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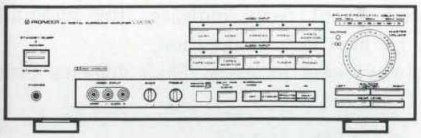
Service Manual



ORDER NO.
ARP1989

AV DIGITAL SURROUND AMPLIFIER

VSA-530

VSA-530 HAS FOLLOWING VERSIONS :

Type	Power requirement	Export destination
HE	AC220V, 240V (switchable) *	European continent
YPW	AC240V only	Australia
SD	AC110V, 120V, 220V, 240V (switchable)	Kingdom of Saudi Arabia and General market

*Change the primary wiring of the power transformer.

- **This manual is applicable to the VSA-530/HE type.**
- **As to the other types, refer to applicable service manuals.**
- **Ce manuel pour le service comprend les explications de réglage en français.**
- **Este manual de servicio trata del método ajuste escrito en español.**

CONTENTS

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1. EXPLODED VIEW, PACKING AND PARTS LIST

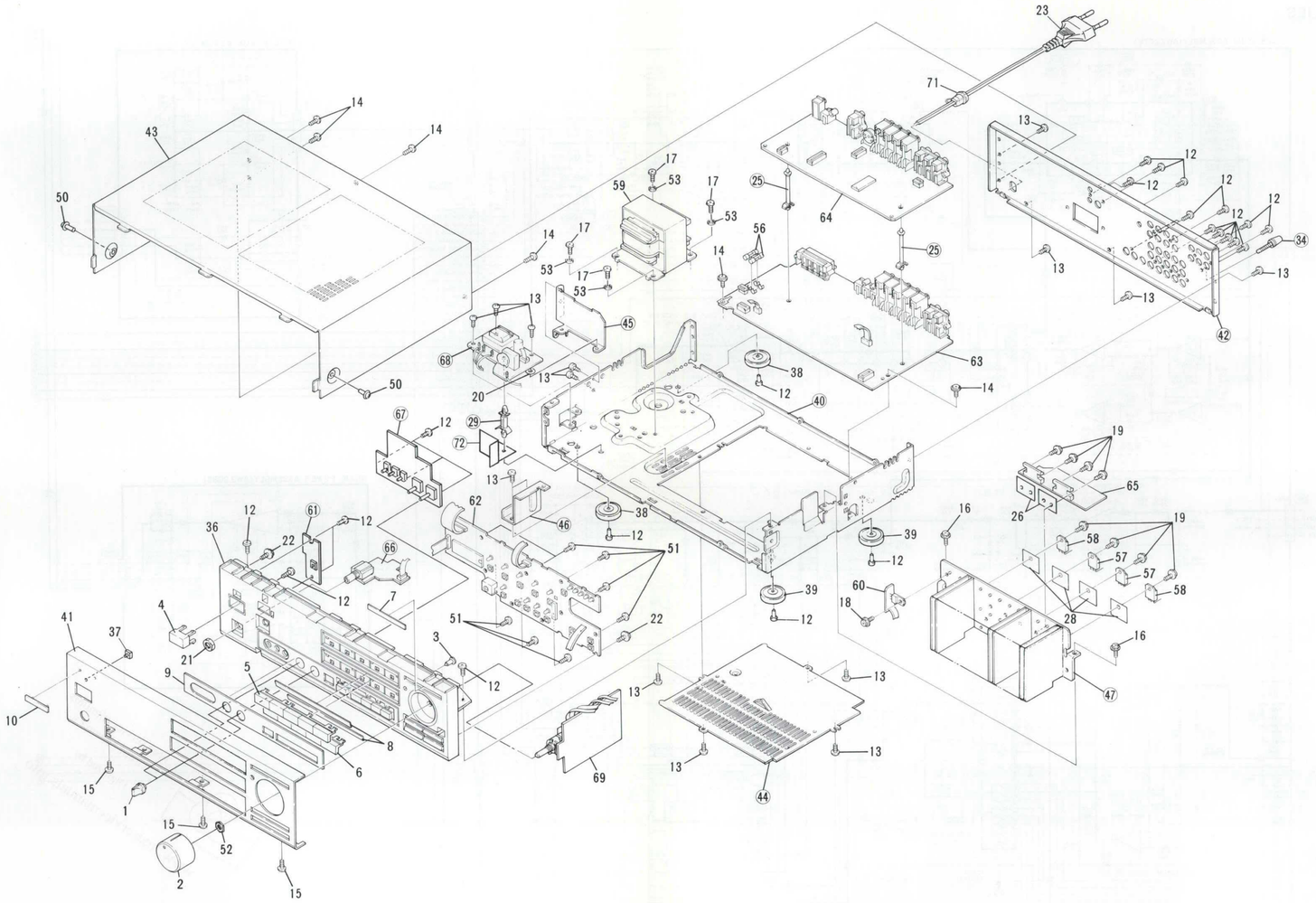
NOTES :

- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the impotance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

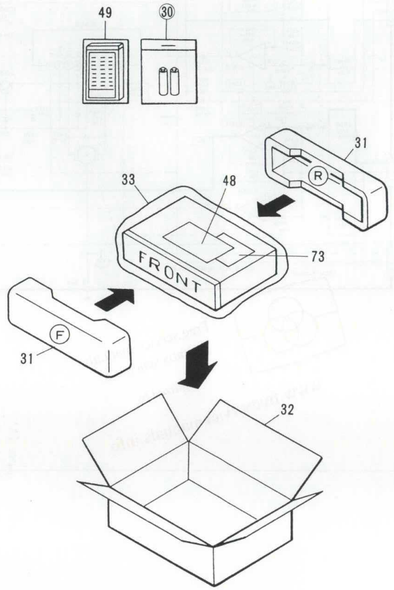
Parts List of Exterior and Packing

Mark	No.	Part No.	Description
	1	AAB1060	Rotary knob
	2	AAB1128	VOL rotary knob
	3	AAD1398	Tact knob
	4	AAD1535	Power knob
	5	AAD1657	Hinge knob
	6	AAD1658	Hinge knob
	7	AAK1610	VOL IND panel
	8	AAK1611	Function panel
	9	AAK1824	Sheet panel
	10	AAM1029	Name plate
	11		.....
	12	ABA−298	Screw
	13	ABA1009	Screw
	14	ABA1011	Screw
	15	ABA1048	Screw
	16	ABA1052	Screw
	17	ABA1054	Screw
	18	ABA1076	Screw
	19	ABA1082	Screw
	20	ABE−052	Washer
	21	ABN−065	Nut
	22	ABZ26P080FZK	Screw
⚠	23	ADG1049	AC power cord
	24		.....
	25		P.C.B. support
	26	AEP−057	Mica sheet
	27		.....
	28	AEE1014	Mica sheet
	29		P.C.B. support
	30		Battery
	31	AHA1015	Pad
	32	AHD1829	Packing case
	33	AHG1016	Sheet
	34		Terminal screw
	35		.....
	36	AMB1670	Panel base
	37	AMR1160	Indicating lens
	38	AMR1434	Insulator assembly
	39	AMR1435	Insulator assembly
	40		Chassis
	41	ANB1361	Front panel
	42		Rear panel
	43	AZN1783	Bonnet
	44		Bottom plate
	45		Transformer holder
	46		Heat sink holder
	47		Heat sink
	48	ARC1197	Operating instructions (Dutch/Swedish/Spanish/Portuguese)
	49	AXD1145	Remote control unit (CU−VSA008)
	50	BBT30P060FZK	Screw
	51	BBZ26P080FMC	Screw
	52	NK70FUC	Nut
	53	WA45F100K080	Washer
	54		.....
	55		.....
	56	AEK−042	Fuse (FU1, 3, 4 T3.15A/250V)
	57	2SC3181N	Transistor Q1, 2
	58	2SA1264N	Transistor Q3, 4
⚠	59	ATS1193	Power transformer T1
	60		Regulator assembly
	61		Power SW assembly
	62	AWZ2670	μ−COM assembly
	63	AWZ2720	Power V.SEL assembly
	64	AWZ2672	Surround assembly
	65	AWZ2085	Rear power assembly
	66		Headphone assembly
	67		Tone・V・AUX assembly
	68		Sub trans assembly
	69	AWX1038	VR assembly
	70		.....
	71	AEC−882	Strain relief
	72		Barrier
	73	ARE1153	Operating instructions (English/French/German/Italian)

1.1 EXTERIOR



1.2 PACKING



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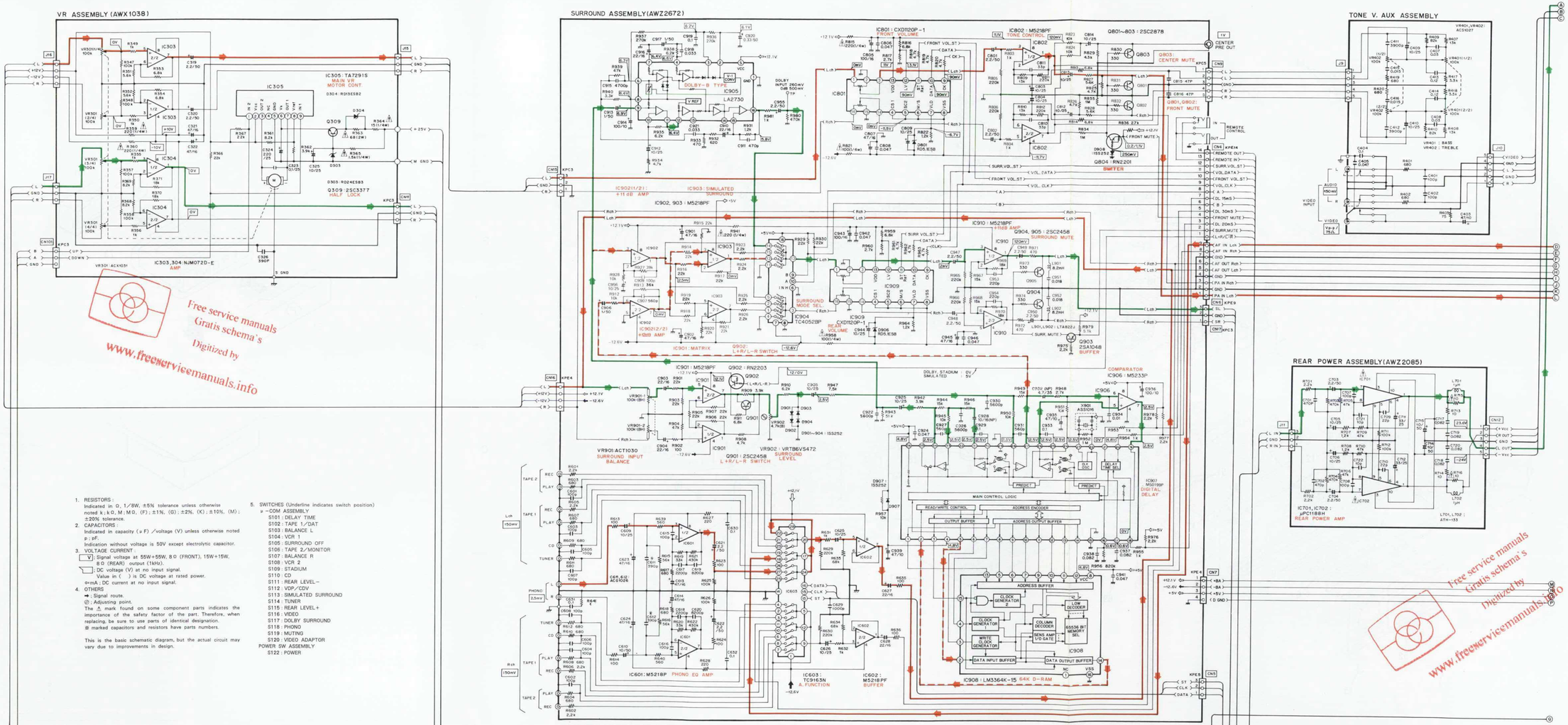
2. SCHEMATIC AND P.C. BOARD CONNECTION DIAGRAMS

2.1 SCHEMATIC DIAGRAMS OF SURROUND, VR, TONE・V・AUX AND REAR POWER ASSEMBLIES



1. RESISTORS :
   Indicated in Ω, 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.
2. CAPACITORS :
   Indicated in capacity (μF) /voltage (V) unless otherwise noted p ; pF.
   Indication without voltage is 50V except electrolytic capacitor.
3. VOLTAGE CURRENT :
   [V] : Signal voltage at 55W+55W, 8Ω (FRONT), 15W+15W, 8Ω (REAR) output (1kHz).
   : DC voltage (V) at no input signal.
   Value in ( ) is DC voltage at rated power.
   ⊖=mA ; DC current at no input signal.
4. OTHERS
   ➡ ; Signal route.
   Ⓐ ; Adjusting point.
   The ⚠ 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.
   ※ marked capacitors and resistors have parts numbers.
   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.
5. SWITCHES (Underline indicates switch position)
   μ –COM ASSEMBLY
   S101 : DELAY TIME
   S102 : TAPE 1/DAT
   S103 : BALANCE L
   S104 : VCR 1
   S105 : SURROUND OFF
   S106 : TAPE 2/MONITOR
   S107 : BALANCE R
   S108 : VCR 2
   S109 : STADIUM
   S110 : CD
   S111 : REAR LEVEL –
   S112 : VDP/CDV
   S113 : SIMULATED SURROUND
   S114 : TUNER
   S115 : REAR LEVEL +
   S116 : VIDEO
   S117 : DOLBY SURROUND
   S118 : PHONO
   S119 : MUTING
   S120 : VIDEO ADAPTOR
   POWER SW ASSEMBLY
   S122 : POWER

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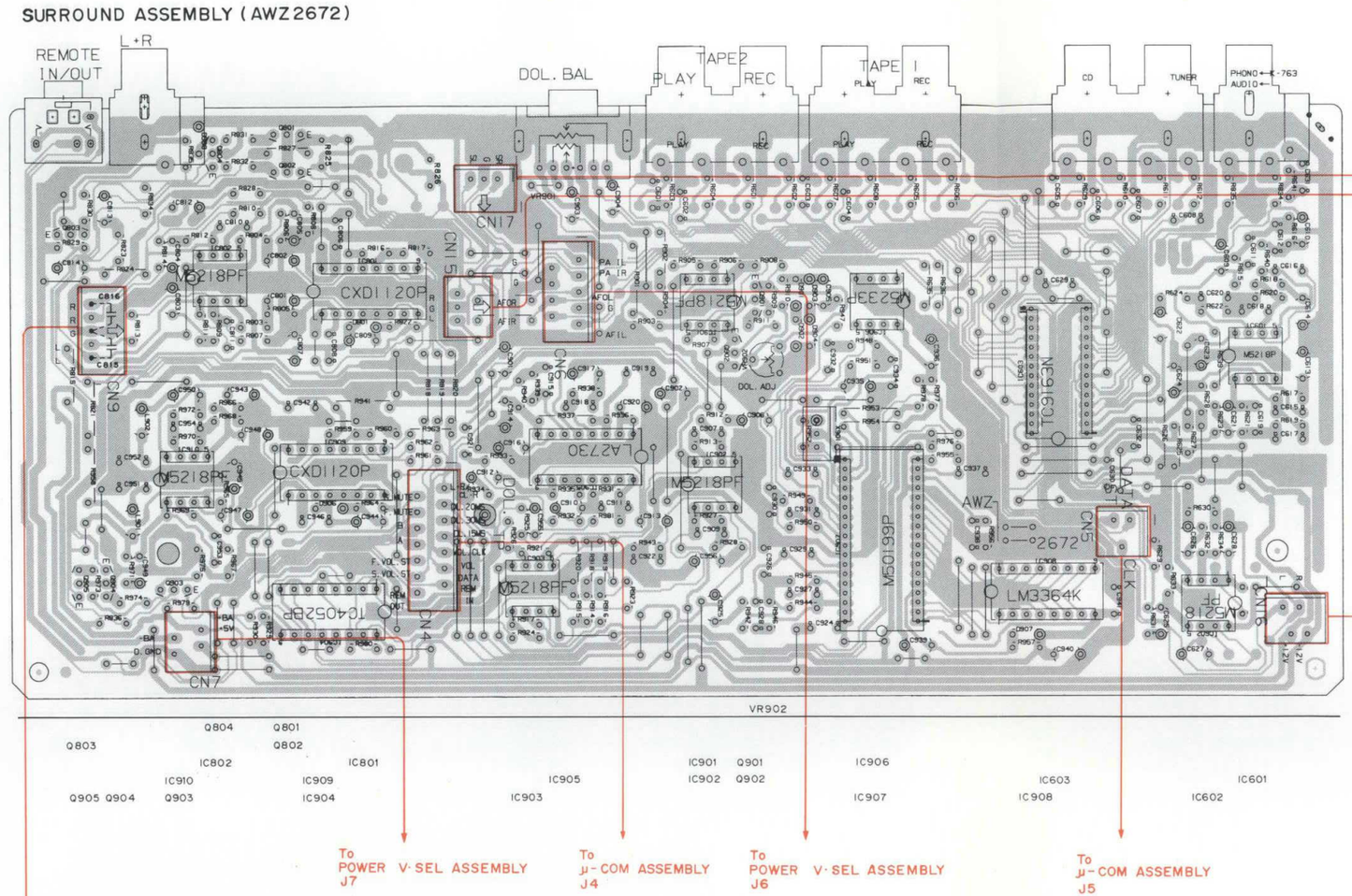
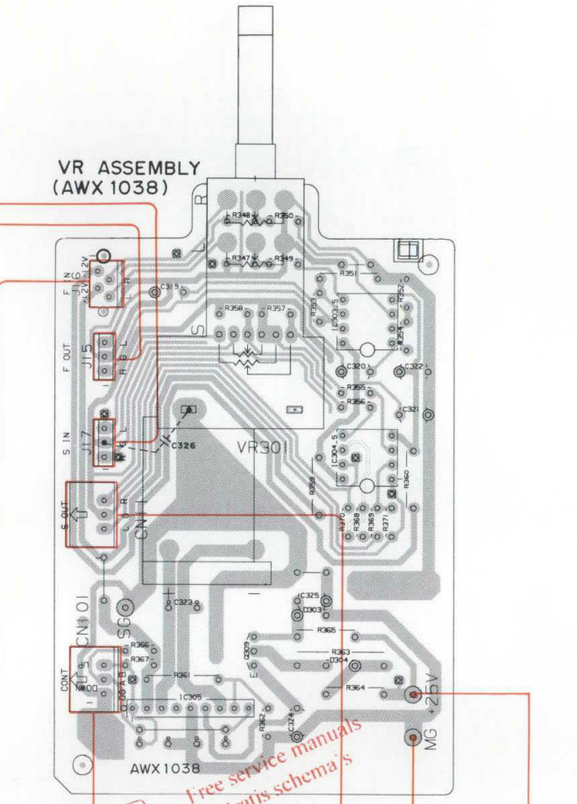
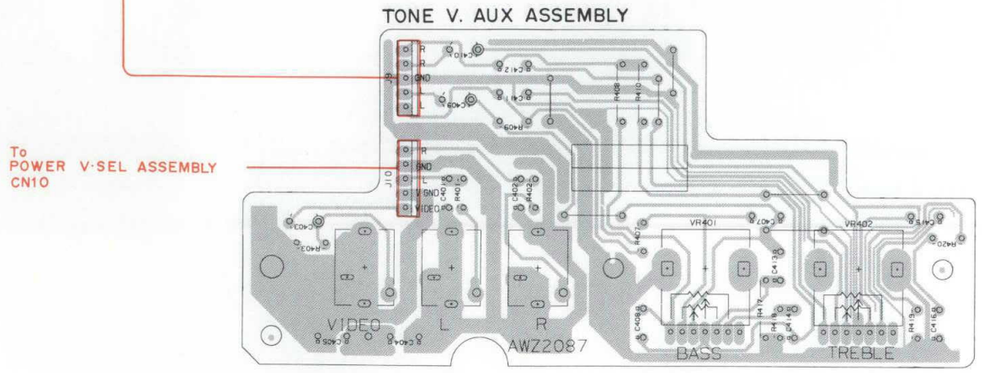
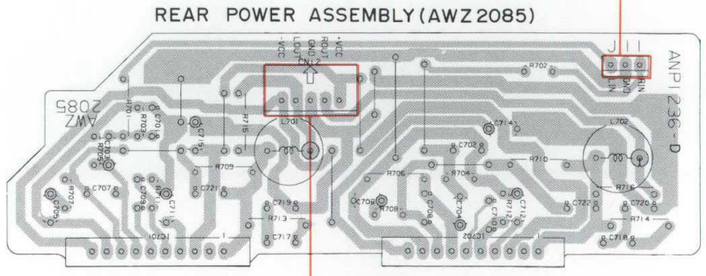
2.2 P.C. BOARDS CONNECTION DIAGRAMS OF SURROUND, VR, TONE・V・AUX AND REAR POWER ASSEMBLIES

- View from component side









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2.2 P.C. BOARDS CONNECTION DIAGRAMS OF SURROUND, VR, TONE · V · AUX AND REAR POWER ASSEMBLIES

• View from soldering side

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2.3 P.C. BOARDS CONNECTION DIAGRAMS OF POWER V・SEL, HEADPHONE, SUB TRANS, S−TERMINAL, μ−COM, POWER SW AND REGULATOR ASSEMBLIES

● View from soldering side

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2.3 P.C. BOARDS CONNECTION DIAGRAMS OF POWER V・SEL, HEADPHONE, SUB TRANS, S−TERMINAL, μ −COM, POWER SW AND REGULATOR ASSEMBLIES

• View from component side

NOTE

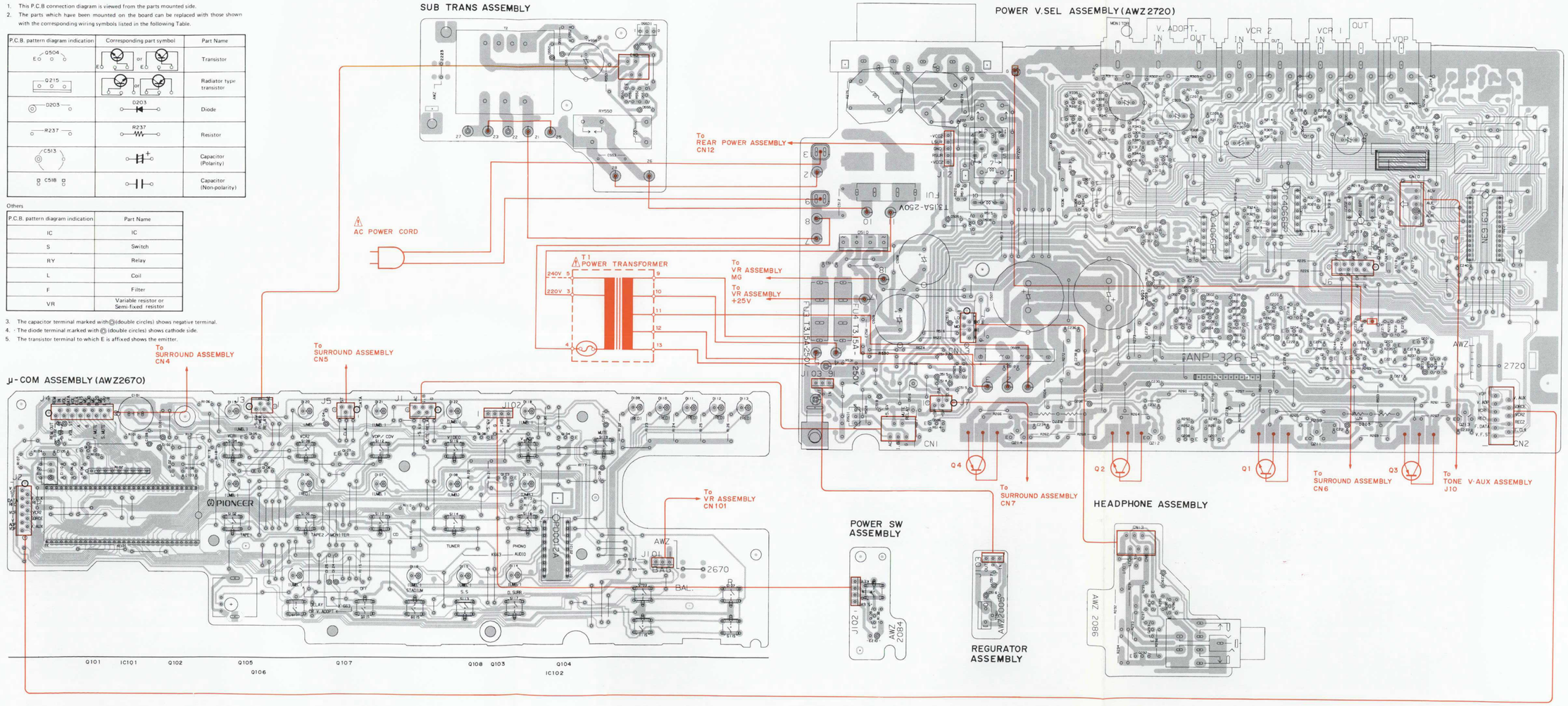
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E C B	Q504 or Q504	Transistor
Q215	Q215 or Q215	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	C513	Capacitor (Polarity)
C518	C518	Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ⓒ (double circles) shows negative terminal.
4. The diode terminal marked with ⓒ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.



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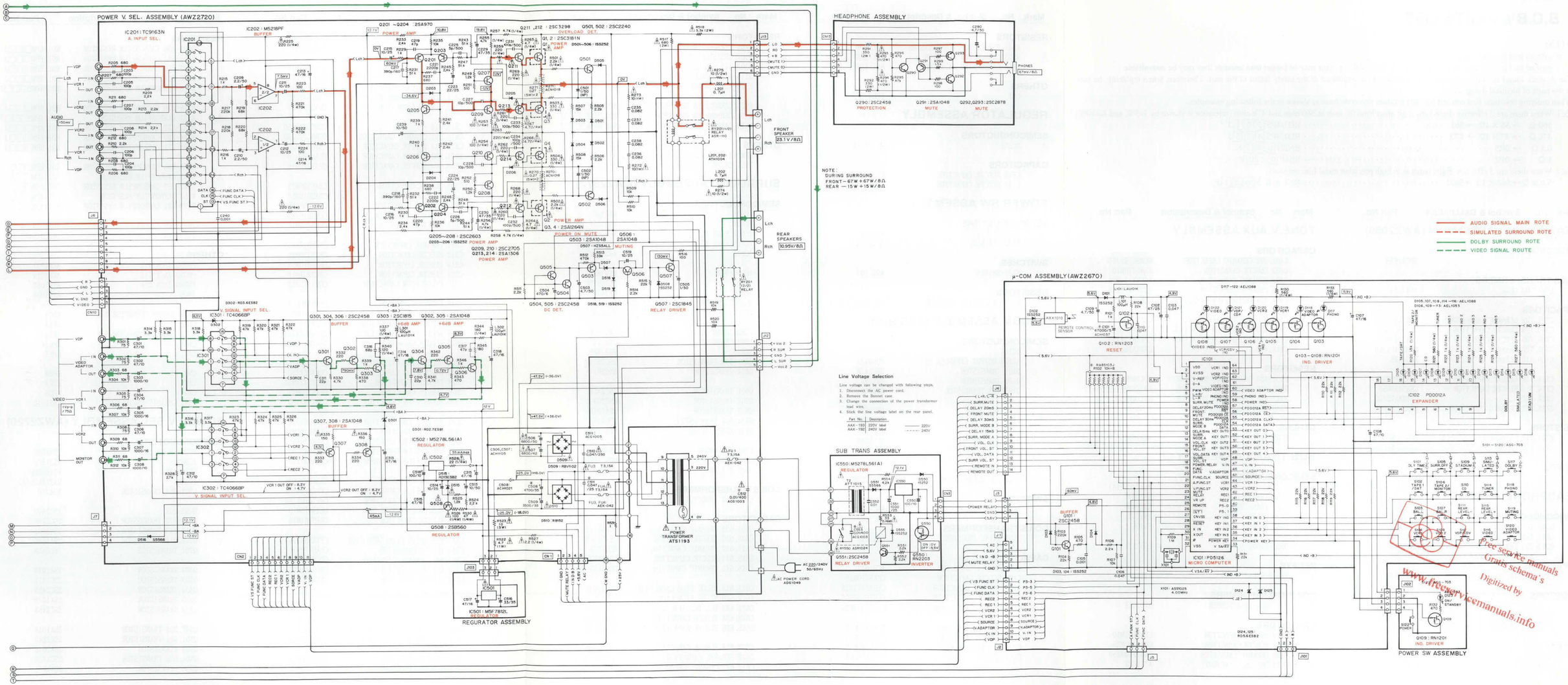
2.4 SCHEMATIC DIAGRAMS OF POWER V・SEL, HEADPHONE, SUB TRANS, S−TERMINAL, μ −COM, POWER SW AND REGULATOR ASSEMBLIES



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3. B.C.B's PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the impotance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%)

560 Ω → 56 × 10¹ → 561 ····· RD1/4PS 5 6 1 J
47k Ω → 47 × 10³ → 473 ····· RD1/4PS 4 7 3 J
0.5 Ω → 0R5 ····· RN2H 0 R 5 K
1 Ω → 010 ····· RS1P 0 1 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10¹ → 5621 ····· RN1/4SR 5 6 2 1 F

REAR POWER ASSEMBLY (AWZ2085)

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
⚠	IC701, 702		UPC1188H
		COILS/TRANSFORMERS	
	L701, 702	COIL	ATH-133
		CAPACITORS	
	C701, 702	CERAMIC CAPACITOR	CKMYB471K50
	C703, 704	ELECTR. CAPACITOR	CEAS2R2M50
	C705, 706	ELECTR. CAPACITOR	CEAS100M25
	C707, 708	CERAMIC CAPACITOR	CCMSL101J50
	C709, 710	CERAMIC CAPACITOR	ACG1025
	C711, 712	ELECTR. CAPACITOR	CEAS330M25
	C714, 715	ELECTR. CAPACITOR	CEAS100M50
	C717-720		CFTXA823J50
	C721, 722	CERAMIC CAPACITOR	CCMSL100D50
		RESISTORS	
	R701-712	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R713-716	CARBONFILM RESISTOR	RD1/4PMF□□□J
		OTHERS	
	CN12		KPC5

HEADPHONE ASSEMBLY

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
	Q290	TRANSISTOR	2SC2458
	Q291	TRANSISTOR	2SA1048
	Q292, 293	TRANSISTOR	2SC2878
		CAPACITORS	
	C290	ELECTR. CAPACITOR	CEAS4R7M50
		RESISTORS	
	R291, 292	METAL OXIDE RESISTOR	RS2LMF□□□J
⚠	R293, 294	CARBONFILM RESISTOR	RD1/2PMF□□□J
	R295-299	CARBONFILM RESISTOR	RD1/8PM□□□J
		OTHERS	
	JACK		AKN1010
	CN13		KPE6

TONE.V.AUX ASSEMBLY

Mark	No.	Symbol & Description	Part No.
		CAPACITORS	
	C401, 402	CERAMIC CAPACITOR	CCMSL101J50
	C403	ELECTR. CAPACITOR	CEAS470M10
	C404	CERAMIC CAPACITOR	CKCYX104M25
	C405	CERAMIC CAPACITOR	CKDYF473Z50
	C407, 408	MYLOR FILM CAPACITOR	CQMA303J50
	C409, 410	ELECTR. CAPACITOR	CEAS100M25
	C411, 412	MYLOR FILM CAPACITOR	CQMA392J50
	C413, 414	AUDIO FILM CAPACITOR	CFTXA124J50
	C415, 416		CFTXA153J50
		RESISTORS	
	R401-403	CARBONFILM RESISTOR	RD1/8PM□□□J
	R407-410	CARBONFILM RESISTOR	RD1/8PM□□□J
	R417-420	CARBONFILM RESISTOR	RD1/8PM□□□J
	VR401, 402	VARIABLE(250K-X2)	ACS1027
		OTHERS	
	PHONO JACK 1-P		AKB1082

SUB TRANS ASSEMBLY

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
	IC550		M5278L56(A)
	Q550	TRANSISTOR	RN2203
	Q551	TRANSISTOR	2SC2458
	D550	DIODE	1SS252
	D551	DIODE	S5566
	D555	DIODE	1SS252
		RELAYS	
⚠	RY550	RELAY	ASR1024
		COILS/TRANSFORMERS	
⚠	T2	POWER TRANSFORMER	ATT1015
		CAPACITORS	
	C550	ELECTR. CAPACITOR	CEAS101M10
	C551	ELECTR. CAPACITOR	CEAS102M25
	C552	CERAMIC CAPACITOR	CKDYF103Z50
⚠	C553	CKA (0.01/AC400V)	ACG1003

RESISTORS

Mark	No.	Symbol & Description	Part No.
	R551, 552	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R553	RESISTOR ARRAY (10K)	RD1/4PMF□□□J
	R554	CARBONFILM RESISTOR	RD1/8PM□□□J
		OTHERS	
	CN3		KPE4

REGULATOR ASSEMBLY

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
⚠	IC501		M5F7812L
		CAPACITORS	
	C516	ELECTR. CAPACITOR	CEHAQ330M35
	C517	ELECTR. CAPACITOR	CEHAQ470M16

POWER SW ASSEMBLY

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
	Q109	TRANSISTOR	RN1201
	D123	LED(RED)	AEL1053
		SWITCHES	
	S122	SWITCH	ASG-703
		RESISTORS	
	R132	CARBONFILM RESISTOR	RD1/8PM□□□J

μ-COM ASSEMBLY (AWZ2670)

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
	IC101		PD5126
	IC102	OUTPUT EXPANDER IC	PD0012A
	Q101	TRANSISTOR	2SC2458
	Q102	TRANSISTOR	RN1203
	Q103-108	TRANSISTOR	RN1201
	D101-104	DIODE	1SS252
	D105	LED(RED)	AEL1088
	D106	LED(RED)	AEL1053
	D107, 108	LED(RED)	AEL1088
	D109-113	LED(RED)	AEL1053
	D114-122	LED(RED)	AEL1088
	D124, 125	ZENER DIODE	RD5.6ESB2
		SWITCHES	
	S101-120	SWITCH	ASG-703
		COILS/TRANSFORMERS	
	L101	AXIAL INDUCTOR	LAU101K
		CAPACITORS	
	C101	CEA (47000/5.5V)	ACH1037
	C102	ELECTR. CAPACITOR	CEAS470M25
	C103	CERAMIC CAPACITOR	CKDYX473M25
	C105	CERAMIC CAPACITOR	CKMYF102Z50
	C106	CERAMIC CAPACITOR	CKDYX473M25
	C107	ELECTR. CAPACITOR	CEAS470M16
	C108	ELECTR. CAPACITOR	CEAS470M10
	C109	ELECTR. CAPACITOR	CEAS4R7M50
	C110	CERAMIC CAPACITOR	CKDYX473M25

RESISTORS

Mark	No.	Symbol & Description	Part No.
	R101	CARBONFILM RESISTOR	RD1/8PM□□□J
	R102	RESISTOR ARRAY (10K)	RA8S□□□J
	R103-112	CARBONFILM RESISTOR	RD1/8PM□□□J
	R115-119	CARBONFILM RESISTOR	RD1/8PM□□□J
	R120-127	CARBONFILM RESISTOR	RD1/4PM□□□J
	R130	CARBONFILM RESISTOR	RD1/4PM□□□J
	R131	CARBONFILM RESISTOR	RD1/8PM□□□J
	R133	CARBONFILM RESISTOR	RD1/4PM□□□J
		OTHERS	
	REMOTE	RECEIVER UNIT	AXX1010
	X101	CERAMIC RESONATOR	ASS1025

SURROUND ASSEMBLY (AWZ2672)

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
	IC601		M5218P
	IC602		M5218PF
	IC603	E-SW IC	TC9163N
	IC801	E-VR IC	CXD1120P-1
	IC802		M5218PF
	IC901-903		M5218PF
	IC904		TC4052BP
	IC905		LA2730
	IC906	COMPARATOR	M5233P
	IC907		M50199P
	IC908	DRAM IC	LM3364K-15
	IC909	E-VR IC	CXD1120P-1
	IC910		M5218PF
	Q801-803	TRANSISTOR	2SC2878
	Q804	TRANSISTOR	RN2201
	Q901	TRANSISTOR	2SC2458
	Q902	TRANSISTOR	RN2203
	Q903	TRANSISTOR	2SA1048
	Q904, 905	TRANSISTOR	2SC2458
	D801	ZENER DIODE	RD5.1ESB
	D901-904	DIODE	1SS252
	D906	ZENER DIODE	RD5.1ESB
	D907, 908	DIODE	1SS252
		COILS/TRANSFORMERS	
	L901, 902	INDUCTOR	LTA822J
		CAPACITORS	
	C601-608	CERAMIC CAPACITOR	CCMSL101J50
	C609, 610	ELECTR. CAPACITOR	CEAS100M25
	C611, 612	CERAMIC CAPACITOR	ACG1026
	C613, 614	ELECTR. CAPACITOR	CEAS470M16
	C615, 616	CERAMIC CAPACITOR	CCMSL101J50
	C617, 618	MYLOR FILM CAPACITOR	CQMA222J50
	C619, 620	MYLOR FILM CAPACITOR	CQMA822J50
	C621, 622	ELECTR. CAPACITOR	CEAS2R2M50
	C623, 624	ELECTR. CAPACITOR	CEAS470M16
	C625, 626	ELECTR. CAPACITOR	CEAS100M25
	C627, 628	ELECTR. CAPACITOR	CEAS220M16
	C629	CERAMIC CAPACITOR	CKDYB102K50
	C630-632	CERAMIC CAPACITOR	CKCYX104M25
	C801, 802	ELECTR. CAPACITOR	CEAS2R2M50
	C803, 804	ELECTR. CAPACITOR	CEAS100M25
	C805	ELECTR. CAPACITOR	CEAS101M16
	C806	CERAMIC CAPACITOR	CKCYX473M25
	C807	ELECTR. CAPACITOR	CEAS470M16
	C808	CERAMIC CAPACITOR	CKCYX473M25
	C809	ELECTR. CAPACITOR	CEAS100M25
	C815, 816		CCDSL470J50
	C810, 811	CERAMIC CAPACITOR	CCMSL330J50
	C812-814	ELECTR. CAPACITOR	CEAS100M25
	C901, 902	ELECTR. CAPACITOR	CEAS470M16
	C903, 904	ELECTR. CAPACITOR	CEAS220M16
	C905	ELECTR. CAPACITOR	CEAS100M25
	C906	ELECTR. CAPACITOR	CEAS010M50
	C907	CERAMIC CAPACITOR	CKMYB561K50
	C909	CERAMIC CAPACITOR	CCMSL101J50
	C910	ELECTR. CAPACITOR	CEAS220M16
	C911	CERAMIC CAPACITOR	CKCYB471K50
	C912	ELECTR. CAPACITOR	CEAS100M25
	C913	ELECTR. CAPACITOR	CEAS010M50
	C914	ELECTR. CAPACITOR	CEAS101M10
	C915	MYLOR FILM CAPACITOR	CQMA472J50
	C916	ELECTR. CAPACITOR	CEAS220M16
	C917	ELECTR. CAPACITOR	CEAS010M50
	C918	AUDIO FILM CAPACITOR	CFTXA333J50
	C919	AUDIO FILM CAPACITOR	CFTXA104J50
	C920	ELECTR. CAPACITOR	CEASR33M50
	C921	AUDIO FILM CAPACITOR	CFTXA333J50
	C922	MYLOR FILM CAPACITOR	CQMA562J50
	C924	CERAMIC CAPACITOR	CKCYX473M25
	C925	ELECTR. CAPACITOR	CEAS100M25
	C926	MYLOR FILM CAPACITOR	CQMA562J50
	C927	MYLOR FILM CAPACITOR	CQMA561J50
	C928	ELECTR. CAPACITOR	CEANP100M16
	C929	AUDIO FILM CAPACITOR	CFTXA104J50
	C930	MYLOR FILM CAPACITOR	CQMA562J50
	C931	MYLOR FILM CAPACITOR	CQMA561J50
	C932	ELECTR. CAPACITOR	CEANP4R7M35
	C933	AUDIO FILM CAPACITOR	CFTXA104J50
	C934	AUDIO FILM CAPACITOR	CFTXA103J50
	C935	ELECTR. CAPACITOR	CEAS470M10
	C936	ELECTR. CAPACITOR	CEAS101M10
	C937, 938	AUDIO FILM CAPACITOR	CFTXA823J50
	C939	ELECTR. CAPACITOR	CEAS470M10
	C941, 942	CERAMIC CAPACITOR	CKCYF473Z50
	C943	ELECTR. CAPACITOR	CEAS101M16
	C944	ELECTR. CAPACITOR	CEAS100M25
	C945	ELECTR. CAPACITOR	CEAS470M16
	C946	CERAMIC CAPACITOR	CKCYF473Z50
	C947-950	ELECTR. CAPACITOR	CEAS2R2M50
	C951, 952	AUDIO FILM CAPACITOR	CFTXA183J50
	C953, 954	CERAMIC CAPACITOR	CKMYB221K50
	C955	ELECTR. CAPACITOR	CEAS2R2M50
	C956	ELECTR. CAPACITOR	CEAS100M25

RESISTORS

Mark	No.	Symbol & Description	Part No.
	R601-636	CARBONFILM RESISTOR	RD1/8PM□□□J
	R639-641	CARBONFILM RESISTOR	RD1/8PM□□□J
	R803-806	CARBONFILM RESISTOR	RD1/8PM□□□J
	R809-814	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R815	CARBONFILM RESISTOR	RD1/4PMF□□□J
	R816-820	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R821	CARBONFILM RESISTOR	RD1/4PMF□□□J
	R822-832	CARBONFILM RESISTOR	RD1/8PM□□□J
	R834-836	CARBONFILM RESISTOR	RD1/8PM□□□J
	R901-921	CARBONFILM RESISTOR	RD1/8PM□□□J
	R923-940	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R941	CARBONFILM RESISTOR	RD1/4PMF□□□J
	R942-957	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R958	CARBONFILM RESISTOR	RD1/4PMF□□□J
	R959-981	CARBONFILM RESISTOR	RD1/8PM□□□J
	VR901	VR (100K)	ACT1030
	VR902	VR	VRTB6VS472
		OTHERS	
	PHONO JACK 4-P		AKB1007
	PHONO JACK 1-P		AKB1011
	PHONO JACK 2-P		AKB1059
	JACK		AKN1006
	CN15	JUMPER CONNECTOR 3-P	KPC3
	CN16		KPE4
	CN17	JUMPER CONNECTOR 3-P	KPC3
	CN4		KPE14
	CN5		KPE3
	CN6		KPE9
	CN7		KPE4
	CN9		KPC5
	X901	CERAMIC OSCILLATOR	ASS1016

POWER V.SEL ASSEMBLY (AWZ2720)

Mark	No.	Symbol & Description	Part No.
		SEMICONDUCTORS	
	IC201	E-SW IC	TC9163N
	IC202		M5218PF
	IC301, 302		TC4066BP
⚠	IC502		M5278L56(A)
	Q201-204	TRANSISTOR	2SA970
	Q205-208		2SC2603
	Q209, 210	TRANSISTOR	2SC2705
⚠	Q211, 212	TRANSISTOR	2SC3298
⚠	Q213, 214	TRANSISTOR	2SA1306
	Q301	TRANSISTOR	2SC2458
	Q302	TRANSISTOR	2SA1048
	Q303	TRANSISTOR	2SC1815
	Q304	TRANSISTOR	2SC2458
	Q305	TRANSISTOR	2SA1048
	Q306	TRANSISTOR	2SC2458
	Q307, 308	TRANSISTOR	2SA1048
	Q501, 502	TRANSISTOR	2SC2240
	Q503	TRANSISTOR	2SA1048
	Q504, 505	TRANSISTOR	2SC2458
	Q506	TRANSISTOR	2SA1048

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Mark	No.	Symbol & Description	Part No.
	Q507	TRANSISTOR	2SC1845
⚠	Q508	TRANSISTOR	2SB560
	D203-206	DIODE	1SS252
	D301	ZENER DIODE	RD2.7ESB1
	D302	ZENER DIODE	RD3.6ESB2
	D501-506	DIODE	1SS252
	D507	ZENER DIODE	HZS5ALL
	D508	DIODE	1SS252
⚠	D509	DIODE	RBV602
⚠	D510	DIODE	RB152
⚠	D515	ZENER DIODE	RD13ESB2
	D516	DIODE	S5566
	D518, 519	DIODE	1SS252

RELAYS

⚠	RY201	RELAY	ASR-110

COILS/TRANSFORMERS

	L201, 202	COIL	ATH1004
	L301, 302	AXIAL INDUCTOR	LAU101K

CAPACITORS

	C203-208	CERAMIC CAPACITOR	CCMSL101J50
	C209, 210	ELECTR. CAPACITOR	CEAS2R2M50
	C211, 212	ELECTR. CAPACITOR	CEAS100M25
	C213, 214	ELECTR. CAPACITOR	CEAS470M16
	C215, 216	ELECTR. CAPACITOR	CEYA100M25
	C217, 218	PL. STYRENE CAPACITOR	CQSXA391J160
	C219, 220	CERAMIC CAPACITOR	CCMSL470J50
	C221, 222	CERAMIC CAPACITOR	CKCYB222K50
	C223, 224	ELECTR. CAPACITOR	CEYA220M25
	C225, 226	MICA CAPACITOR	CMA050D500
	C227, 228	CERAMIC CAPACITOR	CCCSL100D500
	C229, 230	ELECTR. CAPACITOR	CEAS470M35
	C231-234	CERAMIC CAPACITOR	CCCSL101K500
	C235-238	AUDIO FILM CAPACITOR	CFTXA823J50
	C239	ELECTR. CAPACITOR	CEAS100M50
	C240	CERAMIC CAPACITOR	CKCYB102K50
	C301, 302	ELECTR. CAPACITOR	CEAS470M10
	C303	ELECTR. CAPACITOR	CEAS102M10
	C304	ELECTR. CAPACITOR	CEAS470M10
	C305	ELECTR. CAPACITOR	CEAS102M16
	C306	ELECTR. CAPACITOR	CEAS470M10
	C307	ELECTR. CAPACITOR	CEAS102M16
	C308	ELECTR. CAPACITOR	CEAS102M10
	C310, 311	CERAMIC CAPACITOR	CCMSL220J50
	C312	ELECTR. CAPACITOR	CEAS470M10
	C313-315	ELECTR. CAPACITOR	CEAS470M16
	C316	CERAMIC CAPACITOR	CCMSL680J50
	C317	CERAMIC CAPACITOR	CCMSL470J50
	C318	ELECTR. CAPACITOR	CEAS470M16
	C501, 502	ELECTR. CAPACITOR	CEANP010M50
	C503	ELECTR. CAPACITOR	CEAS4R7M50
	C504	ELECTR. CAPACITOR	CEAS471M6
	C505	ELECTR. CAPACITOR	CEAS010M50
⚠	C506, 507	ELECTR. CAPACITOR	ACH1105
	C508	ELECTR. CAPACITOR	ACH1021
	C509	ELECTR. CAPACITOR	CEAS332M35
⚠	C510	MYLOR FILM CAPACITOR	CQMA473K250
	C511		CQMA473K250
⚠	C512	CKA (0.01/AC400V)	ACG1003
	C513	ELECTR. CAPACITOR	CEAS100M50
	C514	ELECTR. CAPACITOR	CEAS100M25
	C515	ELECTR. CAPACITOR	CEAS470M16
	C518	ELECTR. CAPACITOR	CEAS101M10
	C519	ELECTR. CAPACITOR	CEAS100M25

RESISTORS

	R205-224	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R225, 226	CARBONFILM RESISTOR	RD1/4PMF□□□J
	R229-252	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R253, 254	CARBONFILM RESISTOR	RD1/4PMF□□□J
	R255-258	CARBONFILM RESISTOR	RD1/4PM□□□J
⚠	R259-263	CARBONFILM RESISTOR	RD1/4PMF□□□J
⚠	R264-267	FUSLIBLE RESISTOR	RFA1/4PS4R7J
⚠	R268, 269	FUSLIBLE RESISTOR	RFA1/4PS□□□J
⚠	R270, 271	RESISTOR (0.27, 5W)	ACN1018
⚠	R272, 273	METAL OXIDE RESISTOR	RS1PMF100J
⚠	R274, 275	CARBONFILM RESISTOR	RD1/2PMFL100J
	R301-312	CARBONFILM RESISTOR	RD1/8PM□□□J
	R314-326	CARBONFILM RESISTOR	RD1/8PM□□□J
	R328	CARBONFILM RESISTOR	RD1/8PM□□□J
	R330	CARBONFILM RESISTOR	RD1/8PM□□□J
	R332-336	CARBONFILM RESISTOR	RD1/8PM□□□J
	R337	CARBONFILM RESISTOR	RD1/4PM□□□J
	R338, 339	CARBONFILM RESISTOR	RD1/8PM□□□J
	R340	CARBONFILM RESISTOR	RD1/4PM□□□J
	R341-346	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R501-504	CARBONFILM RESISTOR	RD1/4PMF□□□J
	R505-516	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R517, 518	METAL OXIDE RESISTOR	RS2LMF□□□J
	R519, 520	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R522	METAL OXIDE RESISTOR	RS1LMF4R7J
⚠	R523	METAL OXIDE RESISTOR	RS3LMF100J
	R524, 525	CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R526	FUSLIBLE RESISTOR	RFA1/4PS□□□J
⚠	R527	CARBONFILM RESISTOR	RD1/4PMF□□□J
⚠	R528	FUSLIBLE RESISTOR	RFA1/4PS□□□J
⚠	R530	CARBONFILM RESISTOR	RD1/4PMF□□□J
	R531	CARBONFILM RESISTOR	RD1/8PM□□□J

OTHERS

	PHONO JACK 3-P	AKB1021
	PHONO JACK 3-P	AKB1050
	SPEAKER TERMINAL 8-P	AKE-111
	CN1	KPE5
	CN10	KPC5
	CN2	KPE11

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Mark	No.	Symbol & Description	Part No.

VR ASSEMBLY (AWX1038)

SEMICONDUCTORS

	IC303, 304	NJM072D-E
	IC305	TA7291S
	Q309 TRANSISTOR	2SC3377
	D303 ZENER DIODE	RD24ESB3
	D304 ZENER DIODE	RD13ESB2

CAPACITORS

	C319, 320 ELECTR. CAPACITOR	CEYA2R2M50
	C321, 322 ELECTR. CAPACITOR	CEAS470M16
	C323 CERAMIC CAPACITOR	CKCYX104M25
	C324 ELECTR. CAPACITOR	CEAS221M25
	C325 ELECTR. CAPACITOR	CEAS100M25
	C326 CERAMIC CAPACITOR	CKDYB391K50

RESISTORS

	R347-358 CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R359, 360 CARBONFILM RESISTOR	RD1/4PMF□□□J
	R361, 362 CARBONFILM RESISTOR	RD1/8PM□□□J
⚠	R363 METAL OXIDE RESISTOR	RS2LMF□□□J
⚠	R364 FUSLIBLE RESISTOR	RFA1/4PS□□□J
⚠	R365 CARBONFILM RESISTOR	RD1/4PMF□□□J
	R366-371 CARBONFILM RESISTOR	RD1/8PM□□□J
	VR301 VR (100K)	ACX1031

OTHERS

	CN11, CN101	KPC3

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4. SPECIFICATIONS

Audio Section

DIN continuous power output (1 kHz, T.H.D. 1%, 8Ω)
- FRONT ..... 67 W + 67 W
- REAR ..... 15 W + 15 W

Contituous power output
- Stereo mode ..... 60 W + 60 W (20 Hz to 20 kHz, T.H.D. 0.08%, 8Ω)
- Surround mode
- FRONT..... 55 W + 55 W (20 Hz to 20 kHz, T.H.D. 0.08%, 8Ω)
- REAR..... 15 W + 15 W (30 Hz to 7 kHz, T.H.D. 5%, 8Ω)

Music power (1 kHz, 1 %, 8 Ω)
- FRONT ..... 115 W + 115 W
- REAR ..... 30 W + 30 W

Dynamic power output (on EIA dynamic test signal)
- 8Ω/4Ω..... 80 W/115 W

Input (sensitivity/impedance)
- PHONO MM ..... 2.5 mV/50 kΩ
- CD, TUNER, TAPE 1/DAT, TAPE 2, VDP, VCR 1, VCR 2, VIDEO ..... 150 mV/50 kΩ

Overload level
- PHONO MM, 1 kHz, 0.1 % ..... 100 mV

Frequency response
- PHONO ..... 20 Hz to 20 kHz ±0.5 dB
- CD, TUNER, TAPE 1/DAT, TAPE 2, VDP, VCR 1, VCR 2, VIDEO ..... 5 Hz to 80 kHz $^{+0}_{-3}$ dB

Output (level/impedance)
- TAPE 1/DAT, TAPE 2/REC ..... 150 mV/2.2 kΩ
- VCR 1, VCR 2 REC..... 150 mV/2.2 kΩ
- CENTER (L + R) OUT..... 150 mV/2.2 kΩ

Tone control
- BASS..... ±8 dB (100 Hz)
- TREBLE..... ±8 dB (10 kHz)

Muting..... − ∞

Surround Section (Surround mode: DOLBY SURROUND)

Frequency response..... 30 Hz to 7 kHz $^{+0}_{-3}$ dB

Video Section

Input (sensitivity/impedance)
- VCR 1, VCR 2, VDP, VIDEO, VIDEO ADAPTOR..... 1 Vp-p/75 Ω

Output (level/impedance)
- VCR 1, VCR 2, VIDEO ADAPTOR, TO MONITOR TV 1 Vp-p/75 Ω

Frequency response ..... 5 Hz to 10 MHz $^{+0}_{-3}$ dB

Signal-to-Noise ratio ..... More than 55 dB

Miscellaneous

Power requirements
- Australian model..... a.c.220 Volts~, 50/60 Hz

Power consumption..... 430 W

Dimensions ..... 420 (W) x 125 (H) x 331 (D) mm

Weight (without package) ..... 8.0 kg

Furnished Parts

Alkaline dry cell battery 2

Remote control unit 1

Templates added..... 1

Operating instructions 1

NOTE:
Specifications and design are subject to change without notice due to improvements.

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5. ADJUSTMENTS

● SURROUND LEVEL ADJUSTMENT

1) Set the master control to minimum.
2) Set the SURROUND INPUT BALANCE control on the rear panel side to the center click position.
3) Set SURROUND MODE to "OFF".
4) Input 400 Hz/260 mV sign wave into the CD terminal (L channel or R channel).
5) Set the INPUT SELECTOR to CD.

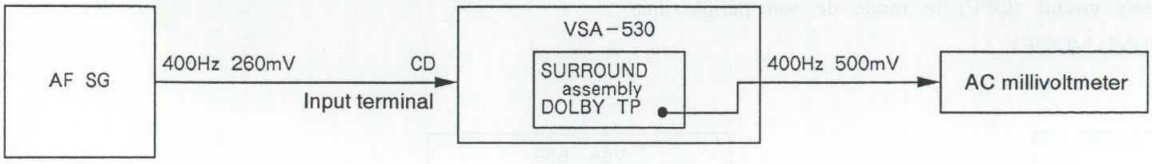

Fig. 5-1. Connections

Adjustment Method

1) Adjust VR902 so that DOLBY TP output becomes 500 mV ± 25 mV.

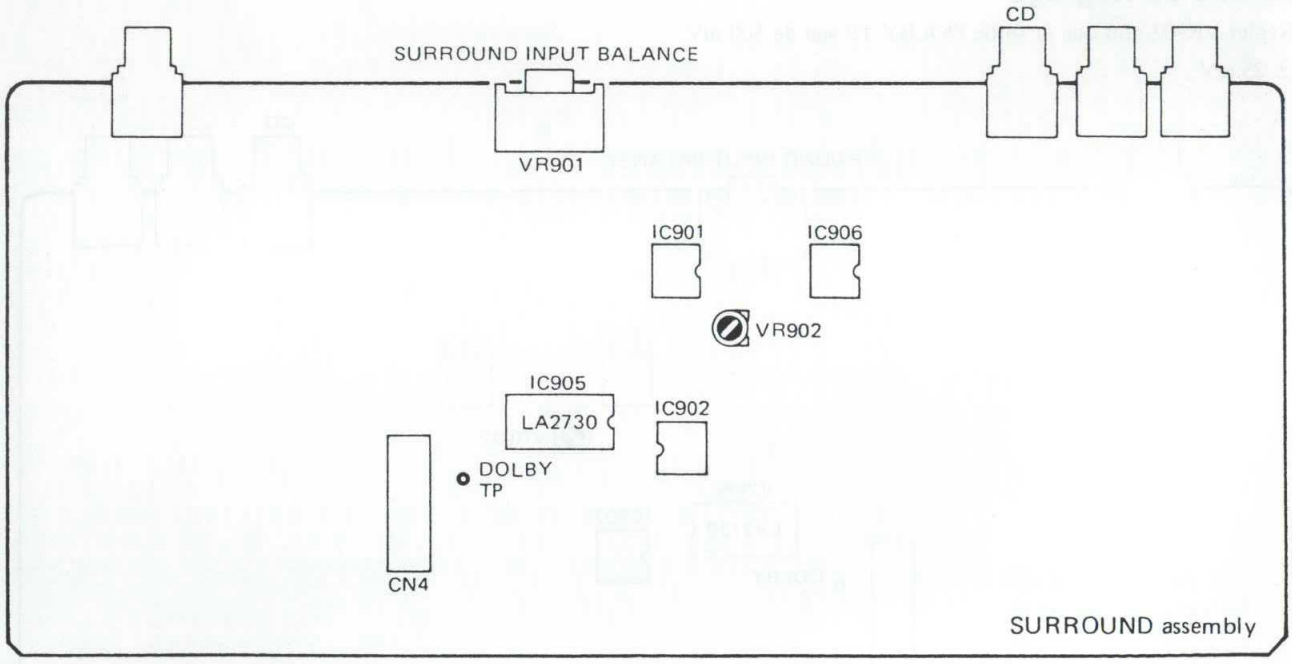

Fig. 5-2. Adjusting Point

5. RÉGLAGES

● REGLAGE DU NIVEAU DE SON PERIPHERIQUE

1) Régler le volume principal au minimum.
2) Régler sur le déclic central la commande d'équilibrage d'entrée du son périphérique (SORROUND INPUT BALANCE située au dos de l'appareil.
3) Mettre hors circuit (OFF) le mode de son périphérique (SORROUND MODE).
4) Introduire une onde de sígne 400 Hz/260 mV dans la borne CD (canal gauche (L) ou canal droit (R)).
5) Régler le sélecteur d'entrée (INPUT SELECTOR) sur compact disc (CD).

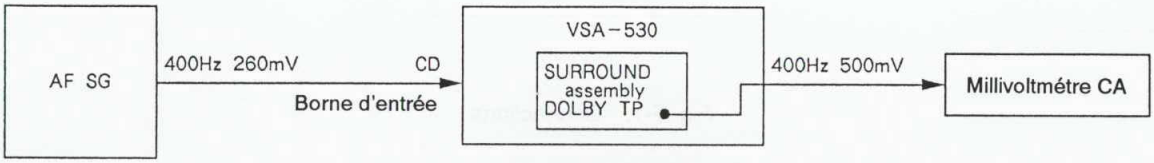

Fig. 5-1. Connexions

Méthode de Réglage

1) Régler VR902 afin que la sortie DOLBY TP soit de 500 mV ± 25 mV.

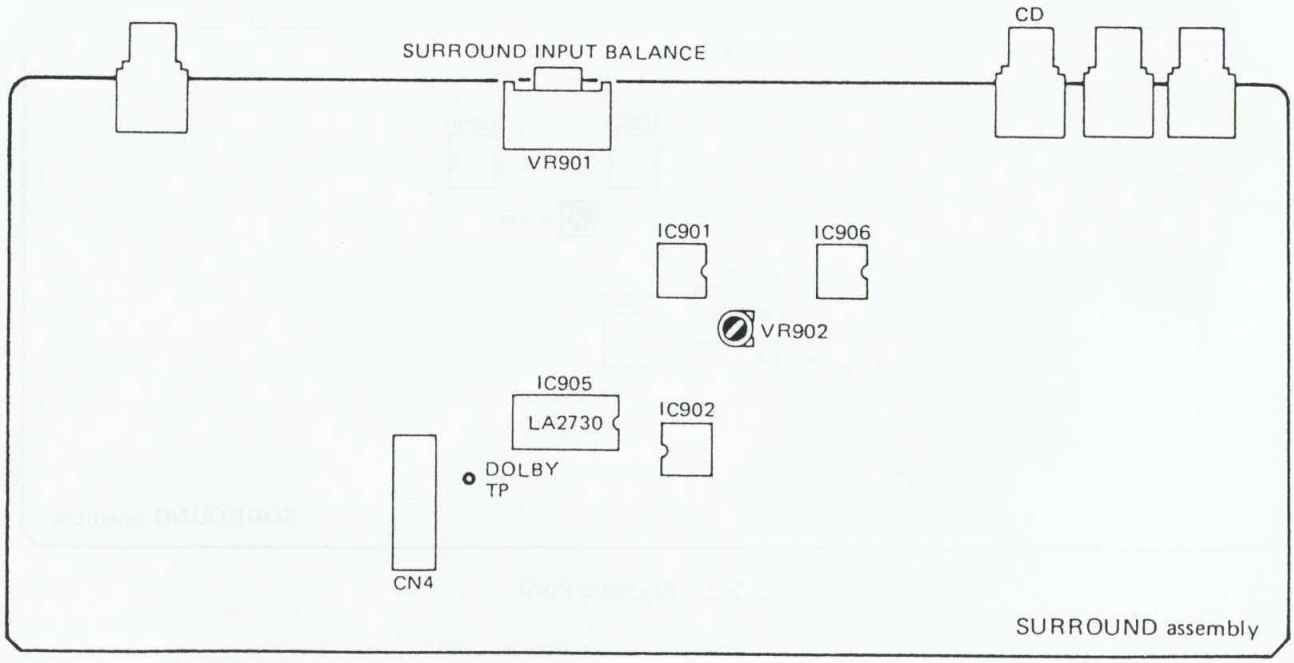

Fig. 5-2. Points de Réglage

5. AJUSTES

● AJUSTE DEL NIVEL DE SONIDO ENVOLVENTE

1) Coloque el control principal de volumen en mínimo.
2) Coloque el control SURROUND INPUT BALANCE del panel trasero en su posición central de traba.
3) Coloque el conmutador SURROUND MODE en OFF.
4) Ingrese una onda sinusoidal de 400 Hz/260 mV por el terminal CD (canal izquierdo o derecho).
5) Coloque el INPUT SELECTOR en CD.

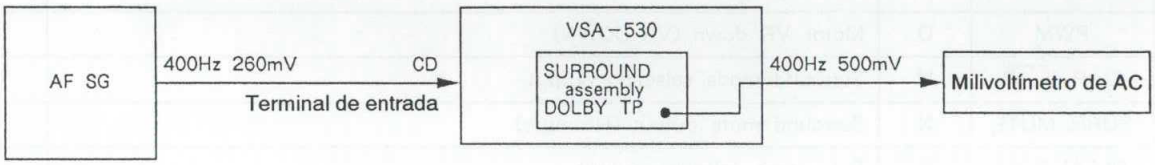

Fig. 5-1. Conexiones

Método de Ajuste

1) Ajuste VR902 de modo que la salida por DOLBY TP sea de 500 mV ± 25 mV.

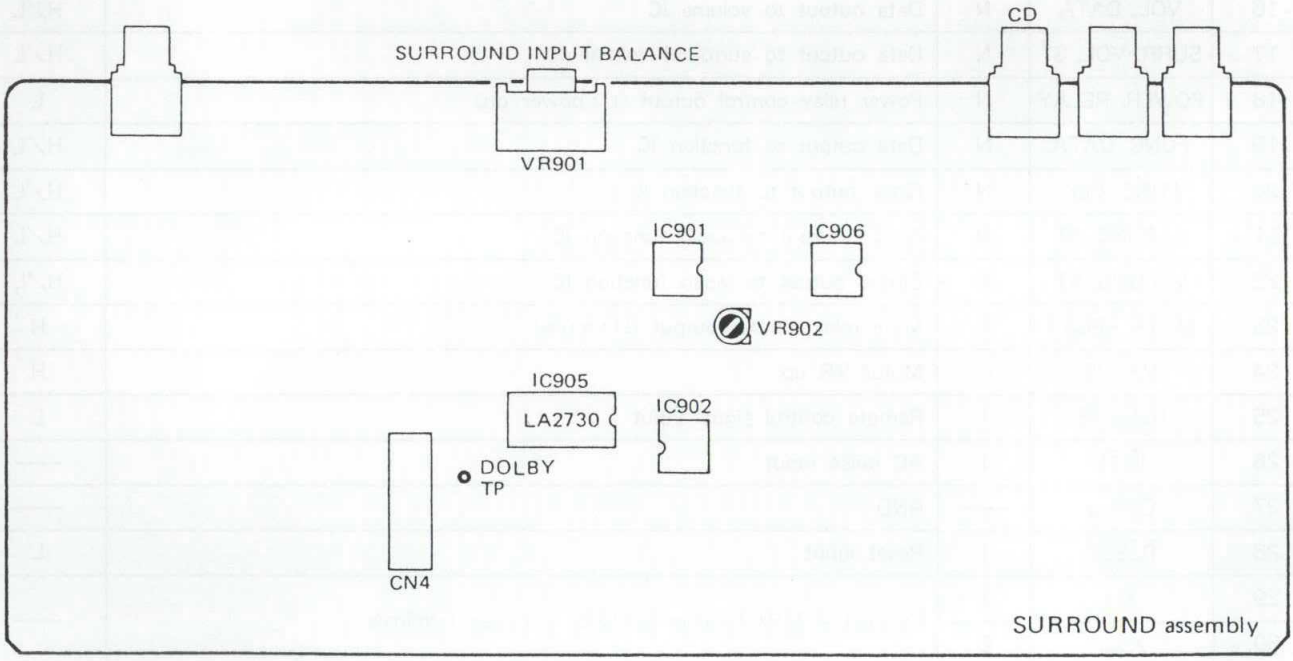

Fig. 5-2. Punto de Ajuste

6. IC INFORMATION (PD5126)

● Pin Function

Note : Symbols of I/O column, I : CMOS input, O : CMOS output, N : Nch open drain output

Pin No.	Name	I/O	Function	Active
1	V_{DD}	——	+5V power supply	——
2	AVss	——	Not used (GND)	——
3	Vref	——	Not used (GND)	——
4	D−A	——	Not used (NC)	——
5	PWM	O	Motor VR down (VR DOWN)	H
6	L+R/$\overline{L-R}$	N	Surround mode selecting output	H/L
7	SURR. MUTE	N	Surround mute output (H : mute)	H
8	DELAY20ms	N	Delay time selecting output	H
9	FRONT • MUTE	N	Front mute output (H : mute)	H
10	DELAY30ms	N	Delay time selecting output	H
11	SURR. MODE B	N	Surround mode selecting output	H/L
12	DELAY15ms	N	Delay time selecting output	H
13	SURR. MODE A	N	Surround mode selecting output	H/L
14	VOL. CLK	N	Clock output to volume IC	H/L
15	FRONT. VOL. ST	N	Strobe output to front volume IC	H/L
16	VOL. DATA	N	Data output to volume IC	H/L
17	SURR. VOL. ST	N	Data output to surround volume IC	H/L
18	POWER. RELAY	N	Power relay control output (L : power on)	L
19	FUNC. DATA	N	Data output to function IC	H/L
20	FUNC. CLK	N	Clock output to function IC	H/L
21	A. FUNC. ST	N	Strobe output to audio function IC	H/L
22	V. FUNC. ST	N	Strobe output to video function IC	H/L
23	MUTE RELAY	N	Mute relay control output (H : mute)	H
24	VR UP	O	Motor VR up	H
25	REMOTE	I	Remote control signal input	L
26	$\overline{INT1}$	I	AC pulse input	——
27	CNVss	——	GND	——
28	$\overline{RESET}$	I	Reset input	L
29	Xin	I	Connect 4 MHz ceramic oscillator between terminals	——
30	Xout	O		
31	ϕ	O	Not used (NC)	——
32	Vss	——	GND	——

Pin No.	Name	I/O	Function	Active
33	V SA/$\overline{AV}$	I	+5V pull up	H
34	$\overline{POWER\ KEY}$	I	Power key input	L
35	KEY IN3	I	Key scan input	L
36	KEY IN2	I	Key scan input	L
37	KEY IN1	I	Key scan input	L
38	KEY IN0	I	Key scan input	L
39	P5.1	I	Not used (NC)	——
40	P5.0	I	Not used (NC)	——
41	REC2	N	Video selector IC (IC302 : TC4066BP) control output	H
42	REC1	N	Video selector IC (IC302 : TC4066BP) control output	H
43	VCR2	N	Video selector IC (IC302 : TC4066BP) control output	H
44	VCR1	N	Video selector IC (IC302 : TC4066BP) control output	H
45	SOURCE	N	Video selector IC (IC301 : TC4066BP) control output	H
46	V. ADAPTOR	N	Video selector IC (IC301 : TC4066BP) control output	H
47	V. IN	N	Video selector IC (IC301 : TC4066BP) control output	H
48	VDP	N	Video selector IC (IC301 : TC4066BP) control output	H
49	KEY OUT4	N	Key scan output	L
50	KEY OUT3	N	Key scan output	L
51	KEY OUT2	N	Key scan output	L
52	KEY OUT1	N	Key scan output	L
53	KEY OUT0	N	Key scan output	L
54	PD0012A DATA	N	Data output to PD0012A	H/L
55	PD0012A $\overline{CLK}$	N	Clock output to PD0012A	L
56	PD0012A $\overline{CE}$	N	Enable output to PD0012A	L
57	PD0012A $\overline{RST}$	O	Reset output to PD0012A	L
58	POWER IND	O	Indicator control output (POWER)	H
59	PHONO IND	O	Indicator control output (PHONO)	H
60	VIDEO ADAPTOR IND	O	Indicator control output (VIDEO ADAPTOR)	H
61	VIDEO IND	O	Indicator control output (VIDEO)	H
62	VDP/CDV IND	O	Indicator control output (VDP/CDV)	H
63	VCR2 IND	O	Indicator control output (VCR2)	H
64	VCR1 IND	O	Indicator control output (VCR1)	H

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7. PROGRAMABLE REMOTE CONTROL UNIT (AXD1145)

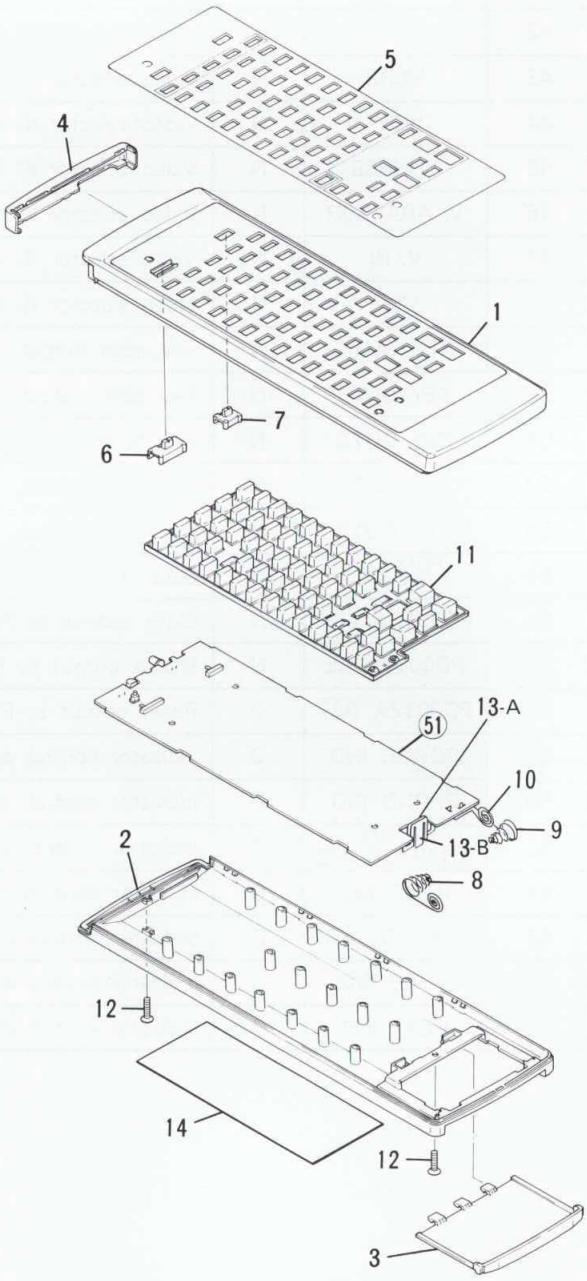
NOTES :

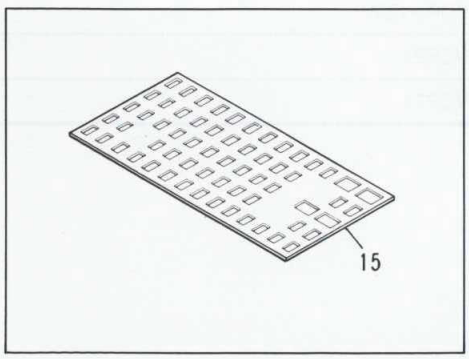
- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the impotance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

7.1 Exploded View and Parts List

Parts List

Mark	No.	Part No.	Description
	1	AZN1968	Case (A)
	2	AZN1969	Case (B)
	3	AZN1970	Battery cover
	4	AZA1139	Filter
	5	AZA1218	Aluminum plate
	6	AZA1142	Knob (A)
	7	AZA1143	Knob (B)
	8	AZB1268	Contact spring
	9	AZB1269	Contact spring
	10	AZB1270	Contact spring
	11	AZA1217	Conduction rubber sheet
	12	AZA1146	Screw
	13-A	AZS1077	Contact side (SW01)
	13-B	AZS1092	Contact side (SW01)
	14	AZA1241	Label
	15	AZA1147	Characters sheet
	51		PCB board





7.2 Electrical Parts List

NOTES :

- Parts without part number cannot be supplied.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the impotance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω	56×10^{1}	561	RD1/4PS 5 6 1 J
47k Ω	47×10^{3}	473	RD1/4PS 4 7 3 J
0.5 Ω	0R5		RN2H 0 R 5 K
1 Ω	010		RS1P 0 1 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω	562×10^{1}	5621	RN1/4SR 5 6 2 1 F

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
	IC1	PDG052
	IC2	AZC1232
	Q1	AZC1229
	Q2	AZC1230
	Q3	AZC1231
	D2	AZC1224
	D4	AZC1225
	D5	AZC1226
	D10	AZC1227
	D6−D9, D11−D13	AZC1228

SWITCHES

Mark	Symbol & Description	Part No.
	SW1 Slide SW	AZS1073
	SW3, SW4 Slide SW	AZS1074
	SW01 Contact side	AZS1077
	SW01 Contact side	AZS1092

CAPACITORS

Mark	Symbol & Description	Part No.
	C6, C8−C10	AZC1220
	C7	AZC1221
	C4, C5	AZC1222
	C1, C2	AZC1253
	C3	AZC1254

RESISTORS

Mark	Symbol & Description	Part No.
	R3 (100k Ω, 1/8)	AZC1210
	R7 (33k Ω, 1/8)	AZC1211
	R11 (22k Ω, 1/8)	AZC1212
	R10 (10k Ω, 1/8)	AZC1213
	R5 (8.2k Ω, 1/8)	AZC1214
	R6 (4.7k Ω, 1/8)	AZC1215
	R9 (1k Ω, 1/8)	AZC1216
	R4 (680 Ω, 1/8)	AZC1217
	R8 (3.3M Ω, 1/4)	AZC1218
	R2 (2.7 Ω, 1/4)	AZC1219

OTHERS

Mark	Symbol & Description	Part No.
	X1 Ceramic lock	AZC1223

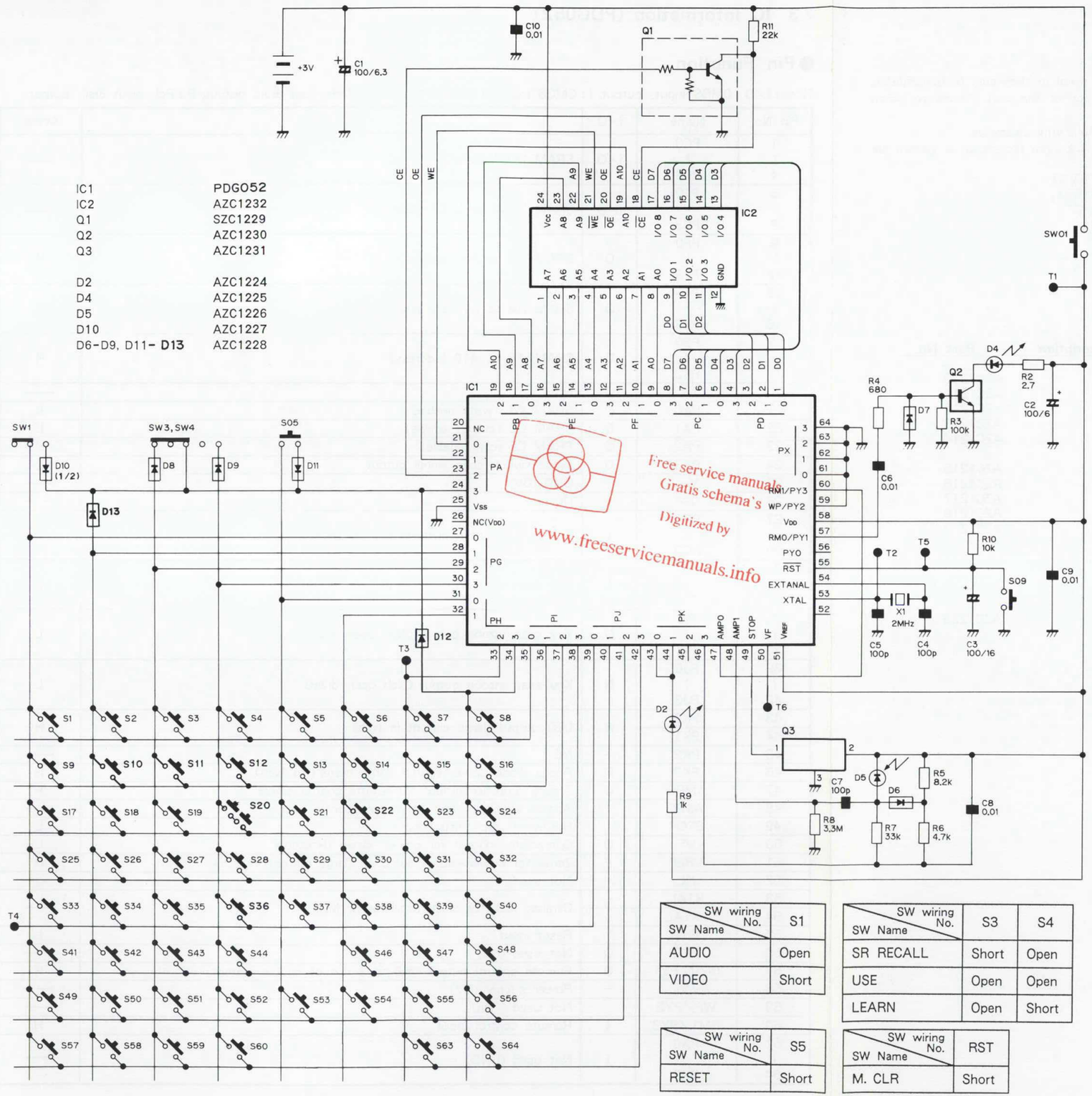
7.3 IC Information (PDG052)

● Pin Function

Note : I/O : CMOS input/output, I : CMOS input, O : CMOS output, N : Nch open drain output, P : Pch open drain output

Pin No.	Name	I/O	Function	Active
1 ~ 4	PC0 ~ PC3	I/O	SRAM I/O1 to I/O3 (data)	——
5 ~ 8	PF0 ~ PC3	I/O	SRAM I/O4 to I/O7 (data)	——
9 ~ 12	PF0 ~ PF3	O	SRAM A0 to A3 (address)	H
13 ~ 16	PE0 ~ PE3	O	SRAM A4 to A7 (address)	H
17 ~ 19	PB0 ~ PB2	O	SRAM A8 to A10 (address)	H
20	NC	O	NC	——
21	PA0	O	SRAM WE (write enable)	L
22	PA1	O	SRAM OE (output enable)	L
23	PA2	O	SRAM CE (chip enable)	H
24	PA3	O	Diode switch scan signal output	L
25	Vss	–	GND (0V)	——
26	VDD	–	NC	——
27 ~ 30	PG0 ~ PG3	I	Key scan input in built−in pull up resistor	L
31 ~ 34	PH0 ~ PH3	I	Key scan input in built−in pull up resistor	L
35 ~ 38	PI0 ~ PI3	N	Key scan strobe output (Nch open drain)	L
39 ~ 42	PJ0 ~ PJ3	N	Key scan strobe output (Nch open drain)	L
43	PK0	N	LED output (large current in Nch)	H
44	PK1			
45	PK2	–	NC	——
46	PK3	N	Photo diode power control (large current in Nch)	H
47	AMPO	O	Analog amplifier output for remote control signal	H
48	AMPI	I	Analog amplifier input for remote control signal	——
49	STOP	I	Hardware stop control input	L
50	VF	O	Comparator output for power−down detection	L
51	VREF	P	Zener for power−down detection (large current in Pch)	H
52	NC	–	Not used	——
53	XTAL	–	Ceramic lock for clock oscillator (2 MHz)	——
54	EXTAL	–		
55	RST	I	Reset input	L
56	PY0	O	Not used (NC)	——
57	RM0/PY1	O	Remote control output (±2 to 3 mA of middle current)	H
58	VDD	–	Power supply (3V)	——
59	WP/PY2		Not used (GND)	——
60	RM1/PY3	I	Remote control input	H
61 ~ 64	PX0 ~ PX3	I	Not used (GND)	——

7.4 SCHEMATIC DIAGRAM



SW wiring / SW Name	No. S1
AUDIO	Open
VIDEO	Short

SW wiring / SW Name	No. S3	S4
SR RECALL	Short	Open
USE	Open	Open
LEARN	Open	Short

SW wiring / SW Name	No. S5
RESET	Short

SW wiring / SW Name	No. RST
M. CLR	Short

1. RESISTORS :
   Indicated in Ω, 1/4W, 1/6W, 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.
2. CAPACITORS :
   Indicated in capacity (μF) /voltage (V) unless otherwise noted p ; pF.
   Indication without voltage is 50V except electrolytic capacitor.
3. VOLTAGE CURRENT :
   ▭ ; DC voltage (V) at play state.
   ⬅mA ; DC current at play state.
   Value in ( ) is DC current at stop state.
4. OTHERS :
   ➡ : Signal route.
   ⊘ : Adjusting point.
   The ⚠ 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.
   ※ marked capacitors and resistors have parts numbers.
5. SWITCHES (Underline indicates switch position)

S1 : TAPE 1/VCR 1	S36 : 2, 14 (TUN/CD, TV/VDP)
S2 : TAPE 2/VCR 2	S37 : 4, 16 (TUN/CD, TV/VDP)
S3 : CD/VDP	S38 : SURROUND ⇨ (AMP)
S4 : ◂◂ (CD/VDP)	S39 : REAR BALANCE R (AMP)
S5 : ◂◂ (TAPE/VCR)	S40 : 5, 17 (TUN/CD, TV/VDP)
S6 : POWER (VDP)	S41 : 6, 18 (TUN/CD, TV/VDP)
S7 : CD ⏮/VDP CHP/FR-TM	S42 : 7, 19 (TUN/CD, TV/VDP)
S8 : CD ⏭/VDP SEARCH	S43 : 8, 20 (TUN/CD, TV/VDP)
S9 : PROGRAM	S44 : SURROUND MODE (AMP)
S10 : CD DISC/VDP DISPLAY	S45 : ———
S11 : PHONO/V・ADPT	S46 : DELAY TIME (AMP)
S12 : TUNER/VIDEO	S47 : SURROUND ⇦ (AMP)
S13 : ■■ (CD/VDP)	S48 : SLEEP (AMP/TV)
S14 : ■ (TAPE/VCR)	S49 : REAR BALANCE L (AMP)
S15 : ▶ (CD/VDP)	S50 : VOLUME+ (AMP)
S16 : ▶▶ (CD/VDP)	S51 : VOLUME− (AMP)
S17 : POWER (VCR)	S52 : 3, 15 (TUN/CD, TV/VDP)
S18 : ■ (CD/VDP)	S53 : VOLUME+ (TV)
S19 : ■■ (TAPE/VCR)	S54 : VOLUME− (TV)
S20 : REC (TAPE/VCR)	S55 : SURROUND ⇩ (AMP)
S21 : ▶▶ (TAPE/VCR)	S56 : SURROUND ⇧ (AMP)
S22 : ▶ (TAPE/VCR)	S57 : 9, 21 (TUN/CD, TV/VDP)
S23 : TAPE ▶▶/VCR CH+	S58 : 11, 23 MEMORY(TUN/CD, TV/VDP)
S24 : TAPE ◂◂TV FANC TV	S59 : 12, 24 CLEAR (TUN/CD, TV/VDP)
S25 : TAPE ◂/TV FANC VDP	S60 : POWER (AMP)
S26 : TAPE ■/TV FANC VCR	S61 : ———
S27 : TAPE ▶/VCR CH−	S62 : ———
S28 : TUNER STATION+/TV CH+	S63 : 0/10, 22 (TUN/CD, TV/VDP)
S29 : POWER (TV)	S64 : MUTING (AMP)
S30 : CD +10/TV DISPLAY	
S31 : TUNER 12/24/TV FANC	SW1 : AUDIO−VIDEO
S32 : TUNER BAND/TV DUAL	SW3, SW4 : RECALL−USE−LEARN
S33 : TUNER STATION/TV CH−	S05 : M. CLR
S34 : 1, 13 (TUN/CD, TV/VDP)	S09 : RESET
S35 : TAPE ◂/VCR TV/VCR	SW01 : REMOTE POWER

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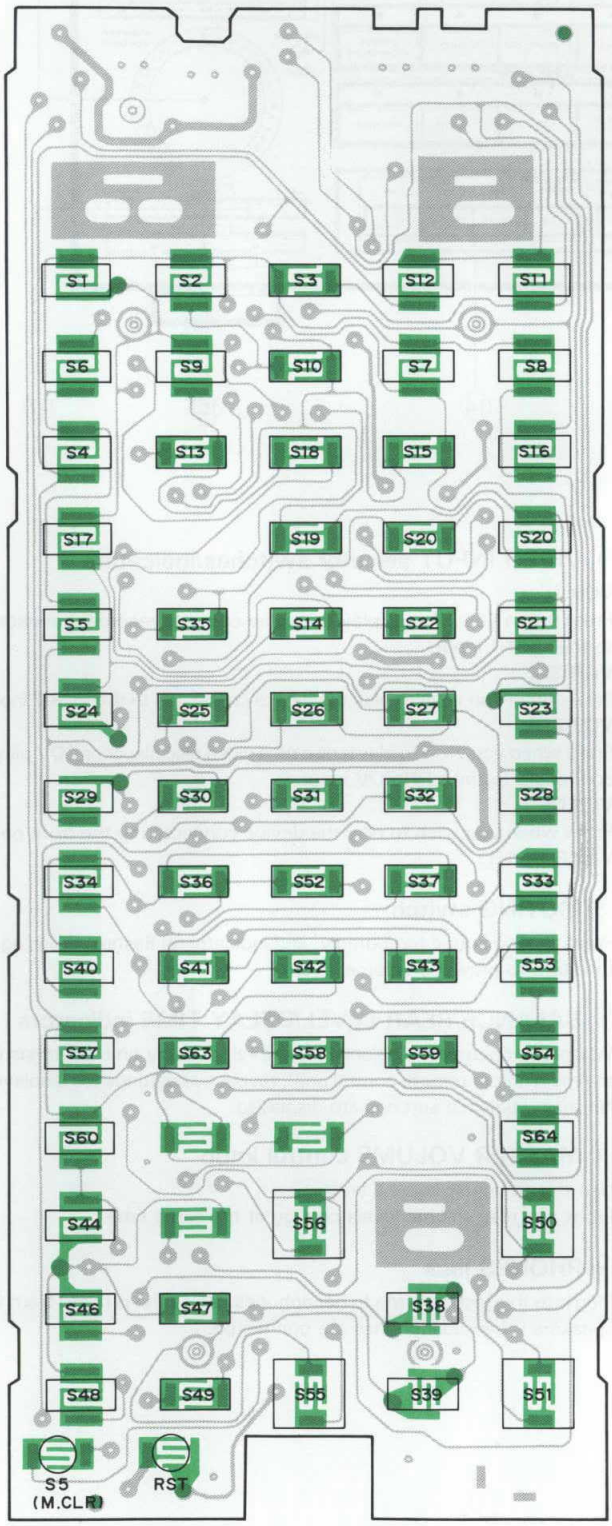
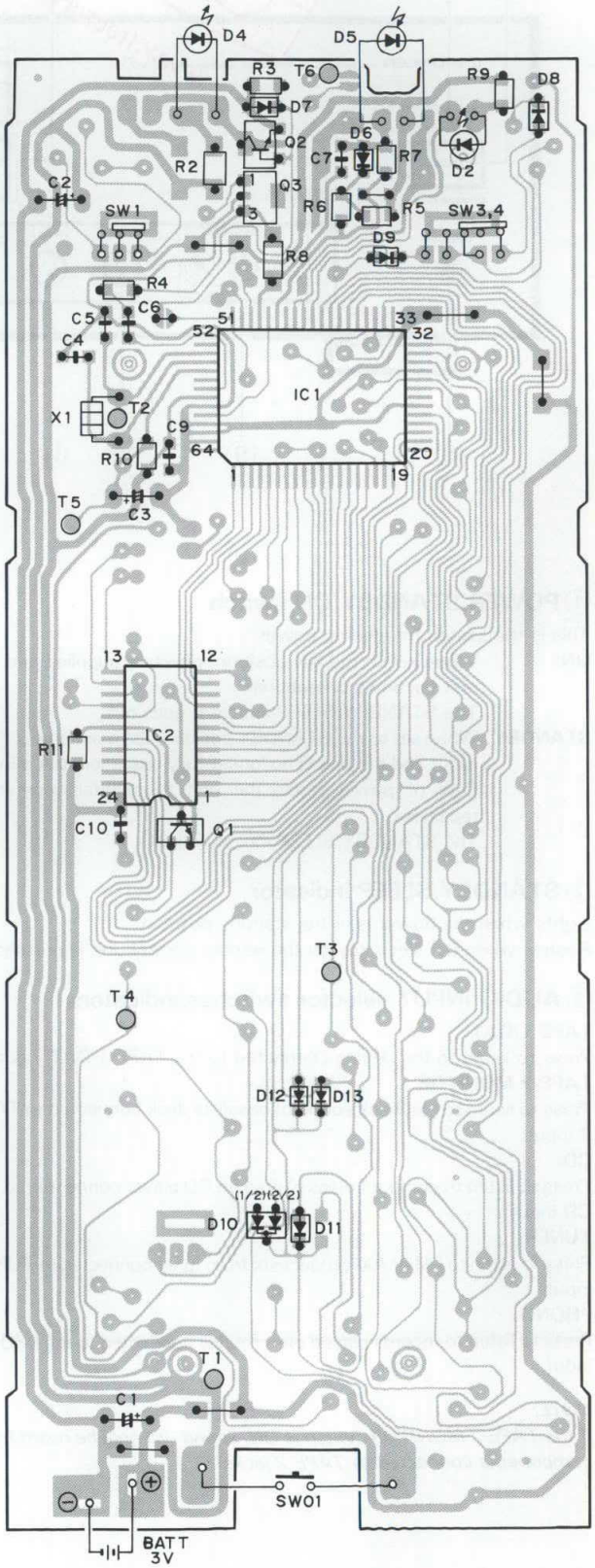
7.5 P.C. BOARD PATTERN

NOTE:

- Indicates a chip resistor.
- Indicates a chip capacitor.
- Indicates a chip transistor.
- Indicates a chip diode.
- Indicates a chip inductor.
- Diode





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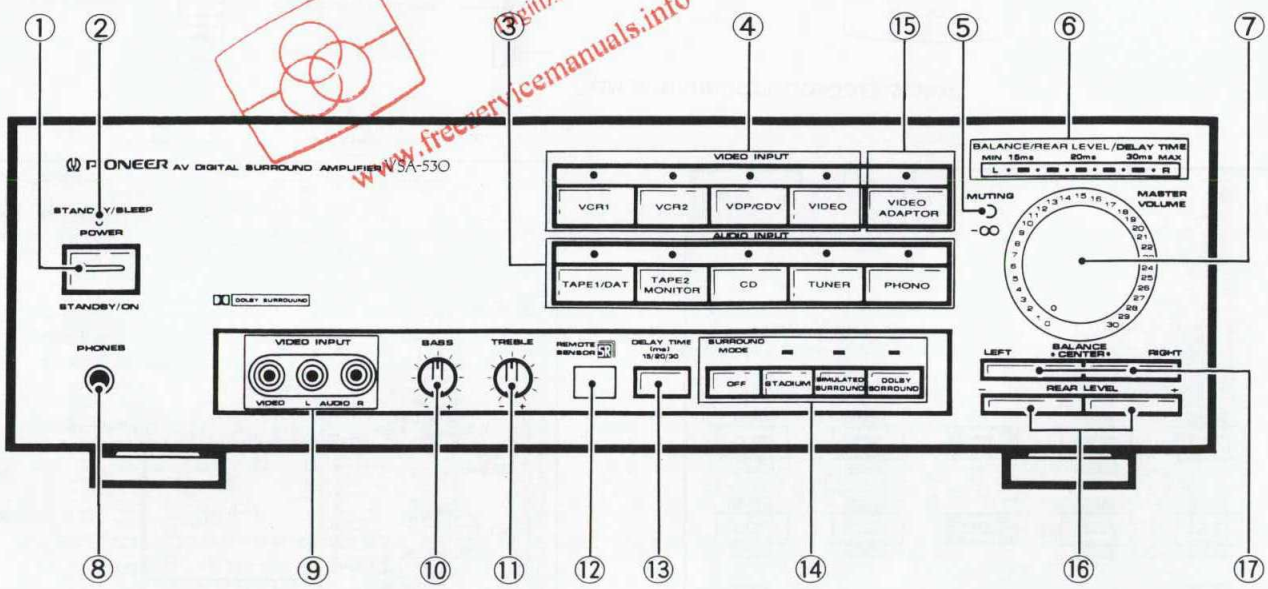
8. PANEL FACILITIES



① POWER STANDBY/ON switch

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.
The STANDBY/SLEEP indicator goes out.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.
The STANDBY/SLEEP indicator lights.

② STANDBY/SLEEP indicator

Lights when the power is in the standby position.
Flashes when the sleep key on the remote control unit is pressed.

③ AUDIO INPUT selector switches/indicators

TAPE 1/DAT:
Press to listen to the device connected to the TAPE 1/DAT input.

TAPE 2 MONITOR:
Press to listen to playback sound of cassette deck connected to TAPE 2 input.

CD:
Press to listen to compact discs played on CD player connected to the CD input.

TUNER:
Press to listen to FM or AM broadcasts from tuner connected to TUNER input.

PHONO:
Press to listen to records played on turntable connected to the PHONO input.

NOTE:
If the TAPE 2 MONITOR switch is ON, sound will only be heard from components connected to TAPE 2 jacks.

④ VIDEO INPUT selector switches/indicators

VCR 1:
Press when you wish to play the video cassette recorder connected to the VCR 1 input.

VCR 2:
Press when you wish to play the device connected to the VCR 2 input.

VDP/CDV:
Press when you wish to play a disc on a video disc player or CDV player connected to the VDP/CDV input.

VIDEO:
Press when you wish to play the device connected to the front panel VIDEO INPUT.

⑤ MUTING switch

Press to stop sound temporarily, and indicator ⑥ flashes. Press again to return to previous volume level.

⑥ BALANCE/REAR LEVEL/DELAY TIME indicators

When you operate the balance, rear level, or delay time switches (on the main unit or remote control unit), respective settings are displayed. Normally, balance settings are displayed.

⑦ MASTER VOLUME control knob

Use this to adjust volume level.
Front and rear volume levels change at the same time.

⑧ PHONES jack

Plug into this jack to listen to headphones. No sound is heard from the speakers when headphones are connected.

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⑨ VIDEO INPUT jacks

VIDEO:
Connect to VIDEO OUTPUT jack of video equipment.
AUDIO L, R:
Connect to AUDIO OUTPUT jacks of video equipment.

⑩ BASS control knob

Use to adjust the low-frequency level. Turn clockwise to increase the bass level, and turn counterclockwise to decrease it.

⑪ TREBLE control knob

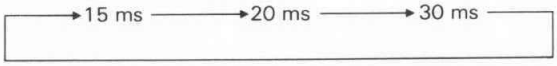
Use to adjust the high-frequency level. Turn clockwise to increase the treble level, and turn counterclockwise to decrease it.

⑫ REMOTE SENSOR window

When operating supplied remote control unit, point it at this window.

⑬ DELAY TIME switch

Switches the surround delay time in three steps.



The current setting is shown by the BALANCE/REAR LEVEL/DELAY TIME indicators.

⑭ SURROUND MODE switches

Select surround mode to match program source.
OFF:
To cancel the surround function.
STADIUM:
Ideal for sports broadcasts, etc.
SIMULATED SURROUND:
Gives concert-hall presence to monaural sound (AM, TV, etc.).
DOLBY SURROUND:
Select this setting when watching video tapes or using a video disc player bearing the DOLBY SURROUND mark.

⑮ VIDEO ADAPTOR switch

Press when using a video adaptor component connected to the VIDEO ADAPTOR jacks.

NOTE:
If nothing is connected to the VIDEO ADAPTOR jacks, then no picture will appear.

⑯ REAR LEVEL switches

Use to adjust the rear sound volume.
Press the + switch to increase the rear sound volume level, and the − switch to decrease it.
Press + and − together to return to the initial position.
These switches operate when SURROUND MODE is ON.

⑰ BALANCE switches

Use to adjust the FRONT and REAR sound volume balance between left and right sides.
LEFT: Press to decrease the sound on the right side.
RIGHT: Press to decrease the sound on the left side.
Press L and R together to bring the volume balance to center.