/6W, ±5%			
IC401	0911-156-5-00	NJM072BD	S101	0028-864-1-00	Lever Switch, 00230744	R49, 50	0926-861-5-14	RD, 150 ohm, 1/6W, ±5%			
IC402	0911-057-9-00	TA7317P	S102	0028-865-1-00	Lever Switch, 00431049	R51, 52	0926-861-0-34	RD, 10k ohm, 1/6W, ±5%			
Transistors			S103, 104	0028-038-0-00	Push Switch Set, XR21K30K	R53-56	0926-861-0-14	RD, 100 ohm, 1/6W, ±5%			
Q1, 2	0906-229-7-56	2SC3329-BL	S105	0028-006-0-00	Push Switch	R57, 58	0926-868-2-04	RD, 82 ohm, 1/6W, ±5%			
Q3-6	0900-007-4-55	2SA1015L-GR	S106, 107	0028-038-0-00	Push Switch Set, XR21K30K	R59, 60	0926-861-1-33	RD, 11k ohm, 1/6W, ±2%			
Q7, 8	0906-200-4-55	2SC1815-GR	ΔS301	0028-044-0-00	Push Switch	R61, 62	0926-914-5-50	RN, 137k ohm, 1/4W, ±1%			
Q9-12	0906-200-2-55	2SA1015-GR	S401	0028-246-0-00	Slide Switch	R63, 64	0926-862-2-34	RD, 22k ohm, 1/6W, ±5%			
Q13-16	0902-014-6-55	2SC1815L-GR	S601, 602	0028-354-0-00	Slide Switch, SSSR22	R65, 66	0926-865-6-14	RD, 560 ohm, 1/6W, ±5%			
Q17-20	0906-200-2-55	2SA1015-GR	Fuses								
Q101, 102	0909-000-3-55	2SK246-GR	ΔF101, 102	0045-074-0-21	800mA/250V AH						
Q103, 104	0900-007-4-55	2SA1015L-GR	ΔF101A, 102A	0045-002-1-41	T. 500mA/250V B1, C						
Q105-108	0906-200-4-55	2SC1815-GR	ΔF201-204	0045-079-0-21	5A/125V AH						
Q109, 110	0906-200-2-55	2SA1015-GR	ΔF201A-F204A	0045-207-0-41	T. 5A/250V B1, C						
Q111, 112	0906-203-5-02	2SC2878-B	ΔF301	0045-080-0-21	6.3A/125V AH						
Q113	0901-003-8-03	2SB689A-C	ΔF301A	0045-023-0-41	T. 2.5A/250V B1, C						
Q114	0903-006-3-03	2SD689A-C	Thermistors								
Q115	0906-206-2-05	OTC144ESTP	PH401	0918-003-7-00	PTH9M-BD222						
Q201	0906-200-4-55	2SC1815-GR	PH402	0918-003-5-00	PTH9M-BC222						
Q401-404	0906-229-6-56	2SC2240-BL	Speaker Terminals								
Q405, 406	0906-207-7-56	2SA970-BL	SP701, 702	0033-262-0-00	Speaker Terminal						
Q407-410	0902-014-5-05	2SC3467-E	Relays								
Q411, 412	0906-207-7-56	2SA970-BL	RY201	0026-085-0-00	Relay						
Q413, 414	0906-229-6-56	2SC2240-BL	RY401	0026-085-0-00	Relay						
Q419, 420	0902-014-4-22	2SC4137-V	AC Socket								
Q421, 422	0903-006-3-03	2SD689A-C	ΔOL301, 302	0033-038-0-00	Socket AH						
Q423, 424	0906-229-6-56	2SC2240-BL									
Q425-428	0901-003-8-03	2SB689A-C									
Q429, 430	0903-006-3-03	2SD689A-C									
Q433, 434	0900-007-3-05	2SA1370-E									
ΔQ435-442	0909-003-0-00	IRFP240									
Q443-446	0906-207-7-56	2SA970-BL									
Q447-450	0906-200-4-55	2SC1815-GR									
Q451, 452	0906-200-2-55	2SA1015-GR									
Q453	0906-200-4-55	2SC1815-GR									
Q454, 455	0906-200-2-55	2SA1015-GR									

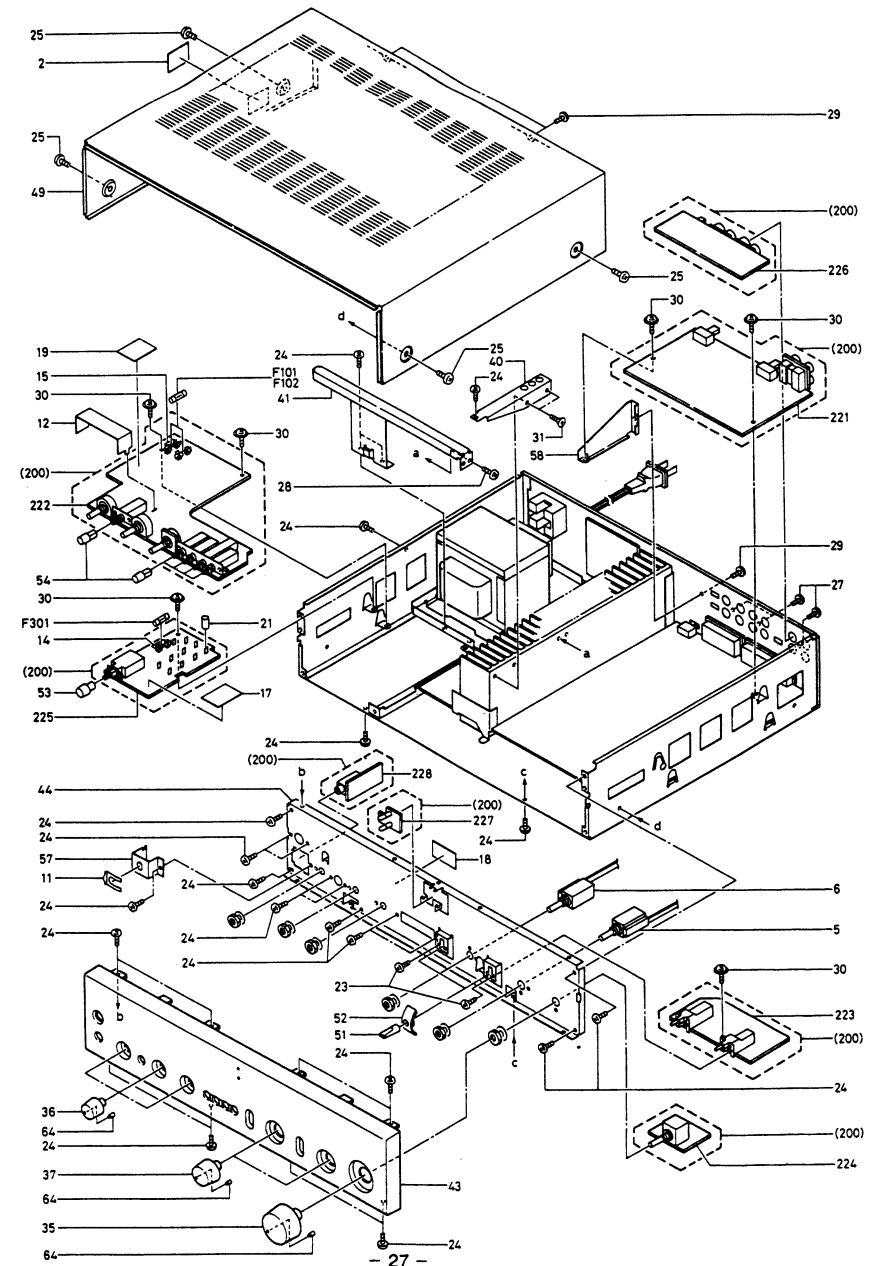
Ref. No.	Part No.	Description	
R103, 104	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R105, 106	0928-862-2-54	RD, 2.2M ohm, 1/6W, ±5%	
R107, 108	0928-913-9-00	RD, 22M ohm, 1/4W, ±5%	
R109, 110	0928-863-2-34	RD, 32k ohm, 1/6W, ±5%	
R111, 112	0928-863-9-14	RD, 390 ohm, 1/6W, ±5%	
R113, 114	0928-861-2-34	RD, 12k ohm, 1/6W, ±5%	
R115, 116	0928-862-7-23	RD, 2.7k ohm, 1/6W, ±2%	
R117, 118	0928-863-9-24	RD, 3.9k ohm, 1/6W, ±5%	
R119, 120	0928-861-5-33	RD, 15k ohm, 1/6W, ±2%	
R121-124	0928-866-2-24	RD, 6.8k ohm, 1/6W, ±5%	
R125-128	0928-866-8-04	RD, 68 ohm, 1/6W, ±5%	
R129, 130	0928-863-9-23	RD, 3.9k ohm, 1/6W, ±2%	
R131, 132	0928-866-8-13	RD, 680 ohm, 1/6W, ±2%	
R133, 134	0928-861-0-24	RD, 1k ohm, 1/6W, ±5%	
R135, 136	0928-861-8-14	RD, 180 ohm, 1/6W, ±5%	
R137, 138	0928-863-9-23	RD, 3.9k ohm, 1/6W, ±2%	
R139, 140	0928-866-8-14	RD, 680 ohm, 1/6W, ±5%	
R141, 142	0928-861-5-23	RD, 1.5k ohm, 1/6W, ±2%	
R143, 144	0928-863-9-13	RD, 390 ohm, 1/6W, ±2%	
R145, 146	0928-866-8-24	RD, 6.8k ohm, 1/6W, ±5%	
R148	0928-861-5-44	RD, 150k ohm, 1/6W, ±5%	
R150, 151	0925-422-2-14	RS, 22k ohm, 1/2W, ±5%	
R152, 153	0928-861-0-24	RD, 1k ohm, 1/6W, ±5%	
R154	0928-862-7-33	RD, 27k ohm, 1/6W, ±2%	
R155	0928-862-2-23	RD, 2.2k ohm, 1/6W, ±2%	
R156, 157	0928-862-2-33	RD, 22k ohm, 1/6W, ±2%	
R158, 159	0925-433-3-14	RS, 330 ohm, 1W, ±5%	
R160	0928-861-0-44	RD, 100k ohm, 1/6W, ±5%	
R161	0928-864-7-34	RD, 47k ohm, 1/6W, ±5%	
R201	0928-864-7-34	RD, 47k ohm, 1/6W, ±5%	
R202	0925-423-9-14	RS, 390 ohm, 1/2W, ±5%	
R401, 402	0928-864-7-44	RD, 470k ohm, 1/6W, ±5%	
R403, 404	0928-862-2-34	RD, 22k ohm, 1/6W, ±5%	
R407, 408	0928-863-3-24	RD, 3.3k ohm, 1/6W, ±5%	
R409, 410	0928-861-0-54	RD, 1M ohm, 1/6W, ±5%	
R413, 414	0928-812-2-13	RD, 220 ohm, 1/4W, ±2%	
R415, 416	0925-422-7-33	RS, 27k ohm, 1/2W, ±2%	
R417, 418	0925-435-6-23	RS, 5.6k ohm, 1W, ±2%	
R419, 420	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R421, 422	0928-861-0-14	RD, 100 ohm, 1/6W, ±5%	
R423, 424	0928-811-0-14	RD, 100 ohm, 1/4W, ±5%	
R425, 426	0925-442-2-34	RS, 22k ohm, 2W, ±5%	
R427, 428	0928-861-0-14	RD, 100 ohm, 1/6W, ±5%	
R429, 430	0925-443-0-24	RS, 3k ohm, 2W, ±5%	
ΔR431-434	0926-221-0-14	RN, 100 ohm, 1/2W, ±5%	
R435, 436	0928-864-7-24	RD, 4.7k ohm, 1/6W, ±5%	
R437, 438	0928-863-9-24	RD, 3.9k ohm, 1/6W, ±5%	
R439, 440	0928-861-0-24	RD, 1k ohm, 1/6W, ±5%	
R441-444	0928-862-2-04	RD, 22 ohm, 1/6W, ±5%	
R445, 446	0928-812-2-14	RD, 220 ohm, 1/4W, ±5%	
R447, 448	0928-812-2-04	RD, 22 ohm, 1/4W, ±5%	
R449, 450	0925-434-7-24	RS, 4.7k ohm, 1W, ±5%	
R451, 452	0928-861-5-34	RD, 1.5k ohm, 1/6W, ±5%	
R453, 454	0928-861-5-24	RD, 1.5k ohm, 1/6W, ±5%	
R455, 456	0928-864-7-24	RD, 4.7k ohm, 1/6W, ±5%	
R459, 460	0928-861-0-44	RD, 100k ohm, 1/6W, ±5%	
R461, 462	0928-864-7-14	RD, 470 ohm, 1/6W, ±5%	
R463, 464	0925-431-5-24	RS, 1.5k ohm, 1W, ±5%	
R465, 466	0928-861-0-24	RD, 1k ohm, 1/6W, ±5%	
R469, 470	0928-864-7-14	RD, 470 ohm, 1/6W, ±5%	
R471, 472	0928-812-2-14	RD, 220 ohm, 1/4W, ±5%	
R473-476	0925-424-7-04	RS, 47 ohm, 1/2W, ±5%	
R479, 480	0928-914-6-00	RD, 0.1 ohm, 2W, ±5%	
R481, 482	0926-613-3-12	RN, 330 ohm, 1/4W, ±1%	
R483, 484	0928-864-7-44	RD, 470k ohm, 1/6W, ±5%	
R485, 486	0928-861-0-14	RD, 100 ohm, 1/6W, ±5%	

Ref. No.	Part No.	Description	
R487-490	0925-444-7-84	RS, 4.7 ohm, 2W, ±5%	
R491, 492	0926-611-6-32	RN, 16k ohm, 1/4W, ±1%	
R493, 494	0926-611-1-22	RN, 1.1k ohm, 1/4W, ±1%	
R495, 496	0928-864-7-34	RD, 47k ohm, 1/6W, ±5%	
R497, 498	0928-867-5-14	RD, 750 ohm, 1/6W, ±5%	
R499, 500	0928-864-7-34	RD, 47k ohm, 1/6W, ±5%	
R501, 502	0928-864-7-24	RD, 4.7k ohm, 1/6W, ±5%	
R503, 504	0928-861-8-24	RD, 1.8k ohm, 1/6W, ±5%	
R505, 506	0928-863-9-14	RD, 390 ohm, 1/6W, ±5%	
R507, 508	0928-864-7-24	RD, 4.7k ohm, 1/6W, ±5%	
R509, 510	0928-861-8-24	RD, 1.8k ohm, 1/6W, ±5%	
R511, 512	0928-863-9-14	RD, 390 ohm, 1/6W, ±5%	
R513	0925-424-3-23	RS, 4.3k ohm, 1/2W, ±2%	
R514	0928-863-3-13	RD, 330 ohm, 1/6W, ±2%	
R515	0925-421-0-34	RS, 10k ohm, 1/2W, ±5%	
R516	0928-861-3-34	RD, 13k ohm, 1/6W, ±5%	
R517	0928-863-9-24	RD, 3.9k ohm, 1/6W, ±5%	
R518, 519	0928-861-0-34	RD, 10k ohm, 1/6W, ±5%	
R520	0928-864-7-34	RD, 47k ohm, 1/6W, ±5%	
R521	0928-862-7-34	RD, 27k ohm, 1/6W, ±5%	
R522	0928-863-9-24	RD, 3.9k ohm, 1/6W, ±5%	
R523, 524	0928-864-7-34	RD, 47k ohm, 1/6W, ±5%	
R525	0928-862-2-14	RD, 220 ohm, 1/6W, ±5%	
R526	0928-865-1-34	RD, 51k ohm, 1/6W, ±5%	
R527	0928-813-3-14	RD, 330 ohm, 1/4W, ±5%	
R528	0928-864-7-24	RD, 4.7k ohm, 1/6W, ±5%	
R529	0928-813-3-14	RD, 330 ohm, 1/4W, ±5%	
R530	0928-864-7-24	RD, 4.7k ohm, 1/6W, ±5%	
R531, 532	0928-861-0-34	RD, 10k ohm, 1/6W, ±5%	
R533	0928-862-2-24	RD, 2.2k ohm, 1/6W, ±5%	
R534	0928-865-6-34	RD, 56k ohm, 1/6W, ±5%	
R535, 536	0928-861-0-44	RD, 100k ohm, 1/6W, ±5%	
R537	0928-868-2-24	RD, 8.2k ohm, 1/6W, ±5%	
R538	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R539	0928-861-2-34	RD, 12k ohm, 1/6W, ±5%	
R540	0925-426-8-14	RS, 680 ohm, 1/2W, ±5%	
R541	0928-861-0-34	RD, 10k ohm, 1/6W, ±5%	
R542	0928-863-3-34	RD, 33k ohm, 1/6W, ±5%	
R543	0928-865-6-34	RD, 56k ohm, 1/6W, ±5%	
R544	0928-861-0-34	RD, 10k ohm, 1/6W, ±5%	
R545	0925-433-0-24	RS, 3k ohm, 1W, ±5%	
R546, 547	0925-433-6-24	RS, 3.6k ohm, 1W, ±5%	
R549	0928-861-0-14	RD, 100 ohm, 1/6W, ±5%	
R551, 552	0928-868-2-34	RD, 82k ohm, 1/6W, ±5%	
R553-556	0928-863-3-14	RD, 330 ohm, 1/6W, ±5%	
R557, 558	0928-861-0-44	RD, 100k ohm, 1/6W, ±5%	
R559	0928-864-7-24	RD, 4.7k ohm, 1/6W, ±5%	
R560	0928-868-8-24	RD, 6.8k ohm, 1/6W, ±5%	
R561-564	0928-861-0-14	RD, 100 ohm, 1/6W, ±5%	
R565, 566	0928-861-0-34	RD, 10k ohm, 1/6W, ±5%	
R567, 568	0928-861-5-54	RD, 1.5M ohm, 1/6W, ±5%	
R601, 602	0928-865-6-14	RD, 560 ohm, 1/6W, ±5%	
R603, 604	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R605, 606	0928-865-6-14	RD, 560 ohm, 1/6W, ±5%	
R607, 608	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R609, 610	0928-865-6-14	RD, 560 ohm, 1/6W, ±5%	
R611, 612	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R613, 614	0928-865-6-14	RD, 560 ohm, 1/6W, ±5%	
R615, 616	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R617, 618	0928-865-6-14	RD, 560 ohm, 1/6W, ±5%	
R619, 620	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R621, 622	0928-865-6-14	RD, 560 ohm, 1/6W, ±5%	
R623, 624	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R625, 626	0928-865-6-14	RD, 560 ohm, 1/6W, ±5%	
R627, 628	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	
R629, 630	0928-865-6-14	RD, 560 ohm, 1/6W, ±5%	
R631, 632	0928-862-2-44	RD, 220k ohm, 1/6W, ±5%	

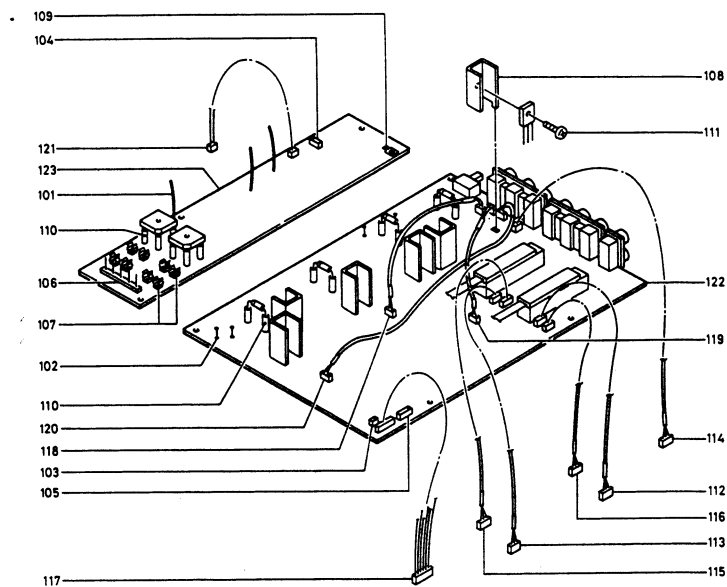
EXPLODED VIEW 1



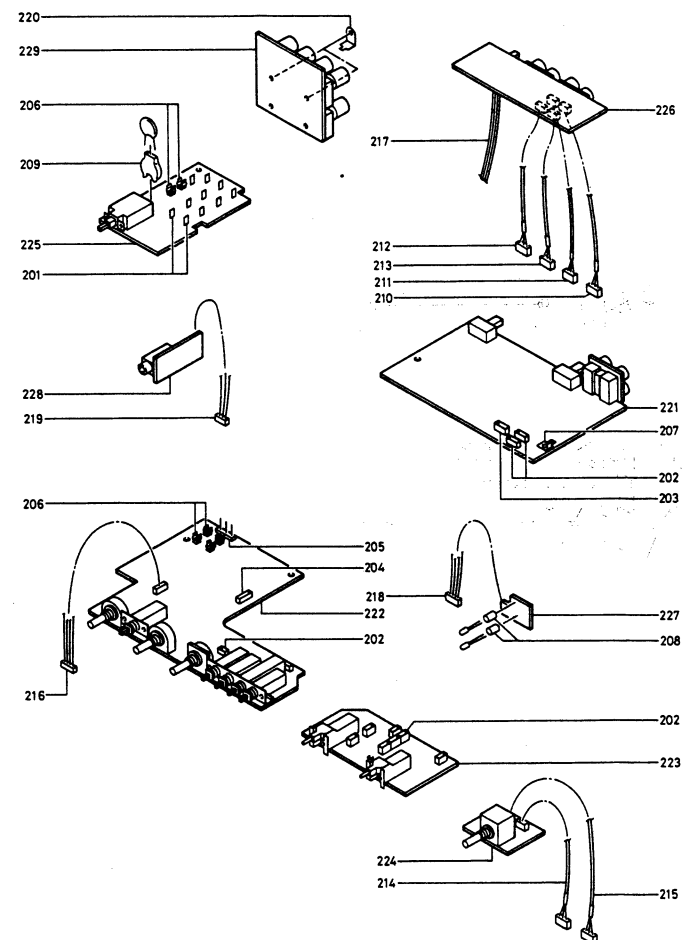
EXPLODED VIEW 2



EXPLODED VIEW 3



EXPLODED VIEW 4

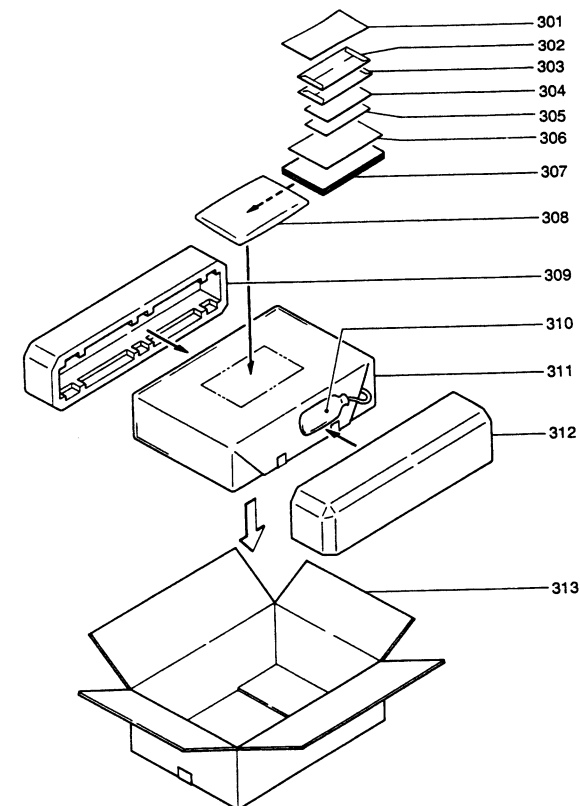


EXPLODED VIEWS PARTS LIST

Ref. No.	Part No.	Description	Q'ty
1	0019-915-0-00	Power Trans, E185 x 60	1
2	0074-129-0-00	Caution Label	AH 2
3	0033-216-0-00	Earth Terminal	1
4	0034-485-0-00	Short Pin	2
5	0036-039-0-00	Rotary Switch	1
6	0036-040-0-00	Rotary Switch	1
7	0047-168-1-20	AC Cord with Plug	AH 1
7a	0047-284-0-00	AC Cord with Plug	B1 1
7b	0047-231-1-21	AC Cord	C 1
8	0064-522-0-00	Insulation Collar	8
9	0064-831-0-50	Bar Lock Cable Tie	AH 37
9a	0064-831-0-50	Bar Lock Cable Tie	B1, C 39
10	0064-865-0-00	Cord Bushing	1
11	0065-370-0-00	Mount Plate J	1
12	1417-727-0-00	Shield Cover	1
13	0074-005-1-50	Fuse Label (5A/125V)	AH 4
14	0074-005-1-51	Fuse Label (6.3A/125V)	AH 1
15	0074-005-1-54	Fuse Label (800mA/250V)	AH 2
16	0074-056-0-00	CSA Label	AH 1
17	0074-094-0-14	Fuse Caution Label (6.3A)	AH 1
18	0074-094-0-17	Fuse Caution Label	AH 1
19	0074-094-0-15	Fuse Caution Label (800mA)	AH 1
20	0652-500-0-15	PT-AWG4 x 15	AH 8
21	0652-600-0-15	PT-AWG3 x 15	AH 10
21a	0652-600-0-15	PT-AWG3 x 15	B1, C 7
22	0655-310-0-70	GT-HG4E 10 x 70	3
23	0671-830-0-65	P3 x 6-SK-S (Screw)	2
24	0672-730-0-65	ST Screw B3 x 6-SK	45
25	0672-740-0-63	ST Screw B4 x 6-SBK	4
26	0672-740-0-65	ST Screw B4 x 6-SK	4
27	0673-230-0-83	BT Screw B3 x 8-SBK	12
28	0673-230-0-85	BT Screw B3 x 8-SK	18
29	0675-030-0-63	CT Screw B3 x 6-SBK	11
30	0675-130-0-65	ST Screw PF3 x 6-SK	13
31	0677-630-0-65	ST Screw L3 x 6-SK	2
32	0987-001-7-00	W032100080SN (Washer)	1
33	1417-728-0-00	Heat Sink	1
34	1417-730-0-00	Silicone Sheet	4
35	1417-867-0-01	VR Knob	1
36	1417-868-0-01	Tone Knob	3
37	1417-869-0-01	Selector Knob	2
38	1417-790-0-00	HS Bracket F	1
39	1417-791-0-00	HS Bracket R	1
40	1417-792-0-00	HS Angle	1
41	1417-796-0-00	T RFM Frame	1
42	1417-798-0-01	Foot	4
43	1417-802-0-01	Front Panel Set	1
44	1417-807-0-00	Front Chassis	1
45	1417-808-0-00	Side Chassis L	1
46	1417-809-0-00	Side Chassis R	1
47	1417-816-0-00	Bottom Plate	1
48	1417-817-0-01	Rear Panel	AH 1
48a	1417-818-0-01	Rear Panel	B1, C 1
49	1417-819-0-01	Metal Case	1
50	1417-856-0-00	Serial No Label	1
51	1417-863-0-01	Lever Knob	2
52	1417-864-0-01	Blind Cover	2
53	1417-865-0-01	Power Knob	1
54	1417-866-0-01	Push Knob	5
55	1417-883-0-00	Trans Chassis	1
56	1417-884-0-00	Trans Frame	1
57	1417-888-0-00	P Jack Holder	1
58	1417-888-0-00	PCB Bracket	1
59	1802-831-0-00	PCB Holder B	1
60	0062-080-0-00	Cushion	1

Product Safety Note: Products marked with a Δ have special characteristics important to safety. Before replacing any of these components read carefully the product safety notice of this Service Manual. Don't degrade the safety of the product.

PACKING DIAGRAM



Parts List

Ref. No.	Part No.	Description	Q'ty
301	1493-650-0-00	Congratulation Card	AH 1
302	1493-930-0-01	Envelope	AH 1
303	1493-930-0-02	Envelope	AH 1
304	1493-921-0-02	Guarantee Card	AH 1
305	1493-921-0-03	Guarantee Card	AH 1
306	0074-233-0-00	Safety Instruction	AH 1
307	1417-920-0-01	Instruction	1
308	0998-000-6-00	PS-24 x 36 (Poly. Bag)	1
309	1417-900-0-00	Styrofoam F	1
310	0998-103-6-00	HS-10 x 20.3-3 (Poly. Bag)	1
311	0998-101-7-00	HS-58 x 55.5 (Poly. Bag)	1
312	1417-901-0-00	Styrofoam R	1
313	1417-910-0-01	Gift Box	1