

KENWOOD[®]
HI/FI STEREO COMPONENTS

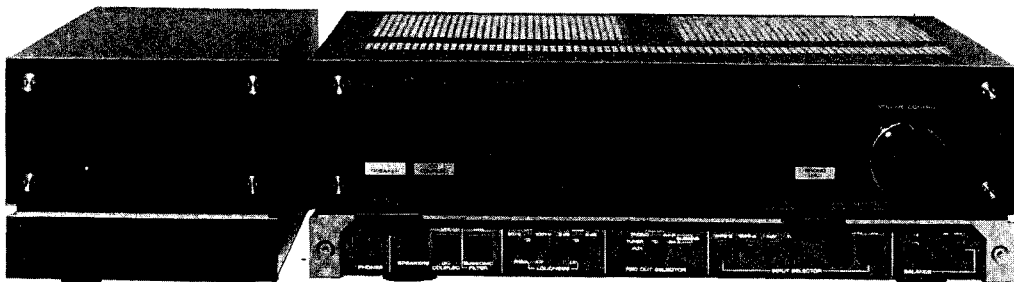
SERVICE MANUAL

L-01A

An item of adjustment is written in three languages - English, French and German.
Un article sur réglages est écrit en trois langues, Anglais, Français et Allemand.

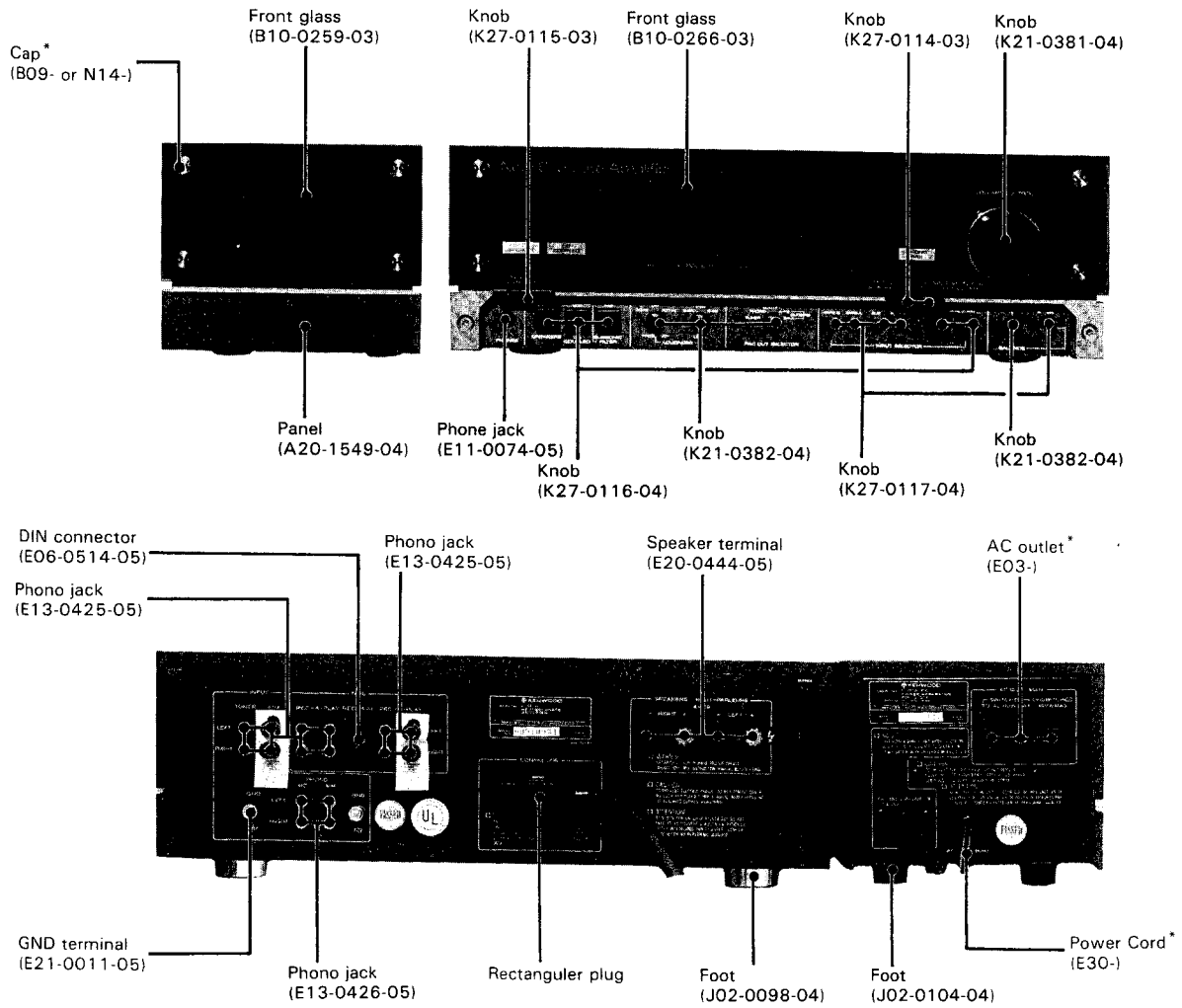
Ein Artikel der Abgleich wird auf drei Sprachen, Englische, Französisch und Deutsch geschrieben.

- Caution**
- Do not touch the copper plate with naked hand because it is liable to rust. If fingerprints are left on the plate, remove them with a steel brush.
 - The cabinet is made of nylon resin. Do not place any hot object such as a soldering iron on the cabinet.
- Avertissement**
- *Ne pas toucher la plaque de cuivre avec les mains nues car elle est susceptible de rouiller. Si des empreintes digitales sont laissées sur la plaque, les nettoyer à la brosse métallique.*
 - *Le coffret est en résine de nylon. Ne pas placer d'objets chauds tel qu'un fer à souder sur le coffret.*
- Vorsicht**
- Die Kupferplatte nicht mit der bloßen Hand berühren, weil diese sonst rosten kann. Bleiben Fingerabdrücke auf der Platte zurück, diese mit einer Stahlbürste entfernen.
 - Das Gehäuse besteht aus Nylonharz. Keinen heißen Gegenstand, wie z.B. ein Bügeleisen, auf das Gehäuse stellen.

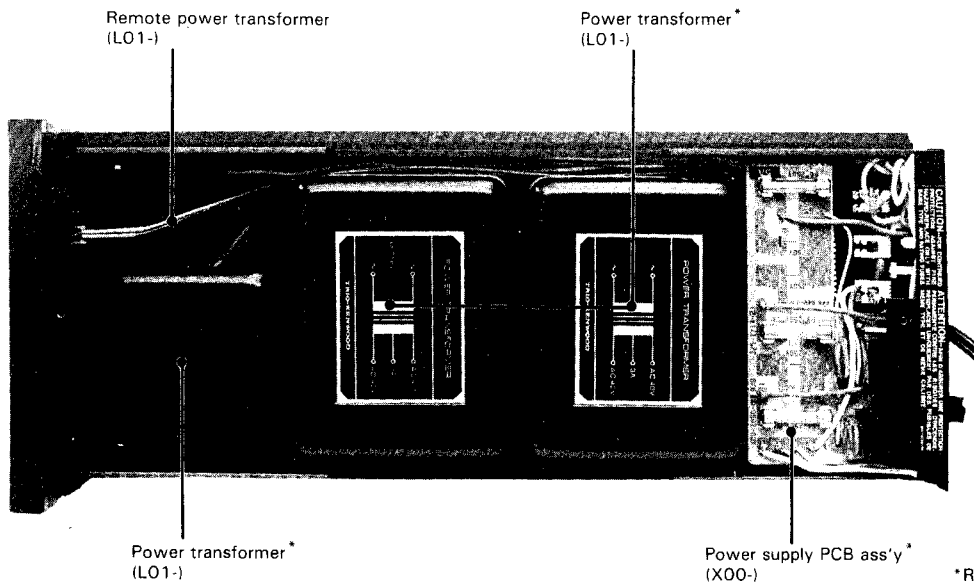


NEW SEPARATE AMPLIFIER

EXTERNAL VIEW/INTERNAL VIEW



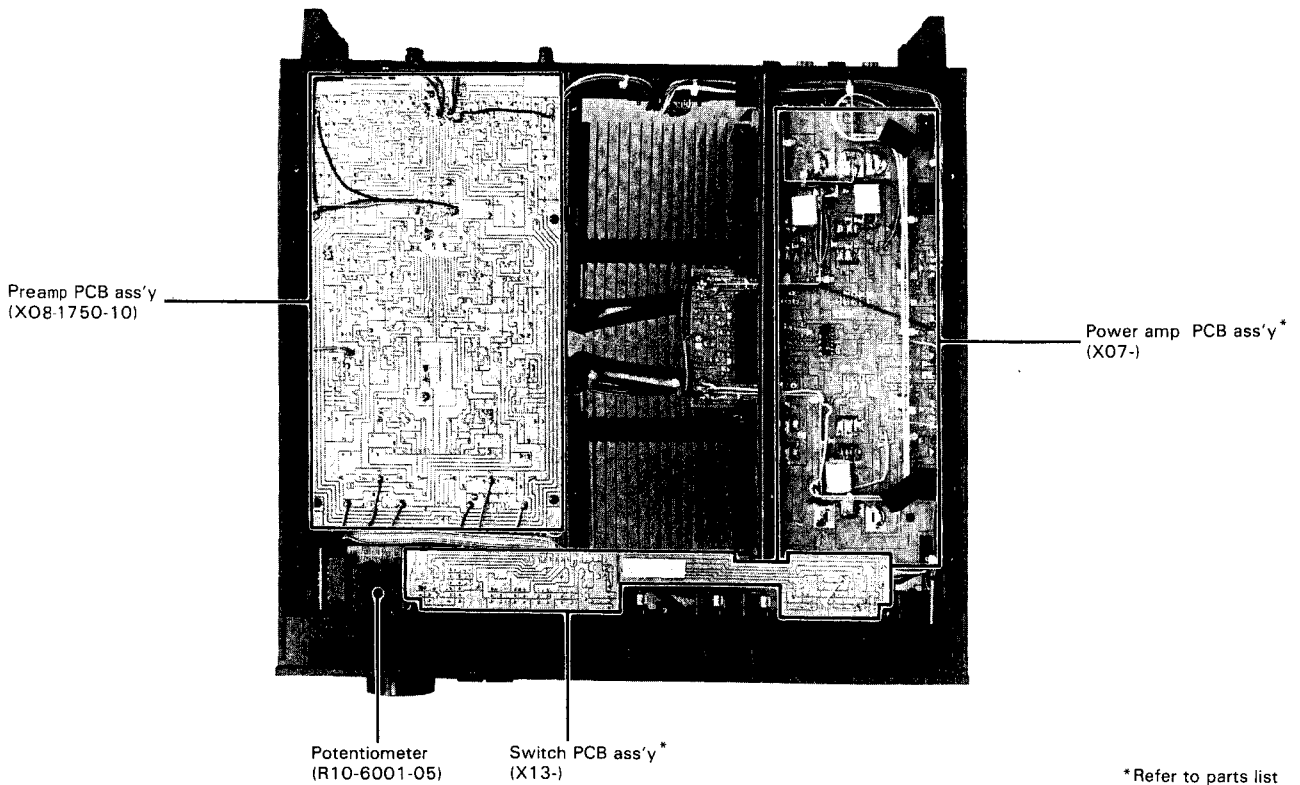
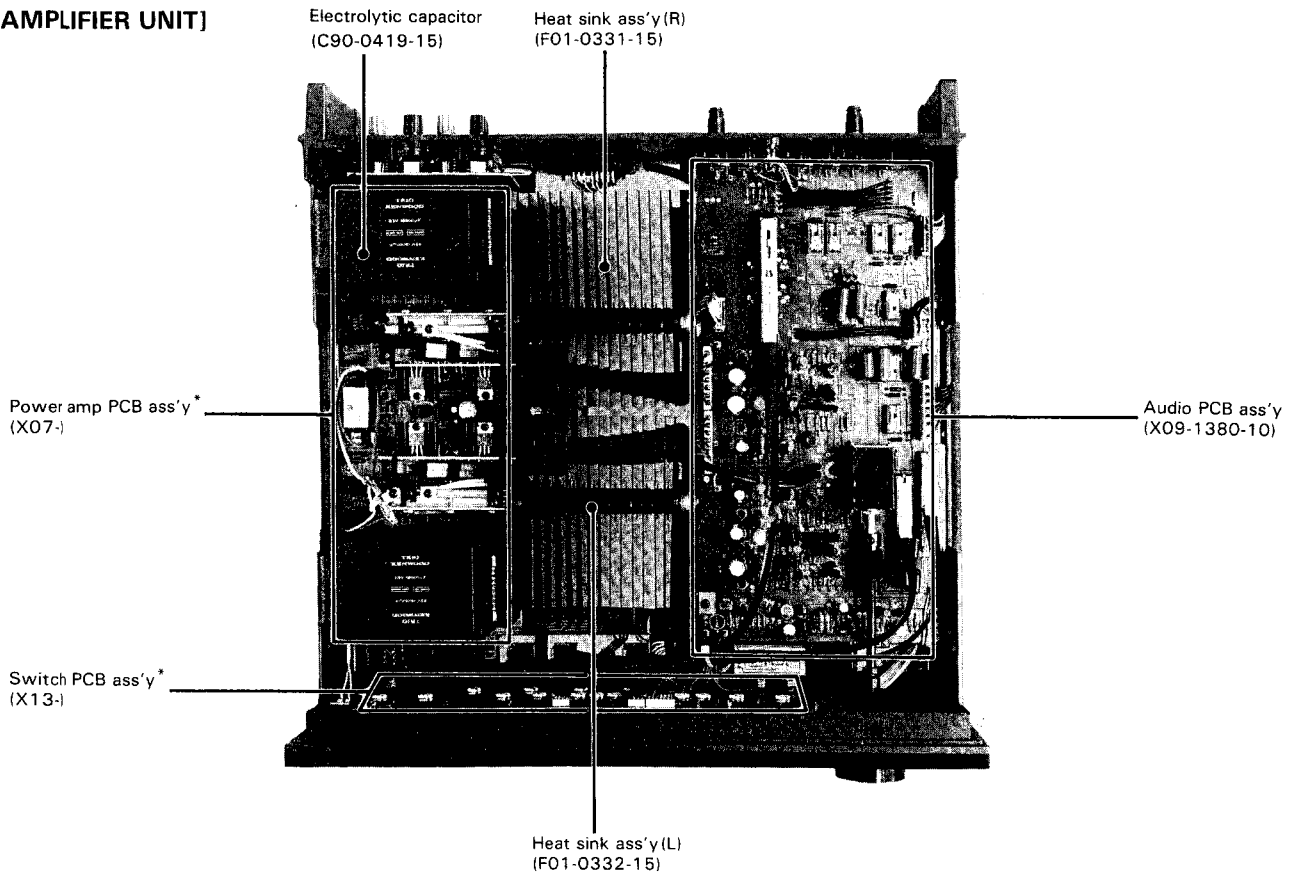
[POWER SUPPLY UNIT]



*Refer to parts list.

INTERNAL VIEW

[AMPLIFIER UNIT]

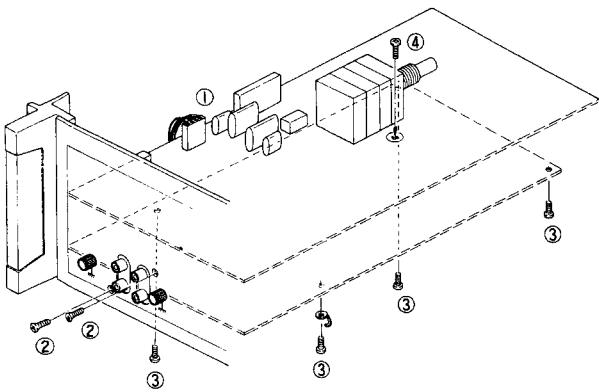


*Refer to parts list

DISASSEMBLY FOR REPAIR

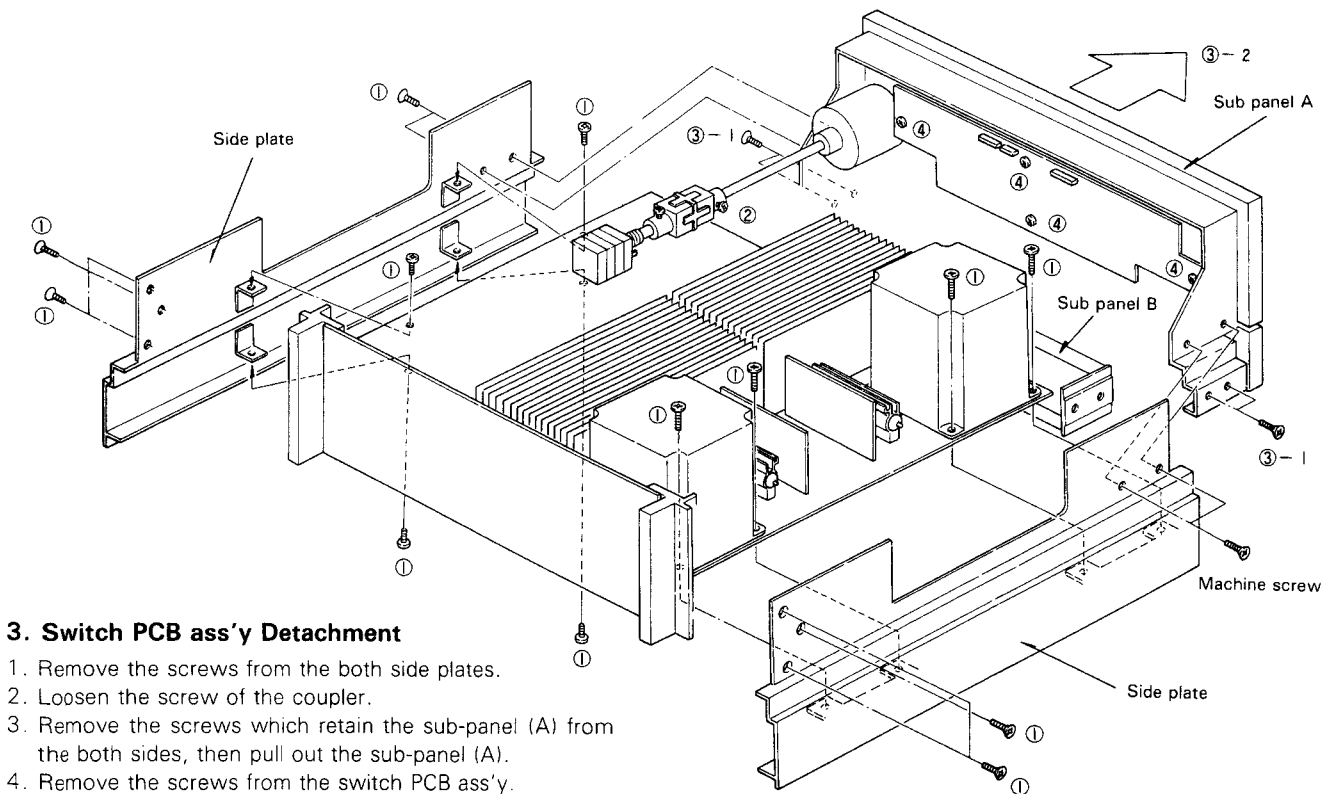
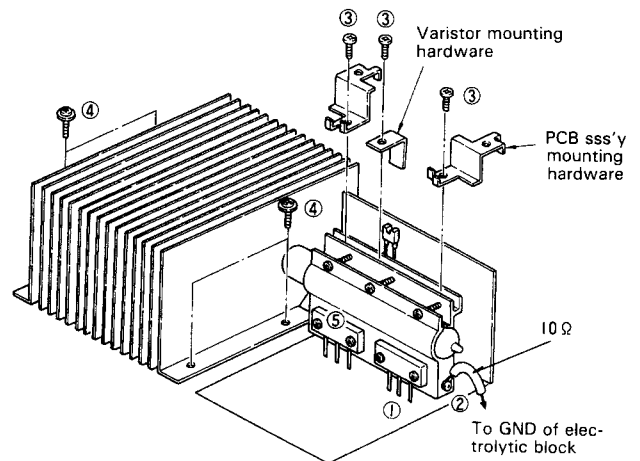
1. Preamp PCB ass'y Detachment

1. Pull out the connector.
2. Remove the screws from the PHONO terminals on the rear panel.
3. Remove the screws from the PC board from the bottom.
4. Remove the screw from the copper plate of the preamplifier.



2. Power Transistors Replacement

1. Unsolder the legs of the power transistors from the bottom side.
2. Remove the screw mounting the 10 Ω wire from the side of the heat sink.
3. Remove the varistor mounting hardware and the PCB mounting hardware.
4. Remove the heat sink mounting screws.
5. Replace the power transistors.



3. Switch PCB ass'y Detachment

1. Remove the screws from the both side plates.
2. Loosen the screw of the coupler.
3. Remove the screws which retain the sub-panel (A) from the both sides, then pull out the sub-panel (A).
4. Remove the screws from the switch PCB ass'y.

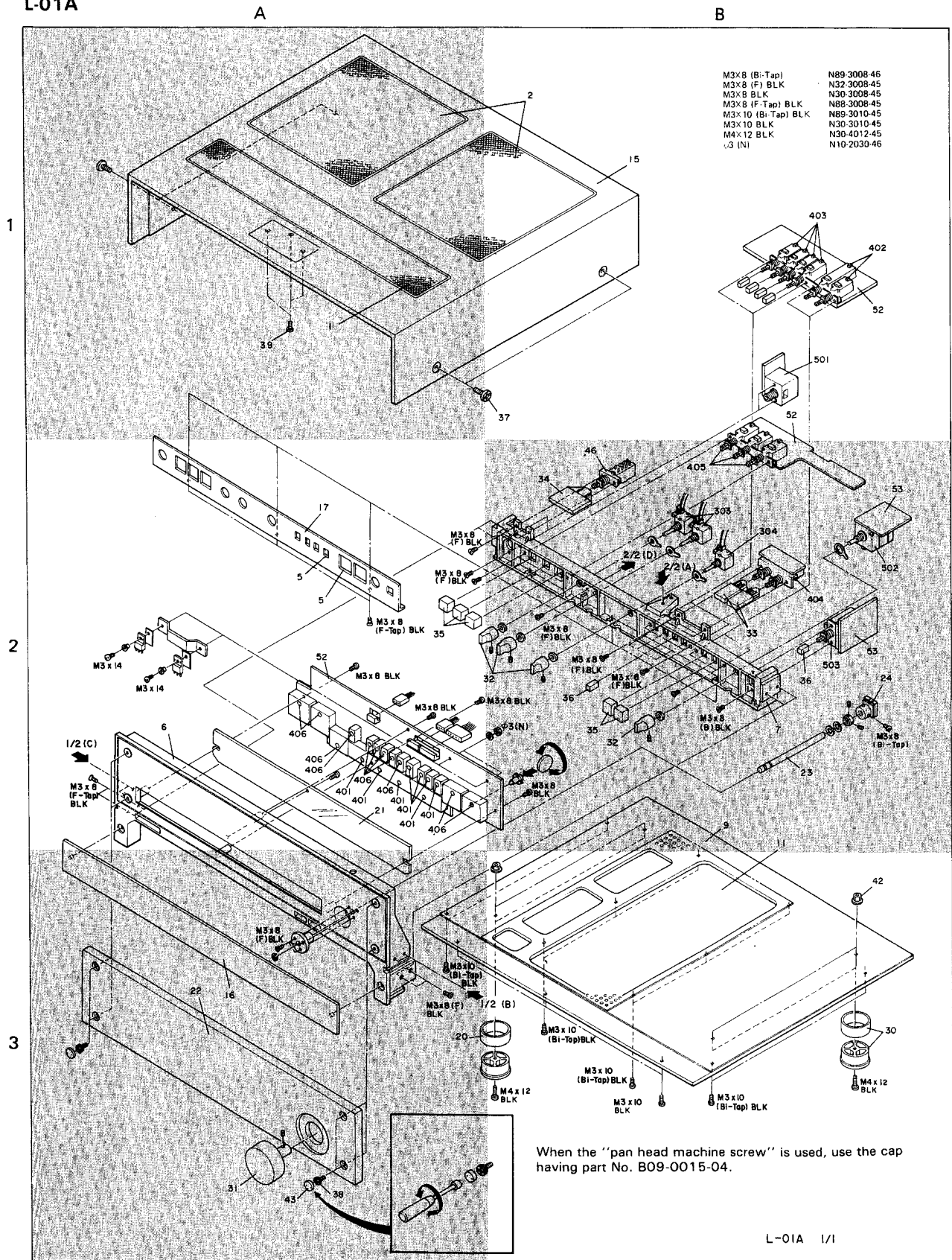
Note:

To replace the face panel, after steps 1—3, remove the screws which retain the panel from the bottom side.

To remove the knobs (LOUDNESS, REC OUT, BALANCE ON/OFF), loosen the hex setscrew using a hex wrench through the access holes in the bottom side of sub-panel B.

EXPLODED VIEW

L-01A



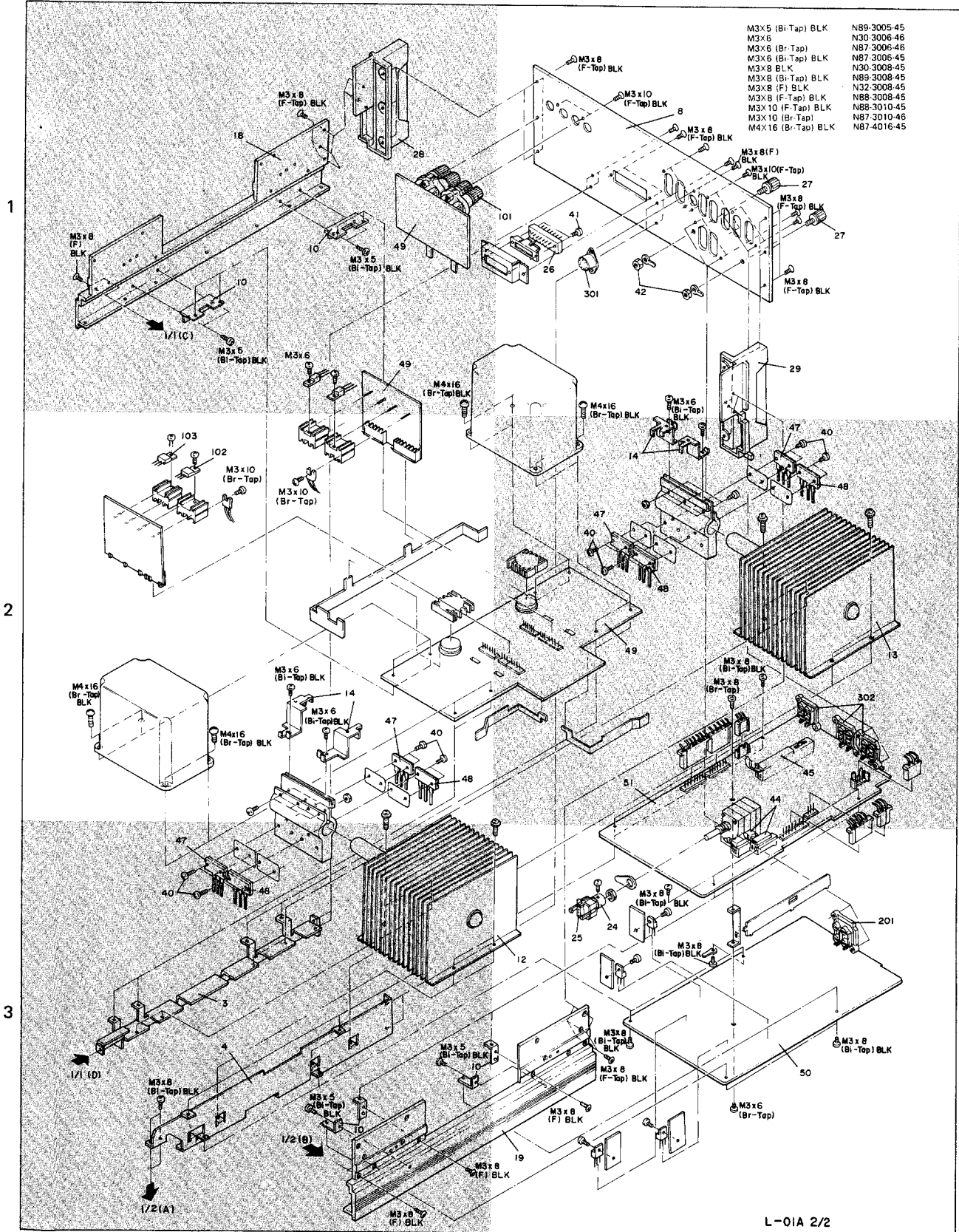
Refer to parts list on page 20 and 21.

EXPLODED VIEW

L-01A

C

D



L-01A 2/2

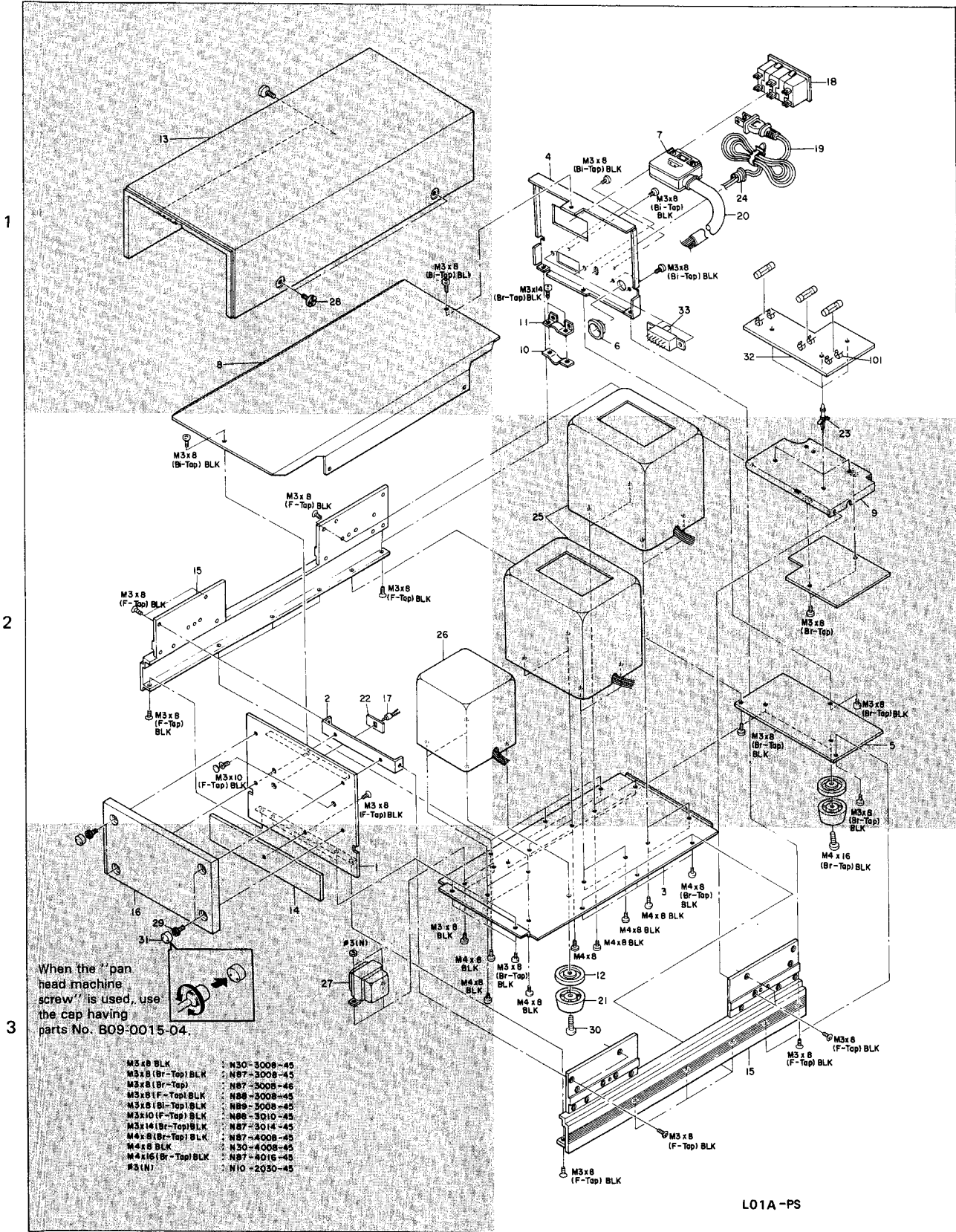
Refer to parts list on page 20 and 21.

EXPLODED VIEW

L-01A-POWER SUPPLY

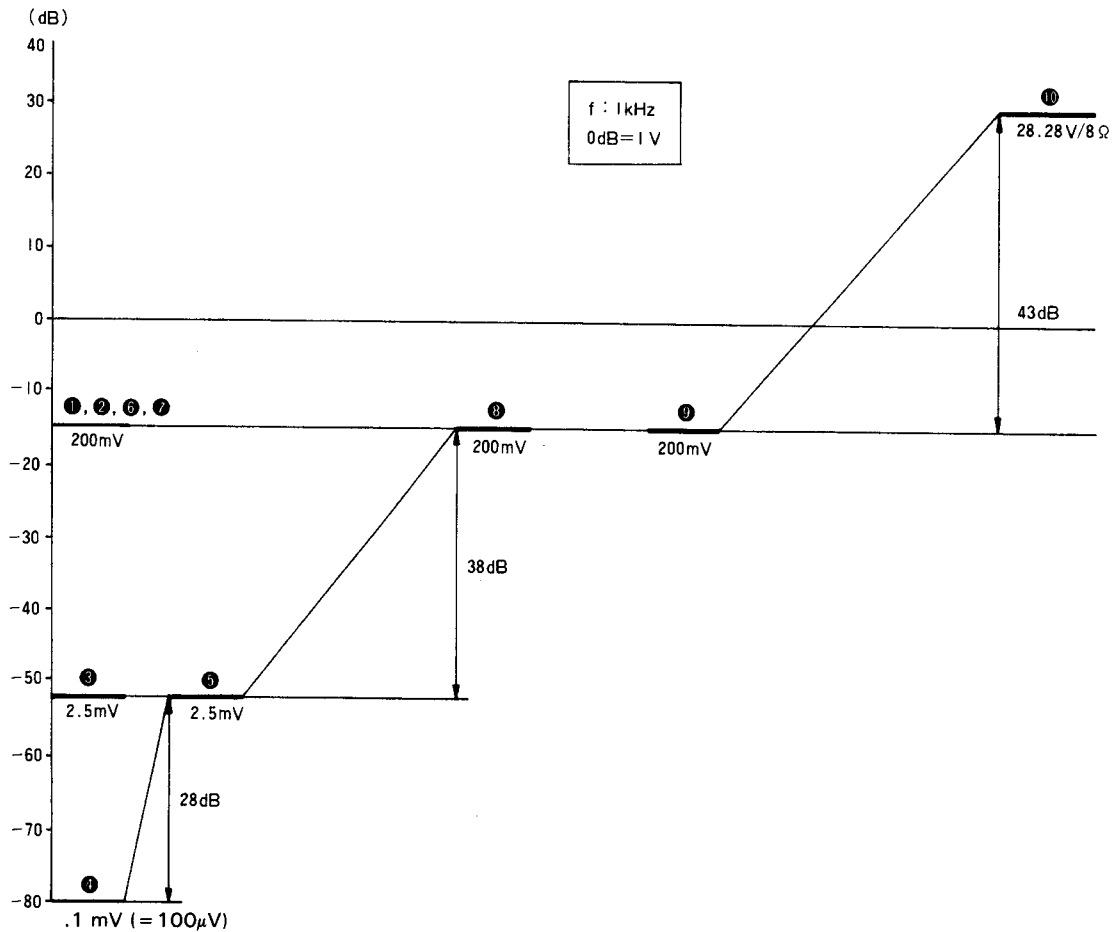
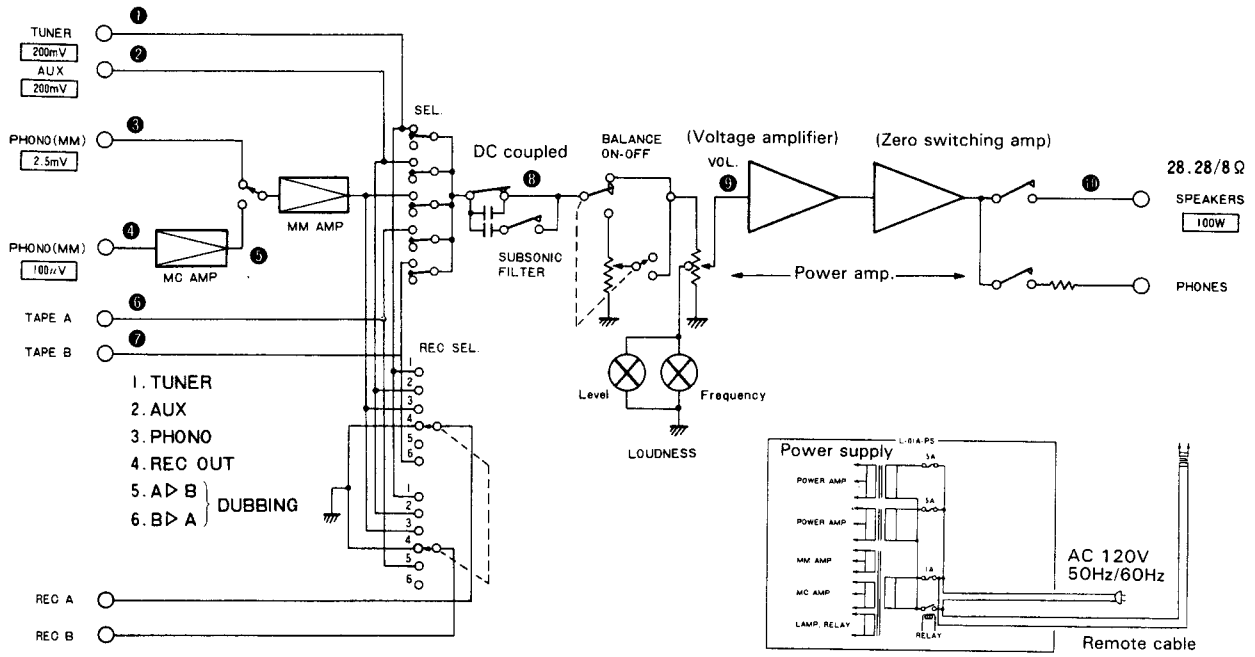
A

B



Refer to parts list on page 20 and 21.

BLOCK DIAGRAM



CIRCUIT DESCRIPTION

In the L-01A, an ASO protection circuit, a zero-switching circuit, a relay delay circuit and a shunt regulator in the preamplifier are employed. For explanation of circuit operation of the parallel input circuit, refer to the KHA-50 service manual. For explanation of circuit operation of the constant current circuit, differential amplifier and current mirror circuit, refer to the service manual of the L-07C and L-07M.

1. ASO Protection Circuit

When an excessive current flows through the power transistors, a voltage appears across the protection resistor, 0.1 Ω connected to the collectors of the power transistor Q1, Q3, Q5, Q7. When this occurs at the PNP transistors, a voltage is applied to the base of the ASO transistor Q1. Therefore, Q1 is turned ON, then a voltage is applied to the base of Q3, and Q3 is turned ON, so that the audio signal fed to Q7 is limited.

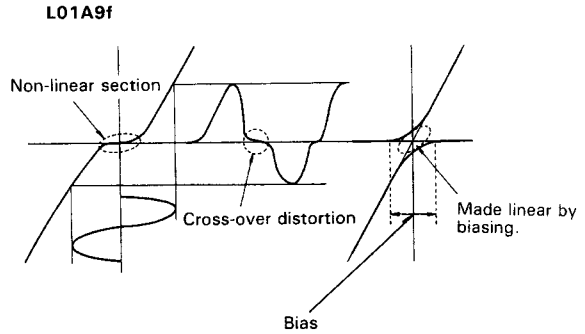
Since the base of Q15 is connected to the collector of Q3, the base voltage of Q15 drops when Q3 is ON. Therefore, Q15 is turned ON. Thus, a voltage (reference value: 1.8 V) is applied to Pin 3 (0 V detection terminal) of IC1, resulting in release of the protection relays RL2 and RL3.

When an excessive current flows through the NPN transistors, the voltage is applied to the base of Q5. When Q5 is ON, the audio signal fed to Q9 flows through Q5, so that the base current of Q9 decreases.

2. Zero-switching Circuit

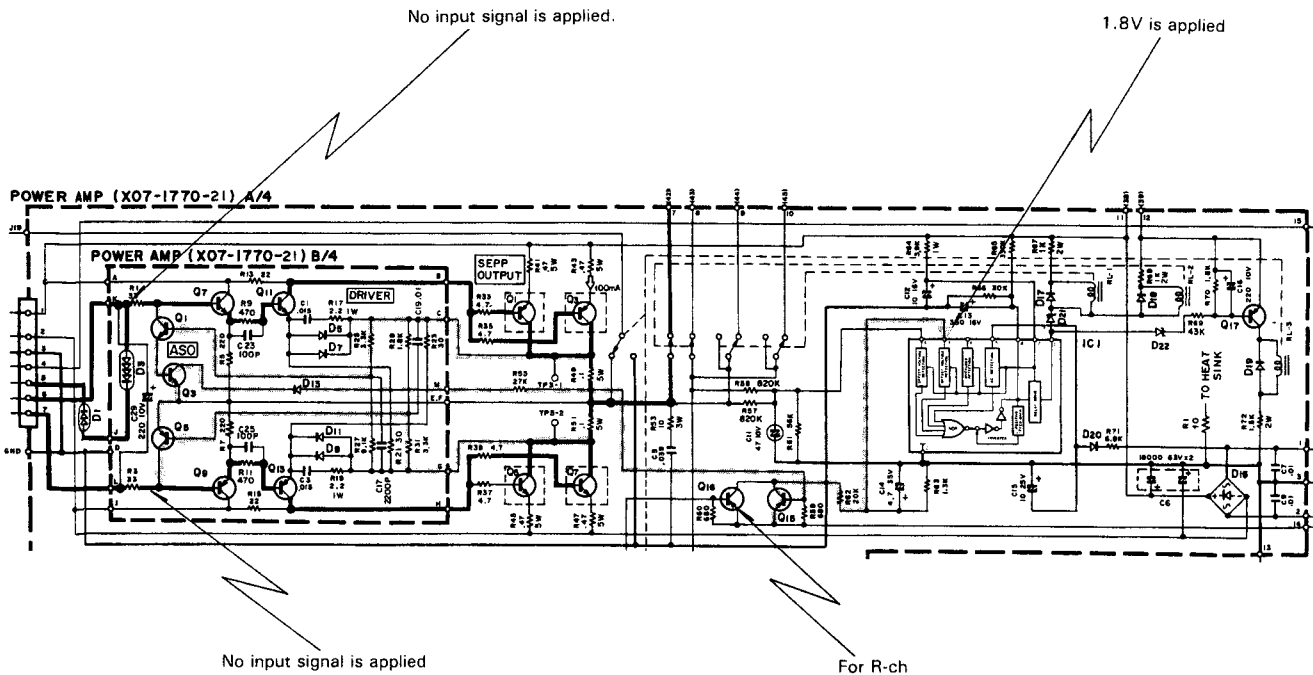
Ordinary power amplifiers are operated in class B because of its high efficiency. However, switching distortion and cross-over distortion are generated.

The cross-over distortion is generated because a class B push-pull amplifier uses the non-linear section of the input-output characteristic curve when input level is low.



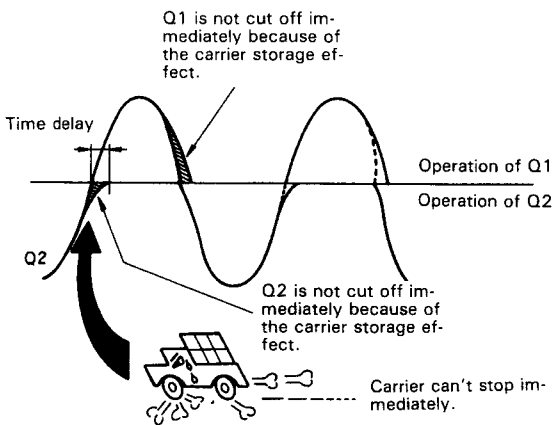
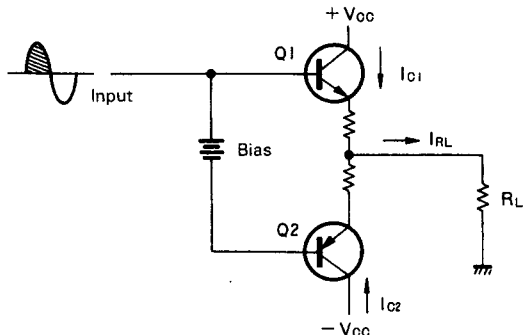
To reduce the cross-over distortion, the power transistors are appropriately biased so that the non-linear section is cancelled. Thus, the amplification is operated in close to class AB.

On the other hand, the switching distortion is generated because the switching ON/OFF timing of the SEPP transistors differs. The output stage of the power amplifier generally has SEPP connection.



< ASO Protection Circuit >

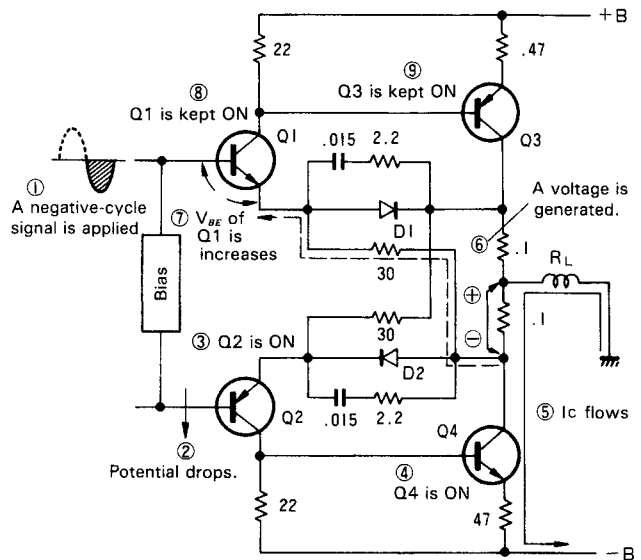
CIRCUIT DESCRIPTION



In the above figure, when such a sine wave signal is applied to the input, Q1 is ON and Q2 is OFF during the positive half period of the input signal, and during the negative half period Q1 is OFF and Q2 is ON. However, the output current is not switched smoothly when the input signal changes from positive to negative (or from negative to positive) because of the carrier storage effect.

When the input signal changes from negative to positive, Q1 is turned ON immediately but Q2 is not turned OFF because of the carrier storage effect. By the time Q2 is completely turned OFF, a fairly large current will already be flowing through Q1. This phenomena will be seen in the opposite transition.

To reduce distortion caused by the carrier storage effect, a certain amount of current is made to flow through the transistors even while they are nominally OFF. This type of amplifier is called the zero switching amplifier. The basic circuit of the output stage of the L-01A is shown in the following.



< Zero-switching circuit operation >

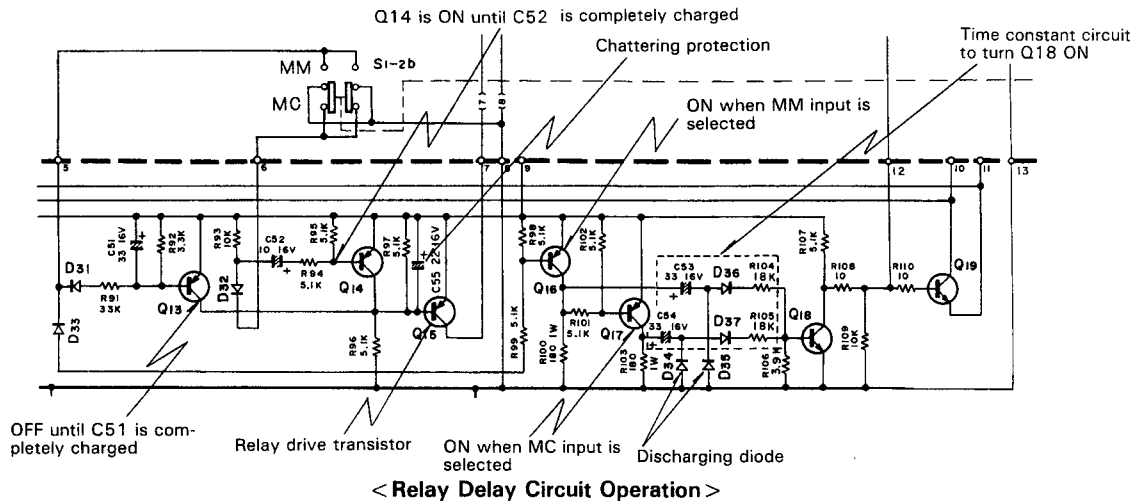
When a negative signal is applied to the input, Q2 and Q4 are deeply biased and the collector current of Q4 increases proportional to the input signal. At the same time, Q1 and Q3 will tend to go OFF. However, a voltage of $I_c \times R$ appears across the resistor 0.1Ω connected to the collector of Q4 and this voltage is applied to the emitter of Q1. Thus, V_{BE} of Q1 is increased and a small collector current flows through Q1. Therefore, a small current also flows through Q3. That is, Q1 and Q3 are maintained in the ON state when they would, if the circuit was of the conventional type, be OFF.

3. Relay Delay Circuit

This circuit prevents shock noise to be emitted when either MC or MM cartridge input is selected as well as when phono input is selected.

When the MC/MM switch is switched over, the MC/MM switching relay keeps the preceding condition for some time and the PHONO ON/OFF relay is kept OFF for a certain time.

CIRCUIT DESCRIPTION



When power is turned ON with the MC/MM switch set to MC, +B (about 9 V) is applied to the bases of Q13~15. Q13 and Q15 are turned OFF immediately, but Q14 is kept ON until C52 is fully charged. Since Q14 is ON, Q15 is OFF. When C52 is fully charged, Q14 is turned OFF and Q15 ON. When Q15 is ON, the MC/MM switching relay makes contact and the MC input is selected.

When power is turned ON with the MC/MM switch set to MM, Q13 is kept OFF until C51 is fully charged. Q14 is OFF and Q15 is OFF. When C51 is fully charged, Q13 is turned ON but Q15 is kept OFF. Therefore, the MC/MM switching relay breaks contact and the MM input is selected.

When switched from MC to MM, Q13 is OFF until C51 is fully charged. Q14 is turned OFF when switched and Q15 goes ON. When C51 is fully charged, Q15 is turned OFF and the relay breaks contact, resulting in MM input selection. The time delay depends on the time required for C51 to be charged.

When switched from MM to MC, Q13 is OFF at the time

of switching. Q14 is ON until C52 is charged, and so Q15 is OFF. After a certain time, Q13 and Q14 are turned OFF and Q15 is turned ON.

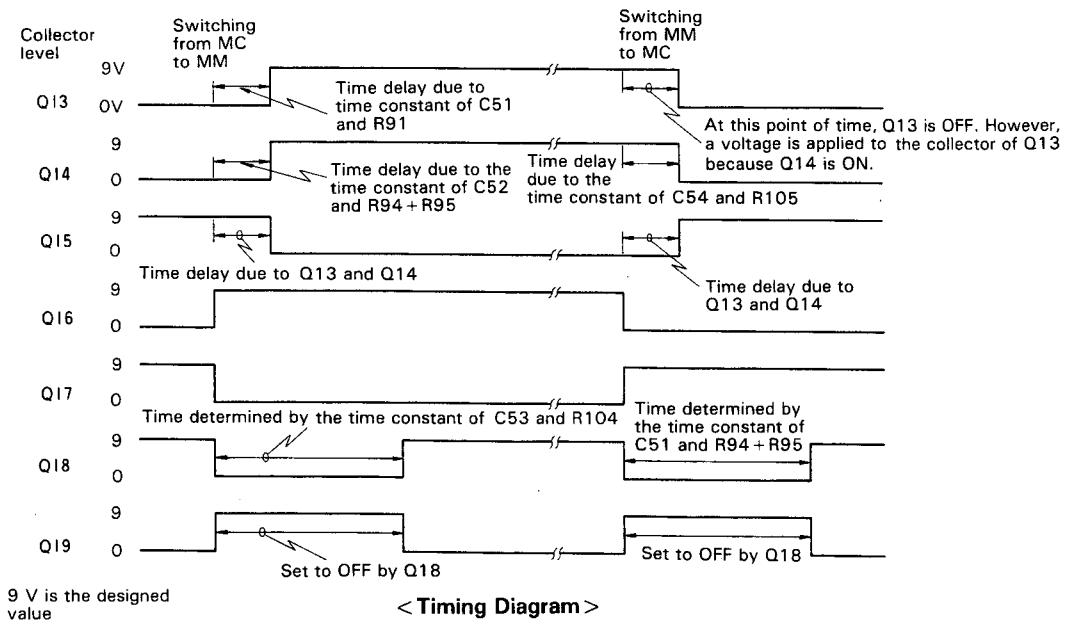
The MC/MM switch controls the PHONO relay, too, so that MC/MM switching noise is not output.

When power is turned ON with MC selected, Q16 is OFF and Q17 is ON. When Q17 is ON, Q18 is ON until C54 is charged through the circuit, C54 → D37 → R105 → Q18, and therefore, Q18 is ON and Q19 is OFF. Thus, the PHONO ON/OFF relay is turned OFF.

When C54 is fully charged, Q18 is turned OFF and Q19 is turned ON. Therefore, the relay is turned ON. That is, the relay is turned ON for a certain time after the MC/MM switching relay is switched over.

When MM is selected, Q16 is turned ON and a current flows through C35 → D36 → R104 → Q18. Thus, Q18 is kept ON for a certain time and the relay is kept OFF.

The time chart of the above operation is shown below.



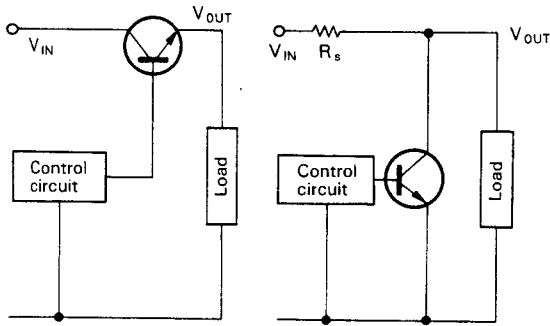
9 V is the designed value

CIRCUIT DESCRIPTION

4. Shunt Type Regulator

A shunt type regulator is provided in the power supply of the preamplifier.

This shunt type regulator controls the output voltage by shunting the load current with a shunt device (transistor).



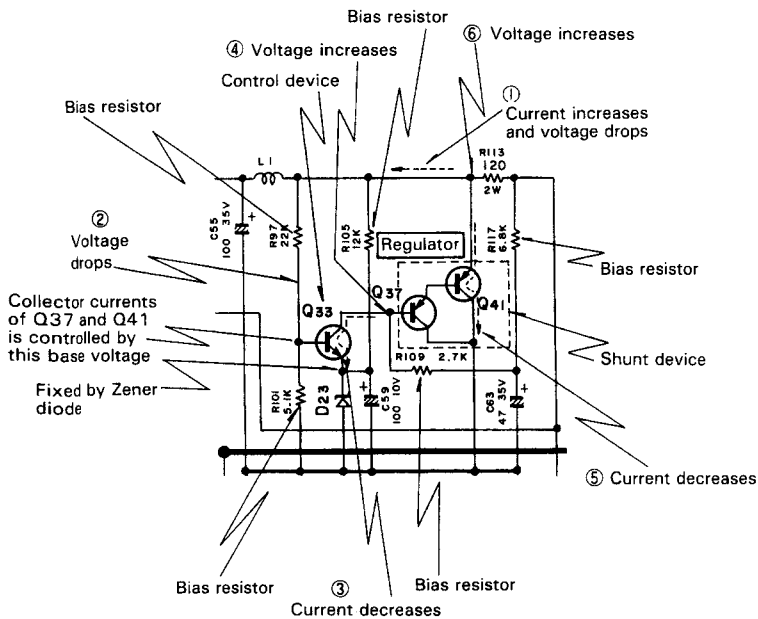
(a) Series path type regulator (b) Shunt type regulator

The one advantage of the shunt type regulator is that a high resistivity against overloads or short-circuited loads can be obtained by selecting the power consumption of the resistor (R_s in the schematic above) which is connected in series to the voltage source. However, the shunt device is connected in parallel with the load circuit and so a large current must be made to flow, resulting in a large power consumption and low efficiency.

The circuit operation is as follows. An appropriate bias is generally applied to the base of Q33 so that a certain current flows through Q37 and Q41. Therefore, V_{CE} of Q41 is kept constant.

When the load current increases, the base voltage of Q33 drops, resulting in the collector current of Q33 decreasing. Then, the base voltage of Q37 increases and the collector current of Q37 decreases. Therefore, the collector current of Q41 decreases and V_{CE} of Q41 increases.

When the load current decreases, the base voltage of Q33 increases and the collector current of Q33 increases. Then, the collector currents of Q37 and Q41 increase. Thus, V_{CE} of Q41 drops.



< Shunt type regulator and its operation >

ADJUSTMENT/RÉGLAGES/ABGLEICH

PREAMP OFFSET VOLTAGE ADJUSTMENT

1. Disconnect the phono cord from the phono jacks.
2. Connect a DC voltmeter between the test point 1 and GND (2 and GND) of the Preamp (X08-1750-10).
3. Adjusting the trimming pot. VR1 (VR2), for 0V reading of the DC voltmeter.

POWER AMP OFFSET VOLTAGE ADJUSTMENT

1. Connect the DC voltmeter between the \oplus and \ominus speaker terminals. (TP5, 6)
2. Adjust the trimming pot VR1 (VR2) for a 0V reading of the DC voltmeter.

POWER AMP BIAS CURRENT ADJUSTMENT

1. Turn the volume control knob fully counterclockwise.
2. Connect the DC voltmeter between the collector of Q1 and of Q5. (TP3, 4)
3. Adjust the trimming pot. VR3 (VR4), of audio (X09-1380-10) for 20 mV reading of the voltmeter.

RÉGLAGE DE LA TENSION DE DÉCALAGE (OFFSET) EN SECTION PREAMPLI

1. Débrancher les câbles PHONO des prises jacks.
2. Brancher le voltmètre c.c. aux points d'alignement. 1 et GND (2 et GND), sur la plaque du circuit imprimé du préampli (X08-1750-10).
3. Régler le potentiomètre ajustable VR1 (VR2) de façon à ce que le voltmètre à C.C. indique 0V.

RÉGLAGE DE LA TENSION DE DÉCALAGE (OFFSET) EN SECTION AMPLI

1. Brancher le voltmètre à C.C. aux bornes de sortie \oplus et \ominus (TP5, 6).
2. Régler le potentiomètre ajustable VR1 (VR2) pour que la tension de sortie soit nulle.

RÉGLAGE DU COURANT DE POLARISATION

1. Tourner le bouton du commande de volume à fond dans le sens inverse de celui des aiguilles d'une montre.
2. Brancher le voltmètre à C.C. sur le collecteur de Q1 et Q5. (TP3, 4)
3. Régler le potentiomètre ajustable VR3 (VR4) de façon à ce que le voltmètre à C.C. indique 18 mV, sur la plaque du circuit imprimé de l'ampli. de puissance.

OFFSET-SPANNUNG DES VORVERSTÄRKERS

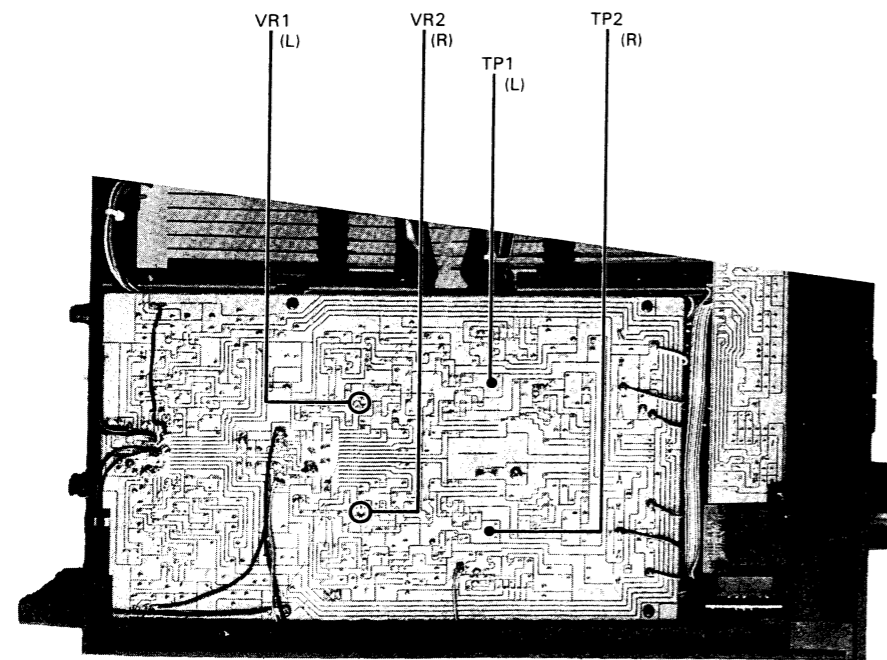
1. Die PHONO-Schnur aus den Buchsen PHONO MM oder den Buchsen PHONO MC.
2. Den Gleichspannungsmesser zwischen dem Regulierungspunkt 1 und der Erde (2 und der Erde) des Vorverstärkers (X08-1750-10) anschließen.
3. Den halbeingebetteten Widerstand VR1 (VR2) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist.

OFFSET-SPANNUNG DES ENDVERSTÄRKERS

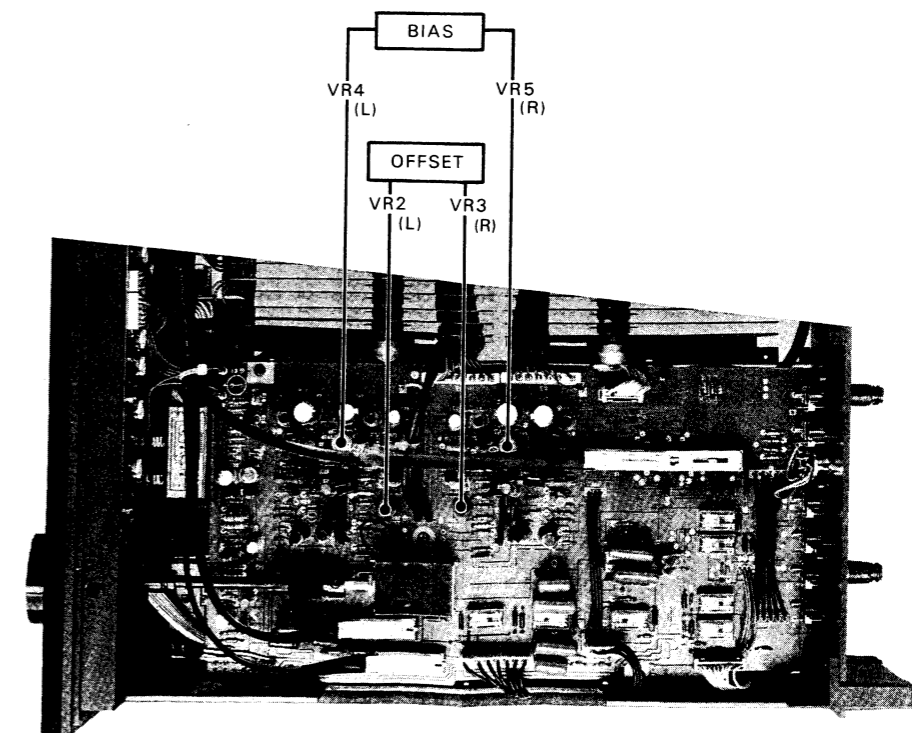
1. Den Gleichspannungsmesser zwischen der Regulierungspunkt \oplus und \ominus des Endverstärkers anschließen. (TP5, 6)
2. Den halbeingebetteten Widerstand VR (VR2) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist.

LEERLAUFS

1. Den Lautstärkeregler (VOLUME) drehen um die Endstärker-Aufnahme auf Null zu reduzieren.
2. Den Gleichspannungsmesser zwischen der Emitter Elektrode von Q1 und der Elektrode von Q5. (TP3, 4)
3. Den halbeingebetteten Widerstand VR3 (VR4) so regulieren, daß die Gleichspannungsmesser-Ablesung 18 mV ist.



< PREAMP OFFSET ADJUSTMENT >

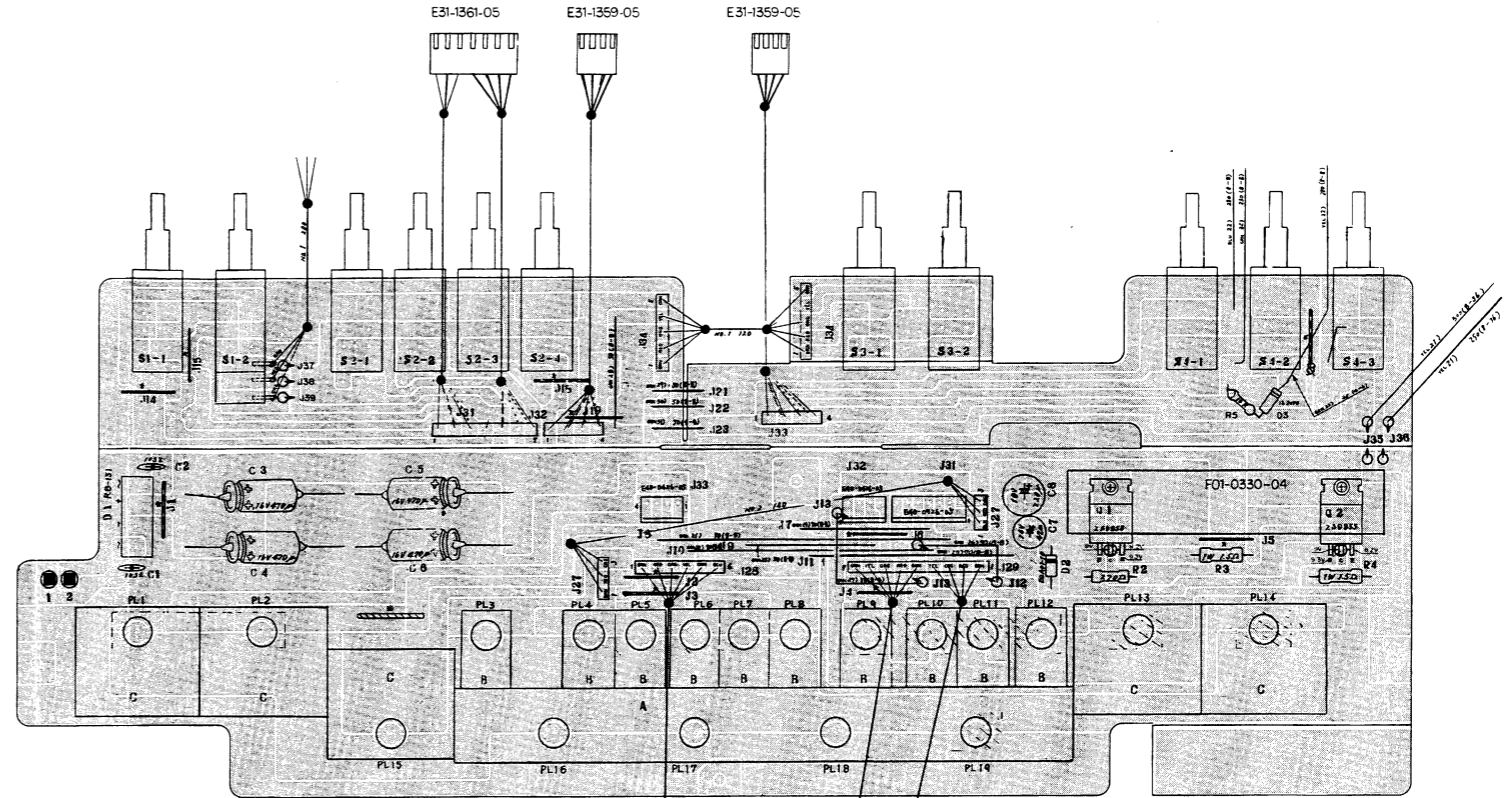
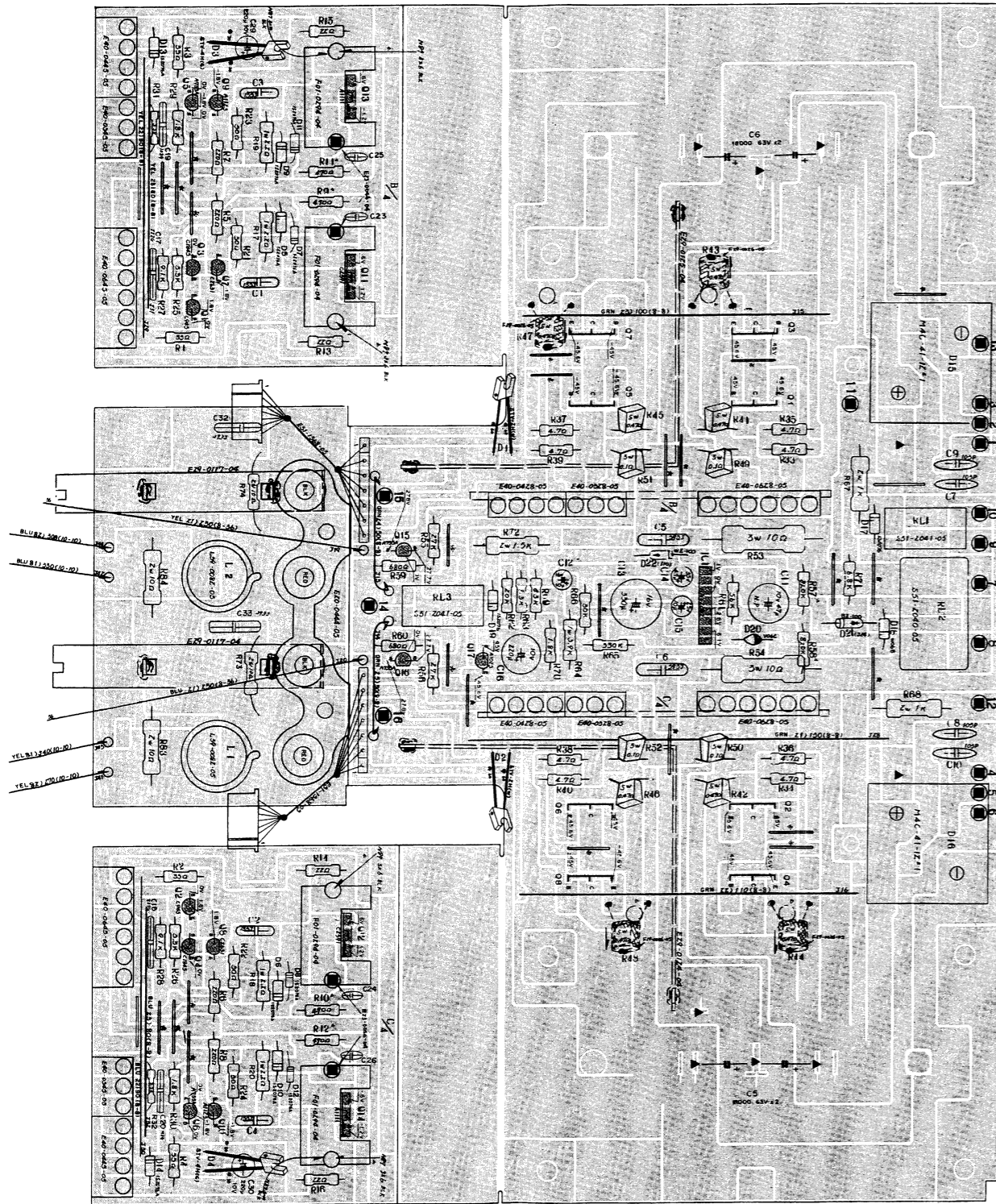


< POWER AMP OFFSET AND BIAS CURRENT ADJUSTMENT >

PC BOARD

▼POWER AMP (X07-1770-21) (Components side view)

▼SWITCH (X13-2650-21) (Components side view)



2SA733 2SC945
2SA1023 2SC1845
2SA1123 2SC2631

2SA1111
2SC2591

HA12002

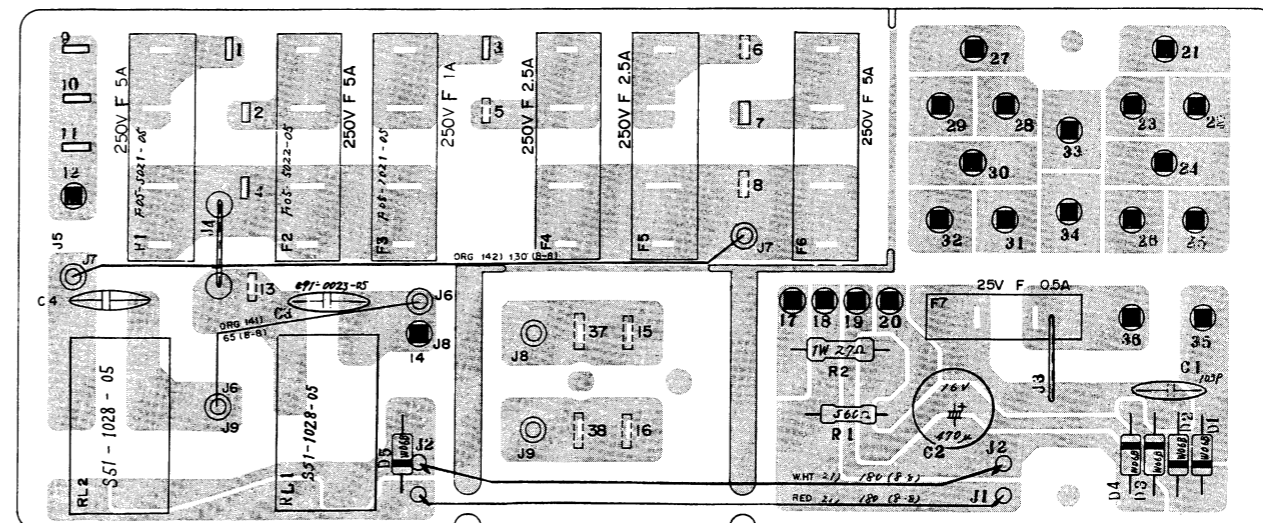
Q1,2 : 2SC945
Q3,4 : 2SC1845
Q5,6,15,16 : 2SA733A
Q7,8 : 2SC2631 (Q,R,S)
Q9,10 : 2SA1123 (Q,R,S)
Q11,12 : 2SC2591 (Q,R)
Q13,14 : 2SA1111 (Q,R)
Q17 : 2SA1023
IC1 : HA12002

D1,2 : STV-2H(W)
D3,4 : STV-4H(G)
D5-14 : IS2076A
D15,16 : M4C-41-12 *1
D17,19 : IS2076
D18 : W06B
D20 : V06C
D21 : BZ-100
D22 : WZ-100

2SD855

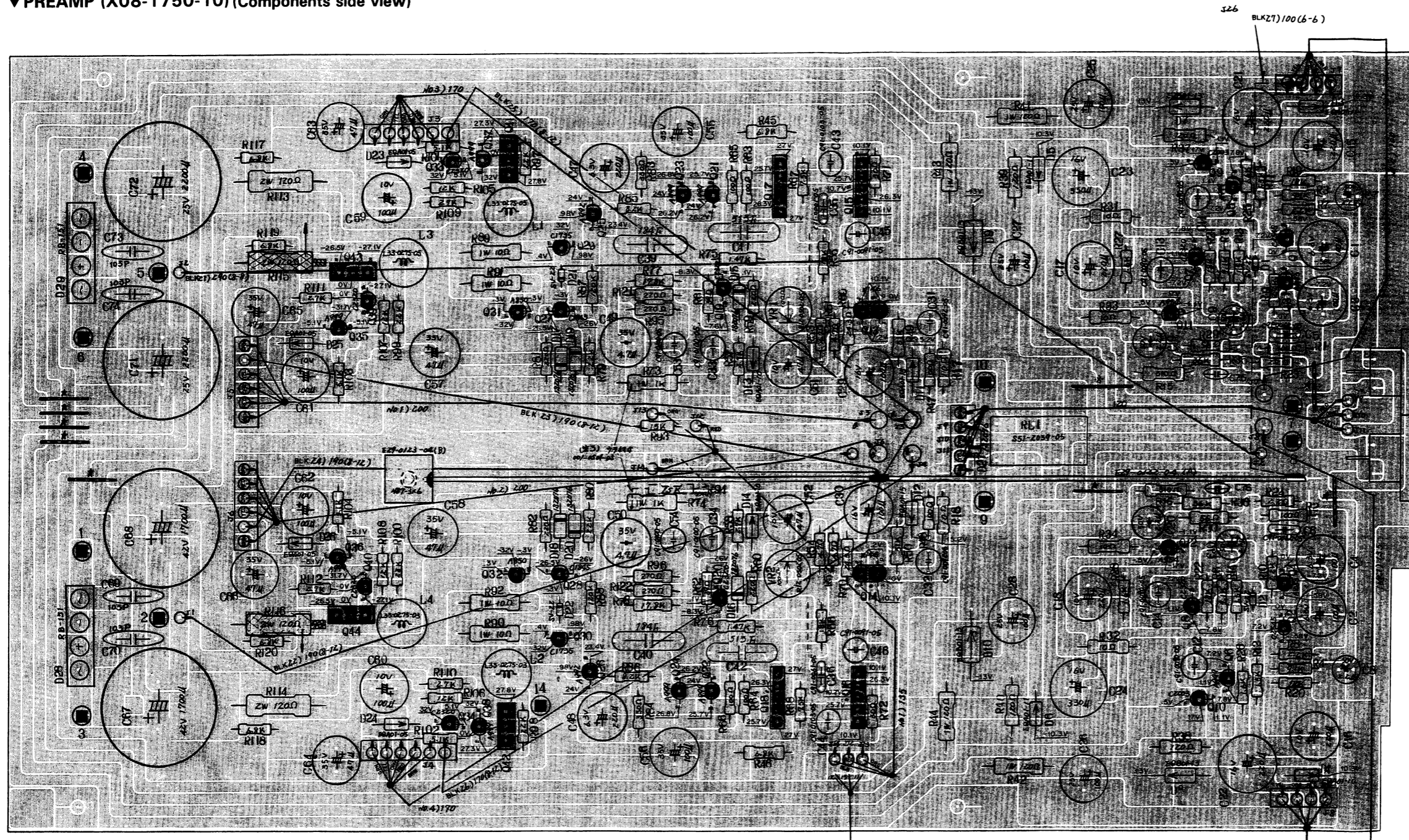
Q1,2 : 2SD855(BD)
D1 : RB-151
D2 : EQA01-10(S1)

▼POWER SUPPLY (X00-2080-11) (Components side view)

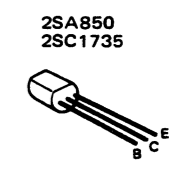


PC BOARD

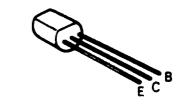
▼PREAMP (X08-1750-10) (Components side view)



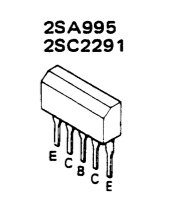
326 BLKZT)100(6-6)



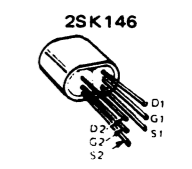
- 2SA992
- 2SA999
- 2SA1083
- 2SC945
- 2SC1845
- 2SC2003
- 2SC2320
- 2SC2545



- 2SB724
- 2SD762



- 2SA995
- 2SC2291



- 2SK146

- Q1, 2 : 2SC2545 (D E)
- Q3, 4 : 2SA1083 (D E)
- Q5, 6, 21 ~ 24, 38 ~ 38 : 2SA999 (E F)
- Q7, 8, 19, 20, 33, 34, 39, 40 : 2SC2320 (E F)
- Q9, 10 : 2SC2003 (M L)
- Q11, 12 : 2SA954 (M L)
- Q13, 14 : 2SK146

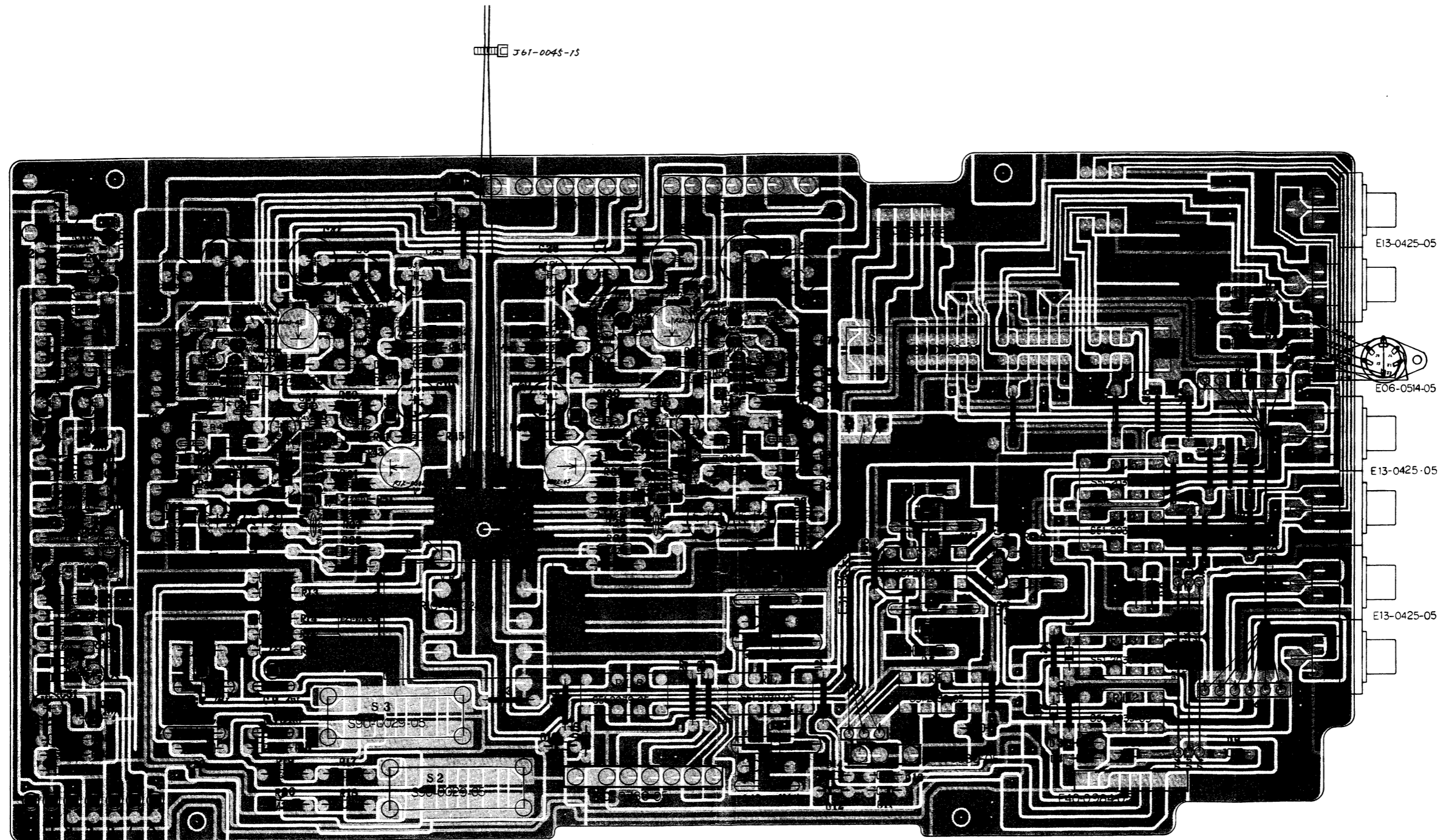
- Q15, 16 : 2SC2291 (F G)
- Q17, 18 : 2SA995 (F G)
- Q25, 26 : 2SA992 (F E)
- Q27, 28 : 2SC1845 (F E)
- Q29, 30 : 2SC1735
- Q31, 32 : 2SA850
- Q41, 42 : 2SB724
- Q43, 44 : 2SD762

- D1, 2, 21, 22 : SV-22
- D3 ~ 6 : EQA01-1 (R1)
- D7 ~ 10 : EQB01-13
- D11, 12 : EQA01-15
- D13, 14 : EQA01-10 (R)
- D15 ~ 20, 27 : IS2076
- D23 ~ 26 : EQA01-05 (T2)
- D28, 29 : RB-151

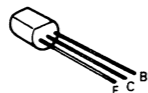


PC BOARD

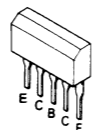
▼AUDIO (X09-1380-10) (Components side view)



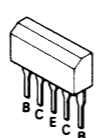
2SA1124
2SA999
2SC2632
2SC2320



2SC2291



2SC2259



μPA68H



Q1, 2: 2SC2291(G, H)
Q3, 4: μPA68H (L, M)
Q5, 6: 2SC2259(G, H)
Q7-10: 2SA1124(R, S)
Q11, 12: 2SC2632(R, S)
Q13-17: 2SA999(E, F)
Q18, 19: 2SC2320(E, F)

D1, 3-16, 29-37: 1S2076
D17, 18: WZ-240
D19, 20: WZ-197
D21, 22: XZ-051

- 2SA850
- 2SC1735
- 2SA733
- 2SC945
- 2SA954
- 2SC1845
- 2SA992
- 2SC2003
- 2SA999
- 2SC2320
- 2SA1023
- 2SC2545
- 2SA1083
- 2SC2631
- 2SA1123
- 2SC2632
- 2SA1124

- 2SA1111
- 2SB724
- 2SC2591
- 2SD762

- 2SD855

- 2SA995
- 2SC2291

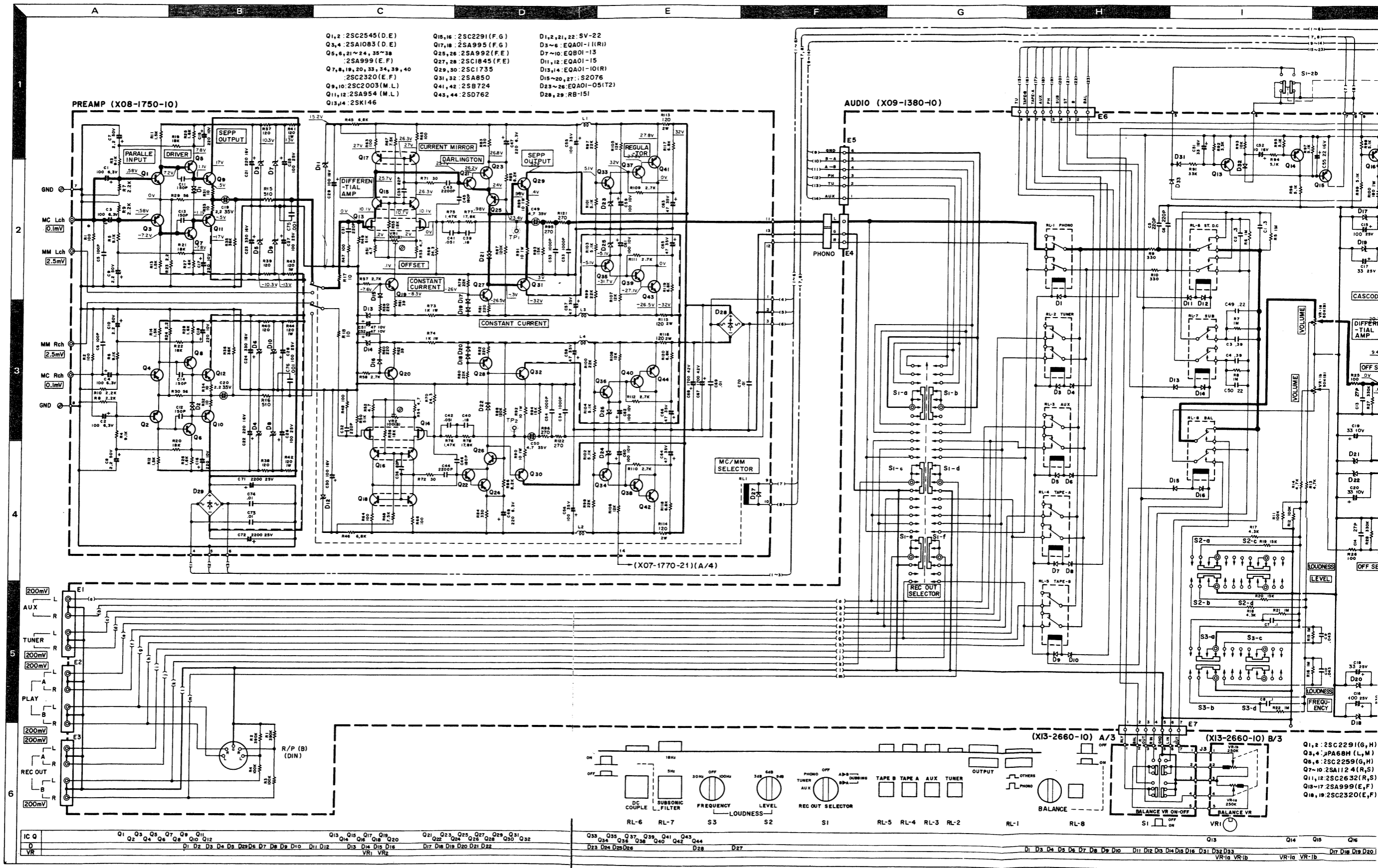
- 2SK146

- HA12002

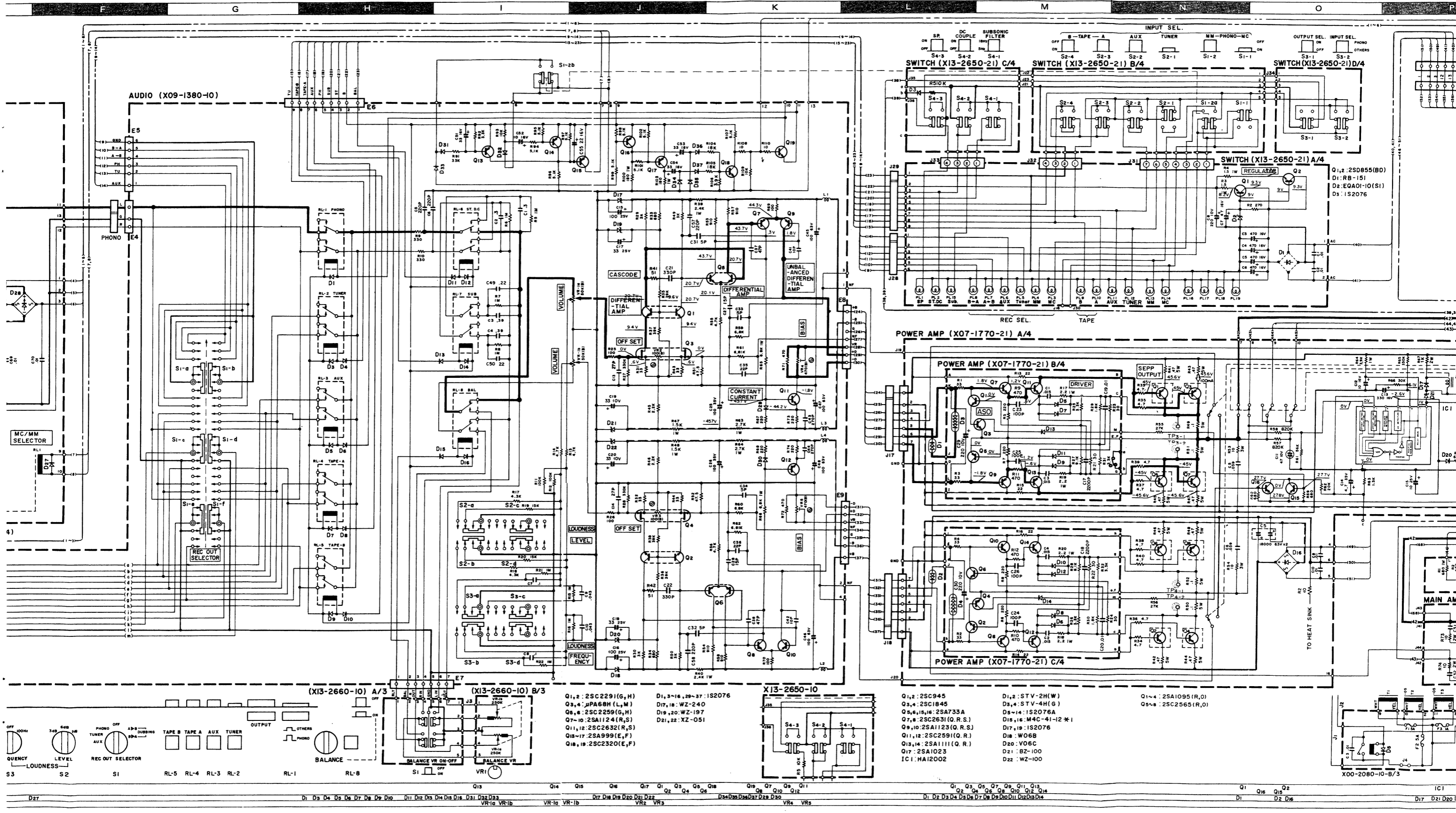
- 2SC2259

- 2SA1095
- 2SC2565

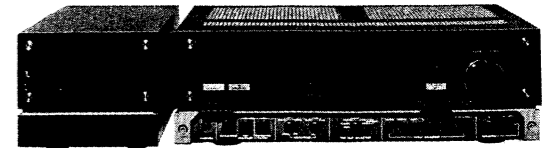
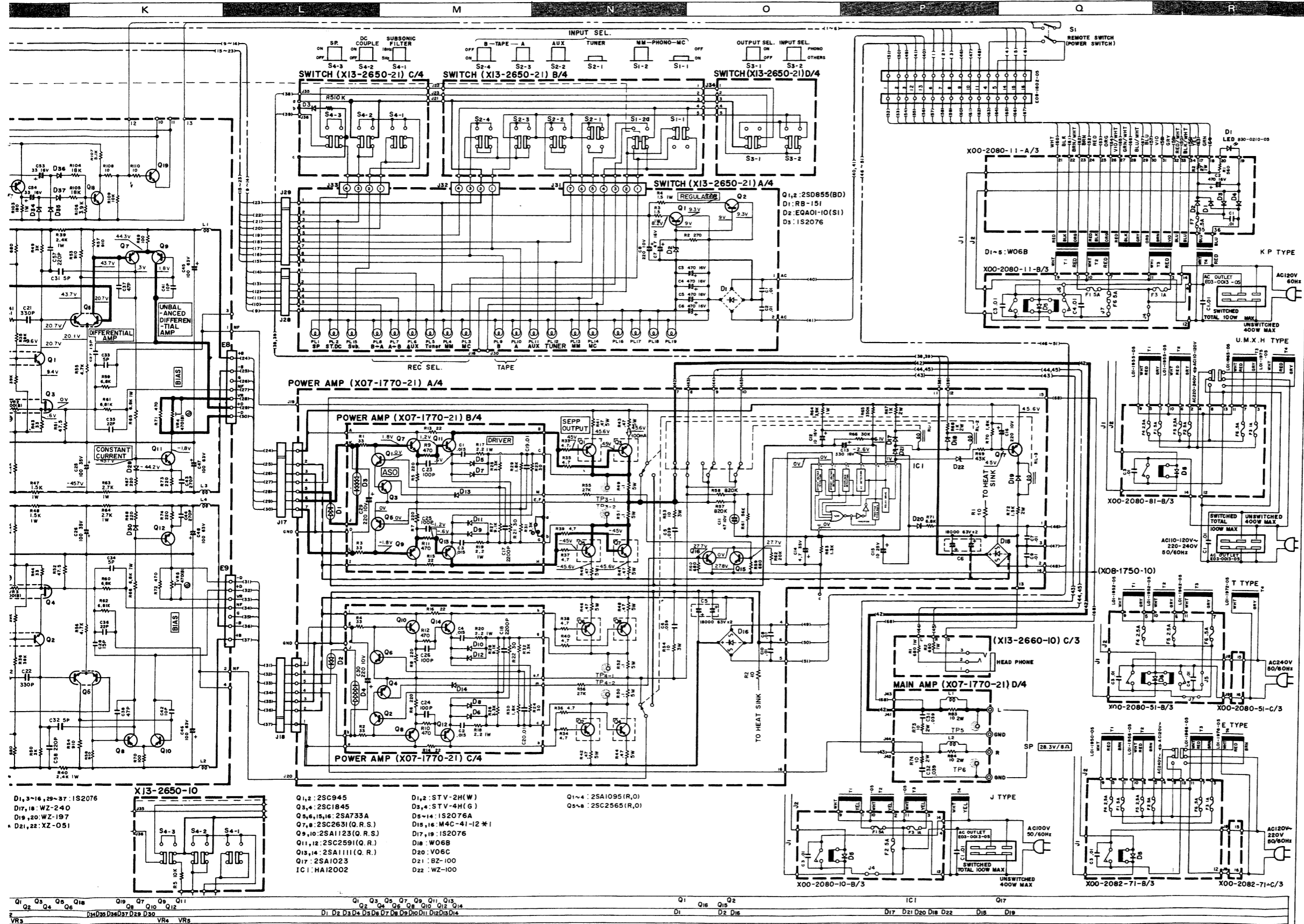
- μPA68H



NEW SEPARATE AMPLIFIER



- | | | | |
|--|--|--|--|
| <p>QUENCY</p> <p>LEVEL</p> <p>REC OUT SELECTOR</p> <p>RL-5</p> <p>RL-4</p> <p>RL-3</p> <p>RL-2</p> <p>RL-1</p> <p>RL-B</p> <p>VR-10</p> <p>VR-1b</p> | <p>(X13-2660-10) A/3</p> <p>(X13-2660-10) B/3</p> <p>Q1,2: 2SC2291(G,H)</p> <p>Q3,4: μPA68H(L,M)</p> <p>Q5,6: 2SC2259(G,H)</p> <p>Q7-10: 2SA1124(R,S)</p> <p>Q11,12: 2SC2632(R,S)</p> <p>Q13-17: 2SA999(E,F)</p> <p>Q18,19: 2SC2320(E,F)</p> <p>D1,3-16,29-37: 1S2076</p> <p>D17,18: WZ-240</p> <p>D19,20: WZ-197</p> <p>D21,22: XZ-051</p> | <p>X13-2650-10</p> <p>S4-3</p> <p>S4-2</p> <p>S4-1</p> <p>Q1,2: 2SC945</p> <p>Q3,4: 2SC1845</p> <p>Q5,6,15,16: 2SA733A</p> <p>Q7,8: 2SC2631(Q,R,S)</p> <p>Q9,10: 2SA1123(Q,R,S)</p> <p>Q11,12: 2SC2591(Q,R,S)</p> <p>Q13,14: 2SA1111(Q,R)</p> <p>Q17: 2SA1023</p> <p>IC1: HA1002</p> <p>D1,2: STV-2H(W)</p> <p>D3,4: STV-4H(G)</p> <p>D5-14: 1S2076A</p> <p>D15,16: M4C-41-12 *1</p> <p>D17,19: 1S2076</p> <p>D18: W06B</p> <p>D20: V06C</p> <p>D21: BZ-100</p> <p>D22: WZ-100</p> <p>Q1-4: 2SA1095(R,O)</p> <p>Q5-8: 2SC2565(R,O)</p> | <p>TO HEAT SINK</p> <p>MAIN AM</p> <p>IC1</p> <p>D17 D21 D20</p> |
|--|--|--|--|



SPECIFICATIONS

- POWER OUTPUT**
 110 watts* per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.006% total harmonic distortion.
- Both Channels Driven..... 120+120 watts 8 ohms at 1,000 Hz
 170+170 watts 4 ohms at 1,000 Hz
- Total Harmonic Distortion (20 Hz to 20,000 Hz)..... 0.006% at 1/2 rated power into 8 ohms
 AUX input to SPEAKER output..... 0.008% at rated power into 8 ohms
 PHONO input to SPEAKER output..... 0.008% at rated power with VOLUME -20 dB
 Intermodulation Distortion..... 0.003% at rated power into 8 ohms (50 Hz: 7 kHz = 4:1)
 Damping Factor..... 1000, 1,000 Hz into 8 ohms
 Transient Response
 Rise Time..... 0.7 μs
 Slew Rate..... ±150 V/μs
 Power Bandwidth..... 5 Hz to 100 kHz at 0.03% THD
 Frequency Response (DC COUPLED at ON)..... 5 Hz to 400 kHz, -3 dB (DC COUPLED at OFF)..... 5 Hz or 18 Hz to 400 kHz, -3 dB
- Speaker Impedance..... Accepts 4 ohms to 16 ohms
 Input Sensitivity/Impedance
 Phono (MM)..... 2.5 mV/50 kohms
 Phono (MC)..... 0.1 mV/100 ohms
 Tuner, Aux, Tape Play..... 200 mV/50 kohms
 Signal to Noise Ratio (IHF, A) Phono (MM)..... 90 dB for 2.5 mV input
 95 dB for 5.0 mV input
 102 dB for 10 mV input
 112 dB for 0.1 mV input
 112 dB for 200 mV input
 Maximum Input Level for Phono (MM)..... 250 mV (RMS), THD 0.01% at 1,000 Hz (MC)..... 9 mV (RMS), THD 0.01% at 1,000 Hz
- Output Level/Impedance
 Tape REC (Pin)..... 200 mV/180 ohms (DIN)..... 40 mV/80 kohms
 Frequency Response for Phono..... RIAA standard curve ±0.2 dB (20 Hz to 20,000 Hz)
 Loudness Control..... +3 dB, +6 dB, +9 dB at 30 Hz and 100 Hz (at -30 dB VOLUME Level)
 Subsonic Filter (DC COUPLED at OFF)..... 6 dB/Oct at 5 Hz and 18 Hz
- GENERAL**
 Power Consumption..... 5.5A UL/CSA
 430 watts, Rated power at 8 ohms
 115 watts, Non signal
 AC Outlet..... Switched 2, Unswitched 1
 Dimensions..... Amplifier (L-01A) Power Supply (L-01A-PS)
 W 440 mm (17-5/16") W 170 mm (6-11/16")
 H 156 mm (6-5/32") H 156 mm (6-5/32")
 D 452 mm (17-25/32") D 403.5 mm (15-7/8")
 Net Weight..... 9.5 kg (20.9 lb) 17.5 kg (38.5 lb)

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

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

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

DC voltages (X13 are measured by a VOM with 20 kΩ/V input impedance.

PARTS LIST

PARTS LIST

INSTRUCTION FOR PARTS LIST

Table with 4 columns: Ref. No., Parts No., Description, Remarks. Includes exploded view drawing No. and position in exploded view.

- ① Exploded view drawing No.
② Position in exploded view.
③ Symbol of new parts
④ Area to which parts are shipped.
⑤ Reference No. in schematic diagram.
⑥ Abbreviation of "ceramic capacitor".
Abbreviations of capacitors (Parts No. with initial letter "C").
Abbreviations of resistors (Parts No. with initial letters "R").
All resistor values are indicated with the unit (Ω) omitted.
Abbreviations common to capacitors and resistors.

Table for L-01A AMPLIFIER UNIT. Columns: Ref. No., Parts No., Description, Remarks. Lists components like MESH PLATE, WOODEN CABINET, FRONT PANEL, etc.

Table for POWER AMP (X07-1770-xx). Columns: Ref. No., Parts No., Description, Remarks. Lists components like POLYSTY 0.015UF, CERAMIC 0.01UF, etc.

Table for PREAMP (X08-1750-10). Columns: Ref. No., Parts No., Description, Remarks. Lists components like POLYSTY 0.039UF, ELECTRO 100UF, etc.

PARTS LIST

PARTS LIST

ption / 規格 Remarks 備考 *K P U M X T E U NS LIST *T E K P U M X

Table with columns: Ref. No., Parts No., Description, Remarks. Includes sub-sections like POWER AMP (X07-1770-xx) and AUDIO (X09-1380-10).

Table with columns: Ref. No., Parts No., Description, Remarks. Includes sub-sections like PREAMP (X08-1750-10) and AUDIO (X09-1380-10).

Table with columns: Ref. No., Parts No., Description, Remarks. Includes sub-sections like AUDIO (X09-1380-10) and AUDIO (X09-1380-10).

Table with columns: Ref. No., Parts No., Description, Remarks. Includes sub-sections like AUDIO (X09-1380-10) and AUDIO (X09-1380-10).

PARTS LIST

Table with 4 columns: Ref. No., Parts No., Description, Remarks. Contains various electronic components like capacitors, resistors, and relays.

Table with 4 columns: Ref. No., Parts No., Description, Remarks. Includes a section for AUDIO (X09-1380-10) and various electronic parts.

PARTS LIST

Table with 4 columns: Ref. No., Parts No., Description, Remarks. Includes sections for SWITCH (X13-2650-xx) and SUB (X13-2660-10).

Table with 4 columns: Ref. No., Parts No., Description, Remarks. Features a section for L-01A POWER SUPPLY UNIT and various power-related components.

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 规格	Re- marks 備考
26 2A	L01-1965-05	POWER TRANSFORMER	XH
26 2A	L01-1966-05	POWER TRANSFORMER	E
27 3A	L01-1971-05	POWER TRANSFORMER	*K
27 3A	L01-1972-05	POWER TRANSFORMER	T
27 3A	L01-1975-05	POWER TRANSFORMER	UM
27 3A	L01-1975-05	POWER TRANSFORMER	XH
27 3A	L01-1976-05	POWER TRANSFORMER	E
27 3A	L01-1977-05	POWER TRANSFORMER	P
28 1A	N09-0323-04	SCREW	
29 3A	N09-0324-04	SCREW	
29 3A	N30-4008-45	PAN HEAD MACHINE SCREW	
30 3B	N09-0328-05	SCREW	
31 3A	N14-0124-04	SPECIAL NUT	
33 1B	S31-2050-05	SLIDE SWITCH	UM
33 1B	S31-2050-05	SLIDE SWITCH	XE
33 1B	S31-2050-05	SLIDE SWITCH	H
32 1B	X00-2080-11	POWER SUPPLY PCB ASSY	*K
32 1B	X00-2080-11	POWER SUPPLY PCB ASSY	P
32 1B	X00-2080-51	POWER SUPPLY PCB ASSY	T
32 1B	X00-2080-81	POWER SUPPLY PCB ASSY	UM
32 1B	X00-2080-81	POWER SUPPLY PCB ASSY	XH
32 1B	X00-2082-71	POWER SUPPLY PCB ASSY	E
POWER SUPPLY (X00-2080-xx)			
C1	C54-2710-39	CERAMIC 0.01UF P	
C2	C24-1247-71	ELECTRO 470UF 16WV	
C3 ,4	C54-2710-39	CERAMIC 0.01UF P	T
C3	C54-2710-39	CERAMIC 0.01UF P	E
C3	C91-0023-05	CERAMIC 0.01UF AC250V	UM
C3	C91-0023-05	CERAMIC 0.01UF AC250V	XH
C3 ,4	C91-0079-05	CERAMIC 0.01UF AC125V	KP
F1	F05-5021-05	FUSE(5A)	KP
F1 ,2	F05-5022-05	FUSE(5A)	UM
F1 ,2	F05-5022-05	FUSE(5A)	XH
F1 ,2	F05-5024-05	FUSE(5A)	E
F3	F05-1021-05	FUSE(1A)	KP
F3	F05-1023-05	FUSE(1A)	UM
F3	F05-1023-05	FUSE(1A)	XH
F3	F06-1021-05	FUSE(1A)	E
F4 ,5	F05-2521-05	FUSE(2.5A)	UM
F4 ,5	F05-2521-05	FUSE(2.5A)	XH
F4 ,5	F05-2528-05	FUSE(2.5A)	TE
F6	F05-5013-05	FUSE(0.5A)	UM
F6	F05-5013-05	FUSE(0.5A)	XH
F6	F05-5015-05	FUSE(0.5A)	TE
F6	F05-5021-05	FUSE(5A)	KP
101 1B	J13-0054-05	FUSE HOLDER	TE
101 1B	J13-0055-05	FUSE HOLDER X6	KP
101 1B	J13-0055-05	FUSE HOLDER X12	UM
101 1B	J13-0055-05	FUSE HOLDER X6	T
105 1B	J13-0055-05	FUSE HOLDER X12	XH
105 1B	J13-0055-05	FUSE HOLDER X12	E
R2	R47-5427-05	FL-PROOF RS27 J 3A	
RL1	S51-1027-05	RELAY	*U
RL1	S51-1027-05	RELAY	MX
RL1	S51-1027-05	RELAY	HE
RL1 ,2	S51-1027-05	RELAY	T
RL1 ,2	S51-1028-05	RELAY	*K
RL1 ,2	S51-1028-05	RELAY	P
D1 -5	V11-0295-05	W06B	

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.

Region	Code
U.S.A.	K
Canada.....	P
PX.....	U
Australia.....	X
Europe & Scandinavia.....	E
England.....	T
South Africa.....	S
Other Areas.....	M
Audio Club.....	H

There is no plan for producing units of S type.