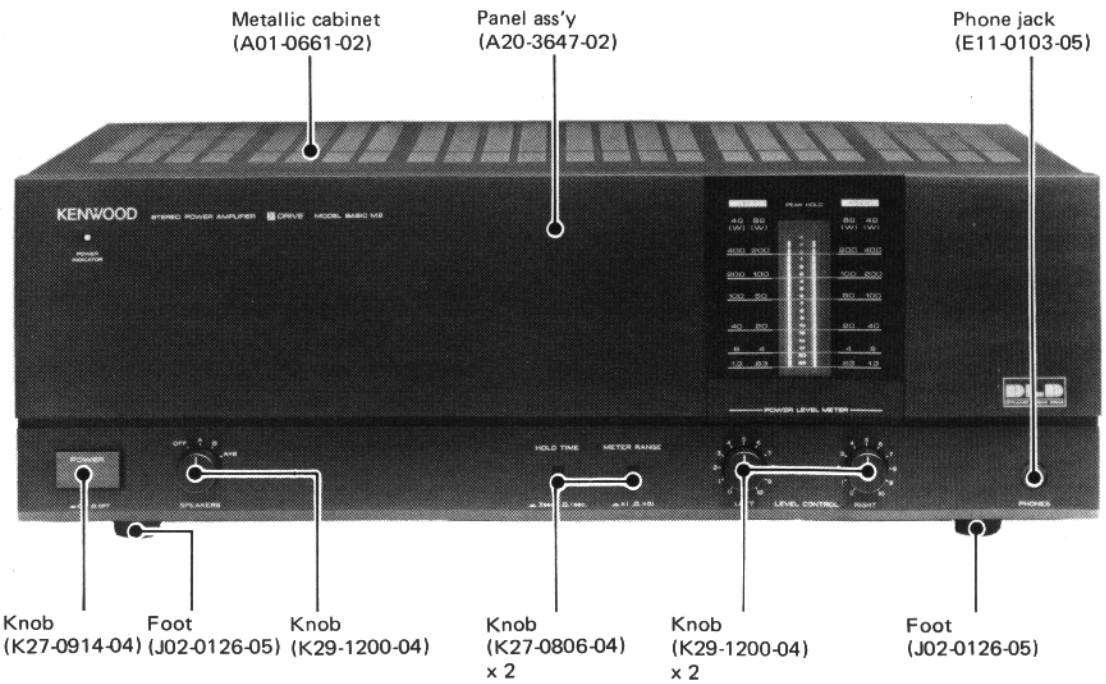
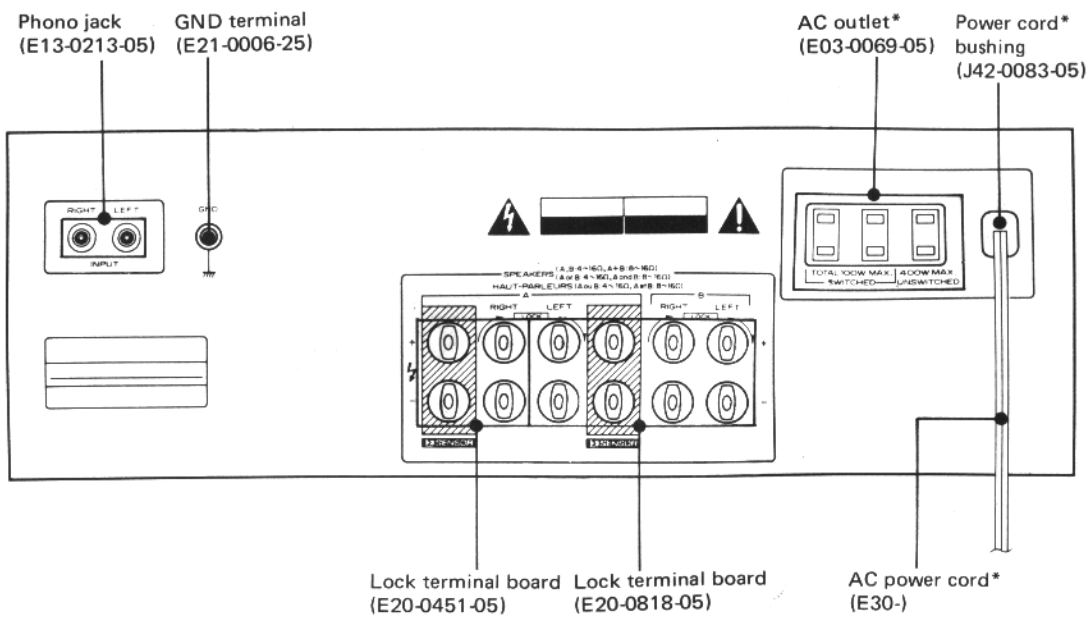
SERVICE MANUAL

KENWOOD **BASIC M2**

STEREO POWER AMPLIFIER





*Refer to parts list on page 9.

ADJUSTMENT

ADJUSTMENT

NO.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
Unless otherwise specified, the individual switches should be set as follows: SPEAKER : B							
1	**OFFSET (X07-2030-11)**	–	Connect a DC voltmeter to SPEAKER B terminal.	VOLUME: 0	VR1 (L) VR2 (R)	0V	(a)
2	**IDLE CURRENT (X07-2030-11)**	–	Connect a DC voltmeter across R85 (L) R86 (R)	VOLUME: 0	VR3 (L) VR4 (R)	13 ± 8 mV	(b)
3	**POWER METER (1)**	(A) 1 kHz, 1 V	(B)	METER RANGE : x 1 Adjust LEVEL CONTROL so that AC voltmeter indicates 40 V	VR3	Adjust the variable resistor so that the 200 W (8Ω) FL indicator lights.	
4	**POWER METER (2)**	(A) 1 kHz, 0,1 V	(B)	METER RANGE: x 0.1 Adjust LEVEL CONTROL so that AC voltmeter indicates 4 V	VR1	Adjust the variable resistor so that the 2 W (8Ω) FL indicator lights.	

Power Amplifier Check

After completing power amplifier repairs, be sure to confirm that waveforms are present as indicated below. Power amplifier operation is not normal if these waveforms cannot be observed.

It is not possible to observe both waveform C and D at the same time. Be sure to observe them individually, and be sure that no other test equipment is connected to the amplifier at the same time as the oscilloscope.

Test Condition

1. Apply a 50Hz sine wave to the INPUT terminal.
2. Connect an 8 ohm dummy load to the speaker terminals.
3. Connect the oscilloscope across the resistor (R67~74) of high output circuit.
4. Set the volume control of the BASIC M2 to 0, then turn on the power.
5. When the LEVEL CONTROL of the BASIC M2 is turned up slowly, the waveform shown in Figure C should appear suddenly at a certain point. This is evidence that the high output circuit has begun operating. Stop turning the volume control at the point where this waveform appears.
6. Momentarily turn off the power to the BASIC M2.
7. Connect the oscilloscope across the resistor (R75~82) of low output circuit.
8. Turn the power to the BASIC M2 back on.
9. The waveform shown in Figure D should appear.

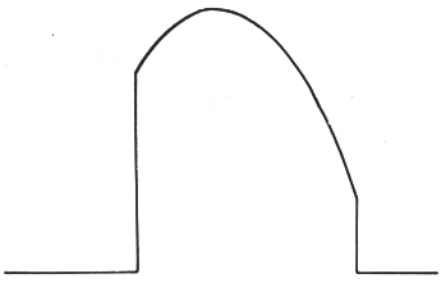
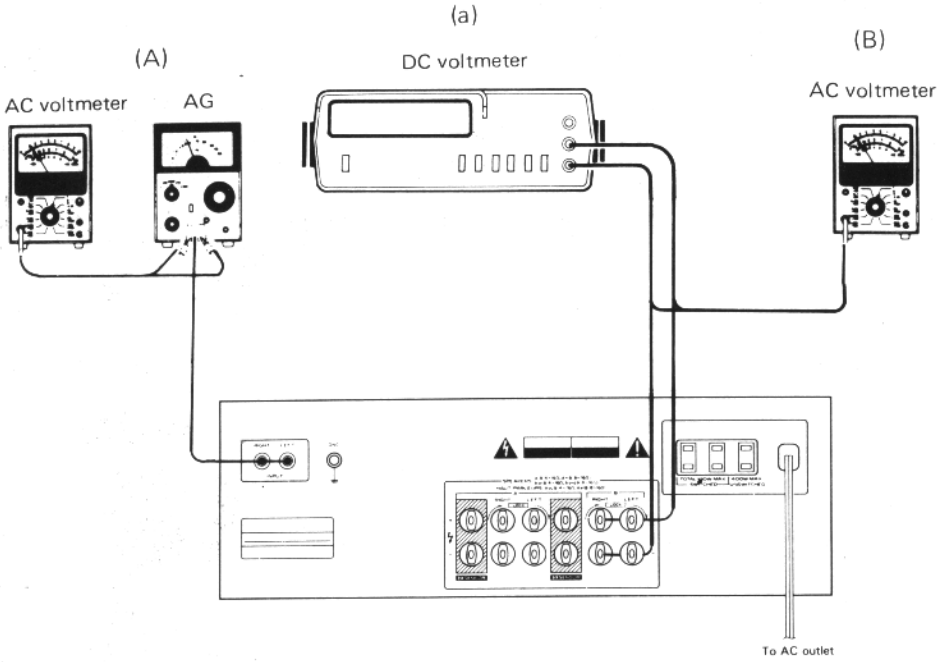


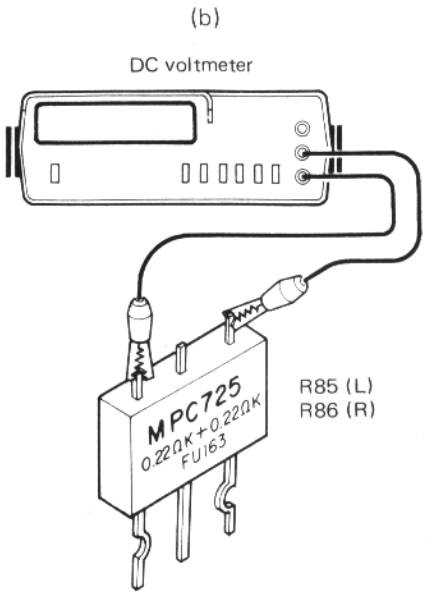
Fig. C

Fig. D

TEST INSTRUMENT CONNECTION

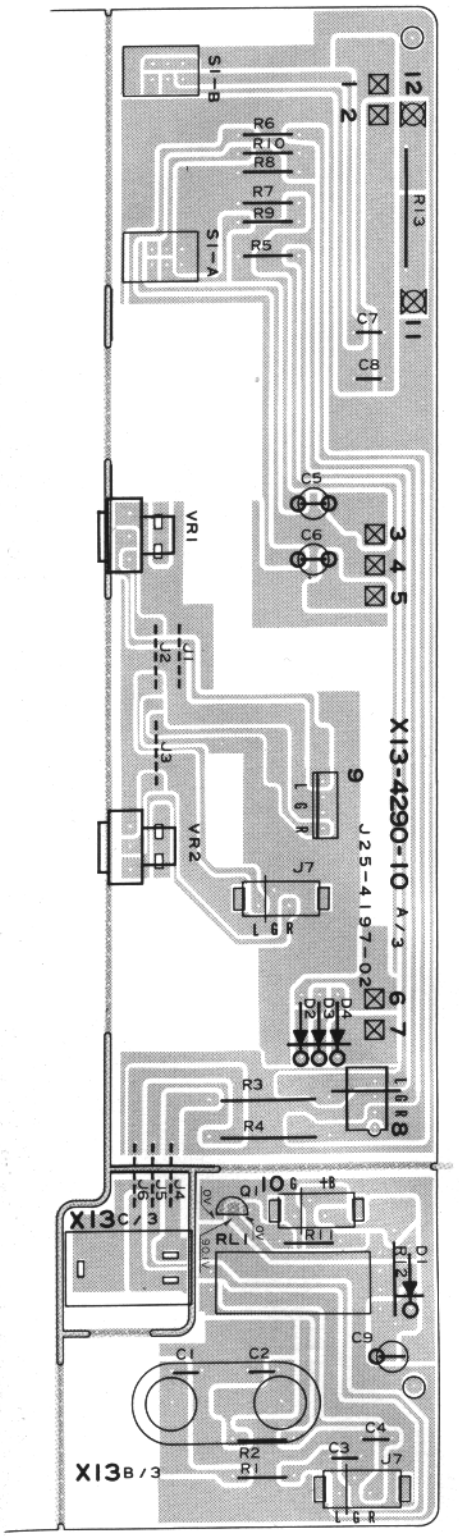
TEST INSTRUMENTS CONNECTION



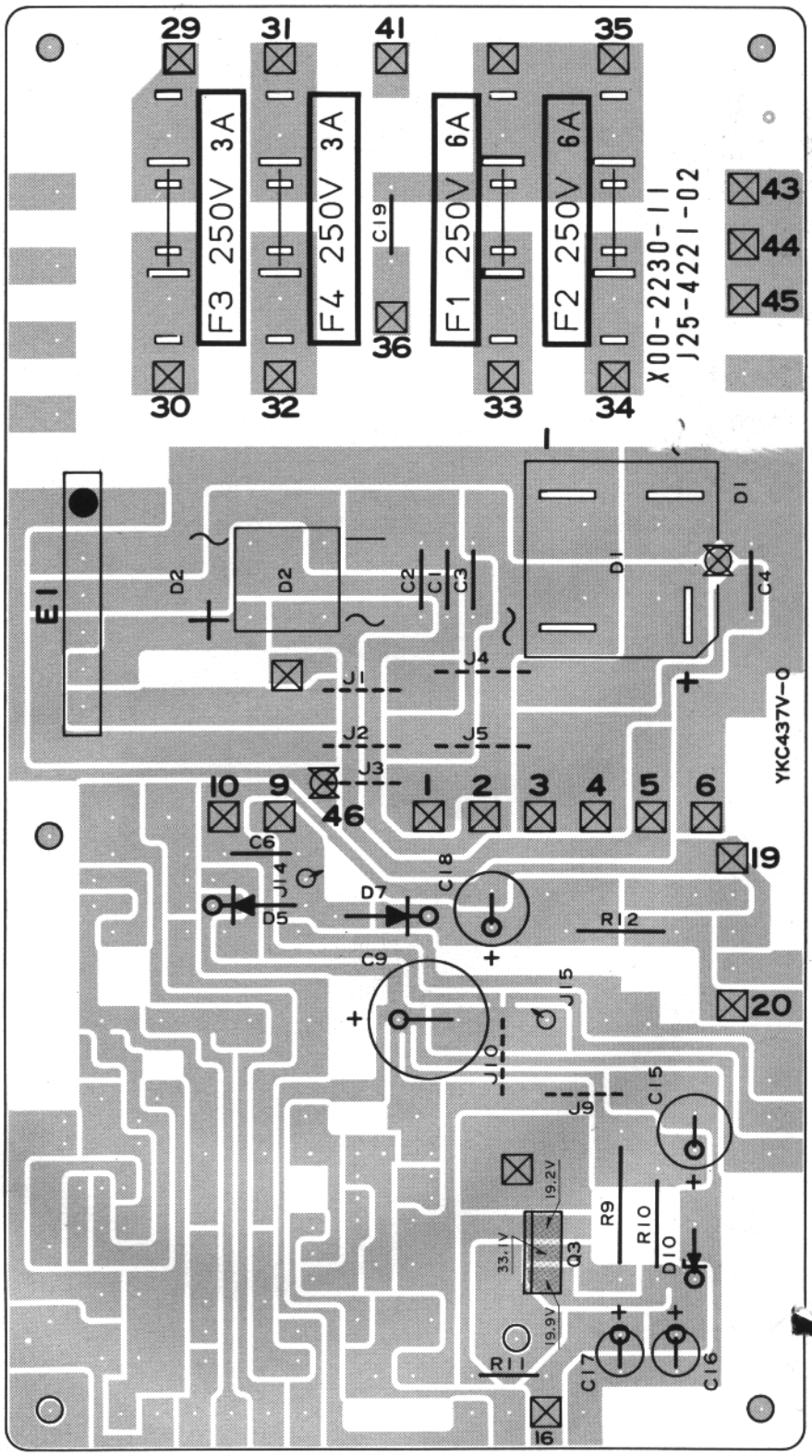


PC BOARD

SUB (X13-4290-10)
Component side view



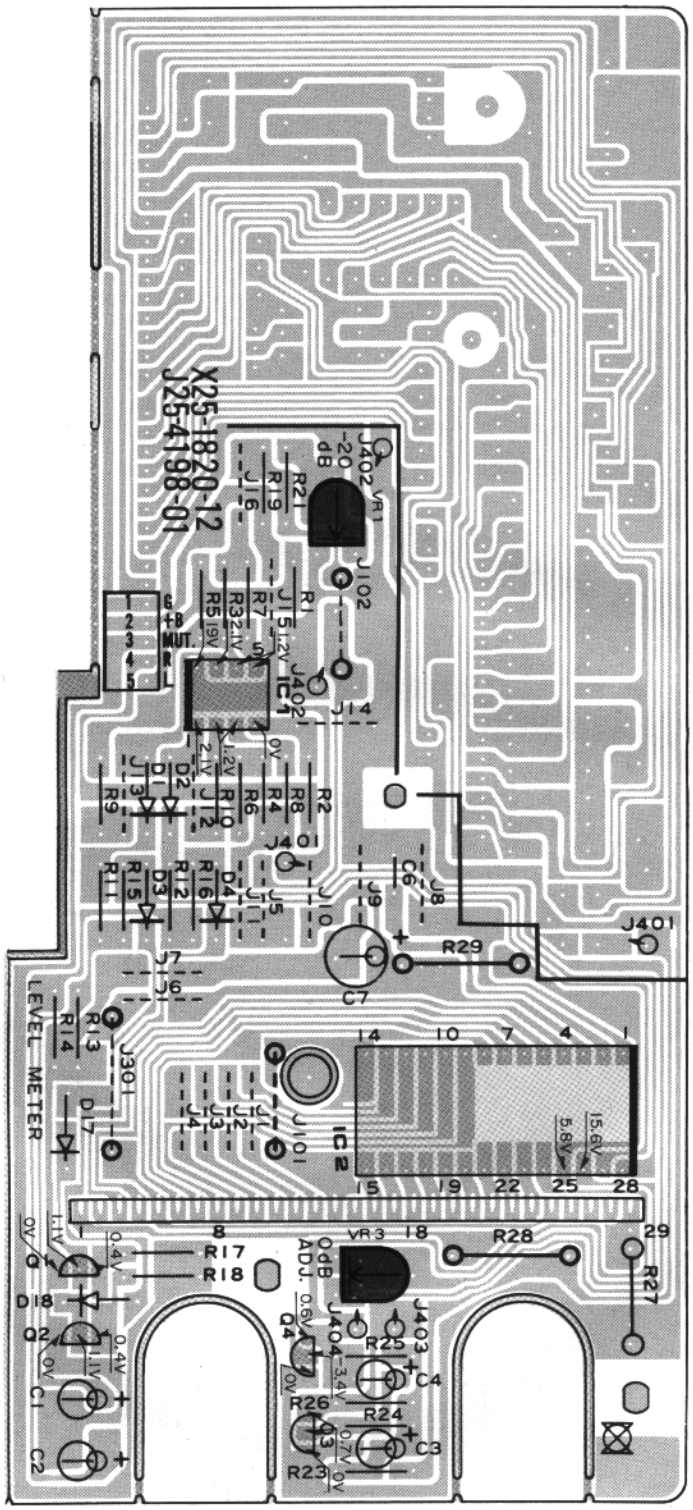
POWER SUPPLY(X00-2230-11) Component side view



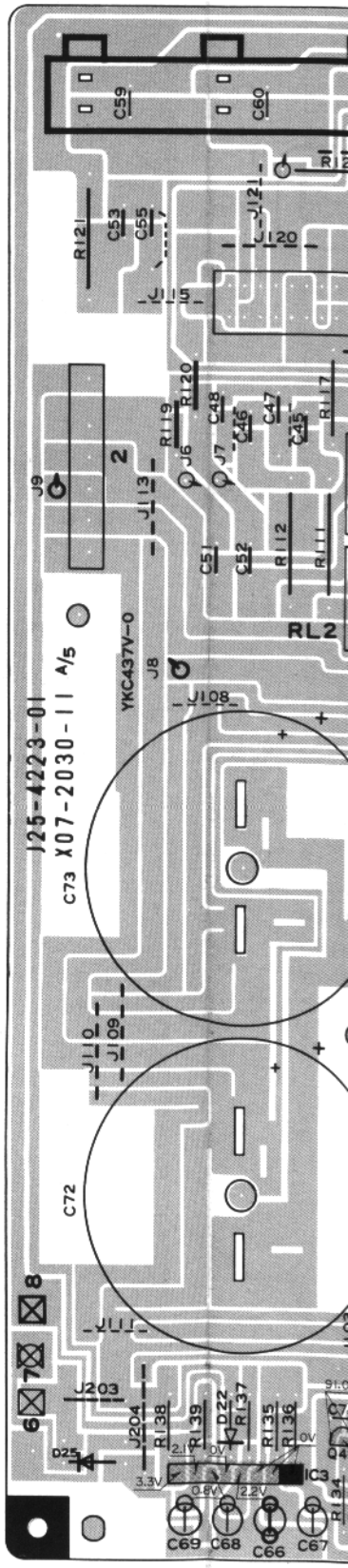
Refer to the schematic diagram for the values of resistors and capacitors.
The PC board drawing is viewing from the side easy to check.

PC BOARD

DISPLAY (X25-1820-12) Component side view



POWER AMP (X07-2030-11) Co

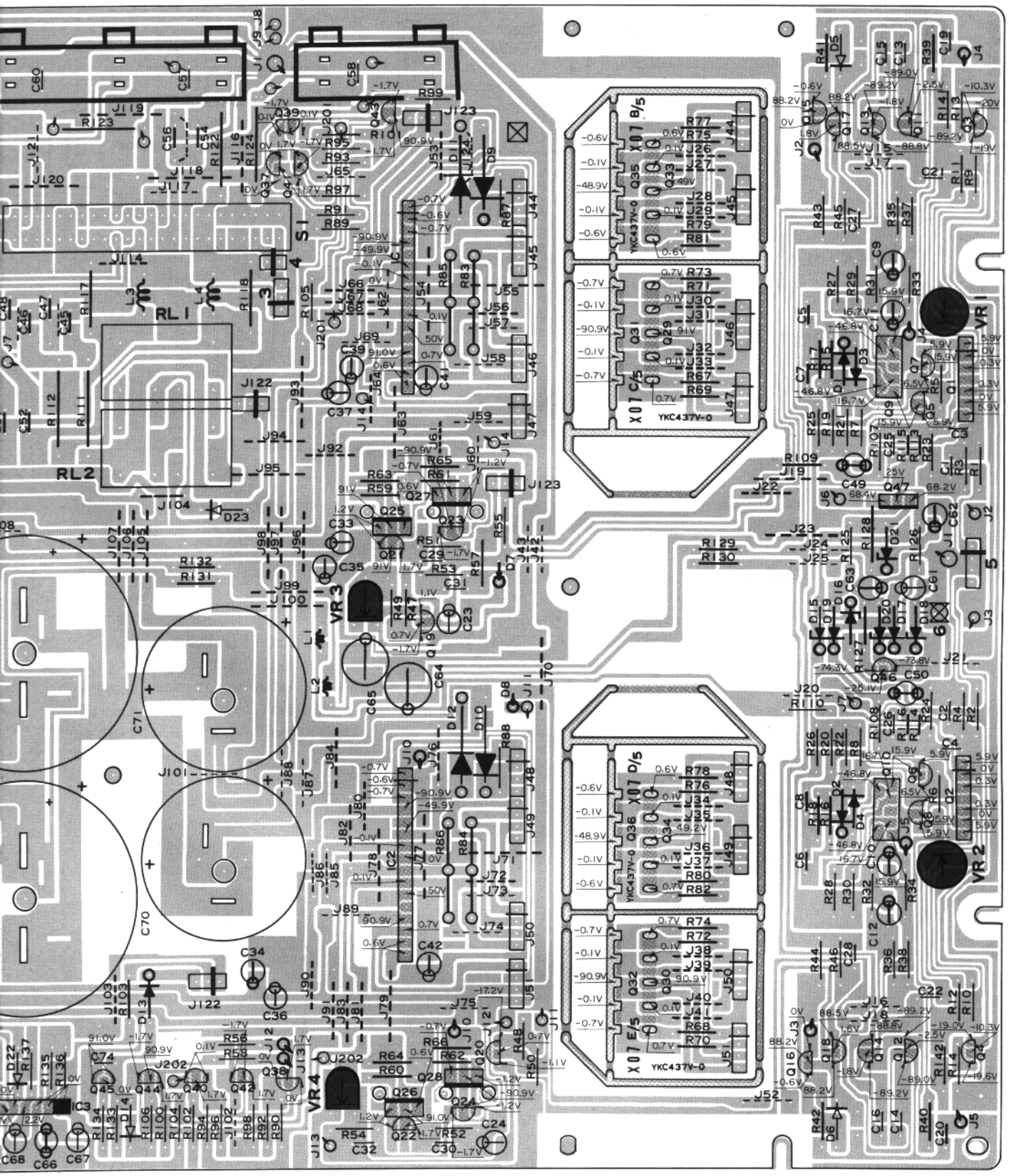


Refer to the schematic diagram for the values of resistors and capacitors.
The PC board drawing is viewing from the side easy to check.

BASIC M2

OARD

7-2030-11) Component side view



	(X07-2030)
IC1,2	TA2031
IC3	μPC1237H
Q1, 2	μPA68H(K,L)
Q3~8	2SC1845
Q9,10	μPA75V(F,E)
Q11~14	2SC2071
Q15,16	2SC2632(Q,R,S)
Q17,18	2SA939
Q19,20	2SC1841
Q21,22,43,44	2SC2071
Q23,24	2SA939
Q25,26	2SC2336A(Q,P)
Q27,28	2SA1006A(Q,P)
Q29,30,33,34	DAT1521N
Q31,32,35,36	DAT1521P
Q37,38	2SC2320
Q39~42	2SA999
Q45	2SA988
Q47	2SA957
Q46	2SC2590
D1~6,17	IS2076
D7,8	STV-2H
D9~12,27~30	RU4Z
D13,14,22,23	IS2076A
D15,16	RD24JB(B3)
D18	RD5.6JB(B1)
D19	E-102
D20	RD16JB(B2)
D21	RD22JB(B2)

MAIN AMP (X07-2030-11)

(X13-4290-10)(B/C)

(X13-4290-10)(A/3)

(X13-4290-10)(C/3)

INPUT L ch R ch

LEVEL

PHONES

METER RANGE

HOLD TIME

Q1 : 2SC2631 D1 : IS2076A D2~4 : IS2076

(X25-1820-12)

IC1 : AN6552 or RC4558P
IC2 : AN6870N
D1~4,17,18 : IS2076 or IS1555 or IS2473

Q1~4 : 2SC945(A)(Q,P) or 2SC1685(R,S) or 2SC2320(E,F)

FL LEVEL

0dB Adj.

-20dB Adj.

FL DRIVER

E TYPE

AC INLET

POWER S1

S1 POWER

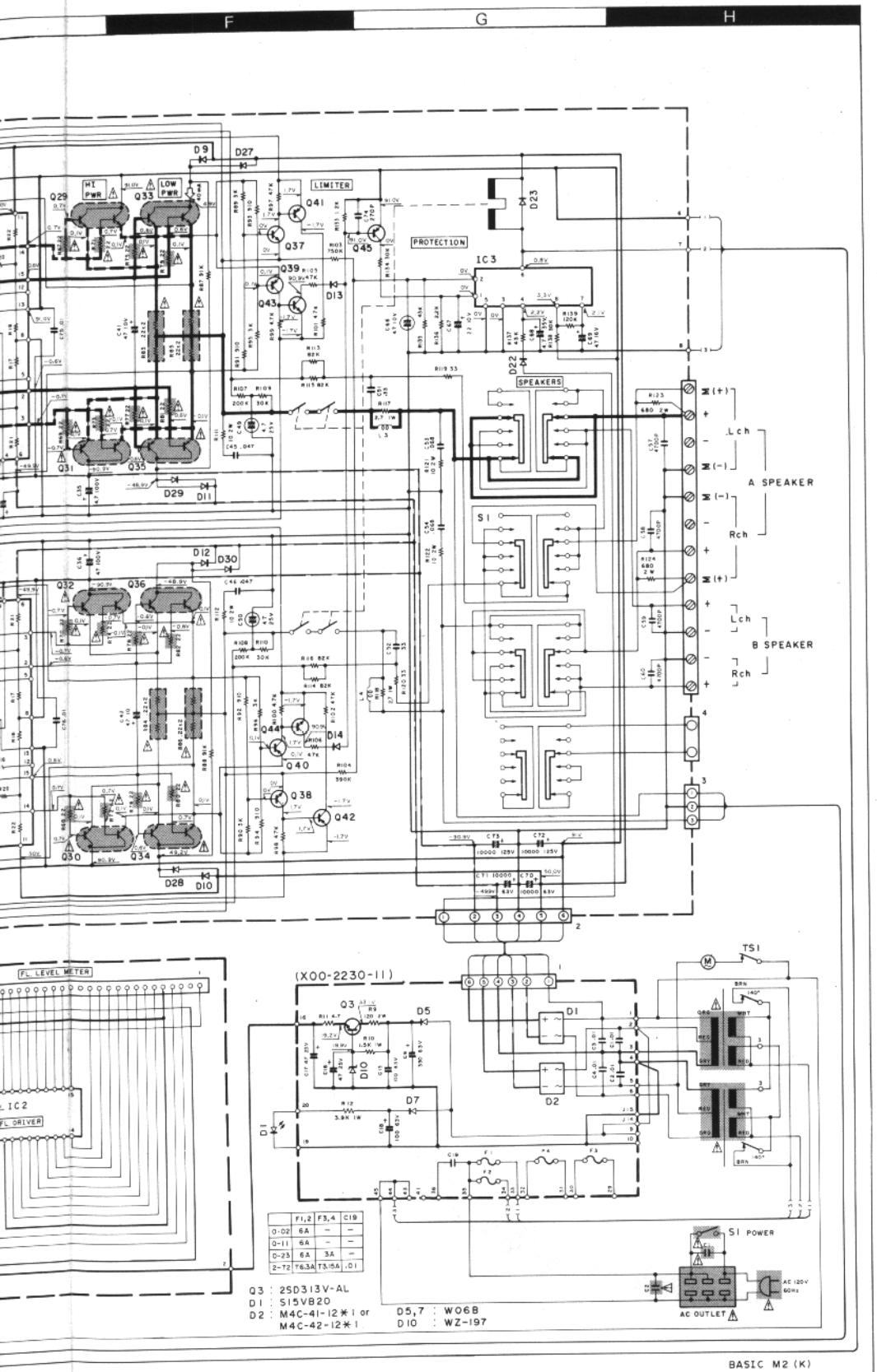
M TYPE

AC OUTLET AC INLET

2SA988 2SA999 2SA999 2SC1685 2SC1841 | 2SC1845 2SC2320 2SC2631 2SC2632 2SC945 | 2SA939 2SC2071 2SC2590 | 2SD313V-AL | 2SA957 2SA1006B 2SC2368B | UPA75V | UPA68H | RC4558P

WER AMPLIFIER

BASIC M2



BASIC M2 (K)

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

SPECIFICATION

Power output

220 watts* per channel minimum RMS, both channels driven, at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.004% total harmonic distortion.

Clipping Power	
at 8 ohms	242 W
at 4 ohms	324 W
Clipping Headroom	
at 8 ohms	0.2 dB
at 4 ohms	1.1 dB
Dynamic Power	
at 8 ohms	325 W
at 4 ohms	484 W
Dynamic Headroom	
at 8 ohms	1.5 dB
at 4 ohms	2.9 dB
Total Harmonic Distortion (20 Hz to 20,000 Hz)	
Input to SPEAKER output	0.004% at rated power into 8 ohms 0.004% at 1/2 rated power into 8 ohms 0.001% at rated power into 8 ohms at 1 kHz
Intermodulation Distortion (60 Hz:7 kHz = 4:1)	0.004% at rated power into 8 ohms
Damping Factor	More than 1,000 at 50 Hz, 8 ohms
Transient Response	
Rise Time	1.8μs
Slew Rate	±100 V/μs
Frequency Response	1 Hz to 200 kHz, +0 dB, −3 dB
Signal-to-Noise Ratio (IHF A Curve)	120 dB
Speaker Impedance	Accept 4 ohms to 16 ohms
Input Sensitivity/Impedance	
INPUT	1 V/47 kohms

General

Power Consumption	6.9 A (UL and CSA), 1,350 W (Rated power at 8 ohms)
A.C. Outlets	Switched 2, Unswitched 1
Dimensions	W 440 mm (17-5/16") H 158 mm (6-7/32") D 373 mm (14-11/16")
Net Weight	15.5 kg (34.1 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 doncerne 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.

- DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

RC4558P AN6870N UPC1237H AN6552 TA2031 DAT1521N DAT1521P