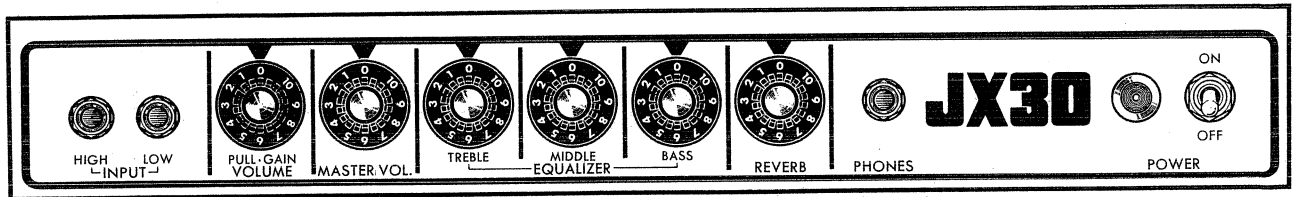


JX30

SERVICE MANUAL

FRONT PANEL



CONTENTS

SPECIFICATIONS	2	PRINTED CIRCUIT BOARD	4
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SPECIFICATIONS

OUTPUT POWER		30 W (8Ω T.H.D. 3%)								
INPUT SENSIVITY (at 1kHz)	PULL-GAIN HIGH	-39dB (9mV)								
	push LOW	-27dB (35mV)								
<table border="0"> <tr> <td>MAS.VOL</td> <td rowspan="2">} max.</td> <td>PULL-GAIN HIGH</td> <td>-53dB (1.7mV)</td> </tr> <tr> <td>EQ.VOL</td> <td>pull LOW</td> <td>-41dB (7mV)</td> </tr> </table>	MAS.VOL	} max.	PULL-GAIN HIGH	-53dB (1.7mV)	EQ.VOL	pull LOW	-41dB (7mV)			
	MAS.VOL		} max.	PULL-GAIN HIGH	-53dB (1.7mV)					
EQ.VOL	pull LOW	-41dB (7mV)								
INPUT IMPEDANCE		HIGH 340KΩ, LOW 60KΩ								
NOISE	-55dB (MAS. VOL → min. VOLUME → min.)									
	-35dB (MAS. VOL → max. VOLUME → max.)									
	-25dB (MAS. VOL → max. VOLUME → max. PULL-G → pull)									
REVERB		Spring Type								

HEADPHONE JACK	-8dB (0.3V) @ 30W 8Ω
SPEAKER	YAMAHA JA3067 (30 cm) x 1
POWER CONSUMPTION	Canadian Model 40W 0.5A Other Models 65W
POWER SOURCE	120V AC fixed, or 110, 130, 220 or 240V AC selectable, 50/60 Hz
DIMENSIONS W x H x D	473 x 455 x 210 mm 18.6" x 17.7" x 8.3"
WEIGHT	13.6 kg (30 lbs)

Specifications 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

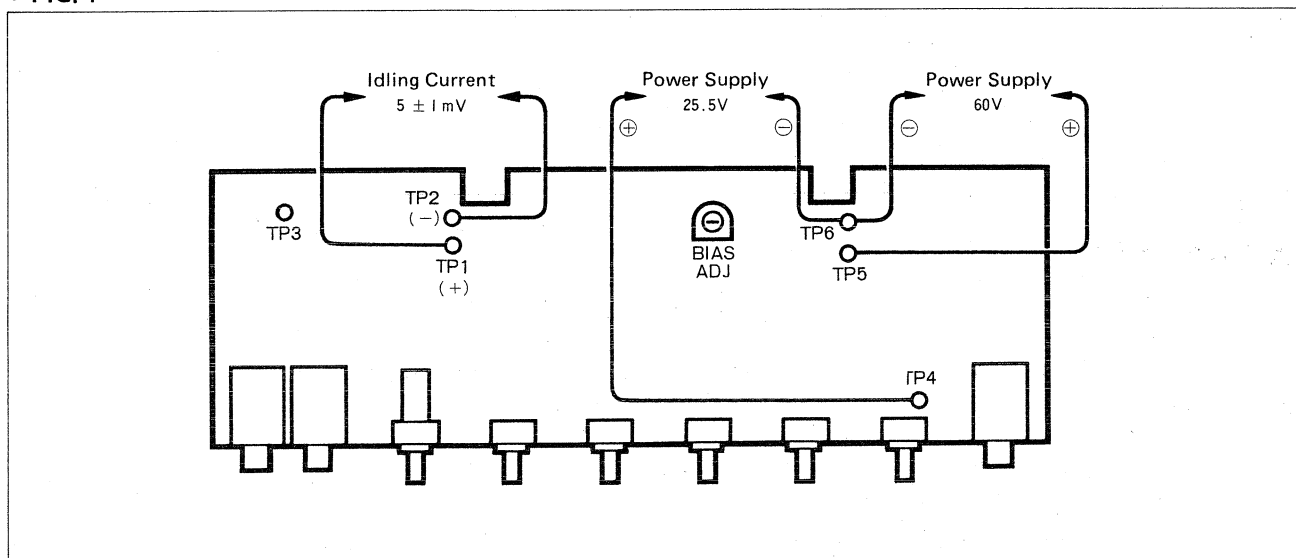
Adjust the pot (B500Ω) so that the voltage across the terminals TP1 (+) and TP2 (-) on PM circuit board is set to 5 ± 1mV.

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

● Power Supply Voltage Check

Check to ensure that a voltage of 60V is obtained across TP5 (+) and TP6 (-) and 25.5V across TP4 (+) and TP6 (-).

● 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 listed in TABLE 2.	
2 Maximum output power	TABLE 1	Apply a 1kHz sine wave signal to HIGH INPUT.	PM circuit board, across "O" and "E" (8Ω load)	30W (26.02dB) with T.H.D. less than 3%.	
3 Frequency response	TABLE 1	Apply an approximately 1kHz, -60dB sine wave signal to HIGH 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 HIGH INPUT and turn TREBLE control from its minimum to maximum positions.	PM circuit board, across "O" and "E" (8Ω load)	Output variation: 16 ± 3dB	
5 MIDDLE response	TABLE 1	Apply a 400Hz, -60dB sine wave signal to HIGH INPUT and turn MIDDLE control from its minimum to maximum positions.	PM circuit board, across "O" and "E" (8Ω load)	Output variation: 6 ± 3dB	
6 BASS response	TABLE 1	Apply a 70Hz, -60dB sine wave signal to HIGH INPUT and turn BASS control from its minimum to maximum positions.	PM circuit board, across "O" and "E" (8Ω load)	Output variation: 12 ± 3dB	
7 PHONES output power	TABLE 1	Apply a 1kHz, -60dB sine wave signal to HIGH INPUT.	PHONES jack (8Ω load)	-30dB output level at both L and R.	Connect the load resistance given in FIG. 3.
8 REVERB drive circuit	TABLE 1	Remove REVERB unit and apply a 1kHz, -60dB sine wave signal to HIGH INPUT.	PM circuit board, across TP3 and E (600Ω load)	Output level: -3.5 ± 2dB	
9 Reverberation output amplification circuit	TABLE 1 except REVERB → Max	Remove REVERB unit and apply a 1kHz, -60dB sine wave signal across P1 and E on PM circuit board.	PM circuit board, across "O" and "E" (8Ω load)	Output level: -6 ± 3dB	
10 Noise level	TABLE 1	(1) PULL · GAIN → pull (2) PULL · GAIN → push (3) MASTER VOL → Min	PM circuit board, across "O" and "E" (8Ω load)	(1) less than -28dB (2) less than -37dB (3) less than -55dB	

● TABLE 1

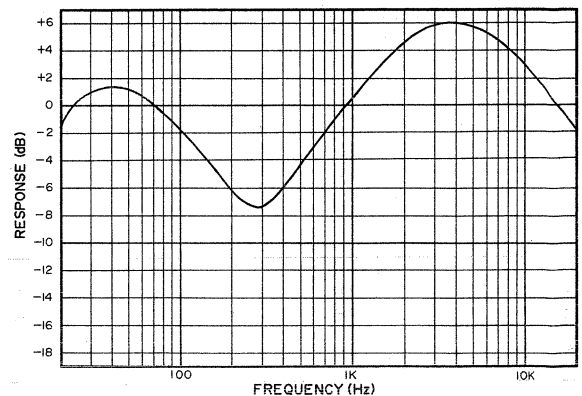
Knob	Set Position
PULL · GAIN/VOLUME	PULL · GAIN → Push VOLUME max.
MASTER VOL.	max.
TREBLE	max.
BASS	max.
REVERB	min.

● TABLE 2

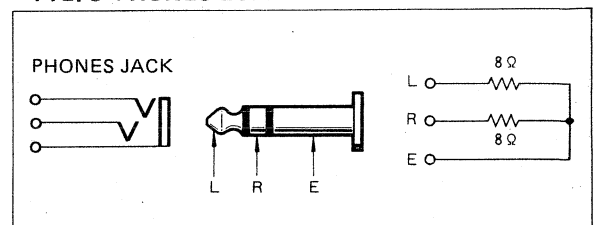
HIGH INPUT	PULL · GAIN → Pull	19 ± 3dB
	PULL · GAIN → Push	5 ± 3dB
LOW INPUT	PULL · GAIN → Pull	7 ± 3dB
	PULL · GAIN → Push	-7 ± 3dB

Note: 0dB is referenced to 0.775 V RMS.

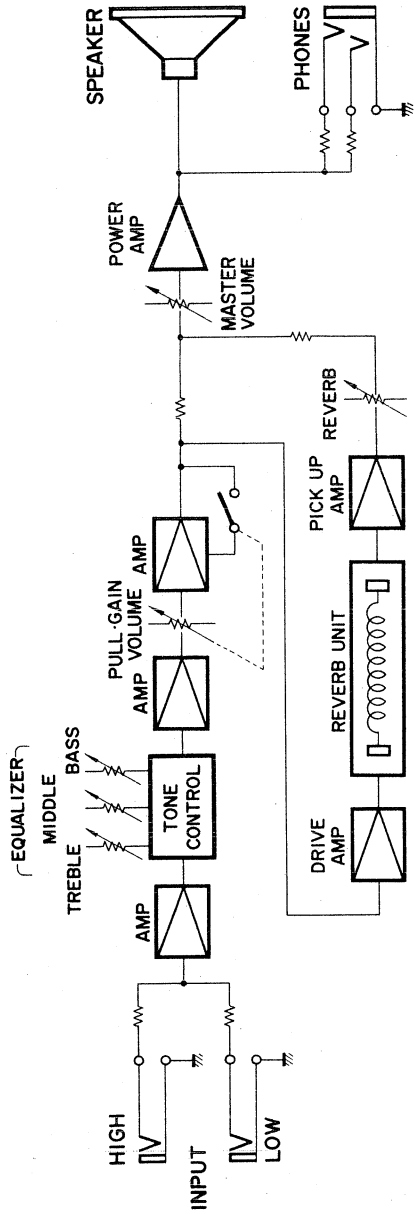
● FIG. 2 FREQUENCY RESPONSE



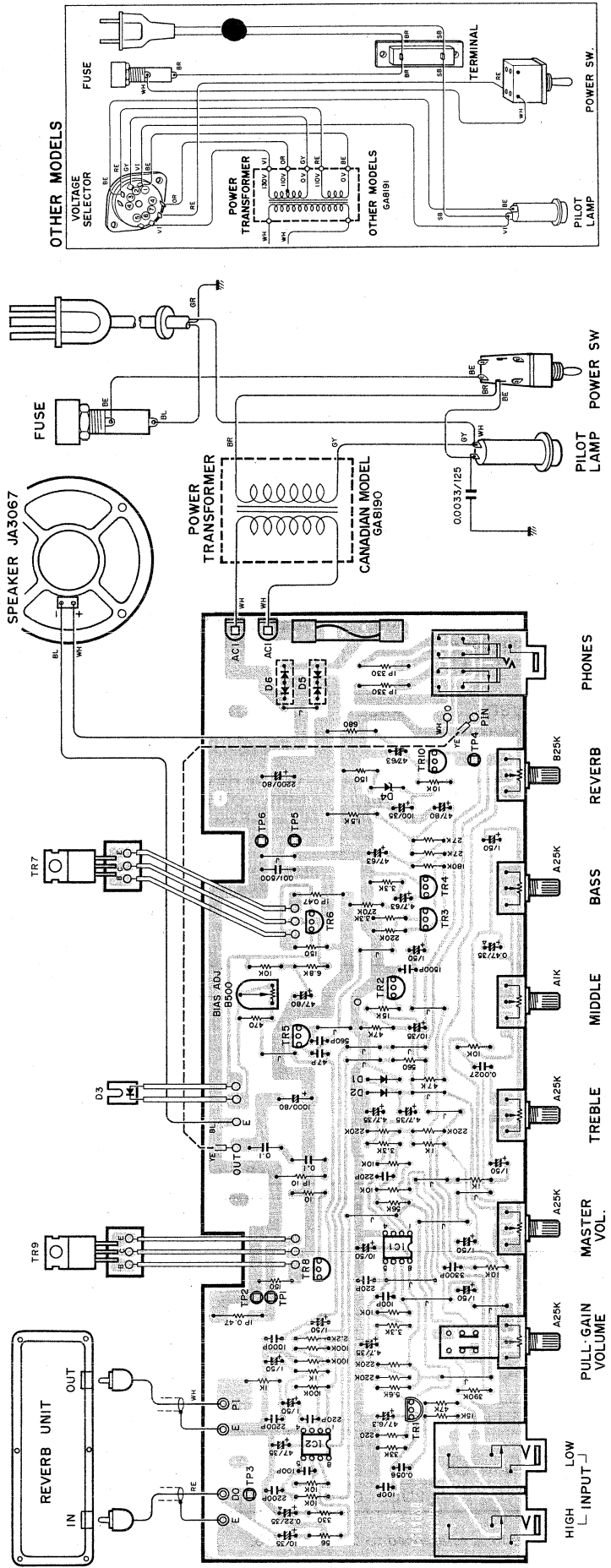
● FIG. 3 PHONES LOAD



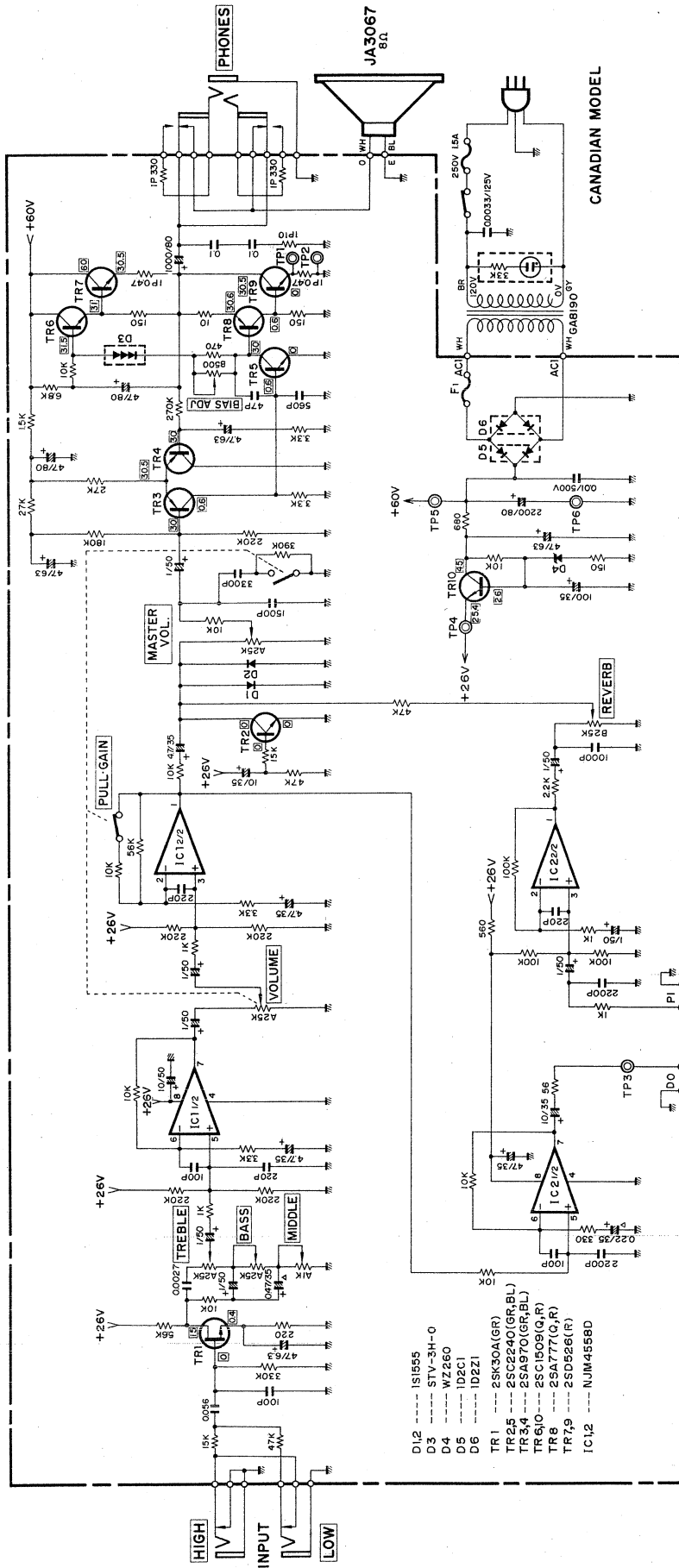
■ BLOCK DIAGRAM



■ PRINTED CIRCUIT BOARD

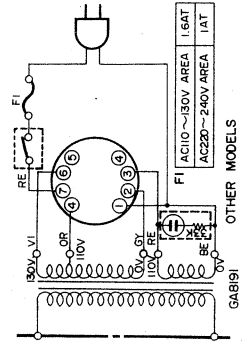


SCHEMATIC DIAGRAM



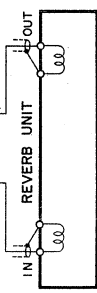
- D1,2 --- 1S1555
- D3 --- STV-3H-0
- D4 --- WZ260
- D5 --- 1D2C1
- D6 --- 1D2Z1
- TR1 --- 2SK30A(GR)
- TR2,5 --- 2SC2240(GR,BL)
- TR3,4 --- 2SA970(GR,BL)
- TR6,10 --- 2SC1509(G,R)
- TR8 --- 2SA777(G,R)
- TR7,9 --- 2SD526(R)
- IC1,2 --- NJM4558D

CANADIAN MODEL

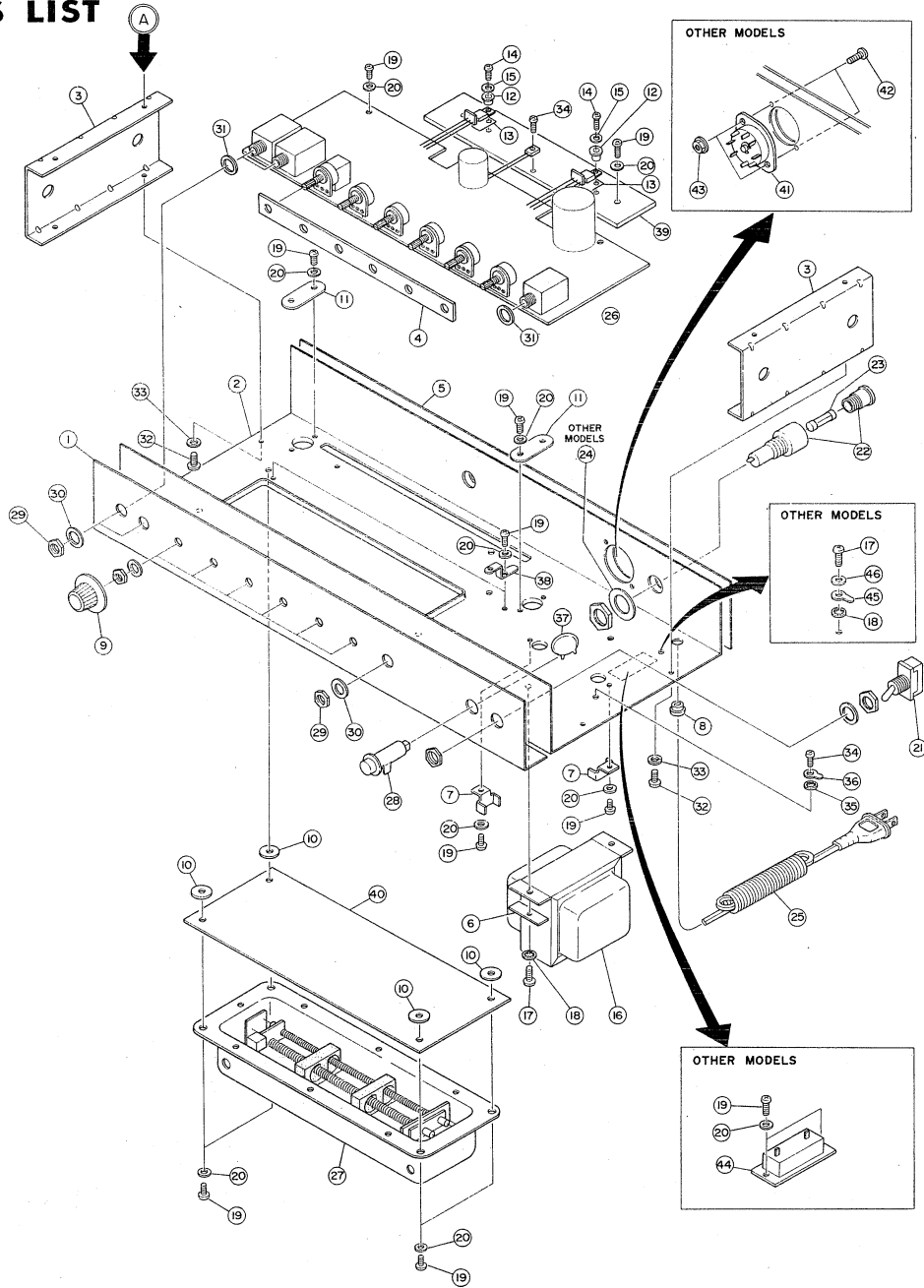


PIN-CONNECTION DIAGRAM OF TRANSISTORS, DIODES AND IC.

NJM4558D	2SC2240(GR, BL) 2SA970(GR, BL) 2SC1509(Q, R) 2SA777(Q, R)	1S1555 WZ260	1D2C1	1D2Z1
		Anode Cathode	STV-3H-0 Anode Cathode	



■ PARTS LIST



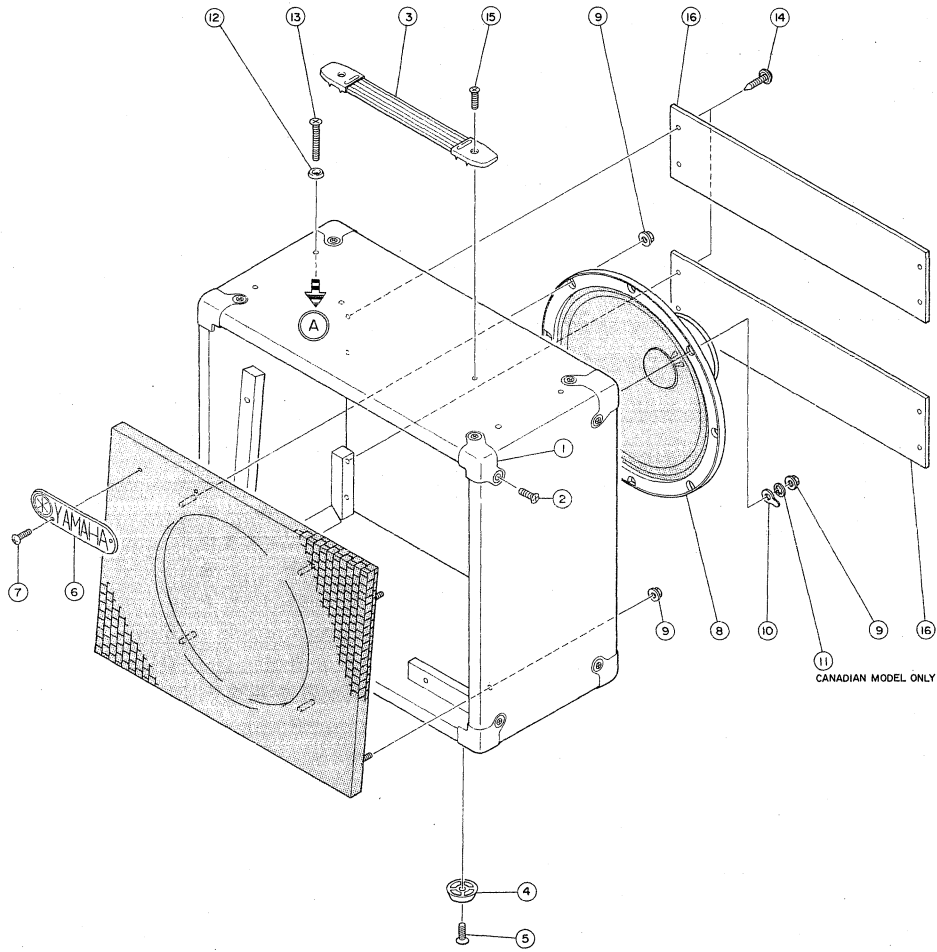
J : Japan Model
 C : Canadian Model
 O : Other Models

Ref No.	Part No.	Description	(部 品 名)	Remarks	Common model
※ 1	30 54 00 AA 81 22 70	Front Panel	フ ロ ン ト パ ネ ル	J, C	
※	30 54 00 AA 81 22 80	"	"	G	
※ 2	30 54 00 AA 81 21 00	Chassis	シ ャ ー シ	J	
※	30 54 00 AA 81 21 50	"	"	C	
※	30 54 00 AA 81 22 00	"	"	O	
※ 3	30 54 00 AA 81 25 50	Side Stay	サ イ ド ス テ ー		
※ 4	30 54 00 AA 81 26 10	Spacer	ス ペ ー サ ー		
※ 5	30 54 00 AA 81 23 50	Rear Panel	リ ア パ ネ ル	J	
※	30 54 00 AA 81 23 70	"	"	C	
※	30 54 00 AA 81 23 80	"	"	O	
※ 6	30 54 00 AA 81 25 80	Transformer Support	ト ラ ン ス 補 強 板		

※ NEW PARTS

Ref No.	Part No.	Description	(部 品 名)	Remarks	Common model		
※	7	30:54:00:AA:81:25:70	Cover	トランスリードカバー			
	8	40:10:00:CB:06:86:30	Cord Bush	コードブッシュ	J		
		40:10:00:CB:80:68:50	"	"	C		
		40:10:00:CB:07:27:50	"	"	O		
※	9	30:54:00:CB:81:46:40	Knob	ツマミ			
	10	40:10:00:CB:80:15:90	Rubber Bush	ゴムブッシュ			
※	11	30:54:00:CB:81:46:50	Wire Push	線材押さえ			
	12	30:54:00:CB:07:28:80	Bush	絶縁ブッシュ			
	13	40:10:00:IL:00:02:70	Mica Base	マイカベース			
	14	40:10:00:EA:02:60:50	Pan Head Screw 2.6 x 6 ZMC2-Y	ナベ小ネジ			
	15	40:10:00:EV:20:02:60	Flat Washer 2.6φ ZMC2-Y	平座金			
※	16	40:10:00:GA:81:89:00	Power Transformer	電源トランス			
※		40:10:00:GA:81:90:00	"	"	C		
※		40:10:00:GA:81:91:00	"	"	O		
	17	40:10:00:EI:04:00:80	Bind Head Tapping Screw 4 x 8 ZMC2-Y	バインドタッピングネジ			
	18	40:10:00:EV:43:00:40	Toothed Lock Washer 4φ ZMC2-Y	歯付座金			
	19	40:10:00:EJ:03:00:80	Pan Head Tapping Screw 3 x 8 ZMC2-Y	ナベタッピングネジ			
	20	40:10:00:EV:20:00:30	Flat Washer 3φ ZMC2-Y	平座金			
	21	40:10:00:KA:30:04:30	Toggle Switch	トグルスイッチ	J	J-35B, J-15	
		40:10:00:KA:30:05:00	"	"	C		
		40:10:00:KA:30:03:00	"	"	O		
	22	40:10:00:LB:20:04:90	Fuse Holder	ヒューズホルダー	J, C		
		40:10:00:LB:20:05:90	"	"	O		
	23	40:10:00:KB:00:03:40	Fuse 1.5A 250V	ヒューズ	J, C		
		40:10:00:KB:00:07:30	" Mini 1AT 250V	"	O		
	24	40:10:00:AA:03:15:80	Fuse Holder Washer	ヒューズホルダーワッシャー	O		
	25	40:10:00:MG:00:06:00	AC Cord	電源コード	J		
		40:10:00:MG:00:10:10	"	"	C		
		40:10:00:MG:00:09:90	"	"	O		
※	26	30:54:00:NA:80:55:50	PM C. Board #84921	P M シート	J, C		
※		30:54:00:NA:80:55:60	" #84921	"	O		
	27	40:10:00:JH:00:01:20	Reverb Unit	リバーブユニット	J	J-15	
		40:10:00:JH:00:01:60	"	"	C, O		
	28	40:10:00:JB:00:07:20	Lamp Holder	ランプホルダー		J-15	
	29	40:10:00:LX:20:00:60	Hexagonal Nut 9φ	特殊六角ナット			
	30	40:10:00:LX:20:00:10	Flat Washer 9φ	特殊平座金			
	31	30:54:00:AA:80:49:40	Spacer 9S	スペーサー		PM-210	
	32	40:10:00:ED:35:00:80	Bind Head Screw 5 x 8 ZMC2-BL	バインド小ネジ			
	33	40:10:00:EV:30:30:50	Spring Lock Washer 5φ ZMC2-BL	バネ座金			
	34	40:10:00:EA:03:00:60	Pan Head Screw 3 x 6 ZMC2-Y	ナベ小ネジ			
	35	40:10:00:EV:41:00:30	Toothed Lock Washer 3φ ZMC2-Y	歯付座金			
	36	40:10:00:LA:00:02:80	Ground Lug 3φ	アースラグ			
	37	40:10:00:FI:18:33:30	Ceramic Cap. 0.0033μF 125V	セラコン			
※	38	30:54:00:AA:81:25:90	P. C. Board Holder	シートホルダー			
※	39	30:54:00:BA:80:40:20	Heat Sink	放熱板	J, C		
※		30:54:00:BA:80:41:70	"	"	O		
※	40	30:54:00:AA:81:27:30	Shield Cover	シールドカバー			
	41	40:10:00:LB:20:14:80	Voltage Selector	電圧切換器	O		
	42	40:10:00:ED:33:01:00	Bind Head Screw 3 x 10 ZMC2-BL	バインド小ネジ	O		
	43	40:10:00:EV:10:90:30	Hexagonal Nut M3 ZMC2-Y	座付六角ナット	O		
	44	40:10:00:LA:00:02:70	Terminal 2P	端子板	O		
	45	40:10:00:LA:00:02:90	Ground Lug φ4	アースラグ	O		
	46	40:10:00:EV:30:00:40	Spring Lock Washer φ4 ZMC2-Y	バネ座金	O		

※ NEW PARTS



Ref No.	Part No.	Description	(部 品 名)	Remarks	Common model
※	30 54 96 00 00 00 10	Cabinet	外 装 組 上 が り		
1	30 54 00 AA 80 76 60	Corner Angle	コ ー ナ ー 金 具		
2	40 10 00 ER 23 51 30	Oval Head Wood Screw 3.5 x 13 FNM3-3g	丸 皿 木 ネ ジ		
3	30 54 00 NB 81 26 40	Handle Ass'y	取 手 Ass'y		
4	30 10 00 CB 02 32 00	Leg	滑 り 座		PM-400
5	40 10 00 EP 33 82 50	Flat Head Wood Screw 3.8 x 25 ZMC2-Bℓ	皿 木 ネ ジ		
6	30 54 00 CB 81 46 30	Name Plate	ネ ー ム プ レ ー ト		
7	40 10 00 ER 33 11 30	Oval Head Wood Screw 3.1 x 13 FCM3-Bℓ	丸 皿 木 ネ ジ		
8	30 54 00 JA 30 67 00	Speaker 30 cm (12") 8Ω	ス ピ ー カ ー		
9	40 10 00 EV 09 04 00	Hexagonal Nut M4 ZMC2-Y	座 付 六 角 ナ ッ ト		
10	40 10 00 LA 00 02 90	Ground Lug 4φ	ア ー ス ラ グ	C	
11	40 10 00 EV 43 00 40	Toothed Lock Washer B4S ZMC2-Y	歯 付 座 金	C	
12	40 10 00 EK 80 00 30	Washer 5φ ZMC2-Bℓ	山 型 ワ ッ シ ャ ー		
13	40 10 00 EF 35 04 00	Oval Head Screw 5 x 40 ZMC2-Bℓ	丸 皿 小 ネ ジ		
14	40 10 00 EM 84 02 50	Oval Head Tapping Screw 4 x 25 FNM3-3g	小 型 ワ ッ シ ャ ー 付 丸 皿 タ ッ ピ ン グ ネ ジ		
15	40 10 00 EF 24 02 50	Oval Head Screw M4 x 25 FNM3-3g	丸 皿 小 ネ ジ		
16	30 54 96 DB 81 30 00	Back Board	裏 板		

※ NEW PARTS

ELECTRICAL PARTS

Ref No.	Part No.	Description	(部 品 名)	Remarks	Common model
※	30:54:00:NA:80:55:50	PM C. Board #84921	P M シ ー ト	J, C	
※	30:54:00:NA:80:55:60	" #84921	"	O	
※	40:10:00:FM:77:91:00	Electrolytic Cap. 1000 μ F 80V	ケ ミ コ ン		
※	40:10:00:FM:77:92:20	" 2200 μ F 80V	"		
	40:10:00:FP:35:54:70	Tantalum Cap. 0.47 μ F 35V	タ ン タ ル コ ン		
	40:10:00:FP:35:52:20	" 0.22 μ F 35V	"		
	40:10:00:HL:31:24:70	Metal Oxide Film Resistor 0.47 Ω 1W	酸 金 抵 抗		
	40:10:00:HL:31:41:00	" 10 Ω 1W	"		
	40:10:00:HL:31:53:30	" 330 Ω 1W	"		
	40:10:00:HS:31:07:60	Variable Resistor A25K Ω	可 変 抵 抗 器		
	40:10:00:HS:31:07:70	" SW A25K Ω	"		
	40:10:00:HS:31:07:50	" A1K Ω	"		
	40:10:00:HS:31:08:60	" B25K Ω	"		
	40:10:00:HT:77:00:20	Semi-Fixed Variable Resistor B500 Ω	半 固 定 抵 抗		
	40:10:00:iA:09:70:00	Transistor 2SA970 (GR, BL)	ト ラ ン ジ ス タ		
	40:10:00:iA:07:77:30	" 2SA777 (Q, R)	"		
	40:10:00:iC:22:40:00	" 2SC2240 (GR, BL)	"		
	40:10:00:iC:15:09:30	" 2SC1509 (Q, R)	"		
	40:10:00:iD:05:26:10	" 2SD526 (R)	"		
	40:10:00:iE:00:00:20	FET 2SK30A (GR)	F E T		
	40:10:00:iG:00:13:90	IC NJM4558D	I C		
	40:10:00:iF:00:00:40	Diode 1S1555	ダ イ オ ー ド		
	40:10:00:iH:00:02:80	" 1D2C1	"		
	40:10:00:iH:00:02:90	" 1D2Z1	"		
	40:10:00:iF:00:02:50	Zener Diode WZ-260	ツ ェ ナ ー ダ イ オ ー ド		
	40:10:00:iF:00:04:50	Varistor Diode STV-3H-0	バ リ ス タ		
	40:10:00:LB:20:15:30	Fuse Holder Pin	ヒ ュ ー ズ ホ ル ダ ー ピ ン		
	40:10:00:KB:00:03:50	Fuse 250V 2A	ヒ ュ ー ズ	J, C	
	40:10:00:KB:00:06:80	" Mini 250V 1.25AT	"	O	
	40:10:00:LB:10:05:00	Jack (INPUT)	ジ ャ ッ ク		
※	40:10:00:LB:30:10:80	" Stereo (HEADPHONE)	"		

※ NEW PARTS

YAMAHA MUSIKINSTRUMENTE

DIN A4: 9
DIN A3:
DIN A2:
DIN A1:

TYP: 7x 30
LFDNR: 154
VORRAT:

PREIS SCHALTPLÄNE :
PREIS GESAMTANLEITUNG:

HZ:

PRODUKTION: