

**KENWOOD**  
HI/FI STEREO COMPONENTS

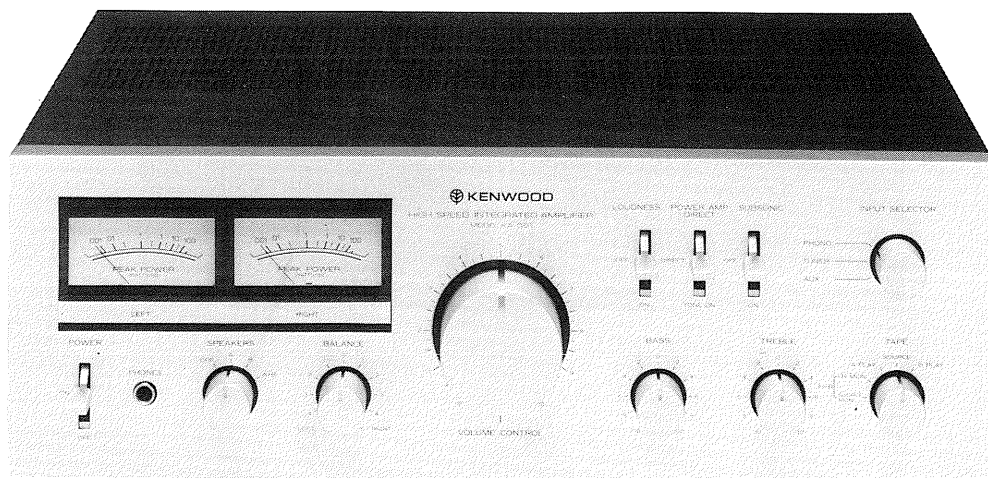
# SERVICE MANUAL

## KA-501 (KA-5011)

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.



**HIGH SPEED INTEGRATED AMPLIFIER**

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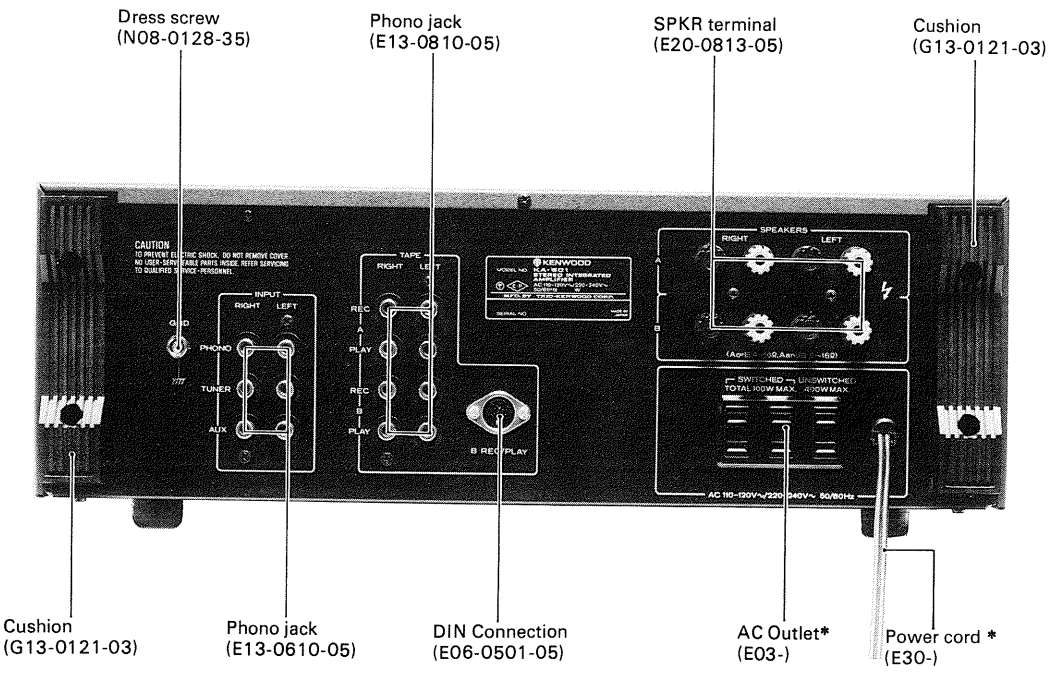
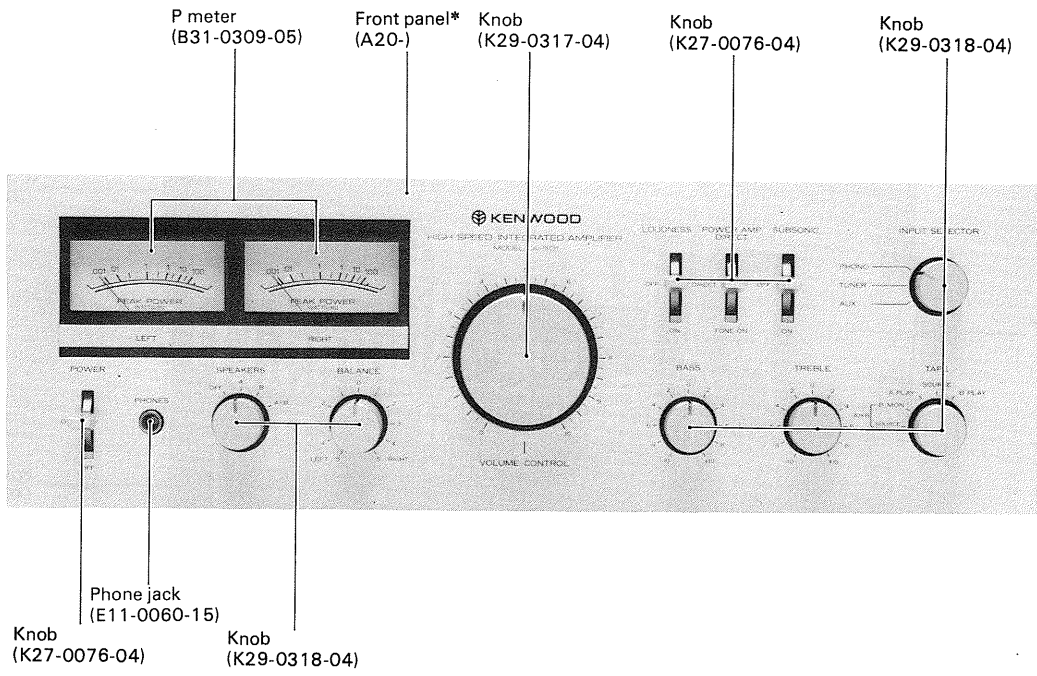
**PARTS LIST**..... 14

**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.

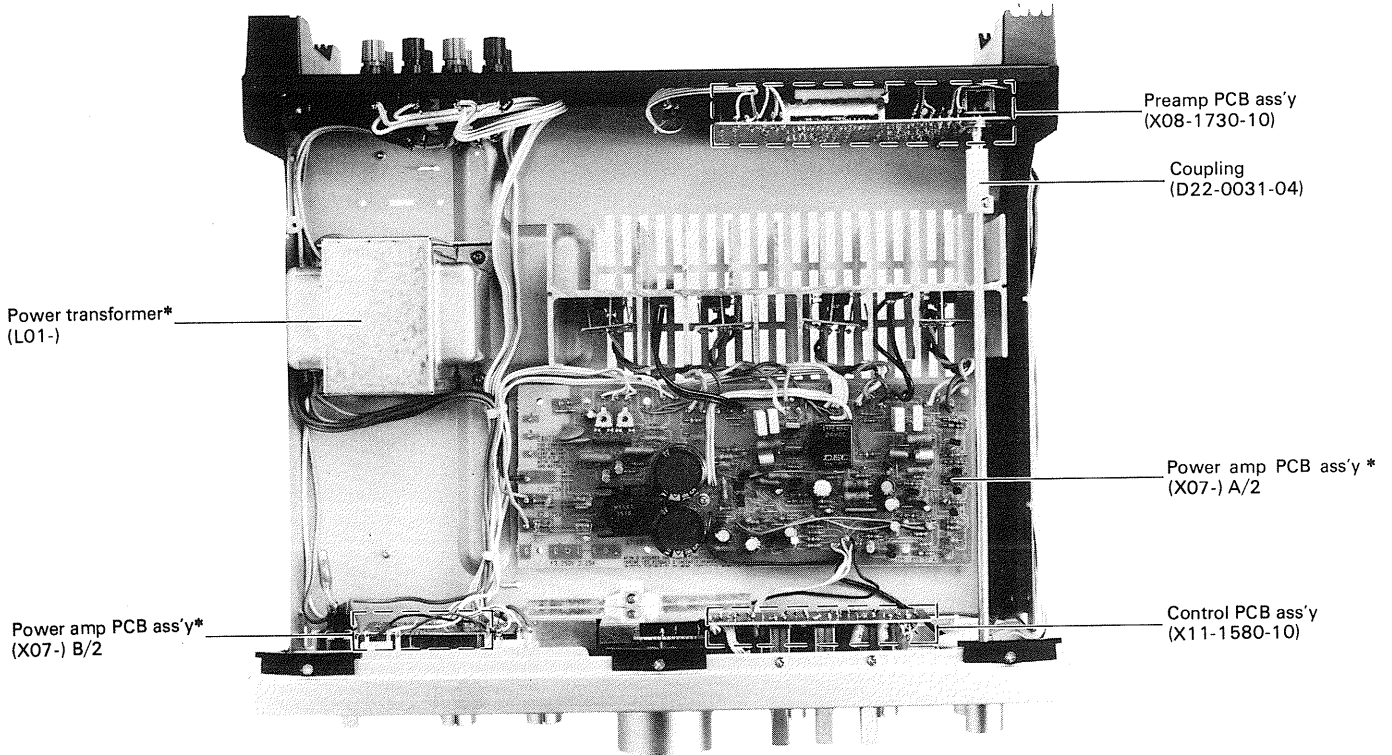
<b>Region</b>	<b>Code</b>
U.S.A. ....	K
Canada.....	P
PX.....	U
Australia.....	X
Europe & Scandinavia (KA-501 and KA-5011) .....	E
England (KA-501 and KA-5011).....	T
South Africa.....	S
Other Areas (KA-501 and KA-5011).....	M
Audio Club (KA-5011).....	H

## EXTERNAL VIEW



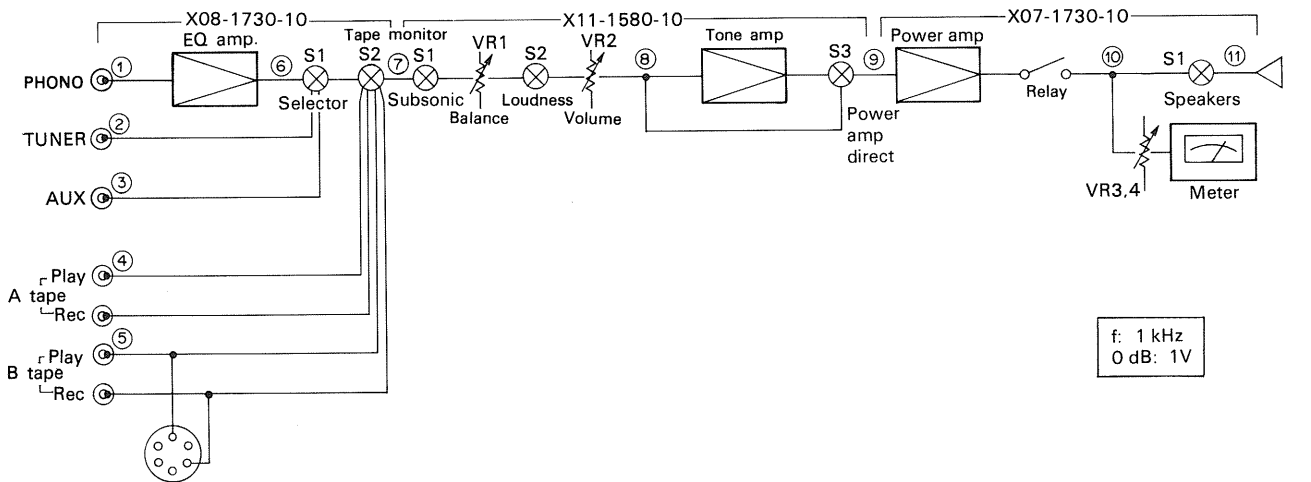
\* Refer to parts list.

## INTERNAL VIEW/BLOCK & LEVEL DIAGRAM

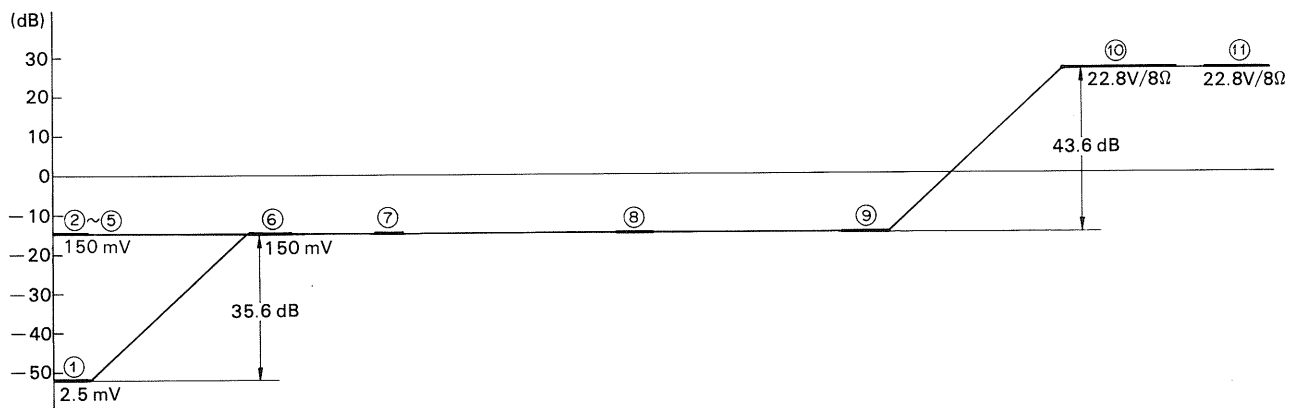


\*Refer to Parts list.

### BLOCK & LEVEL DIAGRAM

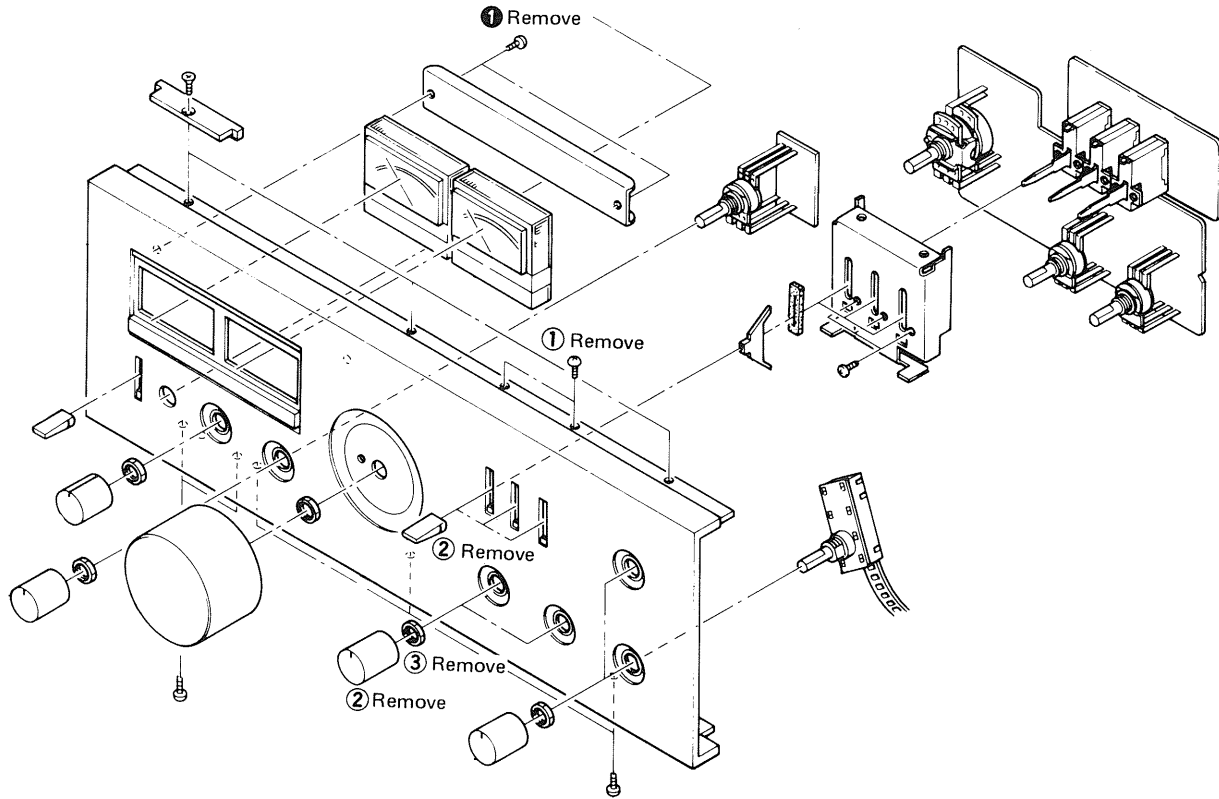


f: 1 kHz  
0 dB: 1V

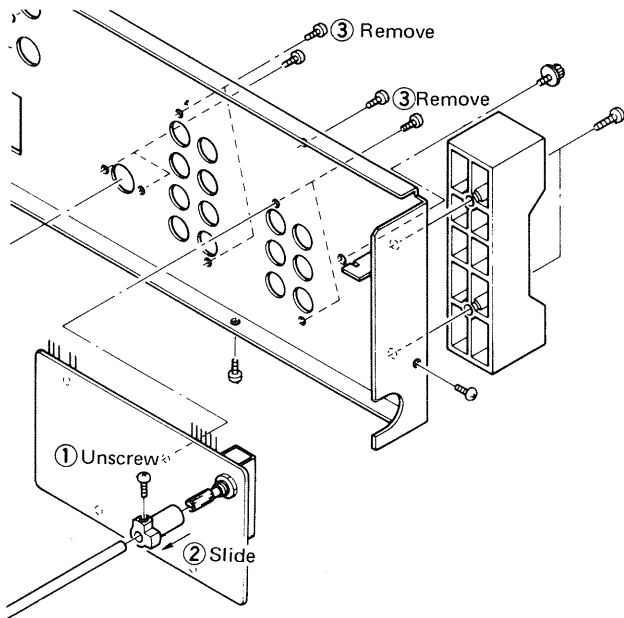


# DISASSEMBLY FOR REPAIR

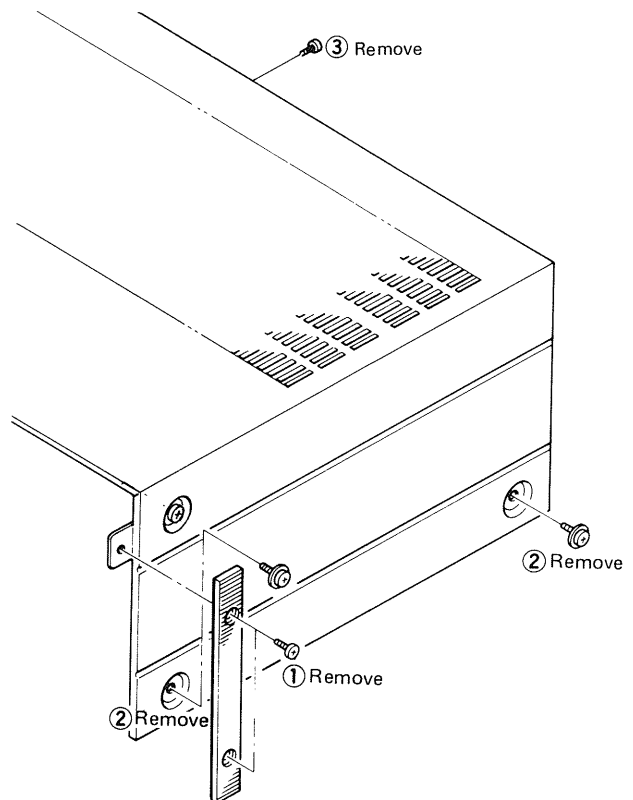
## How to remove control PCB ass'y and P meter



## How to remove preamp PCB ass'y



## How to remove metal cabinet



## ADJUSTMENT/RÉGLAGES/ABGLEICH

### POWER METER LEVEL ADJUSTMENT

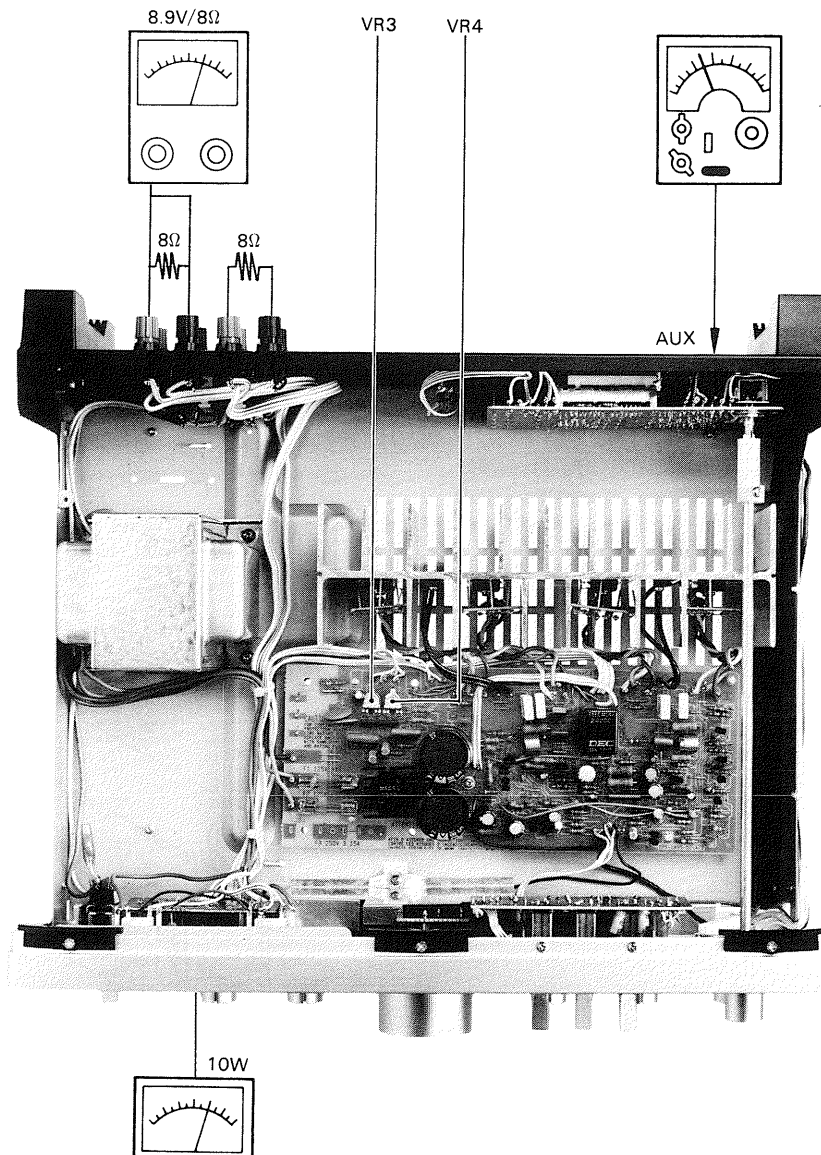
1. Connect an AG set to 1 kHz and dummy load to Aux jack and speaker terminal respectively.
2. Connect an AC voltmeter across the dummy load.
3. Adjust the trimming pot VR3 (VR4), when the AC voltmeter indicating, 8.9V, for 10W reading of power meter.

### RÉGLAGE DU VU MÈTRE

1. Relier un AG (générateur de signaux audio, 1 kHz) sur les prises Aux et une fausse charge (Resistance) sur les bornes de haut-parleur.
2. Relier un voltmètre aux deux extrémités de la resistance (ou aux borne de sortie + et -).
3. Régler le potentiomètre ajustable VR3 (VR4) en sorte que le VU mètre ajustable VR3 (VR4) en sorte que le VU mètre indique 10W lorsque le voltmètre indique 8,9V.

### PEGELEINSTELLUNG DES STROMMESSERS (POWER METER)

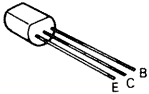
1. Einen AG (NF-Signalgenerator) an die AUX-Buchsen und eine künstliche Last ( $8\Omega$ , 50W oder mehr) an die Lautsprecher-Anschlüsse anschließen.
2. Einen Wechselstrom-Voltmeter über die künstliche Last anschliessen.
3. Den AG auf 1 kHz einstellen.
4. Die Lautstärke regler (oder den AG-Ausgang) so einstellen, daß der Voltmeter 8,9V anzeigt.
5. Das Trimm-Potentiometer VR3 (VR4) so einstellen, das der Strommesser 10W anzeigt.



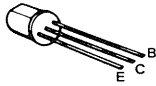
## SEMICONDUCTOR SUBSTITUTIONS

PC BOARD ASS'Y	SEMICONDUCTOR	SUBSTITUTIONS
X07-1730-10	2SA1094 (2)(O,Y)	2SA1095, 2SA1075, 2SA1105F
	2SC2564 (2)(O,Y)	2SC2565, 2SC2525, 2SC2580F
	2SA794 (Q,R)	2SA794A, 2SB631K
	2SA915 (L,K)	2SA912, 2SA899
	2SC1567 (Q,R)	2SC1567A, 2SD600K
	2SC1775 (E)	2SC1980, 2SC1845
X08-1730-10	2SC1940 (L,K)	2SC1885, 2SC1904
	HA-12002	—
	TA7318P	—
X11-1580-10	2SK117 (O,Y,GR)	2SK68A (K,L,M)
	2SA992	2SA841
	2SC945	—
X11-1580-10	NJM 4558D(A)	NJM4559, NJM4560

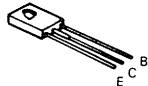
2SA912 2SC1845  
2SA992 2SC1885  
2SC945 2SC1980  
2SC1775



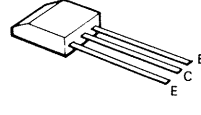
2SA841



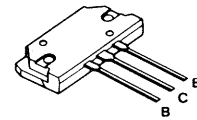
2SA794 2SC1567  
2SA899 2SC1904  
2SB631K 2SD600K



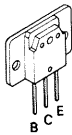
2SA915  
2SC1940



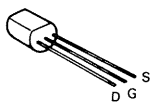
2SA1094 2SC2564  
2SA1095 2SC2565  
2SA1075 2SC2525



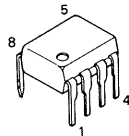
2SA1105F, 2SC2580F



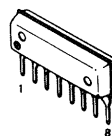
2SK68A  
2SK117



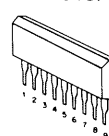
NJM4558D  
NJM4559D  
NJM4560



HA-12002



TA-7318P





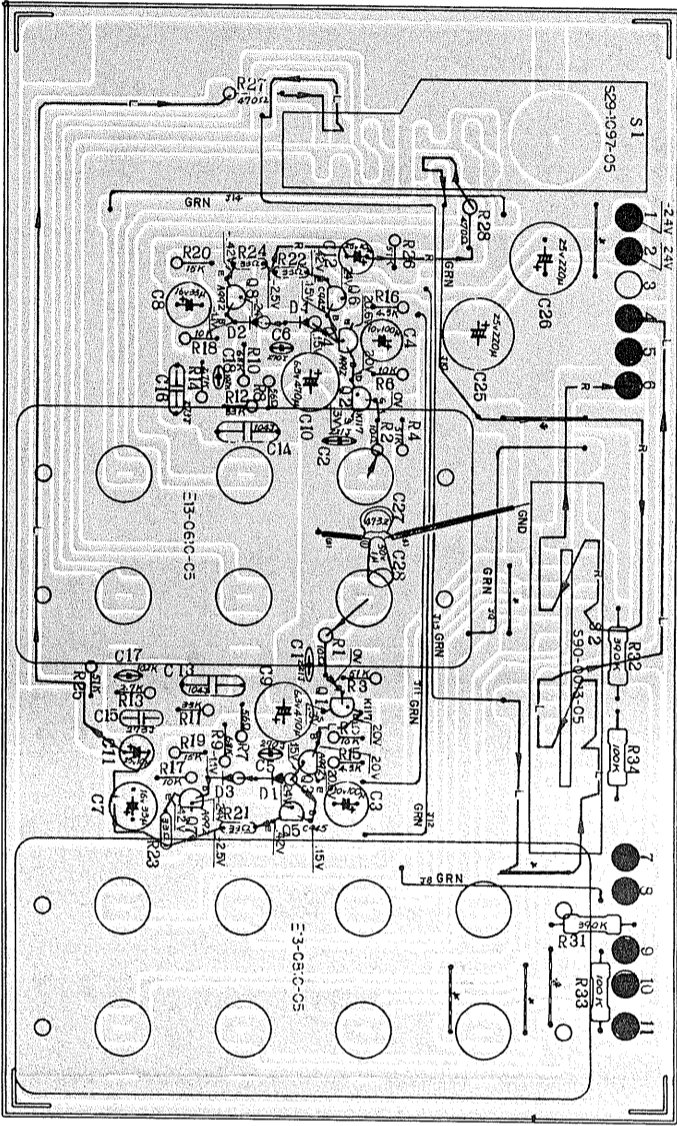


PC BOARD

**PREAMP (X08-1730-10)**  
Components Side View

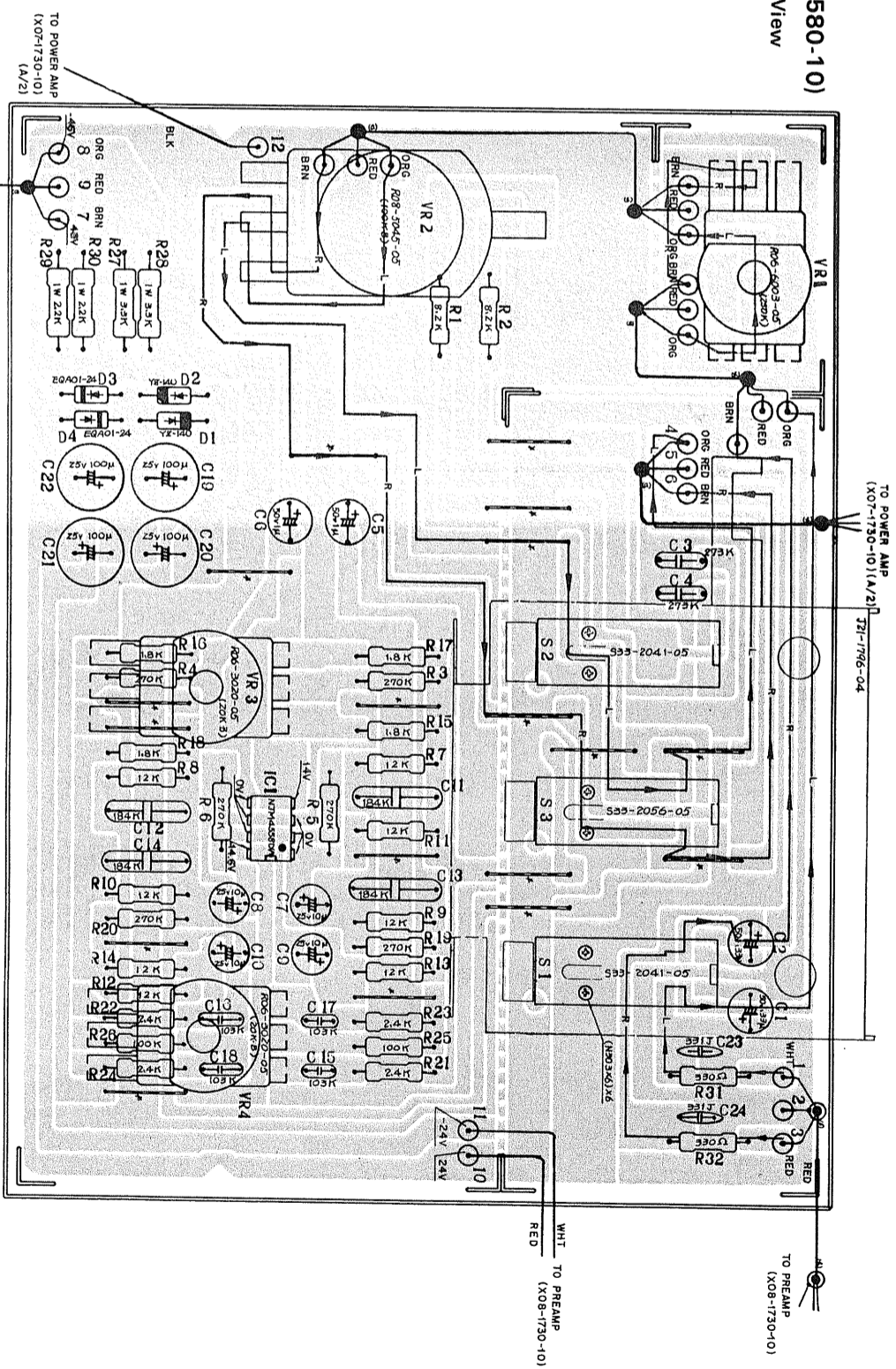
**NOTE:** Red line means signal paths.

As part of PCB illustrations are printed with thinner papers these can be seen from the back page. When using these pages, insert the white paper to the back page.



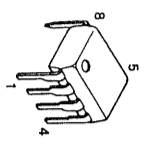
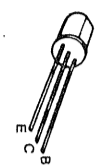
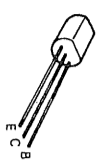
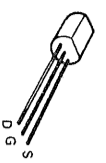
- O1,2: 2SK117 (O, Y, GR) or 2SK68A (K, L, M)
- O3,4,7,8: 2SA992 or 2SA841
- O5,6: 2SC945
- D1~4: 1S1B55 or 1S2076

**Control (X11-1580-10)**  
Components Side View

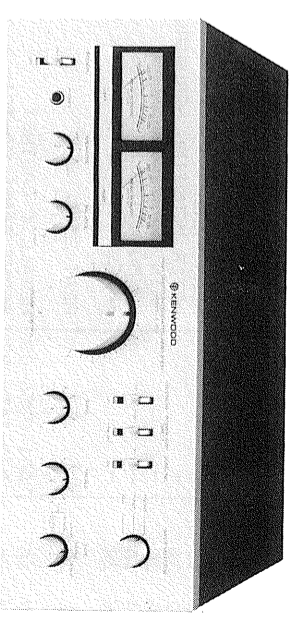
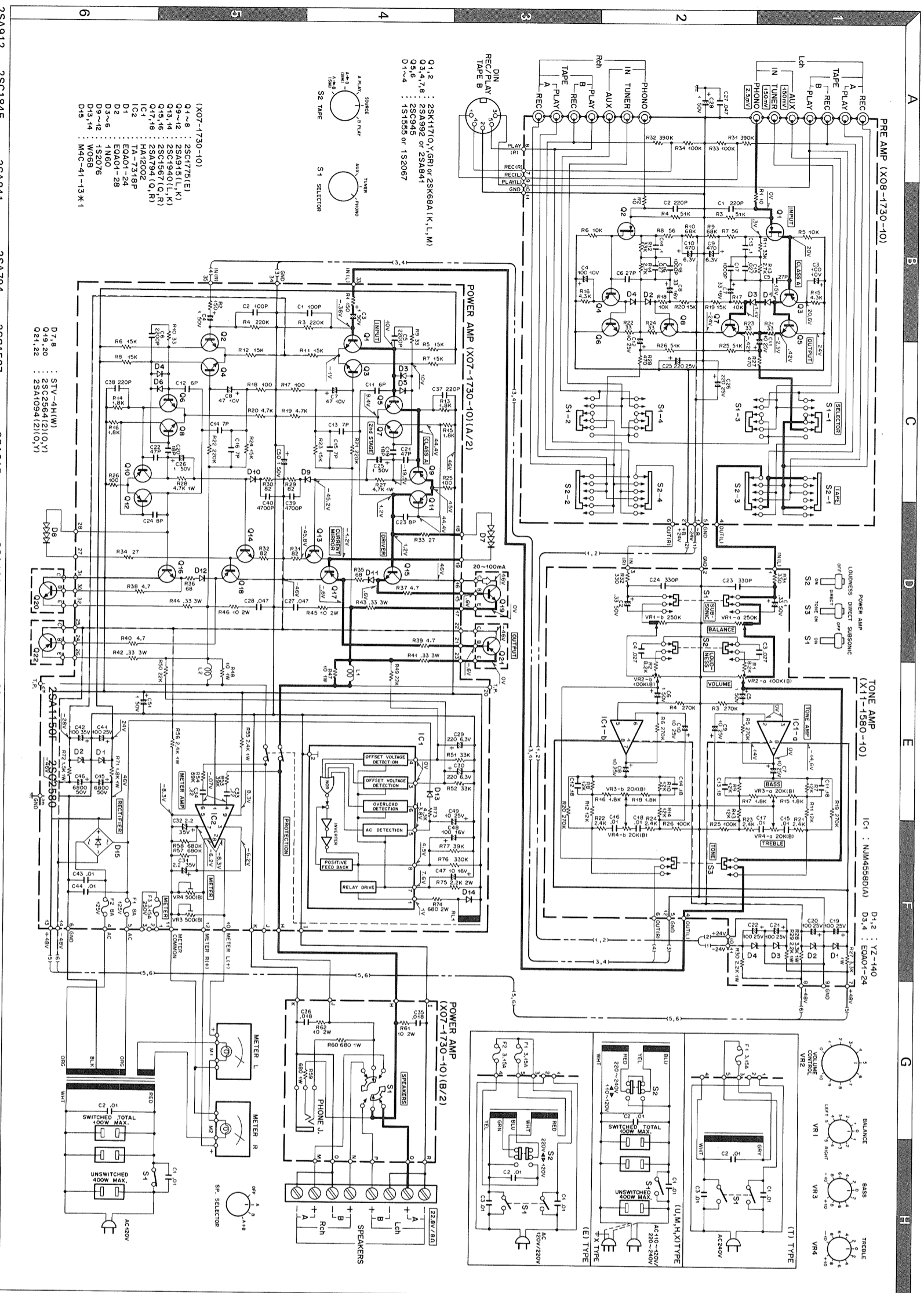


- D1,2: YZ-140
- D3,4: EOA01-24
- IC1: NJM 4558D(A)

- 2SA992
- 2SC945
- 2SA841
- 2SK68A
- 2SK117
- NJM 4558D







### SPECIFICATIONS

**Power output**  
 65 watts \* per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortion.  
 Both Channels Driven..... 70 + 70 watts 8 ohms at 1,000 Hz  
 83 + 83 watts 4 ohms at 1,000 Hz

**Total Harmonic Distortion**  
 (20 Hz to 20,000 Hz)  
 AUX input to SPEAKER output..... 0.03% at rated power into 8 ohms  
 0.03% at 1/2 rated power into 8 ohms  
 PHONO input to SPEAKER output..... 0.05% at rated power with VOLUME - 20 dB  
 Intermodulation Distortion..... 0.006% at rated power into 8 ohms  
 (60 Hz : 7 kHz = 4 : 1)

**Damping Factor**  
 Transient Response..... 60, 20 Hz - 20,000 Hz into 8 ohms  
 Rise Time..... 1.0 μs  
 Slew Rate..... ±100 V/μs

**Power Bandwidth**  
 Frequency Response..... 5 Hz to 40,000 Hz at 0.03% T.H.D.  
 2 Hz to 300 kHz, +0 dB, -3 dB  
 Speaker Impedance..... Accept 4 ohms to 16 ohms  
 Input Sensitivity/Impedance  
 Phono..... 2.5 mV/50 kohms  
 Tuner, AUX, Tape A, B..... 150 mV/50 kohms

**Signal to Noise Ratio (IHF-A)**  
 Phono..... 86 dB for 2.5 mV input  
 92 dB for 5.0 mV input  
 98 dB for 10 mV input  
 105 dB for 150 mV input  
 Maximum Input Level for Phono..... 240 mV (RMS), T.H.D. 0.02% at 1,000 Hz  
 Output Level/Impedance  
 Tape REC (Pin)..... 200 mV/120 ohms  
 (DIN)..... 30 mV/80 kohms

**Frequency Response for Phono**  
 RIAA standard curve ±0.3 dB  
 (20 Hz to 20,000 Hz)

**Tone Control**  
 Bass..... ±10 dB at 100 Hz  
 ±10 dB at 10,000 Hz  
 Treble..... ±10 dB at 10,000 Hz  
 ±18 Hz, 6 dB/oct.  
 Loudness Control..... +8 dB at 100 Hz (at -30 dB VOLUME Level)

**GENERAL**  
 Power Consumption..... 3.5 A (UL and CSA)  
 430 W (IEC)  
 270 W (8 ohms at rated power)  
 25 W (Non signal)  
 A.C. Outlet..... Switched 2, Unswitched 1  
 W 440 mm (17-1/8")  
 H 153 mm (6-1/8")  
 D 407 mm (16-1/8")  
 Weight (Net)..... 10.7 kg (23.6 lbs)

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

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



## INSTRUCTIONS FOR PARTS LIST

Ref. No.	Parts No.	Description	Remarks	
② ①	14 3A	A20-1391-13	FRONT PANEL PANEL	③ ④ *H *T *K PU MX
	14 3A	A20-1417-13	FRONT PANEL ASSY	
	15 3A	A21-0302-03	DRESSING PANEL	
	15 3A	A21-0302-03	DRESSING PANEL	
	15 3A	A21-0302-03	DRESSING PANEL	
⑤	C1 ,C2	C54-3310-39	CERAMIC 0.01UF P	⑥ ET K UM HX P
	C1	C90-0145-05	POLYESTER 0.01UF AC125V	
	C1	C91-0023-05	CERAMIC 0.01UF AC250V	
	C1	C91-0023-05	CERAMIC 0.01UF AC250V	
	C1	C91-0025-05	CERAMIC 0.01UF AC125V	
	28 1B	D15-0155-13	PULLEY	⑥
	29 1B	D15-0156-13	PULLEY	
	30 2A	D15-0170-14	PULLEY	
	31 2A	D20-0144-03	DIAL SHAFT	

- ① Exploded view drawing No.
- ② Position in exploded view.
- ③ Symbol of new parts.
- ④ Area to which parts are shipped. Example: A20-1390-13 is the parts No. of FRONT PANEL ASS'Y for the "K" type products (for USA).  
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 "ceramic capacitor".

All capacitors and resistors are listed using abbreviations.

⑦ 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  
 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  
 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 ..... ±0.25 pF (Used for capacitors only)

D ..... ±0.5 pF (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)

⑧ Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

**KA-501**

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A product of

**TRIO-KENWOOD CORPORATION**

6-17, 3-chome, Aobadai, Meguro-ku, Tokyo 153, Japan

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**KENWOOD ELECTRONICS, INC.**

1315 E. Watsoncenter Rd, Carson, California 90745  
75 Seaview Drive, Secaucus, New Jersey 07094, U.S.A.

**TRIO-KENWOOD ELECTRONICS, N.V.**

Leuvensesteenweg 184 B-1930 Zaventem, Belgium

**TRIO-KENWOOD ELECTRONICS GmbH**

Rudolf-Braas-Str. 20, 6056 Heusenstamm, West Germany

**TRIO-KENWOOD FRANCE S.A.**

5, Boulevard Ney, 75018 Paris, France

**TRIO-KENWOOD SVENSKA AB**

Kemistvagen 10A, S-183 21 Taby, Sweden

**TRIO-KENWOOD (AUSTRALIA) PTY. LTD.**

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

**KENWOOD & LEE ELECTRONICS, LTD.**

Room 501, Wang Kee Building, 5th Floor, 34-37, Connaught Road, Central, Hong Kong