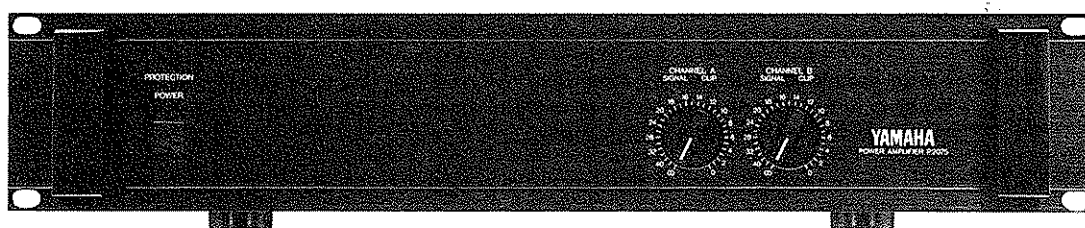


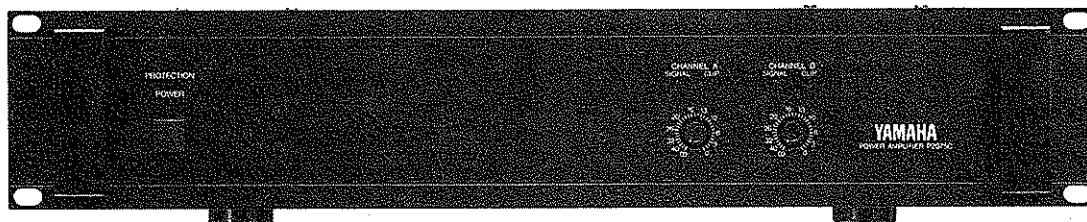
POWER AMPLIFIER

P2075/P2075C

SERVICE MANUAL



P2075



P2075C

P2075/P2075C

CONTENTS

SPECIFICATIONS	1
PANEL LAYOUT	2
BLOCK DIAGRAM	3
DIMENSIONS	4
PERFORMANCE GRAPHS	4
CIRCUIT BOARDS	6
PARTS LIST	8

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.

SPECIFICATIONS

POWER OUTPUT LEVEL

(STEREO)	50W + 50W	RL = 8ohms, f = 20Hz to 20kHz, THD $\leq$ 0.05%
	75W + 75W	RL = 4ohms, f = 20Hz to 20kHz, THD $\leq$ 0.1%
(BTL-MONO)	100W	RL = 16ohms, f = 20Hz to 20kHz, THD $\leq$ 0.05%
	150W	RL = 8ohms, f = 20Hz to 20kHz, THD $\leq$ 0.1%

FREQUENCY RESPONSE

+0, -1dB, f = 10Hz to 30kHz, RL = 8ohms, PO = 1W

POWER BAND WIDTH (THD $\leq$ 0.1%)

(STEREO)	10Hz to 50kHz	PO = 25W, RL = 8ohms, 10Hz to 50kHz
		PO = 38W, RL = 4ohms
(BTL-MONO)	10Hz to 30kHz	PO = 50W, RL = 16ohms, 10Hz to 30kHz
		PO = 75W, RL = 8ohms

TOTAL HARMONIC DISTORTION

(STEREO)	$\leq$ 0.01%	PO = 25W, f = 1kHz, RL = 8ohms
	$\leq$ 0.05%	PO = 25W, f = 20Hz to 20kHz, RL = 8ohms
	$\leq$ 0.01%	PO = 38W, f = 1kHz, RL = 4ohms
	$\leq$ 0.05%	PO = 38W, f = 20Hz to 20kHz, RL = 4ohms
(BTL-MONO)	$\leq$ 0.01%	PO = 50W, f = 1kHz, RL = 16ohms
	$\leq$ 0.05%	PO = 50W, f = 20Hz to 20kHz, RL = 16ohms
	$\leq$ 0.01%	PO = 75W, f = 1kHz, RL = 8ohms
	$\leq$ 0.05%	PO = 75W, f = 20Hz to 20kHz, RL = 8ohms

INTER MODULATION DISTORTION (70Hz: 7kHz = 4: 1)

(STEREO)	$\leq$ 0.05%	PO = 25W, RL = 8ohms, $\leq$ 0.05% PO = 38W, RL = 4ohms
(BTL-MONO)	$\leq$ 0.05%	PO = 50W, RL = 16ohms, $\leq$ 0.05% PO = 75W, RL = 8ohms

CHANNEL SEPARATION (INPUT Short, ATT Max., RL = 8ohms,

(P2075)	PO = -3dB point from nominal power)
	$\geq$ 80dB f = 1kHz
	$\geq$ 100 f = 1kHz, RL = 8ohms, $\geq$ 70 f = 20Hz to 20kHz, RL = 8ohms
(P2075C)	PO = -3dB point from nominal power)
	$\geq$ 80dB f = 1kHz
	$\geq$ 70dB f = 20Hz to 20kHz

DAMPING FACTOR

(P2075)	$\geq$ 100 f = 1kHz, RL = 8ohms, $\geq$ 70
(P2075C)	$\geq$ 100 f = 1kHz, RL = 8ohms, $\geq$ 70 f = 20Hz to 20kHz, RL = 8ohms

SIGNAL TO NOISE

(STEREO)	$\geq$ 100dB	INPUT Short @ 12.7kHz LPF
	$\geq$ 105dB	INPUT Short @ IHF-A Network
(BTL-MONO)	$\geq$ 95dB	INPUT Short @ 12.7kHz LPF
	$\geq$ 100dB	INPUT Short @ IHF-A Network

SLEW RATE

(STEREO)	14V/ μ sec. RL = 8ohms, Full Swing
(BTL-MONO)	26V/ μ sec. RL = 16ohms, Full Swing

SENSITIVITY

+4dBm (1.23V rms) PO = 75W, RL = 4ohms, ATT Max., f = 1kHz

VOLTAGE GAIN

23.0dB f = 1kHz, RL = 4ohms, ATT Max.

INPUT IMPEDANCE

$\geq$ 15kohms, Balanced or unbalanced

RESIDUAL NOISE

$\geq$ -78dBm ATT Min., @ 12.7kHz, LPF $\geq$ -86dBm ATT Min., IHF-A Network

INDICATORS

Signal: Green LED f = 20Hz to 20kHz, VO $\geq$ 2V Clipping: Red LED THD $\geq$ 1%
Protection: Red LED during the protection or muting is on.
Protection: $\geq$ 60°C Heat sink temperature
Pilot: Red LED Power ON

PROTECTION CIRCUITS

Muting: 6 $\pm$ 2sec. After Power ON DC sense: DC $\pm$ 2V Output Voltage
Thermal: $\geq$ 85°C Heat sink temperature (General model)
PC limiter: ON RL = $\leq$ 2ohms

CONTROLS

Front: 2x31 step INPUT Attenuator, Push ON/Push OFF POWER switch.
Rear: MONO/STEREO MODE switch, IN/OUT Transformer switch, Voltage Selector switch (General model only)

POWER REQUIREMENTS

General model	220/240V AC, 50/60Hz
U.S. & Canadian models	120V AC, 60Hz

POWER CONSUMPTION

General model	400W
U.S. & Canadian models	250W, 300VA

WEIGHT

9.5 kg (21 lbs)

DIMENSIONS (W x H x D)

480 x 98 x 364 (18-7/8" x 3-7/8" x 14-3/8")

ACCESSORIES

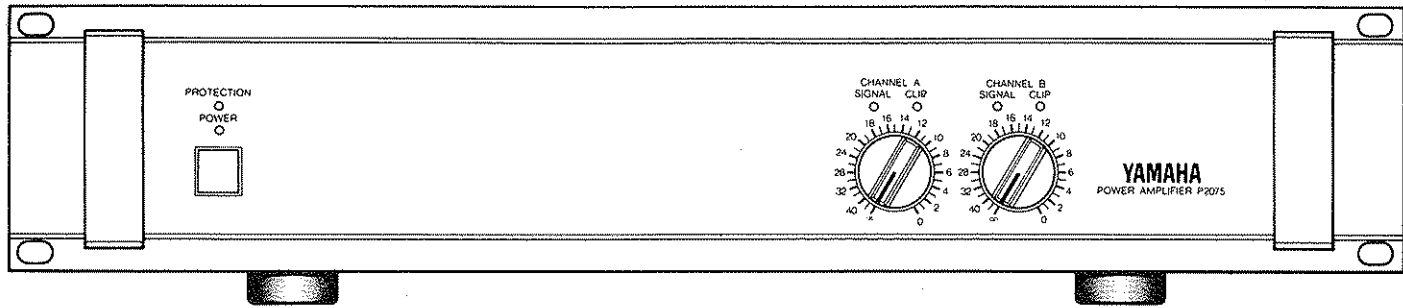
(P2075)
Rubber caps to discourage unauthorized or accidental changes in setting of input attenuators (included).
(P2075C)
Rubber caps to discourage unauthorized or accidental changes in setting of input attenuators (included). BRT15K input transformers, P150T output transformers for 25 & 70V lines (optional).

• All specifications subject to change without notice.

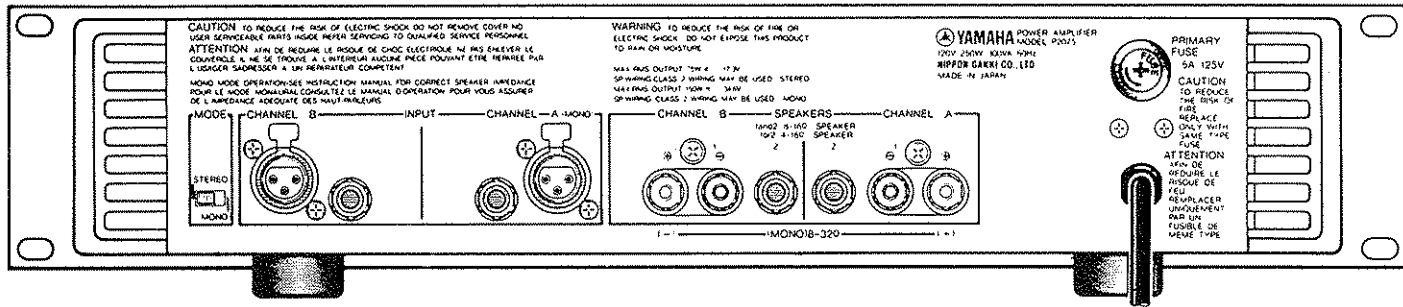
PANEL LAYOUT

P2075

●Front

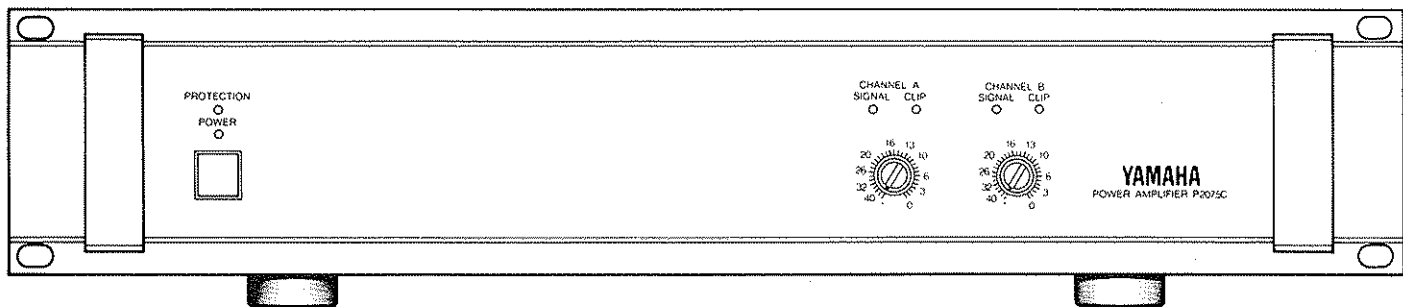


●Rear



P2075C

●Front



●Rear

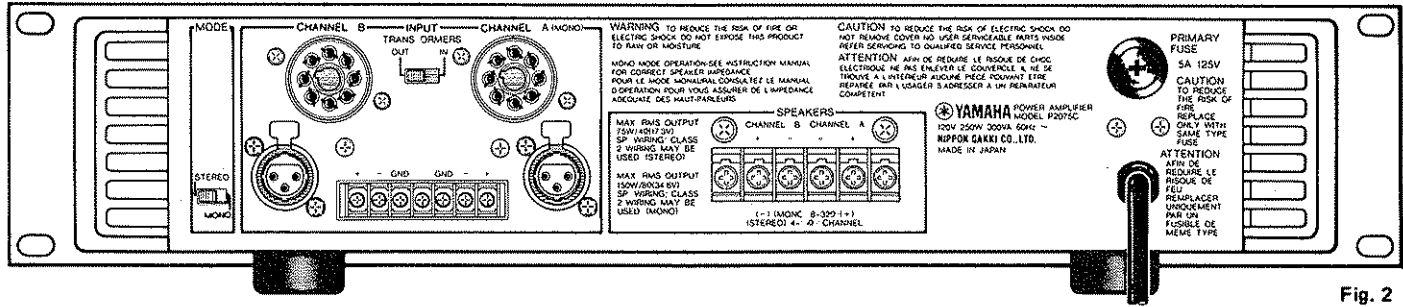
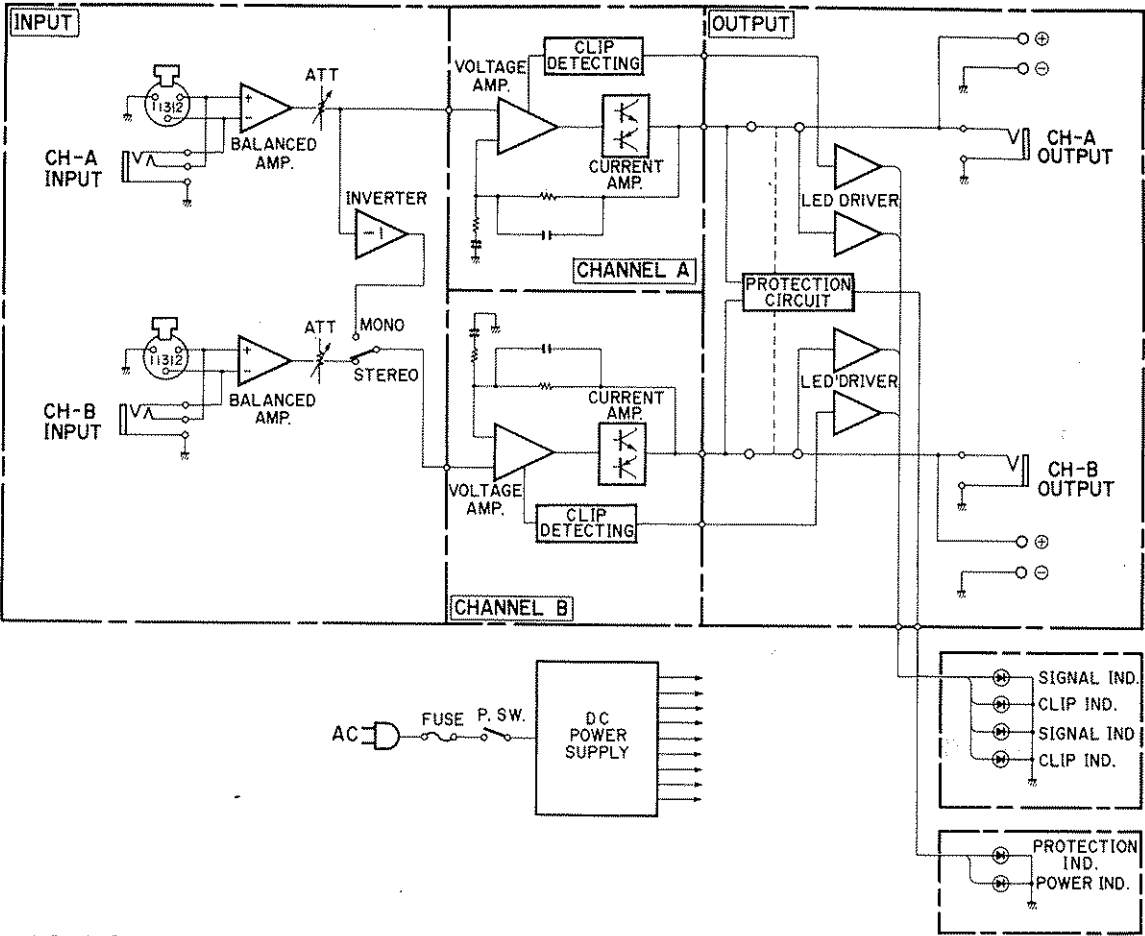


Fig. 2

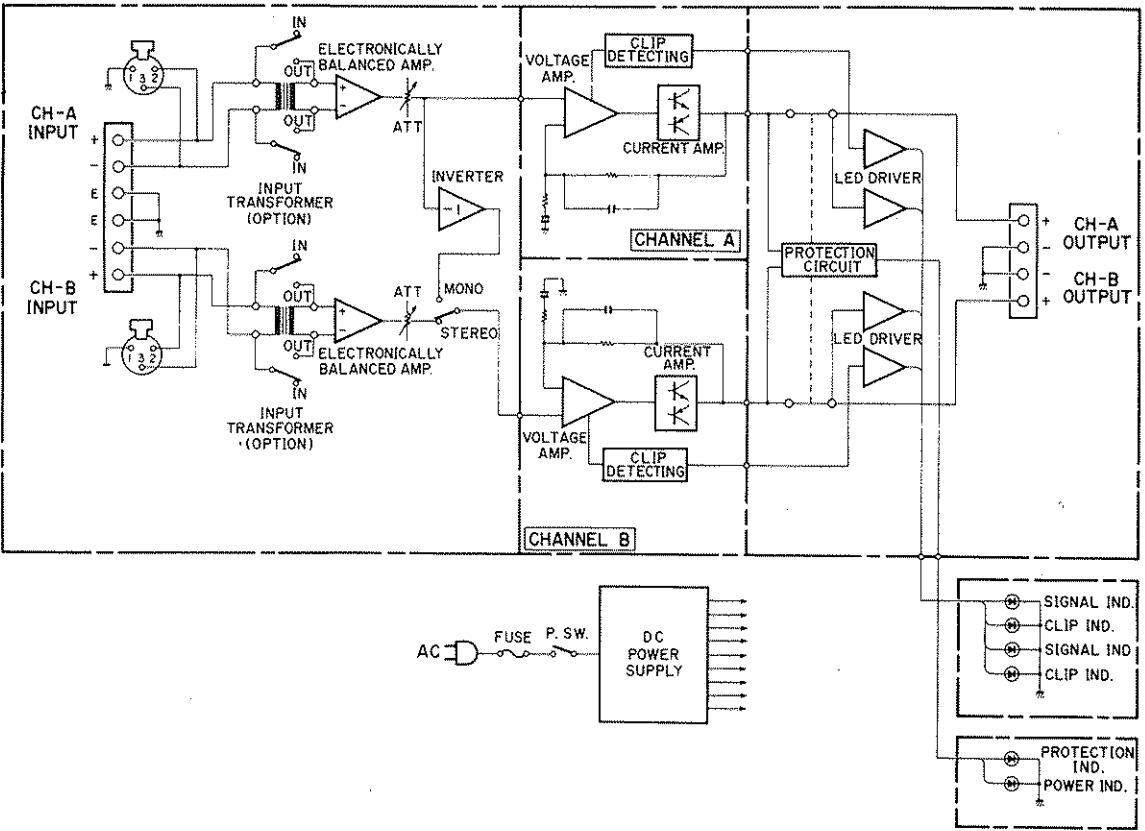
P2075/P2075C

■ BLOCK DIAGRAM

P2075

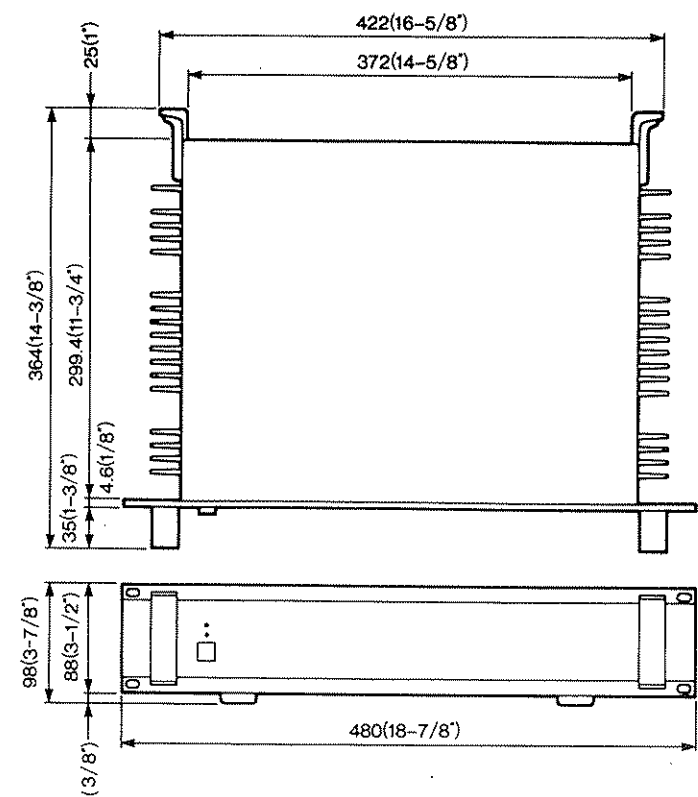


P2075C



P2075/P2075C

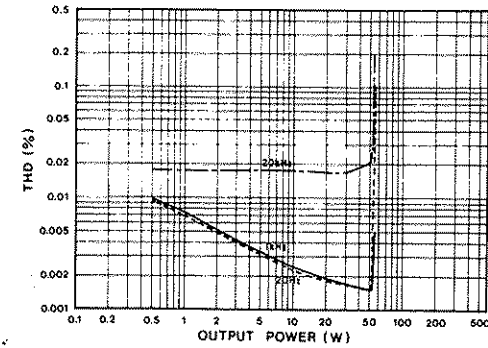
DIMENSIONS



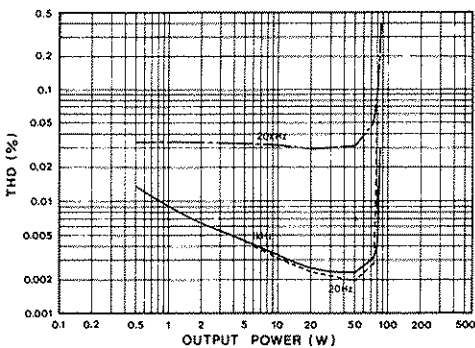
Unit: mm (Inch)

PERFORMANCE GRAPHS

THD vs OUTPUT POWER CHARACTERISTICS
Load Impedance: 8Ω
Mode: STEREO
Both Channels Driven

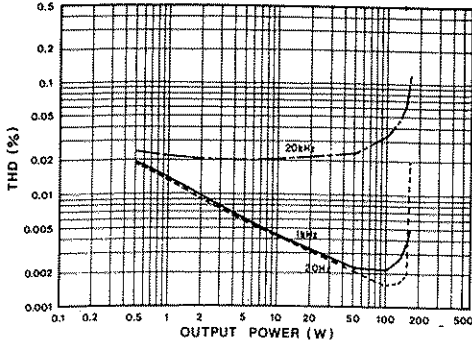


THD vs OUTPUT POWER CHARACTERISTICS
Load Impedance: 4Ω
Mode: STEREO
Both Channels Driven



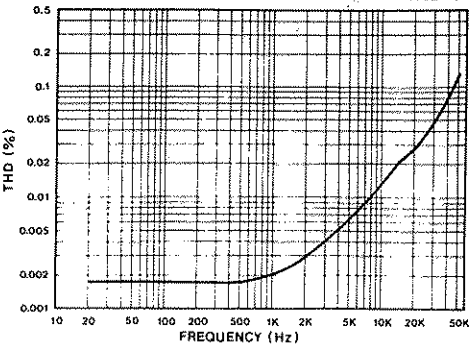
THD vs OUTPUT POWER CHARACTERISTICS

Load Impedance: 8Ω
Mode: MONO (BTL)



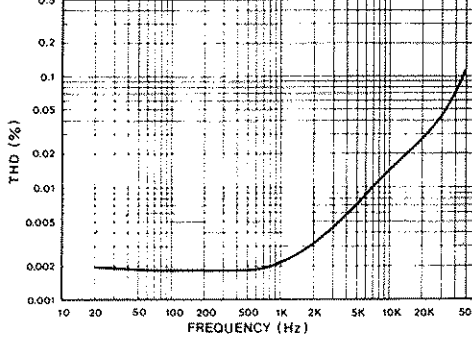
THD vs FREQUENCY CHARACTERISTICS

Load Impedance: 8Ω
Mode: MONO (BTL)
Output Power: 75W constant



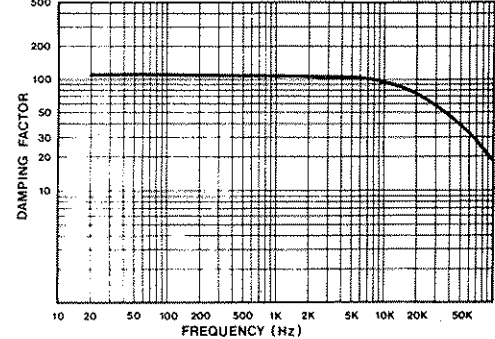
THD vs FREQUENCY CHARACTERISTICS

Load Impedance: 4Ω
Mode: STEREO
Both Channels Driven
Output Power: 38W constant



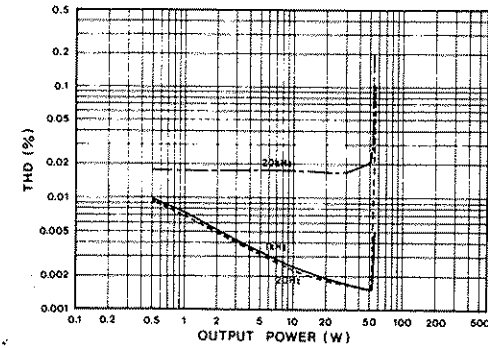
DAMPING FACTOR CHARACTERISTICS

Load Impedance: 8Ω
Mode: STEREO
Output Power: 25W constant



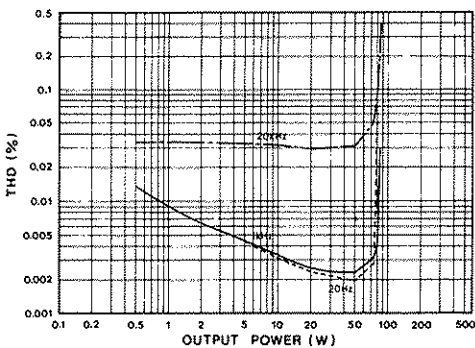
THD vs OUTPUT POWER CHARACTERISTICS

Load Impedance: 8Ω
Mode: STEREO
Both Channels Driven



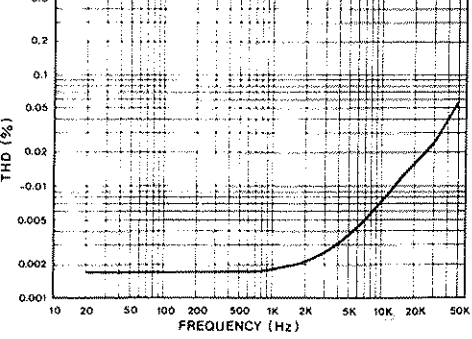
THD vs OUTPUT POWER CHARACTERISTICS

Load Impedance: 4Ω
Mode: STEREO
Both Channels Driven



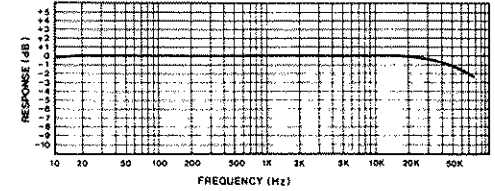
THD vs FREQUENCY CHARACTERISTICS

Load Impedance: 8Ω
Mode: STEREO
Both Channels Driven
Output Power: 25W constant

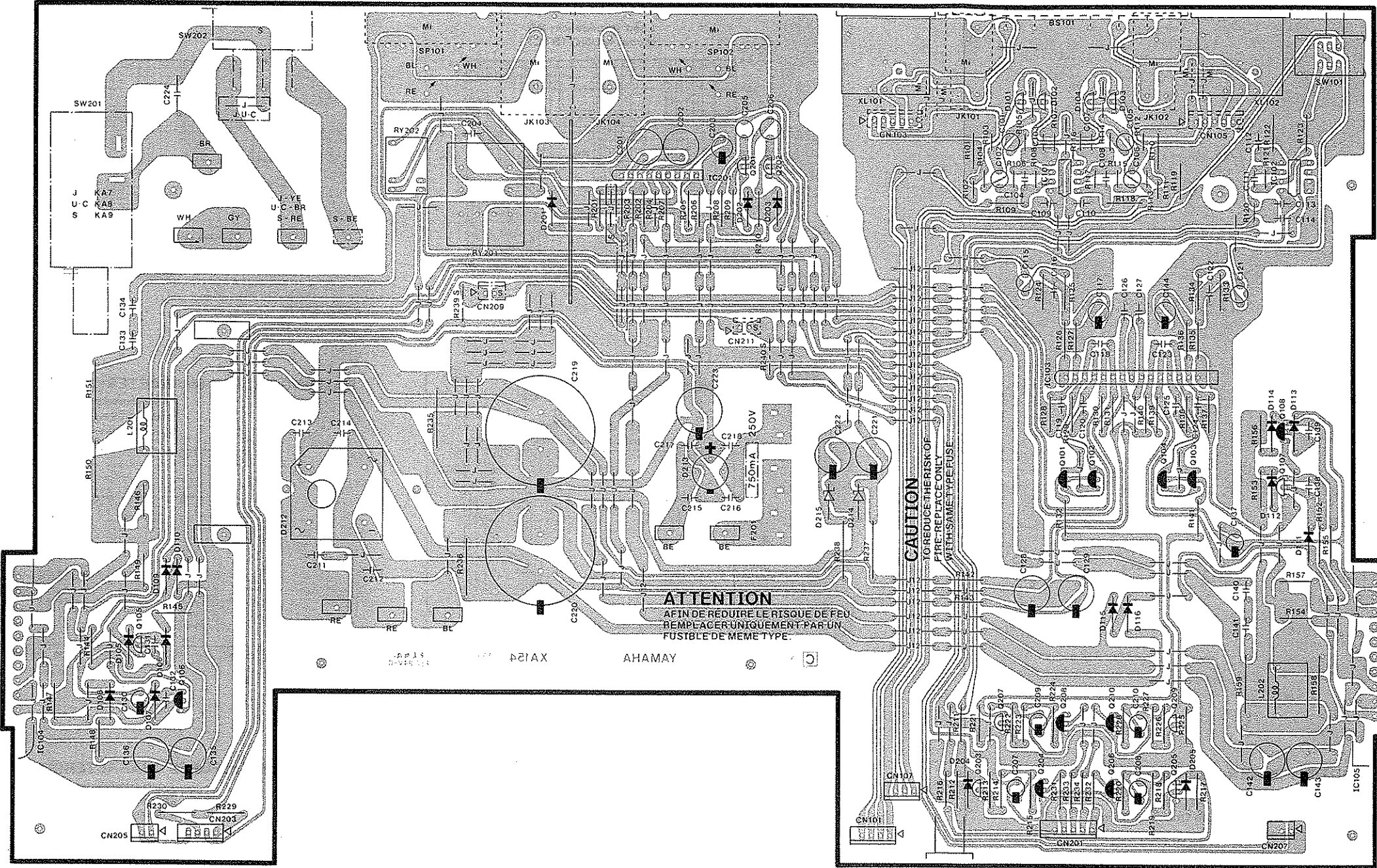


FREQUENCY RESPONSE CHARACTERISTICS

Load Impedance: 8Ω
Input Attenuators: Max
Mode: STEREO

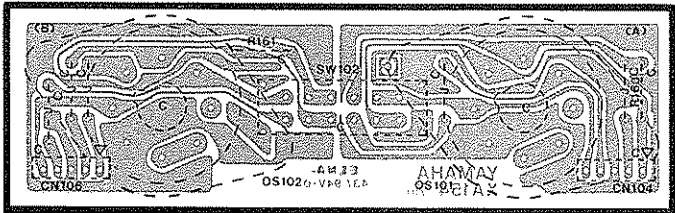


CIRCUIT BOARDS

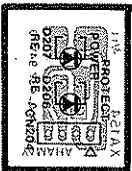


- Notes)
- 1. Circuit Board: XA154C
 - 2. IC
 - IC101,102: NJM4560D
 - IC201: TA7317P
 - IC103: STK3042 III
 - IC104,105: STK0100
 - 3. Transistor
 - Q102-104,106,108, 204,206,208,210: 2SA970
 - Q105,107,201-203, 205,207,209: 2SC2240
 - 4. Diode
 - D202-205: 1S2473
 - D105-108,111-114: 1SS82
 - D201: 10D1
 - D109,110,115,116: 1S1888
 - 5. Zener Diode
 - D214,215: 05Z15
 - 6. Double Diode
 - D101-104: MC931
 - 7. Diode Bridge
 - D213: 1G4B1
 - D212: 10G4B41
 - 8. LED
 - D206,207,210,211: LN222RP
 - D208,209: LN322GP
 - 9. Coil
 - L201,202: 1.5 μ H

INPUT(P2075C)



LED



PARTS LIST

DESTINATION ABBREVIATION

J: Japan C: Canada

U: America H: North Europe

Electrical Parts(電気部品)

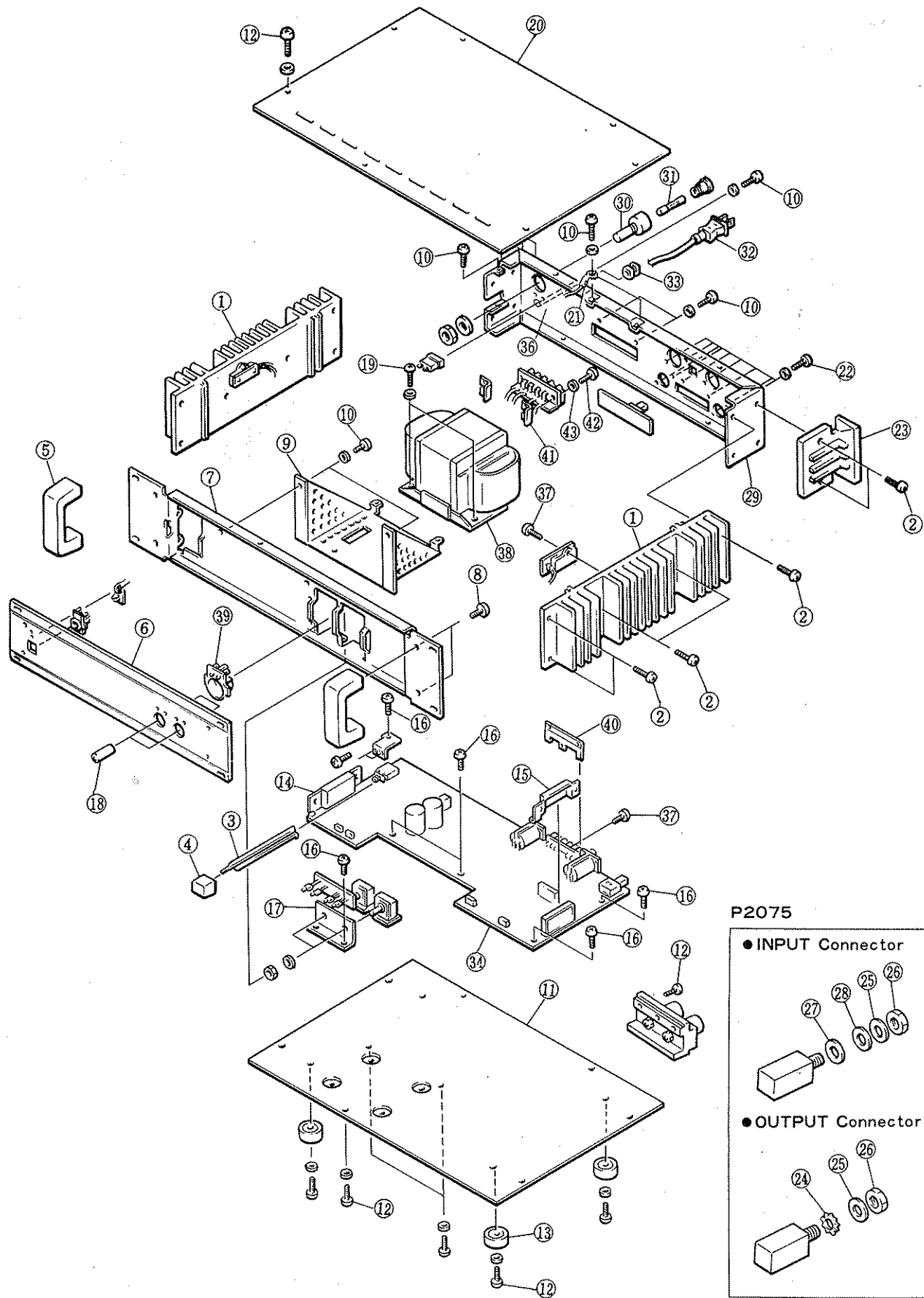
Ref	Part No	Description	部 品 名	Remarks	ランク
* * * * *	VA880200	MA Circuit Board	MAシート	P2075 J	
	VA263200	MA Circuit Board	MAシート	P2075 U	
	VA263300	MA Circuit Board	MAシート	P2075 C	
	VA263500	MA Circuit Board	MAシート	P2075 H	
	VA880300	MA Circuit Board	MAシート	P2075C J	
* * * * *	VA263700	MA Circuit Board	MAシート	P2075C U,C	
	VA263900	MA Circuit Board	MAシート	P2075C H	
	IG040000	IC	IC	OP AMP	04
	XA229001	IC	IC	PRE DRIVE	08
	XA230001	IC	IC	POWER AMP	12
* * * * *	IG034800	IC	TA7313P	PROTECTION	14
	IA097000	Transistor	2SA970(GR,BL)		03
	IC224000	Transistor	2SC2240(GR,BL)		03
	IF000670	Diode	1S2473	タ・イオード	01
	IF001400	Diode	1SS82	タ・イオード	02
* * * * *	IH000030	Diode	10D1	タ・イオード	01
	IH000320	Diode	1S1888	タ・イオード	01
	IF005120	Diode Array	MC931	タ・イオード・アレイ	01
	IH001400	Diode Bridge	1G4B1	タ・イオード・ブリッジ	03
	VA261500	Diode Bridge	10G4B41	タ・イオード・ブリッジ	07
* * * * *	IF002780	Zener Diode	05Z15	ゼナー・タ・イオード	01
	IF001720	LED (Red)	LM222RP	LED	03
	IF002180	LED (Green)	LN322GP	LED	02
	HV355100	Flame Proof Carbon Resistor	100Ω 1/4W	不熱化カーボン抵抗	01
	HU076100	Metal Film Resistor	1KΩ 1/4W	金属皮膜抵抗	02
* * * * *	HU077150	Metal Film Resistor	15KΩ 1/4W	金属皮膜抵抗	02
	HU077160	Metal Film Resistor	16KΩ 1/4W	金属皮膜抵抗	02
	HU077300	Metal Film Resistor	30KΩ 1/4W	金属皮膜抵抗	02
	HU077510	Metal Film Resistor	51KΩ 1/4W	金属皮膜抵抗	02
	HL314100	Metal Oxide Film Resistor	10Ω 1W	酸化金抵抗	01
* * * * *	HL316150	Metal Oxide Film Resistor	1.5KΩ 1W	酸化金抵抗	01
	HL316680	Metal Oxide Film Resistor	6.8KΩ 1W	酸化金抵抗	01
	HZ003950	Cement Resistor	0.33Ω 5W	セメント抵抗	02
	VA284200	Rotary Potentiometer	175KΩ	ロータリー・ポテンション	05
	FH223470	Ceramic Cap.	0.0047μF 500V	セラコン	01
* * * * *	VA261700	Electrolytic Cap.	10000μF 50V	ケミコン	07
	UK147100	Electrolytic Cap.	10μF 25V	BPコン	01
	UK347470	Electrolytic Cap.	47μF 25V	BPコン	02
	UK166220	Electrolytic Cap.	2.2μF 50V	BPコン	01
	UK166330	Electrolytic Cap.	3.3μF 50V	BPコン	01
* * * * *	UK166470	Electrolytic Cap.	4.7μF 50V	BPコン	01
	VA880100	Ceramic Cap.	4700pF 400V	セラコン	01
	GD900340	Coil	1.5μH	空芯コイル	02
	KA401280	Slide Switch	SSP32204	スライド・スイッチ	03
	KA401710	Slide Switch	SSB042	スライド・スイッチ	03
* * * * *	KA804970	Push Switch	ESB-99119R	プッシュスイッチ	08
	KA804980	Push Switch	ESB-9933T	プッシュスイッチ	J
	KA804990	Push Switch	ESB-9917S	プッシュスイッチ	U,C
	KC001980	Relay	DC MZ-24HS	リレー	H
	KC002010	Relay	DC MS24D4-0ZJ	リレー	05
* * * * *	LB302070	Phone Jack	Stereo	ホーン・ジャック	03
	LB100500	Phone Jack	Mono	ホーン・ジャック	03
	LB302320	Cannon Connector	XLB-3-3	キャノンコネクタ	07
	LB608030	Octal Socket	8P	オクタソケット	04
	KA000160	Thermal Reed Switch	QHD-70M	サーマルリレー	08
* * * * *	KA000070	Thermal Reed Switch	QHD-85M	サーマルリレー	H
	KB000320	Fuse	T750mA 250V	ヒューズ	J
	KB001220	Fuse	T750mA 250V	ヒューズ	U,C
	KB000670	Fuse	T630mA 250V	ヒューズ	H
	LA005510	Speaker Terminal	2P Left	スピーカ端子	P2075 J,H
* * * * *	LA005520	Speaker Terminal	2P Right	スピーカ端子	P2075 J,H
	LA005530	Speaker Terminal	2P Left	スピーカ端子	P2075 U,C
	LA005540	Speaker Terminal	2P Right	スピーカ端子	P2075 U,C
	LA005560	Terminal,Block	M118C-76	貫通端子台	P2075C
	LA005470	Terminal,Block	MTB94-4HB	貫通端子台	P2075C
* * * * *	VA855400	Terminal		PC用カラゲ端子	01
	KA401230	Voltage Selector		電圧切替器	H
	CB833530	Cover	SB-1417UL	コンデンサカバー	H
	VA961400	Insulation Sheet		絶縁シート	H
	CB816660	Wire Clip		ワイヤクリップ	01
* * * * *	ED330166	Bind Head Screw	3×16 FCRM3-BL	ハ・イント・小ネジ	PACK
	EI330086	Bind Head Tapping Screw	3×6 FCRM3-BL	ハ・イント・タッピング・ネジ	PACK
	EI330146	Bind Head Tapping Screw	3×14 FCRM3-BL	ハ・イント・タッピング・ネジ	PACK
	EV103030	Hexagonal Nut	φ3 FCRM3-BL	六角ナット	01
	LB201530	Fuse Holder		ヒューズホルダー	01
* * *	VA276900	Switch Angle		スイッチアングル	
	BA810160	Heat Sink		放熱板(D)	03
	BB067690	Bus Bar		バスバー	01

*: New Parts (NR)

ランク: Japan only

P2075/P2075C

Overall Assembly (総組立)



P2075

- **INPUT Connector**
- **OUTPUT Connector**

The diagram shows the input and output connectors for the P2075 unit. The input connector is labeled with 27, 28, 25, and 26. The output connector is labeled with 24, 25, and 26.

P2075/P2075C

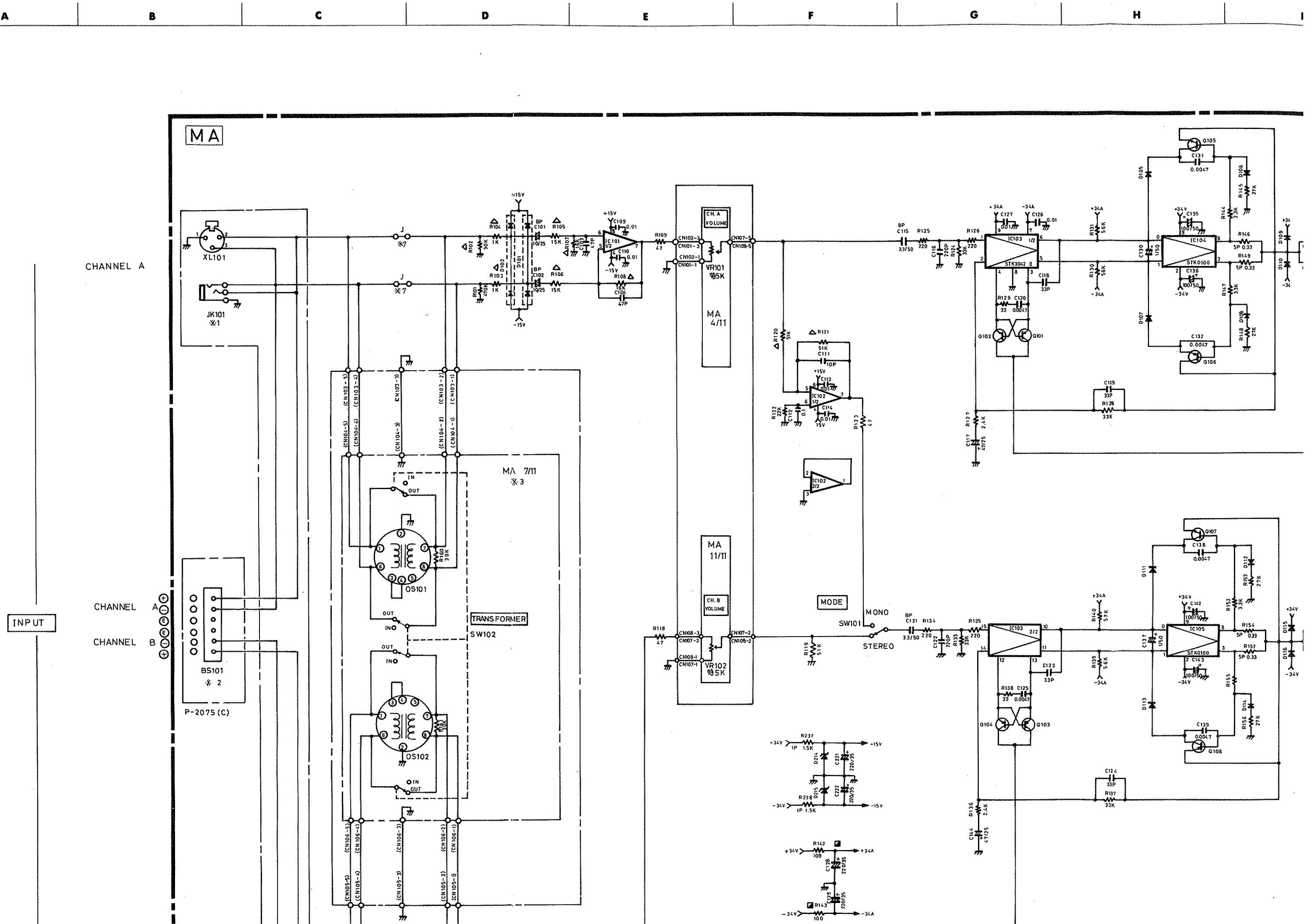
Overall Assembly (総組立)

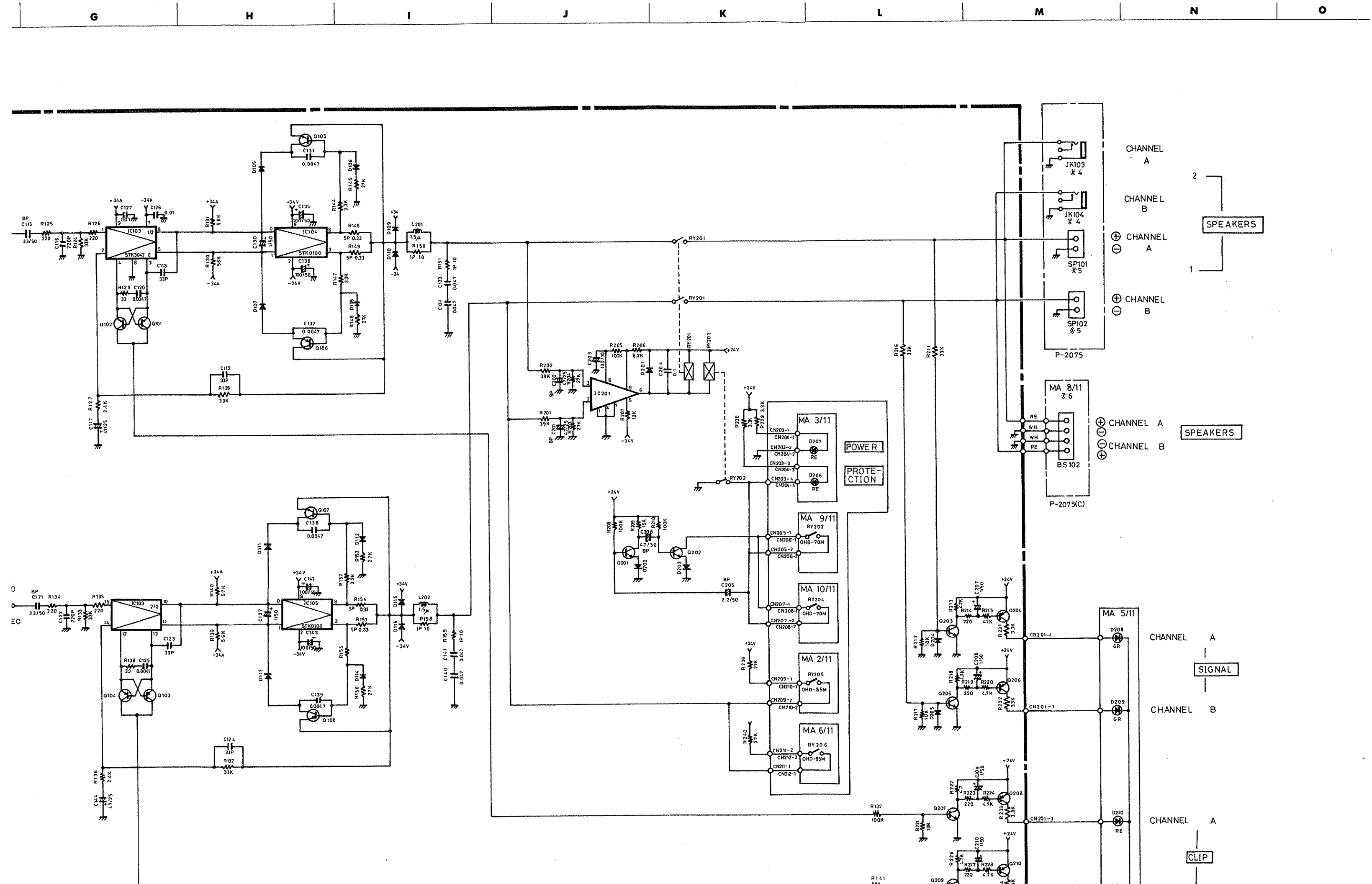
Ref	Part No	Description	部品名	Remarks	ランク
1	VA277000	Heat Sink	放熱板		
2	EI340120	Bind Head Tapping Screw	ハインドタッピョクネジ		01
3	VA276000	Rod	ロッド		
4	CB812380	Push Button	プッシュボタン		01
5	BA803270	Handle	ハンドル		07
6	VA277100	Front Panel	フロントパネル	P2075	
6	VA291500	Front Panel	フロントパネル	P2075C	
7	VA276200	Sub Panel	サブパネル		
8	EA350120	Pan Head Screw	ナハ小ネジ		01
9	VA276300	Angle Trans	トランスアングル		
10	EI340080	Bind Head Tapping Screw	ハインドタッピョクネジ		01
11	VA275800	Bottom Cover	底板		
12	EI340100	Bind Head Tapping Screw	ハインドタッピョクネジ		01
13	CB806590	Leg	ゴム脚		01
14	VA275800	Cover, IC	ICカバー		
15	VA275900	Cover, IC	ICカバー		
16	EI330068	Bind Head Tapping Screw	ハインドタッピョクネジ	PACK	01
17	VA276400	Angle, VR	VRアングル		
18	CB812370	Knob	ツマミ	P2075	02
18	CB835670	Knob	ツマミ	P2075C	02
19	EA040080	Pan Head Screw	ナハ小ネジ		01
20	VA276100	Top Cover	天板		
21	LA003690	Lug Terminal	ラック端子		01
22	EI330088	Bind Head Tapping Screw	ハインドタッピョクネジ	PACK	01
23	VA275500	AC Cord Holder	コードリール		
24	EV410096	Toothed Lock Washer	歯付座金	P2075 PACK	01
25	LX200010	Flat Washer	特殊平座金	P2075	01
26	LX200060	Hexagonal Nut	特殊六角ナット	P2075	01
27	EK002370	Washer	ファイバーワッシャー	P2075	01
28	CB810090	Nut	絶縁ナット	P2075	01
29	VA976800	Rear Panel	リアパネル	P2075 J	
29	VA276500	Rear Panel	リアパネル	P2075 U,C	
29	VA276600	Rear Panel	リアパネル	P2075 H	
29	VA976900	Rear Panel	リアパネル	P2075C J	10
29	VA276700	Rear Panel	リアパネル	P2075C U,C	
29	VA206800	Rear Panel	リアパネル	P2075C H	
30	LB200490	Fuse Holder	ヒューズホルダー	J, U, C	04
30	LB200590	Fuse Holder	ヒューズホルダー	H	
31	KB001280	Fuse	ヒューズ	J	02
31	KB001420	Fuse	ヒューズ	U, C	
31	KB000690	Fuse	ヒューズ	H	
32	MG000610	AC Cord	電源コード	J	06
32	MG000530	AC Cord	電源コード	U, C	
32	MG001130	AC Cord	電源コード	H	
33	CB806850	Cord Stopper	コードストッパー	J, U, C	02
33	CB328400	Cord Stopper	コードストッパー	H	
34	VA880200	MA Circuit Board	MAシート	P2075 J	
34	VA263200	MA Circuit Board	MAシート	P2075 U	
34	VA263300	MA Circuit Board	MAシート	P2075 C	
34	VA263500	MA Circuit Board	MAシート	P2075 H	
34	VA880300	MA Circuit Board	MAシート	P2075C J	
34	VA263700	MA Circuit Board	MAシート	P2075C U, C	
34	VA263900	MA Circuit Board	MAシート	P2075C H	
35	LB201540	Phone Jack	ホンジャック	P2075 C	
36	CB068880	Plastic Rivet	プラスチックリベット	H	
37	EI330106	Bind Head Tapping Screw	ハインドタッピョクネジ	PACK	01
38	GA841100	Power Transformer	電源トランス	J	18
38	GA841200	Power Transformer	電源トランス	U, C	
38	GA841300	Power Transformer	電源トランス	H	
39	CB836210	Cover, Knob	ノブカバー	P2075C	02
40	AA833430	Angle	BSカバー(小)	P2075C	02
41	AA832860	Angle	BSカバー(大)	P2075C	01
42	EI330120	Bind Head Tapping Screw	ハインドタッピョクネジ	P2075C	01
43	EV203030	Flat Washer	平座金	P2075C	01

※: New Parts (NR)

ランク: Japan only

P2075/P2075C





5

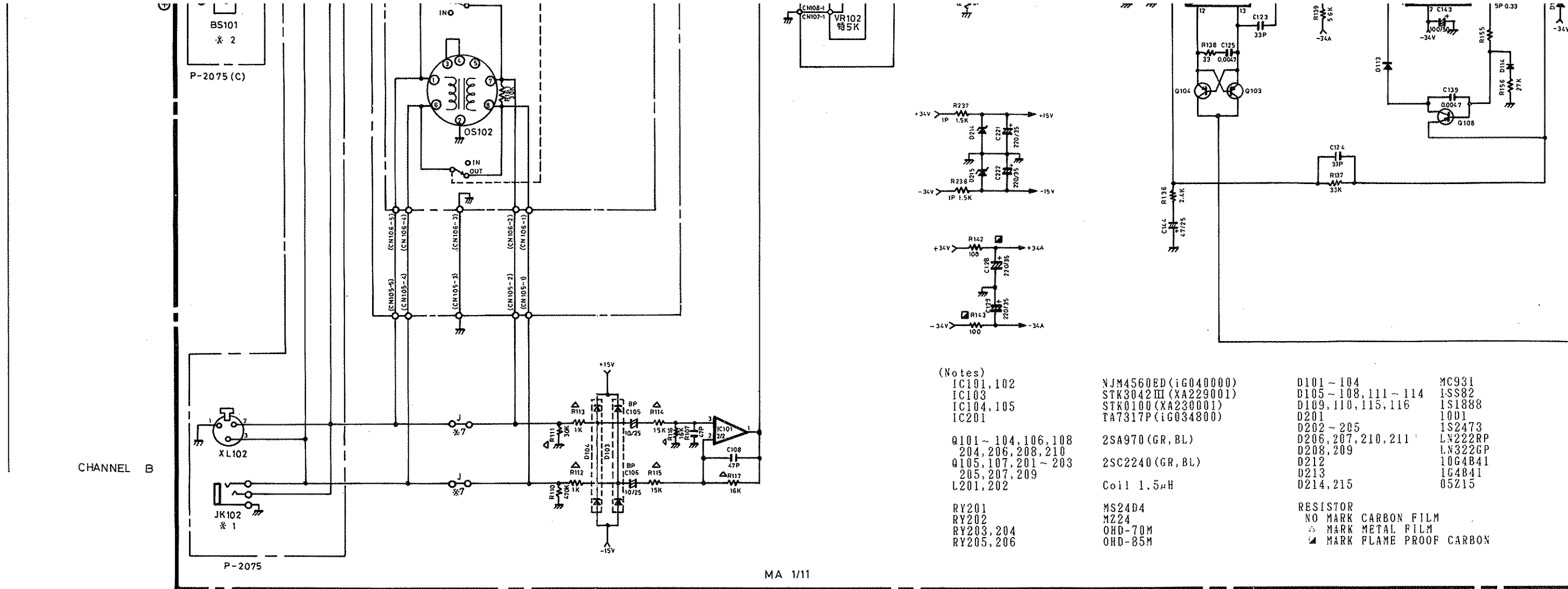
6

7

8

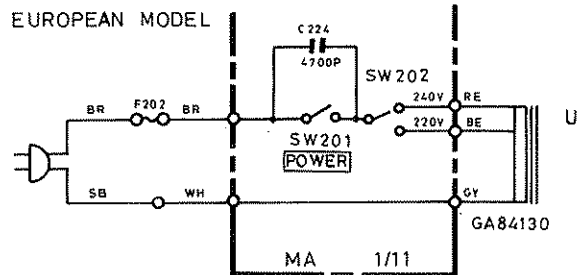
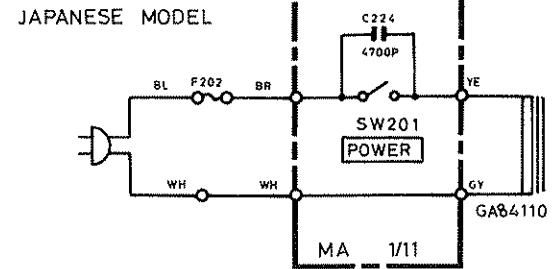
9

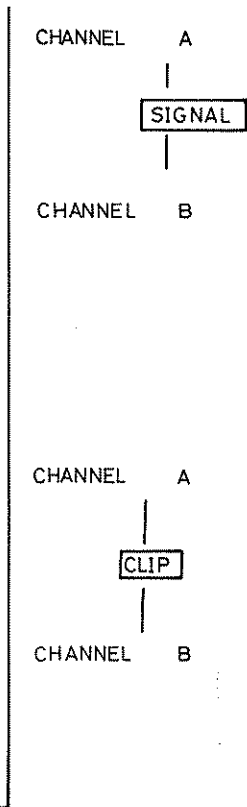
10



	*1 JK101,102	*2 BS101	*3 MA 7/11	*4 JK103,104	*5 SP101,102	*6 MA 8/11	*7 JUMPER
P2075	SET	NONSET	NONSET	SET	SET	NONSET	SHORT
P2075C	NONSET	SET	SET	NONSET	NONSET	SET	OPEN

	J	U. C	E
F 201	075A 250V	750mA 250V	T630mA 250V
F 202	6A 250V	5A 125V	T2.5A 250V
MA 2/10, 6/10	NONSET	NONSET	SET





MC931
1SS82
1S1888
10D1
1S2473
LN222RP
LN322GP
10G4B41
1G4B41
05Z15

MS24D4
MZ24
OHD-70M
OHD-85M

RESISTOR
NO MARK CARBON FILM
45 MARK METAL FILM
4 MARK FLAME PROOF CARBON

