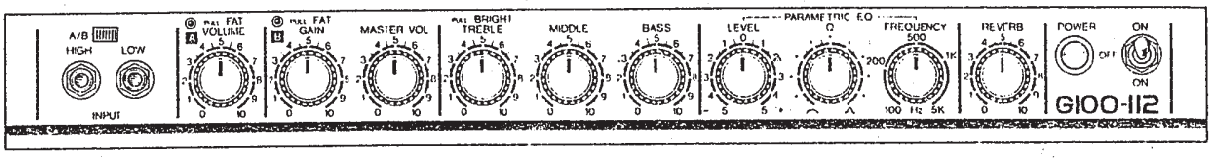
# G50-112II, G100-112
# G100-115II, G100-210
# G100-212II

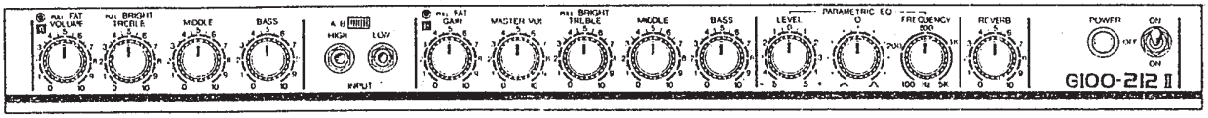
# SERVICE MANUAL

## FRONT PANEL

G100-112 (G50-112II)




G100-212II (G100-115II, G100-210)




Panel size will vary depending on type of unit. For further details, please refer to specifications.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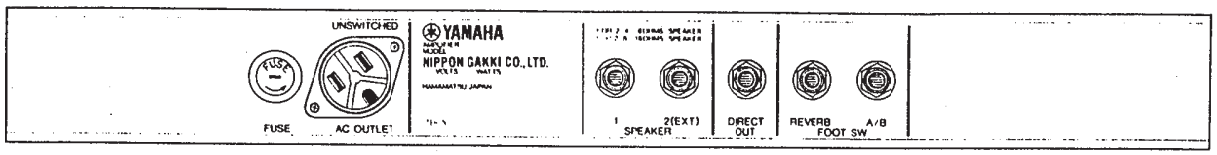
SINCE 1887 YAMAHA

NIPPON GAKKI CO., LTD. HAMAMATSU, JAPAN

'79.10.2.5K Printed in Japan

## REAR PANEL




The illustration shows the U.S. and CANADIAN models. Other models are equipped with voltage selecters instead of AC outlets. So be sure to check for desired voltage.

## CONTENTS

# GENERAL SPECIFICATIONS

## GENERAL SPECIFICATIONS

| Model | | G100-212 II | G100-210 | G100-115 II | G100-112 | G50-112 II |
|---|---|---|---|---|---|---|
| Output Power | | 100 Watts RMS @ 10% THD into 4 ohms | | 100 Watts RMS @ 10% THD into 8 ohms | | 50 Watts RMS @ 10% THD into 8 ohms |
| Speaker(s) | | 2 x JA3066 (30 cm) | 2 x JA2515 (25 cm) | 1 x JA3802 (38 cm) | 1 x JA3062 (30 cm) | 1 x JA3066 (30 cm) |
| Gain (To Speaker Output @ 1kHz, loaced 4 or 8 ohms) | | A CHANNEL High : 70 dB<br>Low : 58 dB<br>B CHANNEL High : 84 dB<br>Low : 72 dB | | | | |
| Input Impedance | | High : 1 Megohm<br>Low : 60 kohms | | | | |
| Noise (All Volume Controls at min.) | | –45 dB (4.4 mV) | | | | |
| Reverb | | Accutronics, spring-type | | | | |
| Direct Output (For 600 ohms unbalanced line) | | Nominal : –20 dB (77.5 mV)<br>Maximum : –10 dB (0.25 V) | | Nominal : –20 dB (77.5 mV)<br>Maximum: –7 dB (0.35 V) | | |
| Power Consumption | U.S. Model | 180 W | | | | 120 W |
| | Canadian Model | 120V 2A | | | | 120V 1.2A |
| | Other Models | 250 W | | | | 160 W |
| Power Source | | 120V AC fixed, or 110, 130, 220 or 240V AC selectable, 50/60 Hz | | | | |
| Dimensions | Width | 687 mm | 634 mm | | 530 mm | |
| | Height | 560 mm* | 410 mm | 600 mm* | 450 mm | |
| | Depth | 280 mm | 270 mm | 280 mm | 270 mm | |
| Net Weight | | 28 kg | 23 kg | 31 kg | 21 kg | 18 kg |
| Standard Accessory | | Foot Switch (FS-2) | | | | |

In above specifications, when dB represents a specific voltage, 0 dB is referenced to 0.775V RMS. * Height includes detachable castors.

## LOUDSPEAKER SPECIFICATIONS

| Speaker | System | Cone Diameter | Nominal Impedance (Ω) | Sensitivity (dB/W.m) | Max. RMS Power (W) | Max. Peak Power (W) |
|---|---|---|---|---|---|---|
| JA2515 | G100-210 | 10" (25 cm) | 8 | 96 | 60 | 180 |
| JA3066 | G100-212II<br>G50-112 II | 12"(30 cm) | 8 | 96 | 60 | 180 |
| JA3062 | G100-112 | 12" (30 cm) | 8 | 99 | 100 | 300 |
| JA3802 | G100-115II | 15" (38 cm) | 8 | 102 | 120 | 360 |

Specifications subject to change without notice.

## ADJUSTMENTS AND PERFORMANCE CHECKS

**Measuring Instruments**

- The impedance of the oscillator shall be no more than 1kΩ.
- The impedance of such instruments, as the oscilloscope and AC Voltmeter/dB meter shall be 100KΩ or more.

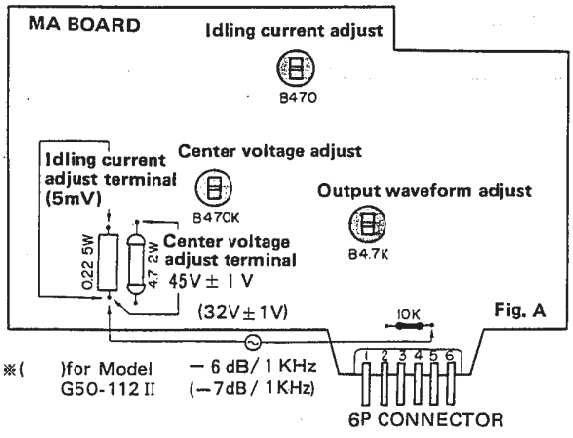
**MA BOARD Adjustment**

1. Adjust the B470k and B4.7k pots to somewhere around the middle.
2. With the unit in the condition of Table 1, apply a −6dB/1kHz signal (or a −7dB/1kHz signal for Model G50-112II) between the 6P connector pin ③ and ① (Fig. A), and adjust the B4.7k pot so as to produce a rounded waveform that is vertically symmetrical. (Load resistance : 8 ohms)
3. With the unit in the condition of Table 1, adjust the B470k pot so that the center voltage (measured at the 6P connector pin⑤) of the output circuit will be 45±1V (or 32±1V for Model G50-112II).

NOTE: By performing adjustments 2 and 3 alternately, adjust the MA circuit board to the optimum condition. Adjustments are to be performed as swiftly as possible.

**Idling Current Adjustment**

With the unit in a no-signal condition, adjust the B470 pot so as to bring the voltage between the 6P connector pin ④ and ① (0.22Ω at both ends) to 5mV.



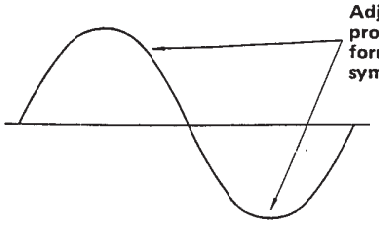




Fig.B

After completing the above adjustments (performed on a circuit board basis), proceed to performance checks.

- **Prior to Performing Adjustments**
- Set each control as shown in Table 1.
- Apply the signal to HIGH INPUT.
- Connect the load specified in Table 2 to SP OUT.

Table 1

| Identification of Controls | Position of Controls |
|---|---|
| VOLUME | MAXIMUM |
| GAIN | MAXIMUM |
| MASTER VOLUME | MAXIMUM |
| TREBLE | MAXIMUM |
| MIDDLE | MAXIMUM |
| BASS | MAXIMUM |
| LEVEL | CENTER |
| Q | MINIMUM |
| FREQUENCY | MINIMUM |
| REVERB | MINIMUM |
| FAT SWITCH | OFF |
| BRIGHT SWITCH | OFF |
| A/B SWITCH | A ch (■) |

Table 2

| Model No. | Load Resistance |
|---|---|
| G50-112II | 8Ω |
| G100-112 | 8Ω |
| G100-115II | 8Ω |
| G100-210 | 4Ω |
| G100-212II | 4Ω |

**1. GAIN**

- With the unit in the condition specified in Tables 1 & 2, feed in the input signal. Outputs as shown in Tables 3 & 4 should be obtained.

Table 3 (G100-112, 115II, 210, 212II)

| INPUT | ch. SW | JACK | OUT PUT |
|---|---|---|---|
| −70dB/1 KHz | A | HIGH | 1 ±3dBm |
| −do.− | A | LOW | -11±3dBm |
| −do.− | B | HIGH | 14±3dBm |

Table 4 (G50-112II)

| INPUT | ch. SW | JACK | OUT PUT |
|---|---|---|---|
| −70dB/1 KHz | A | HIGH | 1 ±3dBm |
| −do.− | A | LOW | -11±3dBm |
| −do.− | B | HIGH | 13±3dBm |

## 2. MAXIMUM OUTPUT

- Put the unit in the condition specified in Tables 1 & 2. When the output is 100W (or 50W for Model G50-112II), and the T.H.D. is at 10%, the condition as shown in Table 5 should be satisfied.

Table 5

| OUTPUT / INPUT | Load (4 ohms) | | Load (8 ohms) | |
|---|---|---|---|---|
| | At 100W output (28.2dBm) | T.H.D. (@ 10%) | At 100W output (31.2dBm) | T.H.D. (@ 10%) |
| 1 KHz | T.H.D.: Less than 10% | 140W, or less (29.7dB) | T.H.D.: Less than 10% | 140W, or less (32.7dB) |

Table 5 (G50-112II)

| OUTPUT / INPUT | Load (4 ohms) | | Load (8 ohms) | |
|---|---|---|---|---|
| | At 50W output (25.2dBm) | T.H.D. (@ 10%) | At 50W output (28.2dBm) | T.H.D. (@ 10%) |
| 1 KHz | T.H.D.: Less than 10% | 70W, or less (26.7dB) | T.H.D.: Less than 10% | 70W, or less (29.7dB) |

## 3. FREQUENCY RESPONSE

- Regarding the frequency response of the unit in the condition specified in Tables 1&2, please refer to Fig.1 when the output level for a 1kHz input is set as the reference level(0dB). The tolerance shall be within ±3dB, respectively.

Table 6 ( ) for Model G50-112II

| Signal Input Level | Channel | Frequency (Hz) | | |
|---|---|---|---|---|
| | | 70 | 400 | 7 K |
| −70dB | A ch. | −1±3dB | −8±3dB | 6±3dB (5±3dB) |
| −70dB | B ch. | −1±3 dB | −8±3dB | 5 ±3dB |

* For models, G50-112II and G100-112, measurments are to be taken only for the A-ch.

## 4. TONE CONTROL

- Put the unit in the condition specified in Tables 1 & 2.
- When each tone control knob is turned from maximum to minimum, the output variation should stay within the range specified in Table 7.
- This applies both to the A-ch. and B-ch.

Table 7

| Control | INPUT | | Variation |
|---|---|---|---|
| | Freq. | Signal | |
| TREBLE | 7KHz | −70dB | 16±3dB |
| MIDDLE | 400Hz | −70dB | 6±3dB |
| BASS | 70Hz | −70dB | 11±3dB |

## 5. FAT VARIATION CHARACTERISTICS

- Put the unit in the condition specified in Tables 1 & 2.
- When the Fat switch is turned ON and OFF, the output variation should stay within the range specified in Table 8.
- The same applies to the B-ch. as well.

Table 8

| INPUT | Variation |
|---|---|
| −70dB / 400Hz | 9±3dB |

## 6. BRIGHT VARIATION CHARACTERISTICS

- Put the unit in the condition specified in Tables 1 & 2.
- Set the VOLUME and GAIN controls to gradation "5" (center).
- When the BRIGHT switch is turned ON and OFF, the output variations should stay within the range specified in Table 9.
- The same applies to the B-ch. as well.

Table 9

| INPUT | Variation |
|---|---|
| −70dB / 7KHz | 11±3dB |

## 7. VARIATION CHARACTERISTICS OF PARAMETRIC EQ

- With the unit first put in the condition specified in Tables 1 & 2, position the VOLUME control to gradation "5" (Center).
- Set the Q. Frequency control as shown in Table 10.
- For each setting, turn the LEVEL control from maximum to minimum. The output variation should stay within the range specified in Table 10.

Table 10

| Condition | INPUT | Variation |
|---|---|---|
| Q MIN., F MIN. | −70dB / 650Hz | ± 7 ± 2 dB |
| Q MIN., F MAX. | −do.−−do.− | ± 7 ± 2 dB |
| Q MAX., F MIN. | −do.−−do.− | No more than ±1dB |
| Q MAX., F MAX. | −do.−−do.− | No more than ±1dB |
| Q MAX., F MIN. | −do.− *90Hz | ±15± 2 dB |
| Q MAX., F MAX. | −do.− 5KHz | ±15± 2 dB |

* However, it shall be considered okay if there is a point within the range from 85 to 100Hz (and not necessarily at 90Hz), where the variation can be established.

8. A/B FOOT SWITCH

- ON-OFF operations of the A/B Foot Switch should cause changeover between the A-ch. and B-ch.

9. REVERB FOOT SWITCH

- Put the unit in the condition specified in Tables 1 & 2.
- Turn the REVERB control to maximum.
- Apply a −70dB/1kHz signal to INPUT. When the Foot Switch is turned ON and OFF, it should cause the reverberation-applied sounds to turn ON and OFF.
- It should be noted here that sounds without reverberation are also mixed in.

10. NOISE LEVEL

- Put the unit in the condition specified in Tables 1 & 2.
- No plug should be inserted into INPUT.
- When the unit is set as shown in Table 11, the output level should stay within the range specified in Table 11.
- Change the polarities of the POWER switch, measurement should be taken at the one whose noise level has been found to be lower.

Table 11

| Channel | Condition | Variation |
|---|---|---|
| A ch | Set the Tables 1 & 2 | No more than −32dB |
| A ch | VOLUME MIN. | No more than −45dB |
| B ch | Set the Tables 1 & 2 | No more than −20dB |
| B ch | GAIN MIN. | No more than −42dB |
| B ch | MASTER VOL. MIN. | No more than −45dB |

11. DIRECT OUT TERMINAL

- Put the unit in the condition specified in Tables 1 & 2.
- Feed in a 1kHz iuput signal and adjust it so that the output will be 0dB.
- At the DIRECT OUT terminal, an output of −38±2dB (or −35±2dB for Model G50-112II) should be obtained.

NOTE: When dB represents a specific voltage, 0dB is referenced to 0.775V.

## DISMANTLING PROCEDURE

- Remove the screws shown in Figs. a and b. Remove the back panel and the chassis body.

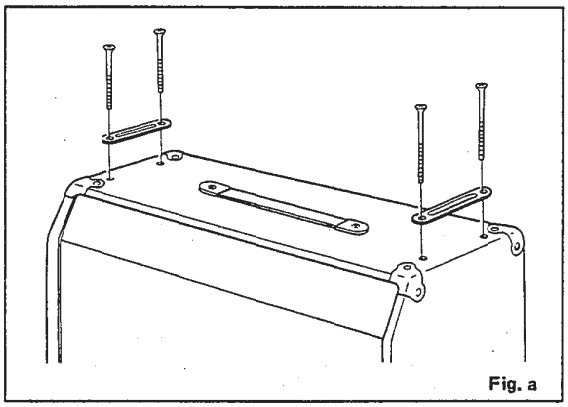


Fig. a

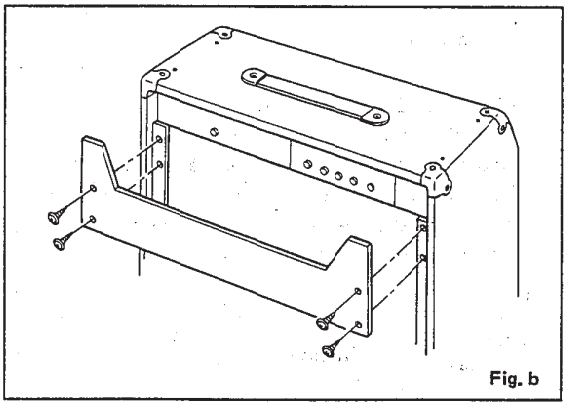


Fig. b

## FREQUENCY RESPONSE DIAGRAM G50-112II G100-112

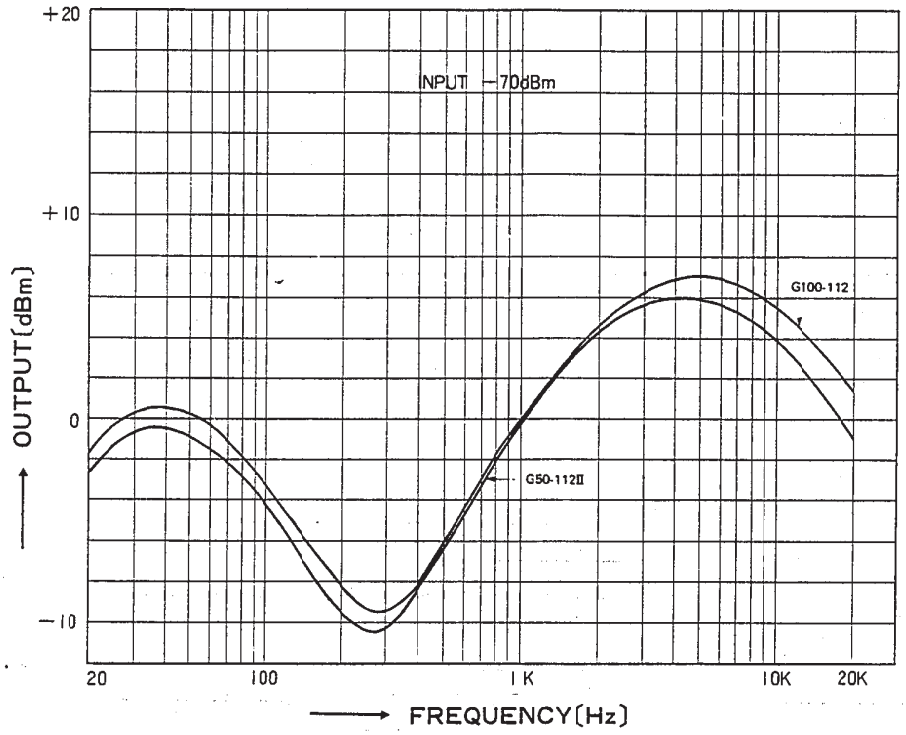



Fig. 1-1

## G100-115II G100-210 G100-212II

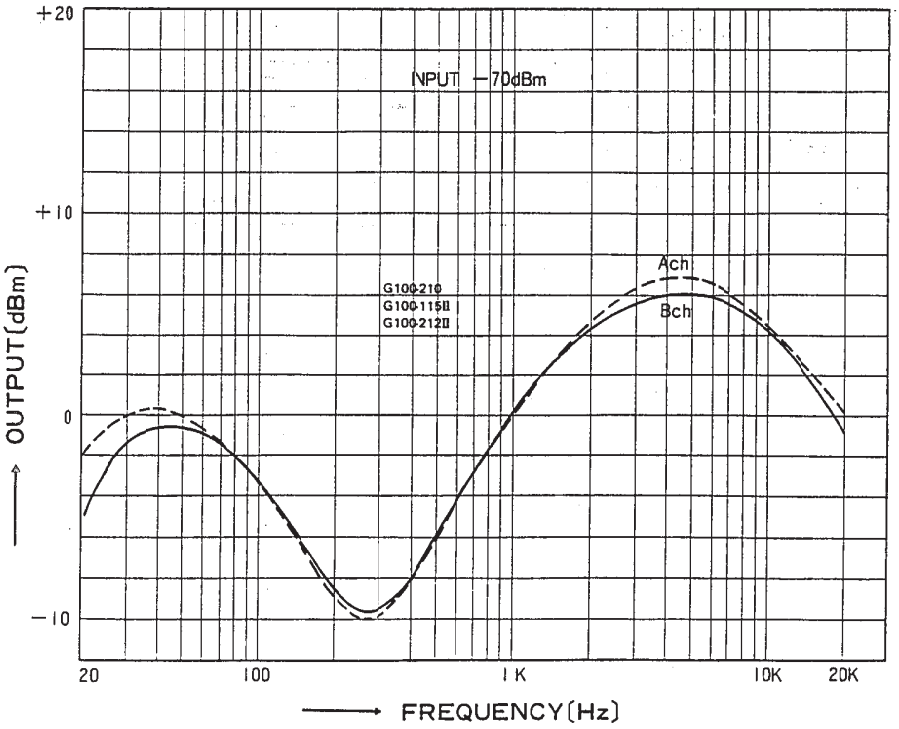
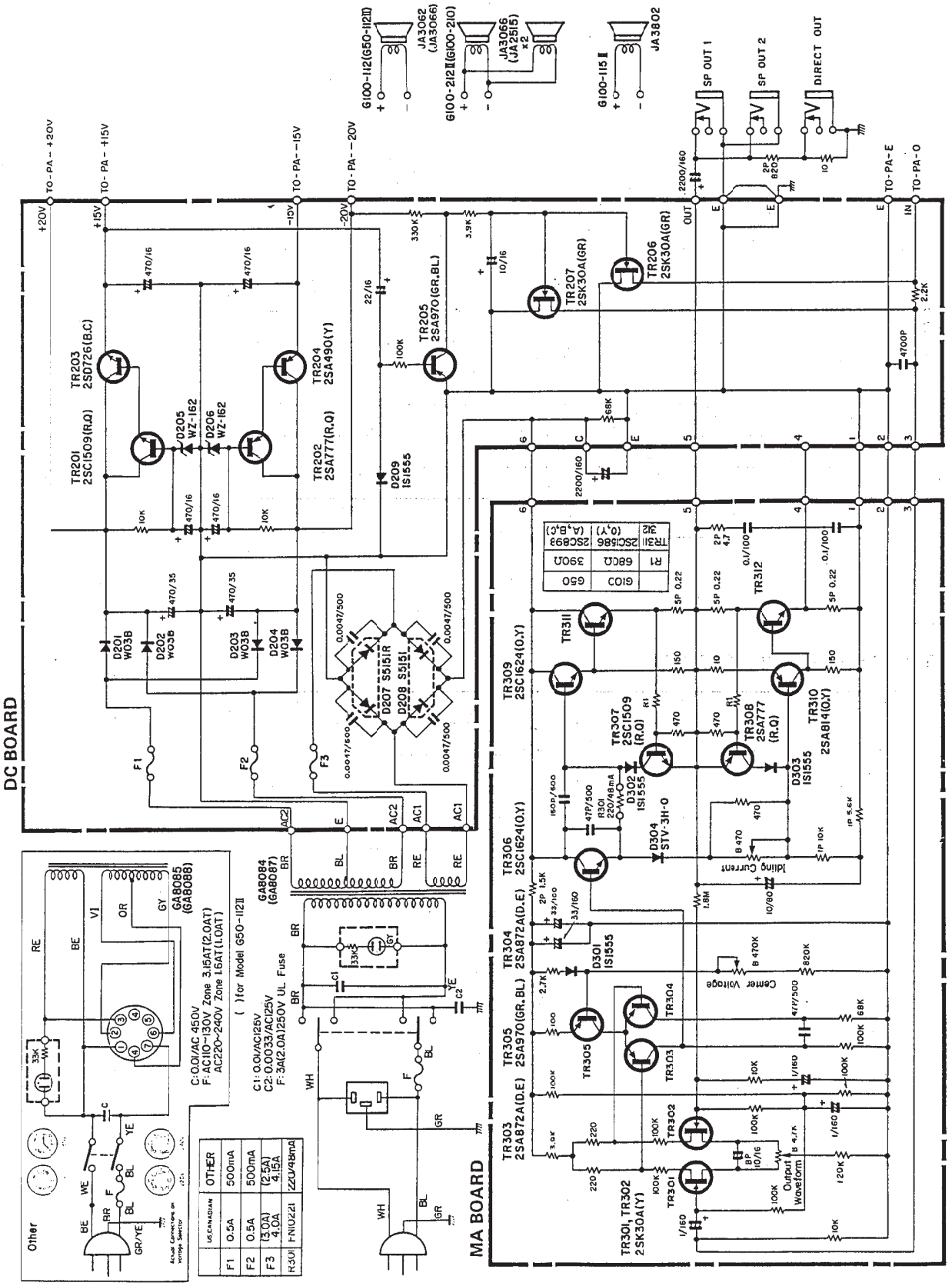



Fig. 1-2

## SCHEMATIC DIAGRAM

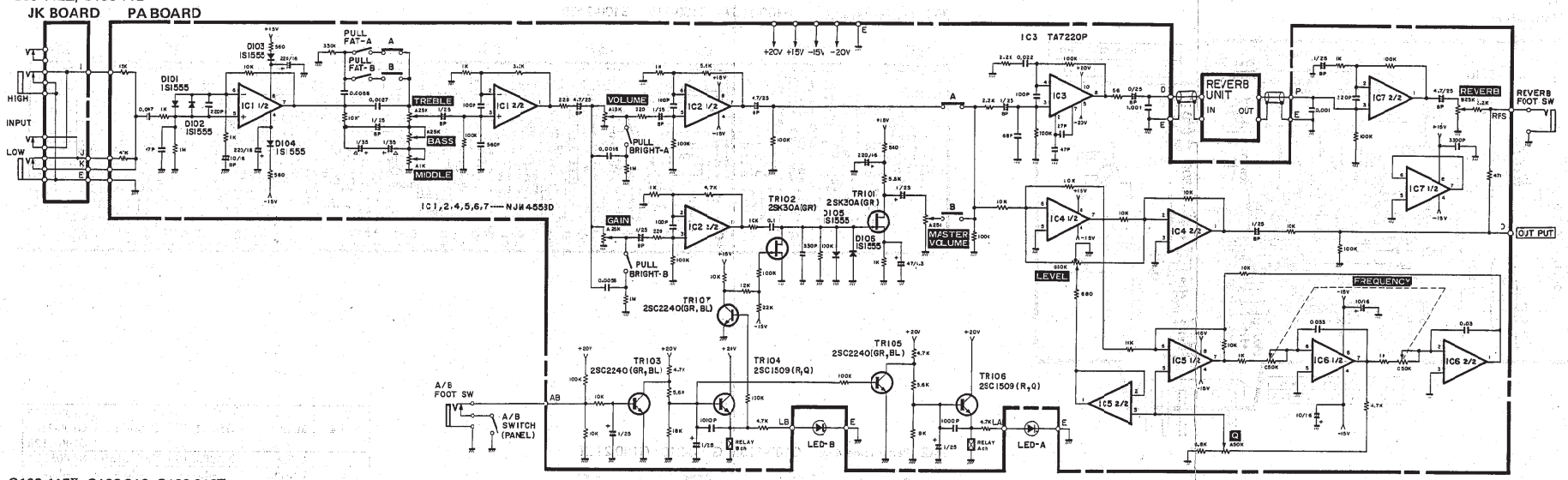
Power Supply and Main Amplifier Sections

G50-112II, G100-112, G100-115II, G100-210, G100-212II

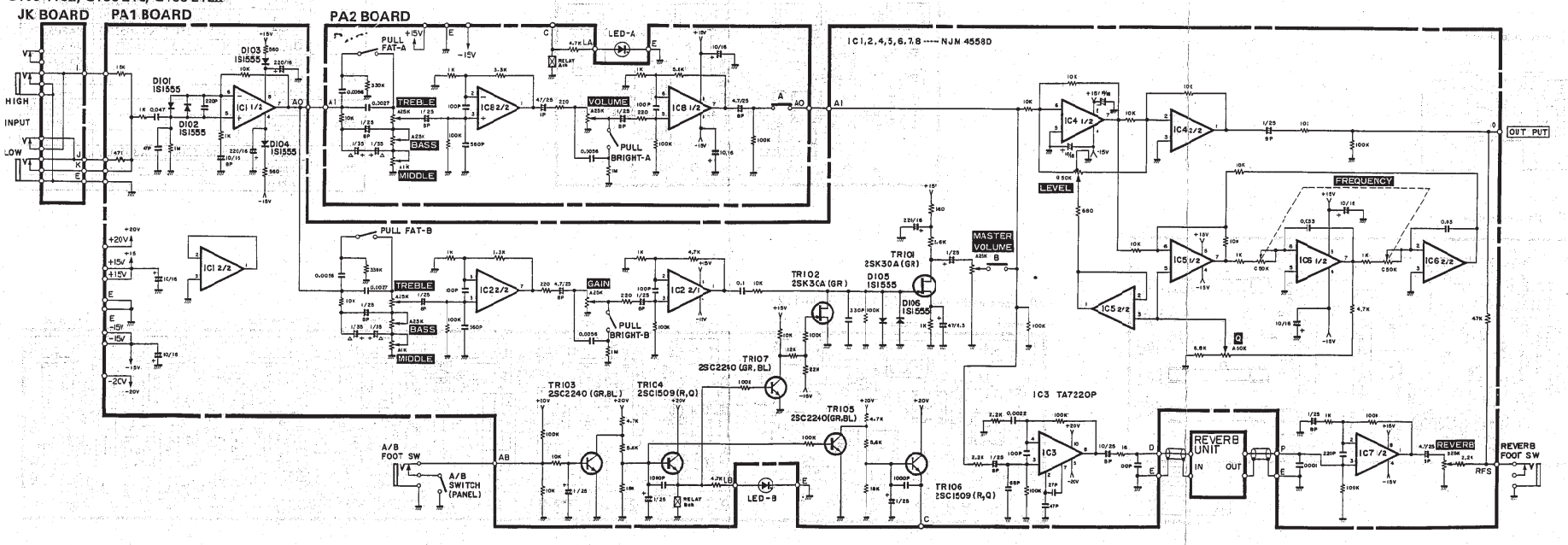


## SCHEMATIC DIAGRAM Preamplifier Section

G50-112II, G100-112

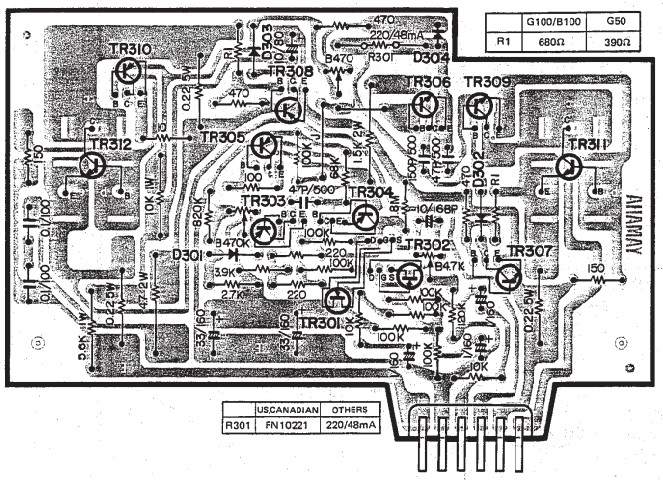



G100-115II, G100-210, G100-212II



## PRINTED CIRCUIT BOARDS G50-112II, G100-112, G100-115II, G100-210, G100-212II

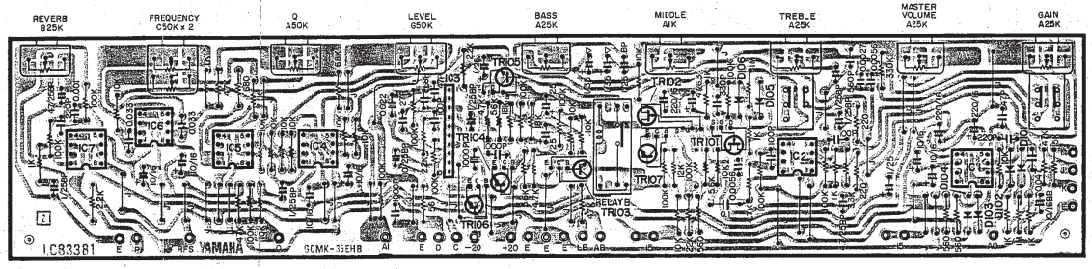
### MA Parts side view



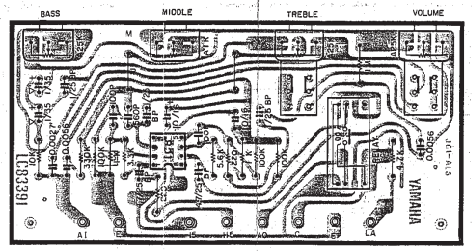

| | G100/B100 | G50 |
|---|---|---|
| R1 | 680Ω | 390Ω |

| | US/CANADIAN | OTHERS |
|---|---|---|
| R301 | FN10221 | 220/48mA |

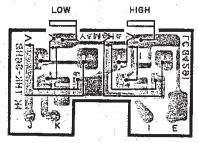
### PA1 Pattern side view G100-115II G100-210 G100-212II



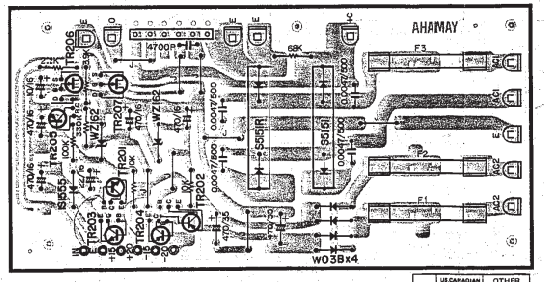

### PA2 Pattern side view G100-115II G100-210 G100-212II




### JK Parts side view



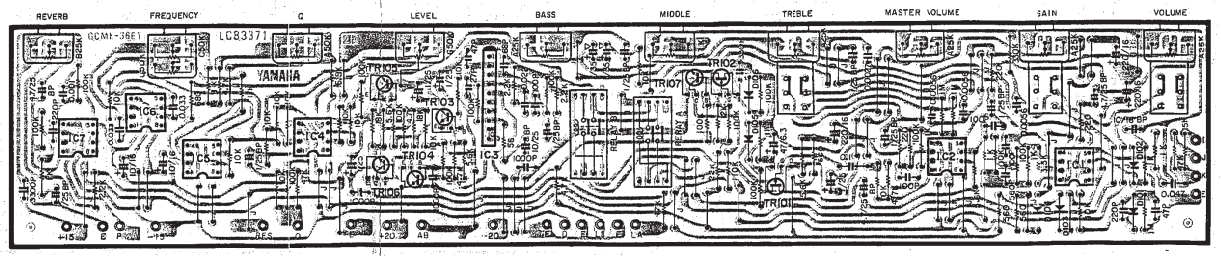

### DC Parts side view




| | US/CANADIAN | OTHER |
|---|---|---|
| F1 | 0.5A | 500mAT |
| F2 | 0.5A | 500mAT |
| F3 | 4.0A | 3.15AT |
| (F3) | (3.6A) | (2.5AT) |

( ) for Model G50-112II

### PA Pattern side view G50-112II G100-112




| Board | Market | G50-112II | G100-112 | G100-115II G100-210 G100-212II |
|---|---|---|---|---|
| MA | U.S.A | NA805510 | NA805150 | NA805150 |
| | Canadian | –do.– | –do.– | –do.– |
| | Others | NA805520 | NA805160 | NA805160 |
| DC | U.S.A | NA805360 | NA805180 | NA805180 |
| | Canadian | NA805350 | NA805170 | NA805170 |
| | Others | NA805370 | NA805190 | NA805190 |
| PA1 | U.S.A | | | NA805210 |
| | Canadian | | | –do.– |
| | Others | | | –do.– |
| PA2 | U.S.A | | | NA805220 |
| | Canadian | | | –do.– |
| | Others | | | –do.– |
| PA | U.S.A | NA805200 | NA805200 | |
| | Canadian | –do.– | –do.– | |
| | Others | –do.– | –do.– | |

## ■PARTS LIST MA Unit, MA Board

| | Ref. No. | Part No. | Description | (部 品 名) | Remarks | Common model | Markets |
|---|---|---|---|---|---|---|---|
| ※ | | 30 54 00 NB 81 26 20 | MA UNIT | MAユニット | G100 | | U,C |
| ※ | | 30 54 00 NB 81 26 30 | 〃 | 〃 | | | O |
| ※ | | 30 54 00 NB 81 38 90 | 〃 | 〃 | G50 | | U,C |
| ※ | | 30 54 00 NB 81 39 00 | 〃 | 〃 | | | O |
| ※ | | 30 54 00 NA 80 51 50 | MA Board #83333 | MAシート | G100 | | U,C |
| ※ | | 30 54 00 NA 80 51 60 | 〃 #83343 | 〃 | | | O |
| ※ | | 30 54 00 NA 80 55 10 | 〃 #84970 | 〃 | G50 | | U,C |
| ※ | | 30 54 00 NA 80 55 20 | 〃 #84980 | 〃 | | | O |
| ※ | | 30 54 00 BA 80 38 60 | Heat Sink | 放熱板 | G100 | | |
| ※ | | 30 54 00 BA 80 38 90 | 〃 | 〃 | G50 | | |
| ※ | | 30 54 00 AA 81 17 20 | Holder | シートホルダー | | | |
| | | 40 10 00 EA 04 01 00 | Pan Head Screw 4×10 ZMC2-Y | ナベ小ネジ | | | |
| | | 40 10 00 ED 03 00 60 | Bind Head Screw 3×6 ZMC2-Y | バインド小ネジ | | | |
| | | 40 10 00 Ei 03 01 00 | Bind Head Tapping Screw 3×10 ZMC2-Y | バインドタッピングネジ | | | |
| | | 40 10 00 EV 20 00 30 | Flat Washer A3S | 平座金 | | | |
| | | 40 10 00 iC 15 86 00 | Transistor | トランジスター | G100 | | |
| | | 40 10 00 iC 08 98 00 | 〃 | 〃 | G50 | | |
| | | 40 10 00 iL 00 04 40 | Mica Base | マイカベース | | | |
| | | 40 10 00 EA 03 01 60 | Pan Head Screw 3×16 ZMC2-Y | ナベ小ネジ | | | |
| ※ | | 30 54 00 AA 81 05 00 | Transister Cover | トランジスタカバー | | | |
| | | 40 10 00 Ei 03 00 60 | Bind Head Tapping Screw 3×6 ZMC2-Y | バインドタッピングネジ | | | |
| ※ | | 30 54 00 AA 81 04 90 | MA Board Cover | 保護カバー | | | |
| | | 30 54 00 CB 81 44 20 | Spacer | スペーサー | | | |
| | | 40 10 00 LB 60 26 70 | Socket | トランジスタソケット | | | |
| | | | | | | | |
| | | | MA BOARD | MAシート | | | |
| | | 40 10 00 HL 32 34 70 | Metal Oxide Film Resistor 4.7Ω,2P | サンキン抵抗 | | | |
| | | 40 10 00 HL 32 61 50 | 〃 1.5KΩ,2P | 〃 | | | |
| | | 40 10 00 HL 31 65 60 | 〃 5.6KΩ,1P | 〃 | | | |
| | | 40 10 00 HL 31 71 00 | 〃 10KΩ,1P | 〃 | | | |
| | | 40 10 00 HM 85 22 20 | 〃 0.22Ω,5P | セメント抵抗 | | | |
| | | 40 10 00 HW 80 52 20 | Fuse Resistor 220Ω,48mA | ヒューズ抵抗 | | | O |
| | | 40 10 00 HW 90 52 20 | 〃 220Ω | 〃 | | | U,C |
| | | 40 10 00 HT 41 00 40 | Variable Resistor B4.7KΩ | 半固定ボリューム | | | |
| | | 40 10 00 HT 41 01 10 | 〃 B470KΩ | 〃 | | | |
| | | 40 10 00 HT 41 01 20 | 〃 B470Ω | 〃 | | | |
| | | 40 10 00 iE 00 00 10 | FET 2SK30A(Y) | FET | | | |
| | | 40 10 00 iA 08 72 10 | Transistor 2SA872A(D,E) | トランジスタ | | | |
| | | 40 10 00 iA 09 70 00 | 〃 2SA970(GR,BL) | 〃 | | | |
| | | 40 10 00 iC 16 24 00 | 〃 2SC1624(O,Y) | 〃 | | | |
| | | 40 10 00 iC 15 09 30 | 〃 2SC1509(R,Q) | 〃 | | | |
| | | 40 10 00 iA 07 77 30 | 〃 2SA777(R,Q) | 〃 | | | |
| | | 40 10 00 iA 08 14 00 | 〃 2SA814(Y) | 〃 | | | |
| | | 40 10 00 iF 00 04 50 | Varistor STV-3H-O | バリスタ | | | |
| | | 40 10 00 iF 00 00 40 | Diode 1S1555 | ダイオード | | | |
| | | 40 10 00 LB 60 07 90 | Connector Plug | ライトアングルワエハーピン | | | |

※ : New Part (新部品) DESTINATION ABBREVIATIONS U : US, C : Canada, O : Other (except for US, Canada models)

## DC Board PA1 Board/PA2 Board

| | Ref. No. | Part No. | Description | (部 品 名) | Remarks | Common model | Markets |
|---|---|---|---|---|---|---|---|
| ※ | | 30 54 00 NA 80 51 70 | DC BOARD #83362 | DCシート | G100 | | C |
| ※ | | 30 54 00 NA 80 51 80 | 〃 #84821 | 〃 | 〃 | | U |
| ※ | | 30 54 00 NA 80 51 90 | 〃 #83352 | 〃 | 〃 | | O |
| ※ | | 30 54 00 NA 80 53 50 | DC BOARD #85002 | DC シート | G50 | | C |
| ※ | | 30 54 00 NA 80 53 60 | 〃 #85012 | 〃 | 〃 | | U |
| ※ | | 30 54 00 NA 80 53 70 | 〃 #84992 | 〃 | 〃 | | O |
| | | 40 10 00 i H 00 02 10 | Diode S5151 | ダイオード | | | |
| | | 40 10 00 i H 00 02 20 | 〃 S5151R | 〃 | | | |
| | | 40 10 00 i F 00 00 40 | 〃 1S1555 | 〃 | | | |
| | | 40 10 00 i H 00 07 20 | 〃 W03B | 〃 | | | |
| | | 40 10 00 i F 00 06 50 | Zener Diode WZ-162 | ツェナーダイオード | | | |
| | | 40 10 00 i C 15 09 30 | Transistor 2SC1509(R,Q) | トランジスター | | | |
| | | 40 10 00 i A 09 70 00 | 〃 2SA970(GR,BL) | 〃 | | | |
| | | 40 10 00 i D 07 26 00 | 〃 2SD726(B,C) | 〃 | | | |
| | | 40 10 00 i A 04 90 10 | 〃 2SA490(Y) | 〃 | | | |
| | | 40 10 00 i A 07 77 30 | 〃 2SA777(R,Q) | 〃 | | | |
| | | 40 10 00 i E 00 00 20 | FET 2SK30A(G,R) | FET | | | |
| | | 40 10 00 L B 20 15 70 | Fuse Holder Pin | ヒューズホルダーピン | G100 | | |
| | | 40 10 00 KB 00 03 10 | Fuse 0.5A,250V | ヒューズ | 〃 | | C |
| | | 40 10 00 KB 00 03 80 | 〃 4.0A,250V | 〃 | 〃 | | C |
| | | 40 10 00 KB 00 10 10 | 〃 UL 0.5A,250V | UL ヒューズ | 〃 | | U |
| | | 40 10 00 KB 00 10 50 | 〃 〃 4.0A,250V | 〃 | 〃 | | U |
| | | 40 10 00 KB 00 07 10 | 〃 Mini 500mAT,250V | ミニヒューズ | 〃 | | O |
| | | 40 10 00 KB 00 07 60 | 〃 〃 3.15AT,250V | 〃 | 〃 | | O |
| | | 40 10 00 L B 20 15 30 | Fuse Holder Pin | ヒューズホルダーピン | G50 | | |
| | | 40 10 00 KB 00 03 10 | Fuse 0.5A 250V | ヒューズ | 〃 | | |
| | | 40 10 00 KB 00 10 10 | 〃 UL 0.5A 250V | 〃 | 〃 | | |
| | | 40 10 00 KB 00 07 10 | 〃 mini 500mAT 250V | ミニヒューズ | 〃 | | |
| | | 40 10 00 KB 00 03 60 | 〃 3A 250V | ヒューズ | 〃 | | |
| | | 40 10 00 KB 00 10 40 | 〃 UL 3A 250V | 〃 | 〃 | | |
| | | 40 10 00 KB 00 06 90 | 〃 mini 2.5AT 250V | 〃 | 〃 | | |
| | | 40 10 00 L B 60 05 20 | Connector Housing 2415-6B | コネクトハウジング | | | |
| | | | | | | | |
| | | 30 54 00 NA 80 52 10 | PA1 BOARD #83382 | PA1 シート | 115II,212II 210 | | |
| | | 40 10 00 FM 22 61 00 | BP Capacitor 1/25 | バイポーラケミコン | | | |
| | | 40 10 00 FM 22 64 70 | 〃 4.7/25 | 〃 | | | |
| | | 40 10 00 FM 09 71 00 | 〃 10/16 | 〃 | | | |
| | | 40 10 00 FM 22 71 00 | 〃 10/25 | 〃 | | | |
| | | 40 10 00 F P 35 61 00 | Tantalum Capacitor 1/35 | タンタルコン | | | |
| | | 40 10 00 i F 00 00 40 | Diode 1S1555 | ダイオード | | | |
| | | 40 10 00 i C 22 40 00 | Transistor 2SC2240(GR,BL) | トランジスタ | | | |
| | | 40 10 00 i C 15 09 30 | 〃 2SC1509(R,Q) | 〃 | | | |
| | | 40 10 00 i E 00 00 20 | FET 2SK30A(GR) | FET | | | |
| | | 40 10 00 i G 00 13 90 | I C NJM4558D | I C | | | |
| | | 40 10 00 i G 02 74 00 | 〃 TA7220P | 〃 | | | |
| | | 40 10 00 KC 00 06 20 | Relay FRL644D12/2AS | リレー | | | |
| | | 40 10 00 HS 31 07 50 | Variable Resistor A1KΩ | ボリューム | | | |
| | | 40 10 00 HS 31 07 60 | 〃 A25KΩ | 〃 | | | |
| | | 40 10 00 HS 31 07 70 | 〃 With Switch A25KΩ | 〃 (SW付) | | | |
| | | 40 10 00 HS 31 07 80 | 〃 C50KΩ×2 | (2連) | | | |
| | | 40 10 00 HS 31 07 90 | 〃 A50KΩ | 〃 | | | |
| | | 40 10 00 HS 31 08 00 | 〃 Center Click G50KΩ | 〃 | | | |
| | | 40 10 00 HS 31 08 60 | 〃 B25KΩ | 〃 | | | |

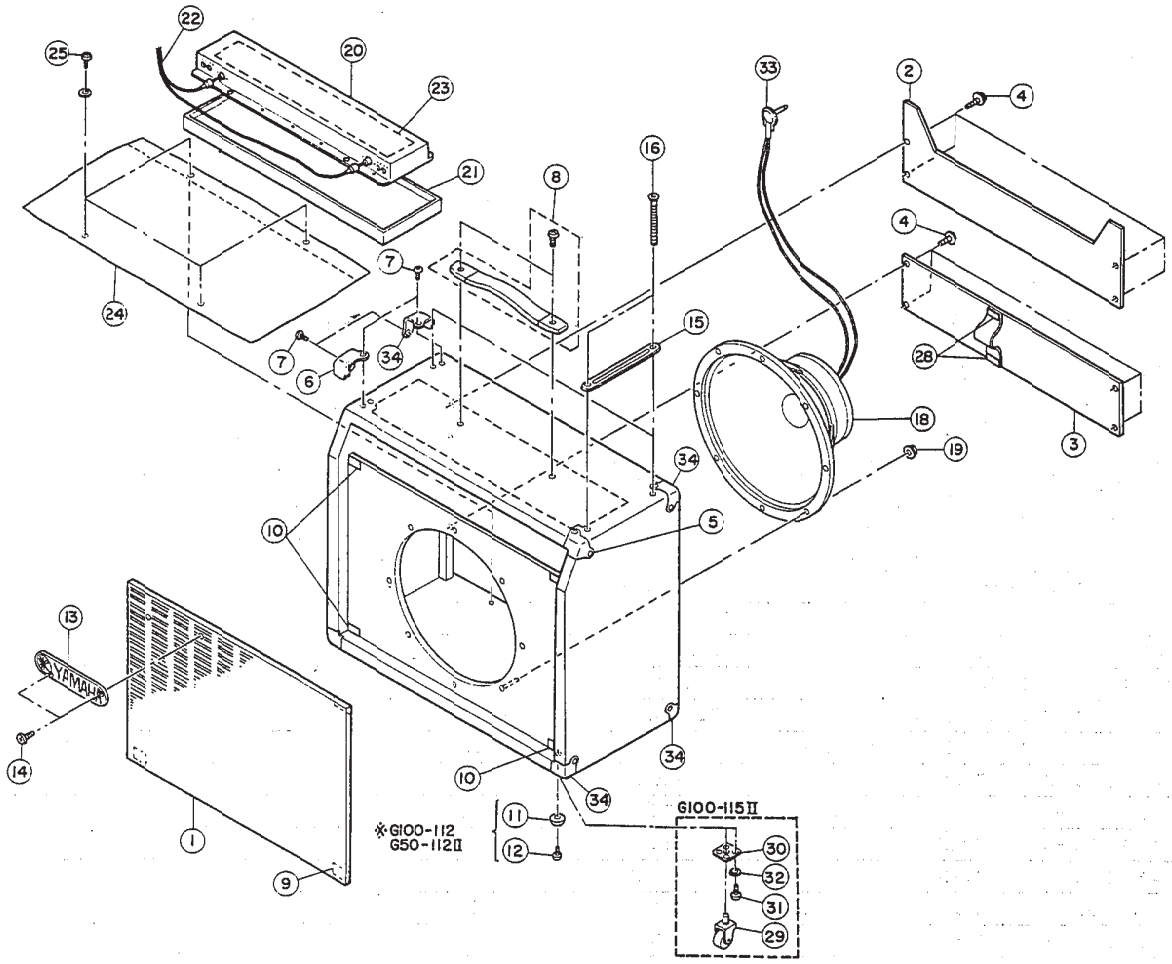
※ : New Part (新部品)

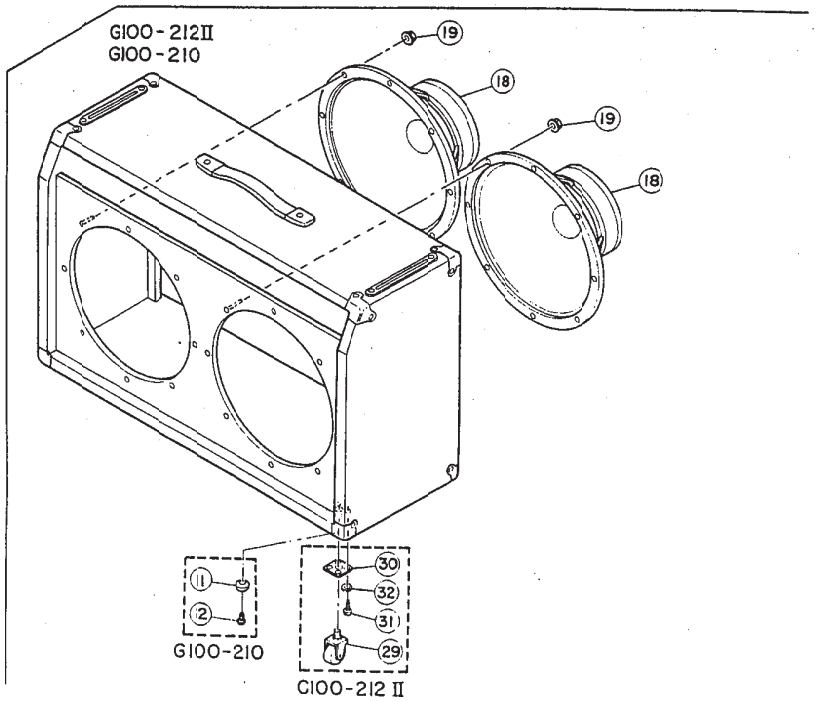
## PA Board/JK Writeing Board

| Ref. No. | Part No. | Description | (部 品 名) | Remarks | Common model | Markets |
|---|---|---|---|---|---|---|
| | 30 54 00 NA 80 52 20 | PA2 BOARD #83392 | PA2 シート | G100-115 II 210,212 II | | |
| | 40 10 00 FM 22 61 00 | BP Capacitor 1/25 | バイポーラケミコン | 〃 | | |
| | 40 10 00 FM 22 64 70 | 〃 4.7/25 | 〃 | 〃 | | |
| | 40 10 00 FP 35 61 00 | Tantalum Capacitor 1/35 | タンタルコン | 〃 | | |
| | 40 10 00 iG 00 13 90 | IC NJM4558D | IC | 〃 | | |
| | 40 10 00 KC 00 06 20 | Relay FRL644D12/2AS | リレー | 〃 | | |
| | 40 10 00 HS 31 07 50 | Variable Resistor A1KΩ | ボリューム | 〃 | | |
| | 40 10 00 HS 31 07 60 | 〃 A25KΩ | 〃 | 〃 | | |
| | 40 10 00 HS 31 07 70 | 〃 (With Switch) A25KΩ | (SW付) | 〃 | | |
| | | | | | | |
| ※ | 30 54 00 NA 80 52 00 | PA BOARD | PAシート | G50-112 II G100-112 | | |
| | 40 10 00 FM 22 61 00 | BP Capacitor 1/25 | バイポーラケミコン | | | |
| | 40 10 00 FM 22 64 70 | 〃 4.7/25 | 〃 | | | |
| | 40 10 00 FM 09 71 00 | 〃 10/16 | 〃 | | | |
| | 40 10 00 FM 22 71 00 | 〃 10/25 | 〃 | | | |
| | 40 10 00 FP 35 61 00 | 〃 1/35 | タンタルコン | | | |
| | 40 10 00 iF 00 00 40 | Diode 1S15555 | ダイオード | | | |
| | 40 10 00 iC 22 40 00 | Transistor 2SC2240(GR,BL) | トランジスタ | | | |
| | 40 10 00 iC 15 09 30 | 〃 2SC1509(R,Q) | 〃 | | | |
| | 40 10 00 iE 00 00 20 | FET 2SK30A(GR) | FET | | | |
| | 40 10 00 iG 00 13 90 | IC NJM4558D | IC | | | |
| | 40 10 00 iG 02 74 00 | 〃 TA7220P | 〃 | | | |
| | 40 10 00 KC 00 06 20 | Relay FRL644D12/2AS | リレー | | | |
| | 40 10 00 HS 31 07 50 | Variable Resistor A1KΩ | ボリューム | | | |
| | 40 10 00 HS 31 07 60 | 〃 A25KΩ | 〃 | | | |
| | 40 10 00 HS 31 07 70 | 〃 With Switch A25KΩ | 〃SW付 | | | |
| | 40 10 00 HS 31 07 80 | 〃 C50KΩ×2 | 〃2連 | | | |
| | 40 10 00 HS 31 07 90 | 〃 A50KΩ | 〃 | | | |
| | 40 10 00 HS 31 08 00 | 〃 Center Click G50KΩ | 〃 (センタークリック) | | | |
| | 40 10 00 HS 31 08 60 | 〃 B25KΩ | 〃 | | | |
| | | | | | | |
| | 40 10 00 LC 84 29 10 | JK WRITEING BOARD | JK基板 | | | |
| | 40 10 00 LB 20 15 40 | Jack | ホーンジャック | | | |

※：New Part (新部品)

## ■EXPLODED VIEW

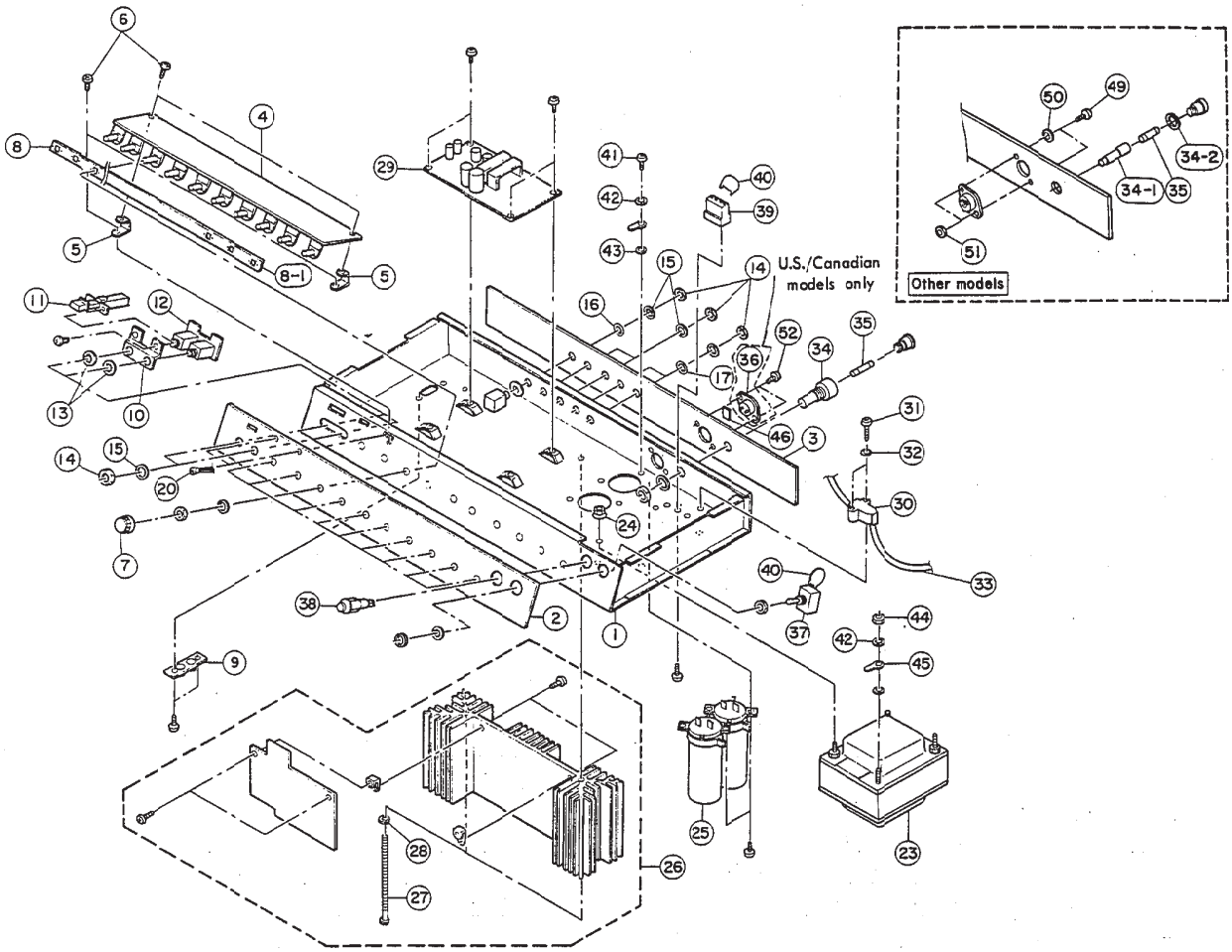


| | Ref. No. | Part No. | Description | (部 品 名) | Remarks | Common model | Markets |
|---|---|---|---|---|---|---|---|
| ※ | | 30 54 40 00 00 00 10 | Cabinet | 外装組上り | G100-212II | | |
| ※ | | 30 54 39 00 00 00 10 | 〃 | 〃 | G100-112 | | |
| ※ | | 30 54 41 00 00 00 10 | 〃 | 〃 | G100-115II | | |
| | | 30 54 42 00 00 00 10 | 〃 | 〃 | G100-210 | | |
| | | 30 54 01 00 00 00 10 | 〃 | 〃 | G50-112II | | |
| ※ | 1 | 30 54 40 DA 80 38 80 | Front Grille | 前板集成 | G100-212II | | |
| ※ | 〃 | 30 54 39 DA 80 39 20 | 〃 | 〃 | G100-112 G50-112II | | |
| ※ | 〃 | 30 54 41 DA 80 40 90 | 〃 | 〃 | G100-115II | | |
| | 〃 | 30 54 42 DA 80 42 50 | 〃 | 〃 | G100-210 | | |
| | | | | | | | |
| ※ | 2 | 30 54 40 DB 81 15 50 | Back Board (Upper) | 裏板 (上) | G100-212II | | |
| ※ | 〃 | 30 54 39 DB 81 16 50 | 〃 | 〃 | G100-112 G50-112II | | |
| ※ | 〃 | 30 54 41 DB 81 20 50 | 〃 | 〃 | G100-115II | | |
| | 〃 | 30 54 42 DB 81 24 40 | 〃 | 〃 | G100-210 | | |
| ※ | 3 | 30 54 40 DB 81 15 60 | Back Board (Lower) | 裏板 (下) | G100-212II | | |
| ※ | 〃 | 30 54 39 DB 81 16 60 | 〃 | 〃 | G100-112 G50-112II | | |
| ※ | 〃 | 30 54 41 DB 81 20 60 | 〃 | 〃 | G100-115II | | |
| | 〃 | 30 54 42 DB 81 24 50 | 〃 | 〃 | G100-210 | | |
| | 4 | 40 10 00 EK 80 08 00 | Screw 4×25 FNM3-3g | 山型ワッシャ付丸皿タッピングネジ | | | |
| ※ | 5 | 30 54 00 AA 80 76 40 | Metal Corner (Right) | コーナー金具 (右) | | | |
| ※ | 6 | 30 54 00 AA 80 76 50 | 〃 (Left) | 〃 (左) | | | |
| | 7 | 40 10 00 ER 23 51 30 | Oval Head Wood Screw 3.5×13 FNM3-3g | 丸皿木ネジ | | | |
| | 8 | 30 54 00 NB 81 26 40 | Handle Assembly | 取手Ass'y | | | |
| | 9 | 40 10 00 CA 80 15 20 | Velcro Tape | マジックテープ (オス) | | | |
| | 10 | 40 10 00 CA 80 15 30 | 〃 | 〃 (メス) | | | |
| | 11 | 30 10 00 CB 02 32 00 | Slip Fitting | 滑り座 (黒) | | | |
| | 12 | 40 10 00 EB 34 02 50 | Flat Head Screw 4×25 ZMC2-Bℓ | 皿小ネジ | | | |
| ※ | 13 | 30 54 00 CB 81 37 90 | Name Plate | ネームプレート | | | |
| | 14 | 40 10 00 ER 33 11 30 | Oval Head Wood Screw 3.1×13 FUM3-Bℓ | 丸皿木ネジ | | | |
| ※ | 15 | 30 54 00 AA 80 76 70 | Fixing Plate | ユニット吊り金具 | | | |
| ※ | 16 | 40 10 00 EK 80 08 70 | Sharp Tip Oval Head Screw 5×90 FNM3-3g | 尖先丸皿小ネジ | | | |
| ※ | 18 | 30 54 00 JA 30 66 00 | Speaker 8Ω 30cm(12") | スピーカー | G100-212II G50-112II | | |
| ※ | 〃 | 30 54 00 JA 30 62 00 | 〃 〃 〃 | 〃 | G100-112 | | |
| ※ | 〃 | 30 10 00 JA 38 02 00 | 〃 〃 38cm(15") | 〃 | G100-115II | | |
| | 〃 | 30 54 00 JA 25 15 00 | 〃 8Ω 25cm(10") | 〃 | G100-210 | | |
| | 19 | 40 10 00 EK 80 06 40 | Flange Nut 5S | フランジナット | | | |
| | 20 | 40 10 00 JH 00 01 40 | Reverb Unit | リバーブユニット | | | |
| | 21 | 30 54 00 CB 81 37 10 | Reverb Unit Base | RV台 | | | |
| | 22 | 40 10 00 Mi 80 10 80 | Reverb Unit Cord | 線材キット (RV用) | | | |
| | 23 | 30 54 00 CB 81 44 20 | Spacer | スペーサー | | | |
| | 24 | 30 54 00 CB 81 37 00 | Reverb Unit Cover | RV収納袋 | | | |
| | 25 | 40 10 00 EQ 03 51 60 | Round Head Wood Screw 3.5×16 ZMC2-Y | 丸木ネジ | | | |
| | 26 | 40 10 00 EV 20 00 40 | Flat Washer 4S | 平座金 | | | |
| | 27 | 30 54 00 CB 80 08 30 | Cord Holder | コード止め | | | |
| | 28 | 40 10 00 CA 80 01 30 | Washer | コード止めワッシャ | | | |
| | 29 | 30 54 00 AA 80 16 80 | Caster | キャスター | | | |
| | 30 | 30 54 00 AA 80 16 90 | Caster Socket | キャスターソケット | | | |
| | 31 | 40 10 00 ED 35 02 00 | Bind Head Screw 5×20 ZMC2-Bℓ | バインド小ネジ | | | |
| | 32 | 40 10 00 EV 30 35 00 | Spring Lock Washer 5S | バネ座金 | | | |
| ※ | 33 | 40 10 00 Mi 80 10 70 | Speaker Cord W/Jack | L型プラグ付コード | | | |
| ※ | 34 | 30 54 00 AA 80 76 60 | Metal Corner | コーナー金具 | | | |
| | | | | | | | |
| | | | | | | | |

※ : New Part (新部品)

## ■EXPLODED VIEW




## ■PARTS LIST

| | Ref. No. | Part No. | Description | (部 品 名) | Remarks | Common model | Markets |
|---|---|---|---|---|---|---|---|
| ※ | 1 | 30 54 00 A A 80 98 50 | Chassis | シャーシ | G100-212 II | | |
| ※ | | 30 54 00 A A 80 98 70 | 〃 | 〃 | G100-112<br>G50-112 II | | |
| ※ | | 30 54 00 A A 80 98 60 | 〃 | 〃 | G100-210<br>G100-115 II | | |
| | 2 | Refer to page 18 Note 1 | Panel | パネル | | | |
| | | | | | | | |
| ※ | | | | | | | |
| ※ | 3 | Refer to page 18 Note2 | Back Panel | バックパネル | | | |
| | | | | | | | |
| | | | | | | | |
| ※ | 4 | 30 54 00 N A 80 52 10 | PA1 Board | PA1 シート | G100-212 II<br>G100-115 II | | |
| ※ | 〃 | 30 54 00 N A 80 52 20 | PA2 Board | PA2 シート | G100-210 | | |
| ※ | 〃 | 30 54 00 N A 80 52 00 | PA Board | PA シート | G100-112<br>G50-112 II | | |
| ※ | 5 | 30 54 00 A A 81 04 50 | Fixing Metal For C,B | シート固定金具 | | | |
| ※ | 6 | 40 10 00 E i 03 00 60 | Bind Head Tapping Screw +3×6 ZMC2-Y | バインドタッピングネジ | | | |
| ※ | 7 | 30 54 00 C B 81 17 80 | Knob | ツマミ | | | |
| | 8 | 30 54 00 A A 81 04 20 | Spacer | スペーサー | G100-212 II<br>115 II, 210 | | |
| | 8-1 | 30 54 00 A A 81 04 30 | 〃 | 〃 | 〃 | | |
| | 〃 | 30 54 00 A A 81 04 40 | 〃 | 〃 | G100-112<br>G50-112 II | | |

※ : New Part (新部品)

| | Ref. No. | Part No. | Description | (部 品 名) | Remarks | Common model | Markets |
|---|---|---|---|---|---|---|---|
| | 9 | 40 10 00 L B 20 07 90 | 2P Pin Jack | ピンジャック | | | |
| ※ | 10 | 30 54 00 A A 81 04 60 | Push Switch Holder | プッシュSW取付金具 | | | |
| | 11 | 40 10 00 K A 80 12 60 | Push Switch | プッシュスイッチ | | | |
| | 12 | 40 10 00 L C 84 29 10 | JK Board | JK基板 | | | |
| | 13 | 40 10 00 E V 41 00 90 | Toothed Lock Washer A9S | 歯付座金 | | | |
| | 14 | 40 10 00 L X 20 00 60 | Hexagonal Nut A9S | 特殊六角ナット | | | |
| | 15 | 40 10 00 L X 20 00 10 | Plain Washer 9S | 特殊平座金 | | | |
| | 16 | 30 56 00 C B 81 00 90 | Insulation Nut | 絶縁ナット | | | |
| ※ | 17 | 30 54 00 C B 81 40 00 | 〃 | 〃 | | | |
| ※ | 18 | 40 10 00 C B 81 37 50 | Damper | 緩衝材 | | | |
| ※ | 19 | 40 10 00 C B 81 37 60 | 〃 | 〃 | | | |
| | 20 | 40 10 00 i F 00 13 10 | LED | LED | | | |
| | 21 | 40 10 00 H L 32 58 20 | Metal Oxide Film Resistor 820Ω 2P | サンキン抵抗 | | | |
| | 22 | 30 54 00 A A 81 07 40 | Fixing Metal For C,B | シート固定金具 | G100-212II | | |
| ※ | 23 | Refer to page 18 Note3 | Power Transformer | 電源トランス | | | |
| | 24 | 40 10 00 E K 80 06 20 | Flange Nut M4 | フランジナット | | | |
| | 25 | 40 10 00 F L 10 92 20 | Electrolytic Capacitor 2200/160 | コンデンサ | | | |
| | 26 | Refer to page 18 Note4 | MA Unit | MAユニット | | | |
| | 27 | 40 10 00 E K 00 09 80 | Sharp Tip Pan Head Screw 5×10 7S | 尖先ナベ小ネジ | | | |
| | 28 | 40 10 00 E V 43 00 50 | Toothed Lock Washer AB5S ZMC2-Y | 歯付座金 | | | |
| ※ | 29 | Refer to page 18 Note5 | DC Board | DCシート | | | |
| ※ | 30 | 30 54 00 C B 81 37 70 | Cord Stopper | コード押え | | | |
| | 31 | 40 10 00 E A 03 01 60 | Pan Head Screw 3×16 ZMC2-Y | ナベ小ネジ | | | |
| | 32 | 40 10 00 E V 20 00 30 | Flat Washer 3S | 平座金 | | | |
| | 33 | Refer to page 18 Note6 | AC Cord | 電源コード | | | |
| | 34 | Refer to page 18 Note7 | Fuse Holder | ヒューズホルダー | | | |
| | 35 | 〃 | Fuse | ヒューズ(タイラッシュ) | | | |
| ※ | 36 | 40 10 00 L B 30 02 50 | 3P AC Outlet | AC OUTLET(3P) | | | U,C |
| | 37 | Refer to page 18 or Note8 | Power Switch | パワースイッチ | | | |
| | 38 | 40 10 00 J B 00 07 20 | Lamp Holder | ランプホルダー | | | |
| | 39 | 40 10 00 L A 00 07 60 | Lug | カラー端子板 | | | |
| | 40 | 40 10 00 F Z 00 20 30 | Spark Killer | スパークキラーコンデンサ | | | |
| | 41 | 40 10 00 E D 04 00 80 | Bind Head Screw 4×8 ZMC2-Y | バインド小ネジ | | | |
| | 42 | 40 10 00 E V 46 00 40 | Toothed Lock Washer B4S 〃 | 歯付座金 | | | |
| | 43 | 40 10 00 E V 30 00 40 | Spring Lock Washer 4S ZMC2-Y | バネ座金 | | | |
| | 44 | 40 10 00 E V 10 00 40 | Hexagonal Nut 4S 〃 | 六角ナット | | | |
| | 45 | 40 10 00 L A 00 02 90 | Ground Lug 4S | アースラグ | | | |
| | 46 | 40 10 00 C A 80 19 90 | Isolation Cover | 絶縁カバー | | | U,C |
| | 47 | 40 10 00 F i 18 33 30 | Ceramic Capacitor 0.0033/125 | セラミックコンデンサー | | | U,C |
| | 48 | 40 10 00 L B 20 02 50 | Voltage Selector | 電圧切替器 | | | O |
| | 49 | 40 10 00 E A 30 08 20 | Pan Head Screw 3×8S ZMC2-B4 | ナベ小ネジ | | | O |
| | 50 | 40 10 00 E W 31 03 20 | Toothed Lock Washer A3S | 歯付座金 | | | O |
| | 51 | 40 10 00 E Y 11 03 20 | Hexagonal Nut 3S | 六角ナット | | | O |
| | 52 | 40 10 00 E A 30 10 30 | Pan Head Screw 3×10S FCM3-B4 | ナベ小ネジ | | | U,C |

※：New Part (新部品)

| | Ref. No. | Part No. | Description | (部 品 名) | Remarks | Common model | Markets |
|---|---|---|---|---|---|---|---|
| | ※ | Note 1 | | | | | |
| ※ | 2 | 30 54 00 A A 81 00 70 | Panel | パネル | G100-212II | | U,C |
| ※ | 〃 | 30 54 00 A A 81 00 80 | 〃 | 〃 | | | O |
| ※ | 〃 | 30 54 00 A A 81 01 00 | Panel | パネル | G100-112 | | U,C |
| ※ | 〃 | 30 54 00 A A 81 01 10 | 〃 | 〃 | | | O |
| ※ | 〃 | 30 54 00 A A 81 07 70 | Panel | パネル | G50-112II | | U,C |
| ※ | 〃 | 30 54 00 A A 81 07 80 | 〃 | 〃 | | | O |
| ※ | 〃 | 30 54 00 A A 81 C1 30 | Panel | パネル | G100-115II | | U,C |
| ※ | 〃 | 30 54 00 A A 81 C1 40 | 〃 | 〃 | | | O |
| ※ | 〃 | 30 54 00 AA 81 C1 60 | Panel | パネル | G100-210 | | U,C |
| ※ | 〃 | 30 54 00 AA 81 C1 70 | 〃 | 〃 | | | O |
| | ※ | Note 2 | | | | | |
| ※ | 3 | 30 54 00 A A 81 02 00 | Back Panel | バックパネル | G100-212II | | U |
| ※ | 〃 | 30 54 00 A A 81 02 10 | 〃 | 〃 | | | C |
| ※ | 〃 | 30 54 00 A A 81 02 30 | 〃 | 〃 | | | O |
| ※ | 3 | 30 54 00 A A 81 02 60 | Back Panel | バックパネル | G100-112 | | U |
| ※ | 〃 | 30 54 00 A A 81 02 70 | 〃 | 〃 | | | C |
| ※ | 〃 | 30 54 00 A A 81 02 90 | 〃 | 〃 | | | O |
| ※ | 3 | 30 54 00 A A 81 09 00 | Back Panel | バックパネル | G50-112II | | U |
| ※ | 〃 | 30 54 00 A A 81 09 10 | 〃 | 〃 | | | C |
| ※ | 〃 | 30 54 00 A A 81 09 30 | 〃 | 〃 | | | O |
| ※ | 〃 | 30 54 00 A A 81 03 20 | Back Panel | バックパネル | G100-115II | | U |
| ※ | 〃 | 30 54 00 A A 81 03 30 | 〃 | 〃 | | | C |
| ※ | 〃 | 30 54 00 A A 81 03 50 | 〃 | 〃 | | | O |
| ※ | 〃 | 30 54 00 AA 81 03 80 | Back Panel | 〃 | G100-210 | | U |
| ※ | 〃 | 30 54 00 AA 81 03 90 | 〃 | 〃 | | | C |
| ※ | 〃 | 30 54 00 AA 81 04 10 | 〃 | 〃 | | | O |
| | ※ | Note 3 | | | | | |
| ※ | 23 | 40 10 00 G A 80 84 00 | Power Transformer | 電源トランス | G100 | | U,C |
| ※ | 〃 | 40 10 00 G A 80 85 00 | 〃 | 〃 | | | O |
| ※ | 〃 | 40 10 00 G A 80 87 00 | 〃 | 〃 | G50 | | U,C |
| ※ | 〃 | 40 10 00 G A 80 88 00 | 〃 | 〃 | | | O |
| | ※ | Note 4 | | | | | |
| ※ | 26 | 30 54 00 N B 81 26 20 | MA-Unit | MAユニット | G100 | | U,C |
| ※ | 〃 | 30 54 00 N B 81 26 30 | 〃 | 〃 | | | O |
| ※ | 〃 | 30 54 00 N B 81 38 90 | 〃 | 〃 | G50 | | U,C |
| ※ | 〃 | 30 54 00 N B 81 39 00 | 〃 | 〃 | | | O |
| | ※ | Note 5 | | | | | |
| ※ | 29 | 30 54 00 N A 80 51 70 | DC Board | DCシート | G100 | | C |
| ※ | 〃 | 30 54 00 N A 80 51 80 | 〃 | 〃 | | | U |
| ※ | 〃 | 30 54 00 N A 80 51 90 | 〃 | 〃 | | | O |
| ※ | 〃 | 30 54 00 N A 80 53 50 | 〃 | 〃 | G50 | | C |
| ※ | 〃 | 30 54 00 N A 80 53 60 | 〃 | 〃 | | | U |
| ※ | 〃 | 30 54 00 N A 80 53 70 | 〃 | 〃 | | | O |
| | ※ | Note 6 | | | | | |
| | 33 | 40 10 00 MG 00 04 50 | AC Cord | 電源コード | | | O |
| | 〃 | 40 10 00 MG 00 02 70 | 〃 | 〃 | | | U,C |

※ : New Part (新部品)

| Ref. No. | Part No. | Description | (部 品 名) | Remarks | Common mocel | Markets |
|---|---|---|---|---|---|---|
| ※ | Note 7 | | | | | |
| 34 | 40 10 00 L B 20 04 90 | Fuse Holder | ヒューズホルダー | | | U,C |
| 34-1 | 40 10 00 L B 20 05 90 | 〃 | 〃 | | | O |
| 34-2 | 40 10 00 A A 03 15 80 | Washer for Fuse Holder | ヒューズホルダーワッシャー | | | O |
| 35 | 40 10 00 K B 00 03 60 | Fuse 3A 250V | ヒューズ(タイラッシュ) | | | C |
| 〃 | 40 10 00 K B 00 10 40 | 〃 UL SS-2 3A 250V | UL ヒューズ | | | U |
| 〃 | 40 10 00 K B 00 07 40 | 〃 1.6AT 250V | ヒューズ(S タイムラグ) | (220～240V) | | O |
| 〃 | 40 10 00 K B 00 07 60 | 〃 3.15AT 250V | 〃 | (110～130V) | | O |
| 〃 | 40 10 00 K B 00 03 50 | 〃 2.0A 250V | ヒューズ(タイラッシュ) | G50-112 II | | C |
| 〃 | 40 10 00 K B 00 10 30 | 〃 UL SS-2 2A 250V | UL ヒューズ | | | U |
| 〃 | 40 10 00 K B 00 07 30 | 〃 1.0AT 250V | ヒューズ(S タイムラグ) | | | O |
| 〃 | 40 10 00 K B 00 07 50 | 〃 2.0AT 2 250V | 〃 | | | O |
| | | | | | | |
| ※ | Note 8 | | | | | |
| 37 | 40 10 00 K A 30 03 50 | Power Switch | パワースイッチ | | | U |
| 〃 | 40 10 00 K A 30 04 40 | 〃 | 〃 | | | C |
| 〃 | 40 10 00 K A 30 03 70 | 〃 | 〃 | | | O |

※ : New Part (新部品)