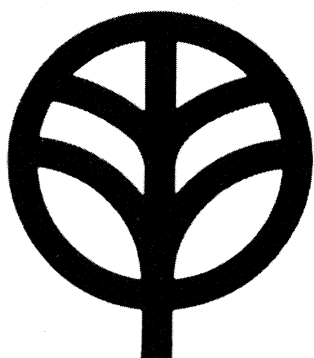




KENWOOD
HI/FI STEREO COMPONENTS

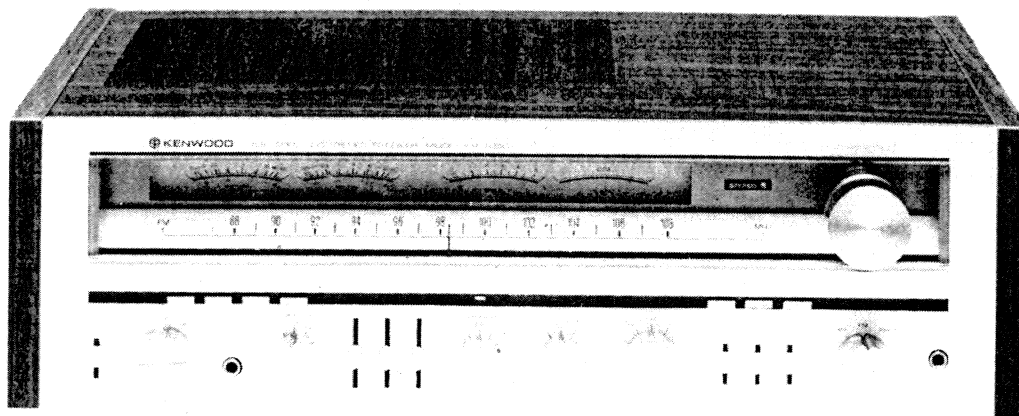
SERVICE MANUAL

KR-7050 (KR-7750)

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

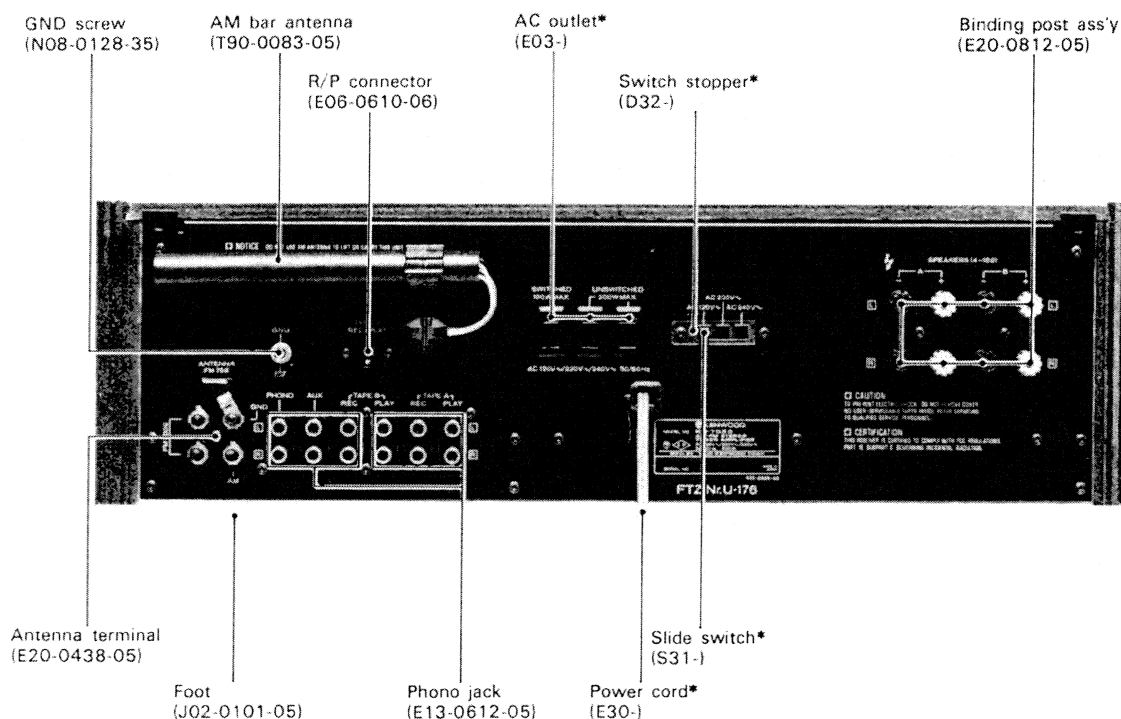
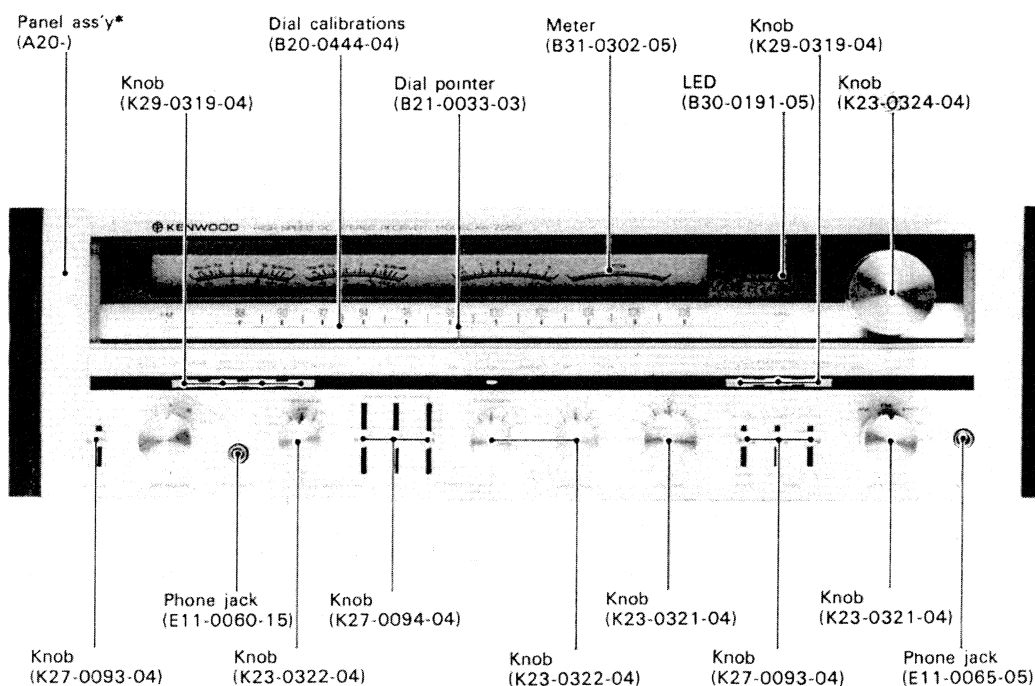
EXTERNAL VIEW	3
INTERNAL VIEW	4
DIAL CORD STRINGING	4
DISASSEMBLY FOR REPAIR	5
BLOCK & LEVEL DIAGRAM	6
ADJUSTMENT/REGLAGES/ABGLEICH	7
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PARTS LIST	16
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Note:

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.

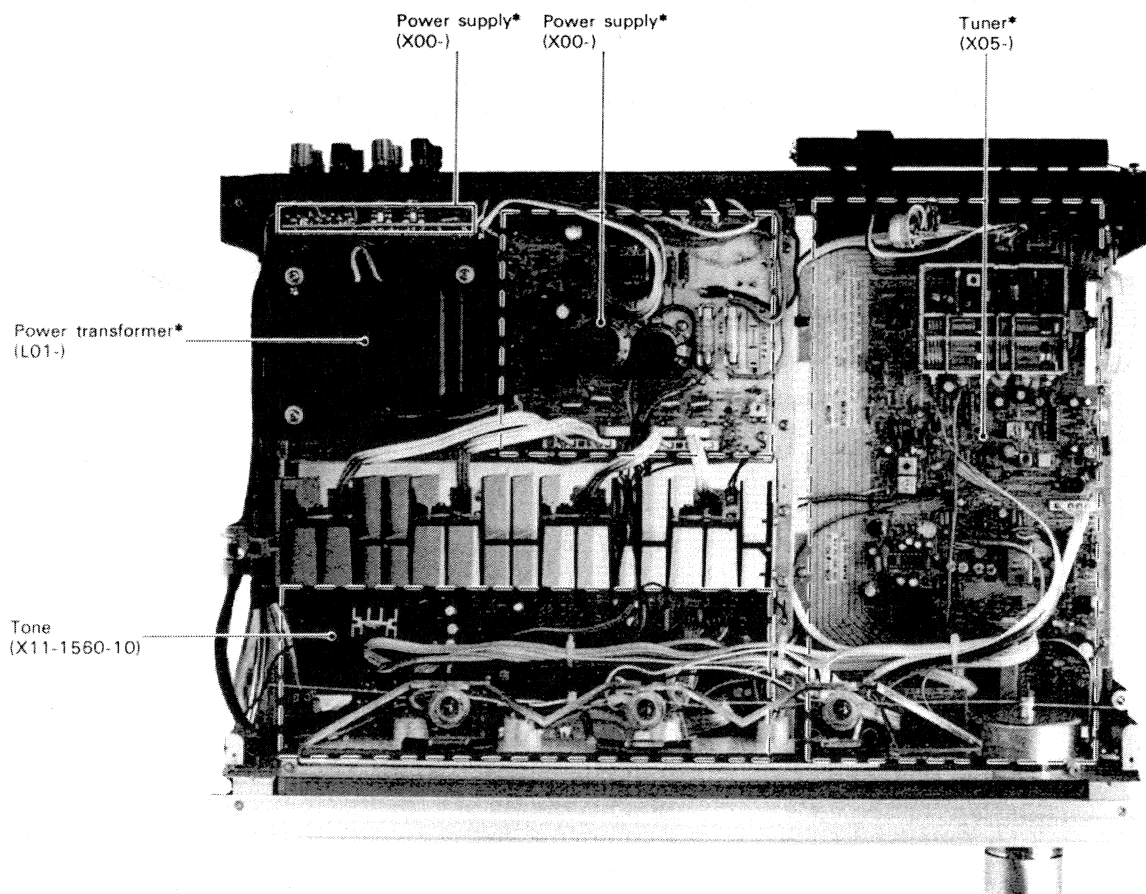
Region	Code
U.S.A.	K
Canada	P
PX	U
Australia	X
Europe & Scandinavia	E
England	T
Other Areas	M
Audio Club (KR-7750)	H

EXTERNAL VIEW



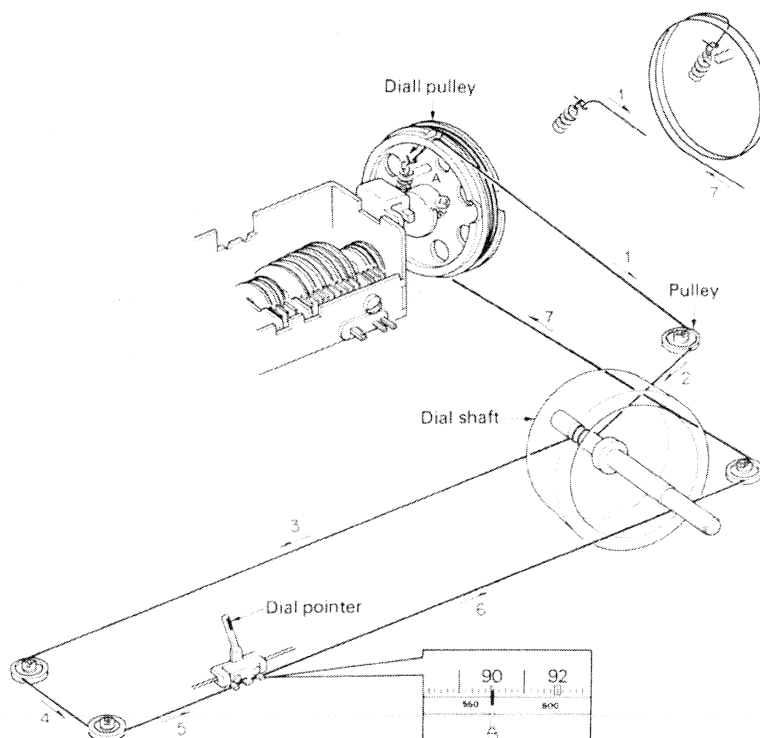
* Refer to Parts list

INTERNAL VIEW/DIAL CORD STRINGING



DIAL CORD STRINGING

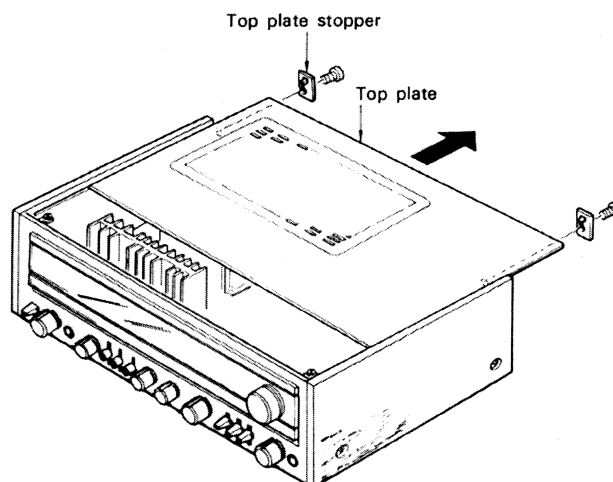
1. Set the dial pulley as illustrated.
2. Tie the dial cord to the dial spring.
3. Hook the dial spring on the boss A.
4. Dress the dial cord in the direction of "1" to "2".
5. Wind the dial cord two turns around the dial shaft starting from its lower side.
6. Dress the dial cord in the direction of "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

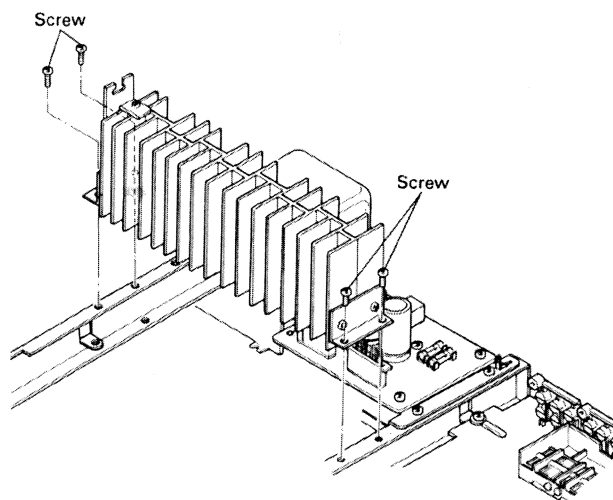
1. TOP PLATE

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



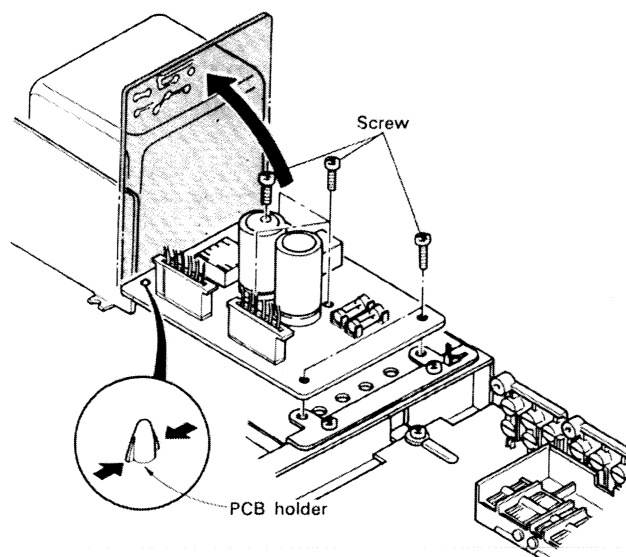
2. POWER AMP (X00-2050-10)

1. Remove the screws fixing the heat sink to the chassis.

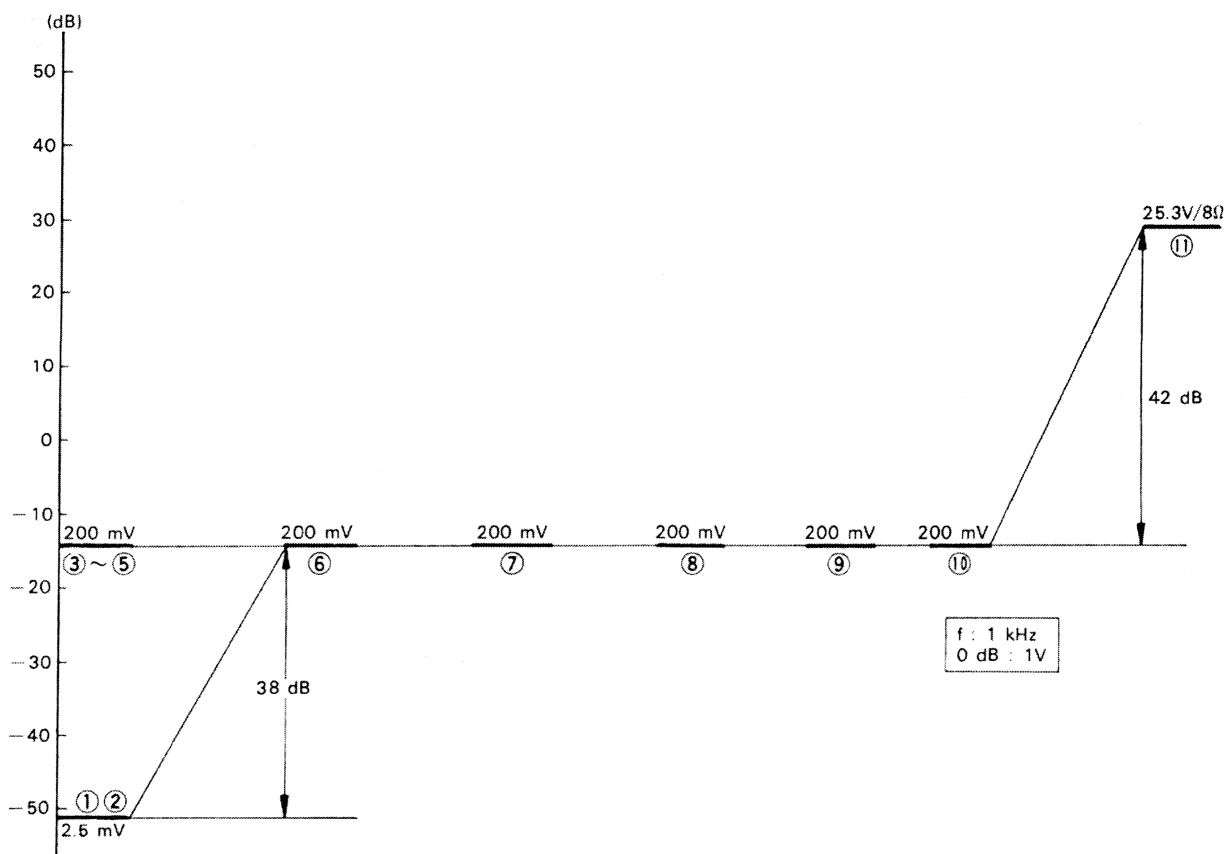
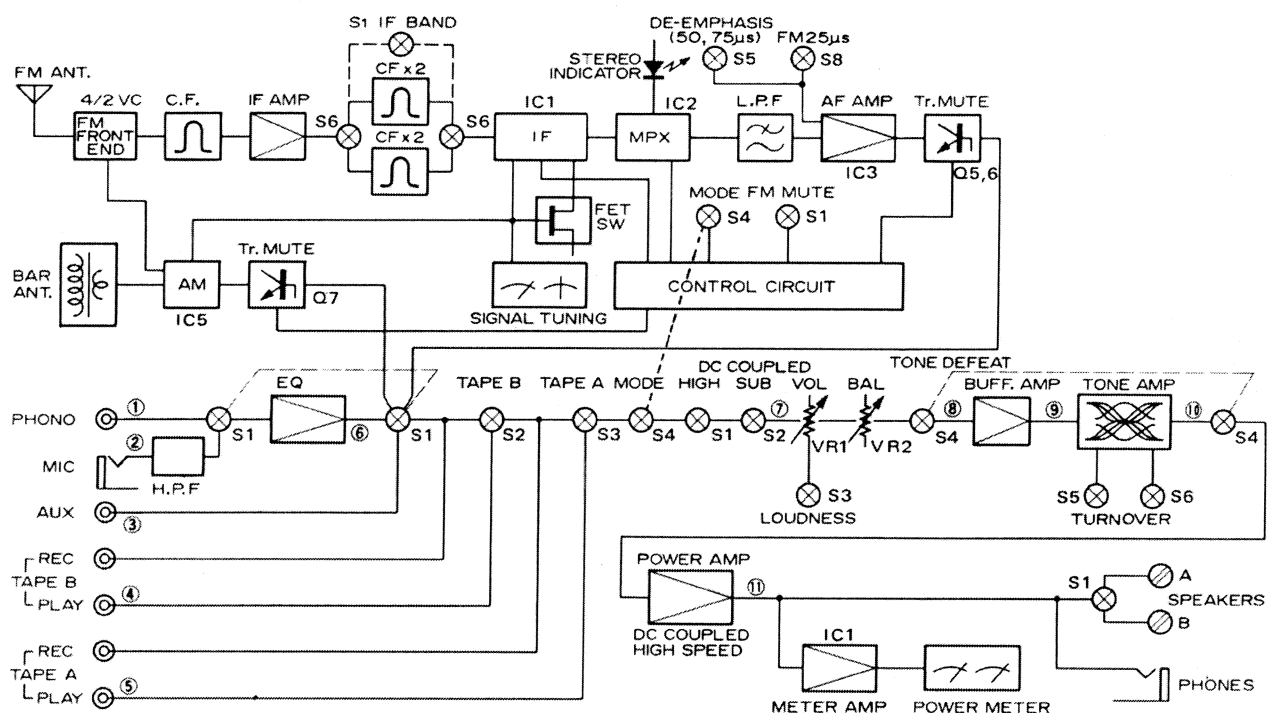


3. POWER SUPPLY SECTION OF AUDIO AMP

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 DIAGRAM/LEVEL DIAGRAM

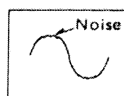


ADJUSTMENTS

NO.	ALIGNMENT	TEST EQUIPMENTS		RECEIVER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
FM							
1	DISCRIMINATOR (1)	Ⓐ	95 MHz 1 kHz, ± 75 kHz Dev	95 MHz. WIDE	Ⓑ	—	*1
2	DISCRIMINATOR (2)	ditto	95 MHz 1 kHz, ± 75 kHz Dev 60 dB (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 60 dB (Receiver input)	95 MHz. WIDE	Frequency counter to the crosspoint of R45 and VR1	VR1	76 kHz ±200 Hz
5	SEPARATION	Ⓒ	95 MHz *2 1 kHz, ±68.25 kHz Dev SELECTOR: L or R 60 dB (Receiver input)	ditto	Ⓑ	VR3	*3
6	IFT	ditto	95 MHz 1 kHz, ±68.25 kHz Dev SELECTOR: L + R 60 dB (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
AM							
1	IFT	Ⓓ	1,000 kHz 400 Hz, 30% Mod	1,000 kHz	Ⓑ	L6	Maximum deflection
2	TRACKING (1)	ditto	600 kHz 400 Hz, 30% Mod	600 kHz	ditto	L5 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	100 kHz 9 kHz 30% Mod	1,000 kHz	ditto	L9	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 ± 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. ± 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. ± 75 kHz, 60 dB and connect it to the antenna terminal of the receiver.

(2) Receive the FM-SG signal.

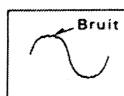
(3) Fix the dial pointer at 90 MHz

RÉGLAGES

NO.	ALIGNMENT	APPAREILLAGE		RÉGLAGE DU AMPLI-TUNER	INDICATEUR DE SORTIE	POINTS DE RÉGLAGES	REMARQUES
		RACCORD-MENT	RÉGLAGE				
SECTION MF							
1	DISCRIMI-NATEUR (1)	Ⓐ	95 MHz 1 kHz (MOD) ± 75 kHz (DEV)	95 MHz WIDE	Ⓑ	—	* 1
2	DISCRIMI-NATEUR (2)	idem	95 MHz 1 kHz (MOD) ± 75 kHz (DEV) 60 dB (Niveau d'entrée du ampli-tuner)	idem	Indicateur à zéro central	L3	Aiguille de l'indicateur à zéro central en position
3	DISCRIMI-NATEUR (3)	idem	idem	idem	Ⓑ	L4	Distorsion minimale
Répéter les points 1 ~ 3 plusieurs fois.							
4	OSCILLA-TEUR 76 kHz	Ⓐ	95 MHz 0 (DEV) 60 dB	95 MHz WIDE	Relier le volt- mètre CC au plot R45 et VR1	VR1	76 kHz ±200 Hz
5	SÉPARA-TION	Ⓒ	95 MHz *2 1 kHz (MOD) ±68.25 kHz (DEV) L ou R (SELECTION) 60 dB	idem	Ⓑ	VR3	*3
6	TFI	idem	95 MHz 1 kHz (MOD) ±68,25 kHz (DEV) L + R (SELECTION) 60 dB	idem	idem	T1 (W02-0022-05)	Distorsion minimale
7	CIRCUIT SUPPRESSION DE SIGNAL PILOTE	idem	95 MHz 60 dB Signal pilote	idem	idem	VR2	Déviaton maximale
SECTION MA							
1	TFI	Ⓓ	1.000 kHz 400 Hz, 30% (MOD)	1.000 kHz	Ⓑ	L6	Déviaton maximale
2	ALIGNMENT (1)	idem	600 kHz 400 Hz, 30% (MOD)	600 kHz	idem	L5 Antenna ferrite MA	idem
3	ALIGNMENT (2)	idem	1.400 kHz 400 Hz, 30% (MOD)	1.400 kHz	idem	CT1, CT2	item
4	FILTRE 9 kHz	idem	1.000 kHz 9 kHz, 30% (MOD)	1.000 kHz	idem	L9	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 crees pas même regler 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:

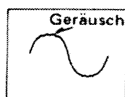
- (1) Régler FM-SG à 90 MHz, 1 kHz Mod. ±75 kHz, 60 dB et le connecter à la borne d'antenne du récepteur
- (2) Recevoir la signal FM-SG.
- (3) Fixer l'aiguille du cadran à 90 MHz.

ABGLEICH

NR.	ABGLEICH	PRÜFEINRICHTUNG		STEUR- GERÄT EINSTEL- LUNG	AUSGANGS- ANZEIGE	EINSTELL- PUNKT	BEMER- KUNGEN
		ANSCHLÜSSE	EINSTELLUNG				
UKW-EMPFANGSABTEILUNG							
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 63 dB (Steuergerät- Eingangspegel)	dito	Kanalmitten Anzeiger	L3	Den zeiger des Kanalmitten Anzeiger mittig einstellen.
3	DISKRIMI- NATOR (3)	dito	dito	dito	Ⓑ	L4	Minimaler klirrfaktor
Abstimmungen „1 bis 3“ mehrer Male wiederholen.							
4	SPANNUNGS- GEREGELTER OSZILLATOR	Ⓐ	95 MHz 0 Hub 60 dB	95 MHz WIDE	Frequenzzähler zum Kreuzungs- Punkt von R45 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
MW-EMPFANGSABTEILUNG							
1	ZF-1	Ⓓ	1.000 kHz 400 Hz, 30% Mod	1.000 kHz	Ⓑ	L6	Maximaler Ausschlag
2	EMPFANGS- BEREICH (1)	dito	600 kHz 400 Hz, 30% Mod	600 kHz	dito	L5 MW-Ferritangenna	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	L9	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 Frontendes auszuscheln 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 Meßsender-signal empfangen wird, während der Skalenzeiger auf, 90 MHz zeigt.

ADJUSTMENTS/RÉGLAGES

OFFSET VOLTAGE ADJUSTMENT

1. Set the SPEAKERS switch to A and the volume to min.
2. Connect the DC voltmeter between the positive and negative speaker terminals.
3. Adjust the trimming pot VR7 (VR6), as shown in figure 1, for 1.0V reading of the DC voltmeter.

RÉGLAGE DE LA TENSION DE DECLAGE (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 VR7 (VR6) pour que la tension de sortie soit nulle, comme le montre ce figure 1.

BIAS CURRENT ADJUSTMENT

1. Turn the volume control knob fully counter clockwise.
2. Connect the DC voltmeter between the adjusting points, 19 and 20 (21 and 22) of power amp pc board ass'y (X00-2050-10).
3. Adjust the BIAS CURRENT trimming pot VR1 (VR2), for an 13 mV reading of the voltmeter.

RÉGLAGE DU COURANT DE POLARISATION

1. Tourner le bouton de commande de volume à fond dans le sens invers de celui des aiguilles d'une montre.
2. Brancher le voltmètre de C.C. aux points d'alignement, 19 et 20 (21 et 22), sur la plaque circuit imprimé d'ampli de puissance (X00-2050-10).
3. Régler le potentiomètre ajustable VR1 (VR2) de façon à ce que le voltmètre de C.C. indique 13 mV.

POWER METER LEVEL ADJUSTMENT

1. Connect an AG 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, 4.9V, for 3W reading of power meter.

RÉGLAGE DU VU METRE

1. Relier un AG (générateur de signaux audio) sur les prises Aux et une fausse charge (Resistance) sur les bornes de haut-parleur.
2. Relier un voltmètre de C.A. aux deux extrémités de la resistance (ou aux borne de sortie + et -).
3. Régler le potentiomètre ajustable VR3 (VR4) en sortie que le VU mètre indique 3W lorsque le voltmètre indique 4.9V.

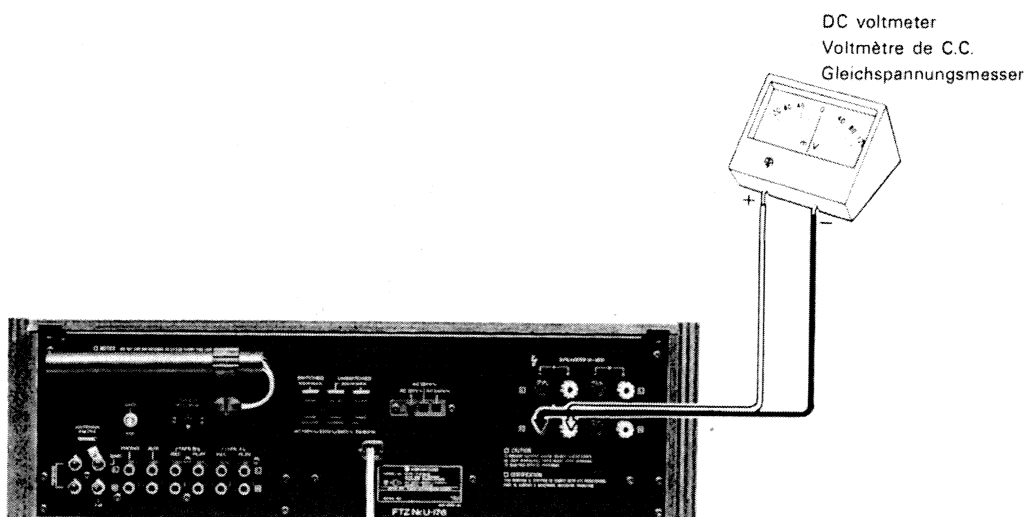


Fig. 1 OFFSET

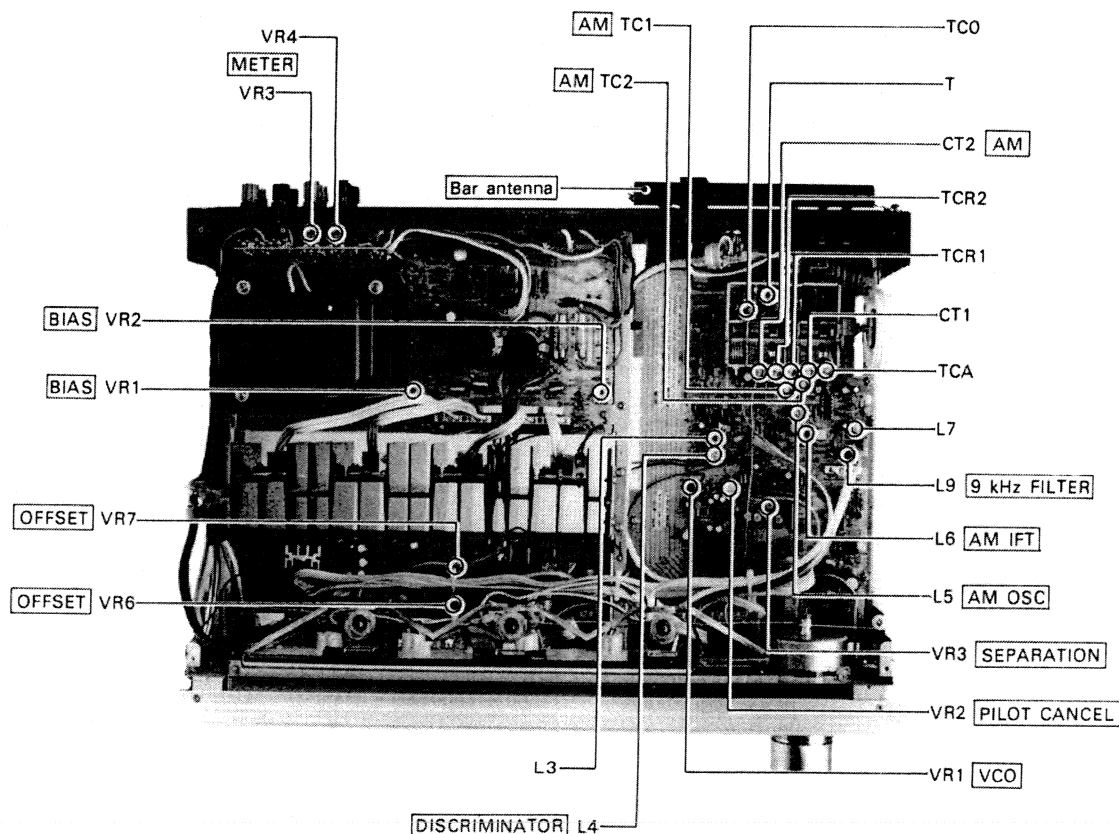
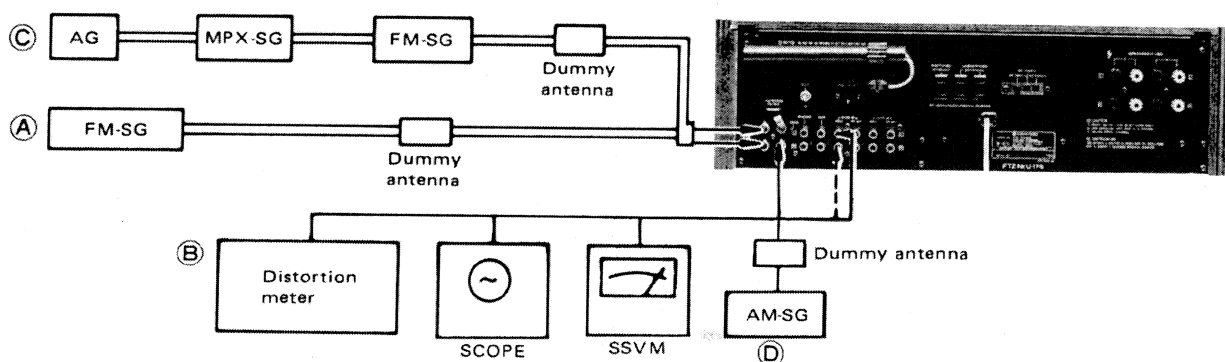
ADJUSTMENTS/RÉGLAGES/ABGLEICH

TEST INSTRUMENT

APPAREILLAGE

PRÜFINSTRUMENTE

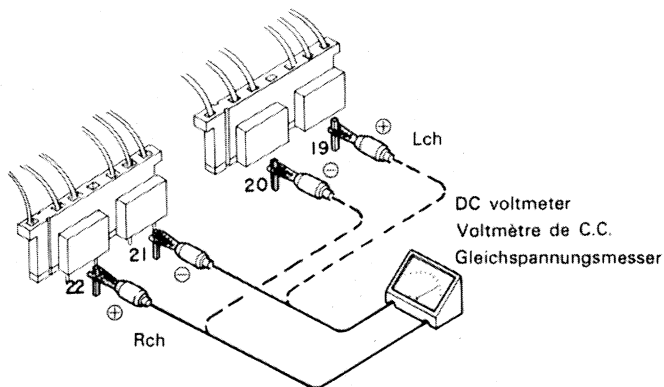
Oscilloscope	Oscilloscope	Oszilloskop	SCOPE
AM signal generator	Générateur MA	MW-Signalgenerator	AM-SG
FM signal generator	Générateur MF	UKW-Signalgenerator	FM-SG
Audio generator	Générateur audio fréquences	NF-Signalgenerator	AG
AC voltmeter	Voltmètre CA	Wechselspannungsmesser	SSVM
FM multiplex generator	Générateur multiplex stéréo	UKW-Multiplexgenerator	FM-MPX
Frequency counter	Fréquence-mètre	Frequenzzähler	
DC voltmeter	Voltmètre CC	Gleichspannungsmesser	
Distortion meter	Distorsiomètre	Klirrfakformesser	
Dummy antenna	Antenne fictive	Antennennackbildung	



ABGLEICH

OFFSET-SPANNUNG

1. Den Schalter SPEAKERS auf A und den Volume auf min einstellen.
2. Einen Gleichspannungsmesser an der klemme SPEAKERS A anschließen. (Abb. 1).
3. Die Regelstange durch das Unterplattenloch einführen und den halbeingebetteten Widerstand VR7 (VR6) so regulieren, daß die Gleichspannungsmesser-Ablesung 0V ist.



LEERLAUFS

1. Den Lautstärkeregler (VOLUME) drehen um die Leistungsverstärker-Aufnahme auf Null zu reduzieren.
2. Den Gleichspannungsmesser zwischen der Regulierungs-Punkte $\oplus$ und $\ominus$ der Leistungsverstärker anschließen.
3. Den halbeingebetteten Widerstand VR1 (VR2) der Leistungsverstärker so regulieren, daß die Gleichspannungsmesser-Ablesung 13 mV ist.

Fig. 2 BIAS CURRENT

PEGELEINSTELLUNG DES STROMMESSERS (POWER METER)

1. Einen AG (NF-Signalgenerator) an die AUX-Buchsen und eine künstliche Last (8Ω , 20W 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 anzeigt.
5. Das Trimm-Potentiometer VR3 (VR4) so einstellen, das der Strommesser 3W anzeigt.

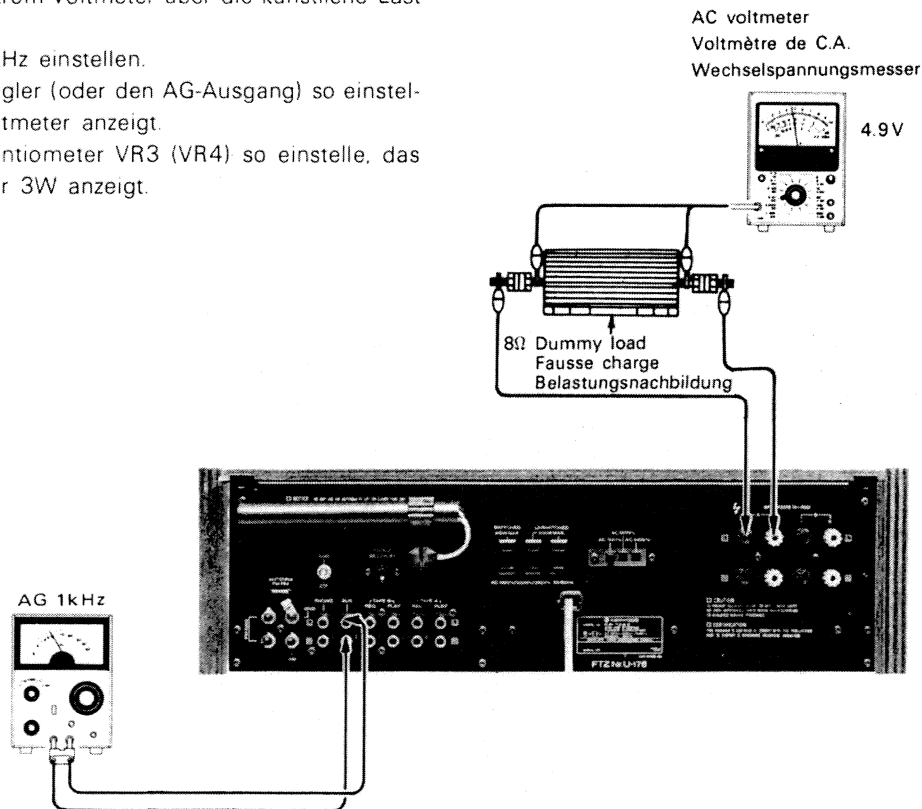
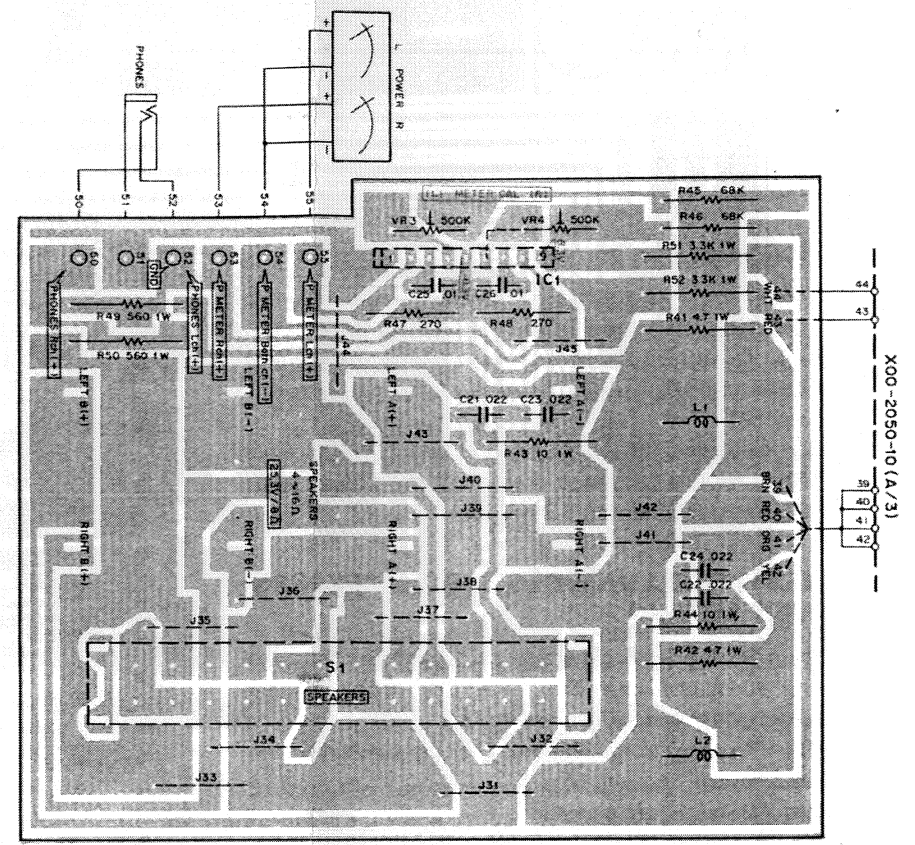
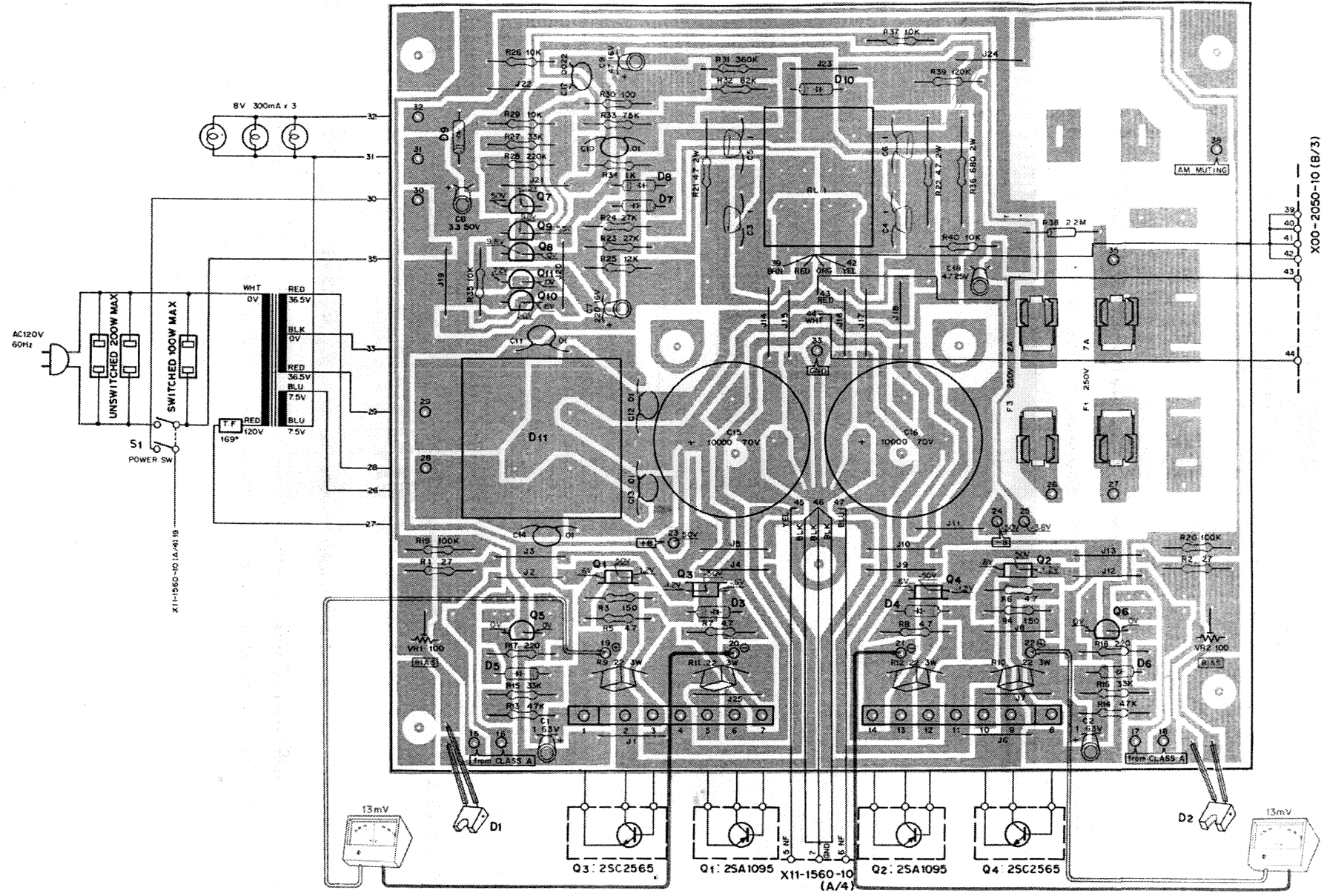


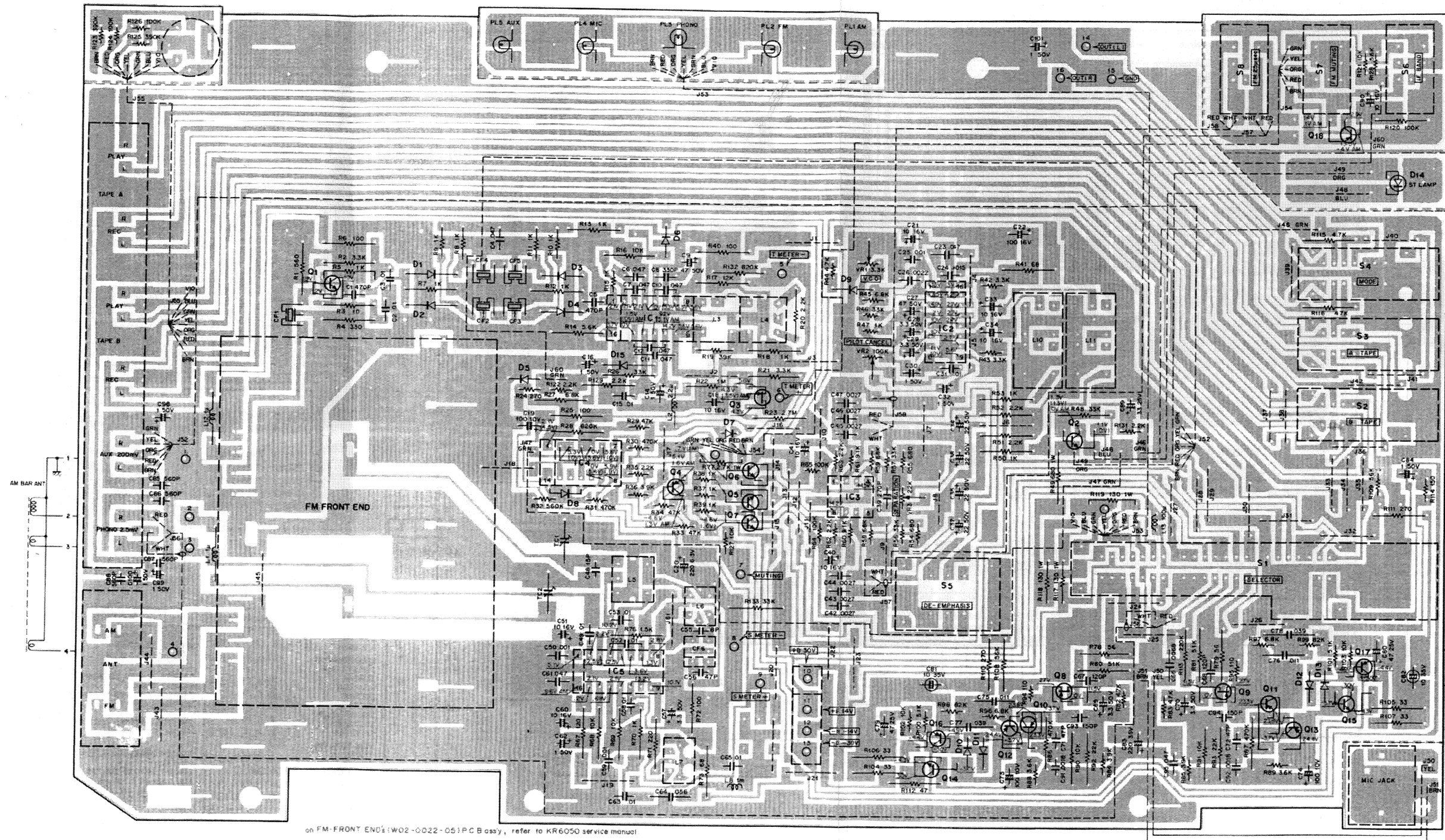
Fig. 3 POWER METER

PC BOARD

▼ POWER AMP (X00-2050-10) COMPONENT SIDE VIEW



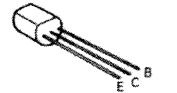
- | | | | |
|---------------|------------------------|---------|---------|
| Q1, 2: | 2SC1913 (Q, R) | 2SA954 | 2SC945 |
| Q3, 4: | 2SA913 (Q, R) | 2SA984 | 2SC1845 |
| Q5, 6: | 2SC1845 or
2SC1890A | 2SA1023 | 2SC1890 |
| Q7: | 2SA1023 or
2SB725 | 2SB725 | 2SC2378 |
| Q8, 9: | 2SC945 or
2SC828A | 2SC828A | |
| Q10: | 2SC2378 or
2SD767 | | |
| Q11: | 2SA954 or
2SA984K | | |
| IC1: | TA7318P | | |
| D1, 2: | STV-4H (G) | | |
| D3, 4, 7 ~ 9: | 1S2076 or
1S1555 | | |
| D5, 6: | 1S2076A | | |
| D10: | W06B or
V06B | | |
| D11: | M4C-51-12*1 | | |



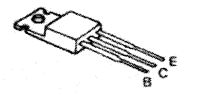
on FM-FRONT END (W02-0022-05) PCB Assy, refer to KR6050 service manual

21:	2SC1923 (Q, R)	Q10 ~ 13, 16, 17:	2SA1023 (R, Q) or	IC3:	NJM4558D (A)	D3 ~ 13, 15:	1S2067 or
22, 7:	2SC945 (P, Q, K) or		2SB725	IC4:	TC4069UBP or		1S1555
	2SC828A (Q, R, S)	Q14, 15	2SC2378 (R, Q) or		MC14069UBPC or	D14:	GD-4-207RD
23:	2SK163 (N) or		2SD767		μPD4069C		
	2SK136 (S)	Q18:	2SA733 (A) or	IC5:	HA1197 or		
24:	2SA992 (E, F)		2SA564A		LA1240		
25, 6:	2SD655 (E, F)	IC1:	HA11225	D1, 2:	1N60		
28, 9:	2SK163 (L)	IC2:	HA11223W				

2SA564
2SA733
2SA992
2SA1023
2SB725
2SC828A
2SC945
2SC1923
2SC2378
2SD655



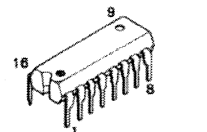
2SD767



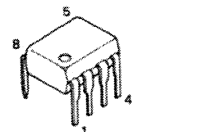
2SK136
2SK163



HA11223W

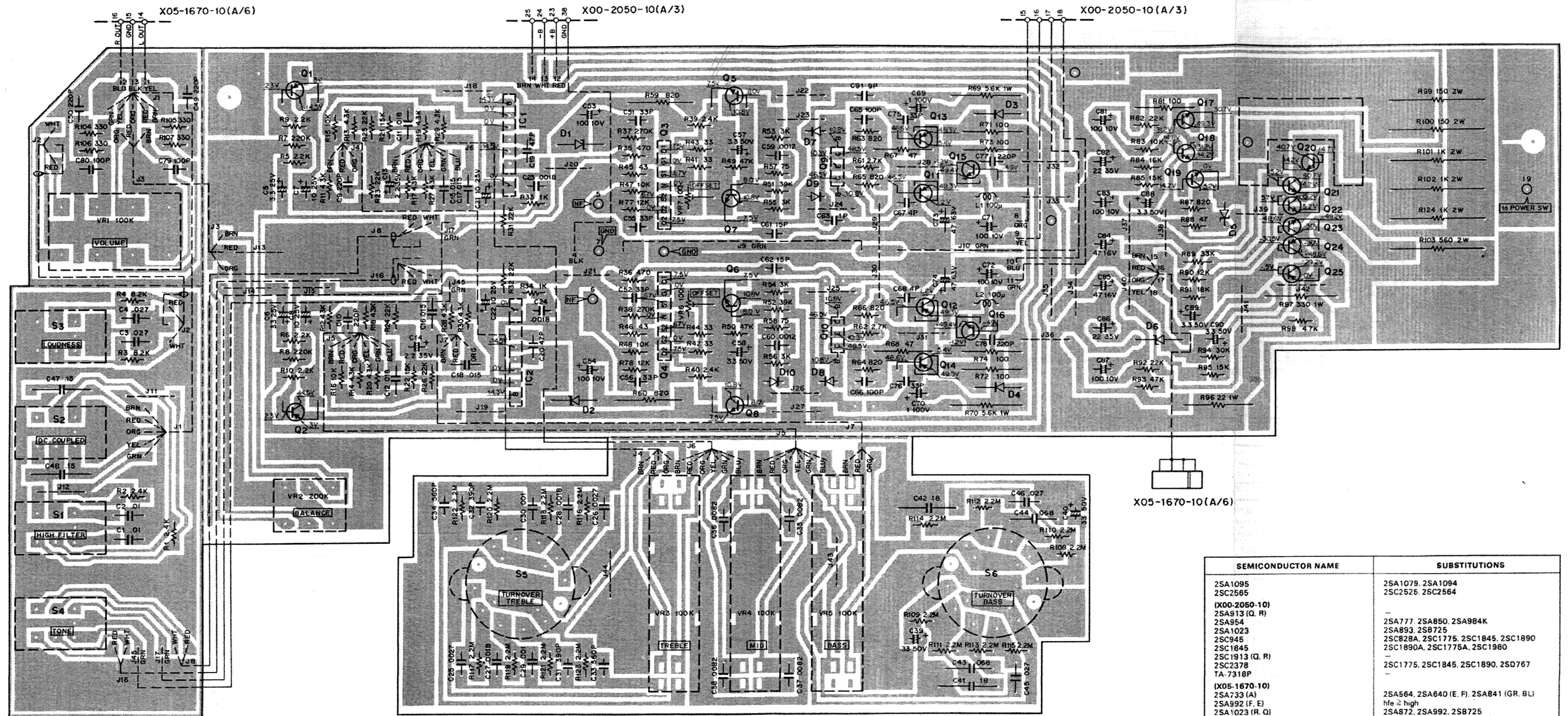


NJM4558D

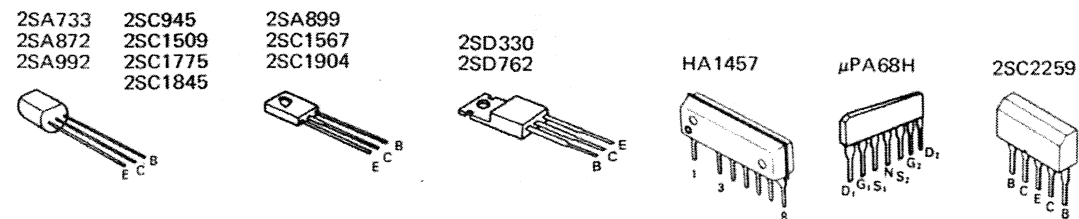


PC BOARD/SEMICONDUCTOR SUBSTITUTIONS

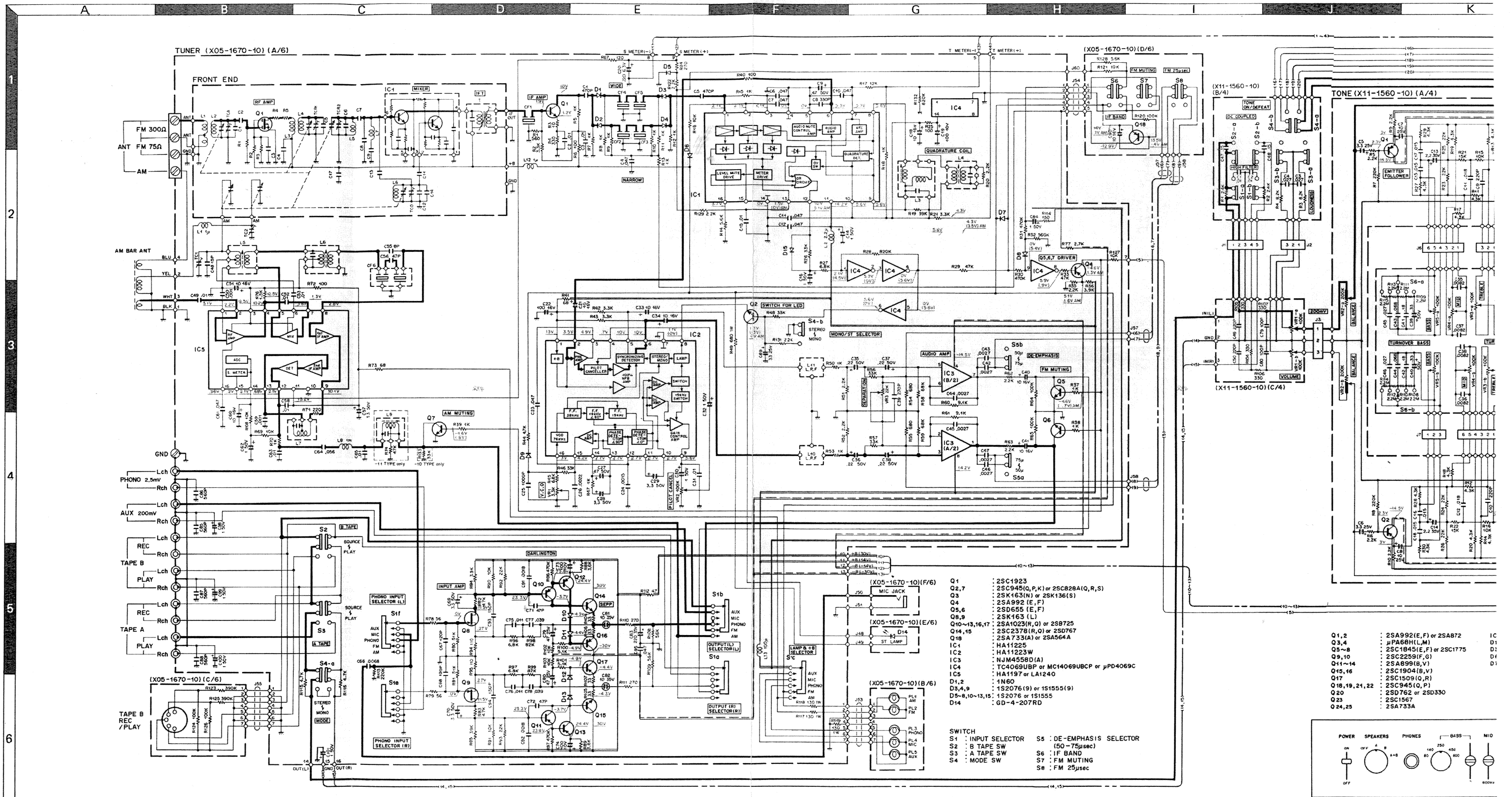
▼ TONE (X11-1560-10) FOIL SIDE VIEW



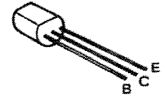
- | | | | |
|------------------|------------------------------|-----------|---------------------|
| Q1, 2: | 2SA992 (E, F) or
2SA872 | Q20: | 2SD762 or
2SD330 |
| Q3, 4: | μPA68H (L, M) | Q23: | 2SC1567 |
| Q5 ~ 8: | 2SC1845 (E, F) or
2SC1775 | Q24, 25: | 2SA733 (A) |
| Q9, 10: | 2SC2259 (F, G) | IC1, 2: | HA1457 |
| Q11 ~ 14: | 2SA899 (B, V) | D1, 2, 5: | XZ-051 |
| Q15, 16: | 2SC1904 (B, V) | D3, 4: | 1S2076 or
1S1555 |
| Q17: | 2SC1509 (Q, R) | D6: | WZ-140 or YZ-140 |
| Q18, 19, 21, 22: | 2SC945 (Q, P) | D7 ~ 10: | 1N60 |



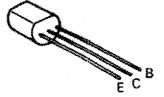
SEMICONDUCTOR NAME	SUBSTITUTIONS
2SA1095	2SA1079, 2SA1094
2SC2565	2SC2526, 2SC2564
(X00-2050-10)	—
2SA913 (Q, R)	—
2SA954	2SA777, 2SA850, 2SA984K
2SA1023	2SA893, 2SB725
2SC945	2SC828A, 2SC1775, 2SC1845, 2SC1890
2SC1845	2SC1890A, 2SC1775A, 2SC1960
2SC1913 (Q, R)	—
2SC2378	2SC1775, 2SC1845, 2SC1890, 2SD767
TA-7318P	—
(X05-1670-10)	—
2SA733 (A)	2SA564, 2SA640 (E, F), 2SA841 (GR, BL)
2SA992 (F, E)	hfe ≥ high
2SA1023 (R, Q)	2SA872, 2SA992, 2SB725
2SC945	VCE ≥ 50V, IC ≥ 100 mA, PC ≥ 250 mW
2SC1845	2SC535 (A, B), 2SC381 (R, O)
2SC1923	2SC1775, 2SC1845, 2SD767
2SC2378 (R, Q)	—
2SD655 (E, F)	—
2SK163 (L)	—
2SK163 (N)	2SK136 (S)
TC4069UBP	MC14069UBCP, μPD4069C
NJM4558D (A)	NJM4559, NJM4558D (B)
HA11225	—
HA11223W	—
HA1197	LA1240
(X11-1560-10)	—
2SA733 (A)	2SA640, 2SA872, 2SA893, 2SA992
2SA899 (B, V)	—
2SA992 (F, E)	2SA640, 2SA872
2SC945 (Q, P)	2SC1222, 2SC1400, 2SC1845, 2SC1890
2SC1509 (Q, R)	2SC1735
2SC1567	2SC1567A, 2SD330, 2SD762
2SC1845 (F, E)	2SC1222, 2SC1400, 2SC1775
2SC1904 (B, V)	—
2SC2259 (F, G)	—
2SD762	—
μPA68H (L, H)	2SD330
HA1457	2SK150A



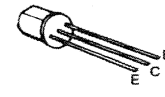
2SA850
2SC1735



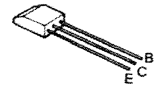
2SA564 2SA954 2SC945 2SC1890
2SA640 2SA984 2SC1222 2SC1923
2SA733 2SA992 2SC1400 2SC1980
2SA777 2SA1023 2SC1509 2SC2378
2SA872 2SB725 2SC1775 2SD655
2SA893 2SC828A 2SC1845



2SA841
2SC381



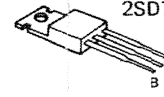
2SC535



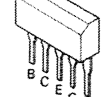
2SA899 2SC1904
2SC1567



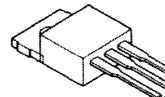
2SA913 2SD330
2SC1913 2SD762
2SD767



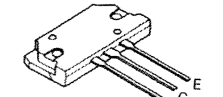
2SC2259



2SA1075
2SC2525



2SA1094 2SC2564
2SA1095 2SC2565



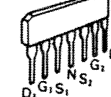
2SK136
2SK163



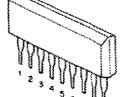
2SK150A

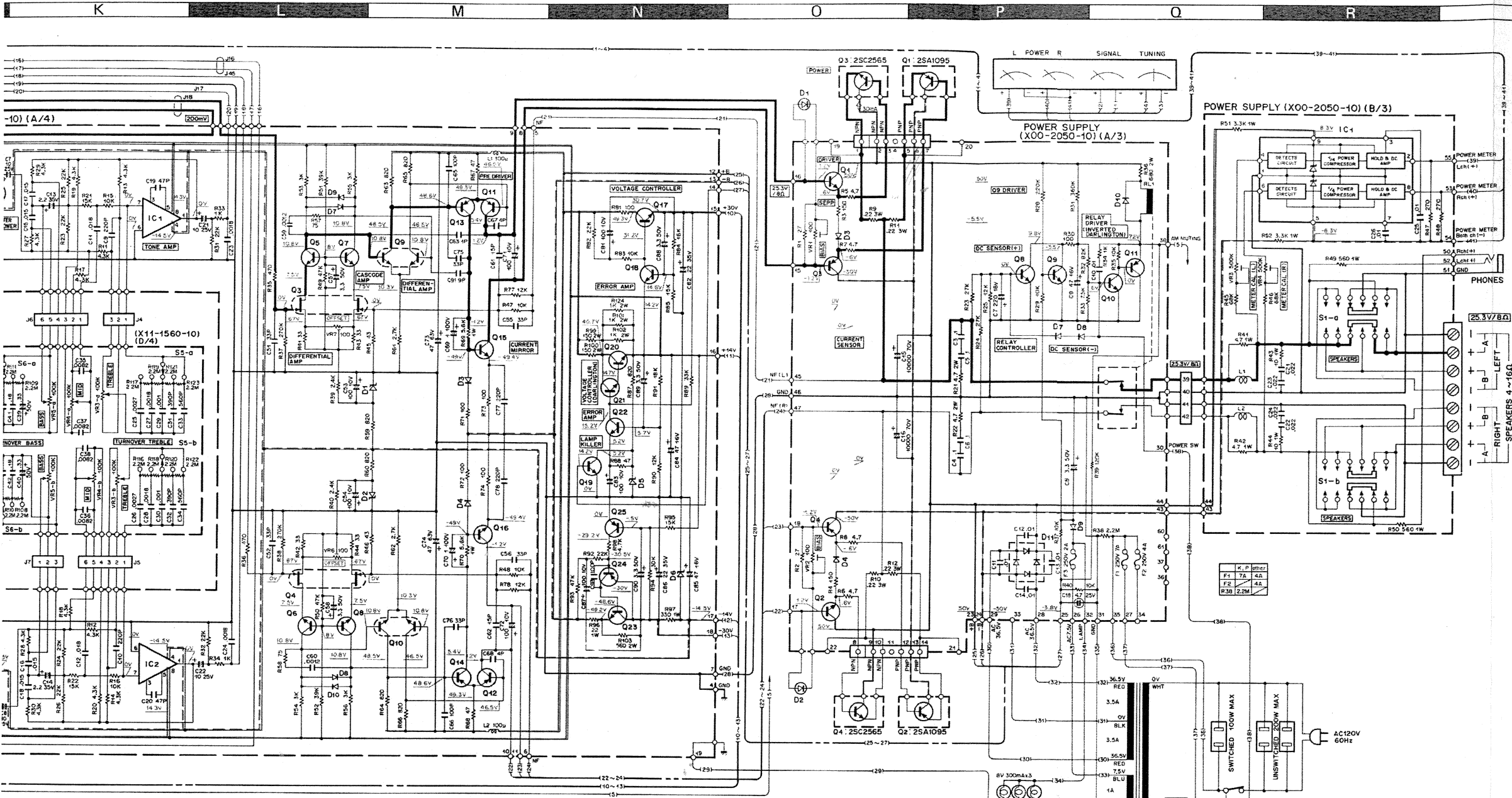


μ PA68H

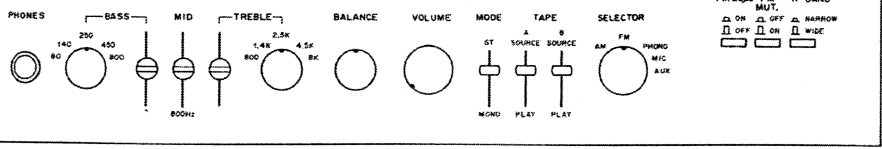


TA-7318P

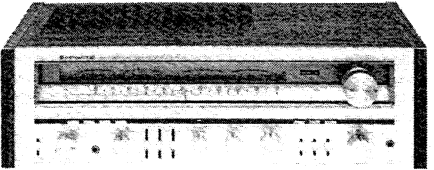
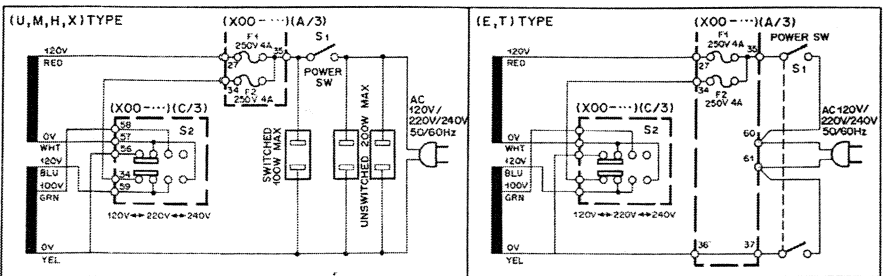




- (192(E,F) or 25A872
- 168H(L,M)
- 1845(E,F) or 25C1775
- 2259(F,G)
- 1899(B,V)
- 1904(B,V)
- 1509(Q,R)
- 1945(O,P)
- 1762 or 25D330
- 1567
- 733A



- X00-2050-10
- Q1,2 : 25C1913 (Q,R)
- Q3,4 : 25A913 (Q,R)
- Q5,6 : 25C1845 or 25C1890A
- Q7 : 25A1023 or 25B725
- Q8,9 : 25C945 or 25C828A
- Q10 : 25C2378 or 25D767
- Q11 : 25A954 or 25A984K
- IC1 : TA7318P
- D1,2 : STV-4H(G)
- D3,4,7-9 : 1S2076 or 1S1555
- D5,6 : 1S2076A
- D10 : W06B or V06B
- D11 : M4C-51-12 *1



AMPLIFIER SECTION

Power Output
80 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 85W + 85W
into 4Ω at 1,000 Hz 100W + 100W
Dynamic Power Output 360W 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 0.007%
1W power into 8Ω 0.009%

Stew Rate 1200 V/μsec
Rise Time 0.9 μsec

Damping Factor
(20 Hz - 20 kHz at 8Ω) 100

Input Sensitivity/Impedance
Phono 2.5 mV/50 kΩ
AUX and TAPE 200 mV/50 kΩ
MIC 3.6 mV/50 kΩ

Signal to Noise Ratio
(A weighted)
Phono 85 dB for 2.5 mV input
AUX and TAPE 91 dB for 5.0 mV input
MIC 108 dB for 200 mV input
72 dB for 2.2 mV input

Maximum Phono Input Level
at 1,000 Hz 200 mV (rms), THD 0.02%

Frequency Response
PHONO RIAA 20 Hz to 20,000 Hz ±0.2 dB
AUX and TAPE DC to 320 kHz -3 dB

Tone Control
Bass (at 250 Hz) ±12 dB at 50 Hz
Mid ±10 dB at 800 Hz
Treble (at 2.5 kHz) ±12 dB at 15 kHz

Loudness Control
(VOL -30 dB) +10 dB at 100 Hz

Subsonic Filter
(DC Coupled off) 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
Mono 16.1 dBf (3.5 μV)
Stereo 37.9 dBf (43 μV)

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 at 65 dBf
Stereo Separation Ratio 50 dB at 1,000 Hz
40 dB at 50 Hz to 10,000 Hz

Subcarrier Product Ratio 70 dB

Antenna Impedance 300Ω Balanced and 75Ω unbalanced

FM Frequency Range 88 MHz to 108 MHz

FM TUNER SECTION

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

GENERAL

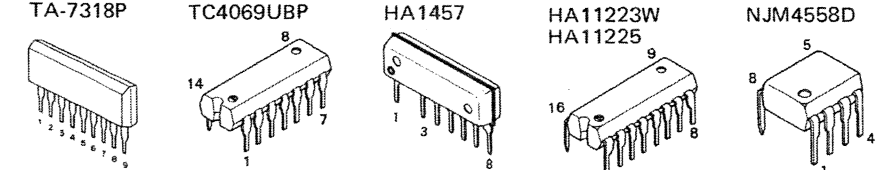
Power Consumption 5.3A (UL and CSA)
600W (IEC)
370W (rated power at 8Ω)
45W (non signal)
Switched 1, Unswitched 1

Dimensions W: 546 mm (21 1/2")
H: 172 mm (6 3/4")
D: 411 mm (16 1/8")

Weight (Net) 15 kg (33 lbs)
(Gross) 17.2 kg (37.9 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.



PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
56 3A	N09-0287-05	SCREW (DIAL BOARD)	
57 2A, 3B	N09-0293-05	SCREW (PULLEY)	
58 1B	N09-0303-05	SCREW (DIN)	
59 1A	N09-0314-05	SCREW (VARISTOR)	
60 3A	N14-0074-05	SPEED NUT	
61 3A, 3B	N29-0033-05	PUSH RIVET	
62 2B	S90-0017-05	REMOTE SWITCH SHAFT	
63 2B	S90-0018-05	REMOTE WIRE	*
S1	S33-4012-05	LEVER SWITCH (POWER)	KP
S1	S33-4014-05	LEVER SWITCH (POWER)	UM
S1	S33-4014-05	LEVER SWITCH (POWER)	XH
S1	S33-4025-05	LEVER SWITCH (POWER)	*T
S1	S33-4025-05	LEVER SWITCH (POWER)	E
-	T90-0202-05	ANTENNA (FM)	
65 1B	T90-0083-05	ANTENNA (AM)	
Q1 ,2	V01-1095-00	2SA1095	
Q3 ,4	V03-2565-00	2SC2565	
66 1B	X00-2050-10	POWER SUPPLY PCB ASSY	*K
66 1B	X00-2050-10	POWER SUPPLY PCB ASSY	P
66 1B	X00-2050-81	POWER SUPPLY PCB ASSY	UM
66 1B	X00-2050-81	POWER SUPPLY PCB ASSY	XH
66 1B	X00-2052-71	POWER SUPPLY PCB ASSY	TE
67 2B	X05-1670-10	TUNER PCB ASSY	*K
67 2B	X05-1670-11	TUNER PCB ASSY	XT
67 2B	X05-1670-11	TUNER PCB ASSY	UM
67 2B	X05-1670-11	TUNER PCB ASSY	EH
68 2B	X11-1560-10	TONE AMP PCB ASSY	*
POWER SUPPLY (X00-2050-10)			
C1 ,2	C24-1810-51	ELECTRO 1UF 63WV	
C3 -6	C46-1710-47	MYLAR 0.1UF M	
C7	C24-1222-71	ELECTRO 220UF 16WV	
C8	C24-1733-51	ELECTRO 3.3UF 50WV	
C9	C25-1247-67	LL-ELEC 47UF 16WV	
C10 -14	C54-2710-39	CERAMIC 0.01UF F	
C15 ,16	C90-0413-05	ELECTRO 10000UF 70SV	*
C17	C46-1722-27	MYLAR 0.0022UF M	
C18	C26-1447-57	ELECTRO 4.7UF 25WV	
C21 -24	C46-1722-36	MYLAR 0.022UF K	
C25 ,26	C46-1710-36	MYLAR 0.01UF K	
100 1B	E20-0812-05	BINDING POST ASSY	
F1 ,2	F05-4022-05	FUSE (4A) X00-2050-81	
F1 ,2	F05-4024-05	FUSE (4A) X00-2052-71	
F1	F05-7022-05	FUSE (7A) X00-2050-10	
F3	F05-2021-05	FUSE (2A) X00-2050-10	
F3	F05-2023-05	FUSE (2A) X00-2050-81	
F3	F05-2029-05	FUSE (2A) X00-2052-71	
-	J13-0055-05	FUSE HOLDER	
L1 ,2	L39-0085-05	COIL	
R3 ,4	R43-1215-15	FL-PROOF RD150 J 2E	
R5 -8	R43-1247-95	FL-PROOF RD4.7 J 2E	
R9 -12	R92-0167-05	METAL 0.22 J 3D	
R17 ,18	R43-1222-15	FL-PROOF RD220 J 2E	
R21 ,22	R47-5547-95	FL-PROOF RS4.7 J 3D	
R36	R47-5568-15	FL-PROOF RS680 J 3D	
R38	R92-0173-05	RC 2.2M K 2H (2050-10)	
R41 ,42	R47-5447-95	FL-PROOF RS4.7 J 3A	
R43 ,44	R47-5410-05	FL-PROOF RS10 J 3A	

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
R49 ,50	R47-5456-15	FL-PROOF RS560 J 3A	
R51 ,52	R47-5433-25	FL-PROOF RS3.3K J 3A	
VR1 ,2	R12-0056-05	TRIMMING POT (BIAS)	
VR3 ,4	R12-7007-05	TRIMMING POT (METER)	
RL1	S51-2038-05	RELAY	
S1	S90-0027-05	SLIDE SWITCH (SPKR)	*
S2	S31-2046-05	SLIDE SW X00-2050-81	
S2	S31-2046-05	SLIDE SW X00-2052-71	
D1 ,2	V11-5100-40	STV-4H(G)	
D3 ,4	V11-0271-05	1S2076 OR 1S1555	
D5 ,6	V11-0273-05	1S2076A	
D7 -9	V11-0271-05	1S2076 OR 1S1555	
D10	V11-0295-05	W06B OR V06B	
D11	V11-2101-40	M4C-51-12*1	
IC1	V30-0292-10	TA7318P	
Q1 ,2	V03-0468-05	2SC1913(O,R)	
Q3 ,4	V01-0188-05	2SA913(O,R)	
Q5 ,6	V03-1845-00	2SC1845 OR 2SC1890A	
Q7	V01-1023-00	2SA1023 OR 2SB725	
Q8 ,9	V03-0297-05	2SC945 OR 2SC828A	
Q10	V03-2378-00	2SC2378 OR 2SD767	
Q11	V01-0954-00	2SA954 OR 2SA984K	
TUNER (X05-1670-10)			
D14	B30-0191-05	LED (GD-4-207RD)	
FL1 -5	B30-0084-05	LAMP (SV, 50MA) FIG 102	
C1	C52-1747-16	CERAMIC 470PF K	
C2 ,3	C55-1710-38	CERAMIC 0.01UF Z	
C4 -7	C55-1747-38	CERAMIC 0.047UF Z	
C5	C52-1747-16	CERAMIC 470PF K	
C8	C52-1733-16	CERAMIC 330PF K	
C9	C24-1747-41	ELECTRO 0.47UF 50WV	
C10 -12	C55-1747-38	CERAMIC 0.047UF Z	
C14	C24-1710-51	ELECTRO 1UF 50WV	
C15	C55-1710-38	CERAMIC 0.01UF Z	
C16	C24-1710-51	ELECTRO 1UF 50WV	
C18	C24-1210-61	ELECTRO 10UF 16WV	
C19	C24-1010-71	ELECTRO 100UF 10WV	
C20	C24-0822-71	ELECTRO 220UF 6.3WV	
C21	C24-1210-61	ELECTRO 10UF 16WV	
C22	C24-1210-71	ELECTRO 100UF 16WV	
C23	C46-1747-36	MYLAR 0.047UF K	
C24	C46-1715-26	MYLAR 0.0015UF K	
C25	C48-1710-25	POLYSTY 1000PF J	
C26	C46-1722-26	MYLAR 0.0022UF K	
C27	C24-1747-41	ELECTRO 0.47UF 50WV	
C28 ,29	C24-1733-51	ELECTRO 3.3UF 50WV	
C30	C24-1710-51	ELECTRO 1UF 50WV	
C31	C46-1710-36	MYLAR 0.01UF K	
C32	C24-1710-51	ELECTRO 1UF 50WV	
C33 ,34	C24-1210-61	ELECTRO 10UF 16WV	
C35 -38	C25-1722-47	LL-ELEC 0.22UF 50WV	
C39	C71-1727-15	CERAMIC 270PF J	
C40 ,41	C24-1210-61	ELECTRO 10UF 16WV	
C42 -47	C46-1727-25	MYLAR 0.0027UF J	
C48	C70-1715-05	CERAMIC 15PF J	
C49	C90-0245-05	CERAMIC 0.1UF M	
C50	C52-1710-26	CERAMIC 0.001UF K	
C51	C24-1210-61	ELECTRO 10UF 16WV	
C52 ,53	C90-0245-05	CERAMIC 0.1UF M	
C55	C71-1708-02	CERAMIC 8PF D	
C56	C71-1747-05	CERAMIC 47PF J	

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
C81	C24-1010-71	ELECTRO 100UF 10WV	
C82	C24-6522-61	ELECTRO 22UF 35WV	
C83	C24-1010-71	ELECTRO 100UF 10WV	
C84 ,85	C24-1247-61	ELECTRO 47UF 16WV	
C86	C24-6522-61	ELECTRO 22UF 35WV	
C87	C24-1010-71	ELECTRO 100UF 10WV	
C88 -90	C24-1733-51	ELECTRO 3.3UF 50WV	
C91	C71-1709-02	CERAMIC 9PF D	
L1 ,2	L40-1011-03	INDUCTOR	
R59 ,60	R40-8382-16	RC 820 K 2H	
R63 -66	R43-5282-15	FL-PROOF RD820 J 2E	
R67 ,68	R43-1247-05	FL-PROOF RD47 J 2E	
R69 ,70	R47-5456-25	FL-PROOF RS5.6K J 3A	
R71 -74	R43-1210-15	FL-PROOF RD100 J 2E	
R81	R43-5210-15	FL-PROOF RD100 J 2E	
R87	R40-8382-16	RC 820 K 2H	
R96	R47-5422-05	FL-PROOF RS22 J 3A	
R97	R47-5433-15	FL-PROOF RS330 J 3A	
R99 ,100	R47-5515-15	FL-PROOF RS150 J 3D	
R101,102	R47-5510-25	FL-PROOF RS1K J 3D	
R103	R47-5556-15	FL-PROOF RS560 J 3D	
R124	R47-5510-25	FL-PROOF RS1K J 3D	
VR1	R08-5046-05	POTENTIOMETER (VOLUME)	*
VR2	R06-5030-05	POTENTIOMETER (BALANCE)	
VR3 -5	R13-5020-05	POTENTIOMETER (TONE)	*
VR6 ,7	R12-0502-05	TRIMMING POT 100 OFFSET	
S1 -4	S42-4010-05	PUSH SWITCH FIG 114	*
S5 ,6	S01-1062-05	ROTARY WAFER SWITCH	*
D1 ,2	V11-4103-60	XZ-051	
D3 ,4	V11-0271-05	1S2076 OR 1S1555	
D5	V11-4103-60	XZ-051	
D6	V11-0344-05	WZ-140 OR YZ-140	
D7 -10	V11-0051-05	1N60	
IC1 ,2	V30-0264-10	HA1457	
Q1 ,2	V01-0992-10	2SA992(F,E) OR 2SA872	
Q3 ,4	V09-0145-30	UPA68H(L,M)	
Q5 -8	V03-1845-10	2SC1845(F,E) OR 2SC1775	
Q9 ,10	V03-2259-30	2SC2259(F,G)	
Q11 -14	V01-0199-05	2SA899(B,V)	
Q15 ,16	V03-0460-05	2SC1904(B,V)	
Q17	V03-0494-05	2SC1509(G,R)	
Q18 ,19	V03-0348-05	2SC945(O,P)	
Q20	V04-0762-00	2SD762 OR 2SD330	
Q21 ,22	V03-0348-05	2SC945(O,P)	
Q23	V03-1567-00	2SC1567	
Q24 ,25	V01-0733-90	2SA733(A)	

PARTS LIST

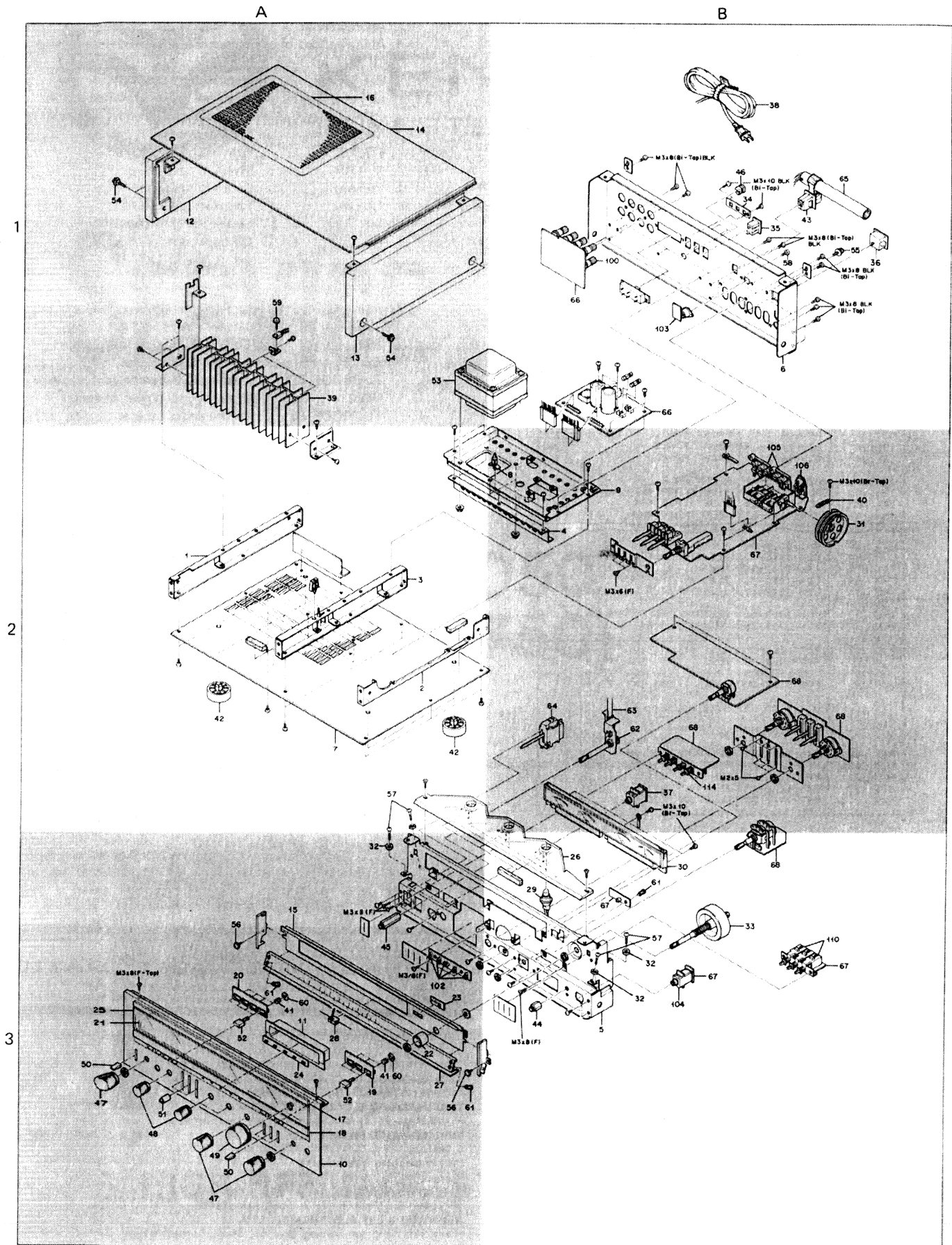
Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考	Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
1	2A	-		22	3A	B07-0278-04	ESCUTCHEON
2	2B	-		23	3A	B08-0006-04	INDICATOR
3	2A	-		24	3A	B08-2019-03	INDICATOR
4	2B	-		25	3A	B10-0248-04	FRONT GLASS
5	3B	-		26	3B	B19-0205-02	LIGHTING ACRYLIC RESIN
6	1B	-		27	3A	B20-0444-04	DIAL CALIBRATIONS
7	2A	-		28	3A	B21-0033-03	DIAL POINTER
8	2B	-		29	3B	B30-0184-05	LAMP
9	2B	-		30	3B	B31-0302-05	METER
10	3A	A20-1424-03	FRONT PANEL	31	2B	D15-0171-13	PULLEY
10	3A	A20-1424-03	FRONT PANEL	32	3A, 3B	D15-0172-04	PULLEY X4
10	3A	A20-1424-03	FRONT PANEL	33	3B	D20-0149-03	DIAL SHAFT ASSY
10	3A	A20-1424-03	FRONT PANEL	34	1B	D32-0082-04	STOPPER (VOLTAGE)
10	3A	A20-1425-03	FRONT PANEL	34	1B	D32-0082-04	STOPPER (VOLTAGE)
10	3A	A20-1426-03	FRONT PANEL	34	1B	D32-0082-04	STOPPER (VOLTAGE)
11	3A	A33-0055-03	REFLECTOR	35	1B	E03-0008-05	AC OULET
12	1A	A50-0057-03	SIDE PLATE L	35	1B	E03-0008-05	AC OULET
12	1A	A50-0063-03	SIDE PLATE L	35	1B	E03-0017-05	AC OULET
13	1A	A50-0058-03	SIDE PLATE R	36	1B	E04-0004-05	RECEPTACLE (ANT)
13	1A	A50-0064-03	SIDE PLATE R	37	2B	E11-0060-15	PHONE JACK
14	1A	A54-0171-03	WOOD TOP BOARD	38	1B	E30-0181-05	POWER CORD
14	1A	A54-0171-03	WOOD TOP BOARD	38	1B	E30-0185-05	POWER CORD
14	1A	A54-0171-03	WOOD TOP BOARD	38	1B	E30-0545-05	POWER CORD
14	1A	A54-0171-03	WOOD TOP BOARD	38	1B	E30-0580-05	POWER CORD
14	1A	A54-0171-03	WOOD TOP BOARD	38	1B	E30-0602-05	POWER CORD
14	1A	A54-0172-03	WOOD TOP BOARD	39	1A	F01-0311-02	HEAT SINK
14	1A	A54-0177-03	WOOD TOP BOARD	40	2B	G01-0045-24	COILED SPRING
-	B46-0055-20	WARRANTY CARD	P	41	3A	G01-0364-04	COILED SPRING
-	B46-0060-00	WARRANTY CARD	T	-	H01-3025-04	CARTON BOX	*K
-	B46-0061-20	WARRANTY CARD	K	-	H01-3025-04	CARTON BOX	UM
-	B46-0062-20	WARRANTY CARD	U	-	H01-3025-04	CARTON BOX	X
-	B46-0063-00	WARRANTY CARD	U	-	H01-3026-04	CARTON BOX	P
-	B46-0064-00	WARRANTY CARD	X	-	H01-3027-04	CARTON BOX	T
-	B50-1859-00	INSTRUCTION MANUAL	*K	-	H01-3028-04	CARTON BOX	H
-	B50-1859-00	INSTRUCTION MANUAL	*U	-	H01-3051-04	CARTON BOX	E
-	B50-1860-00	INSTRUCTION MANUAL	*P	-	H10-1533-02	POLYSTYRENE FIXTURE	*
-	B50-1860-00	INSTRUCTION MANUAL	MX	-	H20-0415-04	COVER	M
-	B50-1861-00	INSTRUCTION MANUAL	*T	-	H20-0445-04	COVER	
-	B50-1862-00	INSTRUCTION MANUAL	*H	42	2A	J02-0101-05	FOOT X4
-	B59-0018-00	INSTRUCTION PRINT		43	1B	J19-0507-05	ANTENNA HOLDER
15	3A	B03-0141-02	DRESSING PLATE	44	3B	J32-0251-04	BOSS (M7)
16	1A	B04-0068-04	MESH PLATE	45	3A	J32-0255-04	BOSS (M8)
16	1A	B04-0068-04	MESH PLATE	46	1B	J41-0034-05	BUSHING
16	1A	B04-0068-04	MESH PLATE	46	1B	J42-0084-05	BUSHING
16	1A	B04-0068-04	MESH PLATE	46	1B	J42-0084-05	BUSHING
16	1A	B04-0070-04	MESH PLATE	46	1B	J42-0085-05	BUSHING
16	1A	B04-0073-04	MESH PLATE	47	3A	K23-0321-04	KNOB (SEL, VOL, SP)
17	3A	B07-0271-04	ESCUTCHEON	48	3A	K23-0322-04	KNOB (BAL, TURNOVER)
17	3A	B07-0271-04	ESCUTCHEON	49	3A	K23-0324-04	KNOB (TUNING)
17	3A	B07-0271-04	ESCUTCHEON	50	3A	K27-0093-04	KNOB (LEVER)
17	3A	B07-0272-04	ESCUTCHEON	51	3A	K27-0094-04	KNOB (SLIDE)
17	3A	B07-0282-04	ESCUTCHEON	52	3A	K29-0319-04	KNOB (PUSH)
18	3A	B07-0273-04	ESCUTCHEON	53	1A	L01-1751-05	POWER TRANSFORMER
18	3A	B07-0273-04	ESCUTCHEON	53	1A	L01-1751-05	POWER TRANSFORMER
18	3A	B07-0273-04	ESCUTCHEON	53	1A	L01-1756-05	POWER TRANSFORMER
18	3A	B07-0273-04	ESCUTCHEON	53	1A	L01-1757-05	POWER TRANSFORMER
18	3A	B07-0273-04	ESCUTCHEON	53	1A	L01-1757-05	POWER TRANSFORMER
19	3A	B07-0274-04	ESCUTCHEON	54	1A	N08-0126-05	DRESSED SCREW
20	3A	B07-0275-04	ESCUTCHEON	55	1B	N08-0128-35	DRESSED SCREW (GND)
20	3A	B07-0276-04	ESCUTCHEON				
21	3A	B07-0277-04	ESCUTCHEON				

PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
C57	C24-1733-51	ELECTRO 3.3UF 50WV	
C58	C90-0245-05	CERAMIC 0.1UF M	
C59	C52-1710-26	CERAMIC 0.001UF K	
C60	C24-1210-61	ELECTRO 10UF 16WV	
C61	C55-1747-38	CERAMIC 0.047UF Z	
C62	C24-1710-51	ELECTRO 1UF 50WV	
C63	C90-0245-05	CERAMIC 0.1UF M	
C64	C46-1756-36	MYLAR 0.056UF K	
C65	C90-0245-05	CERAMIC 0.1UF M	
C66	C46-1768-26	MYLAR 0.0068UF K	
C67 ,68	C71-1712-15	CERAMIC 120PF J	
C69 ,70	C24-1733-51	ELECTRO 3.3UF 50WV	
C71 ,72	C71-1747-05	CERAMIC 47PF J	
C73 ,74	C24-1010-71	ELECTRO 100UF 10WV	
C75 ,76	C49-2011-34	MYLAR 0.011UF G	
C77 ,78	C49-2039-34	MYLAR 0.039UF G	
C79 ,80	C24-1447-61	ELECTRO 47UF 25WV	
C81 ,82	C90-0404-05	NP-ELEC 10UF 35WV	
C83	C24-6522-71	ELECTRO 220UF 35WV	
C84	C24-1710-51	ELECTRO 1UF 50WV	
C85 -88	C52-1756-16	CERAMIC 560PF K	
C89	C24-1433-61	ELECTRO 33UF 25WV	
C90	C24-1210-61	ELECTRO 10UF 16WV	
C91 ,92	C52-1718-26	CERAMIC 0.0018UF K	
C93 ,94	C71-1715-15	CERAMIC 150PF J	
C95	C55-1747-38	CERAMIC 0.047UF Z	
C98 -101	C24-1710-51	ELECTRO 1UF 50WV	
TC1 ,2	C05-0073-05	TRIMMER CAPACITOR	
103 1B	E06-0510-05	R/P CONNECTOR	
104 3B	E11-0065-05	PHONE JACK	
105 2B	E13-0612-05	PHONE JACK (6P)	
106 2B	E20-0438-05	TERMINAL BOARD (ANT)	
CF1 -5	L79-0085-05	FILTER ASSY	
CF6	L72-0078-05	CERAMIC FILTER	
L1	L40-1092-11	INDUCTOR	
L2	L40-2292-44	INDUCTOR	
L3	L30-0327-05	FM IFT	
L4	L30-0328-05	FM IFT	
L5	L32-0225-05	AM OSCILLATING COIL	
L6	L30-0329-05	AM IFT	
L7	L30-0284-05	AM IFT	
L8	L40-1021-03	INDUCTOR	
L9	L79-0073-05	LC FILTER X05-1670-11	
L10 ,11	L79-0060-05	FILTER	
L12	L40-1092-11	INDUCTOR	
L13	L40-1011-12	INDUCTOR	
R6	R43-1210-15	FL-PROOF RD100 J 2E	
R41	R43-1268-05	FL-PROOF RD48 J 2E	
R49	R47-5468-15	FL-PROOF RS680 J 3A	
R73	R43-1268-05	FL-PROOF RD68 J 2E	
R77	R47-5427-25	FL-PROOF RS2.7K J 3A	
R96 ,97	R48-2680-14	RN 6.8K G 2E	
R98 ,99	R48-2820-24	RN 82K G 2E	
R104-107	R43-1233-05	FL-PROOF RD33 J 2E	
R112	R43-1247-05	FL-PROOF RD47 J 2E	
R117-119	R47-5413-15	FL-PROOF RS130 J 3A	
VR1	R12-1041-05	TRIMMING POT 3.3K VCO	
VR2	R12-5030-05	TRIMMING POT 100K	
VR3	R12-3051-05	TRIMMING POT 22K PILOT	
S1	S29-1119-05	ROTARY WAFER SW (SEL)	*
S2 ,3	S33-2052-05	LEVER SWITCH (TAPE)	*

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Re- marks 備考
S4	S33-4023-05	LEVER SWITCH (MODE)	
S5	S31-2052-05	SLIDE SWITCH (EMPHASIS)	*
S6 -8	S42-3028-05	PUSH SWITCH FIG 110	*
D1 ,2	V11-0051-05	1N60	
D3 -13	V11-0271-05	1S2076 OR 1S1555	
D15	V11-0271-05	1S2076 OR 1S1555	
IC1	V30-0321-10	HA11225	
IC2	V30-0266-20	HA11223W	
IC3	V30-0248-10	NJM4558D(A)	
IC4	V30-0297-20	TC4069UBP OR UPD4069C	
IC4	V30-0297-20	TC4069UBP, MC14069UBCP	
IC5	V30-0196-05	HA1197 OR LA1240	
Q1	V03-1923-00	2SC1923	
Q2	V03-0945-40	2SC945(O, P, K), 2SC828A	
Q3	V09-0144-40	2SK163(N) OR 2SK136(S)	
Q4	V01-0992-10	2SA992(F, E)	
Q5 ,6	V04-0655-20	2SD655(E, F)	
Q7	V03-0945-40	2SC945(O, P, K), 2SC828A	
Q8 ,9	V09-0144-60	2SK163(L)	
Q10 -13	V01-1023-10	2SA1023(R, O) OR 2SB725	
Q14 ,15	V03-2378-10	2SC2378(R, O) OR 2SD767	
Q16 ,17	V01-1023-10	2SA1023(R, O) OR 2SB725	
Q18	V01-0733-90	2SA733(A) OR 2SA564A	
TONE AMP (X11-1560-10)			
C1 ,2	C46-1710-36	MYLAR 0.01UF K	
C3 ,4	C46-1727-36	MYLAR 0.027UF K	
C5 ,6	C25-1433-57	LL-ELEC 3.3UF 25WV	
C7 ,8	C25-1410-67	LL-ELEC 10UF 25WV	
C9 ,10	C71-1722-15	CERAMIC 220PF J	
C11 ,12	C46-1718-36	MYLAR 0.018UF K	
C13 ,14	C25-6522-57	LL-ELEC 2.2UF 35WV	
C15 -18	C46-1715-35	MYLAR 0.015UF J	
C19 ,20	C71-1747-05	CERAMIC 47PF J	
C21 ,22	C25-1410-67	LL-ELEC 10UF 25WV	
C23 ,24	C52-1718-26	CERAMIC 0.0018UF K	
C25 ,26	C46-1727-26	MYLAR 0.0027UF K	
C27 ,28	C46-1718-26	MYLAR 0.0018UF K	
C29 ,30	C46-1710-26	MYLAR 0.001UF K	
C31 ,32	C52-1739-16	CERAMIC 390PF K	
C33 ,34	C52-1756-16	CERAMIC 560PF K	
C35 -38	C46-1782-25	MYLAR 0.0082UF J	
C39 ,40	C25-1733-47	LL-ELEC 0.33UF 50WV	
C41 ,42	C46-1718-46	MYLAR 0.18UF K	
C43 ,44	C46-1768-36	MYLAR 0.068UF K	
C45 ,46	C46-1727-36	MYLAR 0.027UF K	
C47 ,48	C46-1715-46	MYLAR 0.15UF K	
C49 ,50	C71-1722-15	CERAMIC 220PF J	
C51 ,52	C71-1733-05	CERAMIC 33PF J	
C53 ,54	C24-1010-71	ELECTRO 100UF 10WV	
C55 ,56	C71-1733-05	CERAMIC 33PF J	
C57 ,58	C24-1733-51	ELECTRO 3.3UF 50WV	
C59 ,60	C46-1712-26	MYLAR 0.0012UF K	
C61 ,62	C71-1715-05	CERAMIC 15PF J	
C63	C71-1701-01	CERAMIC 1PF C	
C65 ,66	C71-1710-15	CERAMIC 100PF J	
C67 ,68	C71-1704-01	CERAMIC 4PF C	
C69 ,70	C24-2010-51	ELECTRO 1UF 100WV	
C71 ,72	C24-1010-71	ELECTRO 100UF 10WV	
C73 ,74	C24-1847-61	ELECTRO 47UF 63WV	
C75 ,76	C71-1733-05	CERAMIC 33PF J	
C77 ,78	C71-1722-15	CERAMIC 220PF J	
C79 ,80	C71-1710-15	CERAMIC 100PF J	

EXPLODED VIEW



PARTS LIST

Fig. No.	Parts No.
M3 × 6	N30-3006-46
M3 × 6 BLK	N30-3006-45
M3 × 6 (F-Tap) BLK	N88-3006-45
M3 × 8 BLK	N30-3008-45
M3 × 8 (Br-Tap)	N87-3008-46
M3 × 8 (F-Tap)	N88-3008-46
M3 × 8 (Bi-Tap) BLK	N89-3008-45
M3 × 8 (Tp-T)	N91-3008-46
M3 × 10 (Br-Tap)	N87-3010-46
M3 × 10 (F-Tap)	N88-3010-46
M4 × 10 (Br-Tap)	N87-4010-46

INSTRUCTIONS FOR PARTS LIST

Ref. No. 参照番号	Parts No. 部品番号	Description 部品名 / 規格	Remarks 備考
①	②	③	④
11 1A	A01-0352-02	CASE	
12 3A	A20-1402-03	FRONT PANEL	
12 3A	A20-1402-03	FRONT PANEL	
12 3A	A20-1402-03	FRONT PANEL	
12 3A	A20-1402-03	FRONT PANEL	
12 3A	A20-1403-03	FRONT PANEL	
12 1A	A50-0059-02	SIDE PLATE (L)	
14 1A	A50-0060-02	SIDE PLATE (R)	
15 1A	A54-0169-02	WOOD TOP BOARD	
⑤			⑥
C31 -38	C91-0039-05	MYLAR 0.1UF J	
C39 -40	C24-1410-61	ELECTRO 10UF 25WV	
C41 -42	C46-1712-26	MYLAR 0.0012UF L	
C43 -44	C24-1710-51	ELECTRO 1UF 50WV	
C45	C25-6547-67	ELECTRO 47UF 35WV	
C46	C24-2010-51	ELECTRO 1UF 100WV	
C47	C71-1727-15	CERAMIC 270PF J	
F10 2B	F05-6024-05	FUSE (2A) F1-4	IF
F10 2B	F05-6024-05	FUSE (2A) F1-4	UM
F10 2B	F05-6022-05	FUSE (1/2A) F1-4	TW
F10 2B	F05-6022-05	FUSE (1/2A) F1-4	L
F11 2B	J13-0055-05	FUSE HOLDER	
L1 -2	L29-0035-05	COIL	
R5 -6	R43-1227-25	FL-PROOF RD2.7K J 2E	
R17 -18	R43-1247-25	FL-PROOF RD4.7K J 2E	
R23 -24	R43-1210-15	FL-PROOF RD100 J 2E	
R25 -28	R43-1222-15	FL-PROOF RD220 J 2E	
R29 -30	R47-1412-35	FL-PROOF RS12K J 3A	

- Exploded view drawing No.
 - Position in exploded view.
 - Symbol of new parts.
 - Area to which parts are shipped. Example: A20-1402-03 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.
 - Reference No. in schematic diagram.
 - 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.

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