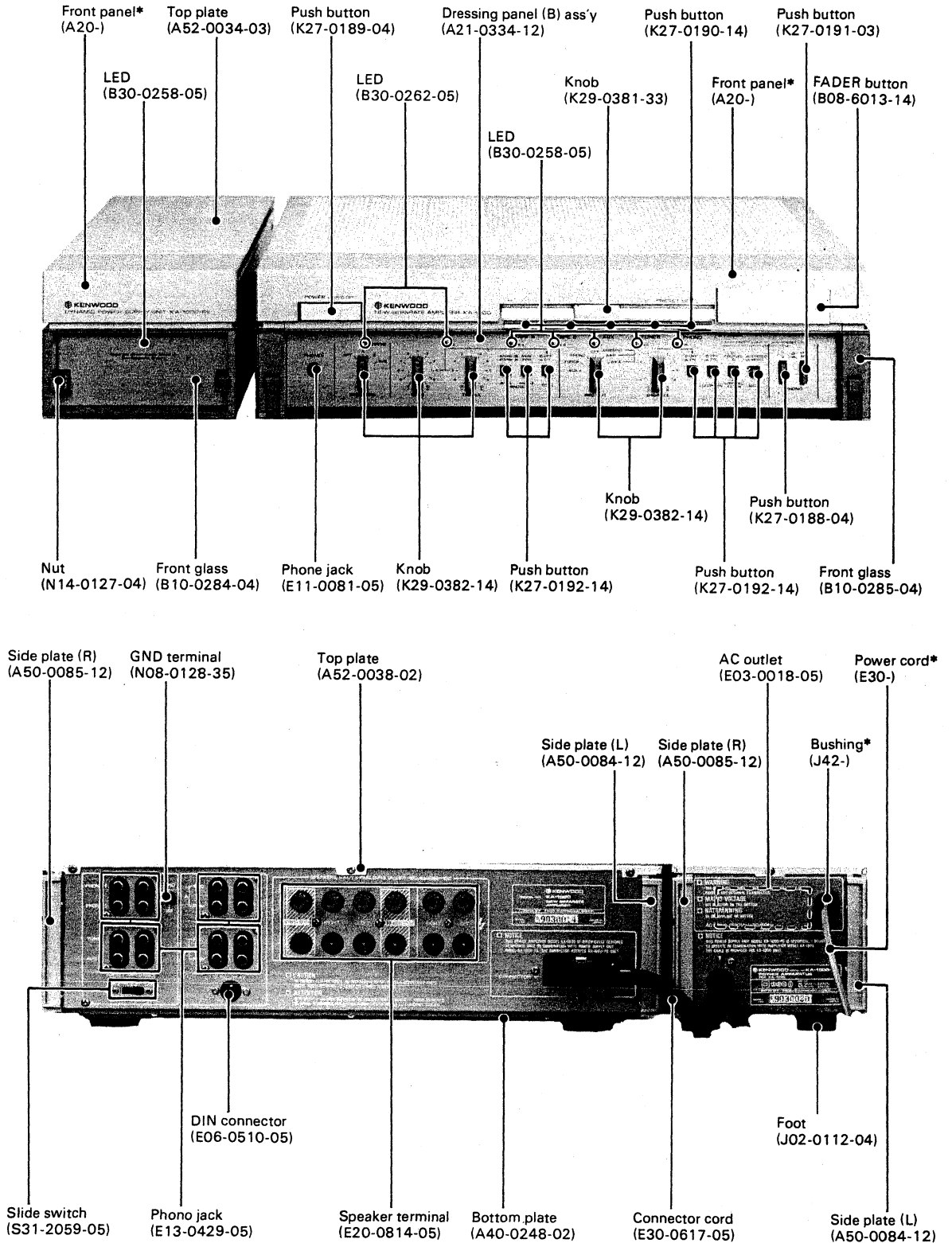


NEW SEPARATE AMPLIFIER

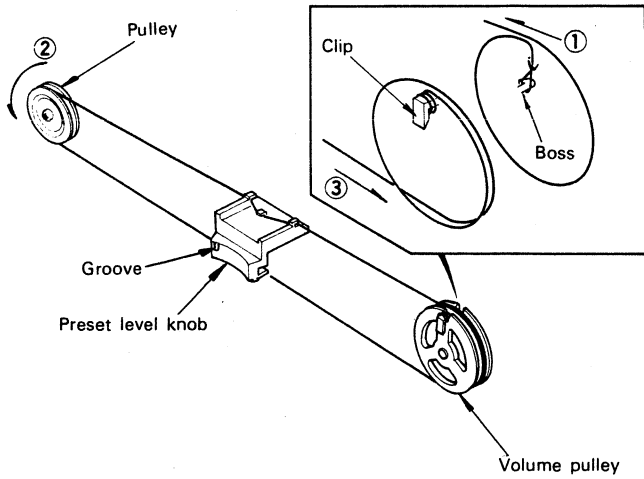
SERVICE MANUAL



*Refer to Parts List on page 10.
This photo is E type.

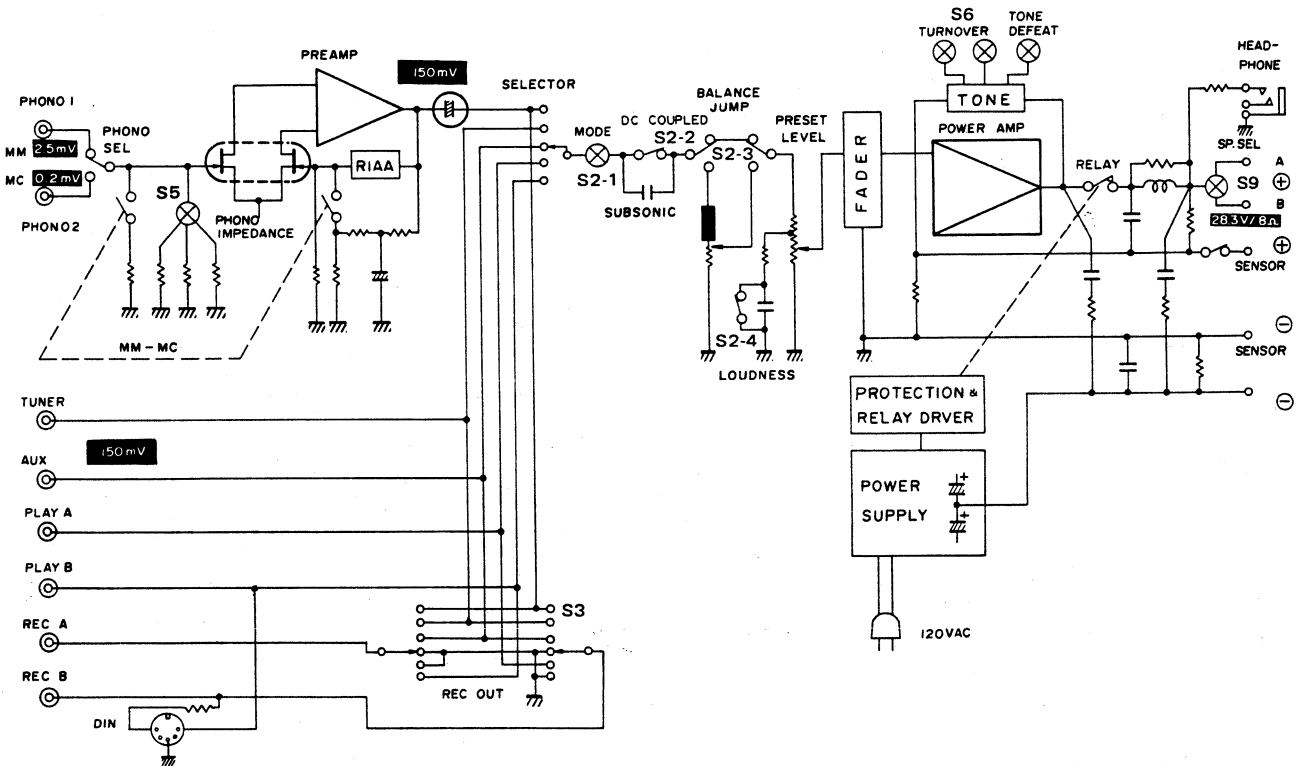
DIAL CORD STRINGING/BLOCK DIAGRAM

DIAL CORD STRINGING



1. Tie the dial cord to the boss of volume pulley.
2. Set volume pulley to the volume shaft and turn it counterclockwise till it stops.
3. Dress the dial cord to volume pulley counterclockwise 1 turn starting from the upper side as shown (①).
4. Stretch and hook the dial cord to the pulley and dress it to the volume pulley from the lower side 1 and a half turn (② ③).
5. Be sure to wind the end of the dial cord firmly to the clip of the volume pulley, so that it is tightly stretched.
6. Make sure that volume pulley is fully turned counterclockwise and fix the preset level knob by adhesive. Check that the groove of the preset level knob aligns with the O mark on the panel.

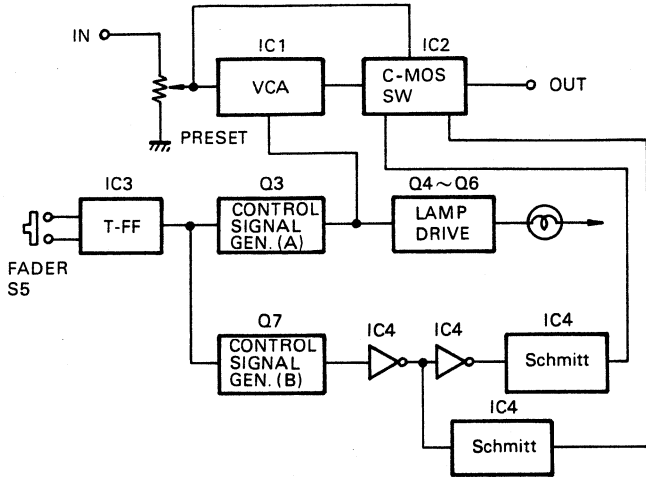
BLOCK DIAGRAM



CIRCUIT DESCRIPTION

FADER Circuit

The block diagram of the FADER circuit is shown below. When the power is turned on, it automatically fades in to the preset level. After then, fader effect can be obtained by a light push on the FADER button.



The output of T-type flip flop changes its state every time the FADER button is pressed. The state of the output, either high or low level, determines the function. This state is sent to control signal generators (CSG) (A) and (B). The CSG (A) will output the signal for the voltage controlled amplifier (VCA) and lamp driver to decrease or increase sound voltage and brightness, respectively. The CGS (B) outputs a control signal for C-MOS switches to select either of the direct signal or voltage controlled signal.

Protection Circuit for Misconnected Sigma Cord

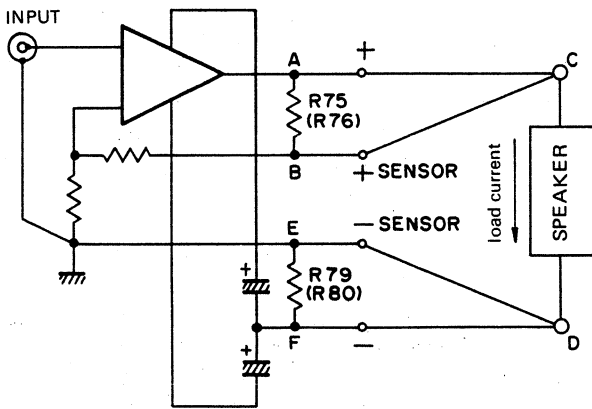


Fig. 1

Simplified schematic diagram is shown above. In this diagram, resistors R75, 79 are by-pass resistors which will let the amplifier work as an conventional amplifier in case the sigma sensor cord has been detached.

When one of the four normally connected sigma speaker cord (+, -, +Σ sensor, -Σ sensor) is detached by mistake or by accident, the following protection will go in effect.

In the following description sigma speaker cords are first correctly connected to each terminal. Also, speaker selector is set to A for Σ drive. In this condition, the load current passage will be A → C → D → F.

- (1) When only + signal cord is detached:
In this case, load current passage will be A → B → C → D → F. For R75 to withstand the power and not to be burned, the following calculation is done to figure out the value.
Suppose the power consumption to be 1 watt.

$$P = \frac{V^2}{R} \quad R = \frac{V^2}{P}$$

$$V = 25 (V) \quad P = 1 (W)$$

$$\therefore R = 625 (\Omega)$$

In the actual circuit, 560Ω 2W is used. Since this 560Ω will be in series to the speaker (8Ω), sound level will greatly drop.

- (2) When only +Σ sensor or -Σ sensor cord is detached:
In this case, load current passage will be A → C → D → F. Even if sigma sensor cord has been detached, NFB loop is completed through by-pass resistor R75 or R79. Thus this amplifier will act as a conventional amplifier.
- (3) When - signal cord is detached:
In this case, load current passage will be A → C → D → E → F. Since R79 is 3.3Ω, almost the same power will be consumed.

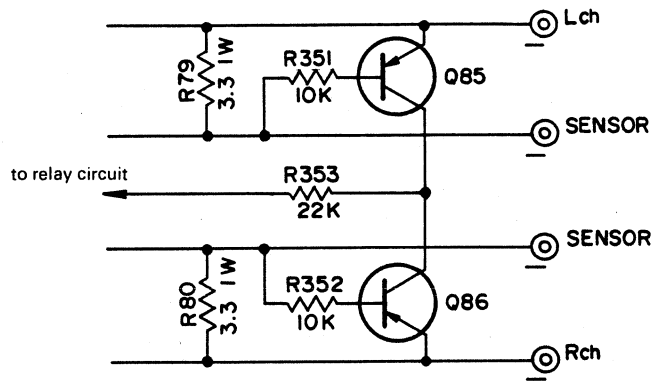


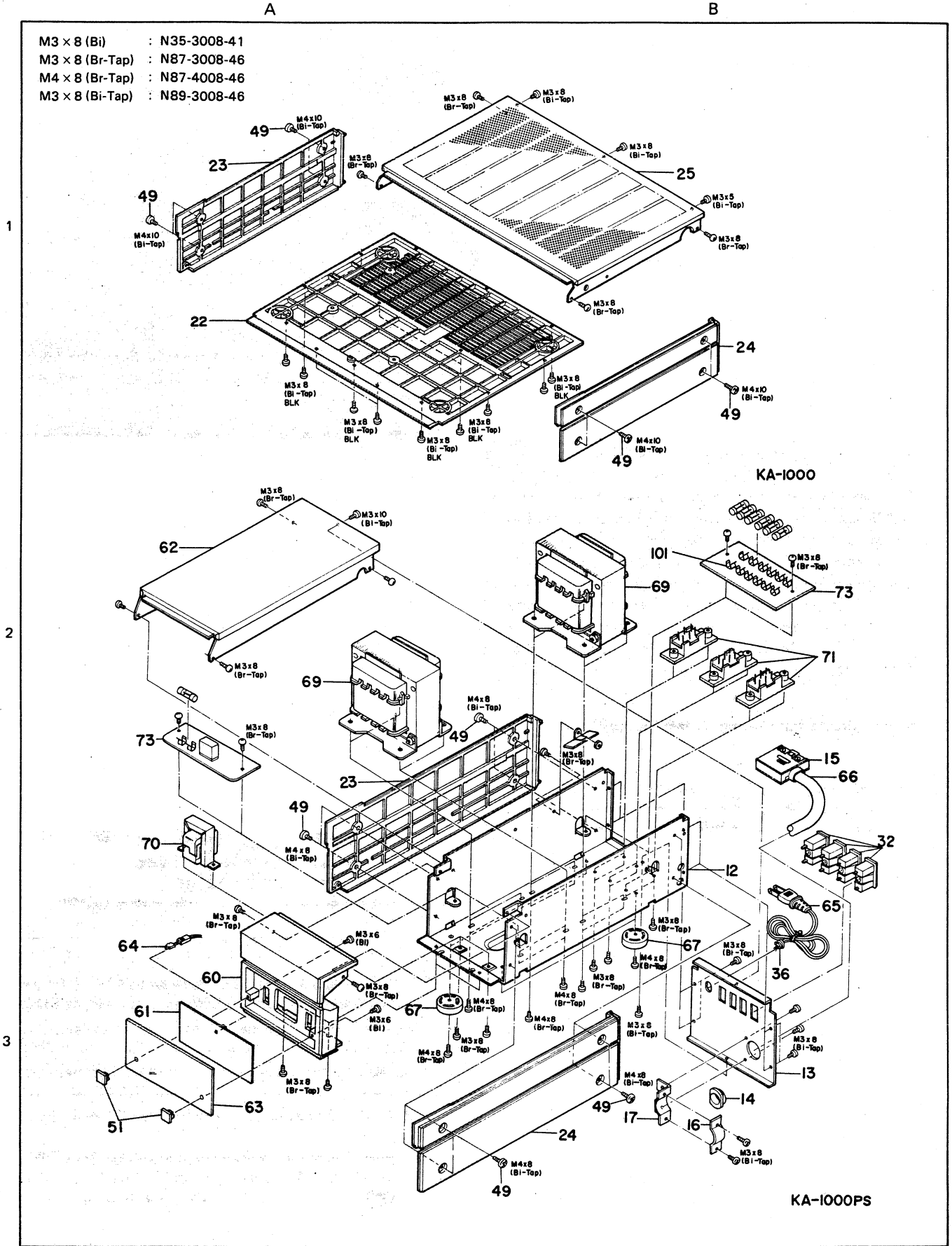
Fig. 2

When a great power is consumed at R79 (3.3Ω), in another words when VBE of Q85 exceeds 0.6V, Q85 is turned ON. This will activate Q66 to cut the relay OFF. This protection circuit works as a kind of a limiter. For this reason, relay will recover in a short time. Unless the detached - signal cord is correctly connected, relay will repeat ON-OFF routine and prevents R79 to be burned.

For detail of C-MOS analog switch IC, voltage controlled amplifier IC (AN5733), voltage regulator using FET and T flip-flop (DN819), refer to KA-800 Service Manual.

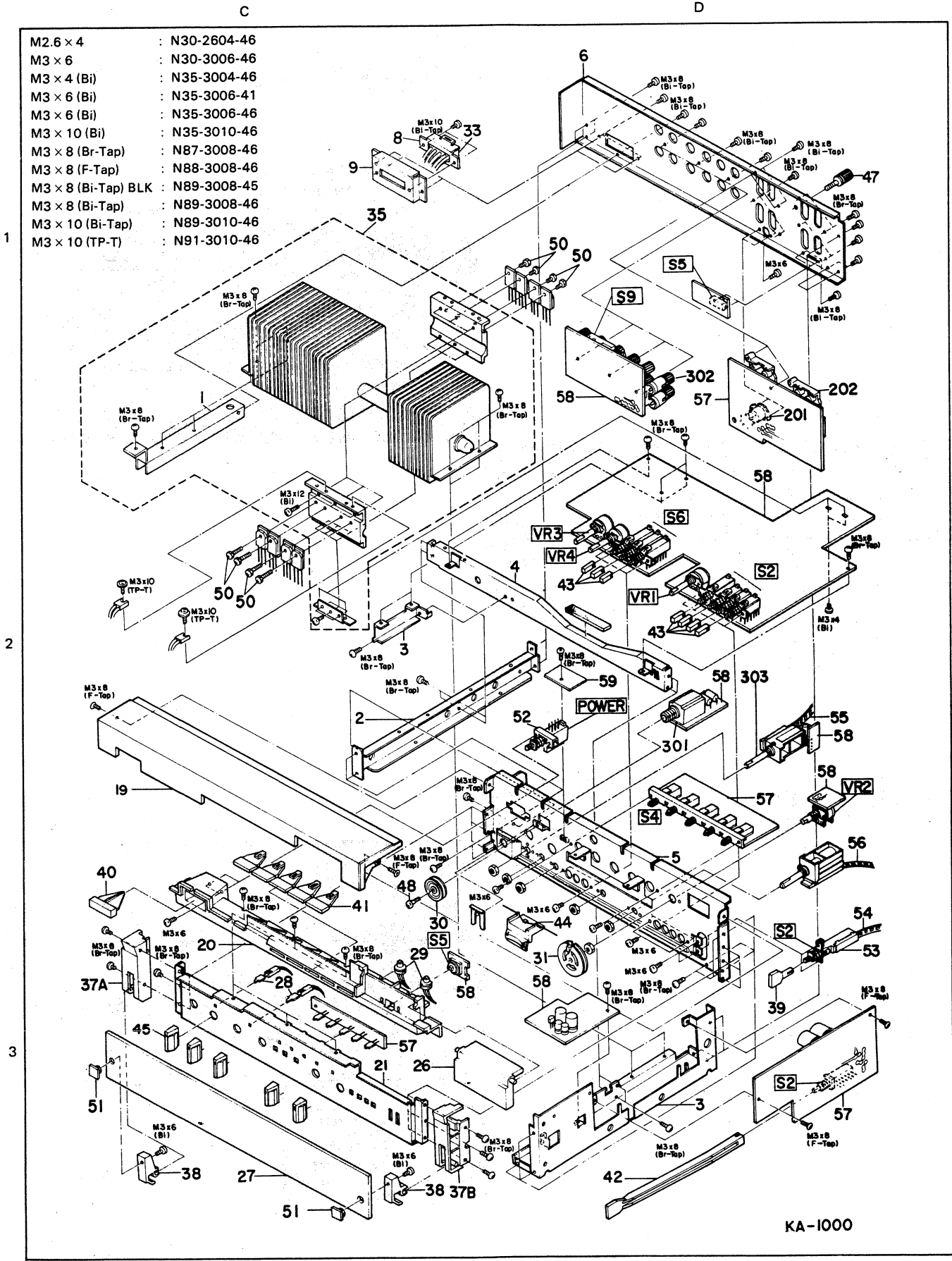
EXPLODED VIEW

- M3 x 8 (Bi) : N35-3008-41
- M3 x 8 (Br-Tap) : N87-3008-46
- M4 x 8 (Br-Tap) : N87-4008-46
- M3 x 8 (Bi-Tap) : N89-3008-46



Refer to parts list on page 10.

EXPLODED VIEW

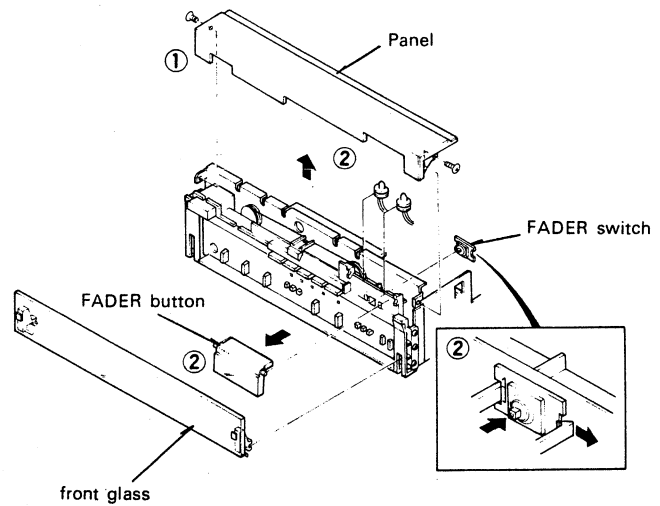


- M2.6 x 4 : N30-2604-46
- M3 x 6 : N30-3006-46
- M3 x 4 (Bi) : N35-3004-46
- M3 x 6 (Bi) : N35-3006-41
- M3 x 6 (Bi) : N35-3006-46
- M3 x 10 (Bi) : N35-3010-46
- M3 x 8 (Br-Tap) : N87-3008-46
- M3 x 8 (F-Tap) : N88-3008-46
- M3 x 8 (Bi-Tap) BLK : N89-3008-45
- M3 x 8 (Bi-Tap) : N89-3008-46
- M3 x 10 (Bi-Tap) : N89-3010-46
- M3 x 10 (TP-T) : N91-3010-46

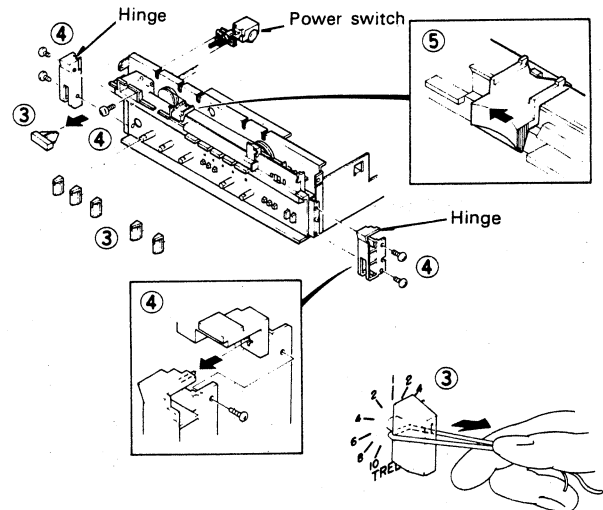
Refer to parts list on page 10.

DISASSEMBLY FOR REPLACEMENT

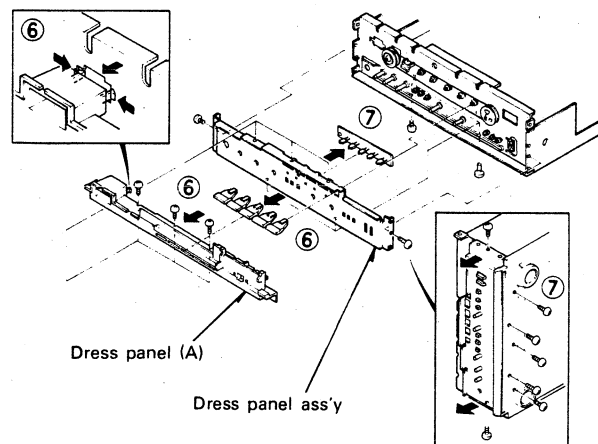
1. Remove side plate, top plate, panel and the front glass.
2. Remove FADER button and FADER lamp. Now, you can remove the FADER switch (S5) pc board by spreading the claws outward and pushing the switch from the front.



3. Remove the power switch button and knobs for BASS, TREBLE, BALANCE etc. by pulling them toward yourself. If they cannot be removed by hand, wind a covered wire around the shaft and pull.
4. Remove screws of the power switch. Remove screws at the side of the hinge and pull it to the direction of the arrow as shown. This hinge serves as a rivet to hold dress panel (A) to the chassis. For this reason, **please proceed after you remove this hinge.**
5. Preset level knob can be removed after the adhesive is taken off and slid to the left.



6. Remove dress panel (A) by pinching the claws inward and pushing it toward the front. Now, INPUT selector button can be removed.
7. Remove 5 screws at the front side of the bottom plate, also 2 screws at sides of dress panel ass'y and pull frontward. Now LED pc board for INPUT selector can be removed.



ADJUSTMENT/REGLAGES/ABGLEICH

ADJUSTMENT

OFFSET AND IDLE CURRENT

— Before adjustments —

This adjustment must be done without dummy load connected.

1. Remove top cover.
2. This amplifier uses heat pipe. For this reason, amplifier must be kept horizontal for accurate adjustment.
3. Before turning the power ON, turn potentiometers VR7 and 8 fully counterclockwise.
4. Set preset level to 0.
5. Follow steps 6 through 10 within 1 minute, after you turn the power ON.

— Adjustment —

6. Connect a DC voltmeter between TP1 and 3 (TP2 and 4 for right channel) of preamp unit (X08-185*.**).
7. Adjust VR1 (VR2) for a 0V reading of the DC voltmeter (PREAMP OFFSET).
8. Connect a DC voltmeter to speaker terminals.
9. Set the SPEAKERS switch to A+B and the PRESET LEVEL to 0.
10. Adjust CENTER ADJ VR5 (VR6) for 0V reading of the DC voltmeter (AUDIO AMP OFFSET).
11. Connect a DC voltmeter between TP25 and 23 (TP26 and 24) of audio amp unit (X09-160*.**).
12. After 2 minutes adjust IDLE ADJ VR7 (VR8) for 2 ~ 3 mV reading of the DC voltmeter (IDLE CURRENT).
13. Leave the power switch ON for 10 minutes.
14. Check that OFFSET voltages are 0V and voltage between TP25 and 23 (TP26 and 24) is now 4 ~ 5 mV.
15. If necessary, adjust each potentiometers again.
16. Place top cover.
17. After performing these adjustments IDLE current of 30 mA will flow.

REGLAGES

DECALAGE ET COURANT DE POLARISATION

— Avant les réglages —

Ce réglage sera effectué sans connecter l'antenne artificielle.

1. Retirer le couvercle du haut.
2. Cet amplificateur est équipé d'un caloduc. Il faudra donc maintenir l'amplificateur à l'horizontale pour obtenir un réglage précis.
3. Avant avoir placé l'appareil sous tension, tourner les potentiomètres VR7 et 8 à fond dans le sens inversé de celui des aiguilles d'une montre.
4. Régler PRESET LEVEL au 0.
5. Procéder aux opérations 6 à 10 dans 1 minute, après avoir placé l'appareil sous tension.

— Réglage —

6. Brancher un voltmètre de C.C. entre TP1 et 3 (TP2 et 4 pour le canal de droite) du bloc préamplificateur (X08-185*.**).
7. Régler VR1 (VR2) de façon à ce que le voltmètre de C.C. indique 0V (OFFSET).
8. Brancher un voltmètre de C.C. aux bornes du haut-parleur.
9. Régler SPEAKERS interrupteur au A+B et PRESET LEVEL à 0.
10. Régler CENTER ADJ. VR5 (VR6) de façon à ce que le voltmètre de C.C. indique 0V. (OFFSET).
11. Brancher un voltmètre de C.C. entre TP25 et 23 (TP26 et 24) du bloc amplificateur audio (X09-160*.**).
12. Après 2 minutes, régler IDLE ADJ VR7 (VR8) de façon à ce que le voltmètre de C.C. indique 2 ~ 3 mV (COURANT DE POLARISATION).
13. Maintenir le commutateur d'alimentation en position de marche pendant 10 minutes.
14. Vérifier que les voltages correspondent à 0V et s'assurer que le voltage entre TP25 et 23 correspond maintenant à 4~5 mV.
15. Si cela s'avère nécessaire, procéder à nouveau au réglage de chaque potentiomètre.
16. Placer le couvercle de haut.
17. A la suite de ces divers réglages, le passage du courant de polarisation de 30 mV sera assuré.

ADJUSTMENT/REGLAGES/ABGLEICH

ABGLEICH

VERSCHIEBUNG UND LEERLAUFSTROM

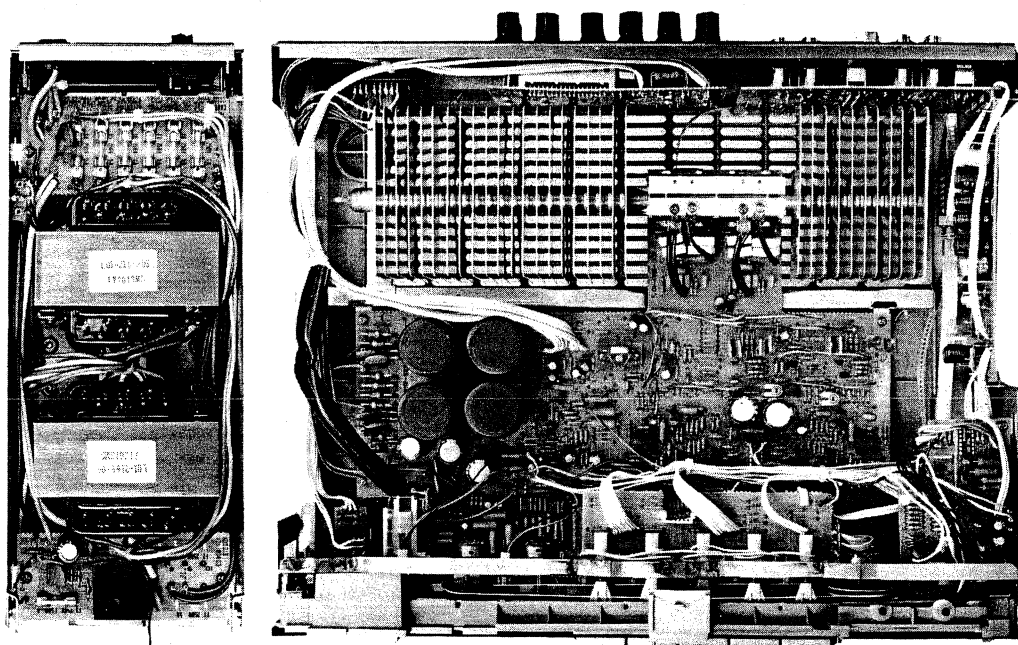
— Vor die Abgleich —

Dieser Abgleich wird ohne die künstliche Antenne anzuschließen ausgeführt

1. Die obere Abdeckung entfernen.
2. Dieser Verstärker ist mit einem Wärmerohr ausgestattet. Aus diesem Grund soll er in horizontaler Lage bleiben um eine genaue Einstellung zu ermöglichen.
3. Vor Einschalten das Potentiometers VR7 und 8 drehen voll gegen den Uhrzeigersinn.
4. Den PRESEL LEVEL Knopf auf 0.
5. Nach Einschalten die Schritte b6 bis 10 binnen 1 Minuten ausführen.

— Abgleich —

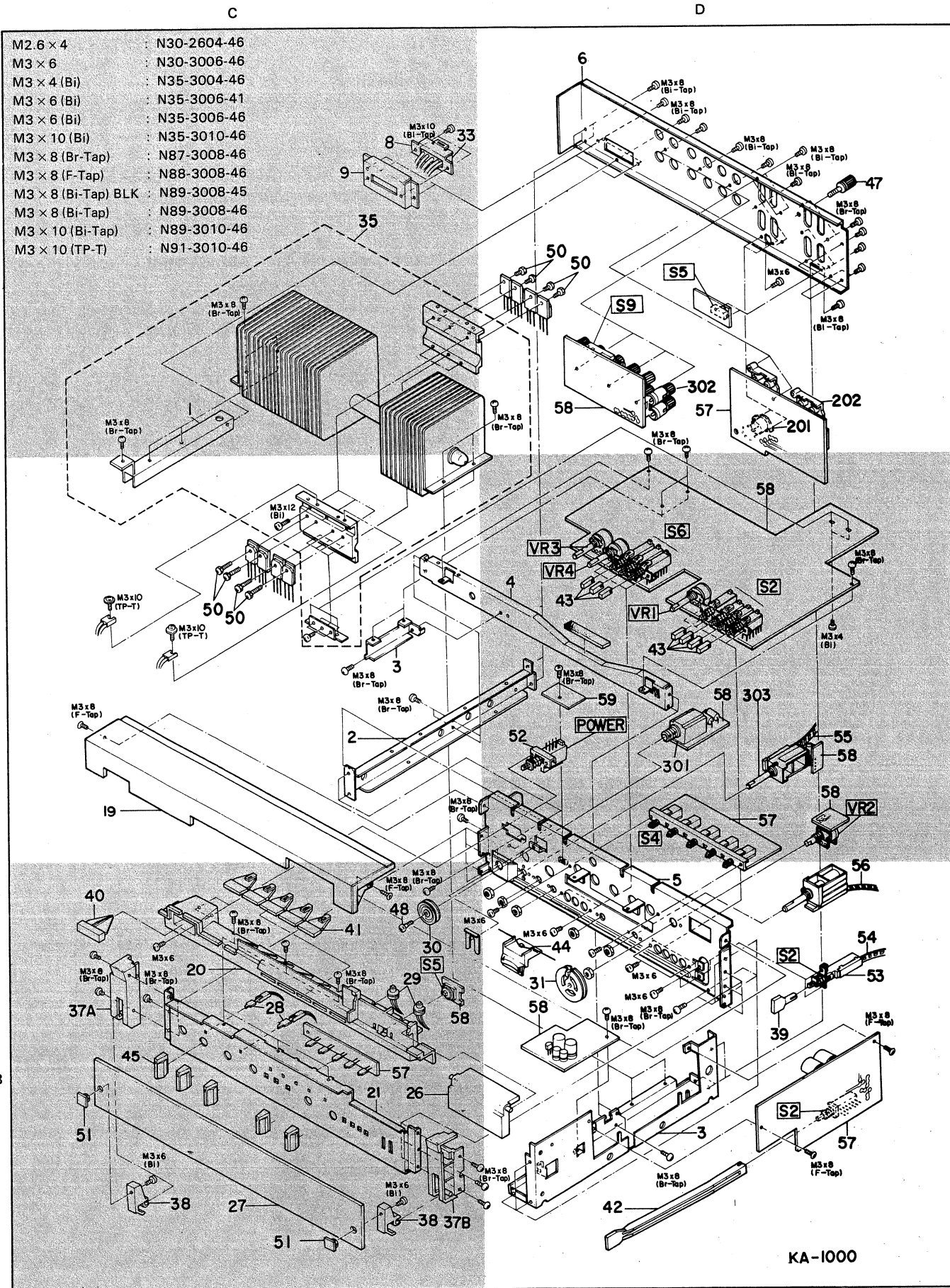
6. Einen Gleichspannungsmesser zwischen TP1 und 3 (TP2 und 4 für den rechten Kanal) des Vorverstärkers (X08-185*-***) anschließen.
7. Den VR1 (VR2) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist (VERSCHIEBUNG).
8. Einen Gleichspannungsmesser an die Lautsprecherklemmen anschließen.
9. Den Schalter SPEAKERS auf A+B und den PRESET VOLUME auf 0 einstellen.
10. Den CENTER ADJ. VR5 (VR6) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist (VERSCHIEBUNG).
11. Einen Gleichspannungsmesser zwischen TP25 und 23 (TP26 und 24) des Tonverstärker (X09-160*-***) anschließen.
12. Nach 2 Minuten, den IDLE ADJ VR7 (VR8) so regulieren, daß die Gleichspannungsmesser-Ablesung $2 \sim 3$ mV ist (LEERLAUFSTROM).
13. Den Netzschalter 10 Minuten lang eingeschaltet lassen.
14. Nachprüfen, ob die Verschiebespannungen 0V sind und die Spannung zwischen TP25 und 23 jetzt $4 \sim 5$ mV beträgt.
15. Die Potentiometer erforderlichenfalls nochmals entsprechend einstellen.
16. Den oberen Deckel anbringen.
17. Nach diesen Einstellungen fließt ein Ruhestrom von 30 mV.



PREAMP	AUDIO AMP	
	L	R
TP3 TP1 VR1 (OFFSET)		
	TP25 TP23	TP26 TP24
TP2 VR2 TP4 (OFFSET)		
	VR7 (IDLE)	VR8 (IDLE)
	VR5 (OFFSET)	VR6 (OFFSET)

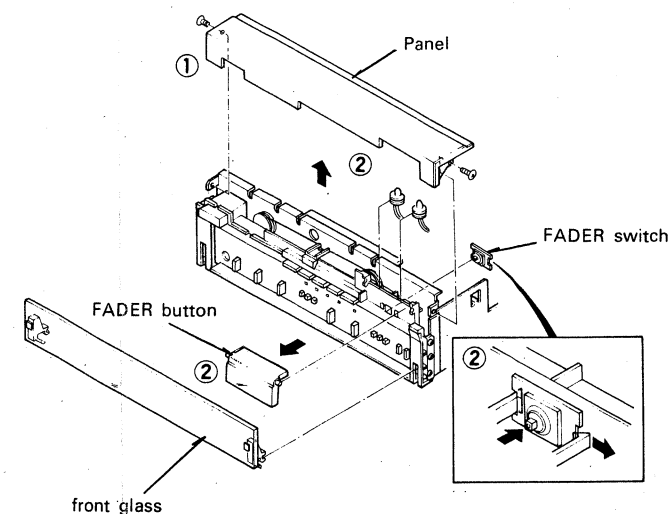
EXPLODED VIEW

DISASSEMBLY FOR REPLACEMENT

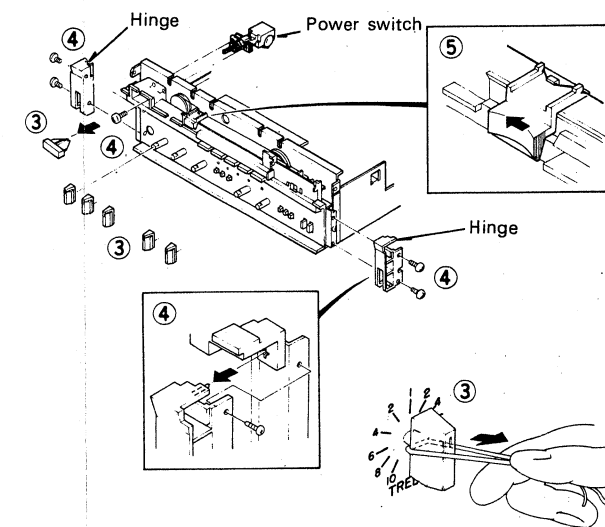


Refer to parts list on page 10.

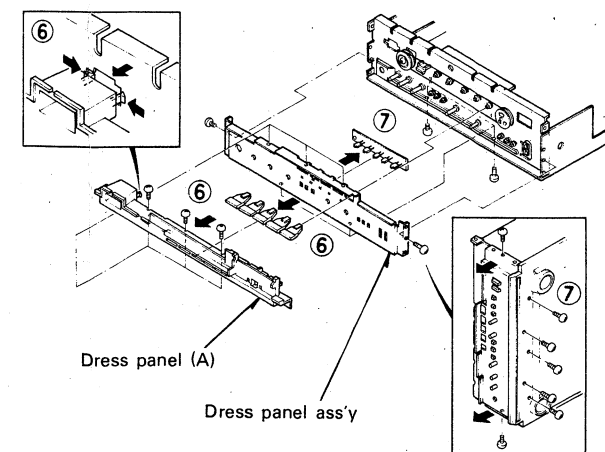
1. Remove side plate, top plate, panel and the front glass.
2. Remove FADER button and FADER lamp. Now, you can remove the FADER switch (S5) pc board by spreading the claws outward and pushing the switch from the front.



3. Remove the power switch button and knobs for BASS, TREBLE, BALANCE etc. by pulling them toward yourself. If they cannot be removed by hand, wind a covered wire around the shaft and pull.
4. Remove screws of the power switch. Remove screws at the side of the hinge and pull it to the direction of the arrow as shown. This hinge serves as a rivet to hold dress panel (A) to the chassis. For this reason, **please proceed after you remove this hinge.**
5. Preset level knob can be removed after the adhesive is taken off and slided to the left.



6. Remove dress panel (A) by pinching the claws inward and pushing it toward the front. Now, INPUT selector button can be removed.
7. Remove 5 screws at the front side of the bottom plate, also 2 screws at sides of dress panel ass'y and pull forward. Now LED pc board for INPUT selector can be removed.



ADJUSTMENT/REGLAGES/ABGLEICH

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OFFSET AND IDLE CURRENT

— Before adjustments —

This adjustment must be done without dummy load connected.

1. Remove top cover.
2. This amplifier uses heat pipe. For this reason, amplifier must be kept horizontal for accurate adjustment.
3. Before turning the power ON, turn potentiometers VR7 and 8 fully counterclockwise.
4. Set preset level to 0.
5. Follow steps 6 through 10 within 1 minute, after you turn the power ON.

REGLAGES

DECALAGE ET COURANT DE POLARISATION

— Avant les réglages —

Ce réglage sera effectué sans connecter l'antenne artificielle.

1. Retirer le couvercle du haut.
2. Cet amplificateur est équipé d'un caloduc. Il faudra donc maintenir l'amplificateur à l'horizontale pour obtenir un réglage précis.
3. Avant avoir placé l'appareil sous tension, tourner les potentiomètres VR7 et 8 à fond dans le sens inversé de celui des aiguilles d'une montre.
4. Régler PRESET LEVEL au 0.
5. Procéder aux opérations 6 à 10 dans 1 minute, après avoir placé l'appareil sous tension.

— Adjustment —

6. Connect a DC voltmeter between TP1 and 3 (TP2 and 4 for right channel) of preamp unit (X08-185*.**).
7. Adjust VR1 (VR2) for a 0V reading of the DC voltmeter (PREAMP OFFSET).
8. Connect a DC voltmeter to speaker terminals.
9. Set the SPEAKERS switch to A+B and the PRESET LEVEL to 0.
10. Adjust CENTER ADJ VR5 (VR6) for 0V reading of the DC voltmeter (AUDIO AMP OFFSET).
11. Connect a DC voltmeter between TP25 and 23 (TP26 and 24) of audio amp unit (X09-160*.**).
12. After 2 minutes adjust IDLE ADJ VR7 (VR8) for 2 ~ 3 mV reading of the DC voltmeter (IDLE CURRENT).
13. Leave the power switch ON for 10 minutes.
14. Check that OFFSET voltages are 0V and voltage between TP25 and 23 (TP26 and 24) is now 4 ~ 5 mV.
15. If necessary, adjust each potentiometers again.
16. Place top cover.
17. After performing these adjustments IDLE current of 30 mA will flow.

— Réglage —

6. Brancher un voltmètre de C.C. entre TP1 et 3 (TP2 et 4 pour le canal de droite) du bloc préamplificateur (X08-185*.**).
7. Régler VR1 (VR2) de façon à ce que le voltmètre de C.C. indique 0V (OFFSET).
8. Brancher un voltmètre de C.C. aux bornes du haut-parleur.
9. Régler SPEAKERS interrupteur au A+B et PRESET LEVEL à 0.
10. Régler CENTER ADJ. VR5 (VR6) de façon à ce que le voltmètre de C.C. indique 0V. (OFFSET).
11. Brancher un voltmètre de C.C. entre TP25 et 23 (TP26 et 24) du bloc amplificateur audio (X09-160*.**).
12. Après 2 minutes, régler IDLE ADJ VR7 (VR8) de façon à ce que le voltmètre de C.C. indique 2 ~ 3 mV (COURANT DE POLARISATION).
13. Maintenir le commutateur d'alimentation en position de marche pendant 10 minutes.
14. Vérifier que les voltages correspondent à 0V et s'assurer que le voltage entre TP25 et 23 corresponde maintenant à 4~5 mV.
15. Si cela s'avère nécessaire, procéder à nouveau au réglage de chaque potentiomètre.
16. Placer le couvercle de haut.
17. A la suite de ces divers réglages, le passage du courant de polarisation de 30 mV sera assuré.

ADJUSTMENT/REGLAGES/ABGLEICH

ABGLEICH

VERSCHIEBUNG UND LEERLAUFSTROM

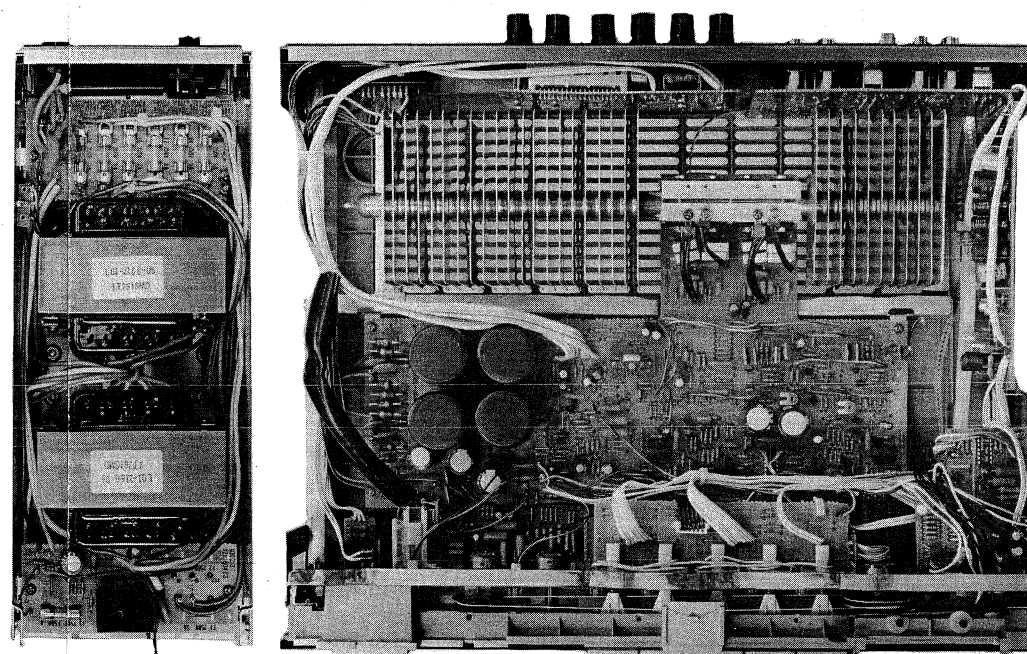
— Vor die Abgleich —

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1. Die obere Abdeckung entfernen.
2. Dieser Verstärker ist mit einem Wärmerohr ausgestattet. Aus diesem Grund soll er in horizontaler Lage bleiben um eine genaue Einstellung zu ermöglichen.
3. Vor Einschalten das Potentiometers VR7 und 8 drehen voll gegen den Uhrzeigersinn.
4. Den PRESET LEVEL Knopf auf 0.
5. Nach Einschalten die Schritte b6 bis 10 binnen 1 Minuten ausführen.

— Abgleich —

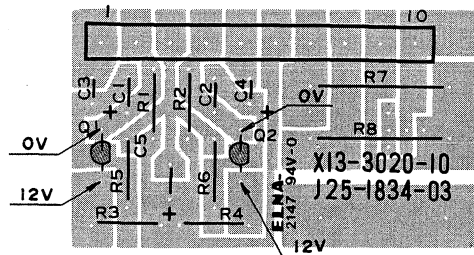
6. Einen Gleichspannungsmesser zwischen TP1 und 3 (TP2 und 4 für den rechten Kanal) des Vorverstärkers (X08-185*.***) anschließen.
7. Den VR1 (VR2) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist (VERSCHIEBUNG).
8. Einen Gleichspannungsmesser an die Lautsprecherklemmen anschließen.
9. Den Schalter SPEAKERS auf A+B und den PRESET VOLUME auf 0 einstellen.
10. Den CENTER ADJ. VR5 (VR6) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist. (VERSCHIEBUNG).
11. Einen Gleichspannungsmesser zwischen TP25 und 23 (TP26 und 24) des Tonverstärker (X09-160*.***) anschließen.
12. Nach 2 Minuten, den IDLE ADJ VR7 (VR8) so regulieren, daß die Gleichspannungsmesser-Ablesung 2 ~ 3 mV ist (LEERLAUFSTROM).
13. Den Netzschalter 10 Minuten lang eingeschaltet lassen.
14. Nachprüfen, ob die Verschiebespannungen 0V sind und die Spannung zwischen TP25 und 23 jetzt 4~5 mV beträgt.
15. Die Potentiometer erforderlichenfalls nochmals entsprechend einstellen.
16. Den oberen Deckel anbringen.
17. Nach diesen Einstellungen fließt ein Ruhestrom von 30 mV.



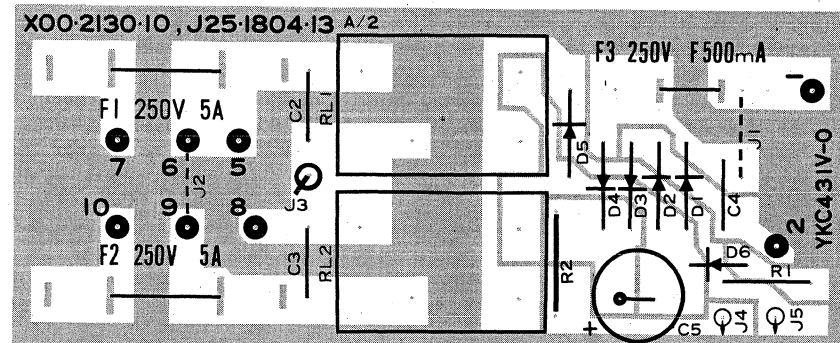
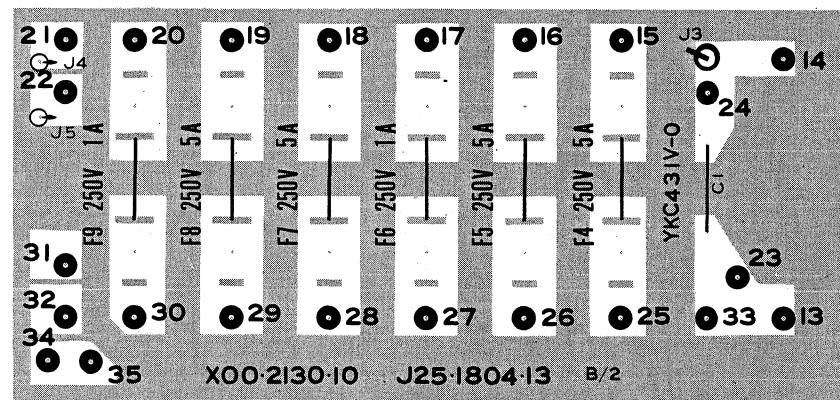
PREAMP	AUDIO AMP	
	L	R
TP3 TP1 VR1 (OFFSET)		
	TP25 TP23	TP26 TP24
TP2 VR2 TP4 (OFFSET)	VR7 (IDLE)	VR8 (IDLE)
	VR5 (OFFSET)	VR6 (OFFSET)

PC BOARD

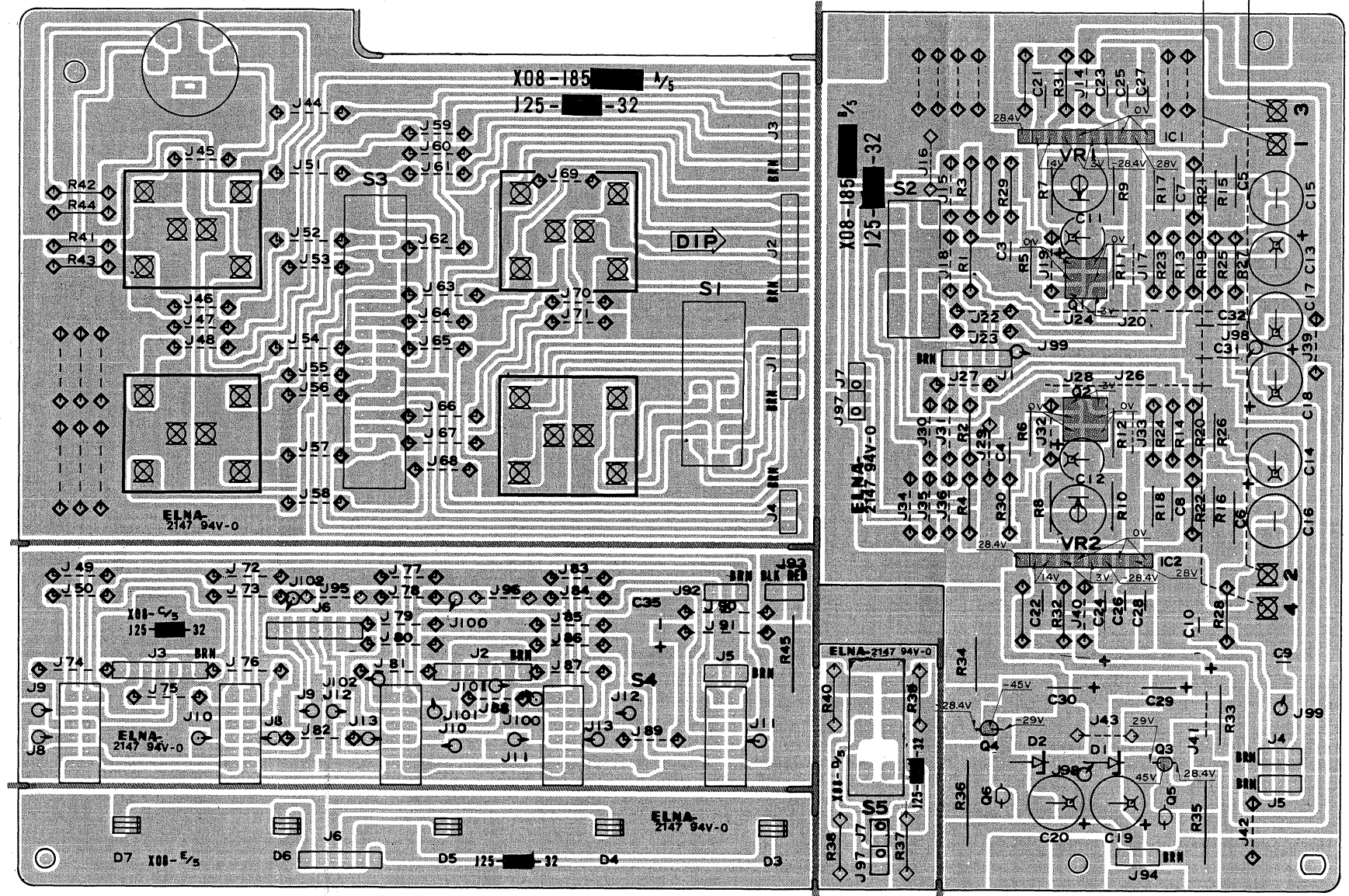
SUB (X13-3020-10)
Component Side View



POWER SUPPLY (X00-213-*)**
Component Side View



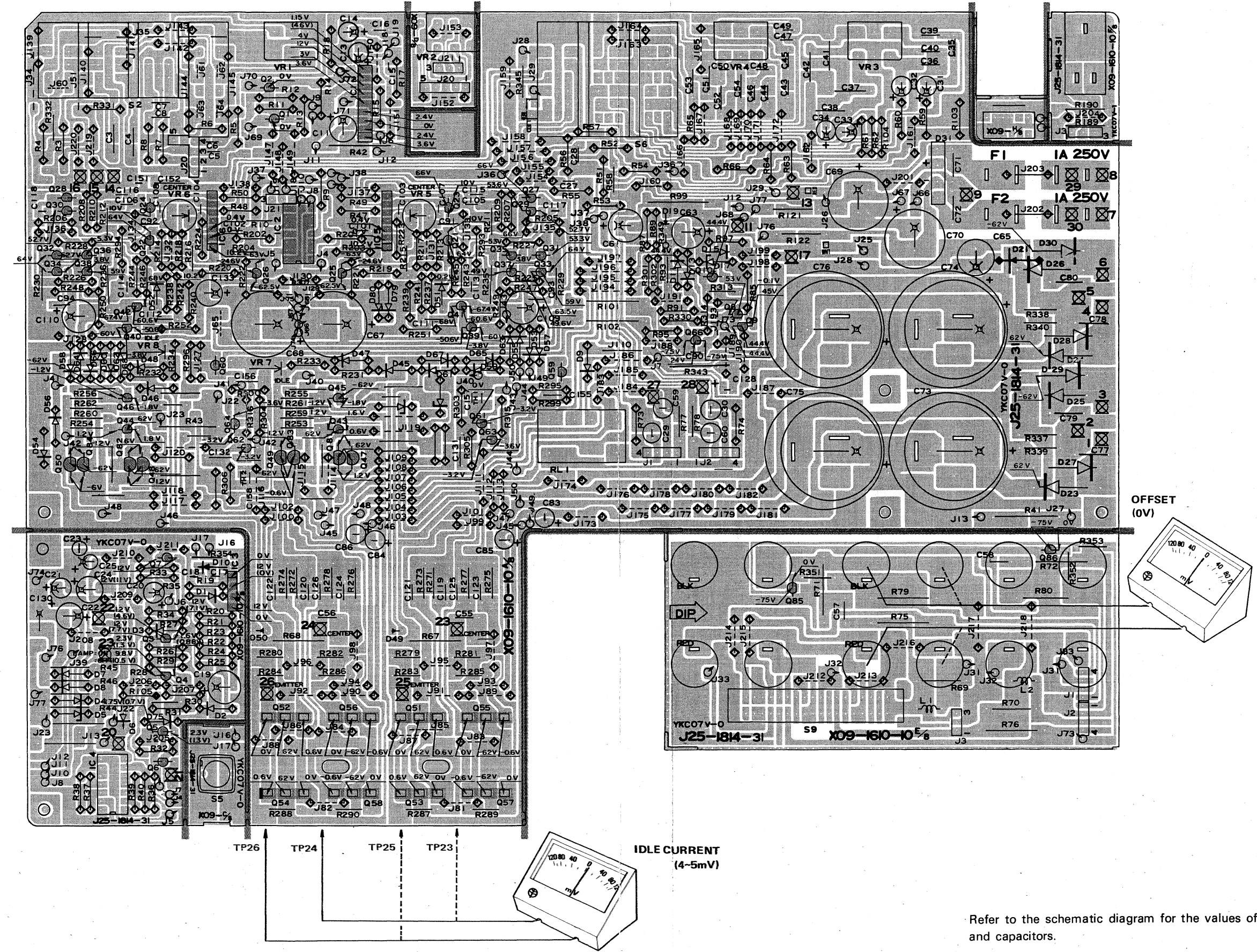
PRE AMP (X08-1850-10)
Component Side View



Refer to the schematic diagram for the values of resistors and capacitors.

PC BOARD

AUDIO AMP (X09-1610-10)
Component Side View



Refer to the schematic diagram for the values of resistors and capacitors.

PARTS LIST

INSTRUCTION FOR PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考	
② ①	18 1A 19 2A 19 2A 19 2A 19 2A	A01-0608-12 A20-1979-11 A20-1979-11 A20-1979-11 A20-1979-11	METALLIC CABINET FRONT PANEL ASSY FRONT PANEL ASSY FRONT PANEL ASSY FRONT PANEL ASSY	③ *K PM SU XW ④ ⑤ ⑥
⑤	R221 R222 VR1 /2 VR3 /4 VR5 /6	R43-1333-15 R43-1368-15 R12-3301-05 R19-4305-05 R12-2302-05	FL-PROOF RD330 J 2H FL-PROOF RD680 J 2H TRIMMING POT. 20K(B) POTENTIOMETER (OUTPUT) TRIMMING POT. 5K(B)	• • • • •

- ① Exploded view drawing No.
 - ② Position in exploded view.
 - ③ Symbol of new parts.
 - ④ Area to which parts are shipped. Example: A20-1979-11 is the part No. of FRONT PANEL ASS'Y for the "K" type products (for U.S.A.). When this column is blank, it means that the same type of parts (same parts No.) are used for the products shipped to all areas.
 - ⑤ Reference No. in schematic diagram.
 - ⑥ Abbreviation of "Flame-proof carbon film resistor"
- All capacitors and resistors are listed using abbreviations.
- Abbreviations of capacitors (Parts No. with initial letter "C").
- ELECTRO..... Electrolytic capacitor
 - LL-ELEC..... Low leak electrolytic capacitor
 - NP-ELEC..... Non-pole electrolytic capacitor
 - MICA..... Mica capacitor
 - POLYSTY..... Polystyrene capacitor
 - MYLAR..... Mylar capacitor
 - CERAMIC..... Ceramic capacitor
 - TANTAL..... Tantalum capacitor
 - MF..... Metallized film capacitor
 - MP..... Metallized paper capacitor
 - OIL..... Oil capacitor
- The unit "UF" is used in lieu of "μF"
- Abbreviations of resistors (Parts No. with initial letters "R").
- RC..... Carbon composition resistor
 - RD..... Carbon film resistor
 - FL-PROOF RD..... Flame-proof carbon film resistor
 - RW..... Wire wound power resistor
 - FL-PROOF RS..... Flame-proof metal oxide film resistor
 - RN..... Metal film resistor
 - FUSE-RESIST..... Resistor with fuse function
 - 2B..... Rated wattage 1/8W
 - 2E..... Rated wattage 1/4W
 - 2H..... Rated wattage 1/2W
 - 3A..... Rated wattage 1W
 - 3D..... Rated wattage 2W
 - 3F..... Rated wattage 3W
 - 3G..... Rated wattage 4W
 - 3H..... Rated wattage 5W
- All resistor values are indicated with the unit (Ω) omitted.
- Abbreviations common to capacitors and resistors.
- C..... ±0.25pF (Used for capacitors only)
 - D..... ±0.5pF (Used for capacitors only)
 - F..... ±1%
 - G..... ±2%
 - J..... ±5%
 - K..... ±10%
 - M..... ±20%
 - Z..... +80%.-20%(Used for capacitors only)
 - P..... +100%.-0%(Used for capacitors only)
- Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

CODES in:

- X00-213*..**
- E: X00-2132-71
- U: X00-2130-81
- K: X00-2130-10

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
KA-1000 UNIT			
1	1C	-	
2	2C	-	
3	2C,3D	-	
4	2D	-	
5	3D	-	
6	1D	-	
8	1C	-	
9	1C	-	
	041-0401-15	SIGMA CORD	
19	2C	A20-1728-02	*K
19	2C	A20-1728-02	PU
19	2C	A20-1728-02	MH
19	2C	A20-1728-02	UE
19	2C	A20-1728-02	XE
19	2C	A20-1729-02	*T
20	3C	A21-0329-12	
21	3C	A21-0334-12	
22	1A	A40-0248-02	*
23	1A	A50-0084-12	
24	1B	A50-0085-12	
25	1B	A52-0038-02	
-	B46-0055-30	WARRANTY CARD	P
-	B46-0060-00	WARRANTY CARD	T
-	B46-0061-30	WARRANTY CARD	K
-	B46-0062-30	WARRANTY CARD	UH
-	B46-0062-30	WARRANTY CARD	UE
-	B46-0063-13	WARRANTY CARD	UH
-	B46-0063-13	WARRANTY CARD	UE
-	B46-0064-20	WARRANTY CARD	X
-	B50-3239-00	INSTRUCTION MANUAL	*K
-	B50-3240-00	INSTRUCTION MANUAL	*P
-	B50-3240-00	INSTRUCTION MANUAL	MX
-	B50-3241-00	INSTRUCTION MANUAL	*P
-	B50-3241-00	INSTRUCTION MANUAL	UM
-	B50-3241-00	INSTRUCTION MANUAL	HX
-	B50-3241-00	INSTRUCTION MANUAL	UE
-	B50-3242-00	INSTRUCTION MANUAL	*M
-	B50-3243-00	INSTRUCTION MANUAL	*E
-	B50-3262-00	INSTRUCTION MANUAL	*T
-	B59-0018-00	SERVICE STATIONS' LIST	UH
-	B59-0018-00	SERVICE STATIONS' LIST	UE
26	3C	B08-6013-14	
27	3C	B10-0285-04	
28	3C	B30-0262-05	*
29	3C	B30-0270-05	
30	3C	D15-0073-14	
31	3D	D15-0179-03	
33	1D	E09-1603-05	
35	1C	F01-0358-15	*
-	H01-3222-04	CARTON BOX	*U
-	H01-3222-04	CARTON BOX	MH
-	H01-3222-04	CARTON BOX	UE
-	H01-3222-04	CARTON BOX	X
-	H01-3224-04	CARTON BOX	*E
-	H01-3225-04	CARTON BOX	*T
-	H01-3254-04	CARTON BOX	*K
-	H10-1563-02	POLYSTYRENE FIXTURE	*

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
-	H12-0081-04	PACKING FIXTURE	*
-	H20-0453-04	COVER	
-	H25-0078-04	BAG 235X315	UH
-	H25-0078-04	BAG 235X315	UE
37A 3C	J50-0098-03	HINGE (L)	
37B 3C	J50-0099-03	HINGE (R)	
38 3C	J50-0100-04	HINGE (A)	
39 3D	K27-0188-04	PUSH BTN(PHONO 1-2)	
40 3C	K27-0189-04	PUSH BTN(POWER)	
41 3C	K27-0190-14	PUSH BTN(INPUT SELECT)	
42 3D	K27-0191-03	PUSH BTN(CART MM-MC)	
43 2D	K27-0192-14	PUSH BTN(FILTER,ETC)	
44 3D	K29-0381-23	KNOB(PRESET LEVEL)	
45 3C	K29-0382-14	KNOB(SP,TONE,BAL,REC)	
47 1D	N08-0128-35	GND TERMINAL	
48 3C	N09-0100-14	SCREW (PULLEY)	
49 1A,1B	N09-0363-05	SCREW (SIDE PLATE)	
50 1D,2C	N09-0364-05	SCREW (POWER TR)	
51 3C	N14-0127-04	NUT (FRONT GLASS)	
52 2D	S40-2123-05	PUSH SWITCH (POWER)	
53 3D	S90-0039-05	REMOTE SW SHAFT	
54 3D	S90-0051-05	REMOTE WIRE	
56 3D	S90-0043-05	REMOTE ROT SW (REC OUT)	
Q51 -54	V03-2837-10	2SC2837(O,Y)	*
Q55 -58	V01-1186-10	2SA1186(O,Y)	*
57 2D,3D	X08-1850-10	PRE AMP PCB ASSY	
58 2D,3D	X09-1610-10	AUDIO AMP PCB ASSY	*
59 2D	X13-3020-10	SUB PCB ASSY	
KA-1000PS UNIT			
12 3B	-	MAIN CHASSIS	
13 3B	-	REAR PANEL	
14 3B	-	ESCUTCHEON	
15 2B	-	RECTANGULAR PLUG	
16 3B	-	MOUNTING HARDWARE (B)	
17 3B	-	MOUNTING HARDWARE (C)	
23 2A	A50-0084-02	SIDE PLATE (L)	
24 3B	A50-0085-02	SIDE PLATE (R)	
60 3A	A20-1722-02	FRONT PANEL	*K
60 3A	A20-1722-02	FRONT PANEL	PU
60 3A	A20-1722-02	FRONT PANEL	MH
60 3A	A20-1722-02	FRONT PANEL	UE
60 3A	A20-1722-02	FRONT PANEL	XE
60 3A	A20-1723-02	FRONT PANEL	*T
61 3A	A21-0347-04	DRESSING PANEL	*
62 2A	A52-0034-03	TOP PLATE	*
63 3A	B10-0284-04	FRONT GLASS	*
64 3A	B30-0258-05	LED	
-	C91-0023-05	CERAMIC 0.01UF AC250V	UM
-	C91-0023-05	CERAMIC 0.01UF AC250V	HX
-	C91-0023-05	CERAMIC 0.01UF AC250V	UE
-	C91-0079-05	CERAMIC 0.01UF AC125V	KP
32 3B	E03-0018-05	AC OUTLET	KP
32 3B	E03-0018-05	AC OUTLET	UM
32 3B	E03-0018-05	AC OUTLET	HX
32 3B	E03-0018-05	AC OUTLET	UE
65 3B	E30-0290-05	POWER CORD	KP
65 3B	E30-0291-25	POWER CORD	UM
65 3B	E30-0291-25	POWER CORD	H
65 3B	E30-0291-25	POWER CORD	UE

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
65 3B	E30-0580-05	POWER CORD	E
65 3B	E30-0587-05	POWER CORD	T
65 3B	E30-0649-05	POWER CORD	X
66 2B	E30-0617-05	CONNECTOR CORD	
-	H01-3226-04	CARTON BOX	*
-	H10-1564-02	POLYSTYRENE FIXTURE	*
-	H25-0122-04	BAG	
-	H25-0182-14	BAG	
36 3B	J42-0083-05	BUSHING	KP
36 3B	J42-0083-05	BUSHING	TE
36 3B	J42-0085-05	BUSHING	UM
36 3B	J42-0085-05	BUSHING	HX
36 3B	J42-0085-05	BUSHING	UE
67 3A,3B	J02-0112-04	FOOT X4	*
69 2A,2B	L01-2161-05	POWER TRANSFORMER	*K
69 2A,2B	L01-2161-05	POWER TRANSFORMER	P
69 2A,2B	L01-2162-05	POWER TRANSFORMER	*T
69 2A,2B	L01-2165-05	POWER TRANSFORMER	*U
69 2A,2B	L01-2165-05	POWER TRANSFORMER	MH
69 2A,2B	L01-2165-05	POWER TRANSFORMER	UE
69 2A,2B	L01-2165-05	POWER TRANSFORMER	X
69 2A,2B	L01-2166-05	POWER TRANSFORMER	*E
70 3A	L01-2171-05	POWER TRANSFORMER	*K
70 3A	L01-2171-05	POWER TRANSFORMER	P
70 3A	L01-2174-05	POWER TRANSFORMER	UM
70 3A	L01-2174-05	POWER TRANSFORMER	HX
70 3A	L01-2174-05	POWER TRANSFORMER	UE
70 3A	L01-2177-05	POWER TRANSFORMER	*T
70 3A	L01-2177-05	POWER TRANSFORMER	E
49 2A,3B	N09-0363-05	SCREW (SIDE PLATE)	
51 3A	N14-0127-04	NUT (FRONT GLASS)	
71 2A,2B	S31-2050-05	SLIDE SW (VOLTAGE SEL)	UM
71 2A,2B	S31-2050-05	SLIDE SW (VOLTAGE SEL)	HX
71 2A,2B	S31-2050-05	SLIDE SW (VOLTAGE SEL)	UE
71 2A,2B	S31-2050-05	SLIDE SW (VOLTAGE SEL)	E
73 2A,2B	X00-2130-10	POWER SUPPLY PCB ASSY	*K
73 2A,2B	X00-2130-10	POWER SUPPLY PCB ASSY	P
73 2A,2B	X00-2130-81	POWER SUPPLY PCB ASSY	*U
73 2A,2B	X00-2130-81	POWER SUPPLY PCB ASSY	MH
73 2A,2B	X00-2130-81	POWER SUPPLY PCB ASSY	UE
73 2A,2B	X00-2130-81	POWER SUPPLY PCB ASSY	X
73 2A,2B	X00-2132-71	POWER SUPPLY PCB ASSY	*T
73 2A,2B	X00-2132-71	POWER SUPPLY PCB ASSY	E
POWER SUPPLY(X00-213*-**)			
C1 ,2	C91-0079-05	CERAMIC 0.01UF AC125V	E
C2	C91-0023-05	CERAMIC 0.01UF AC250V	U
C4	C54-2710-39	CERAMIC 0.01UF P	
C5	C24-1247-71	ELECTRO 470UF 16WV	
F3	F05-5015-05	FUSE F0.5A 250V	E
F4 ,5	F05-5021-05	FUSE 5A 250V	K
F4 ,5	F05-5022-05	FUSE 5A 250V	U
F4 ,5	F05-5024-05	FUSE F5A 250V	E
F6	F05-1021-05	FUSE 1A 250V	K
F6	F05-1023-05	FUSE 1A 250V	U
F6	F06-1021-05	FUSE 1A 250V	E
F7 ,8	F05-5021-05	FUSE 5A 250V	K
F7 ,8	F05-5022-05	FUSE 5A 250V	U
F7 ,8	F05-5024-05	FUSE F5A 250V	E
F9	F05-1021-05	FUSE 1A 250V	K
F9	F05-1023-05	FUSE 1A 250V	U

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
F9	F06-1021-05	FUSE F1A 250V	E
101 2B	J13-0054-05	FUSE HOLDER	E
101 2B	J13-0055-05	FUSE HOLDER	KU
R2	R47-5427-05	FL-PROOF RS27 J 3A	UE
RL1	S51-1027-05	RELAY	UE
RL1 ,2	S51-1028-05	RELAY	K
D1 -5	V11-0295-05	W06B	
PRE AMP (X08-1850-10)			
D3 -7	B30-0258-05	LED	
C1 ,2	C52-1756-16	CERAMIC 560PF K	
C3 ,4	C71-1712-16	CERAMIC 120PF J	
C5 ,6	C49-2051-34	MYLAR 0,051UF G	
C7 ,8	C49-2015-35	MYLAR 0,015UF J	
C9 ,10	C48-1710-25	POLYSTY 1000PF J	
C11 ,12	C90-0402-05	ELECTRO 100UF 10WV	
C13 ,14	C90-0532-05	ELECTRO 470UF 10WV	
C15 ,16	C90-0404-05	NP-ELEC 10UF 35WV	
C17 -20	C24-6510-71	ELECTRO 100UF 35WV	
C21 ,22	C91-0100-05	POLYSTY 1000PF J	
C23 -26	C71-1733-05	CERAMIC 33PF 50WV	
C27 ,28	C71-1705-01	CERAMIC 5PF C	
C29 ,30	C24-1847-71	ELECTRO 470UF 63WV	
C31 ,32	C49-2010-34	MYLAR 0,01UF G	
C33 ,34	C55-1710-38	CERAMIC 0,01UF Z	
C35	C24-1047-69	ELECTRO 47UF 10WV	
201 10	E06-0510-05	DIN CONNECTOR	
202 10	E13-0429-05	PHONO JACK	
R11 ,12	R48-2107-03	RN 107 F 2E	
R13 ,14	R48-6282-95	RN 8,2 J 2E	
R15 ,16	R48-2619-23	RN 61,9K F 2E	
R17 ,18	R48-2511-13	RN 5,11K F 2E	
R23 ,24	R48-6233-05	RN 33 J 2E	
R33 ,34	R43-1247-95	FL-PROOF RD4,7 J 2E	
R35 ,36	R47-5533-15	FL-PROOF RS330 J 3D	
R45	R47-5456-25	FL-PROOF RS5,6K J 3A	
VR1 ,2	R12-0502-05	TRIMMING POT. (100KB)	
S1	S90-0045-05	SLIDE SW.(PHONO 1-2)	*
S2	S40-4033-05	PUSH SW.(MM-MC)	
S3	S90-0038-05	SLIDE SW.(REC-OUT)	
S4	S42-5020-05	PUSH SW.(INPUT SEL)	
S5	S31-2059-05	SLIDE SW.(PHONO IMP)	
D1 ,2	V11-4109-20	WZ-290	
IC1 ,2	V30-0520-10	TA2010A	*
Q1 ,2	V09-0153-10	2SK240(BL,V)	*
Q3	V03-2167-10	2SC2167(Y,G)	
Q4	V01-0957-10	2SA957(Y,G)	
Q5 ,6	V09-0127-50	2SK105(H)	
AUDIO AMP (X09-1610-10)			
C3 ,4	C46-1718-46	MYLAR 0,18UF K	
C5 ,6	C71-1722-15	CERAMIC 220PF J	
C7 ,8	C46-1727-35	MYLAR 0,027UF J	
C11	C24-1010-79	ELECTRO 100UF 10WV	
C13 ,14	C25-1722-47	LL-ELEC 0,22UF 50WV	
C15 ,16	C52-1756-16	CERAMIC 560PF K	
C17	C71-1756-06	CERAMIC 56PF J	
C18	C71-1710-02	CERAMIC 10PF D	
C19 ,20	C25-1222-67	LL-ELEC 22UF 16WV	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
C21 ,22	C25-1210-77	LL-ELEC 100UF 16WV	
C23	C25-1210-67	LL-ELEC 10UF 16WV	
C24	C24-0847-79	ELECTRO 470UF 6,3WV	
C25	C25-1210-67	LL-ELEC 10UF 16WV	
C27 ,28	C71-1708-02	CERAMIC 8PF D	
C29 ,30	C26-1722-57	NP-ELEC 2,2UF 50WV	
C31 ,32	C25-1722-57	LL-ELEC 2,2UF 50WV	
C33 ,34	C25-1222-67	LL-ELEC 22UF 16WV	
C35 ,36	C46-1733-35	MYLAR 0,033UF K	
C37 ,38	C46-1715-46	MYLAR 0,15UF K	
C39 ,40	C46-1733-35	MYLAR 0,033UF K	
C41 ,42	C46-1715-46	MYLAR 0,15UF K	
C43 -46	C46-1712-35	MYLAR 0,012UF J	
C47 ,48	C71-1733-16	CERAMIC 330PF K	
C49 ,50	C46-1712-26	MYLAR 0,0012UF K	
C51 -54	C46-1756-35	MYLAR 0,056UF J	
C55 -58	C46-1747-35	MYLAR 0,047UF J	
C59 ,60	C26-1722-57	NP-ELEC 2,2UF 50WV	
C61	C24-0822-79	ELECTRO 220UF 6,3WV	
C63	C24-1410-71	ELECTRO 100UF 25WV	
C65	C24-2033-67	ELECTRO 33UF 100WV	
C67 ,68	C24-2033-77	ELECTRO 330UF 100WV	
C69 ,70	C24-2047-77	ELECTRO 470UF 100WV	
C71 ,72	C54-2710-39	CERAMIC 0,01UF P	
C73 -76	C90-0493-05	ELECTRO 10000UF 63WV	*
C77 -80	C54-2710-39	CERAMIC 0,01UF P	
C83 -86	C24-1822-51	ELECTRO 2,2UF 63WV	
C90	C52-1715-26	CERAMIC 0,0015UF K	
C91 ,92	C46-1710-35	MYLAR 0,01UF J	
C93 ,94	C71-1708-02	CERAMIC 8PF D	
C101,102	C71-1710-15	CERAMIC 100PF J	
C105,106	C52-1782-16	CERAMIC 820PF K	
C107,108	C71-1702-01	CERAMIC 2PF C	
C109,110	C24-1047-69	ELECTRO 47UF 10WV	
C111,112	C46-1733-35	MYLAR 0,033UF K	
C113,114	C71-1739-06	CERAMIC 39PF J	
C115,116	C55-1722-38	CERAMIC 0,022UF Z	
C119-126	C46-1722-35	MYLAR 0,022UF J	
C128	C25-1710-67	ELECTRO 10UF 50WV	
C130	C24-1747-61	ELECTRO 47UF 50WV	
C133	C24-0810-79	ELECTRO 100UF 6,3WV	
C151	C25-1747-47	LL-ELEC 0,47UF 50WV	
C152	C46-1710-45	MYLAR 0,1UF J	
C153,154	C71-1706-02	CERAMIC 6PF D	
C155,156	C71-1722-15	CERAMIC 220PF J	
C157,158	C52-1715-26	CERAMIC 0,0015UF K	
301 2D	E11-0081-05	PHONE JACK	
302 1D	E20-0814-05	SPEAKER TERMINAL	
L1 ,2	L39-0085-05	COIL	
-	N10-2030-46	HEXAGON NUT (M3)	
R16	R47-5518-25	FL-PROOF RS1,8K J 3D	
R41	R47-5522-15	FL-PROOF RS220 J 3D	
R42 ,43	R47-5510-25	FL-PROOF RS1K J 3D	
R44 -46	R47-5433-25	FL-PROOF RS3,3K J 3A	
R67 ,68	R47-5547-95	FL-PROOF RS4,7 J 3D	
R69 ,70	R47-5410-05	FL-PROOF RS10 J 3A	
R71 ,72	R47-5547-95	FL-PROOF RS4,7 J 3D	
R75 ,76	R47-5556-15	FL-PROOF RS560 J 3D	
R77 ,78	R43-1233-95	FL-PROOF RD3,3 J 2E	
R79 ,80	R47-5410-05	FL-PROOF RS10 J 3A	

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 规格	Re- marks 備考
R81	R47-5456-15	FL-PROOF RS560 J 3A	
R99	R47-5518-25	FL-PROOF RS1,8K J 3D	
R101,102	R47-5512-15	FL-PROOF RS120 J 3D	
R113-116	R43-1247-05	FL-PROOF RD47 J 2E	
R121	R47-5547-15	FL-PROOF RS470 J 3D	
R122	R47-5582-15	FL-PROOF RS820 J 3D	
R229,230	R43-1216-15	FL-PROOF RD160 J 2E	
R235,236	R47-5482-25	FL-PROOF RS8,2K J 3A	
R253-256	R43-1256-15	FL-PROOF RD560 J 2E	
R259-262	R43-1282-05	FL-PROOF RD82 J 2E	
R271-278	R43-1282-95	FL-PROOF RD8,2 J 2E	
R279-290	R92-0203-05	FIXED RESISTOR	
R307	R47-5418-35	FL-PROOF RS18K J 3A	
R337-340	R43-1282-25	FL-PROOF RD8,2K J 2E	
R343	R47-5510-25	FL-PROOF RS1K J 3D	
R345	R47-5456-25	FL-PROOF RS5,6K J 3A	
VR1	R06-5062-05	POTENTIOMETER (BAL)	
VR2	R06-5063-05	POTENTIOMETER (VOL)	
VR3 ,4	R06-4051-05	POTENTIOMETER (TONE)	
VR5 ,6	R12-0502-05	TRIMMING POT. 100	
VR7 ,8	R12-0077-05	TRIMMING POT. 100	
303 2D	S90-0046-05	REMOTE ROT SW (SP SEL)	
RL1	S51-2045-05	RELAY	
S2	S42-4015-05	PUSH SW. (FIL,MODE,LOUD)	
S5	S40-1012-05	PUSH SW. (FADER)	
S6	S42-3047-05	PUSH SW. (TURN OVER)	
S9	S90-0047-05	SLIDE SW. (SP SELECTOR)	
D1 -3	V11-0273-05	1S2076A	
D4	V11-4100-40	WZ-120	
D5	V11-4172-26	WZ-032	
D6	V11-4100-40	WZ-120	
D7 ,8	V11-4172-26	WZ-032	
D9	V11-0273-05	1S2076A	
D10	V11-0271-05	1S2076	
D11	V11-0273-05	1S2076A	
D13	V11-0273-05	1S2076A	
D15	V11-0273-05	1S2076A	
D17	V11-0287-05	WZ-240	
D19	V11-0273-05	1S2076A	
D21	V11-0295-05	W06B	
D23 -30	V11-0465-05	GP25D	
D31	V11-5100-60	RB-151	
D45 ,46	V11-5100-80	STV-2H(W)	
D47 ,48	V11-0271-05	1S2076	
D49 ,50	V21-0013-05	STV-3H(Y)	
D51 ,52	V11-0271-05	1S2076	
D53 -56	V11-0273-05	1S2076A	
D57 -68	V11-0271-05	1S2076	
D75	V11-0273-05	1S2076A	
D79	V11-4103-60	X2-051	
D80	V11-0271-05	1S2076	
D81	V11-0271-05	1S2076	
IC1	V30-0514-10	AN5733	
IC2	V30-0516-10	MB84066B	
IC3	V30-0515-10	DN819	
IC4	V30-0526-10	MB84069B	
IC5 ,6	V09-0145-30	UPA68H(L,M)	
Q1 ,2	V09-0144-40	2SK163(N)	
Q3 ,4	V01-0999-10	2SA999(E,F)	
Q5	V03-2320-00	2SC2320	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 规格	Re- marks 備考
Q6	V02-0724-20	2SB724(P,O)	
Q7	V01-0999-10	2SA999(E,F)	
Q8	V03-2320-00	2SC2320	
Q9	V01-0999-10	2SA999(F,E)	
Q10	V01-0954-00	2SA954	
Q21 -26	V03-2320-00	2SC2320	
Q27 -30	V03-0098-05	2SC535	
Q31 -34	V01-0999-10	2SA999(E,F)	
Q31 -34	V01-1127-30	2SA1127NC	
Q35 -38	V01-0912-30	2SA912(R)	
Q35 -38	V01-0992-10	2SA992(F,E)	
Q39 ,40	V03-1885-20	2SC1885(R)	
Q41 ,42	V03-2320-00	2SC2320	
Q43 ,44	V03-2631-10	2SC2631(Q,R,S)	
Q45 ,46	V01-1123-10	2SA1123(Q,R,S)	
Q47 ,48	V03-2275-10	2SC2275A(R,Q,P)	
Q49 ,50	V01-0985-10	2SA985A(R,Q,P)	
Q59 ,60	V01-0992-10	2SA992(F,E)	
Q61 ,62	V01-0198-05	2SA872	
Q63 ,64	V03-1775-00	2SC1775	
Q66	V03-1845-10	2SC1845(F,E)	
Q81 ,82	V03-2275-10	2SC2275A(R,Q,P)	
Q83 ,84	V01-0985-10	2SA985A(R,Q,P)	
Q85 ,86	V01-0992-10	2SA992(F,E)	
TH1 ,2	V22-0027-05	5TP-41L	
SUB (X13-3020-10)			
C1 ,2	C52-1747-26	CERAMIC 0,0047UF K	
C3 ,4	C25-1447-57	LL-ELEC 4,7UF 25WV	
R7 ,8	R47-5522-15	FL-PROOF RS220 J 3D	
Q1 ,2	V01-0992-00	2SA992	

Semiconductor Substitutions

Name	Substitutions
PRE AMP (X08-1850-10)	
TA2010A	TA2010
2SA957 (Y, G)	2SB724 (O)
2SC2167	2SD762 (O)
2SK105 (H)	2SK163 (L), 2SK136 (Q), 2SK117 (GR)
AUDIO AMP (X09-1610-10)	
MB84066B	μPD4066C
MB84069B	μPD4069C
2SA985A (R,Q,P)	2SA1111 (Q, R)
2SA1123 (Q,R,S)	2SA912 (Q, R, S)
2SC535	2SC1674 (L, K), 2SC1923
2SC2275A (R,Q,P)	2SC2591 (Q, R)
2SC2320	2SC945
2SC2631 (Q,R,S)	2SC1885 (Q, R, S)
2SK163 (N)	2SK105 (H)
1S2076	1S1555
GP25D	U05C (S)

PARTS LIST

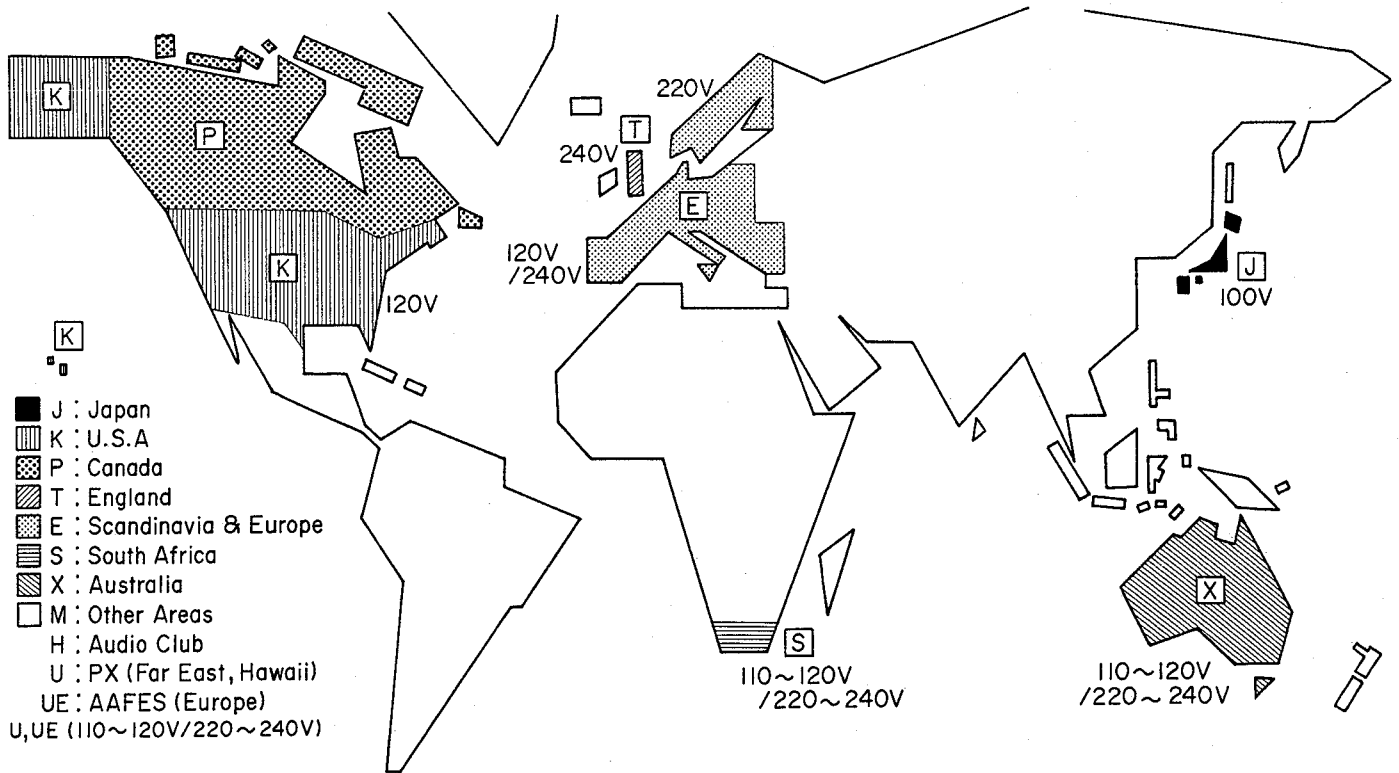
Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
RB1	R47-5456-15	FL-PROOF RS560 J 3A	
R99	R47-5518-25	FL-PROOF RS1,8K J 3D	
R101,102	R47-5512-15	FL-PROOF RS120 J 3D	
R113-116	R43-1247-05	FL-PROOF RD47 J 2E	
R121	R47-5547-15	FL-PROOF RS470 J 3D	
R122	R47-5582-15	FL-PROOF RS820 J 3D	
R229,230	R43-1216-15	FL-PROOF RD160 J 2E	
R235,236	R47-5482-25	FL-PROOF RS8,2K J 3A	
R253-256	R43-1256-15	FL-PROOF RD560 J 2E	
R259-262	R43-1282-05	FL-PROOF RD82 J 2E	
R271-278	R43-1282-95	FL-PROOF RD8,2 J 2E	
R279-290	R92-0203-05	FIXED RESISTOR	
R307	R47-5418-35	FL-PROOF RS18K J 3A	
R337-340	R43-1282-25	FL-PROOF RD8,2K J 2E	
R343	R47-5510-25	FL-PROOF RS1K J 3D	
R345	R47-5456-25	FL-PROOF RS5,6K J 3A	
VR1	R06-5062-05	POTENTIOMETER (BAL)	
VR2	R06-5063-05	POTENTIOMETER (VOL)	
VR3 ,4	R06-4051-05	POTENTIOMETER (TONE)	
VR5 ,6	R12-0502-05	TRIMMING POT. 100	
VR7 ,8	R12-0077-05	TRIMMING POT. 100	
303 2D	S90-0046-05	REMOTE ROT SW (SP SEL)	
RL1	S51-2045-05	RELAY	
S2	S42-4015-05	PUSH SW.(FIL,MODE,LOUD)	*
S5	S40-1012-05	PUSH SW.(FADER)	
S6	S42-3047-05	PUSH SW.(TURN OVER)	
S9	S90-0047-05	SLIDE SW.(SP SELECTOR)	
D1 -3	V11-0273-05	1S2076A	
D4	V11-4100-40	WZ-120	
D5	V11-4172-26	WZ-032	
D6	V11-4100-40	WZ-120	
D7 ,8	V11-4172-26	WZ-032	
D9	V11-0273-05	1S2076A	
D10	V11-0271-05	1S2076	
D11	V11-0273-05	1S2076A	
D13	V11-0273-05	1S2076A	
D15	V11-0273-05	1S2076A	
D17	V11-0287-05	WZ-240	
D19	V11-0273-05	1S2076A	
D21	V11-0295-05	W06B	
D23 -30	V11-0465-05	GP25D	
D31	V11-5100-60	RB-151	
D45 ,46	V11-5100-80	STV-2H(W)	
D47 ,48	V11-0271-05	1S2076	
D49 ,50	V21-0013-05	STV-3H(Y)	
D51 ,52	V11-0271-05	1S2076	
D53 -56	V11-0273-05	1S2076A	
D57 -68	V11-0271-05	1S2076	
D75	V11-0273-05	1S2076A	
D79	V11-4103-60	XZ-051	
D80	V11-0271-05	1S2076	
D81	V11-0271-05	1S2076	
IC1	V30-0514-10	AN5733	
IC2	V30-0516-10	MB84066B	
IC3	V30-0515-10	DN819	
IC4	V30-0526-10	MB84069B	
IC5 ,6	V09-0145-30	UPA68H(L,M)	
Q1 ,2	V09-0144-40	2SK163(N)	
Q3 ,4	V01-0999-10	2SA999(E,F)	
Q5	V03-2320-00	2SC2320	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
Q6	V02-0724-20	2SB724(P,O)	
Q7	V01-0999-10	2SA999(E,F)	
Q8	V03-2320-00	2SC2320	
Q9	V01-0999-10	2SA999(F,E)	
Q10	V01-0954-00	2SA954	
Q21 -26	V03-2320-00	2SC2320	
Q27 -30	V03-0098-05	2SC535	
Q31 -34	V01-0999-10	2SA999(E,F)	
Q31 -34	V01-1127-30	2SA1127NC	
Q35 -38	V01-0912-30	2SA912(R)	
Q35 -38	V01-0992-10	2SA992(F,E)	
Q39 ,40	V03-1885-20	2SC1885(R)	
Q41 ,42	V03-2320-00	2SC2320	
Q43 ,44	V03-2631-10	2SC2631(Q,R,S)	
Q45 ,46	V01-1123-10	2SA1123(Q,R,S)	
Q47 ,48	V03-2275-10	2SC2275A(R,Q,P)	
Q49 ,50	V01-0985-10	2SA985A(R,Q,P)	
Q59 ,60	V01-0992-10	2SA992(F,E)	
Q61 ,62	V01-0198-05	2SA872	
Q63 ,64	V03-1775-00	2SC1775	
Q66	V03-1845-10	2SC1845(F,E)	
Q81 ,82	V03-2275-10	2SC2275A(R,Q,P)	
Q83 ,84	V01-0985-10	2SA985A(R,Q,P)	
Q85 ,86	V01-0992-10	2SA992(F,E)	
TH1 ,2	V22-0027-05	5TP-41L	
SUB (X13-3020-10)			
C1 ,2	C52-1747-26	CERAMIC 0.0047UF K	
C3 ,4	C25-1447-57	LL-ELEC 4,7UF 25WV	
R7 ,8	R47-5522-15	FL-PROOF RS220 J 3D	
Q1 ,2	V01-0992-00	2SA992	

Semiconductor Substitutions

Name	Substitutions
PRE AMP (X08-1850-10)	
TA2010A	TA2010
2SA957 (Y, G)	2SB724 (O)
2SC2167	2SD762 (O)
2SK105 (H)	2SK163 (L), 2SK136 (Q), 2SK117 (GR)
AUDIO AMP (X09-1610-10)	
MB84066B	μPD4066C
MB84069B	μPD4069C
2SA985A (R,Q,P)	2SA1111 (Q, R)
2SA1123 (Q,R,S)	2SA912 (Q, R, S)
2SC535	2SC1674 (L, K), 2SC1923
2SC2275A (R,Q,P)	2SC2591 (Q, R)
2SC2320	2SC945
2SC2631 (Q,R,S)	2SC1885 (Q, R, S)
2SK163 (N)	2SK105 (H)
1S2076	1S1555
GP25D	U05C (S)

WORLD MAP & AREA CODE



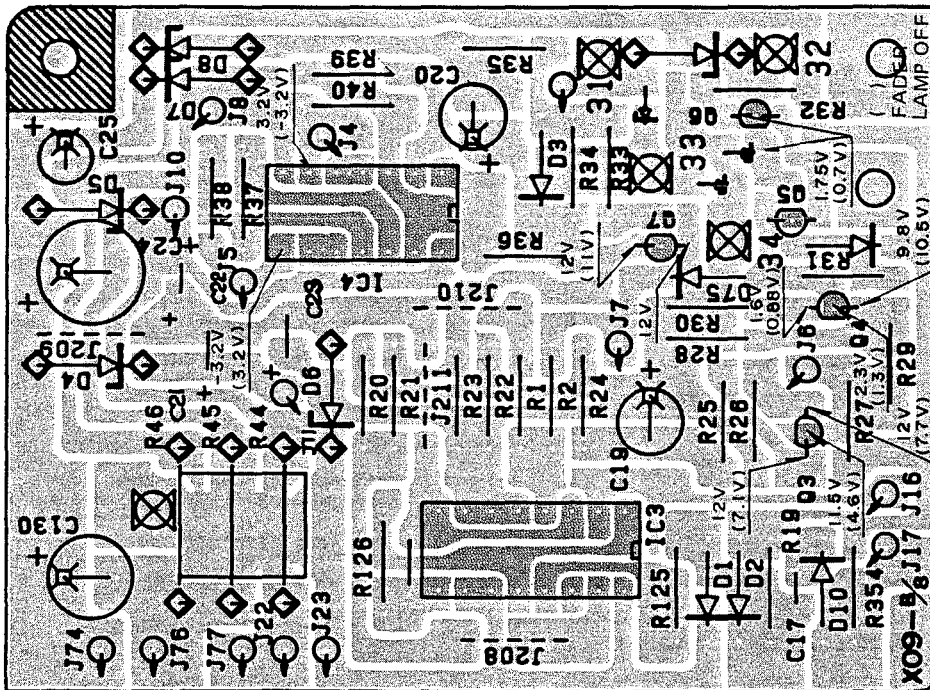
Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on, the U.S. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list. There are no plan for producing units of S type.

A product of
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PC BOARD/PARTS LIST



Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
KA-1000 Refer to Parts List of Service Manual for other parts.			
Q51 -54	V03-2837-10	2SC2837(O,Y)	
Q55 -58	V01-1186-10	2SA1186(O,Y)	
KA-1000PS Refer to Parts List of Service Manual for other parts.			
-	C91-0023-05	CERAMIC 0.01UF AC250V	UM
-	C91-0023-05	CERAMIC 0.01UF AC250V	HX
-	C91-0023-05	CERAMIC 0.01UF AC250V	UE
-	C91-0079-05	CERAMIC 0.01UF AC125V	KP
POWER SUPPLY (X00-213*..**)			
C1 -3	C91-0079-05	CERAMIC 0.01UF AC125V	KE
C2	C91-0023-05	CERAMIC 0.01UF AC250V	U
C4	C54-2710-39	CERAMIC 0.01UF P	
C5	C24-1247-77	ELECTRO 470UF 16WV	
F3	F05-5015-05	FUSE	E
F4 ,5	F05-5021-05	FUSE	K
F4 ,5	F05-5022-05	FUSE	U
F4 ,5	F05-5024-05	FUSE	E
F6	F05-1021-05	FUSE	E
F6	F05-1023-05	FUSE	U
F6	F06-1021-05	FUSE	K
F7 ,8	F05-5021-05	FUSE	K
F7 ,8	F05-5022-05	FUSE	U
F7 ,8	F05-5024-05	FUSE	E
101 2B	J13-0054-05	FUSE HOLDER	E
101 2B	J13-0055-05	FUSE HOLDER	
R2	R47-1427-05	FL-PROOF RS27 J 3A	UE
RL1	S51-1027-05	RELAY	UE
RL1 ,2	S51-1028-05	RELAY	K
D1 -5	V11-0295-05	W06B	

Codes for X00-213*..**
 K: X00-2130-10
 U: X00-2130-81
 E: X00-2132-71

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
PRE AMP (X08-185*..**)			
D3 -7	B30-0258-05	LAMP	
C3 ,4	C71-1712-16	CERAMIC 120PF	J
C5 ,6	C49-2051-34	MYLAR 0.051UF	G
C7 ,8	C49-2015-34	MYLAR 0.015UF	J
C9 ,10	C48-1710-25	POLYSTY 1000PF	J
C11 ,12	C90-0402-05	ELECTRO 100UF 6.3WV	
C13 ,14	C90-0532-05	ELECTRO 470UF 10WV	
C15 ,16	C90-0404-05	NP-ELEC 10UF 35WV	
C17 -20	C24-6510-71	ELECTRO 100UF 35WV	
C21 ,22	C91-0100-05	POLYSTY 1000PF	J
C23 ,24	C71-1710-15	CERAMIC 100PF	J
C25 ,26	C71-1733-06	CERAMIC 33PF	K
C27 ,28	C71-1705-01	CERAMIC 5PF	C
C29 ,30	C24-1847-77	ELECTRO 470UF 63WV	
C31 ,32	C49-2010-35	MYLAR 0.01UF	J
C35	C24-1047-69	ELECTRO 47UF 10WV	
C37 ,38	C71-1718-16	CERAMIC 180PF	K
C39 ,40	C71-1712-16	CERAMIC 120PF	J
C41 ,42	C52-1722-26	CERAMIC 0.0022UF	K
C43 -46	C71-1768-06	CERAMIC 68PF	K
201 1D	E06-0510-05	DIN CONNECTOR	
202 1D	E13-0429-05	PHONO JACK	
L1 ,2	L40-1511-43	INDUCTOR	E
R11 ,12	R12-0502-05	TRIMMING POT. 100KB	
R13 ,14	R48-2107-03	RN 107 F 2E	
R15 ,16	R48-6282-95	RN 8.2 J 2E	
R17 ,18	R48-2619-23	RN 61.9K F 2E	
	R48-2511-13	RN 5.11K F 2E	

Codes for X08-185*..**
 E: X08-1852-71

15

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
R23,24	R48-6233-05	RN 33 J 2E	
R33,34	R43-1247-95	FL-PROOF RD4.7 J 2E	
R35,36	R47-5533-15	FL-PROOF RS330 J 3D	
R45	R47-5482-25	FL-PROOF RS8,2K J 3A	
S1	S90-0045-05	SLIDE SWITCH(PHONO 1-2)	
S2	S40-4033-15	PUSH SWITCH(MM-MC)	
S3	S90-0038-05	SLIDE SWITCH(REC-OUT)	
S4	S42-5020-05	PUSH SWITCH(INPUT SEL)	
S5	S31-2059-05	SLIDE SWITCH(PHONO IMP)	
D1,2	V11-4109-20	WZ-290	
IC1,2	V30-0520-10	TA2010A GR TA2010	
Q1,2	V09-0153-10	2SK240(BL,V)	
Q3	V03-2167-10	2SC2167 OR 2SD762(C)	
Q4	V01-0957-10	2SA957 OR 2SB724(C)	
Q5,6	V09-0126-20	2SK117(GR) OR	
	V09-0127-50	2SK105(H) OR	
	V09-0144-60	2SK163(L)	
AUDIO AMP (X09-161*-.**)			
C1,2	C71-1710-15	CERAMIC 100PF J	
C3,4	C46-1718-46	MYLAR 0.18UF K	
C5,6	C71-1722-15	CERAMIC 220PF J	
C7,8	C46-1727-35	MYLAR 0.027UF J	
C11	C24-1010-79	ELECTRO 100UF 10WV	
C13,14	C25-1722-47	LL-ELEC 0.22UF 50WV	
C15,16	C52-1756-16	CERAMIC 560PF K	
C17	C71-1747-05	CERAMIC 47PF J	
C18	C71-1733-16	CERAMIC 330PF K	
C19,20	C25-1222-67	LL-ELEC 22UF 16WV	
C21,22	C24-1210-79	ELECTRO 100UF 16WV	
C23	C24-1210-69	ELECTRO 10UF 16WV	
C24	C24-0847-77	ELECTRO 470UF 6.3WV	
C25	C24-1210-69	ELECTRO 10UF 16WV	
C27,28	C71-1708-02	CERAMIC 8PF D	
C29,30	C26-1722-57	NP-ELEC 2.2UF 50WV	
C31,32	C24-1722-57	ELECTRO 2.2UF 50WV	
C33,34	C24-1222-67	ELECTRO 22UF 16WV	
C35,36	C46-1733-35	MYLAR 0.033UF J	
C37,38	C46-1715-46	MYLAR 0.15UF K	
C39,40	C46-1733-35	MYLAR 0.033UF J	
C41,42	C46-1715-46	MYLAR 0.15UF K	
C43-46	C46-1712-35	MYLAR 0.012UF J	
C47,48	C71-1733-16	CERAMIC 330PF K	
C49,50	C46-1712-26	MYLAR 0.0012UF K	
C51-54	C46-1756-35	MYLAR 0.056UF J	
C55-58	C46-1747-35	MYLAR 0.047UF J	
C59,60	C26-1722-57	NP-ELEC 2.2UF 50WV	
C61	C24-0822-79	ELECTRO 220UF 6.3WV	
C63	C24-1410-79	ELECTRO 100UF 25WV	
C65	C24-2033-67	ELECTRO 33UF 100WV	
C67,68	C24-2033-77	ELECTRO 330UF 100WV	
C69,70	C24-2047-77	ELECTRO 470UF 100WV	
C71,72	C54-2710-39	CERAMIC 0.01UF P	
C73-76	C90-0493-05	ELECTRO 10000UF 63WV	
C77-80	C54-2710-39	CERAMIC 0.01UF P	
C83-86	C24-1822-51	ELECTRO 2.2UF 63WV	
C90	C46-1768-25	MYLAR 0.0068UF J	
C91,92	C46-1710-35	MYLAR 0.01UF J	
C93,94	C71-1708-02	CERAMIC 8PF D	
C101,102	C71-1710-15	CERAMIC 100PF J	
C105,106	C52-1782-16	CERAMIC 820PF K	
C107,108	C71-1702-01	CERAMIC 2PF C	
C109,110	C24-1047-69	ELECTRO 47UF 10WV	
C111,112	C46-1733-35	MYLAR 0.033UF J	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
C113,114	C71-1739-06	CERAMIC 39PF K	
C115,116	C55-1722-38	CERAMIC 0.022UF Z	
C119-126	C46-1722-35	MYLAR 0.022UF J	
C128	C24-1710-67	ELECTRO 10UF 50WV	
C130	C24-1747-67	ELECTRO 47UF 50WV	
C131,132	C71-1722-05	CERAMIC 22PF J	
C133	C24-0810-79	ELECTRO 100UF 6.3WV	
C135,136	C46-1727-25	MYLAR 0.0027UF J	
C137,138	C52-1715-26	CERAMIC 0.0015UF K	
C139,140	C71-1747-16	CERAMIC 470PF K	
C141,142	C71-1747-06	CERAMIC 47PF K	
C151	C24-1747-41	ELECTRO 0.47UF 50WV	
C152	C46-1710-45	MYLAR 0.1UF J	
C157,158	C52-1715-26	CERAMIC 0.0015UF K	
C159	C26-1747-47	LL-ELEC 0.47UF 50WV	
301 2D	E11-0081-05	PHONE JACK	
302 1D	E20-0814-05	SPEAKER TERMINAL	
L1,2	L39-0085-05	COIL	
-	N10-2030-46	HEXAGON NUT(M3)	
R41	R47-5522-15	FL-PROOF RS220 J 3D	
R42,43	R47-5510-25	FL-PROOF RS1K J 3D	
R44-46	R47-5433-25	FL-PROOF RS3,3K J 3A	
R67,68	R47-5547-95	FL-PROOF RS4.7 J 3D	
R69,70	R47-5410-05	FL-PROOF RS10 J 3A	
R71,72	R47-5547-95	FL-PROOF RS4.7 J 3D	
R75,76	R47-5556-15	FL-PROOF RS560 J 3D	
R77,78	R43-1233-95	FL-PROOF RD3,3 J 2E	
R79,80	R47-5433-95	FL-PROOF RS3,3 J 3A	
R81	R47-5456-15	FL-PROOF RS560 J 3A	
R99	R47-5518-25	FL-PROOF RS1,8K J 3D	
R101,102	R47-5447-05	FL-PROOF RS47 J 3A	
R102	R47-5412-15	FL-PROOF RS120 J 3A	
R121,124	R47-5510-25	FL-PROOF RS1K J 3D	
R122	R47-5582-15	FL-PROOF RS820 J 3D	
R137,138	R43-1322-25	FL-PROOF RD2,2K J 2H	KE
R189,190	R47-5456-15	FL-PROOF RS560 J 3A	
R229,230	R43-1216-15	FL-PROOF RD160 J 2E	
R231,232	R43-1256-05	FL-PROOF RD56 J 2E	K
R233,234	R43-1218-15	FL-PROOF RD180 J 2E	K
R235,236	R47-5482-25	FL-PROOF RS8,2K J 3A	
R237-242	R43-1212-15	FL-PROOF RD120 J 2E	K
R253-256	R43-1256-15	FL-PROOF RD560 J 2E	
R259-262	R43-1282-05	FL-PROOF RD82 J 2E	
R271-278	R43-1282-95	FL-PROOF RD8,2 J 2E	
R279-290	R92-0203-05	METAL PLATE 0.47 5w	
R307	R47-5418-35	FL-PROOF RS18K J 3A	
R337-340	R43-1282-25	FL-PROOF RD8,2K J 2E	
R343	R47-5510-25	FL-PROOF RS1K J 3D	
R345	R47-5456-25	FL-PROOF RS5,6K J 3A	
VR1	R06-5062-05	POTENTIOMETER (BALANCE)	
VR2	R06-5063-05	POTENTIOMETER (VOLUME)	
VR3,4	R06-4051-05	POTENTIOMETER (TONE)	
VR5,6	R12-0502-05	TRIMMING POT. 100	
VR7,8	R12-0077-05	TRIMMING POT. 100	
-	S90-0046-05	REMOTE SWITCH SHAFT	
S1	S51-2045-05	RELAY	
S2	S42-4015-15	PUSH SW.(FIL,MODE,LOUD)	
S5	S40-1012-05	PUSH SWITCH (FADER)	
S6	S42-3047-15	PUSH SWITCH (TURN OVER)	
S9	S90-0047-05	SLIDE SW.(SP SELECTOR)	

Codes for X09-161*-.**

- K: X09-1610-10
- U: X09-1610-81
- E: X09-1612-71

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
D1 -3	V11-0273-05	1S2076A	
D4	V11-4100-40	WZ-120	
D5	V11-4172-26	WZ-032	
D6	V11-4100-40	WZ-120	
D7 ,8	V11-4172-26	WZ-032	
D9	V11-0273-05	1S2076A	
D10	V11-0076-05	1S1555	OR
	V11-0271-05	1S2076	
D11	V11-0273-05	1S2076A	
D13	V11-0273-05	1S2076A	
D14	V11-0247-05	WZ-100	
D15	V11-0273-05	1S2076A	
D17	V11-0287-05	WZ-240	
D18	V11-4103-80	WZ-157	UE
	V11-4111-50	XZ-076	K
D19	V11-0273-05	1S2076A	
D20	V11-4111-50	XZ-076	K
D21	V11-0295-05	W068	
D23 -30	V11-0465-05	GP25D	OR
	V11-2100-10	U05C(S)	
D31	V11-5100-60	RB-151	
D45 ,46	V11-5100-80	STV-2H(W)	
D47 ,48	V11-0076-05	1S1555	OR
	V11-0271-05	1S2076	
D49 ,50	V21-0013-05	STV-3H(Y)	
D51 ,52	V11-0076-05	1S1555	OR
	V11-0271-05	1S2076	
D53 -56	V11-0273-05	1S2076A	
D57 -68	V11-0076-05	1S1555	OR
	V11-0271-05	1S2076	
D73 -75	V11-0273-05	1S2076A	
D77 ,78	V11-4111-40	WZ-350	
D79	V11-4103-60	XZ-051	KE
D80	V11-0076-05	1S1555	OR
	V11-0271-05	1S2076	
IC1	V30-0514-10	ANS733	
IC2	V30-0516-10	MB840668	OR UPD4066BC
IC3	V30-1050-06	TC4027BP	
IC4	V30-0526-10	MB840698	OR UPD4069UBC
IC5 ,6	V09-0145-30	UPA68H(L,M)	
Q1 ,2	V09-0127-50	ZSK105(H)	OR
	V09-0144-40	ZSK163(N)	
Q3 ,4	V01-0733-50	ZSA733(A)	OR
	V01-0999-10	ZSA999	
Q5	V03-0945-51	ZSC945(A)	OR
	V03-2320-00	ZSC2320	
Q6	V03-2167-10	ZSC2167	
	V04-0313-30	ZSD313V-AL	OR
Q7	V01-0999-10	ZSA999	
Q8	V03-0945-51	ZSC945(A)	OR
	V03-2320-00	ZSC2320	
Q9	V01-0999-10	ZSA999	
Q10	V01-0954-00	ZSA954	
Q21 -24	V03-1845-10	ZSC1845(F,E)	
Q25 ,26	V03-0945-51	ZSC945(A)	OR
	V03-2320-00	ZSC2320	
Q27 -30	V03-0098-05	ZSC535	OR
	V03-0444-05	ZSC1674(L,K)	OR
	V03-1923-00	ZSC1923	
Q31 -34	V01-0999-10	ZSA999	OR
	V01-1127-30	ZSA1127NC	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
Q35 -38	V01-0912-30	ZSA912	OR
	V01-1124-10	ZSA1124	
Q39 ,40	V03-1885-20	ZSC1885	OR
	V03-2632-10	ZSC2632	
Q41 ,42	V03-0945-51	ZSC945(A)	OR
	V03-2320-00	ZSC2320	
Q43 ,44	V03-2631-10	ZSC2631(Q,R,S)	
Q45 ,46	V01-1123-10	ZSA1123(Q,R,S)	
Q47 ,48	V03-2275-20	ZSC2275A	OR
	V03-2591-10	ZSC2591(Q,R)	
Q49 ,50	V01-092.-10	ZSA985A	OR
	V01-1111-10	ZSA1111(Q,R)	
Q59 ,60	V01-0992-10	ZSA992(F,E)	
Q61 ,62	V01-0198-05	ZSA872	
Q63 ,64	V03-1775-00	ZSC1775	
Q66	V03-1845-10	ZSC1845(F,E)	
Q81 ,82	V03-2275-20	ZSC2275A	OR
	V03-2591-10	ZSC2591(Q,R)	
Q83 ,84	V01-0985-10	ZSA985A	OR
	V01-1111-10	ZSA1111(Q,R)	
Q85 ,86	V01-0992-10	ZSA992(F,E)	
TH1 ,2	Z22-0027-05	5TP-41L	U
SUB (X13-3020-10)			
C1 ,2	C52-1747-26	CERAMIC 0.0047UF K	
C3 ,4	C24-1447-57	ELECTRO 4.7UF 25WV	
R7 ,8	R47-5522-15	FL-PROOF RS220 J 3D	
Q1 ,2	V01-0992-00	ZSA992	

A product of
TRIO-KENWOOD CORPORATION
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TRIO-KENWOOD AG

Unterboesch 6331 Huenenberg/ZUG Switzerland

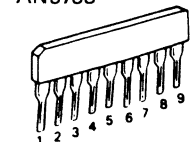
TRIO-KENWOOD (AUSTRALIA) PTY. LTD.

30 Whiting St., Artarmon, N.S.W. 2064, Australia

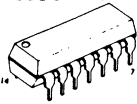
KENWOOD & LEE ELECTRONICS, LTD.

Wang Kee Building, 5th Floor, 34-37, Connaught Road Central, Hong Kong

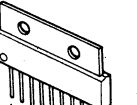
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- 2SA912 2SC945
- 2SA954 2SC1674
- 2SA992 2SC1775
- 2SA999 2SC1845
- 2SA1123 2SC1885
- 2SA1127NC 2SC1923
- 2SC2320
- 2SC2631



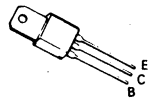
- MB84066B
- MB84069B
- μ PD4066C
- μ PD4069C



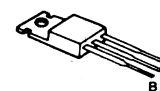
- TA2010
- TA2010A



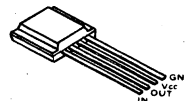
- 2SA957
- 2SC2167



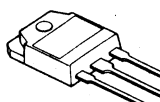
- 2SA985A 2SC2275A
- 2SA1111 2SC2591
- 2SB724 2SD762



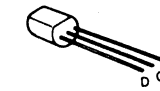
- DN819



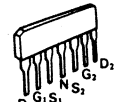
- 2SA1186
- 2SC2837



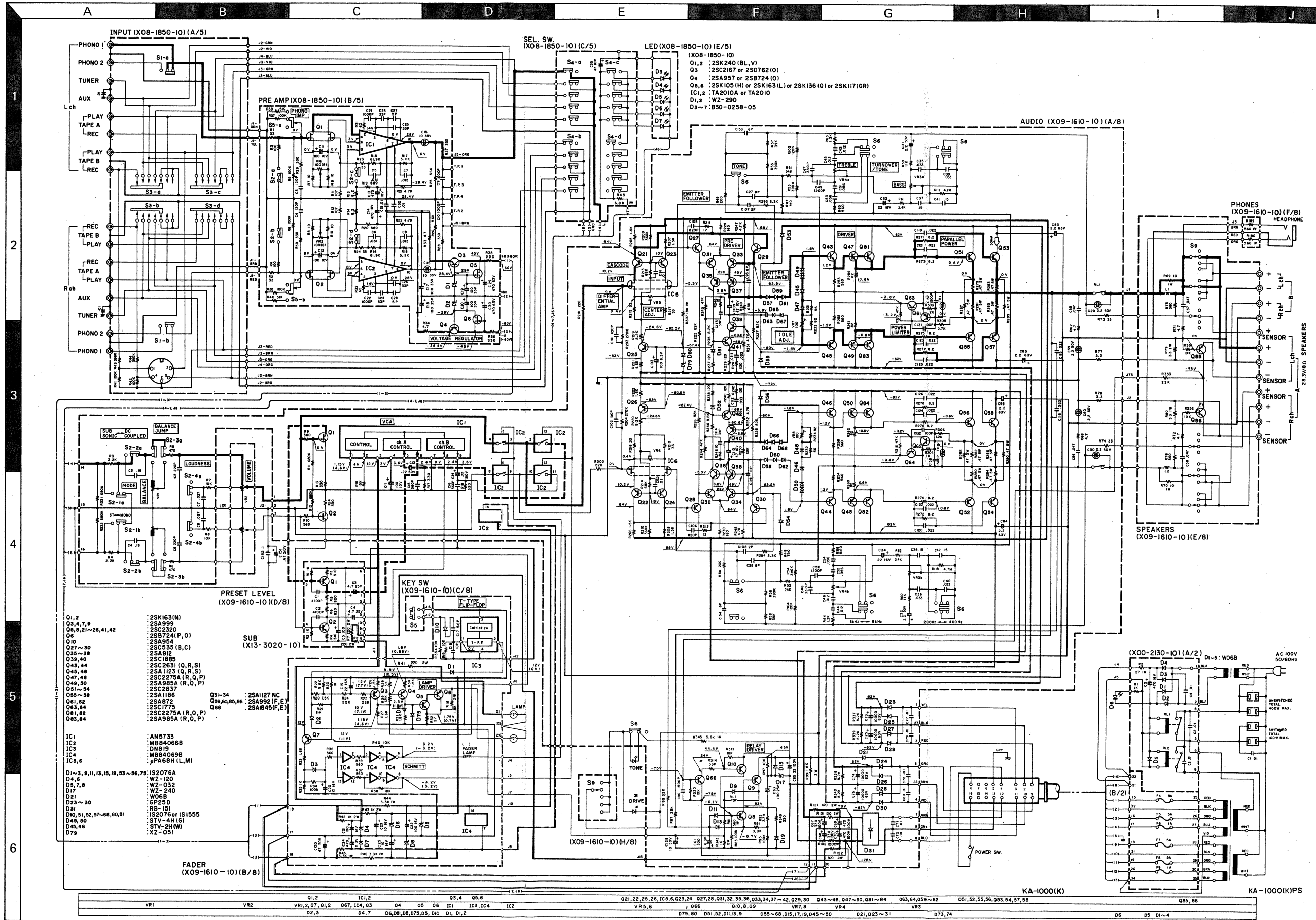
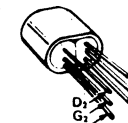
- 2SK105 2SK163
- 2SK117 2SK136



- μ PA68H

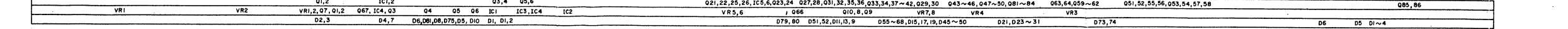


- 2SK240



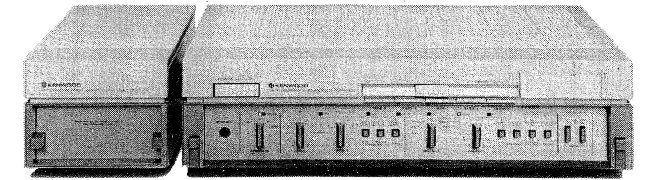
- Q1,2 : 2SK163(N)
- Q3,4,7,9 : 2SA999
- Q5,8,21~26,41,42 : 2SC2360
- Q6 : 2SB724(P,O)
- Q10 : 2SA954
- Q11 : 2SC35(B,C)
- Q12 : 2SA912
- Q13 : 2SC1885
- Q14 : 2SC2631(O,R,S)
- Q15 : 2SA1123(O,R,S)
- Q16 : 2SC2275A(R,Q,P)
- Q17 : 2SA985A(R,Q,P)
- Q18 : 2SC2837
- Q19 : 2SA1186
- Q20 : 2SA872
- Q21 : 2SC1775
- Q22 : 2SC2275A(R,Q,P)
- Q23 : 2SA985A(R,Q,P)
- Q24 : 2SA1127NC
- Q25,26,27,28 : 2SA992(F,E)
- Q29 : 2SA1186
- Q30 : 2SA985A(R,Q,P)
- Q31 : AN5733
- Q32 : MB84066B
- Q33 : DN819
- Q34 : μPA68H(L,M)
- Q35 : IS2076A
- Q36 : WZ-120
- Q37 : WZ-032
- Q38 : WZ-240
- Q39 : W06B
- Q40 : GP250
- Q41 : RB-151
- Q42 : IS2076 or IS1555
- Q43 : STV-4H(G)
- Q44 : STV-2H(W)
- Q45 : XZ-051

- IC1 : AN5733
- IC2 : MB84066B
- IC3 : DN819
- IC4 : MB84069B
- IC5,6 : μPA68H(L,M)
- D1~3, 9,11,13,16,19,33~36,75 : IS2076A
- D4,5 : WZ-120
- D6,7,8 : WZ-032
- D17 : WZ-240
- D21 : W06B
- D23~30 : GP250
- D31 : RB-151
- D10,51,52,57~68,80,81 : IS2076 or IS1555
- D48,50 : STV-4H(G)
- D45,46 : STV-2H(W)
- D79 : XZ-051



NEW SEPARATE AMPLIFIER

KA-1000



SPECIFICATIONS

POWER OUTPUT
100 watts* per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.005% total harmonic distortion.

- Both Channels Driven 115 + 115 watts 8 ohms at 1,000 Hz
- Total Harmonic Distortion (20 Hz to 20,000 Hz)
 AUX input to SPEAKER output 0.005% at rated power into 8 ohms
 0.005% at 1/2 rated power into 8 ohms
- PHONO input to SPEAKER output 0.007% at rated power with VOLUME - 20 dB
- Intermodulation Distortion 0.005% at rated power into 8 ohms (60 Hz: 7 kHz = 4:1)
- Damping Factor 600, at 100 Hz into 8 ohms
- Transient Response
 Rise Time 0.9 μs
 Slew Rate ± 120 V/μs
- Frequency Response
 (DC COUPLED at ON) DC to 400 kHz, + 0 dB, - 3 dB
 (DC COUPLED at OFF) 18 Hz to 400 kHz, + 0 dB, - 3 dB
- Speaker Impedance Accept 4 ohms to 16 ohms
- Input Sensitivity/Impedance
 Phono (MM) 2.5 mV/33 k ohms, 47 k ohms and 100 k ohms
 Phono (MC) 0.2 mV/100 ohms
 Tuner, AUX, Tape A, B 150 mV/47 k ohms
- Signal-to-Noise Ratio (IHF, A)
 Phono (MM) 87 dB for 2.5 mV input
 93 dB for 5.0 mV input
 99 dB for 10 mV input
 Phono (MC) 67 dB for 0.2 mV input
 73 dB for 0.4 mV input
 Tuner, AUX, Tape A, B 105 dB for 150 mV input
- Maximum Input Level
 Phono (MM) 270 mV (RMS), T.H.D. 0.003% at 1,000 Hz
 Phono (MC) 15 mV (RMS), T.H.D. 0.003% at 1,000 Hz
- Output Level/Impedance
 Tape REC (Pin) 150 mV/330 ohms
 (DIN) 30 mV/80 k ohms
- Phono Frequency Response RIAA standard curve ± 0.2 dB (20 Hz to 20,000 Hz)
- Loudness Control + 10 dB at 100 Hz (at - 30 dB VOLUME Level)
- Tone Control
 Bass 200 Hz ± 10 dB, at 50 Hz
 400 Hz ± 10 dB, at 100 Hz
 Treble 3 kHz ± 10 dB, at 10 kHz
 6 kHz ± 10 dB, at 20 kHz
- Subsonic Filter (DC COUPLED at OFF) 18 Hz, 6 dB/oct

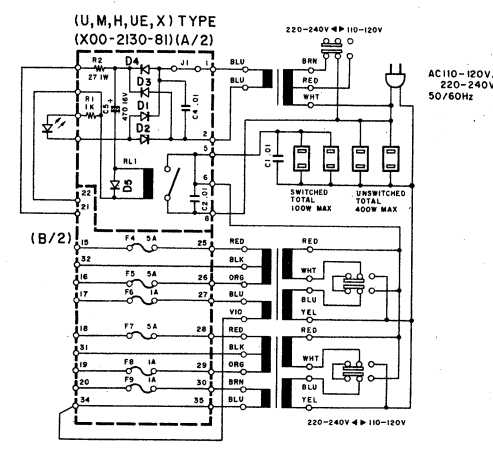
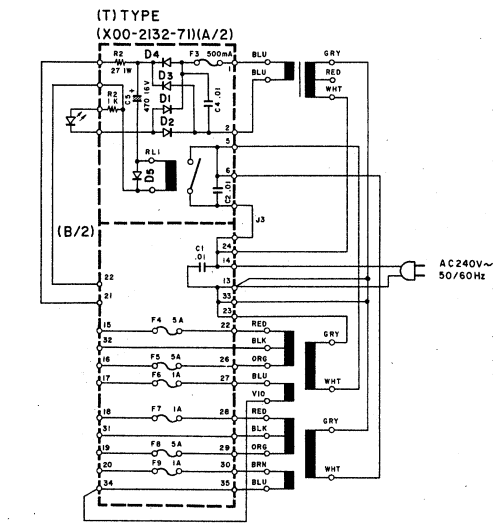
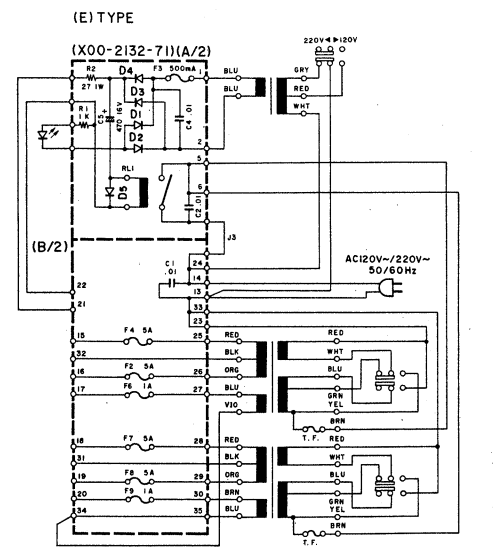
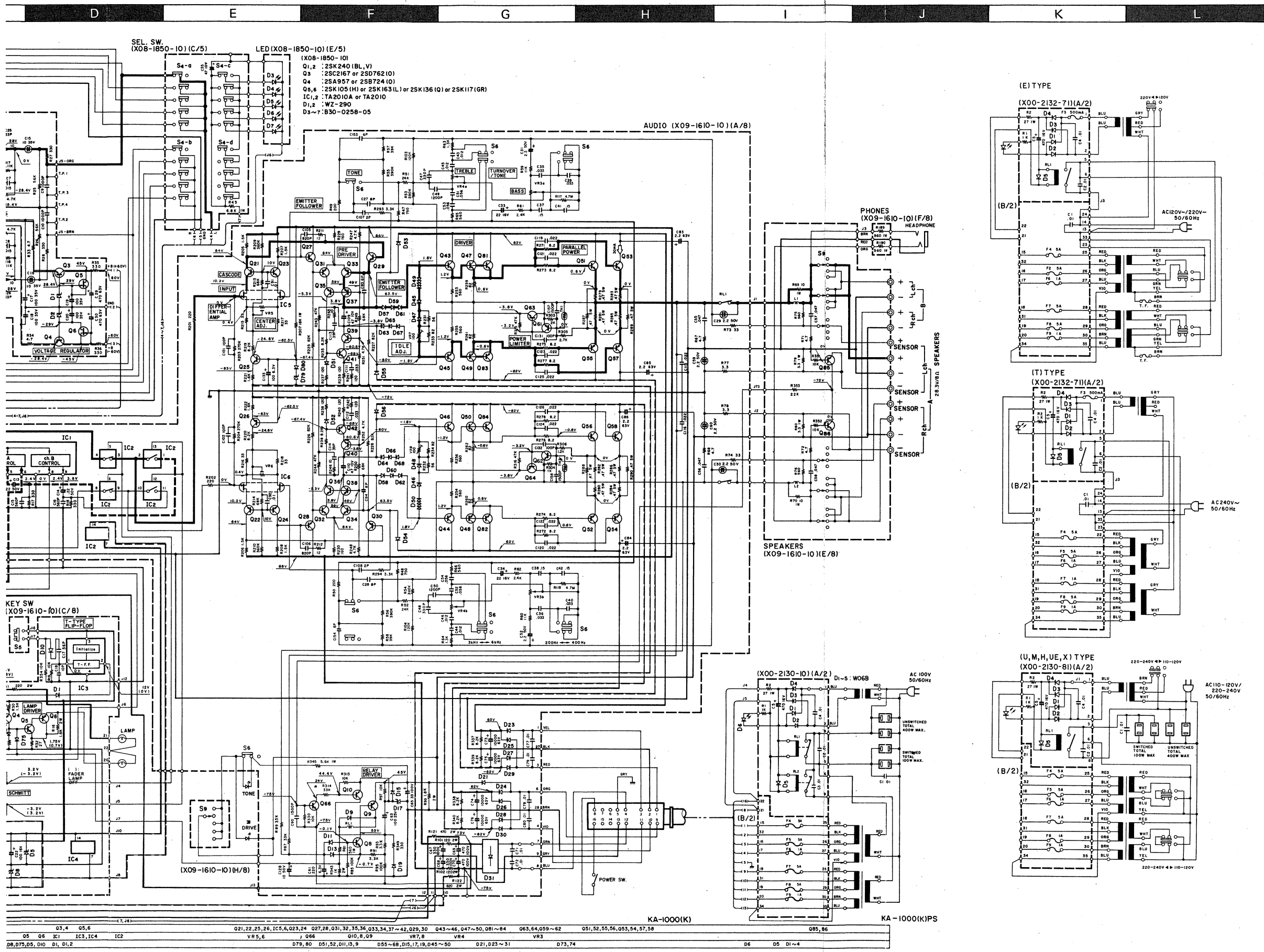
- GENERAL**
- Power Consumption 5.7 (UL/CSA) 800 watts (IEC)
 - AC Outlets Switched 2, Unswitched 2
 - Dimensions
 W 440 mm (17-5/16")
 H 123 mm (4-7/32")
 D 375 mm (14-3/4")
 - Net Weight
 14.4 kg (31.7 lb)
 8.0 kg (17.6 lb)

* Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier in U.S.A.

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

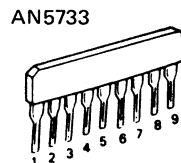


KA-1000(K) KA-1000(K)PS

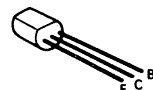
Q3, 4	Q5, 6	Q21, 22, 25, 26, IC5, 6, Q23, 24	Q27, 28, Q31, 32, 35, 36, Q33, 34, 37 ~ 42, Q29, 30	Q43 ~ 46, Q47 ~ 50, Q81 ~ 84	Q63, 64, Q59 ~ 62	Q51, 52, 55, 56, Q53, 54, 57, 58	Q85, 86
Q8	Q6	Q81	IC3, IC4	IC2	VR5, 6	Q10, 8, Q9	VR7, 8
D8, D7, D5, D10	D1, D1, 2	D79, 80	D51, 52, D11, 13, 9	D55 ~ 68, D15, 17, 19, D45 ~ 50	D21, D23 ~ 31	VR3	D73, 74
							D6
							D5
							D1 ~ 4

DC voltages are measured by a VOM with 25 kΩ/V input impedance.

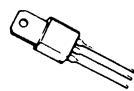
- 2SA733
- 2SA872
- 2SA912
- 2SA954
- 2SA992
- 2SA1123
- 2SA1124
- 2SA1127NC
- 2SC535
- 2SC945
- 2SC1674
- 2SC1775
- 2SC1845
- 2SC1885
- 2SC1923
- 2SC2320
- 2SC2631



AN5733
MB84066B
MB84069B
μPD4066BC
μPD4069UBC

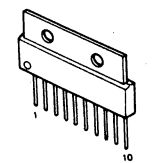


2SA957
2SC2167



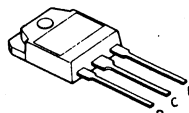
TA2010
TA2010A

- 2SA985A
- 2SA1111
- 2SB724
- 2SC2275A
- 2SC2591
- 2SC2632
- 2SD762
- 2SD313V-AL

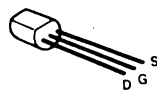


TC4027BP

2SA1186
2SC2837



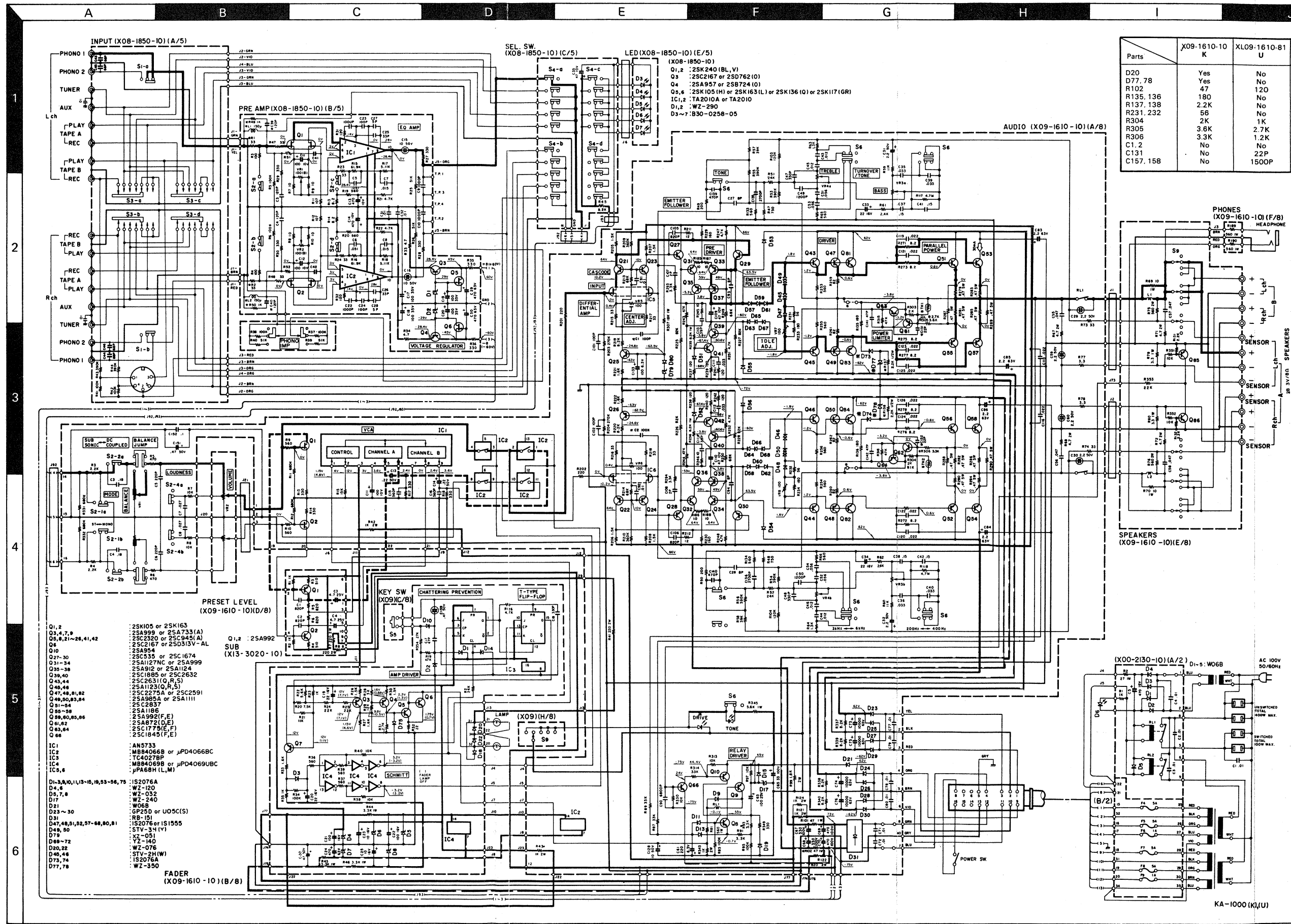
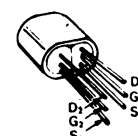
2SK105
2SK117
2SK163
2SK136



μPA68H



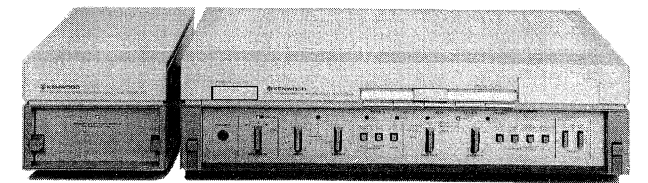
2SK240



NEW SEPARATE AMPLIFIER

KA-1000

REVISED EDITION



SPECIFICATIONS

POWER OUTPUT
100 watts* per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.005% total harmonic distortion.

Both Channels Driven	115 + 115 watts 8 ohms at 1,000 Hz
Total Harmonic Distortion (20 Hz to 20,000 Hz)	0.005% at rated power into 8 ohms
AUX input to SPEAKER output	0.005% at 1/2 rated power into 8 ohms
PHONO input to SPEAKER output	0.007% at rated power with VOLUME - 20 dB
Intermodulation Distortion (60 Hz: 7 kHz = 4:1)	0.005% at rated power into 8 ohms
Damping Factor	600, at 100 Hz into 8 ohms
Transient Response	
Rise Time	0.9 μs
Slew Rate	± 120 V/μs
Frequency Response (DC COUPLED at ON)	DC to 400 kHz, +0 dB, -3 dB
(DC COUPLED at OFF)	18 Hz to 400 kHz, +0 dB, -3 dB
Speaker Impedance	Accept 4 ohms to 16 ohms
Input Sensitivity/Impedance	
Phono (MM)	2.5 mV/33 k ohms, 47 k ohms and 100 k ohms
Phono (MC)	0.2 mV/100 ohms
Tuner, AUX, Tape A, B	150 mV/47 k ohms
Signal-to-Noise Ratio (IHF, A)	
Phono (MM)	87 dB for 2.5 mV input
	93 dB for 5.0 mV input
	99 dB for 10 mV input
Phono (MC)	67 dB for 0.2 mV input
	73 dB for 0.4 mV input
Tuner, AUX, Tape A, B	105 dB for 150 mV input
Maximum Input Level	
Phono (MM)	270 mV (RMS), T.H.D. 0.003% at 1,000 Hz
Phono (MC)	15 mV (RMS), T.H.D. 0.003% at 1,000 Hz
Output Level/Impedance	
Tape REC (Pin)	150 mV/330 ohms
(DIN)	30 mV/80 k ohms
Phono Frequency Response	RIAA standard curve ± 0.2 dB (20 Hz to 20,000 Hz)
Loudness Control	+ 10 dB at 100 Hz (at -30 dB VOLUME Level)
Tone Control	
Bass 200 Hz	± 10 dB, at 50 Hz
400 Hz	± 10 dB, at 100 Hz
Treble 3 kHz	± 10 dB, at 10 kHz
6 kHz	± 10 dB, at 20 kHz
Subsonic Filter (DC COUPLED at OFF)	18 Hz, 6 dB/oct

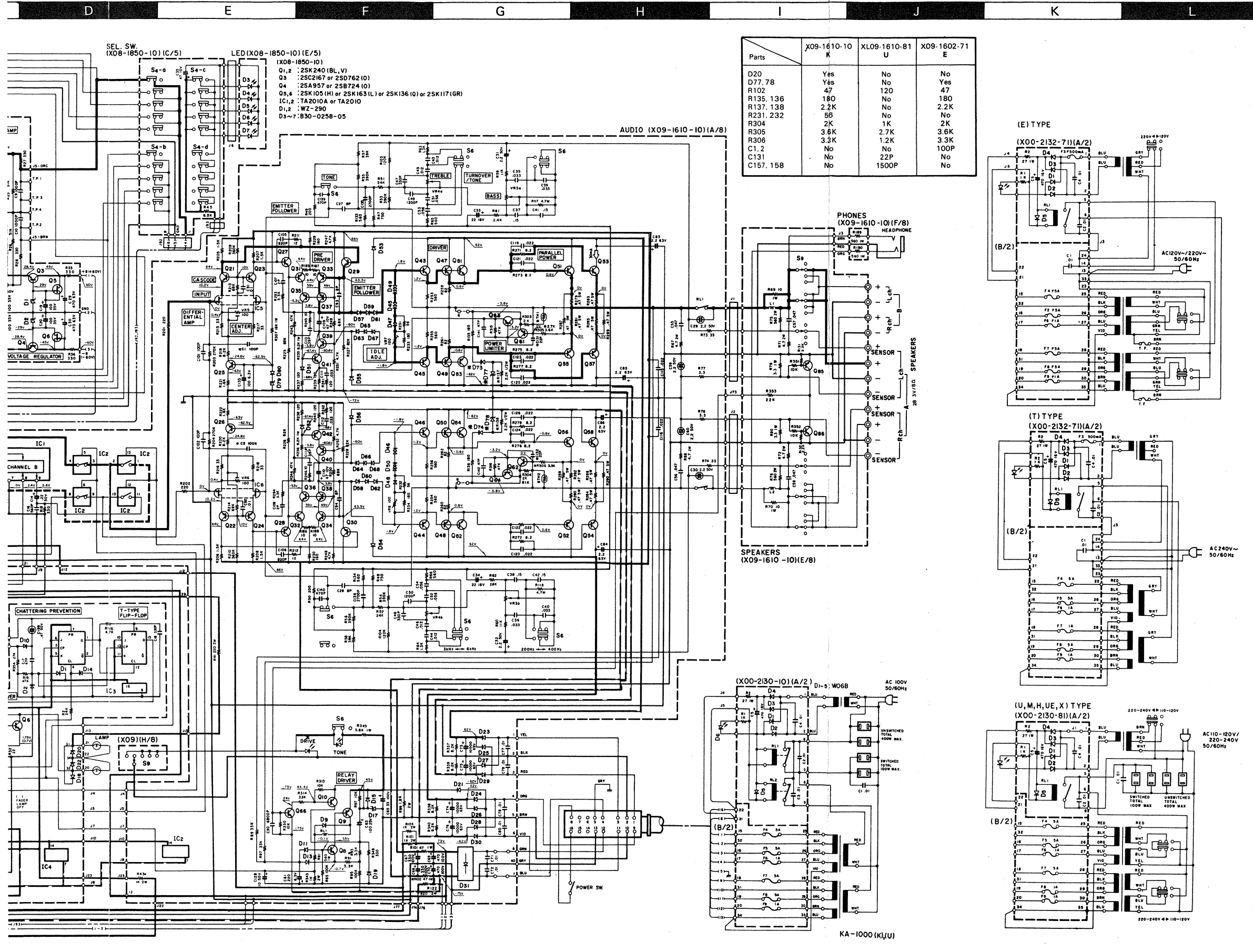
GENERAL		
Power Consumption	5.7 (UL/CSA)	800 watts (IEC)
AC Outlets	Switched 2, Unswitched 2	
Dimensions	Amplifier (KA-1000)	Power Supply (KA-1000-PS)
W	440 mm (17-5/16")	140 mm (14-1/2")
H	123 mm (4-7/32")	123 mm (4-7/32")
D	375 mm (14-3/4")	358 mm (14-3/32")
Net Weight	14.4 kg (31.7 lb)	8.0 kg (17.6 lb)

* Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier in U.S.A.

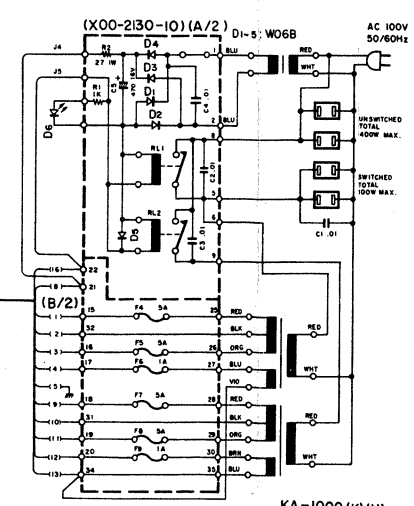
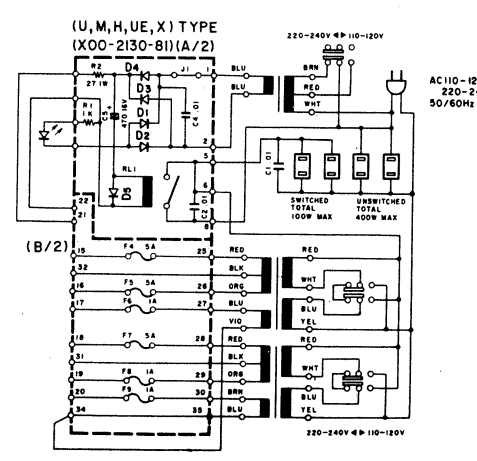
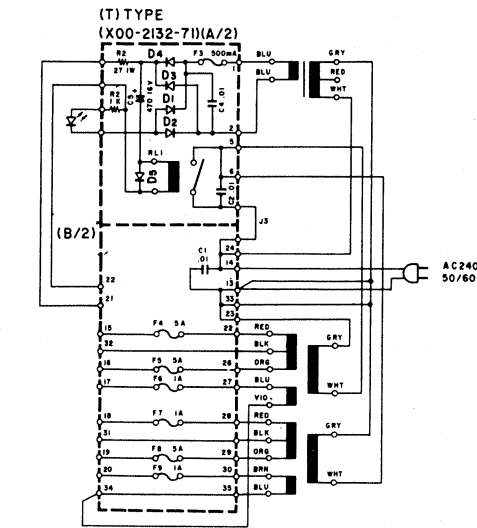
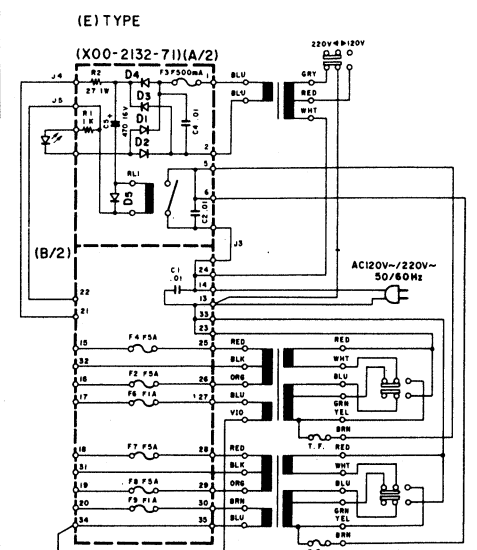
Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.



Parts	X09-1610-10 K	X09-1610-81 U	X09-1602-71 E
D20	Yes	No	No
D77.78	Yes	No	Yes
R102	47	120	47
R135, 136	180	No	180
R137, 138	2.2K	No	2.2K
R231, 232	56	No	No
R304	2K	1K	2K
R305	3.6K	2.7K	3.6K
R306	3.3K	1.2K	3.3K
C1.2	No	No	100P
C131	No	22P	No
C157, 158	No	1500P	No



DC voltages are measured by a VOM with 25 kΩ/V input impedance.