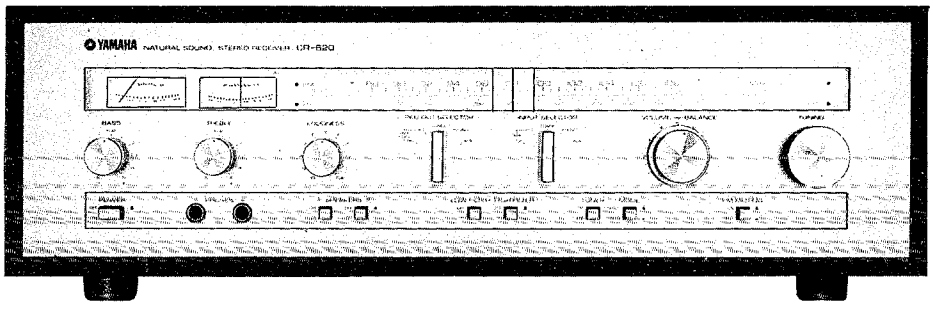
PARTS LIST

CR-620

FM/AM STEREO RECEIVER



YAMAHA

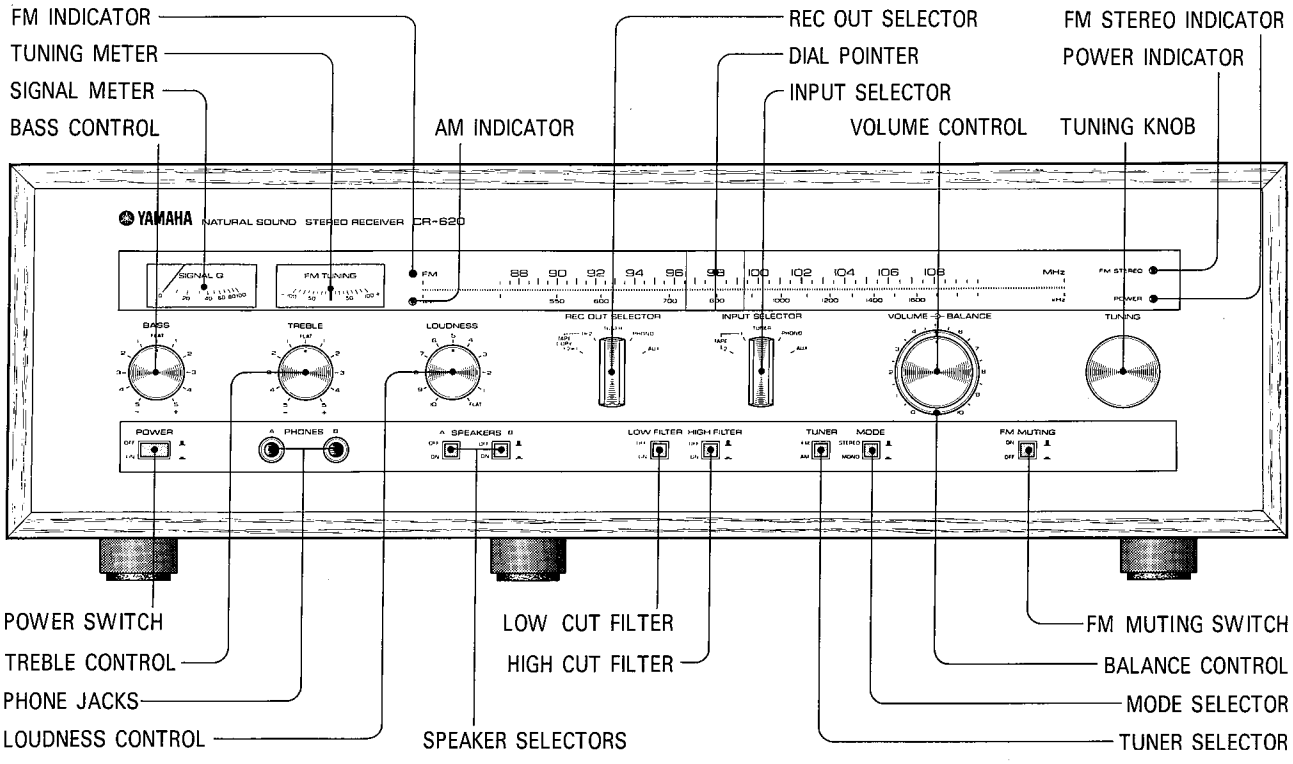
REMARKS

R : GENERAL EXPORT MODELS
U : U.S.A MODELS
C : CANADIAN MODELS
A : AUSTRALIAN MODELS
B : BRITISH MODELS
E : EUROPEAN MODELS

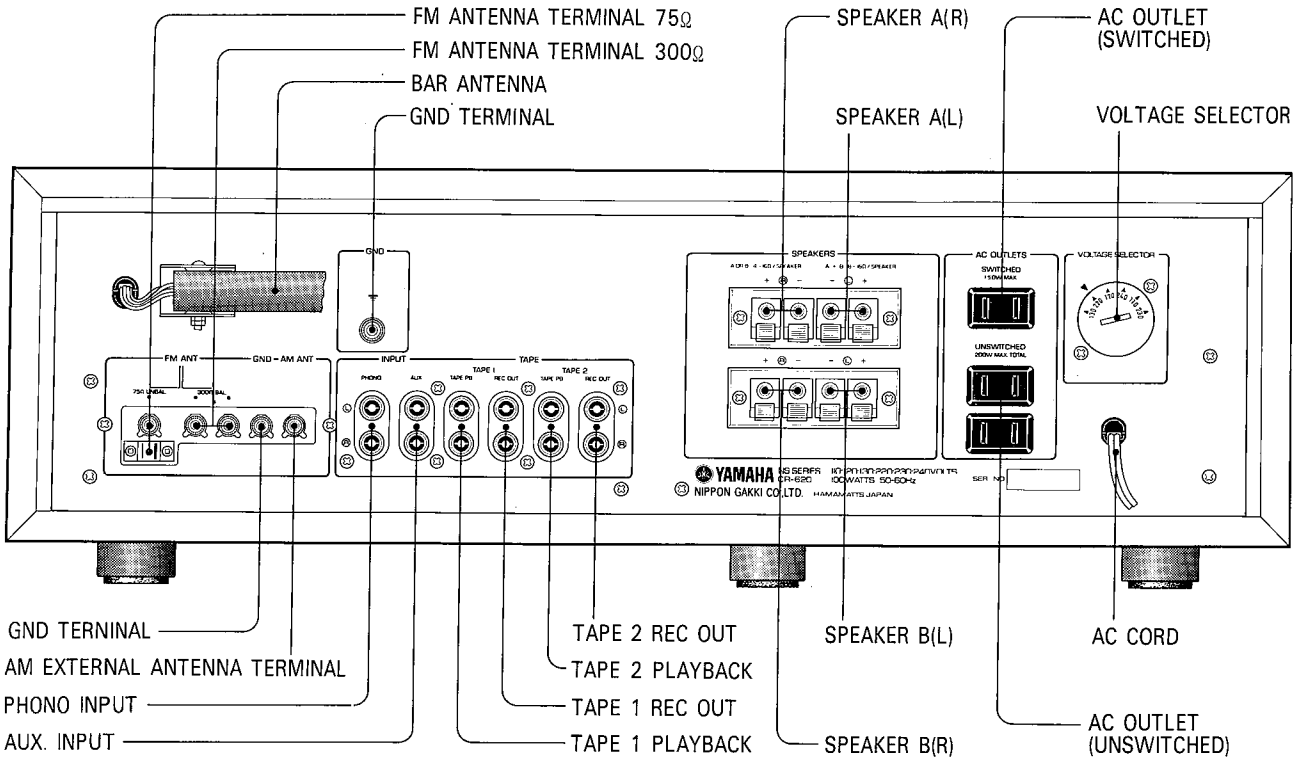
CONTENTS

PANEL OPERATION

FRONT PANEL

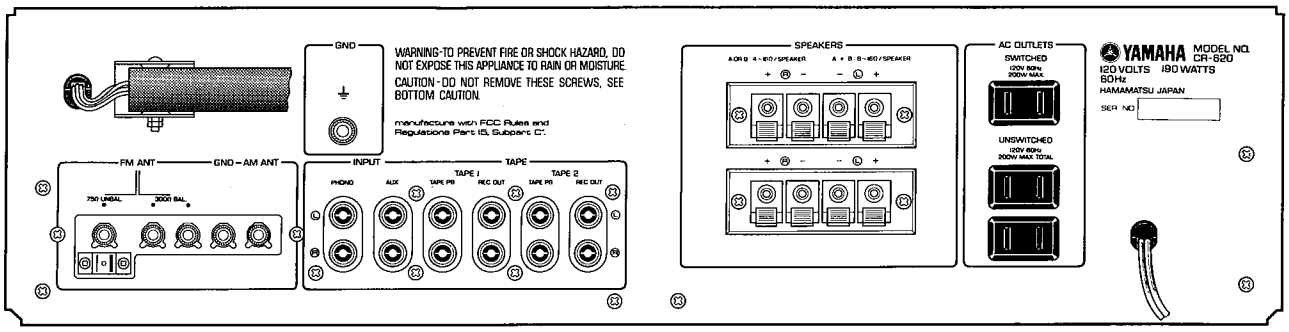


REAR PANEL
GENERAL MODEL

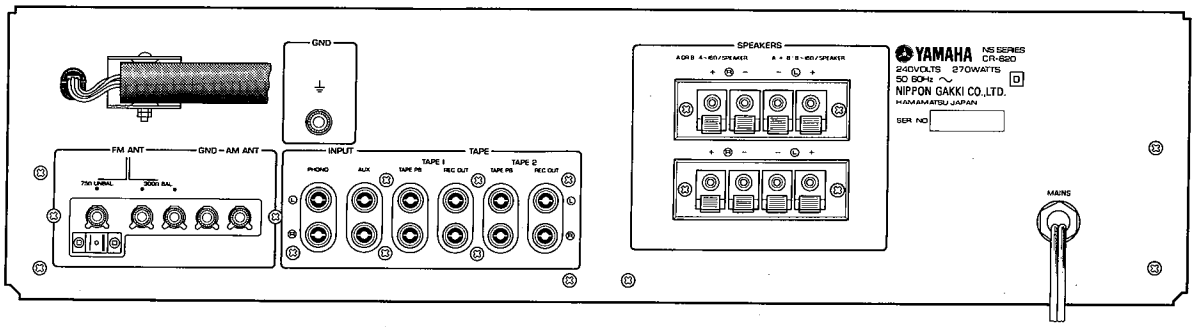


PANEL OPERATION

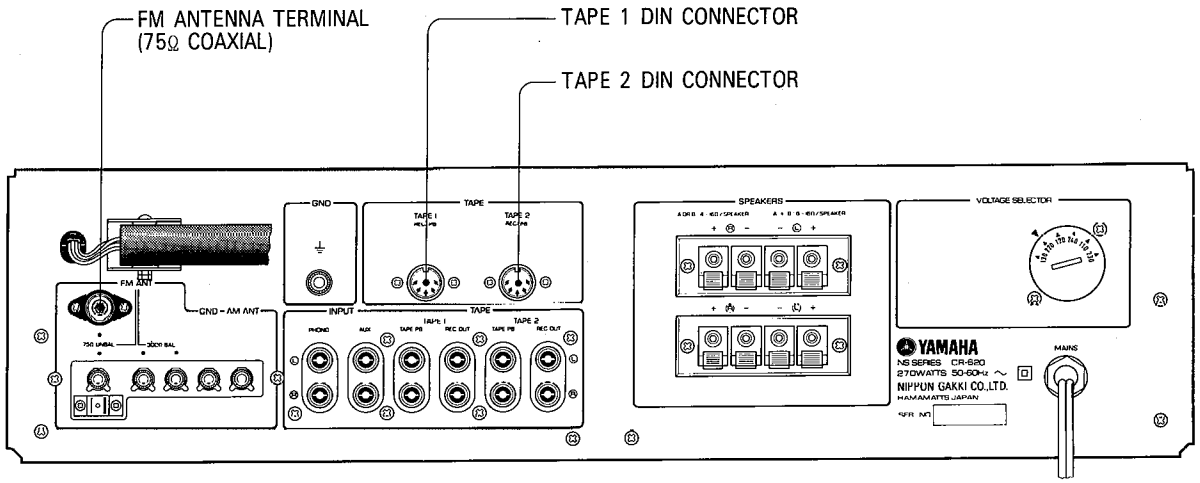
REAR PANEL
US & CANADIAN MODEL



UK & AUSTRALIAN MODEL



EUROPEAN MODEL



SPECIFICATION

AMPLIFIER SECTION

Input Sensitivity/Impedance
Phono 1 (MM) 2mV-1kHz/50kΩ, max. 150mV
AUX, Tape 1, 2 120mV/45kΩ
DIN 1, 2 (European model only) 120mV/37kΩ

Output Level/Impedance
REC. OUT 1, 2 120mV/220Ω(Phono)/6kΩ(Tuner)
max. 9V/1kHz
DIN OUT 1,2(European model only) 30mV/52KΩ
max. 1V/1kHz 50kΩ lorded

Frequency Response
Phono 1, 2 RIAA Deviation: ±0.5dB
AUX, Tape 1, 2 to SP out: ±0.5dB (20Hz to 20kHz)

Tone Controls Characteristics
BASS: Turnover 350Hz, Variable Range ±13dB/50Hz
TREBLE: Turnover 3.5kHz, Variable Range ±10dB/20kHz

Filter Characteristics
Low Filter: f_c = 25Hz, 12dB/oct
Hogh Filter: f_c = 10kHz, 12dB/oct

Loudness Characteristics
According to the Fletcher and Munson curve

S/N Ratio and Noise Level
Phono: 2mV 78dB (IHF A Network)
10mV 92dB (IHF A Network)
AUX, Tape: 97dB (IHF A Network)
Residual Noise: 0.11mV (IHF A Network)

Total Harmonics Distortion
Phono: 0.012% (20 to 20kHz), REC OUT 2V
AUX, Tape: 0.02% (20 to 20kHz), SP. OUT 20W/8Ω
Phono: 0.05%/1kHz (0.25W to 35W/8Ω), Vol. −20dB
IMDist AVX 0,02% 20W/8Ω

Rating Output and etc.
8Ω Both ch. driven: 35W (20 to 20kHz), 0.05% THD 40W/1kHz
4Ω Both ch. driven: 40W (20 to 20kHz), 0.05% THD 50W/1kHz
Power Band Width: 10 to 50kHz
Dumping Factor: 40, 1kHz/8Ω

TUNER SECTION

FM Section Tuning Range
87.6 to 108MHz

Usable Sensitivity
IHF mono.: 1.8μV (300Ω) 10.3dBf
0.9μV (75Ω) 10.3dBf
DIN mono.: 1.5μV (Dev: 40kHz, S/N: 26dB)
stereo: 50μV (Dev: 40kHz, S/N: 46dB)

Sensitivity When S/N 50dB
mono.: 3.2μV, 15.3dBf
stereo: 43.5μV, 38.0dBf

S/N Ratio
mono.: 77dB, DIN (Dev: 40kHz): 71dB
stereo: 73dB, DIN (Dev: 40kHz): 67dB

Image Interference Ratio (98MHz)
50dB

IF Interference Ratio (98MHz)
75dB

Spurious Interference Ratio (98MHz)
75dB

Amplitude Suppression Ratio
IHF: 56dB

Capture Ratio
1dB

Effective Selectivity
70dB, DIN (±300kHz, Dev: 40kHz): 50dB

Total Harmonics Distortion
mono. 100Hz: 0.15%
. 1kHz: 0.15%
6kHz: 0.3%
stereo 100Hz: 0.25%
1kHz: 0.25%
6kHz: 0.4%

Cross Modulation Distortion
IHF mono.: 0.1%
stereo: 0.2%

Stereo Separation
50Hz: 30dB
1kHz: 40dB
10kHz: 30dB

Frequency Response
50 to 10kHz: ±0.5dB
30 to 15kHz: $\pm\frac{1}{3}$ dB

Sub Carrier Suppression
50dB

Muting Signal Level
5μV (19.2dBf)

AM Section Tuning Range
525 to 1605kHz

Usable Sensitivity (Used Bar Antenna)
IHF: 316μV/m (50dB/m)

Selectivity
1000kHz: 25dB

S/N Ratio
80dB/m: 50dB

Image Interference Ratio
1000kHz: 50dB

IF Interference Ratio
1000kHz: 40dB

Spurious Interference Ratio
1000kHz: 55dB

Total Harmonics Distortion
80dB/m: 0.6%

Output Level/Impedance
FM(Mod. 100%): 450mV/6.5kΩ(REC OUT)
AM(Mod. 30%): 120mV/6.5kΩ(REC OUT)

GENERAL

Used Semi Conductors

68 Transistors	29 Diodes
3 ICs	5 Zenner Diodes
1 FET	4 LEDs

Used Ceramic Filters
4 Filters

Rated Voltage
120V/60Hz(US. and CANADA),
240V/50, 60Hz(UK. and AUSTRALIA)
110, 120, 130, 220, 230 and 240V/50, 60Hz
(EUROPE and General export models)

Rated Power Consumption
190W(US., CANADA and General export models)
270W(UK., EUROPE and AUSTRALIA)

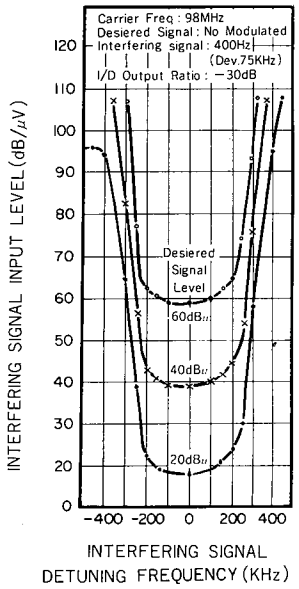
Dimensions
508(W) x 167(H) x 395(D)mm
20(W) x 6-9/16(H) x 15-9/16(D)in (US.,CANADA, and General export models)
488(W) x 146(H) x 395(D)mm
19-3/16(W) x 5-3/4(H) x 15-9/16(D)in (UK. and EUROPE)

Weight
12.5kg 27.5 lbs (US., CANADA, AUSTRALIA and General export models)
11.5kg 25.3 lbs (UK. and EUROPE)

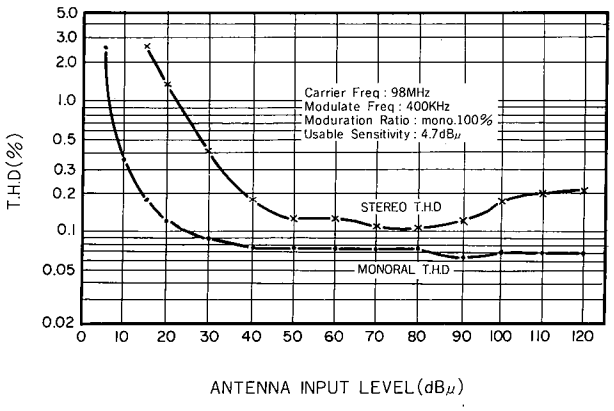
CHARACTERISTICS CHARTS

TUNER SECTION

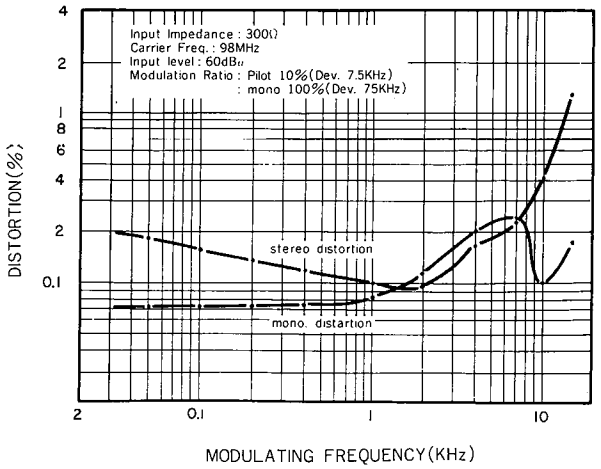
FM 2 SIGNALS EFFECTIVE SELECTIVITY



T.H.D. V. INPUT LEVEL

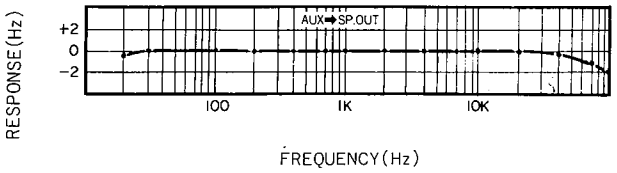


DISTORTION V. MODULATING PREQUENCY

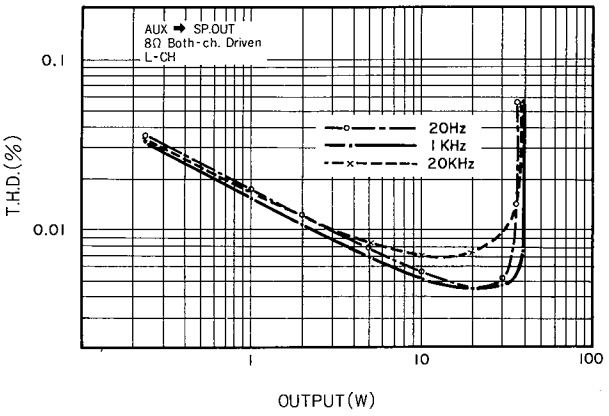


AMPLIFIER SECTION

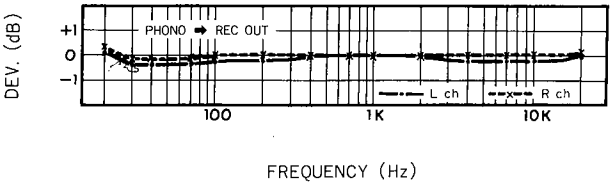
FREQUENCY RESPONSE



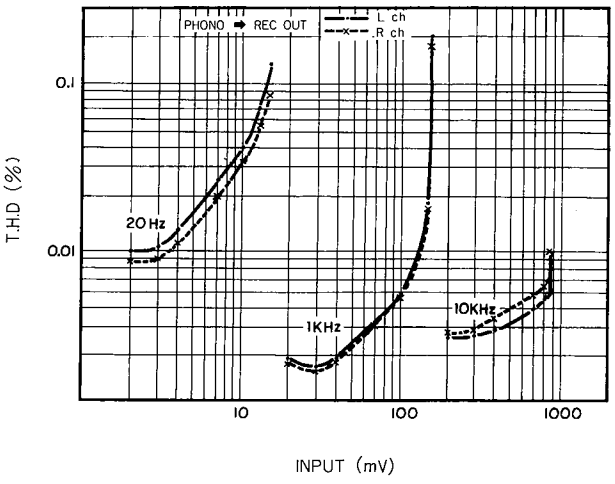
T.H.D. V. OUT PUT



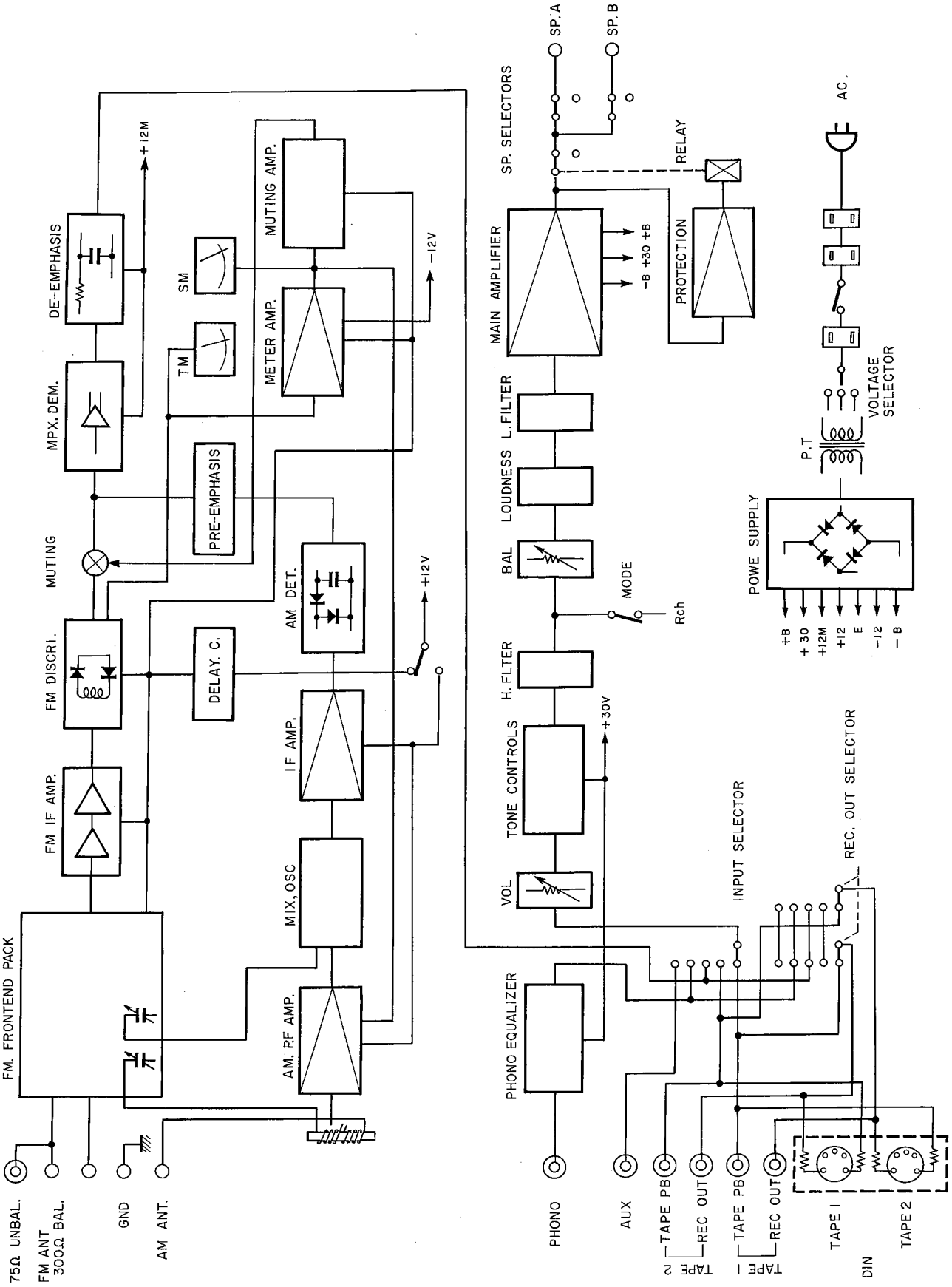
RIAA DEVIATION



T.H.D. V. PHONO INPUT

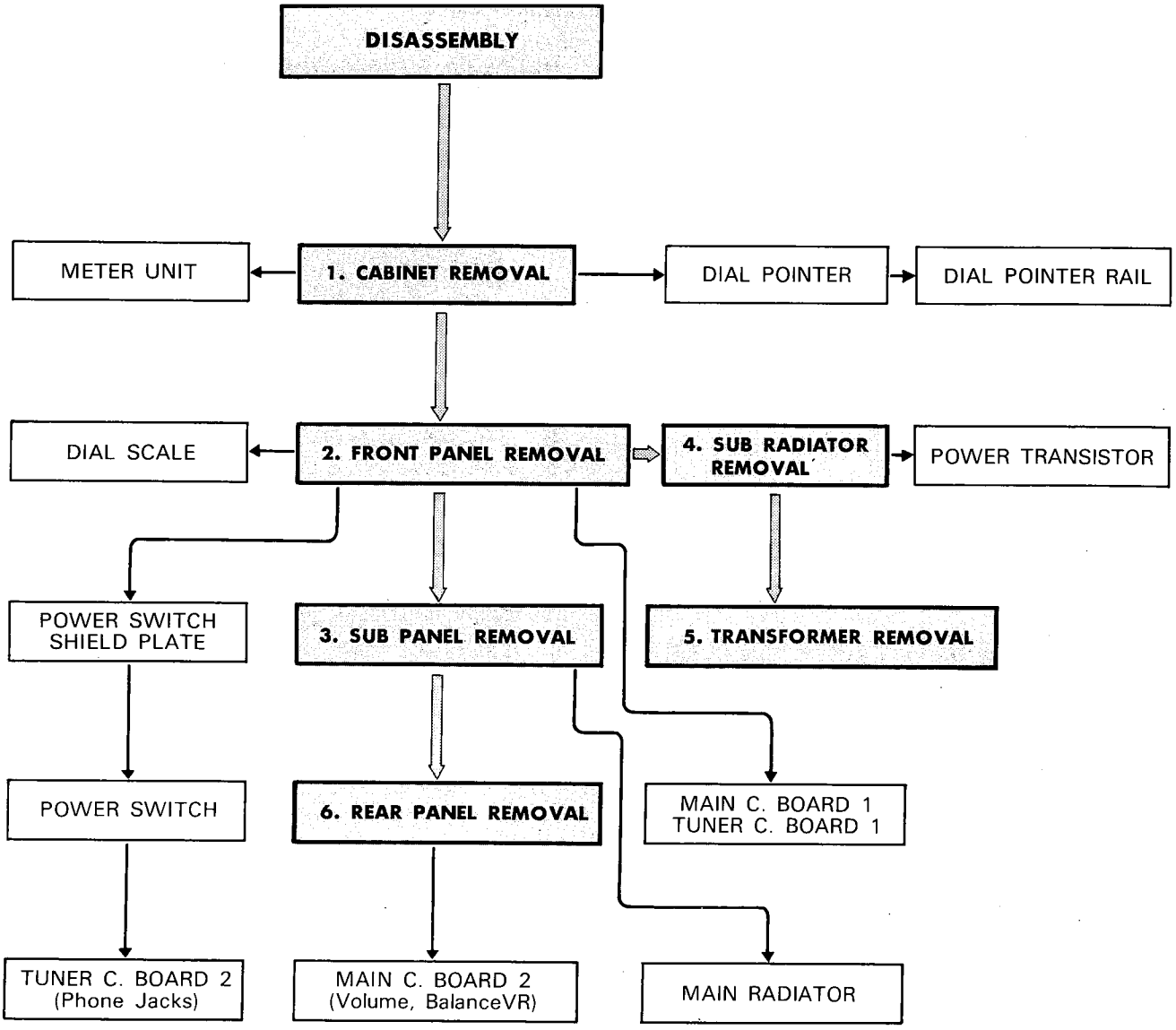


BLOCK DIAGRAM



DISASSEMBLY PROCEDURES

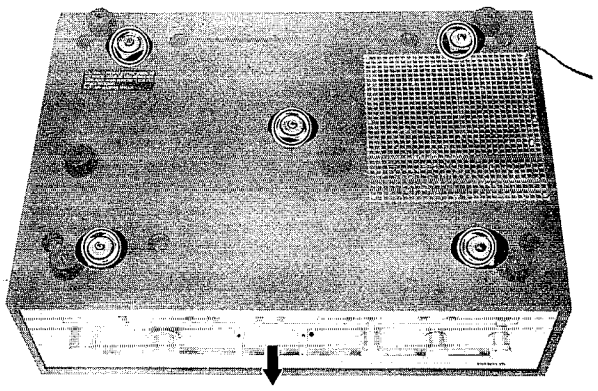
FIOW CHART



1. CABINET REMOVAL

Remove five screws then pull out the chassis in arrow direction.

Since the cabinet used for UK and EUROPEAN models are different from the photo shown in right hand side, refer to "EXPLODED VIEW" as shown in page 1 of the PARTS LIST.

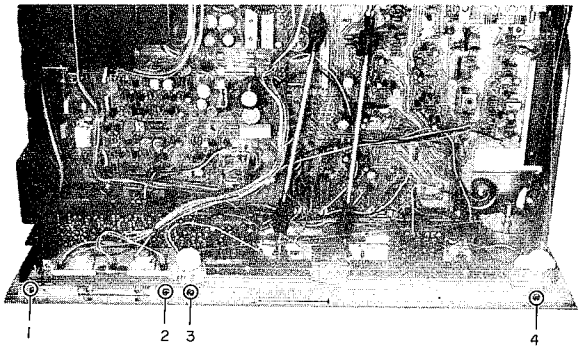


DISASSEMBLY PROCEDURES

2. FRONT PANEL REMOVAL

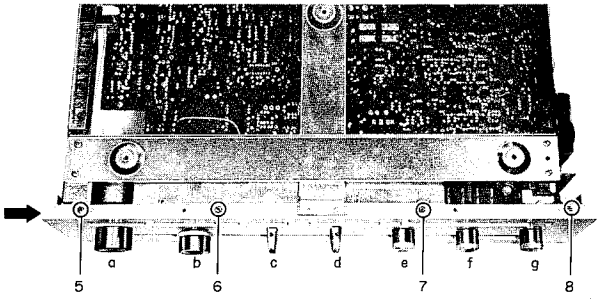
Step 1. Top side

1) Remove four screws shown in 1 to 4.



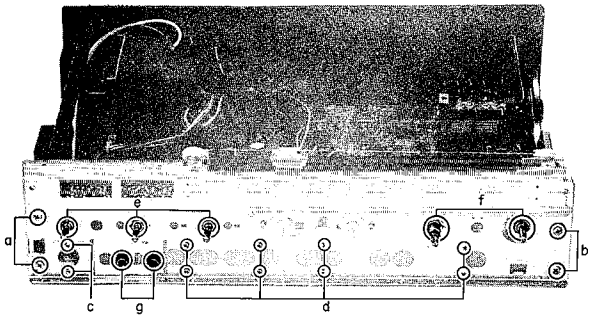
Step 2. Bottom side

1) Pull out four knobs shown in b, e, f and g.
2) Loosen two set screws fixing knobs shown in c and d, and pull out them.
3) Tuning knob removal: Insert hexagonal wrench from arrow direction and loosen two set screws, and pull out.
4) Remove four screws shown in 5 to 8.



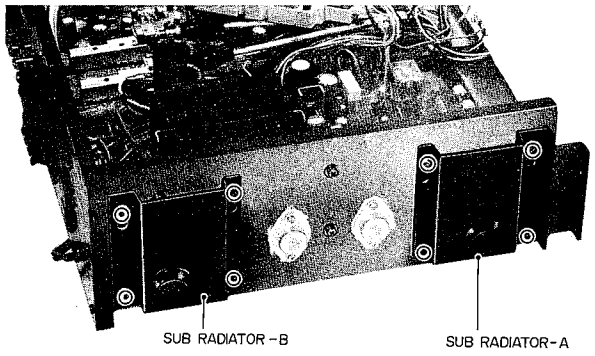
3. SUB PANEL REMOVAL

1) Remove 14 screws shown in a, b, c and d.
2) Remove 7 hexagonal nuts shown in e, f and g.



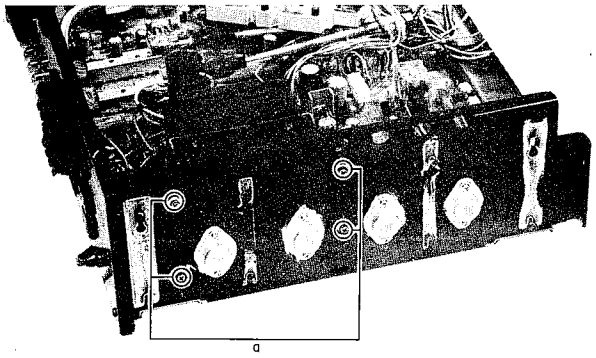
4. SUB RADIATOR REMOVAL

Loosen 8 (4 x 2) screws then slide radiators up and remove them.



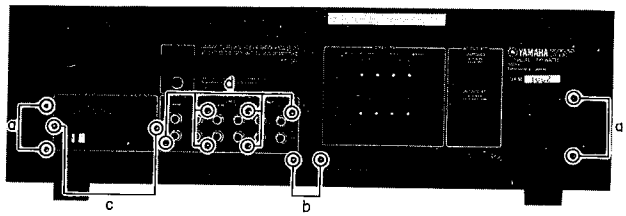
5. TRANSFORMER REMOVAL

a: Four screws for transformer.

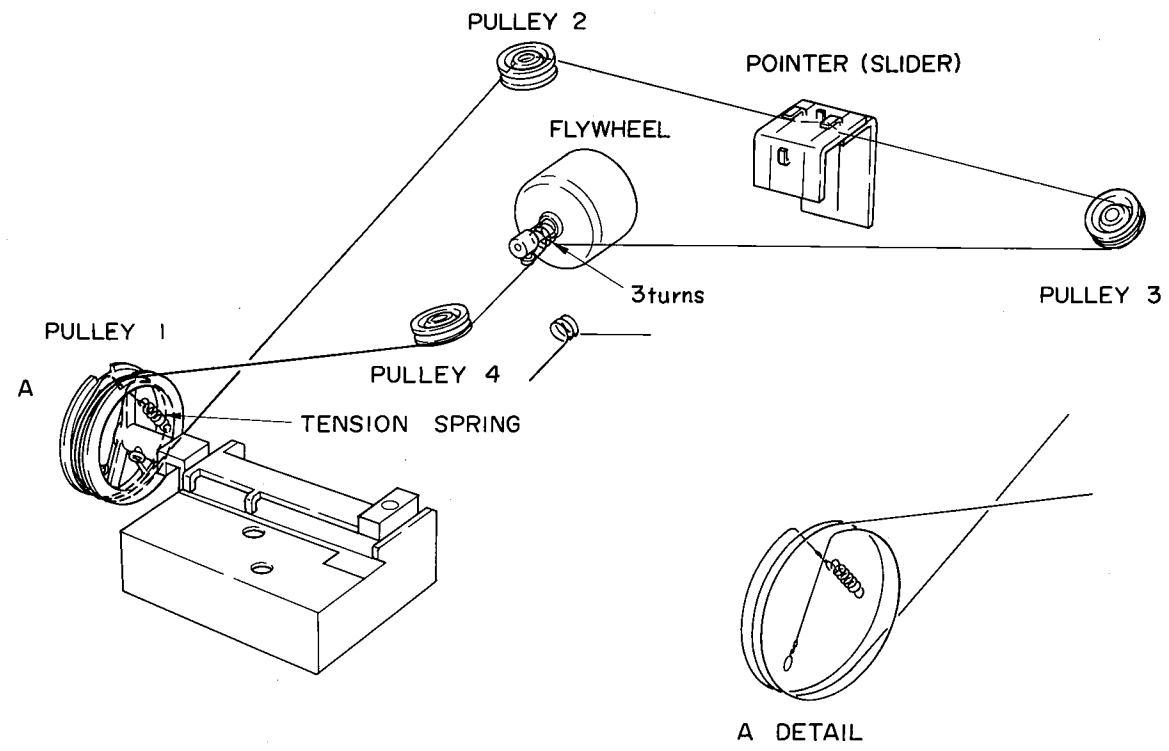


6. REAR PANEL REMOVAL

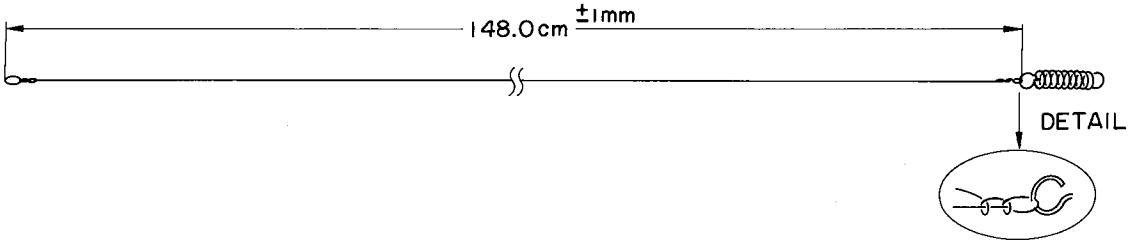
Remove 14 screws shown in a, b, c and d.

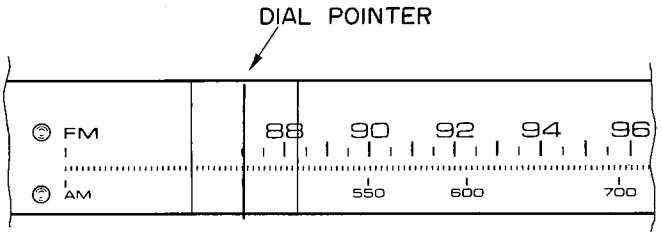


DIAL CORD STRINGING



DIAL CORD LENGTH

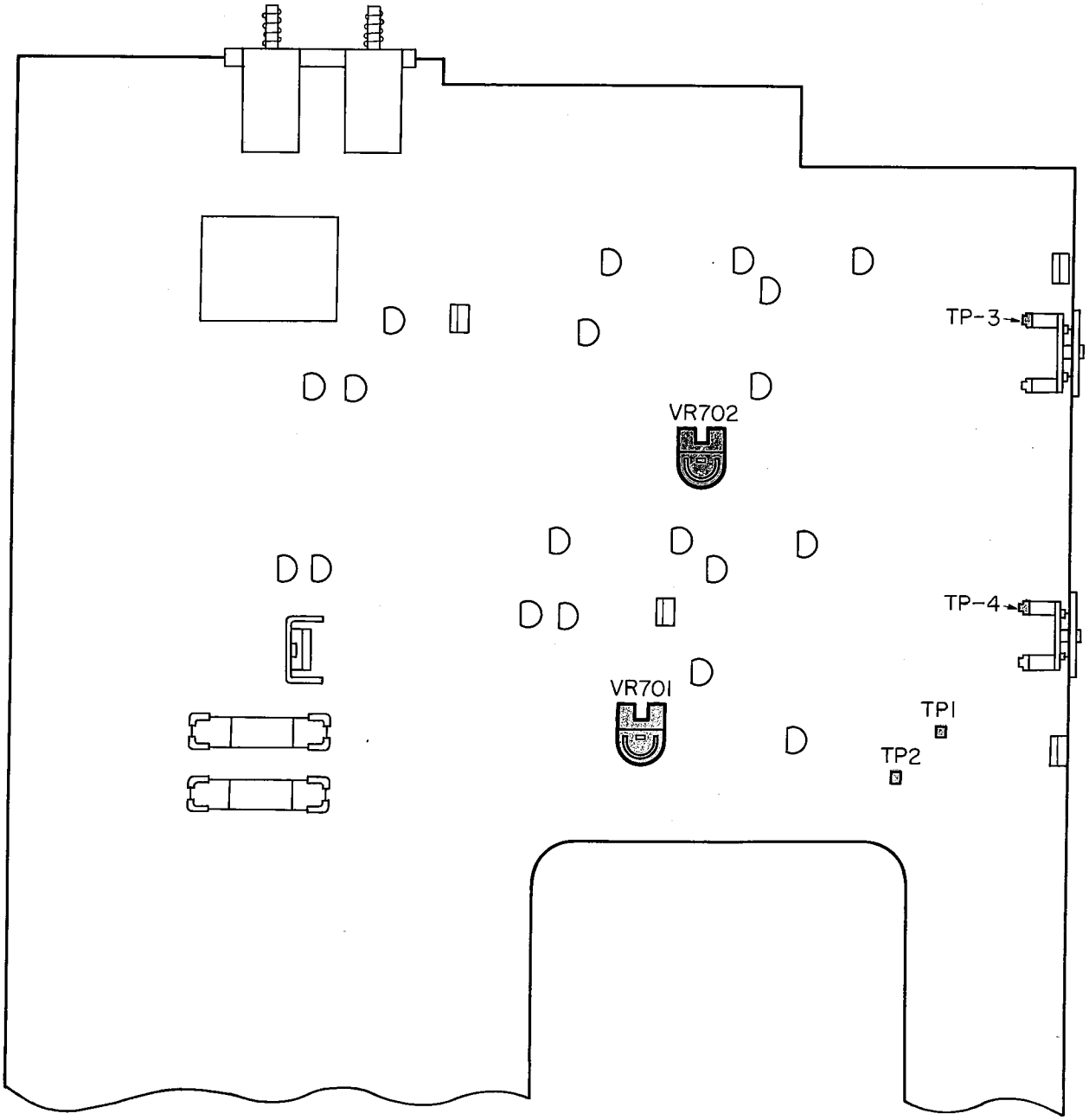




LOW END

After dial cord stringing, turn the tuning knob fully counterclockwise and set the pointer to lower end indication of the scale as illustrated above. Then hook the string to the pointer assembly and lock by painting.

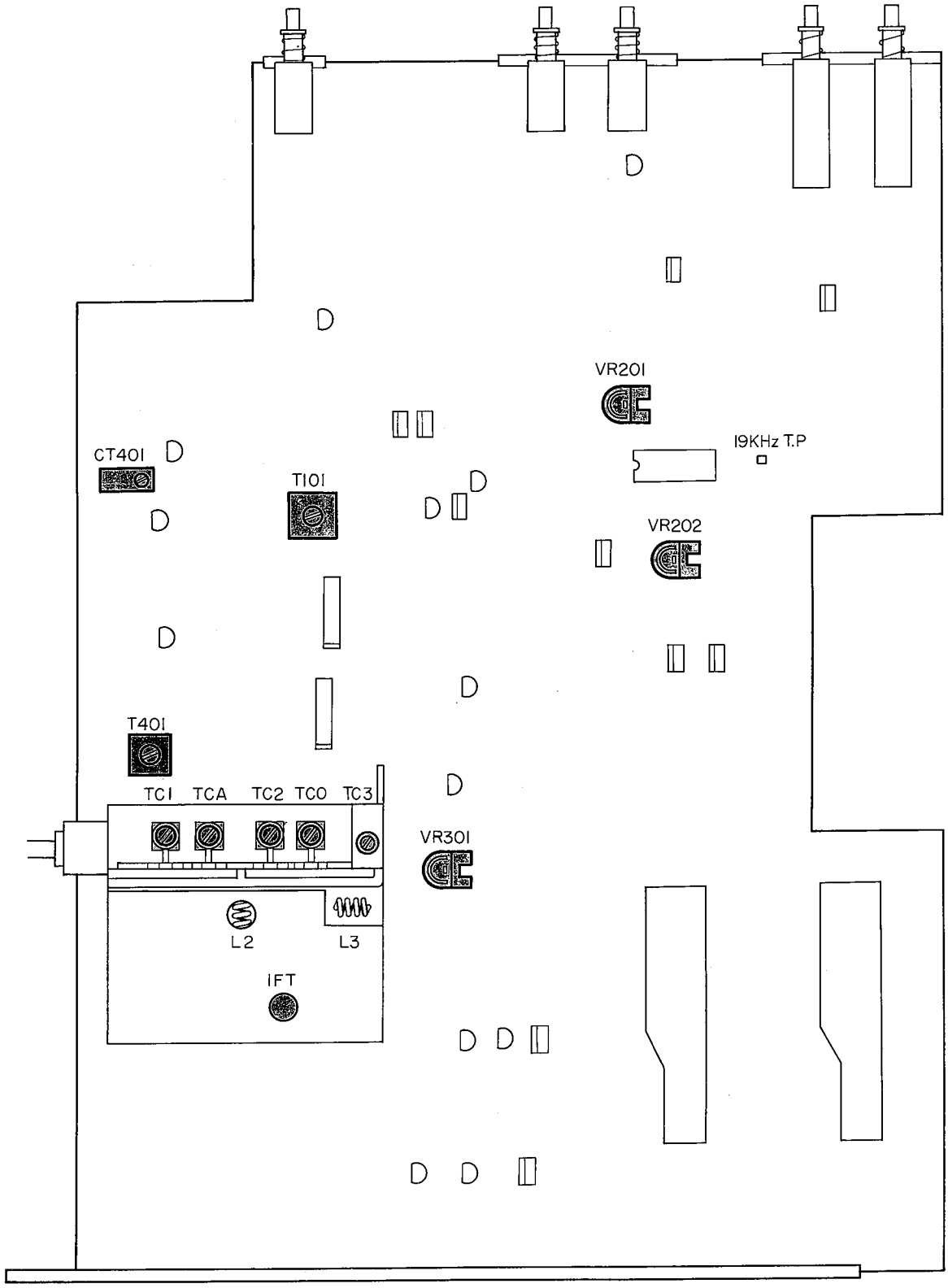
ADJUSTING AMPLIFIER CIRCUIT BOARD
ADJUSTING POINTS



ADJUSTMENT

ITEM	AD-JUSTING POINTS	CON-NECTING POINTS	EQUIPMENT	METHOD	INDI-CATION
IDLING CURRENT	VR701(L) VR702(R)	TP1-2 TP3-4	VTVM or Desital Volt Meter	Turn VR701 and VR702, so that the voltages between TP1 and TP2, TP3 and TP4 become rated value as shown in right hand side.	8±2mV

ADJUSTING TUNER CIRCUIT BOARD
ADJUSTING POINTS



ADJUSTMENT

ADJUSTING TRACKING ERROR OF FM SECTION

Step	ITEMS	ADJUSTING POINTS	CONNECTING INPUT	EQUIPMENTS	METHOD	REMARKS
1	POINTER OF THE DIAL	Pointer	FM Ant.	FM SG 98MHz 60dBμ	Tune the receiver to SG, then loosen the pointer from the dial string and set the pointer to 98MHz of the scale.	±1mm or less
2	HIGH END TRACKING ERROR CONFIRMATION		FM Ant.	FM SG 108MHz 60dBμ	Tune the receiver to SG, then confirm that the pointer is on 108MHz of the scale.	±2mm or less
3	TRACKING ERROR TRIMMING (When proper confirmation cannot be made by step 2, proceed step 3.)	Pointer	FM Ant.	FM SG 88MHz to 108MHz 60dBμ	Reset the pointer, so that the pointer is on within allowance in all range as shown in right hand side.	±2mm or less
4	TRACKING ERROR ADJUSTING (When proper adjustment cannot be made by step 3, proceed step 4.)	TC3 Pointer	FM Ant.	FM SG 98MHz 108MHz 60dBμ	Adjust error by the pointer and TC3 alternately. 98MHz – pointer 108MHz – TC3	

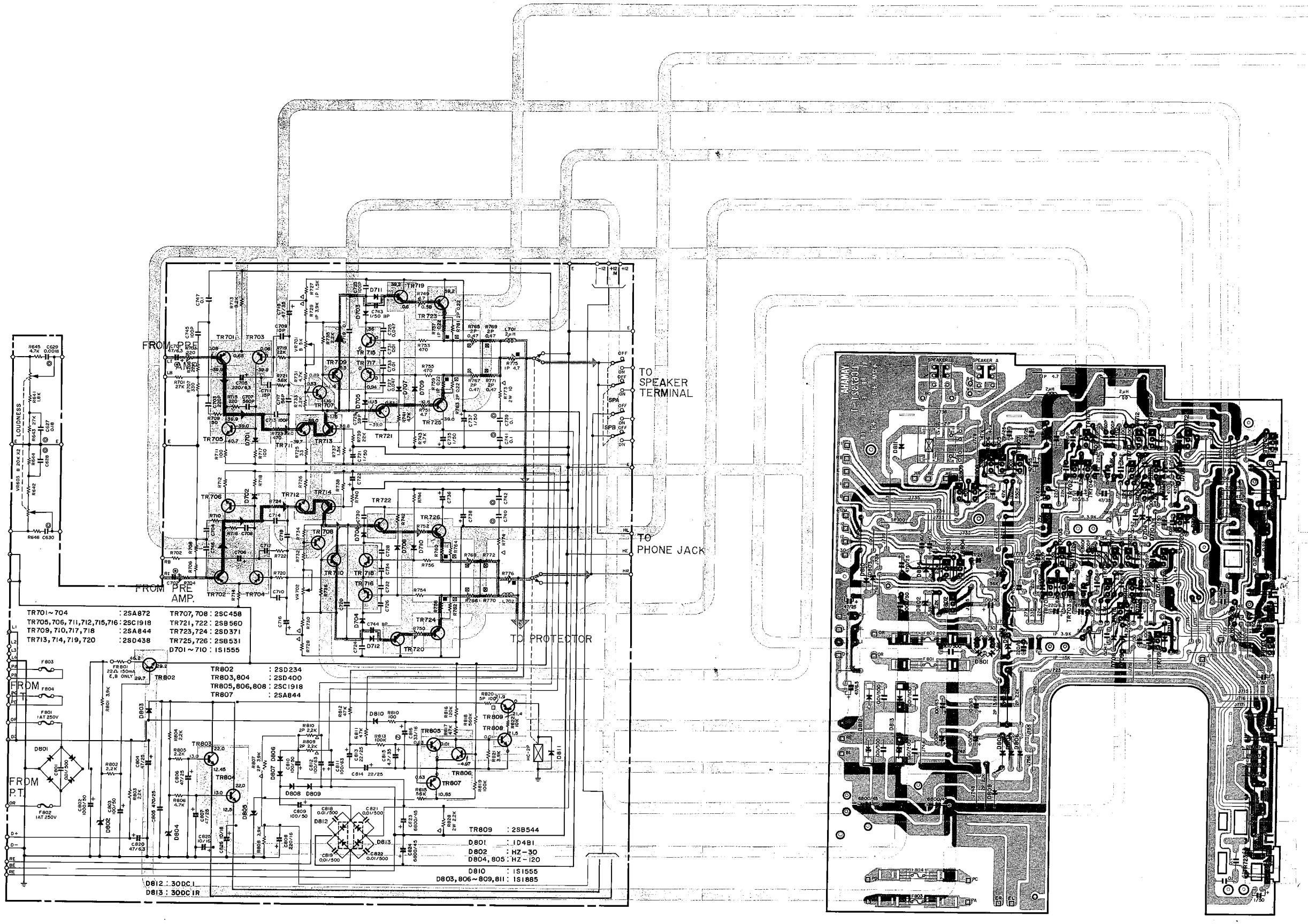
ADJUSTING TRACKING ERROR OF AM SECTION

ADJUST AM SECTION AFTER ADJUSTMENT OF FM SECTION MADE CORRECTLY.

Step	ITEMS	ADJUSTING POINTS	CONNECTING POINTS	EQUIPMENTS	METHOD	REMARKS
1	LOCAL OSCILLATING COIL ADJUSTING	T401	Bar Ant.	AM SG 600kHz 80dB/m to 100dB/m	Set the pointer to 600kHz of the scale, then turn the core of T401 slowly, so that the signal meter swings maximum.	
2	LOW END SENSITIVITY	Core of bar ant.	Bar Ant.	AM SG 600kHz 60dB/m	Turn the cord of the bar antenna coil, so that the signal meter swings maximum.	
3	LOCAL OSCILLATING CAPACITOR ADJUSTING	CT0	Bar Ant.	AM SG 1350kHz 80dB/m to 100dB/m	Set the pointer to 1350kHz of the scale, then turn the trimmer capacitor CT0, so that the signal meter swings maximum.	
4	HIGH END SENSITIVITY	CTA	Bar Ant.	AM SG 1350kHz 60dB/m	Turn the trimmer capacitor CTA, so that the signal meter swings maximum.	
5	REPEAT ADJUSTING			AM SG 600kHz 1350kHz 60dB/m	The above adjustment are necessary to repeat 2 to 3 times until minimize tracking error and differential of sensitivity between 600kHz and 1350kHz.	Tracking error: ±1.5mm or less
6	MID RANGE CONFIRMATION		Bar Ant.	AM SG 950kHz	Tune the receiver to SG, so that the signal meter swings maximum, then confirm that the pointer is on 950kHz of the scale.	±2mm or less

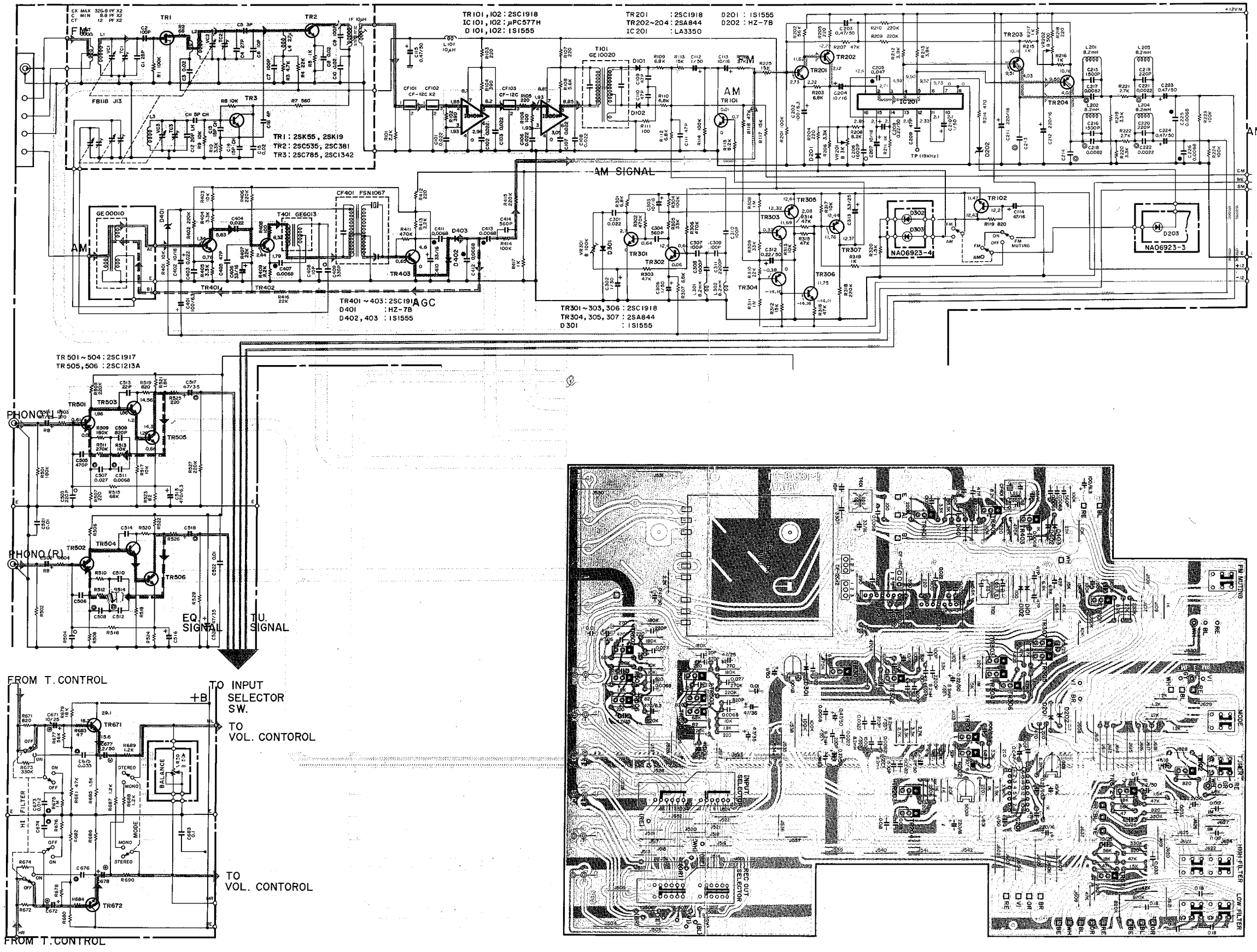
CIRCUIT BOARDS

MAIN C. BOARD 1 (Amplifier)

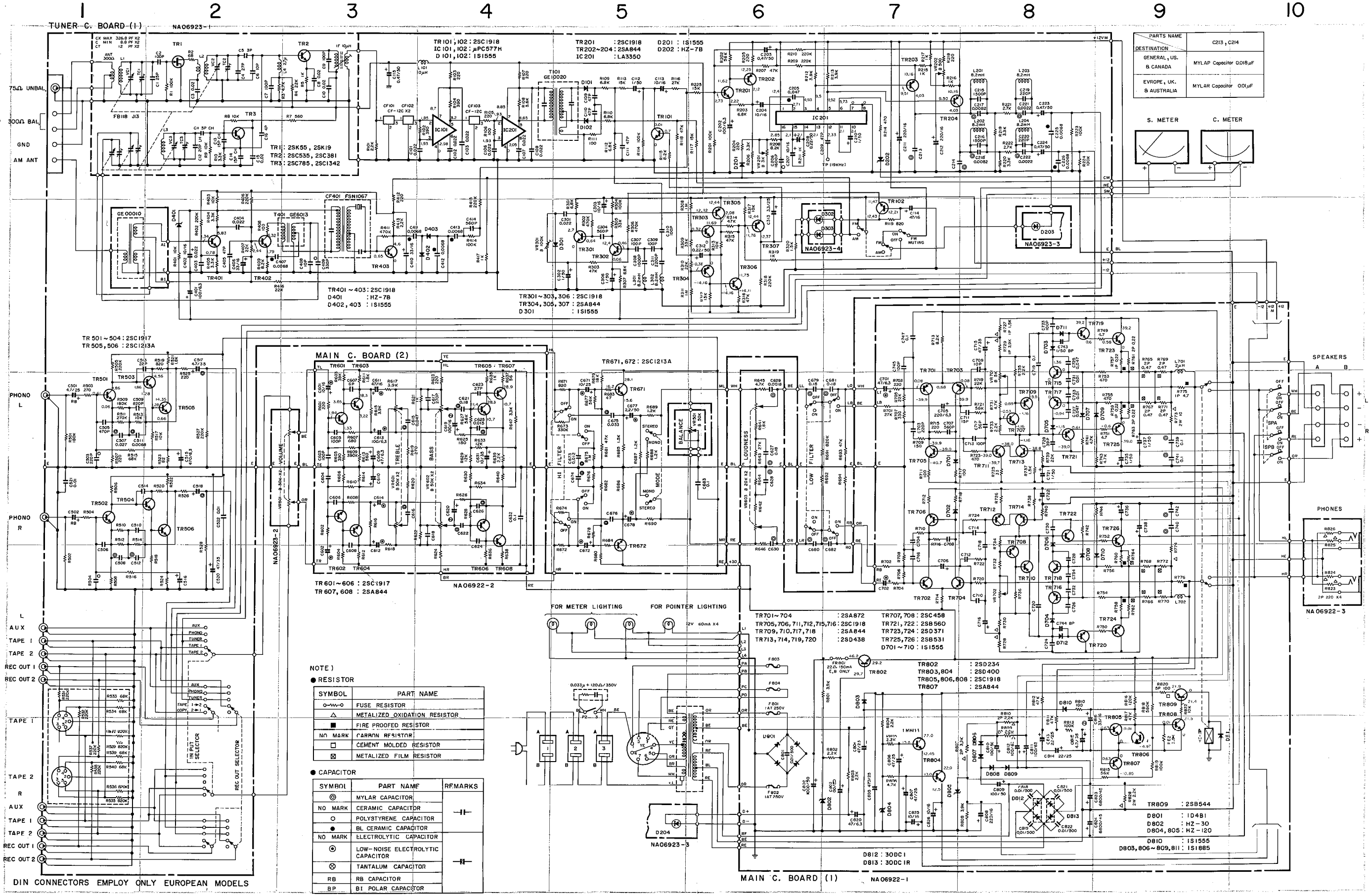


CIRCUIT BOARDS

TUNER C. BOARD 1 (Tuner)



SCHEMATIC DIAGRAM



NOTE)

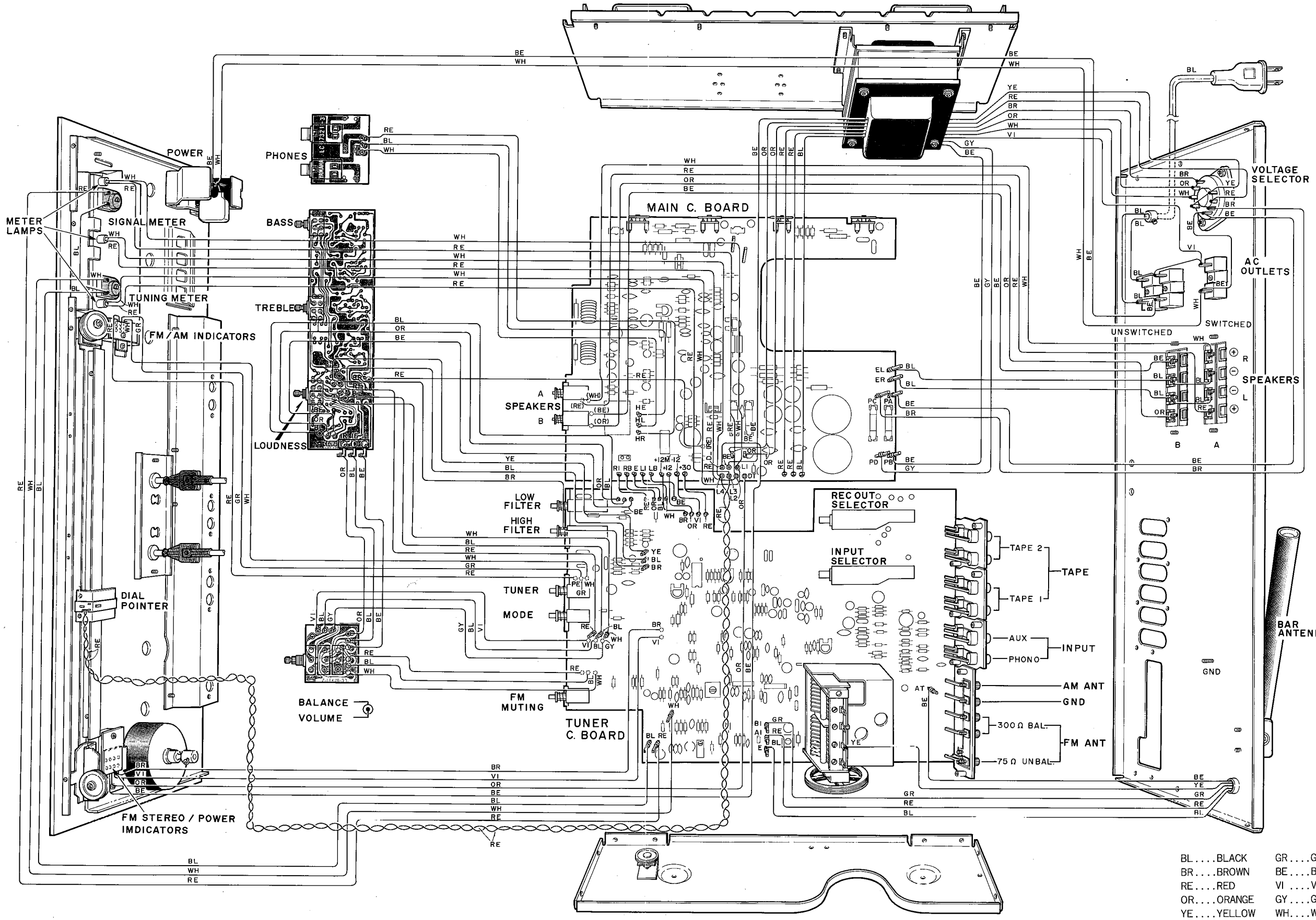
● RESISTOR

SYMBOL	PART NAME
○-W-○	FUSE RESISTOR
△	METALIZED OXIDATION RESISTOR
■	FIRE PROOFED RESISTOR
NO MARK	CARBON RESISTOR
□	CEMENT MOLDED RESISTOR
⊠	METALIZED FILM RESISTOR

● CAPACITOR

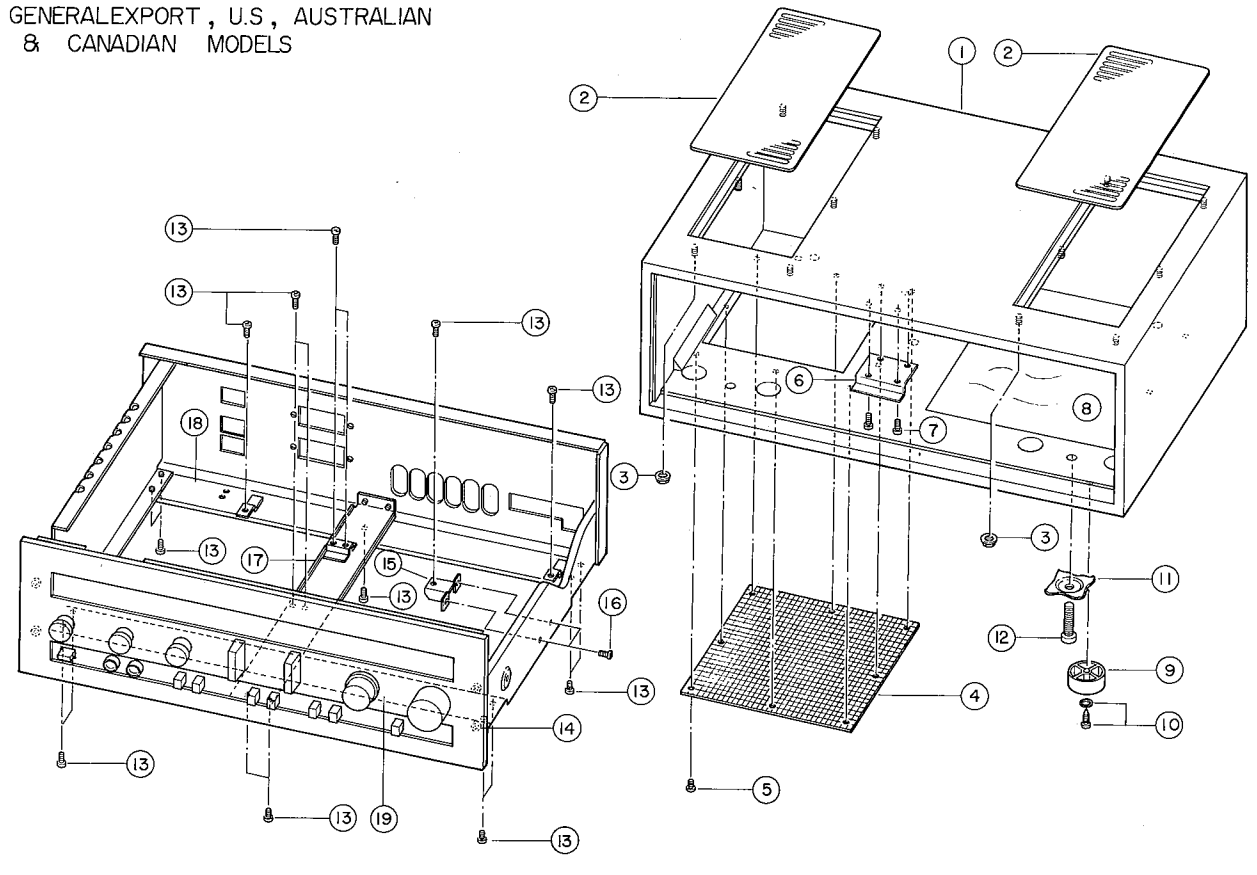
SYMBOL	PART NAME	REMARKS
◎	MYLAR CAPACITOR	⊣⊢
NO MARK	CERAMIC CAPACITOR	
○	POLYSTYRENE CAPACITOR	
●	BL CERAMIC CAPACITOR	
NO MARK	ELECTROLYTIC CAPACITOR	
⊙	LOW-NOISE ELECTROLYTIC CAPACITOR	⊣⊢
⊗	TANTALUM CAPACITOR	
RB	RB CAPACITOR	
BP	BI POLAR CAPACITOR	

WIRING

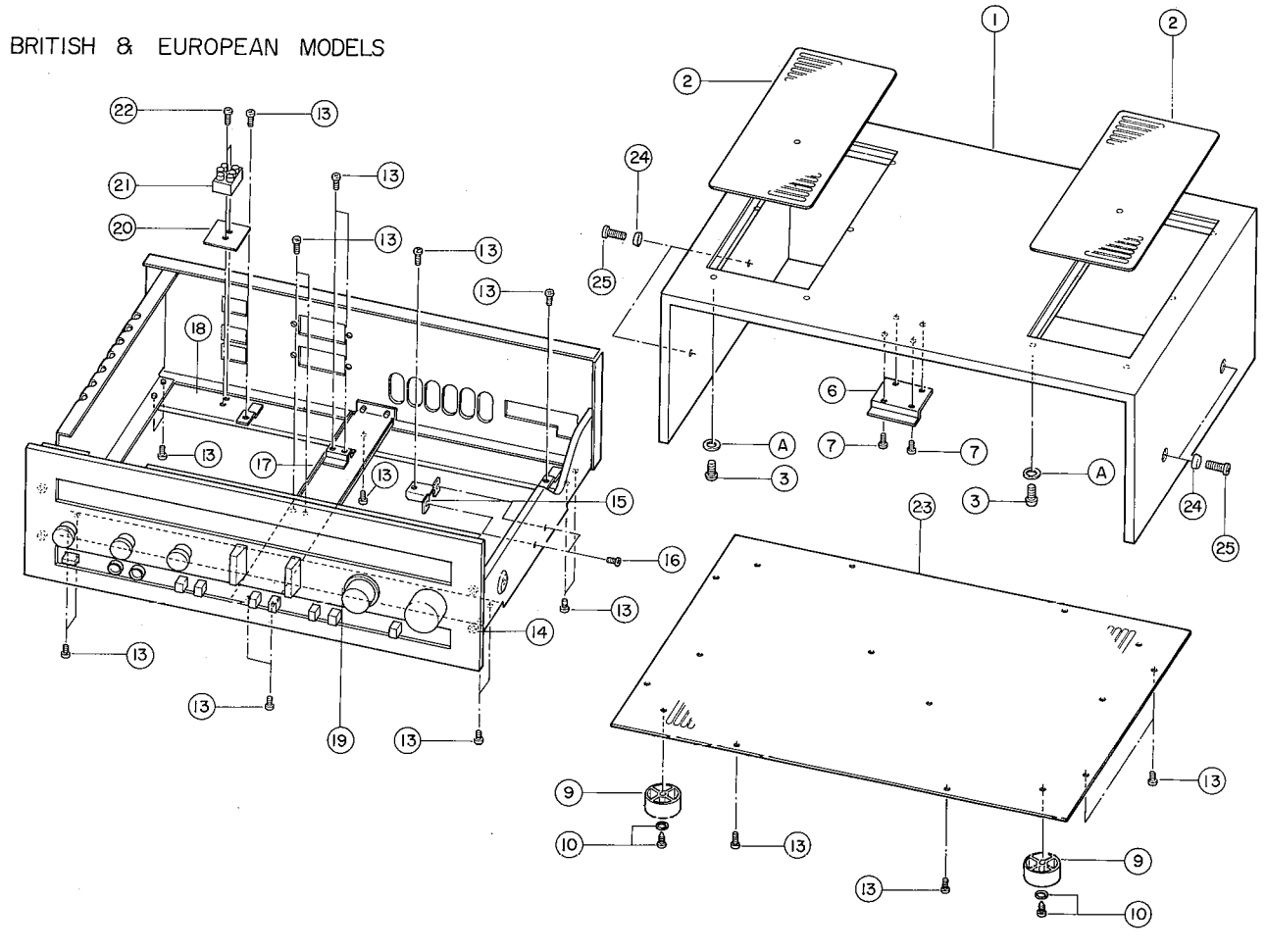


BL....BLACK
BR....BROWN
RE....RED
OR....ORANGE
YE....YELLOW
GR....GREEN
BE....BLUE
VI....VIOLET
GY....GRAY
WH....WHITE

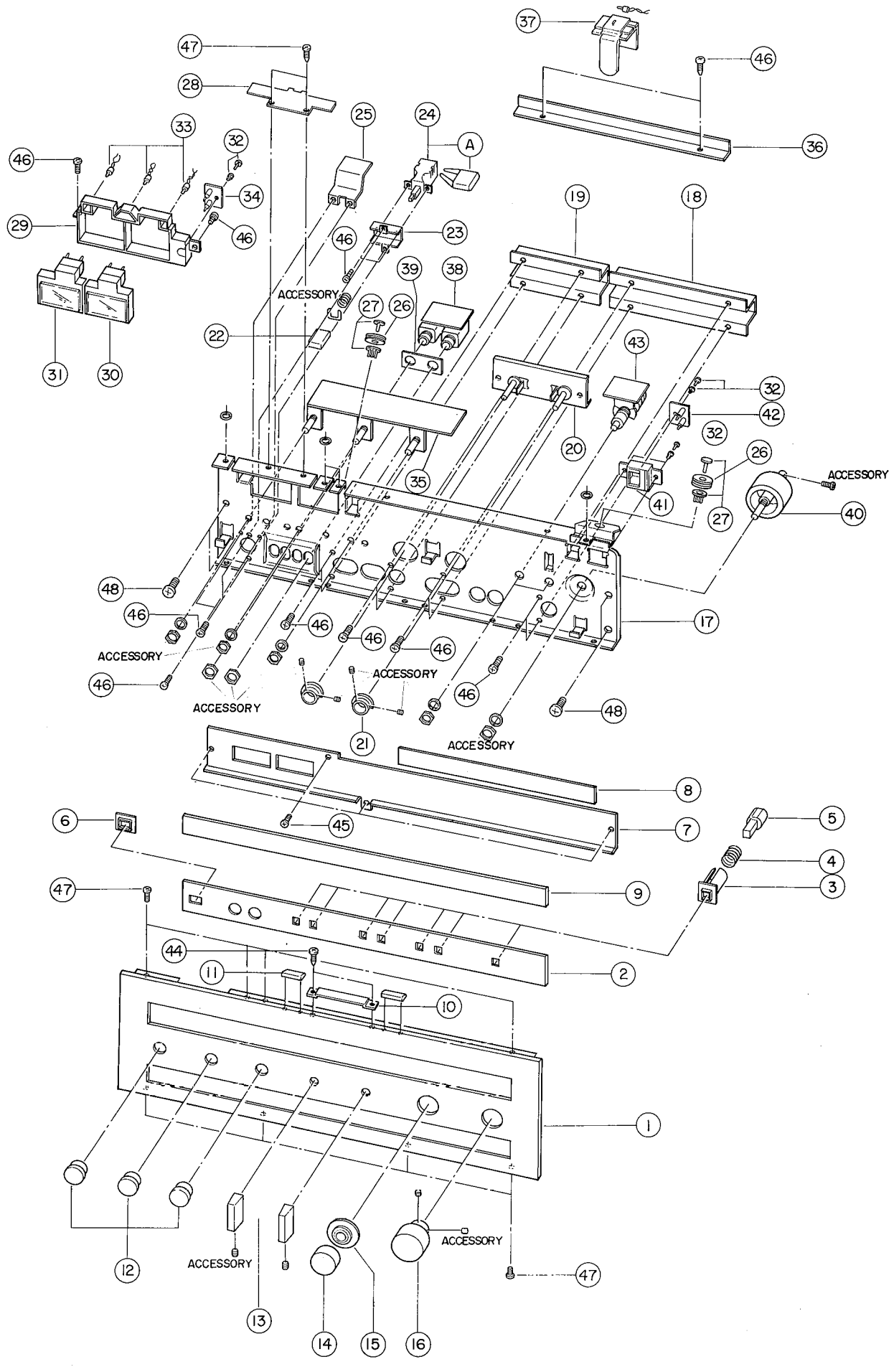
GENERAL EXPORT, U.S, AUSTRALIAN & CANADIAN MODELS



BRITISH & EUROPEAN MODELS



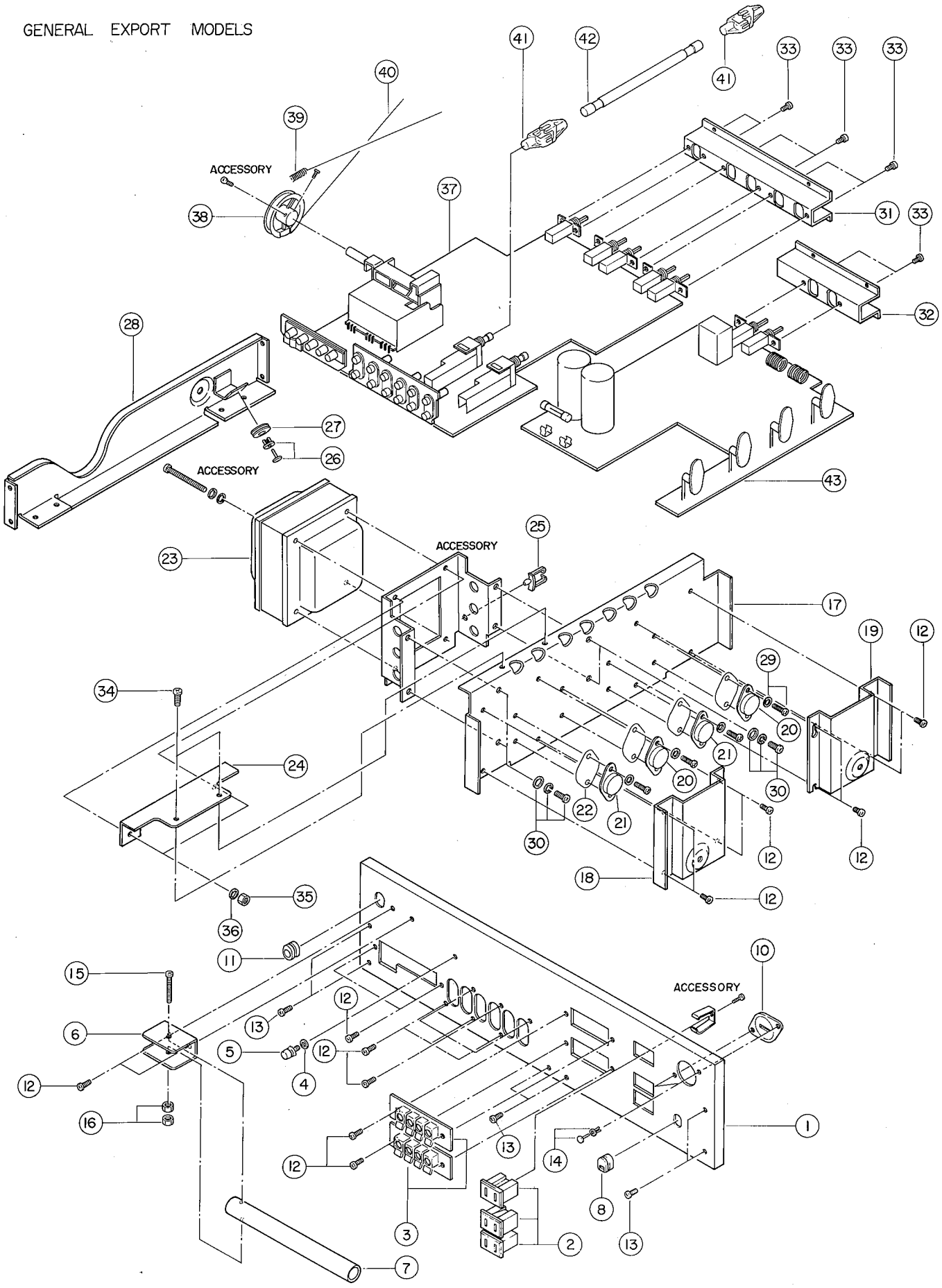
Ref. No.	Part No.	Description		Remarks	Common Models	
1	3 2 0 0 1 1 9 0 6 1 5 3 1 0	Cabinet	外装組上り	R,U,A,C	CR-820	
	3 2 0 0 1 1 9 0 6 1 5 4 1 0	—do.—	〃	E,B	—do.—	
2	3 2 0 0 0 0 A A 0 8 5 3 6 0	Radiator Grille	放熱グリル	R,U,A,C	—do.—	
	3 2 0 0 0 0 C B 0 7 9 4 1 0	—do.—	〃	E,B	—do.—	
3	4 2 0 0 0 0 E V 9 0 0 0 3 0	Hexagonal Nut With Washer M3 ZMC2-Y	座付ナット	R,U,A,C		
	4 2 0 0 0 0 E i 0 3 0 0 8 0	Binding Tapping Screw 3×8 ZMC2-Y	バインドタッピングネジ	E,B		
A	3 2 0 0 0 0 A A 0 7 7 2 1 0	Plain Washer 2t	平座金	E,B		
4	3 2 0 0 0 0 A A 0 8 5 3 8 0	Punching Metal	パンチングメタル	R,U,A,C	CR-820	
5	4 2 0 0 0 0 E Z 0 3 1 1 0 0	Wooden Cums Ccrew 3.1×10 ZMC2-Y	鉄丸座付ネジ	R,U,A,C		
6	3 2 0 0 0 0 A A 0 8 5 3 7 0	Metal, Warp Prevention	反り止め金具	R,U,A,C	CR-820	
	3 2 0 0 0 0 A A 0 8 5 3 5 0	—do.—	〃	E,B	—do.—	
7	4 2 0 0 0 0 E Q 7 3 1 1 0 0	Wooden Screw 3.1×10 ZMC2-Y	鉄丸木ネジ			
8	4 2 0 0 0 0 C A 0 6 5 7 0 0	Shield Paper	バリヤ紙	R,U,A,C	CR-820	
9	4 2 0 0 0 0 C B 0 7 9 4 9 0	Leg	脚		CR-820, 1020, 2020	
A	4 2 0 0 0 0 E J 0 4 0 1 4 0	Pan Head Tapping Screw 4×14 ZMC2-Y	ナベタッピングネジ	E,B		
10	4 2 0 0 0 0 E Q 7 4 1 1 0 0	Wooden Screw 4.1×10 ZMC2-Y	鉄丸木ネジ	R,U,A,C		
11	3 2 0 0 0 0 A A 0 7 4 6 3 0	Amp. Setling Washer	アンプ取付ワッシャー	R,U,A,C	CR-400	
12	4 2 0 0 0 0 E A 0 5 0 2 5 0	Pan Head Screw 5×25 ZMC2-Y	ナベ小ネジ	R,U,A,C		
13	4 2 0 0 0 0 E i 0 3 0 0 8 0	Binding Tapping Screw 3×8 ZMC2-Y	バインドタッピングネジ			
14	4 2 0 0 0 0 E i 0 4 0 0 8 0	—do.— 4×8 ZMC2-Y	〃			
15	3 2 0 0 0 0 A A 0 8 5 1 8 0	Holder, Tuner C.Board	Tuシートホルダー		CR-820	
16	4 2 0 0 0 0 E D 0 3 0 0 6 0	Binding Head Screw 3×6 ZMC2-Y	バインド小ネジ			
17	3 2 0 0 0 0 A A 0 8 5 0 4 0	Center Frame	センターフレーム		CR-820	
18	3 2 0 0 0 0 A A 0 8 5 0 6 0	R-Bridge	Rブリッジ		—do.—	
A	4 2 0 0 0 0 L A 0 0 0 2 8 0	Lug Terminal 3mm	アースラグ	A		
B	4 2 0 0 0 0 E i 0 3 0 0 6 0	Binding Tapping Screw 3×6 ZMC2-Y	バインドタッピングネジ	A		
19	3 2 0 0 0 0 A A 0 8 5 0 5 0	F-Bridge	Fブリッジ		—do.—	
20	3 2 0 0 0 0 C B 0 7 4 9 7 0	Isolation Plate #7497	絶縁板	A,E,B	CR-400,820, 1020, 2020	
21	4 2 0 0 0 0 L A 0 0 1 0 4 0	Board, Terminal 3P	3P中継端子台	A,E,B		
22	4 2 0 0 0 0 E D 0 3 0 1 6 0	Binding Head Screw 3×16 ZMC2-Y	バインド小ネジ	A,E,B		
23	3 2 0 0 0 0 A A 0 8 5 0 2 0	Bottom Cover	ボトムカバー	E,B	CR-820	
24	3 2 0 0 0 0 C B 0 7 9 5 2 0	Hole-Cap	ホールキャップ	E,B	—do.—	
25	4 2 0 0 0 0 E D 4 5 0 1 4 0	Binding Head Screw 5×14 FCM3-BI	バインド小ネジ	E,B		



Ref. No.	Part No.	Description		Remarks	Common Models	
1	3 2 0 0 0 0 B A 0 6 9 8 8 0	Panel	パネル			
2	3 2 0 0 0 0 B A 0 6 9 8 9 0	Sub Panel	サブパネル			
3	3 2 0 0 0 0 C B 0 7 9 2 5 0	Frame, Push SW. Button	プッシュボタン枠		CR-820, 1020,2020	
4	3 2 0 0 0 0 A A 0 8 4 5 9 0	Spring, Push SW.	プッシュスプリング		—do.—	
5	3 2 0 0 0 0 C B 0 7 9 2 4 0	Button, Push SW.	プッシュボタン		—do.—	
6	3 2 0 0 0 0 C B 0 7 9 3 5 0	Frame, Power SW. Button	パワーボタン枠		CR-820	
7	3 2 0 0 0 0 N B 0 7 8 3 7 0	Dial Scale Unit	目盛板ユニット			
8	4 2 0 0 0 0 C B 0 6 8 8 3 0	Double Face 30×210	ダブルフェイス		CR-400	
9	3 2 0 0 0 0 C G 0 6 0 4 6 0	Dial Panel	ダイヤルパネル		CR-820	
10	3 2 0 0 0 0 A A 0 8 4 9 4 0	Metal, Warp Prevention	反り止め金具		CR-820, 1020,2020	
11	3 2 0 0 0 0 C B 0 7 9 3 2 0	Spacer, Warp Prevention	反り止めスペーサー	R,U,A,C	—do.—	
12	3 2 0 0 0 0 B A 0 6 4 4 6 0	Knob, LN	ツマミ		CA-1000	
13	3 2 0 0 0 0 B A 0 6 7 7 9 0	Knob, Switch	SWツマミ		CA-610 CR-820	
14	3 2 0 0 0 0 B A 0 6 9 8 6 0	Knob, Volume Control	ボリュームツマミ		CR-820	
15	3 2 0 0 0 0 B A 0 6 9 8 7 0	Knob, Balance Control	バランスツマミ		—do.—	
16	3 2 0 0 0 0 B A 0 6 9 8 5 0	Knob, Tuning	チューニングツマミ		—do.—	
17	3 2 0 0 0 0 A A 0 8 5 0 1 0	Sub Chassis	サブシャーシー		—do.—	
18	3 2 0 0 0 0 A A 0 8 5 2 8 0	Holder A, Push SW.	プッシュスイッチホルダーA			
19	3 2 0 0 0 0 A A 0 8 5 2 9 0	Holder B, Push SW.	プッシュスイッチホルダーB			
20	3 2 0 0 0 0 A A 0 8 5 2 7 0	Shaft Unit	シャワトユニット			
21	3 2 0 0 0 0 C B 0 7 9 3 9 0	SW. Limitter	SWリミッター		CR-820	
22	3 2 0 0 0 0 C B 0 7 9 3 4 0	Button, Power SW.	パワーボタン		—do.—	
23	3 2 0 0 0 0 A A 0 8 5 1 5 0	Holder, Power SW.	パワーSWホルダー	R,U,C	—do.—	
	3 2 0 0 0 0 A A 0 8 5 1 6 0	—do.—	〃	E,B,A	—do.—	
24	4 2 0 0 0 0 K A 8 0 0 2 4 0	Push Switch SPG TV-5	ハワースイッチ	R,U,C	—do.—	
	4 2 0 0 0 0 K A 8 0 0 1 8 0	—do.— 1P-0009AF2020	〃	A,E,B	—do.—	
A	4 2 0 0 0 0 F Z 0 0 0 5 4 0	Spark Killer D.C500V A.C350V 0.033+120	スパークキラーコンデンサー	R	—do.—	
	4 2 0 0 0 0 F Z 0 0 0 1 1 0	—do.— A.C125V 0.33+120	〃	U	—do.—	
	4 2 0 0 0 0 F Z 0 0 0 6 9 0	—do.— D.C500V A.C350V 0.022μ	〃	E,B	—do.—	
	4 2 0 0 0 0 F Z 0 0 0 9 5 0	—do.— 250V 2CA-120033	〃	C	CR-2020	
B	4 2 0 0 0 0 C B 0 7 2 1 9 0	Cover For Capacitor 820826	コンデンサーカバー	R,U,A,E,B	CT-400 CR-820	
	4 2 0 0 0 0 C B 0 7 9 8 9 0	—do.— SB-0653a	〃	C	CR-2020	
C	3 2 0 0 0 0 N A 0 6 9 2 0 4	Main Circuit Board, 4	メインシート4	E		
	3 2 0 0 0 0 N A 0 6 9 1 9 4	—do.—	〃	B		
25	3 2 0 0 0 0 A A 0 8 5 2 0 0	Shield Plate, Power SW.	P.Sシールド板		CR-820	
A	3 2 0 0 0 0 C B 0 7 9 3 3 0	Isolation Plate, Power SW.	P.S絶縁板	B	—do.—	
B	4 2 0 0 0 0 E I 0 3 0 0 8 0	Binding Tapping Screw 3×8 ZMC2-Y	バインドタッピングネジ	B		
26	3 2 0 0 0 0 C B 0 7 5 8 4 0	Wheel	滑車		CT-1010 CR-820	
27	3 2 0 0 0 0 C B 0 7 7 8 9 0	Pulley-Crip	フーリークリップ		—do.—	
28	3 2 0 0 0 0 A A 0 8 5 1 9 0	Holder, Meter Unit	メーター押え金具		CR-820	
29	3 2 0 0 0 0 C B 0 7 9 3 3 0	Holder, Meter	メーターホルダー		—do.—	
A	3 2 0 0 0 0 C B 0 7 9 3 1 0	Colour Plate	カラープレート		CR-820, 1020,2020	
30	4 2 0 0 0 0 J i 0 0 0 6 7 0	Tuning Meter	チューニングメーター		CR-820	
31	4 2 0 0 0 0 J i 0 0 0 6 6 0	Signal Q Meter	シグナルQメーター		—do.—	
32	4 2 0 0 0 0 C B 0 6 8 8 8 0	Plastic Rivet φ3.5	プラスチックリベット			
33	3 2 0 0 0 0 M Z 0 6 9 3 7 0	Lamp Asse'y	ランプAssy		CR-820	
34	3 2 0 0 0 0 N A 0 6 9 2 3 4	Tuner Circuit Board, 4	チューナーシート4	R,U,C		
	3 2 0 0 0 0 N A 0 6 9 2 4 4	—do.—	〃	E		
	3 2 0 0 0 0 N A 0 6 9 2 5 4	—do.—	〃	A,B		
A	4 2 0 0 0 0 i F 0 0 0 6 8 0	Light Emitting Diode SLP132B	LED			
B	3 2 0 0 0 0 C B 0 7 9 3 0 0	Spacer For LED	LEDスペーサー		CR-820, 1020,2020	

Ref. No.	Part No.	Description		Remarks	Common Models	
35	320000 NA06922 2	Main Circuit Board, 2	メインシート2	R		
	320000 NA06918 2	—do.—	〃	U,C		
	320000 NA06919 2	—do.—	〃	B		
	320000 NA06920 2	—do.—	〃	E		
	320000 NA06921 2	—do.—	〃	A		
A	420000 iC19170 0	Transistor 2SC1917 E,F,G	トランジスター			
B	420000 iA0844 0 0	—do.— 2SA844	〃			
C	420000 HSII022 0	Variable Resistor 50K	ボリューム			
D	420000 HSII020 0	—do.— 20KB×2	〃			
E	420000 LA00I96 0	Lapping Pin, U Type 3P	U型ラッピングピン			
36	320000 AA08517 0	Dial Pointer Rail	指針レール		CR-820	
37	320000 NB07838 0	Dial Pointer	ダイヤル指針	U,C	CR-400,820 1020,2020	
	320000 NB07839 0	—do.—	〃	R,A,E,B		
A	420000 JB00009 0	Pilot Lamp 12V 60mA	パイロットランフ	R,A,E,B		
	420000 JB00032 0	—do.—	〃	R,A,E,B		
	420000 JB00045 0	—do.— UL Lead 12V 60mA	〃	U,C		
38	320000 NA06922 3	Main Circuit Board, 3	メインシート3	R		
	320000 NA06918 3	—do.—	〃	U,C		
	320000 NA06919 3	—do.—	〃	B		
	320000 NA06920 3	—do.—	〃	E		
	320000 NA06921 3	—do.—	〃	A		
A	420000 LB30052 0	Phone Jack LJ190-1-2	フォーンジャック			
B	420000 HL42522 0	Metal Oxide Film Resistor 2W220Ω	酸金抵抗			
39	320000 CB07990 0	Phone's Emblem	フォーンズ エンブレム		CR-820, 1020,2020	
40	320000 NB07815 0	Tuning Unit	チューニング ユニット			
41	320000 CB07936 0	Holder, LED	LEDホルダー		CR-820	
42	320000 NA06923 3	Tuner Circuit Board, 3	チューナーシート3	R,U,C		
	320000 NA06924 3	—do.—	〃	E		
	320000 NA06925 3	—do.—	〃	A,B		
A	420000 iF00068 0	Light Emitting Diode SLP132B	LED			
43	320000 NA06923 2	Tuner Circuit Board, 2	チューナーシート2	R,U,C		
	320000 NA06924 2	—do.—	〃	E		
	320000 NA06925 2	—do.—	〃	A,B		
A	420000 HS42018 0	Variable Resistor 50KA 2×3	ボリューム2軸3連			
44	420000 Ei03006 0	Binding Tapping Screw 3×6 ZMC2-Y	バインド タッピングネジ			
45	420000 Ei23006 0	—do.— 3×6 FCrM3-3g	〃			
46	420000 ED03006 0	Binding Head Screw 3×6 ZMC2-Y	バインド小ネジ			
47	420000 Ei03008 0	Binding Tapping Screw 3×8 ZMC2-Y	バインド タッピングネジ			
48	420000 ED04008 0	Binding Head Screw 4×8 ZMC2-Y	バインド小ネジ			

GENERAL EXPORT MODELS

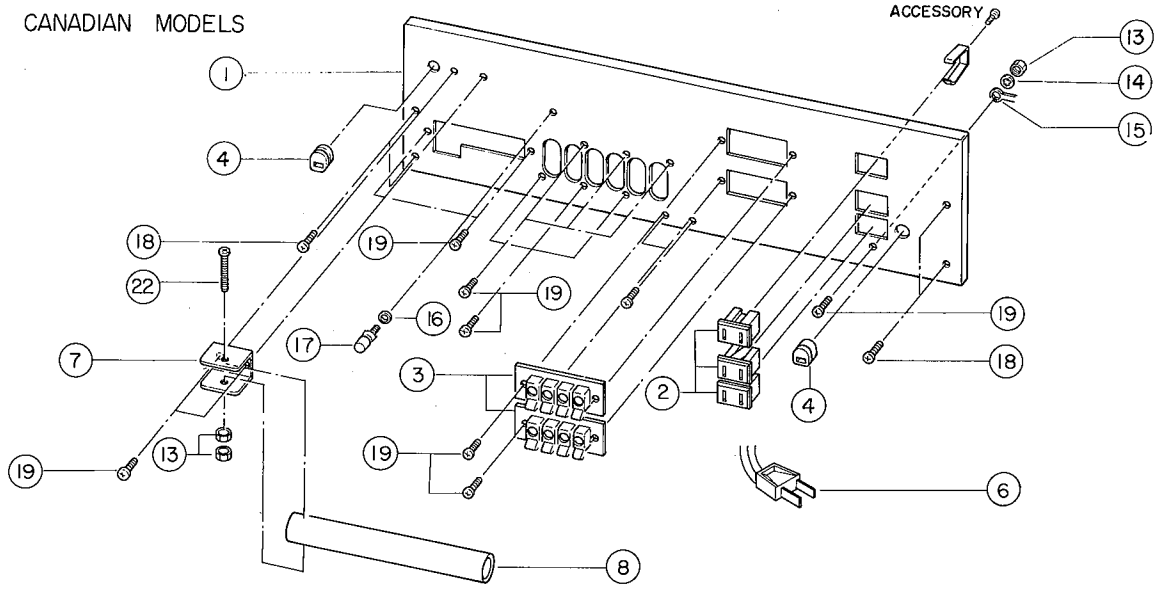


Ref. No.	Part No.	Description		Remarks	Common Models	
1	320000 AA085230	Rear Panel, R	リアパネル	R		
2	420000 LB200710	AC Socket S-1642B	ACコンセント	R,U,C	CA-400	
3	420000 LA001940	4P Push Terminal	4Pプッシュターミナル			
4	420000 EV901360	Thoothed Locked Wacher ϕ3.6 FNM3-3g	セムス平座金			
5	420000 LA001070	Earth Terminal	アース端子		CA-1000	
6	320000 AA076970	Antenna Holder	アンテナホルダー		CR-820, 1020, 2020	
7	420000 GE000100	AM Bar Antenna	AMバーアンテナ			
8	420000 CB070690	Cord Stopper SR-3P-4	コードストッパー	R,U,C	CA-1000	
9	420000 MG000340	AC Cord	ACコード	R,U,C	C-2	
10	420000 LB200260	Voltage Selector SWP033-3023	電圧切換器	R,E		
11	320000 CB062780	Rubber Spacer	ゴムブッシュ	R,A,E,B		
12	420000 Ei430080	Binding Tapping Screw 3×8 FCM3-BI	バインドタッピングネジ			
A	420000 CB078250	Screw Cover 3S	ビスカバー	R,E		
13	420000 EZ430080	Bonding Tapping Screw 3×8 FCM3-BI	ボンディングタッピングネジ			
14	420000 CB068880	Plastic Rivet ϕ3.5	プラスチックリベット	R,E		
15	420000 EA430250	Pan Head Screw 3×25 FCM3-BI	ナベ小ネジ			
16	420000 EV100300	Hexagonal Nut M3 FCM3-BI	六角ナット			
17	320000 BA069800	Rediator	ラジエター			
18	320000 BA069810	Sub-Radiator, A	サブラジエターA			
19	320000 BA069820	—do.— B	サブラジエターB			
20	420000 iD037100	Transistor 2SD371 R, O	トランジスター			
21	420000 iB053100	—do.— 2SB531 R, O	〃			
22	420000 iI000230	Isolation Base, Mica	マイカベース			
23	420000 GA610520	Power Transformer	電源トランス	R,E		
	420000 GA610510	—do.—	〃	U		
	420000 GA610540	—do.—	〃	C		
	420000 GA610580	—do.—	〃	A,B		
A	420000 LA000590	Press Terminal 2-SD	圧着端子	A		
24	320000 AA086620	Angle Iron For Transformer	トランスアングル		CR-820	
25	320000 CB069480	Wire Supporter	ワイヤークリップ		CR-200, 820	
26	320000 CB077890	Pulley-Crip	フーリークリップ		CT-1010	
27	320000 CB075840	Wheel	滑車		CT-1010	
28	320000 AA085030	Side Frame	サイドフレーム			
29	420000 EZ330140	B.W Head Screw 3×14 FNM3-3m	B.Wヘッド小ネジ			
30	420000 EH040100	Pan Head Sems Type Screw 4×10 3Piecies ZMC2-Y	セムスナベ小ネジ			
31	320000 AA085280	Holder A, Push SW.	プッシュスイッチホルダーA			
32	320000 AA085290	Holder B, Push SW.	プッシュスイッチホルダーB			
33	420000 ED030060	Binding Head Screw 3×6 ZMC2-Y	バインド小ネジ			
34	420000 Ei040080	Binding Tapping Screw 4×8 ZMC2-Y	バインドタッピングネジ			
35	420000 EV100040	Hexagonal Nut M4	六角ナット			
36	420000 EV200030	Flat Washer 4S ZMC2-Y	平座金ミガキ丸			

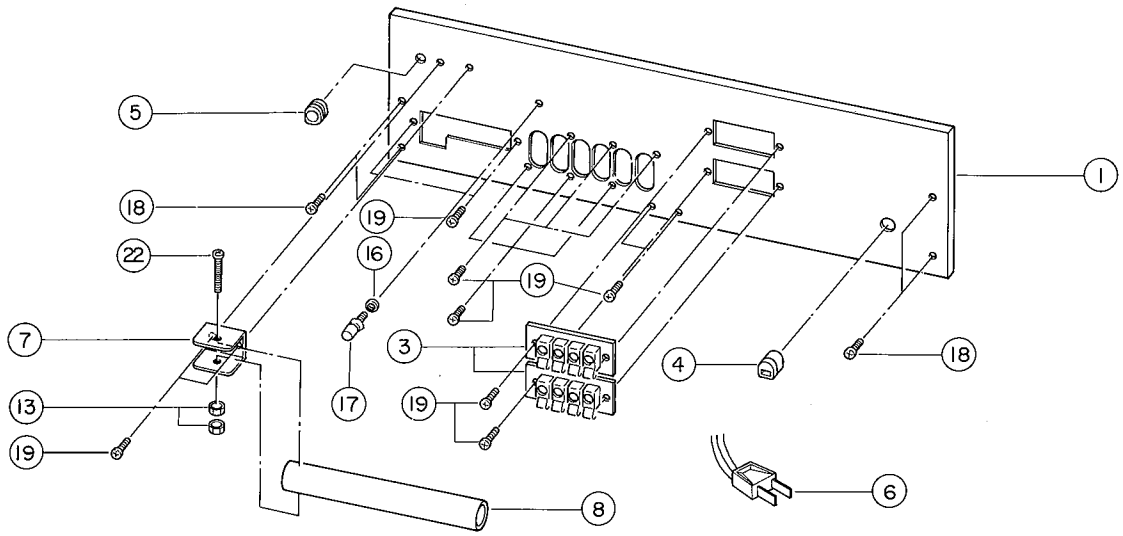
Ref. No.	Part No.	Description		Remarks	Common Models	
37	3 2 0 0 0 0 N A 0 6 9 2 3 1	Tuner C.Board 1	チューナーシート1	R,U,C		
	3 2 0 0 0 0 N A 0 6 9 2 4 1	—do.—	〃	E		
	3 2 0 0 0 0 N A 0 6 9 2 5 1	—do.—	〃	A,B		
A	4 2 0 0 0 0 F S 1 1 3 6 8 0	BL Ccramic Capacitor 50V0.0068μ	SBLコン			
	4 2 0 0 0 0 F S 1 3 4 4 7 0	—do.— 50V0.047μ	〃			
	4 2 0 0 0 0 F Z 0 0 0 5 3 0	Electrolytic Cap. MS 25V10μ	MSケミコン			
	4 2 0 0 0 0 F Z 0 0 0 9 0 0	—do.— 50V2.2μ	〃			
	4 2 0 0 0 0 F Z 0 0 0 4 9 0	—do.— 35V4.7μ	〃			
	4 2 0 0 0 0 F Z 0 0 0 9 9 0	—do.— RB 25V4.7μ	RBケミコン			
B	4 2 0 0 0 0 G E 3 0 0 1 3 0	RF Inductor Coil 10μH	RFインダクター			
	4 2 0 0 0 0 G E 3 0 0 1 5 0	—do.— 8.2mH	〃			
	4 2 0 0 0 0 G E 1 0 0 2 0 0	FM Disciminater Coil	FMディスクリコイル			
	4 2 0 0 0 0 G E 1 0 0 1 5 0	OSC. Coil, AM GE6013	OSCコイル			
C	4 2 0 0 0 0 G G 0 0 0 1 7 0	Ceramic Filter CFM-107M-12C	セラミックフィルター			
	4 2 0 0 0 0 G G 0 0 0 0 8 0	—do.— FSN1067	〃			
D	4 2 0 0 0 0 H T 1 7 0 0 4 0	Variable Resistor B500	半固定抵抗			
	4 2 0 0 0 0 H T 1 7 0 0 7 0	—do.— B3K	〃			
	4 2 0 0 0 0 H T 1 7 0 0 3 0	—do.— B100K	〃			
E	4 2 0 0 0 0 i A 0 8 4 4 0 0	Transistor 2SA844	トランジスター			
	4 2 0 0 0 0 i C 1 2 1 3 1 0	—do.— 2SC1213A C,D	〃			
	4 2 0 0 0 0 i C 1 1 7 5 1 0	—do.— 2SC1175NP E,F,G	〃		2SC1213A	
	4 2 0 0 0 0 i C 1 9 1 8 0 0	—do.— 2SC1918 E,F,G	〃			
	4 2 0 0 0 0 i C 1 9 1 7 0 0	—do.— 2SC1917 E,F,G	〃			
F	4 2 0 0 0 0 i F 0 0 0 0 4 0	Diode 1S1555	ダイオード			
	4 2 0 0 0 0 i F 0 0 0 6 4 0	Zener Diode HZ-7B	ツェナーダイオード			
G	4 2 0 0 0 0 i G 0 0 0 3 9 0	IC μPC577H	IC			
	4 2 0 0 0 0 i G 0 0 1 2 3 0	IC LA3350	〃			
H	4 2 0 0 0 0 L B 4 0 0 3 1 0	Pin Jack PC-4P L-Type	ヒンジャック			
I	4 2 0 0 0 0 K A 5 0 0 3 9 0	Rotary Switch SRZ-045	ロータリースイッチ			
	4 2 0 0 0 0 K A 8 0 0 2 9 0	Push Switch 2×4 SUE	フッシュSW			
	4 2 0 0 0 0 K A 8 0 0 2 6 0	—do.— 1×2 SUE	〃			
	4 2 0 0 0 0 K A 8 0 0 2 8 0	—do.— 2×2 SUE	〃			
J	4 2 0 0 0 0 L A 0 0 1 9 5 0	Antenna Terminal	アンテナ端子			
K	4 2 0 0 0 0 L A 0 0 1 2 8 0	Wire Lapping Pin	ラッピングピン			
L	4 2 0 0 0 0 P A 0 0 0 3 3 0	RF Pack FB118U14	RFパック			
38	3 2 0 0 0 0 C B 0 7 9 2 6 0	V.C Pulley	バリコンフーリー		CR-820, 1020,2020	
39	3 2 0 0 0 0 A A 0 8 0 5 3 0	Dial Spring	ダイヤルスプリング		CR-450,820, 1020,2020	
40	4 2 0 0 0 0 C B 0 7 7 0 7 0	Dial String	ダイヤル糸			
41	3 2 0 0 0 0 C B 0 7 7 9 4 0	Joint	ジョイント		CA-1010 CR-820.1020.2020	
42	3 2 0 0 0 0 B A 0 6 9 8 4 0	Shaft	延長シャフト		CR-820	
43	3 2 0 0 0 0 N A 0 6 9 2 2 1	Main C. Board, 1	メインシート1	R		
	3 2 0 0 0 0 N A 0 6 9 1 8 1	—do.—	〃	U,C		
	3 2 0 0 0 0 N A 0 6 9 1 9 1	—do.—	〃	B		
	3 2 0 0 0 0 N A 0 6 9 2 0 1	—do.—	〃	E		
	3 2 0 0 0 0 N A 0 6 9 2 1 1	—do.—	〃	A		
A	4 2 0 0 0 0 F J 2 6 9 1 0 0	Electrolytic Capacitor 1000μ50V	ケミコン			
	4 2 0 0 0 0 F M 3 7 9 6 8 0	—do.— 6800μ50V	〃			
	4 2 0 0 0 0 F M 1 1 6 1 0 0	Bipolar Electrolytic Cap. 1μ50V	バイポーラケミコン			
	4 2 0 0 0 0 F M 2 3 4 1 0 0	Ceramic Copacitor 500V 0.01μ	セラコン			
B	4 2 0 0 0 0 H Z 0 0 0 8 7 0	Fire-Proof Resistor 1W0.22Ω	不燃性抵抗			
	4 2 0 0 0 0 H Z 0 0 0 7 1 0	—do.— 1W4.7Ω	〃			

Ref. No.	Part No.	Description		Remarks	Common Models	
	4 2 0 0 0 0 HL 6 1 6 1 5 0	Metal Oxide Film Resistor 1W 1.5KΩ	酸金抵抗			
	4 2 0 0 0 0 HL 6 1 6 3 9 0	Metal Oxide Film Resistor 1W 3.9KΩ	〃			
	4 2 0 0 0 0 HL 4 2 4 1 0 0	—do.— 2W 10KΩ	〃			
	4 2 0 0 0 0 HL 4 2 6 2 2 0	—do.— 2W 2.2KΩ	〃			
	4 2 0 0 0 0 HL 4 2 6 3 9 0	—do.— 2W 3.9KΩ	〃			
	4 2 0 0 0 0 HL 6 2 6 2 2 0	—do.— 2W 2.2KΩ	〃			
	4 2 0 0 0 0 HW 1 0 4 2 2 0	Fuse Resistor 150mA 22Ω	ヒューズ抵抗	B,E		
	4 2 0 0 0 0 HZ 0 0 0 0 2 0	Metal Film Resistor 2W 0.22Ω	金属板抵抗			
	4 2 0 0 0 0 HZ 0 0 0 0 3 0	—do.— 2W 0.47Ω	〃			
	4 2 0 0 0 0 HM 0 5 5 1 0 0	Cement Molded Resistor 5W 100Ω	セメント抵抗			
	4 2 0 0 0 0 HT 1 7 0 0 5 0	Variable Resistor B5K	半固定抵抗			
C	4 2 0 0 0 0 iA 0 8 4 4 0 0	Transistor 2SA844	トランジスター			
	4 2 0 0 0 0 iA 0 5 6 0 0 0	—do.— 2SA872	〃			
	4 2 0 0 0 0 iB 0 5 4 4 0 0	—do.— 2SB544	〃			
	4 2 0 0 0 0 iB 0 5 6 0 0 0	—do.— 2SB560	〃			
	4 2 0 0 0 0 iC 0 4 5 8 8 0	—do.— 2SC458B,C	〃			
	4 2 0 0 0 0 iC 1 9 1 8 0 0	—do.— 2SC1918E,F,G	〃			
	4 2 0 0 0 0 iD 0 2 3 4 0 0	—do.— 2SD234R,O,Y,G,R	〃			
	4 2 0 0 0 0 iD 0 4 0 0 0 0	—do.— 2SD400	〃			
	4 2 0 0 0 0 iD 0 4 3 8 0 0	—do.— 2SD438	〃			
D	4 2 0 0 0 0 iF 0 0 0 0 4 0	Diode 1S1555	ダイオード			
	4 2 0 0 0 0 iH 0 0 0 2 4 0	—do.— 1S1885	〃			
	4 2 0 0 0 0 iH 0 0 0 5 6 0	—do.— 30DC1	〃			
	4 2 0 0 0 0 iH 0 0 0 5 7 0	—do.— 30DC1R	〃			
	4 2 0 0 0 0 iH 0 0 0 4 7 0	—do.— 1D4B1	〃			
	4 2 0 0 0 0 iF 0 0 0 5 5 0	Zener Diode HZ12C	ツェナーダイオード			
	4 2 0 0 0 0 iF 0 0 0 6 6 0	—do.— HZ30	〃			
E	4 2 0 0 0 0 GD 9 0 0 2 1 0	Coil 2μH	コイル			
F	4 2 0 0 0 0 KC 0 0 0 0 8 0	Relay HC-2P	リレー	R,B,A,E		
	4 2 0 0 0 0 KC 0 0 0 3 5 0	—do.— HC-2P AP34219	〃	U,C		
G	4 2 0 0 0 0 LB 2 0 0 9 0 0	Fuse Holder Pin	ヒューズホルダーピン	R,U,C,A		
	4 2 0 0 0 0 LB 2 0 1 0 6 0	—do.—	〃	E,B		
H	4 2 0 0 0 0 LB 3 0 0 4 0 0	Transistor Socket	トランジスターソケット			
I	4 2 0 0 0 0 LA 0 0 1 2 8 0	Wire Lapping Pin	ラッピングピン			
J	4 2 0 0 0 0 KB 0 0 0 3 3 0	Fuse 250V 1.0AT	ヒューズ耐ラッシュ	R,A		
	4 2 0 0 0 0 KB 0 0 1 0 6 0	—do.— UL 250V 1.0AT	ヒューズUL	U,C		
	4 2 0 0 0 0 KB 0 0 0 7 3 0	Miniature Fuse 250V 1.0AT	Ⓢヒューズ	E,B		
	4 2 0 0 0 0 KB 0 0 0 2 2 0	Fuse 125V 1.5AT	ヒューズ	R,A		
	4 2 0 0 0 0 KB 0 0 1 0 4 0	—do.— UL 250V 3A	ヒューズUL	U,C		
	4 2 0 0 0 0 KB 0 0 0 6 8 0	Miniature Fuse 250V 1.25AT	Ⓢヒューズ	E,B		
K	3 2 0 0 0 0 BA 0 6 9 7 3 0	Radiator	放熱板		CR-820, 1020,2020	
L	3 2 0 0 0 0 BB 0 6 3 0 8 0	TR-Pusher	TRプッシャー		CA-1010 CR820,1020,2020	
M	3 2 0 0 0 0 CB 0 6 9 4 8 0	Wire Supporter No.37	ワイヤークリップ		CR-311 CR-820	
N	3 2 0 0 0 0 CB 0 7 3 9 2 0	Lead Cramper No.435	リードクランハ		CR-311 CR-820	
O	4 2 0 0 0 0 KA 8 0 0 3 4 0	Push Switch 2×2 SUE 1A	プッシュSW 2連, 2回路			
P	4 2 0 0 0 0 LA 0 0 0 5 3 0	Eyelet With Wing	羽根付ハトメ	E,B		

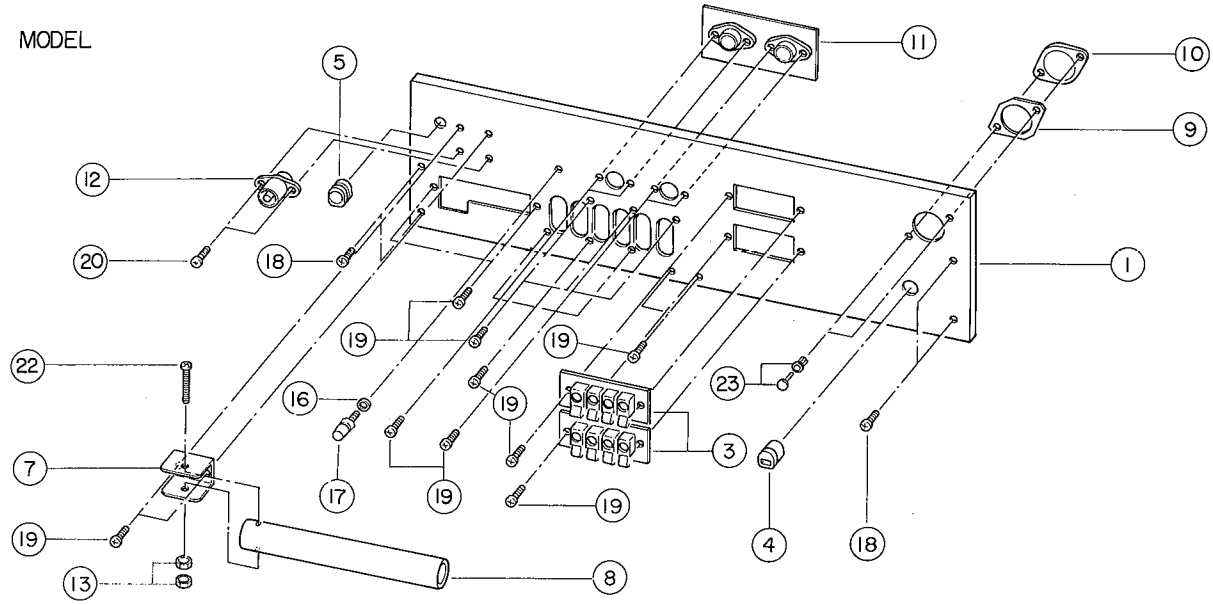
U.S & CANADIAN MODELS



BRITISH & AUSTRALIAN MODELS

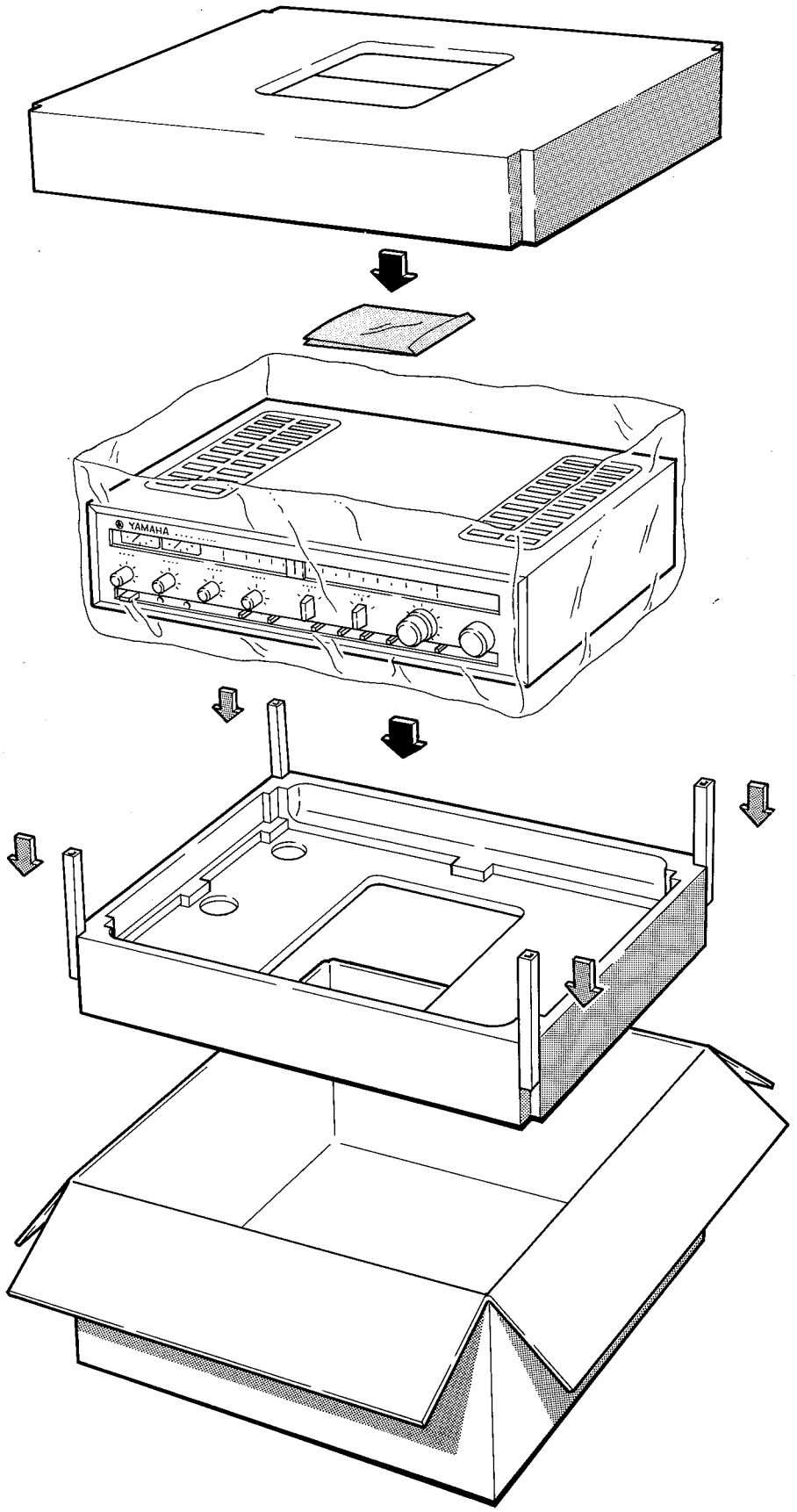


EUROPEAN MODEL



Ref. No.	Part No.	Description		Remarks	Common Models	
1	320000 AA08524 0	Rear Panel, U	リアパネル	U		
	320000 AA08585 0	—do.— C	〃	C		
	320000 AA08525 0	—do.— A	〃	A		
	320000 AA08526 0	—do.— E	〃	E		
	320000 AA08543 0	—do.— B	〃	B		
2	420000 LB20071 0	AC Socket S-1642B	ACコンセント	R,U,C	CA-400 CR-820	
3	420000 LA00194 0	4P Push Terminal	4Pプッシュターミナル		CR-820	
4	420000 CB06863 0	Cord Stopper SR-3P-4	コードストッパー	R,U,C	CA-1000 CR-820	
	420000 CB07069 0	—do.— EA-5	〃	E,A,B	CA-400 CR-820	
5	320000 CB06278 0	Rubber Spacer	ゴムブッシュ	R,A,E,B		
6	420000 MG00034 0	AC Cord Pot-64	ACコード	R,U,C	C-2	
	420000 MG00050 0	—do.— SA-1	〃	A	CA-610	
	420000 MG00029 0	—do.— #1272	〃	E	—do.—	
	320000 MZ06784 0	AC Cord Assy For BS	〃	B		
7	320000 AA07697 0	Antenna Holder	アンテナホルダー		CR-820, 1020,2020	
8	420000 GE00010 0	AM Bar Antenna	AMバーアンテナ		CR-820	
9	320000 CB07656 0	Isolation Plate For Voltage Selector	VS絶縁板	E	CA-800 II CR-820,1020,2020	
10	420000 LB20026 0	Voltage Selector SWP033-3023	電圧切換器	R,E	CR-820	
11	320000 NA06924 5	Tuner C. Board, 5	チューナーシート5	E		
A	420000 LB50019 0	DIN Socket	DINコネクター	E	CR-820	
12	420000 LB20015 0	75Ω Coaxial Cable Socket	同軸コネクターソケット	E	—do.—	
13	420000 EV10030 0	Hexagonal Nut M3 FCM3-BI	六角ナット			
14	420000 EV41003 0	Toothed Locked Washer 3S ZMC2-Y	歯付座金	U,C		
15	420000 LA00028 0	Lug Terminal, Earth 3MM	アースラグ	U,C		
16	420000 EV90136 0	Toothed Locked Washer φ3.6 FNM3-3g	セスム平座金			
17	420000 LA00107 0	Earth Terminal	アース端子			
18	420000 EZ43008 0	Bonding Tapping Screw 3×8 FCM3-BI	ボンディングタッピングネジ			
19	420000 Ei43008 0	Binding Tapping Screw 3×8 FCM3-BI	バインドタッピングネジ			
20	420000 EJ42608 0	Pan Head Tapping Screw 2.6×8 FCM3-BI	ナベタッピングネジ	E		
21	420000 ED43008 0	Binding Head Screw 3×8 FCM3-BI	バインド小ネジ			
22	420000 EA43025 0	Pan Head Screw 3×25 FCM3-BI	ナベ小ネジ			
23	420000 CB06888 0	Plastic Rivet φ3.5	プラスチックリベット	R,E		

PACKAGE



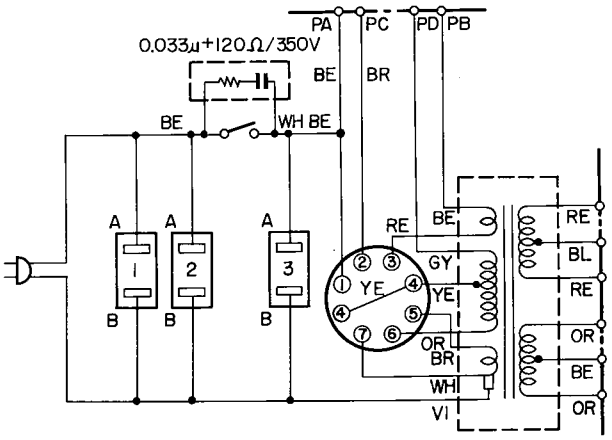
SCHEMATIC DIAGRAM BY EXPORT ZONE

USED FUSE

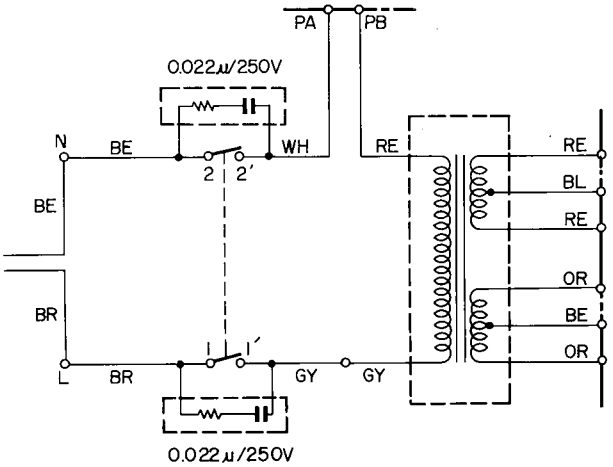
MODEL	F803	F804	FR801
GENERAL	1.5AT 250V		Jumper
US & CANADIAN	1.5AT 250V	1.5AT 250V	-do.-
UK	3.0A 250V		-do.-
EUROPEAN	1.25AT 250V	1.25AT 250V	22Ω150mA
AUS-TRALIAN	1.25AT 250V		-do.-

POWER SUPPLY CIRCUIT

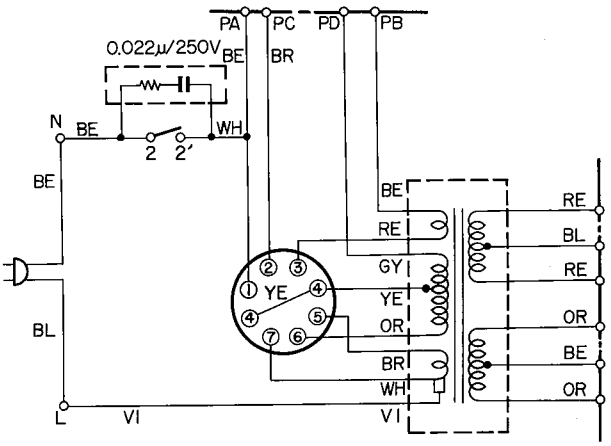
GENERAL EXPORT model



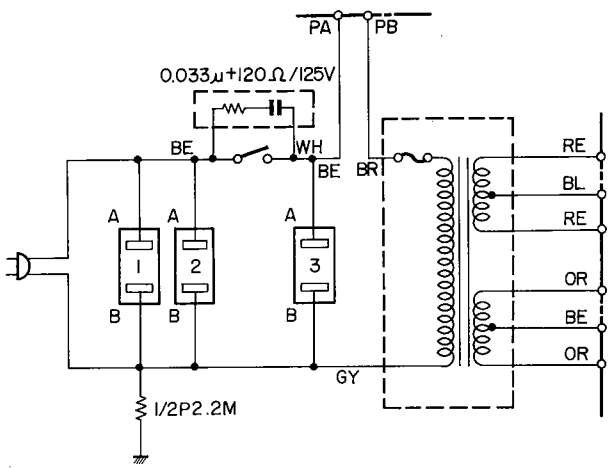
UK model



EUROPEAN model



US & CANADIAN model



AUSTRALIAN model