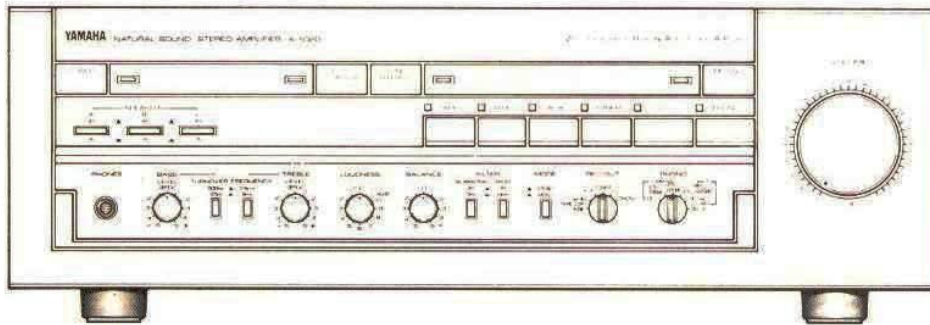


STEREO INTEGRATED AMPLIFIER

A-1020

SERVICE MANUAL

FRONT PANEL



U, C, R model



A, E model



IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principle agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit/s indicated on the cover. The research, engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

CONTENTS

TO SERVICE PERSONNEL	1	ADJUSTMENTS	5
SPECIFICATIONS	1	PRINTED CIRCUIT BOARD (Pattern side)	5 ~ 9
REARPANELS	2	SCHMATIC DIAGRAM	10
BLOCK DIAGRAM	3	WIRING	11
INTERNAL VIEW	4	PARTS LIST	12 ~ 18
DISASSEMBLY PROCEDURES	4		

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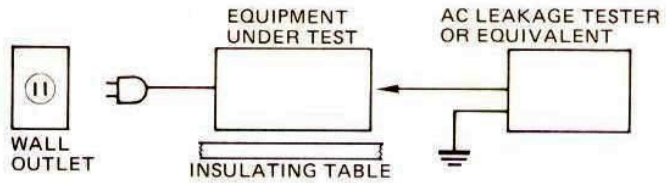
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

2.6k-972 Printed in Japan '85.1

A-1020

TO SERVICE PERSONNEL

- Critical Components Information.**
Components having special characteristics are marked ! and must be replaced with parts having specifications equal to those originally installed.
- Leakage Current Measurement (For 120 V Model Only).**
When service has been completed, it is imperative that you verify that all exposed conductive surfaces are properly insulated from supply circuits.
 - Meter impedance should be equivalent to 1500 ohm shunted by 0.15μF.
 - Leakage current must not exceed 0.5mA.
 - Be sure to test for leakage with the AC plug in both polarities.



SPECIFICATIONS

Continuous Power Per Channel	
20Hz ~ 20kHz, 0.005% THD, 8Ω	125W
0.007% THD, 6Ω	145W
1kHz, 0.01% THD, 8Ω (IEC Rated Power)	130W (A)(E)
DIN Standard Output Power Per Channel	
1kHz, 1% THD, 4Ω	169W (A)(E)
Dynamic Headroom	
8Ω	1.36dB
4Ω	1.73dB
Dynamic Power Per Channel (IHF)	
8Ω	171W
6Ω	216W
4Ω	269W
Power Band Width	
0.003% THD, 62.5W, 8Ω	10Hz ~ 50kHz
Damping Factor	
1kHz, 8Ω (SPEAKER A)	45
Input Sensitivity/Impedance	
Phono 1 MC	160μV/100Ω, 10kΩ
MM	2.5mV/47kΩ 220pF 47kΩ 330pF (A) (E)
Phono 2 MM	2.5mV/47kΩ 220pF 47kΩ 330pF (A) (E) 47kΩ 330pF 47kΩ 390pF (A) (E)
CD, TUNER, AUX, TAPE	100Ω 150mV/47kΩ
Input Sensitivity (New IHF)	
Phono MC	15μV
MM	0.23mV
CD, TUNER, AUX, TAPE	13.4mV
Maximum Input Signal	
1kHz, 0.01% THD, Phono MC	10mV
MM	170mV
Output Level/Impedance	
Rec Out	150mV/470Ω
Headphone Jack Rated Output/Impedance	
0.005% THD	0.91V/8Ω
Frequency Response	
20Hz ~ 20kHz, CD/TUNER/AUX/TAPE (TONE BYPASS ON)	+0 -0.5 dB
RIAA Equalization Deviation	
20Hz ~ 20kHz Phono MC	±0.3dB
MM	±0.2dB
Total Harmonic Distortion	
Phono MC to Rec Out 3V	0.005%
MM to Rec Out 3V	0.003%
CD/TUNER/AUX/TAPE to SP Out 62.5W/8Ω	0.005%
Intermodulation Distortion	
CD/TUNER/AUX/TAPE Rated Output/8Ω	0.002%
1W/8Ω	0.003%

Signal to Noise Ratio (IHF-A-Network)	
Phono MC (500μV, Input Shorted)	80dB
MM (5mV, Input Shorted)	94dB
CD/TUNER/AUX/TAPE (Input Shorted, TONE BYPASS ON)	106dB
Signal to Noise Ratio (New IHF)	
Phono MC	76dB
MM	79dB
CD/TUNER/AUX/TAPE	86dB
Input Equivalent Noise	
Phono MC	-145dBV (A)(E)
MM	-138dBV (A)(E)
Residual Noise (IHF-A-Network)	
TONE BYPASS ON	133μV
Channel Separation	
Phono MM (Input Shorted, 1kHz, Vol -30dB)	70dB
CD/TUNER/AUX/TAPE (5.1kΩ, 1kHz, Vol -30dB)	65dB
Tone Control Characteristics	
BASS boost/cut	±10dB (at 20Hz)
turnover frequency	125Hz, 500Hz
TREBLE boost/cut	±10dB (at 20kHz)
	2.5kHz, 8kHz
Filter Characteristics	
Low (Subsonic)	15Hz, -12dB/oct
High	10kHz, -12dB/oct
Continuous Loudness Control (Level-related equalization)	
Attenuation	-40dB (at 1kHz)
Gain Tracking Error (0 to -60dB)	
	-20dB
Power Supply	
U.S.A. & Canadian models	120V AC, 60Hz
General model	110V/120V/220V/240V AC 60/50Hz
European model	220V/240V AC, 50Hz
Australian model	240V AC, 50Hz
Power Consumption	
	450W (U)(C)(A)
	580W (E)
	280W (R)
AC Outlet (U) (C) (R)	
Switched x 2	200W max total
Unswitched x 1	200W max
Dimensions (W x H x D)	
	435 x 147 x 422 mm (17-1/8" x 5-3/4" x 16-5/8")
Weight	
	11.5 kg (26.3 lbs.)

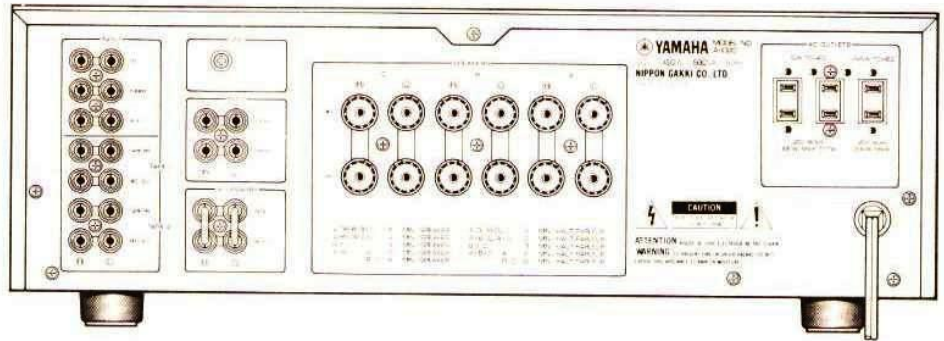
*Specifications are subject to change without notice.

- (U) U.S.A. model
- (C) Canadian model
- (A) Australian model
- (E) European model
- (R) General model

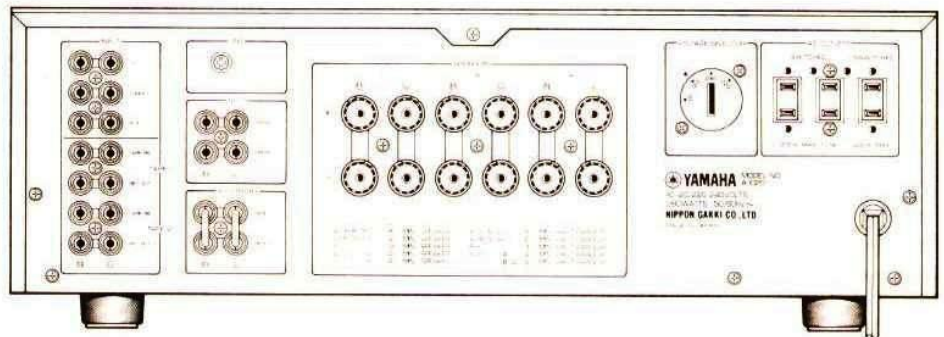
A-1020

REAR PANELS

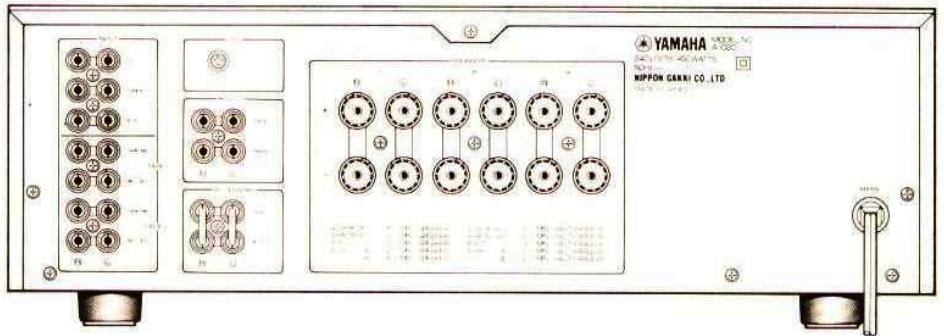
▼ U.S.A. & Canadian models



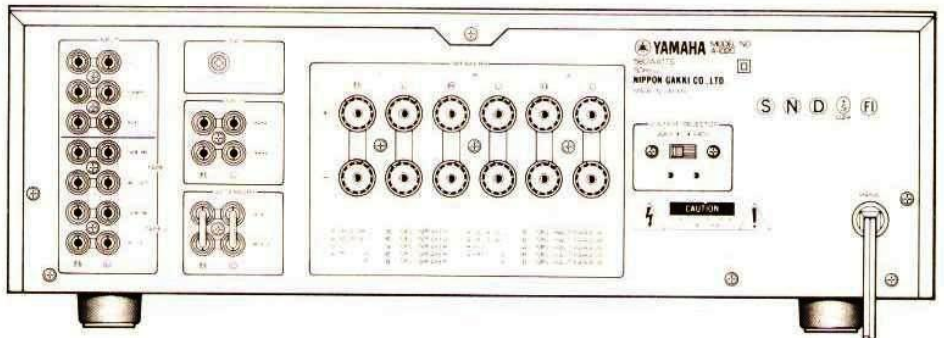
▼ General model



▼ Australian model

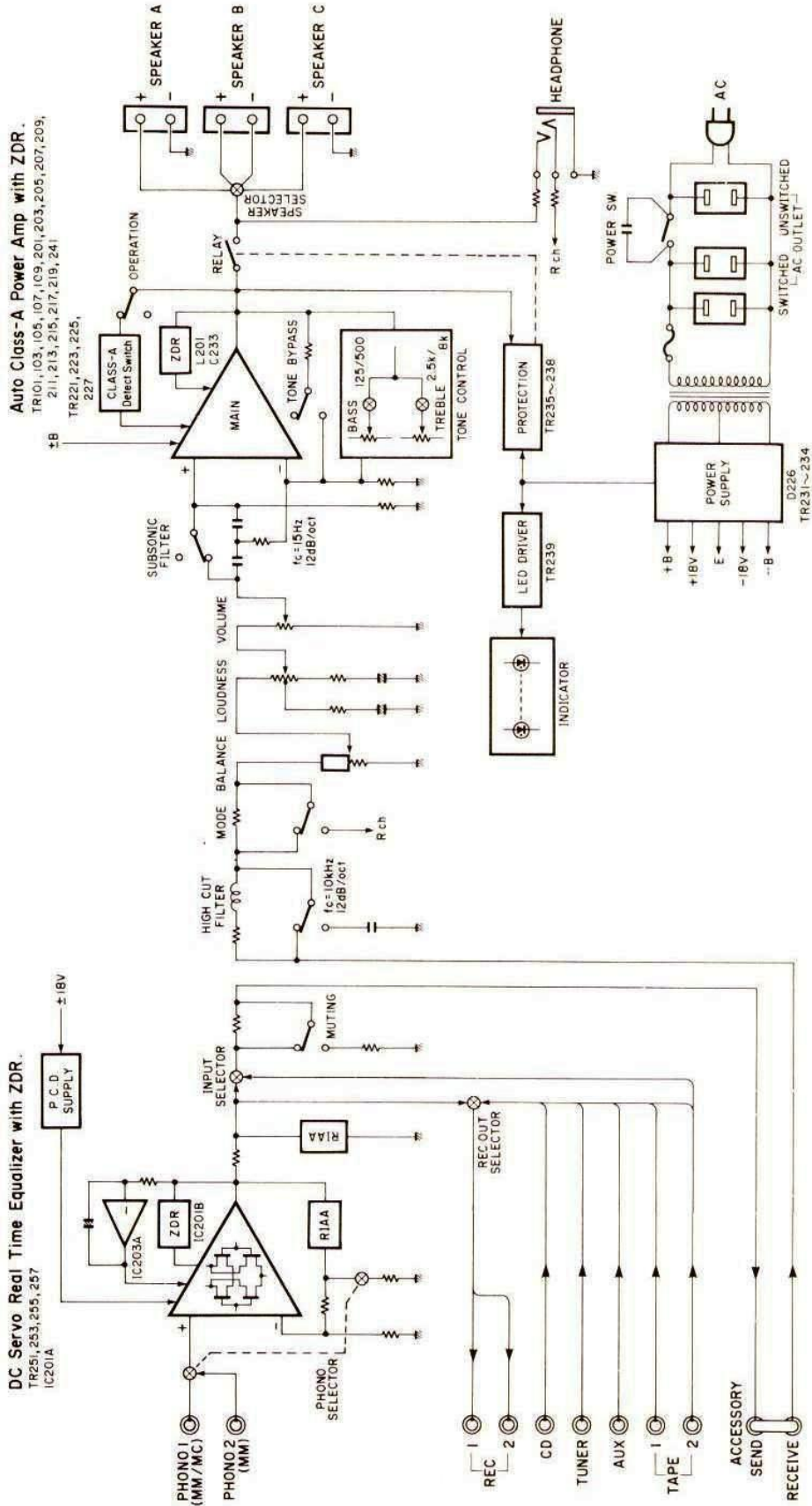


▼ European model

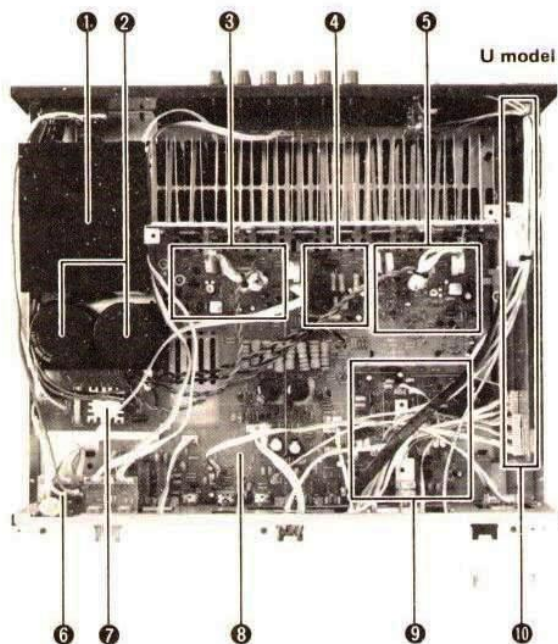


A-1020

BLOCK DIAGRAM



INTERNAL VIEW



- ① POWER TRANSFORMER
U.S.A. model: GA68410
Canadian model: GA68420
European model: GA68430
Australian model: GA68440
General model: GA68450
- ② ELECTROLYTIC CAP.: 22000 μ F 69V
- ③ POWER AMP SECTION (Lch)
- ④ PROTECTION SECTION
- ⑤ POWER AMP SECTION (Rch)
- ⑥ POWER SWITCH
- ⑦ DIODE BRIDGE: D5FB20
- ⑧ MAIN CIRCUIT BOARD
- ⑨ EQUALIZER AMP SECTION
- ⑩ FUNCTION CIRCUIT BOARD

DISASSEMBLY PROCEDURES

(Remove parts in disassembly order as numbered.)

1. **Removal to Top Cover**
Remove 5 screws (①) in Fig. 1, and slide the Top Cover back.
2. **Removal of Front Panel**
Remove 6 screws (②) in Fig. 1, and pull the Front Panel forward.
3. **Removal of Bottom Cover**
Remove 6 screws (③) in Fig. 1.

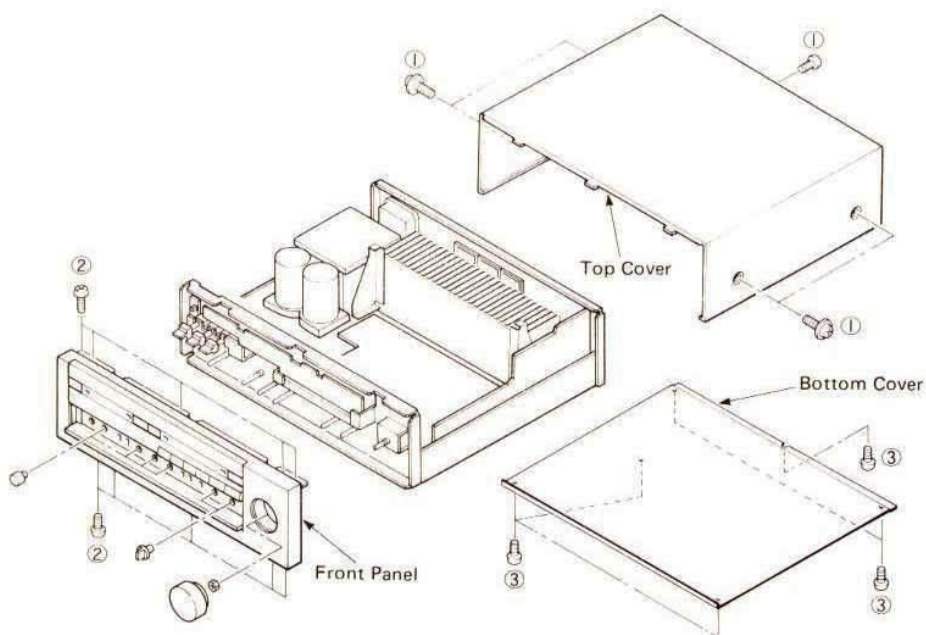


Fig. 1

ADJUSTMENTS

• IDLING CURRENT ADJUSTMENT

After the power has been turned on, age about 2 minutes in no signal and non-loaded condition. Switch off the Auto CLASS A switch. Adjust VR207 (Lch) and VR208 (Rch) so that the voltage across the terminals of R277 (Lch) and R272 (Rch) comes to $8mV \pm 2mV$ DC.

• CONFIRMATION OF AUTO CLASS A OPERATION

After the auto class A has been turned on, age about 1 minute in no signal and non-loaded condition. Confirm that the voltage across the terminals of R277 (Lch) and R272 (Rch) comes to $55mV \pm 25mV$ DC.

Item to be Adjusted	Test Points	Adjustment Points	Rating
Idling Current	Lch: Across the terminals of R277 ²⁷⁸ Rch: Across the terminals of R272 ²⁷⁵	VR207 (Lch) VR208 (Rch)	$8mV \pm 2mV$ DC.
AUTO CLASS A OPERATION		—	$55mV \pm 25mV$ DC.

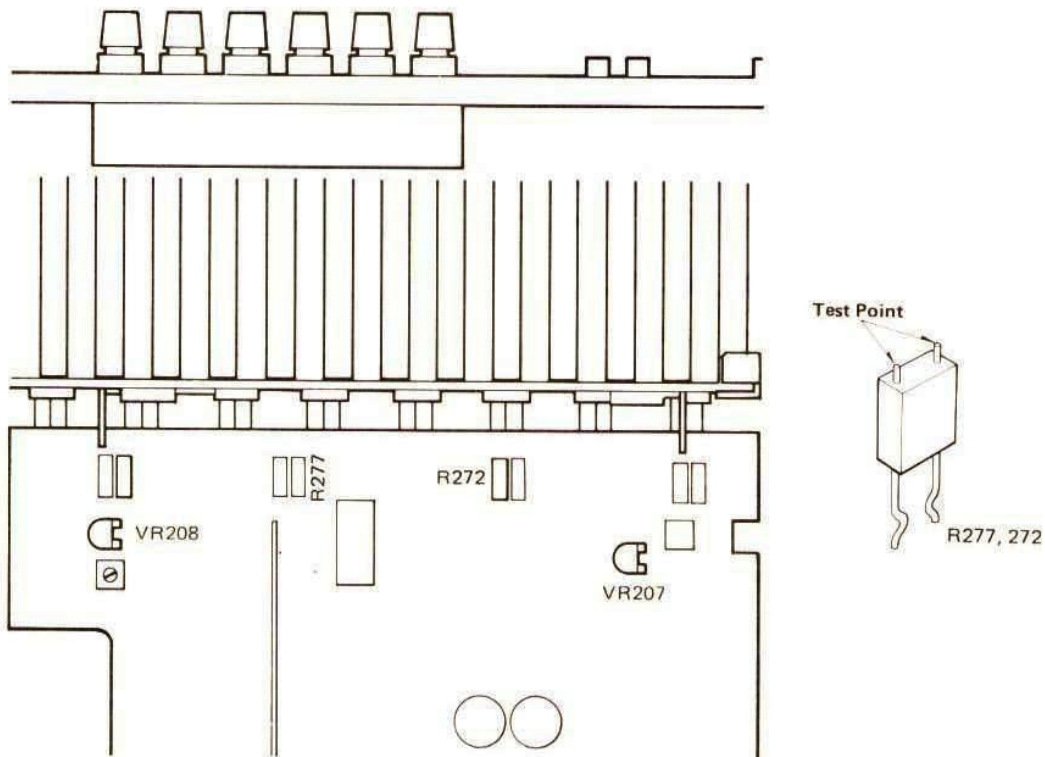
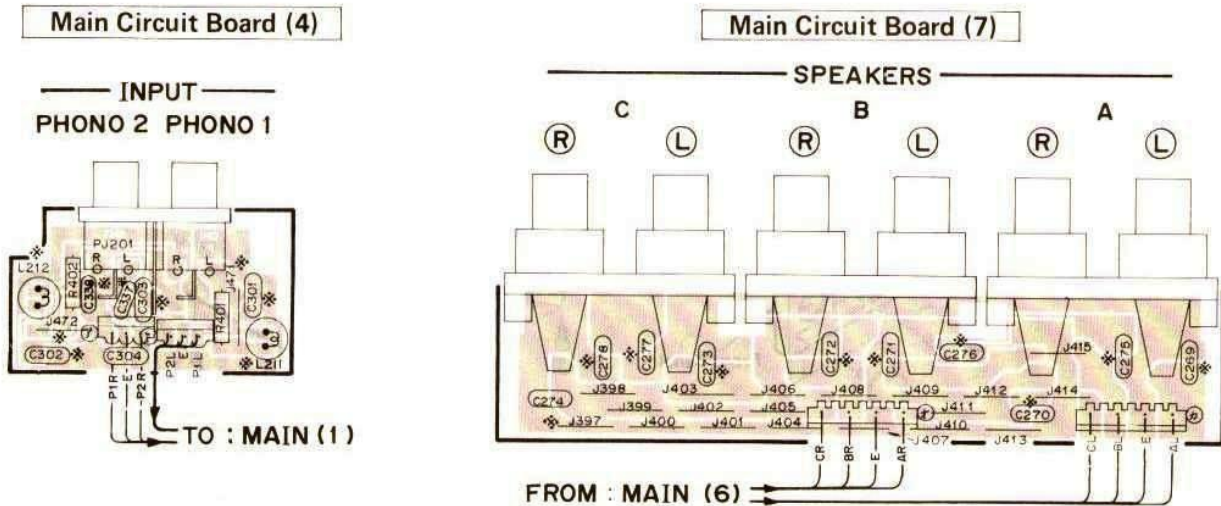


Fig. 2

PRINTED CIRCUIT BOARD (Pattern side)



A

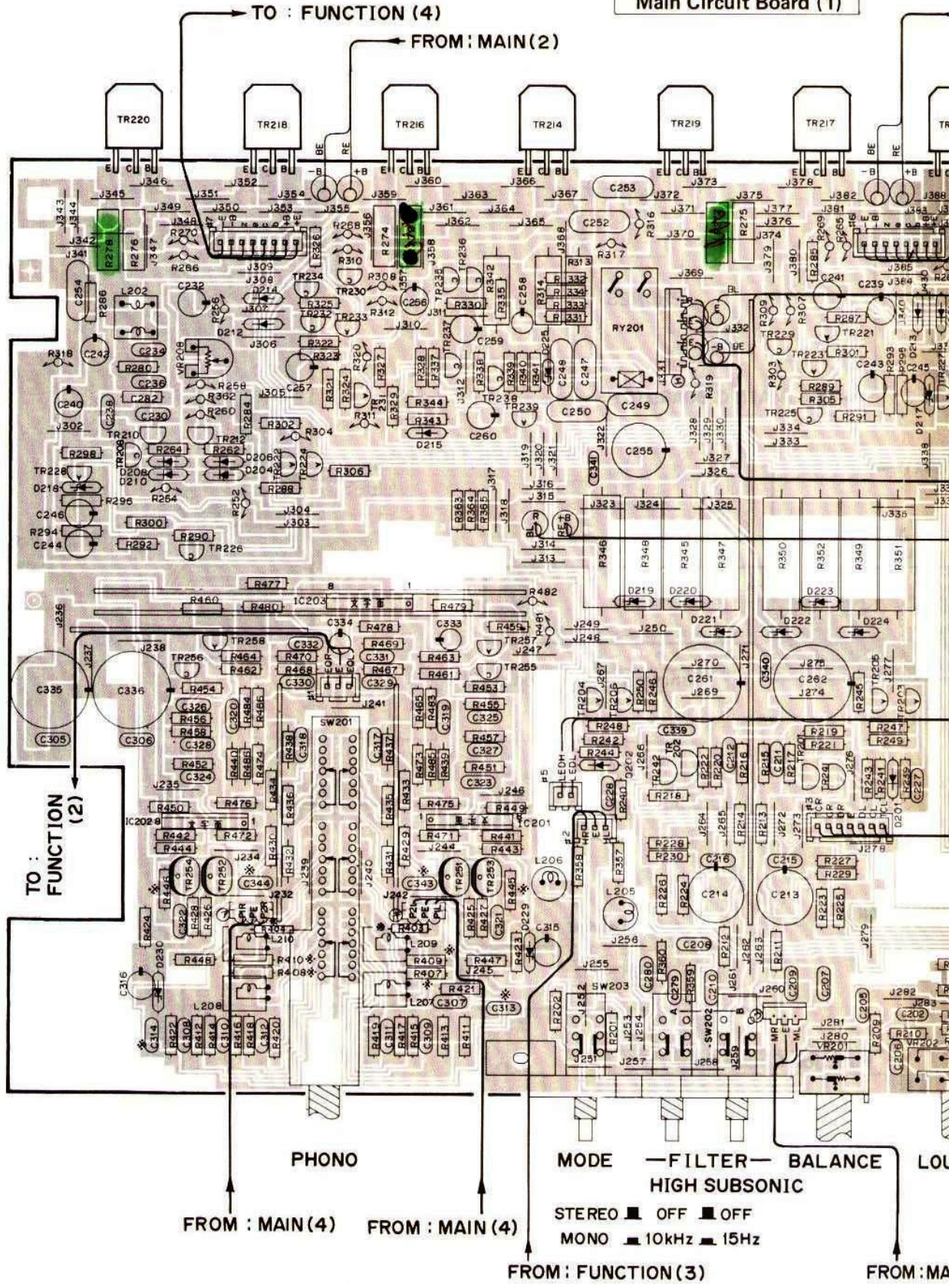
B

C

D

PRINTED CIRCUIT BOARD (Pattern side)

Main Circuit Board (1)



1

2

3

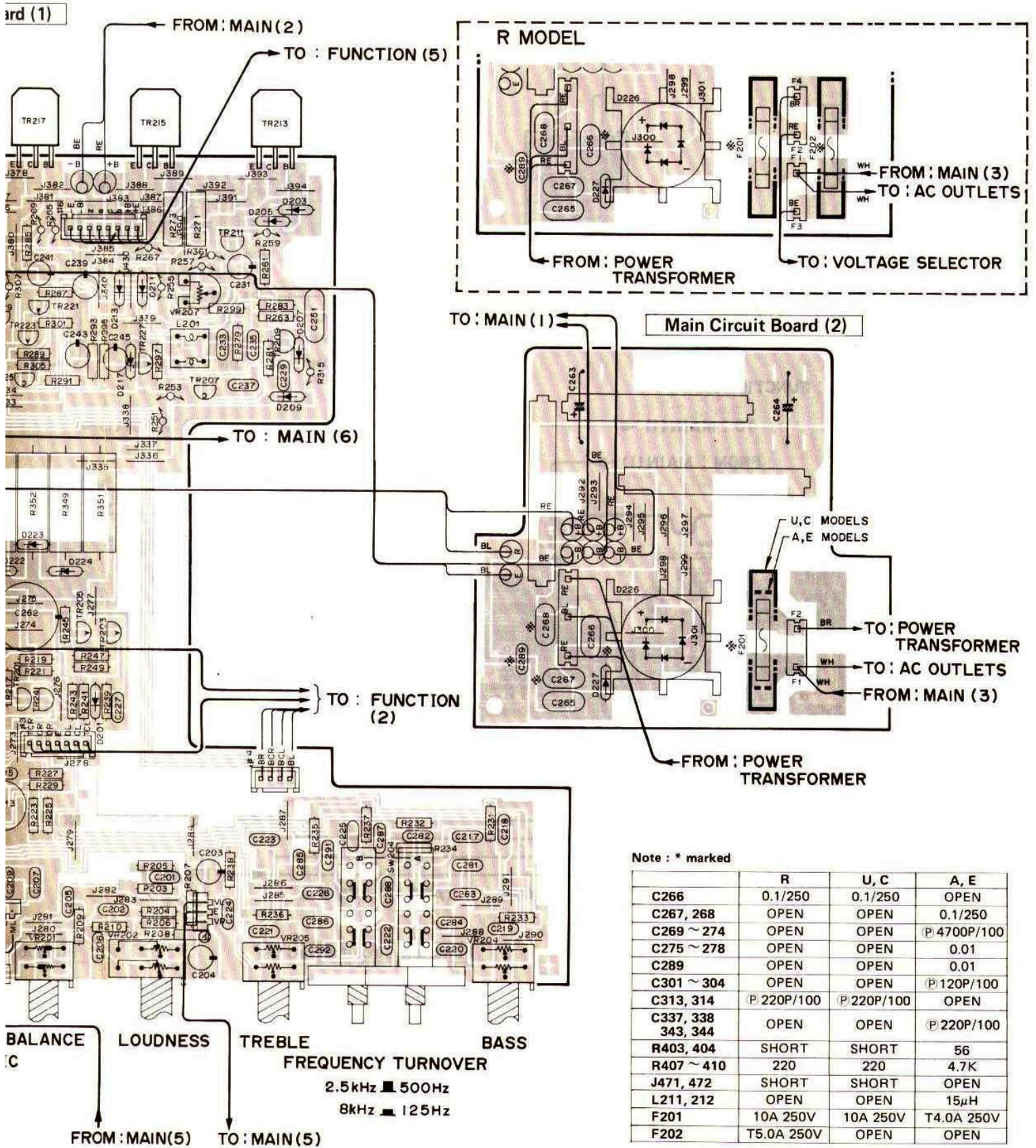
4

5

6

6

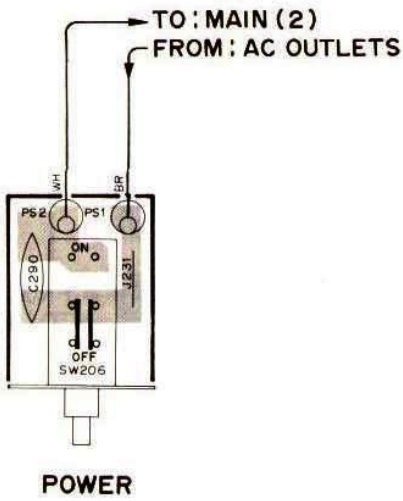
Note)
 文字面: Letter side



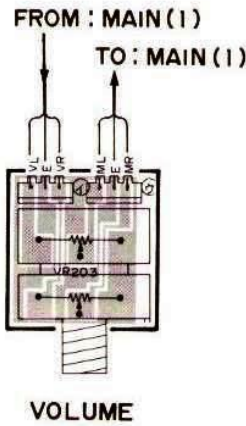
Note : * marked

	R	U, C	A, E
C266	0.1/250	0.1/250	OPEN
C267, 268	OPEN	OPEN	0.1/250
C269 ~ 274	OPEN	OPEN	Ⓟ 4700P/100
C275 ~ 278	OPEN	OPEN	0.01
C289	OPEN	OPEN	0.01
C301 ~ 304	OPEN	OPEN	Ⓟ 120P/100
C313, 314	Ⓟ 220P/100	Ⓟ 220P/100	OPEN
C337, 338 343, 344	OPEN	OPEN	Ⓟ 220P/100
R403, 404	SHORT	SHORT	56
R407 ~ 410	220	220	4.7K
J471, 472	SHORT	SHORT	OPEN
L211, 212	OPEN	OPEN	15μH
F201	10A 250V	10A 250V	T4.0A 250V
F202	T5.0A 250V	OPEN	OPEN

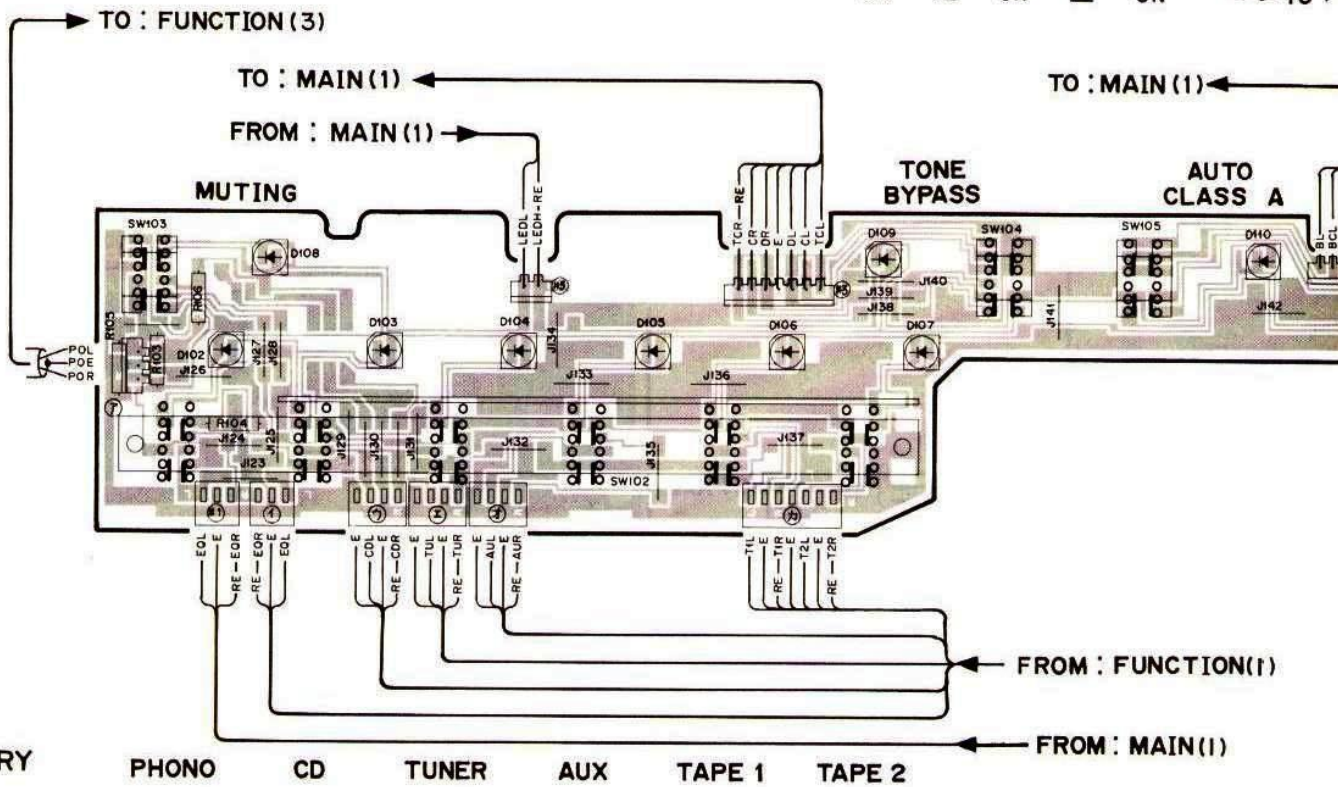
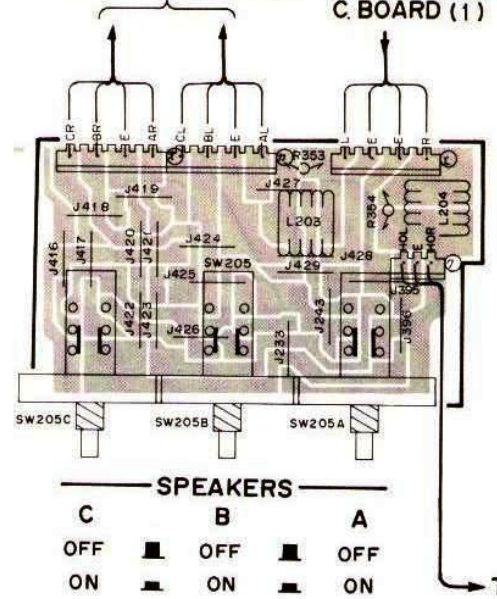
Main Circuit Board (3)



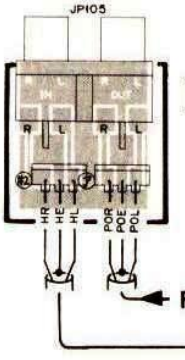
Main Circuit Board (5)



Main Circuit Board (6)

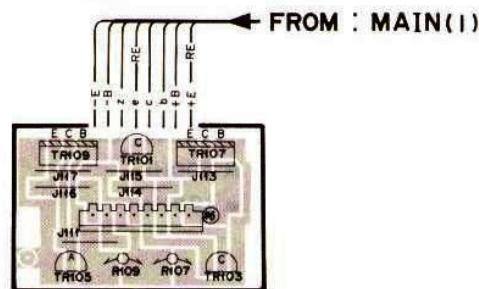


ACCESSORY SEND RECEIVE

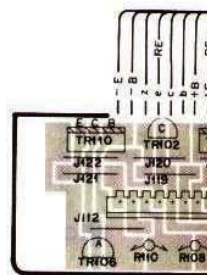


Function Circuit Board (3)

Function Circuit Board (4)

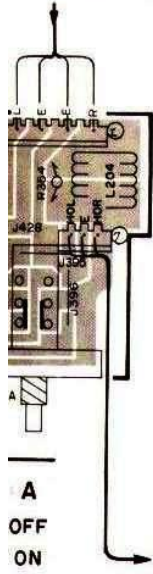


Function



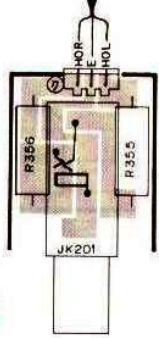
ard (6)

FROM : MAIN C. BOARD (1)



Main Circuit Board (8)

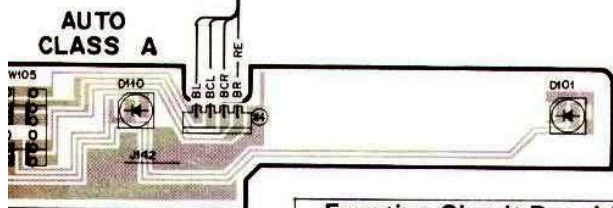
FROM : MAIN (6)



PHONES

A OFF ON TO : MAIN C. BOARD (8)

AIN (1)



Function Circuit Board (2)

FROM : FUNCTION (2)



UNCTION (1)

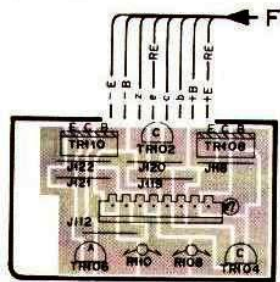
MAIN (1)

Note : * marked

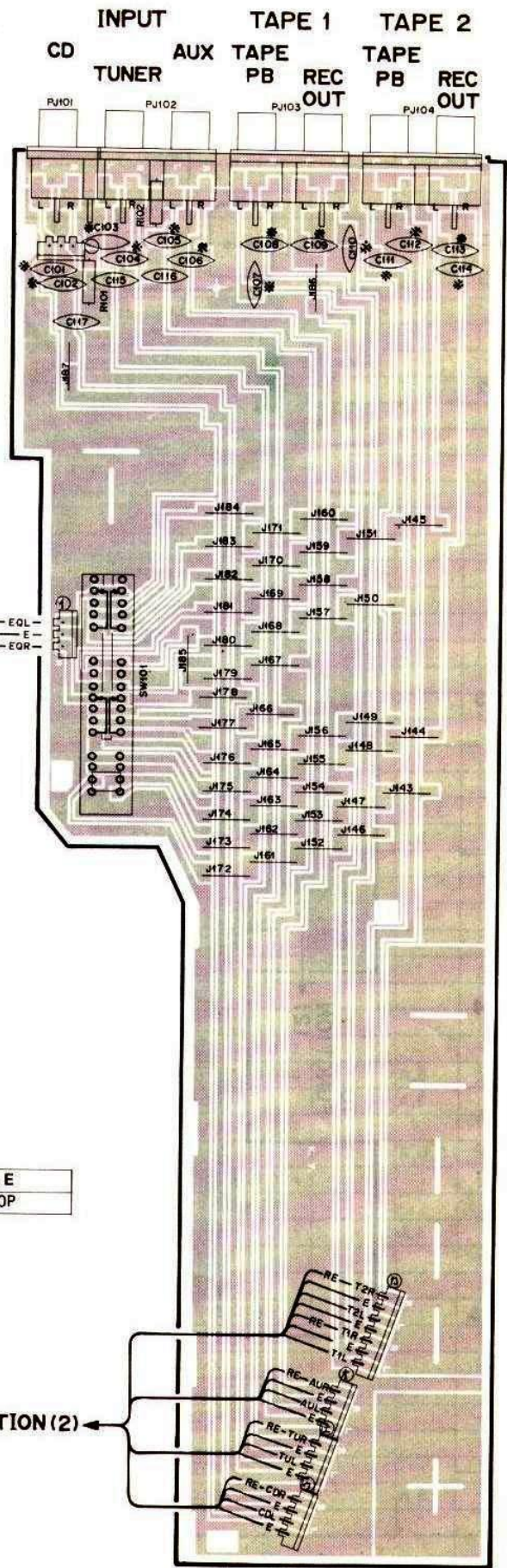
	R, U, C	A, E
C101 ~ 114	OPEN	470P

Function Circuit Board (5)

FROM : MAIN (1)



TO : FUNCTION (2)



Function Circuit Board (1)

A

B

C

D

SCHEMATIC DIAGRAM

1

2

3

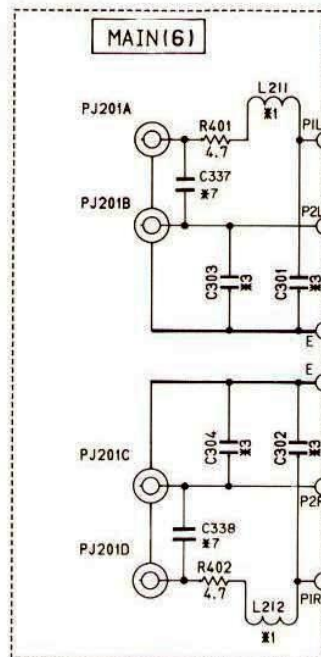
4

5

6

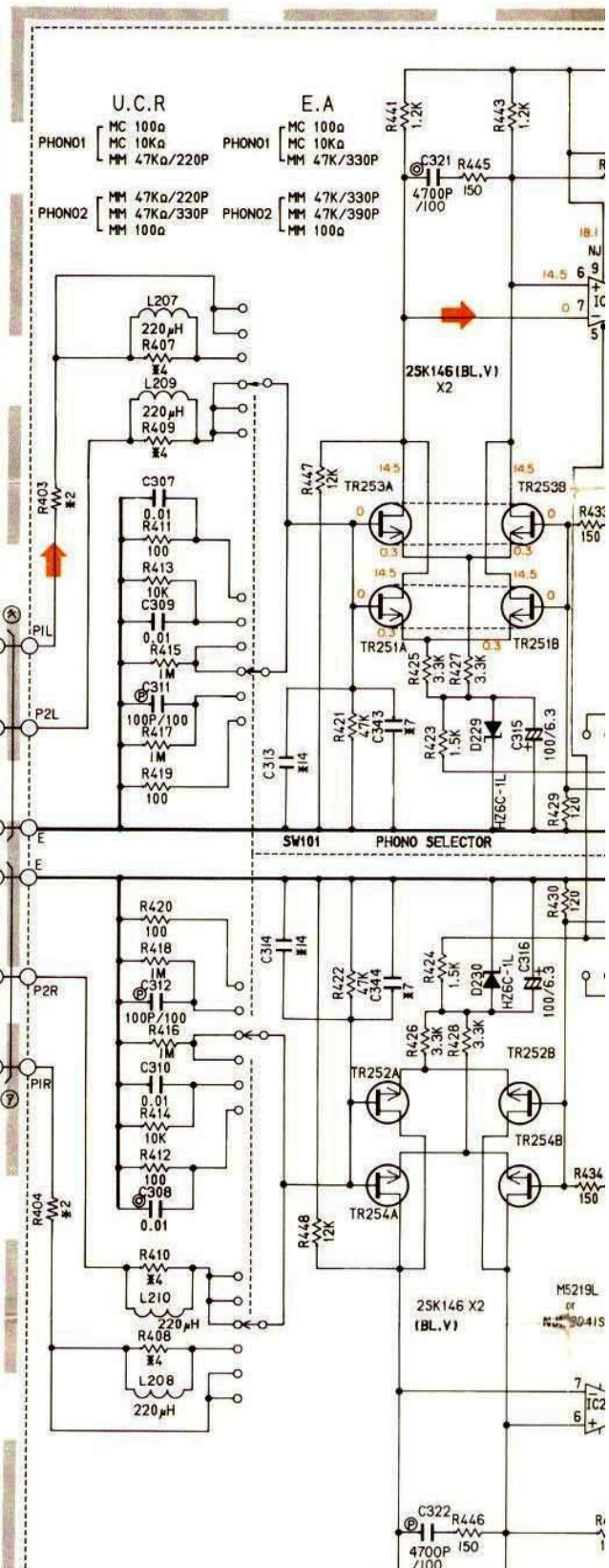
DC Servo Real Time E

		E.A	U.C	R
*1	L211, 212	15 μ H	SHORT	→
*2	R403, 404	56 Ω	SHORT	→
*3	C301~304	120P/100	OPEN	→
*4	R407~410	4.7K	220 Ω	→
*6	C101~114	470P	OPEN	→
*7	C343, 344, 337, 338	220P/100	OPEN	→
*8	C269~274	4700P/100	OPEN	→
*9	C267, 268	0.01/250	OPEN	→
*10	C266	OPEN	0.01/250	→
*11	C275~278, 289	0.01	OPEN	→
*12	F202	OPEN	T 5.0A250V	→
*13	F201	T4.0A250V	10A 250V	→
*14	C313, 314	OPEN	220P/100	→



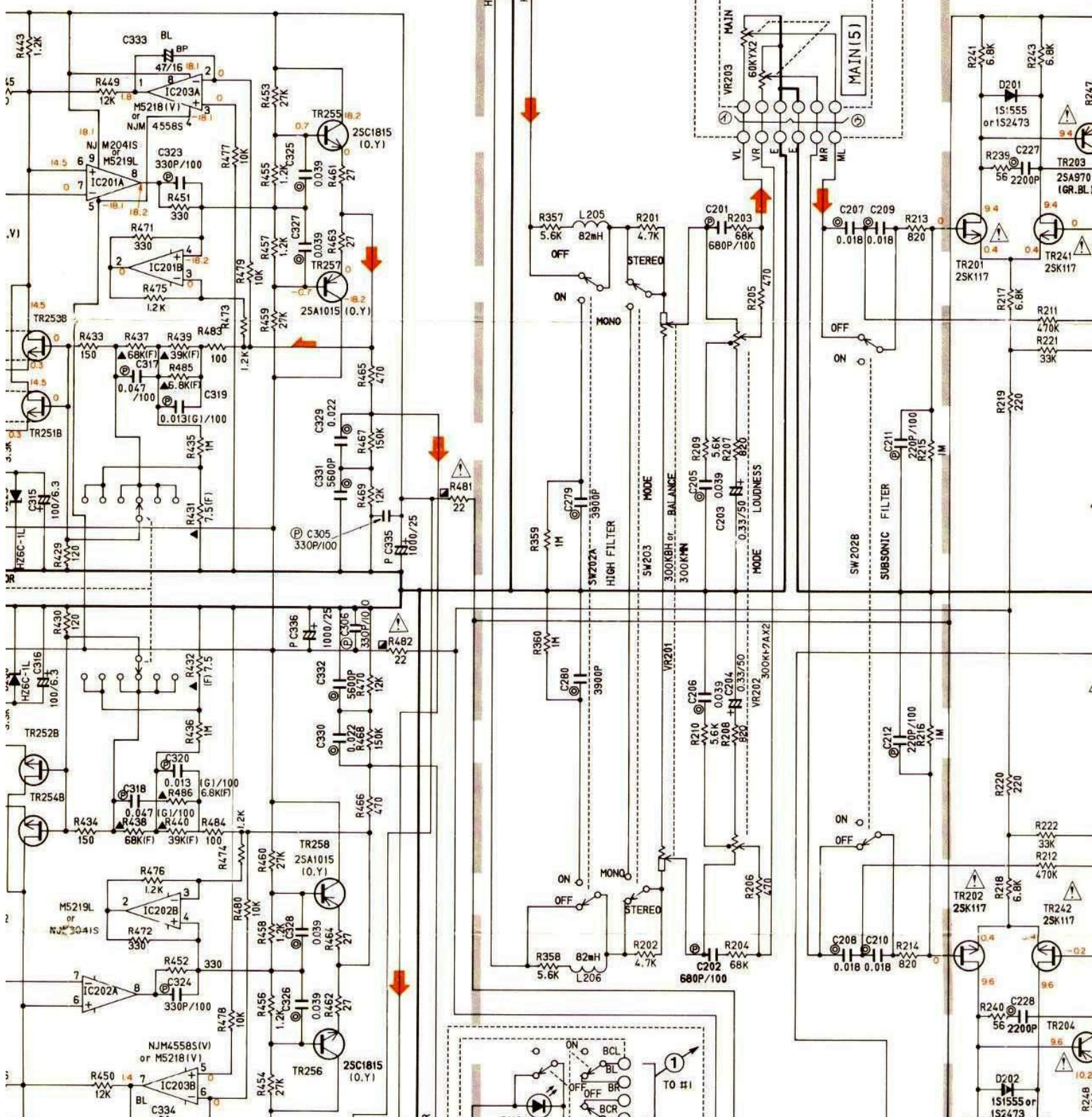
← AUDIO SIGNAL

← RECORDING SIGNAL



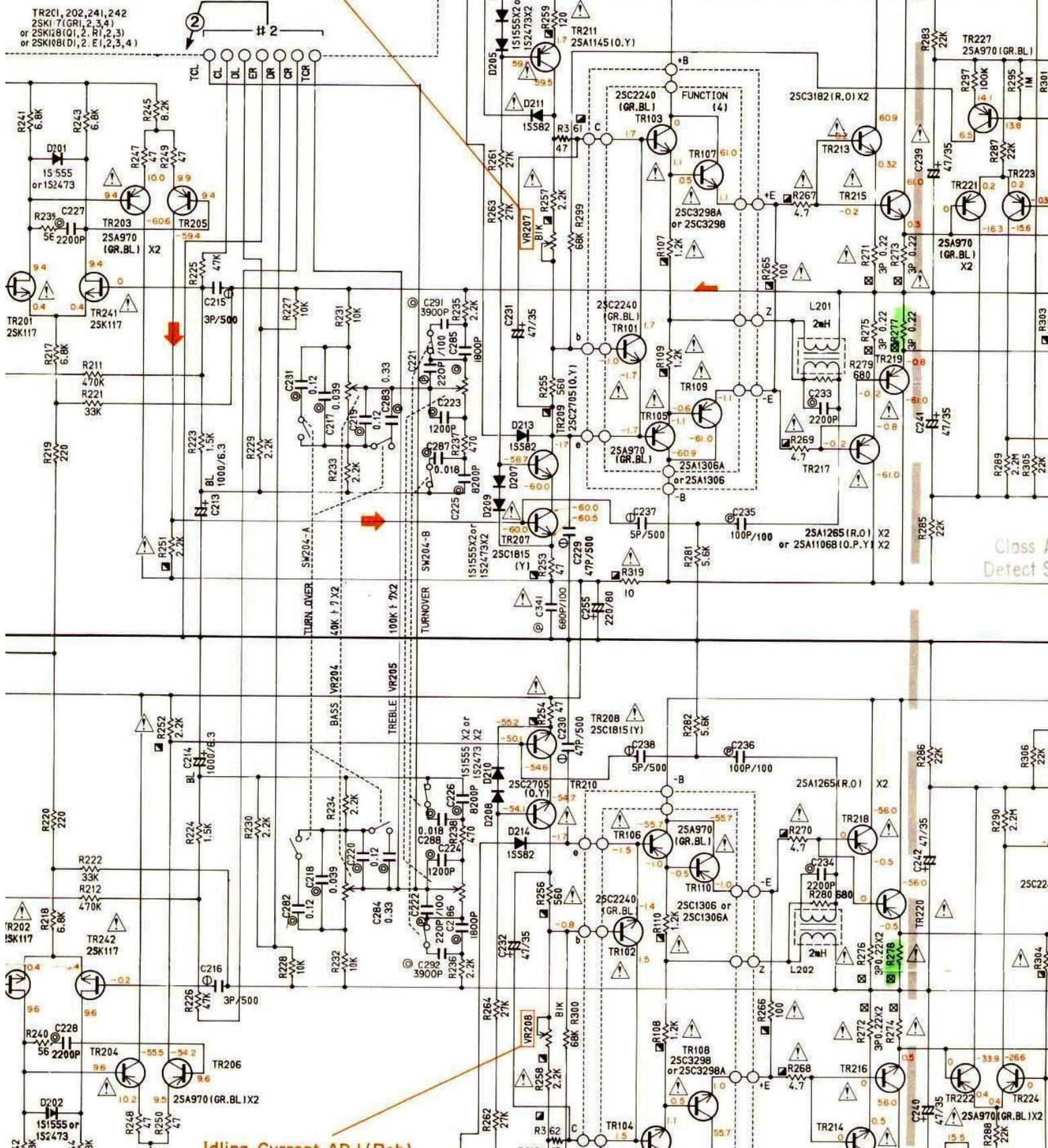
Real Time EQ AMP with ZDR

TR201, 202, 241, 242
 2SK117 (GR1, 2, 3, 4)
 or 2SK101 (01, 2, R1, 2, 3)
 or 2SK101 (D1, 2, E1, 2, 3, 4)



Main AMP. with ZDR

Idling Current ADJ (Lch)



TR2C1, 202, 241, 242
2SK17 (GRI, 2, 3, 4)
or 2SK128 (Q1, 2, R1, 2, 3)
or 2SK168 (D1, 2, E1, 2, 3, 4)

TR201
25K117

TR204
25A970 (GR.BL) X2

TR206
25A970 (GR.BL) X2

TR211
25A1145 (O.Y.)

TR101
25C2240 (GR.BL)

TR210
25C1815 (Y)

TR108
25C3298 or 25C3298A

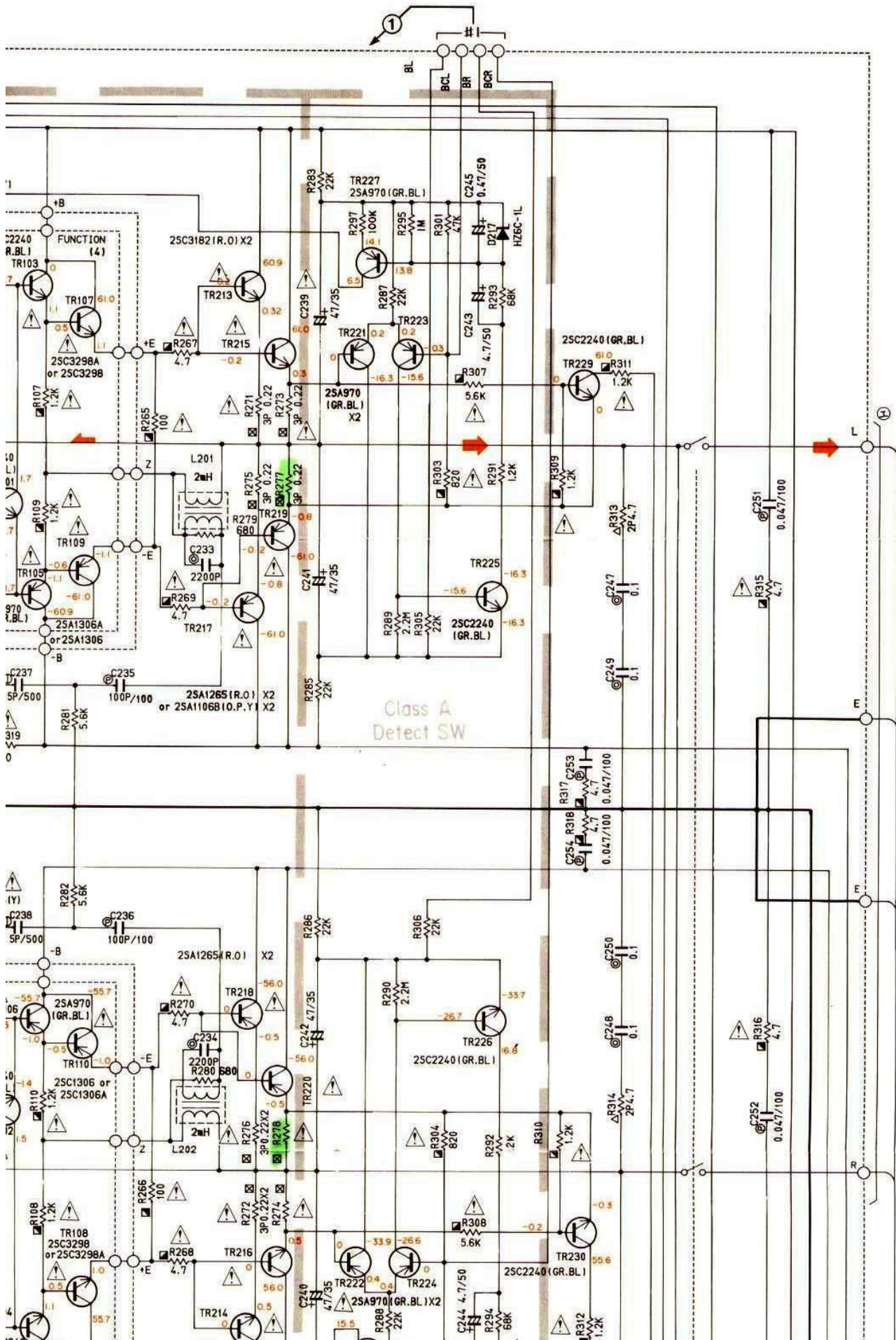
TR227
25A970 (GR.BL)

TR219
25A970 (GR.BL) X2

TR218
25A1265 (R.O) X2

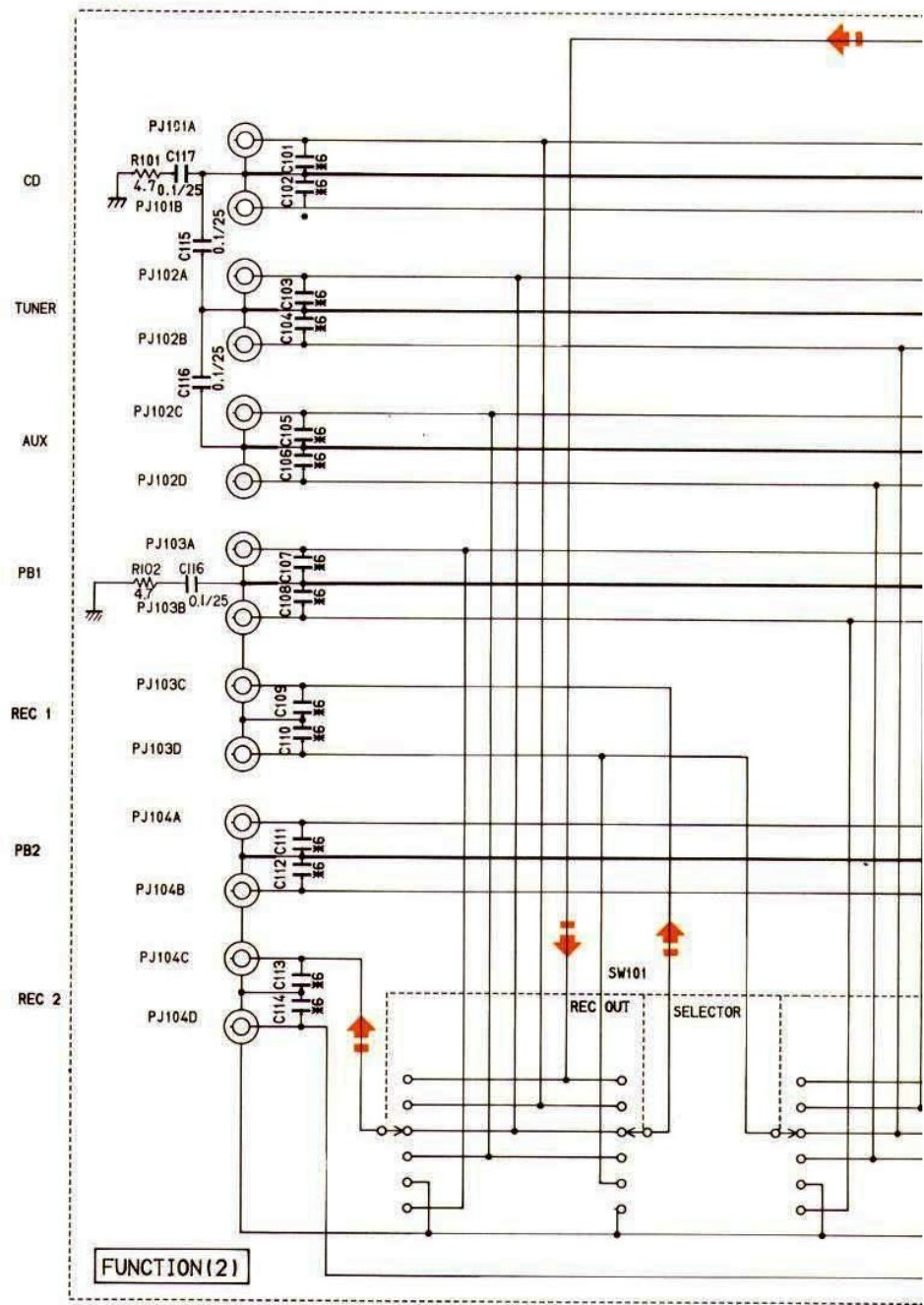
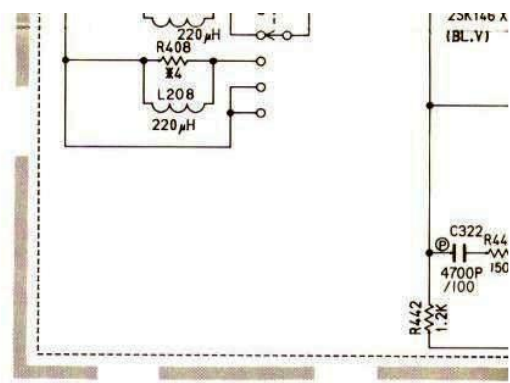
TR222
25A970 (GR.BL) X2

Class 1
Detect S

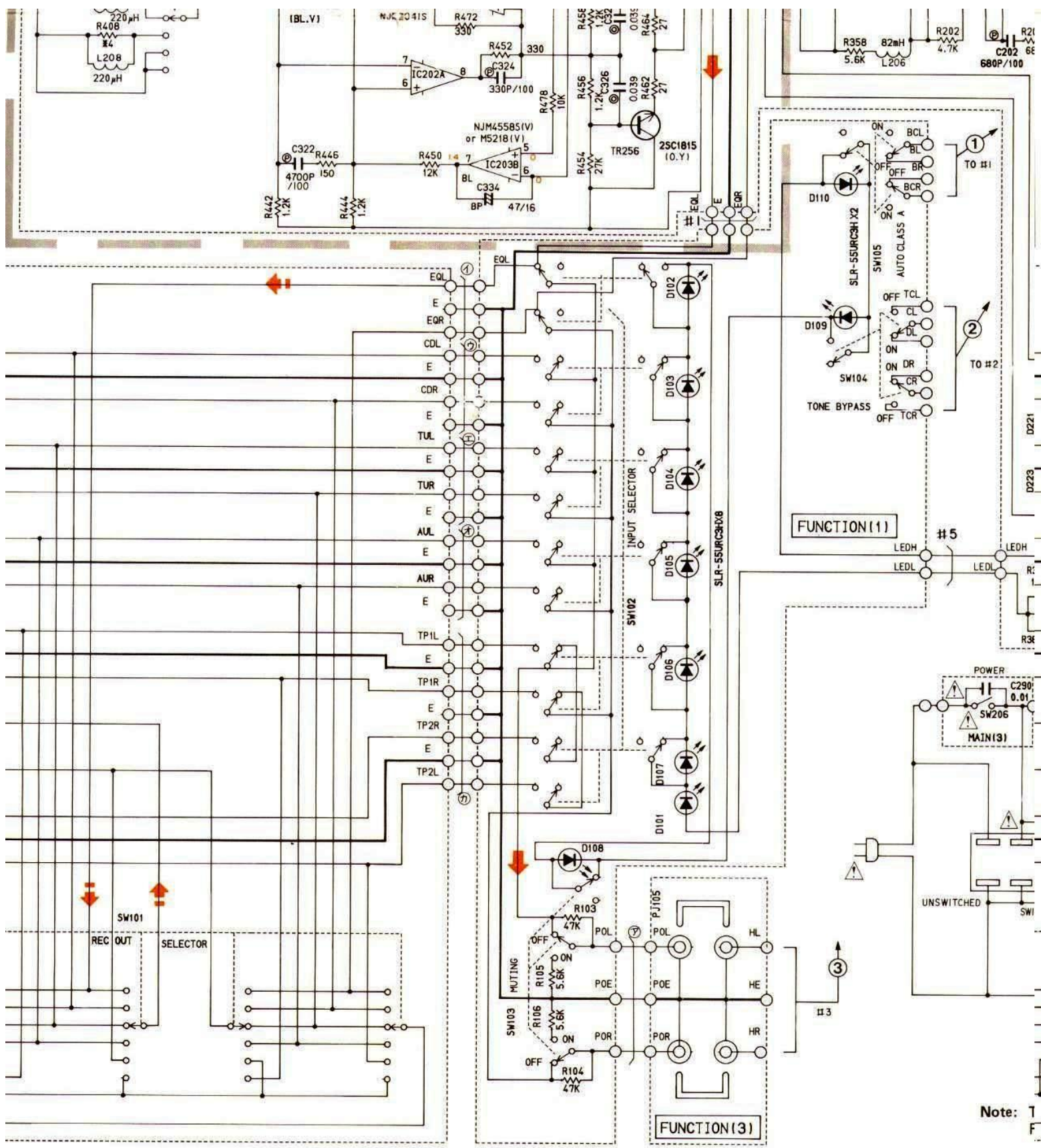


6
7
8
9
10


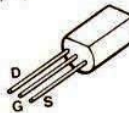
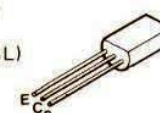

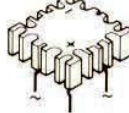

← AUDIO SIGNAL
← RECORDING SIGNAL

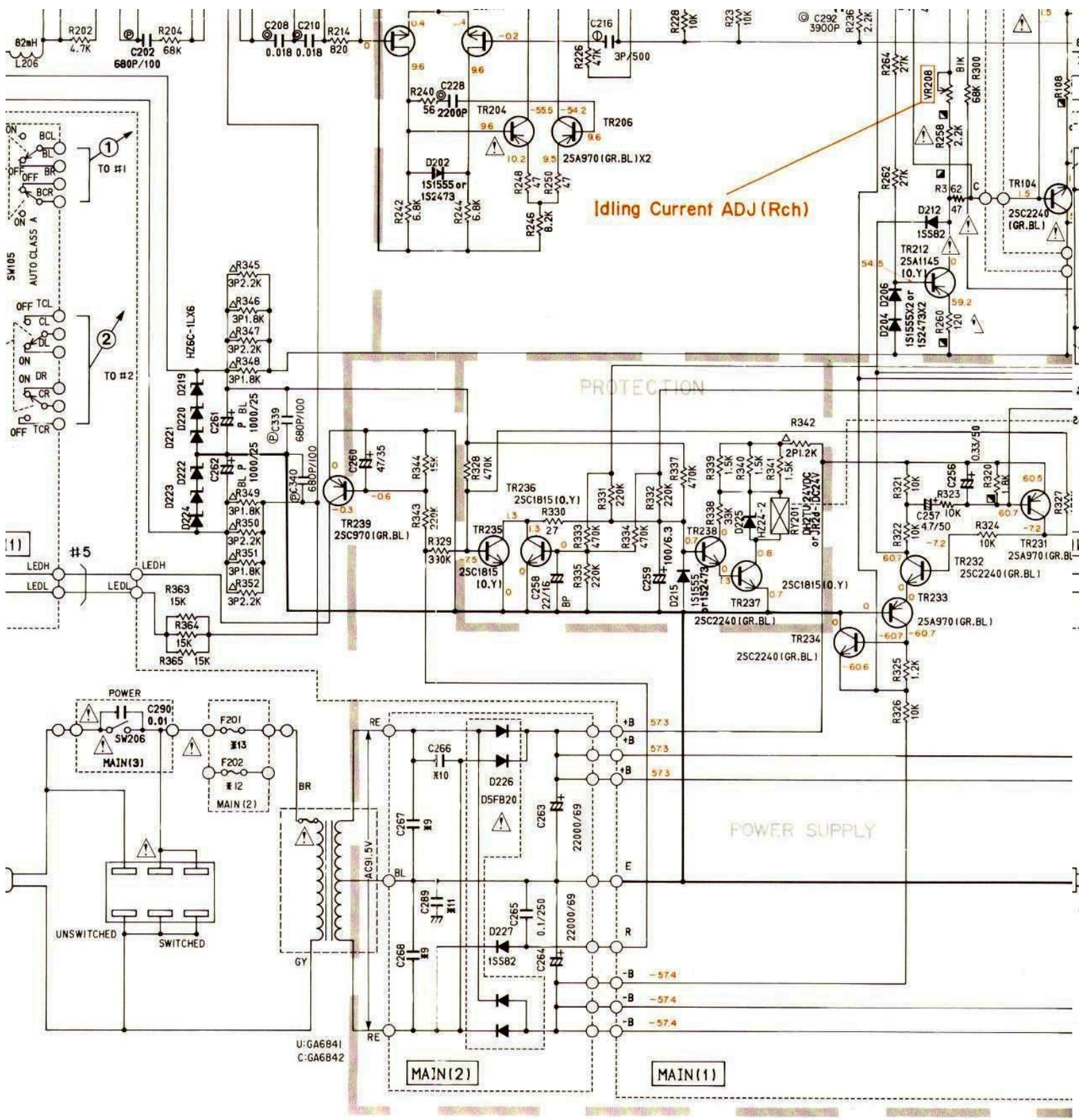


<p>2SC2581B (O, P, Y) 2SC3182 (R, O) 2SA1106B (O, P, Y) 2SA1265 (R, O)</p>	<p>2SA1306A 2SC3298A 2SA1306 2SC3298</p>	<p>2SK146 (BL, V)</p>	<p>2SK117 (GR1, 2, 3, 4)</p>	<p>2SA970 (G) 2SA1015 (Y) 2SA1145 (C) 2SC1815 (Y) 2SC2240 (G) 2SC2705 (O)</p>
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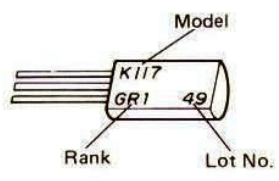


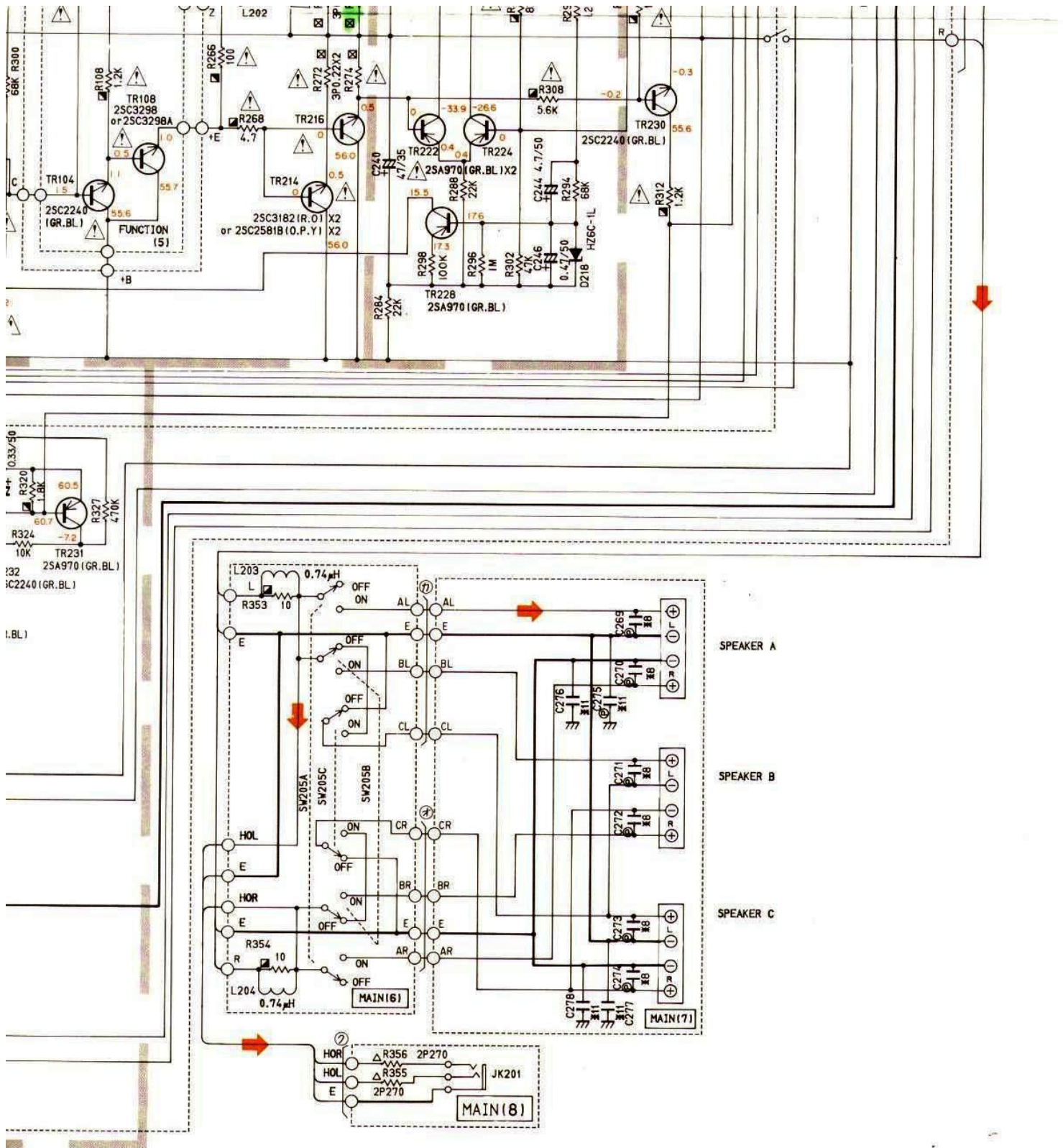
Note: T F

<p>2SK146 (BL, V)</p> 	<p>2SK117 (GR1, 2, 3, 4)</p> 	<p>2SA970 (GR, BL) 2SA1015 (Y) 2SA1145 (O, Y) 2SC1815 (Y) 2SC2240 (GR, BL) 2SC2705 (O, Y)</p> 	<p>HZ24-2 1S2473 1S1555 HZ6C-1L 1SS82</p> 	<p>D5FB20</p> 	<p>M5218L NJM4558S (F) M5219L NJM2041S</p> 
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Note: The same rank FETs must be used for TR201, TR202, TR241, TR242. FETs are classified into four rank (GF1, GR2, GR3, GR4).



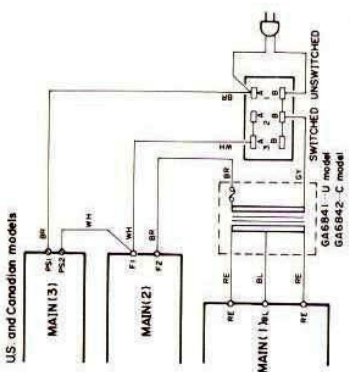
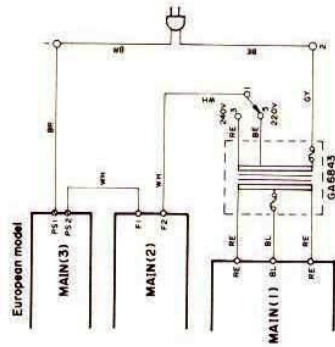
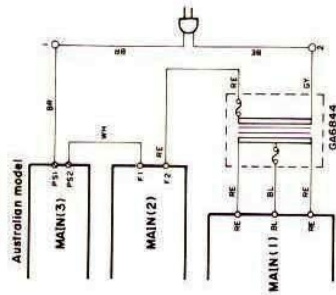
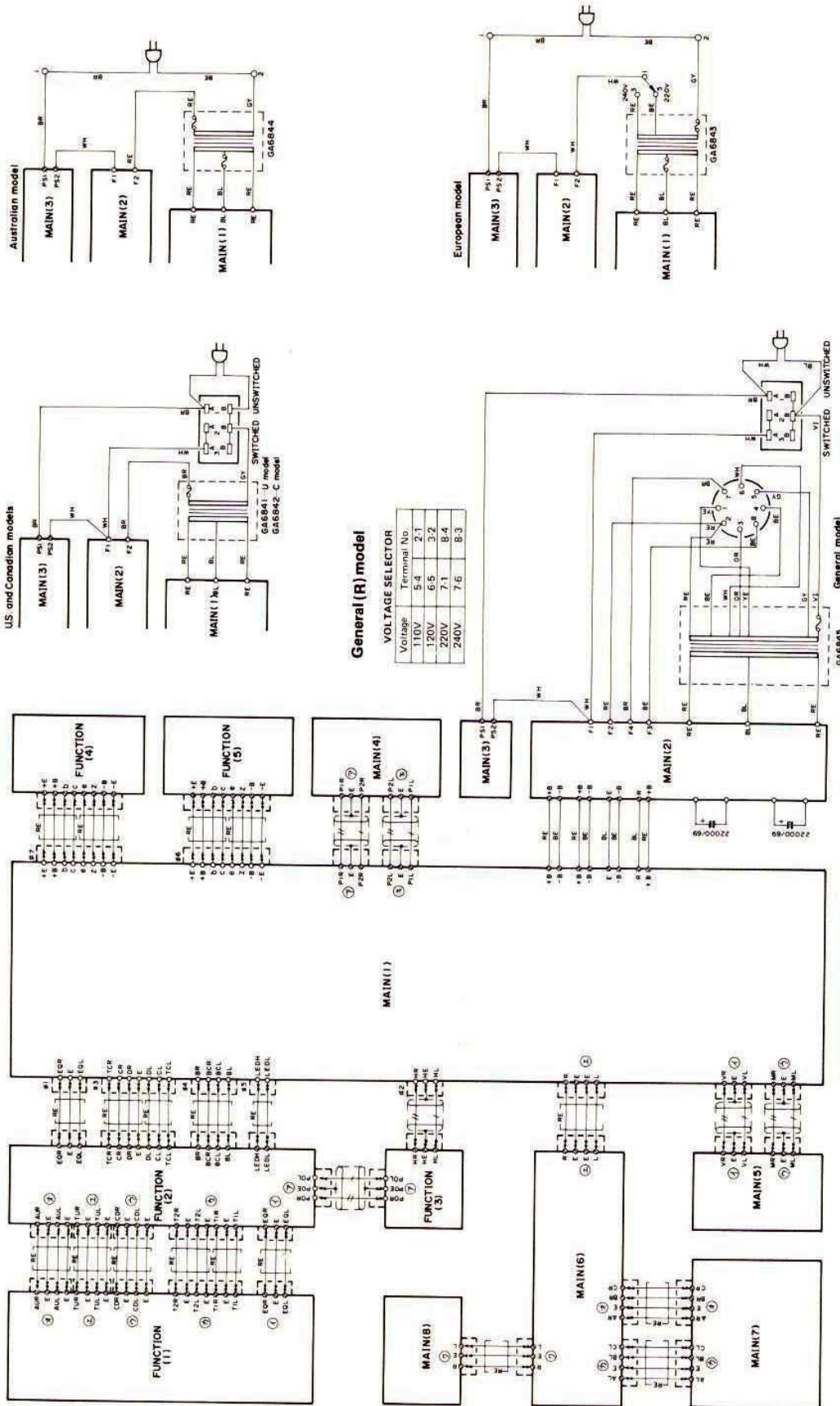


• All voltages are measured with a 10M Ω /DC electric volt meter.

AUTO CLASS A \rightarrow OFF Lch
 AUTO CLASS A \rightarrow ON Rch

- Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
- Schematic diagram is subject to change without notice.

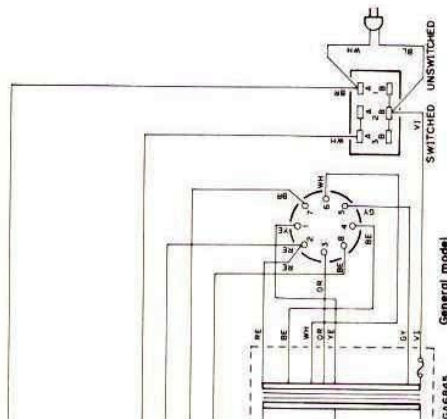
WIRING



General (R) model

VOLTAGE SELECTOR

Voltage	Terminal No
110V	5,4 2,1
120V	6,5 3,2
220V	7,1 8,4
240V	7,6 8,3



PARTS LIST

ELECTRICAL PARTS

- Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
- Carbon resistors of this stereo amplifier are 1/4W. There are no description about them in this parts list. Use the "Parts No." HJ35○○○○(1/4W) or equivalent.

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
*	NA 08 71 00	Main Circuit Board	メ イ ン シ ー ト	Silver		R	
*	NA 08 71 10	"	"	Black		R	
*	NA 08 71 20	"	"	Silver		U,C	
*	NA 08 71 30	"	"	Black		U,C	
*	NA 08 71 40	"	"	Silver		A,E	
*	NA 08 71 50	"	"	Black		A,E	
	FC 36 51 00	Mylar Cap.	マ イ ラ ー コ ン	0.1 μ F 50V	C247~250		
	FC 34 31 20	"	"	1200pF 50V	C223,224		
	FC 34 31 80	"	"	1800pF 50V	C285,286		
	FC 34 32 20	"	"	2200pF 50V	C227,228,233,234		
	FC 34 33 90	"	"	3900pF 50V	C279,280,291,292		
	FC 34 35 60	"	"	5600pF 50V	C331,332		
	FC 34 38 20	"	"	8200pF 50V	C225,226		
	FC 34 41 00	"	"	0.01 μ F 50V	C307~310		
	FC 34 41 00	"	"	0.01 μ F 50V	C275~278,289	A,E	
	FC 34 41 80	"	"	0.018 μ F 50V	C207~210,287,288		
	FC 34 42 20	"	"	0.022 μ F 50V	C329,330		
	FC 34 43 90	"	"	0.039 μ F 50V	C217,218,325~328,205,206		
	UA 55 51 20	"	"	0.12 μ F 50V	C219,220,281,282		
	UA 55 53 30	"	"	0.33 μ F 50V	C283,284		
	Fi 38 41 00	Ceramic Cap.	セ ラ コ ン	0.01 μ F	C290		Δ
	FU 35 03 00	Mica Cap.	マ イ カ コ ン	3pF 500V	C215,216		
	FU 35 05 00	"	"	5pF 500V	C237,238		
	FU 35 14 70	"	"	47pF 500V	C229,230		
	FV 44 91 00	Electrolytic Cap.	ケ ミ コ ン	1000 μ F 25V	C335,336		
	FZ 00 46 60	Metallized Mylar Cap.	M M コ ン	0.1 μ F 250V	C266	R,U,C	
	FZ 00 46 60	"	"	0.1 μ F 250V	C267,268	A,E	
	FZ 00 46 60	"	"	0.1 μ F 250V	C265		
	FZ 00 47 00	Electrolytic Cap.	B P ケ ミ コ ン	22 μ F 16V	C258		
*	FZ 00 72 00	"	ケ ミ コ ン	220 μ F 80V	C255		
	FZ 00 62 70	"	ブ ラ ッ ク ゲ ー ト コ ン	1000 μ F 6.3V	C213,214		
	FZ 00 74 20	"	"	47 μ F 16V	C333,334		
	UT 46 41 30	Polypropylene Film Cap.	ポ リ プ ロ コ ン	0.013 μ F 100V	C319,320		
	UT 46 44 70	"	"	0.047 μ F 100V	C317,318		
	UT 45 21 00	"	"	100pF 100V	C235,236,311,312		
	UT 45 22 20	"	"	220pF 100V	C337,338,343,344	A,E	
	UT 45 21 20	"	"	120pF 100V	C301~304	A,E	
	UT 45 22 20	"	"	220pF 100V	C211,212,221,222		
	UT 45 22 20	"	"	220pF 100V	C313,314	R,U,C	
	UT 45 23 30	"	"	330pF 100V	C305,306,323,324		
	UT 45 26 80	"	"	680pF 100V	C201,202,339~341		
	UT 45 34 70	"	"	4700pF 100V	C269~274	A,E	
	UT 45 34 70	"	"	4700pF 100V	C321,322		
	UT 45 44 70	"	"	0.047 μ F 100V	C251~254		
	UW 81 81 00	Electrolytic Cap.	ケ ミ コ ン	100 μ F 6.3V	C259,315,316		
	UW 85 74 70	"	"	47 μ F 35V	C231,232,239~242,260		
	UW 96 54 70	"	"	0.47 μ F 50V	C245,246		
	UW 96 64 70	"	"	4.7 μ F 50V	C243,244,257		
	UJ 16 53 30	"	"	0.33 μ F 50V	C203,204,256		
	GD 90 06 80	Coil	コ イ ル	0.74 μ H	L203,204		
	GE 90 08 40	"	"	15 μ H	L211,212	A,E	

* New Parts (新規部品)

A-1020

Ref. No.	Part No.	Description	部 品 名		Remarks	Common Model	Markets	ランク
	GD 90 07 10	ZDR Transformer	2mH	Z D R ト ラ ン ス	L201,202	Inter-changeable		
	GD 90 07 20	"	2mH	"	"			
*	GD 90 08 00	Choke Coil	82mH	チ ョ ー ク コ イ ル	L205,206			
	GE 90 03 30	"	220 μ H	"	L207~210			
	HL 82 34 70	Metal Oxide Film Resistor	4.7 Ω 2W	酸 金 抵 抗	R313,314			
	HL 72 52 70	"	270 Ω 2W	"	R355,356			
	HL 72 61 20	"	1.2k Ω 2W	"	R342			
	HL 33 61 80	"	1.8k Ω 3W	"	R346,348,349,351			
	HL 33 62 20	"	2.2k Ω 3W	"	R345,347,350,352			
	HU 57 37 50	Metal Film Resistor	7.5 Ω 1/4W	金 属 皮 膜 抵 抗	R431,432			
	HU 57 66 80	"	6.8k Ω 1/4W	"	R485,486			
	HU 57 73 90	"	39k Ω 1/4W	"	R439,440			
	HU 57 76 80	"	68k Ω 1/4W	"	R437,438			
	HV 45 34 70	Flame Proof Carbon Resistor	4.7 Ω ERD25FV	不 燃 化 カ ー ボ ン 抵 抗	R267~270,315~318			▲
	HV 45 41 00	"	10 Ω "	"	R319,353,354			
	HV 45 42 20	"	22 Ω "	"	R481,482			
	HV 45 44 70	"	47 Ω "	"	R253,254,361,362			▲
	HV 45 51 00	"	100 Ω "	"	R265,266			▲
	HV 45 51 20	"	120 Ω "	"	R259,260			▲
	HV 45 55 60	"	560 Ω "	"	R255,256			▲
	HV 45 58 20	"	820 Ω "	"	R303,304			▲
	HV 45 61 20	"	1.2k Ω "	"	R309~312			▲
	HV 45 61 80	"	1.8k Ω "	"	R320			
	HV 45 62 20	"	2.2k Ω "	"	R251,252,257,258			▲
	HV 45 65 60	"	5.6k Ω "	"	R307,308			▲
	HZ 00 30 50	Metal Film Resistor	0.22 Ω 3W	金 属 板 抵 抗	R271~278			▲
	HS 31 25 00	Potentiometer	40K トク×2	可 変 抵 抗 器	VR204	Inter-changeable		
	HS 41 23 70	"	40K トク×2	"	"			
	HS 31 25 10	"	100K トク×2	"	VR205	Inter-changeable		
	HS 41 23 80	"	100K トク×2	"	"			
	HS 31 25 20	"	300K トクA×2	"	VR202	Inter-changeable		
	HS 41 25 00	"	300K トクA×2	"	"			
	HS 31 25 30	"	300KBH	"	VR201	Inter-changeable		
	HS 41 24 80	"	300KMN	"	"			
	HS 32 07 00	"	60KY×2	"	VR203			
	HT 37 00 10	Pre-Set Potentiometer	B1K Ω	半 固 定 抵 抗	VR207,208			
	iA 09 70 00	Transistor	2SA970 (GR,BL)	ト ラ ン ジ ス タ	TR203-206,221-224,227,228,231,233,239			▲
	iA 10 15 20	"	2SA1015 (Y)	"	TR257,258			▲
	iA 11 45 00	"	2SA1145 (O,Y)	"	TR211,212			▲
	iC 18 15 20	"	2SC1815 (Y)	"	TR207,208,235,236,238,255,256			▲
	iC 22 40 00	"	2SC2240 (GR,BL)	"	TR225,226,229,230,232,234,237			▲
	iC 27 05 00	"	2SC2705 (O,Y)	"	TR209,210			▲
	iE 10 22 00	FET	2SK146 (BL,V)	F E T	TR251~254			
	iE 10 34 10	"	2SK117 (GR1,2,3,4)	"	TR201,202,241,242			▲
	iF 00 06 70	Diode	1S2473	ダ イ オ ー ド	D201~210,215	Inter-changeable		
	iF 00 00 40	"	1S1555	"	"			
	iF 00 14 00	"	ISS82	"	D211~214,227			

*New Parts (新規部品)

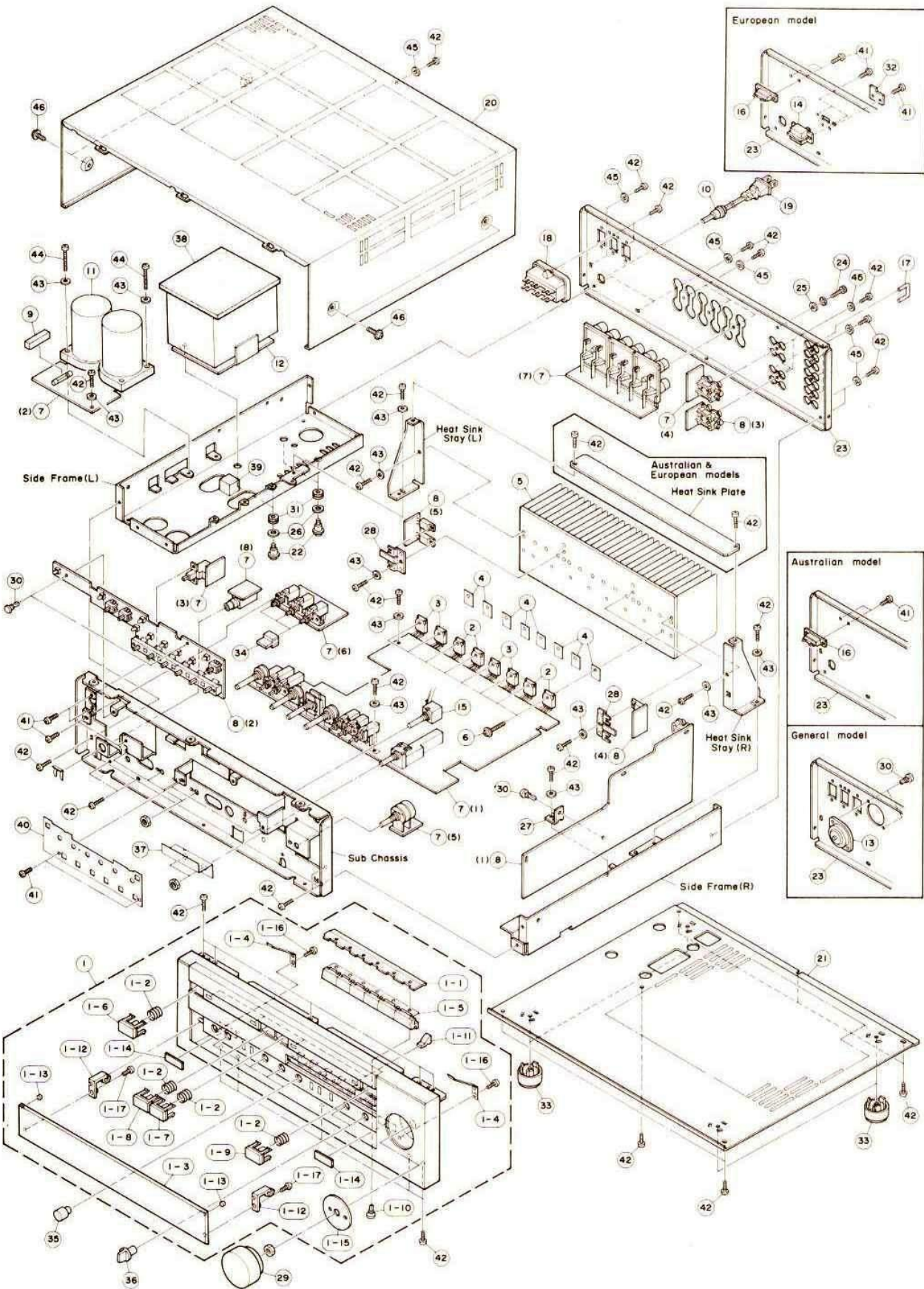
A-1020

Ref. No.	Part No.	Description	部品名		Remarks	Common Model	Markets	ランク
	iF 00 19 40	Zener Diode	HZ24-2	ツェナーダイオード	D225			
	iF 00 15 10	"	HZ6C-1L	"	D217~224,229,230			
	iF 00 11 30	Diode	D5FB20	ダイオードブリッジ	D226			
	iG 08 57 00	IC	M5218L(V)	I C	IC203			
	iG 09 21 00	"	M5219L	"	IC201,202	} Inter-changeable		
	iG 07 69 00	"	NJM2041S	"	"			
*	KA 50 20 30	Rotary Switch	SRZ-V 6-6S	ロータリースイッチ	SW201			
	KA 80 35 20	Push Switch	TV-5	プッシュスイッチ	SW206			
*	KA 80 50 00	"	2-2 NS	"	SW205			
*	KA 80 50 10	"	2-2 NS	"	SW203			
*	KA 80 50 20	"	2-2 NS	"	SW202			
*	KA 80 50 30	"	4-2 NS	"	SW204			
	KB 00 04 00	Fuse	T5.0A 250V	ヒューズ	F202		R	
	KB 00 13 90	"	10A 250V	"	F201		U,C	
	KB 00 14 90	"	10A 250V	"	"		R	
	KB 00 07 90	Fuse, Miniature	T4.0A 250V	ミニチュアヒューズ	"		A,E	
	KC 00 19 40	Relay	DH2TU 24VDC	リレー	RY201	} Inter-changeable		
*	KC 00 20 00	"	JR2a-DC 24V	"	"			
	LB 30 17 10	Jack, Head Phone	Gray	ホンジャック	JK201 Silver			
	LB 30 17 20	"	Black	"	" Black			
*	LB 40 13 30	Pin Jack	4P	ピンジャック	PJ201			
	CB 09 52 60	Cover For Capacitor	SB-0833	コンデンサーカバー			A,E	
	LA 00 21 40	Lapping Terminal	P=10,2Pi-Type	i型ラッピング端子板			R	
	LA 00 21 50	"	P=10,3Pi-Type	"				
	LA 00 25 80	"	P=10,2Pi-Type	"				
*	LA 00 54 10	Speaker Terminal	4P	スピーカターミナル				
	LB 20 10 60	Pin, Fuse Holder	YSH403T	ヒューズホルダーピン			A,E	
	LB 20 19 70	"	23165081	"			R,U,C	
	LB 91 80 20	Base Pin	i-Type 2P	XHベースピンI型				
	LB 91 80 30	"	i-Type 3P	"				
	LB 91 80 40	"	i-Type 4P	"				
	LB 91 80 70	"	i-Type 7P	"				
	LB 91 80 80	"	i-Type 8P	"				
	BB 06 83 70	Metal, Ground		アース金具				
	BB 07 04 40	Bus Bar		バスバー		A-1000		
	BB 07 04 10	"	l=55	"		A-700		
	BB 07 04 20	"	l=100	"		"		
	BB 07 04 30	"	l=145	"		"		
*	NA 08 70 80	Function Circuit Board		ファンクションシート		A-720	R,U,C	
*	NA 08 70 90	"		"		"	A,E	
	FG 21 24 70	Ceramic Cap	470pF 50V	セラコン	C101~114		A,E	
	FZ 00 41 30	"	0.1μF 25V	半導体セラコン	C115~117			
	HV 45 61 20	Flame Proof Carbon Resistor	1.2kΩ ER-D25FV	不燃化カーボン抵抗	R107~110			

*New Parts (新規部品)

A-1020

EXPLODED VIEW



MECHANISM PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※ 1	NB 62 58 30	Panel Unit	パネルユニット	Silver		R,U,C	
※ "	NB 62 58 40	"	"	Black		R,U,C	
※ "	NB 62 67 70	"	"	Silver		A,E	
※ "	NB 62 67 80	"	"	Black		A,E	
1-1	AA 61 78 70	Cover	カバ				
1-2	AA 61 78 80	Spring	スプリング				
1-3	BA 08 67 30	Shielding Panel	シーリングパネル	Silver			
"	BA 08 67 40	"	"	Black			
1-4	BB 07 04 50	Holder, Hinge	ヒンジ押え				
1-5	NB 62 27 90	Knob Ass'y	ツマミ Ass'y	Silver	A-520		
"	NB 62 28 00	"	"	Black			
1-6	CB 63 51 20	Button, P	ボタン	POWER Silver			
"	CB 63 51 30	"	"	" Black			
1-7	CB 63 51 40	Button, T	"	トーンバイパス Silver			
"	CB 63 51 50	"	"	" Black			
1-8	CB 63 51 60	Button, A	"	オートクラスA Silver			
"	CB 63 51 70	"	"	" Black			
1-9	CB 63 51 80	Button, M	"	ミュート Silver			
"	CB 63 51 90	"	"	" Black			
1-10	CB 06 88 80	Plastic Rivet	プラスチックリベット				
1-11	CB 62 29 70	Lens	レンズ				
1-12	CB 62 07 70	Hinge	ヒンジ	Silver			
"	CB 62 07 80	"	"	Black			
1-13	CB 62 08 90	Damper	ダンパー	Silver			
"	CB 62 19 30	"	"	Black			
1-14	CB 62 34 40	Damper, Panel	パネルダンパー				
1-15	CB 62 17 50	Plate, Shield	シールド板				
1-16	Ei 33 00 86	Binding Head Tapping Screw	3×8 FCM3-BI	バインドタッピングネジ	PACK		
1-17	ED 33 00 66	Binding Head Screw	3×6 FCM3-BI	バインド小ネジ	PACK		
※ 2	iX 60 32 40	Transistor	2SA1265(R,O)	トランジスタ	TR217~220		
※ 3	iX 60 32 50	"	2SC3182(R,O)	"	TR213~216		
4	iL 00 05 70	Insulation Base	マイカーベース				
5	BA 09 17 70	Heat Sink	放熱板				
6	EZ 00 13 50	Cup Screw	3×14 FCM3-BI	カップスクリュー (Bタイト)			
※ 7	NA 08 71 00	Main Circuit Board		メインシート	Silver	R	
※ "	NA 08 71 10	"		"	Black	R	
※ "	NA 08 71 20	"		"	Silver	U,C	
※ "	NA 08 71 30	"		"	Black	U,C	
※ "	NA 08 71 40	"		"	Silver	A,E	
※ "	NA 08 71 50	"		"	Black	A,E	
8	NA 08 70 80	Function Circuit Board		ファンクションシート		A-720 R,U,C	
"	NA 08 70 90	"		"		A-720 A,E	
9	CB 09 95 80	Fuse Holder Cover	SB-0664U	ヒューズホルダーカバー		LA	
10	CB 62 01 90	Cord Stopper	CM-22B	コードストッパー		R,A,E	
"	CB 62 02 00	"	CM-22C	"		U,C	
※ 11	FZ 00 70 20	Electrolytic Cap. Set	22000 μ F 69V	ケミコンセット			
※ 12	GA 68 41 00	Power Transformer		電源トランス		U	△
※ "	GA 68 42 00	"		"		C	△
※ "	GA 68 43 00	"		"		E	△
※ "	GA 68 44 00	"		"		A	△
※ "	GA 68 45 00	"		"		R	△
13	LB 20 14 80	Voltage Selector		電圧切換器		R	△
14	KA 40 12 60	Slide Switch	SS-12	スライドスイッチ		E	△

※New Parts (新規部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
15	KA 90 70 60	Remote Rotary Switch	ESA-33	リモートロータリースイッチ			
16	LA 00 29 50	Terminal Board	2P	中 継 端 子 台		A,E	
17	LB 10 11 10	Plug,Short		シ ョ ー ト ブ ラ グ	Accessory Terminal		
18	LB 60 39 20	AC Outlet	M7026-C	A C ア ウ ト レ ッ ト		R,U	
*	"	"	M7032-B	"		C	
19	MG 00 09 20	Power Cord	7.5A 250V 2.5m	電 源 コ ー ド	Interchangeable	A	
"	MG 00 14 90	"	7.5A 250V 2.5m	"		A	
"	MG 00 14 50	"	10A 125V 1.98m	"	Interchangeable	U	
"	MG 00 14 60	"	10A 125V 2m	"		U	
"	MG 00 16 20	"	2.5A 250V 2m	"		E	
"	MG 00 16 30	"	6A 250V 2m	"		R	
"	MG 00 22 20	"	10A 125V 2m	"		C	
20	AA 62 47 80	Top Cover		ト ッ プ カ バ ー	Silver		
"	AA 62 47 90	"		"	Black		
21	AA 62 48 10	Bottom Cover		ボ ト ム カ バ ー			
22	AA 60 38 50	Screw		段 付 ネ ジ			
23	AA 62 48 40	Rear Panel		リ ア パ ネ ル		R	
"	AA 62 48 50	"		"		U,C	
"	AA 62 48 60	"		"		A	
"	AA 62 48 70	"		"		E	
24	EZ 00 14 00	Ground Terminal Screw	3×13.5MFNi-II	ア ー ス 端 子 ネ ジ			
25	EV 90 13 60	Toothed Locked Washer	$\phi 10 \times \phi 3.6 \times 10.8$ FNM3-3g	セ ム ス 平 座 金			
26	EV 20 00 66	Plain Washer	$\phi 6$ ZMC2-Y	平 座 金	PACK		
27	AA 62 49 10	Circuit Board Stay		シ ー ト ス テ ー			
28	AA 62 49 20	TR Pusher		T R ブ ッ シ ャ ー			
29	BA 08 77 10	Knob		ツ マ ミ	VOLUME Silver		
"	BA 08 77 20	"		"	" Black		
30	CB 06 88 80	Plastic Rivet		プ ラ ス チ ッ ク リ ベ ッ ト			
31	CB 09 99 10	Rubber,Cushion		防 振 ゴ ム			
32	CB 60 14 40	Voltage Selector Stopper		V S ス ト ッ パ ー		E	
33	CB 62 07 30	Leg	TL-037	ト ラ ン レ ッ グ			
34	NB 62 36 20	Button F Ass'y		ボ タ ン (F)Ass'y	SPEAKERS Silver	T-500	
"	NB 60 92 00	"		"	" Black	"	
35	CB 63 79 40	Knob		ツ マ ミ	BASS, TREBLE LOUDNESS, BLANCE Silver	K-1020	
"	CB 62 08 20	"		"	" Black		
36	CB 63 42 60	Knob, Switch		S W ツ マ ミ	RECOUT/ PHONO Silver	K-720	
"	CB 63 42 70	"		"	" Black	"	
37	CB 63 91 80	Plate, Shield		シ ー ル ド 板			
38	CB 62 33 90	Dumper		ダ ン パ ー			
39	CB 63 29 60	"		"			
40	CB 64 20 10	Plate, Shield		シ ー ル ド プ レ ー ト			
41	ED 33 00 66	Binding Head Screw	3×6 FCM3-BI	バ イ ン ド 小 ネ ジ	PACK		
42	Ei 33 00 86	Binding Head Tapping Screw	3×8 FCM3-BI	バ イ ン ド タ ッ ピ ン グ ネ ジ	PACK		
43	EV 20 30 36	Plain Washer	$\phi 3$ FCM3-BI	平 座 金	PACK		
44	EK 93 50 10	BW Head Tapping Screw	3×20 ZMC2-BI	BWヘッドタッピングネジ			
45	EV 41 30 36	Toothed Lock Washer	$\phi 3$ FCM3-BI	歯 付 座 金	PACK		
46	EZ 00 13 10	Cup Tight Screw	4×8 FNM3-3g	カ ッ プ タ イ ト ス ク リ ュ ー	Silver		
"	EZ 00 13 20	"	4×8 FCM3-BI	"	Black		
	CB 06 92 50	Binding Tie	BK-1	イ ン シ ュ ロ ッ ク タイ			

*New Parts (新規部品)

A-1020