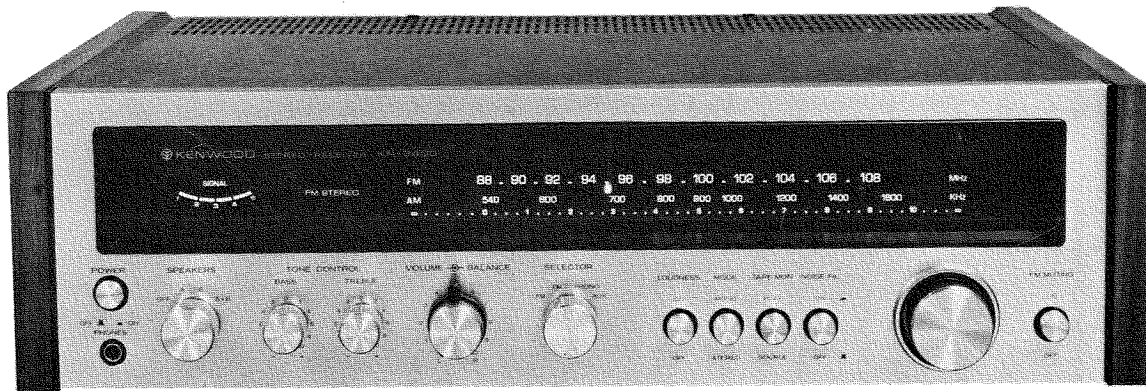


**KENWOOD**  
HI/FI STEREO COMPONENTS

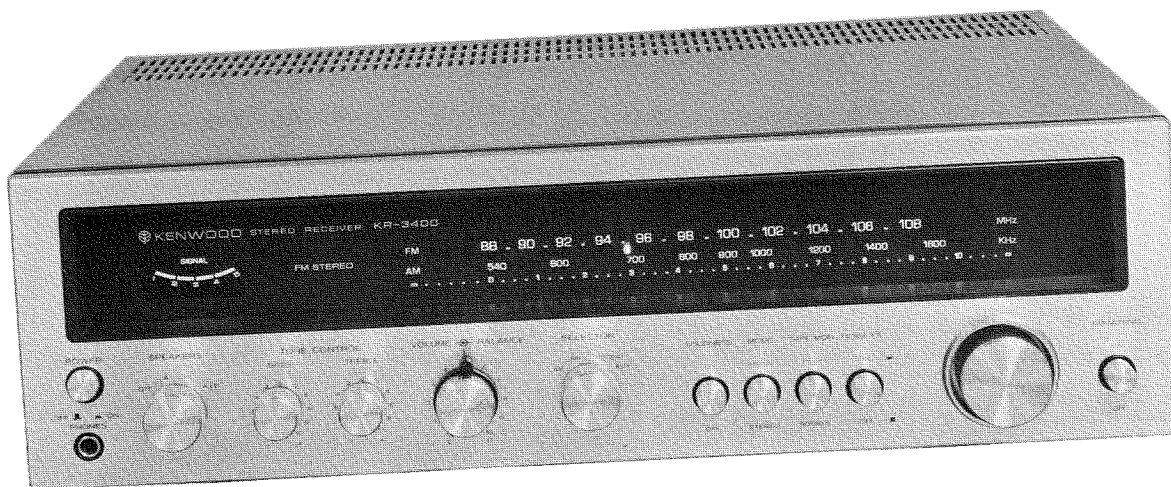
# SERVICE MANUAL

**KR-3400**  
**KR-2400**



**AM-FM STEREO RECEIVER**

# EUROPE TYPE/POWER VOLTAGE SELECTOR



KR-3400, KR-2400 have a voltage selector switch on the rear panel (except for K, P, L type) to meet with two kinds of line voltage of 110 ~ 120 Volts AC and 220 ~ 240 Volts AC, which is set to the voltage of its destination.

Before operating this receiver, make sure that the position of the AC Voltage Selector Switch matches your line voltage. If not, it must be changed to the proper setting.

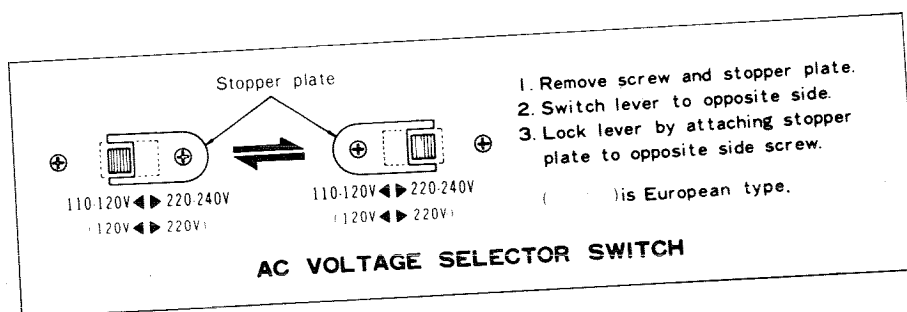
To change, first disconnect the AC line cord, then remove the stopper plate and slide the AC Voltage Switch to the opposite side. Then reattach the stopper plate to the other side.

When the position of the AC Voltage Selector Switch is changed, it is also necessary to change the power fuse. For 110 ~ 120 volt operation a 2 ampere fuse should be used. For 220 ~ 240 volt operation a 1 ampere fuse should be used. If the power fuse fails, remove blown fuse and replace with the same type fuse of the same capacity.

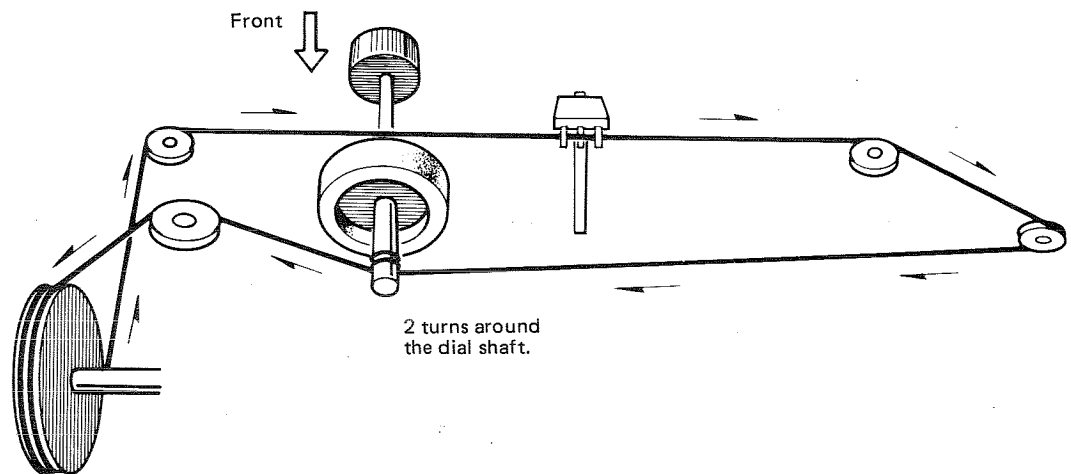
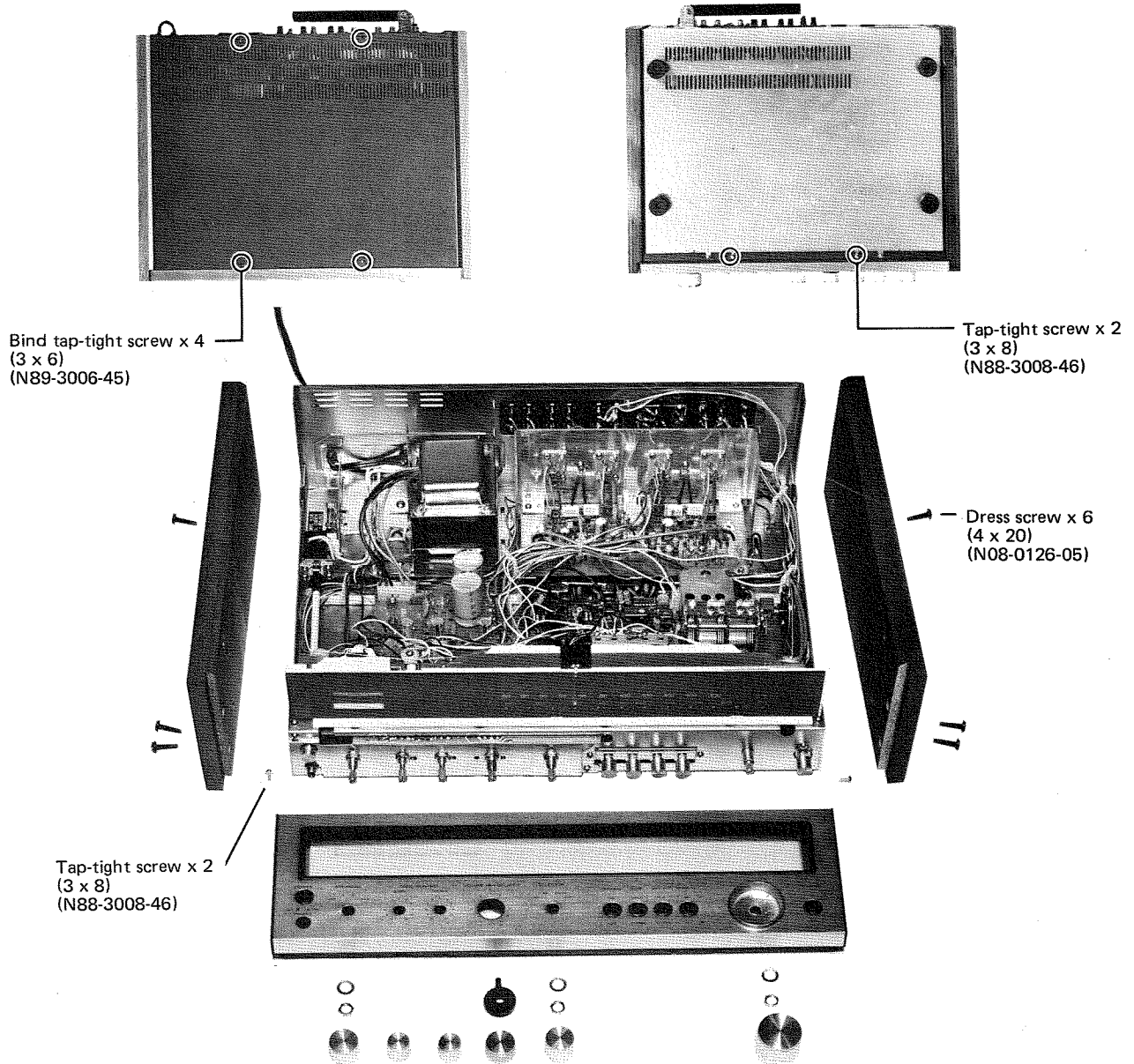
When you replace the fuse, turn the fuse holder in the direction of the arrow using a Phillips screw driver. In some districts, the set will be provided with another type of fuse holder, which allows easy replacement of the fuse without using the Phillips screw driver.

## NOTE:

Always disconnect power supply before replacing a fuse.



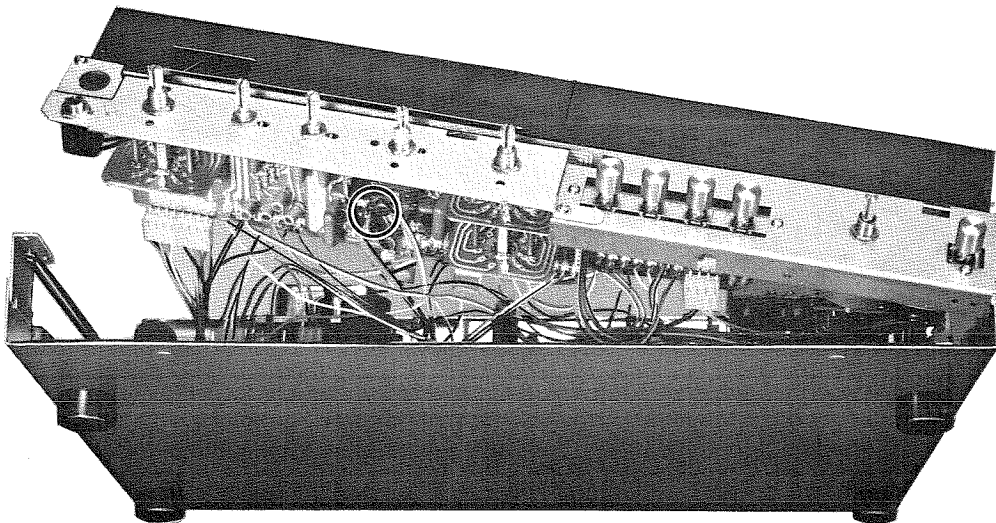
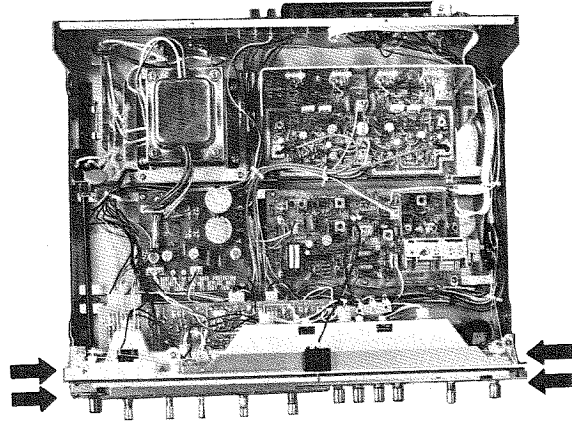
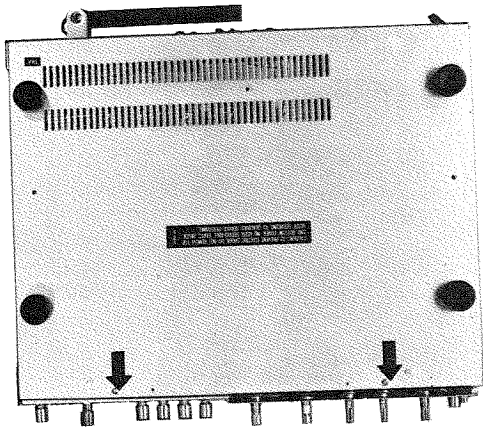
# DISASSEMBLY / CORD STRINGING



## REPLACEMENT OF IC

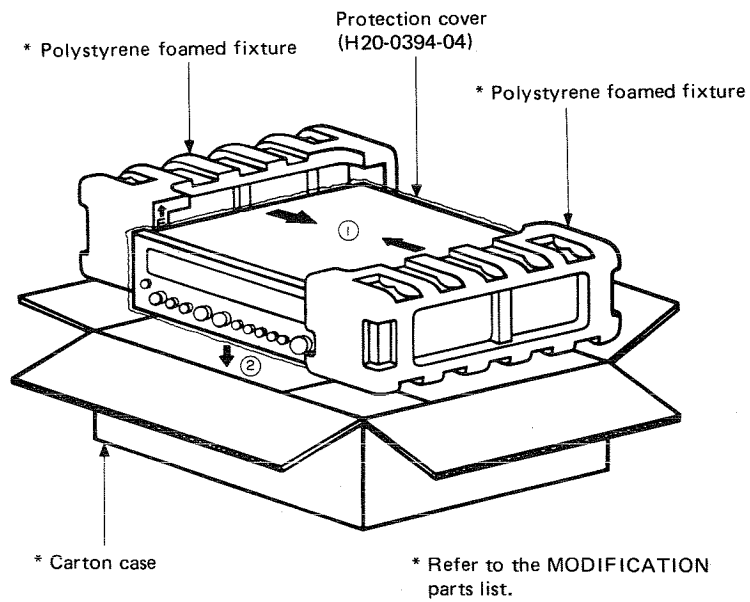
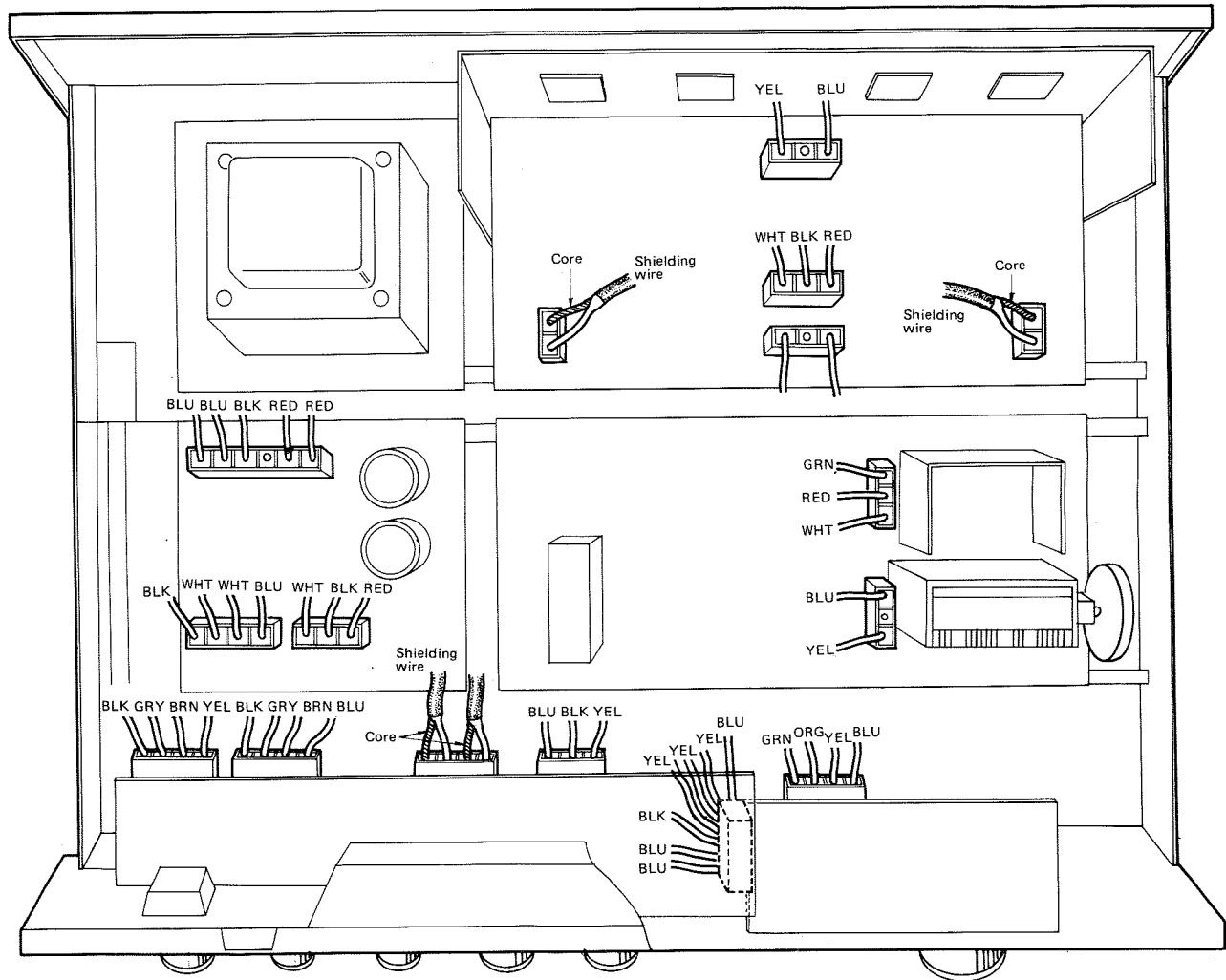
In the case of replacement of IC (RC4558T) in CONTROL unit, proceed as below.

1. Remove two wooden side board, the case, and the front panel. (Refer to P. 5)
2. Unscrew (indicated by arrows) the Sub-panel from the chassis.
3. Lift the Sub-panel with care that the dial string and internal wiring would not be out of place.
4. Replace the IC (RC4558T) from underside.

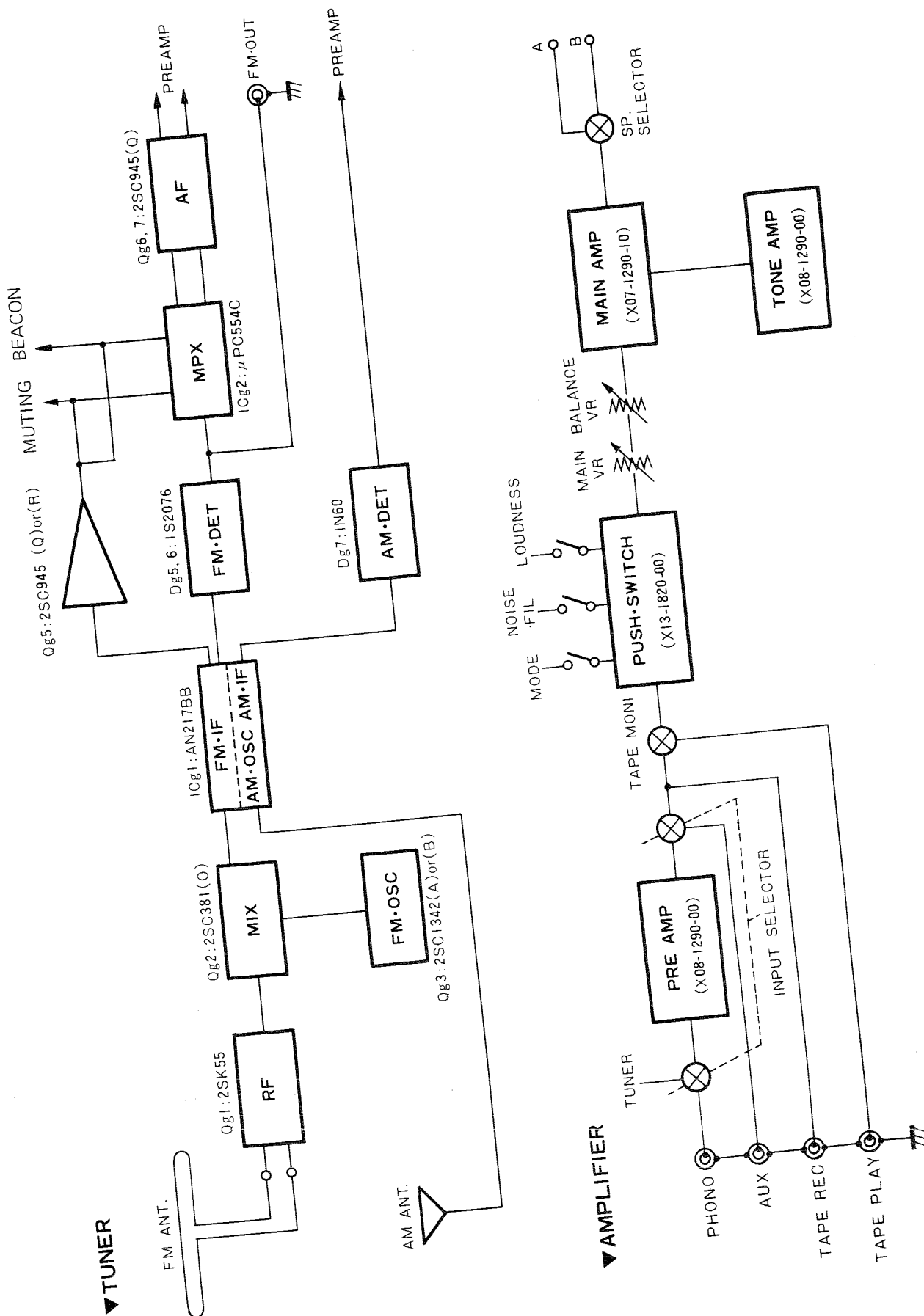


# CONNECTOR/PACKING

Insert the connectors in a correct position as it was before, if they were removed for repairs etc.



# BLOCK DIAGRAM

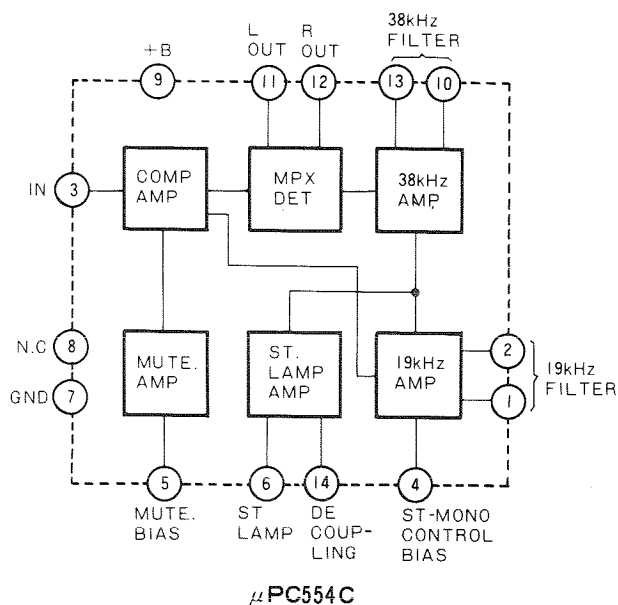
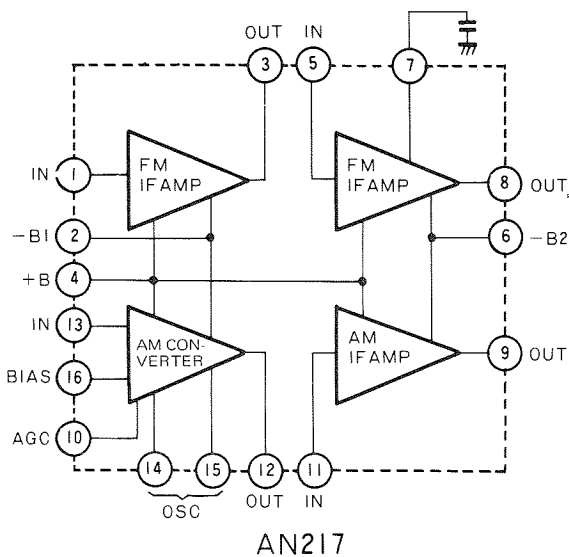


# CIRCUIT DESCRIPTION

## ■ TUNER (X05-1190-10, -41, -61)

In this section, two ICs are employed. The one acts for FM-IF, AM-OSC, AM-MIX, and AM-IF stage, the other for FM-MPX stage. Consequently, only the LC resonance circuit for OSC, MIX, IF and the ceramic filter are added as external parts on AM circuitry.

MPX IC consists of composite signal amplifier, muting amplifier, MPX detection, 38 kHz amplifier, STEREO lamp amplifier and 19 kHz amplifier, which established stable separation characteristics.



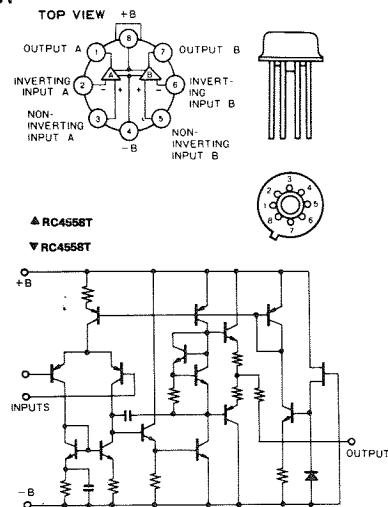
## ■ CONTROL AMP (X08-1290-00)

PREAMP section and TONE CONTROL section are constructed on the same PC board as CONTROL AMP. In PREAMP section, a metal can sealed monolithic IC is used for amplification, which is composed of the differential amplifier, the emitter followers, the class A driver, and pure complementary output stage.

This circuit possesses the characteristics of wide dynamic range and low distortion by supplying two power supplies, positive and negative.

TONE CONTROL characteristics is obtained by controlling NFB effect from MAIN AMP section.

### ▼ RC4558T



## ■ MAIN AMP (X07-1290-10, -11)

Good N.F.B. effect and bias current stability are established by using the metal can sealed transistors in the differential amplifier of the first stage and in class A driver.

Transistors and thermistor for bias setting are used in the complementary circuit, and full temperature compensation is effective.

Complementary and final circuitry consists of a direct-coupled pure complementary.

Meanwhile, protection circuit is the current limiter type (ASO limiter) suppressing the over current through the power transistor.

This protective action are self-return.

# ADJUSTMENT

- Tuning dial is set to the proper point corresponding to no radio stations.
- The sweep and the r.f. generator are set to the lowest response possible on oscilloscope.
- When connecting the r.f. generator to the antenna terminal use the dummy antenna . . . refer to Fig. 2.
- Use the insulated screwdriver adjusting the i.f.t.
- SELECTOR is FM position.
- FM MUTING is OFF position unless it is required.
- Test point shown in the schematic diagram.
- For TRACKING adjustment, repeat several times and confirm the reception of broadcasting.

No.	ALIGN	TEST EQUIPMENTS		RECEIVER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
<b>FM SECTION</b>							
1	IFT	SWEEP to TP-1 via. 5pF cap.	10.7 MHz	Non-station	VTVM & SCOPE to TP-2 via. 100kΩ resist.	Tg4, 5	Maximum deflection (Fig. 2 ~ 4)
2	DISCRIMINATOR	Same	Same	Same	VTVM & SCOPE to FM DET. OUT jack	Tg6	S-response and symmetry on <b>its each MHz</b> center frequency (Fig. 5)
3	TRACKING	RF-SG to ANT via. dummy ant.	90 MHz 75 kHz (Dev.) 400 Hz (Mod.)	90 MHz	VTVM & SCOPE to REC jack	Tg1, 2, 3	Maximum deflection
4	TRACKING	Same	108 MHz 75 kHz (Dev.) 400 Hz (Mod.)	108 MHz	Same	CTg1, 2, 3	Same
5	SEPARATION	MPX-SG to RF-SG ext. jack (Fig. 1)	98 MHz 67.5 kHz (Dev.) 400 Hz (Mod.) L or R (Select) 60 dB (Input)	98 MHz	VTVM & SCOPE to REC jack	Tg10 (19 kHz) (38 kHz)	Minimum cross-talk (Maximum separation)
6	38 kHz (This coil sealed usually should not be touched at random if not necessary.)	MPX-SG to RF-SG ext. jack (Fig. 1)	98 MHz 67.5 kHz (Dev.) 400 Hz (Mod.) Phase → Reverse 60 dB (Input)	Same	VTVM & SCOPE to 13th terminal of ICg2	Tg10 (19 kHz) (38 kHz)	Maximum deflection (Adjust separation in the same manner as No. 5)
7	MUTING	Same	98 MHz 67.5 kHz (Dev.) 400 Hz (Mod.) 30 dB (Input)	98 MHz MUTING on	—	—	Confirm MUTING operates
8	BEACON	Same	Same	98 MHz	—	—	Confirm STEREO indicator lights

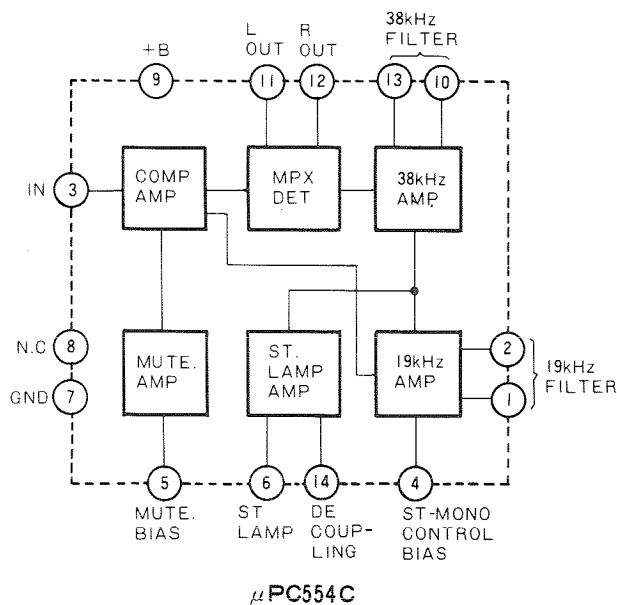
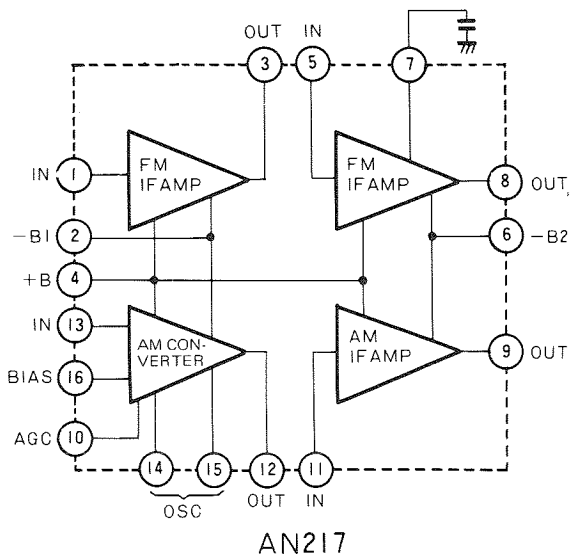


# CIRCUIT DESCRIPTION

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In this section, two ICs are employed. The one acts for FM-IF, AM-OSC, AM-MIX, and AM-IF stage, the other for FM-MPX stage. Consequently, only the LC resonance circuit for OSC, MIX, IF and the ceramic filter are added as external parts on AM circuitry.

MPX IC consists of composite signal amplifier, muting amplifier, MPX detection, 38 kHz amplifier, STEREO lamp amplifier and 19 kHz amplifier, which established stable separation characteristics.



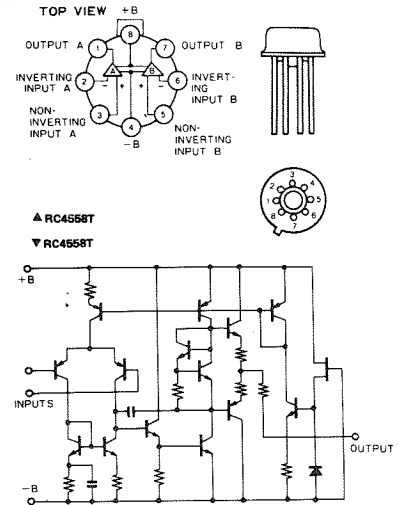
## ■ CONTROL AMP (X08-1290-00)

PREAMP section and TONE CONTROL section are constructed on the same PC board as CONTROL AMP. In PREAMP section, a metal can sealed monolithic IC is used for amplification, which is composed of the differential amplifier, the emitter followers, the class A driver, and pure complementary output stage.

This circuit possesses the characteristics of wide dynamic range and low distortion by supplying two power supplies, positive and negative.

TONE CONTROL characteristics is obtained by controlling NFB effect from MAIN AMP section.

### ▼ RC4558T



## ■ MAIN AMP (X07-1290-10, -11)

Good N.F.B. effect and bias current stability are established by using the metal can sealed transistors in the differential amplifier of the first stage and in class A driver.

Transistors and thermistor for bias setting are used in the complementary circuit, and full temperature compensation is effective.

Complementary and final circuitry consists of a direct-coupled pure complementary.

Meanwhile, protection circuit is the current limiter type (ASO limiter) suppressing the over current through the power transistor.

This protective action are self-return.

# ADJUSTMENT

- Tuning dial is set to the proper point corresponding to no radio stations.
- The sweep and the r.f. generator are set to the lowest response possible on oscilloscope.
- When connecting the r.f. generator to the antenna terminal use the dummy antenna . . . refer to Fig. 2.
- Use the insulated screwdriver adjusting the i.f.t.
- SELECTOR is FM position.
- FM MUTING is OFF position unless it is required.
- Test point shown in the schematic diagram.
- For TRACKING adjustment, repeat several times and confirm the reception of broadcasting.

No.	ALIGN	TEST EQUIPMENTS		RECEIVER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
<b>FM SECTION</b>							
1	IFT	SWEEP to TP-1 via. 5pF cap.	10.7 MHz	Non-station	VTVM & SCOPE to TP-2 via. 100k $\Omega$ resist.	Tg4, 5	Maximum deflection (Fig. 2 ~ 4)
2	DISCRIMINATOR	Same	Same	Same	VTVM & SCOPE to FM DET. OUT jack	Tg6	S-response and its symmetry on each side of 10.7 MHz center frequency (Fig. 5)
3	TRACKING	RF-SG to ANT via. dummy ant.	90 MHz 75 kHz (Dev.) 400 Hz (Mod.)	90 MHz	VTVM & SCOPE to REC jack	Tg1, 2, 3	Maximum deflection
4	TRACKING	Same	108 MHz 75 kHz (Dev.) 400 Hz (Mod.)	108 MHz	Same	CTg1, 2, 3	Same
5	SEPARATION	MPX-SG to RF-SG ext. jack (Fig. 1)	98 MHz 67.5 kHz (Dev.) 400 Hz (Mod.) L or R (Select) 60 dB (Input)	98 MHz	VTVM & SCOPE to REC jack	Tg10 (19 kHz) 38 kHz	Minimum cross-talk (Maximum separation)
6	38 kHz (This coil sealed usually should not be touched at random if not necessary.)	MPX-SG to RF-SG ext. jack (Fig. 1)	98 MHz 67.5 kHz (Dev.) 400 Hz (Mod.) Phase $\rightarrow$ Reverse 60 dB (Input)	Same	VTVM & SCOPE to 13th terminal of ICg2	Tg10 (19 kHz) 38 kHz	Maximum deflection (Adjust separation in the same manner as No. 5)
7	MUTING	Same	98 MHz 67.5 kHz (Dev.) 400 Hz (Mod.) 30 dB (Input)	98 MHz MUTING on	—	—	Confirm MUTING operates
8	BEACON	Same	Same	98 MHz	—	—	Confirm STEREO indicator lights

# ADJUSTMENT

No.	ALIGN	TEST EQUIPMENTS		RECEIVER SETTING	OUTPUT INDICATOR	ADJUSTMENT POINTS	REMARKS
		CONNECTION	SETTING				
<b>AM SECTION</b>							
1a	IFT	SWEEP to TP3 via. 5pF cap.	455 kHz	Non-station	VTVM & SCOPE to TP4	Tg8, 9	Maximum deflection.
1b	IFT	1,000 kHz RF-SG to ANT	1,000 kHz 400 Hz (30% Mod.)	1,000 kHz	VTVM & SCOPE to REC jack	Tg8, 9	Same
2a	TRACKING	Same	600 kHz 400 Hz (30% Mod.)	600 kHz	Same	Tg11 Ferrite ANT	Same
2b	TRACKING	Same	1,400 kHz 400 Hz (30% Mod.)	1,400 kHz	Same	CTg4, 5	Same
3	S METER	Same	1,000 kHz 400 Hz (30% Mod.) 60 dB (Input)	1,000 kHz	S meter	—	Confirm the meter deflection at 4, 5
<b>AUDIO SECTION</b>							
1a	BIAS	—	—	VOLUME is its min.	Ammeter	VRe1, 2	Meter indicates 30 mA (Fig. 6)
1b	BIAS	—	—	Same	DC VTVM	Same	Meter indicates 30 mV (Fig. 6)

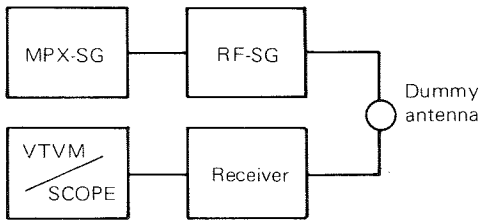


Fig. 1 Setting

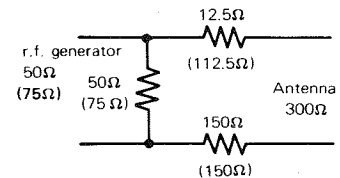


Fig. 2 Dummy Antenna

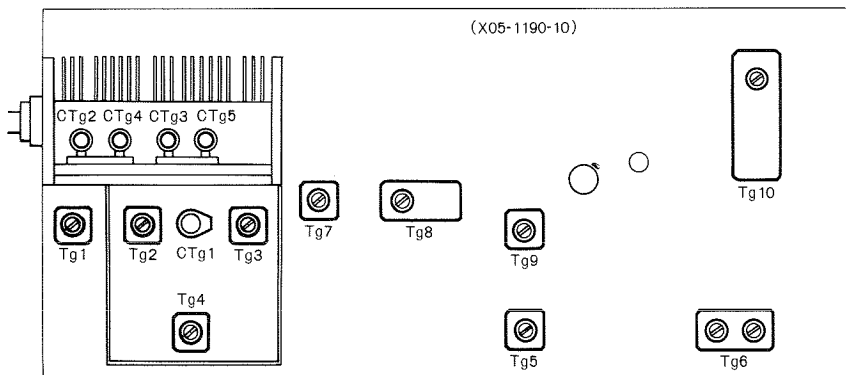


Fig. 3 Top View of PC Board

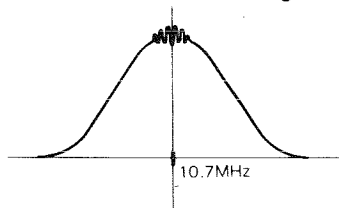


Fig. 4 IF Wave Form

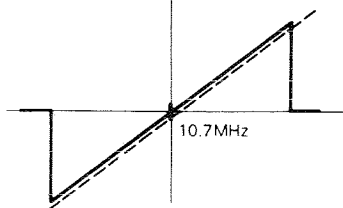


Fig. 5 DISCRI Wave Form

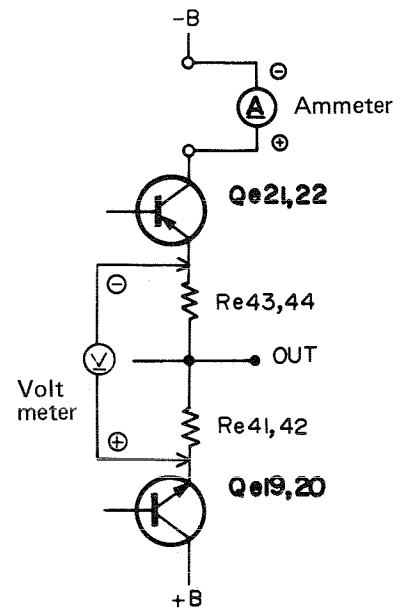


Fig. 6

# MODIFICATION PARTS LIST

Ref. No.	U.S.A (K)	Canada (P)	PX (U)	Australia (X)	Europe (W)	Scandinavia (L)	England (T)	South Africa (S)	Other area (M)	Description
-	A01-0246-03	A01-0246-03	A01-0246-03	A01-0246-03	A01-0247-02	A01-0247-02	A01-0246-03	A01-0246-03	A01-0246-03	Case
-	A20-0796-01	A20-0796-01	A20-0796-01	A20-0796-01	A20-0798-01	A20-0798-01	A20-0796-01	A20-0796-01	A20-0796-01	Panel assembly
-	A20-0785-05	A20-0785-05	A20-0785-05	A20-0785-05	A20-0787-05	A20-0787-05	A20-0785-05	A20-0785-05	A20-0785-05	Panel
-	A21-0175-02	A21-0175-02	A21-0175-02	A21-0175-02	A21-0177-02	A21-0177-02	A21-0175-02	A21-0175-02	A21-0175-02	Dress panel
-	B10-0150-04	B10-0150-04	B10-0150-04	B10-0150-04	B10-0162-04	B10-0162-04	B10-0151-04	B10-0150-04	B10-0150-04	Front glass . . . . . (KR-3400)
-	B10-0154-04	B10-0154-04	B10-0154-04	B10-0154-04	B10-0163-04	B10-0163-04	B10-0155-04	B10-0154-04	B10-0154-04	Front glass . . . . . (KR-2400)
-	B20-0315-03	B20-0315-03	B20-0315-03	B20-0315-03	B20-0316-13	B20-0316-13	B20-0315-03	B20-0317-03	B20-0315-03	Dial calibration
-	B40-0980-03	B40-0980-03	B40-0981-03	B40-0982-03	B40-0984-03	B40-0985-03	B40-0983-03	B40-0982-03	B40-0982-03	Destination sticker . . . . . (KR-3400)
-	B40-0997-03	B40-0998-03	B40-0999-03	B40-1000-03	B40-1002-03	B40-1003-03	B40-1001-03	B40-1000-03	B40-1000-03	Destination sticker . . . . . (KR-2400)
-	B42-0358-04	B42-0358-04	-	-	-	-	-	-	-	Caution sticker x 2
-	B42-0511-04	B42-0511-04	-	-	-	-	-	-	-	Sticker for fuse
-	B46-0002-00	B46-0021-00	B46-0022-00	-	-	-	-	-	-	Warranty card
-	B50-1185-00	B50-1185-00	B50-1185-00	B50-1185-00	B50-1185-00	B50-1185-00	B50-1198-00	B50-1185-00	B50-1185-00	Instruction manual . . . . . (KR-3400)
-	B50-1191-00	B50-1191-00	B50-1191-00	B50-1191-00	B50-1191-00	B50-1191-00	B50-1199-00	B50-1191-00	B50-1191-00	Instruction manual . . . . . (KR-2400)
-	B58-0043-00	B58-0043-00	B58-0139-00	B58-0003-00	B58-0156-00	-	B58-0003-00	B58-0003-00	B58-0003-00	Caution card for power supply
-	F19-0166-03	F19-0166-03	F19-0166-03	F19-0166-03	F19-0166-03	-	F19-0166-03	F19-0166-03	F19-0166-03	Caution card for carton box
-	F19-0167-03	F19-0167-03	F19-0167-03	F19-0167-03	F19-0167-03	-	F19-0167-03	F19-0167-03	F19-0167-03	Caution card for power voltage selector
-	H01-1161-04	H01-1162-04	H01-1162-04	H01-1162-04	H01-1164-04	H01-1164-04	H01-1163-04	H01-1162-04	H01-1162-04	KENWOOD service station's list
-	H01-1166-04	H01-1167-04	H01-1167-04	H01-1167-04	H01-1169-04	H01-1169-04	H01-1168-04	H01-1167-04	H01-1167-04	Wooden side board (L)
-	H03-0337-04	H03-0337-04	H03-0337-04	H03-0337-04	H03-0339-04	H03-0339-04	H03-0338-04	H03-0337-04	H03-0337-04	Wooden side board (R)
-	H03-0340-04	H03-0340-04	H03-0340-04	H03-0340-04	H03-0342-04	H03-0342-04	H03-0341-04	H03-0340-04	H03-0340-04	Carton case (internal) . . . (KR-3400)
-	H10-1142-02	H10-1142-02	H10-1142-02	H10-1142-02	H10-1144-02	H10-1144-02	H10-1142-02	H10-1142-02	H10-1142-02	Carton case (internal) . . . (KR-2400)
-	H10-1143-02	H10-1143-02	H10-1143-02	H10-1143-02	H10-1145-02	H10-1145-02	H10-1143-02	H10-1143-02	H10-1143-02	Carton case (external) . . . (KR-3400)
-	J19-0418-13	J19-0418-13	J19-0418-13	J19-0418-13	J19-0421-03	J19-0421-03	J19-0418-13	J19-0418-13	J19-0418-13	Carton case (external) . . . (KR-2400)
-	S40-2037-05	S40-2037-05	S40-2037-05	S40-2047-05	S40-2047-05	S40-2047-05	S40-2047-05	S40-2047-05	S40-2047-05	Carton case (external) . . . (KR-2400)
-	X00-1440-10	X00-1440-10	X00-1440-10	X00-1440-01	X00-1440-61	X00-1440-61	X00-1450-61	X00-1440-01	X00-1440-01	Polystyrene foamed fixture
-	X00-1450-10	X00-1450-10	X00-1450-10	X00-1450-01	X00-1450-61	X00-1450-61	X05-1190-61	X00-1450-01	X00-1450-01	Polystyrene foamed fixture
-	X05-1190-10	X05-1190-10	X05-1190-10	X05-1190-10	X05-1190-10	X05-1190-61	X05-1190-61	X05-1190-10	X05-1190-10	Front glass stopper
-	X90-1130-10	X90-1130-10	X90-1130-10	X90-1130-81	X90-1130-71	X90-1130-61	X90-1130-71	X90-1130-41	X90-1130-41	Power switch
-	X90-1140-10	X90-1140-10	X90-1140-10	X90-1140-81	X90-1140-71	X90-1140-61	X90-1140-71	X90-1140-41	X90-1140-41	Power supply unit . . . . . (KR-3400)
-										Power supply unit . . . . . (KR-2400)
-										Tuner unit
-										Power supply assembly . . . (KR-3400)
-										Power supply assembly . . . (KR-2400)

# MODIFICATION PARTS LIST

Ref. No.	U.S.A. (K)	Canada (P)	PX (U)	Australia (X)	Europe (W)	Scandinavia (L)	England (T)	South Africa (S)	Other area (M)	Description
—	RC05G2H225K	RC05G2H225K	RC05G2H225K	—	—	—	—	—	RC05G2H225K	Carbon 2.2MΩ ±10% 1/2W
—	L04-0046-05	L04-0046-05	L03-0097-05	L03-0097-05	L09-01123-05	L09-01119-05	L03-0097-05	L03-0097-05	L03-0097-05	Power transformer . . (KR-3400)
—	L04-0048-05	L04-0048-05	L03-0098-05	L03-0098-05	L09-0124-05	L09-0120-05	L03-0098-05	L03-0098-05	L03-0098-05	Power transformer . . (KR-2400)
—	—	—	S31-2001-05	S31-2001-05	S31-2001-05	—	S31-2001-05	S31-2001-05	S31-2001-05	Slide switch
—	—	—	—	—	B42-0024-04	—	—	—	—	SEV sticker
—	E08-0221-05	E08-0221-05	E08-0221-05	E08-0221-05	E08-0221-05	—	E08-0221-05	E08-0221-05	E08-0221-05	AC outlet x 2
—	E30-0181-05	E30-0181-05	E30-0034-05	E30-0185-05	E30-0176-05	E30-0292-05	—	—	E30-0034-05	Power cord
—	F05-2021-05	F05-2021-05	F05-2023-05	F05-2023-05	F05-2029-05	—	F05-2023-05	F05-2023-05	F05-2023-05	Fuse
—	—	—	F05-1023-05	F05-1023-05	F05-1021-05	F05-1021-05	F05-1023-05	F05-1023-05	F05-1023-05	Fuse
—	J13-0040-05	J13-0040-05	J13-0040-05	J13-0040-05	J13-0027-05	J13-0027-05	J13-0040-05	J13-0040-05	J13-0040-05	Fuse holder
—	J20-0282-12	J20-0282-12	J20-0283-12	J20-0284-12	J20-0284-12	J20-0285-12	J20-0284-12	J20-0284-12	J20-0283-12	Power supply assembly supporter
—	J41-0006-00	J41-0006-00	J41-0006-00	J41-0024-15	J41-0017-05	J41-0017-05	J41-0024-15	J41-0024-15	J41-0006-00	AC cord bushing
—	—	—	—	—	J61-0038-05	J61-0038-05	J61-0038-05	J61-0038-05	—	Cord band

# PARTS LIST

## KR-3400, KR-2400 PARTS LIST

Ref. No.	Parts No.	Description	Re marks
<b>RESISTOR</b>			
R1, 2	PD14BY2E394J	Carbon 390kΩ ±5% 1/4W	
R3, 4	PD14BY2E104J	Carbon 100kΩ ±5% 1/4W	
R5	RC05GF2H270K	Carbon 27Ω ±10% 1/2W	
<b>SWITCH</b>			
S1	S29-2014-05	Rotary switch (SELECTOR)	
S2	S29-1067-05	Rotary switch	
S3~6	S40-2049-05	Push switch (LOUDNESS, MODE, TAPE MONI, NOISE FIL.)	
S7	S40-2032-05	Push switch (FM MUTING)	
<b>MISCELLANEOUS</b>			
-	A10-0397-01	Chassis	
-	A22-0155-02	Sub-panel	
-	A30-0089-05	Dial plate	
-	B07-0128-04	Ring (Tuning knob)	
-	B19-0166-04	Color board	
-	B21-9013-05	Dial pointer	
-	B30-0064-15	Pilot lamp (Beacon 8V, 50mA)	
-	B30-0068-05	Pilot lamp (Meter 8V, 200mA)	
-	B30-0069-05	Pilot lamp (Reflector 8V, 300mA) x 3	
-	B31-0190-05	S meter	
-	B42-0009-04	Passed sticker	
-	D01-0024-05	Flywheel (KR-3400)	
-	D01-0015-05	Flywheel (KR-2400)	
-	D15-0067-24	Pulley	
-	D15-0073-14	Pulley (middle)	
-	D15-0075-04	Pulley (small) x 5	
-	D20-0091-14	Dial shaft	
-	D21-0362-04	Shaft	
-	E11-0002-05	Phone jack	
-	E29-0063-05	Terminal strips	
K-01	E30-0299-05	Connector (Phono)	
K-02	E30-0300-05	Connector (AUX)	
K-03	E30-0301-05	Connector (Tape)	
K-08	E30-0306-05	Connector (MIC)	
K-09	E30-0307-05	Connector (P.L)	
K-10	E30-0308-05	Connector (L.SP)	
K-11	E30-0309-05	Connector (R.SP)	
-	E90-0020-05	Shield cap x 6	
-	F19-0170-04	Blinder	
-	G01-0044-04	Dial spring	
-	H20-0394-04	Protection cover	
-	J02-0049-14	Leg x 4	
-	J19-0306-05	Lead holder x 3	
-	J21-0806-14	Antenna fittings	
-	J90-0062-03	Guide	
-	K23-0167-14	Knob (SELECTOR, SP) x 2	
-	K23-0168-24	Knob (TONE) x 2	
-	K23-0171-14	Knob (TUNING)	
-	K23-0172-04	Knob (VOLUME)	
-	K23-0173-04	Knob (BALANCE)	
-	K29-0195-04	Knob (PUSH) x 6	
-	T90-0002-05	FM indoor antenna	
-	T90-0031-05	Ferrite antenna	

Ref. No.	Parts No.	Description	Re marks
-	X07-1290-11	Main amp unit (KR-3400)	
-	X07-1290-10	Main amp unit (KR-2400)	
-	X08-1290-00	Control amp unit	
-	X13-1820-10	Push switch unit	
<b>POWER SUPPLY (X00-1440-10, -01, -61) KR-3400 (X00-1450-10, -01, -61) KR-2400</b>			
<b>CAPACITOR</b>			
Ck1, 2	CK45F2H103P	Ceramic 0.01μF +100%, -0%	
Ck3, 4	C90-0218-05	Electrolytic 3300μF 35WV	
Ck5~7	CE04W1C221	Electrolytic 220μF 16WV	
Ck8	CE04W1C101	Electrolytic 100μF 16WV	
<b>RESISTOR</b>			
Rk1	RN14AB3D101K-B	Metal film 100Ω ±10% 2W	
Rk2, 3	RN14AB3A471K-B	Metal film 470Ω ±10% 1W	
	RN14AB3A271K-B	Metal film 270Ω ±10% 1W	
Rk4, 5	RC05GF2H561K	Carbon 560Ω ±10% 1/2W	
Rk6	RN14AB3A560K-B	Metal film 56Ω ±10% 1W	
<b>SEMICONDUCTOR</b>			
Dk1~4		Diode V03C	
Dk5		Diode W06B	
<b>MISCELLANEOUS</b>			
-	E19-0605-05	Pin assembly	
-	E30-0310-05	Connector	
-	F05-2021-05	Fuse (UL 2A)	-10
-	F05-2023-05	Fuse (2A)	-01
-	F05-2029-05	Fuse (SEMKO 2A)	-61
-	J13-0020-05	Fuse clip x 2	-10
-	J13-0039-05	Fuse clip x 2	-61
-	J25-1082-03	PC board	
<b>TUNER (X05-1190-10, -41, -61)</b>			
<b>CAPACITOR</b>			
Cg1	CC45SL1H150K	Ceramic 15pF ±10%	
Cg2	CC45SL1H101K	Ceramic 100pF ±10%	
Cg3, 4	CK45F1H103Z	Ceramic 0.01μF +80%, -20%	
Cg5	CC45SL1H150K	Ceramic 15pF ±10%	
Cg6	CC45SL1H030C	Ceramic 3pF ±0.25pF	
Cg7	CC45TH1H030C	Ceramic 3pF ±0.25pF	
Cg9	CC45SL1H221K	Ceramic 220pF ±10%	
Cg10	CC45SL1H050D	Ceramic 5pF ±0.5pF	
Cg11	CK45F1H223Z	Ceramic 0.022μF +80%, -20%	

# PARTS LIST

Ref. No.	Parts No.	Description	Re marks	Ref. No.	Parts No.	Description	Re marks
Cg12	CK45F1H103Z	Ceramic 0.01μF +80%, -20%		Rg36	PD14BY2E101J	Carbon 100Ω ±5% 1/4W	
Cg13	CC45SG1H150K	Ceramic 15pF ±10%	-10-61	Rg37, 38	PD14BY2E472J	Carbon 4.7kΩ ±5% 1/4W	
	CC45UH1H050D	Ceramic 5pF ±0.5pF	-41	Rg39, 40	PD14BY2E392J	Carbon 3.9kΩ ±5% 1/4W	
Cg14	CC45SG1H220K	Ceramic 22pF ±10%	-10-61	Rg41~43	PD14BY2E333J	Carbon 33kΩ ±5% 1/4W	
	CC45TH1H220K	Ceramic 22pF ±10%	-41	Rg44	PD14BY2E472J	Carbon 4.7kΩ ±5% 1/4W	
Cg15	CC45SG1H470K	Ceramic 47pF ±10%		Rg45, 46	PD14BY2E224J	Carbon 220kΩ ±5% 1/4W	
Cg16	CC45SG1H223K	Ceramic 22pF ±10%		Rg47, 48	PD14BY2E563J	Carbon 56kΩ ±5% 1/4W	
Cg17	CK45F1H103Z	Ceramic 0.01μF +80%, -20%		Rg49	PD14BY2E224J	Carbon 220kΩ ±5% 1/4W	
Cg18~22	CK45F1H223Z	Ceramic 0.022μF +80%, -20%		Rg50	PD14BY2E332J	Carbon 3.3kΩ ±5% 1/4W	
Cg23	CC45SL1H100D	Ceramic 10pF ±0.5pF		Rg51, 52	PD14BY2E681J	Carbon 680Ω ±5% 1/4W	
Cg24	CC45F1H223Z	Ceramic 0.022μF +80%, -20%		Rg53	PD14BY2E332J	Carbon 3.3kΩ ±5% 1/4W	
Cg25	CQ09S1H361J	Polystyrene 360pF ±5%		Rg54	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W	
Cg26	CC45SL1H180K	Ceramic 18pF ±10%		Rg55, 56	PD14BY2E104J	Carbon 100kΩ ±5% 1/4W	
Cg27	CQ93M1H103M	Mylar 0.01μF ±20%		Rg57	PD14BY2E470J	Carbon 47Ω ±5% 1/4W	
Cg28	CQ93M1H223M	Mylar 0.022μF ±20%		<b>SEMICONDUCTOR</b>			
Cg29	CK45F1H223Z	Ceramic 0.022μF +80%, -20%		Qg1		FET 2SK55 (D), (E) or 2SK19 (Y)	
Cg30	CC45SL1H331K	Ceramic 330pF ±10%		Qg2		Transistor 2SC381 (O)	
Cg31~33	CK45F1H223Z	Ceramic 0.022μF +80%, -20%		Qg3		Transistor 2SC1342 (A) or (B)	
Cg34	CE04W0J221	Electrolytic 220μF 6.3WV		Qg4		Transistor 2SC381 (R) or (O)	
Cg35	CC45SL1H331K	Ceramic 330pF ±10%		Qg5		Transistor 2SC945 (Q) or (R)	
Cg36	CE04W1E100	Electrolytic 10μF 25WV		Qg6, 7		Transistor 2SC945 (Q)	
Cg37	CC45SL1H331K	Ceramic 330pF ±10%		ICg1		IC AN217BB	
Cg38	CC45SL1H221K	Ceramic 220pF ±10%		ICg2		IC μPC554C	
Cg39, 40	CE04W1H010	Electrolytic 1μF 50WV		Dg1, 2		Diode 1S2076 or 1S1555	
Cg41	CK45F1H223Z	Ceramic 0.022μF +80%, -20%		Dg3, 4		Diode 1N60	
Cg42	CQ93M1H154M	Mylar 0.15μF ±20%		Dg5, 6		Diode 1S2076 or 1S1555	
Cg43	CE04W1A101	Electrolytic 100μF 10WV		Dg7		Diode 1N60	
Cg44	CE04W1E4R7	Electrolytic 4.7μF 25WV		Dg8		Zener diode BZ-090	
Cg45	CQ93M1H102K	Mylar 0.001μF ±10%		<b>COIL/IFT/FILTER/TRIMMER CAPACITOR</b>			
Cg46	CE04W1H010	Electrolytic 1μF 50WV		CTg1	C05-0055-05	Ceramic trimmer capacitor	
Cg47	CE04W1E4R7	Electrolytic 4.7μF 25WV		Tg1	L34-0410-05	FM ANT coil	
Cg48, 49	CQ93M1H222J	Mylar 0.0022μF ±5%	-10, 41-61	Tg2	L34-0436-05	FM RF coil	-10-61
Cg50, 51	CQ93M1H104M	Elimination 0.1μF ±20%		Tg3	L34-0409-05	FM OSC coil	-41
Cg52, 53	CE04W1H010	Electrolytic 1μF 50WV			L34-0412-05	FM OSC coil	
<b>RESISTOR</b>						FM IFT	
Rg1	PD14BY2E104J	Carbon 100kΩ ±5% 1/4W			L30-0257-05	FM IFT	
Rg2	PD14BY2E680J	Carbon 68Ω ±5% 1/4W			L30-0274-05	FM IFT	
Rg3	PD14BY2E103	Carbon 10kΩ ±5% 1/4W			L30-0260-05	FM Discriminator coil	
Rg4	PD14BY2E223	Carbon 22kΩ ±5% 1/4W			L32-0181-05	AM OSC coil	
Rg5	PD14BY2E472J	Carbon 4.7kΩ ±5% 1/4W			L72-0030-05	AM Ceramic filter	
Rg6	PD14BY2E102J	Carbon 1kΩ ±5% 1/4W			L30-0275-05	AM IFT	
Rg7	PD14BY2E680J	Carbon 68Ω ±5% 1/4W			L35-0058-05	MPX coil (19 kHz, 38 kHz)	
Rg8	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W		Lg1	L33-0221-05	Choke coil	
Rg9	PD14BY2E183J	Carbon 18kΩ ±5% 1/4W		Lg2, 3	L33-0227-05	Ferri-inductor	
Rg10	PD14BY2E222J	Carbon 2.2kΩ ±5% 1/4W		CFg1, 2	L72-0014-05	Ceramic filter	
Rg11	PD14BY2E101J	Carbon 100Ω ±5% 1/4W		<b>MISCELLANEOUS</b>			
Rg12	PD14BY2E680J	Carbon 68Ω ±5% 1/4W		CRg1	R90-0104-05	CR parts	
Rg13	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W		CRg2, 3	R90-0105-05	CR parts	
Rg14	PD14BY2E470J	Carbon 47Ω ±5% 1/4W		-	C01-0185-05	Variable capacitor	
Rg15	PD14BY2E101J	Carbon 100Ω ±5% 1/4W		-	F10-0344-03	Shield plate	
Rg16	PD14BY2E222J	Carbon 2.2kΩ ±5% 1/4W		-	J25-1051-12	PC board	
Rg17	PD14BY2E154J	Carbon 150kΩ ±5% 1/4W					
Rg18	PD14BY2E333J	Carbon 33kΩ ±5% 1/4W					
Rg19	PD14BY2E332J	Carbon 3.3kΩ ±5% 1/4W					
Rg20	PD14BY2E470J	Carbon 47Ω ±5% 1/4W					
Rg21	PD14BY2E101J	Carbon 100Ω ±5% 1/4W					
Rg22	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W					
Rg23~25	PD14BY2E223J	Carbon 22kΩ ±5% 1/4W					
Rg26, 27	PD14BY2E102J	Carbon 1kΩ ±5% 1/4W					
Rg28	PD14BY2E472J	Carbon 4.7kΩ ±5% 1/4W					
Rg29	PD14BY2E223J	Carbon 22kΩ ±5% 1/4W					
Rg30	PD14BY2E101J	Carbon 100Ω ±5% 1/4W					
Rg31	PD14BY2E104J	Carbon 100kΩ ±5% 1/4W					
Rg32, 33	PD14BY2E471J	Carbon 470Ω ±5% 1/4W					
Rg34	PD14BY2E103J	Carbon 10kΩ ±5% 1/4W					
Rg35	PD14BY2E123J	Carbon 12kΩ ±5% 1/4W					

# PARTS LIST

**MAIN AMP (X07-1290-11 : KR-3400)**  
**(X07-1290-10 : KR-2400)**

**CONTROL AMP (X08-1290-00)**

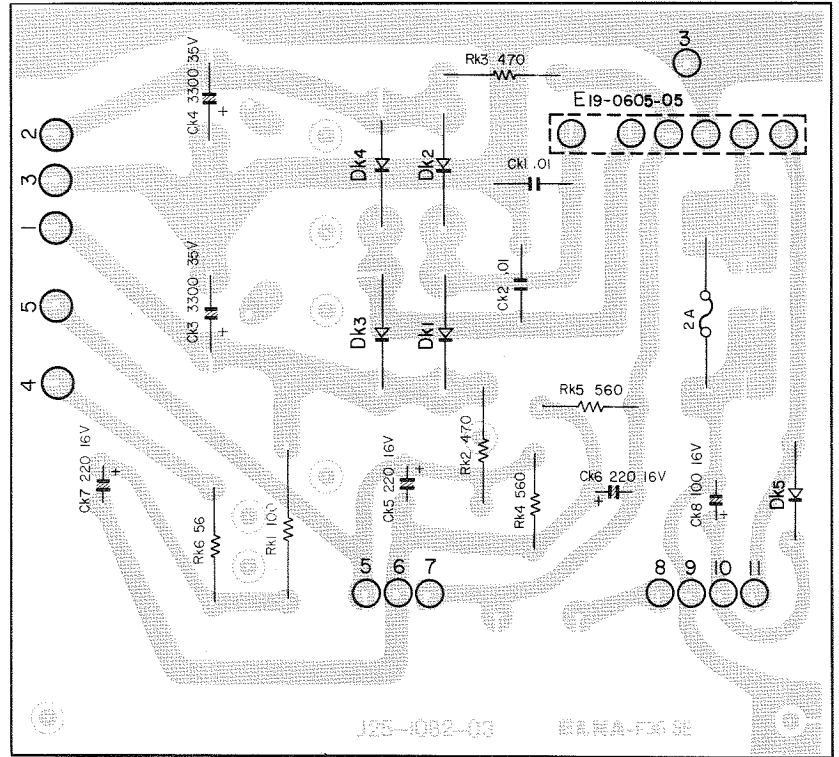
Ref. No.	Parts No.	Description	Re marks
<b>CAPACITOR</b>			
Ce1, 2	CC45SL1H221K	Ceramic 220pF ±10%	
Ce3, 4	CS15E1VR47M	Tantalum 0.47μF 35WV	
Ce5, 6	CE04W0J101	Electrolytic 100μF 6.3WV	
Ce7, 8	CC45SL1H100D	Ceramic 10pF ±0.5pF	
Ce9, 10	CE04W0J101	Electrolytic 100μF 6.3WV	
Ce11, 12	CE04W1E101	Electrolytic 100μF 25WV	
Ce13, 14	CC45SL1H101K	Ceramic 100pF ±10%	
Ce15~18	CC45SL1H221K	Ceramic 220pF ±10%	
Ce19, 20	CQ93M1H224M	Mylar 0.22μF ±20%	
Ce21, 22	CE04W1C470	Electrolytic 47μF 16WV	
Ce23, 24	CE04W1C100(NP)	Electrolytic 10μF 16WV	
Ce25	CE04W1V221	Electrolytic 220μF 35WV	
Ce26~29	CE04W0J470	Electrolytic 47μF 6.3WV	
<b>RESISTOR</b>			
Re1, 2	PD14BY2E684J	Carbon 680kΩ ±5% 1/4W	
Re3, 4	PD14BY2E562J	Carbon 5.6kΩ ±5% 1/4W	
Re5, 6	PD14BY2E104J	Carbon 100kΩ ±5% 1/4W	
Re7, 8	PD14BY2E153J	Carbon 15kΩ ±5% 1/4W	
Re9, 10	PD14BY2E332J	Carbon 3.3kΩ ±5% 1/4W	
Re11, 12	PD14BY2E101J	Carbon 100Ω ±5% 1/4W	
Re13, 14	PD14BY2E183J	Carbon 18kΩ ±5% 1/4W	
Re15, 16	PD14BY2E104J	Carbon 100kΩ ±5% 1/4W	
Re17, 18	PD14BY2E101JB	Carbon 100Ω ±5% 1/4W	
Re19~22	PD14BY2E332J	Carbon 3.3kΩ ±5% 1/4W	
Re23, 24	PD14BY2E182J	Carbon 1.8kΩ ±5% 1/4W	
Re25, 26	PD14BY2E392J	Carbon 3.9kΩ ±5% 1/4W	
Re27, 28	PD14BY2E182J	Carbon 1.8kΩ ±5% 1/4W	
Re29~32	PD14BY2E153J	Carbon 15kΩ ±5% 1/4W	
Re33~36	PD14BY2E182J	Carbon 1.8kΩ ±5% 1/4W	
Re37~40	PD14BY2E331JB	Carbon 330Ω ±5% 1/4W	
Re41~44	R92-0110-05	Wire wound 0.47Ω ±10% 2W	
Re45, 46	RN14AB3A4R7JB	Metal film 4.7Ω ±5% 1W	
Re47	PD14BY2E101JB	Carbon 100Ω ±5% 1/4W	
Re48~51	PD14BY2E102J	Carbon 1kΩ ±5% 1/4W	
<b>SEMICONDUCTOR</b>			
Qe1~4		Transistor 2SA620WL-5	
Qe5, 6		Transistor 2SC1384 (Q) or (R)	-10
		Transistor 2SC1212A (C)	-11
Qe7, 8		Transistor 2SC1416GR or BL	
Qe9~12		Transistor 2SC945P or Q	
Qe13, 14		Transistor 2SA733Q or R	
Qe15, 16		Transistor 2SC1384Q or R	-10
		Transistor 2SC1212A (B) or (C)	-11
Qe17, 18		Transistor 2SA684Q or R	-10
		Transistor 2SA743A (B), (C)	-11
Qe19, 20		Transistor 2SC789	-10
		Transistor 2SC1444	-11
Qe21, 22		Transistor 2SA489	-10
		Transistor 2SA764	-11
De1~4		Diode 1S2076 or 1S1555	
THE1, 2		Thermister 5TP-41L	
<b>POTENTIOMETER</b>			
VRe1, 2	R12-1021-05	Trimmer potentiometer	
<b>MISCELLANEOUS</b>			
—	E02-0210-05	Transistor socket x 4	-11
—	F01-0186-03	Heat sink	
—	F20-0067-05	Mica plate x 4	-11
—	F20-0078-05	Mica plate x 4	-10
—	J25-1056-03	PC board	

Ref. No.	Parts No.	Description	Re marks
<b>CAPACITOR</b>			
Cd1, 2	CE04W1H3R3	Electrolytic 3.3μF 50WV	
Cd3, 4	CE04W0J470	Electrolytic 47μF 6.3WV	
Cd5, 6	CQ93M1H272K	Mylar 0.0027μF ±10%	
Cd7, 8	CQ93M1H103K	Mylar 0.01μF ±10%	
Cd9, 10	CQ93M1H334M	Mylar 0.33μF ±20%	
Cd11, 12	CE04W1C470	Electrolytic 47μF 16WV	
Cd13, 14	CE04W1A6R8(NP)	Electrolytic 6.8μF 10WV	
Cd15, 16	CQ93M1H224M	Mylar 0.22μF ±10%	
Cd17~20	CS15E1A3R3M	Tantalum 3.3μF ±20%	
Cd21, 22	CQ93M1H333M	Mylar 0.033μF ±20%	
Cd23, 24	CQ93M1H154M	Mylar 0.15μF ±20%	
Cd25, 26	CE04W1A6R8(NP)	Electrolytic 6.8μF 10WV	
<b>RESISTOR</b>			
Rd1, 2	PD14BY2E222J	Carbon 2.2kΩ ±5% 1/4W	
Rd3~6	PD14BY2E104J	Carbon 100kΩ ±5% 1/4W	
Rd7, 8	PD14BY2E561J	Carbon 560Ω ±5% 1/4W	
Rd9, 10	PD14BY2E273J	Carbon 27kΩ ±5% 1/4W	
Rd11, 12	PD14BY2E564J	Carbon 560kΩ ±5% 1/4W	
Rd13, 14	PD14BY2E563J	Carbon 56kΩ ±5% 1/4W	
Rd15, 16	PD14BY2E221JB	Carbon 220Ω ±5% 1/4W	
Rd17, 18	PD14BY2E152J	Carbon 1.5kΩ ±5% 1/4W	
Rd19, 20	PD14BY2E331J	Carbon 330Ω ±5% 1/4W	
Rd21, 22	PD14BY2E102J	Carbon 1kΩ ±5% 1/4W	
Rd23, 24	PD14BY2E271J	Carbon 270Ω ±5% 1/4W	
Rd25, 26	PD14BY2E681J	Carbon 680Ω ±5% 1/4W	
Rd27, 28	PD14BY2E121J	Carbon 120Ω ±5% 1/4W	
Rd29, 30	RC05GF2H331K	Carbon 330Ω ±10% 1/2W	
<b>SEMICONDUCTOR</b>			
ICd1		IC RC4558TA	
<b>POTENTIOMETER</b>			
VRd1	R11-9005-05	Potentiometer 200kΩ (W), 100kΩ (B) x 2	
VRd2, 3	R06-2002-05	Potentiometer 5kΩ (C)	
<b>MISCELLANEOUS</b>			
K-04	E30-0302-05	Connector (+, -B)	
K-05	E30-0303-05	Connector (AM, FMB)	
K-06	E30-0304-05	Connector (FM)	
K-13	E30-0311-05	Connector (MAIN NF)	
K-14	E30-0312-05	Connector (MAIN OUT)	
K-15, 16	E30-0313-05	Connector (VOLUME OUT)	
—	J25-1059-03	PC board	
<b>PUSH SWITCH (X13-1820-10)</b>			
<b>CAPACITOR</b>			
Ch1, 2	CQ93M1H563K	Mylar 0.056μF ±10%	
Ch3, 4	CK45D1H561M	Ceramic 560pF ±20%	
Ch5, 6	CQ93M1H472K	Mylar 0.0047μF ±10%	
<b>RESISTOR</b>			
Rh1, 2	PD14BY2E682K	Carbon 6.8kΩ ±10% 1/4W	
Rh3, 4	PD14BY2E562K	Carbon 5.6kΩ ±10% 1/4W	
Rh5, 6	PD14BY2E472K	Carbon 4.7kΩ ±10% 1/4W	
<b>MISCELLANEOUS</b>			
—	E30-0305-05	Connector	
—	J25-1083-03	PC board	
<b>POWER SUPPLY ASSEMBLY</b>			
See MODIFICATION parts list.			



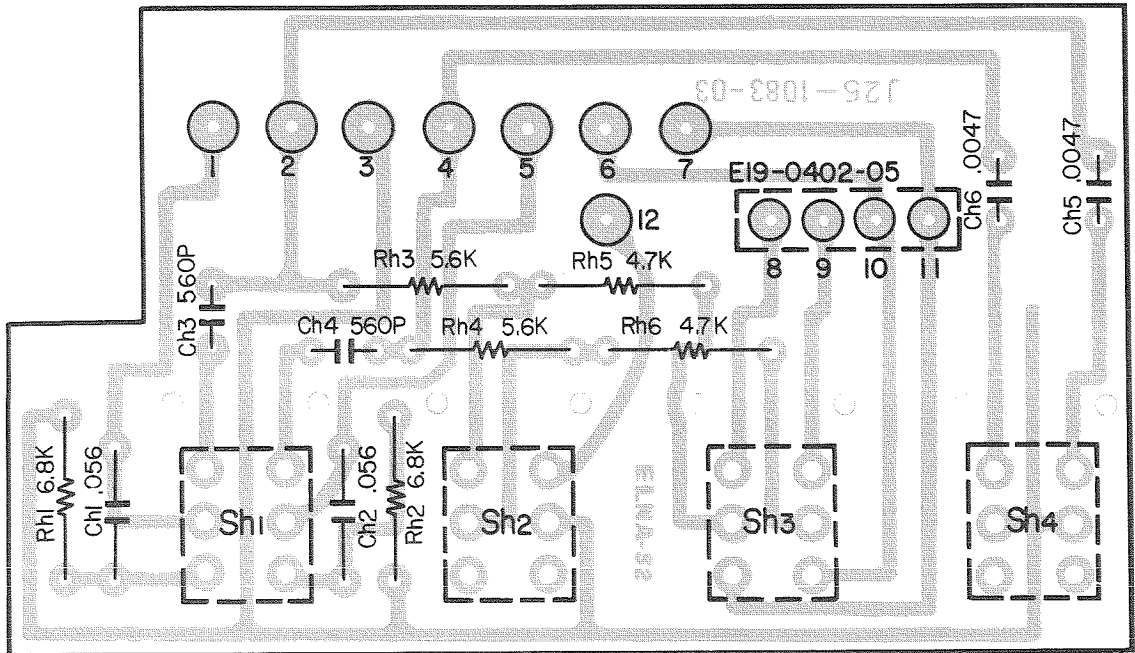
# PC BOARD

▶ POWER SUPPLY  
(X00-1440-10)  
(X00-1450-10)



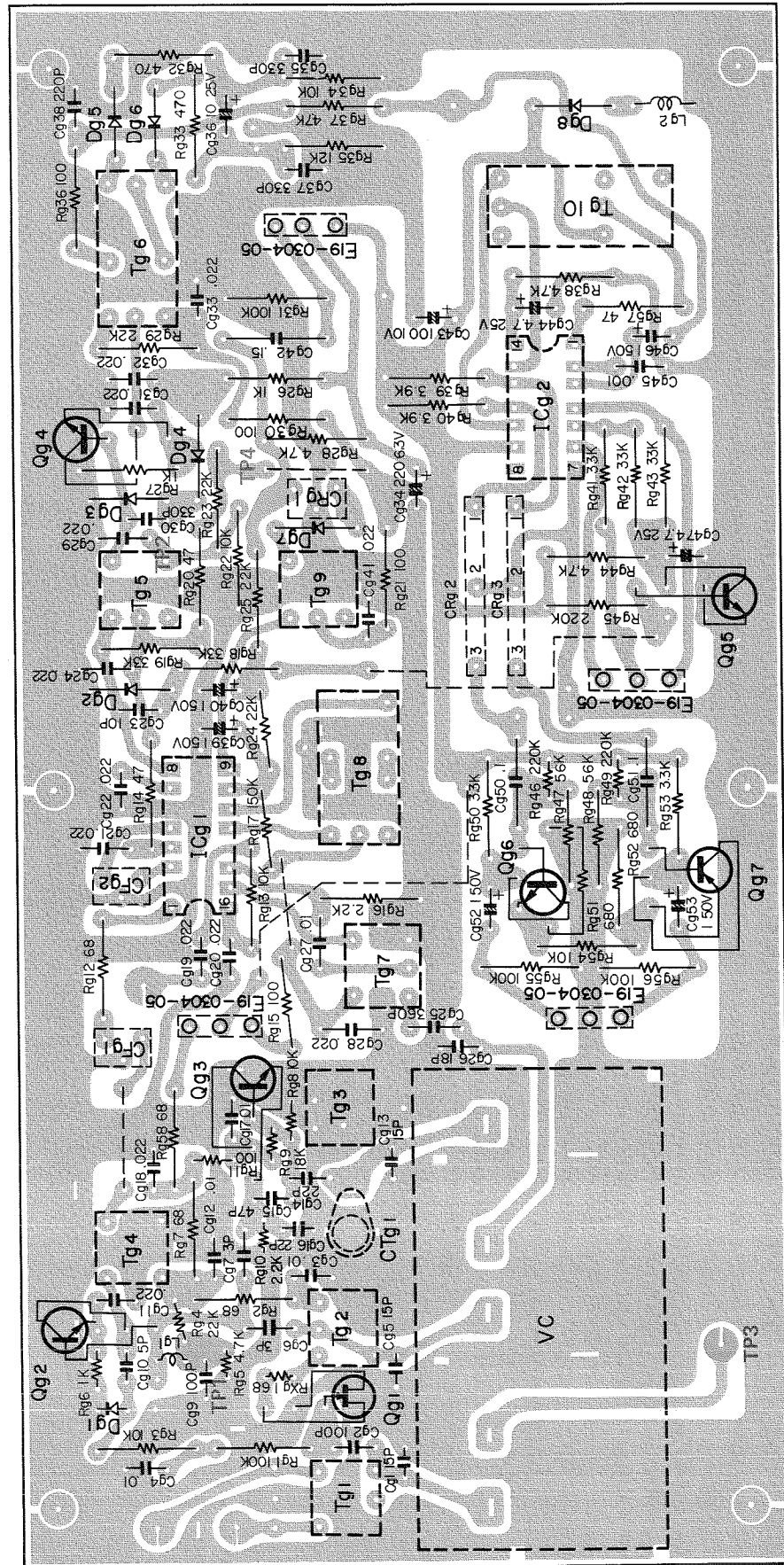
Dk1~4 : V03C, Dk5 : W06B

▶ PUSH SWITCH  
(X13-1820-10)



# PC BOARD

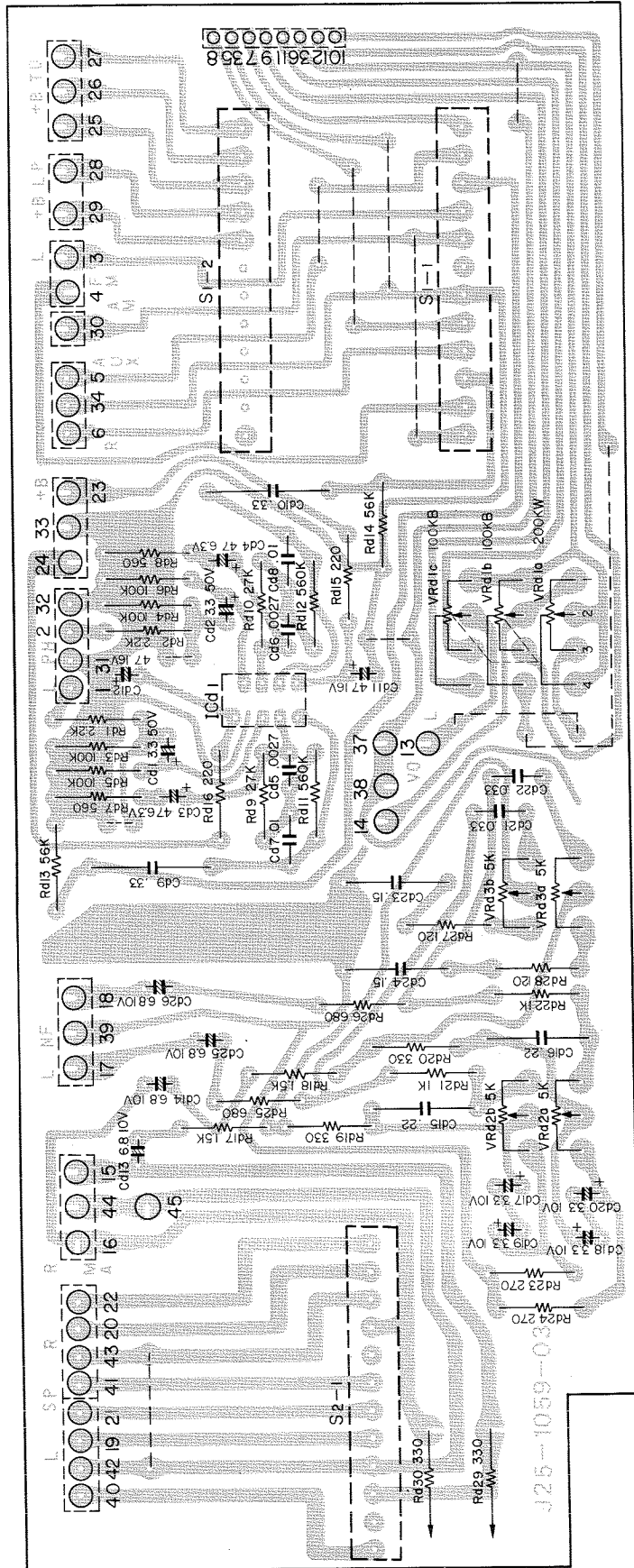
▶ TUNER  
(X05-1190-10)



Qg1 : 2SK55 (D or E) or 2SK19 (Y), Qg2 : 2SC381 (Y), Qg3 : 2SC1342 (A or B), Qg4 : 2SC381 (R or O), Qg5 : 2SC945 (O or R),  
Qg6, 7 : 2SC945 (O), ICg1 : AN217BB, ICg2 :  $\mu$ PC554C, Dg1, 2, 5, 6 : 1S2076, Dg3, 4, 7 : 1N60, Dg8 : BZ-090

# PC BOARD

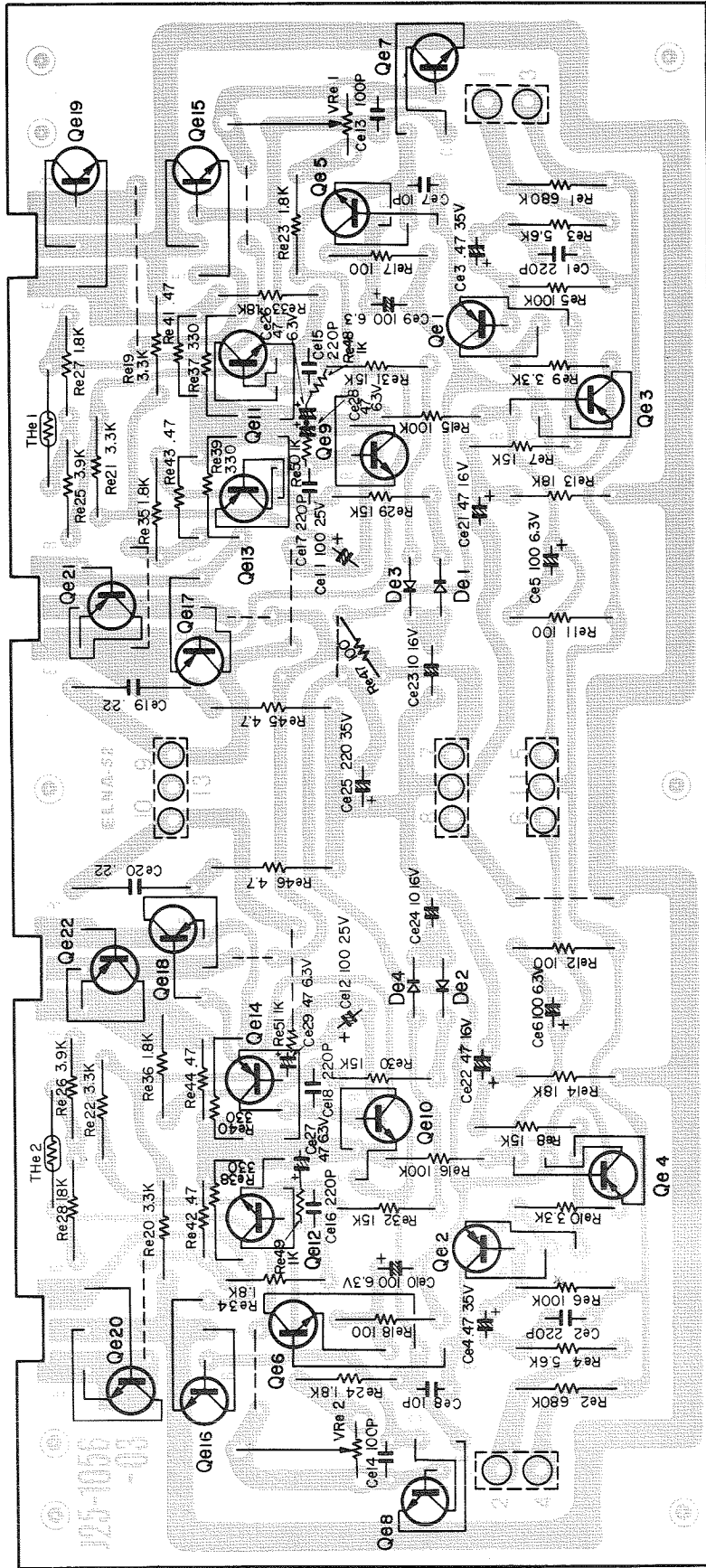
▶ CONTROL AMP  
(00-060-80X)



ICd1 : RC4558TA

# PC BOARD

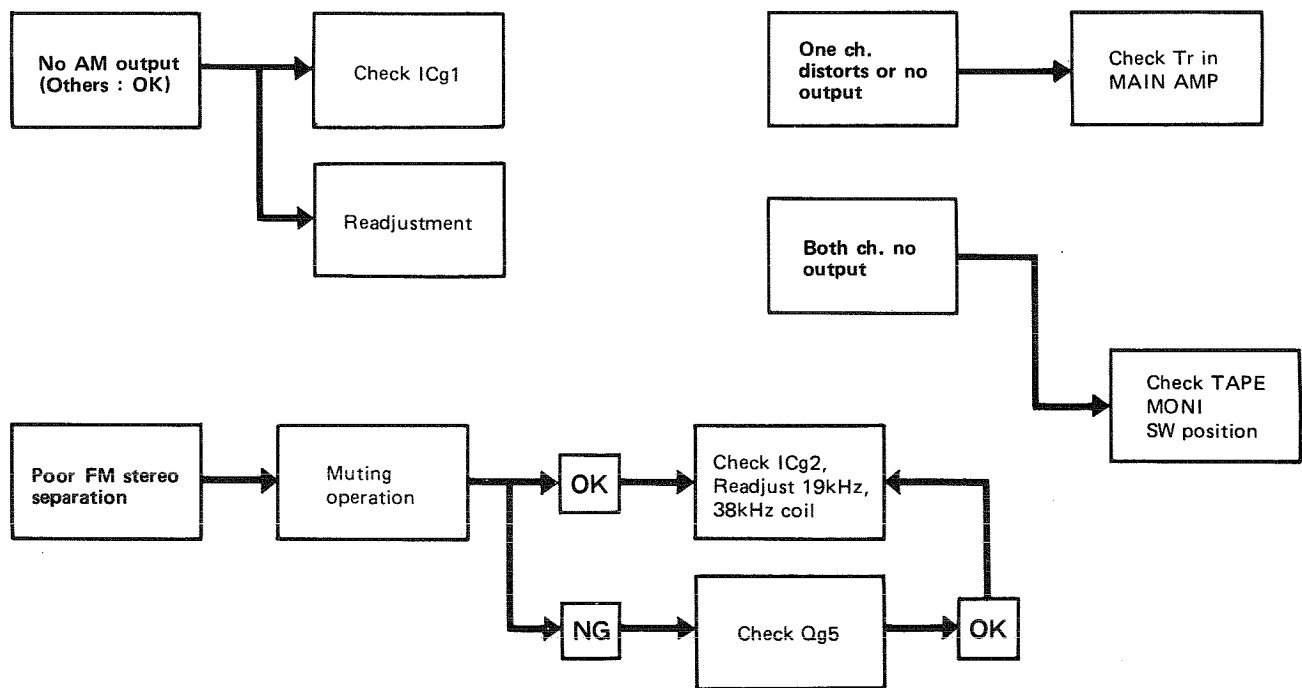
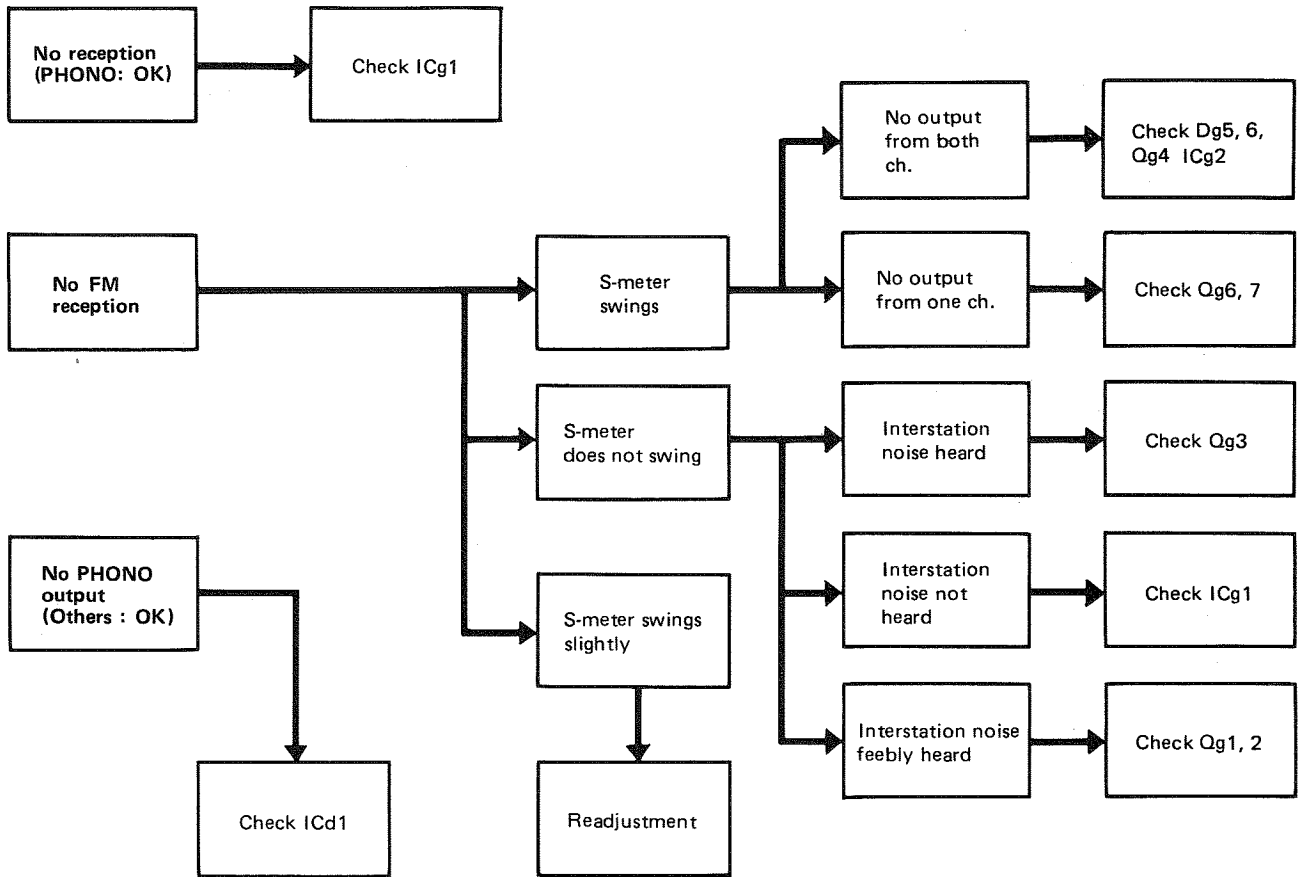
▶ MAIN AMP  
 (X07-1290-11) KR-3400  
 (X07-1290-10) KR-2400



KR-3400: Qe1~4 : 2SA620WL5, Qe5, 6 : 2SC1212A  
 Qe7, 8 : 2SC1416 GR or BL, Qe9~12 : 2SC945 P or O,  
 Qe13, 14 : 2SA733 Q or R, Qe15, 16 : 2SC1212A  
 Qe17, 18 : 2SA743 AB or C Qe19, 20 : 2SC1444  
 Qe21, 22 : 2SA764

KR-2400: Qe1~4 : 2SA620WL5, Qe5, 6 : 2SC1384 Q or R,  
 Qe7, 8 : 2SC1416 GR or BL, Qe9~12 : 2SC945 P or O,  
 Qe13, 14 : 2SA733 Q or R, Qe15, 16 : 2SC1384 Q or R,  
 Qe17, 18 : 2SA684 Q or R Qe19, 20 : 2SC789  
 Qe21, 22 : 2SA489

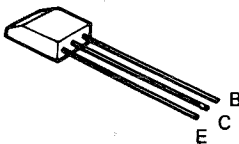
# TROUBLESHOOTING



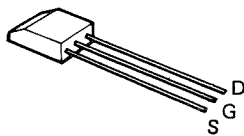
# SEMICONDUCTOR SUBSTITUTIONS & LEADS

Semiconductor	Substitutions	Semiconductor	Substitutions
<b>TUNER</b> (X05-1190-10) AN217BB μPC554C 2SK55 (D), (E) 2SC381 (O) 2SC381 (R), (O) 2SC945 (Q) 2SC945 (Q), (R) 2SC1342 (A), (B)	— — 2SK19 (Y) 2SC535 (B) 2SC535 (B) 2SC458 (B), (C) 2SC458 (C) 2SC785 (R)	2SC1212A (C) 2SC1212A (B), (C) 2SC1416 (GR), (BL) 2SC945 (P), (Q) 2SA733 (Q), (R) 2SA684 (Q), (R) 2SA743A (B), (C) 2SC789 2SC1444 2SA489 2SA764	2SC983, 2SC1451 — 2SC1000, 2SC1345 2SC1213 2SA673 2SA743A — — — — —
<b>MAIN AMP</b> (X07-1290-10, 11) 2SA620WL5 2SC1384 (Q), (R)	2SA493 2SC1212A	<b>CONTROL AMP</b> (X08-1290-00) RC4558TA	—

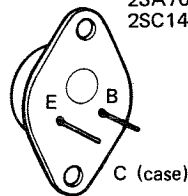
2SC1342



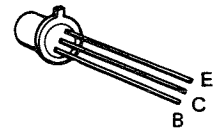
2SK55



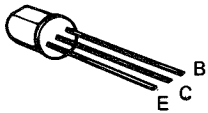
2SA764  
2SC1444



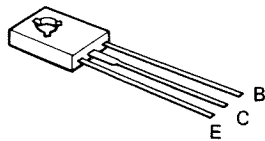
2SA620WL



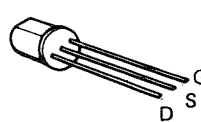
2SC381



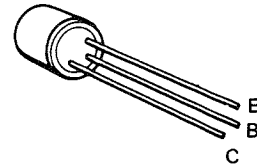
2SA743A  
2SC1212A



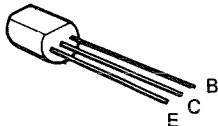
2SK19



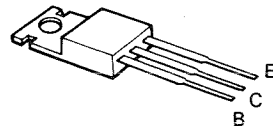
2SC1416



2SC1384  
2SA733  
2SC945  
2SA684

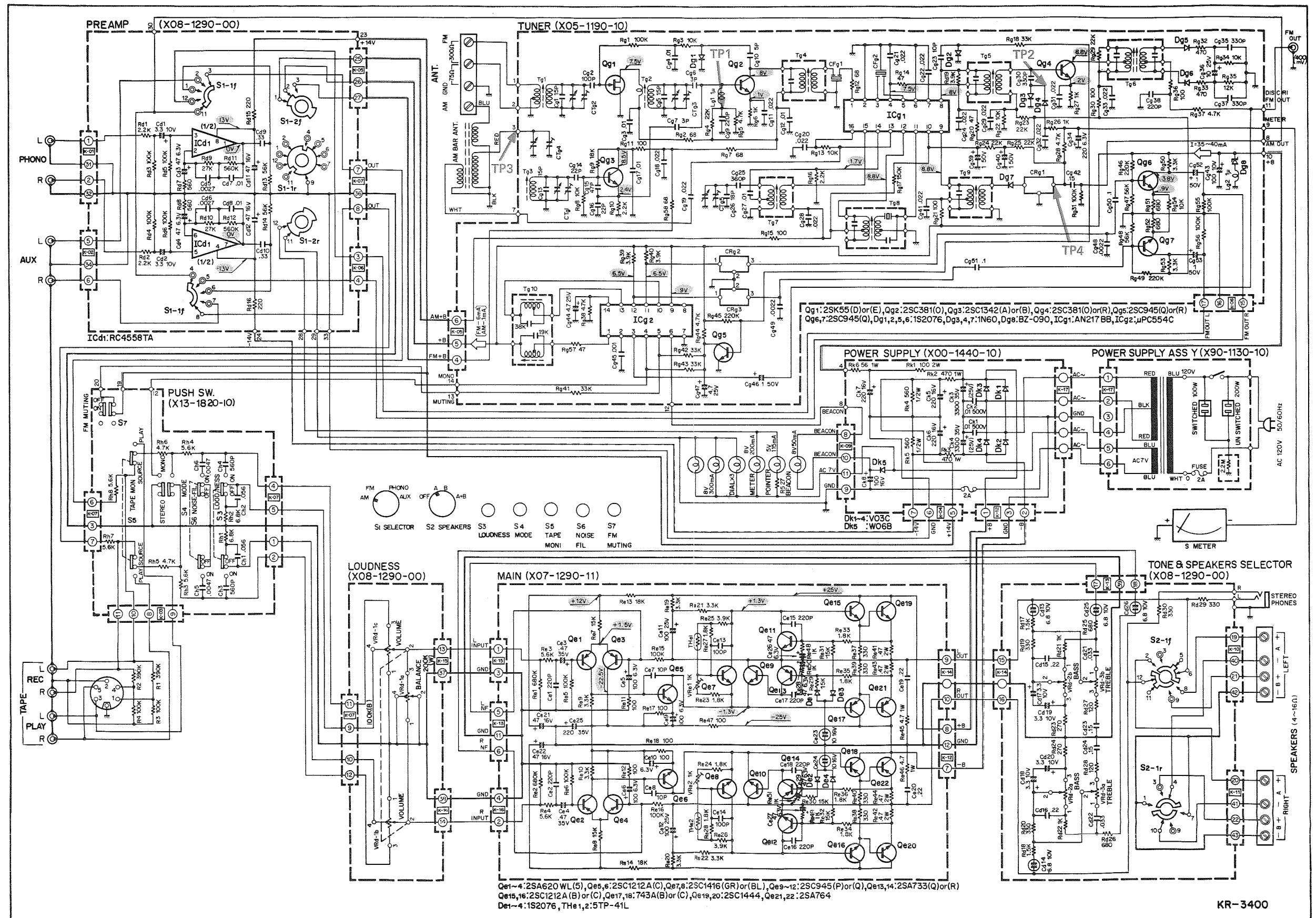


2SA489  
2SC789



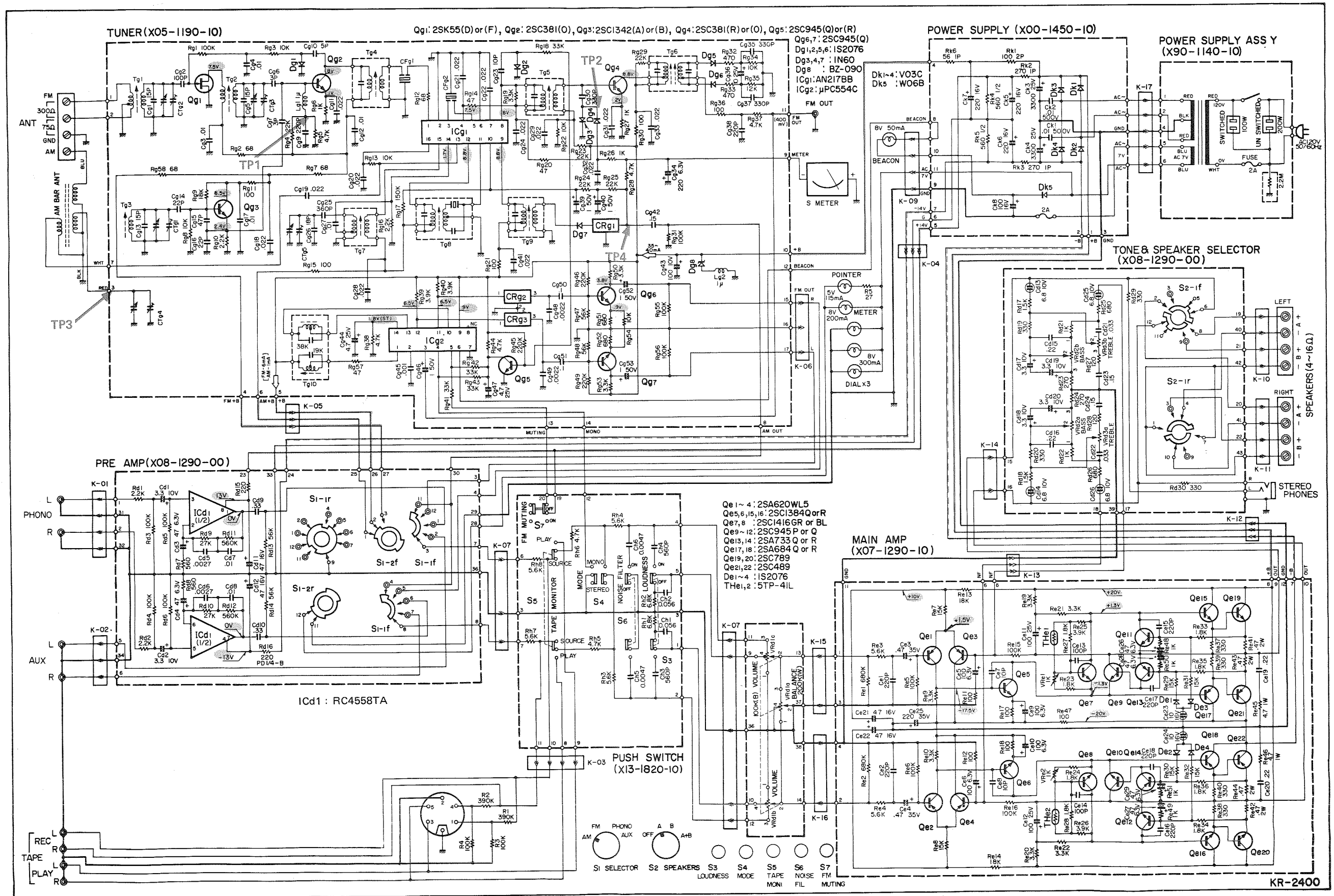


# KR-3400 SCHEMATIC DIAGRAM



KR-3400

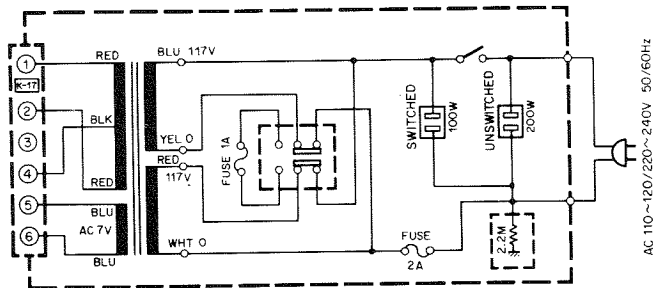
# KR-2400 SCHEMATIC DIAGRAM



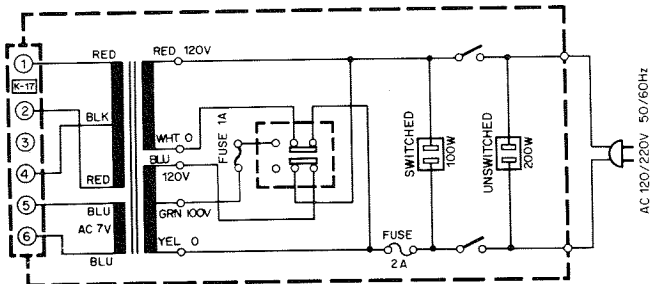


# MODIFICATION OF SCHEMATIC DIAGRAM

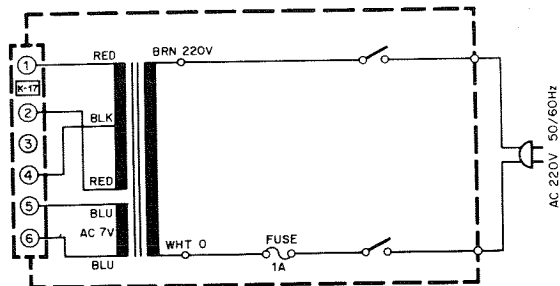
For 110~120/220~240V



For Europe except England



For Scandinavia



KR-3400  
KR-2400

# KR-3400 SPECIFICATIONS

## FM TUNER SECTION

Frequency Range	88 MHz to 108 MHz
Usable Sensitivity (IHF)	87.5 MHz to 108 MHz (FTZ APPROVED)
Quieting Slope	2.5 $\mu$ V 5 $\mu$ V 40 dB, 10 $\mu$ V 56 dB, 50 $\mu$ V 62 dB
Frequency Response	20 Hz to 15,000 Hz + 0.5 dB - 2.0 dB
Harmonic Distortion	0.4% Mono (at 400 Hz 100% modulation) 0.6% Stereo (at 400 Hz 100% modulation)
Signal to Noise Ratio	62 dB at 1 mV input
Image Rejection	50 dB
Selectivity (IHF ALT channel)	45 dB
IF Rejection	80 dB
Spurious Signal Rejection	75 dB
AM Suppression	45 dB
Capture Ratio	3.0 dB
Stereo Separation	33 dB at 1,000 Hz
Sub Carrier Suppression	40 dB
Antenna Impedance	300 ohms Balanced & 75 ohms Unbalanced

## AM TUNER SECTION

Usable Sensitivity (IHF)	25 $\mu$ V
Signal to Noise Ratio	45 dB at 1 mV input
Image Rejection	45 dB
Selectivity (IHF)	25 dB
IF Rejection	33 dB
Antenna	Built-in ferrite bar antenna, External antenna terminal

## MAIN AMPLIFIER SECTION

RMS Power Output	22 watts x 2 into 8 ohms at 1,000 Hz
Both channels driven	29 watts x 2 into 4 ohms at 1,000 Hz
Dynamic Power Output	65 watts into 8 ohms 82 watts into 4 ohms
Total Harmonic Distortion	0.8% at rated power into 8 ohms 0.1% at 1/2 rated power into 8 ohms at 1,000 Hz
Inter Modulation Distortion	0.8% at rated power into 8 ohms
Power Bandwidth	0.1% at 1/2 rated power into 8 ohms
Signal to Noise Ratio at 50 mW	10 Hz to 30,000 Hz
Damping Factor	50 dB
Speaker Impedance	30 at 8 ohms Accept 4 ohms to 16 ohms

## PRE-AMPLIFIER SECTION

Input Sensitivity and Impedance	2.5 mV, 50 Kohms
Phono	150 mV, 45 Kohms
AUX	150 mV, 45 Kohms
Tape Play	110 mV T.H.D. 0.8% at 1,000 Hz
Maximum Input Voltage (rms)	70 dB
Phono	87 dB
AUX	87 dB
Tape Play	150 mV, 100 ohms
Output Voltage and Impedance	30 mV, 80 Kohms
Tape Rec. (Pin)	RIAA Standard curve $\pm$ 1.5 dB
(Din connector)	10 Hz to 40,000 Hz $\pm$ 1.5 dB
Frequency Response	$\pm$ 8 dB at 100 Hz
Phono	$\pm$ 8 dB at 10,000 Hz
AUX, Tape Play	+10 dB at 100 Hz
Tone Controls	+5 dB at 10,000 Hz
Bass	-9.0 dB at 10,000 Hz
Treble	
Loudness Control (-30 dB)	
Noise Filter	

## GENERAL

Switches	OFF, A, B, A + B
Speaker Selector	AM-FM-PHONO-AUX
Input Selector	MONO-STEREO
Mode	PLAY-SOURCE
Tape Monitor	NOISE FILTER, FM MUTING, LOUDNESS,
Others	PHONES JACK
AC Outlets	Switched 1, Unswitched 1
Power Consumption	145 watts at full power 25 watts at no signal
Dimensions	W 18-15/16" (480mm), H 5-3/8" (137 mm) D 13-9/16" (344 mm)
Weight	18.5 lbs. (8.4 kg) 16.5 lbs. (7.5 kg)
	Units shipped to the European and the Scandinavian Countries.

# KR-2400 SPECIFICATIONS

## FM TUNER SECTION

Frequency Range	88 MHz to 108 MHz
Usable Sensitivity (IHF)	87.5 MHz to 108 MHz (FTZ APPROVED)
Quieting Slope	2.5 $\mu$ V
Frequency Response	5 $\mu$ V 40 dB, 10 $\mu$ V 56 dB, 50 $\mu$ V 62 dB
Harmonic Distortion	20 Hz to 15,000 Hz $\pm$ 0.5 dB -2.0
Signal to Noise Ratio	0.4% Mono (at 400 Hz 100% modulation)
Image Rejection	0.6% Stereo (at 400 Hz 100% modulation)
Selectivity (IHF ALT channel)	62 dB at 1 mV input
IF Rejection	50 dB
Spurious Signal Rejection	45 dB
AM Suppression	80 dB
Capture Ratio	75 dB
Stereo Separation	45 dB
Sub Carrier Suppression	33 dB at 1,000 Hz
Antenna Impedance	40 dB
	300 ohms Balanced & 75 ohms Unbalanced

## AM TUNER SECTION

Usable Sensitivity (IHF)	25 $\mu$ V
Signal to Noise Ratio	45 dB at 1 mV input
Image Rejection	45 dB
Selectivity (IHF)	25 dB
IF Rejection	33 dB
Antenna	Built-in ferrite bar antenna, External antenna terminal

## MAIN AMPLIFIER SECTION

RMS Power Output	16 watts x 2 into 8 ohms at 1,000 Hz
Both channels driven	20 watts x 2 into 4 ohms at 1,000 Hz
Dynamic Power Output	42 watts into 8 ohms
Total Harmonic Distortion	62 watts into 4 ohms
Inter Modulation Distortion	1.0% at rated power into 8 ohms
(60 Hz : 7 kHz = 4 : 1)	0.1% at 1/2 rated power into 8 ohms
Power Bandwidth	0.1% at 1/2 rated power into 8 ohms
Signal to Noise Ratio at 50 mW	10 Hz to 30,000 Hz
Damping Factor	50 dB
Speaker Impedance	30 at 8 ohms
	Accept 4 ohms to 16 ohms

## PRE-AMPLIFIER SECTION

Input Sensitivity and Impedance	
Phono	2.5 mV, 50 Kohms
AUX	150 mV, 45 Kohms
Tape Play	150 mV, 45 Kohms
Maximum Input Voltage (rms)	110 mV T.H.D. 1.0% at 1,000 Hz
Signal to Noise Ratio (IHF A Curve)	
Phono	70 dB
AUX	87 dB
Tape Play	87 dB
Output Voltage and Impedance	
Tape Rec. (Pin)	150 mV, 100 ohms
(Din connector)	30 mV, 80 Kohms
Frequency Response	
Phono	RIAA Standard curve $\pm$ 1.5 dB
AUX, Tape Play	10 Hz to 40,000 Hz $\pm$ 1.5 dB
Tone Controls	
Bass	$\pm$ 8 dB at 100 Hz
Treble	$\pm$ 8 dB at 10,000 Hz
Loudness Control (-30 dB)	+10 dB at 100 Hz
Noise Filter	+5 dB at 10,000 Hz
	-9.0 dB at 10,000 Hz

## GENERAL

Switches	OFF, A, B, A + B
Speaker Selector	AM-FM-PHONO-AUX
Input Selector	MONO-STEREO
Mode	PLAY-SOURCE
Tape Monitor	NOISE FILTER, FM MUTING, LOUDNESS,
Others	PHONES JACK
AC Outlets	Switched 1, Unswitched 1
Power Consumption	105 watts at full power
Dimensions	25 watts at no signal
Weight	W 18-15/16" (480mm), H 5-3/8" (137 mm), D 13-9/16" (344 mm)
	18.1 lbs. (8.2 kg)
	15.8 lbs. (7.2 kg)
	Units shipped to the European and the Scandinavian Countries.

**KENWOOD ELECTRONICS, INC.**

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**TRIO-KENWOOD ELECTRONICS, GmbH.**

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**TRIO ELECTRONICS, INC.**

- 3-6-17 AOBADAI, MEGURO-KU, TOKYO, JAPAN.