

QQ 376315150

# POWERED SPEAKER

# MS300

## SERVICE MANUAL



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**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 :** This 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 principal-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 bus in the unit (heavy gauge black wires connect to this bus.)

**IMPORTANT :** Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

**WARNING: CHEMICAL CONTENT NOTICE!**

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (Where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

**DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHATSOEVER SO EVER!**

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

**IMPORTANT NOTICE FOR THE UNITED KINGDOM**

**Connecting the Plug and Cord**

**IMPORTANT.** The wires in this main lead are coloured in accordance with the following code:  
BLUE: NEUTRAL  
BROWN: LIVE


As the colours of the wires in the main lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The BLUE wire must be connected to the terminal that is marked with the letter N (or coloured BLACK).

The BROWN wire must be connected to the terminal that is marked with the letter L (or coloured RED).

Be certain that neither core is connected to the earth terminal of the three pin plug.

**■ WARNING**

Components having special characteristics are marked  and must be replaced with parts having specification equal to those originally installed.

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# SPECIFICATIONS

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## General specifications

### Type

Bi-Amp 2-way bass reflex powered speaker  
(Bi-amplifier electronic crossover network)

### Speaker unit

LF: 30 cm cone

HF: 5 cm Titanium diaphragm compression driver

Frequency Range ..... 50 Hz~16 kHz (-10 dB)

Maximum Output Level..... 121 dB (1m on Axis)

Directional angle..... 90° (H)/40° (V)

Dimension (W x H x D) ..... 406 x 637 x 348.5 mm

Weight ..... 23.7 kg

Color ..... Black (approx. Munsell value:  
5PB 2/1)

Tripod pole diameter..... 35~36 mm

Accessories .....Power cord (AC inlet type, 2.5 m)

## Amp.unit

### Maximum Output Power

LF: 225 W at 500 Hz, THD=1%, RL=4Ω

HF: 85 W at 5 kHz, THD=1%, RL=16 Ω

Crossover frequency ..... 1.6 kHz (30 dB/oct.)

Input Sensitivity ..... LINE: +4 dB\*, MIC: -50 dB\*

Input impedance..... LINE: 30 kΩ, MIC: 5 kΩ

### Controls

LEVEL ..... MASTER, MIC, LINE

EQ ..... LOW: 0 (Max.) ~ -8 dB (Min.) at 55 Hz  
HIGH: ±3 dB (HF)

Power switch..... On/Off

### Connectors (all balanced):

LINE in/out ..... XLR-3-31, XLR-3-32, phone  
(They are all connected in parallel  
and can be used as line outputs.)

MIC in..... XLR-3-31

POWER indicator ..... Green LED

Power Requirement USA and Canada ..... 120 V, 60 Hz  
Europe..... 230 V, 50 Hz  
Others ..... 240 V, 50 Hz

Power Consumption ..... 100 W

Option ..... Bracket BWS251-400, BCS251,  
and BBS251

\* 0 dB=0.775 V

### For European Model

Purchaser/User Information specified in EN55103-1 and  
EN55103-2.

Inrush Current: 31A

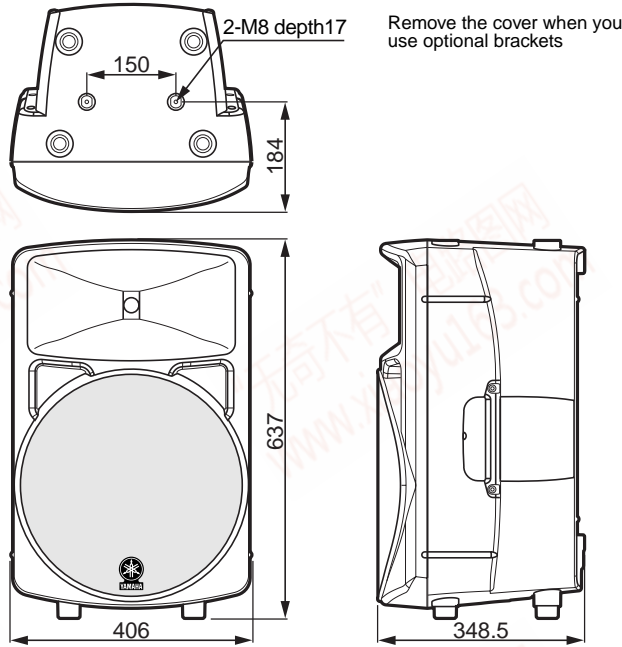
Conformed Environment: E1, E2, E3 and E4

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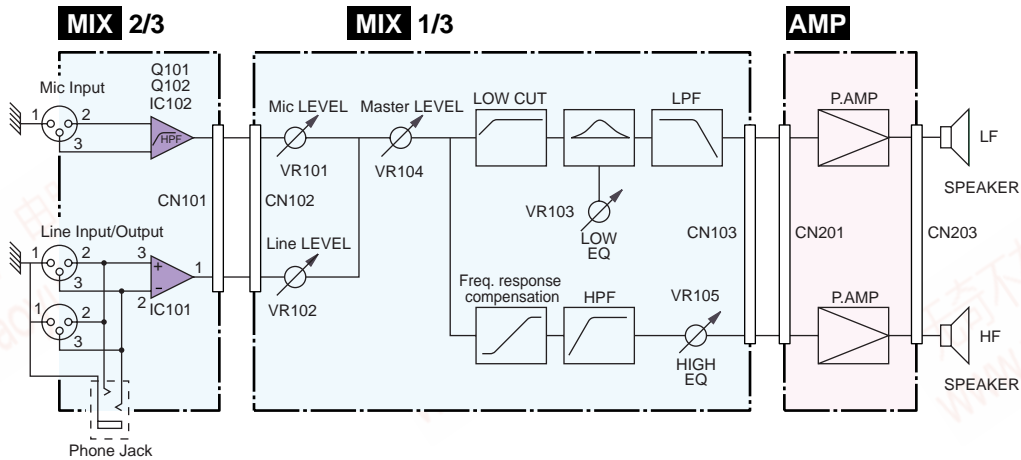
# DIMENSIONS

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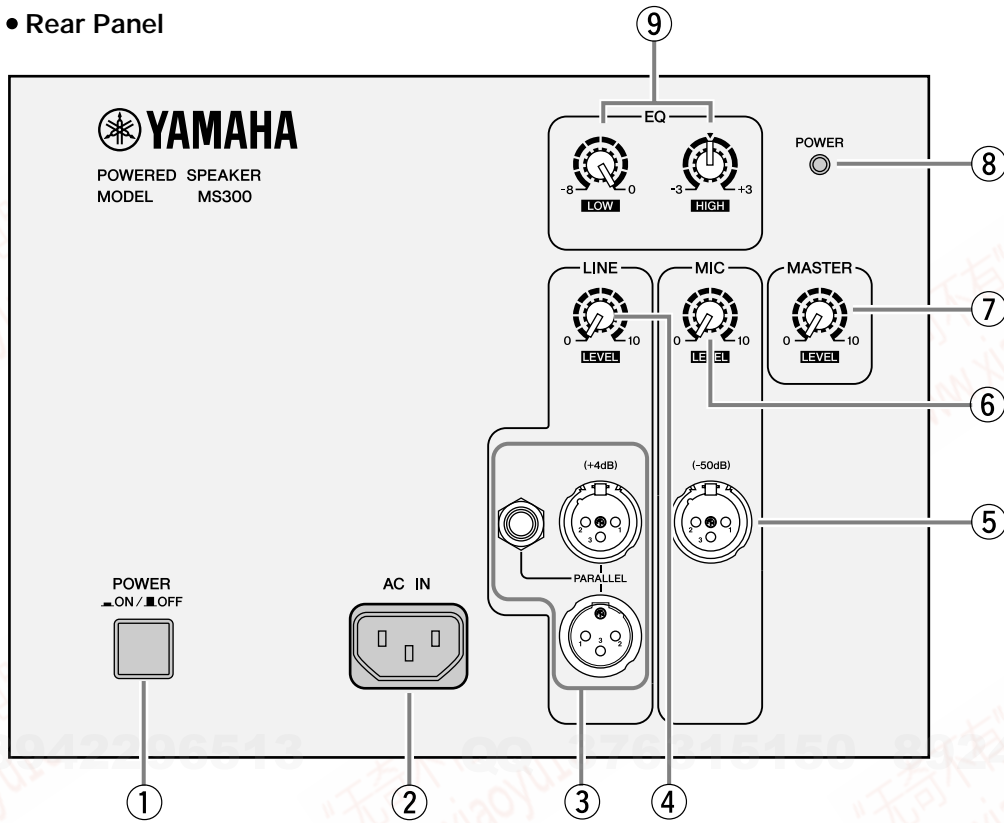
Units: mm

# BLOCK DIAGRAM



# ■ PANEL LAYOUT

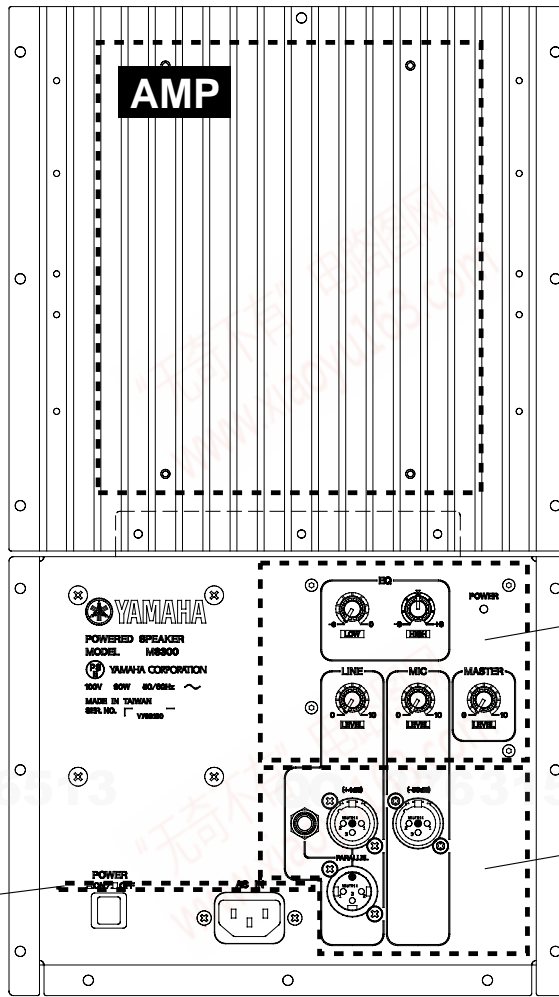
## • Rear Panel



- ① POWER switch
- ② AC IN connector
- ③ LINE connectors
- ④ LINE LEVEL control
- ⑤ MIC connector
- ⑥ MIC control
- ⑦ MASTER LEVEL control
- ⑧ POWER indicator
- ⑨ EQ control

# ■ CIRCUIT BOARD LAYOUT

# QQ 376315150 892498299



**MIX 3/3**

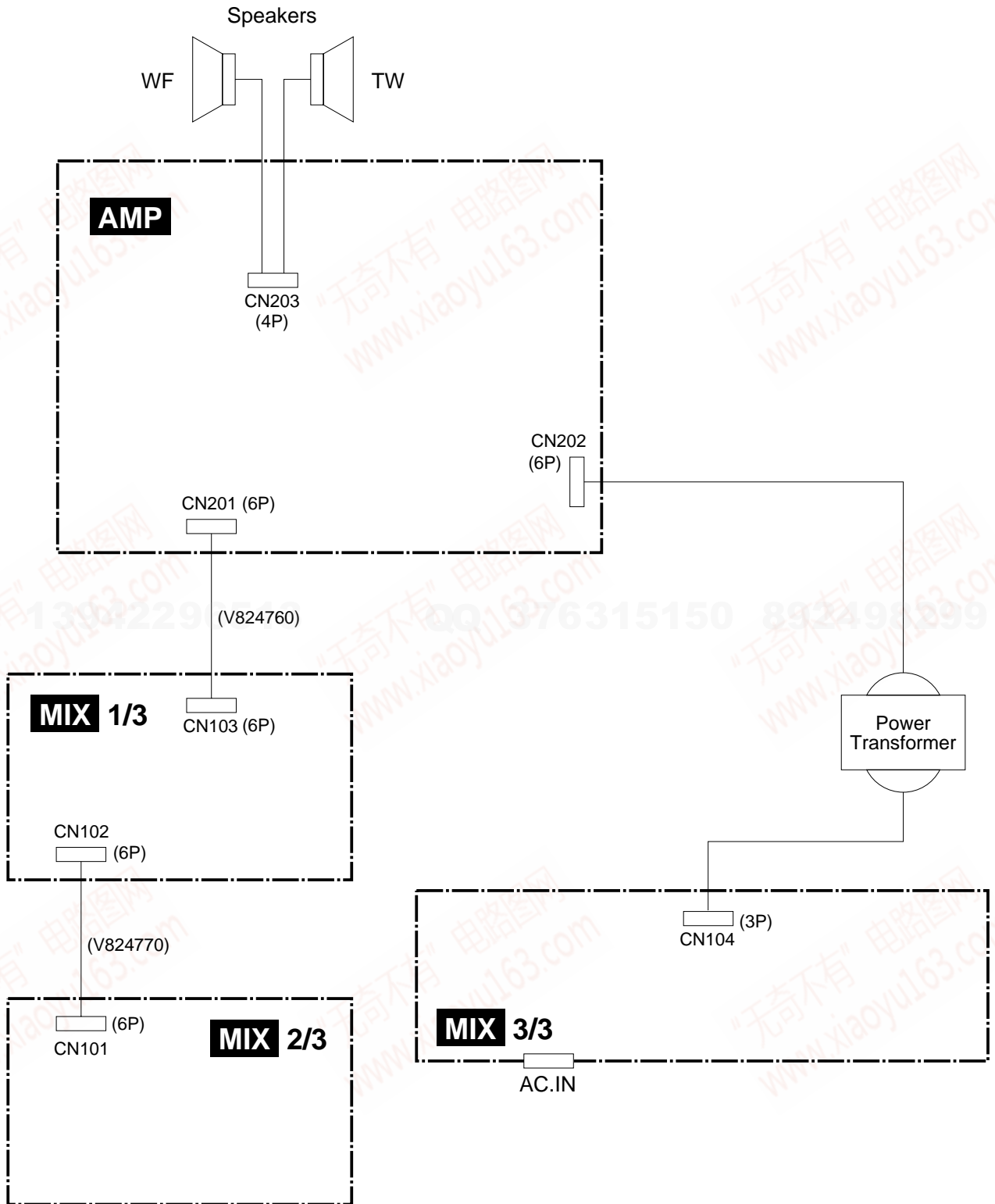
**MIX 1/3**

**MIX 2/3**

# WIRING

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# DISASSEMBLY PROCEDURE

## 1. Amplifier assembly (Time required: 5 min.)

1-1. Remove the sixteen (16) screws marked [160A]. The amplifier assembly can then be removed. (Fig. 1)

## 2. Cabinet assembly and baffle assembly (Time required: 10 min.)

2-1. Remove the sixteen (16) screws marked [150]. The baffle assembly can then be removed from the cabinet assembly. (Fig. 1)

## 3. Speakers (30cm) (Time required: 15 min.), Horn driver (Time required: 12 min.) and Diaphragm assembly (Time required: 11 min.)

3-1. Remove the baffle assembly from the cabinet assembly. (See Procedure 2.)

3-2-1. To remove the 30cm speaker, remove the four (4) screws marked [160B] and the front grille. (Fig. 1)

3-2-2. Remove the eight (8) bolts marked [70]. The 30cm speaker can then be removed. (Fig. 1)

3-3-1. To remove the horn driver, remove the four (4) screws marked [110]. Then remove the speaker with the bracket. (Fig. 1)

3-3-2. Remove the two (2) screws marked [100]. The horn driver can then be removed from the bracket. (Fig. 1)

3-4. Remove the three (3) screws marked [80b]. The diaphragm assembly can then be removed. (Fig. 1)

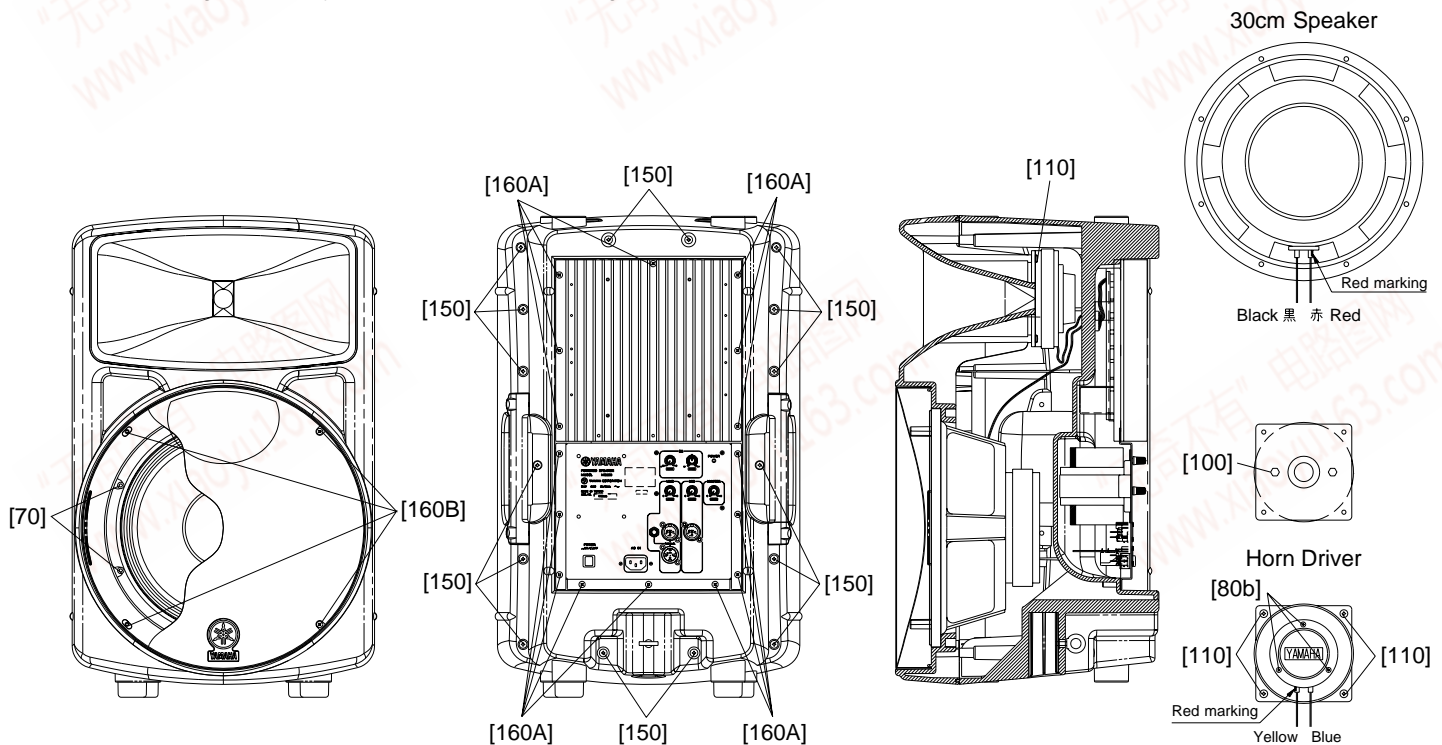


Fig.1

- [70]: Hexagonal Bolt 5.0 X 35 MFZN2BL (V6389200)
- [100]: Bind Head Screw 1/4" -20uncx 3/8" (V6289600)
- [110]: Bind Head Tapping Screw-P 5.0 X 30 MFZN2BL (V6405200)
- [150]: Bind Head Tapping Screw-P 5.0 X 50 MFZN2BL (V6084800)
- [160]: Bind Head Screw-Giza 4 X 16 MFZN2BL (V6396400)



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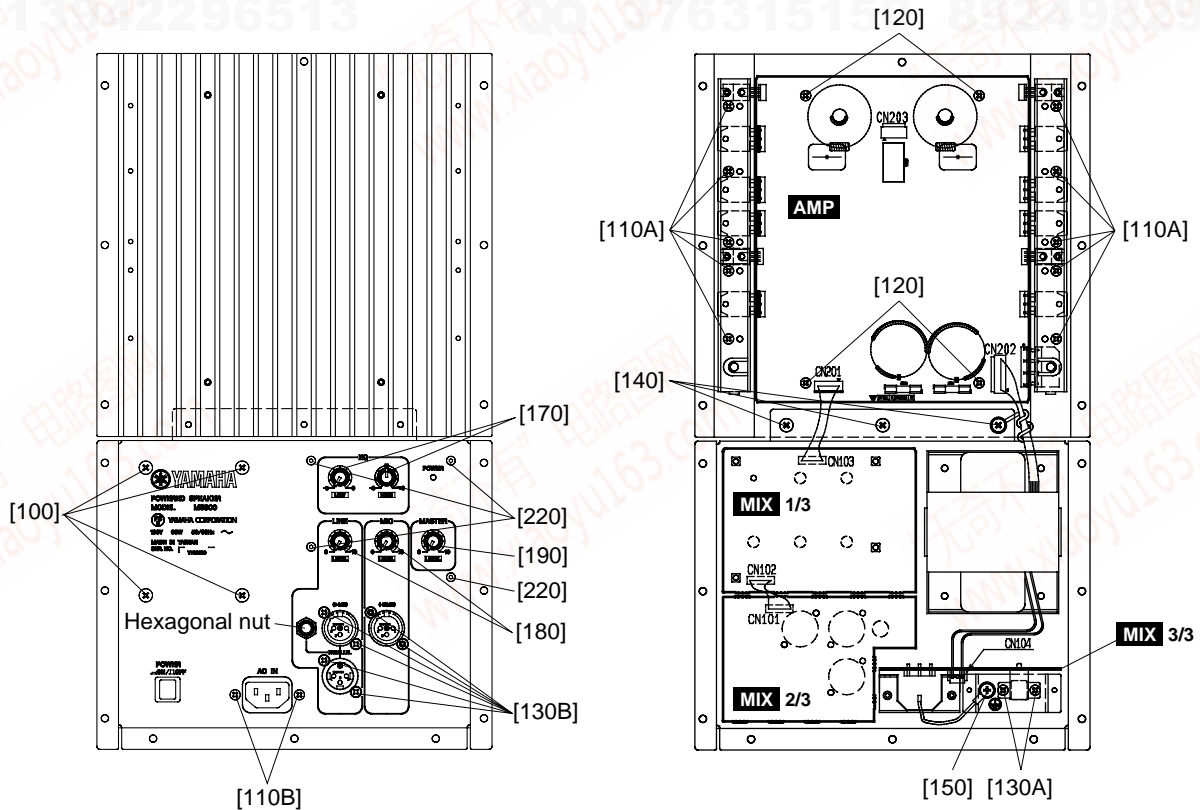
**4. AMP and MIX (1/3 ~ 3/3) Circuit Boards  
(Time required: 7 min. each)**

- 4-1. Remove the amplifier assembly. (See Procedure 1.)
- 4-2. Remove the screws and the knob from each circuit board, which can then be removed. (Fig. 2)

PCB Name	Ref No.	Description	QTY
AMP Circuit Board	110A	Bind Head Tapping Screw-B 3.0 X 12 MFZN2BL (VQ074600)	10
	120	Bind Head Screw SP 3.0 X 8 MFZN2Y (EG330290)	4
MIX3/3 Circuit Board	110B	Bind Head Tapping Screw 3.0 X 12 MFZN2BL (VQ074600)	2
	130A	Bonding Screw-B 3.0 X 8 MFZN2BL (VN413300)	2
	150	Bind Head Screw A4.0 X 8 MFZN2BL (VP156800)	1
MIX2/3 Circuit Board	130B	Bonding Screw-B 3.0 X 8 MFZN2BL (VN413300)	6
		Hexagonal Nut	1
MIX1/3 Circuit Board	170	Knob MX-GREEN/D-GRAY (VU860200)	2
	180	Knob ORANGE/D-GRAY (VV625800)	2
	190	Knob RED/D-GRAY (VU860400)	1
	220	Button 3 X 25 MFZN2BL (V3289800)	4

**5. Power transformer (Time required: 7 min.)**

- 5-1. Remove the amplifier assembly. (See Procedure 1.)
- 5-2. Remove the four (4) screws marked [100]. The power transformer can then be removed. (Fig. 2)



- [100]: Bonding Tapping Screw-B 4.0 X 12 MFZN2BL (V7242900)
- [110]: Bonding Head Tapping Screw-B 3.0 X 12 MFZN2BL (VQ074600)
- [140]: Bonding Tapping Screw-B 4.0 X 8 MFZN2BL (VR779900)

Fig.2

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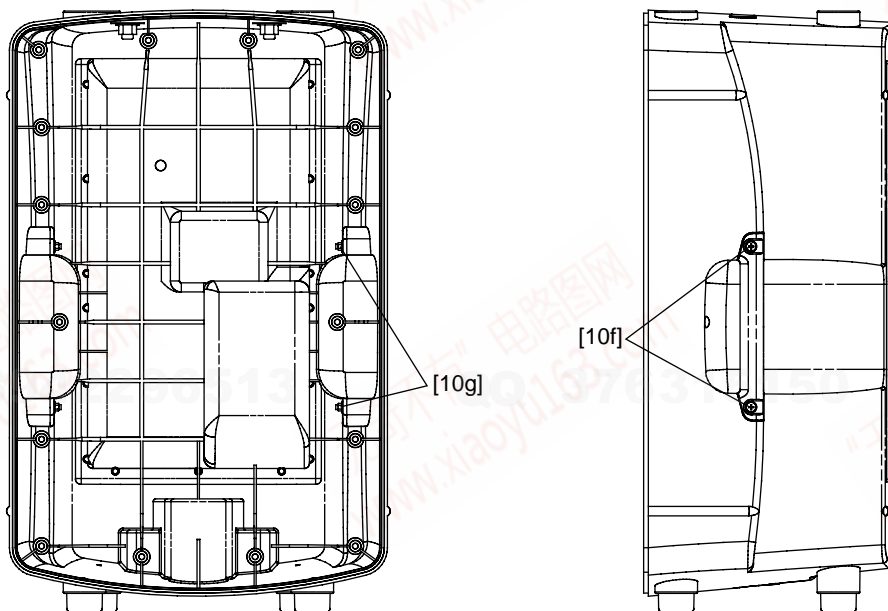
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**6. Handle (Time required: 13 min.)**

- 6-1. Remove the cabinet assembly. (See Procedure 2.)
- 6-2. Remove the two (2) screws marked [10f] and the two (2) nuts marked [10g]. The handle can then be removed. (Fig.3)

**7. Heat sink (Time required: 8 min.)**

- 7-1. Remove the amplifier assembly. (See Procedure 1.)
- 7-2. Remove the AMP circuit board. (See Step 4-2.)
- 7-3. Remove the three (3) screws marked [140]. The heat sink can then be removed. (Fig.2)

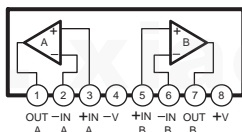


[10f]: Bind Head Screw-B 5.0 X 35 MFZN2BL (VL670600)  
 [10g]: Hexagonal Nut 5.0 MFZN2BL (VB664600)

Fig.3

**IC BLOCK DIAGRAM**

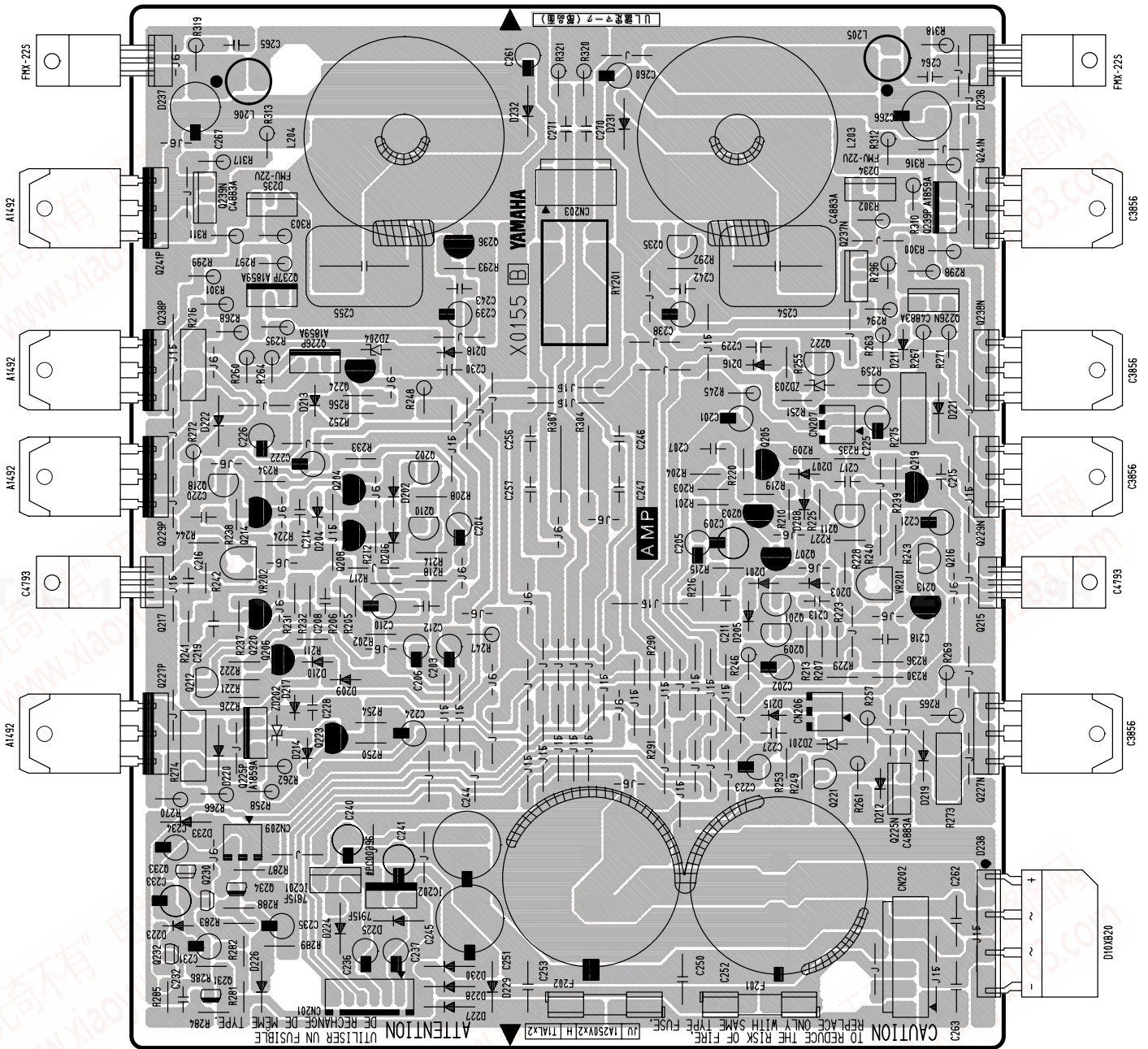
- **NJM2068L-D** (XM356A00)  
MIX: IC101,IC103,IC104,IC105,  
IC106,IC107,IC108
  - **NJM4580L** (XF195A00)  
MIX: IC102
- Operational Amplifier



# CIRCUIT BOARDS

## • AMP Circuit Board

CN203: to Woffer (1,2pin)  
CN203: to Tweeter (3,4pin)



CN201: to MIX 1/3-CN103

CN202: to Transformer

Component side

Notes: VR201, VR202: Idling Adjustment VR.

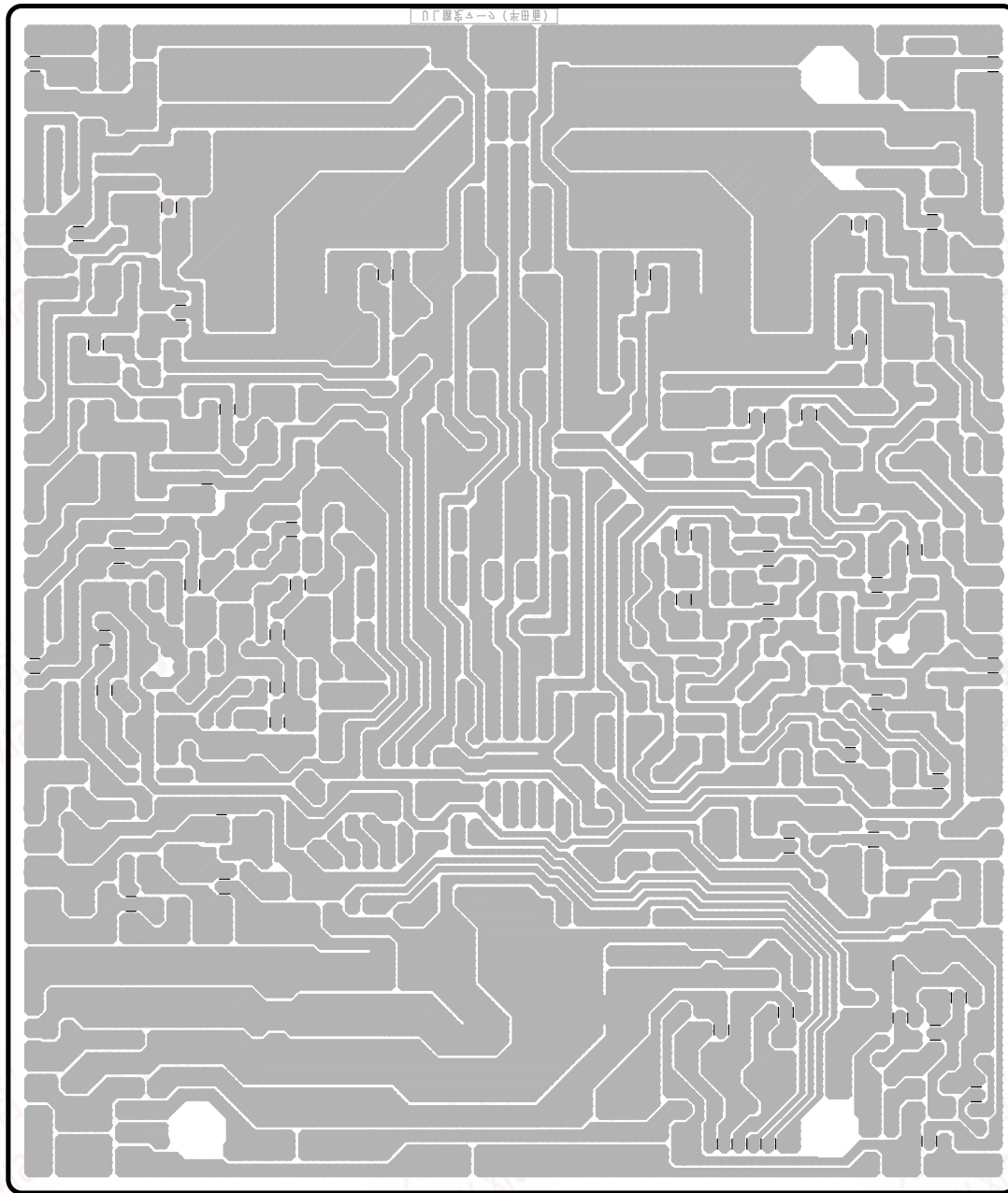
Note: See parts list for details of circuit board component parts.

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• AMP Circuit Board

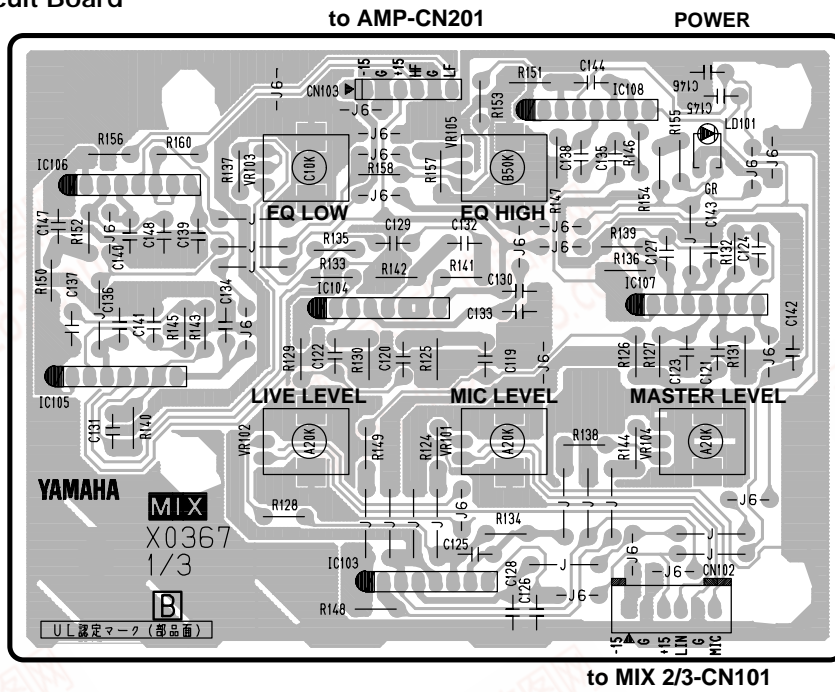


Pattern side

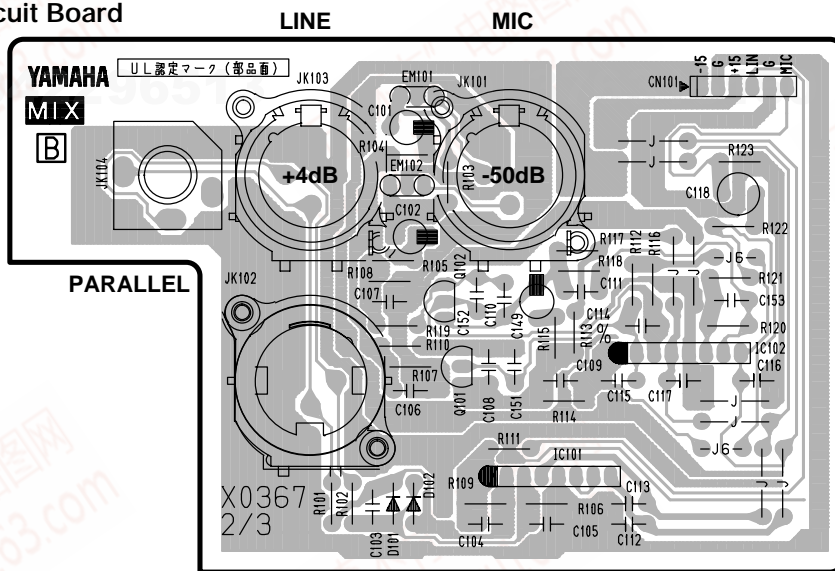
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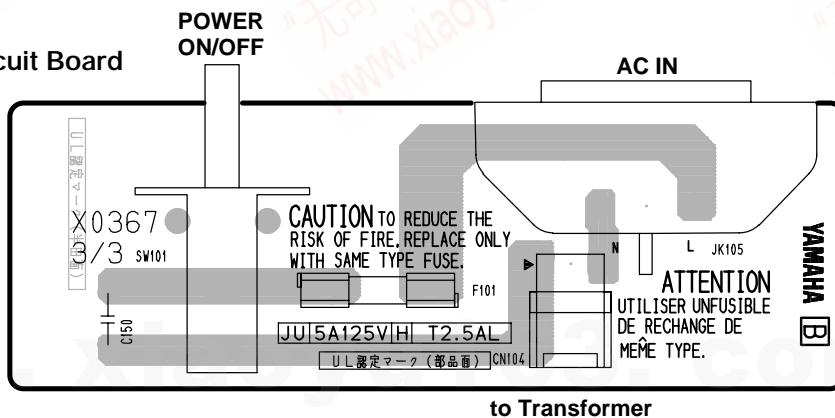
• MIX1/3 Circuit Board



• MIX2/3 Circuit Board



• MIX3/3 Circuit Board



3LP-X0367A0

## ■ INSPECTIONS

### • Amplifier unit

#### 1. Preparation

- 1) Input terminal  
LINE INPUT (XLR)  
MIC INPUT (XLR)
- 2) Output terminal: CN203 (VH4P)  
LF 1P(+) 2P(-), RL=4 ohms / Power capacity 500W  
HF 4P(+) 3P(-), RL=16 ohms / Power capacity 200W  
or more
- 3) LINE LEVEL: MAX (10)
- 4) MIC LEVEL: MIN (0)
- 5) MASTER LEVEL: MAX(10)
- 6) TONE CONTROL HIGH: Center click position (0)
- 7) TONE CONTROL LOW: MAX (0)
- 8) The input signals should be in the form of sine wave.

#### 2. Inspection

- 1) Power ON muting time  
Check that the muting function is cancelled and the relay turns on in  $3\pm 1$  seconds after the power switch is turned on. Also, check that the power indicator lights up.,
- 2) Idling current adjustment  
Adjust VR201 and VR202 so that the voltage between Pins 1 and 2 of CN206 and CN207 becomes  $1\pm 0.2$ mV respectively.
- 3) Midpoint potential  
Check the DC voltage of CN203 (VH4P) when no signal is applied. It should be within  $\pm 70$ mV both at LF (between Pins 1 and 2) and at HF (between Pins 3 and 4).
- 4) Gain / Efficiency  
Input a 500Hz, -1dBu signal to the input terminal Line INPUT (XLR) and check that the output voltage at the output terminal LF is  $+25\pm 1$ dBu. Also, check that the primary side power consumption at this time is  $110\pm 20$ W.
- 5) Full harmonic distortion  
Input a 500Hz signal to the input terminal LINE INPUT (XLR) and check that the full harmonic distortion when the output voltage at the output terminal LF is 31.8dBu is THD+N=1% or less.  
Input a 5kHz signal to the input terminal LINE INPUT (XLR) and check that the full harmonic distortion when the output voltage at the output terminal HF is 33.6dBu is THD+N=1% or less. This measurement should be completed within 30 seconds.

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6) Output noise level

Ground the input terminals LINE INPUT (XLR) and MIC INPUT (XLR) with a 600 ohm resistance connected to each terminal and measure the noise level at the output terminals LF and HF. The measured value should be as specified below. Use a DIN audio filter for the noise meter.

LF ≤ -62dBu

HF ≤ -65dBu

7) Frequency response characteristics

Input -20dBu signals of 50Hz, 1kHz, 2kHz and 15kHz to the input terminal LINE INPUT (XLR). Using the output voltage measured at the output terminal LF when a 1kHz, -20dBu signal is input as standard (0dB), check that the output voltages measured at LF and HF are as specified below.

Frequency (Hz)	LF	HF
50	+6.2±1.5dB	--
1k	0dB	-25.5±1.5dB
2k	-6.1±1.5dB	-7.5±1.5dB
15k	--	+1.4±1.5dB

8) EQ high change characteristics

Input a 5kHz, -20dBu signal to the input terminal LINE INPUT (XLR), move the EQ high VR and check that the output voltage measured at the output terminal HF then is as follows, using the output voltage when the VR is at the center click position as standard (0dB).

MAX(+3): +2.5dB ± 1dB

MIN(-3): -3.2dB ± 1dB

9) EQ low change characteristic

Input a 50kHz, -20dBu signal to the input terminal LINE INPUT (XLR), move the EQ low VR and check that the output voltage measured at the output terminal LF then is as follows, using the output voltage when the VR is at the MAX position as standard (0dB).

MIN(-10): -7.5dB ± 1dB

10) MIC input

Input a 500Hz, -55dBu signal to the input terminal MIC INPUT (XLR), set the MIC level to MAX (10) and check that the output voltage measured then is 25 ± 1dBu.

11) Protection circuit

Apply DC+5V (power supply output resistance = 10 kohm) between Pins 1 and 2 of the connector CN209 and check that the relay turns off within 1 second. Also, check that it returns automatically within 10 seconds when the input signal is shut off.

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• Finished product inspection

1. Preparation

- 1) input terminal: LINE INPUT (XLR)
- 2) LINE LEVEL: MAX(10)
- 3) MIC LEVEL: MIN(0)
- 4) MASTER LEVEL: MAX(10)
- 5) EQ HIGH: Center click position (0)
- 6) EQ LOW: MAX(0)

2. Inspection

- 1) Input a 20Hz to 20kHz, 0.08Vrms(-19.72dBu) sine wave signal to the input terminal LINE INPUT (XLR) and check that none of the contact of the voice coil, air leakage and abnormal noise such as vibration noise occurs.

Next, input music signals to the input terminal LINE INPUT (XLR), move each VR knob and check that the sound volume and tone quality change smoothly without producing noise.

- 2) Phase of speaker output

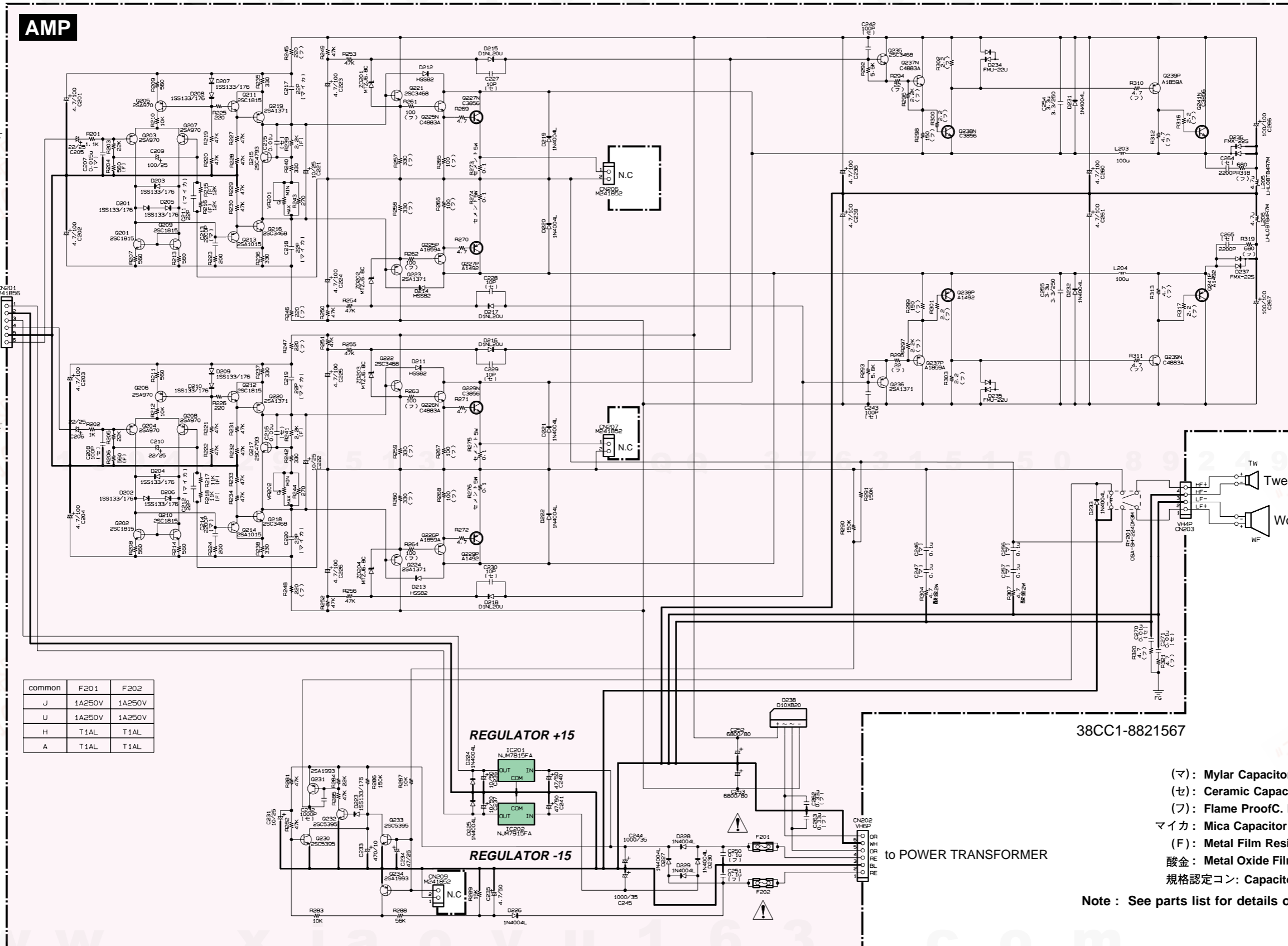
Check that the output at LF is in positive phase with respect to the input signal and the output at HF is in negative phase with respect to the input signal.

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# MS300 OVERALL CIRCUIT DIAGRAM 1/2 (AMP)

MS300



common	F201	F202
J	1A250V	1A250V
U	1A250V	1A250V
H	T1AL	T1AL
A	T1AL	T1AL

REGULATOR +15

REGULATOR -15

38CC1-8821567

to POWER TRANSFORMER

- (マ) : Mylar Capacitor
- (セ) : Ceramic Capacitor
- (フ) : Flame ProofC. Resister
- マイカ : Mica Capacitor
- (F) : Metal Film Resistor
- 酸化金 : Metal Oxide Film Resistor
- 規格認定コン : Capacitor

Note : See parts list for details of circuit board component parts.

•D10XB20 (V2954200)  
DIODE STACK

•NJM7815FA(XD853A00)  
REGULATOR +15V

1: OUTPUT  
2: COMMON  
3: INPUT

•NJM7915FA(XD854A00)  
REGULATOR -15V

1: OUTPUT  
2: INPUT  
3: COMMON

Tweeter  
Woffler

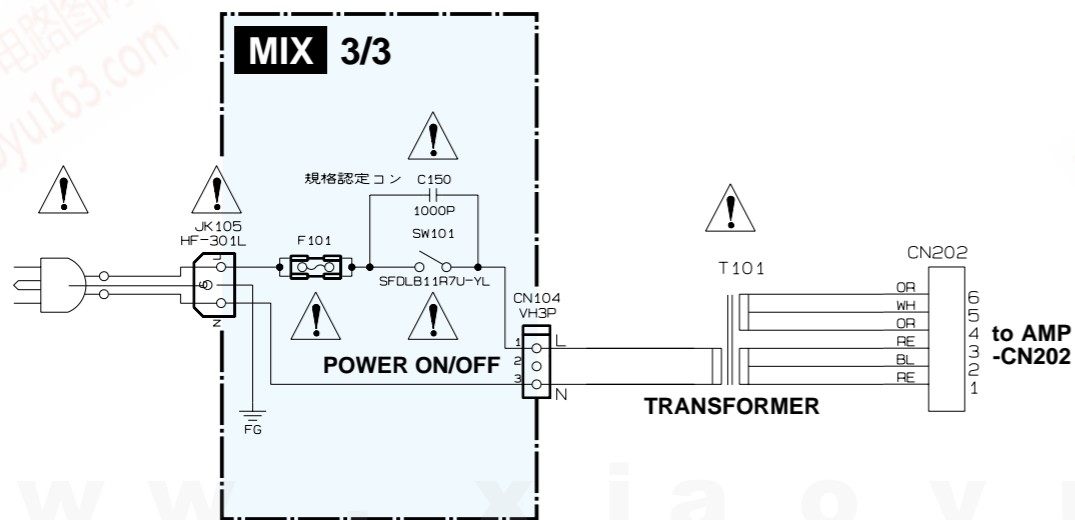
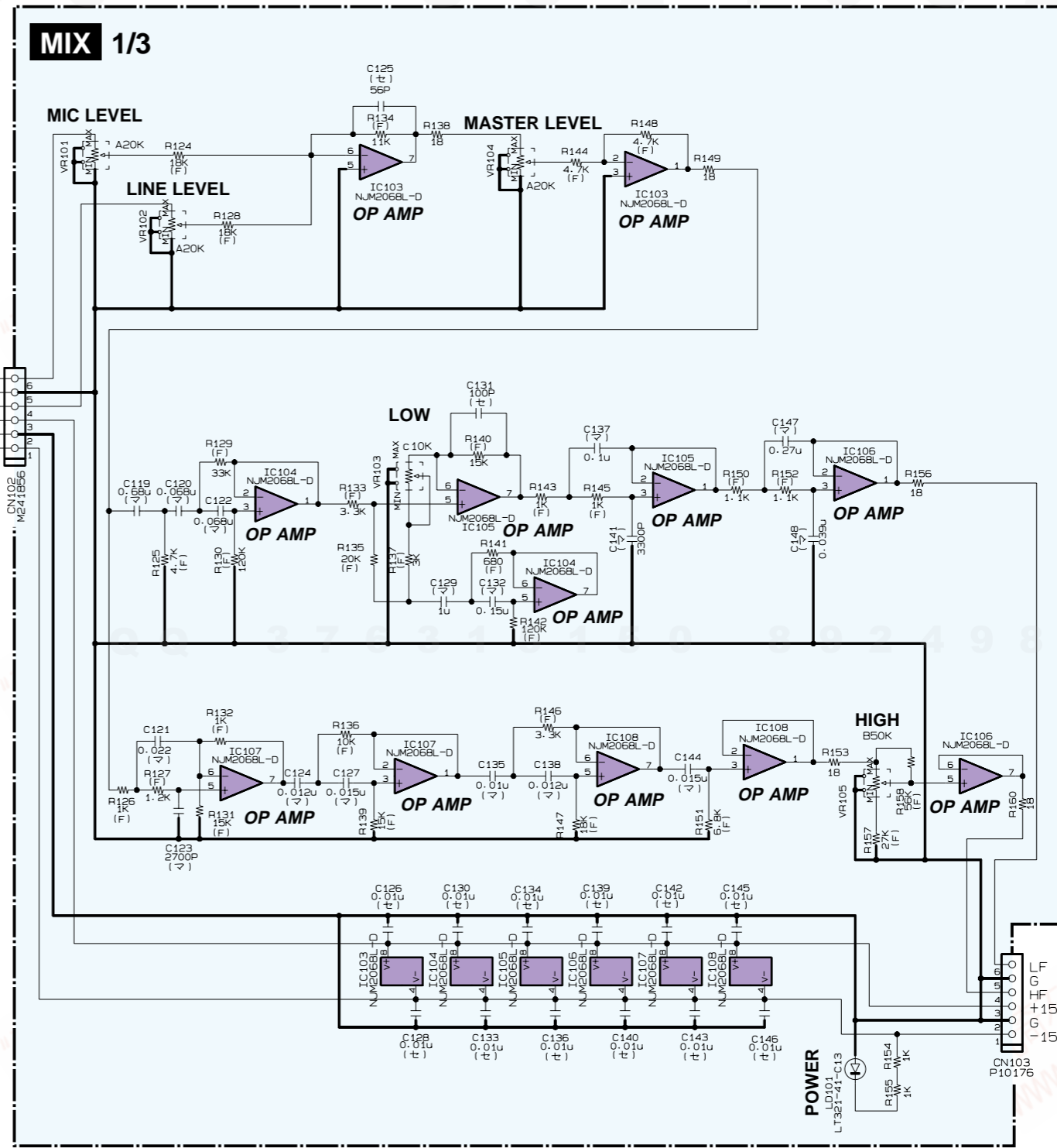
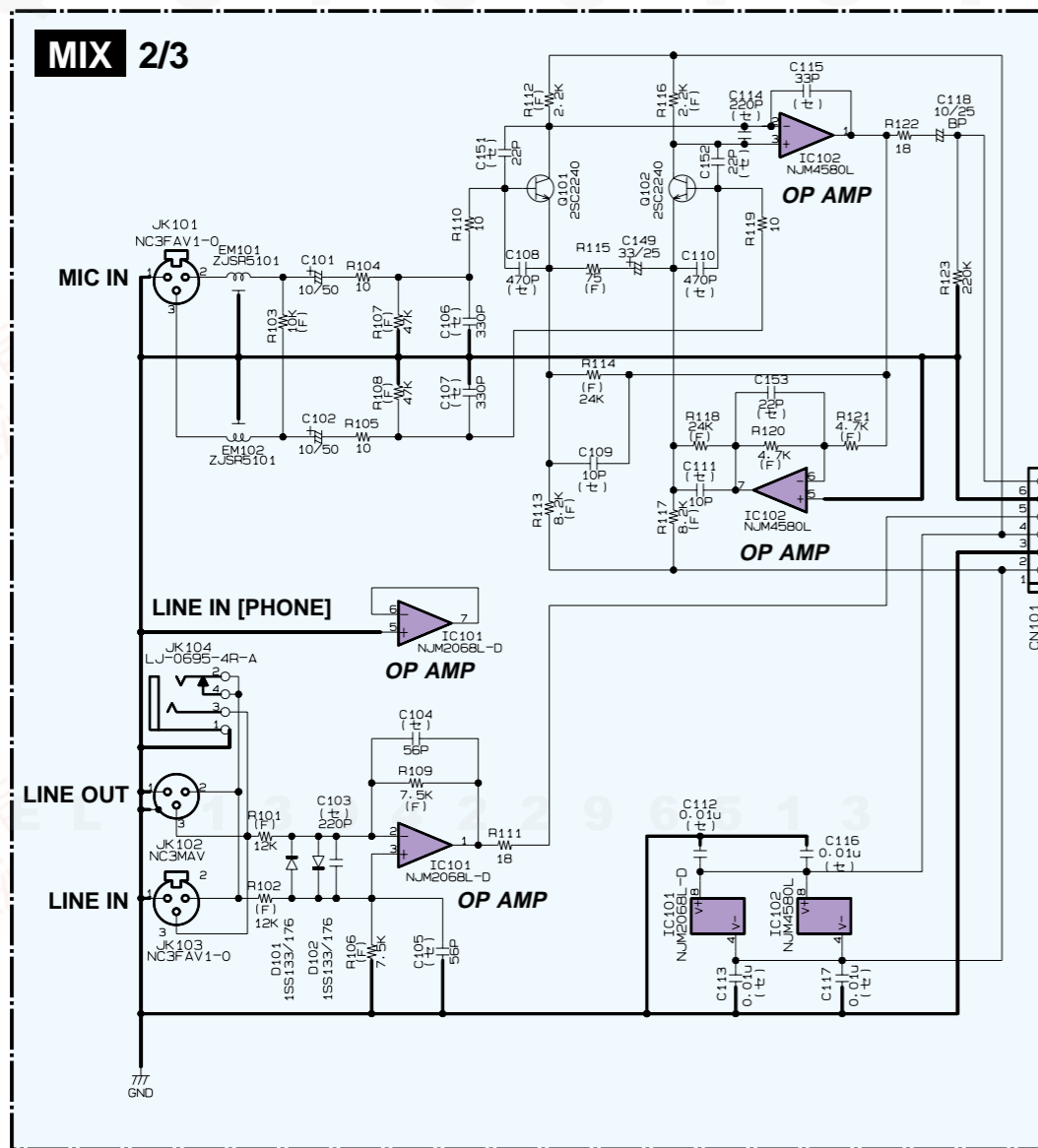
MS300

MS300

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# MS300 OVERALL CIRCUIT DIAGRAM 2/2 (MIX 1/3, 2/3, 3/3)

MS300



Common	F101	T101
J	5A125V	X0169A00
U	5A125V	X0170A00
H	T2.5AH	X0171A00
A	T2.5AH	X0172A00

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MS300

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# POWERED SPEAKER MS300 PARTS LIST

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## Notes : DESTINATION ABBREVIATIONS

A : Australian model	M: South African model
B : British model	O : Chinese model
C : Canadian model	Q: South-east Asia model
D : German model	T : Taiwan model
E : European model	U : U.S.A. model
F : French model	V : General export model (110V)
H : North European model	W: General export model (220)
I : Indonesian model	N,X: General export model
J : Japanese model	Y : Export model

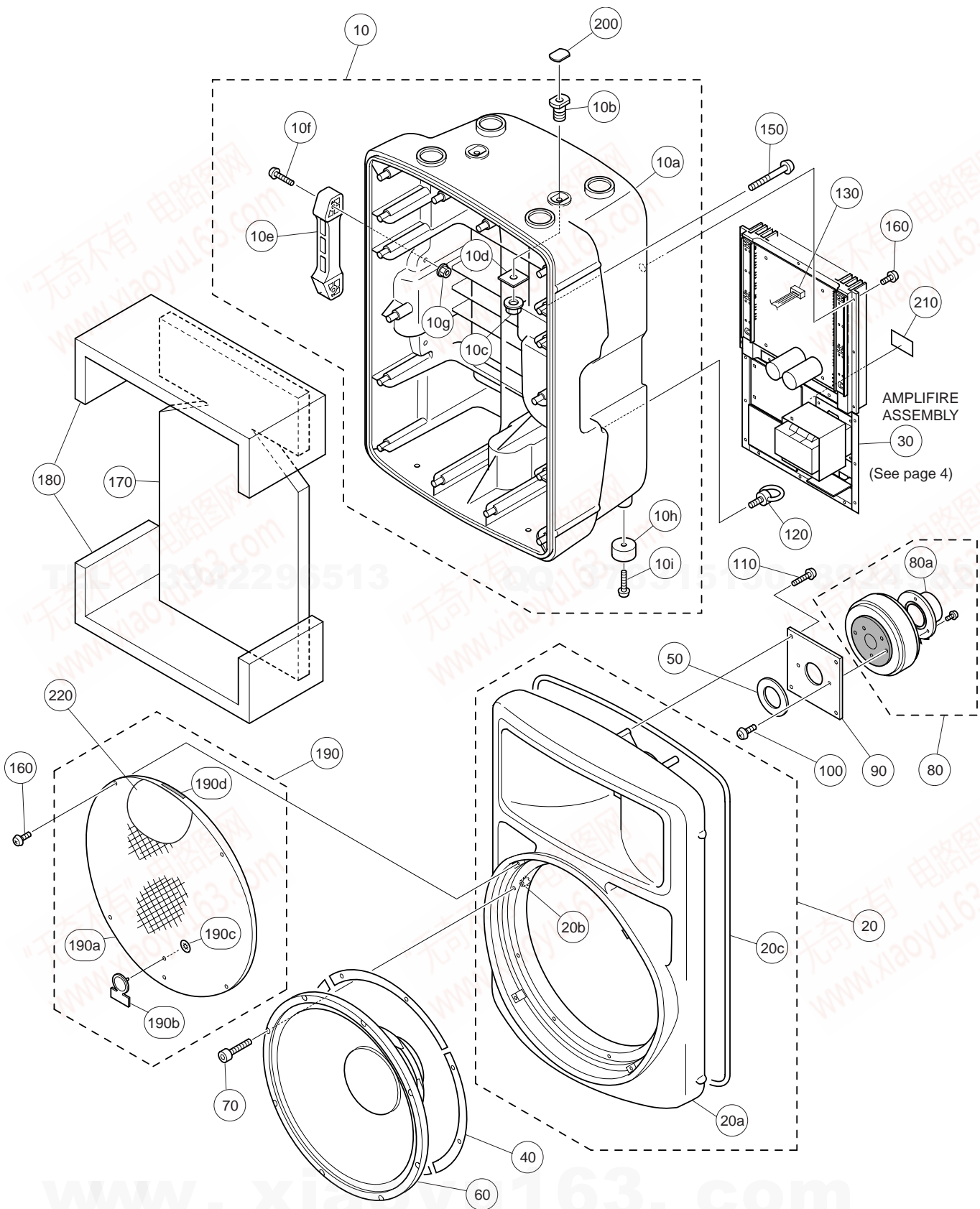
## ■ WARNING

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

- The numbers "QTY" show quantities for each unit.
- The parts with "--" in "PART NO." are not available as spare parts.
- This mark "}" in the REMARKS column means these parts are interchangeable.
- The second letter of the shaded (■) part number is O, not zero.
- The second letter of the shaded (■) part number is I, not one.

# OVERALL ASSEMBLY

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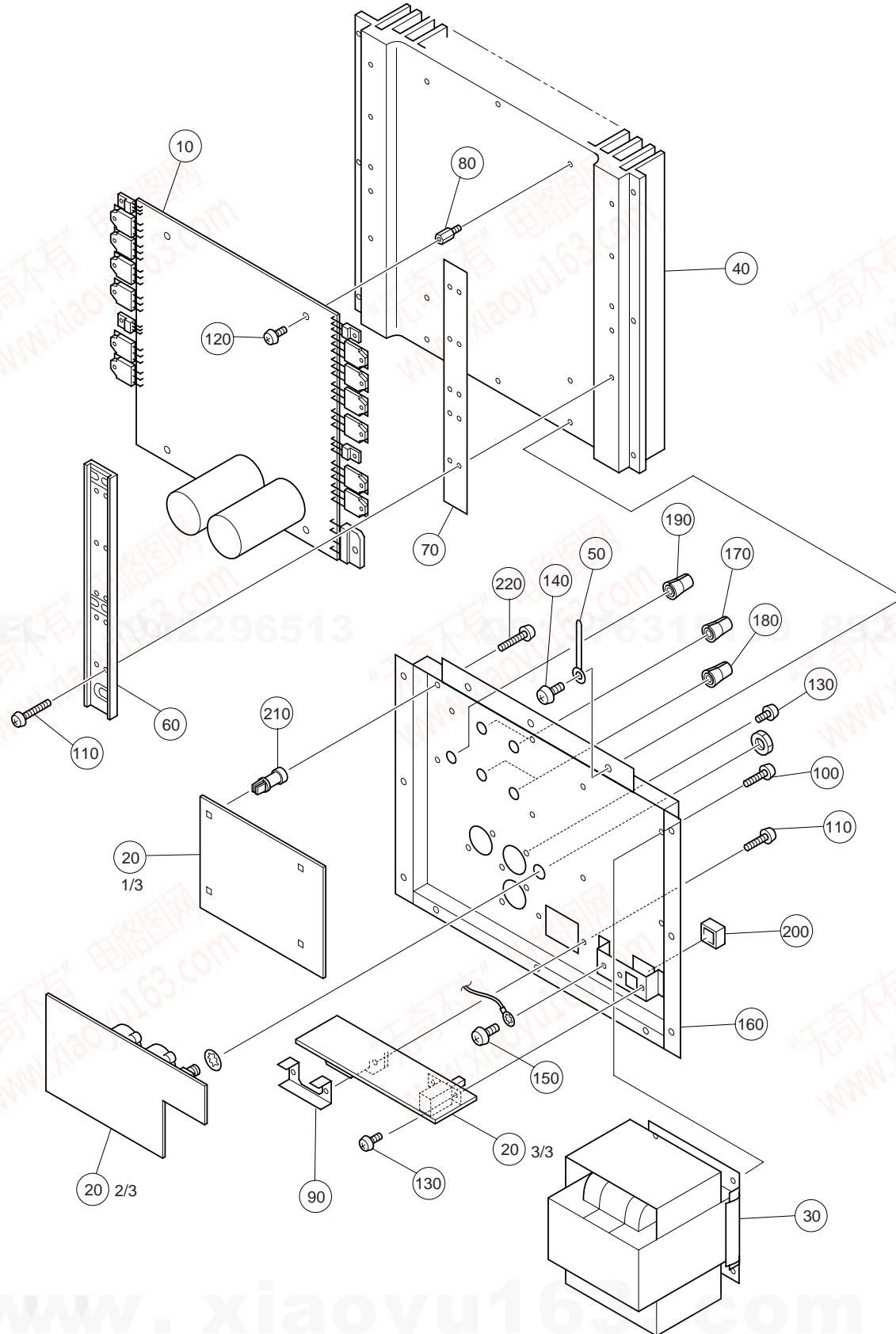
REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	OVERALL ASSEMBLY		MS300		
	--	Overall Assembly		J (V792250)		
	--	Overall Assembly		U,V (V792260)		
	--	Overall Assembly		H,B,W (V792270)		
	--	Overall Assembly		A (V792280)		
	--	Cabinet Assembly		(V792360)		
* 10a	V7923800	SP Cabinet				
10b	--	Bolt	12X20 MFZN2BL		2	
10c	V6084400	Hexagonal Flange Nut	12		2	01
10d	V6253400	Washer	12X35 MFZN2Y		2	01
10e	V6086000	Handle			2	04
10f	VL670600	Bind Head Screw	5.0X35 MFZN2BL		4	01
10g	VB664600	Hexagonal Nut	5.0 MFZN2BL		4	
10h	V6085900	Foot			4	03
10i	V6405200	Bind Head Tapping Screw-P	5.0X30 MFZN2BL		4	01
* 20	V7923700	Baffle Assembly	J			
20a	--	SP Baffle				
20b	--	Nut	B 5.0X12 MFZN2Y		8	
20c	--	Packing			2	
30	--	Amplifier Assembly		J (V792320)		
30	--	Amplifier Assembly		U,V (V792330)		
30	--	Amplifier Assembly		H,B,W (V792340)		
30	--	Amplifier Assembly		A (V792350)		
* 40	V7917400	Gasket W			4	
50	V6085400	Gasket HF				01
* 60	X0539A00	Speaker	30cm 4ohm			
70	V6389200	Cap Screw	5.0X35 MFZN2BL		8	01
80	JAY20610	Horn Driver	5cm 16ohm			22
80a	NBE20610	Diaphragm Assembly				16
90	--	HF Holder				(V608620)
100	V6289600	Bind Head Screw	1/4"-20UNCX3/8"		2	01
110	V6405200	Bind Head Tapping Screw-P	5.0X30 MFZN2BL		4	01
120	V6511500	I Bolt	6 MFZN2Y			04
130	--	Connector Assembly	SP			(V792590)
150	V6084800	Bind Head Tapping Screw-P	5.0X50 MFZN2BL		16	01
160	V6396400	Bind Head Screw	4X16 MFZN2BL		20	01
170	--	Felt A				(V791820)
180	--	Felt B				(V791830)
* 190	V7923900	Front Grille Assembly	J			
190a	--	Front Grille				(V789710)
190b	V6086300	Badge				
190c	V6290000	Push Nut	SPN-4		2	01
190d	--	Cushion				(V705450)
200	V6290200	Bolt Cover			4	
210	VA039300	Label		U,V	2	
220	--	Grille Sticker				(V792460)
		ACCESSORIES				
⚠	V7240300	AC Cord	J VCTF 0.75X3	J		05
⚠	V6284300	AC Cord	UC SJT#18X3	U,V		05
⚠	V6284400	AC Cord	E H05VV-FX3 0.75	H,W,A		06
⚠	V6283900	AC Cord	BS H05VV-F3X0.75	B		08

\*: New Parts

RANK: Japan only

# AMPLIFIRE ASSEMBLY

QQ 376315150 892498299



REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	--	AMPLIFIER ASSEMBLY				
	--	Amplifier Assembly		J (V792320)		
	--	Amplifier Assembly		U,V (V792330)		
	--	Amplifier Assembly		H,B,W (V792340)		
	--	Amplifier Assembly		A (V792350)		
* 10	V7915800	Circuit Board	AMP JU	J,U,V		
* 10	V7915900	Circuit Board	AMP H	H,B,W,A		
* 20	V7916000	Circuit Board	MIX JU	J,U,V (1/3,2/3,3/3)		
* 20	V7916100	Circuit Board	MIX H	H,B,W,A (1/3,2/3,3/3)		
⚠	30	X0169A00	Power Transformer	J		
⚠	30	X0170A00	Power Transformer	U,V		
⚠	30	X0171A00	Power Transformer	CEE		
⚠	30	X0172A00	Power Transformer	H,B,W		
	40	--	Heat Sink	A		
	50	--	Cord Binder	WC-3-MT PINGOOD	(V768170)	
	60	--	Transistor Holder		(V608650)	2
	70	V6074700	Insulation Sheet	TBM51W T=0.15		2 03
	80	VV086500	Support	H=7.4 B=5.5		4 01
	90	--	Angle Bracket, AC Inlet		(V809880)	
	100	V7242900	Bonding Tapping Screw-B	4.0X12 MFZN2BL		4
	110	VQ074600	Bind Head Tapping Screw-B	3.0X12 MFZN2BL		12 01
	120	EG330290	Bind Head Screw	SP 3.0X8 MFZN2Y		4 01
	130	VN413300	Bonding Tapping Screw-B	3.0X8 MFZN2BL		8 01
	140	VR779900	Bonding Tapping Screw-B	4.0X8 MFZN2BL		3 01
	150	VP156800	Bind Head Screw	A4.0X8 MFZN2BL		01
* 160	V7681800	Rear Panel		J		
* 160	V7681900	Rear Panel		U,V		
* 160	V7682000	Rear Panel		H,B,W		
* 160	V7682100	Rear Panel		A		
	170	VU860200	Knob	MX-GREEN/D-GRAY		2 01
	180	VV625800	Knob	ORANGE/D-GRAY		2 01
	190	VU860400	Knob	RED/D-GRAY		01
	200	VU859000	Power Switch Knob		POWER ON/OFF	01
* 210	V7396900	PCB Support	TIFCO			4
	220	V3289800	Screw	3X25 MFZNBL		4 01

\*: New Parts

RANK: Japan only

**ELECTRICAL PARTS**

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
		ELECTRICAL PARTS			
*	V7915800	Circuit Board	AMP JU		
*	V7915900	Circuit Board	AMP H		
	VV319600	Fuse Holder	CQ-05CT		
	--	Jumper Wire	0.55	4	01
				100	
C201	V7079300	Electrolytic Cap.	4.7 100.0V		
-204	V7079300	Electrolytic Cap.	4.7 100.0V		
C205	V6638400	Electrolytic Cap.	22.00 25.0V		
C206	V6638400	Electrolytic Cap.	22.00 25.0V		
C207	VV061800	Mylar Capacitor	0.015 50V J		01
C208	FG652100	Ceramic Capacitor-SL	100P 50V J		01
C209	V6638300	Electrolytic Cap.	100.00 25.0V		
C210	V6638400	Electrolytic Cap.	22.00 25.0V		
C211	FU451220	Mica Capacitor	22P 500V J		01
C212	FU451220	Mica Capacitor	22P 500V J		01
C213	VV060300	Mylar Capacitor	2200P 50V J		01
C214	VV060300	Mylar Capacitor	2200P 50V J		01
C215	VZ354000	Ceramic Capacitor-F	0.0100 50V Z		01
C216	VZ354000	Ceramic Capacitor-F	0.0100 50V Z		01
C217	FU451220	Mica Capacitor	22P 500V J		01
-220	FU451220	Mica Capacitor	22P 500V J		01
C221	V7079700	Electrolytic Cap.	10.0 25.0V		
C222	V7079700	Electrolytic Cap.	10.0 25.0V		
C223	V7079300	Electrolytic Cap.	4.7 100.0V		
-226	V7079300	Electrolytic Cap.	4.7 100.0V		
C227	V4567500	Ceramic Capacitor-SL	10P 500V K		
-230	V4567500	Ceramic Capacitor-SL	10P 500V K		
C231	V7079700	Electrolytic Cap.	10.0 25.0V		
C232	VZ353900	Ceramic Cap.-B	1000P 50V K		01
C233	UR828470	Electrolytic Cap.	470.00 10.0V		01
C234	UR847470	Electrolytic Cap.	47.00 25.0V		01
C235	UR866470	Electrolytic Cap.	4.70 50.0V		01
C236	V7079500	Electrolytic Cap.	10.0 50.0V		
C237	V7079500	Electrolytic Cap.	10.0 50.0V		
C238	V7079300	Electrolytic Cap.	4.7 100.0V		
C239	V7079300	Electrolytic Cap.	4.7 100.0V		
C240	V7079600	Electrolytic Cap.	47.0 50.0V		
C241	V7079600	Electrolytic Cap.	47.0 50.0V		
C242	V3280500	Ceramic Capacitor-B	100P 500 K		01
C243	V3280500	Ceramic Capacitor-B	100P 500 K		01
C244	V6433600	Electrolytic Cap.	1000 35.0V		03
C245	V6433600	Electrolytic Cap.	1000 35.0V		03
C246	V5868900	Mylar Capacitor	0.1 50V J		
C247	V5868900	Mylar Capacitor	0.1 50V J		
C250	VZ004200	Mylar Capacitor	0.1000 100V M		01
C251	VZ004200	Mylar Capacitor	0.1000 100V M		01
C252	VV082100	Electrolytic Cap.	6800 80V		08
C253	VV082100	Electrolytic Cap.	6800 80V		08
C254	V5097700	Mylar Capacitor	3.3000 250V K		05
C255	V5097700	Mylar Capacitor	3.3000 250V K		05
C256	V5868900	Mylar Capacitor	0.1 50V J		
C257	V5868900	Mylar Capacitor	0.1 50V J		
C260	V7079300	Electrolytic Cap.	4.7 100.0V		
C261	V7079300	Electrolytic Cap.	4.7 100.0V		
C262	V3148500	Mylar Capacitor	0.33 250V M		01
C263	V3148500	Mylar Capacitor	0.33 250V M		01
C264	VZ354300	Ceramic Capacitor-E	0.0022 500 M		01
C265	VZ354300	Ceramic Capacitor-E	0.0022 500 M		01
C266	V7079400	Electrolytic Cap.	100.0 100.0V		01
C267	V7079400	Electrolytic Cap.	100.0 100.0V		01
C270	VZ354000	Ceramic Capacitor-F	0.0100 50V Z		01
C271	VZ354000	Ceramic Capacitor-F	0.0100 50V Z		01
CN201	V3764400	Connector Base Post	6P TE		
CN202	LB932060	Base Post Connector	6P TE		01
CN203	LB932040	Base Post Connector	4P TE		01
CN206	V3764000	Connector Base Post	2P TE		
CN207	V3764000	Connector Base Post	2P TE		
CN209	V3764000	Connector Base Post	2P TE		
D201	VD631600	Diode	1SS133,176,HSS104		01
-210	VD631600	Diode	1SS133,176,HSS104		01

\*: New Parts

RANK: Japan only



REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
D211	VQ469600	Diode	HSS82		01
-214	VQ469600	Diode	HSS82		01
D215	VN478200	Diode	D1NL20U		01
-218	VN478200	Diode	D1NL20U		01
D219	VU801600	Diode	1N4004L 26		01
-222	VU801600	Diode	1N4004L 26		01
D223	VD631600	Diode	1SS133,176,HSS104		01
D224	VU801600	Diode	1N4004L 26		01
-233	VU801600	Diode	1N4004L 26		01
D234	V4816400	Diode Stack	FMU-22U 10A 200V		03
D235	V4816400	Diode Stack	FMU-22U 10A 200V		03
D236	VS135800	Diode Stack	FMX-22S 10.0A 200V		03
D237	VS135800	Diode Stack	FMX-22S 10.0A 200V		03
D238	V2954200	Diode Stack	D10XB20 10.0A 200V		04
F201	VV070300	Fuse	TDS 1A 250V JU/C	J,U,V	01
F201	VV071200	Fuse	TSD 1A 250V SEMKO	H,B,W,A	01
F202	VV070300	Fuse	TDS 1A 250V JU/C	J,U,V	01
F202	VV071200	Fuse	TSD 1A 250V SEMKO	H,B,W,A	01
IC201	XD853A00	IC	NJM7815FA	REGULATOR +15	03
IC202	XD854A00	IC	NJM7915FA	REGULATOR -15	03
L203	V4668300	Coil	OH-20 100uH		08
L204	V4668300	Coil	OH-20 100uH		08
L205	VR769600	Coil	LH L 08TB4R7M 4.7		01
L206	VR769600	Coil	LH L 08TB4R7M 4.7		01
Q201	IC1815M0	Transistor	2SC1815 Y,GR		01
Q202	IC1815M0	Transistor	2SC1815 Y,GR		01
Q203	IA097040	Transistor	2SA970 GR		01
Q204	IA097040	Transistor	2SA970 GR		01
Q205	IA097030	Transistor	2SA970 GR,BL		01
Q206	IA097030	Transistor	2SA970 GR,BL		01
Q207	IA097040	Transistor	2SA970 GR		01
Q208	IA097040	Transistor	2SA970 GR		01
Q209	IC1815M0	Transistor	2SC1815 Y,GR		01
-212	IC1815M0	Transistor	2SC1815 Y,GR		01
Q213	IA101590	Transistor	2SA1015 O,Y		01
Q214	IA101590	Transistor	2SA1015 O,Y		01
Q215	VQ547300	Transistor	2SC4793 (HFE)		03
Q216	VU418600	Transistor	2SC3468 D,E		01
Q217	VQ547300	Transistor	2SC4793 (HFE)		03
Q218	VU418600	Transistor	2SC3468 D,E		01
-224	VU418400	Transistor	2SA1371 D,E		01
Q225N	VR732800	Pair Transistor	A1859A/C4883A		04
Q225P	VR732800	Pair Transistor	A1859A/C4883A		04
Q226N	VR732800	Pair Transistor	A1859A/C4883A		04
Q226P	VR732800	Pair Transistor	A1859A/C4883A		04
Q227N	VZ222300	Pair Transistor	A1492C3856(Z)(210)		06
Q227P	VZ222300	Pair Transistor	A1492C3856(Z)(210)		06
Q229N	VZ222300	Pair Transistor	A1492C3856(Z)(210)		06
Q229P	VZ222300	Pair Transistor	A1492C3856(Z)(210)		06
Q230	V2797700	Transistor	2SC5395 E,F		01
-236	VU418400	Transistor	2SA1371 D,E		01
Q237N	VR732800	Pair Transistor	A1859A/C4883A		04
Q237P	VR732800	Pair Transistor	A1859A/C4883A		04
Q238N	VZ222300	Pair Transistor	A1492C3856(Z)(210)		06
Q238P	VZ222300	Pair Transistor	A1492C3856(Z)(210)		06
Q239N	VR732800	Pair Transistor	A1859A/C4883A		04
Q239P	VR732800	Pair Transistor	A1859A/C4883A		04
Q241N	VZ222300	Pair Transistor	A1492C3856(Z)(210)		06
Q241P	VZ222300	Pair Transistor	A1492C3856(Z)(210)		06
R201	HF456110	Carbon Resistor	1.1K 1/4 J		01
R202	HF456100	Carbon Resistor	1.0K 1/4 J		01
R203	HF457220	Carbon Resistor	22.0K 1/4 J		01
R204	VZ010600	Metal Film Resistor	560.0 1/4 F		01
R205	HF457220	Carbon Resistor	22.0K 1/4 J		01
R206	VZ010600	Metal Film Resistor	560.0 1/4 F		01
-209	HF455560	Carbon Resistor	560.0 1/4 J		01
R210	HF457100	Carbon Resistor	10.0K 1/4 J		01
R211	HF455560	Carbon Resistor	560.0 1/4 J		01
R212	HF457100	Carbon Resistor	10.0K 1/4 J		01
R213	HF455560	Carbon Resistor	560.0 1/4 J		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
R214	HF455560	Carbon Resistor	560.0 1/4 J		01
R215	V2440400	Metal Film Resistor	12K 1/4 F		01
R216	V2440400	Metal Film Resistor	12K 1/4 F		01
R217	VV065600	Metal Film Resistor	11K 1/4 F		05
R218	VV065600	Metal Film Resistor	11K 1/4 F		05
R219	HF457470	Carbon Resistor	47.0K 1/4 J		01
-222	HF457470	Carbon Resistor	47.0K 1/4 J		01
R223	HF455200	Carbon Resistor	200.0 1/4 J		01
R224	HF455200	Carbon Resistor	200.0 1/4 J		01
R225	HF455220	Carbon Resistor	220.0 1/4 J		01
R226	HF455220	Carbon Resistor	220.0 1/4 J		01
R227	HF457470	Carbon Resistor	47.0K 1/4 J		01
-234	HF457470	Carbon Resistor	47.0K 1/4 J		01
R235	HF455330	Carbon Resistor	330.0 1/4 J		01
-238	HF455330	Carbon Resistor	330.0 1/4 J		01
R239	VV065100	Metal Film Resistor	2.2K 1/4 F		01
R240	HF455330	Carbon Resistor	330.0 1/4 J		01
R241	VV065100	Metal Film Resistor	2.2K 1/4 F		01
R242	HF455330	Carbon Resistor	330.0 1/4 J		01
R243	HF455270	Carbon Resistor	270.0 1/4 J		01
R244	HF455270	Carbon Resistor	270.0 1/4 J		01
R245	VV313800	Flame Proof C. Resistor	220.0 1/4 J		01
-248	VV313800	Flame Proof C. Resistor	220.0 1/4 J		01
R249	HF457470	Carbon Resistor	47.0K 1/4 J		01
-256	HF457470	Carbon Resistor	47.0K 1/4 J		01
R257	VZ009300	Flame Proof C. Resistor	330.0 1/4 J		01
-260	VZ009300	Flame Proof C. Resistor	330.0 1/4 J		01
R261	VV276800	Flame Proof C. Resistor	100 1/4 J		01
-268	VV276800	Flame Proof C. Resistor	100 1/4 J		01
R269	VV276700	Flame Proof C. Resistor	4.7 1/4 J		01
-272	VV276700	Flame Proof C. Resistor	4.7 1/4 J		01
R273	VZ370200	Wire Wound Resistor	0.1 5W K		01
-276	VZ370200	Wire Wound Resistor	0.1 5W K		01
R281	HF457470	Carbon Resistor	47.0K 1/4 J		01
R282	HF457470	Carbon Resistor	47.0K 1/4 J		01
R283	HF457100	Carbon Resistor	10.0K 1/4 J		01
R284	HF457220	Carbon Resistor	22.0K 1/4 J		01
R285	HF457470	Carbon Resistor	47.0K 1/4 J		01
R286	HF458150	Carbon Resistor	150.0K 1/4 J		01
R287	HF457100	Carbon Resistor	10.0K 1/4 J		01
R288	HF457560	Carbon Resistor	56.0K 1/4 J		01
R289	HF457150	Carbon Resistor	15.0K 1/4 J		01
R290	HF458150	Carbon Resistor	150.0K 1/4 J		01
R291	HF458150	Carbon Resistor	150.0K 1/4 J		01
R292	HF456560	Carbon Resistor	5.6K 1/4 J		01
R293	HF456560	Carbon Resistor	5.6K 1/4 J		01
R294	VZ008800	Flame Proof C. Resistor	22.0 1/4 J		01
R295	VZ008800	Flame Proof C. Resistor	22.0 1/4 J		01
R296	VZ008700	Flame Proof C. Resistor	2.2K 1/4 J		01
R297	VZ008700	Flame Proof C. Resistor	2.2K 1/4 J		01
R298	VZ008600	Flame Proof C. Resistor	150.0 1/4 J		01
R299	VZ008600	Flame Proof C. Resistor	150.0 1/4 J		01
R300	VV313600	Flame Proof C. Resistor	2.2 1/4 J		01
-303	VV313600	Flame Proof C. Resistor	2.2 1/4 J		01
R304	V2961000	Metal Oxide Film Resistor	4.7 2W J		01
R307	V2961000	Metal Oxide Film Resistor	4.7 2W J		01
R310	VV276700	Flame Proof C. Resistor	4.7 1/4 J		01
-313	VV276700	Flame Proof C. Resistor	4.7 1/4 J		01
R316	VV313600	Flame Proof C. Resistor	2.2 1/4 J		01
R317	VV313600	Flame Proof C. Resistor	2.2 1/4 J		01
R318	VV313900	Flame Proof C. Resistor	680.0 1/4 J		01
R319	VV313900	Flame Proof C. Resistor	680.0 1/4 J		01
R320	VV276700	Flame Proof C. Resistor	4.7 1/4 J		01
R321	VV276700	Flame Proof C. Resistor	4.7 1/4 J		01
RY201	VV315400	Relay	DC OSA-SH-224DM3M		06
VR201	VA787500	Trimmer Potentiometer	B 470 3P RHEOA	Adjustment VR	01
VR202	VA787500	Trimmer Potentiometer	B 470 3P RHEOA	Adjustment VR	01
ZD201	VG438400	Zener Diode	MTZ J 6.8C 6.8V		01
-204	VG438400	Zener Diode	MTZ J 6.8C 6.8V		01

\*: New Parts

RANK: Japan only

REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
*	V7916000	Circuit Board	MIX(1/3,2/3,3/3)	J,U,V (X0367A0)		
*	V7916100	Circuit Board	MIX(1/3,2/3,3/3)	H,B,W,A (X0367A0)		
	VV319600	Fuse Holder	CQ-05CT		2	01
	--	Jumper Wire	0.55	(VA07890)	100	01
	VV307300	LED Spacer				01
	--	Connector Assembly	SGND	AC IN (V676790)		
C101	V7079500	Electrolytic Cap.	10.0 50.0V			
C102	V7079500	Electrolytic Cap.	10.0 50.0V			
C103	VZ353600	Ceramic Cap.-B	220P 50V K			01
C104	VZ353300	Ceramic Capacitor-SL	56P 50V J			01
C105	VZ353300	Ceramic Capacitor-SL	56P 50V J			01
C106	VZ353700	Ceramic Cap.-B	330P 50V K			01
C107	VZ353700	Ceramic Cap.-B	330P 50V K			01
C108	VZ353800	Ceramic Cap.-B	470P 50V K			01
C109	VZ352700	Ceramic Capacitor-SL	10P 50V J			01
C110	VZ353800	Ceramic Cap.-B	470P 50V K			01
C111	VZ352700	Ceramic Capacitor-SL	10P 50V J			01
C112	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C113	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C114	VZ353600	Ceramic Cap.-B	220P 50V K			01
C115	VZ353000	Ceramic Capacitor-SL	33P 50V J			01
C116	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C117	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C118	V4587500	Capacitor	10.00 25.0V			01
C119	VV064300	Monolithic Mylar Capacitor	0.68 50V J			
C120	VV062600	Mylar Capacitor	0.068 50V J			01
C121	VV062000	Mylar Capacitor	0.022 50V J			01
C122	VV062600	Mylar Capacitor	0.068 50V J			01
C123	VV060400	Mylar Capacitor	2700P 50V J			
C124	VV061500	Mylar Capacitor	0.012 50V J			01
C125	VZ353300	Ceramic Capacitor-SL	56P 50V J			01
C126	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C127	VV061800	Mylar Capacitor	0.015 50V J			01
C128	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C129	VV064500	Monolithic Mylar Capacitor	1.0 50V J			03
C130	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C131	V3280500	Ceramic Capacitor-B	100P 500 K			01
C132	VV063000	Mylar Capacitor	0.15 50V J			01
C133	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C134	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C135	VV061400	Mylar Capacitor	0.010 50V J			01
C136	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C137	V5868900	Mylar Capacitor	0.1 50V J			
C138	VV061500	Mylar Capacitor	0.012 50V J			01
C139	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C140	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C141	VV060600	Mylar Capacitor	3300P 50V J			01
C142	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C143	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C144	VV061800	Mylar Capacitor	0.015 50V J			01
C145	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
C146	VZ354000	Ceramic Capacitor-F	0.0100 50V Z			01
*	C147	VV063800	Monolithic Mylar Capacitor	0.27 50V J		
	C148	VV062300	Mylar Capacitor	0.039 50V J		01
	C149	UR847330	Electrolytic Cap.	33.00 25.0V		01
⚠	C150	VV314800	Capacitor	1000P 400V J.U.C.S		01
	C151	VZ352800	Ceramic Capacitor-SL	22P 50V J		01
	-153	VZ352800	Ceramic Capacitor-SL	22P 50V J		01
	CN101	--	Connector Assembly	1017&24185 6P 60L	(V824770)	
	CN102	V3764400	Connector Base Post	6P TE		
*	CN103	V8247600	Connector Assembly	1017&24185 6P 100L		
	CN104	LB933030	Base Post Connector	3P SE		01
	D101	VD631600	Diode	1SS133,176,HSS104		01
	D102	VD631600	Diode	1SS133,176,HSS104		01
	EM101	V3260500	Noise Filter	ZJSR5101-271TA		01
	EM102	V3260500	Noise Filter	ZJSR5101-271TA		01
⚠	F101	VZ897900	Fuse	TDS 5A 125V J/U/C	J,U,V	01
⚠	F101	VV071600	Fuse	TSD 2.5A 250V SEMK	H,B,W,A	
	IC101	XM356A00	IC	NJM2068L-D	OP AMP	02
	IC102	XF195A00	IC	NJM4580L	OP AMP	04

\*: New Parts

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REF NO.	PART NO.	DESCRIPTION	REMARKS	QTY	RANK
IC103	XM356A00	IC	NJM2068L-D		02
-108	XM356A00	IC	NJM2068L-D		02
JK101	VU805200	XLM Connector	XLR Jack NC3FAV1-0		04
* JK102	V8865600	XLM Connector	XLR Jack NC3MAV		
JK103	VU805200	XLM Connector	XLR Jack NC3FAV1-0		04
JK104	V2954500	Phone Jack	LJ-0695-4R-A		02
JK105	V5817000	AC Inlet 3P	HF-301L		02
LD101	VV621000	LED Green	LT321-41-C13		01
Q101	IC224030	Transistor	2SC2240 GR,BL		01
Q102	IC224030	Transistor	2SC2240 GR,BL		01
R101	V2440400	Metal Film Resistor	12K 1/4 F		01
R102	V2440400	Metal Film Resistor	12K 1/4 F		01
R103	VV065500	Metal Film Resistor	10K 1/4 F		01
R104	HF454100	Carbon Resistor	10.0 1/4 J		01
R105	HF454100	Carbon Resistor	10.0 1/4 J		01
R106	V4404200	Metal Film Resistor	7.5K 1/4 F		
R107	VV066100	Metal Film Resistor	47K 1/4 F		01
R108	VV066100	Metal Film Resistor	47K 1/4 F		01
R109	V4404200	Metal Film Resistor	7.5K 1/4 F		
R110	HF454100	Carbon Resistor	10.0 1/4 J		01
R111	HF454180	Carbon Resistor	18.0 1/4 J		01
R112	VV065100	Metal Film Resistor	2.2K 1/4 F		01
R113	VV065400	Metal Film Resistor	8.2K 1/4 F		01
R114	VV065900	Metal Film Resistor	24K 1/4 F		01
R115	V2386300	Metal Film Resistor	75.0 1/4 F		01
R116	VV065100	Metal Film Resistor	2.2K 1/4 F		01
R117	VV065400	Metal Film Resistor	8.2K 1/4 F		01
R118	VV065900	Metal Film Resistor	24K 1/4 F		01
R119	HF454100	Carbon Resistor	10.0 1/4 J		01
R120	VV065200	Metal Film Resistor	4.7K 1/4 F		05
R121	VV065200	Metal Film Resistor	4.7K 1/4 F		05
R122	HF454180	Carbon Resistor	18.0 1/4 J		01
R123	HF458220	Carbon Resistor	220.0K 1/4 J		01
R124	VV065700	Metal Film Resistor	18K 1/4 F		
R125	VV065200	Metal Film Resistor	4.7K 1/4 F		05
R126	V3029000	Metal Film Resistor	1K 1/4 F		01
R127	V6433400	Metal Film Resistor	1.2K 1/4 F		
R128	VV065700	Metal Film Resistor	18K 1/4 F		
R129	VV066000	Metal Film Resistor	33K 1/4 F		01
R130	V6570200	Metal Film Resistor	120K 1/4 F		
R131	VZ009900	Metal Film Resistor	15K 1/4 F		01
R132	V3029000	Metal Film Resistor	1K 1/4 F		01
R133	V4404000	Metal Film Resistor	3.3K 1/4 F		
R134	VV065600	Metal Film Resistor	11K 1/4 F		05
R135	VV065800	Metal Film Resistor	20K 1/4 F		05
R136	VV065500	Metal Film Resistor	10K 1/4 F		01
R137	V2348600	Metal Film Resistor	3K 1/4 F		01
R138	HF454180	Carbon Resistor	18.0 1/4 J		01
R139	VZ009900	Metal Film Resistor	15K 1/4 F		01
R140	VZ009900	Metal Film Resistor	15K 1/4 F		01
R141	VV312800	Metal Film Resistor	680.0 1/4 F		01
R142	V6570200	Metal Film Resistor	120K 1/4 F		
R143	V3029000	Metal Film Resistor	1K 1/4 F		01
R144	VV065200	Metal Film Resistor	4.7K 1/4 F		05
R145	V3029000	Metal Film Resistor	1K 1/4 F		01
R146	V4404000	Metal Film Resistor	3.3K 1/4 F		
R147	VV065700	Metal Film Resistor	18K 1/4 F		
R148	VV065200	Metal Film Resistor	4.7K 1/4 F		05
R149	HF454180	Carbon Resistor	18.0 1/4 J		01
R150	V4640100	Metal Film Resistor	1.1K 1/4 F		
R151	VV065300	Metal Film Resistor	6.8K 1/4 F		01
R152	V4640100	Metal Film Resistor	1.1K 1/4 F		
R153	HF454180	Carbon Resistor	18.0 1/4 J		01
R154	HF456100	Carbon Resistor	1.0K 1/4 J		01
R155	HF456100	Carbon Resistor	1.0K 1/4 J		01
R156	HF454180	Carbon Resistor	18.0 1/4 J		01
R157	V2440500	Metal Film Resistor	27K 1/4 F		01
R158	V3028900	Metal Film Resistor	56K 1/4 F		01
R160	HF454180	Carbon Resistor	18.0 1/4 J		01
SW101	VV089200	Push Switch	SFDLB11R7U-YL U.C		03

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REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
VR101	V5521500	Rotary Variable Resistor	A 20.0K RK09D113	MIC LEVEL		01
VR102	V5521500	Rotary Variable Resistor	A 20.0K RK09D113	LINE LEVEL		01
VR103	V6062600	Rotary Variable Resistor	C 10.0K RK09D113	EQ LOW		01
VR104	V5521500	Rotary Variable Resistor	A 20.0K RK09D113	MASTER LEVEL		01
VR105	V5521600	Rotary Variable Resistor	B 50.0K RD09F113	EQ HIGH		01
⚠*	X0169A00	Power Transformer		J		
⚠*	X0170A00	Power Transformer	UL	U,V		
⚠*	X0171A00	Power Transformer	CEE	H,B,W		
⚠*	X0172A00	Power Transformer		A		
*	X0539A00	Speaker	30cm 4ohm			22
	JAY20610	Horn Driver	5cm 16ohm			16
	NBE20610	Diaphragm Assembly				

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