

**KENWOOD**  
HI/FI STEREO COMPONENTS

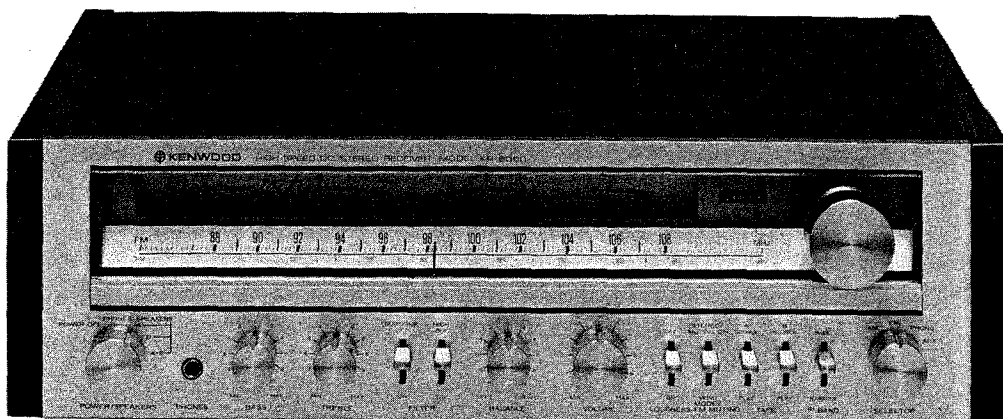
# SERVICE MANUAL

## KR-6050 (KR-6650)

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 DC STEREO RECEIVER**

# CONTENTS

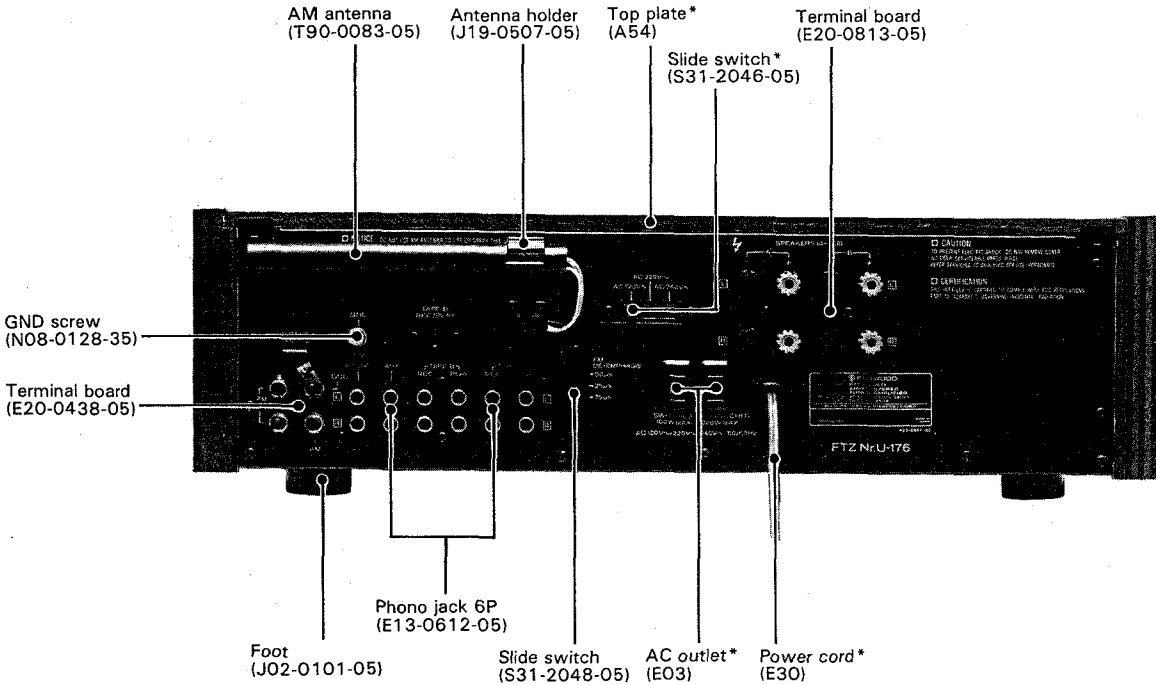
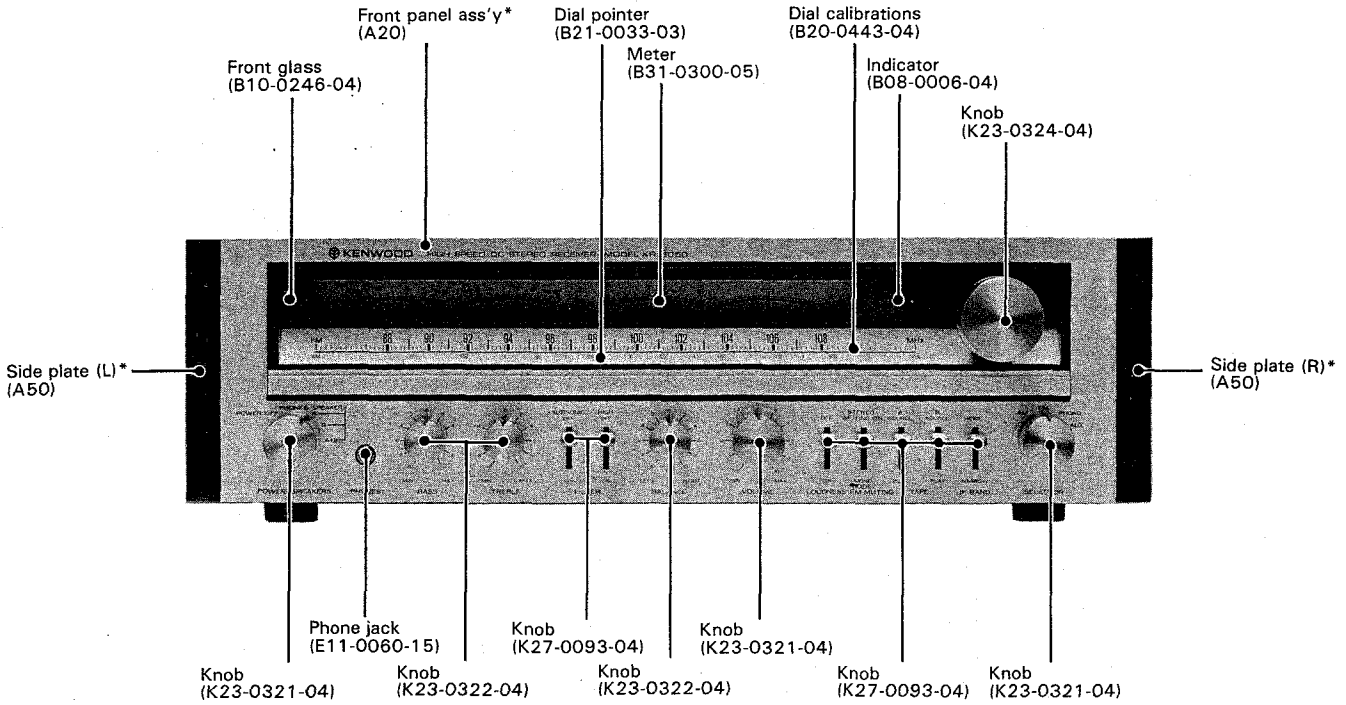
EXTERNAL VIEW.....	3
INTERNAL VIEW .....	4
DIAL CORD STRINGING.....	4
DISASSEMBLY FOR REPAIR.....	5
BLOCK & LEVEL DIAGRAM.....	6
EXPLODED VIEW.....	7
ADJUSTMENT/RÉGLAGES/ABGLEICH .....	8
PC BOARD .....	13
SCHEMATIC DIAGRAM.....	15
SPECIFICATIONS .....	15
PARTS LIST .....	16
SEMICONDUCTOR SUBSTITUTIONS.....	18

**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.

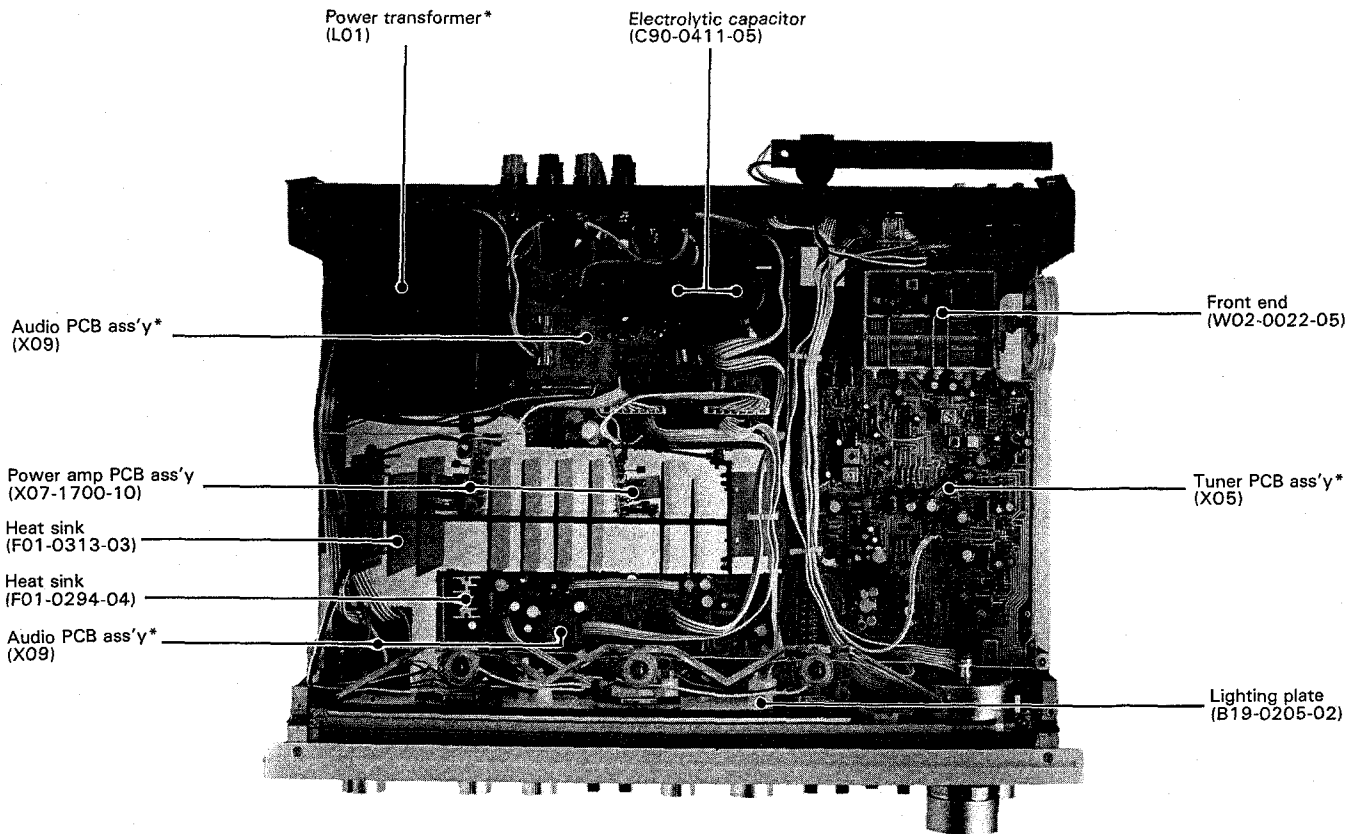
Region	Code
U.S.A. ....	K
Canada .....	P
PX .....	U
Australia .....	X
Europe & Scandinavia .....	E
England .....	T
Other Areas .....	M
Audio Club (KR-6650) .....	H

## EXTERNAL VIEW



\* Refer to Parts List.

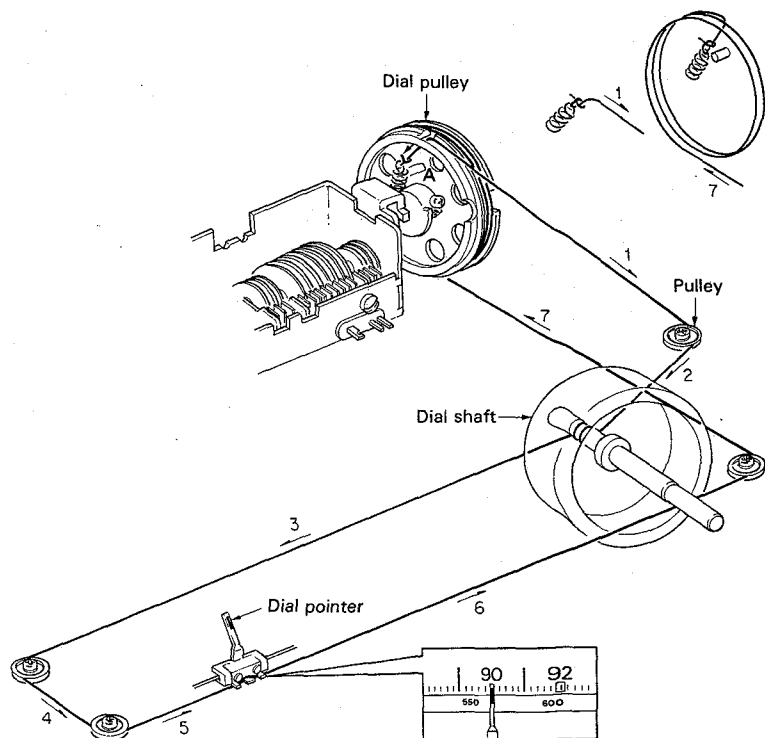
## INTERNAL VIEW/DIAL CORD STRINGING



\* Refer to Parts List.

### DIAL CORD STRINGING

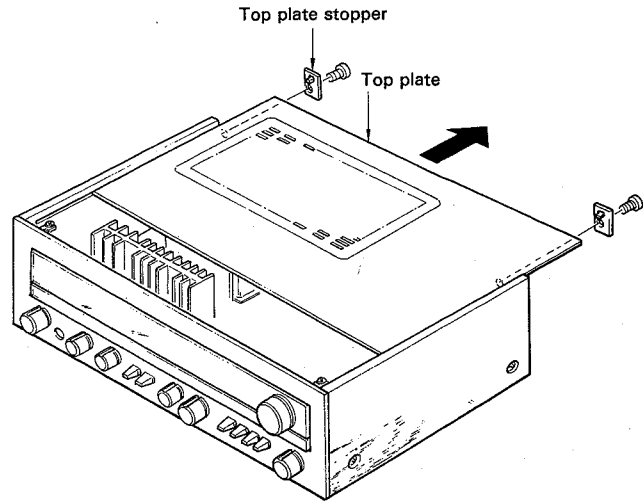
1. Set the dial pulley as illustrated.
2. Tie the dial cord to the dial spring.
3. Hook the dial spring on the boss A.
4. Dress the dial cord in the direction of "1" to "2".
5. Wind the dial cord two turns around the dial shaft starting from its lower side.
6. Dress the dial cord in the direction of "3" through "7".
7. Wind the dial cord two and a half turns around the dial pulley starting from its lower side.
8. Tie the end of the dial cord to the dial spring.
9. Remove the dial spring from the boss A.
10. Receive a 90 MHz signal, and then mount the dial pointer at the 90 MHz position of the dial calibrations.



## DISASSEMBLY FOR REPAIR

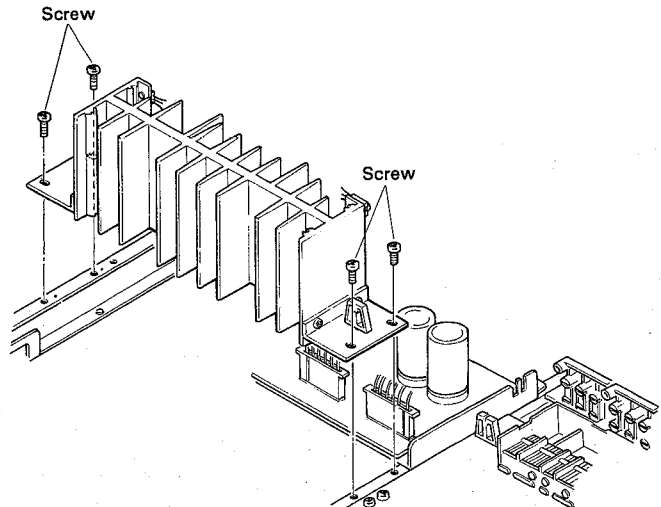
### 1. TOP PLATE

- (1) Remove the top plate stoppers.
- (2) Pull out the top plate in the direction of the arrow.



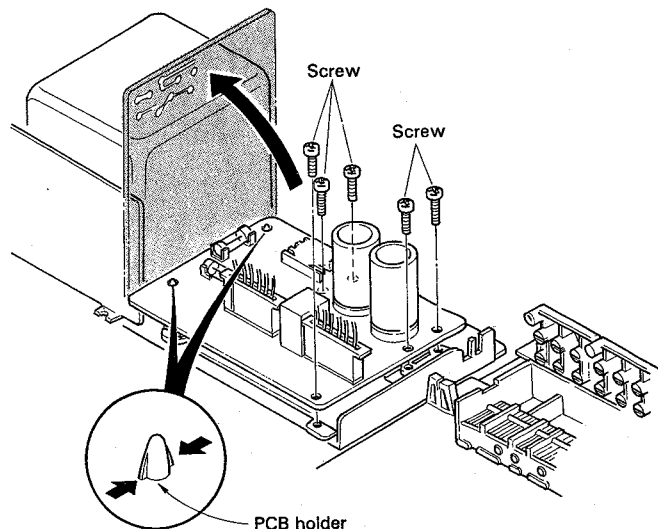
### 2. POWER AMP (X07-1700-10)

- (1) Remove the screws fixing the heat sink to the chassis.



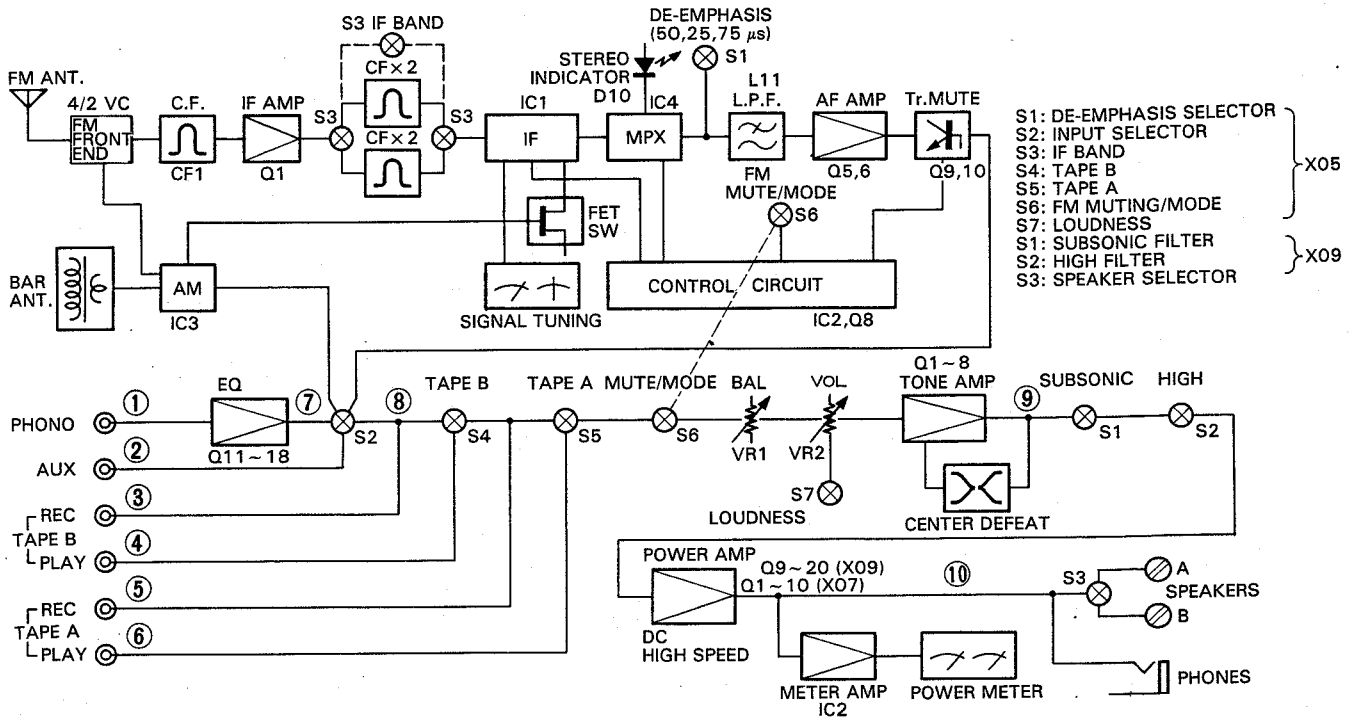
### 3. POWER SUPPLY SECTION OF AUDIO AMP

- (1) Remove the screws fixing the PC board to the chassis.
- (2) Push the PCB holder as illustrated.
- (3) Decline the PC board in the direction of the arrow.

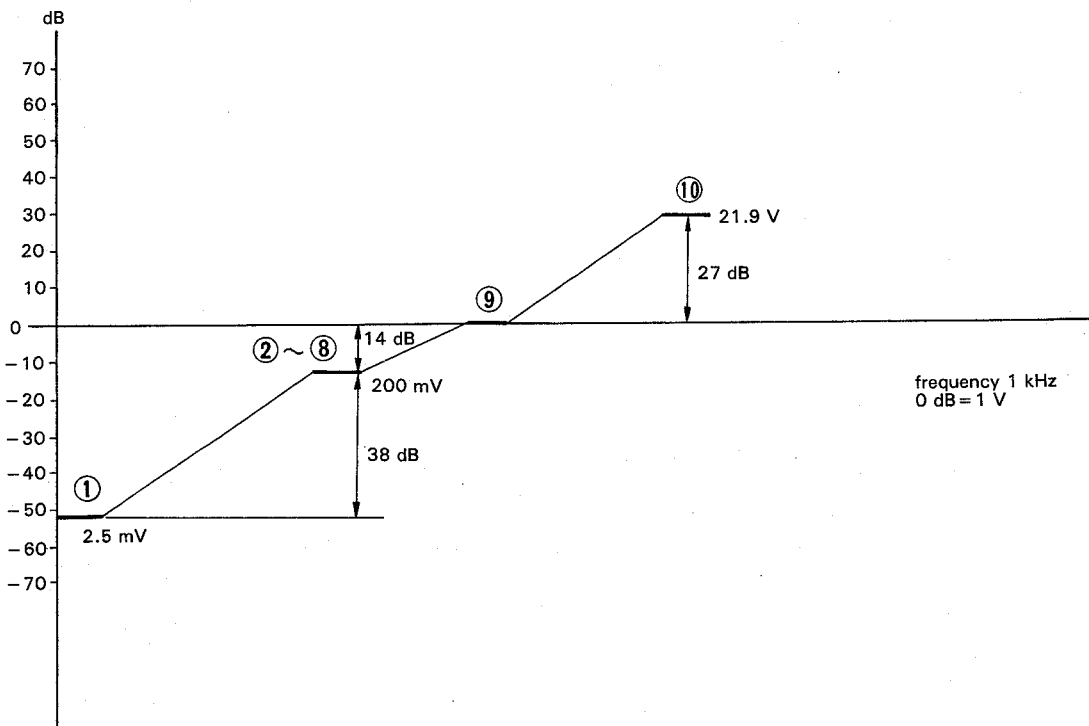


## BLOCK & LEVEL DIAGRAM

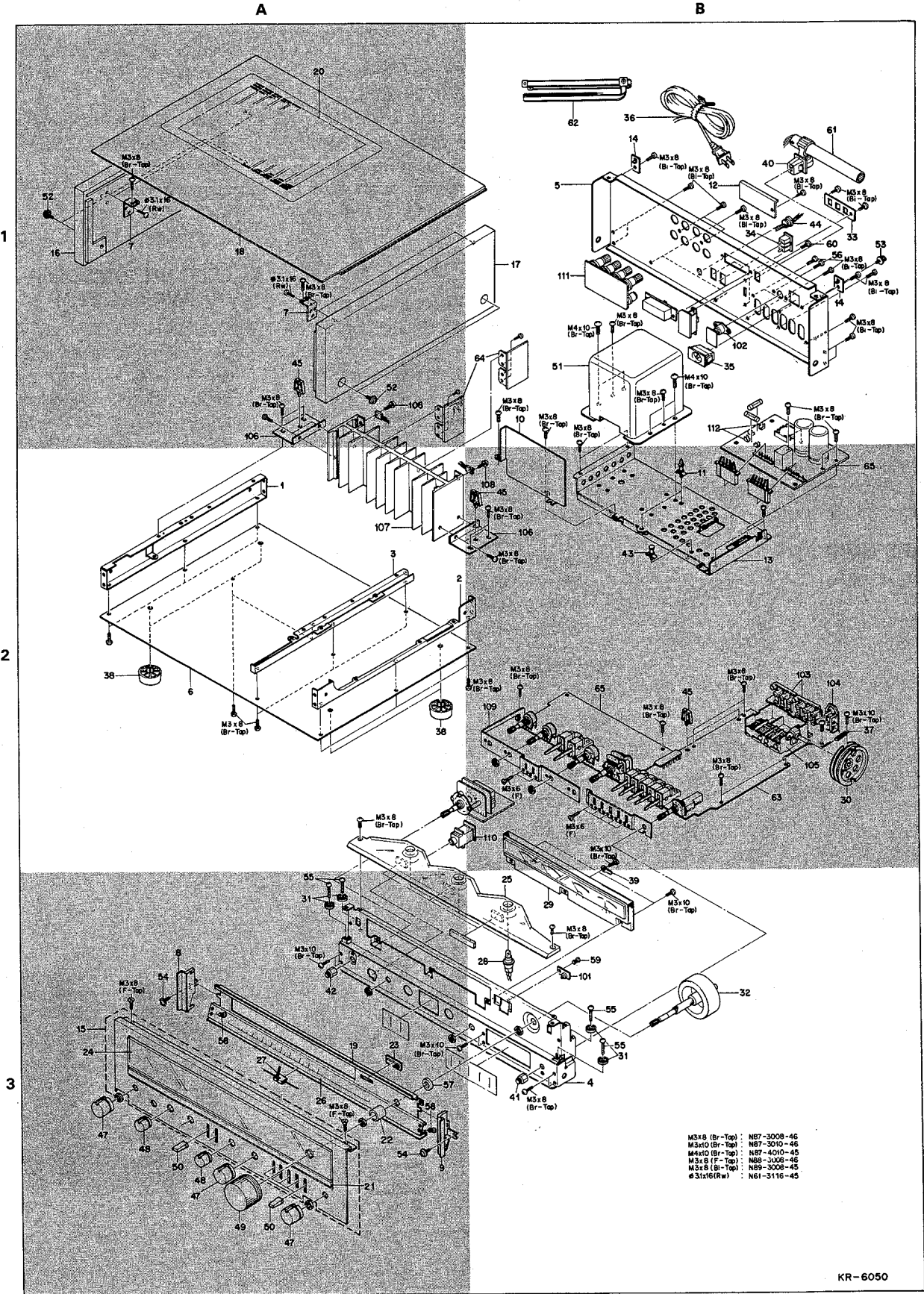
### BLOCK DIAGRAM



### LEVEL DIAGRAM



**EXPLODED VIEW**



KR-6050

## ADJUSTMENT/RÉGLAGES/ABGLEICH

### 1. OFFSET VOLTAGE

- (1) Set the SPEAKERS switch to A and the VOLUME to MIN.
- (2) Connect a DC voltmeter to the SPEAKERS A terminals.
- (3) Adjust VR5 (VR6) for a 0 V reading of the DC voltmeter.

### 2. POWER METER

- (1) Set the TAPE switch to A PLAY and the SPEAKERS switch to A.
- (2) Connect an AG to the TAPE A jack and a dummy load to the SPEAKERS A terminals.
- (3) Connect an AC voltmeter across the dummy load.
- (4) Set the AG to 1 kHz and for a 8.9 V reading of the AC voltmeter.
- (5) Adjust VR7 (VR8) for a 10 W reading of the left power meter (right power meter).

### 3. BIAS CURRENT

See page 17.

### 1. TENSION DE DÉCALAGE (OFFSET)

- (1) Régler SPEAKERS interrupteur au A et VOLUME au MIN.
- (2) Brancher le voltmètre de C.C. aux bornes de sortie + et -.
- (3) Régler le potentiomètre ajustable VR5 (VR6) de façon à ce que le voltmètre de C.C. indique 0 V.

### 2. VU MÈTRE

- (1) Régler TAPE interrupteur au A PLAY et SPEAKER interrupteur au A.
- (2) Relier un AG (générateur de signaux audio) sur les TAPE A et une fausse charge (résistance) sur les sortie de ampli-tuner (SPEAKER).
- (3) Relier un voltmètre de C.A. aux deux extrémités de la résistance (ou aux borne de sortie + et -).
- (4) Régler le potentiomètre ajustable VR7 (VR8) en sorte que le VU mètre indique 10 W lorsque le voltmètre indique 8,9 V.

### 3. COURANT DE DEPLACEMENT

Voir page 17.

### 1. OFFSET-SPANNUNG

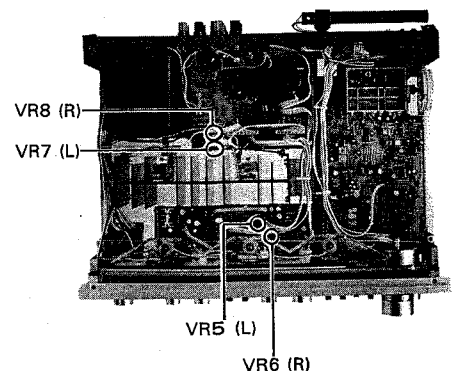
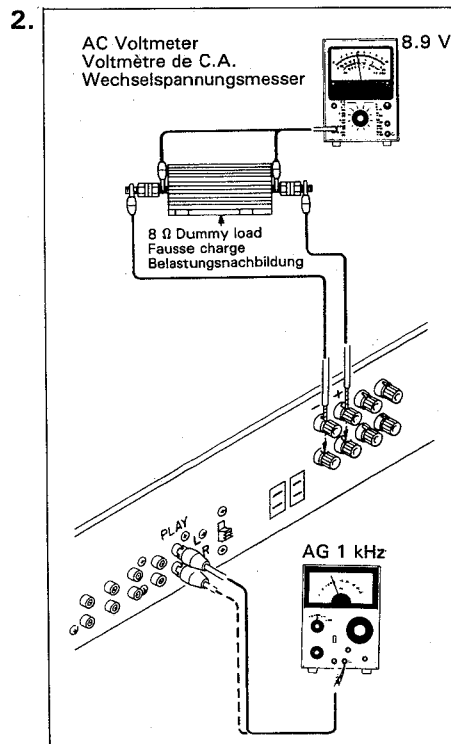
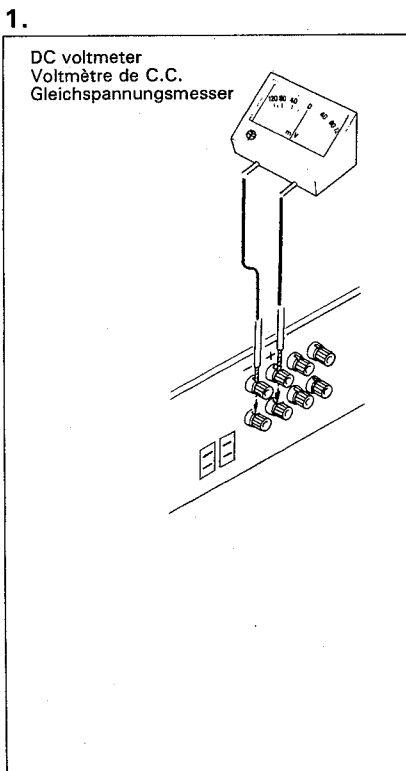
- (1) Den Schalter SPEAKERS auf A und den VOLUME auf MIN einstellen.
- (2) Einen Gleichspannungsmesser an die Klemmen SPEAKERS A anschließen.
- (3) Den VR5 (VR6) so regulieren, daß die Gleichspannungsmesser-Ablesung 0 V ist.

### 2. LEISTUNGSMESSER (POWER METER)

- (1) Den Schalter TAPE auf A PLAY und den Schalter SPEAKERS auf A einstellen.
- (2) Einen AG (NF-Signalgenerator) an die Buchse TAPE A und eine Belastungsnachbildung an die klemmen SPEAKERS A anschließen.
- (3) Einen Wechselspannungsmesser über die Belastungsnachbildung anschließen.
- (4) Den AG auf 1 kHz einstellen.
- (5) Die Lautstärkereger (VOLUME) und/oder den AG-Ausgang so einstellen, daß die Wechselspannungsmesser-Ablesung 8,9 V ist.
- (6) Den VR7 (VR8) so regulieren, daß die linke Leistungsmesser-Ablesung (rechte Leistungsmesser-Ablesung) 10 W ist.

### 3. LEERLAUFSTORM

Siehe seite 17.



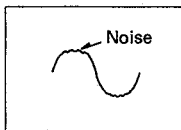


## ADJUSTMENT

NO.	ALIGNMENT	TEST EQUIPMENTS		RECEIVER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
<b>FM</b>							
1	DISCRIMINATOR (1)	Ⓐ	95 MHz 1 kHz, $\pm 75$ kHz Dev	95 MHz WIDE	Ⓑ	—	* 1
2	DISCRIMINATOR (2)	ditto	95 MHz 1 kHz, $\pm 75$ kHz Dev 60dB (Receiver input)	ditto	T meter	L3	T meter pointer to be center.
3	DISCRIMINATOR (3)	ditto	ditto	ditto	Ⓑ	L4	Minimum distortion
Repeat alignments "1 ~ 3" several times.							
4	VCO	Ⓐ	95 MHz 0 Dev 60dB (Receiver input)	95 MHz WIDE	Frequency counter to the crosspoint of R54 and VR1	VR1	76 kHz $\pm 200$ Hz
5	SEPARATION	Ⓒ	95 MHz * 2 1 kHz, $\pm 68.25$ kHz Dev SELECTOR: L or R 60dB (Receiver input)	ditto	Ⓑ	VR3	* 3
6	IFT	ditto	95 MHz 1 kHz, $\pm 68.25$ kHz Dev SELECTOR: L + R 60dB (Receiver input)	ditto	ditto	T1 (W02-0022-05)	Minimum distortion
7	PILOT CANCEL	ditto	95 MHz 60 dB Pilot signal	ditto	ditto	VR2	Minimum output
<b>AM</b>							
1	IFT	Ⓓ	1,000 kHz 400 Hz, 30% Mod	1,000 kHz	Ⓑ	L7	Maximum deflection
2	TRACKING (1)	ditto	600 kHz 400 Hz, 30% Mod	600 kHz	ditto	L6 Bar antenna	ditto
3	TRACKING (2)	ditto	1,400 kHz 400 Hz, 30% Mod	1,400 kHz	ditto	CT1, CT2	ditto
4	9 kHz FILTER	ditto	1,000 kHz 9 kHz, 30% Mod	1,000 kHz	ditto	L10	Minimum deflection

### \* 1

Adjust the tuning knob so that the same amount of noise is observed at the top and bottom of the output waveform with a weak signal.



### \* 2

Set deviation to  $\pm 68.25$  kHz with selector in L + R position.  
Set deviation of pilot signal to 6.75 kHz (9%).

### \* 3 Minimum output

A compromise adjustment may be required if left-to-right and right-to-left separations are unequal.

### \* 4 FM front end

The FM front end section is completely adjusted in the factory and further adjustment is not necessary. When the transistor and/or FET are replaced, perform the following adjustment.

- (1) Set FM-SG to 108 MHz, 1 kHz Mod,  $\pm 75$  kHz Dev and connect it to the antenna terminal of the receiver.
- (2) Set the dial pointer at 108 MHz.
- (3) Adjust TCO so that T meter gives a mid-scale reading.
- (4) Adjust TCA, TCR1 and TCR2 so that S meter deflects maximum.

When the FM front end section cannot be repaired by replacing semiconductors and taking steps in "(1) ~ (4)", replace the front end PCB ass'y (W02-0022-05) and do the following.

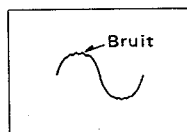
- (1) Set FM-SG to 90 MHz, 1 kHz Mod,  $\pm 75$  kHz, 60 dB and connect it to the antenna terminal of the receiver.
- (2) Receive the FM-SG signal.
- (3) Fix the dial pointer at 90 MHz.

## RÉGLAGES

N°	ALIGNEMENT	APPAREILLAGE		RÉGLAGE DU AMPLI-TUNER	INDICATEUR DE SORTIE	POINTS DE RÉGLAGES	REMARQUES
		RACCORDEMENT	RÉGLAGE				
<b>SECTION MF</b>							
1	DISCRIMINATEUR (1)	Ⓐ	95 MHz 1 kHz (MOD) ± 75 kHz (DÉV)	95 MHz WIDE	Ⓑ	—	* 1
2	DISCRIMINATEUR (2)	idem	95 MHz 1 kHz (MOD) ± 75 kHz (DÉV) 60dB (Niveau d'entrée du ampli-tuner)	idem	Indicateur à zéro central	L3	Aiguille de l'indicateur à zéro central en position centrale.
3	DISCRIMINATEUR (3)	idem	idem	idem	Ⓑ	L4	Distorsion minimale
Répéter les points "1 ~ 3" plusieurs fois.							
4	OSCILLATEUR 76kHz	Ⓐ	95 MHz 0 (DÉV) 60dB	95 MHz WIDE	Relier le voltmètre CC au plot R54 et VR1	VR1	76kHz ± 200Hz
5	SÉPARATION	Ⓒ	95 MHz * 2 1 kHz (MOD) ± 68,25 kHz (DÉV) L ou R (SELECTION) 60dB	idem		VR3	* 3
6	TFI	idem	95 MHz 1 kHz (MOD) ± 68,25 kHz (DÉV) L + R (SELECTION) 60dB	idem	idem	T1 (W02-0022-05)	Distorsion minimale
7	CIRCUIT SUPPRESSION DE SIGNAL PILOTE	idem	95 MHz 60dB Signal pilote	idem	idem	VR2	Déviaton maximale
<b>SECTION MA</b>							
1	TFI	Ⓓ	1.000kHz 400Hz, 30% (MOD)	1.000kHz	Ⓑ	L7	Déviaton maximale
2	ALIGNEMENT (1)	idem	600kHz 400Hz, 30% (MOD)	600kHz	idem	L6 Antenne ferrite MA	idem
3	ALIGNEMENT (2)	idem	1.400kHz 400Hz, 30% (MOD)	1.400kHz	idem	CT1, CT2	idem
4	FILTRE 9kHz	idem	1.000kHz 9kHz, 30% (MOD)	1.000kHz	idem	L10	Déviaton minimale

**\* 1**

Ajuster le bouton d'accord de façon que la même quantité du bruit puisse être observé au sommet et en bas de la forme d'onde de sortie sous des conditions d'alimentation de signal faible.


**\* 2**

Régler la déviation à ± 68,25 kHz avec le sélecteur en position L + R (gauche + droite). Régler la déviation du signal pilote à 6.75 kHz (9%).

**\* 3 Sortie minimale**

Si la sortie la droite de diaphonie et la gauche ne sont pas même régler le potentiomètre ajustable pour que la tension de sortie est même.

**\* 4 Partie frontale FM**

La partie frontale FM a été parfaitement réglée en usine et aucun réglage supplémentaire n'est requis.

Si l'on remplace le transistor et/ou FET, il convient d'effectuer le réglage suivant:

- (1) Régler FM-SG sur 108 MHz, 1 kHz Mod, ± 75 kHz Dev et connecter à la borne d'antenne du ampli-tuner.
- (2) Régler l'aiguille du cadran à 108 MHz.
- (3) Ajuster TCO de façon que l'indicateur à zéro central donne une lecture à mi-échelle.
- (4) Ajuster TCA, TCR1 et TCR2 de façon que l'indicateur de champ dévie au maximum.

Si la partie frontale FM ne peut pas être réparée en remplaçant les semi-conducteurs et en procédant suivant les indications dans (1) ~ (4), remplacer l'assemblage PCB de la partie frontale (W02-0022-05) et effectuer les opérations suivantes:

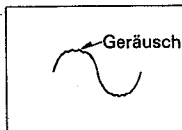
- (1) Régler FM-SG à 90 MHz, 1 kHz Mod, ± 75 kHz, 60 dB et le connecter à la borne d'antenne du récepteur.
- (2) Recevoir le signal FM-SG.
- (3) Fixer l'aiguille du cadran à 90 MHz.

## ABGLEICH

NR.	ABGLEICH	PRÜFEINRICHTUNG		STEUERGERÄT EINSTELLUNG	AUSGANGS- ANZEIGE	EINSTELL- PUNKT	BEMER- KUNGEN
		ANSCHLÜSSE	EINSTELLUNG				
<b>UKW-EMPFANGSABTEILUNG</b>							
1	DISKRIMI- NATOR (1)	Ⓐ	95 MHz 1 kHz, ± 75 kHz Hub	95 MHz WIDE	Ⓑ	—	* 1
2	DISKRIMI- NATOR (2)	dito	95 MHz 1 kHz, ± 75 kHz Hub 60 dB (Steuergerät- Eingangspegel)	dito	Kanalmitten- Anzeiger	L3	Den zeiger des Kanalmitten Anzeiger mittig ein stellen.
3	DISKRIMI- NATOR (3)	dito	dito	dito	Ⓑ	L4	Minimaler klirrfaktor
Abstimmungen "1 bis 3" mehrere Male wiederholen.							
4	SPA- NNUNGS- GEREGELTER OSZILLATOR	Ⓐ	95 MHz 0 Hub 60 dB	95 MHz WIDE	Frequenzzähler zum Kreuzungs- Punkt von R54 und VR1	VR1	76 kHz ± 200 Hz
5	STEREO KANAL TRENNUNG	Ⓒ	95 MHz * 2 1 kHz, ± 68,25 kHz Hub Wähler: L oder R 60 dB	dito	Ⓑ	VR3	* 3
6	ZF-T	dito	95 MHz 1 kHz, ± 68,25 kHz Hub Wähler: L + R 60 dB	dito	dito	T1 (W02-0022-05)	Minimaler Klirrfaktor
7	PILOTTON- UNTER- DRÜCKUNG	dito	95 MHz 60 dB Pilotton	dito	dito	VR2	Minimaler Ausschlag
<b>MW-EMPFANGSABTEILUNG</b>							
1	ZF-T	Ⓓ	1.000 kHz 400 Hz, 30% Mod	1.000 kHz	Ⓑ	L7	Maximaler Ausschlag
2	EMPFANGS- BEREICH (1)	dito	600 kHz 400 Hz, 30% Mod	600 kHz	dito	L6 MW-Ferritantenna	dito
3	EMPFANGS- BEREICH (2)	dito	1.400 kHz 400 Hz, 30% Mod	1.400 kHz	dito	CT1, CT2	dito
4	9 kHz FILTER	dito	1.000 kHz 9 kHz, 30% Modulation	1.000 kHz	dito	L10	Minimaler Ausschlag

### \* 1

Den Abstimmknopf so einstellen, daß an der oberen und unteren Grenze der Ausgangswellenform bei schwachem Signal dasselbe Geräusch auftritt.



### \* 2

Hub mit dem Wahlschalter auf L+R auf 68,25 kHz einstellen.

Hub des Kontrollsignals auf 6,75 kHz (9%) einstellen.

### \* 3 Minimaler Ausschlag

Wenn dem Übersprechanteil des linken Kanals in den rechten Kanal und dem Übersprechanteil des rechten Kanals in den linken Kanal ungleich sind, eine kompromißabgleichung wird gefordert.

### \* 4 UKW-Frontende

Das UKW-Frontende wird bereits im Werk vollständig eingestellt. Weitere Einstellung ist daher nicht nötig.

Beim Auswechseln des Transistors und/oder des FETs die Einstellung wie folgt vornehmen.

- (1) DEN UKW-Signalgenerator auf 108 MHz, 1 kHz Modulation und ± 75 kHz Hub einstellen und mit der Antennenklemme des steuergeräts verbinden.
- (2) Den Skalenzeiger auf 108 MHz stellen.
- (3) TCO so einstellen, daß der Kanalmitten-anzeiger in der Mitte ausschlägt.
- (4) TCA, TCR1 und TCR2 so einstellen, daß das Feldstärkeinstrument das Maximum anzeigt.

Wenn das UKW-Frontende durch Auswechseln der Halbleiter und/oder durch in Abschnitt "1 ~ 4" genannten Schritte nicht repariert werden kann, ist die Leiterplatte (W02-0022-05) des Fronterides auszuschleichen und folgende Einstellung vorzunehmen:

- (1) Den UKW-Signalgenerator auf 90 MHz, 1 kHz Modulation ± 75 kHz Hub, und 60 dB einstellen und mit der Antennenklemme des Steuergeräts verbinden.
- (2) Den Steuergeräts so einstellen, daß das Meßsendersignal empfangen wird, während der Skalenzeiger auf 90 MHz zeigt.

## ADJUSTMENT / RÉGLAGES / ABGLEICH

### TEST INSTRUMENTS

- Oscilloscope .....
- AM signal generator .....
- FM signal generator .....
- Audio generator .....
- AC voltmeter .....
- FM multiplex generator .....
- Frequency counter .....
- DC voltmeter .....
- Distortion meter .....
- Dummy antenna .....

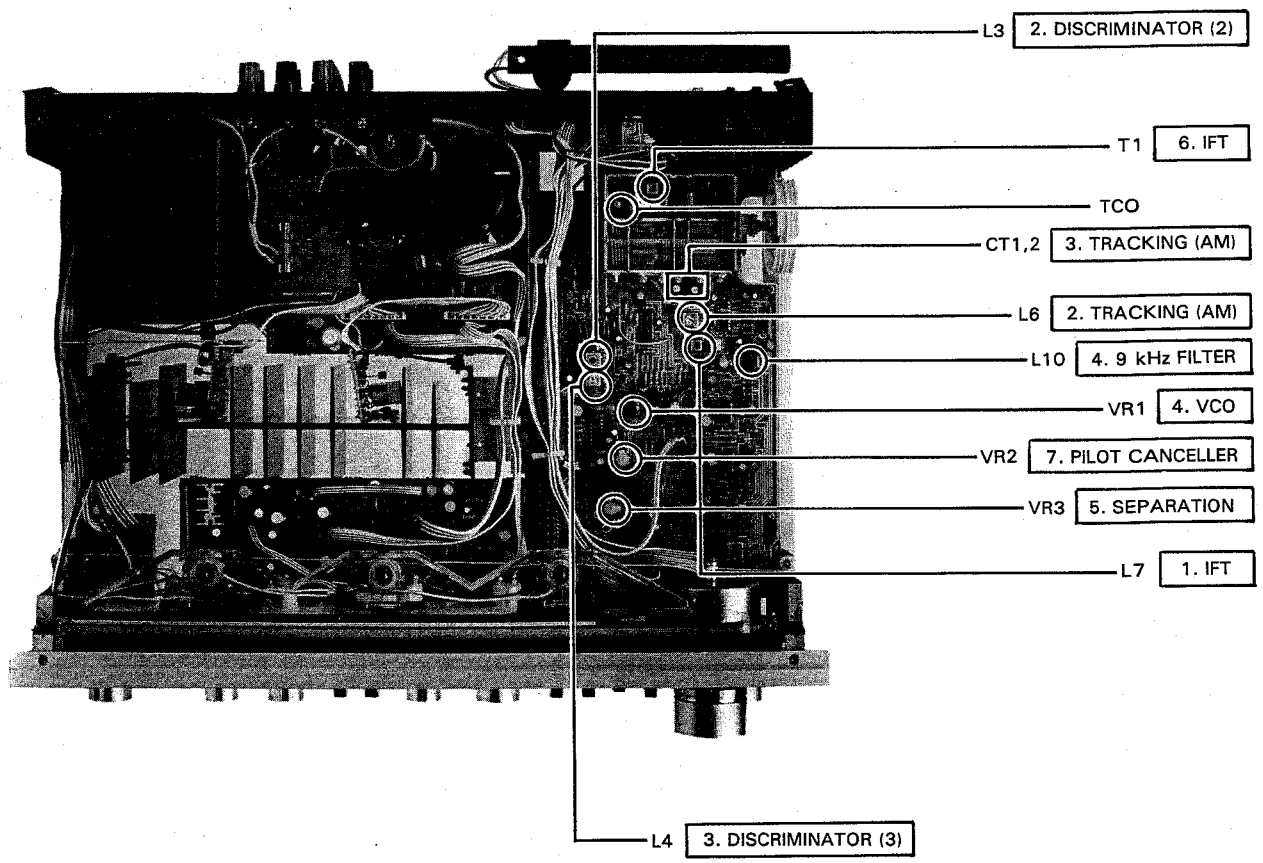
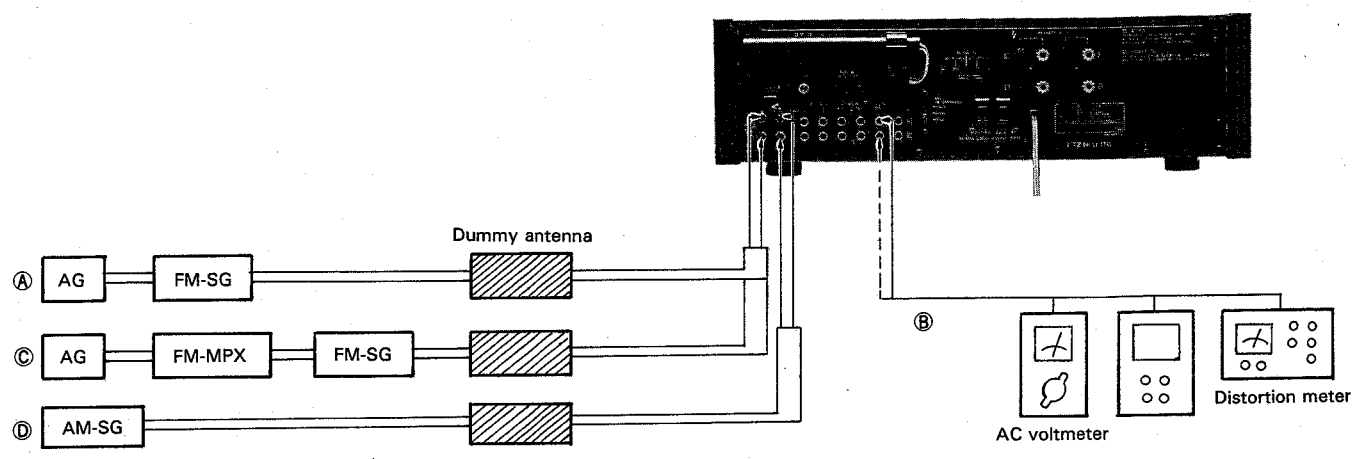
### APPAREILLAGE

- Oscilloscope .....
- Générateur MA .....
- Générateur MF .....
- Générateur audio fréquences .....
- Voltmètre CA .....
- Générateur multiplex stéréo .....
- Fréquencecètre .....
- Voltmètre CC .....
- Distorsiomètre .....
- Antenne fictive .....

### PRÜFINSTRUMENTE

- Oszilloskop .....
- MW-Signalgenerator .....
- UKW-Signalgenerator .....
- NF-Signalgenerator .....
- Wechselspannungsmesser .....
- UKW-Multiplexgenerator .....
- Frequenzzähler .....
- Gleichspannungsmesser .....
- Klirrfaktormesser .....
- Antennennachbildung .....

- OSC
- AM-SG
- FM-SG
- AG
- FM-MPX



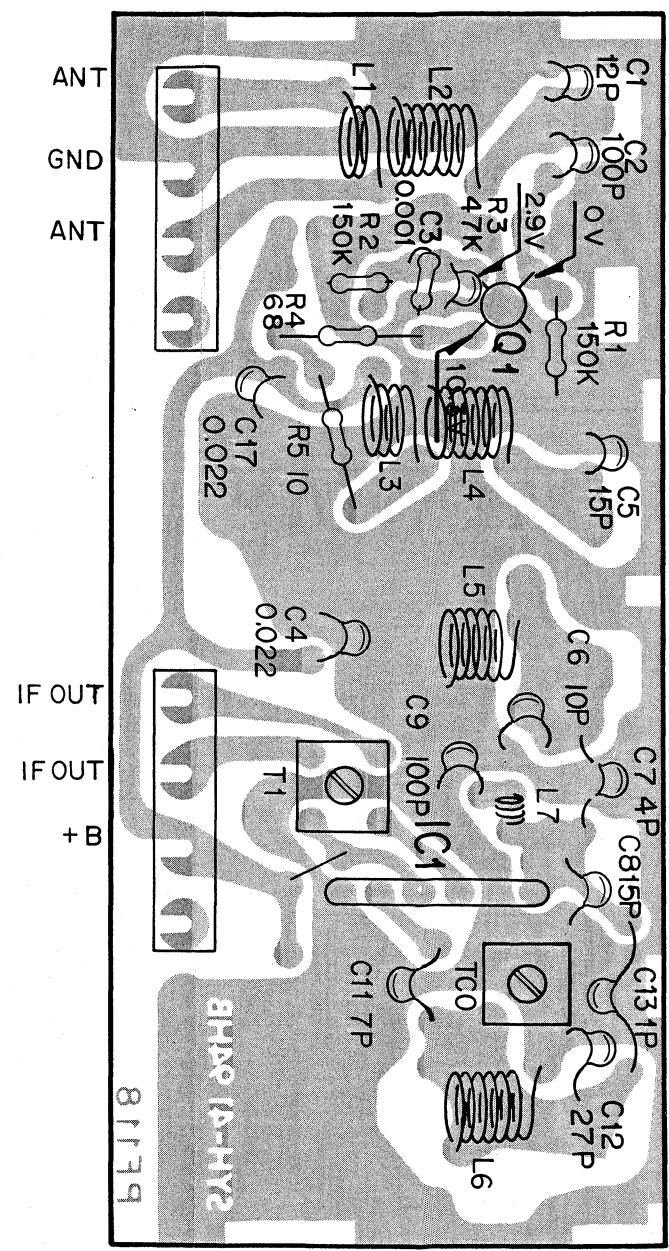
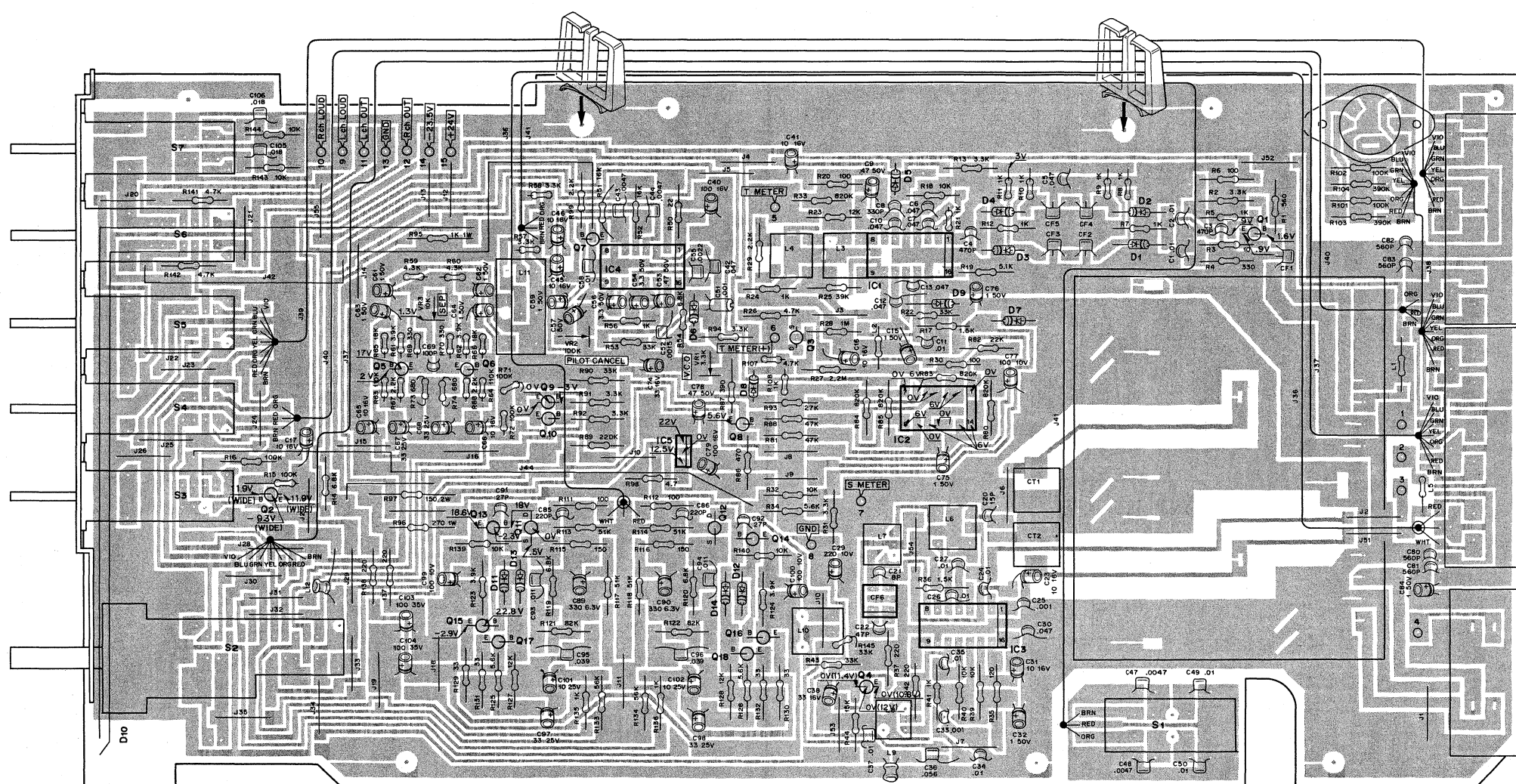
**PC BOARD**

**PC BOARD**

**TUNER (X-5-1650-10) Component Side**

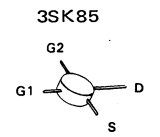
**FRONT END (W02-0022-05)**

**Component Side**



Q1:2SC1923(R,O), Q2:2SA733(A) or 2SA564A, Q3:2SK163(N) or 2SK136(S), Q4,7:2SC945(Q,P,K) or 2SC828A, Q5,6:2SC1845(F,E), Q8:2SA992(F,E), Q9,10:2SD655(E,F), Q11,12:2SK163(L,M) or 2SK136(Q,R), Q13,14,17,18:2SA1023(R,Q) or 2SB725, Q15,16:2SC2378(R,Q) or 2SD767, D1,2:1N60, D3,4:1S1555, D5,6,8,9,11~14:1S2076 or 1S1555, D7:YZ-040B or WZ-040, D10:GD-4-207RD, IC1:HA11225, IC2:TC4069UBP, MC14069UBCP, IC3:HA1197 or LA1240, IC4:HA11223W, IC5:μPC78L12

- |         |         |          |           |          |
|---------|---------|----------|-----------|----------|
| 2SA564A | 2SC945  | HA11223W | TC4069UBP | μPC78L12 |
| 2SA733  | 2SC1845 | HA11225  |           |          |
| 2SA992  | 2SC2378 | HA1197   |           |          |
| 2SA1023 | 2SD655  |          |           |          |
| 2SB725  | 2SD767  |          |           |          |
| 2SC828A |         |          |           |          |
- 2SK136  
2SK163

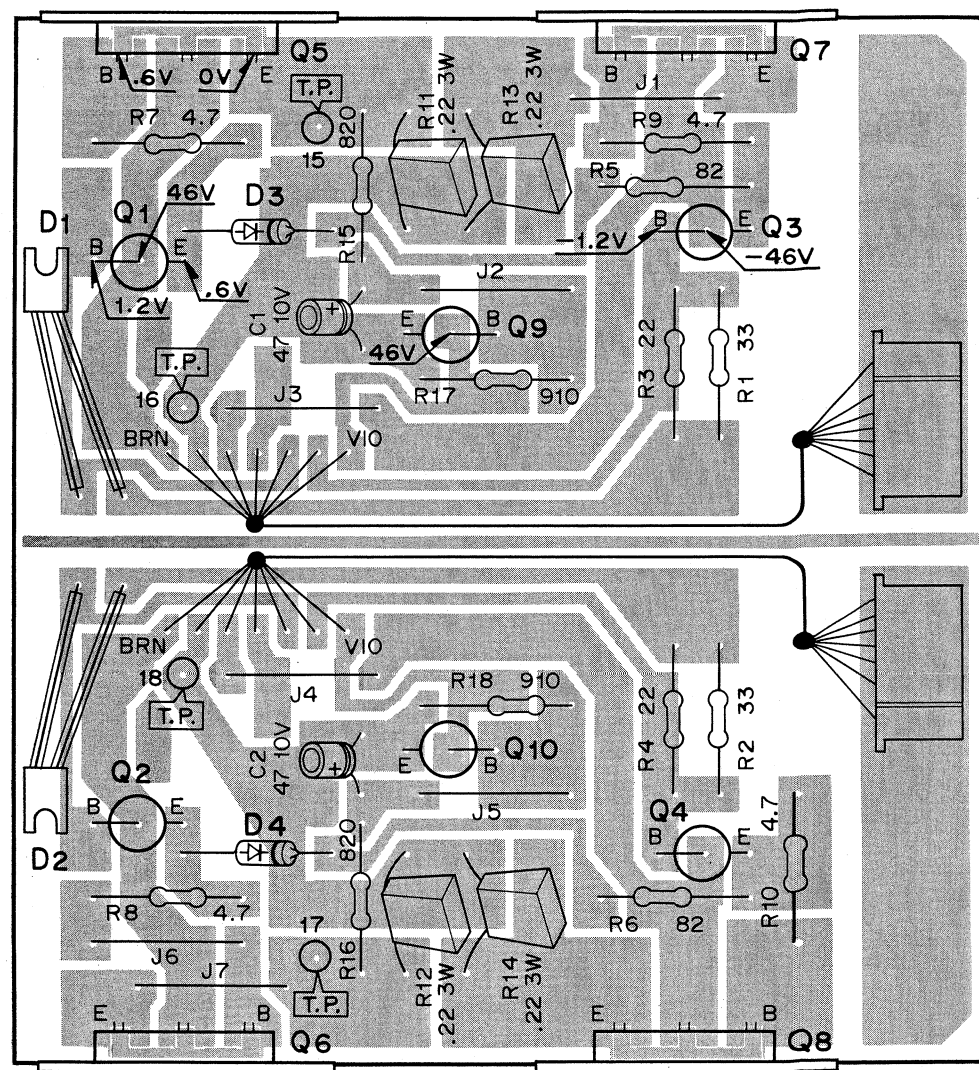
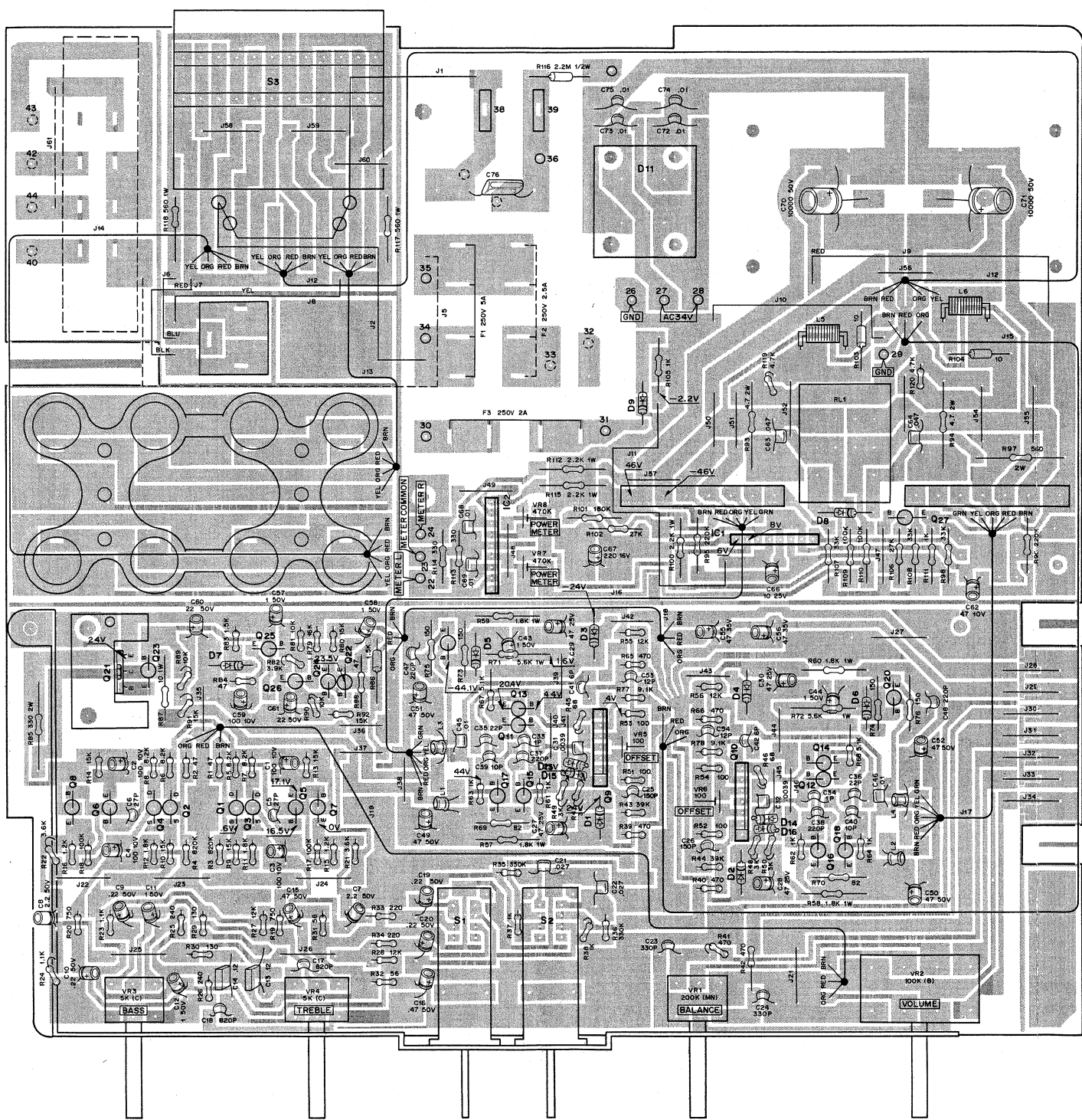


PC BOARD

PC BOARD

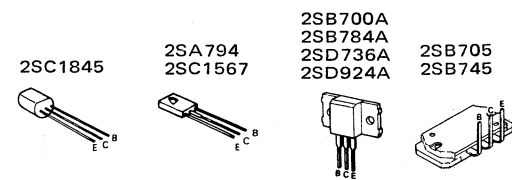
AUDIO (X09-1350-10) Component Side

POWER AMP (X07-1700-10) Component Side



Q1,2:2SC1567(Q,R,S), Q3,4:2SA794(Q,R,S), Q5,6:2SD736A, 2SD924A or 2SD745, Q7,8:2SB700A, 2SB784A or 2SB705, Q9,10:2SC1845 (F,E,U), D1,2:STV4H(G), D3,4:1S2076 or 1S1555

- |        |                               |        |                   |
|--------|-------------------------------|--------|-------------------|
| Q1~4   | :2SK163(L,M)                  | D1~4   | :EOA01-24         |
| Q5,6   | :2SA992(F,E) or 2SA872        | D5,6,9 | :1S2076 or 1S1555 |
| Q7,8   | :2SC1845(F,E,U) or 2SC1775    | D7     | :EOA01-06(S)      |
| Q9,10  | :2SK150A(Y,GR) or $\mu$ PA68H | D8     | :W06B             |
| Q11~14 | :2SC1775                      | D11    | :M4C-41-121       |
| Q15~18 | :2SA915(L,K) or 2SA912(R,S)   | D13~16 | :1N60             |
| Q19,20 | :2SC1940(L,K) or 2SC1885(R,S) | IC1    | :HA12002          |
| Q21    | :2SD762 or 2SD330(E)          | IC2    | :TA7318P          |
| Q22    | :2SC2003(L,M)                 |        |                   |
| Q23,25 | :2SC945(R,Q)                  |        |                   |
| Q24,26 | :2SA733(A)(R,Q)               |        |                   |
| Q27    | :2SA1023(Q,P)                 |        |                   |



- 2SA733
- 2SA872
- 2SA912
- 2SA992
- 2SA1023
- 2SC945
- 2SC1775
- 2SC1845
- 2SC1885
- 2SC2003

2SD330  
2SD762

2SA915

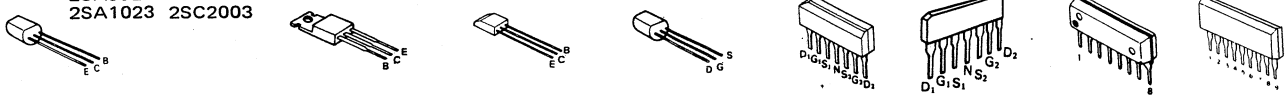
2SK163

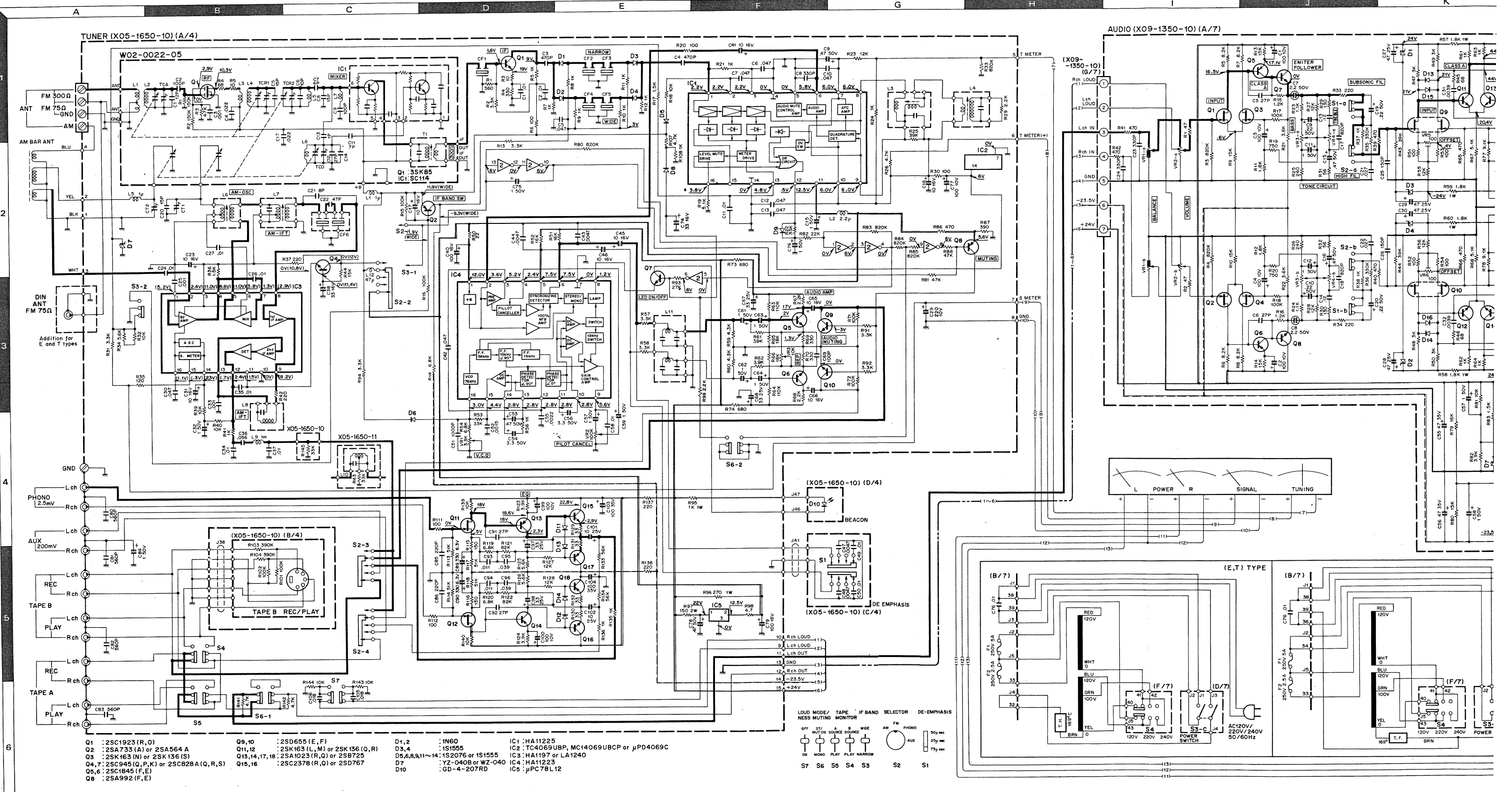
2SK150

$\mu$ PA68H

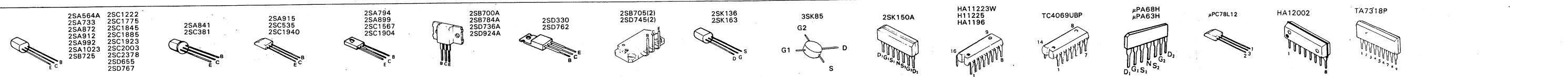
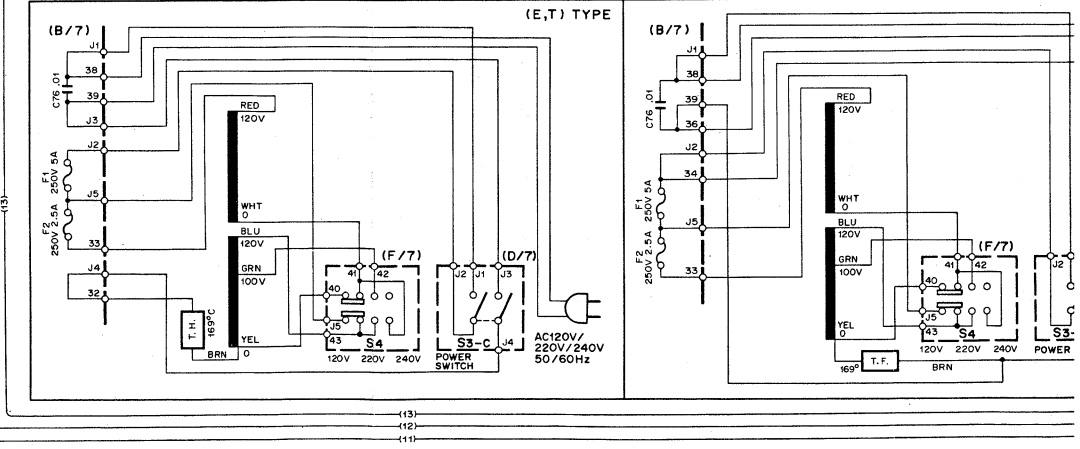
HA12002

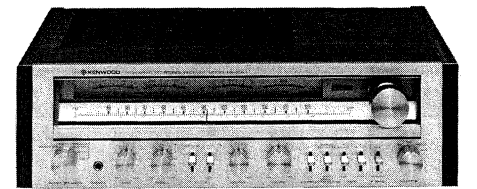
TA7318P





- Q1 : 2SC1923 (R, O)
- Q2 : 2SA733 (A) or 2SA564 A
- Q3 : 2SK163 (N) or 2SK136 (S)
- Q4, 7 : 2SC945 (Q, P, K) or 2SC828A (Q, R, S)
- Q5, 6 : 2SC1845 (F, E)
- Q8 : 2SA992 (F, E)
- Q9, 10 : 2SD655 (E, F)
- Q11, 12 : 2SK163 (L, N) or 2SK136 (O, R)
- Q13, 14, 17, 18 : 2SA1023 (R, O) or 2SB725
- Q15, 16 : 2SC2378 (R, O) or 2SD767
- D1, 2 : 1N60
- D3, 4 : 1S1955
- D5, 6, 8, 9, 11~14 : 1S2076 or 1S1555
- D7 : YZ-040B or WZ-040
- D10 : GD-4-207RD
- IC1 : HA11225
- IC2 : TC4069UBP, MC14069UBCP or  $\mu$ PD4069C
- IC3 : HA1197 or LA1240
- IC4 : HA11223
- IC5 :  $\mu$ PC78L12





**AMPLIFIER SECTION**

Power Output  
**60 watts\* per channel, minimum RMS both channels driven at 8 ohms from 20 Hz to 20,000 Hz with no more than 0.02% total harmonic distortion.**

Both Channels Driven  
 into 8Ω at 1,000 Hz ..... 65W + 65W  
 into 4Ω at 1,000 Hz ..... 80W + 80W  
 Dynamic Power Output ..... 300W at 4Ω  
 Total Harmonic Distortion (20 Hz to 20,000 Hz from AUX)  
 rated power into 8Ω ..... 0.02%  
 1W power into 8Ω ..... 0.007%  
 Intermodulation Distortion (60 Hz, 7 kHz = 4 : 1 SMPTE)  
 rated power into 8Ω ..... 0.01%  
 1W power into 8Ω ..... 0.009%  
 Slew Rate ..... +100 V/μsec  
 Rise Time ..... 0.95 μsec  
 Damping Factor (20 Hz - 20 kHz at 8Ω) ..... 40  
 Input Sensitivity/Impedance  
 Phone ..... 2.5 mV/50 kΩ  
 AUX and TAPE ..... 200 mV/50 kΩ  
 Signal to Noise Ratio (A weighted)  
 Phone ..... 84 dB for 2.5 mV input  
 90 dB for 5.0 mV input  
 105 dB for 200 mV input  
 AUX and TAPE .....  
 Maximum Phono Input Level at 1,000 Hz ..... 200 mV (rms, THD 0.02%)  
 Frequency Response  
 PHONO RIAA  
 Standard Curve ..... 20 Hz to 20,000 Hz ±0.2 dB  
 AUX and TAPE ..... 5 Hz to 24,000 Hz -3 dB  
 Tone Control  
 Bass ..... ±9 dB at 100 Hz  
 Treble ..... ±9 dB at 10 kHz  
 Loudness Control (VOL -30 dB) ..... +10 dB at 100 Hz  
 Subsonic Filter ..... 18 Hz 6 dB/oct  
 High Filter ..... 5 kHz 6 dB/oct  
 Output Level/Impedance  
 TAPE REC Out (Pin) ..... 200 mV/300Ω  
 TAPE REC Out (DIN) ..... 30 mV/80 kΩ

**FM TUNER SECTION**

Usable Sensitivity ..... 10.3 dBf (1.8 μV)  
 50 dB Quieting Sensitivity ..... 16.1 dBf (3.5 μV)  
 Mono ..... 37.9 dBf (43 μV)  
 Stereo .....  
 Signal to Noise Ratio at 65 dBf  
 Mono ..... 83 dB  
 Stereo ..... 75 dB  
 77 dB at 10 mV input  
 Total Harmonic Distortion  
 Mono ..... 0.08%  
 Stereo ..... 0.09%  
 Frequency Response ..... 30 Hz to 15,000 Hz +0.5 -1.0 dB  
 Capture Ratio ..... 1.0 dB  
 Image Rejection Ratio ..... 83 dB  
 Spurious Response Ratio ..... 100 dB  
 IF Response Ratio ..... 105 dB  
 Alternate Channel Selectivity  
 WIDE ..... 30 dB at 300 kHz  
 NARROW ..... 60 dB at 300 kHz  
 AM Suppression Ratio ..... 65 dB  
 Stereo Separation Ratio ..... 50 dB at 1,000 Hz  
 40 dB at 50 Hz to 10,000 Hz  
 Subcarrier Product Ratio ..... 300:1 Balanced and 75:1 unbalanced  
 Antenna Impedance ..... 75Ω unbalanced  
 FM Frequency Range ..... 88 MHz to 108 MHz

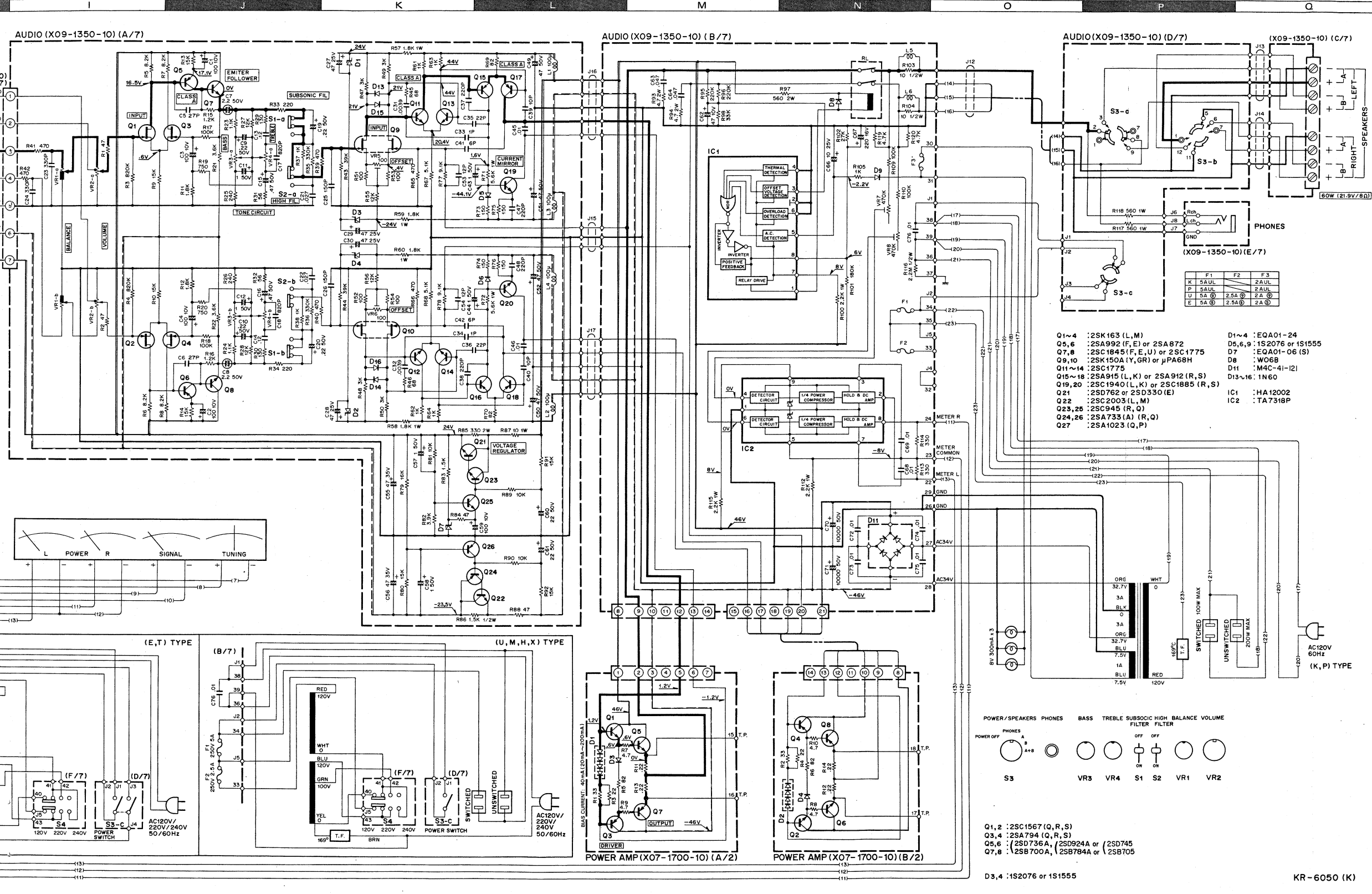
**AM TUNER SECTION**

Usable Sensitivity ..... 10 μV (250 μV/m)  
 Signal to Noise Ratio ..... 52 dB  
 Image Rejection ..... 50 dB  
 Selectivity ..... 50 dB

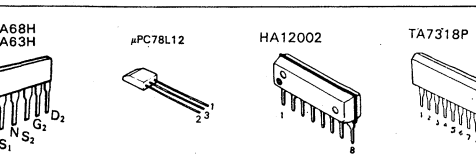
**GENERAL**

Power Consumption ..... 4.5A (UL and CSA)  
 450W (IEC)  
 280W (rated power at 8Ω)  
 45W (non signal)  
 AC Outlet ..... Switched 1, Unswitched 1  
 Dimensions ..... W: 516 mm (20.5"18")  
 H: 154 mm (6-1/16")  
 D: 409 mm (16-3/32")  
 Weight (Net) ..... 13.0 kg (28.7 lbs)  
 (Gross) ..... 14.6 kg (32.2 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 development. For this reason specifications may be changed without notice.



\* DC voltages for the power and audio amps are measured with 20 kΩ/v VOM when no signal is applied.  
 \* DC voltages for the tuner section are measured with 20 kΩ/v VOM when an FM signal is received. Exception: DC voltages with ( ) are measured when an AM signal is received.









## PARTS LIST/ADJUSTMENT/RÉGLAGES/ABGLEICH

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名/規格	Re- marks 備考
②			
①	14 3A	A20-1391-13	*H *T *K PU MX
	14 3A	A20-1417-13	
	15 3A	A21-0302-03	
	15 3A	A21-0302-03	
	15 3A	A21-0302-03	
⑤	C1, C2	C54-3310-39	ET K UM HX P
	C1	C90-0145-05	
	C1	C91-0023-05	
	C1	C91-0023-05	
	C1	C91-0025-05	
	28 1B	D15-0155-13	⑥
	29 1B	D15-0156-13	
	30 2A	D15-0170-14	
	31 2A	D20-0144-03	

- 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 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.  
CODEs in X09-135  
K: X09-1350-10  
E: X09-1352-71  
U: X09-1350-81  
P: X09-1351-01
- 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 ..... ±0.25pF (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)
- ⑧ Resistors RD (carbon composition resistors) are not listed in the parts list. For values, refer to the schematic diagram.

### BIAS CURRENT

The KR-6050 has no trimming potentiometer for adjusting the bias current. R1(R2) and/or R3(R4) of the power amp section (X07-1700-10) are used in place of trimming potentiometers.

It is necessary to check the value of the bias current when the power transistors, driver transistors and/or varistor diodes are replaced.

The bias current must be within the range of 20~200 mA.\*  
 (The recommended value is 40 mA.)  
 If not so, change the value of the resistors above mentioned.

\*The DC voltage between the terminals 15(17) and 16(18) (X07-1700-10) must be within the range of 4.4 mV~44 mV.

### COURANT DE POLARISATION

Le modèle KR-6050 ne possède pas du potentiomètre ajustable de mise au point pour ajuster le courant de polarisation. R1(R2) et/ou R3(R4) de la section amp. de puissance (X07-1700-10) sont utilisées à la place des potentiomètres de mise au point.

Il est nécessaire de vérifier la valeur du courant de polarisation quand on remplace les transistors de puissance, les transistors d'attaque et/ou les diodes varistors.

Le courant de polarisation doit être compris dans les limites de 20~200 mA.\*  
 (La valeur recommandée est de 40 mA).  
 Autrement, changer la valeur des résistances mentionnées ci-dessus.

\*La tension de Cour. Cont. entre les bornes 15 (17) et 16 (18) (X07-1700-10) doit être comprise dans les limites de 4,4 mV~44 mV.

### LEERLAUFSTROM

Das KR-6050 hat keinen Trimm-Potentiometer zum Einstellen des Leerlaufstroms. R1(R2) und/oder R3(R4) des Verstärkerteils (X07-1700-10) werden anstelle von Trimm-Potentiometern verwendet.

Beim Auswechseln der Stromtransistoren, Driver-Transistoren und/oder Varistor-Dioden muß der Wert des Leerlaufstroms geprüft werden.

Der Leerlaufstroms muß innerhalb 20-200 mA\* liegen.  
 (Der empfohlene Wert ist 40 mA).  
 Die oben erwähnten Widerstände entsprechend einstellen.

\*Die Gleichstromspannung zwischen den Anschlüssen 15(17) und 16(18) (X07-1700-10) muß innerhalb 4,4 mV und 44 mV liegen.