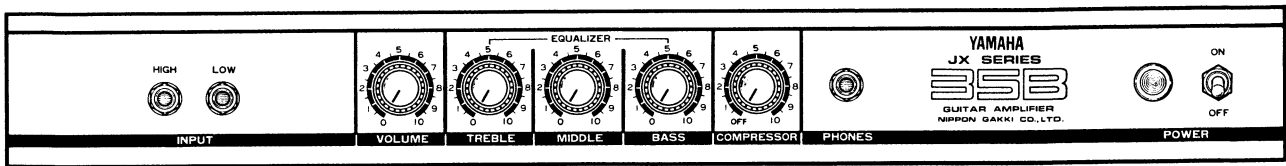


JX35B

SERVICE MANUAL

FRONT PANEL



CONTENTS

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006520

■ SPECIFICATIONS

OUTPUT POWER	30W (8Ω T.H.D. 3%)	
INPUT SENSIVITY (at 1 kHz)		
EQ. VOL } max.	HIGH	-39dB (9mV)
VOLUME }	LOW	-27dB (35mV)
INPUT IMPEDANCE	HIGH	340 kΩ
	LOW	60 kΩ
NOISE	-55dB (VOLUME → min.)	
	-35dB (VOLUME → max.)	
HEADPHONE JACK	-8dB (0.3V) @ 30W 8Ω	
SPEAKER	YAMAHA JA3808 (38cm) x 1	

POWER CONSUMPTION	US & Canadian models 40W 0.5A
	General model 65W
POWER SOURCE	120V AC fixed, or 110, 130, 220 or 240V AC selectable, 50/60Hz
DIMENSIONS (WxHxD)	544 x 695 x 300 mm (21-3/8" x 27-3/8" x 11-7/8")
WEIGHT	23.5 kg (51 lbs.)

0dB is referenced to 0.775V RMS.
Specification subject to change without notice.

■ GENERAL ADJUSTMENT AND CHECK SPECIFICATIONS

For the measurements, use an oscillator with an output impedance of below 1kΩ; an oscilloscope and an AC voltmeter/ dB meter with an input impedance of over 100kΩ.

I. GENERAL ADJUSTMENT

● Idling Current Adjustment

Adjust the pot (B500Ω) so that the voltage across the terminals TP1 (+) and E (-) on PM circuit board is set to 5mV ± 1mV.

*When readjusting all over again (e.g. when replacing the power transistor), make sure to turn the pot full counterclockwise.

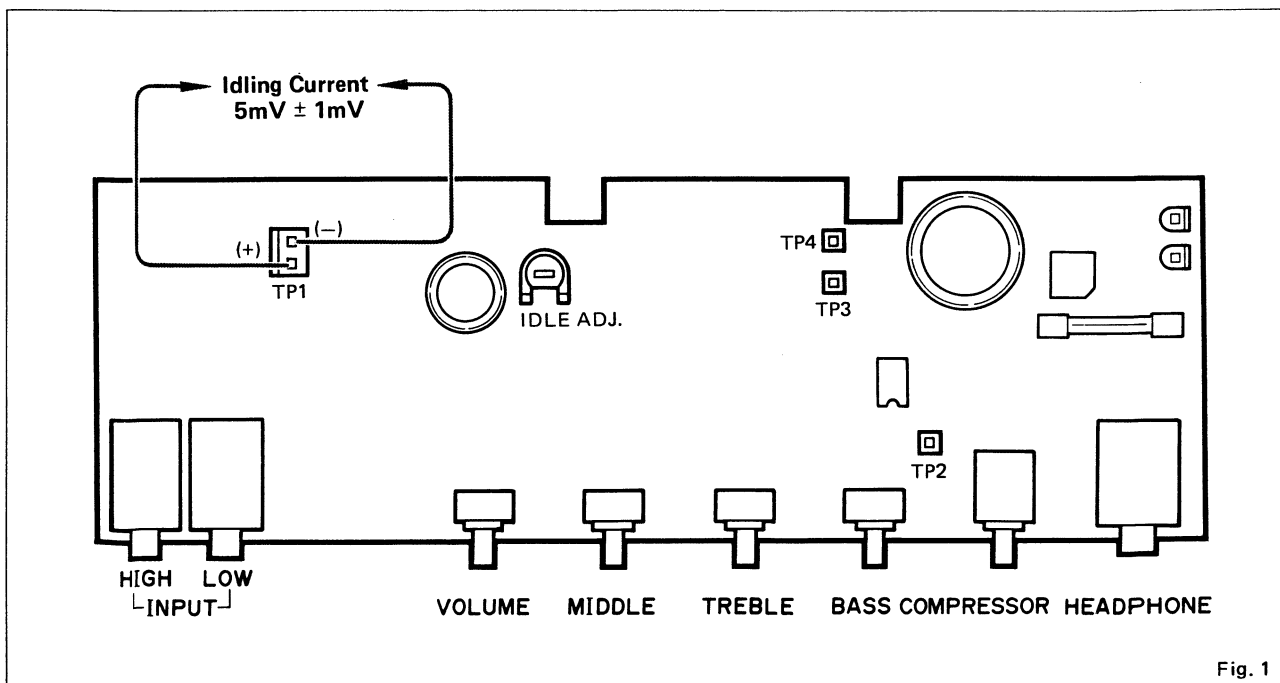


Fig. 1

II. CHECK SPECIFICATIONS

Check item	Set position of control	Measurement conditions	Point of measurement	Specifications	Remarks
1 Gain	TABLE 1	Apply a 1kHz, -60dB sine wave signal to INPUT.	PM circuit board, across "O" and "E" (8Ω load)	Output level HIGH 5dB ± 3dB LOW -7dB ± 3dB	
2 Maximum output power	TABLE 1	Apply a 1kHz sine wave signal to LOW INPUT.	PM circuit board, across "O" and "E" (8Ω load)	30W (26dB) with T.H.D. less than 3%.	
3 Frequency response	TABLE 1	Apply a 1kHz, -60dB sine wave signal to INPUT.	PM circuit board, across "O" and "E" (8Ω load)	Within ±3dB of the basic curve in Fig. 2 with 1kHz as a standard.	
4 TREBLE response	TABLE 1	Apply a 7kHz, -60dB sine wave signal to INPUT and turn TREBLE control from its minimum to maximum positions.	PM circuit board, across "O" and "E" (8Ω load)	Output variation: 17dB ± 3dB	
5 MIDDLE response	TABLE 1	Apply a 400Hz, -60dB sine wave signal to INPUT and turn MIDDLE control from its minimum to maximum positions.	PM circuit board, across "O" and "E" (8Ω load)	Output variation: 4dB ± 3dB	
6 BASS response	TABLE 1	Apply a 70Hz, -60dB sine wave signal to INPUT and turn BASS control from its minimum to maximum positions.	PM circuit board, across "O" and "E" (8Ω load)	Output variation: 12dB ± 3dB	
7 COMPRESSOR level 1 COMPRESSOR level 2	TABLE 1 COMPRESSOR max.	Apply a 1kHz, -60dB sine wave signal to LOW INPUT.	PM circuit board, across "O" and "E" (8Ω load)	Output level 13dB ± 3dB	
	Set the VOLUME so that the output level -20dB from the COMPRESSOR level 1 position	Apply a 1kHz, -10dB sine wave signal to LOW INPUT.	PM circuit board, across "O" and "E" (8Ω load)	21dB ± 3dB output with T.H.D. less than 10%.	
8 PHONES output power	TABLE 1	Apply a 1kHz, -60dB sine wave signal to LOW INPUT.	PHONES jack (8Ω load)	-39dB ± 3dB output level at both L and R.	Connect the load resistance given in Fig. 3.
9 Noise level	TABLE 1	Nothing plugged into INPUT TABLE 2	PM circuit board, across "O" and "E" (8Ω load)	TABLE 2	

Note: 0dB is referenced to 0.775 V RMS.

● TABLE 1

Knob	Set position
VOLUME	max.
TREBLE	max.
MIDDLE	max.
BASS	max.
COMPRESSOR	OFF

● TABLE 2

Control settings		Output level
VOLUME	COMPRESSOR	
max.	max.	-24dB
max.	OFF	-35dB
min.	OFF	-60dB

● FREQUENCY RESPONSE

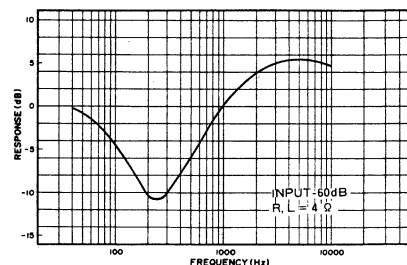


Fig. 2

● PHONES LOAD

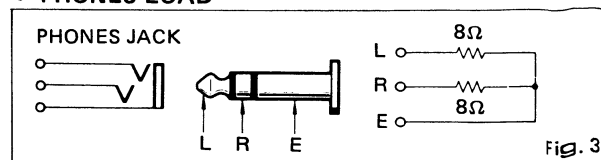
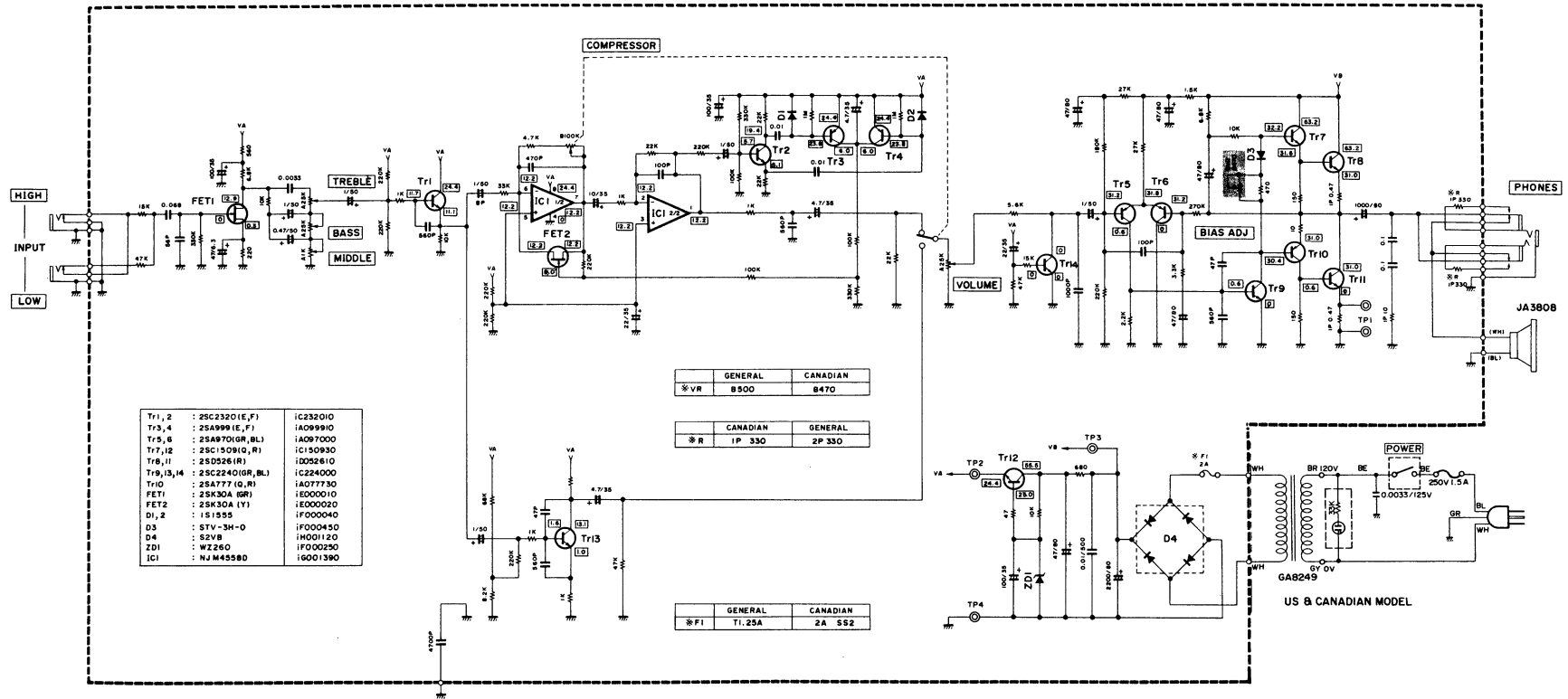
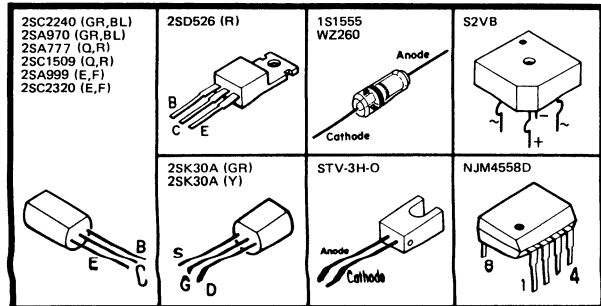


Fig. 3

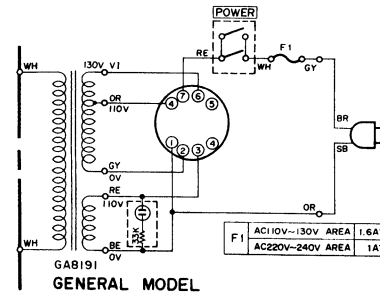
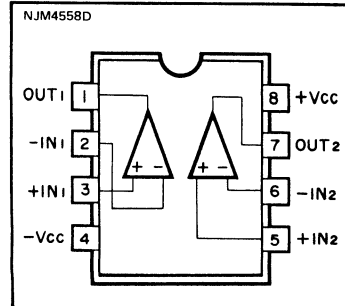
SCHEMATIC DIAGRAM



PIN-CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND ICs.



IC SCHEMATIC DIAGRAM



WIRE COLOR ABBREVIATIONS

- | | |
|-------------|------------------|
| BL ▶ Black | VI ▶ Violet |
| BR ▶ Brown | GY ▶ Gray |
| RE ▶ Red | WH ▶ White |
| OR ▶ Orange | GG ▶ Light Green |
| YE ▶ Yellow | SB ▶ Light Blue |
| GR ▶ Green | PK ▶ Pink |
| BE ▶ Blue | |

*All voltages measured with a 10MΩ/V DC electric volt meter, under no-signal condition.
*Schematic diagram is subject to change without notice.

PARTS LIST

JX35B

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EXPLODED VIEW (AMP. UNIT)	1
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EXPLODED VIEW (CABINET)	4
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PARTS LIST (ELECTRICITY)	5

U: U.S.A. model

C: Canadian model

G: General model

J: Japanese model

SINCE 1887

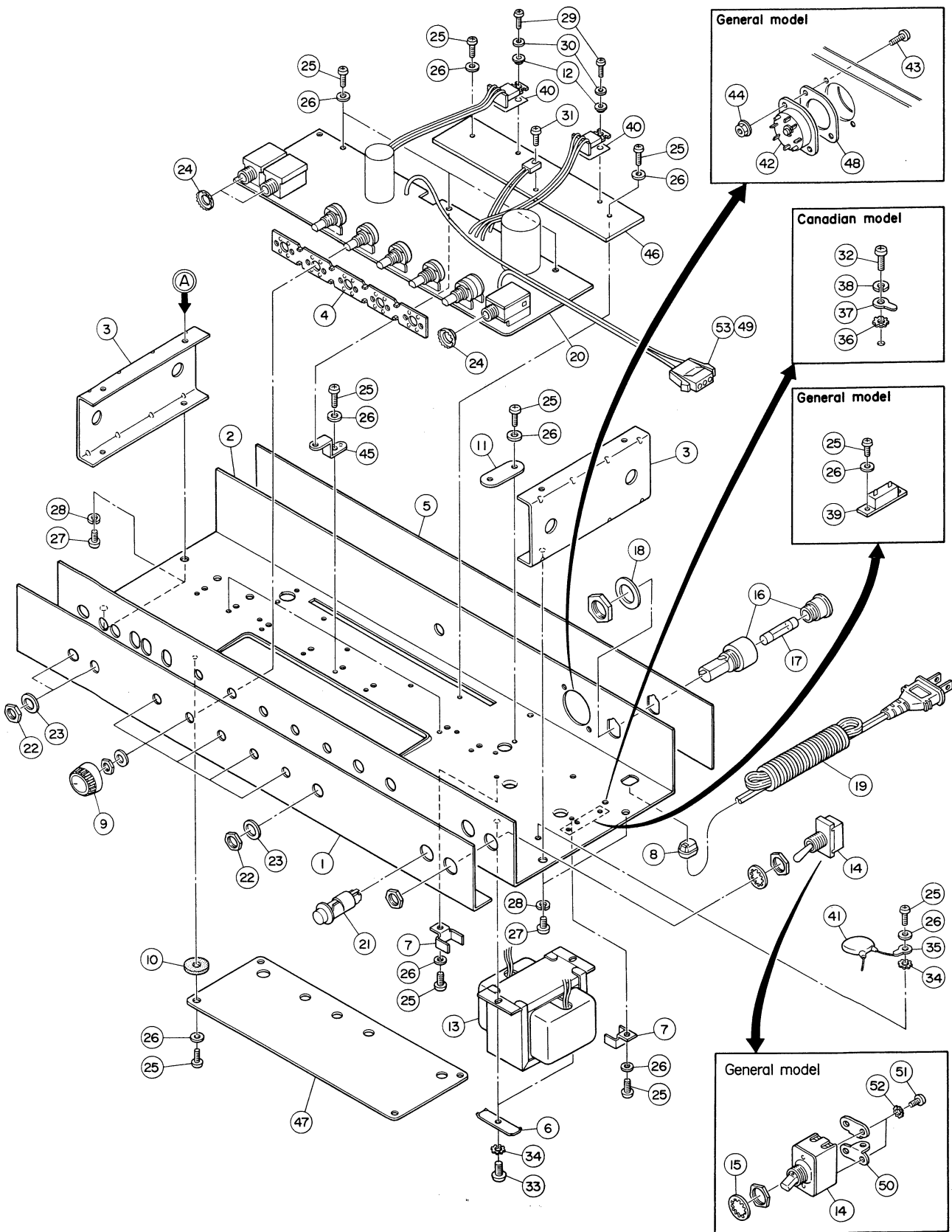


YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

006520

EXPLODED VIEW (AMP. UNIT)



■ PARTS LIST

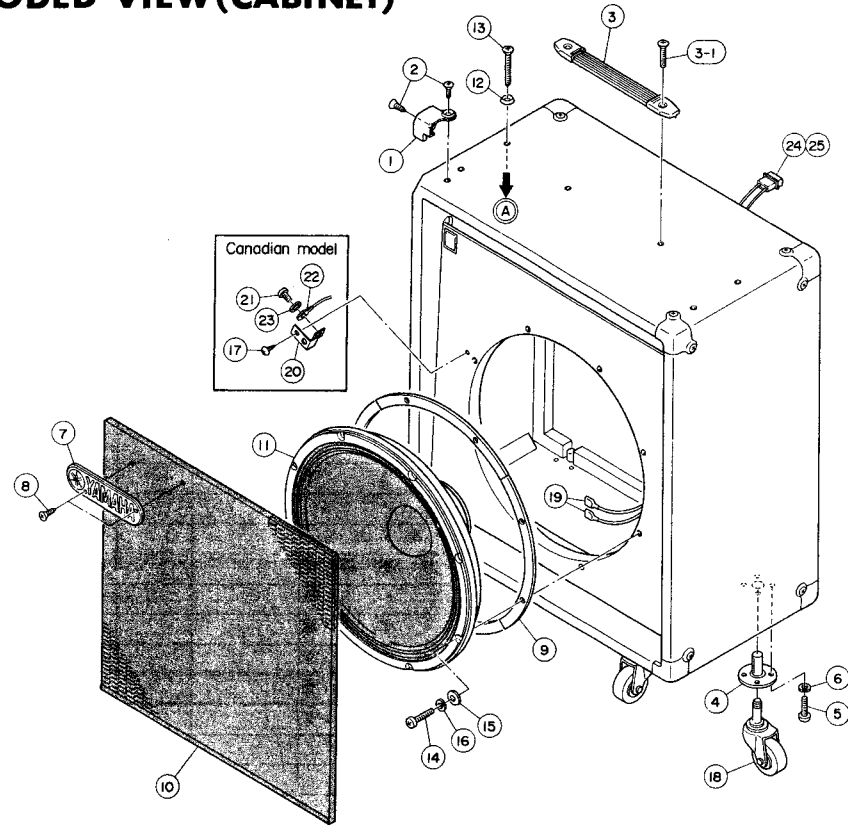
Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
* 1	AA:82:39:00	Front Panel	フロントパネル			J,C,U
* "	AA:82:39:10	"	"			G
2	AA:81:21:30	Chassis	シャーシ			J
"	AA:81:21:80	"	"			C,U
"	AA:81:22:30	"	"			G
3	AA:81:25:50	Side Stay	サイドステー			
4	AA:81:30:60	Spacer	スペーサー			J
* 5	AA:82:39:20	Rear Panel	リアパネル			J
* "	AA:82:39:30	"	"			C,U
* "	AA:82:39:40	"	"			G
6	AA:81:25:80	Transformer Support	トランス補強板			
7	AA:81:25:70	Cover	トランスリードカバー			J,G
"	AA:82:40:80	"	"			C,U
8	CB:06:86:30	Cord Bush	コードブッシュ			J
"	CB:80:68:50	"	"			C,U
"	CB:07:27:50	"	"			G
9	CB:81:93:10	Knob	ツマミ			
10	CB:80:15:90	Rubber Bush	ゴムブッシュ			
11	CB:81:46:50	Wire Push	線材押え			
12	CB:07:28:80	Bush	絶縁ブッシュ			
13	GA:81:89:10	Power Transformer	電源トランス		JX30B	J
"	GA:82:49:00	"	"			C,U
"	GA:81:91:10	"	"			G
14	KA:30:06:00	Toggle Switch	トグルスイッチ			J,U,C
"	KA:30:03:00	"	"			G
15	EV:41:01:20	Toothed Lock Washer	A12S ZMC2-Bℓ 歯付座金			G
16	LB:20:04:90	Fuse Holder	ヒューズホルダー			J,C,U
"	LB:20:05:90	"	"			G
17	KB:00:03:40	Fuse	1.5A 250V ヒューズ			J
"	KB:00:12:90	" UL	1.5A 250V "			C,U
"	KB:00:07:30	" Mini	1AT 250V "			G
18	AA:03:15:80	Fuse Holder Washer	ヒューズホルダーワッシャー			G
19	MG:00:06:00	Power Supply Cord	電源コード			J
"	MG:00:10:10	"	"			C,U
"	MG:00:12:00	"	"			G
* 20	NA:80:86:30	PM C. Board	#87361 P M シート			J
* "	NA:80:86:40	"	#87361 "			C,U
* "	NA:80:86:50	"	#87361 "			G
21	JB:00:07:20	Lamp Holder	ランプホルダー			
22	LX:20:00:60	Hexagonal Nut	9S 特殊六角ナット			
23	LX:20:00:10	Flat Washer	9S 特殊平座金			
24	AA:80:58:20	Spacer	9S スペーサー			
25	EJ:33:00:80	Pan Head Tapping Screw	3x8 ZMC2-Bℓ ナベタッピングネジ			
26	EV:20:30:30	Flat Washer	3S ZMC2-Bℓ 平座金			
27	ED:35:00:80	Bind Screw	M5x8 ZMC2-Bℓ バインド小ネジ			
28	EV:30:30:50	Spring Lock Washer	5S ZMC2-Bℓ バネ座金			
29	EA:02:60:80	Pan Head Screw	M2.6x8 ZMC2-Y ナベ小ネジ			
30	EV:20:02:60	Flat Washer	2.6S ZMC2-Bℓ 平座金			
31	EA:33:00:60	Pan Head Screw	M3x6 ZMC2-Bℓ ナベ小ネジ			
32	EA:34:00:80	"	M4x8 ZMC2-Bℓ "			C
33	Ei:34:00:80	Bind Tapping Screw	4x8 ZMC2-Bℓ バインドタッピングネジ			
34	EV:42:00:30	Toothed Lock Washer	B3S ZMC2-Y 歯付座金			
35	LA:00:02:80	Ground Lug	3φ アースラグ			

* New Parts (新規部品)

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
36	EV:42:30:40	Toothed Lock Washer	B4S ZMC2-Bℓ 歯付座金			
37	LA:00:02:90	Ground Lug	4φ アースラグ			C
38	EV:30:30:40	Spring Lock Washer	4S ZMC2-Bℓ バネ座金			C
39	LA:00:29:50	Terminal	2P 端子板			G
40	iL:00:05:80	Mica Base	マイカベース			
41	FZ:00:21:60	Ceramic Cap.	0.0033μF AC125V セラコン			J,C,U
42	LB:20:00:25	Voltage Selector	電圧切換器			G
43	ED:33:01:00	Bind Screw	M3x10 ZMC2-Bℓ バインド小ネジ			G
44	EK:80:06:30	Flange Nut	M3 ZMC2-Bℓ フランジナット			G
45	AA:81:25:90	Circuit Board Holder	シートホルダー			
46	BA:80:40:20	Heat Sink	放熱板			J,C,U
"	BA:80:41:70	"	"			G
47	AA:81:27:30	Shield Cover	シールドカバー			
48	CB:07:64:00	VS Insulator	V S 絶縁板			G
49	BB:00:14:40	Contact	電極			J,C
50	BB:80:15:50	Lug	ラグ板			G
51	EA:33:00:80	Pan Head Screw	M3x8 ZMC2-Bℓ ナベ小ネジ			G
52	EV:42:30:30	Toothed Lock Washer	B3S ZMC2-Bℓ 歯付座金			G
53	CB:00:64:50	3P Socket Housing	3Pソケットハウジング			

* New Parts (新規部品)

EXPLODED VIEW(CABINET)



PARTS LIST

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
*	DC 82:76:00	Cabinet	外 装			
1	AA 80:76:60	Corner Angle	コ ー ナ ー 金 具			
2	ER 23:51:30	Oval Head Wood Screw	丸 皿 木 ネ ジ	3.5x13 FNM3-3g		
3	NB 81:26:40	Handle Ass'y	取 手 Ass'y			
3-1	EF 24:02:50	Oval Head Screw	丸 皿 小 ネ ジ	M4x25 FNM3-3g		
4	AA 80:16:90	Caster Socket	キャスターソケット			
5	ED 35:02:00	Bind Screw	バ イ ン ド 小 ネ ジ	M5x20 ZMC2-Bℓ		
6	EV 30:30:50	Spring Lock Washer	バ ネ 座 金	5S ZMC2-Bℓ		
7	CB 81:37:90	Name Plate	ネ ー ム プ レ ー ト			
8	ER 33:51:30	Oval Head Wood Screw	丸 皿 木 ネ ジ	3.5x13 FCM3-Bℓ		
9	CB 80:19:10	Speaker Packing	スピーカパッキン			
*	DA 82:21:40	Front Panel	前 板 集 成			
11	JA 38:08:00	Speaker	ス ピ ー カ ー			
12	EK 80:00:30	Washer	山 型 ワ ッ シ ャ ー	5φ ZMC2-Bℓ		
13	EF 35:04:00	Oval Head Screw	丸 皿 小 ネ ジ	5x40 ZMC2-Bℓ		
14	ED 34:02:00	Bind Screw	バ イ ン ド 小 ネ ジ	M4x20 ZMC2-Bℓ		
15	EV 20:30:40	Flat Washer	平 座 金	4S ZMC2-Bℓ		
16	EV 30:30:40	Spring Lock Washer	バ ネ 座 金	4S ZMC2-Bℓ		
17	EQ 33:11:00	Round Head Wood Screw	丸 木 ネ ジ	3.1x10 ZMC2-Y		C
18	AA 80:16:80	Caster	キャスター			
19	LA 00:14:40	Terminal	ファストン端子			
20	AA 80:14:40	Ground Angle	ア ー ス 金 具			C
21	EA 04:00:60	Pan Head Screw	ナ ベ 小 ネ ジ	M4x6 ZMC2-Y		C
22	LA 00:02:90	Ground Lug	ア ー ス ラ グ	4φ		C
23	EV 41:00:40	Toothed Lock Washer	歯 付 座 金	A4S ZMC2-Y		C
24	CB 00:64:70	3P Housing	3 P ハ ウ ジ ン グ			
25	BB 00:14:60	Terminal	電 極			

* New Parts (新規部品)

PARTS LIST(ELECTRICITY)

Ref. No.	Part No.	Description	部品名	Remarks	Common Model	Markets
*	NA 80:86:30	PM C. Board	#87361	P M シ ー ト		J
*	NA 80:86:40	"	#87361	"		C,U
*	NA 80:86:50	"	#87361	"		G
	FM 77:91:00	Electrolytic Cap.	1000μF 80V	ケ ミ コ ン		
	FM 77:92:20	"	2200μF 80V	"		
	UK 16:61:00	" Bipolar Type	1μF 50V	B P ケ ミ コ ン		
	HV 35:56:80	Flame Proof Resistor	680Ω	不 燃 化 カ ー ボ ン 抵 抗		
	HV 35:61:50	"	1.5kΩ	"		
	HL 31:41:00	Metal Oxide Film Resistor	1P 10Ω	酸 化 金 属 皮 膜 抵 抗		
	HL 31:53:30	"	1P 330Ω	"		J,C,U
	HL 31:24:70	"	1P 0.47Ω	"		
	HM 52:53:30	Cement Resistor	2P 330Ω	セ メ ン ト 抵 抗		
*	HS 31:14:30	Variable Resistor	A1kΩ	可 変 抵 抗 器		
*	HS 31:14:50	"	A25kΩ	"		
*	HS 31:16:80	"	B100kΩ	"		
	HT 77:00:20	Semi-Fixed Variable Resistor	B500Ω	半 固 定 抵 抗		J,G
	HT 41:01:20	"	B470Ω	"		C,U
	iA 07:77:30	Transistor	2SA777 (Q,R)	ト ラ ン ジ ス タ		
	iA 09:70:00	"	2SA970(GR,BL)	"		
	iA 09:99:10	"	2SA999 (E,F)	"		
	iC 15:09:30	"	2SC1509 (Q,R)	"		
	iC 22:40:00	"	2SC2240(GR,BL)	"		
	iC 23:20:10	"	2SC2320(E,F)	"		
	iD 05:26:10	"	2SD526 (R,O)	"		
	iE 00:00:10	FET	2SK30A (Y)	F E T		
	iE 00:00:20	"	2SK30A (GR)	"		
	iF 00:00:40	Diode	1S1555	ダ イ オ ー ド		
	iF 00:02:50	Zener Diode	WZ260	ツ ェ ナ ー ダ イ オ ー ド		
	iF 00:04:50	Varistor Diode	STV-3H-0	バ リ ス タ ダ イ オ ー ド		
*	iH 00:11:20	Bridge Rectifier	S2VB	ダ イ オ ー ド ブ リ ッ ジ		
	iG 00:13:90	IC	NJM4558D	I C		
	KB 00:03:50	Fuse	2A	ヒ ユ ー ズ		J
*	KB 00:10:30	" UL	2A	"		C,U
	KB 00:06:80	" Mini	T1.25A	"		G
	LB 10:05:00	Jack	Mono	ジ ャ ッ ク		
	LB 30:10:80	"	Stereo	"		

* New Parts (新規部品)