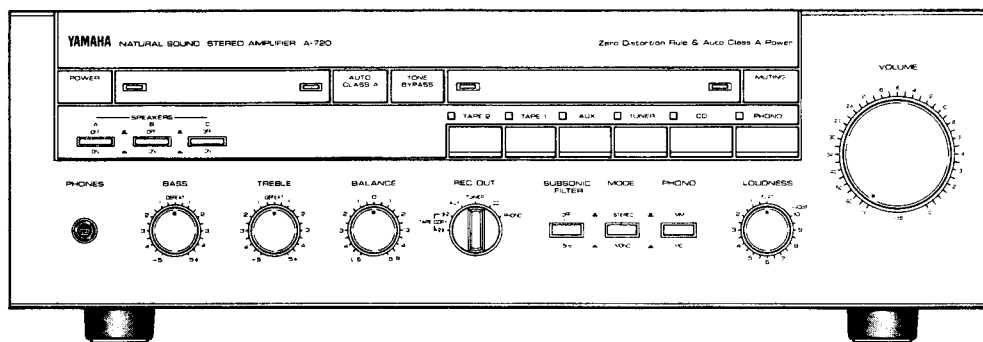


# STEREO INTEGRATED AMPLIFIER

# A-720

## SERVICE MANUAL

### FRONT PANEL



### 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
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# YAMAHA

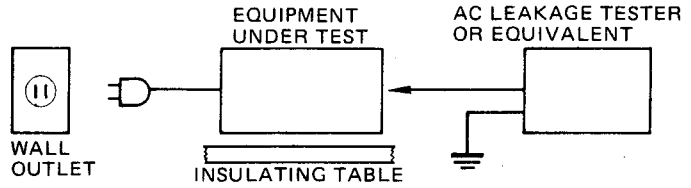
NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

2.55k-092

A-720

## 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

<b>Continuous Power Per Channel</b>		
20Hz ~ 20kHz (0.005% THD, 8Ω)		105W
(0.007% THD, 6Ω)		125W
1kHz, IEC Rated Power		
(0.01% THD, 8Ω)	117W (R)(U)(C)	
	110W (A)(E)	
(0.01% THD, 6Ω)	143W (R)(U)(C)	
	144W (A)(E)	
<b>DIN Standard Output Power Per Channel</b>		
1kHz (1% THD, 4Ω)		150W (A)(E)
<b>Dynamic Headroom</b>		
8Ω		1.4dB
6Ω		1.58dB
<b>Dynamic Power Per Channel (IHF)</b>		
8Ω		145W
6Ω		180W
4Ω		240W
<b>Power Band Width</b>		
0.03% THD, 52.5W 8Ω		10Hz ~ 50kHz
<b>Dimping Factor</b>		
1kHz, 8Ω (SPEAKER A)		45
<b>Input Sensitivity/Impedance</b>		
Phono MC		160μV/220Ω
MM		2.5mV/47kΩ
CD/AUX/TAPE/TUNER		150mV/47kΩ
<b>Input Sensitivity (New IHF)</b>		
Phono MC		16μV
MM		0.25mV
CD/AUX/TAPE/TUNER		15mV
<b>Maximum Input Signal</b>		
1kHz, 0.01% THD, Phono MC		10mV
MM		165mV
<b>Output Level/Impedance</b>		
Rec Out		150mV/470Ω
<b>Headphone Jack Rated Output/Impedance</b>		
0.005% THD		0.83V/8Ω
<b>Frequency Response</b>		
20Hz ~ 20kHz, CD/AUX/TAPE/TUNER (TONE BYPASS ON)		+0 -0.5 dB
<b>RTAA Equalization Deviation</b>		
20Hz ~ 20kHz, Phono MC		±0.3dB
MM		±0.2dB
<b>Total Harmonic Distortion</b>		
Phono MC to Rec Out 3V		0.006%
MM to Rec Out 3V		0.003%
CD/AUX/TAPE/TUNER to SP Out (52.5W/8Ω)		0.005%
<b>Intermodulation Distortion</b>		
CD/AUX/TAPE/TUNER Rated Output/8Ω		0.002%
1W/8Ω		0.003%

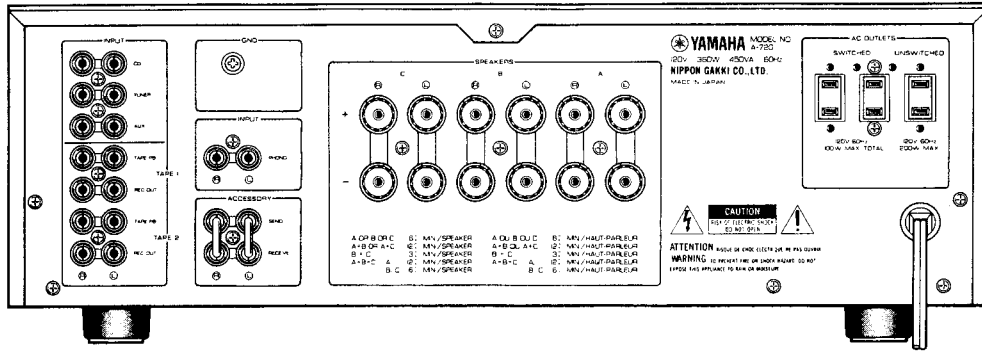
<b>Signal to Noise Ratio (IHF-A-Network)</b>	
Phono MC (500μV Input Shorted)	76dB
MM (5mV Input Shorted)	92dB
CD/AUX/TAPE/TUNER (Input Shorted, TONE BYPASS ON)	106dB
<b>Signal to Noise Ratio (New IHF)</b>	
Phono MC	74.5dB
MM	78dB
CD/AUX/TAPE/TUNER	85dB
<b>Input Equivalent Noise</b>	
Phono MC	-142dBV (A)(E)
MM	-138dBV (A)(E)
<b>Residual Noise (IHF-A-Network)</b>	
TONE BYPASS ON	133μV
<b>Channel Separation</b>	
Phono MM (1kHz, Input Shorted, Vol -30dB)	70dB
CD/AUX/TAPE/TUNER (1kHz, 5.1kΩ, Vol -30dB)	65dB
<b>Tone Control Characteristics</b>	
BASS boost/cut	±10dB (20Hz)
turnover frequency	350Hz
TREBLE boost/cut	±10dB (20kHz)
turnover frequency	3.5kHz
<b>Filter Characteristics</b>	
Low (Subsonic)	15Hz, -12dB/oct
<b>Continuous Loudness Control (Level-related equalization)</b>	
Attenuation	-40dB (1kHz)
<b>Audio Muting</b>	
	-20dB
<b>Gain Tracking Error (0 to -60dB)</b>	
	2dB
<b>Power Supply</b>	
U.S.A. & Canadian models	120V AC, 60Hz
General model	110V/120V/220V/240V AC, 50/60Hz
European model	220V AC, 50Hz
Australian model	220V/240V AC, 50Hz
<b>Power Consumption</b>	
	360W, 450VA (U)(C)
	240W (R)
	360W (A)
	470W (E)
<b>AC Outlet (U)(C)(R)</b>	
Switched x 2	200W max total (R) 100W max total (U)(C)
Unswitched x 1	200W max
<b>Dimensions (W x H x D)</b>	
	435 x 147 x 399 mm (17-1/8" x 5-3/4" x 15-3/4")
<b>Weight</b>	
	10.2 kg (22 lbs 7 oz)

\* Specifications are subject to change without notice.

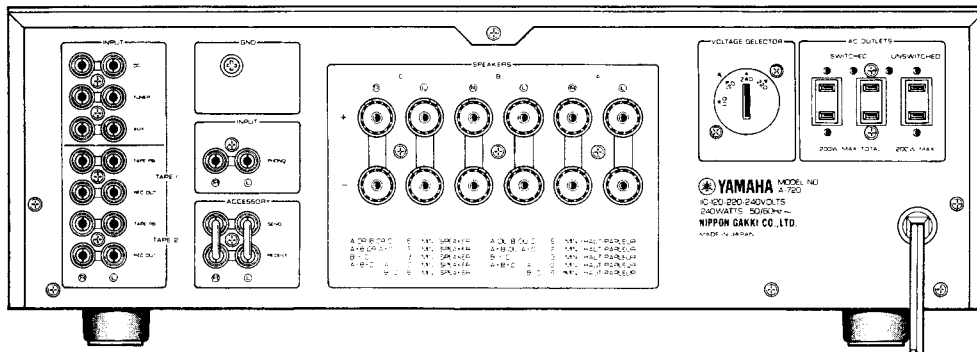
- (U) ..... U.S.A. model
- (C) ..... Canadian model
- (A) ..... Australian model
- (E) ..... European model
- (R) ..... General model

# REAR PANELS

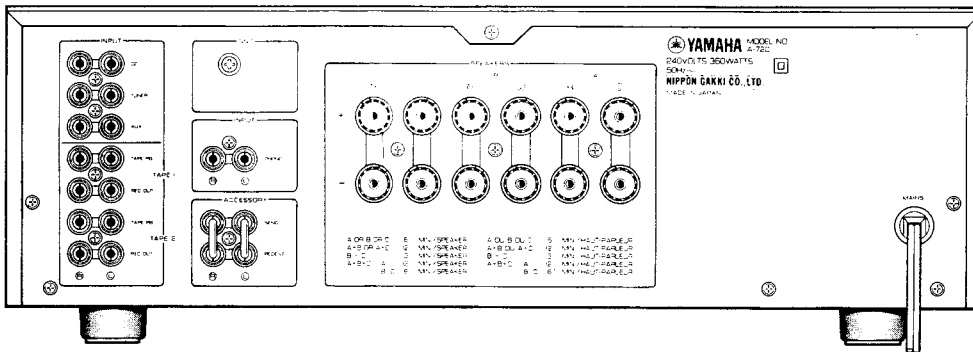
## ▼ U.S.A. & Canadian models



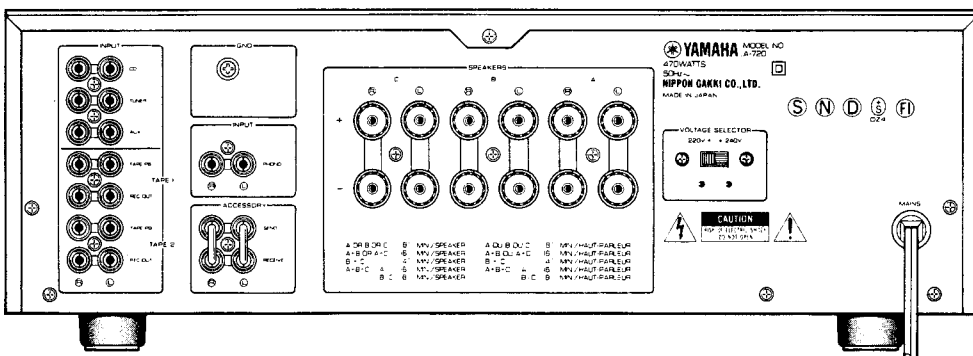
## ▼ General model



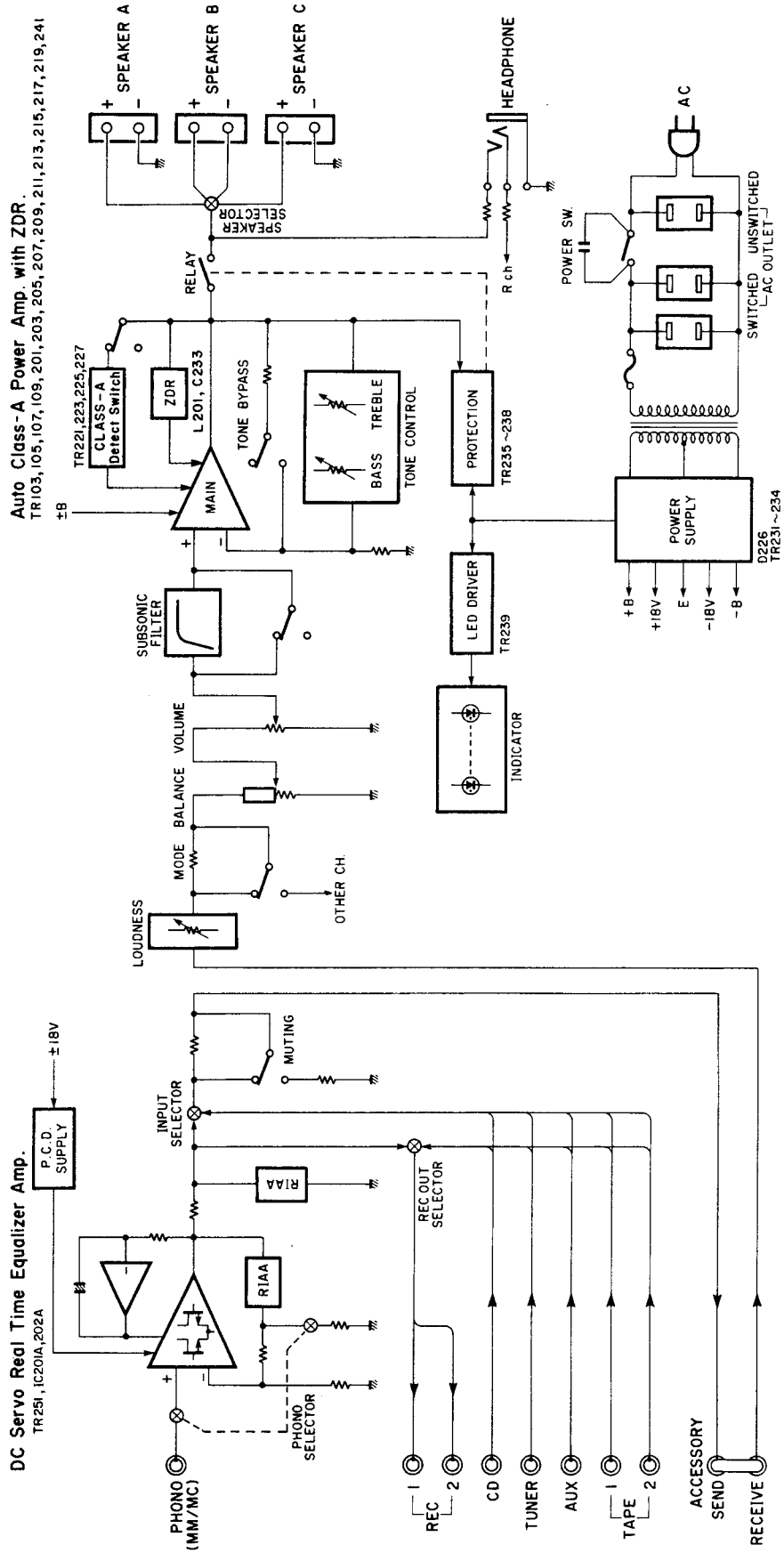
## ▼ Australian model



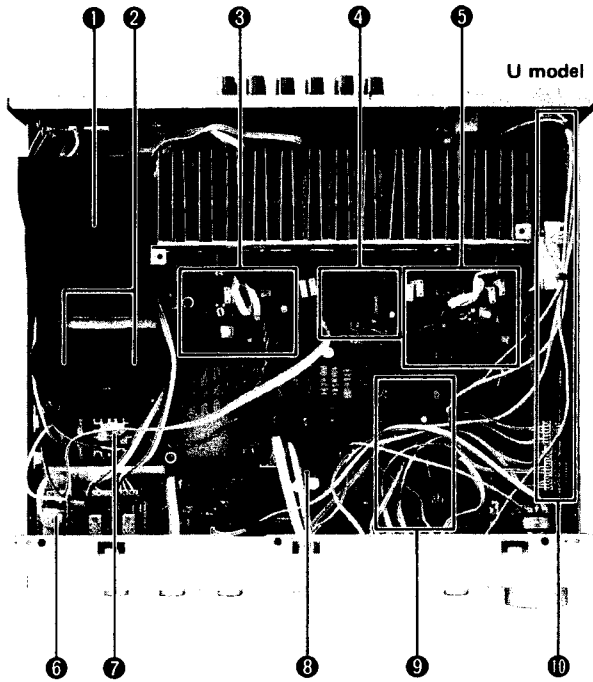
## ▼ European model



■ BLOCK DIAGRAM



**INTERNAL VIEW**



- ① POWER TRANSFORMER  
U.S.A. model: GA68350  
Canadian model: GA68360  
European model: GA68370  
Australian model: GA68380  
General model: GA68390
- ② ELECTRICAL CAP.: 22000 $\mu$ F 69V
- ③ POWER AMP SECTION (Rch)
- ④ PROTECTION SECTION
- ⑤ POWER AMP SECTION (Lch)
- 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 of 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.

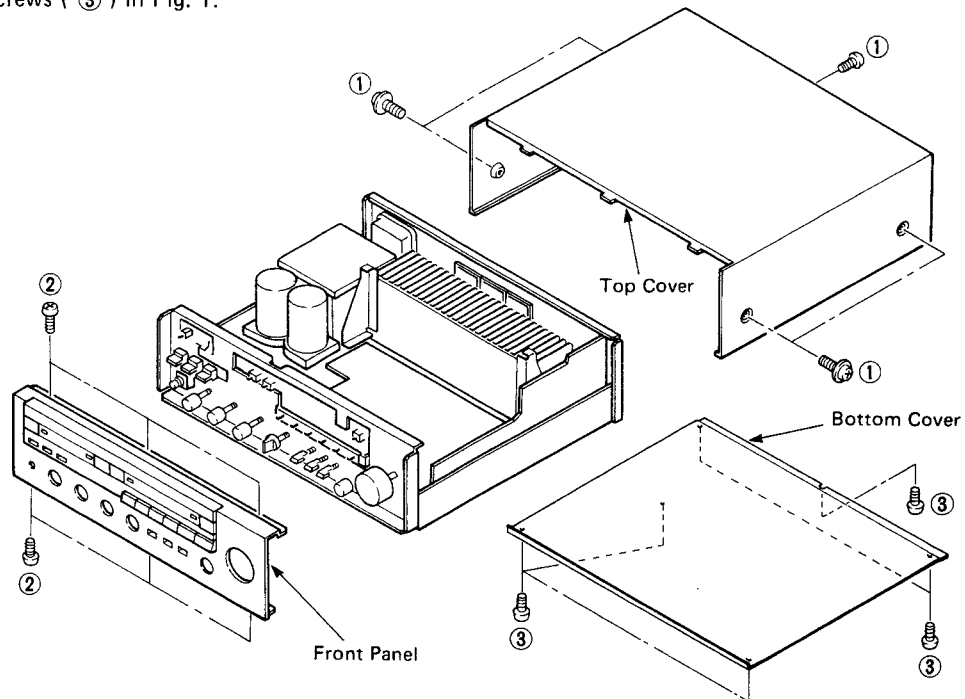


Fig. 1

## 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 R271 (Lch) and R272 (Rch) comes to  $5\text{mV} \pm 1\text{mV DC}$ .

### ● 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 R271 (Lch) and R272 (Rch) comes to  $60\text{mV} \pm 30\text{mV DC}$ .

Item to be Adjusted	Test Points	Adjustment Points	Rating
Idling Current	Lch: Across the terminals of R271 Rch: Across the terminals of R272	VR207 (Lch) VR208 (Rch)	$5\text{mV} \pm 1\text{mV DC}$ .
AUTO CLASS A OPERATION		—	$60\text{mV} \pm 30\text{mV DC}$ .

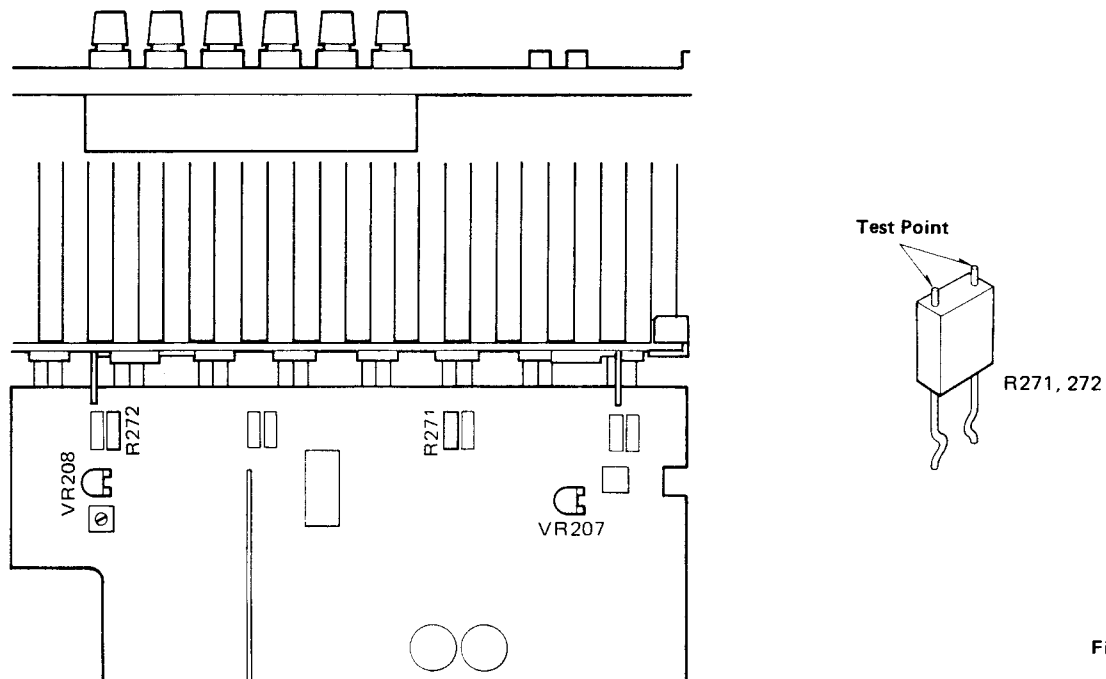
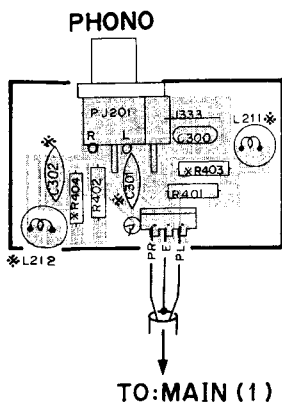


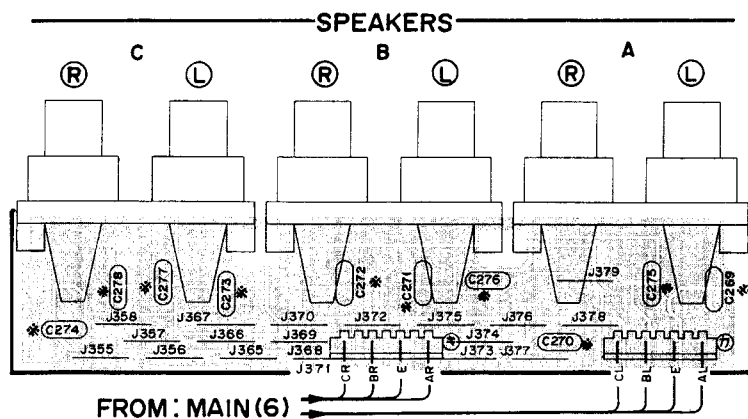
Fig. 2

## PRINTED CIRCUIT BOARD (Pattern side)

Main Circuit Board (4)

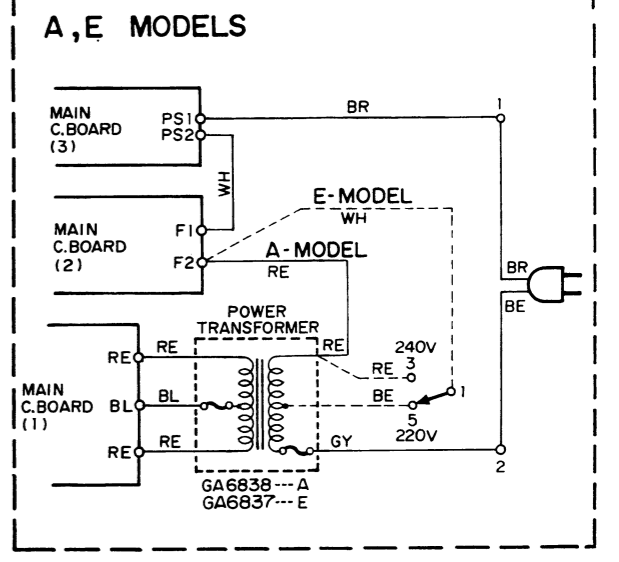
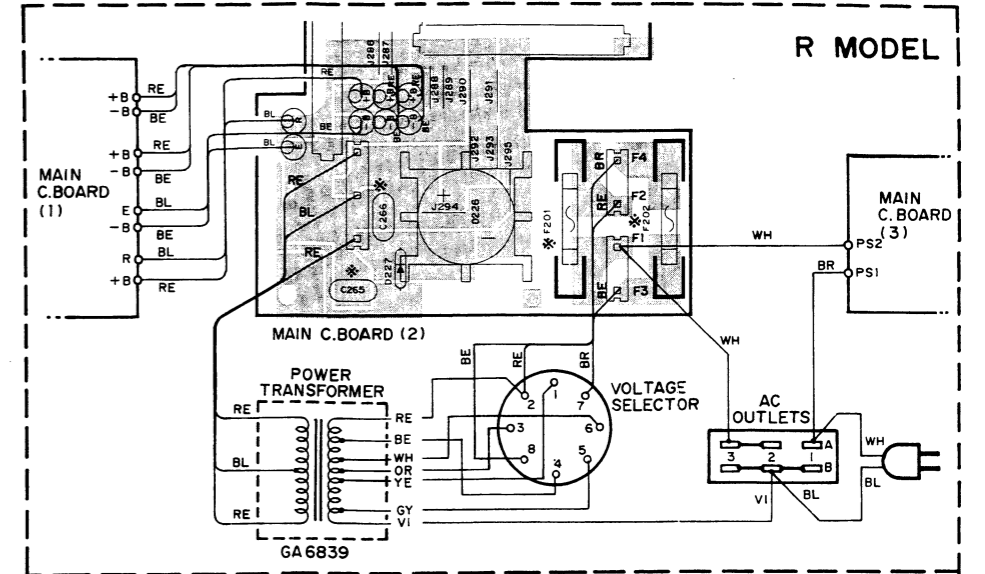
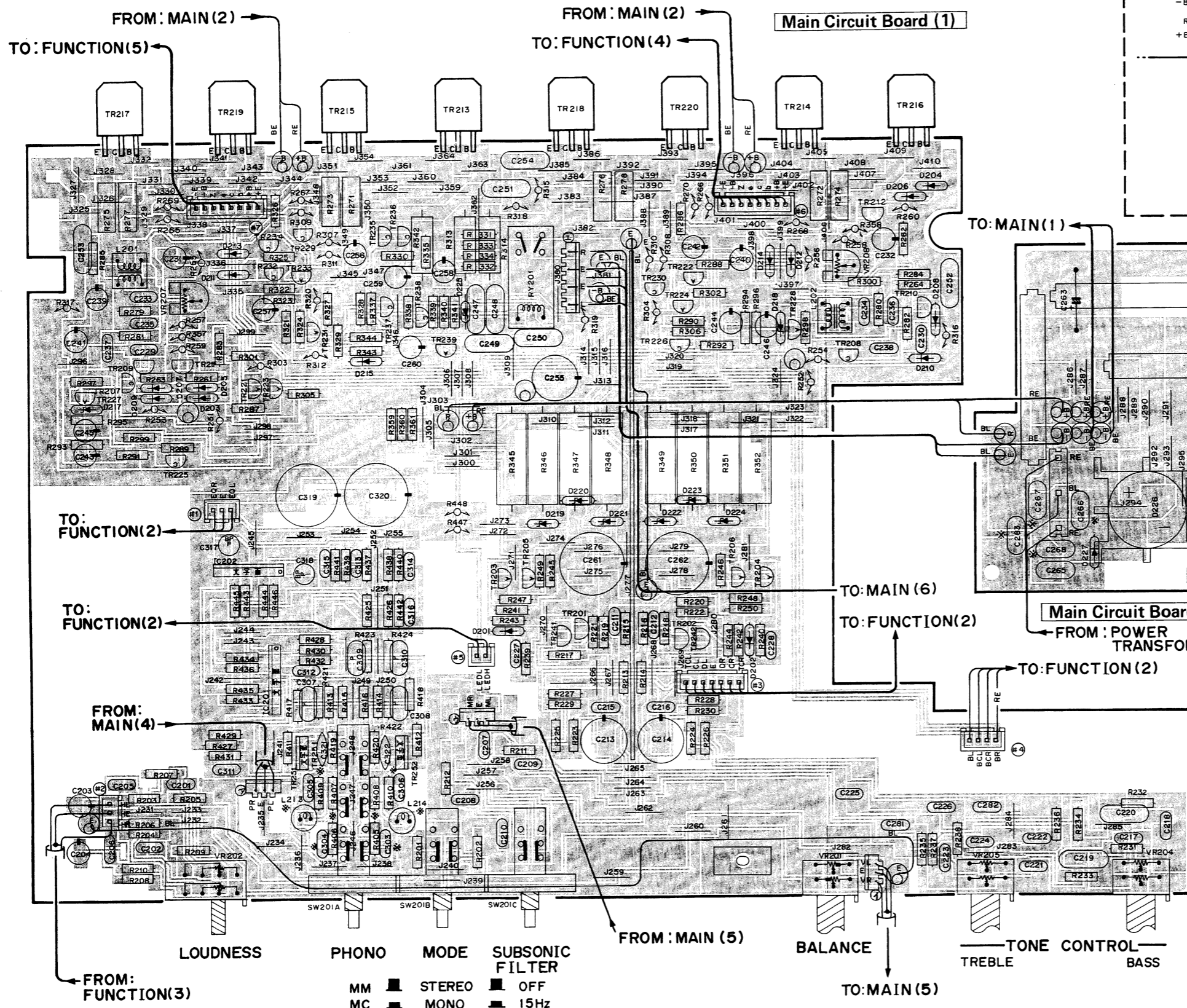


Main Circuit Board (7)



PRINTED CIRCUIT BOARD (Pattern side)

1  
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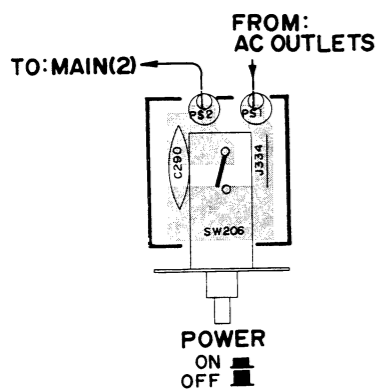
Note)  
文字面 : Letter side

Note: \* marked

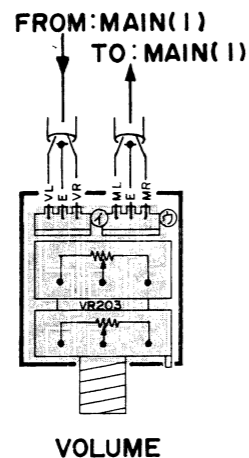
	R	U, C	A, E
R403, 404	SHORT	SHORT	1.2K
R407, 408	33	33	4.7K
C266	0.1/250	0.1/250	OPEN
C267, 268, 283	OPEN	OPEN	0.1/250
C269 ~ 274	OPEN	OPEN	⊙2700P/100
C275 ~ 278	OPEN	OPEN	0.01
C301, 302	OPEN	OPEN	120P
C303, 304	0.01	0.01	0.022
C321, 322	OPEN	OPEN	220P/100
L211, 212	OPEN	OPEN	15μH
L213, 214	OPEN	OPEN	220μH
F201	10A 250V	10A 250V	T4.0A 250V
F202	T5.0A 250V	OPEN	OPEN

A-720

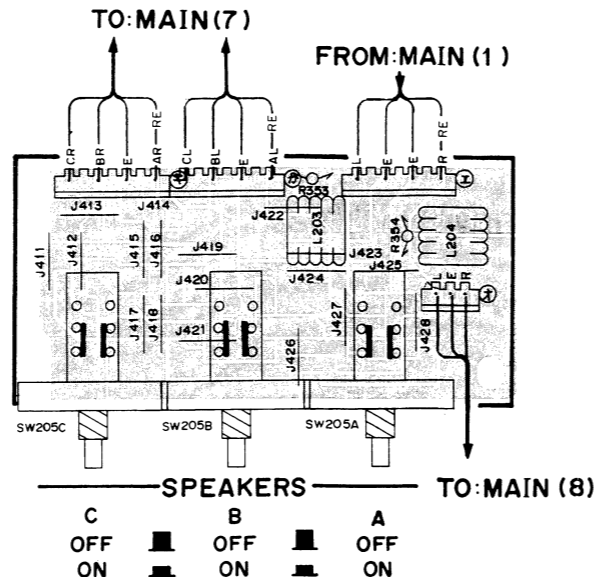
Main Circuit Board (3)



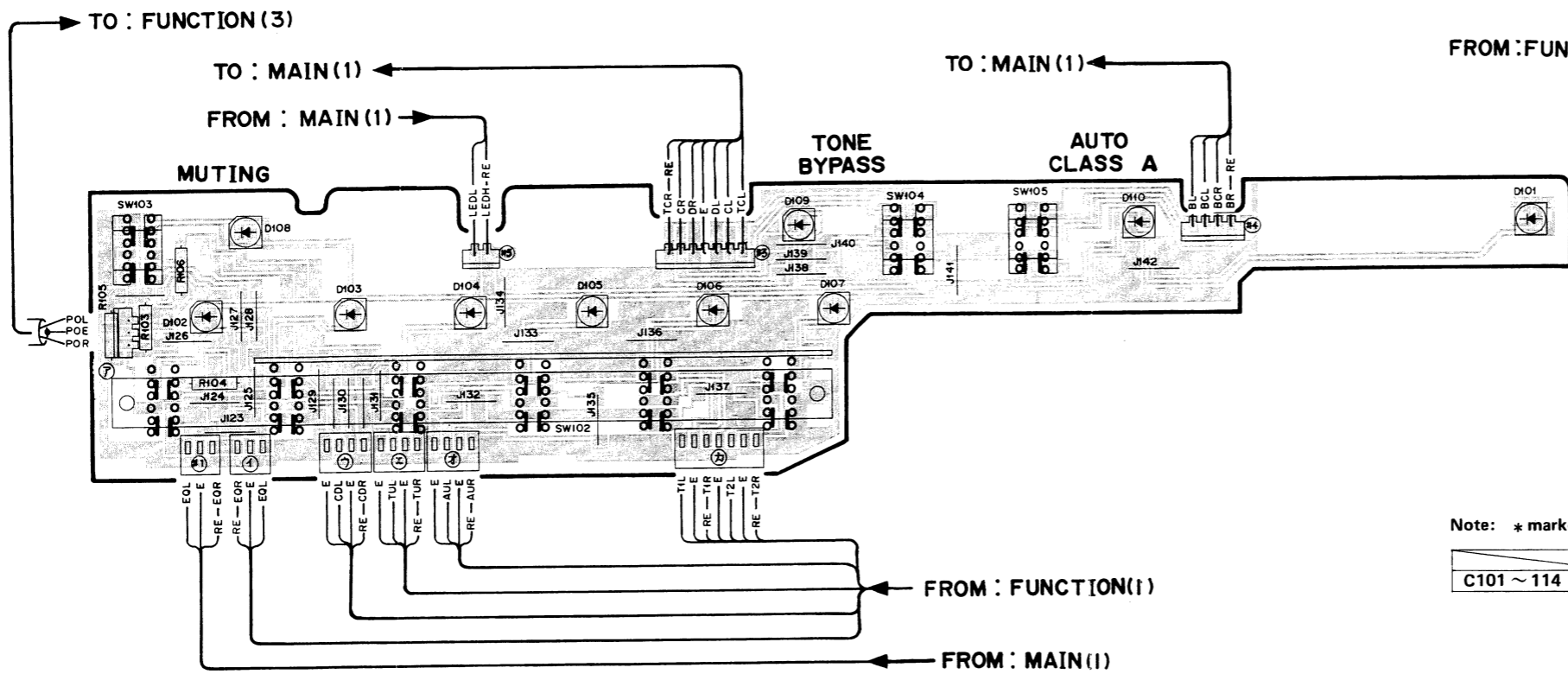
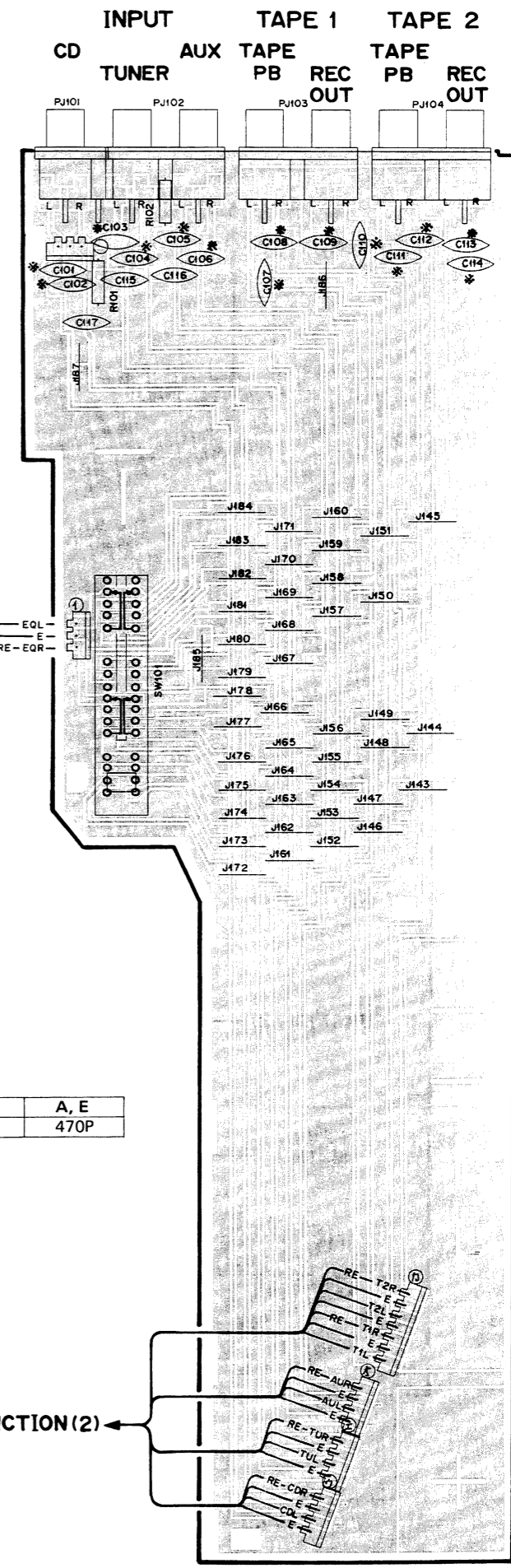
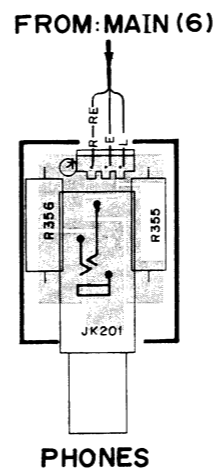
Main Circuit Board (5)



Main Circuit Board (6)



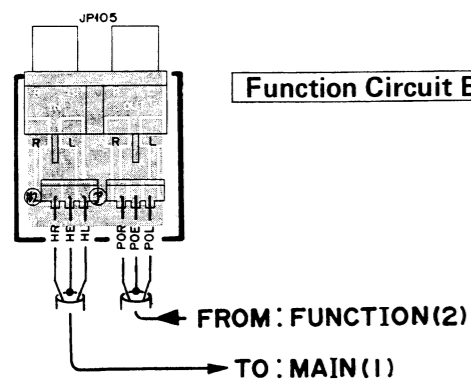
Main Circuit Board (8)



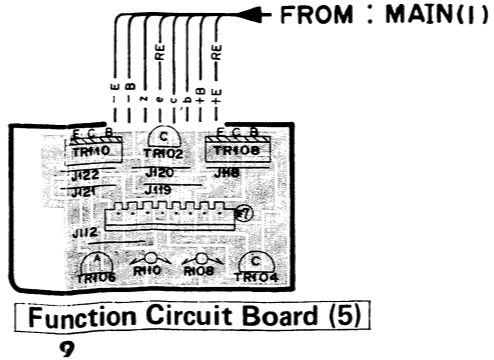
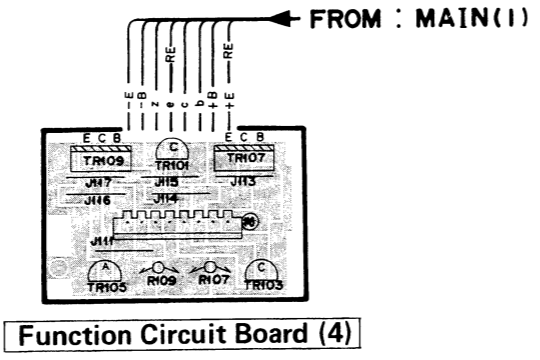
Note: \* marked

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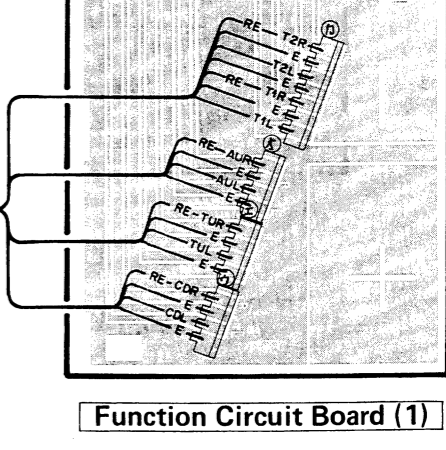
ACCESSORY SEND RECEIVE



Function Circuit Board (3)



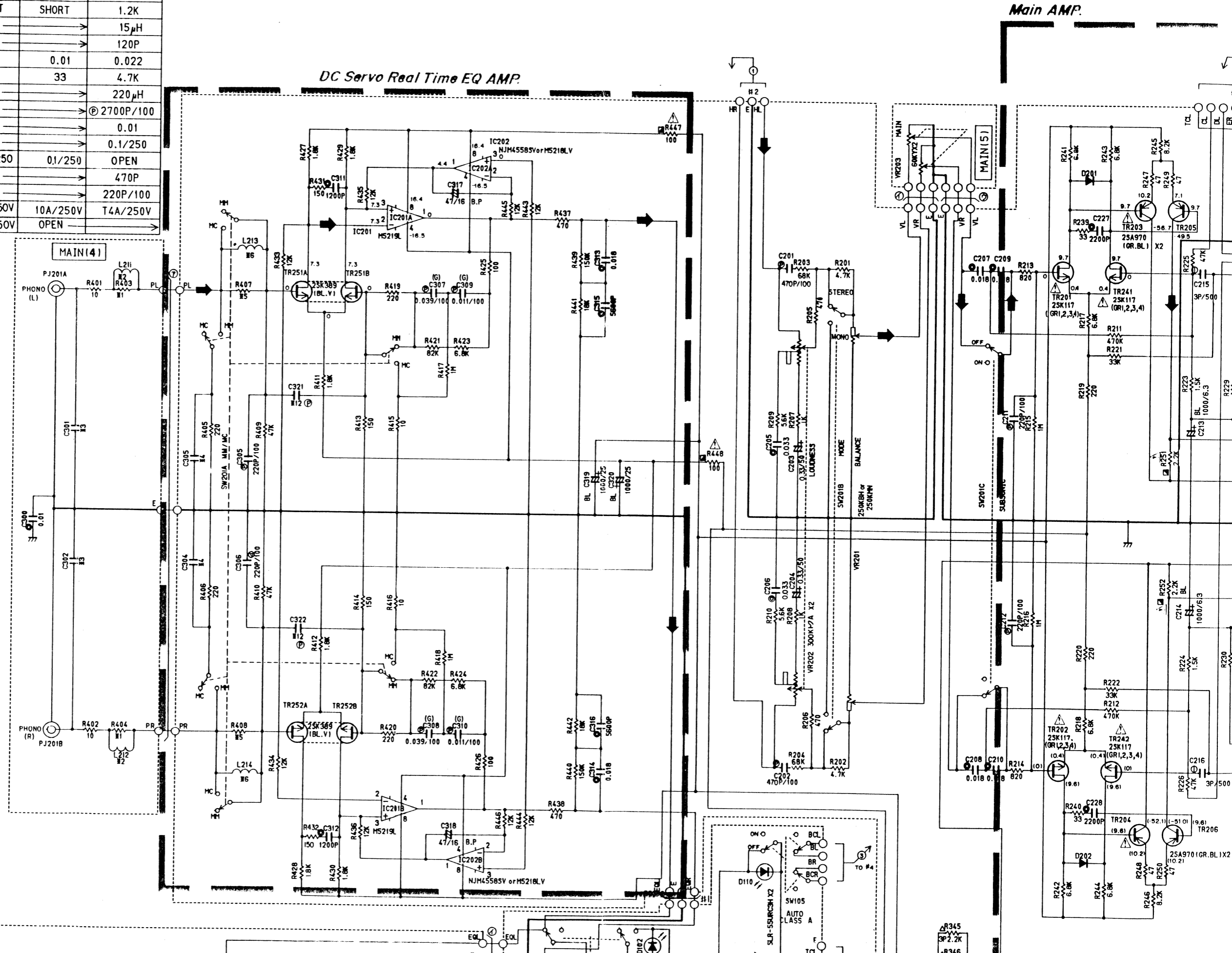
TO: FUNCTION(2)





SCHEMATIC DIAGRAM

	R	U	C	R	A	E
1	R403,404	SHORT		SHORT		1.2K
2	L211,212	OPEN				15μH
3	C301,302	OPEN				120P
4	C303,304	0.01		0.01		0.022
5	R407,408	33		33		4.7K
6	L213,214	OPEN				220μH
7	C269-274	OPEN				Ⓢ 2700P/100
8	C275-278	OPEN				0.01
9	C267,268,283	OPEN				0.1/250
10	C266	01/250		0.1/250		OPEN
11	C101-114	OPEN				470P
12	C321,322	OPEN				220P/100
13	F201	10A/250V		10A/250V		T4A/250V
14	F202	T5.0A 250V		OPEN		

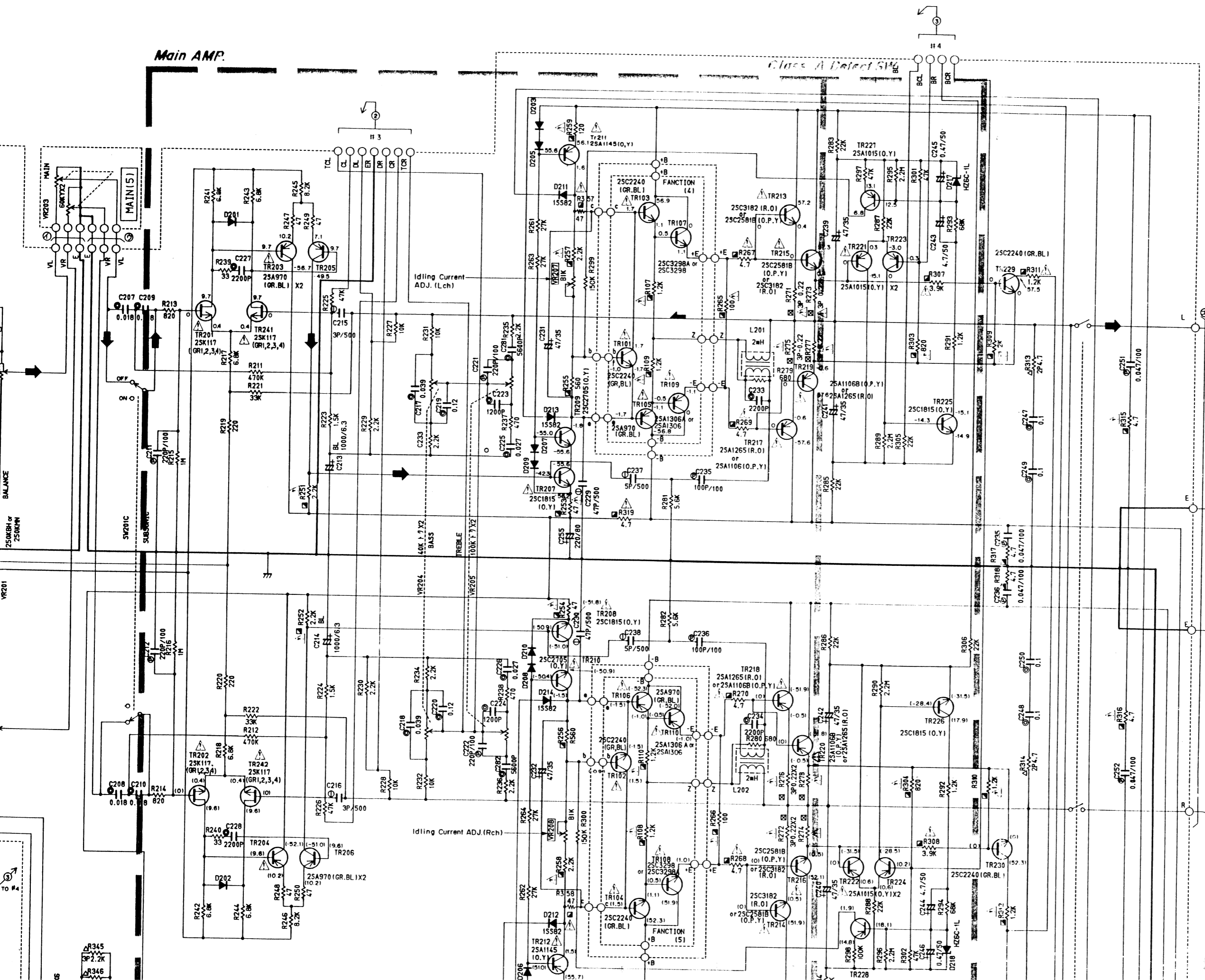


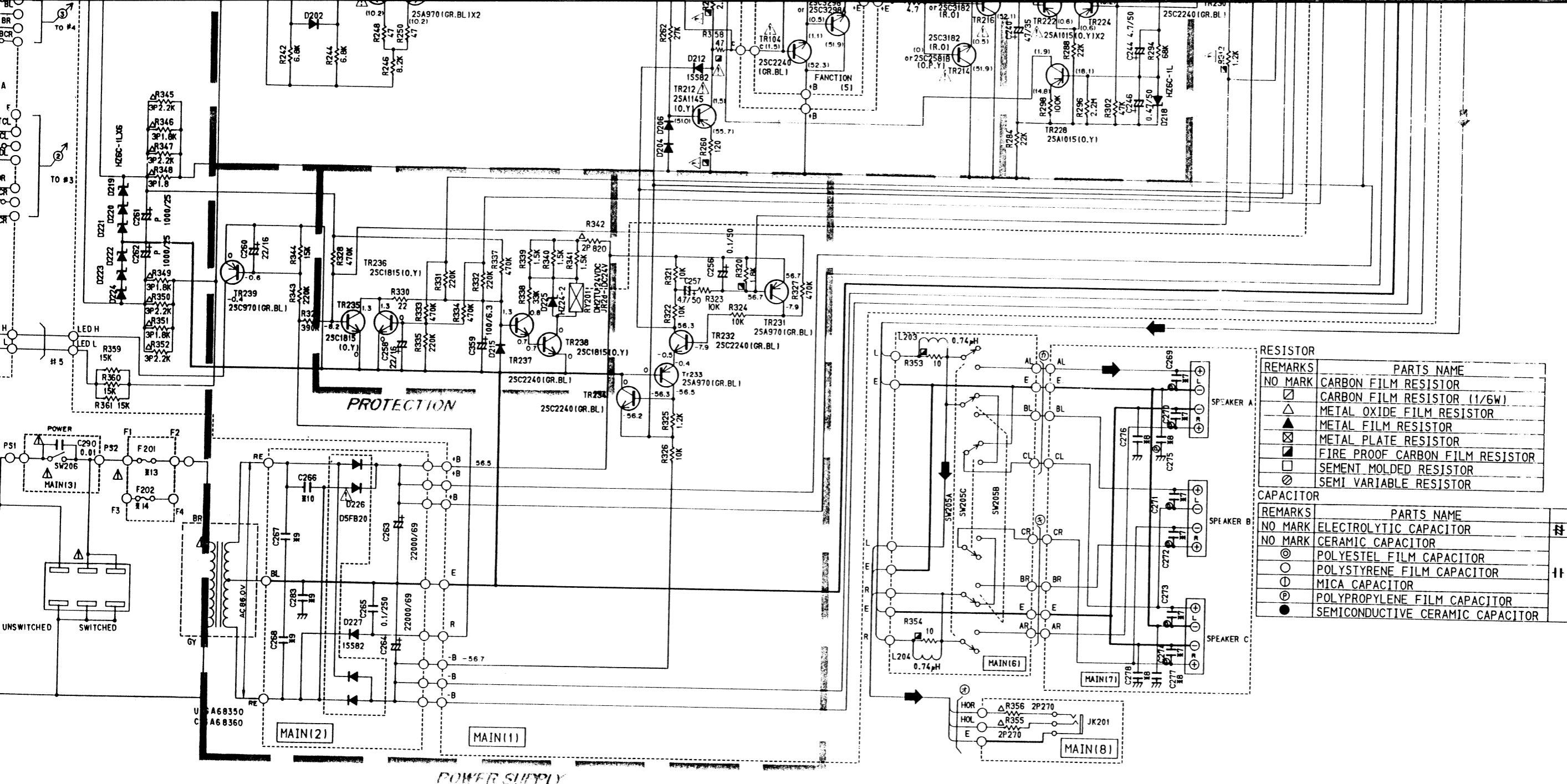
Main AMP.

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2  
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6

Main AMP.

Class A Defect 5W6



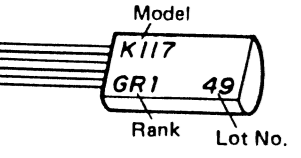


RESISTOR	
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR
☑	CARBON FILM RESISTOR (1/6W)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
☒	METAL PLATE RESISTOR
☑	FIRE PROOF CARBON FILM RESISTOR
□	SEMENT MOLDED RESISTOR
⊙	SEMI VARIABLE RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
NO MARK	CERAMIC CAPACITOR
⊙	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
⊖	MICA CAPACITOR
⊕	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

The same rank FETs must be used for TR201, TR202, TR241, TR242.  
 FETs are classified into four rank (GR1, GR2, GR3, GR4).



\* All voltages are measured with a 10MΩ/DC electric volt meter.  
 AUTO CLASS A → OFF . . . Lch  
 AUTO CLASS A → ON . . . Rch  
 \* Components having special characteristics are marked ⊕ and must be replaced with parts having specifications equal to those originally installed.  
 \* Schematic diagram is subject to change without notice.

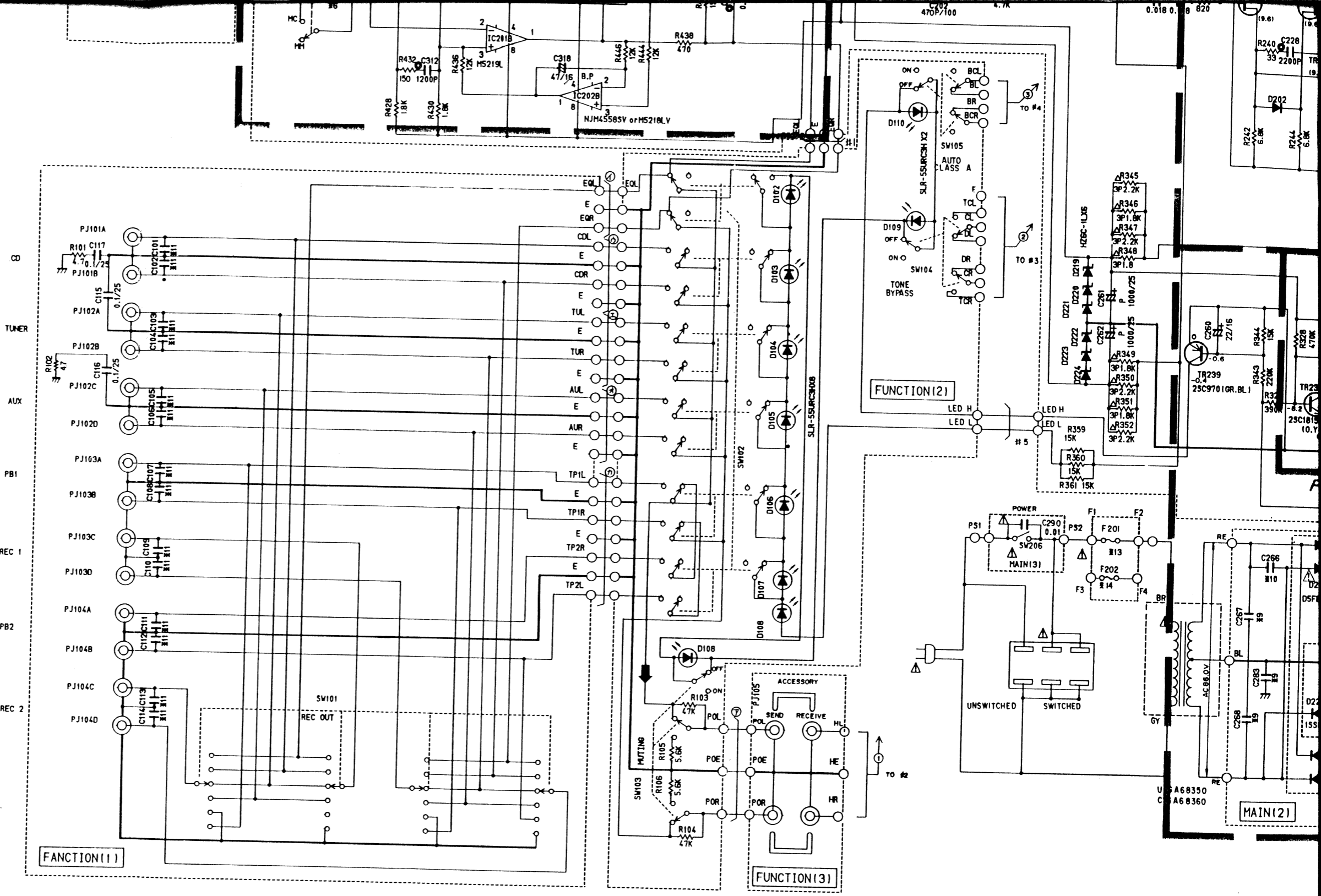
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8

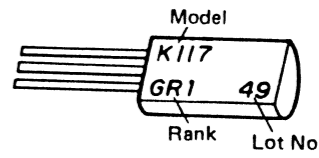
9

10

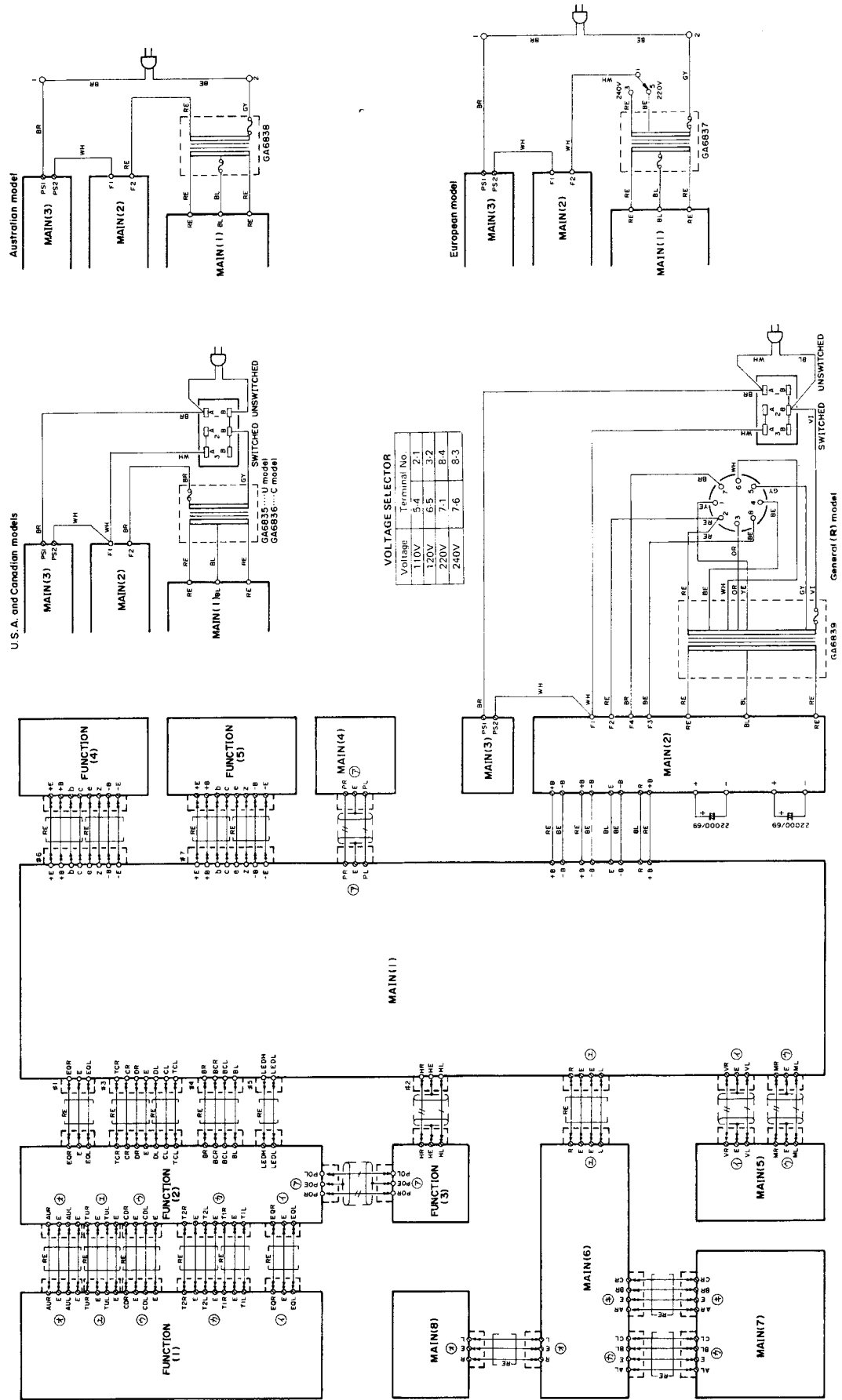


2SC2581B (O, P, Y) 2SC3182 (R, O) 2SA1106B (O, P, Y) 2SA1265 (R, O)	 2SA1306A 2SC3298A 2SA1306 2SC3298	 2SK389 (BL, V)	 2SK117 (GR1, 2, 3, 4)	 2SA970 (GR, BL) 2SA1015 (Y) 2SA1145 (O, Y) 2SC1815 (Y) 2SC2240 (GR, BL) 2SC2705 (O, Y)	 HZ24-2 1S2473 1S1555 HZ6C-1L 1SS82	 D5FB20	 M5218LV NJM4558S (V) M5219L
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Note: The same rank FETs must be used for TR201, TR202, TR241, FETs are classified into four rank (GR1, GR2, GR3, GR4).



WIRING



# PARTS LIST

## ■ ELECTRICAL PARTS

- Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.
- Carbon resistors of A-720 are 1/4W. There are no description about them in this parts list. Use the "Parts No." HJ35 OOOO (1/4W) or equivalent.

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※	NA:08:70:20	Main Circuit Board	メ イ ン シ ー ト	Silver		R	
※	NA:08:70:30	"	"	Black		R	
※	NA:08:70:40	"	"	Silver		U,C	
※	NA:08:70:50	"	"	Black		U,C	
※	NA:08:70:60	"	"	Silver		A,E	
※	NA:08:70:70	"	"	Black		A,E	
	FC:34:31:20	Mylar Cap.	マ イ ラ ー コ ン	1200pF 50V	C223,224,311,312		
	FC:34:32:20	"	"	2200pF 50V	C227,228,233,234		
	FC:34:35:60	"	"	5600pF 50V	C281,282,315,316		
	FC:34:41:00	"	"	0.01 $\mu$ F 50V	C300		
	FC:34:41:00	"	"	0.01 $\mu$ F 50V	C275~278	A,E	
	FC:34:41:00	"	"	0.01 $\mu$ F 50V	C303,304	R,U,C	
	FC:34:42:20	"	"	0.022 $\mu$ F 50V	"	A,E	
	FC:34:41:80	"	"	0.018 $\mu$ F 50V	C207~210,313,314		
	FC:34:43:30	"	"	0.033 $\mu$ F 50V	C205,206		
	FC:34:42:70	"	"	0.027 $\mu$ F 50V	C225,226		
	FC:34:43:90	"	"	0.039 $\mu$ F 50V	C217,218		
	FC:36:51:00	"	"	0.1 $\mu$ F 50V	C247~250		
※	FC:36:51:20	"	"	0.12 $\mu$ F 50V	C219,220		
	FG:21:21:20	Ceramic Cap.	セ ラ コ ン	120pF 50V	C301,302	A,E	
	Fi:38:41:00	"	"	0.01 $\mu$ F	C290		$\Delta$
※	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 $\mu$ F 25V	C261,262		
	FZ:00:46:20	"	"	47 $\mu$ F 16V	C317,318		
	FZ:00:46:60	"	"	0.1 $\mu$ F 250V	C266	R,U,C	
	FZ:00:46:60	"	"	0.1 $\mu$ F 250V	C267,268,283	A,E	
	FZ:00:46:60	"	"	0.1 $\mu$ F 250V	C265		
※	FZ:00:72:00	"	"	220 $\mu$ F 80V	C255		
※	FZ:00:62:70	"	ブラックゲートコン	1000 $\mu$ F 6.3V	C213,214		
※	FZ:00:74:10	"	"	1000 $\mu$ F 25V	C319,320		
	UT:45:21:00	Polypropylene Film Cap.	ポ リ プ ロ コ ン	100pF 100V	C235,236		
	UT:45:22:20	"	"	220pF 100V	C211,212,221,222,305,306		
	UT:45:22:20	"	"	220pF 100V	C321,322	A,E	
	UT:45:24:70	"	"	470pF 100V	C201,202		
	UT:46:32:70	"	"	2700pF 100V	C269~274	A,E	
	UT:46:41:10	"	"	0.011 $\mu$ F 100V	C309,310		
	UT:46:43:90	"	"	0.039 $\mu$ F 100V	C307,308		
	UT:46:44:70	"	"	0.047 $\mu$ F 100V	C251~254		
	UW:81:81:00	Electrolytic Cap.	ケ ミ コ ン	100 $\mu$ F 6.3V	C259		
	UW:83:72:20	"	"	22 $\mu$ F 16V	C258,260		
	UW:85:74:70	"	"	47 $\mu$ F 35V	C231,232,239~242		
	UW:56:51:00	"	"	0.1 $\mu$ F 50V	C256		
	UW:96:54:70	"	"	0.47 $\mu$ F 50V	C245,246		
	UW:96:64:70	"	"	4.7 $\mu$ F 50V	C243,244,257		
	UJ:16:53:30	"	"	0.33 $\mu$ F 50V	C203,204		
	GD:90:06:80	Coil	コ イ ル	0.74 $\mu$ H	L203,204		
	GD:90:07:10	ZDR Transformer	Z D R コ イ ル	2mH	L201,202		
	GD:90:07:20	"	"	2mH	"		Inter-changeable
	GE:90:03:30	Choke Coil	チ ョ ー ク コ イ ル	220 $\mu$ H	L213,214	A,E	
	GE:90:08:40	"	"	15 $\mu$ H	L211,212	A,E	

※ New Parts (新規部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
	HL 82 34 70	Metal Oxide Film Resistor	4.7Ω 2W	酸 金 抵 抗	R313,314		
	HL 72 52 70	"	270Ω 2W	"	R355,356		
	HL 32 58 20	"	820Ω 2W	"	R342		
	HL 33 61 80	"	1.8kΩ 3W	"	R346,348,349,351		
	HL 33 62 20	"	2.2kΩ 3W	"	R345,347,350,352		
	HV 45 34 70	Flame Proof Carbon Resistor	4.7Ω ERD25FV	不 燃 化 カ ー ボ ン 抵 抗	R267~270,315~319		△
	HV 45 41 00	"	10Ω "	"	R353,354		
	HV 45 44 70	"	47Ω "	"	R253,254,357,358		△
	HV 45 51 00	"	100Ω "	"	R265,266,447,448		△
	HV 45 51 20	"	120Ω "	"	R259,260		△
	HV 45 55 60	"	560Ω "	"	R255,256		
	HV 45 58 20	"	820Ω "	"	R303,304		△
	HV 45 61 20	"	1.2kΩ "	"	R309~312		△
	HV 45 61 80	"	1.8kΩ "	"	R320		
	HV 45 62 20	"	2.2kΩ "	"	R251,252,257,258		△
	HV 45 63 90	"	3.9kΩ "	"	R307,308		△
	HZ 00 30 50	Metal Film Resistor	0.22Ω 3W	金 属 板 抵 抗	R271~278		△
	HS 41 24 00	Potentiometer(2-Ganged)	40Kトク×2	可 変 抵 抗 器	VR204		
	HS 41 24 10	"	100Kトク×2	"	VR205		
*	HS 31 26 40	"	300KトクA×2	"	VR202		
	HS 31 21 20	Potentiometer	250KBH	"	VR201	} Inter-changeable	
	HS 41 19 20	"	250KMW	"	"		
	HS 32 07 00	"	60KY×2	"	VR203	} Inter-changeable	
	HS 42 03 40	"	60KY×2	"	"		
	HT 37 03 40	Pre-Set Potentiometer	B1kΩ	半 固 定 抵 抗	VR207,208		
	iA 09 70 00	Transistor	2SA970 (GR,BL)	ト ラ ン ジ ス タ	TR203~206,231,233,239		△
	iA 10 15 20	"	2SA1015 (Y)	"	TR221~224,227,228		△
	iA 11 45 00	"	2SA1145 (O,Y)	"	TR211,212		△
	iC 18 15 20	"	2SC1815 (Y)	"	TR207,208,225,226,235,236,238		△
	iC 22 40 00	"	2SC2240 (GR,BL)	"	TR229,230,232,234,237		
	iC 27 05 00	"	2SC2705 (O,Y)	"	TR209,210		△
	iE 10 34 10	FET	2SK117 (GR1,2,3,4)	F E T	TR201,202,241,242		△
	iE 10 45 10	"	2SK389 (BL,V)	"	TR251,252		
	iF 00 06 70	Diode	IS2473	ダ イ オ ード	D201~210,215	} Inter-changeable	
	iF 00 00 40	"	IS1555	"	"		
	iF 00 14 00	"	ISS82	"	D211~214,227		
	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		
	iH 00 11 30	Diode	D5FB20	ダイオードブリッジ	D226		△
	iG 08 57 00	IC	M5218L(V)	I C	IC202		
	iG 09 21 00	"	M5219L	"	IC201		
	KA 80 35 20	Push Switch	SLD TV-5	プ ッ シ ュ ス イ ッ チ	SW206		△
*	KA 80 50 00	"	2-2 NS	"	SW205		
*	KA 80 50 40	"		"	SW201		
	KB 00 04 00	Fuse	T5.0A 250V	ヒ ュ ー ズ	F202		△
	KB 00 13 90	"	10A 250V	"	F201		△
	KB 00 07 90	"	T4.0A 250V	"	"		△

\*New Parts (新規部品)

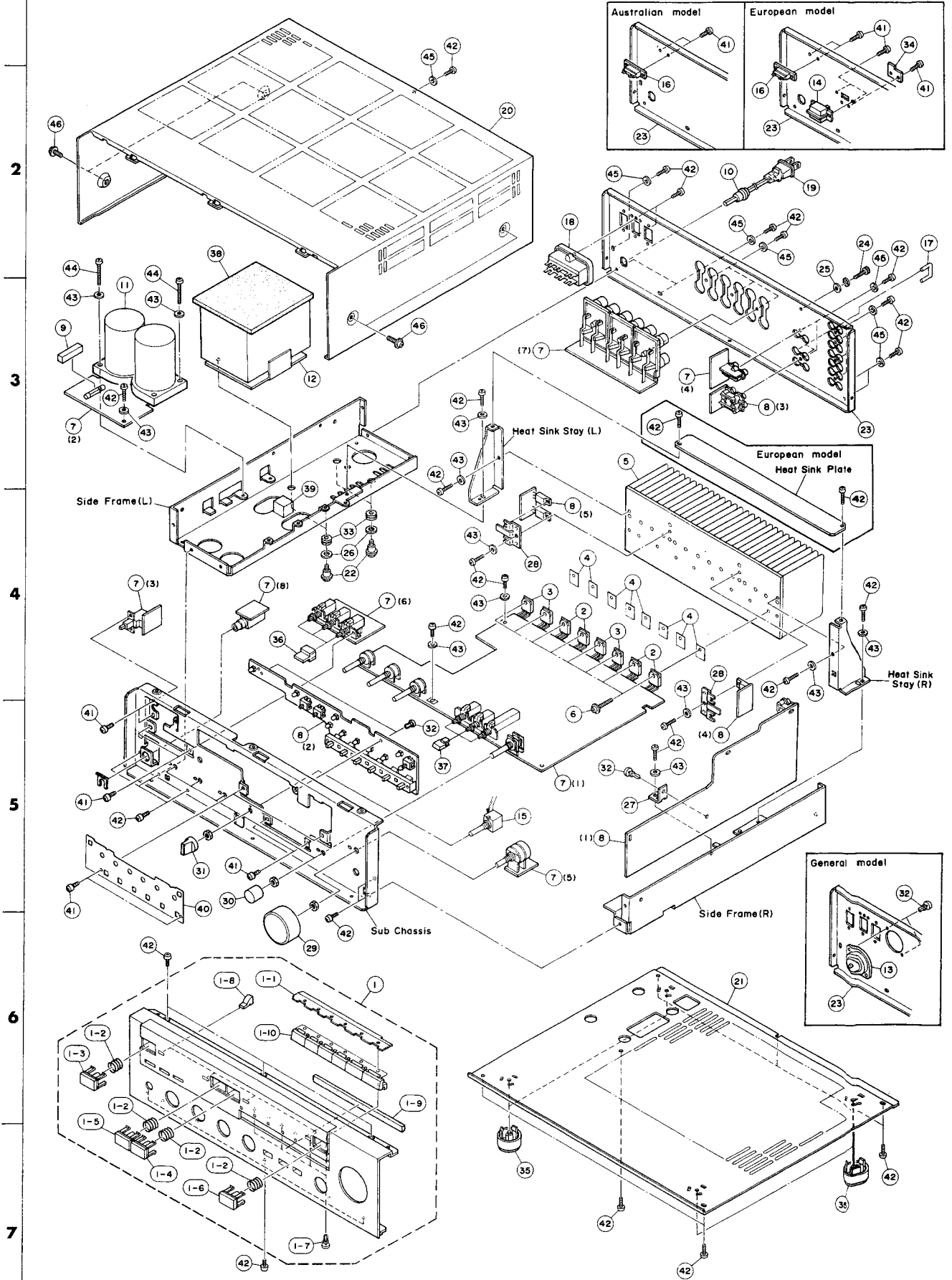
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Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
	KB 00:14:90	Push Switch	10A 250V	プッシュスイッチ	F201	R	△
	KC 00:19:40	Relay	DH2TU 24VDC	リ レ ー	RY201 } Inter-changeable		
※	KC 00:20:00	"	JR2a-DC 24V	"		"	
	LB 30:17:10	Jack,Head Phone	Gray	ホ ー ン ジャ ッ ク	JK201 Silver		
	LB 30:17:20	"	Black	"	" Black		
	LB 20:25:60	Pin Jack	2P	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 00:21:50	Lapping Terminal	P=10,3Pi-Type	i 型ラッピング端子板			
	LA 00:25:80	"	P=10,2Pi-Type	"		R	
	LA 00:25:80	"	"	"			
	LA 00:54:10	Speaker Terminal	4P	スピーカーターミナル			
	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	X H 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 07:04:30	"	l=145	"		A-700	
※	NA 08:70:80	Function Circuit Board		ファンクションシート		A-1020	R,U,C
※	NA 08:70:90	"		"		A-1020	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		
	iA 09:70:00	Transistor	2SA970 (GR,BL)	ト ラ ン ジ ス タ	TR105,106		△
	iC 22:40:00	"	2SC2240(GR,BL)	"	TR101~104		△
	iX 60:16:50	"	2SA1306A	"	TR109,110		△
	iX 60:16:60	"	2SC3298A	"	TR107,108		△
	iF 00:42:70	LED (Red)	SLR-55URC3H	L E D	D101~110		
※	KA 80:48:30	Push Switch	4-2NS SEA	プッシュスイッチ	SW102		
	KA 80:48:50	"	"	"	SW103~105		
	KA 90:10:70	Remote Switch		リ モ ー ト ス イ ッ チ	SW101		
	LB 20:22:60	Pin Jack	2P	ピ ン ジャ ッ ク	PJ101		
	LB 40:10:30	"	4P	"	PJ102~105		
	BB 07:04:20	Bus Bar	l=100	バ ス バ ー			

※New Parts (新規部品)



1 ■ EXPLODED VIEW



MECHANISM PARTS

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※	1	NB:62:58:00	Panel Unit	パネルユニット	Silver		
※	※	NB:62:58:10	〃	〃	Black		
	1-1	AA:61:78:70	Cover	カバ			
	1-2	AA:61:78:80	Spring	スプリング			
	1-3	CB:63:51:20	Button,P	ボタン	POWER Silver		
	※	CB:63:51:30	〃	〃	〃 Black		
	1-4	CB:63:51:40	Button,T	〃	トネ BYPASS Silver		
	※	CB:63:51:50	〃	〃	〃 Black		
	1-5	CB:63:51:60	Button,A	〃	AUTO CLASS A Silver		
	※	CB:63:51:70	〃	〃	〃 Black		
	1-6	CB:63:51:80	Button,M	〃	MUTING Silver		
	※	CB:63:51:90	〃	〃	〃 Black		
	1-7	CB:06:88:80	Plastic Rivet	プラスチックリベット			
	1-8	CB:61:60:20	Lens	レンズ			
	1-9	CB:63:52:60		クッション			
	1-10	NB:62:27:90	Knob Ass'y	ツマミ Ass'y	Silver		
	※	NB:62:28:00	〃	〃	Black		
※	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:08:70:20	Main Circuit Board	メインシート	Silver	R	
※	※	NA:08:70:30	〃	〃	Black	R	
※	※	NA:08:70:40	〃	〃	Silver	U,C	
※	※	NA:08:70:50	〃	〃	Black	U,C	
※	※	NA:08:70:60	〃	〃	Silver	A,E	
※	※	NA:08:70:70	〃	〃	Black	A,E	
※	8	NA:08:70:80	Function Circuit Board	ファンクションシート		A-1020	R,U,C
※	※	NA:08:70:90	〃	〃		A-1020	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	Electrolitic Cap. Set	22000 $\mu$ F 69V	ケミコンセット		
	12	GA:68:35:00	Power Transformer		電源トランス		U
	※	GA:68:36:00	〃	〃	〃		C
	※	GA:68:37:00	〃	〃	〃		E
	※	GA:68:38:00	〃	〃	〃		A
	※	GA:68:39:00	〃	〃	〃		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
※	15	KA:90:70:50	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		ショートプラグ	Accessory Terminal	
	18	LB:60:39:20	AC Outlet	M7026-C	A C アウトレット		R,U
※	※	LB:60:81:30	〃	M7032-B	〃		C
	19	MG:00:09:20	Power Coard	7.5A 250V 2.5m	電源コード	Interchangeable	A
	※	MG:00:14:90	〃	7.5A 250V 2.5m	〃		A,A
	※	MG:00:14:50	〃	10A 125V1.98m	〃	Interchangeable	U
	※	MG:00:14:60	〃	10A 125V 2m	〃		U
	※	MG:00:16:20	〃	10A 125V 2m	〃		E
	※	MG:00:16:30	〃	6A 250V 2m	〃		R
※	※	MG:00:22:20	〃	10A 125V 2m	〃		C

※ New Parts (新規部品)

Ref. No.	Part No.	Description	部 品 名	Remarks	Common Model	Markets	ランク
※ 20	AA 62 49 30	Top Cover	ト ッ プ カ バ ー	Silver			
※ "	AA 62 49 40	"	"	Black			
21	AA 62 48 10	Bottom Cover	ボ ト ム カ バ ー		A-1020		
22	AA 60 38 50	Screw	段 付 ネ ジ				
※ 23	AA 62 49 60	Rear Panel	リ ア パ ネ ル			R	
※ "	AA 62 49 70	"	"			U,C	
※ "	AA 62 49 80	"	"			A	
※ "	AA 62 49 90	"	"			E	
24	EZ 00 14 00	Ground Terminal Screw	3×13.5 MFNi-II ア ー ス 端 子 ネ ジ				
25	EV 90 13 60	Toothed Locked Washer	φ10×φ3.6×t0.8 FNM3-3g セ ム ス 平 座 金				
26	EV 20 00 66	Plain Washer	φ6 ZMC2-Y 平 座 金	PACK			
27	AA 62 49 10	Circuit Board Stay	シ ー ト ス テ ー		A-1020		
28	AA 62 49 20	TR Pusher	T R プ ッ シ ャ ー		A-1020		
29	BA 09 12 60	Knob	ツ マ ミ	VOLUME Silver			
"	BA 09 12 50	"	"	" Black			
30	BA 08 49 00	Knob,TC	T C ツ マ ミ	BASS TREBLE BALANCE LOUDNESS Silver			
"	BA 08 51 00	"	"	" Black			
31	BA 08 49 10	Knob,Switch	S W ツ マ ミ	REC OUT Silver			
"	BA 08 51 10	"	"	" Black			
32	CB 06 88 80	Plastic Rivet	プ ラ ス チ ッ ク リ ベ ッ ト				
33	CB 09 99 10	Rubber,Cushion	防 振 ゴ ム				
34	CB 60 14 40	Voltage Selector Stopper	V S ス ト ッ パ ー			E	
35	CB 62 07 30	Leg	TL-037 ト ラ ン レ ッ グ				
36	NB 62 36 20	Button (F) Ass'y	ボ タ ン (F) Ass'y	SPEAKERS Silver			
"	NB 60 92 00	"	"	" Black			
37	CB 63 42 20	Push Button	プ ッ シ ュ ボ タ ン	SUBSONIC MODE PHONO Silver			
"	CB 63 42 30	"	"	" Black			
38	CB 62 33 90	Dumper	ダ ン バ ー				
39	CB 63 29 60	"	"				
40	CB 64 20 10	Plate,Shield	シ ー ル ド プ レ ー ト		A-1020		
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	φ3 FCM3-BI 平 座 金	PACK			
44	EK 93 50 10	BW Head Tapping Screw	3×20 ZMC2-BI B W ヘ ッ ド タ ッ ピ ン グ ネ ジ				
45	EV 41 30 36	Toothed Lock Washer	φ3 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 FNM3-BI "		Black		
	CB 06 92 50	Binding Tie	イ ン シ ュ ロ ッ ク タイ				

※ New Parts (新規部品)

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# YAMAHA