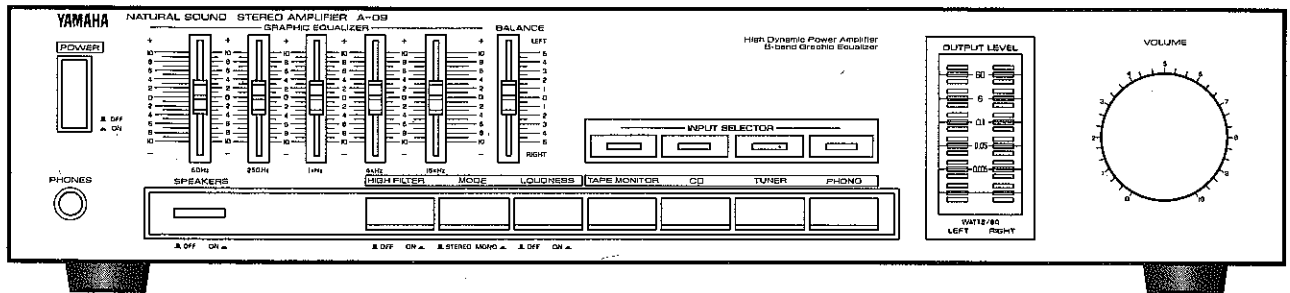


# STEREO INTEGRATED AMPLIFIER

# CENTER

# A-09

## SERVICE MANUAL



### 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 or 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 specifications 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	IC BLOCK .....	5
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100150

# YAMAHA

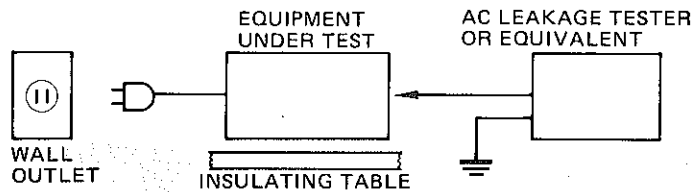
YAMAHA CORPORATION  
P.O. Box 1, Hamamatsu, Japan

2.4k-453 Printed in Japan. '87.12

A-09

## ■ TO SERVICE PERSONNEL

1. Critical Components Information.  
Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.
2. Leakage Current Measurement (For 120V 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 0.15 $\mu$ F.
  - Leakage current must not exceed 0.5mA.
  - Be sure to test for leakage with the AC plug in both polarities.



## ■ SPECIFICATIONS

### Minimum RMS Output Power per Channel

20Hz ~ 20kHz (0.3% THD, 8 $\Omega$ )	50W
1kHz (0.3% THD, 8 $\Omega$ )	55W

### Dynamic Power per Channel (IHF)

8 $\Omega$	80W
6 $\Omega$	92W
4 $\Omega$	110W

### DIN Standard Output Power per Channel

(1kHz, 8 $\Omega$ )	60W (European Model)
---------------------	----------------------

### IEC Power

1kHz (0.3% THD, 6 $\Omega$ )	55W (European Model)
------------------------------	----------------------

### Damping Factor

(1kHz, 8 $\Omega$ )	60
---------------------	----

### Input Sensitivity/Impedance

Phono	2.5mV/47k $\Omega$
CD/TAPE/TUNER	150mV/60k $\Omega$

### Maximum Input Signal

1kHz, 0.1% THD, Phono	160mV
-----------------------	-------

### Output level/Impedance

Rec Out	150mV/1k $\Omega$
---------	-------------------

### Headphone Jack Rated Output/Impedance

0.05% THD	0.7V/220 $\Omega$
-----------	-------------------

### Frequency Response

20Hz ~ 20kHz CD/TAPE/TUNER	$\pm 0.5$ dB
-------------------------------	--------------

### RIAA Equalization Deviation

Phono	$\pm 0.5$ dB
-------	--------------

### Total Harmonic Distortion

20Hz ~ 20kHz Phono (3V)	0.008%
----------------------------	--------

### Intermodulation Distortion

CD, TAPE, TUNER Rated Output/8 $\Omega$ 0.3%	
--	--

### Signal to Noise Ratio (New IHF)

Phono (5mV Input Shorted)	80dB
CD/TAPE/TUNER (Shorted)	98dB

### High-Cut Filter Characteristics

8kHz	-12dB/oct
------	-----------

### Loudness Control

(Vol. -30dB)	
100Hz	+7dB
10kHz	+2dB
Residual Noise (IFA-A Network)	155 $\mu$ V

### Channel Separation

(1kHz Vol. -30dB)	
Phono Input Shorted	50dB
CD/TAPE Input 5.1k $\Omega$ Terminated	50dB

### 5 Band Equalizer

Control Frequency	60Hz, 250Hz, 1kHz, 4kHz, 16kHz
Boost/Cut	$\pm 10$ dB
Gain Tracking Error (0 to -60dB)	2dB

### Power Supply

European & Belgium Models	220V, 50Hz
General Model	110/120/220/240V, 50/60Hz
British and Australian Models	240V, 50Hz
Canadian Model	120V, 60Hz

### Power Consumption

European & Belgium Models	230W
General Model	95W
British and Australian Models	230W
Canadian Model	140W

### AC Outlets

(Canadian and General Models only)	
Switched x 2	200W max. (Total)
Unswitched x 1	200W max.

### Dimensions (W x H x D)

435 x 92 x 263 mm (17-1/8" x 3-5/8" x 10-3/8")
--

### Weight

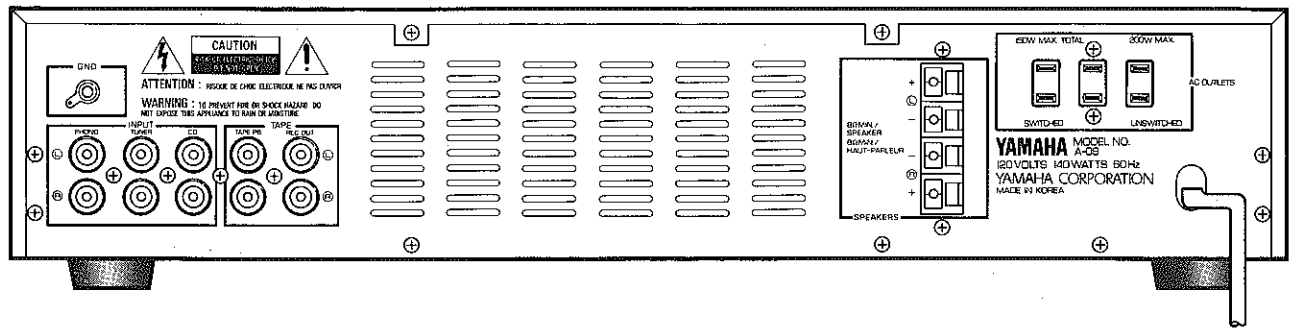
5.9 kg (13 lb 0 oz)
---------------------

Specifications are subject to change without notice.

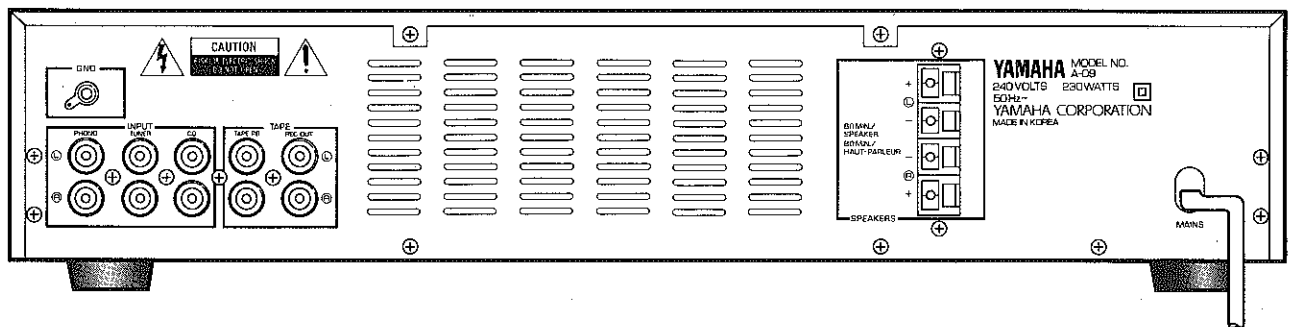
(C) ..... Canadian Model  
 (A) ..... Australian Model  
 (H) ..... North European Model  
 (B) ..... British Model  
 (R) ..... General Model  
 (G) ..... European Model

## REAR PANELS

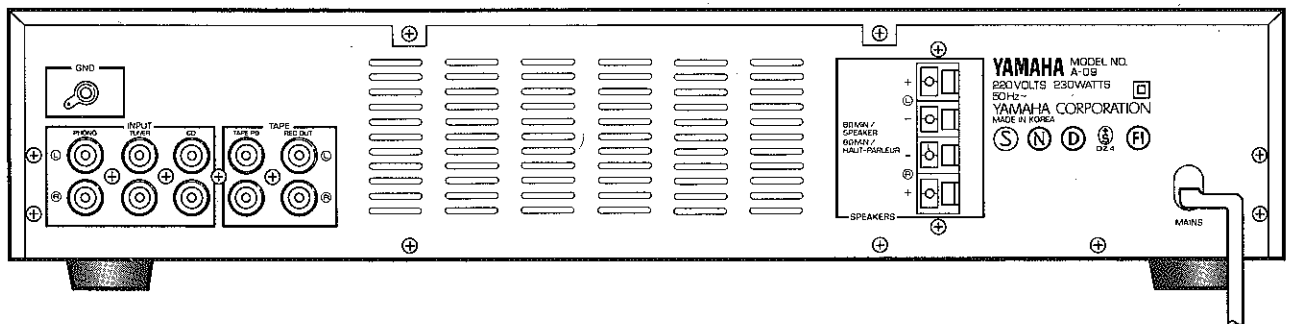
### Canadian model



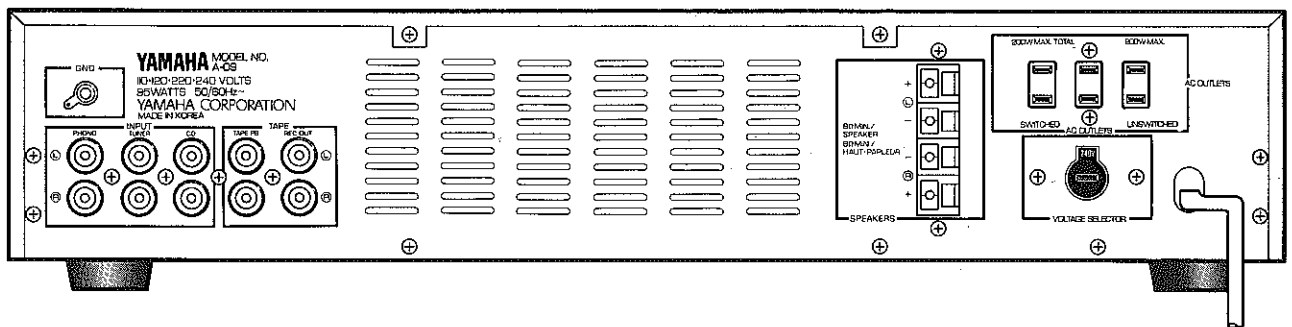
### Australian & British models



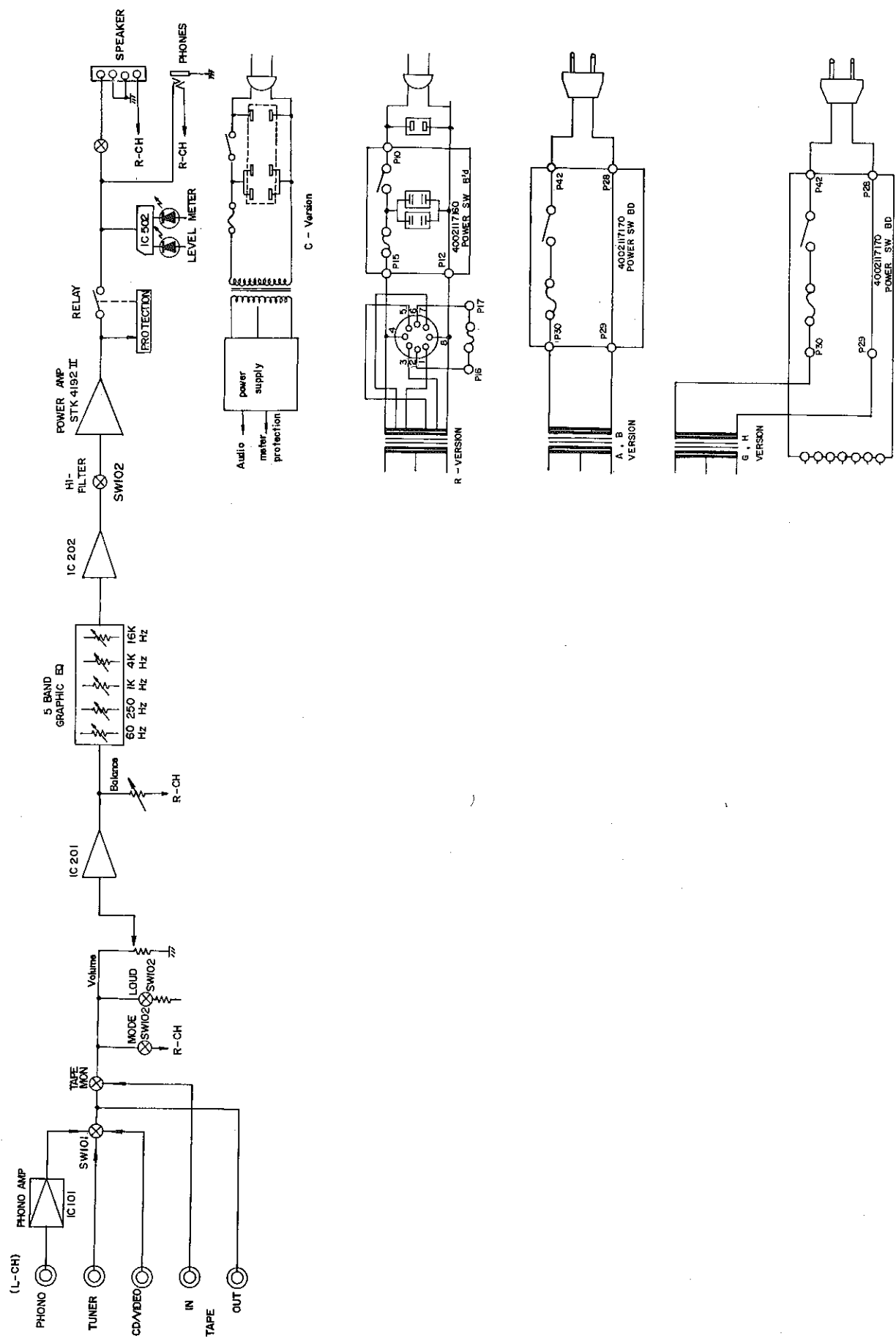
### North European & European models



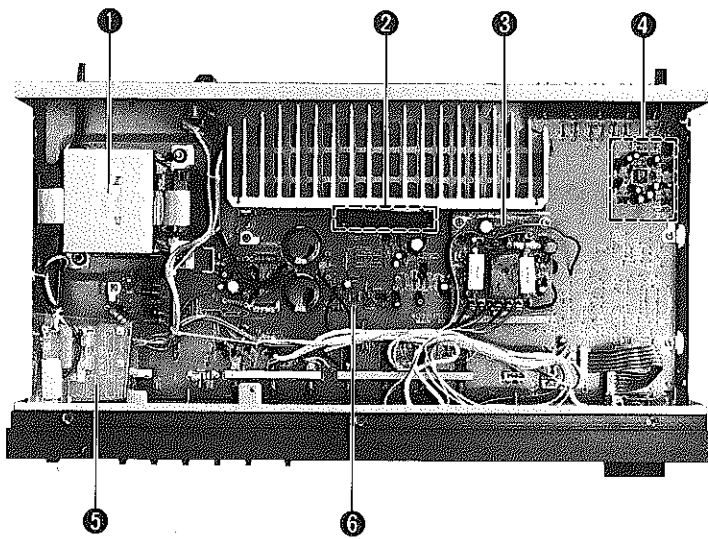
### General model



# BLOCK DIAGRAM



## INTERNAL VIEW



- ① POWER TRANSFORMER
- ② POWER IC : STK4192 II
- ③ RELAY CIRCUIT BOARD
- ④ PHONO AMP. SECTION
- ⑤ POWER SW. CIRCUIT BOARD
- ⑥ MAIN CIRCUIT BOARD

## DISASSEMBLY PROCEDURES (Remove parts in disassembly order as numbered)

### 1. Removal of Top Cover

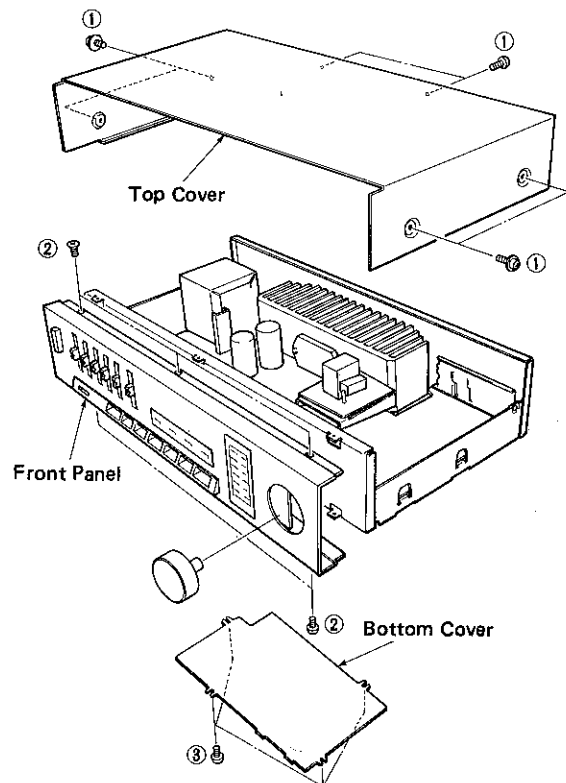
Remove 6 screws ( ① ) in Fig. 1, and slide the Top Cover back.

### 2. Removal of Front Panel

Remove 6 screws ( ② ) in Fig. 1, and pull the Front Panel forward.

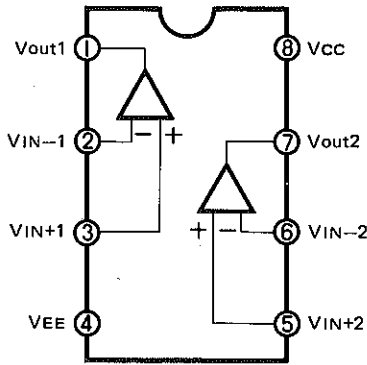
### 3. Removal of Bottom Cover

Remove 4 screws ( ③ ) in Fig. 1.

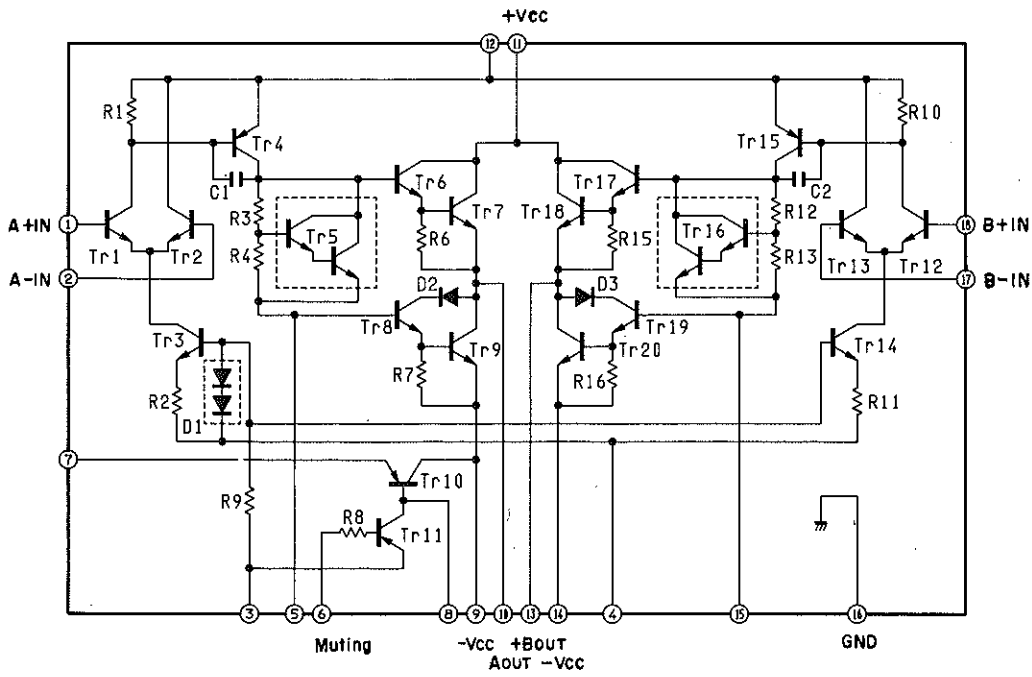


■ IC BLOCK

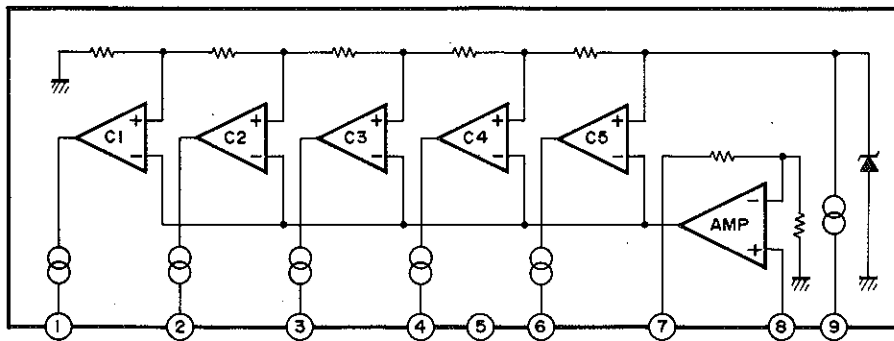
IC101 : NJM4558DD  
 IC201, 202 : NJM4560D  
 Dual Ope-amp



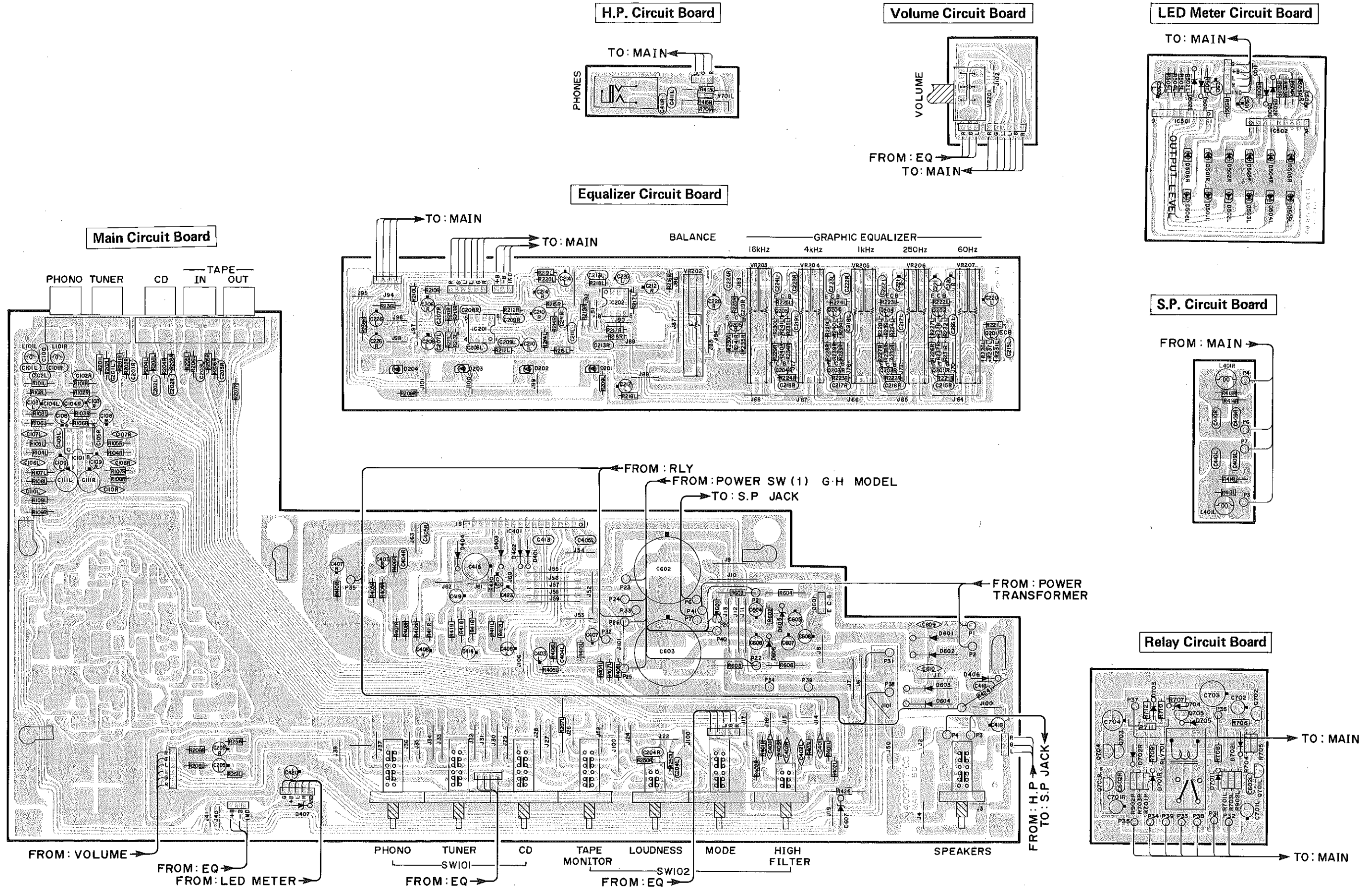
IC401 : STK4192L II  
 Power Amp



IC501, 502 : KA2285  
 LED Meter Drive



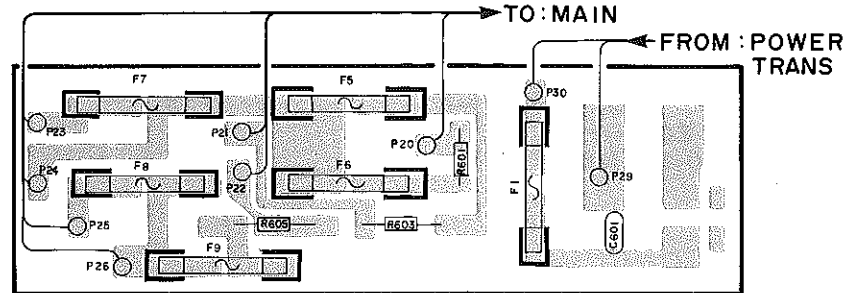
PRINTED CIRCUIT BOARD (Pattern side)



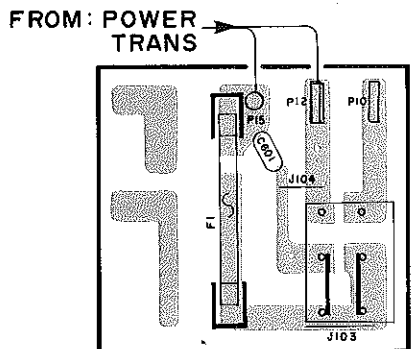
1  
2  
3  
4  
5  
6

PRINTED CIRCUIT BOARD (Pattern side)

Power SW Circuit Board

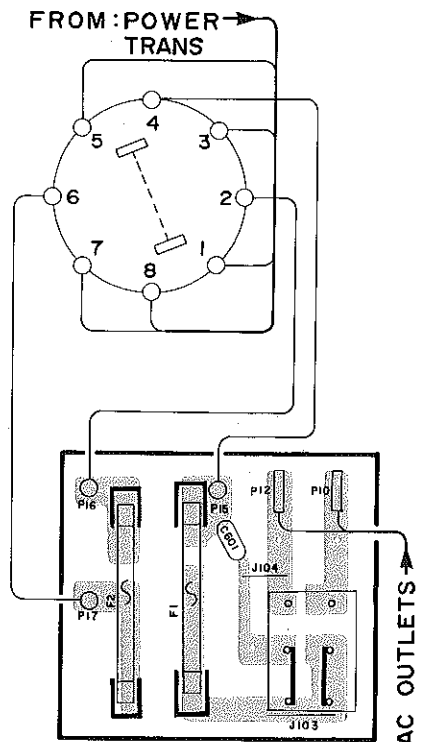


A, B models



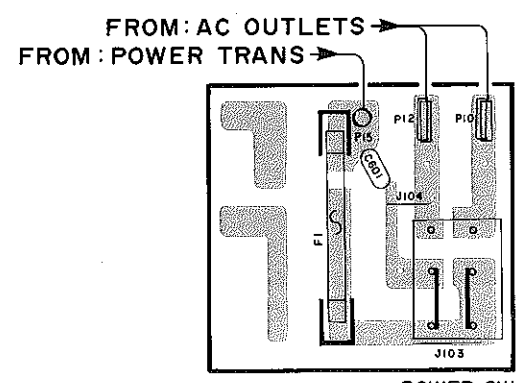
A, B MODEL

R model



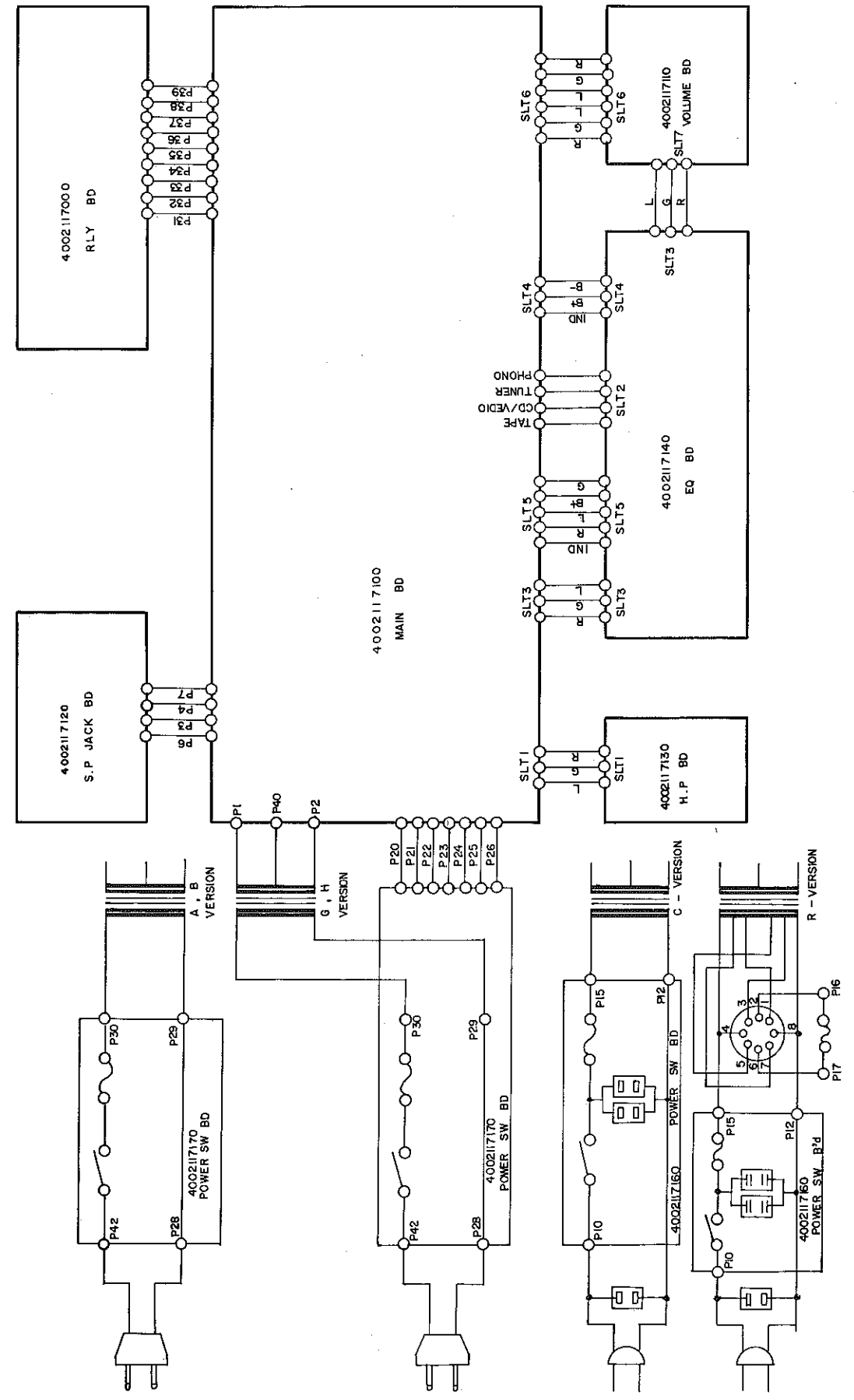
R MODEL

C model



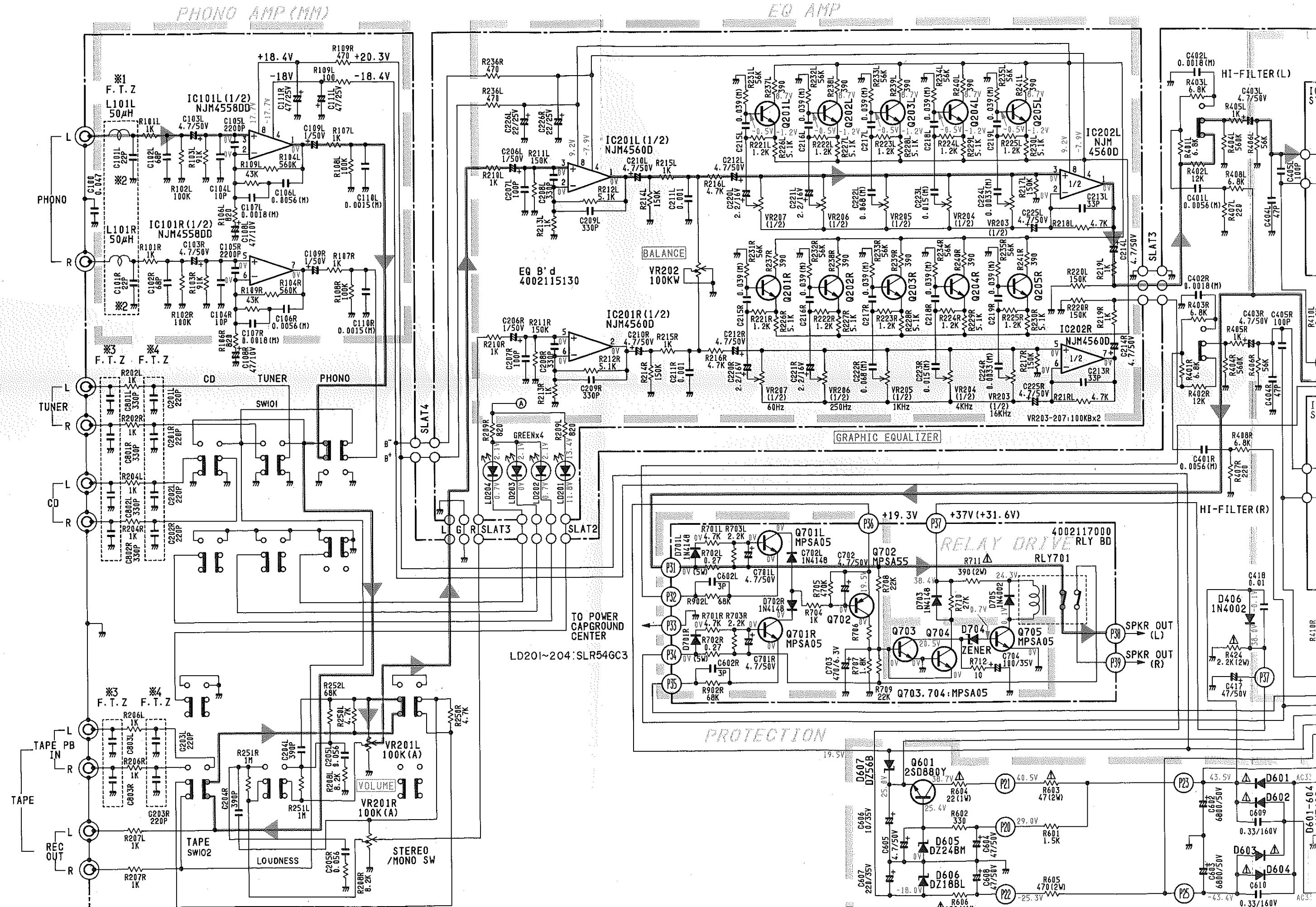
C MODEL

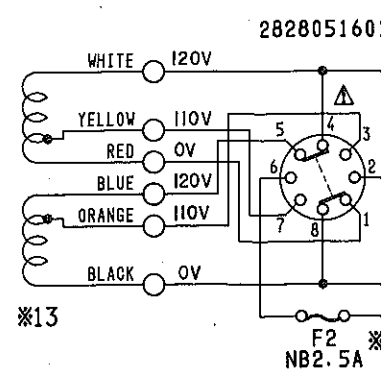
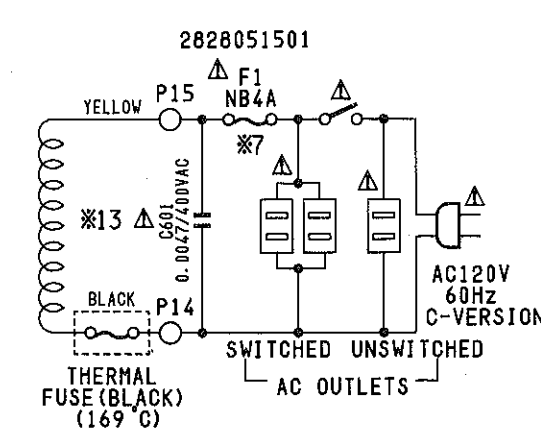
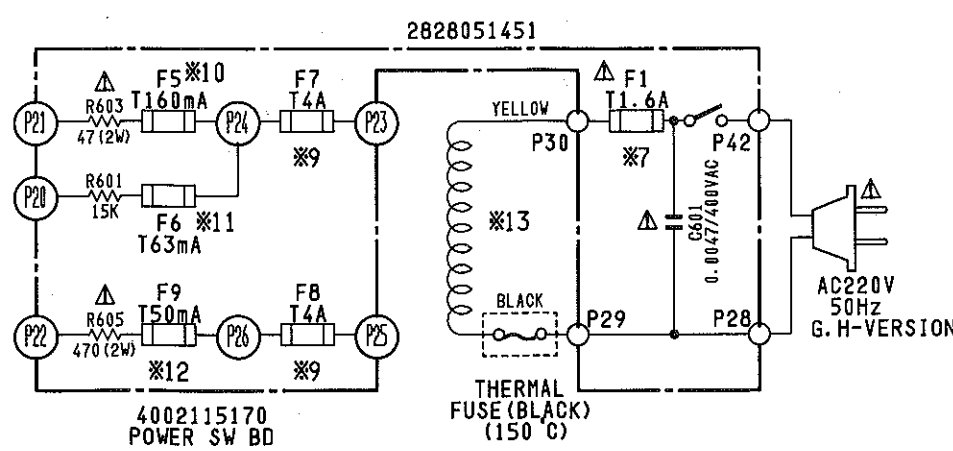
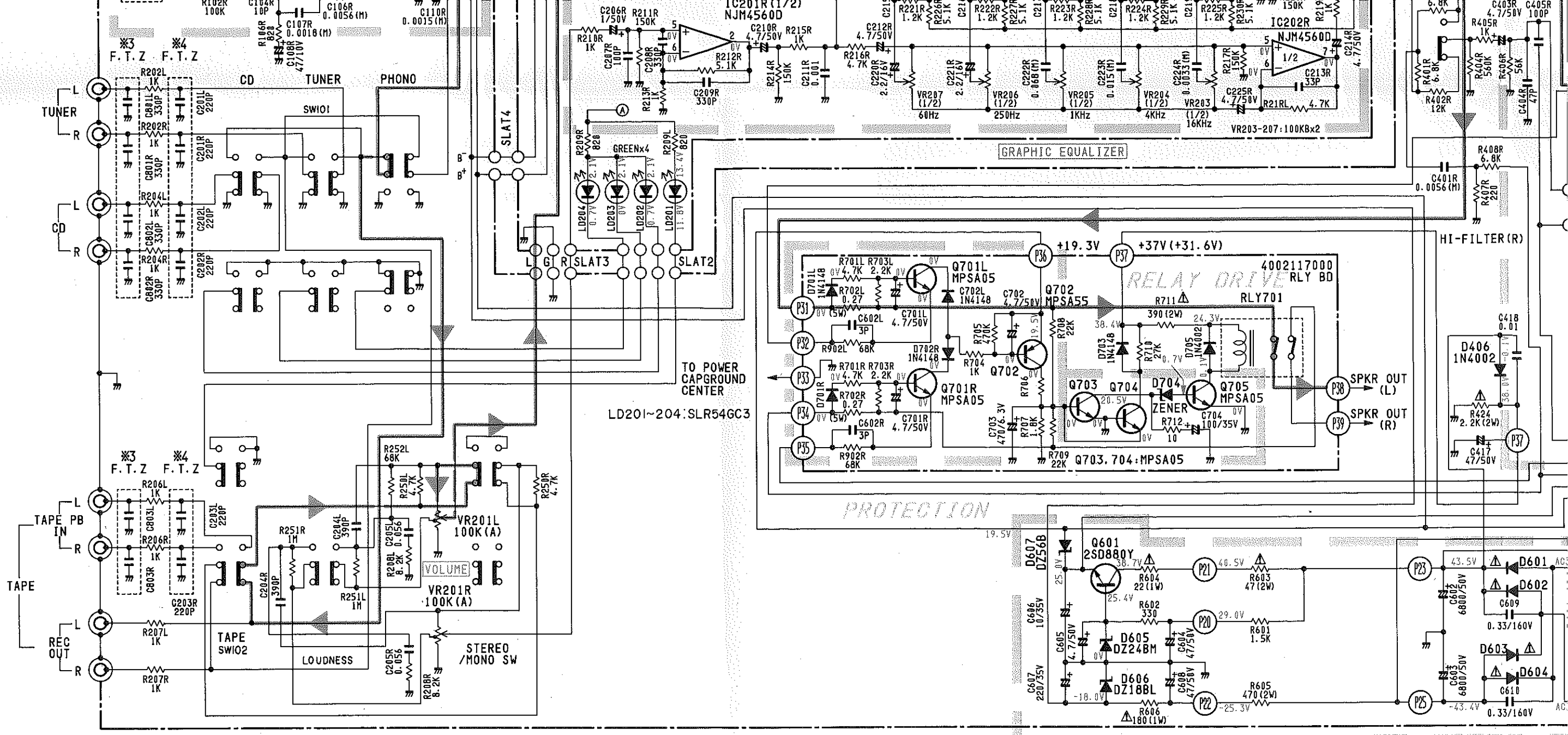
WIRING



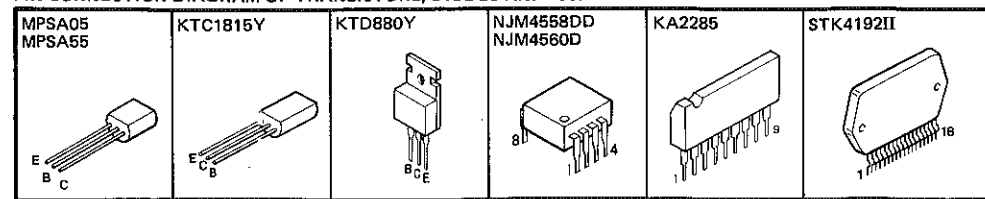


**SCHEMATIC DIAGRAM**



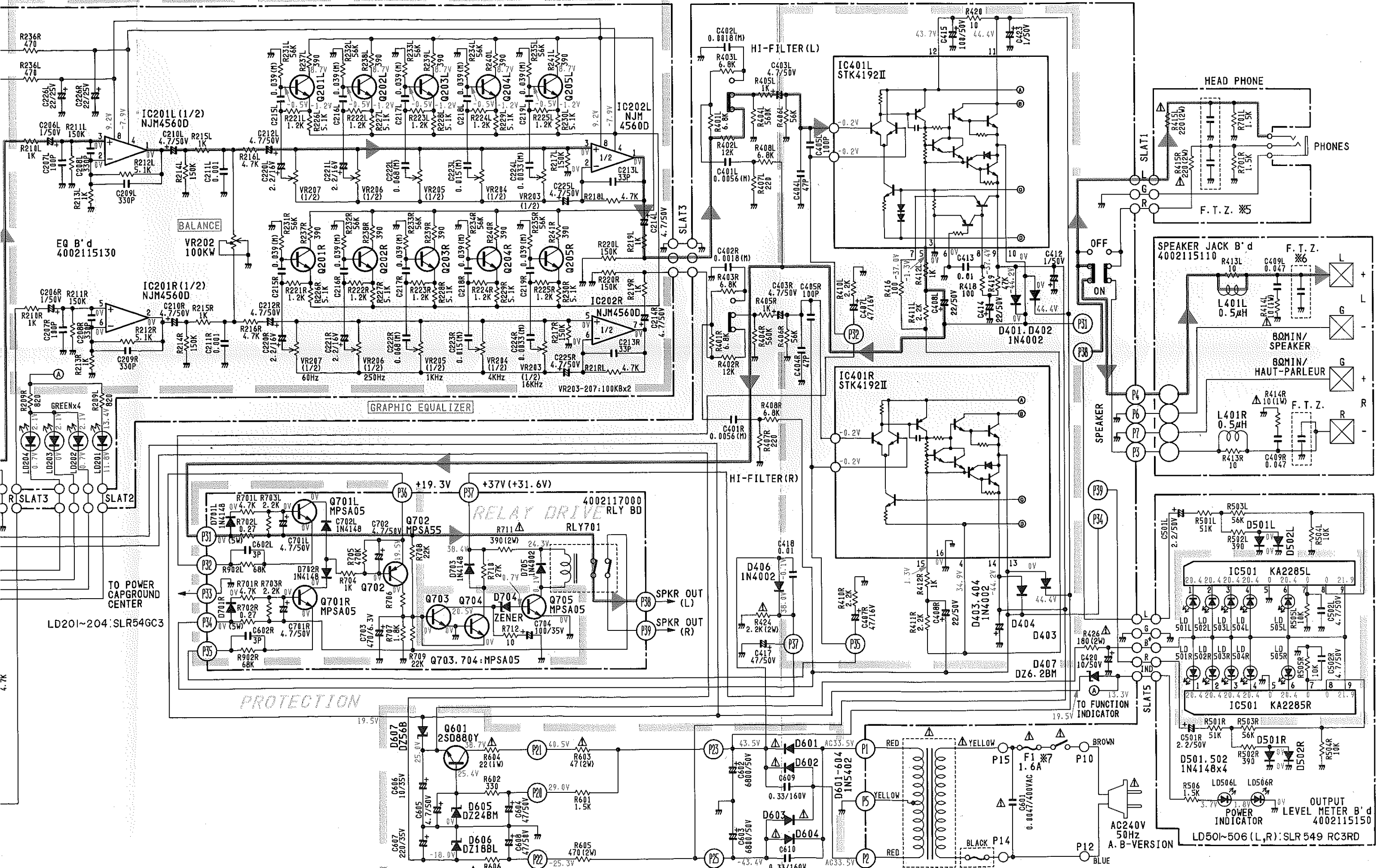


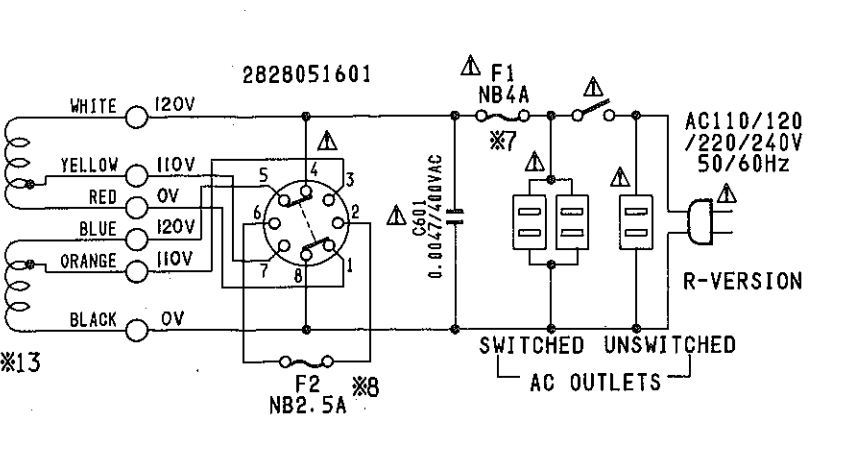
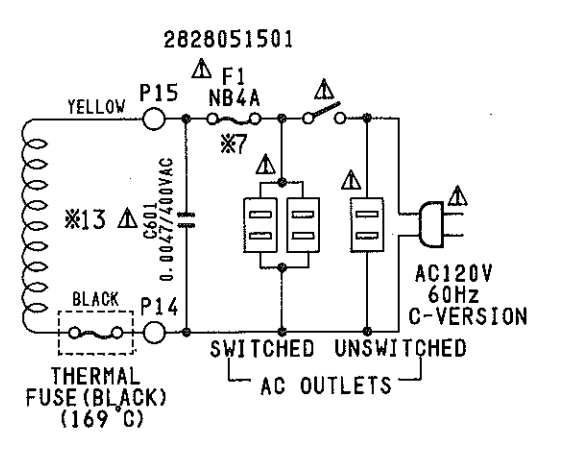
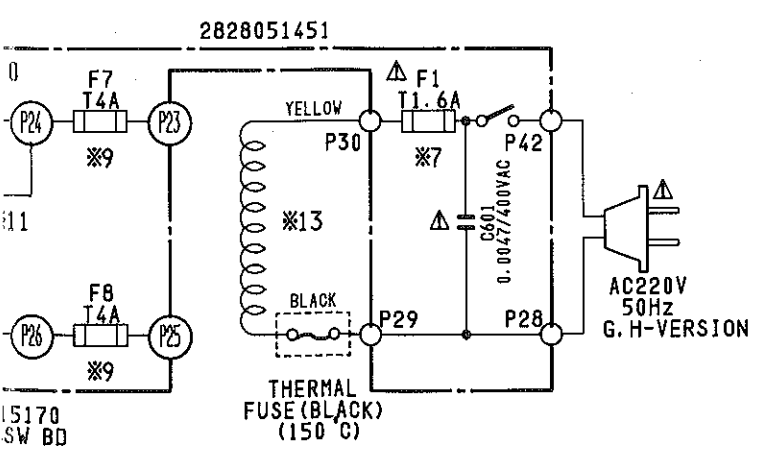
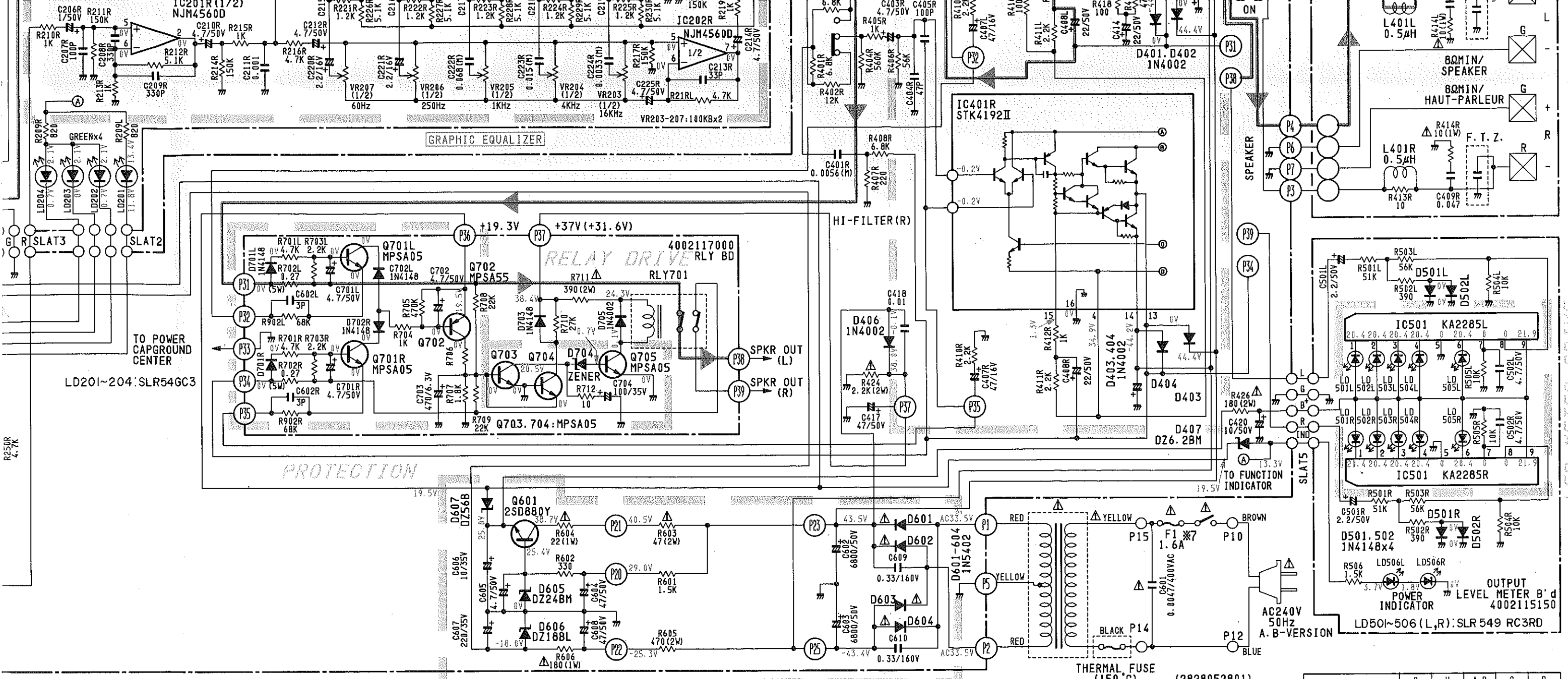
PIN CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.



EQ AMP

POWER AMP





	G	H	A. B	C	R
*1	L101	50μH	OPEN		
*2	C101	22P	OPEN		
*3	C801L.R, C802L.R, C803L.R	330P	OPEN		
*4	C201 ~ C203, C205	220P	OPEN		
*5	C411	560P	OPEN		
*6	C410	4700P	OPEN		
*7	F1	T1.6A			NB4A
*8	F2		OPEN		NB2.5A
*9	F7	T4A			SHORT
*10	F5	T160mA			SHORT
*11	F6	T63mA			SHORT
*12	F8	T50mA			SHORT
*13	TRANSFORMER 28280 ~	51401	51401	52801	51501 51601

\* All voltages are measured with a 10MΩ/DC electric volt meter.  
 \* Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.  
 \* Schematic diagram is subject to change without notice.

# PARTS LIST

**■WARNING**

Components having special characteristics are marked  $\Delta$  and must be replaced with parts having specifications equal to those originally installed.

● Carbon resistors (1/6W or 1/4W) are not included in the ELECTRICAL PARTS list. For the parts No. of the carbon resistor, refer to p.18.

**■ELECTRICAL PARTS**

Part No.	Description	Remarks	Markets	
* NX 60 13 80	Main Circuit Board		A,B,C,R,H	4002117100
* NX 60 13 90	"		G	
* IX 61 13 40	IC	STK 4192II	IC401	2178317120
* IX 60 14 40	"	NJM 4558DD	IC101	2168220104
* IX 61 13 50	Diode	1N5402	D601~604	2058100105 $\Delta$
* IX 61 13 60	"	1N4002	D401~404,406	2058106100
* IX 61 13 70	Zener Diode	DZ-6.2BM	D407	2058599105
* IX 61 13 80	"	DZ-24BM	D605	2058599113
* IX 61 13 90	"	DZ 5.6B	D607	2058599124
* IX 61 14 00	"	DZ 18BL	D606	2058599127
* IX 61 14 10	Transistor	25D880(Y)	Q601	2028406113
HL 82 51 80	Metal Film Resistor	180 $\Omega$ 2W	R426	3039191572 $\Delta$
HL 71 42 20	"	22 $\Omega$ 1W	R604	3039220472 $\Delta$
HL 32 62 20	"	2.2k $\Omega$ 2W	R424	3039222572 $\Delta$
HL 31 51 80	"	180 $\Omega$ 1W	R606	3039181472 $\Delta$
HL 32 44 70	"	47 $\Omega$ 2W	R603	3039470572 $\Delta$
HJ 35 41 00	Carbon Resistor	10 $\Omega$ 1/4W	R420	3069100970
HJ 35 61 00	"	1k $\Omega$ 1/4W	R101L/R, 107L/R, 202L/R, 204L/R, 206L/R 207L/R 405L/R, 412L/R	3069102970
HJ 35 51 00	"	100 $\Omega$ 1/4W	R109L, 416, 418	3069101970
HJ 35 81 00	"	100k $\Omega$ 1/4W	R102L/R, 110L/R	3069104970
HJ 35 71 20	"	12k $\Omega$ 1/4W	R402L/R	3059123970
HJ 35 62 20	"	2.2k $\Omega$ 1/4W	R401L/R, 411L/R	3069222970
HJ 35 53 30	"	330 $\Omega$ 1/4W	R602	3069331970
HK 35 74 30	"	43k $\Omega$ 1/4W	R105L/R	3069471970
HJ 35 54 70	"	470 $\Omega$ 1/4W	R109R	3069471970
HJ 35 64 70	"	4.7k $\Omega$ 1/4W	R250L/R	3069472970
HJ 35 74 70	"	47k $\Omega$ 1/4W	R419	3069473970
HJ 35 75 60	"	56k $\Omega$ 1/4W	R406L/R	3069563970
HJ 35 85 60	"	560k $\Omega$ 1/4W	R104L/R, 404L/R	3069564970
HJ 35 66 80	"	6.8k $\Omega$ 1/4W	R401L/R, 403L/R, 408L/R	3069682970
HJ 35 58 20	"	820 $\Omega$ 1/4W	R106L/R	3069821970
HJ 35 91 00	"	1M $\Omega$ 1/4W	R251L/R	3069105970
HJ 35 68 20	"	8.2k $\Omega$ 1/4W	R208L/R	3069822970
HJ 35 69 10	"	9k $\Omega$ 1/4W	R103L/R	3069913970
HJ 35 52 20	"	220 $\Omega$ 1/4W	R407L/R	3069221970
HJ 35 76 80	"	68k $\Omega$ 1/4W	R252L	
* HX 60 23 30	Slide Volume	100kA	VR201L/R	3238406210
UJ 16 61 00	Electrolytic Cap.	1 $\mu$ F 50V	C109L/R, 419, 421, 423	3479210971
UJ 16 71 00	"	10 $\mu$ F 50V	C420, 606	3479210071
UJ 12 74 70	"	47 $\mu$ F 10V	C108L/R	3479247021
UJ 13 74 70	"	47 $\mu$ F 16V	C407L/R	3479247031
UJ 14 74 70	"	47 $\mu$ F 25V	C111L/R	3479247041
UJ 16 74 70	"	47 $\mu$ F 50V	C416, 604, 608	3479247071
UJ 16 64 70	"	4.7 $\mu$ F 50V	C103L/R, 403L/R, 605	3479247971
UJ 16 81 00	"	100 $\mu$ F 50V	C415	3409210171

\* New Parts



Part No.	Description	Remarks	Markets	
* FX 60 37 30	Electrolytic Cap.	6800 $\mu$ F 50V C602,603		3419568224
UJ 15 82 20	"	220 $\mu$ F 35V C607		3409222161 ← 5P
FG 24 41 00	Ceramic Cap.	0.01 $\mu$ F 50V C418,413		3579222530
FG 41 32 20	"	0.0022 $\mu$ F 50V C105L/R		3579222530
FG 21 11 00	"	10pF 50V C104L/R		3579100030
FG 21 21 00	"	100pF 50V C405L/R		3579103530
FG 21 22 20	"	220pF 50V C408L/R,414		3479222071
FG 21 22 20	"	220pF 50V C201L/R~203L/R	G	3579221130
FG 21 23 30	"	330pF 50V C801L/R~803L/R	G	3579221130
FG 21 12 20	"	22pF 50V C101L/R	G	3579220130
FG 21 14 70	"	47pF 50V C404L/R		3579470130
FG 21 16 80	"	68pF 50V C102L/R		3579680130
FG 24 44 70	"	0.047 $\mu$ F 50V C100		3509473530
FT 15 31 50	Polypropylene Film Cap.	0.0015 $\mu$ F 100V C110L/R		3679152120
FT 15 31 80	"	0.0018 $\mu$ F 100V C107L/R,402L/R		3679182120
FT 15 35 60	"	0.0056 $\mu$ F 100V C106L/R,401L/R		3679562L20
FT 17 43 30	"	0.033 $\mu$ F 100V C205L/R		
* FX 60 37 40	"	0.33 $\mu$ F 150V C609,610		369334130
FG 21 23 90	Ceramic Cap.	390pF 50V C204L/R		
* GX 60 14 10	Coil Inductor	50 $\mu$ H L101L/R	G	2648601470
* LX 60 09 80	Connector Plug	3P SLT3,4		4428505710
* LX 60 09 90	"	4P SLT2		4428505610
* LX 60 10 00	"	5P SLT5		4428506910
* LX 60 10 10	Connector	WDO606 SMK SLT6		3039470572
* LX 60 10 20	Pin Jack	4P		4438100410
* LX 60 08 80	"	6P		4438100510
* QX 60 01 30	Equalizer Circuit Board			4002117140
IG 04 64 00	IC	NJM 4560D IC201,202		2168220103
* IX 61 13 20	LED(Green)	SLR 54GC 3 LD201~204		2308220306
IC 18 15 20	Transistors	2SC1815(Y) Q201L/R~205L/R		2208606104
HJ 35 61 00	Carbon Resistor	1k $\Omega$ 1/4W R210L/R,213L/R, 215L/R,219L/R		3069102970
HJ 35 61 20	"	1.2k $\Omega$ 1/4W R221L/R~225L/R		3069154970
HJ 35 81 50	"	150k $\Omega$ 1/4W R211L/R,214L/R, 217L/R,220L/R		3069154970
HJ 35 53 90	"	390 $\Omega$ 1/4W R237L/R~R241L/R		3069391970
HJ 35 54 70	"	470 $\Omega$ 1/4W R236L/R		3069471970
* KX 60 08 50	Slide Volume	100k $\times$ 2 VR203~207		3238405610
* NX 60 14 00	Power SW Circuit Board		G,H	4002117170
* NX 60 14 10	"		A,B	4002117160
* NX 60 14 20	"		C	
* NX 60 14 30	"		R	
HL 32 44 70	Metal Film Resistor	47 $\Omega$ 2W R603		3039471572 $\Delta$
HL 32 54 70	"	470 $\Omega$ 2W R605		3039471572 $\Delta$

\* New Parts

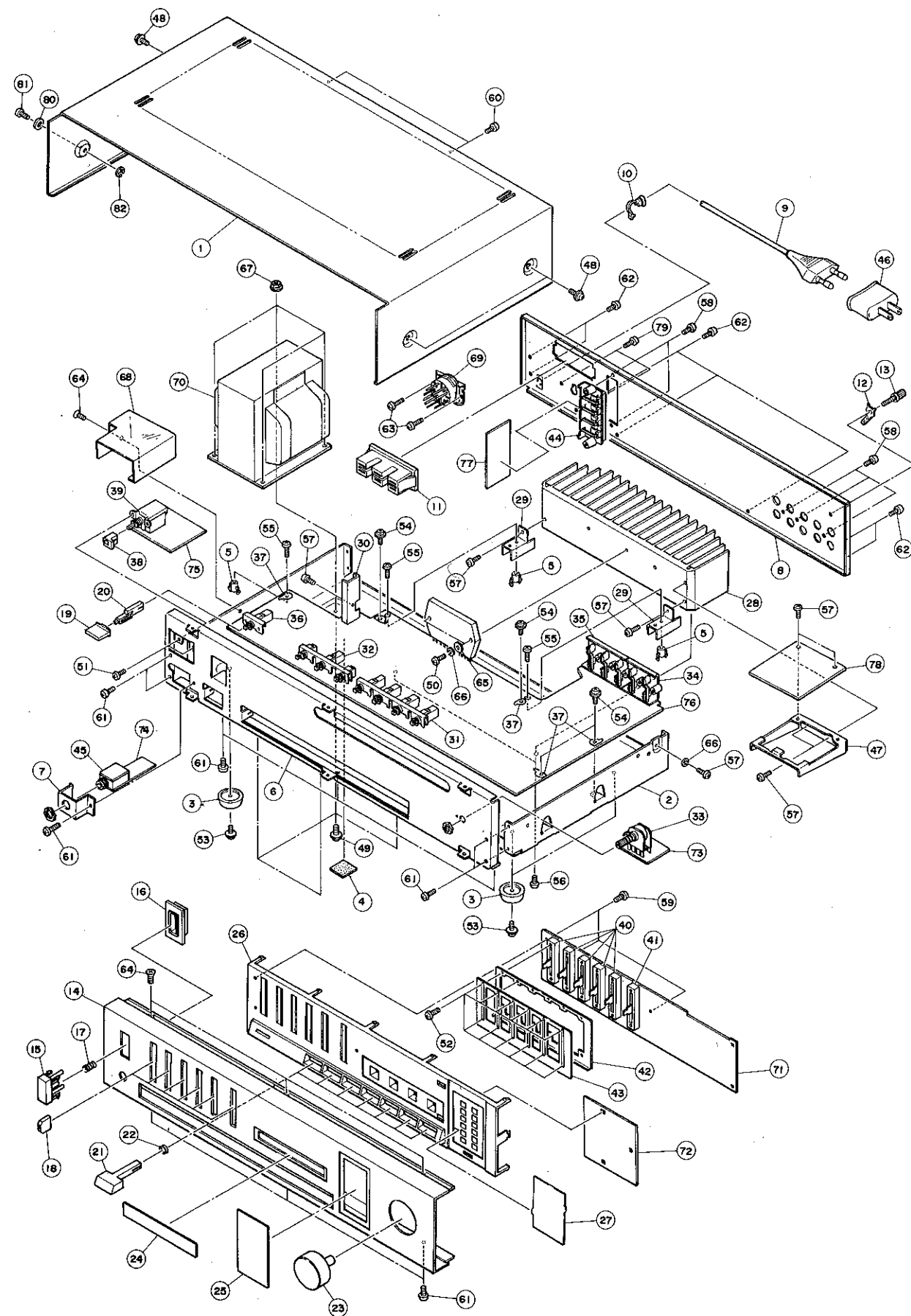
Part No.	Description	Remarks	Markets	
HJ 35 61 50	Carbon Resistor	1.5k $\Omega$ 1/4W	R601	3009152973
FH 12 34 70	Ceramic Cap.	0.0047 $\mu$ F 500V	CG01	3349472407 $\Delta$
* KX 60 09 70	Fuse	T 4A	F7	G,H 5508302934 $\Delta$
* KX 60 09 80	"	T 1.6A	F1	G,H,A,B 5508302334 $\Delta$
* KX 60 09 90	"	NB 4A	F1	C,R 5508212913 $\Delta$
* KX 60 10 00	"	T 160mA	F5	G,H 5508301034 $\Delta$
* KX 60 10 10	"	T 63mA	F6	G,H 5508300534 $\Delta$
* KX 60 10 20	"	T 50mA	F8	G,H 5508300434 $\Delta$
* KX 60 10 30	"	NB 2.5A	F2	C,R 5508212531 $\Delta$
* KX 60 08 80	Power Switch			4628005710 $\Delta$
* NX 60 14 40	Volume Circuit Board			4002117110
* LX 60 10 30	Connector Plug	3P	SLT7	4428505710
* MX 60 06 40	Slat Wire	6P	SLT6	4119106105
* NX 60 14 50	S.P Jack Circuit Board			4002117120
HL 31 41 00	Metal Film Resistor	10 $\Omega$ 1W	R414L/R	3039100472 $\Delta$
HJ 35 41 00	Carbon Resistor	10 $\Omega$ 1/4W	R413L/R	3009100973
FG 24 44 70	Ceramic Cap.	0.047 $\mu$ F 50V	C409L/R	3509473530
FG 21 34 70	"	0.0047 $\mu$ F 50V	C410L/R	G 3579472130
* GX 60 14 20	Coil Inductor	0.5 $\mu$ H	L401L/R	2648001010
* LX 60 09 00	Push Terminal			4408000910
* NX 60 14 60	H.P Circuit Board			4002117130
HL 32 51 80	Metal Film Resistor	220 $\Omega$ 2W	R415L/R	3039221572 $\Delta$
HJ 35 61 50	Carbon Resistor	1.5k $\Omega$ 1/4W	R701L/R	3069152970
FG 21 25 60	Ceramic Cap.	560pF 50V	C411L/R	G 3509561130
* MX 60 06 50	Slat Wire	3P	SLT1	4119103125
* LX 60 09 10	Phone Jack			4438000810
* NX 60 14 70	LED Meter Circuit Board			4002117150
* IX 61 14 20	IC	KA 2285	IC501,502	2168000121
* IX 61 13 30	LED	SLR 54URC 3 RD	LD501L/R~50GL/R	2308220109
* IX 61 13 00	Diode	1N4148	D501L/R,502L/R	2058306101
HJ 35 75 60	Carbon Resistor	56k $\Omega$ 1/4W	R503L/R	3069563970
HA 15 75 10	"	51k $\Omega$ 1/4W	R501L/R	3069513970
HJ 35 53 90	"	390 $\Omega$ 1/4W	R502L/R	3069391970
HJ 35 71 00	"	10k $\Omega$ 1/4W	R504L/R,505L/R	3069103970
HJ 35 61 50	"	1.5k $\Omega$ 1/4W	R506	3069152970
UJ 16 62 20	Electrolytic Cap.	2.2 $\mu$ F 50V	C501L/R	3479222971
UJ 16 64 70	"	4.7 $\mu$ F 50V	C502L/R	3479247971

\* New Parts

Part No.	Description	Remarks	Markets	
* MX 60 06 60	Connector Ass'y	5P	SLT5	4355029640
* NX 60 11 70	RLY Circuit Board			4002117000
* KX 60 10 40	Relay	AR 34229	RLY 701	5518001450
* IX 61 12 70	Transistor	MPS A55	Q702	2008209101
* IX 61 12 80	"	MPS A05	Q701L/R,703~705	2008609101
* IX 61 13 60	Diode	1N4002	D703,705	2058106100
* IX 61 13 00	"	1N4148	D701L/R,702L/R	2058306101
* IX 61 16 60	Zener Diode	DZ-20BM	D704	2058599112
HL 32 53 90	Metal Film Resistor	390 $\Omega$ 2W	R711	3039391572 $\Delta$
* HX 60 23 70	Cement Resistor	0.27 $\Omega$ 5W	R702L/R	3509278782
HJ 35 41 00	Carbon Resistor	10 $\Omega$ 1/4W	R706,712	3069100970
HJ 35 61 00	"	1k $\Omega$ 1/4W	R704	3069102970
HJ 35 61 80	"	1.8k $\Omega$ 1/4W	R707	3069182970
HJ 35 62 20	"	2.2k $\Omega$ 1/4W	R703L/R	3069182970
HJ 35 64 70	"	4.7k $\Omega$ 1/4W	R701L/R	3069472970
HJ 35 84 70	"	470k $\Omega$ 1/4W	R705	3069474970
HJ 35 72 20	"	22k $\Omega$ 1/4W	R708,709	3069223970
HJ 35 76 80	"	68k $\Omega$ 1/4W	R902L/R	3069683970
FG 20 03 00	Ceramic Cap.	3pF 50V	C602L/R	3579309030
UJ 16 64 70	Electrolytic Cap.	4.7 $\mu$ F 50V	C701L/R,702	3479247971
UJ 11 84 70	"	470 $\mu$ F 6.3V	C703	3409247111
UJ 15 81 00	"	100 $\mu$ F 35V	C704	3409210161

\* New Parts (新規部品) NR

EXPLODED VIEW



MECHANISM PARTS

Note) φ : Diameter

Ref. No.	Part No.	Description	Remarks	Markets	
* 1	AX 60 05 90	Cover Top			046122014911
* 2	AX 60 06 00	CH. Main			6121601110
* 3	CX 60 21 30	Foot Rubber			6335000410
* 4	CX 60 23 00	Foot			6335000910
* 5	AX 60 06 10	Spacer			6705004220
* 6	AX 60 06 20	CH. Front			6122210910
* 7	AX 60 06 30	BKT Jack Phone			6505064610
* 8	AX 60 06 40	CH. Back			046102021422
* 9	MX 60 05 70	Cord AC Power		G,H	4308000430
* //	MX 60 06 10	"		R	4308001010
* //	MX 60 06 20	"		A	4308003610
* //	MX 60 06 80	"		B	4338000210
* //	MX 60 06 30	"		C	4308001410
* 10	CX 60 23 10	Stopper Cord AC			6513000111
* 11	LX 60 11 50	AC Outlet		C,R	4448100810
* 12	BX 60 06 50	Terminal Ground			4465100110
* 13	BX 60 06 60	Terminal Screw			4465100210
* 14	BX 60 06 70	Panel Front			048602014711
* 15	CX 60 21 50	Button Push	POWER		8543013110
* 16	CX 60 21 60	Bezel BTN Push			8543013010
* 17	AX 60 06 50	Spring Push			6555006410
* 18	CX 60 23 40	Knob Slide			048545028611
* 19	CX 60 23 50	Button Push	SPEAKER		048543006511
* 20	CX 60 23 60	Button Shaft			6305002810
* 21	CX 60 31 60	Button Push	FUNCTION		048543006811
* 22	AX 60 06 60	Spring			6555005010
* 23	CX 60 23 70	Knob Rotary			048643003111
* 24	CX 60 23 80	Plate LED (A)			048535017911
* 25	CX 60 23 90	Plate LED (B)			048535018011
* 26	BX 60 06 80	Decoration Panel			048521002414
* 27	CX 60 24 00	Filter LED			048535006516
* 28	BX 60 06 90	H/Sink Power			7503006230
* 29	BX 60 07 00	BKT H/Sink			6505064510
* 30	AX 60 06 70	H/Sink Reg TR			7505202420
* 31	KX 60 08 00	Switch Push	4keys	SW101	4628041110
* 32	KX 60 08 10	"	3keys	SW102	4628041610
* 33	KX 60 08 20	Volume Rotary			3208048510
* 34	LX 60 08 60	Jack RCA	4P		4438100410
* 35	LX 60 08 80	"	6P		4438100510
* 36	KX 60 08 30	Switch Push		1key	4628041010
* 37	LX 60 08 90	Ground Plate			4235003610
* 38	CX 60 24 10	Shaft Button			7005005310
* 39	KX 60 08 40	Switch Power			4628005710
* //	KX 60 08 80	"		A,B,G,H,R R,C	4628005710
* 40	KX 60 08 50	Slide Potentiometer		TONE	3238405610
* 41	KX 60 08 60	"		BALANCE	32384006210
* 42	AX 60 06 80	BKT E/Q			6505064710
* 43	AX 60 06 90	Plate E/Q VR			6065101710
* 44	LX 60 09 00	Terminal Speaker			4408000910
* 45	LX 60 09 10	Jack Phone			4438000810
* 46	CX 60 24 20	Adapter			4428300310
* 47	AX 60 07 00	BKT Relay			6505078810
* 48	EK 36 50 90	BW Head Screw	4x8 ZMC2-B1		8159440083

\* New Parts

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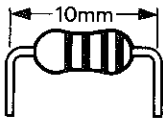


# Parts List for Carbon Resistor

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ353100	HF853100	12K Ω	HJ357120	HF857120
1.8 "	HJ353180	※	15 "	HJ357150	HF857150
2.2 "	HJ353220	HF853220	18 "	HJ357180	HF857180
3.3 "	HJ353330	HF853330	22 "	HJ357220	HF857220
4.7 "	HJ353470	HF853470	27 "	HJ357270	HF857270
5.6 "	HJ353560	HF853560	33 "	HJ357330	HF857330
10 "	HJ354100	HF854100	39 "	HJ357390	HF857390
15 "	HJ354150	HF854150	47 "	HJ357470	HF857470
22 "	HJ354220	HF854220	56 "	HJ357560	HF857560
27 "	HJ354270	HF854270	68 "	HJ357680	HF857680
33 "	HJ354330	HF854330	82 "	HJ357820	HF857820
39 "	HJ354390	HF854390	91 "	HJ357910	HF857910
47 "	HJ354470	HF854470	100 "	HJ358100	HF858100
56 "	HJ354560	HF854560	120 "	HJ358120	HF858120
68 "	HJ354680	HF854680	150 "	HJ358150	HF858150
82 "	HJ354820	HF854820	180 "	HJ358180	HF858180
100 "	HJ355100	HF855100	220 "	HJ358220	HF858220
110 "	HJ355110	HF855110	270 "	HJ358270	HF858270
120 "	HJ355120	HF855120	330 "	HJ358330	HF858330
150 "	HJ355150	HF855150	390 "	HJ358390	HF858390
160 "	HJ355160	※	470 "	HJ358470	HF858470
180 "	HJ355180	HF855180	560 "	HJ358560	HF858560
220 "	HJ355220	HF855220	680 "	HJ358680	HF858680
270 "	HJ355270	HF855270	820 "	HJ358820	HF858820
330 "	HJ355330	HF855330	1.0M Ω	HJ359100	HF859100
390 "	HJ355390	HF855390	1.2 "	HJ359120	※
470 "	HJ355470	HF855470	1.5 "	HJ359150	HF859150
510 "	※	HF855510	1.8 "	HJ359180	HF859180
560 "	HJ355560	HF855560	2.2 "	HJ359220	HF859220
680 "	HJ355680	HF855680	3.3 "	HJ359330	HF859330
820 "	HJ355820	HF855820	3.9 "	HJ359390	※
910 "	HJ355910	HF855910	4.7 "	HJ359470	HF859470
1.0K Ω	HJ356100	HF856100			
1.2 "	HJ356120	HF856120			
1.5 "	HJ356150	HF856150			
1.8 "	HJ356180	HF856180			
2.0 "	HJ356200	HF856200			
2.2 "	HJ356220	HF856220			
2.4 "	HJ356240	HF856240			
2.7 "	HJ356270	HF856270			
3.0 "	HJ356300	HF856300			
3.3 "	HJ356330	HF856330			
3.6 "	HJ356360	HF856360			
3.9 "	HJ356390	HF856390			
4.7 "	HJ356470	HF856470			
5.1 "	HJ356510	HF856510			
5.6 "	HJ356560	HF856560			
6.8 "	HJ356680	HF856680			
8.2 "	HJ356820	HF856820			
9.1 "	HJ356910	HF856910			
10 "	HJ357100	HF857100			

1/4W Type

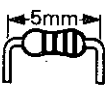
HJ35○○○○



10mm

1/6W Type

HF85○○○○



5mm