

# ONKYO® SERVICE MANUAL

## Integrated Stereo Amplifier MODEL A-9310

MP	230V AC, 50Hz
MW	120V/220V AC, 50Hz/60Hz
MD	120V AC, 60Hz

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\Delta$  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF PARTS.

WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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## SPECIFICATIONS

Power output :	50watts per channel, min. RMS at 8ohms, both channels driven from 20Hz to 20kHz with no more than 0.08% T.H.D. 2×80watts at 4 ohms, 1kHz (DIN) 2×60watts at 8 ohms, 1kHz (DIN)
Total Harmonic Distortion :	0.08% at rated power
IM Distortion :	0.08% at rated power
Damping Factor :	150 at 8 ohms
Frequency response :	15Hz - 50kHz, ±1dB
Input sensitivity/impedance :	
Phono :	2.5mV/50 kohms
Tuner/CD/Line :	150mV/25 kohms
Tape Play :	150mV/25 kohms
Output sensitivity/impedance	
Tape Rec :	150mV/3 kohms (phono)
Phono overload :	135mV RMS at 1kHz, 0.1% T.H.D (REC)
Bass control :	±8dB at 100Hz
Treble control :	±8dB at 10kHz
Loudness control :	±8dB at 100Hz ±8dB at 10kHz
Signal-to-noise ratio (IHF-A)	
Phono :	80dB (5mV input)
Source Direct (CD) :	102dB (0.5V input)

### General

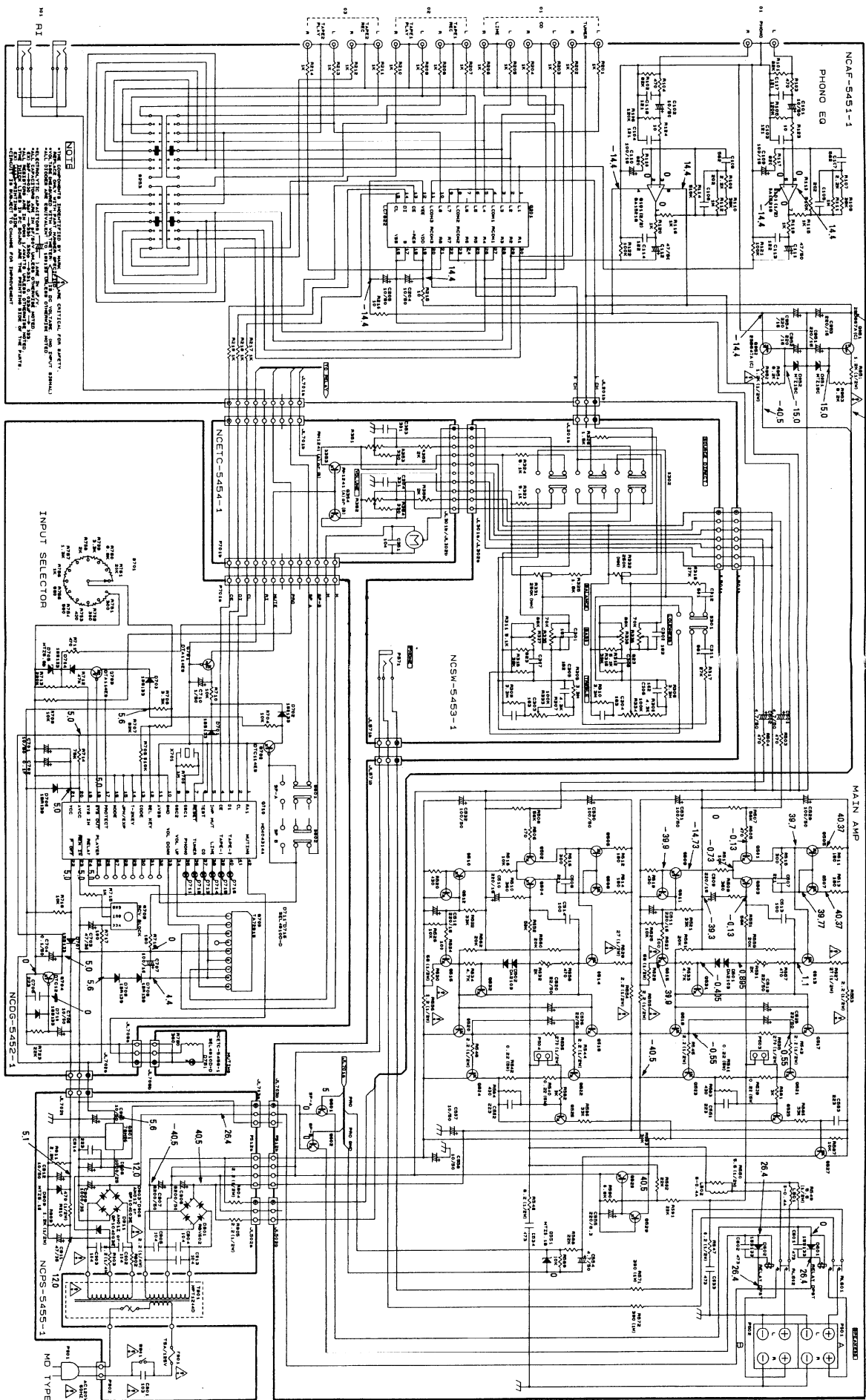
Power supply :	
European and	
Australian models :	AC 230V, 50Hz
U.S.A and Canadian models :	AC 230V, 60Hz
Worldwide models :	AC 120V and 220V switchable, 50Hz/60Hz
Power consumption :	180W, 240VA
Dimensions :	455 (W)×150 (H)×348 (D) mm 17-15/16"×5-7/8"×13-16/11"
Weight :	7.9kg, 17.4lbs.

### Remote control RC-286S

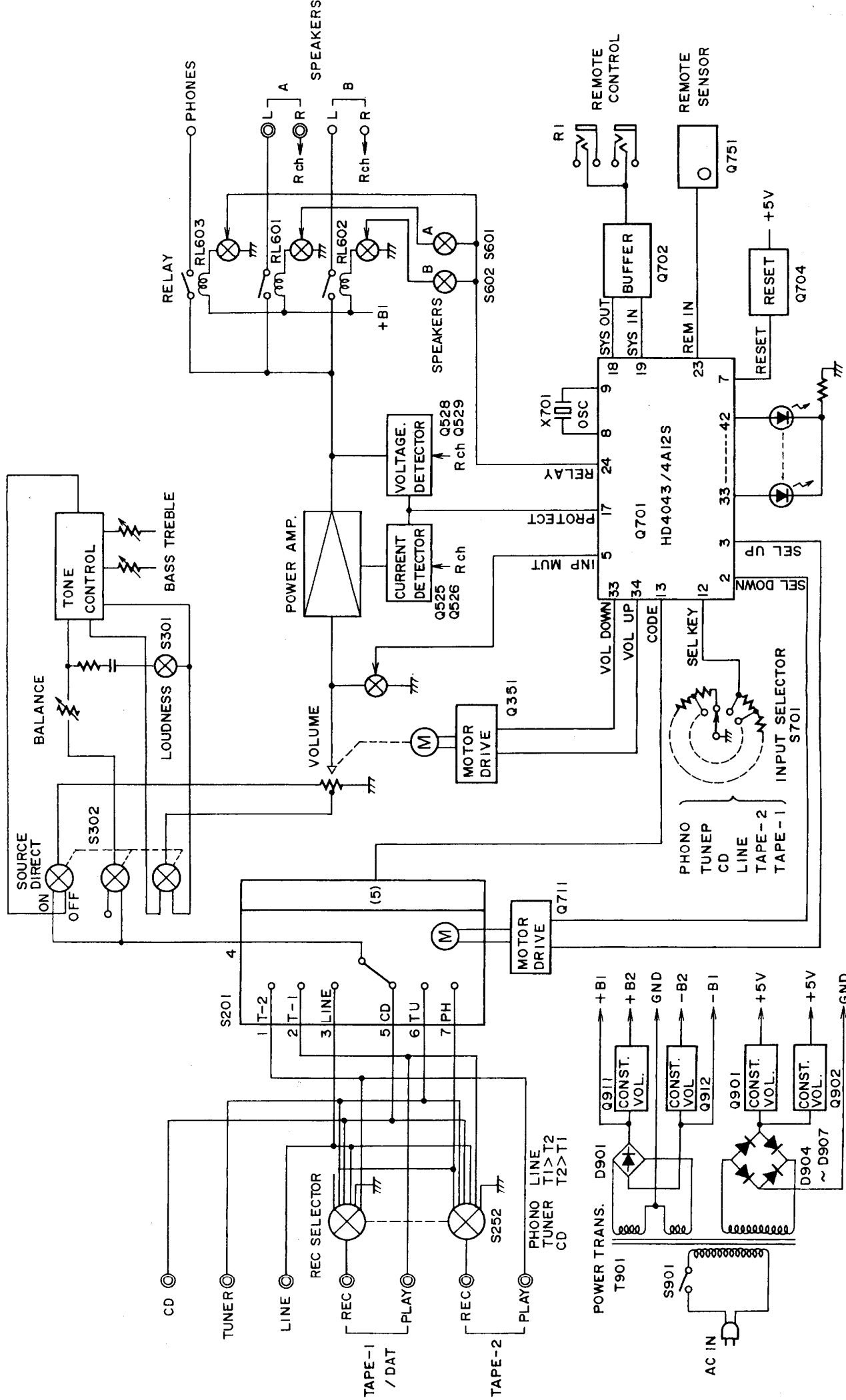
Transmitter :	Infraared
Signal range :	Approx. 5 meters, 16ft
Power supply :	Two "AA"batteries (1.5V×2)
Dimintions :	55 (W)×18 (H)×194 (D) mm 2-3/16"×11/16"×7-5/8"
Weight :	100grams, 3.5oz. (including batteries)

Specification and features are subject to change without notice.

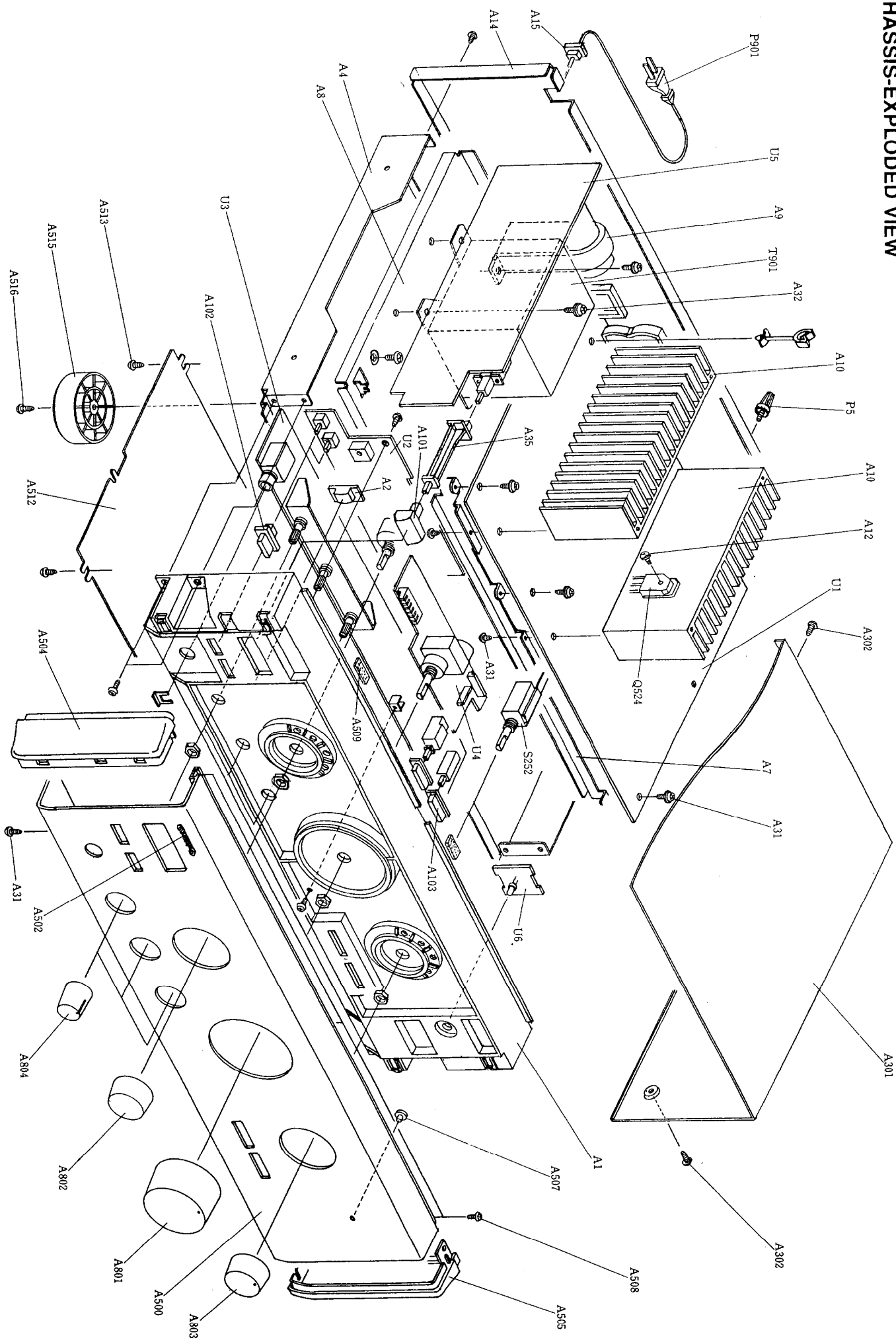
# SCHEMATIC DIAGRAM (120V MODEL)



# BLOCK DIAGRAM



CHASSIS-EXPLODED VIEW



# ADJUSTMENT PROCEDURES

## Adjustments and Checking the Protection Circuitry

### 1. Preparations

- 1) Place the unit on the workbench. (There should be about 15mm of space between the base plate of the unit and work surface.)
- 2) Set up the unit as follows.
  - (1) No load
  - (2) No signal
  - (3) Volume turned all the way down
  - (4) speaker switch OFF
  - (5) Power switch OFF

Note) Check the following points before making adjustments

- (1) The power switch should be OFF.
- (2) The interior of the unit should not be warm.

### 2. Idling current adjustment

- 1) And after 4~6 minutes of heat running, readjust R531 and R532 according to the voltage at that times; 6.0~7.0mV

### 3. Confirming operations.

#### 1) Speaker relay

- (1) The speaker relay turns ON after 5 seconds when power is ON.
- (2) The speaker relay turns OFF immediately when power is OFF.

#### 2) Over-voltage protector (Source Direct →ON)

- (1) The speaker relay is OFF immediately when D.C. +1~+1.5V is put at CD-terminal. (NO load, One channel)
- (2) The same as above when D.C. -1~-1.5V is put at CD-terminal.

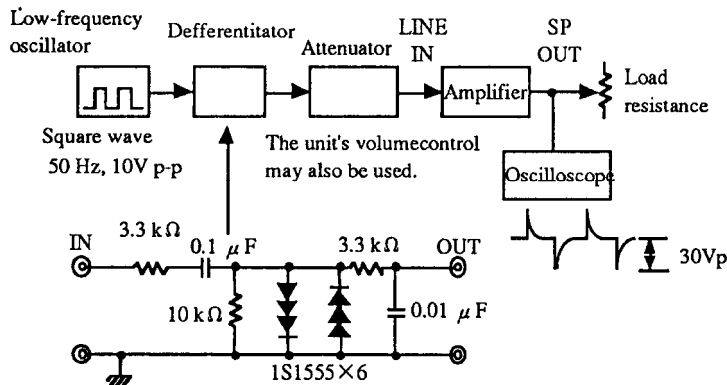
Note) Do not connect load nor short speaker terminals.

#### 3) Over current protector

- (1) The speaker relay must hold ON when output level at 2 ohms load is under clip-point.  
(clip-point=10% T.H.D. input:CD-terminal 1kHz)
- (2) The speaker relay must turns OFF immediately when 1.0 ohms load is connected at speaker terminals under the conditions that signal is put at CD-terminal by the designated circuit on 105% power supply voltage and output voltage is 30Vp-p.

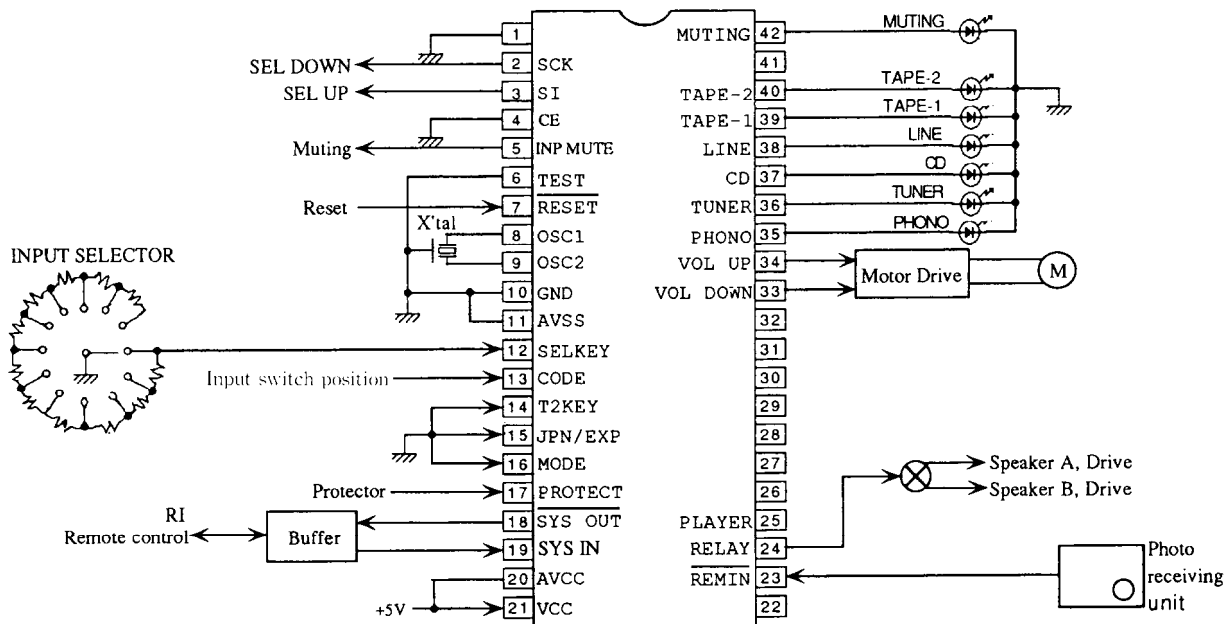
#### 4) Remote control operation.

- (1) Each key must operate properly for the amplifier, cassette deck, and CD.



# IC BLOCK DIAGRAM

HD404314A12S



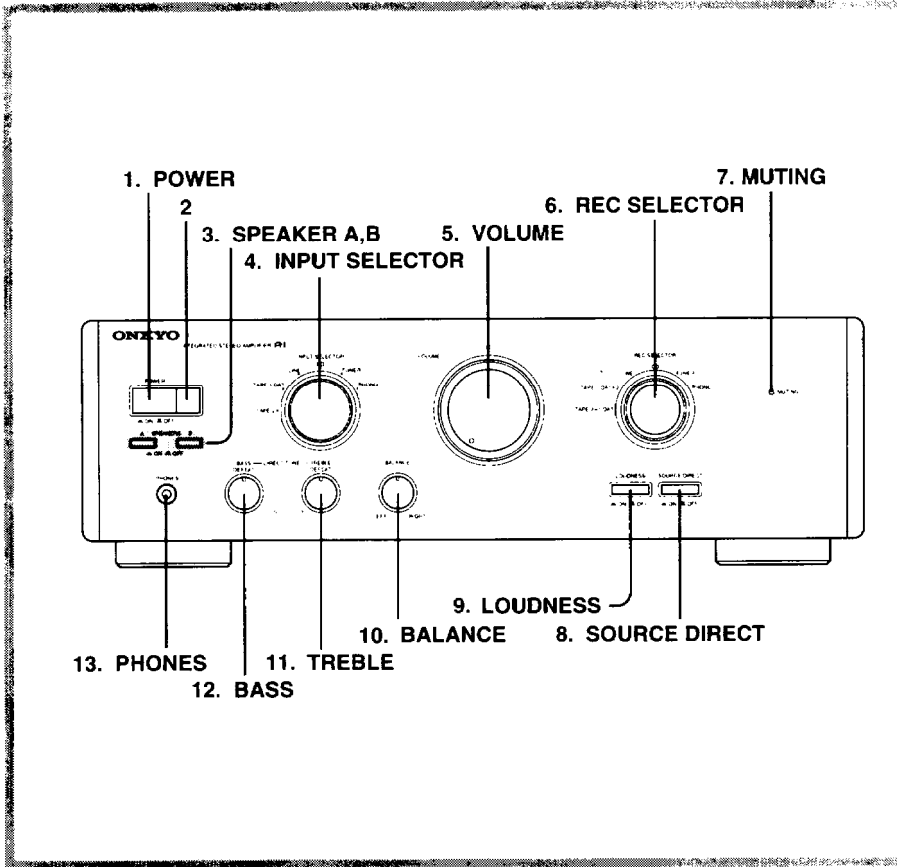
HD404314

Pin No.	CODE	FUNCTION	I/O	DESCRIPTION												
1	RA1/Vdisp	-----	----	Not used, To be connected with GND.												
2	R00/SCK	SEL DOWN / CL	OUT	<table border="1"> <thead> <tr> <th>OPERATION</th> <th>SEL UP</th> <th>SEL DOWN</th> </tr> </thead> <tbody> <tr> <td>STOP</td> <td>H</td> <td>H</td> </tr> <tr> <td>UP</td> <td>H</td> <td>L</td> </tr> <tr> <td>DOWN</td> <td>L</td> <td>H</td> </tr> </tbody> </table>	OPERATION	SEL UP	SEL DOWN	STOP	H	H	UP	H	L	DOWN	L	H
OPERATION	SEL UP	SEL DOWN														
STOP	H	H														
UP	H	L														
DOWN	L	H														
3	R01/SI	SEL UP / D1														
4	R02/SO	CE	----													
5	R03/TOC	INP MUT	OUT	Muting output terminal. Active "H".												
6	TEST	TEST	----	Shipment Test. To be connected with GND.												
7	RESET	RESET	IN	Input terminal for Reset signal. Active "L"												
8	OSC1	Xtal	----	Terminal for connecting with Ceramic oscillator (4MHz)												
9	OSC2	Xtal	----													
10	GND	GND	----	Ground terminal												
11	AVss	AVss	----	Ground terminal of A/D converter												
12	R30/AN0	SELKEY	IN	Input terminal for when changing over Input Selector. Through A/D conversion, the selector will be detector on its right or left rotation.												
13	R31/AN1	CODE	IN	Code input terminal for detecting position of Rotary switch of Motor drive.												
14	R32/AN2	T-2KEY	IN	Tape-2 Key entry terminal.												
• 15	R33/AN3	JPN/EXP	IN	Input terminal for change-over between Japan model and Export model.												

Pin No.	CODE	FUNCTION	I/O	DESCRIPTION															
16	R40/AN4	MODE	IN	Input terminal for initialization to change over operation mode.															
17	R41/AN5	PROTECT	IN	Input terminal for detecting protect operation.															
18	R42/AN6	$\overline{\text{SYS OUT}}$	OUT	Output terminal for System Code.															
19	R43/AN7	SYS IN	IN	Input terminal for System Code.															
20	AVcc	AVcc	----	Analog reference voltage for A/D conversion.															
21	Vcc	+5V	----	Power(+5V) terminal .															
22	D0/INT0	$\overline{\text{POFF}}$	IN	Input terminal for Detecting Power suspension. However, "L" 100 $\mu$ S or under shall be ignored.															
23	D1/INT1	$\overline{\text{REMIN}}$	IN	Remote control signal input terminal															
24	D2/EVENB	RELAY	OUT	Output terminal for controlling relay. "H" when ON.															
25	D3/BUZZ	PLAYER	OUT	Output terminal for Player control. "H" will be output for 200mS if input PLAY/REJECT code for Remote control and set Input selector for PHONO.															
26	D4/STOPC	-----	----	Not used															
27	D5																		
28	D6																		
29	D7																		
30	D8																		
31	R80																		
32	R81																		
33	R81	VOL DOWN	OUT	UP / DOWN output terminal for Volume. Active "H".															
34	R83	VOL UP																	
				<table border="1"> <thead> <tr> <th>OPERATION</th> <th>VOL UP</th> <th>VOL DOWN</th> </tr> </thead> <tbody> <tr> <td>STOP</td> <td>H</td> <td>H</td> </tr> <tr> <td>VOL UP</td> <td>H</td> <td>L</td> </tr> <tr> <td>VOL DOWN</td> <td>L</td> <td>H</td> </tr> <tr> <td>POWER OFF</td> <td>L</td> <td>L</td> </tr> </tbody> </table>	OPERATION	VOL UP	VOL DOWN	STOP	H	H	VOL UP	H	L	VOL DOWN	L	H	POWER OFF	L	L
OPERATION	VOL UP	VOL DOWN																	
STOP	H	H																	
VOL UP	H	L																	
VOL DOWN	L	H																	
POWER OFF	L	L																	
35	R10	PHONO	OUT	Output terminal for Input selector LED. Active "H".															
36	R11	TUNER																	
37	R12	CD																	
38	R13	LINE																	
39	R20	TAPE-1																	
40	R21	TAPE-2																	
41	R22	-----	----	Not used															
42	R23	MUTING	OUT	Output terminal for Audio muting LED, Remote control															



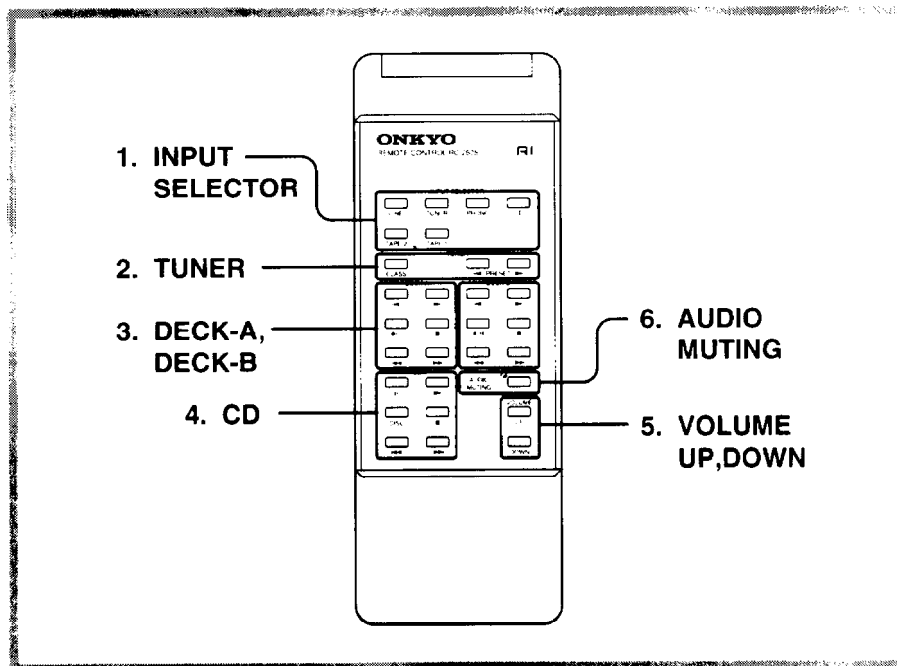
## FRONT PANEL



### Front panel

1. Power button
2. Remote control sensor
3. Speaker selector buttons
4. Input selector knob and indicator
5. Volume control knob
6. Recording selector knob
7. Muting indicator
8. Source Direct button
9. Loudness button
10. Balance control knob
11. Treble control knob
12. Bass control knob
13. Headphone jack

## REMOTE CONTROL



### Remote control

1. Input selector buttons
2. Tuner operation buttons  
 CLASS : Class selector button  
 PRESET : Preset memory down/up
3. Tape operation buttons  
 ◀ : Reverse play button  
 ▶ : Forward play button  
 ⏮ : Fast rewind button  
 ⏭ : Fast forward button  
 ■ : Stop button  
 ●/|| : Record/pause button
4. CD operation buttons  
 || : Pause button  
 ▶ : Play button  
 DISC : Disc button for CD changer  
 ⏮ : Down button  
 ⏭ : Up button
5. Volume control buttons
6. Audio muting button

## CHASSIS-EXPLODED VIEW PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
A1	27110785DY	Front bracket	F901	△ 252164	5A-UL/T-237, Fuse <W>
A2	28191593-1	Clear plate	F901	△ 252164	5A-UL/T-237, Fuse <D>
A4	27100274	Chassis	F902	△ 252074	2A-SE-EAK, Fuse
A7	27130724	Bracket(C)	P5	25060044	GND terminal
A8	27130749	Bracket(PT)	P901	△ 253193HIT or	AS-CEE, AC Cord
A9	27190940	Holder(CH)		△ 253192HIT or	AS-UC-6#18, (SPT-2), AC CORD or
A10	27160334AY	Heat sink		△ 253194MAR	AS-UC-6#18, AC CORD <D>
A11	223021	TBM-51W, 9043, Isolation sheet	Q521,Q522	2201704 or	2SC3855-Y, Transistor or
A12	801433	3SMS8W.SW+14B(BC), Screw		2201706	2SC3855-P, Transistor
A13	838130088	3TTB+8B, Screw	Q523,Q524	2201694 or	2SA1491-Y, Transistor or
A14	27122070	Rear panel <P>		2201696	2SA1491-P, Transistor
	27122071	Rear panel <W>	S252	25030369A	NRSF-106-, 20BU, Rotary switch
	27122110	Rear panel <D>	T901	△ 2301116	NPT-1244P, Power transformer
A15	27300750	Cord bushing		△ 2301117	NPT-1244DG, Power transformer <W>
A30	82143006	3P+6FN(BC), Screw		△ 2301115	NPT-1244D, Power transformer <D>
A31	838130088	3TTB+8B, Screw	U1	1A587551-1Y	NAAF-5451-1, AF-AS
A32	830440089	4TTC+8C(BC), Screw		1A587551-1BY	NAAF-5451-1B, AF-AS <D>
A35	27273155	Joint(POW)	U2	1A587552-1Y	NADG-5452-1, DG-AS
A101	28324140	Knob(POW)	U3	1A587553-1Y	NASW-5453-1, SW-AS
A102	28324882	Knob(SP)	U4	1A587554-1Y	NAETC-5454-1, ETC-AS
A103	28324886	Knob(D)	U5	1A587555-1Y	NAPS-5455-1, PS-AS
A301	28184561Y	Top cover		1A587555-1AY	NAPS-5455-1A, PS-AS <W>
A302	838430088	3TTB+8B(BC), Screw		1A587552-1BY	NAPS-5455-1B, PS-AS <D>
A501	27211721	Front panel	U6	1A587556-1Y	NAETC-5456-1, ETC-AS
A502	28135199	Badge	U7	1A587557-1Y	NASW-5457-1, SW-AS <W>
A503	8910301	CS-3(SUS), CS ring			
A504	28125255-6Y	End cap(L)			
A505	28125256-6Y	End cap(R)			
A506	28198798Y	Facet(SEL)			
A507	28198778	Facet			
A508	838130088	3TTB+8B, Screw			
A509	28141288	Cushion			
A510	29110029	W=3, DF Tape			
A512	28153118	Bottom board			
A513	838130088	3TTB+8B, Screw			
A515	27175300Y	Leg AS			
A516	838130088	3TTB+8B, Screw			
A801	28324883	Knob(VOL)			
A802	28324884A	KnobSEL)			
A803	28324885A	Knob(REC)			
A804	28324887A	Knob(TONE)			

NOTE: <P> : 230V model only  
 <W> : Worldwide model only  
 <D> : 120V model only

NOTE: THE COMPONENTS IDENTIFIED BY  
 MARK △ ARE CRITICAL FOR RISK  
 OF FIRE AND ELECTRIC SHOCK.  
 REPLACE ONLY WITH PART

# PRINTED CIRCUIT BOARD – PARTS LIST

## Main circuit PC board Parts list (NAAF-5451-1/1B)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q101	22240111	BA15218
Q201	22240270	LC7822N
	<b>Transistors</b>	
Q501,Q503	2213677 or 2213678	2SC3067-G or 2SC3067-H
Q505,Q506	2212125 or 2213355	2SA1048-GR or 2SA933S-S
Q507,Q508	2212125 2213355	2SA1048-GR 2SA933S-S
Q509,Q510	2211732 or 2211733	2SC1845-F or 2SC1845-E
Q511,Q512	2212115 or 2213284 or	2SC2458-GR or 2SC1740S-R or
Q513,Q514	2211353 or 2211354	2SA949-O or 2SA949-Y
Q515,Q516	2211633 or 2211634	2SC2229-O or 2SC2229-Y
Q517,Q518	2212653 or 2212654	2SC3421-O or 2SC3421-Y
Q519,Q520	2212643 or 2212644	2SA1358-O or 2SA1358-Y
Q525,Q526	2211732 or 2211733	2SC1845-F or 2SC1845-E
Q527	2211792 or 2211793	2SA992-F or 2SA992-E
Q528,Q529	2211732 or 2211733	2SC1845-F or 2SC1845-E
Q531,Q532	2212115 or 2213284	2SC2458-GR or 2SC1740S-R
Q601,Q602	2213650	DTD113ZS
Q951,Q952	2215163	2SD667A-C
	<b>Diodes</b>	
D501,D502	223168	DA210S
D551	224450512	MTZ5.1B, Zener
D601,D602	223163 or 223205 or 223222	1SS133 or 1SS270A or WG713A
D951,D952	224451503	MTZ15C, Zener
	<b>Coils</b>	
L501,L502	231209	S-0.4A, S Coil
	<b>Capacitors</b>	
C101,C102	354781009	CE04W50V, 10M, ELECT C
C103,C104	374723915 374721215	ECQ-B50V, 391K, TF C <P,W> ECQ-B50V, 121K, TF C <D>
C105,C106	374722024	ECQ-B50V, 202J, TF C
C107,C108	374725624	ECQ-B50V, 562J, TF C
C109,C110	354741019	CE04W16V, 100M, ELECT C
C111,C112	354784709	CE04W50V, 47M, ELECT C
C113,C114	374721224	ECQ-B50V, 122J, TF C
C117,C118	374721215	ECQ-B50V, 121K, TF C
C119,C120	374722215	ECQ-B50V, 221K, TF C <P,W>
C204,C205	354781009	CE04W50V, 10M, ELECT C
C501,C502	354780479	CE04W50V, 4.7M, ELECT C
C505,C506	374721015	ECQ-B50V, 101K, TF C
C507,C508	374722215	ECQ-B50V, 221K, TF C
C509-C512	354742219	CE04W16V, 220M, ELECT C
C519-C526	354782209	CE04W50V, 22M, ELECT C
C529-C532	354781019	CE04W50V, 100M, ELECT C
C533,C534	374724734	ECQ-V50V, 473J, TF C
C541-C544	374721524	ECQ-B50V, 152J, TF C <P,W>
C545,C546	374721015	ECQ-B50V, 101K, TF C <P,W>
C554	354780479	CE04W50V, 4.7M, ELECT C
C555	354722219	CE04W6.3V, 220M, ELECT C
C557,C558	354781009	CE04W50V, 10M, ELECT C
C561,C562	374721024	ECQ-B50V, 102J, TF C <P,W>
C563,C564	374721024	ECQ-B50V, 102J, TF C <P,W>
C601,C602	374724734	ECQ-V50V, 473J, TF C
C951-C954	354742219	CE04W16V, 220M, ELECT C

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Resistors</b>	
R527,R528	443522704	RS1/2WBJ, 27, METAL O R
R529,R530	443526804	RS1/2WBJ, 68, METAL O R
R531,R532	5210259	N06HR, 2KBC, TRIM R
R535,R536	443522714	RS1/2WBJ, 270, METAL O R
R539-R542	4000076	MPC74-5WK, 0.22, METAL P R
R543-R546	453530224	RNU1/2WCJ, 2.2, METAL R
R547,R548	453530824	RNU1/2WCJ, 8.2, METAL R
R549,R550	453530564	RNU1/2WCJ, 5.6, METAL R
R553-R556	453530224	RNU1/2WCJ, 2.2, METAL R
R571,R572	443623914	RS1WBJ, 390, METAL O R
R951,R952	443521224	RS1/2WBJ, 1.2K, METAL O R
	<b>Switch</b>	
S253	25065079	NSS-4643, Slide
	<b>Relays</b>	
RL601,RL602	25065339	NRL-2P5A, -DC24-046, Relay
	<b>Plugs, Jacks</b>	
P503	25055038	NPLG-2P29, Pin plug
P504	25055038	NPLG-2P29, Pin plug
P101	25045401	NPJ-2PDBL226, Pin jack
P201	25045411	NPJ-6PDBL236, Pin jack
P202	25045410	NPJ-4PDBL235, Pin jack
P203	25045410	NPJ-4PDBL235, Pin jack
P801	25045330	NPJ-2PDBL184, Pin jack
P501	25060125	NTM-8PDMN058, Trimmer
P512b	25055167 27141059	NPLG-4P151, Pin plug End plate
	<b>Holders</b>	
JL701a	25051113 27301779	NSCT-9P900, Wire holder HL-38-0, Clamp

## Microprocessor PC board Parts list (NADG-5452-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	<b>Remote control sensor</b>	
Q709	24130010	HC-312
	<b>ICs</b>	
Q708	22240239	TA7291S
Q710	22240899	HD404314A99S
	<b>Transistors</b>	
Q701-Q704	2213510	DTA114ES
	<b>Diodes</b>	
D701-D704	223163	1SS133
D705	224450562	MTZ5.6B, Zener
D706	22380032	1SR139-100
D707,D710	223163	1SS133
D708,D709	22380032	1SR139-100
D711-D716	225291D	SEL4910D-D, LED
	<b>Resonator</b>	
X701	3010150	CST4.00MGW
	<b>Capacitors</b>	
C701,C706	354781009	CE04W50V, 10M, ELECT C
C702	3000076	ECCS5R5T104, EDL C
C703	354764709	CE04W35V, 47M, ELECT C
C704	354781099	CE04W50V, 0.1M, ELECT C
C705	374722234	ECQ-B50V, 223J, TF C
C707	354741019	CE04W16V, 100M, ELECT C
C710	354780109	CE04W50V, 1M, ELECT C
	<b>Switches</b>	
S601	25035653	NPS-122-L605
S602	25035653	NPS-122-L605
S701	25030359	NRSF-112, -20RM, Rotary

CIRCUIT NO.	PART NO.	DESCRIPTION
	Plug, Wire holders	
P701a	25055660	NPLG-13P616, Pin plug
JL706a	25051107	NSCT-3P894, Wire holder
JL702a	25051107	NSCT-3P894, Wire holder

Tone control circuit PC board Parts list (NADG-5453-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C301-C304	374721634Y	ECQ-B50V, 163J, TF C
C305,C306	374721824Y	ECQ-B50V, 182J, TF C
C307,C308	374728234Y	ECQ-V50V, 823J, TF C
C311,C312	374726814Y	ECQ-B50V, 681J, TF C
	Resistors	
R331,R332	5148107AY	N16RGM, 250KMN25, Variable
R333,R334	5142002Y	N16RGM11C, 100K25, Variable
R335,R336	5144011Y	N16RQM11C, 70K88K25, Variable

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switches, Jack	
S301	25035407Y	NPS-122-L371
S302	25035654AY	NPS-162-L606
	25065425	SCREW TRMM3
P571	25045164	HLJ4317, -01-3020, Jack

CIRCUIT NO.	PART NO.	DESCRIPTION
	Wire holders	
JL201a,JL571a	25051107	NSCT-3P894, Wire holder
JL501a	25051111	NSCT-7P898, Wire holder
JL301a,JL302a	25051114	NSCT-10P901, Wire holder

Volume control circuit PC board Parts list (NAETC-5454-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q353,Q354	2213631 or 2213632	RN1241-A or RN1241-B
	Capacitors	
C351	374721044Y	ECQ-V50V, 104J, TF C
C353,C254	374723315Y	ECQ-B50V, 331K, TF C
	Resistors	
R351,R352	5104329AY	N16RGM, 50KBT25F, Variable
	Sockets	
P701b	25051047Y	NSCT-13P834, Socket
JL301b	25050274Y	NSCT-10P102, 2.5mm TOP, Wire trap
JL701b	25050273Y	NSCT-9P101, 2.5mm TOP, Wire trap
JL302b	25050274Y	NSCT-10P102, Wire trap
	25065425	SCREW TRMM3

Power supply circuit PC board Parts list (NAPS-5455-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q901	222780565JRC	78M56
	Diodes	
D901	22380038F	RBV602
D903	22380046 or 22380035	AM01Z or GP104003E
D904-D906	22380046 or 22380035	AM01Z or GP104003E
D909	224450512Y	MTZ5.1B, Zener
D911	22380046 or 22380035	AM01Z or GP104003E

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C901	△ 3500065AY	DE7150FZ103P, AC400V/125V, IS C
C902,C903	374721044Y	ECQ-V50V, 104J, TF C
C904,C905	374731044Y	ECQ-V100V, 104J, TF C
C906,C907	3504279 or 3504245	CE92W50V, 8200M, ELECT C or CE62W50V, 8200M, ELECT C
C908,C909	354751029Y	CE04W25V, 1000M, ELECT C
C910,C912	354781009Y	CE04W50V, 10M, ELECT C
C911	354784709Y	CE04W50V, 47M, ELECT C
C913	374731044Y	ECQ-V100V, 104J, TF C

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R902,R903	4500055	RNU1/4WJ, 2.2, METAL R
R904,R905	453530224Y	RNU1/2WCJ, 2.2, METAL R
R909	443521224Y	RS1/2WBJ, 1.2K, METAL O R
R910	443524714Y	RS1/2WBJ, 470, METAL O R

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switch	
S901	△ 25035550Y	NPS-111, -L512P
F901a	△ 25050065Y	YSH403T, Fuse holder <D>
F902a	△ 25050065Y	YSH403T, Fuse holder <P,W>
P902	△ 25055675Y	NPLG-2P631, Pin plug
JL502a,JL703a	25051107	NSCT-3P894, Wire holder
JL702b	25050267Y	NSCT-3P95, 2.5mm TOP, Wire trap
P512a	2009990301AY	NSAS-4P0435, Socket AS
	838130088Y	3TTB+8B, Screw

Muting indicator circuit PC board Parts list (NAETC-5456-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diode	
D751	225291D	SEL4910D-D
	Resistor	
R750	417342614Y	R16J360
	Wire holder	
JL706b	25051107	NSCT-3P894, Wire holder

Voltage selector switch PC board Parts list (NASW-5457-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switch	
S902	△ 25065437Y	NSS-22157P, Slide

NOTE: <P> : 230V model only  
<W> : Worldwide model only  
<D> : 120V model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK △ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART

## PRECAUTIONS

### 1 . Replacing the fuses

For continued protection against risk fire, replace only with same type and same rating fuse.

CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252164	5A-UL/T-237, Fuse (120V/220V models)
F902	252074	2A-SE-EAK, Fuse

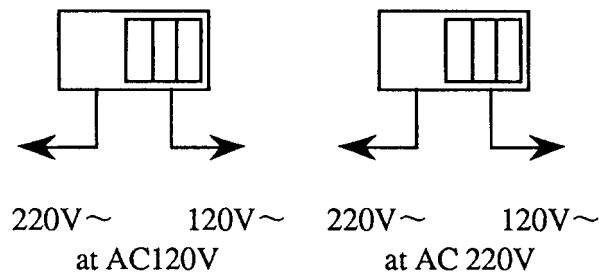
### 2 . Insulation resistance measurement (Only U.S.A model)

Connect the insulating-resistance tester between the plug of power supply cable and terminal GND on the back panel. Specifications; More than 10M $\Omega$  at 500V.

### 3 . Voltage Selector (Rear Panel)

Worldwide models are equipped with a voltage selector to conform to local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before plugging in the unit. Models without a voltage selector can only be used in areas where the power supply is the same as that of the unit.

#### VOLTAGE SELECTOR



#### Setting the voltage selector

- 1 . Determine the proper for voltage for your area: 220V or 120V.
- 2 . If the preset voltage is not proper for your area, insert a screwdriver into the groove in the switch. Slide the switch all the way to the right (120V) or to the left (220V), which-ever is proper.

## PARTS LIST OF PACKING

CIRCUIT NO.	PART NO.	DESCRIPTION
1	29052881Y	Carton
2	29091651BY	Pad(L)
3	29091652CY	Pad(R)
	29360404	SN Sheet
4	29100034-1Y	850 × 650, Poly bag
	261504	W=30, Paper tape
5	282321	Staple
	282301	Staple
6	29110071	W=50, PP Tape
	29110098	W=50, PP Tape
7	Accessory bag ass'y	
	24140286Y	RC-286S, Remote control
	3010194	UM-3, Battery
	2010200	3.5Mini plug, Cord AS
	29342141Y	Instruction manual(E)
	29342142Y	Instruction manual(U7)
	29342144Y	Instruction manual(U3) <W>
	29100097-1Y	350 × 250, Poly bag
	29365019B	Wranty card(E) <N>
	25055040	CV-K-2, Conversion plug <W>
	29361786	Label <W>
	29358002K	SS List <N>
	29361894	UPC Label <N>
	29360778	Label flash <N>

NOTE: <P> : 230V model only  
 <W> : Worldwide model only  
 <D> : 120V model only  
 <N> : U.S.A. model only

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