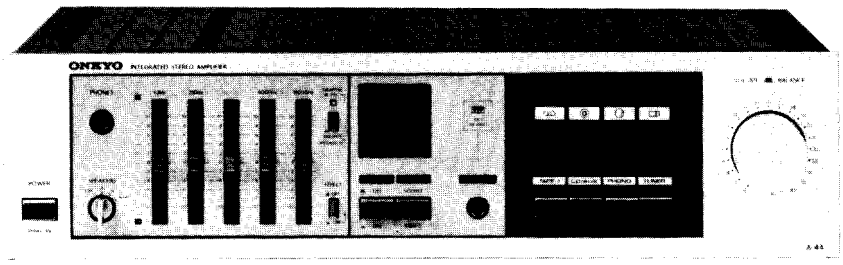
SERIAL NO. 3156

ONKYO SERVICE MANUAL

INTEGRATED STEREO AMPLIFIER

MODEL A-44



Silver model and black model

UDN, UD	120V AC, 60Hz
UGV, UG	220V AC, 50Hz
UW	120V or 220V AC, 50/60Hz
UQA, UQB	240V AC, 50Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

TABLE OF CONTENTS

ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

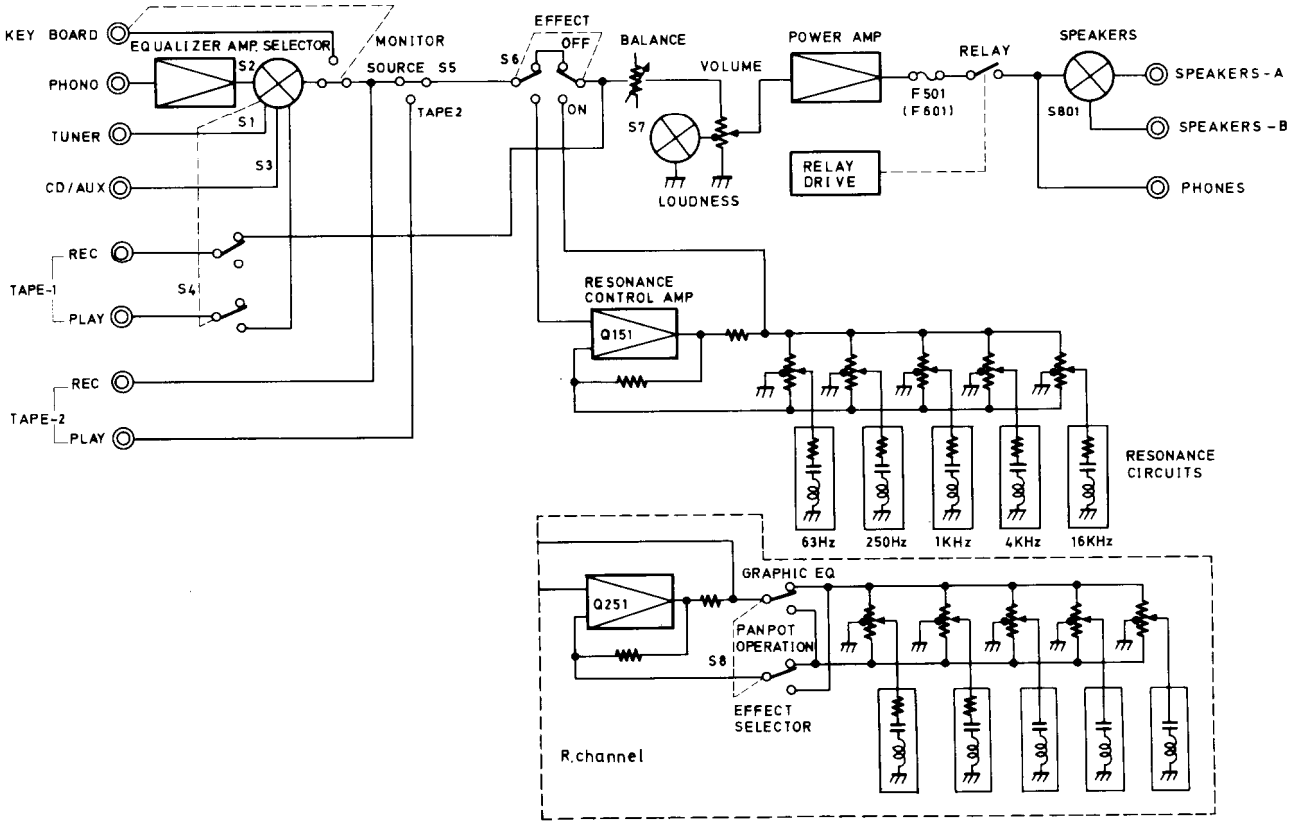
Music Power Output:	2 x 120 watts at 4 ohms, 1 kHz (DIN) 2 x 80 watts at 8 ohms, 1 kHz (DIN)
Continuous Power Output:	2 x 75 watts at 4 ohms, 1 kHz (DIN) 2 x 50 watts at 8 ohms, 1 kHz (DIN) 45 watts per channel min. RMS at 8 ohms both channels driven, from 20 Hz to 20 kHz, with no more than 0.04% THD.
U.S. & Canadian models:	50 watts per channel min. RMS at 8 ohms, both channels driven, from 40 Hz to 20 kHz, with no more than 0.5% THD.
Total Harmonic Distortion:	0.04% at 45W
IM Distortion:	0.04% at 45 W
Damping Factor:	50 at 8 ohms
Frequency Response:	15 – 30,000 Hz ±1 dB
Sensitivity and Impedance:	Phono: 2.5 mV/50 kohms CD/AUX, TUNER: 150 mV/50 kohms Tape Play: 150 mV/50 kohms Tape Rec: 150 mV/5 kohms (PH) Keyboard: 150mV/25 kohms
Phono Overload:	180 mV RMS at 1 kHz, 0.04% THD
Level Controls:	±12 dB – 63 Hz, 250 Hz, 1,000 Hz, 4,000 Hz, 16,000 Hz
Signal to Noise Ratio:	Phono: 75 dB (IHF A-202, 5 mV input, 1 watt output) Tuner, CD/AUX: 80 dB (IHF A-202, 0.5 V input, 1 watt output)
Loudness:	+6 dB at 70 Hz +5 dB at 20 kHz

General

Power Supply:	European model AC 220 V 50 Hz U.S.A. & Canadian model AC 120 V, 60 Hz British and Australian model AC 240 V 50 Hz Universal model AC 120/220 V 50/60 Hz
Semiconductors:	10 ICs, 2 transistors, 17 diodes
Dimensions:	418(W) x 112(H) x 275(D) mm 16-1/2" x 4-1/2" x 10-13/16"
Weight:	6,2 kgs, 13,7 lbs.

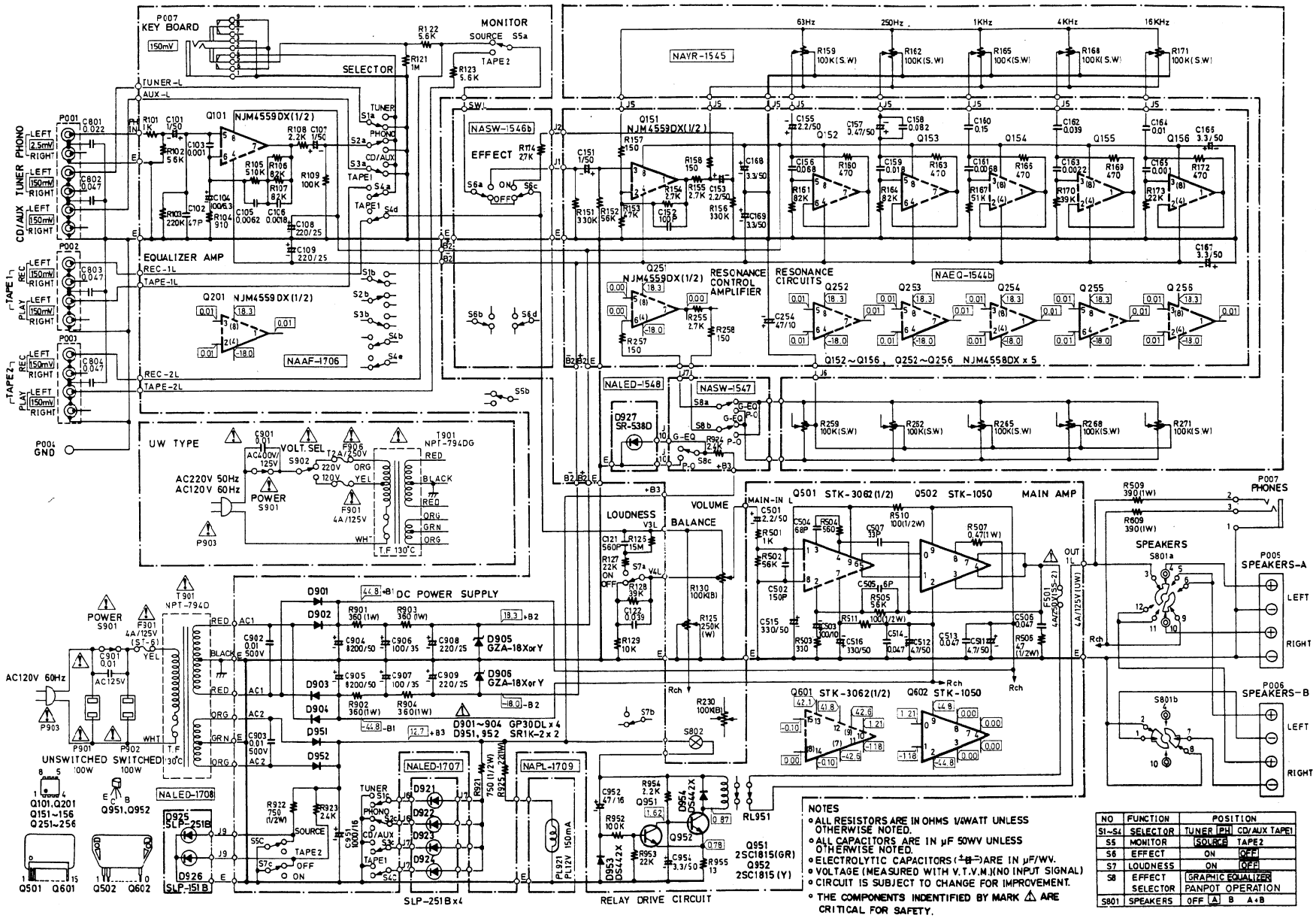
Specifications and features are subject to change without notice.

BLOCK DIAGRAM



SCHEMATIC DIAGRAM

120V Model, 120V/220V Model



NOTES

- ALL RESISTORS ARE IN OHMS 1/4WATT UNLESS OTHERWISE NOTED.
- ALL CAPACITORS ARE IN μF 50WV UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (+B-) ARE IN μF/WV.
- VOLTAGE (MEASURED WITH V.T.V.M.)(NO INPUT SIGNAL)
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
- THE COMPONENTS INDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLASE ONLY WITH PART NUMBER SPECIFIED.

NO	FUNCTION	POSITION
S1~S4	SELECTOR	TUNER PH CD/AUX TAPE1
S5	MONITOR	SOURCE TAPE2
S6	EFFECT	ON OFF
S7	LOUDNESS	ON OFF
S8	EFFECT SELECTOR	GRAPHIC EQUALIZER / PANPOT OPERATION
S801	SPEAKERS	OFF A B A+B

PRECAUTIONS

1. **Replacing the fuse**
For continued protection against risk fire, replace only with same type and same rating fuse.

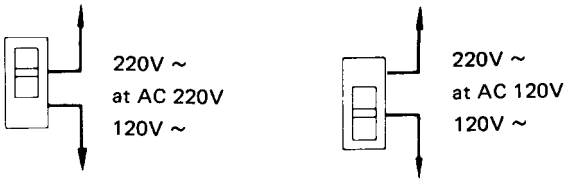
CIRCUIT NO.	PARTS NO.	DESCRIPTION
F901	252049	4A (ST-6), AC fuse (120V, model)
F901	252074	2A-SE-EAK, AC fuse (220V, 240V model)
F901	252014	4A-T, AC fuse (120V/220V model)
F902, F903	252078	5A-SE-EAK, AC fuse (220V, 240V model)
F904, F905	252063	500mA-SE-EAWK, AC fuse (220V, 240V model)
F906	252074	2A-SE-EAK, AC fuse (120V/220V model)
F501, F601	252059	4A (SS-2), Speaker fuse (120V model)
F501, F601	252077	4A-SE-EAK, Speaker fuse (220V, 240V model)
F501, F601	252014	4A-T, Speaker fuse (120V/220V model)

2. **Replacing the lamp**
This unit uses the lamp listed below.

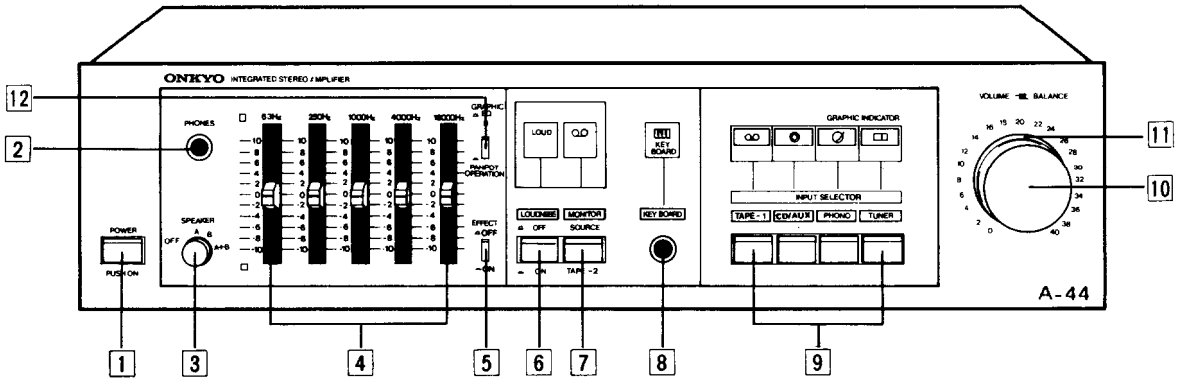
CIRCUIT NO.	PARTS NO.	DESCRIPTION
PL921	210065B	PL 12V 150mA

3. **Insulation resistance mesurement**
Connect the insulating-resistance tester between the plug of power supply cable and the terminal GND on the back panel.
Specification; 500V more than 10MΩ

4. **Voltage selector (rear panel)**
Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on. Voltage is changed by sliding the groove in the switch with a screw-driver or similar instrument to the up or down position. Confirm that the switch has been moved all the way to the up or down before turning the power switch on. If there is no voltage selector switch on the unit you have purchased, it can only be used in areas where the power supply voltage is the same as that of the unit.



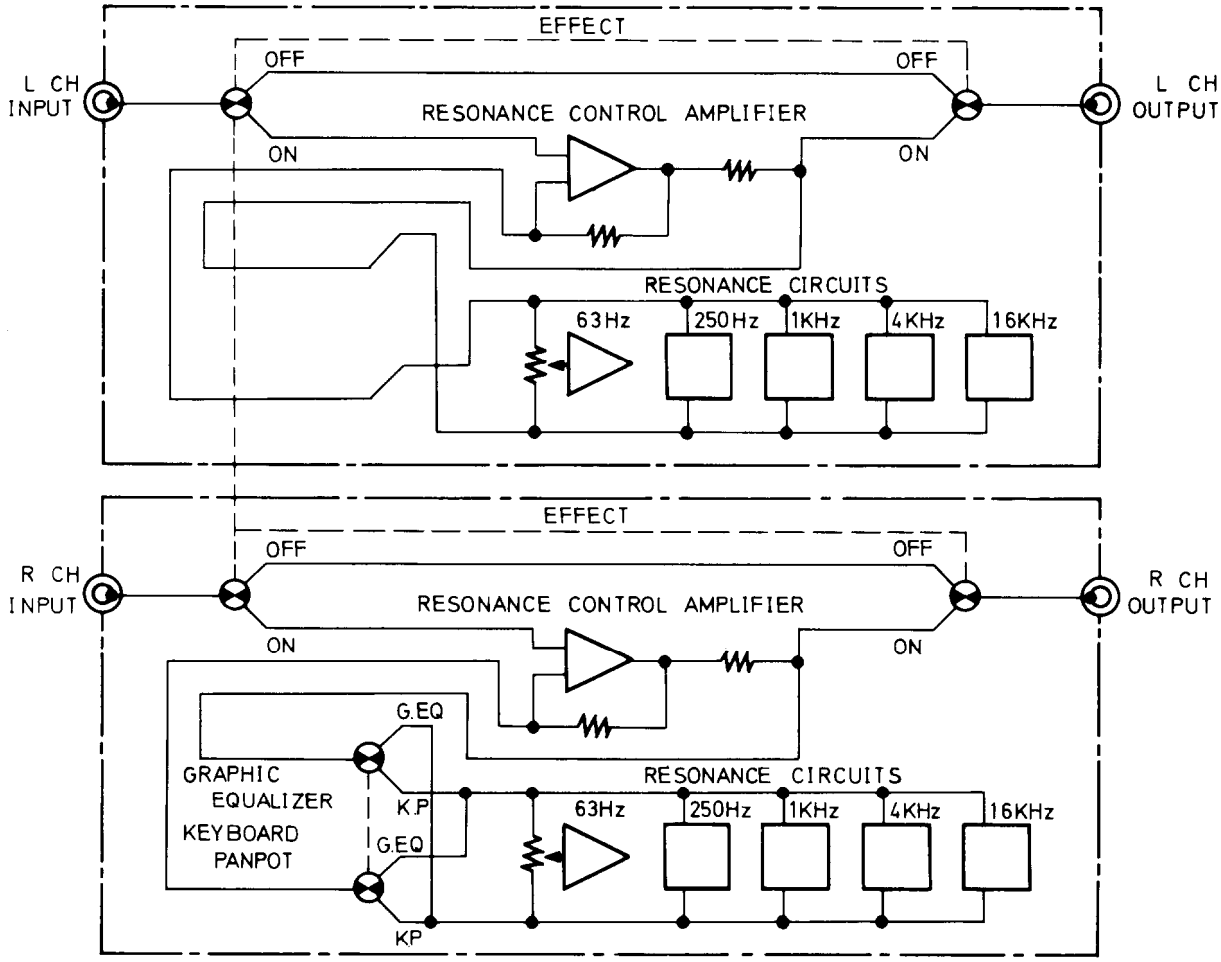
FRONT PANEL



1. Power switch
2. Headphone jack
3. Speaker selector
4. Level controls
5. Defeat switch (EFFECT)
6. Loudness control and indicator
7. Tape monitor switch and indicator
8. Keyboard jack
9. Selector switches and indicators
10. Volume control
11. Balance control
12. Effect selector and indicator

CIRCUIT DESCRIPTION

GRAPHIC EQUALIZER - KEYBOARD PANPOT BLOCK DIAGRAM



1. Graphic Equalizer

In an ideal listening environment, an amplifier with flat response will give the best results. However, the characteristics of other parts of the sound reproduction chain, such as the cartridge and speakers, as well as peculiarities of the listening room itself invariably make this ideal impossible to attain. Therefore, the sound that reaches the listener's ears is quite uneven. This unevenness becomes noticeable if there are large peaks or valleys in the frequency response curve. Ordinary bass and treble tone controls are designed to allow the listener to easily adjust low and high range response as required to make response more flat.

Graphic equalizers permit much more detailed control of frequency response for even more freedom in tailoring sound quality to listening room peculiarities and personal tastes. Graphic equalizers are also useful for altering frequency response when recording and playing back tapes, for extra creativitiy in listening to all kinds of music, and for increasing an audio system's versatility.

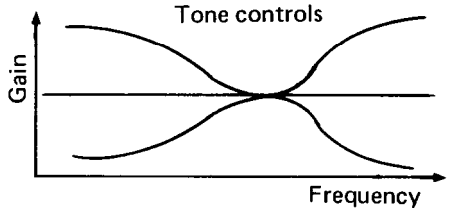


Fig. 1

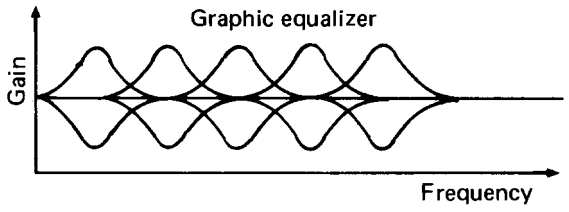


Fig. 2

The A-44 is equipped with a 5-band graphic equalizer having its center frequencies at 63Hz, 250Hz, 1kHz, 4kHz and 16kHz. Each frequency band can be raised or lowered by up to±12dB.

The equalization circuitry consists of the control section, Q151 and Q251, and the resonanting circuit which includes the semi-conductor inductors Q152–156 and Q252–256. A diagram of the control section is shown in figure 3. By placing a resonating circuit consisting of a semi-conductor inductor and capacitor in the amplifier input and feedback circuit, the resonance characteristics shown in figure 4 are obtained.

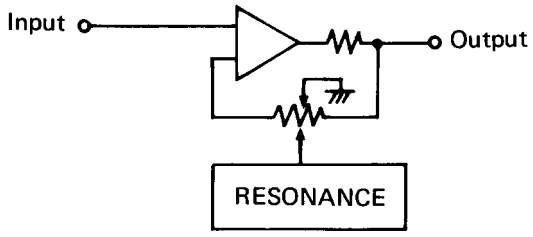


Fig. 3

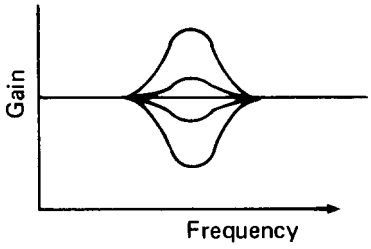


Fig. 4

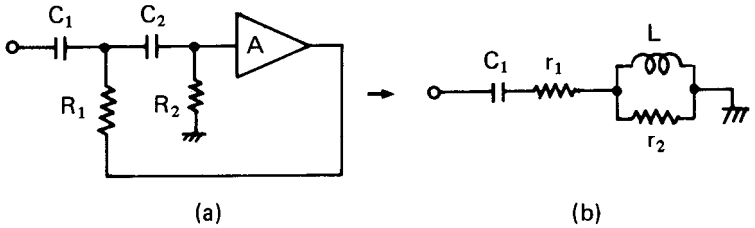


Fig. 5

Figure 5 shows the equivalent circuit of the resonating circuit. This circuit becomes a equivalently quasi-L.C.R. series resonating circuit in which the resonance point ω_0 when r_2 becomes sufficiently large is:

$$\omega_0 = \frac{1}{\sqrt{C_1 C_2 R_1 (AR_2 - R_1)}}$$

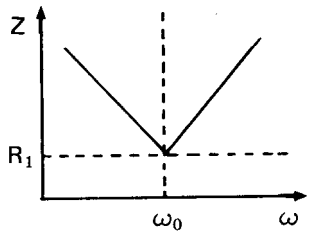


Fig. 6

This results in the resonance characteristics shown in figure 6 in which the impedance at the resonance point is R_1.

2. Panpot Operation

Panpot operation is performed using the graphic equalizer level controls after setting the graphic/panpot switch to the panpot position. Again, the center frequencies are 63Hz, 250Hz, 1kHz, 4kHz and 16kHz. In the panpot mode, moving the level controls shifts the balance of the corresponding frequency range to the left or right. This can be used to divide the monaural signal of a keyboard into two sections, the low range going to the right speaker system and the high range to the left, for example, in order to give monaural sound a feeling of width and depth. Another application is emphasizing the stereo effect on older stereo records and otherwise altering various autdio sources. Switching between the graphic equalizer and panpot operation modes is done by reversing the right channel control volume section of the control amp. Since the control volume change is reversed for the right and left channels, the panpot effect (shifting the sonic image) is obtained.

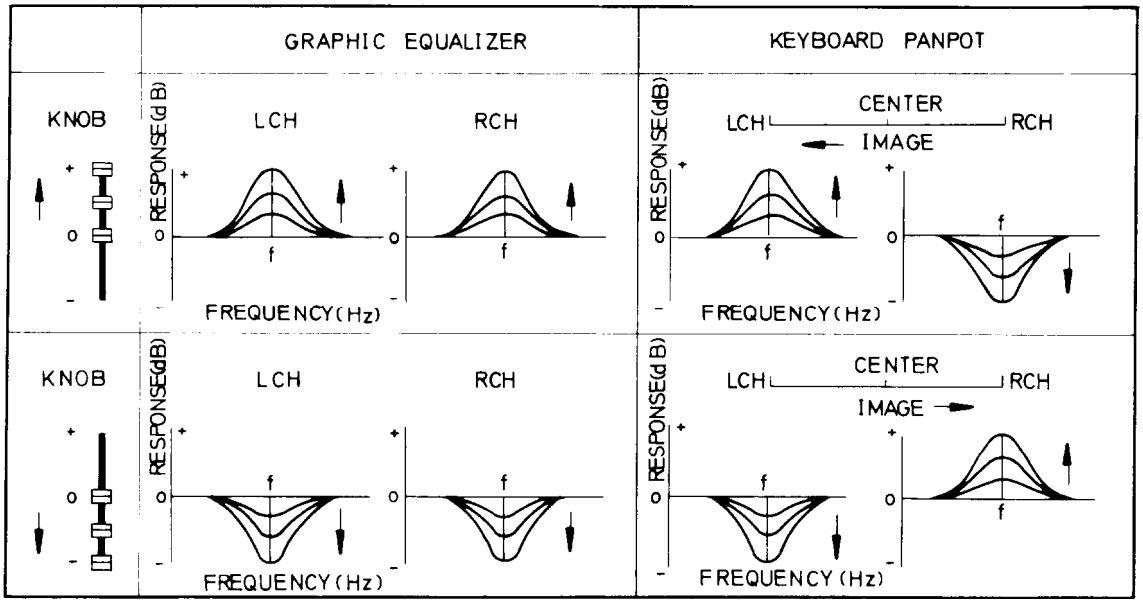
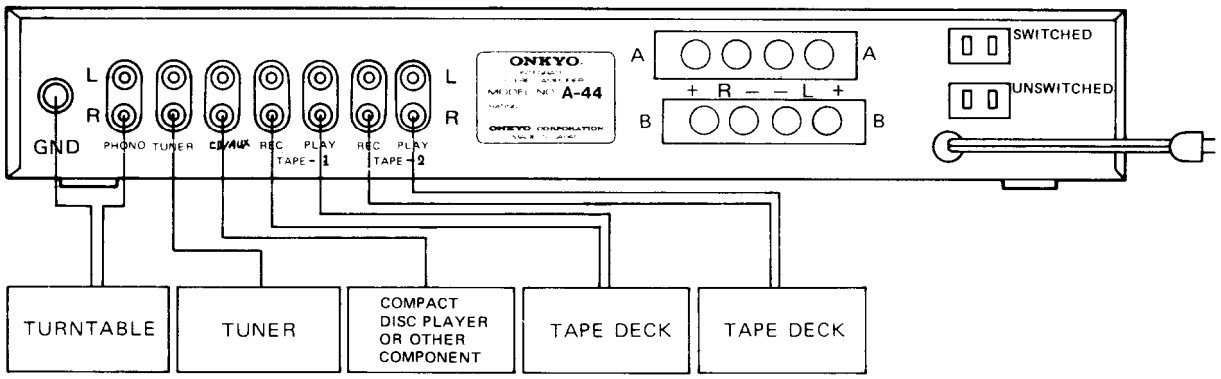


Fig. 7

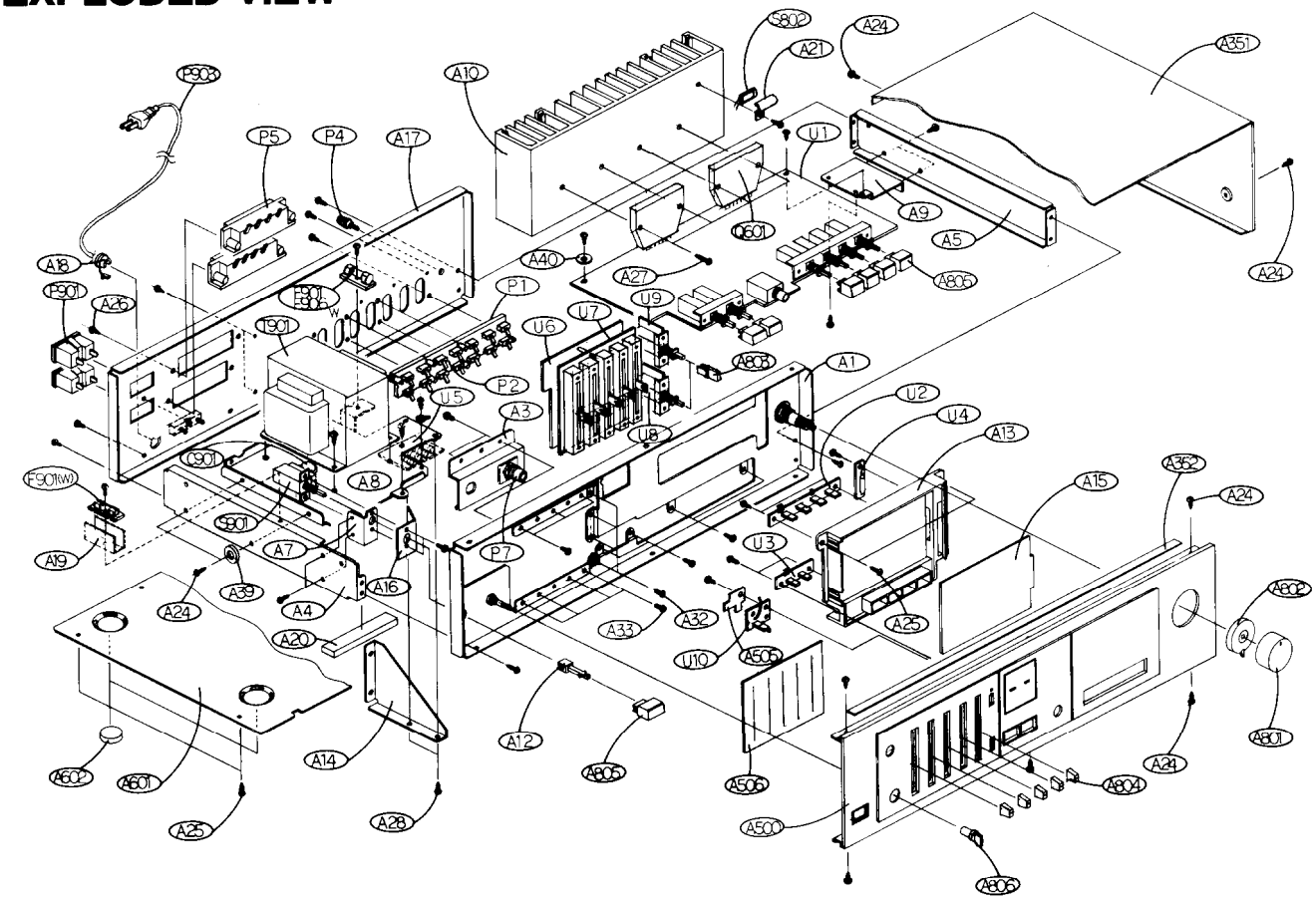
SYSTEM CONNECTIONS



AC Outlet (UNSWITCHED): (USA & Canadian models only)
This outlet is not switched on and off by the power switch on the front panel. Capacity is 100 watts.

AC Outlet (SWITCHED): (USA & Canadian models only)
This outlet is switched on and off by the power switch on the front panel. Capacity is 100 watts.

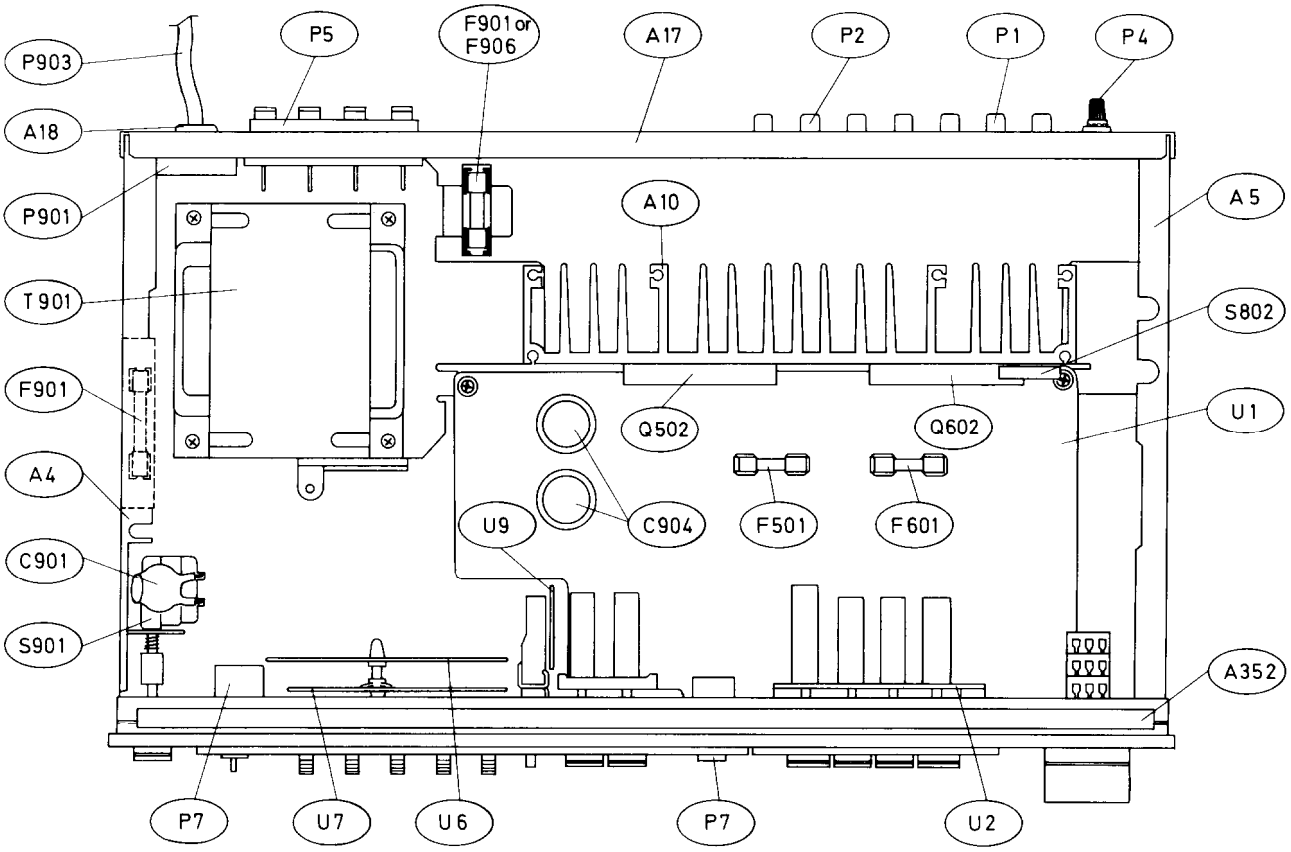
EXPLODED VIEW



REF. NO.	PARTS NO.	DESCRIPTION
A1	27110198A	Front bracket
A3	27140727	Bracket, headphone
A4	27115133	Side bracket L
A5	27115045H	Side bracket R
A7	27140714A	Bracket, switch
A8	27130326B	Bracket, transformer
A9	27140713	Bracket
A12	27260062	Shaft, switch
A13	27190217	Holder
A14	27140788	Bracker, radiator
A15	28130190	Dial plate
A16	28175077	Insulator plate
A17	27120500	Back panel (D)
	27120502	Back panel (G) (B)
	27120501	Back panl (W)
	27120536	Back panel (A)
A18	270280	SR-4K-4, Strainrelief (D) (G) (W) (B)
	27300349	SR-6W-1, Strainrelief (A)
A19	28175078	Insulator plate (W)
A20	28140450	Cushion
A21	270281A	Bracket, thermal switch
A24	834430068	3TTS+6B(BC), Tapping screw
A25	831430088	3TTW+8B(BC), Tapping screw
A26	834430108	3TTS+10B(BC), Tapping screw
A27	834430168	3TTS+16B(BC), Tapping screw
A28	838440089	4TTB+8C(BC), Tapping screw
A32	82143006	3P+6F–N(BC), Pan head screw
A33	82143004	3P+4F–N(BC), Pan head screw
A39	27175011C	Cushion
A40	870060	W5x15BLK, Washer
A351	28184198	Top cover
	28184199	Top cover (Black)

REF. NO.	PARTS NO.	DESCRIPTION
A352	28140024	Cushion
A500	12108121	Front panel ass'y
	12088121	Front panel ass'y (Black)
A601	27170138B	Bottom board
A602	27175039	Bottom leg
A801	28320570	Knob, Volume
	28321187	Knob, Volume (Black)
A802	28320798	Knob, Balance
	28321188	Knob, Balance (Black)
A803	28320889	Knob, Push
	28321192	Knob, Push (Black)
A804	28321186	Knob, Graphic
	28321123	Knob, Graphic (Black)
A805	28320852	Knob, Power switch
	28321160	Knob, Power switch (Black)
A806	28321183	Knob, Speaker
	28321191	Knob, Speaker (Black)
Q502, Q602	222034	ICs STK1050
T901	230719	NPT-794D, Power transformer (D)
	230720	NPT-794G, Power transformer (G)
	230721	NPT-794DG, Power transformer (W)
	230745	NPT-794Q, Power transformer (A) (B)
C901	3500065A	0.01μF, AC400V, Capacitor IS
S901	25035321 or	NPS-111-L285P or
	25035135	NPS-111-L100P, Power switch (D)
	25035322 or	NSP-111-L286P, or
	25035015A	NPF-111-LA3, Power switch (G) (W) (A) (B)
S902	25065123	NSS-1258P, Slide switch (W)
S802	25065211	17AM028A5-250, Thermal switch
P1	25045029	NPJ-6PRBL07, Input terminal

COMPONENT LOCATION



REF. NO.	PARTS NO.	DESCRIPTION
P2	25045025	NPJ-4PRBL03, Input terminal
P4	25060044	Ground terminal
P5	25060057	NTM-4PRML24, Speaker terminal
P7	25045092	HLJ0607-01-020, Stereo headphone jack
⚠ P901	25050046	NSCT-2P15, AC outlet (D)
	25108010	LG-2C, Terminal (G) (W) (A) (B)
⚠ P903	253112	AS-UC-4 #18, Power supply cable (D)
	253083	AS-CEE, Power supply cable (G)
	2503092	AS-CEE-2, Power supply cable (W)
	253077-1	Power supply cable (A)
	728320 or 728328	2-0.75BS16 BLK or 2-0.75BS16 GRY, Power supply cable (B)
⚠ F501, F601	252059	A4(SS-2), Speaker fuse (D)
	252077	4A-SE-EAK, Speaker fuse (G) (A) (B)
	252014	4A-T, Speaker fuse (W)
⚠ F901	252049	4A (ST-6), AC fuse (D)
	252074	2A-SE-EAK, AC fuse (G) (A) (B)
	252014	4A-T, AC fuse (W)
F901a	25050082	S-N1152, Fuse holder (D)
	25065096	NPF-073, Fuse holder (G) (A) (B)
	25050050	H0438A, Fuse holder (W)
⚠ F902, F903	252078	5A-SE-EAK, AC fuse (G) (A) (B)
⚠ F904, F905	252063	500mA-SE-EAWK, AC fuse (G) (A) (B)
⚠ F906	252074	2A-SE-EAK, AC fuse (w)
F906a	25065096	NPF-073, Fuse holder (W)
U1	12108506	NAAF-1706, Equalizer/Power amp./ Power supply pc board ass'y (D)
	12114506A	NAAF-1706a, Equalizer/Power amp./Power supply pc board ass'y (G) (A) (B)
	12110506B	NAAF-1706b, Equalizer/Power amp./Power supply pc board ass'y (W)
U2	12108507	NALED-1707, Input selector indicator pc board ass'y
U3	12108508	NALED-1708, Loudness/Monitor switch indicator pc board ass'y
U4	12108509	NAPL-1709, Illumination lamp pc bard ass'y
U5	12114510	NAFU-1710, Fuse pc board ass'y (G)
U6	12722544B	NAEQ-1544b, Graphic equalizer pc board ass'y (D)
	12114544C	NAEQ-1544C, Graphic equalizer pc board ass'y (G)
U7	12722545	NAVR-1545, Graphic control level pc board ass'y
U8	12108546B	NASW-1546b, Effect switch pc board ass'y
U9	12722547	NASW-1547, Effect selector pc board ass'y
U10	12722548	NALED-1548, Effect selector indicator pc board ass'y

NOTE: (D) : Only 120V model (A) : Only Australian model
(G) : Only 220V model (B) : Only British model
(W) : Only 120V/220V model (Black) : Black model

The components identified by mark ⚠ are critical for risk of fire and electric shock. Replace only with parts number specified.

PRINTED CIRCUIT BOARD PARTS LIST

GRAPHIC EQUALIZER PC BOARD (NAEQ-1544b, c) PARTS LIST

CURCUIT NO.	PARTS NO.	DESCRIPTION
	ICs	
Q151, Q251	222534	NJM4559DX
Q152-Q156	222502	NJM4558DX
Q252-Q256		
	Capacitors	
C151	352780109	1μF, 50V, Elect.
C153, C155	352780229	2.2μF, 50V, Elect.
C253, C255		
C156, C256	371126835	0.068μF, 50V, MY
C157, C257	352784799	0.47μF, 50V, Elect.
C158, C258	371128235	0.082μF, 50V, MY
C159, C259	371121835	0.018μF, 50V, MY
C160, C260	371121545	0.15μF, 50V, MY
C161, C261	371126825	6800pF, 50V, MY
C162, C262	371123935	0.039μF, 50V, MY
C163, C263	371122225	2200pF, 50V, MY
C164, C264	371121035	0.01μF, 50V, MY
C165, C265	371121025	1000pF, 50V, MY
C166, C167	352780339	3.3μF, 50V, Elect.
C168, C169		
C266, C267		
C251	352780109	1μF, 50V, Elect.
C254	352734709	47μF, 10V, Elect.

GRAPHIC CONTROL LEVEL PC BOARD (NAVR-1545) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	Variable resistors	
R159, R162	6142014	N45LGPC100KWTP16Z
R165, R168		
R171, (R259		
R262, R265		
R268, R271)		

EFFECT SWITCH PC BOARD (NASW-1546) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	Switch	
S6	25035349	NPS-142-L312

EFFECT SELECTOR PC BOARD (NASW-1547) PARTS LSIT

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	Switch	
S8	25035349	NPS-142-L312

EFFECT SELECTOR INDICATOR PC BOARD (NALED-1548) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
D927	225057	SR-538D, LED
	27190121	Holder LED

EQUALIZER/POWER AMP./POWER SUPPLY PC BOARD (NAAF-1706) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	ICs	
Q101, Q201	222534	NJM4559DX
Q501 (Q601)	222023	STK3062
	Transistors	
Q951	2211255	2SC1815 (GR)
Q922	2211254	2SC1815 (Y)
	Diodes	
D901-D904	223863	GP-30DL
D905, D906	2241192 or	GZA18Y or
	224191	GZA18X
D951, D952	223804	SR1K-2
D953, D954	223105 or	1S1555 or
	223133 or	DS442X
	223145	1S2076TD
	Capacitors	
C101, C107	352780109	1μF, 50V, Elect.
C201, C207		
C104, C204	352721019	100μF, 6.3V. Elect.
C105, C205	371126224	6200pF, 50V, MY
C106, C206	371121824	1800pF, 50V, MY
C108, C109	352752219	220μF, 25V, Elect.
C908, C909		
C122, C222	371123935	0.039μF, 50V, MY
C501, C601	352780229	2.2μF, 50V, Elect.
C503, C603	352731019	100μF, 10V, Elect.
C506, C606	371124735	0.047μF, 50V, MY
C511, C512	352780479	4.7μF, 50V, Elect.
C611, C612		
C515, C516	352783319	330μF, 50V, Elect
C904, C905	3504149	8200μF, 50V, Elect.
C906, C907	352761019	100μF, 35V, Elect.
C951	352741029	1000μF, 16V, Elect.
C952	352744709	47μF, 16V, Elect.
C954	352780339	3.3μF, 50V, Elect.
	Resistors	
R506, R606	441520474	4.7Ω, 1/2W, Metal oxide film
R507, R607	441624794	0.47Ω, 1W, Metal oxide film
R510, R511	441521014	100Ω, 1/2W, Metal oxide film
R901-R904	441623614	360Ω, 1W, Metal oxide film
R921, R922	441527514	750Ω, 1/2W, Metal oxide film
R925	441622204	22Ω, 1W, Metal oxide film
	Switches	
S1-S4	25035348	NPS-342-162-L311, Selector switch
S5, S7	25035347	NPS-242-L310, Loudness/monitor switch
	Relay	
RL951	25065140	NRL-2P5A-DC12-06
	Keyboard terminal	
P007	25045135	HLJ4307-01-010
	Fuse holder	
	250113	SN5051
	Fuse lable	
	29360607	4A/250V

EQUALIZER/POWER AMP./POWER SUPPLY PC BOARD (NAAF-1706a) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	ICs	
Q101, Q201	222534	NJM4559DX
Q501 (Q601)	222023	STK3062
	Transistors	
Q951	2211255	2SC1815 (GR)
Q922	2211254	2SC1815 (Y)
	Diodes	
D901-D904	223863	GP-30DL
D905, D906	2241192 or	GZA18Y or
	2241491	GZA18X
D951, D952	223804	SR1K-2

CIRCUIT NO.	PARTS NO.	DESCRIPTION
D953, D954	223105 or	1S1555 or
	223133 or	DS442X
	223145	1S2076TD
	Capacitors	
C101, C107	352780109	1μF, 50V, Elect.
C201, C207		
C104, C204	352721019	100μF, 6.3V. Elect.
C105, C205	371126224	6200pF, 50V, MY
C106, C206	371121824	1800pF, 50V, MY
C108, C109	352752219	220μF, 25V, Elect.
C908, C909		
C122, C222	371123935	0.039μF, 50V, MY
C501, C601	352780229	2.2μF, 50V, Elect.
C503, C603	352731019	100μF, 10V, Elect.
C506, C606	371124735	0.047μF, 50V, MY
C511, C512	352780479	4.7μF, 50V, Elect.
C611, C612		
C515, C516	352783319	330μF, 50V, Elect.
C904, C905	3504149	8200μF, 50V, Elect.
C906, C907	352761019	100μF, 35V, Elect.
C951	352741029	1000μF, 16V, Elect.
C952	352744709	47μF, 16V, Elect.
C954	352780339	3.3μF, 50V, Elect.
	Resistors	
R506, R508	441520474	4.7Ω, 1/2W, Metal oxide film
R606, R608		
R507, R607	441624794	0.47Ω, 1W, Metal oxide film
R510, R511	441521014	100Ω, 1/2W, Metal oxide film
R901-R904	441623614	360Ω, 1W, Metal oxide film
R921, R922	441527514	750Ω, 1/2W, Metal oxide film
R925	441622204	22Ω, 1W, Metal oxide film
	Coils	
L501, L601	231001	S-1.3B
	Switches	
S1-S4	25035348	NPS-342-162-L311, Selector switch
S5, S7	25035347	NPS-242-L310, Loudness/monitor switch
	Relay	
RL951	25065140	NRL-2P5A-DC12-06
	Key board terminal	
P007	25045135	HLJ4307-01-010
	Fuse holder	
	250113	SN5051
	25050065	YSH403T

EQUALIZER/POWER AMP./POWER SUPPLY PC BOARD (NAAF-1706b) PARTS LSIT

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	ICs	
Q101, Q201	222534	NJM4559DX
Q501 (Q601)	222023	STK3062
	Transistors	
Q951	2211255	2SC1815 (GR)
Q922	2211254	2SC1815 (Y)
	Diodes	
D901-D904	223863	GP-30DL
D905, D906	2241192 or	GZA18Y or
	2241491	GZA18X
D951, D952	223804	SR1K-2
D953, D954	223105 or	1S1555 or
	223133 or	DS442X
	223145	1S2076TD
	Capacitors	
C101, C107	352780109	1μF, 50V, Elect.
C201, C207		
C104, C204	352721019	100μF, 6.3V. Elect.
C105, C205	371126224	6200pF, 50V, MY
C106, C206	371121824	1800pF, 50V, MY
C108, C109	352752219	220μF, 25V, Elect.
C908, C909		
C122, C222	371123935	0.039μF, 50V, MY
C501, C601	352780229	2.2μF, 50V, Elect.
C503, C603	352731019	100μF, 10V, Elect.
C506, C606	371124735	0.047μF, 50V, MY
C511, C512	352780479	4.7μF, 50V, Elect.
C611, C612		
C515, C516	352783319	330μF, 50V, Elect
C904, C905	3504149	8200μF, 50V, Elect.
C906, C907	352761019	100μF, 35V, Elect.
C951	352741029	1000μF, 16V, Elect.
C952	352744709	47μF, 16V, Elect.
C954	352780339	3.3μF, 50V, Elect.
	Resistors	
R506, R508	441520474	4.7Ω, 1/2W, Metal oxide film
R606, R608		
R507, R607	441624794	0.47Ω, 1W, Metal oxide film
R510, R511	441521014	100Ω, 1/2W, Metal oxide film
R901-R904	441623614	360Ω, 1W, Metal oxide film
R921, R922	441527514	750Ω, 1/2W, Metal oxide film
R925	441622204	22Ω, 1W, Metal oxide film
	Switches	
S1-S4	25035348	NPS-342-162-L311, Selector switch
S5, S7	25035347	NPS-242-L310, Loudness/monitor switch
	Relay	
RL951	25065140	NRL-2P5A-DC12-06
	Key board terminal	
P007	25045135	HLJ4307-01-010
	Fuse holder	
	250113	SN5051
	25050065	YSH403T
	Fuse label	
	29360467	4A/125V

INPUT SELECTOR INDICATOR PC BOARD (NALED-1707) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
D921-D924	225047	SLP-251B, LED
	27190121	Holder LED

LOUDNESS/MONITOR SWITCH INDICATOR PC BOARD (NALED-1708) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
D925	225047	SLP-251B, LED
D926	225046	SLP-151B, LED
	27190121	Holder LED

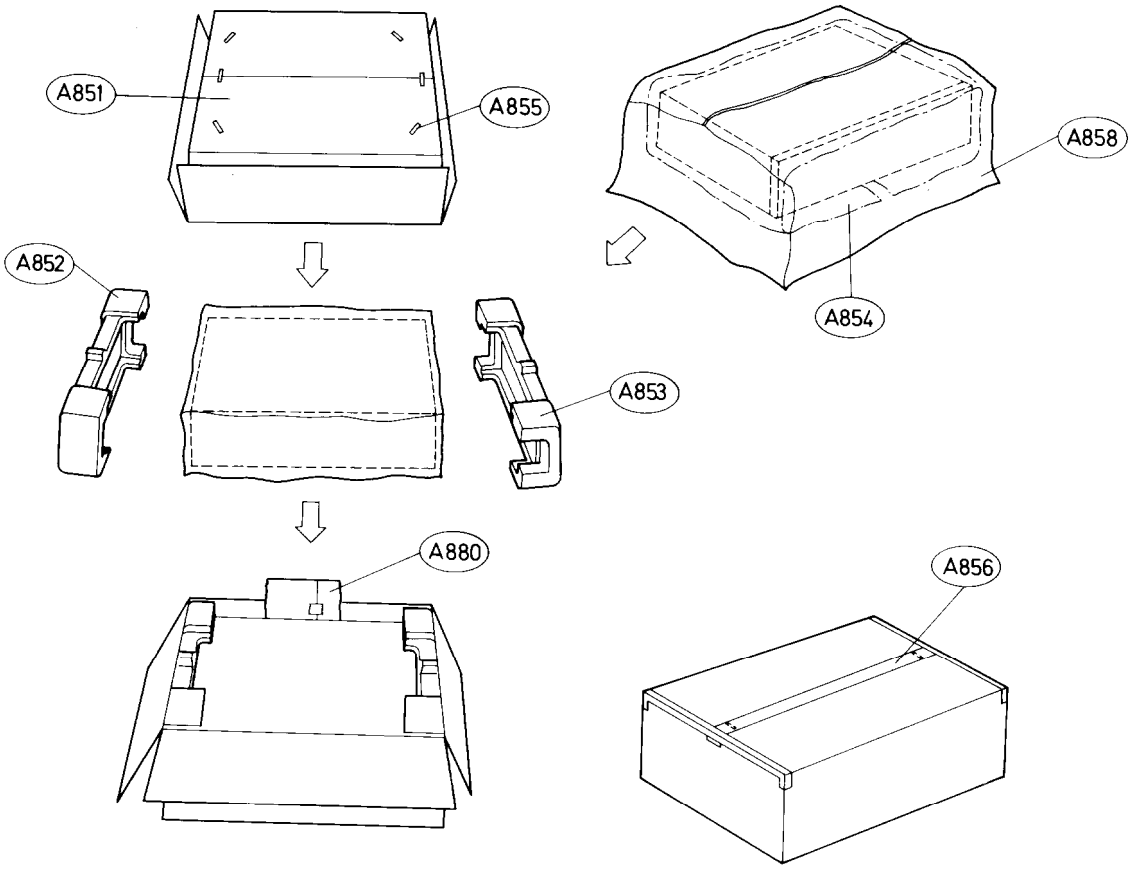
ILLUMINATION LAMP PC BOARD (NAPL-1709) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
PL921	210065B	PL12V150mA, Lamp

FUSE PC BOARD (NAFU-1710) PARTS LIST

CIRCUIT NO.	PARTS NO.	DESCRIPTION
	25050065	YSH403T, Fuse holder

PACKING PROCEDURES



REF. NO.	PARTS NO.	DESCRIPTION
A851	29050770	Master carton box
	29050774	Master carton box (Black)
A852	29090746	Pad L
A853	29090747	Pad R
A854	29095012-1	500x800mm, Protection sheet
A855	282301	Sealing hook
A856	260012	Damplon tape
A858	29100063	750x500mm, Poly bag
A880	Accessary bag ass'y	
	29340698	Instruction manual (D) (U)
	29340702	Instruction manual (G) (V) (W) (Q)
	29365006-5	Warranty card (U)
	29365005-3A	Warranty card (V)
	29358002	Service station list (U)
	29358004	Service station list (V)
	29100006	350x250mm, Poly bag
	29365010	Caution label (U)
	29365011	Label (U)
	25055018	CV-K-1, Conversion plug (W)

NOTE: (U) : U.S.A. model
(V) : West Germany model
(D) : 120V model
(G) : 220V model
(W): 120V/220V model
(Q) : 240V model
(Black) : Only black model