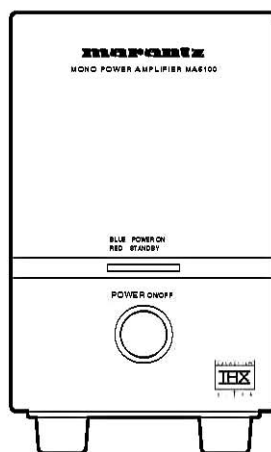


Service Manual

MA6100 /N1G, /U1G
/N1B, /U1B
Mono Power Amplifier



MA6100

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Please use this service manual with referring to the user guide (D.F.U.) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

MA6100

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

<p>USA MARANTZ AMERICA, INC. 440 MEDINAH ROAD ROSELLE, ILLINOIS 60172 USA PHONE : 630 - 307 - 3100 FAX : 630 - 307 - 2687</p>	<p>EUROPE / TRADING MARANTZ EUROPE B.V. P.O.BOX 80002, BUILDING SFF2 5600 JB EINDHOVEN THE NETHERLANDS PHONE : +31 - 40 - 2732241 FAX : +31 - 40 - 2735578</p>	<p>BRAZIL PHILIP DA AMAZONIA IND. ELET. ITDA CENTRO DE INFORMACOES AO CEP 04698-970 SAO PAULO, SP, BRAZIL PHONE : 0800 - 123123(Discagem Direta Gratuita) FAX : +55 11 534. 8988</p>
<p>PROFESSIONAL AMERICAS SUPERSCOPE TECHNOLOGIES, INC. MARANTZ PROFESSIONAL PRODUCTS 2640 WHITE OAK CIRCLE, SUITE A AURORA, ILLINOIS 60504 USA PHONE : 630 - 820 - 4800 FAX : 630 - 820 - 8103</p>	<p>PROFESSIONAL AUSTRALIA TECHNICAL AUDIO GROUP PTY, LTD 558 DARLING STREET, BALMAIN, NSW 2041, AUSTRALIA PHONE : 61 - 2 - 9810 - 5300 FAX : 61 - 2 - 9810 - 5355</p>	<p>CANADA LENBROOK INDUSTRIES LIMITED 633 GRANITE COURT, PICKERING, ONTARIO L1W 3K1 CANADA PHONE : 905 - 831 - 6333 FAX : 905 - 831 - 6936</p>
<p>AUSTRALIA JAMO AUSTRALIA PTY LTD 1 EXPO COURT, P.O. BOX 350 MT. WAVERLEY VIC 3149 AUSTRALIA PHONE : +61 - 3 - 9543 - 1522 FAX : +61 - 3 - 9543 - 3677</p>	<p>THAILAND MRZ STANDARD CO.,LTD 746 - 754 MAHACHAI ROAD., WANGBURAPAPIROM, PHRANAKORN, BANGKOK, 10200 THAILAND PHONE : +66 - 2 - 222 9181 FAX : +66 - 2 - 224 6795</p>	<p>SINGAPORE WO KEE HONG (S) PTE LTD WO KEE HONG CENTRE NO.23, LORONG 8, TOA PAYOH SINGAPORE 319257 PHONE : +65 2544555 FAX : +65 2502213</p>
<p>NEW ZEALAND WILDASH AUDIO SYSTEMS NZ 14 MALVERN ROAD MT ALBERT AUCKLAND NEW ZEALAND PHONE : +64 - 9 - 8451958 FAX : +64 - 9 - 8463554</p>	<p>TAIWAN PAI- YUING CO., LTD. 6 TH FL NO. 148 SUNG KIANG ROAD, TAIPEI, 10429, TAIWAN R.O.C. PHONE : +886 - 2 - 2522 1304 FAX : +886 - 2 - 25630415</p>	<p>MALAYSIA WO KEE HONG ELECTRONICS SDN. BHD. SUITE 8.1, LEVEL 8, MENARA GENESIS, NO. 33, JALAN SULTAN ISMAIL, 50250 KUALA LUMPUR, MALAYSIA PHONE : +60 3 - 2457677 FAX : +60 3 - 2458180</p>
<p>JAPAN Technical MARANTZ JAPAN, INC. 35- 1, 7- CHOME, SAGAMIONO SAGAMIHARA - SHI, KANAGAWA JAPAN 228-8505 PHONE : +81 42 748 1013 FAX : +81 42 741 9190</p>	<p>日本マランツ株式会社 本社 〒228-8505 神奈川県相模原市相模大野7-35-1 営業本部 〒150-0022 東京都渋谷区恵比寿南1-11-9</p>	<p>KOREA MK ENTERPRISES LTD. ROOM 604/605, ELECTRO-OFFICETEL, 16-58, 3GA, HANGANG-RO, YONGSAN-KU, SEOUL KOREA PHONE : +822 - 3232 - 155 FAX : +822 - 3232 - 154</p>

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

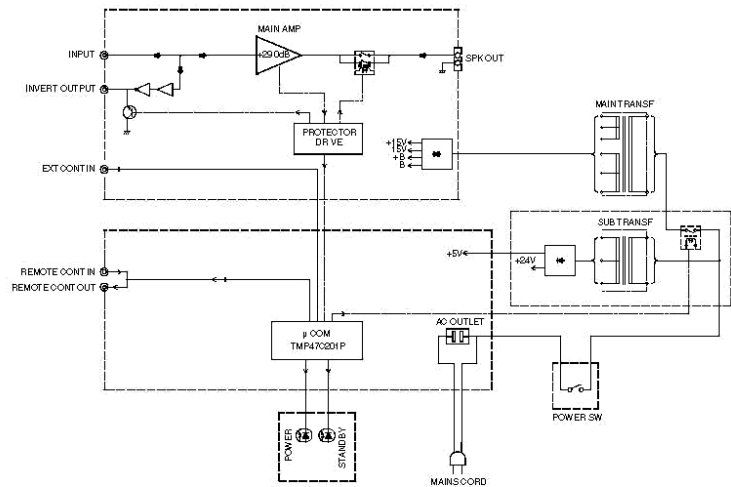
In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

1. TECHNICAL SPECIFICATIONS

Rated power output (20 Hz to 20 kHz, 8 Ω load)	125 W
Total harmonic distortion (20 Hz to 20 kHz, 8 Ω load)	0.02 %
Output bandwidth (8 Ω load, 0.04 %)	10 Hz to 50 kHz
Frequency response	10 Hz to 70 kHz, +0 / -1 dB
Damping factor (8 Ω load, 1 kHz)	60
S/N (IHF A network, input shorted)	110 dB
Supply voltage [N]	230 V AC, 50 Hz
[U]	120 V AC, 60 Hz
Power consumption [N]	200 W
(Stand-by) 1 W	
[U]	230 W
(Stand-by) 2.5 W	
Dimensions	
Width	88 mm
Height	146 mm
Depth	470 mm
Weight	5.7 kg

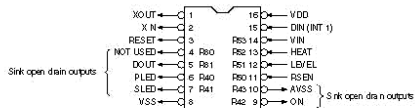
Design and specifications are subject to change without notice.

3. BLOCK DIAGRAM



2. IC DATA

QY01 : TMP47C201P

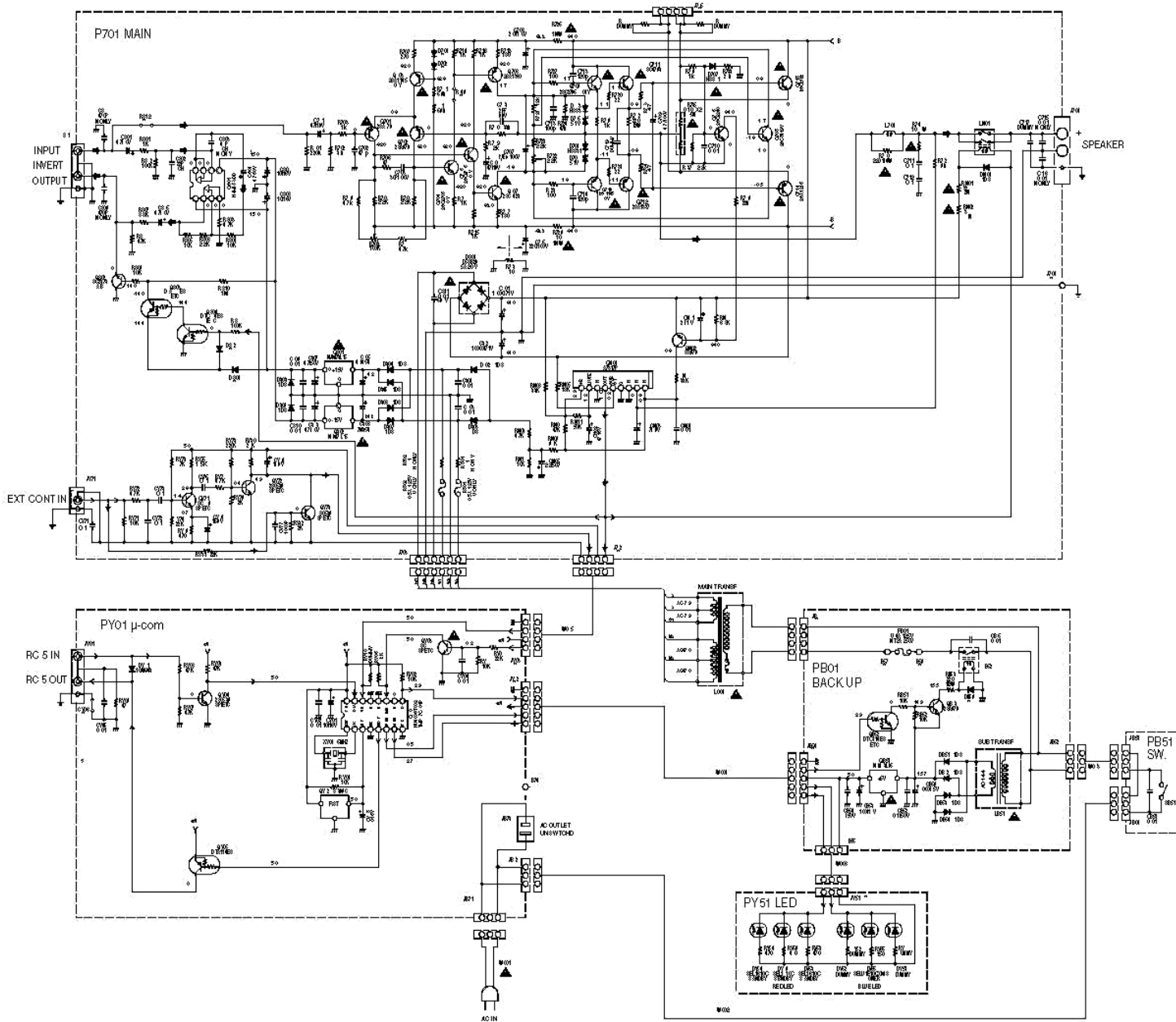


Port	Pin	Name	In/Out	Active	Description
R80	4		Input		Not used
R81	5	DOOUT	Output		Data output from RCS
R82	15	DIN	Input	L	Data input to RCS
R40	6	PLED	Output	L	Power LED
R41	7	SLED	Output	L	Stand by LED
R42	9	ON	Output	LH	Power amplifier OFF/ON
R42	10	AVSS	Output	LH	Power amp supply voltage control. Low/high voltage
R80	11	RSEN	Input	H L	Power amp output muting status detection input. OFF/ON
R81	12	LEVEL	Input	LH	Power amp output level detection input. High/Low power
R82	13	HEAT	Input	LH	Heatsink overheating detection input. Overheats/Normal
R82	14	VIN	Input	LH	Video and DC signal detection input. Detect/no detect

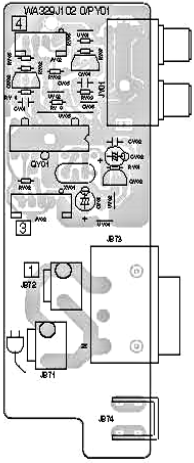
4. TEST EQUIPMENT REQUIRED FOR SERVICING

項目	使用 方法
Distortion Analyzer 歪率計	Distortion measurements 歪の測定
Audio Oscillator 低周波発振器	Sinewave and squarewave signal source 正弦波及び矩形波の信号源
AC VTVM	Voltage measurements (AC) 交流電圧の測定
DC VTVM	Voltage measurements (DC) 直流電圧の測定
AC Wattmeter 交流ワットメーター	Monitors primary power to amplifier アンプの一次側消費電力のモニター
Line Voltmeter 電源電圧計	Monitors potential of primary power to amplifier アンプの一次側消費電圧のモニター
Variable Autotransformer スライダック	Adjust level of primary power to amplifier アンプの一次側電圧の調節
Circuit Tester テスター	Trouble shooting トラブルシューティング
Shorting Plug ショート用プラグ	Shorts amplifier input to eliminate noise pickup 雑音を拾わないようにアンプ入力を短絡する

5. SCHEMATIC DIAGRAM AND PARTS LOCATION (Pattern Side)



PY01
 QY03 QY04
 QY01 QY02



P701

QB02 QB03

Q701 Q702

QS01

QS02

Q714

Q705 Q707

Q704 Q704

Q703 Q715

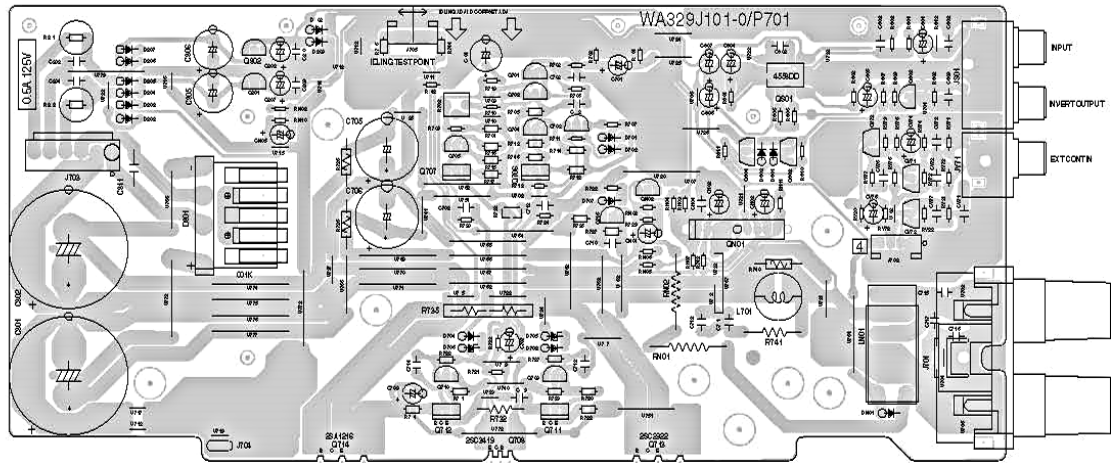
QN02

QN01

QS04

QS03

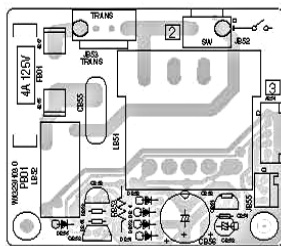
QY72 QY71 QY73



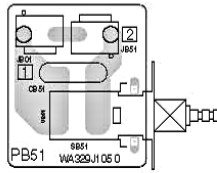
PB01

QB53
 QB52

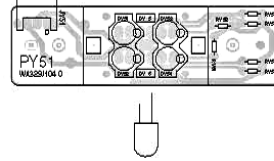
QB51



PB51

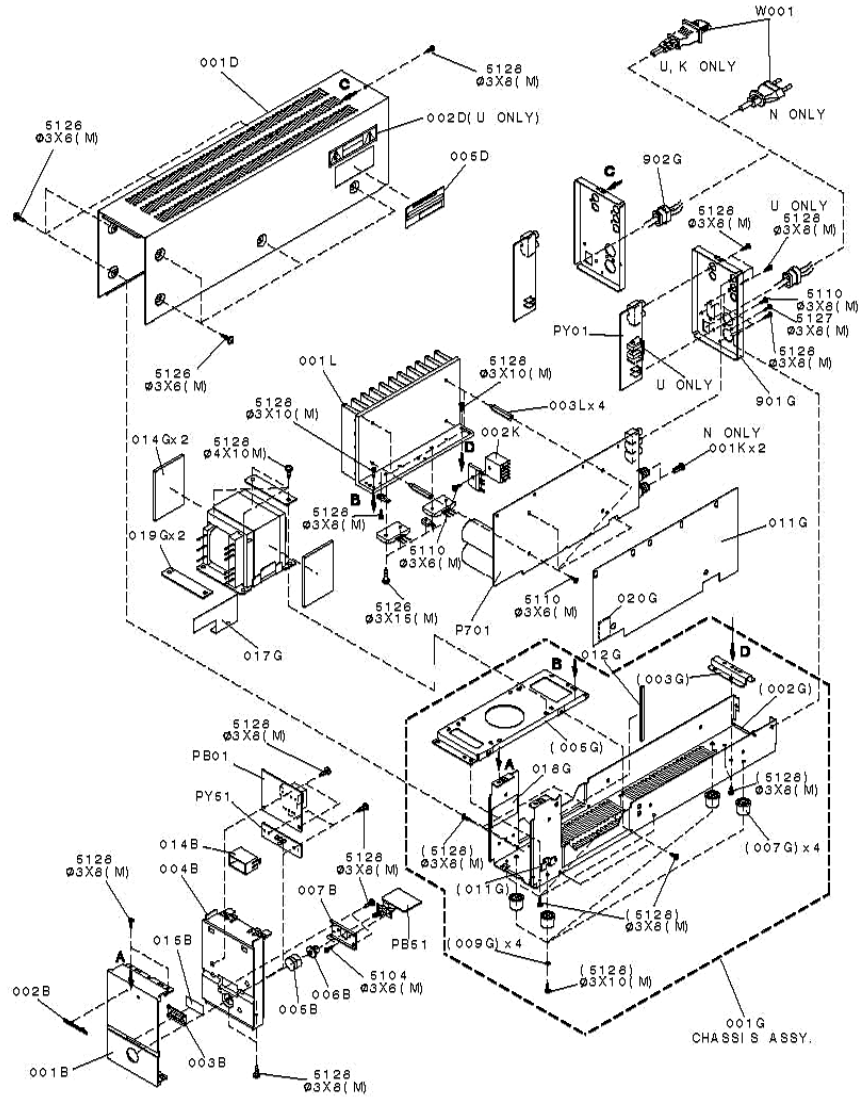
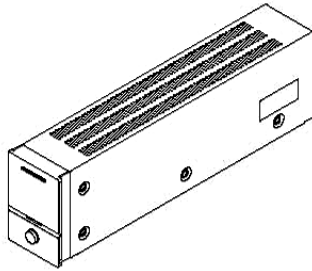


PY51



6. EXPLODED VIEW AND PARTS LIST

SYMBOL	STYLE	PARTS NAME	MARK	MATERIAL/ FINISH
5104		+ F H M SCREW	(M)	IRON/ COPPER
5110		+ B H M SCREW		
5126		+ B H TAP TIT E SCREW W/WASHER		
5128		+ B H TAP TIT E SCREW (B TYPE)		



POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
001B	BLACK	9965 000 05897	FRONT AL PANEL BLACK	329J248010
001B	GOLD	9965 000 05902	FRONT AL PANEL GOLD	329J248110
002B		9965 000 05898	BADGE MARANTZ	354H251240
003B		9965 000 05899	LENS FOR POWER ON/STANDBY	329J355010
004B	BLACK	9965 000 05900	CHASSIS FRONT MOLD BL	329J105010
004B	GOLD	9965 000 05903	CHASSISFRONT MOLD GL	329J105110
005B	BLACK	9965 000 01975	BUTTON POWER BL	255W270010
005B	GOLD	9965 000 01395	BUTTON POWER GL	255W270110
006B		9965 000 01394	JOINT FOR POWER BUTTON	312J125010
014B			REFLECTOR FOR P.ON/STAN.	329J274010
007G		4822 462 42026	LEG	176J057010
902G		4822 532 60948	BUSHING MAINS CORD	450H259010
▲ L001	/N	9965 000 05887	MAINS TRANSF. 230V 50Hz	TS18631020
▲ L001	/U		MAINS TRANSF. 120V 60Hz	TS18631010
▲ W001	/N	4822 321 11343	MAINS CORD N MAYOR / JB71	YC01800790
▲ W001	/U		MAINS CORD UL/CSA	YC02000880
			PACKING	
001T	/N	9965 000 05901	USER GUIDE	329J851310
001T	/U		USER GUIDE	329J851250
Z001		4822 321 62012	RCA PIN CORD ORANGE	ZD00900100
			NOT STANDARD SPARE PARTS	
001S			PACKING CASE	329J801010
002S			CUSHION FRONT	329J809010
003S			CUSHION REAR	329J809020

7. POWER AMP. ALIGNMENT

7.1 DC offset Adjustment

Speaker out:non Load

Step	Power	Adjust. Point	Test Point	Adjustment Vaule
1	On	R708	Speaker Output Terminal	$\leq 20\text{mV}$

Note:If the value that measured is not exceed $\pm 20\text{mV}$,no need adjust the DC offset.

7.2 Idling current Adjustment

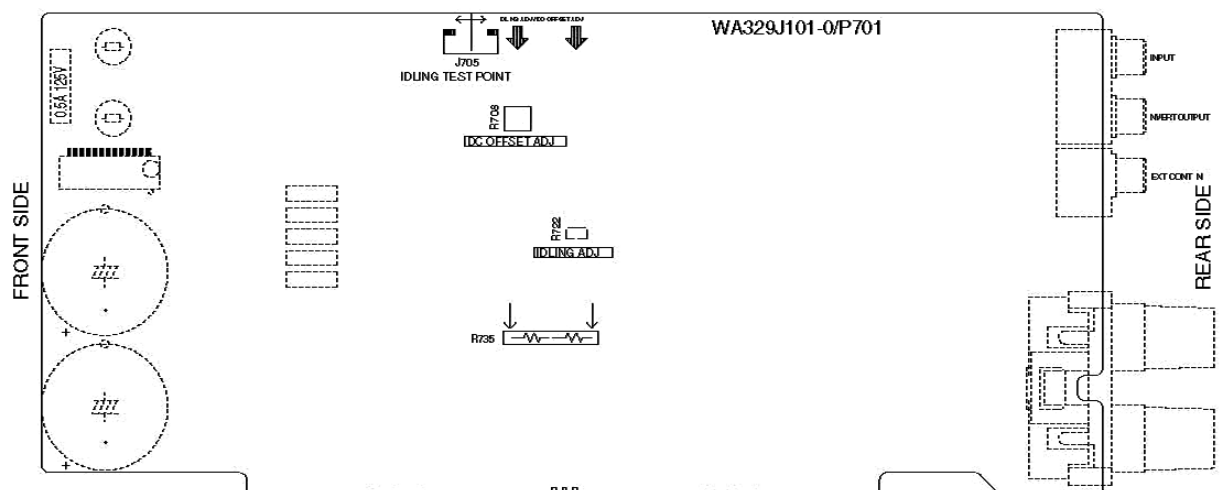
Speaker out:non Load

Step	Power	Adjust. Point	Test Point	Adjustment Vaule
1	Power on	R722	J705 or R735	within 1 minute 0.6mV
2	after 4 minutes	R722	J705:4P Connecter (between 1p-4p) or R735:Emitter Resister (0.1ohms x2)	see table for adjustment vaule

Time since power on	Idling current adjust.	Time since power on	Idling current adjust.
4m-4m30s	4.6mV	11m-12m	4.9mV
4m30s-5m	4.8mV	12m-14m	4.8mV
5m-5m30s	5.0mV	14m-16m	4.6mV
5m30s-6m	5.1mV	16m-18m	4.5mV
6m-7m	5.2mV	18m-22m	4.4mV
7m-8m	5.2mV	22m-26m	4.3mV
8m-9m	5.2mV	26m-30m	4.2mV
9m-10m	5.1mV	More than 40m	4.0mV
10m-11m	5.0mV		The target is 4.0mV

m : minutes

s : seconds



8. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R*** : 1) GD05××× 140, Carbon film fixed resistor, ±5% 1/4W
 R*** : 2) GD05××× 160, Carbon film fixed resistor, ±5% 1/6W

① Resistance value

Examples ;

① Resistance value

0.1Ω ... 001 10Ω ... 100 1kΩ ... 102 100kΩ ... 104
 0.5Ω ... 005 18Ω ... 180 2.7kΩ ... 272 680kΩ ... 684
 1Ω ... 010 100Ω ... 101 10kΩ ... 103 1MΩ ... 105
 6.8Ω ... 068 390Ω ... 391 22kΩ ... 223 4.7MΩ ... 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C*** : CERAMIC CAP.

3) DD1×××× 370, Ceramic capacitor
 Disc type
 Temp.coeff.P350 ~ N1000, 50V
 ② Tolerance
 ③ Capacity value
 ④ Resistance value

Examples ;

② Tolerance (Capacity deviation)

±0.25pF ... 0
 ±0.5pF ... 1
 ±5% ... 5

* Tolerance of COMMON PARTS handled here are as follows :

0.5pF ~ 5pF ... ±0.25pF
 6pF ~ 10pF ... ±0.5pF
 12pF ~ 560pF ... ±5%

③ Capacity value

0.5pF ... 005 3pF ... 030 100pF ... 101
 1pF ... 010 10pF ... 100 220pF ... 221
 1.5pF ... 015 47pF ... 470 560pF ... 561

C*** : CERAMIC CAP.

4) DK16××× 300, High dielectric constant ceramic capacitor
 Disc type
 Temp.chara. 2B4, 50V
 ④ Capacity value

Examples ;

④ Capacity value

100pF ... 101 1000pF ... 102 10000pF ... 103
 470pF ... 471 2200pF ... 222

C*** : 5) ELECTROLY CAP. (⏏), 6) FILM CAP. (⏏)

5) EA××××× 10, Electrolytic capacitor
 One-way lead type, Tolerance ±20%
 ⑤ Capacity value
 ⑥ Working voltage

Examples ;

⑤ Capacity value

0.1μF ... 104 4.7μF ... 475 100μF ... 107
 0.33μF ... 334 10μF ... 106 330μF ... 337
 1μF ... 105 22μF ... 226 1100μF ... 118
 2200μF ... 228

⑥ Working voltage

6.3V ... 006 25V ... 025
 10V ... 010 35V ... 035
 16V ... 016 50V ... 050

6) DF15××× 350 → Plastic film capacitor
 DF15××× 310 → One-way type, Mylar ±5% 50V
 DF16××× 310 → Plastic film capacitor
 DF16××× 310 → One-way type, Mylar ±10% 50V
 ⑦ Capacity value

Examples ;

⑦ Capacity value

0.001μF (1000pF) ... 102 0.1μF ... 104
 0.0018μF ... 182 0.56μF ... 564
 0.01μF ... 103 1μF ... 105
 0.015μF ... 153

NOTE : 1) The above CODES (R***, R***, C***, C*** and C***) are omitted on the schematic diagram in some case.
 2) On the occasion, be confirmed the common parts on the parts list.
 3) Refer to "Common Parts List" for the other common parts (RI05, DD4, DK4).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

Part No. (MJL)	Type No. (KOA)	Description
NH05××× 140	RF25S××××ΩJ	(±5% 1/4W)
NH05××× 120	RF50S××××ΩJ	(±5% 1/2W)
NH85××× 110	RF73B2A××××ΩJ	(±5% 1/10W)
NH95××× 140	RF73B2E××××ΩJ	(±5% 1/4W)

* Resistance value Resistance value
 (0.1 - 10kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJL)	Type No. (MEC)	Description
NF05××× 140	ERD-2FCJ×××	(±5% 1/4W)
RF05××× 140	ERD-2FCG×××	(±2% 1/4W)
NF02××× 140		
RF02××× 140		

* Resistance value * Resistance value

Examples ;

* Resistance value

0.1Ω ... 001 10Ω ... 100 1kΩ ... 102 100kΩ ... 104
 0.5Ω ... 005 18Ω ... 180 2.7kΩ ... 272 680kΩ ... 684
 1Ω ... 010 100Ω ... 101 10kΩ ... 103 1MΩ ... 105
 6.8Ω ... 068 390Ω ... 391 22kΩ ... 223 4.7MΩ ... 475

ABBREVIATION AND MARKS

ANT. : ANTENNA	BATT. : BATTERY
CAP. : CAPACITOR	CER. : CERAMIC
CONN. : CONNECTING	DIG. : DIGITAL
HP : HEADPHONE	MIC. : MICROPHONE
μ-PRO : MICROPROCESSOR	REC. : RECORDING
RES. : RESISTOR	SPK : SPEAKER
SW : SWITCH	TRANSF. : TRANSFORMER
TRIM. : TRIMMING	TRS. : TRANSISTOR
VAR. : VARIABLE	X'TAL : CRYSTAL

NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意 :

⚠ がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
			P701-MAIN/POWER SUPPLY CIRCUIT BOARD		▲ R726		4822 052 10109	10Ω ±5% 1/4W	GG05100140
			P701-CAPACITORS		▲ R727		4822 052 10101	100Ω ±5% 1/6W	GG05101160
CN01		4822 124 90358	ELECT. 22μF M 16V RA-2	OA22601620	▲ R728		4822 052 10101	100Ω ±5% 1/6W	GG05101160
CN02		4822 124 41539	ELECT. 47μF M 16V RA-2	OA47601620	▲ R729		4822 052 10102	1kΩ ±5% 1/6W	GG05102160
CN03		4822 124 41539	ELECT. 47μF M 16V RA-2	OA47601620	▲ R730		4822 052 10229	22Ω ±5% 1/6W	GG05220160
CN04		4822 122 30043	CER. 0.01μF Z 50V	DK18103310	▲ R731		4822 052 10229	22Ω ±5% 1/6W	GG05220160
CN05		4822 124 90357	ELECT. 2.2μF M 50V RA-2	OA22505020	▲ R732		4822 116 60319	FUSIBLE 220Ω J 1/2W	NH05221120
CN06	/N	4822 122 30043	CER. 0.01μF Z 50V	DK18103310	▲ R733		4822 052 10478	4.7Ω ±5% 1/6W	GG05047160
CS01		4822 124 22274	ELECT. 4.7μF M 50V RA-2	OA47505020	▲ R734		4822 052 10478	4.7Ω ±5% 1/6W	GG05047160
CS02		5322 122 32143	CER. 22pF J CH 50V BLK	DD15220300	▲ R735		4822 111 91422	COMPO. 0.1Ω K 5W X 2	BW10000050
CS03	/N	4822 122 31205	CER. 47pF J CH 50V BLK	DD15470300	▲ R736		4822 052 10102	1kΩ ±5% 1/6W	GG05102160
CS04		4822 124 22274	ELECT. 4.7μF M 50V RA-2	OA47505020	▲ R737		4822 050 22202	2.2kΩ ±5% 1/6W	GG05222160
CS05		4822 124 22274	ELECT. 4.7μF M 50V RA-2	OA47505020	▲ R740		4822 116 83929	220Ω ±5% 1/4W	GG05221140
CS06		4822 124 90352	ELECT. 10μF M 16V RA-2	OA10601620	▲ R741		4822 053 10109	10Ω ±5% 1W	GA05100010
CS07		4822 124 90352	ELECT. 10μF M 16V RA-2	OA10601620	R746			JUMPER	75060501P0
CY71		4822 122 40617	CER. 0.1μF +80 -20% 50V DC	DD38104010	▲ R801	/N	4822 116 82805	1Ω ±5% 1/6W	GG05010160
CY74		4822 124 41543	ELECT. 1μF M 50V RA-2	OA10505020	▲ R801	/U		FUSE 0.5A 125V UL/CSA	FS20050220
CY76		4822 124 41543	ELECT. 1μF M 50V RA-2	OA10505020	▲ R802	/N	4822 116 82805	1Ω ±5% 1/6W	GG05010160
C701		4822 124 22275	ELECT. 47μF M 10V RA-2	OA47601020	▲ R802	/U		FUSE 0.5A 125V UL/CSA	FS20050220
C702			FILM 470pF TP 100V	OF15471540					
C703		4822 121 42341	FILM 680pF 100V ECQ-P	DF15681550	R***			P701-RESISTORS (COMMON)	
C704		4822 124 22275	ELECT. 47μF M 10V RA-2	OA47601020				CARBON FILM FIXED RES.	
C705		9965 000 02644	ELECT. 220μF M 100V RA-2	OA22710020				±5% 1/6W : R701-R703 R706	
C706		9965 000 02644	ELECT. 220μF M 100V RA-2	OA22710020				R707 R709-R712 R719-R724	
C707		4822 124 11533	ELECT. 1μF100V RA-2	OA10510020				R738 R739 R742 R743	
C708		9965 000 01586	MICA 22pF J 500V FE	DF35220520				RN03-R/N1 RS01-RS11	
C709		9965 000 05892	ELECT. 4.7μF 100V	EA47510010				RY71-RY82	
C713		9965 000 00438	FILM 120pF J 100V APSV	OF15121540				P701-SEMICONDUCTORS	
C714		9965 000 00438	FILM 120pF J 100V APSV	OF15121540	DN01		4822 130 82421	DIODE 1D3 1A 200V	HD20002710
C715	/N	4822 122 40306	CER. 0.047μF Z 50V	DK18473310	DS01		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
C716	/N	4822 122 30043	CER. 0.01μF Z 50V	DK18103310					
C718		9965 000 01344	FILM 100pF J 100V APSV	OF15101540	DS02		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
▲ C801			ELECT. 10000μF M 71V	EB10907170	D701		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
▲ C802			ELECT. 10000μF M 71V	EB10907170	D702		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
C803		4822 122 30043	CER. 0.01μF Z 50V	DK18103310					
C804		4822 122 30043	CER. 0.01μF Z 50V	DK18103310					
C805		4822 124 41541	ELECT. 470μF M 35V RA-2	OA47703520	D703		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010
C806		4822 124 41541	ELECT. 470μF M 35V RA-2	OA47703520	D704		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010
C807		4822 124 22274	ELECT. 4.7μF M 50V RA-2	OA47505020	D705		4822 130 80317	ZENER DIODE 5.1V	HD30511000
C808		4822 124 22274	ELECT. 4.7μF M 50V RA-2	OA47505020	D706		4822 130 80317	ZENER DIODE 5.1V	HD30511000
C809		4822 122 30043	CER. 0.01μF Z 50V	DK18103310	D707		4822 130 80837	DIODE HSS81TD 150V 150mA	HD20027010
C810		4822 122 30043	CER. 0.01μF Z 50V	DK18103310	▲ D801		4822 130 83438	DIODE D5SB-20 200V	HE20016290
C811		4822 126 12453	CER. 0.01μF Z E 500V	DK18103560	D802				
C812	/N	4822 122 30043	CER. 0.01μF Z 50V	DK18103310	§				
			P701-CAPACITORS (COMMON)		D809		4822 130 82421	DIODE 1D3 1A 200V	HD20002710
			HIGH DIELECTRIC CONSTANT		▲ K701			TRS. KIT 2SA1360 2SC3423	HK136019C0
			CER. CAPACITOR ±10% 50V :		▲ K702			PAIR O OR Y	HK183719C0
			CS08 CS09 CY77		▲ K703		4822 130 11394	TRS. KIT 2SA1837 2SC4793	HK121619F0
			P701-RESISTORS					HFE MJI RANK	
			PLASTIC FILM CAPACITOR		QN01		4822 209 83312	IC TA7317P	HC10042050
			±5% 50V :		QN02		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
			C710-C713 CY72-CY75		QS01		4822 209 83631	IC NJM4558D-D	HC10008090
▲ RN01		4822 053 11821	820Ω ±5%2W	GA05821020	QS02		4822 130 43818	TRS. 2SC2878 A OR BRANK	HT328782A0
▲ RN02		4822 053 11821	820Ω ±5%2W	GA05821020	QS03		4822 130 61227	DIG.TRS.	BA10001000
RS12			JUMPER	75060501P0				DTA114ES UN4111 10K 10K	
▲ R704		4822 050 22202	2.2kΩ ±5% 1/6W	GG05222160	QS04		4822 130 60588	DIG.TRS.	BA20001000
▲ R705		4822 050 22202	2.2kΩ ± 5% 1/6W	GG05222160				DTC114ES UN4211 10K 10K	
R708		9965 000 01766	TRIM. 100kΩ	RA01040760	QY71				
▲ R713		4822 052 10102	1kΩ ±5% 1/6W	GG05102160	§		4822 130 41947	TRS. 2SC2458 2SC1740S	HT30001000
▲ R714		4822 052 10102	1kΩ ±5% 1/6W	GG05102160	QY73			2SC3199 ETC.	
▲ R715		4822 052 10102	1kΩ ±5% 1/6W	GG05102160	Q701		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
▲ R716		4822 052 10102	1kΩ ±5% 1/6W	GG05102160	Q702		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
▲ R717			180Ω ±5% 1/6W	GG05181160	Q703		4822 130 42999	TRS. 2SA1145 O OR Y	HT111452A0
▲ R718			180Ω ±5% 1/6W	GG05181160	Q704		4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0
R722		9965 000 01566	TRIM. 2.2kΩ	GA02220760					
▲ R725		4822 052 10109	10Ω ±5% 1/4W	GG05100140					

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)	POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJ)
Q705		4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0	CY05		4822 122 30043	CER. 0.01μF Z 50V	DK18103310
▲ Q706		5322 130 61728	TRS. 2SA1360 O OR Y	HT113602A0	CY06			JUMPER	75060501P0
▲ Q707		5322 130 61737	TRS. 2SC3423 O OR Y	HT334232A0					
Q708		4822 130 60117	TRS. 2SC3419 Y 40V 0.8A PC=1.2W 5W	HT334191Y0					
Q709		4822 130 43283	TRS. 2SC2705 O OR Y	HT327052A0					
Q710		4822 130 42999	TRS. 2SA1145 O OR Y	HT111452A0					
▲ Q711		4822 130 63635	TRS. 2SC4793 O Y	HT347932A0					
▲ Q712		4822 130 63634	TRS. 2SA1837 O Y	HT118372A0	DY01		4822 130 81247	PY01-SEMICONDUCTORS DIODE 1GWJ43	HD20031050
▲ Q713		9965 000 01762	TRS. 2SC2922 O Y	HT329222A0					
▲ Q714		9965 000 01763	TRS. 2SA1216 O Y	HT112162A0	QY01		4822 209 15768	MICROPROCESSOR TMP47C201P	HU400ST000
Q715		4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0	QY02		4822 209 14883	IC V-SENSOR IC S-806C 4.55V	HC10075530
▲ Q801		4822 209 71038	IC NJM78L15A +15V 0.1A	HC38115090	QY03		4822 130 41947	TRS. 2SC2458 2SC1740S 2SC3199 ETC.	HT30001000
▲ Q802		4822 209 71039	IC NJM79L15A -15V 500MW	HC39115090	QY04		4822 130 41947	TRS. 2SC2458 2SC1740S 2SC3199 ETC.	HT30001000
JS01		9965 000 01315	P701-MISCELLANEOUS TERMINAL 2P RCA JACK BLK/BLK GOLD 1L2	YT02021550	QY05		4822 130 42682	DIG.TRS. DTA144ES UN4113 47K 47K	BA10002000
JY71		9965 000 05815	TERMINAL 1P RCA PIN JACK YELLOW	YT02010560					
J701		4822 290 81596	TERMINAL SPK. BROWN/RED	YT01020190					
LN01		9965 000 05895	RELAY G5PA-28 5A 250VAC	LY20240490	▲ JB73 /U		4822 267 31686	PY01-MISCELLANEOUS JACK AC OUTLET 1P	YJ04001780
L701		4822 157 70022	SPK CHOCK COIL VERTICAL	ML08010030	JY01		9965 000 03413	TERMINAL 14X14 RA 1L2P ORG NI F-GROUND	YT02021640
			PB01-SUB TRANSF. CIRCUIT BOARD		XY01		4822 242 72592	SERAMIC VIB. CST 5.56MGW-TF01	FQ05564010
CB52		4822 126 11558	CER. 0.01μF Z 50V	DA17104110					
CB53		4822 124 90353	ELECT. 100μF M 10V RA-2	OA10701020					
CB54		4822 126 11558	CER. 0.01μF Z 50V	DA17104110					
CB55			CER. 0.01μF 250V	DK17103860					
CB56		4822 124 90356	ELECT. 1000μF M 35V RA-2	OA10803520	RY53			PY51-LED CIRCUIT BOARD PY51-RESISTORS 470Ω ±5% 1/6W	GD05471160
			PB01-RESISTORS 10kΩ ±5% 1/6W	GD05103160	RY54			470Ω ±5% 1/6W	GD05471160
RB51			10kΩ ±5% 1/6W	GD05103160	RY55			150Ω ±5% 1/6W	GD05151160
RB52			220Ω ±5% 1/2W	GG05221120	RY56			470Ω ±5% 1/6W	GD05471160
▲ RB53		4822 050 22201	PB01-SEMICONDUCTORS						
DB51			PB01-SEMICONDUCTORS		DY53		9965 000 05889	PY51-SEMICONDUCTORS L.E.D. SEL1610C RED	HI10041080
DB54		4822 130 82421	DIODE 1D3 1A 200V	HD20002710	DY54		9965 000 05889	L.E.D. SEL1610C RED	HI10041080
DB56		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000	DY55		9965 000 05889	L.E.D. SEL/UE10CXM-S BLUE	HI10040080
▲ QB51		4822 209 71373	IC NJM78L05A	HC38105090	DY56		9965 000 05889	L.E.D. SEL1610C RED	HI10041080
QB52		4822 130 60588	DIG.TRS. DTC114ES UN4211 10K 10K	BA20001000					
QB53		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0					
▲ FB01	/N	4822 070 32001	PB01-MISCELLANEOUS FUSE 2 A 250V BS LISTED	FS10200850					
▲ FB01	/U		FUSE 4A 125V	FS10400350					
▲ LB51	/N	9965 000 05888	UL CSA MITI TYPE FBT						
▲ LB51	/U		BACK UP 230V 50Hz	TS12812020					
▲ LB52		9965 000 00681	BACK UP 120V 60Hz RELAY POWER G5PA-1 5A	TS12812010 LY10120400					
CB51			PB51-SWITCH CIRCUIT BOARD						
▲ SB51		9965 000 01777	CER. 0.01μF 250V PUSH SWITCH SDDL B1-B1-D2 TV-5	DK17103860 SP01012460					
CY01		4822 124 90352	PY01-μ-COM CIRCUIT BOARD PY01-CAPACITORS ELECT. 10μF M 16V RA-2	OA10601620					
CY02		4822 122 30043	CER. 0.01μF Z 50V	DK18103310					
CY03		4822 124 90352	ELECT. 10μF M 16V RA-2	OA10601620					
CY04		4822 122 30043	CER. 0.01μF Z 50V	DK18103310					