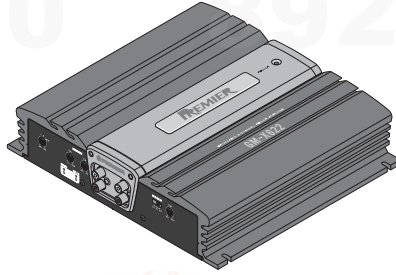


# Service Manual

**PIONEER®**  
The Art of Entertainment

GM-X622/X1R/UC



ORDER NO.  
**CRT2190**

BRIDGEABLE POWER AMPLIFIER

# GM-X622

**X1R/UC**

**GM-X622**

**X1R/EW**

**GM-X622**

**X1R/ES**

**GM-X522**

**X1R/UC**

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**PIONEER ELECTRONIC CORPORATION** 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan  
**PIONEER ELECTRONICS SERVICE INC.** P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.  
**PIONEER ELECTRONIC [EUROPE] N.V.** Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium  
**PIONEER ELECTRONICS ASIACENTRE PTE.LTD.** 501 Orchard Road, #10-00, Wheelock Place, Singapore 238880

# 1. SAFETY INFORMATION

## CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely; you should not risk trying to do so and refer the repair to a qualified service technician.

## WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

# 2. EXPLODED VIEWS AND PARTS LIST

## 2.1 PACKING

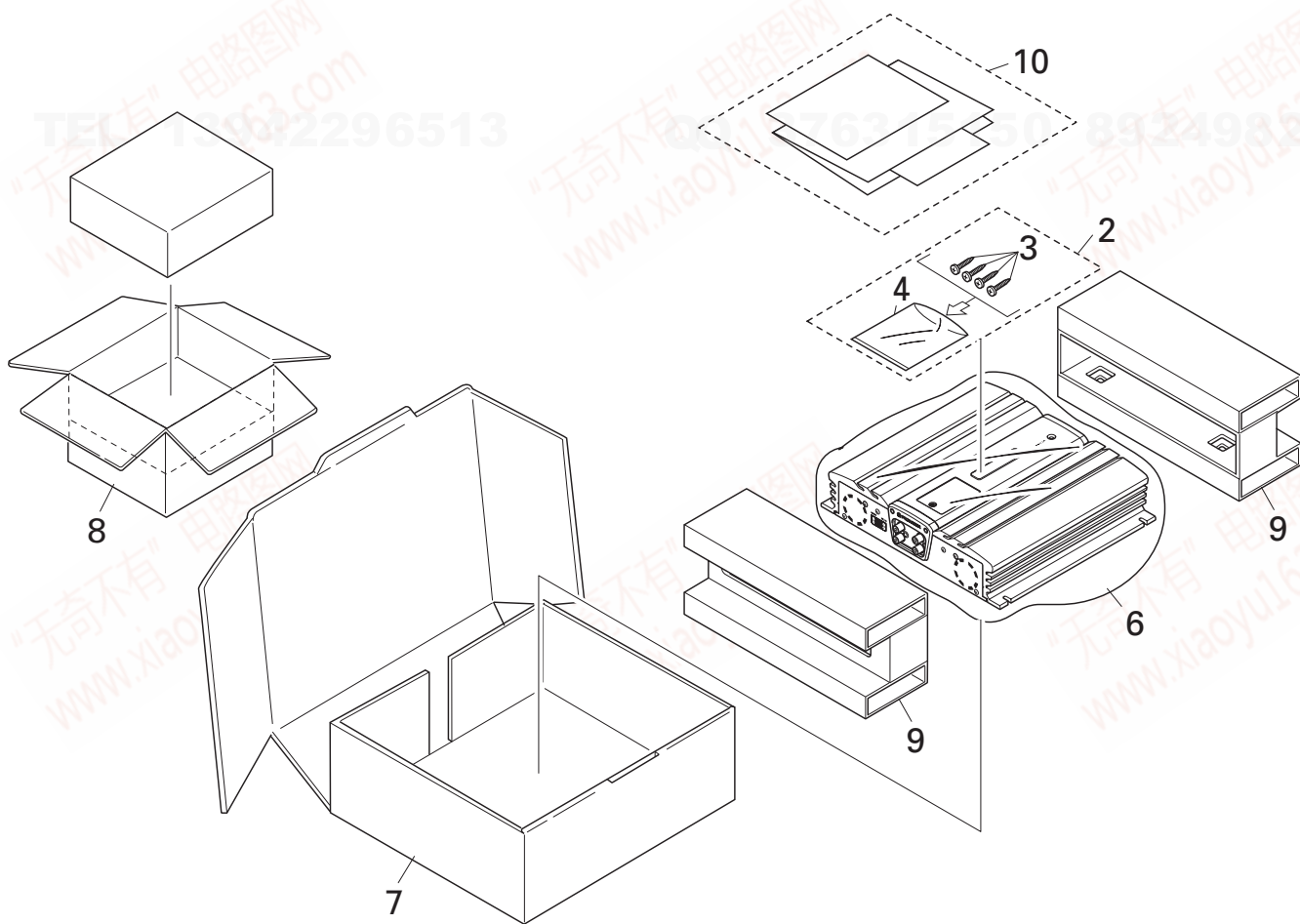


Fig. 1

**NOTE:**

- Parts marked by "\*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

**(1) PACKING SECTION PARTS LIST**

Mark No.	Description	Part No.	Mark No.	Description	Part No.
	1 *****		6	Polyethylene Bag	HEG0013
*	2 Screw Assy	HEA0017	7	Carton	See Contrast table (2)
	3 Screw	BYC40P180FZK	8	Contain Box	See Contrast table (2)
	4 Polyethylene Bag	HEG0011	9	Protector	HHP0025
	5 *****		10-1	Owner's Manual	See Contrast table (2)
			10-2	Owner's Manual	See Contrast table (2)
			* 10-3	Warranty Card	See Contrast table (2)
			* 10-4	Warranty Card	See Contrast table (2)
			* 10-5	Card	See Contrast table (2)

**(2) CONTRAST TABLE**

GM-X622/X1R/EW, GM-X622/X1R/UC, GM-X622/X1R/ES and GM-X522/X1R/UC are constructed the same except for the following:

Mark No.	Symbol and Description	Part No.			
		GM-X622			GM-X522
		X1R/EW	X1R/UC	X1R/ES	X1R/UC
7	Carton	HHG0153	HHG0149	HHG0152	HHG0150
8	Contain Box	HHL0153	HHL0149	HHL0152	HHL0150
10-1	Owner's Manual	HRD0044	HRD0041	HRD0043	HRD0042
10-2	Owner's Manual	Not used	Not used	HRD0070	Not used
* 10-3	Warranty Card	Not used	HRY0005	Not used	HRY0005
* 10-4	Warranty Card	HRY1087	HRY1070	Not used	Not used
* 10-5	Card	Not used	Not used	Not used	ARY1048

● **Owner's Manual**

Model	Part No.	Language
GM-X622/X1R/EW	HRD0044	English, French, German, Dutch, Spanish, Italian
GM-X622/X1R/UC	HRD0041	English, French
GM-X622/X1R/ES	HRD0043	English, Spanish
	HRD0070	Arabic, Portuguese(B)
GM-X522/X1R/UC	HRD0042	English, French

2.2 EXTERIOR

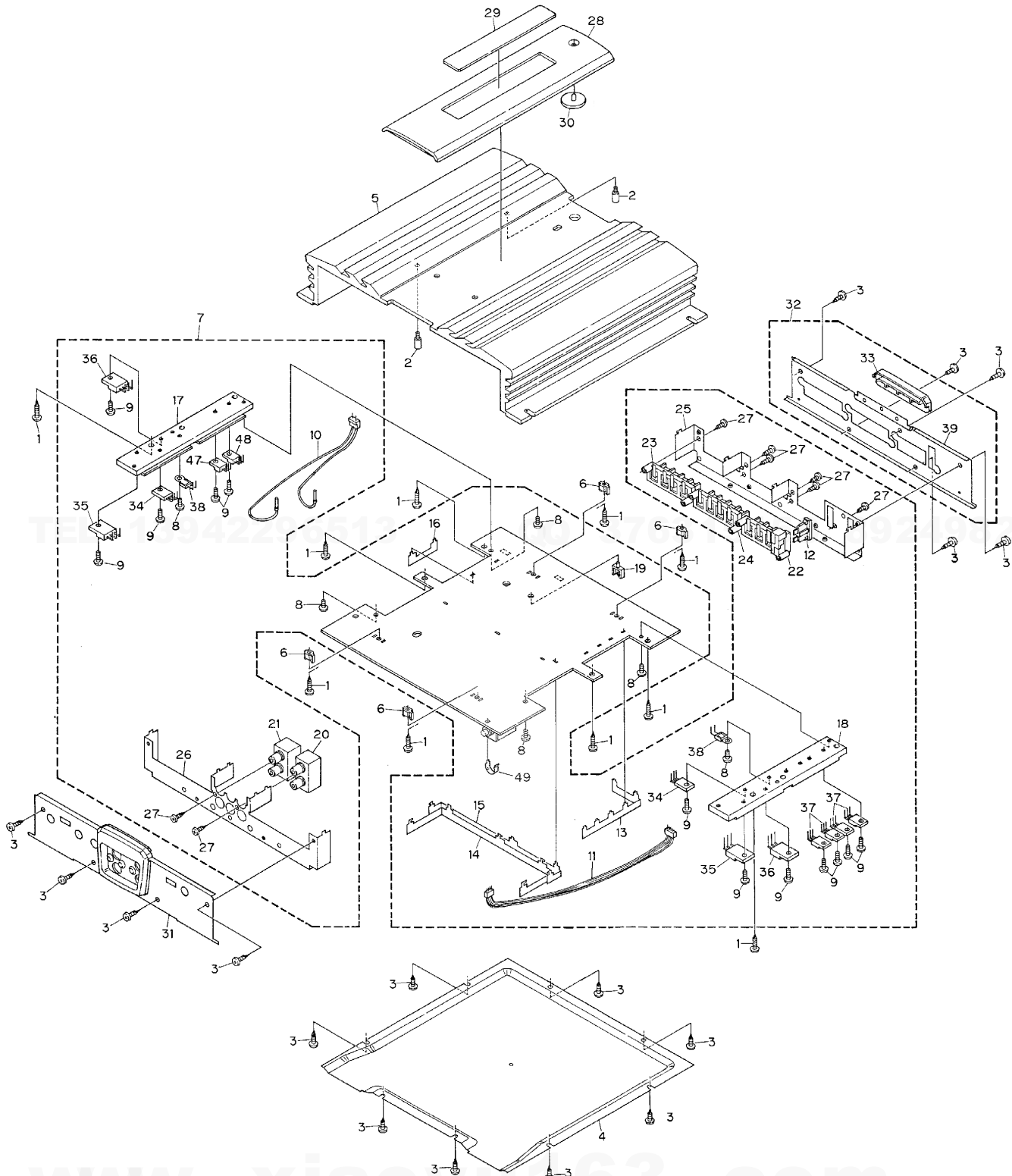


Fig. 2

**NOTE:**

- Parts marked by "\*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.

**(1) EXTERIOR SECTION PARTS LIST**

Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	Screw(M3×12)	CBA1323	21	Pin Jack(CN855)	See Contrast table (2)
2	Screw(M3×5)	HBA0006	22	Terminal(CN901)	See Contrast table (2)
3	Screw(M3×8)	HBA0011	23	Terminal(CN651)	See Contrast table (2)
4	Case	HNB0027	24	Terminal(CN852)	See Contrast table (2)
5	Heat Sink	See Contrast table (2)	25	Holder	HNC0025
6	Spacer	HNV3975	26	Holder	HNC0026
7	Amp Unit	See Contrast table (2)	27	Screw	PPZ30P060FZK
8	Screw	BMS30P060FZK	28	Plate Unit	See Contrast table (2)
9	Screw	BMS30P080FMC	29	Badge Unit	See Contrast table (2)
10	Cord Assy	HDE0019	30	Light Pipe Unit	HXA0201
11	Connector	HDE0013	31	Panel Unit	See Contrast table (2)
12	Fuse(25A)	HEK0025	32	Panel Unit	See Contrast table (2)
13	Bass Bar	HNC0039	33	Plate	HNS0039
14	Bass Bar	HNC0040	34	Transistor(Q565,566)	2SC1568
15	Bass Bar	HNC0041	35	Transistor(Q567,568)	2SD2438
16	Bass Bar	HNC0043	36	Transistor(Q569,570)	2SB1587
17	Heat Sink	HNR0088	37	FET(Q905,906,911,912)	IRFIZ44N
18	Heat Sink	HNR0089	38	Thermistor(TH901,902)	CCX1013
19	Clamper	HNV0015	* 39	Panel	HNB0035
20	Pin Jack(CN851)	See Contrast table (2)	40-46	.....	
			47	Diode(D907)	YG902C2
			48	Diode(D910)	YG902N2
			49	Clip	See Contrast table (2)

**(2) CONTRAST TABLE**

GM-X622/X1R/EW, GM-X622/X1R/UC, GM-X622/X1R/ES and GM-X522/X1R/UC are constructed the same except for the following:

Mark No.	Symbol and Description	Part No.			
		GM-X622			GM-X522
		X1R/EW	X1R/UC	X1R/ES	X1R/UC
5	Heat Sink	HNR0104	HNR0071	HNR0104	HNR0103
7	Amp Unit	HWH0042	HWH0040	HWH0044	HWH0043
20	Pin Jack(CN851)	HKB0001	HKB0002	HKB0001	HKB0001
21	Pin Jack(CN855)	HKB0001	HKB0002	HKB0001	HKB0001
22	Terminal(CN901)	HKE0001	HKE0002	HKE0001	HKE0001
23	Terminal(CN651)	HKE0009	HKE0010	HKE0009	HKE0009
24	Terminal(CN852)	HKE0013	HKE0015	HKE0013	HKE0013
28	Plate Unit	HXA0108	HXA0107	HXA0108	HXA0108
29	Badge Unit	HXA0113	HXA0261	HXA0113	HXA0113
31	Panel Unit	HXA0256	HXA0254	HXA0256	HXA0245
32	Panel Unit	HXA0259	HXA0260	HXA0259	HXA0259
49	Clip	Not used	HNC0054	Not used	Not used

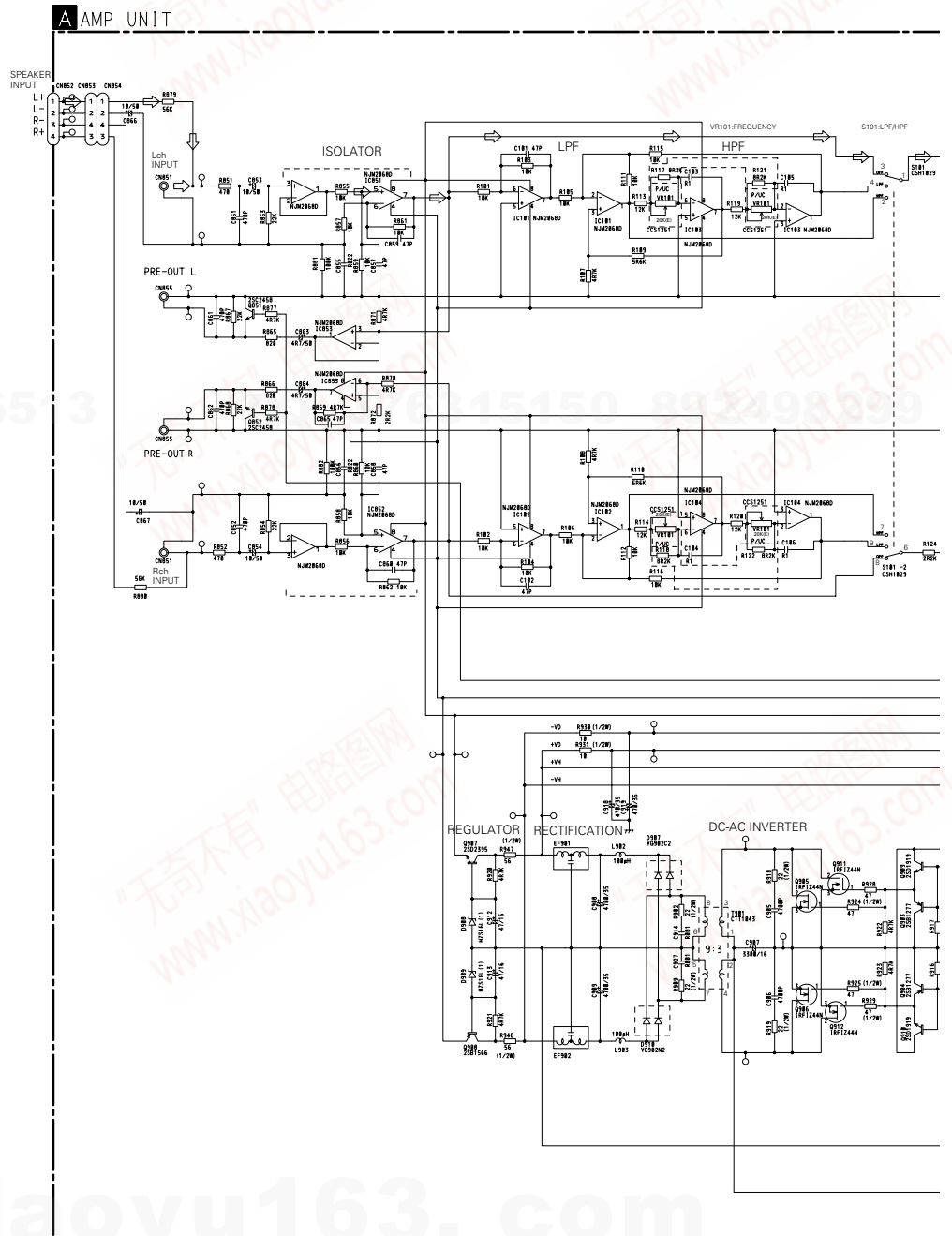
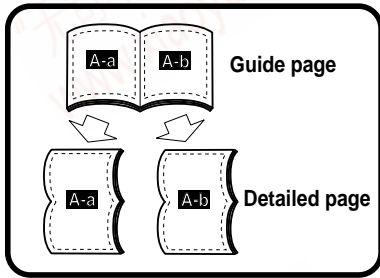
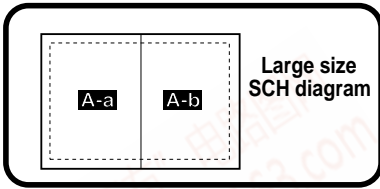


### 3. SCHEMATIC DIAGRAM

#### 3.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".

# A-a



# A

QQ 376315150 892498299

A-b

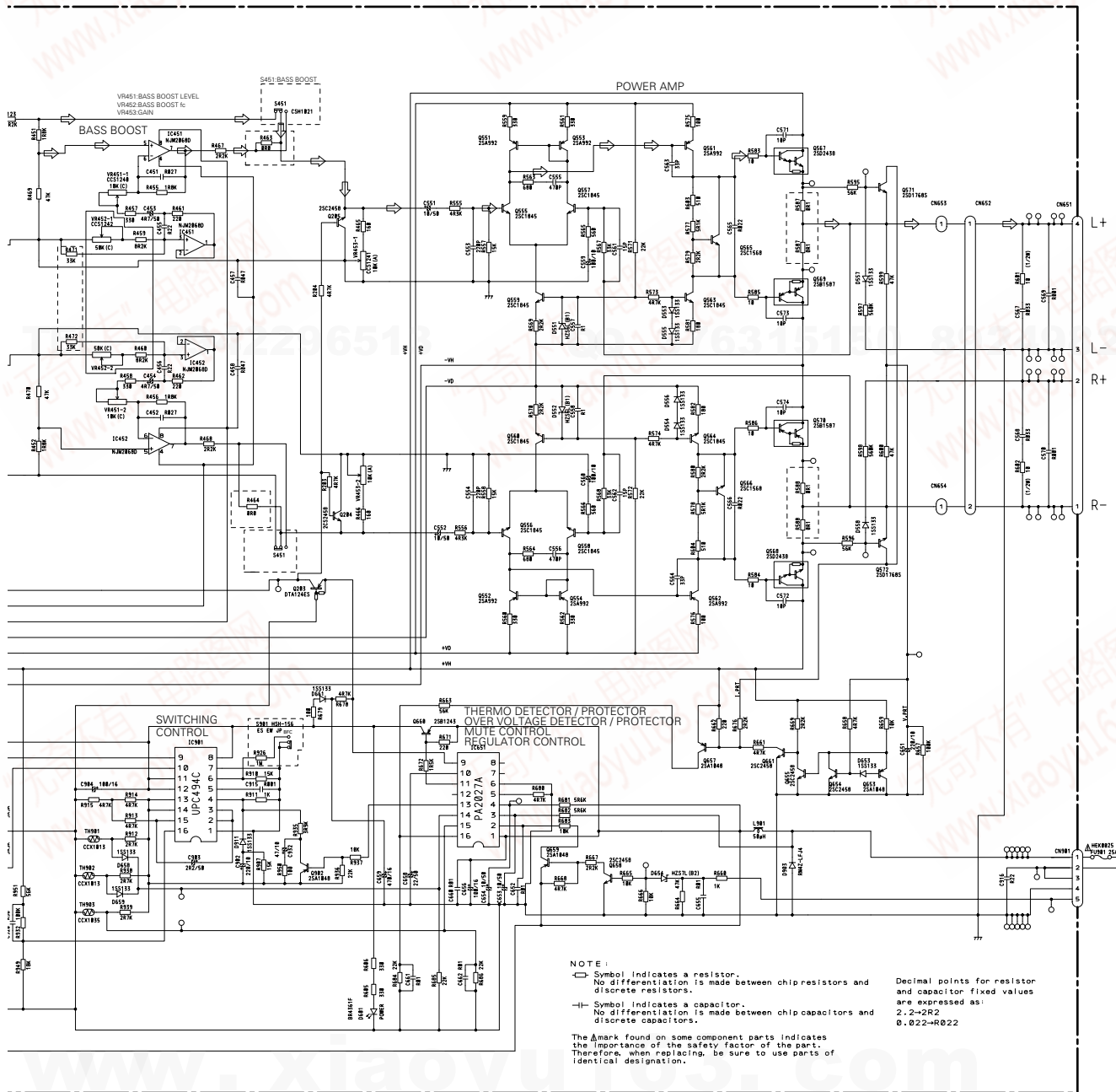
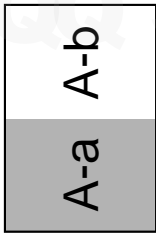
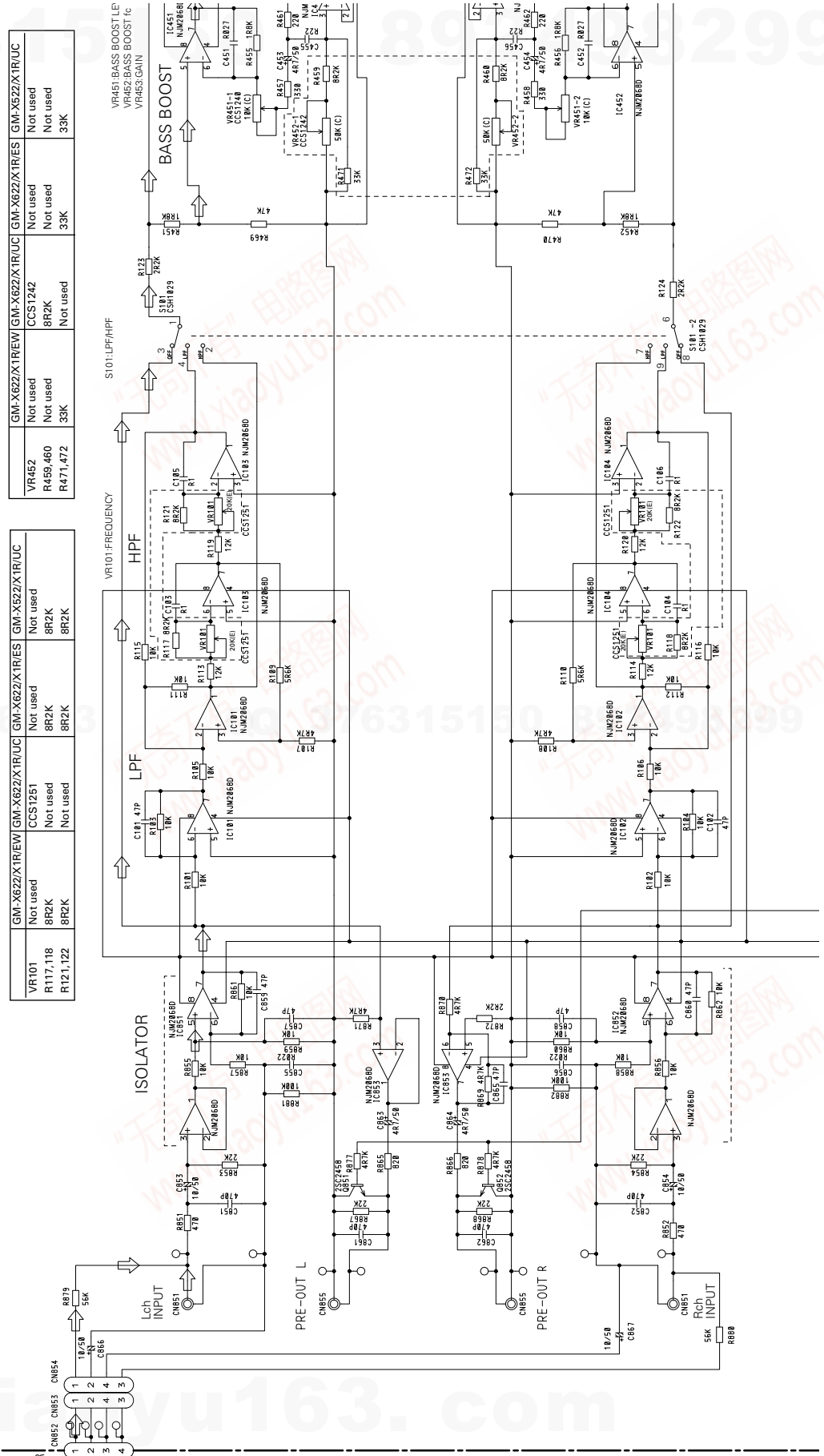


Fig. 3





A AMP UNIT



GM-X622X1R/UC	GM-X622X1R/ES	GM-X622X1R/UC	GM-X622X1R/ES	GM-X522X1R/UC
VR101	Not used	CCS1251	Not used	Not used
R117,118	8R2K	8R2K	8R2K	8R2K
R121,122	8R2K	8R2K	8R2K	8R2K

GM-X622X1R/UC	GM-X622X1R/ES	GM-X622X1R/UC	GM-X622X1R/ES	GM-X522X1R/UC
VR452	Not used	CCS1242	Not used	Not used
R459,460	8R2K	8R2K	8R2K	8R2K
R471,472	8R2K	8R2K	8R2K	8R2K

GM-X622X1R/UC	GM-X622X1R/ES	GM-X622X1R/UC	GM-X622X1R/ES	GM-X522X1R/UC
VR1E1	Not used	CCS1242	Not used	Not used
VR1E2	Not used	8R2K	Not used	Not used
VR1E3	Not used	8R2K	Not used	Not used
VR1E4	Not used	8R2K	Not used	Not used
VR1E5	Not used	8R2K	Not used	Not used
VR1E6	Not used	8R2K	Not used	Not used
VR1E7	Not used	8R2K	Not used	Not used
VR1E8	Not used	8R2K	Not used	Not used
VR1E9	Not used	8R2K	Not used	Not used
VR1E10	Not used	8R2K	Not used	Not used
VR1E11	Not used	8R2K	Not used	Not used
VR1E12	Not used	8R2K	Not used	Not used
VR1E13	Not used	8R2K	Not used	Not used
VR1E14	Not used	8R2K	Not used	Not used
VR1E15	Not used	8R2K	Not used	Not used
VR1E16	Not used	8R2K	Not used	Not used
VR1E17	Not used	8R2K	Not used	Not used
VR1E18	Not used	8R2K	Not used	Not used
VR1E19	Not used	8R2K	Not used	Not used
VR1E20	Not used	8R2K	Not used	Not used

SPEAKER INPUT  
L+  
L-  
P-  
R+

PRE-OUT L  
CMB5

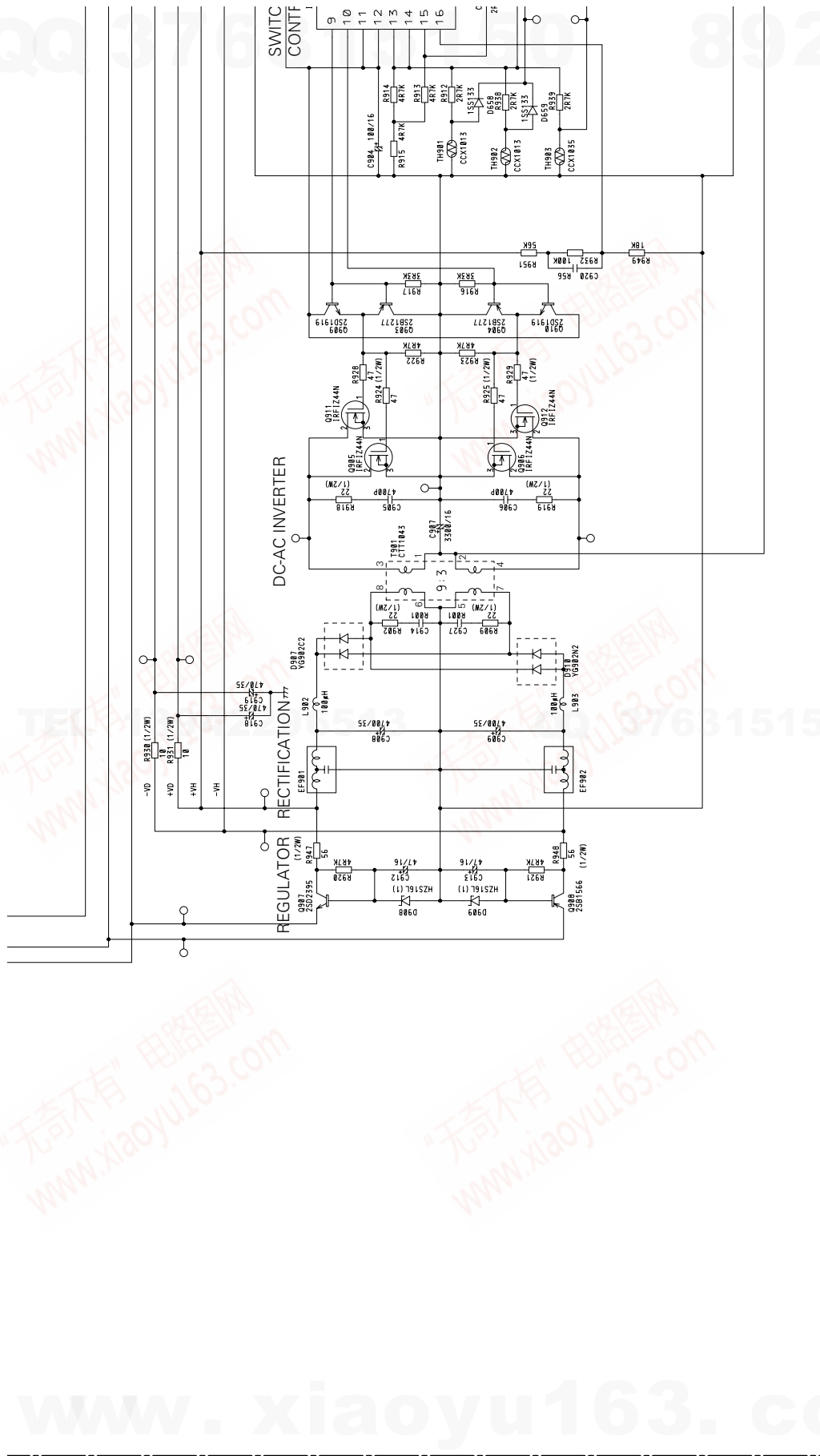
PRE-OUT R  
CMB5

Rch INPUT  
CMB5

Lch INPUT  
CMB5

TEL 13942296513 QQ 376315150 892498299





A-a A-b

A

B

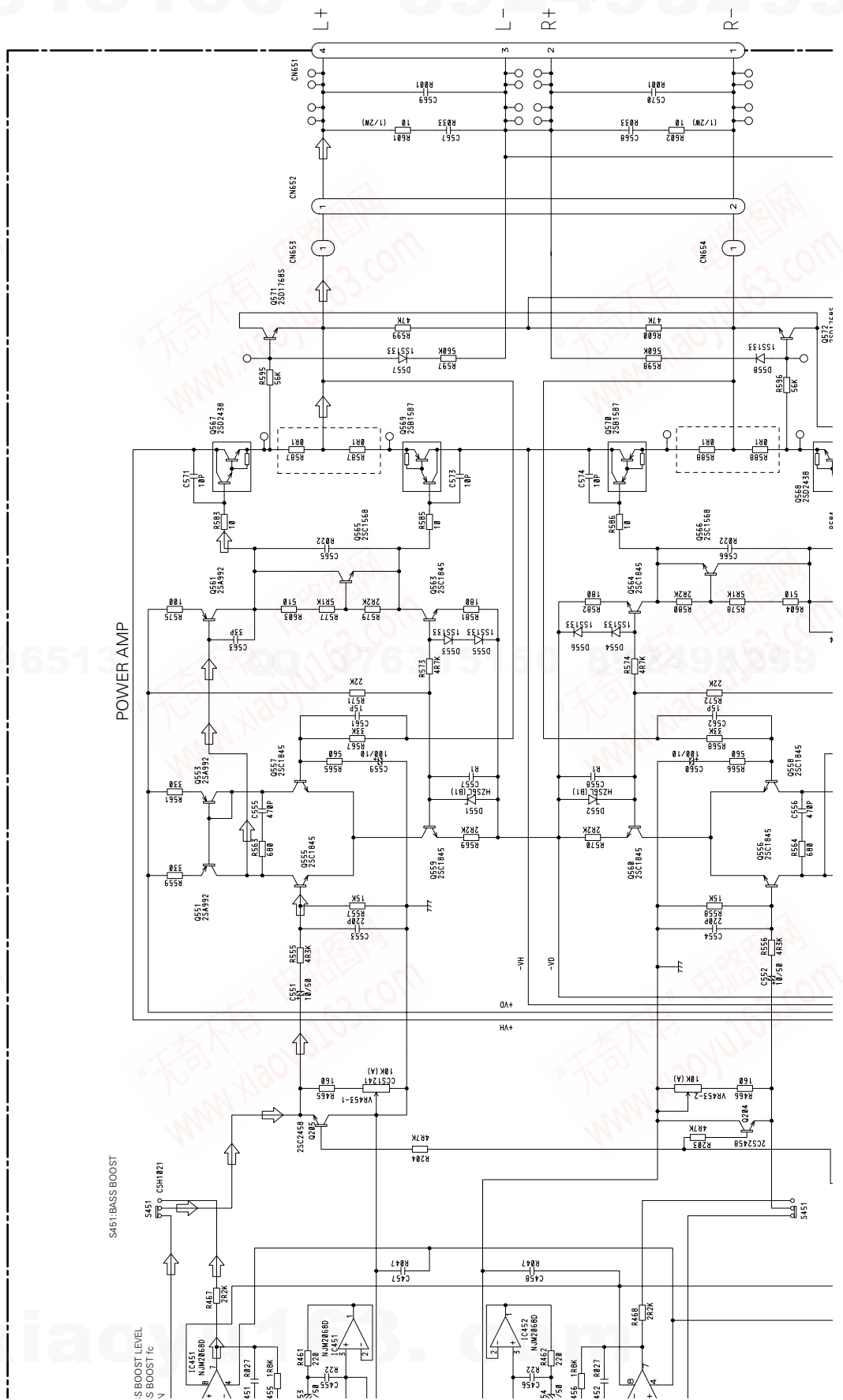
C

D

Fig. 4

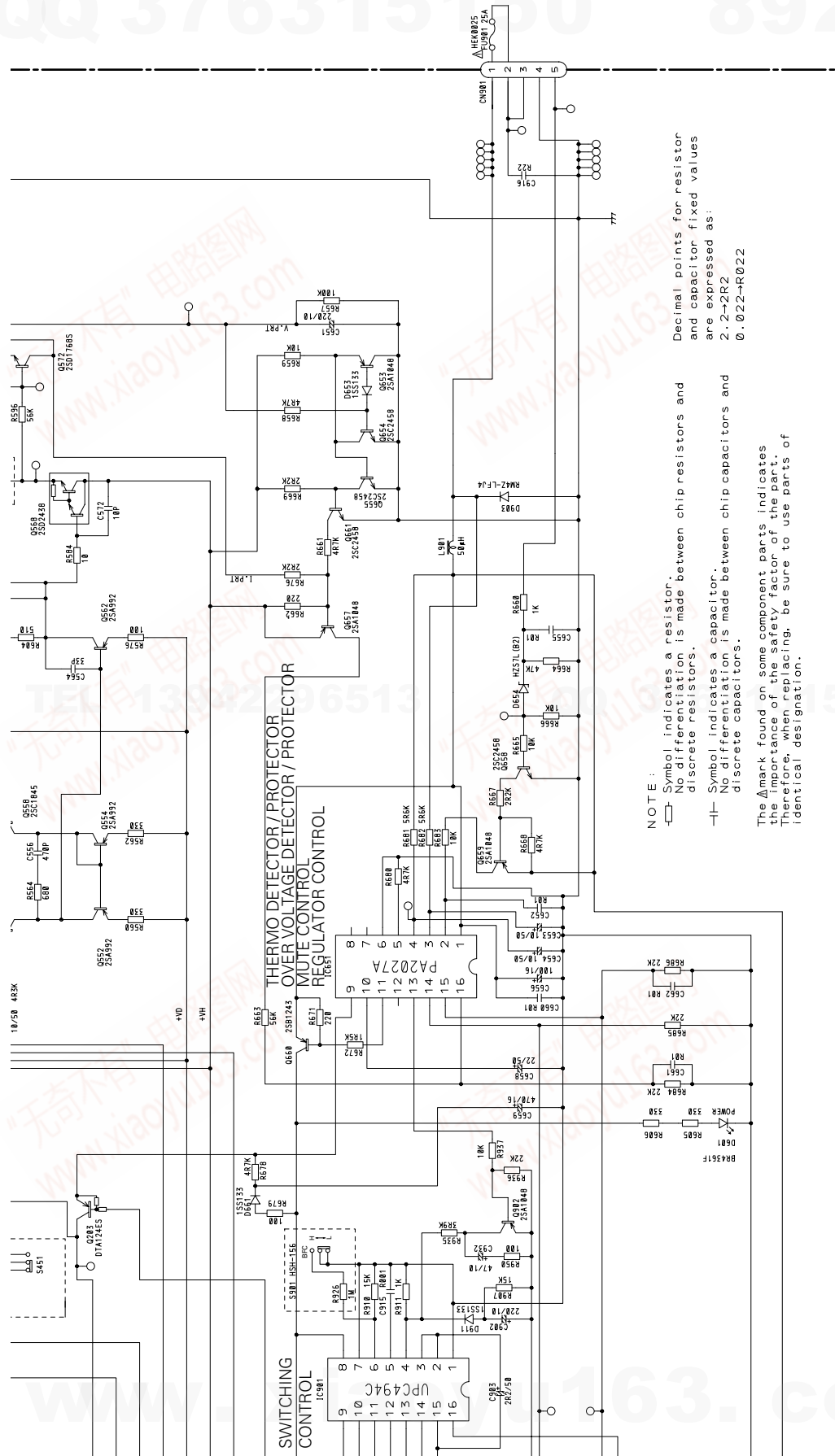
A-a 9

A-a A-b



A-b

A-a A-b



NOTE :

- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

Decimal points for resistor and capacitor fixed values are expressed as:  
 2.2-2R2  
 0.022-R022

	GM-X622(X1)REW	GM-X622(X1)RUC	GM-X622(X1)RIES	GM-X622(X1)RUC
S451	Not used	Not used	Not used	Not used
S901	CSH1021	CSH1021	CSH1021	CSH1021
R463.464	HSR-156	HSR-156	HSR-156	HSR-156
R926	Not used	0R0	Not used	0R0
	TM	TM	TM	TM

Fig. 5

A-b

# 4. PCB CONNECTION DIAGRAM

## 4.1 AMP UNIT

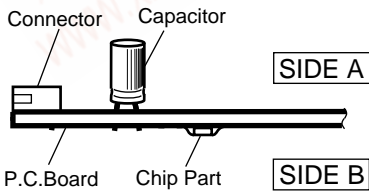
### A AMP UNIT

#### NOTE FOR PCB DIAGRAMS

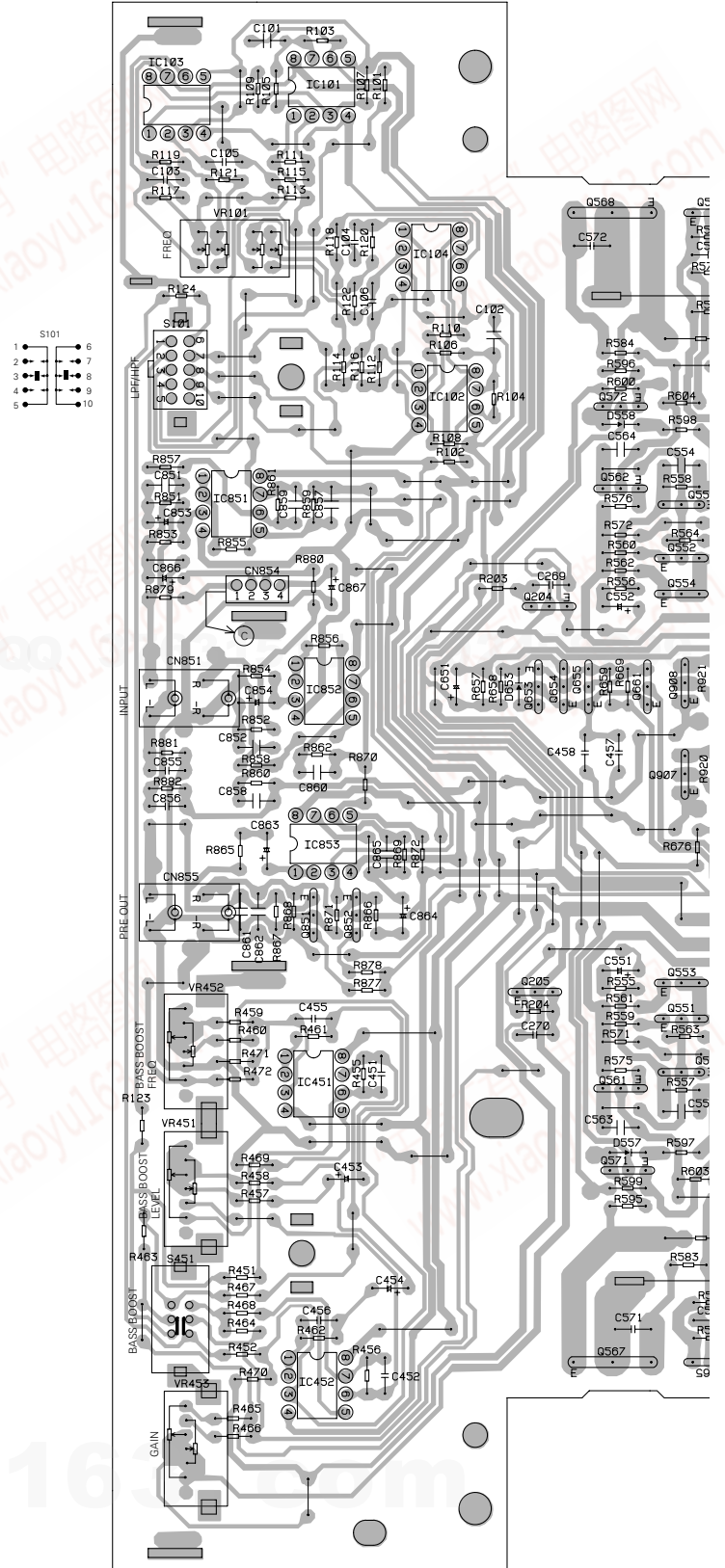
1. The parts mounted on this PCB include all necessary parts for several destination.

For further information for respective destinations, be sure to check with the schematic diagram.

2. Viewpoint of PCB diagrams



IC. Q
IC103
IC101
0568 0570 0906 0905
0566 0912 0911
IC104
0910 0909
0904 0903
IC102 0572
0562
IC851
IC901
0552
0554
Q204
0902
Q661 0908 IC651
Q654 0655 0653
IC852
Q907
Q658
IC853
Q657 0659
Q660
Q203
Q851 0852
0553
Q205
0551
IC451 0561
0571
0567 0569
0565
IC452



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SIDE A

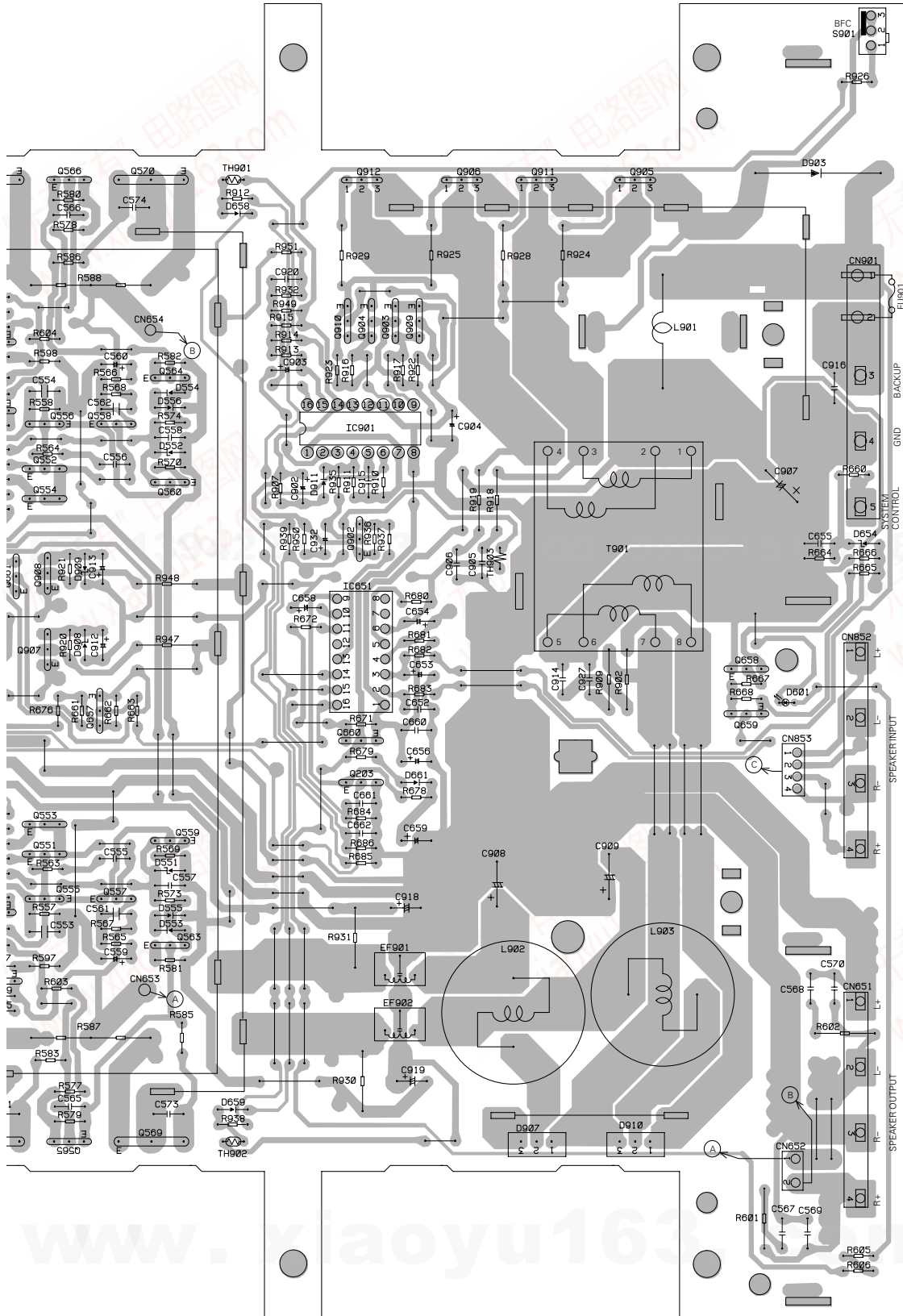


Fig. 8

A



## 5. ELECTRICAL PARTS LIST

### NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/OSOOOJ,RS1/OOSOOOJ

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
<b>A</b> Unit Number : HWH0042		Q 906 FET	IRFIZ44N
Unit Name : Amp Unit		Q 907 Transistor	2SD2395
		Q 908 Transistor	2SB1566
		Q 909 Transistor	2SD1919
		Q 910 Transistor	2SD1919
<b>MISCELLANEOUS</b>		Q 911 FET	IRFIZ44N
IC 101 IC	NJM2068D	Q 912 FET	IRFIZ44N
IC 102 IC	NJM2068D	D 551 Diode	HZS6L(B1)
IC 103 IC	NJM2068D	D 552 Diode	HZS6L(B1)
IC 104 IC	NJM2068D	D 553 Diode	1SS133
IC 451 IC	NJM2068D	D 554 Diode	1SS133
IC 452 IC	NJM2068D	D 555 Diode	1SS133
IC 651 IC	PA2027A	D 556 Diode	1SS133
IC 851 IC	NJM2068D	D 557 Diode	1SS133
IC 852 IC	NJM2068D	D 558 Diode	1SS133
IC 853 IC	NJM2068D	D 601 LED	BR4361F
IC 901 IC	UPC494C	D 653 Diode	1SS133
Q 203 Transistor	DTA124ES	D 654 Diode	HZS7L(B2)
Q 204 Transistor	2SC2458	D 658 Diode	1SS133
Q 205 Transistor	2SC2458	D 659 Diode	1SS133
Q 551 Transistor	2SA992	D 661 Diode	1SS133
Q 552 Transistor	2SA992	D 903 Diode	RM4Z
Q 553 Transistor	2SA992	D 907 Diode	YG902C2
Q 554 Transistor	2SA992	D 908 Diode	HZS16L(1)
Q 555 Transistor	2SC1845	D 909 Diode	HZS16L(1)
Q 556 Transistor	2SC1845	D 910 Diode	YG902N2
Q 557 Transistor	2SC1845	D 911 Diode	1SS133
Q 558 Transistor	2SC1845	L 901 Choke Coil 50μH	CTH1146
Q 559 Transistor	2SC1845	L 902 Choke Coil 100μH	CTH1150
Q 560 Transistor	2SC1845	L 903 Choke Coil 100μH	CTH1150
Q 561 Transistor	2SA992	T 901 Transformer	CTT1043
Q 562 Transistor	2SC1845	TH 901 Thermistor	CCX1013
Q 563 Transistor	2SC1845	TH 902 Thermistor	CCX1013
Q 564 Transistor	2SC1845	TH 903 Thermistor	CCX1035
Q 565 Transistor	2SC1568	S 101 Switch(LPF/HPF)	CSH1029
Q 566 Transistor	2SC1568	S 451 Switch(BASS BOOST)	See Contrast table
Q 567 Transistor	2SD2438	S 901 Switch(BFC)	See Contrast table
Q 568 Transistor	2SD2438	VR 101 Volume 20kΩ(E)	See Contrast table
Q 569 Transistor	2SB1587	VR 451 Volume 10kΩ(C)	CCS1240
Q 570 Transistor	2SB1587	VR 452 Volume 50kΩ(C)	See Contrast table
Q 571 Transistor	2SD1768S	VR 453 Volume 10kΩ(A)	CCS1241
Q 572 Transistor	2SD1768S	EF 901	CCG-081
Q 653 Transistor	2SA1048	EF 902	CCG-081
Q 654 Transistor	2SC2458	FU 901 Fuse 25A	HEK0025
Q 655 Transistor	2SC2458		
Q 657 Transistor	2SA1048		
Q 658 Transistor	2SC2458		
Q 659 Transistor	2SA1048		
Q 660 Transistor	2SB1243		
Q 661 Transistor	2SC2458		
Q 851 Transistor	2SC2458		
Q 852 Transistor	2SC2458		
Q 902 Transistor	2SA1048		
Q 903 Transistor	2SB1277		
Q 904 Transistor	2SB1277		
Q 905 FET	IRFIZ44N		
		<b>RESISTORS</b>	
		R 101	RD1/4PU103J
		R 102	RD1/4PU103J
		R 103	RD1/4PU103J
		R 104	RD1/4PU103J
		R 105	RD1/4PU103J

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 106	RD1/4PU103J	R 579	RD1/4PU222J
R 107	RD1/4PU472J	R 580	RD1/4PU222J
R 108	RD1/4PU472J	R 581	RD1/4PU181J
R 109	RD1/4PU562J	R 582	RD1/4PU181J
R 110	RD1/4PU562J	R 583	RD1/4PU100J
R 111	RD1/4PU103J	R 584	RD1/4PU100J
R 112	RD1/4PU103J	R 585	RD1/4PU100J
R 113	RD1/4PU123J	R 586	RD1/4PU100J
R 114	RD1/4PU123J	R 587	CCN1082
R 115	RD1/4PU103J	R 588	CCN1082
R 116	RD1/4PU103J	R 595	RD1/4PU563J
R 117	See Contrast table	R 596	RD1/4PU563J
R 118	See Contrast table	R 597	RD1/4PU564J
R 119	RD1/4PU123J	R 598	RD1/4PU564J
R 120	RD1/4PU123J	R 599	RD1/4PU473J
R 121	See Contrast table	R 600	RD1/4PU473J
R 122	See Contrast table	R 601	RS1/2PMF100J
R 123	RD1/4PU222J	R 602	RS1/2PMF100J
R 124	RD1/4PU222J	R 603	RD1/4PU511J
R 203	RD1/4PU472J	R 604	RD1/4PU511J
R 204	RD1/4PU472J	R 605	RD1/4PU331J
R 451	RD1/4PU182J	R 606	RD1/4PU331J
R 452	RD1/4PU182J	R 657	RD1/4PU104J
R 455	RD1/4PU182J	R 658	RD1/4PU472J
R 456	RD1/4PU182J	R 659	RD1/4PU103J
R 457	RD1/4PU331J	R 660	RD1/4PU102J
R 458	RD1/4PU331J	R 661	RD1/4PU472J
R 459	See Contrast table	R 662	RD1/4PU221J
R 460	See Contrast table	R 663	RD1/4PU563J
R 461	See Contrast table	R 664	RD1/4PU473J
R 462	See Contrast table	R 665	RD1/4PU103J
R 463	See Contrast table	R 666	RD1/4PU103J
R 464	See Contrast table	R 667	RD1/4PU222J
R 465	RD1/4PU161J	R 668	RD1/4PU472J
R 466	RD1/4PU161J	R 669	RD1/4PU222J
R 467	RD1/4PU222J	R 671	RD1/4PU221J
R 468	RD1/4PU222J	R 672	RD1/4PU152J
R 469	RD1/4PU473J	R 676	RD1/4PU222J
R 470	RD1/4PU473J	R 678	RD1/4PU472J
R 471	RD1/4PU333J	R 679	RD1/4PU101J
R 472	RD1/4PU333J	R 680	RD1/4PU472J
R 555	RD1/4PU432J	R 681	RD1/4PU562J
R 556	RD1/4PU432J	R 682	RD1/4PU562J
R 557	RD1/4PU153J	R 683	RD1/4PU103J
R 558	RD1/4PU153J	R 684	RD1/4PU223J
R 559	RD1/4PU331J	R 685	RD1/4PU223J
R 560	RD1/4PU331J	R 686	RD1/4PU223J
R 561	RD1/4PU331J	R 851	RD1/4PU471J
R 562	RD1/4PU331J	R 852	RD1/4PU471J
R 563	RD1/4PU681J	R 853	RD1/4PU223J
R 564	RD1/4PU681J	R 854	RD1/4PU223J
R 565	RD1/4PU561J	R 855	RN1/4PC1002D
R 566	RD1/4PU561J	R 856	RN1/4PC1002D
R 567	RD1/4PU333J	R 857	RN1/4PC1002D
R 568	RD1/4PU333J	R 858	RN1/4PC1002D
R 569	RD1/4PU222J	R 859	RN1/4PC1002D
R 570	RD1/4PU222J	R 860	RN1/4PC1002D
R 571	RD1/4PU223J	R 861	RN1/4PC1002D
R 572	RD1/4PU223J	R 862	RN1/4PC1002D
R 573	RD1/4PU472J	R 865	RD1/4PU821J
R 574	RD1/4PU472J	R 866	RD1/4PU821J
R 575	RD1/4PU101J	R 867	RD1/4PU223J
R 576	RD1/4PU101J	R 868	RD1/4PU223J
R 577	RD1/4PU512J	R 869	RD1/4PU472J
R 578	RD1/4PU512J	R 870	RD1/4PU472J

GM-X622,GM-X522

====Circuit Symbol and No.====Part Name	Part No.	====Circuit Symbol and No.====Part Name	Part No.
R 871	RD1/4PU472J	C 557	CFTLA104J50
R 872	RD1/4PU222J	C 558	CFTLA104J50
R 877	RD1/4PU472J	C 559	CEAS101M10
R 878	RD1/4PU472J	C 560	CEAS101M10
R 879	RD1/4PU563J	C 561	CCPUCH150J50
R 880	RD1/4PU563J	C 562	CCPUCH150J50
R 881	RD1/4PU104J	C 563	CMA330J2H
R 882	RD1/4PU104J	C 564	CMA330J2H
R 902	RS1/2PMF220J	C 565	CFTLA223J50
R 907	RD1/4PU153J	C 566	CFTLA223J50
R 909	RS1/2PMF220J	C 567	CFTLA333J50
R 910	RD1/4PU153J	C 568	CFTLA333J50
R 911	RD1/4PU102J	C 569	CQMA102J50
R 912	RD1/4PU272J	C 570	CQMA102J50
R 913	RD1/4PU472J	C 571	CMA100J2H
R 914	RD1/4PU472J	C 572	CMA100J2H
R 915	RD1/4PU472J	C 573	CMA100J2H
R 916	RD1/4PU332J	C 574	CMA100J2H
R 917	RD1/4PU332J	C 651	CCH1036
R 918	RS1/2PMF220J	C 652	CFTLA103J50
R 919	RS1/2PMF220J	C 653	CEAS100M50
R 920	RD1/4PU472J	C 654	CEAS100M50
R 921	RD1/4PU472J	C 655	CFTLA103J50
R 922	RD1/4PU472J	C 656	CEAS101M16
R 923	RD1/4PU472J	C 658	CEAS220M50
R 924	RS1/2PMF470J	C 659	CEAS471M16
R 925	RS1/2PMF470J	C 660	CFTLA103J50
R 926	See Contrast table	C 661	CFTLA103J50
R 928	RS1/2PMF470J	C 662	CFTLA103J50
R 929	RS1/2PMF470J	C 851	CKPUYB471K50
R 930	RS1/2PMF100J	C 852	CKPUYB471K50
R 931	RS1/2PMF100J	C 853	CEAS100M50
R 932	RD1/4PU104J	C 854	CEAS100M50
R 935	RD1/4PU392J	C 855	CFTLA223J50
R 936	RD1/4PU223J	C 856	CFTLA223J50
R 937	RD1/4PU103J	C 857	CCPUSL470J50
R 938	RD1/4PU272J	C 858	CCPUSL470J50
R 939	RD1/4PU272J	C 859	CCPUSL470J50
R 947	RS1/2PMF560J	C 860	CCPUSL470J50
R 948	RS1/2PMF560J	C 861	CKPUYB471K50
R 949	RD1/4PU183J	C 862	CKPUYB471K50
R 950	RD1/4PU101J	C 863	CEAS4R7M50
R 951	RD1/4PU563J	C 864	CEAS4R7M50
		C 865	CCPUSL470J50
		C 866	CEAS100M50
CAPACITORS			
C 101	CCPUSL470J50	C 867	CEAS100M50
C 102	CCPUSL470J50	C 902	CEAS221M10
C 103	CFTLA104J50	C 903	CEAS2R2M50
C 104	CFTLA104J50	C 904	CEAS101M16
C 105	CFTLA104J50	C 905	CQMA472J50
C 106	CFTLA104J50	C 906	CQMA472J50
C 451	CFTLA273J50	C 907	3300μF/16V CCH1211
C 452	CFTLA273J50	C 908	4700μF/35V CCH1207
C 453	CEAS4R7M50	C 909	4700μF/35V CCH1207
C 454	CEAS4R7M50	C 912	CEAS470M16
C 455	CFTLA224J50	C 913	CEAS470M16
C 456	CFTLA224J50	C 914	CQMA102J50
C 457	CFTLA473J50	C 915	CQMA102J50
C 458	CFTLA473J50	C 916	CFTLA224J50
C 551	CEAS100M50	C 918	CEAS471M35
C 552	CEAS100M50	C 919	CEAS471M35
C 553	CKPUYB221K50	C 920	CFTLA564J50
C 554	CKPUYB221K50	C 927	CQMA102J50
C 555	CQMA471J50	C 932	CEAS470M10
C 556	CQMA471J50		

**CONTRAST TABLE of AMP UNIT**

GM-X622/X1R/EW, GM-X622/X1R/UC, GM-X622/X1R/ES and GM-X522/X1R/UC are constructed the same except for the following:

Symbol and Description	Part No.			
	GM-X622/X1R/EW	GM-X622/X1R/UC	GM-X622/X1R/ES	GM-X522/X1R/UC
VR101	Not used	CCS1251	Not used	Not used
VR452	Not used	CCS1242	Not used	Not used
S451	CSH1021	Not used	CSH1021	Not used
S901	HSH-156	Not used	HSH-156	Not used
R117,118	RD1/4PU822J	Not used	RD1/4PU822J	RD1/4PU822J
R121,122	RD1/4PU822J	Not used	RD1/4PU822J	RD1/4PU822J
R463,464	Not used	RD1/4PU0R0J	Not used	RD1/4PU0R0J
R459,460	Not used	RD1/4PU822J	Not used	Not used
R471,472	RD1/4PU333J	Not used	RD1/4PU333J	RD1/4PU333J
R926	RD1/4PU105J	Not used	RD1/4PU105J	Not used

**6. ADJUSTMENT**

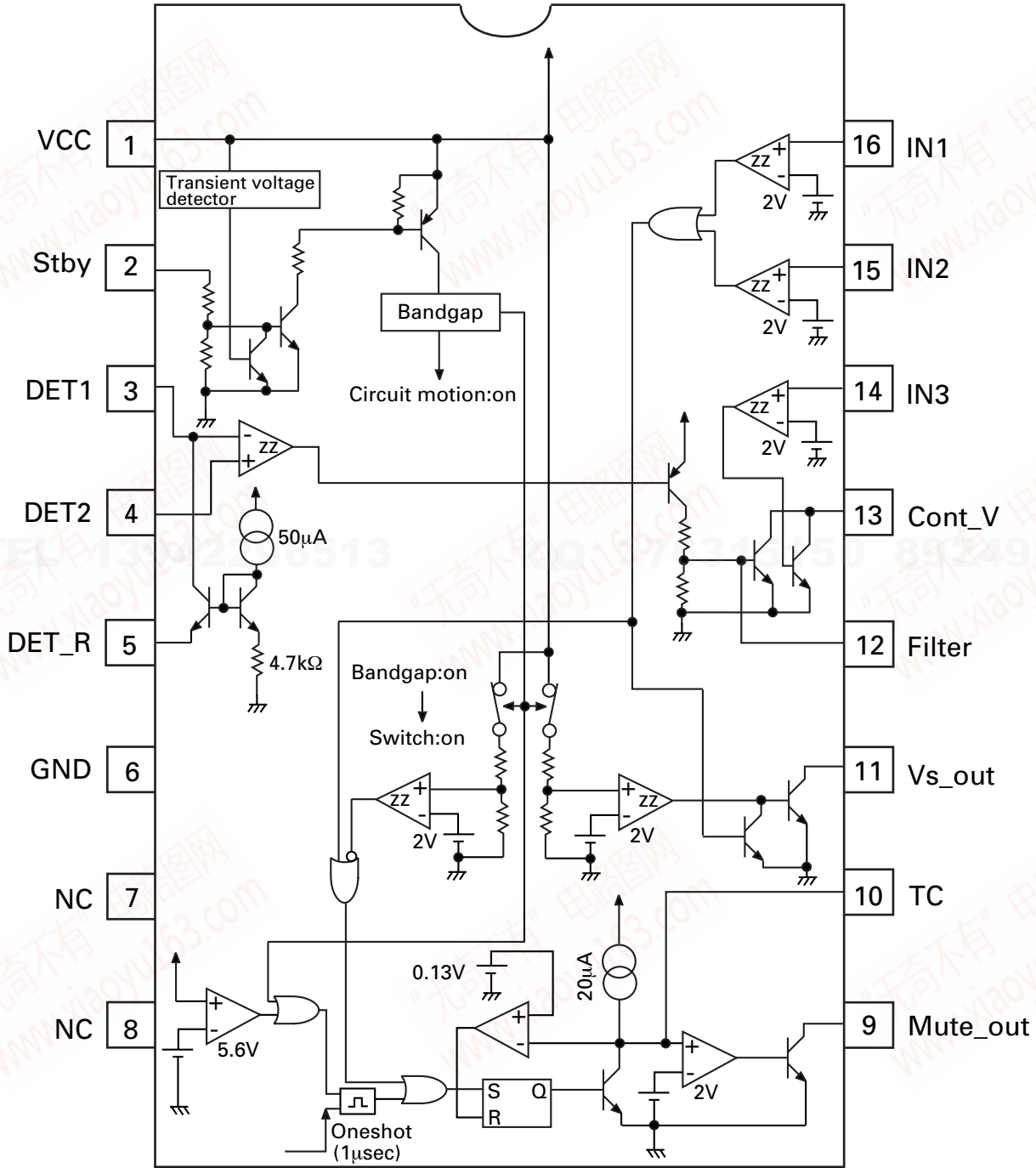
There is no information to be shown in this chapter.

# GM-X622,GM-X522

## 7. GENERAL INFORMATION

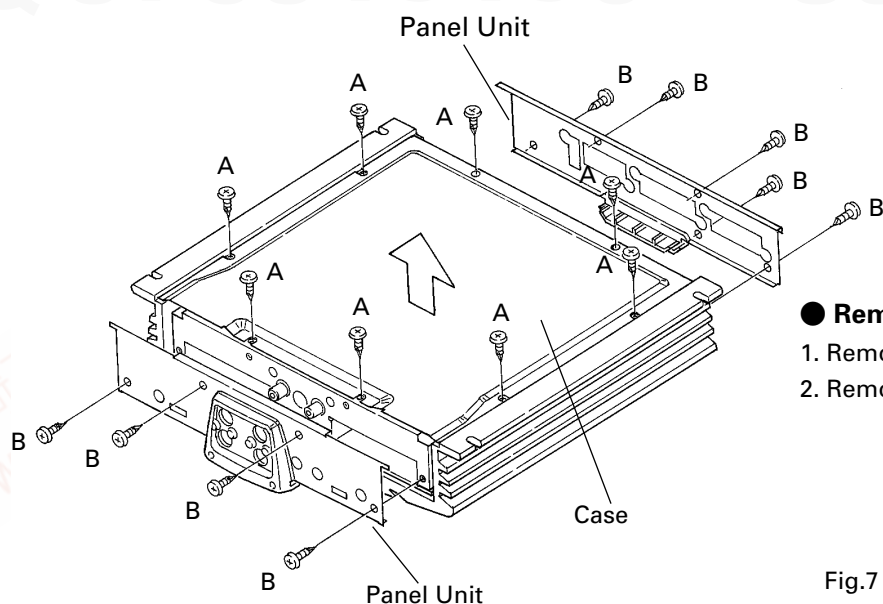
### 7.1 IC

PA2027A





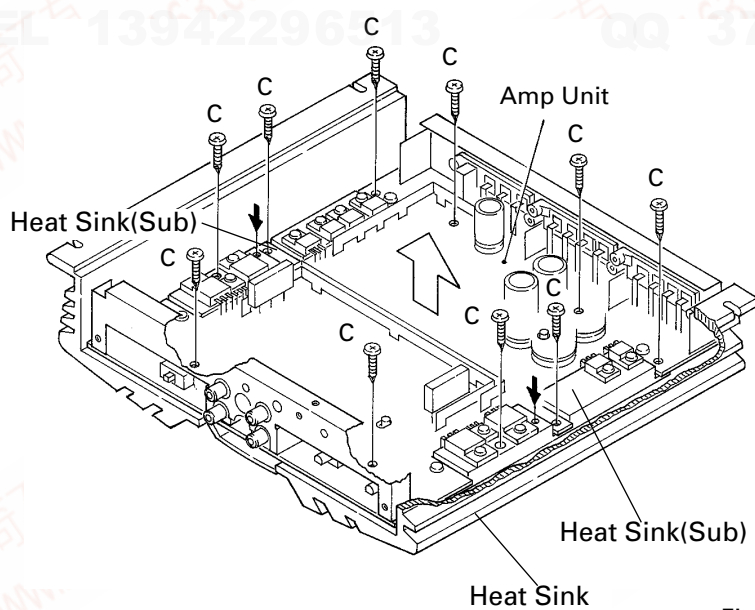
### 7.2 DISASSEMBLY



#### ● Removing the Case and the Panel Units

1. Remove eight screws A and nine screws B.
2. Remove Case and Panel Units.

Fig.7



#### ● Removing the the Amp Unit

Some silicone glue has been applied between the Heat Sink and the Sub Heat Sink. therefore, to remove the Amp Unit from the Heat Sink.

1. Remove ten screws C.
4. Use 2 pcs. of screw C and insert them into the two holes marked with an arrow.
5. Alternately tighten them little by little until the Sub Heat Sink(Sub) separates from the Heat Sink.

Fig. 8

### 7.3 BLOCK DIAGRAM

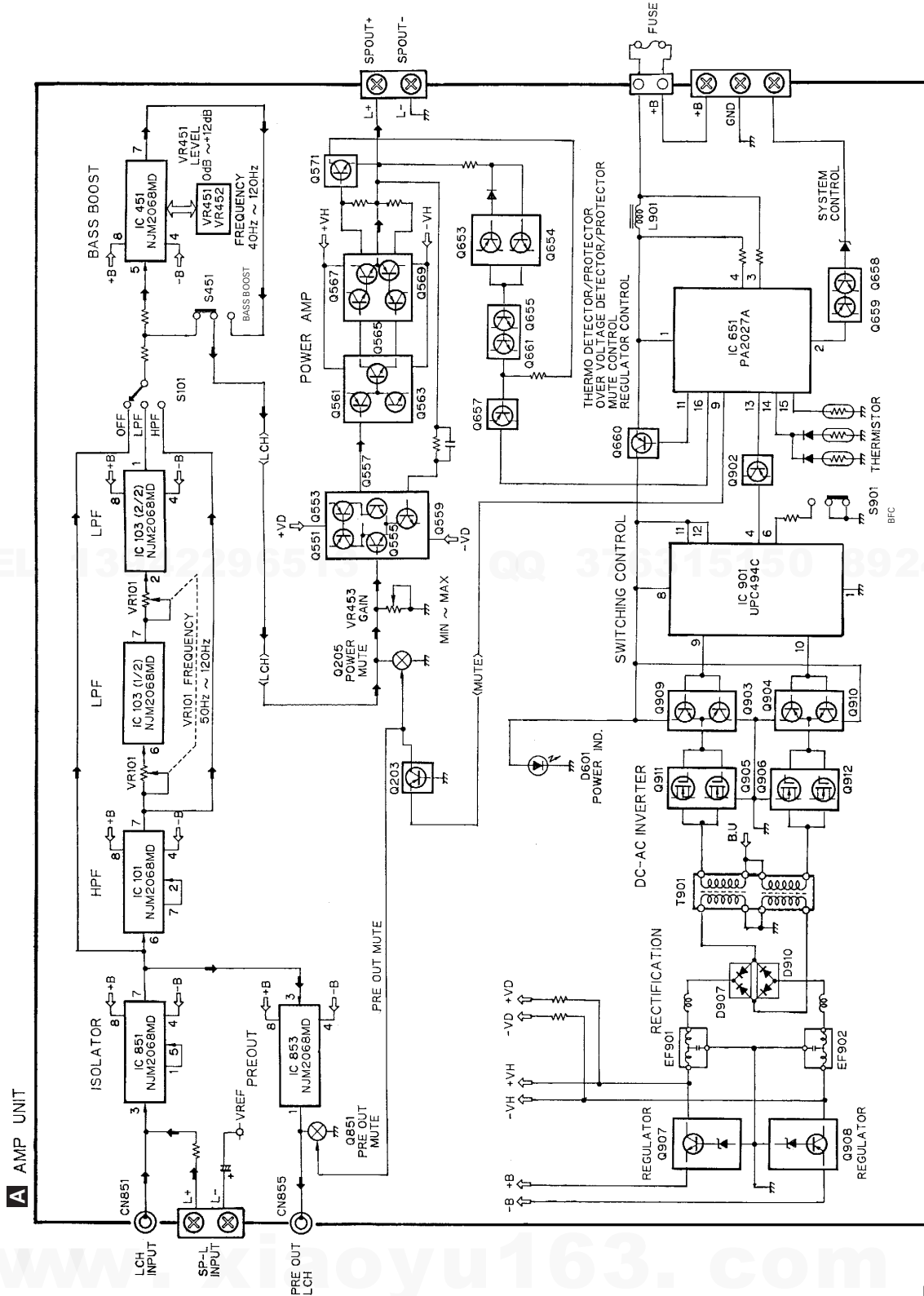


Fig. 8

## 8. OPERATIONS AND SPECIFICATIONS

### 8.1 SPECIFICATIONS

Power source .....	14.4 V DC (10.8 — 15.1 V allowable)
Grounding system .....	Negative type
Current consumption .....	15.2 A (at continuous power, 4 Ω)
Average current drawn* .....	4.6 A (4 Ω for two channels) 8.6 A (4 Ω for one channel)
Fuse .....	25 A
Dimensions .....	255 (W) × 61 (H) × 230 (D) mm [10 (W) × 2-3/8 (H) × 9 (D) in.]
Weight .....	3.5 kg (7.7 lbs.) (Leads for wiring not included)
Maximum power output .....	100 W × 2 / 300 W × 1 (EIAJ)
Continuous power output .....	50 W × 2 (at 14.4V, 4 Ω, 20 — 20,000 Hz, 0.08% THD) 150 W × 1 (at 14.4V, 4 Ω, 20 — 20,000 Hz, 0.8% THD) 75 W × 2 (at 14.4V, 2 Ω, 20 — 20,000 Hz, 0.8% THD)
Load impedance .....	4 Ω (1 — 8 Ω allowable) (Bridge connection: 2 — 8 Ω allowable)
Frequency response .....	10 — 50,000 Hz (+0 dB, -1 dB)
Signal-to-noise ratio .....	105 dB (IHF-A network)
Distortion .....	0.005% (10 W, 1 kHz)
Separation .....	70 dB (1 kHz)
Low pass filter .....	Cut off frequency: 50 — 120 Hz Cut off slope: -12 dB/oct
High pass filter .....	Cut off frequency: 50 — 120 Hz Cut off slope: -12 dB/oct
Bass boost .....	Frequency: 40 — 120 Hz Gain: 0 — 12 dB
Input level / impedance .....	RCA: 0.4 — 4.0 V/22 kΩ Speaker: 1.6 — 16 V/78 kΩ

**Note:**

- Specifications and the design are subject to possible modification without notice due to improvements.

**\*Average current drawn**

- The average current drawn is nearly the maximum current drawn by this unit when an audio signal is input. Use this value when working out total current drawn by multiple power amplifiers.

## 8.2 OPERATIONS

### Gain Control

If the sound level is too low, even when the volume of the car stereo used along with this power amplifier is turned up, turn gain control on the back of the power amplifier clockwise. If the sound distorts when the volume is turned up, turn the gain control counter-clockwise.

- Set the gain control to "NORMAL" when this amplifier is connected to a Pioneer car stereo with RCA output jacks. If the sound level is too low or distorts, adjust the gain control.

- If you hear much noise when using the speaker input terminals, turn the gain control clockwise.
- Adjust the gain control to the "MIN" side of "NORMAL" when this amplifier is connected to a Pioneer car stereo (High voltage output type).

### Power Indicator

The power indicator lights when the power is switched on.

### Cut Off Frequency Control

If the LPF/HPF select switch is set to LPF or HPF, you can select a cut off frequency from 50 to 120 Hz.

### Bass Boost Level Control

Bass boost level control can boost the level around the frequency selected by the bass boost frequency control from 0 to 12 dB.

### Bass Boost Frequency Control

You can select a bass boost frequency from 40 to 120 Hz with the bass boost control.

- Bass Boost Level Control and Bass Boost Frequency Control can be adjusted only when the LPF/HPF select switch is set to a position other than HPF.

### LPF (Low-Pass Filter)/HPF (High-Pass Filter) Select Switch

Set the LPF/HPF select switch as follows according to the type of speaker that is connected to the speaker output connector and the car stereo system:

LPF/HPF Select Switch	Audio frequency range to be output	Speaker Type	Remarks
LPF (left)	* — 50 to 120 Hz	Sub-woofer	Connect a sub-woofer.
OFF (center)	Full range	Full range	
HPF (right)	* 50 to 120 Hz —	Full range	Use if you want to cut the very-low-frequency range* because it is not necessary for the speakers you are using.

\* See the "Cut Off Frequency Control" section.

