

ONKYO® SERVICE MANUAL

Integrated Stereo Amplifier MODEL A-RV401



UD	120V AC, 60Hz
UP	230V AC, 50Hz
UQ	240V AC, 50Hz
UW	120V/220V AC, 50Hz/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK Δ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO 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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ONKYO
AUDIO COMPONENTS

SPECIFICATIONS

U.S. A & Canadian models

Power Output:	100 watts per channel, min RMS, at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.08% THD.
Total Harmonic Distortion	0.08% at rated power
IM Distortion	0.08% at rated power
Damping Factor:	40 at 8 ohms
Frequency and Response:	15–30,000 Hz \pm 1 dB
Sensitivity and Impedance	Phono: 2.5 mV/50 kohms Tuner/CD/VCR-1, VDP: 150 mV/50 kohms Source Direct: 150 mV/50kohms Tape/VCR-2 Play: 150 mV/50 kohms Tape/VCR-2 Rec: 150 mV/3 kohms (phono)
Phono Overload:	150 mV RMS at 1 kHz, 0.08% THD (REC)
Bass Control:	\pm 10 dB at 100 Hz
Treble Control:	\pm 10 dB at 10,000 Hz
Selective Tone Control	\pm 15 dB at 50 Hz/ \pm 6 dB at 10 kHz
Signal to Noise Ratio (IHF-A):	Phono: 80 dB (5 mV input) Source Direct (CD): 102 dB

General

Power Supply:	USA & Canadian models: AC 120V, 60 Hz Worldwide models: AC 120V and 220 V switchable, 50/60 Hz
Dimensions (W) \times (H) \times (D):	455 \times 140 \times 330 mm 17-15/16" \times 5-1/2" \times 13"
Weight:	10.1 kg, 22.2 lbs.

Remote Control Transmitter RC-142S

Transmitter:	Infrared
Signal range:	Approx. 5 meters, 16ft
Power supply:	Two "AA" batteries (1.5 V \times 2)
Dimensions (W \times H \times D):	64 \times 18 \times 176 mm 2-1/2" \times 11/16" \times 6-15/16"
Weight:	130 grams, 4.6 oz. (including batteries)

European models

Power Output:	80 watts per channel, min RMS, at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.08% THD. 2 \times 120 watts at 4 ohms, 1 kHz (DIN) 2 \times 90 watts at 8 ohms, 1 kHz (DIN)
Total Harmonic Distortion	0.08% at rated power
IM Distortion	0.08% at rated power
Damping Factor:	40 at 8 ohms
Frequency and Response:	15–30,000 Hz \pm 1 dB
Sensitivity and Impedance	Phono: 2.5 mV/50 kohms Tuner/CD/VCR-1/VDP: 150 mV/50 kohms Source Direct: 150 mV/50 kohms Tape/VCR-2 Play: 150 mV/50 kohms Tape/VCR-2 Rec: 150 mV/3 kohms (phono)
Phono Overload:	150 mV RMS at 1 kHz, 0.08% THD (REC)
Bass Control:	\pm 10 dB at 100 Hz
Treble Control:	\pm 10 dB at 10,000 Hz
Selective Tone Control	\pm 15 dB at 50 Hz/ \pm 6 dB at 10 kHz
Signal to Noise Ratio (IHF-A):	Phono: 80 dB (5 mV input) Source Direct (CD): 102 dB

General

Power Supply	European models (except U.K.): AC 230V, 50Hz U.K. & Australian models: AC 240V, 50Hz Worldwide models: AC 120V and 220V switchable, 50/60Hz
Dimensions (W) \times (H) \times (D):	455 \times 140 \times 330 mm 17-15/16" \times 5-1/2" \times 13"
Weight:	10.1 kg, 22.2 lbs.

Remote Control Transmitter RC-143S

Transmitter:	Infrared
Signal range:	Approx. 5 meters, 16ft
Power supply:	Two "AA" batteries (1.5 V \times 2)
Dimensions (W \times H \times D):	64 \times 18 \times 176 mm 2-1/2" \times 11/16" \times 6-15/16"
Weight:	130 grams, 4.6 oz. (including batteries)

Specifications and features are subject to change without notice.

ADJUSTMENT PROCEDURES

Adjustments and Checking the Protection Circuitry

1. Preparations

- 1) Place the unit on the workbench. (There should be about 15 mm of space between the base plate of the unit and the 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) Turn the power switch ON and allow the unit to warm up for about 10 minutes.
 - (1) Adjust R529 (R530) so that the voltage at test point VCT-ID on the NAAF-3547 circuit board is $9.5\text{mV} \pm 3.5\text{mV}$

3. Check of operation of protection circuitry

- 1) Check of operation of protection relay .
 - (1) Confirm that the relay turns ON approximately 5 seconds after the power switch is turned ON.
 - (2) The relay should turn OFF approximately 0.5 seconds after the power switch is turned OFF.
- 2) Check of DC detection
 - (1) Turn the power on with no load.
 - (2) After the speaker relay turns ON, apply DC +1.5V to the CD input terminals. Confirm that the relay turns OFF.
 - (3) Confirm that operation is the same as (2) above when an input of DC -1.5V is applied.

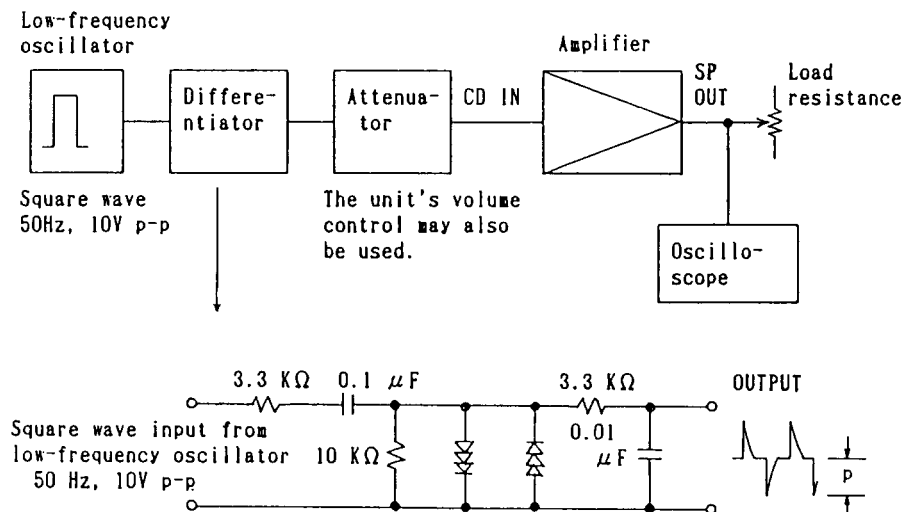
Note) Under no circumstances connect a load or short the speaker terminals when performing the above test.

3) Signal input from the circuit illustrated below with no load.

- (1) Confirm that the speaker relay does not turn OFF even when a 2 ohm load is connected when a peak value of 35Vp is output.
- (2) Next, confirm that when a 1 ohm load is connected the speaker relay switches OFF and ON a couple of times and then stays OFF.

Note) The period before that relay stays OFF should not last for more than 10 second.

Relay OFF status can be canceled by switching the power OFF.



NOTE) Semi-fixed resistors enclosed in parentheses () are for the right channel.

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	252052	7A ST-6
F902	252076 or 252076CC	3.15A-SE-EAK or 3.15A-SE-EAK Primary fuse (230V, 240V, 120V/220V model)
F903	252075 or 252075CC	2.5A-SE-EAK or 2.5A-SE-EAK, Primary fuse (230V model)

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

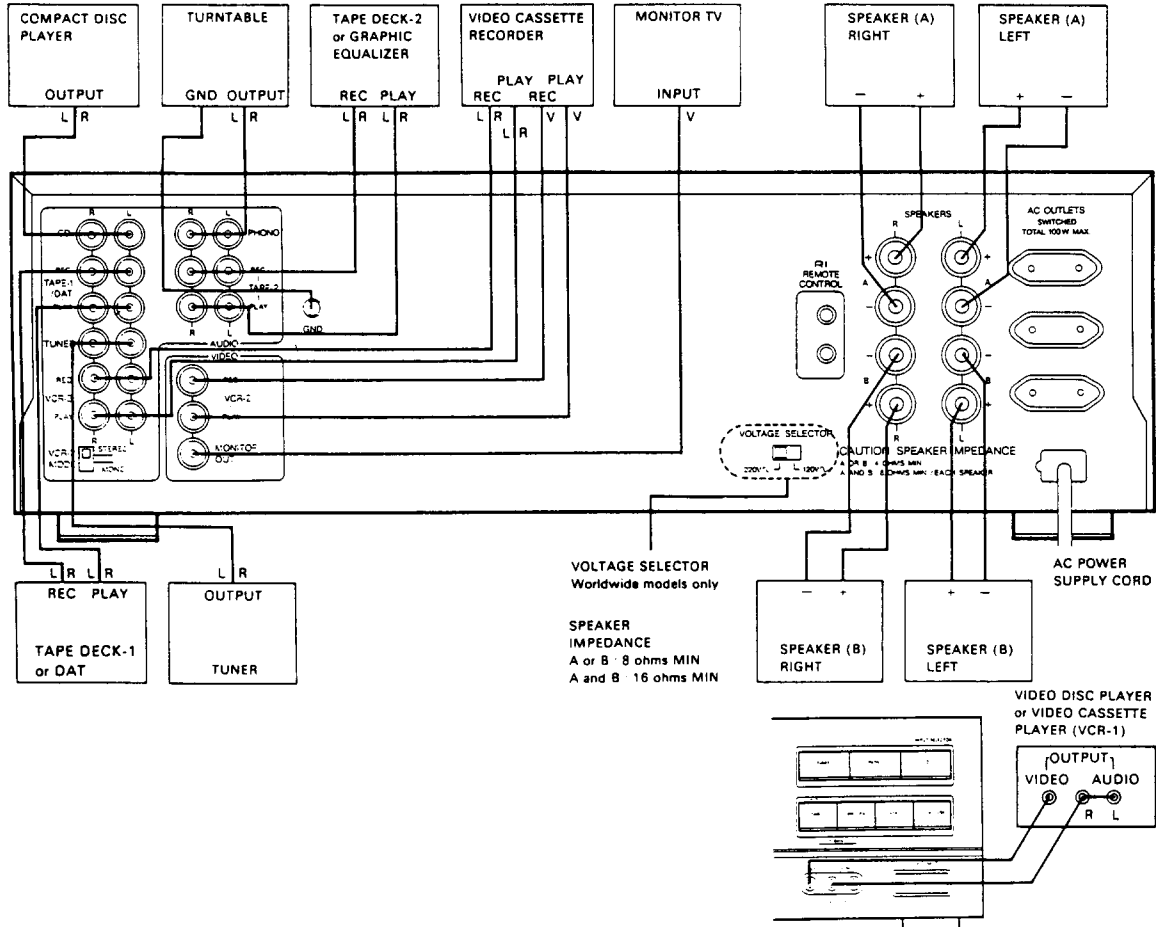
Connect the insulating-resistance tester between the plug of power supply cable and the terminal GND on the back panel
Specifications; More than 10 MΩ at 500V.

3. Voltage selector (rear panel)

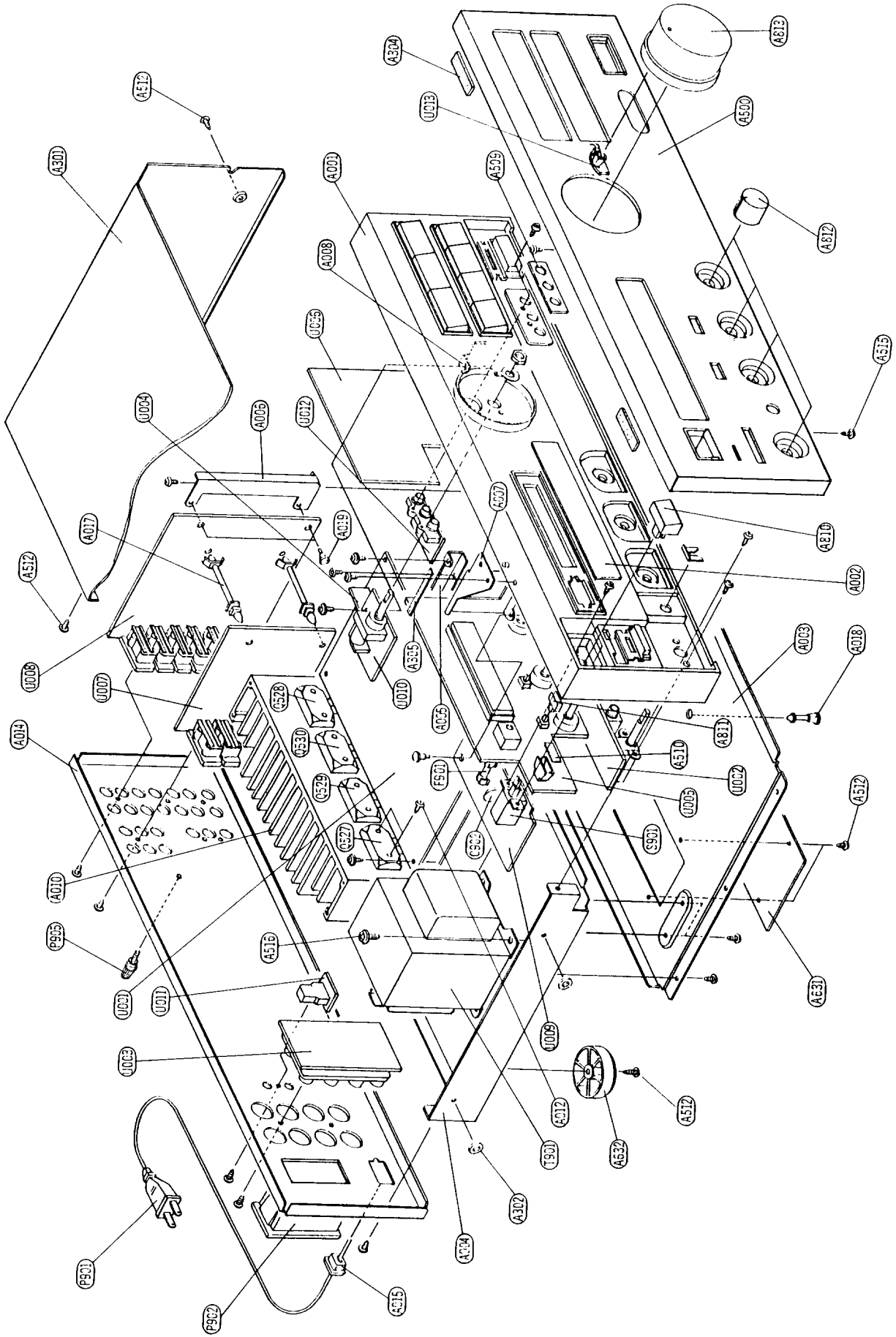
Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before plugging in the unit. Voltage is changed by sliding the groove in the switch with a screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left 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.



SYSTEM CONNECTIONS



CHASSIS-EXPLODED VIEW



CHASSIS EXPLODED VIEW PARTS LIST

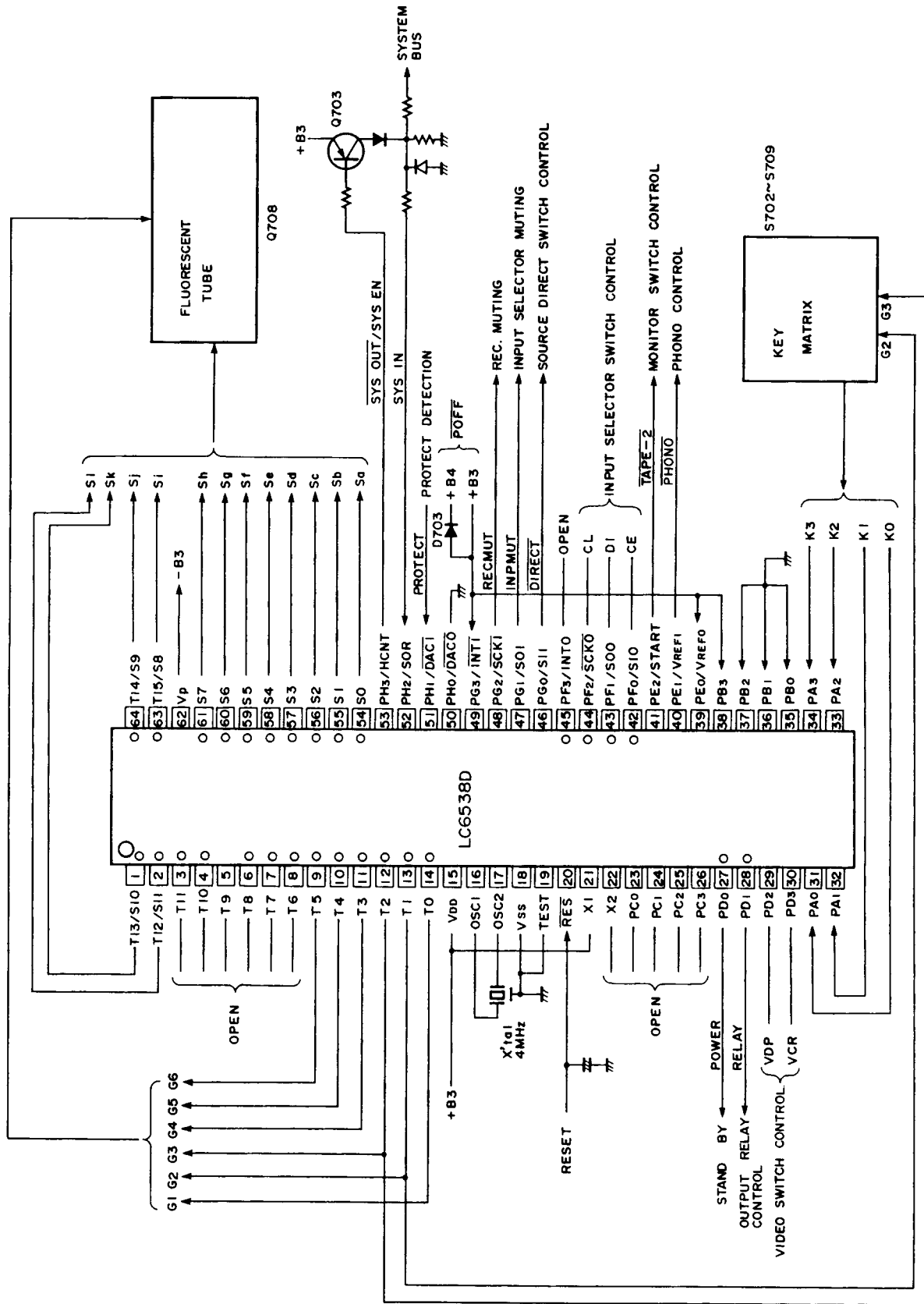
REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
A001	27110619	FRONT ANGLE ASS'Y	△ P901	253092-1A	AS-CEE-2, POWER SUPPLY
A002	28191587	CLEAR PLATE			CABLE [W]
A003	27100234	CHASSIS	△ P901	253118	AS-SAA, POWER SUPPLY CABLE [A]
A004	27130647	BRACKET (PT)			C2.5BS2 OR
A005	27141332	BRACKET (PC)	△ P901	253104 OR	C2.5BS2, POWER SUPPLY CABLE [B]
A006	27141329	BRACKET (SW)		253105	
A007	27141450	BRACKET (POW)			
A008	27141451	BRACKET (VOL)	△ P902	25050336	NSCT-6P163, AC SOCKET [D]
A010	27160239	HEATSINK	△ P902	25050337	NSCT-2P164, AC SOCKET [P, W, Q]
A012	801433	3SMS8WSW+14B(BC), SPECIAL	P905	25060044	GROUND TERMINAL
		TAP TIGHT SCREW	△ S901	25035550	NPS-111-L512P, POWER SWITCH
A014	27121412	BACK PLATE [D]	△ S902	25065123	NSS-1258P, SLIDE SWITCH [W]
A014	27121412-1	BACK PLATE [P]	△ C901, C902	3500065A	0.01μF, AC400V/125V, CAPACITOR
A014	27121412-3	BACK PANEL [W]	△ F901	252052	7A(ST-6), FUSE [D, W]
A014	27121412-8	BACK PANEL [Q]	F901a	29360626-1	LABEL (FUSE) [D, W]
A015	27300750	BUSHING (CABLE)	△ F902	252076 or	3.15A-SE-EAK or
A017	27190369	KGLS-22S, PC HOLDER		252076CC	3.15A-SE-EAK FUSE [P, W, Q]
A018	27190657	KGLS-18R, PC HOLDER	△ F903	252075 or	2.5A-SE-EAK or [P]
A019	880009	NRP-345, REVET		252075CC	2.5A-SE-EAK, FUSE
A301	28184476	TOP COVER	U001	1A252547-5	NAAF-3547-5, MAIN PC BOARD ASS'Y [D]
A302	27270212	SPACER		--	
A304	28140555	CUSHION	U001	1A252547-5A	NAAF-3547-5A, MAIN PC BOARD ASS'Y [P, W, Q]
A305	28170025	CE-016, BUSHING			
A500	1A252121	FRONT PANEL	U002	1A252548-5	NASW-3548-5, SPEAKER SWITCH PC BOARD ASS'Y
(A502)	28125234	END CAP (L)			
(A503)	28125235	END CAP (R)	U003	1A252549-5	NAETC-3549-5, SPEAKER TERMINAL PC BOARD ASS'Y [D]
(A504)	27267700	GUIDE (POW)			
(A505)	28198723A	FACKET	U003	1A252549-5A	NAETC-3549-5A, SPEAKER TERMINAL PC BOARD ASS'Y [P, W, Q]
(A506)	27267701	GUIDE (SOD)			
(A507)	27267702	GUIDE (VOL)	U004	1A252521-5	NAETC-4121-5, POWER INPUT TRANSISTOR PC BOARD ASS'Y
(A508)	28135199	NAME PLATE			
(A801)	28324237	KNOB ASS'Y (SEL)	U005	1A252564-3	NADG-3564-3, SYSTEM CONTROL CIRCUIT PC BOARD ASS'Y [D]
A509	27262415	PLATE (T)			
A510	28194181	FILM	U005	1A252564-3A	NADG-3564-3A, SYSTEM CONTROL CIRCUIT PC BOARD ASS'Y [P, W]
A512	834430088	3TTS+8BBC, TAPPING SCREW			
A513	28143006	3P+6FNBC, SCREW			
A515	833430080	3TTP+8PBC, TAPPING SCREW	U005	1A252564-3B	NADG-3564-3B, SYSTEM CONTROL CIRCUIT PC BOARD ASS'Y [Q]
A516	830440089	4TTC+8CBC, TAPPING SCREW			
A524	801230	3STS+8BQBC, TAPPING SCREW			
A631	27170261	BOTTOM BOARD	U006	1A252565-3	NASW-3565-3, KEY SWITCH PC BOARD ASS'Y
A632	27175254	BOTTOM LEG			
A810	28324101	KNOB (POW)	U007	1A252566-3	NAETC-3566-3, EQUALIZER CIRCUIT PC BOARD ASS'Y [D]
A811	28324251	KNOB (SOR)			
A812	28324252A	KNOB (TON)	U007	1A252566-3A	NAETC-3566-3A, EQUALIZER CIRCUIT PC BOARD ASS'Y [P, W, Q]
A813	28324250	KNOB (VOL)			
Q527, Q528	2201803 OR	2SC3857-O OR	U008	1A252567-3	NAAF-3567-3, SELECTOR SWITCH CIRCUIT PC BOARD ASS'Y [D]
	2201804 OR	2SC3857-Y OR			
	2201806	2SC3857-P, TRANSISTOR	U008	1A252567-3A	NAAF-3567-3A, SELECTOR SWITCH CIRCUIT PC BOARD ASS'Y [P, W, Q]
Q529, Q530	2201793 OR	2SA1493-O OR			
	2201794 OR	2SA1493-Y OR			
	2201796	2SA1493-P, TRANSISTOR	U009	1A252568-3	NAPS-3568-3, POWER SWITCH CIRCUIT PC BOARD ASS'Y [D]
△ T901	2300418	NPT-1029D, POWER TRANSFORMER [D]			
△ T901	2300629	NPT-1030P, POWER TRANSFORMER [P]	U009	1A252568-3A	NAPS-3568-3A, POWER SWITCH CIRCUIT PC BOARD ASS'Y [P]
△ T901	2300420	NPT-1030DG, POWER TRANSFORMER [W]	U009	1A252568-3B	NAPS-3568-3B, POWER SWITCH CIRCUIT PC BOARD ASS'Y [W]
△ T901	2300445	NPT-1030Q, POWER TRANSFORMER [Q]	U009	1A252568-3C	NAPS-3568-3C, POWER SWITCH CIRCUIT PC BOARD ASS'Y [Q]
△ P901	253123 OR	AS-UC-6 #18 OR	U010	1A252569-3	NAETC-3569-3, VOLUME CONTROL CIRCUIT PC BOARD ASS'Y
	253136 OR	AS-UC-6 #18 OR			
	253140 OR	AS-UC-6 #18 OR	U011	1A252570-3	NAETC-3570-3, BUS TERMINAL PC BOARD ASS'Y [D]
	253146 OR	AS-UC-6 #18 OR			
	253161	AS-UC-6 #18, POWER SUPPLY CABLE [D]	U011	1A252570-3A	NAETC-3570-3A, BUS TERMINAL PC BOARD ASS'Y [P, W, Q]
△ P901	253149	AS-CEE, POWER SUPPLY CABLE [P]	U012	1A252571-3	NAETC-3571-3, VIDEO TERMINAL PC BOARD ASS'Y [D]
			U012	1A252571-3A	NAETC-3571-3A, VIDEO TERMINAL PC BOARD ASS'Y [P, W, Q]

REF.NO.	PART NO.	DESCRIPTION
U013	1A252572-3	NADIS-3572-3, VOLUME IN- DICATOR PC BOARD ASS'Y

NOTE: [D]: ONLY 120V MODEL
[P]: ONLY 230V MODEL
[Q]: ONLY 240V MODEL
[W]: ONLY 120V/220V MODEL
[A]: ONLY AUSTRALIAN MODEL
[B]: ONLY BRITISH MODEL

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

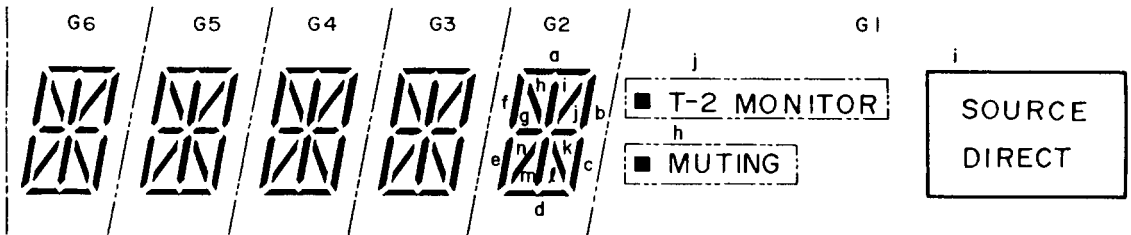
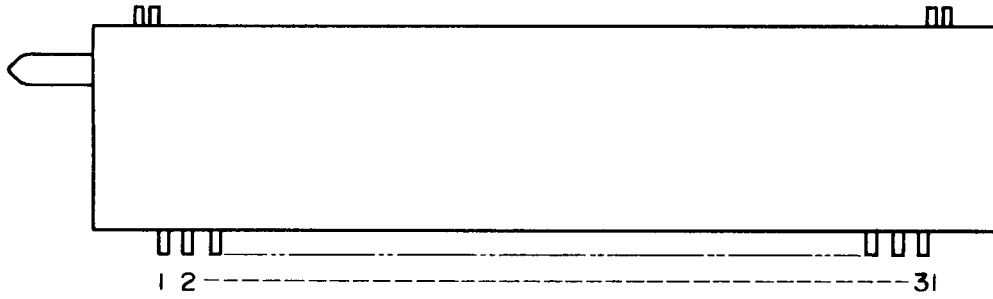
LC6538D (Micro computer)



LC6538D

Pin No.	Pin name	Symbol	Function
1	T13/S10	SK	Segment output terminals. Active: "H".
2	T12/S11	S1	
3	T11	DISPLAY	Display control output terminal. "H" when display is illuminated.
4	I10	DIRECT	Direct display output terminal. "H" when direct is on.
5	T9	FM	FM control output terminal (receiver only). "H" when set to FM. Controls the automatic reception mode display.
6	T8	D9	Digit output terminals. Active: "H". Key scan output terminals.
7	T7	D8	
8	T6	D7	
9	T5	D6	
10	T4	D5	
11	T3	D4	
12	T2	D3	
13	T1	D2	
14	T0	D1	
15	V _{DD}	V _{DD}	Power supply terminal (+5V)
16	OSC1	OSC1	Main system clock terminals. Connected to 4 MHz ceramic oscillator. The system clock mode is equivalent to the main clock 1/2 mode (cycle time: 21s).
17	OSC2	OSC2	
18	V _{SS}	V _{SS}	Ground terminal.
19	TEST	TEST	LSI test terminal. Connected to V _{SS} .
20	RES	RES	Reset input terminal. Active: "L".
21	X1	X1	Sub-clock terminals. Not used. X1 terminal is connected V _{DD} .
22	X2	X2	
23	PC0	LOCAL	Automatic reception mode display output terminals. Active: "L". "L" when in automatic reception mode (receiver only). (The settings for DX and LOCAL as well as AUTO and MONO are always the reverse of one another.) All are always "L" for amplifier.
24	PC1	DX	
25	PC2	AUTO	
26	PC3	MONO	
27	PD0	POWER	POWER signal output terminal. "H" when ON.
28	PD1	RELAY	Speaker relay control output terminal. Active "H".
29	PD2	VDP	Video signal control output terminals. Active: "H".
30	PD3	VDP	
31	PA0	K0	Key input terminals. Active: "H".
32	PA1	K1	
33	PA2	K2	
34	PA3	K3	
35	PB0	SD	Station detect input terminal (receiver only). Active: "L". Turns off auto tuning.
36	PB1	STEREO	Stereo broadcast detect terminal. Active: "L". Controls "STEREO" indication (receiver only).
37	PB2	RF IN	RF input terminal (receiver only). DX when "H".
38	PB3	REC/AMP	Initial setting input terminals.
39	PE0/VREF0	BACK	
40	PE1/VREF1	PHONO	PHONO control output terminal. "L" when selector is set to PHONO.
41	PE2/START	AUTO/MONO/ TAPE-2	(1) Receiver: AUTO/MONO switching output terminal. "L" when AUTO (receiver only). (2) Amplifier: TAPE-2 control output terminal. "L" when TAPE-2 is on.
42	PF0/SI0	SEL	Output terminal connected to analog switch LC7821 CE terminal.
43	PF1/SO0	DATA	Output terminal connected to DATA terminal of PLL LM7001 and D1 terminal of switch LC7821.
44	PF2/SCK0	CL	Output terminal connected to CL terminals of PLL LM7001 and switch LC7821.
45	PF3/INT0	PLL	Receiver: output terminal connected to CE terminal of PLL LM7001.
46	PC0/S11	DIRECT	DIRECT control output terminal. Active: "L".
47	PG1/SO1	INP MUT	INPUT selector muting output terminal. Active: "H".
48	PG2/SCK1	REC MUT	Record output muting output terminal. Active: "H".
49	PG3/INT1	POFF	Power off sensor input terminal. Active: "L". "L" shorter than 100μs is ignored.
50	PH0/DAC0	TU MUT	Tuner muting output terminal (receiver only). Active: "H".
51	PH1/DAC1	PROTECT	Protect operation sensor input terminal. "H" during protect operation. "H" shorter than 100μs is ignored. Controls RELAY output.
52	PH2/SQR	SYS IN	System code input terminal. Active: "H".
53	PH3/HCNT	SYS OUT/ SYS EN	System code output terminal. Active: "L". Becomes initial setting input terminal SYS EN when power is turned on.
54	S0	Sa	Segment output terminals. Active: "H".
55	S1	Sb	
56	S2	Sc	
57	S3	Sd	
58	S4	Se	
59	S5	Sf	
60	S6	Sg	
61	S7	Sh	
62	VP	VP	Power supply terminal for pull down resistance.
63	T15/S8	Si	Segment output terminals. Active: "H".
64	T14/S9	Sj	

CPF3027GR (Fluorescent indicator tube)



Pin No.	1	2	3	4	5	6	7	8	9	10	11
Connection	F	F	NP	G6	NC	f	G5	a	b	G4	l

Pin No.	12	13	14	15	16	17	18	19	20	21	22
Connection	G3	d	n	G2	m	c	G1	e	h	k	g

Pin No	23	24	25	26	27	28	29	30	31
Connection	G1	j	i	NC	NC	G1	NP	F	F

F: Filament G: Grids P: Anode
 NP: No pin NC: Non connection

PRINTED CIRCUIT BOARD PARTS LIST

MAIN CIRCUIT PC BOARD (NAAF-3547-5, NAAF-3547-5A) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q501, Q502	2212285 or 2212286	2SC2878-A or 2SC2878-B
Q503-Q506	2211455 or 2210803	2SA1015-GR or 2SA733-P
Q509, Q510	2211732 or 2211733	2SC1845-F or 2SC1845-E
Q511, Q512	2211255 or 2210746	2SC1815-GR or 2SC945A-P
Q513, Q514	2211353 or 2211354	2SA949-O or 2SA949-Y
Q515, Q516	2211633 or 2211634	2SC2229-O or 2SC2229-Y
Q517, Q518	2211255 or 2210746	2SC1815-GR or 2SC945A-P
Q519, Q520	2211633 or 2211634	2SC2229-O or 2SC2229-Y
Q521, Q522	2211353 or 2211354	2SA949-O or 2SA949-Y
Q523, Q524	2201643 or 2201644	2SC3298-O or 2SC3298-Y
Q525, Q526	2201633 or 2201634	2SA1306-O or 2SA1306-Y
Q531, Q532	2211633 or 2211634	2SC2229-O or 2SC2229-Y
Q651	2211455 or 2213074	2SA1015-GR or 2SA933-R
Q652	2211792 or 2211793	2SA992-F or 2SA992-E
Q653, Q654	2211732 or 2211733	2SC1845-F or 2SC1845-E
Q655	2211255 or 2211183	2SC1815-GR or 2SC1740-R
Q911, Q913	2201754 or 2201755	2SD1913-R or 2SD1913-S
Q912	2201764 or 2201765	2SB1274-R or 2SB1274-S
	Diodes	
D503-D508 D652	223163	1SS133
D911-D914	22380003	1N5402F
D915	224451602 or 224451602	05AZ16Y or MTZ16B, Zener
D916	224152003 or 224452003	05AZ20Z or MTZ20C, Zener
D918	224151601 or 224451601	05AZ16X or MTZ16A, Zener
D919	224450623	MTZ6.2C, Zener
D931, D932	223896	1N4003F
D933	224450512	MTZ5.1B, Zener
	Capacitors	
C501, C502	354741009	10 μ F, 16V, Elect.
C503, C504	372123314	330 pF, 50V, Styrene
C505, C506 C653	354722219	220 μ F, 6.3V, Elect.
C511, C512	354780229	2.2 μ F, 50V, Elect.
C513, C514	372121024	1000 pF, 50V, Styrene
C529, C530 C533, C534	371124734	0.047 μ F, 50V, Mylar
C535, C536	354790479	4.7 μ F, 100V, Elect. [D]
C535, C536	354771019	100 μ F, 63V, Elect. [P, W, Q]
C652	354790479	4.7 μ F, 100V, Elect.
C654	354780109	1 μ F, 50V, Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
C911, C912	3504237	10000 μ F, 71V, Elect.
C913	354772219	220 μ F, 63V, Elect. [D]
C913	354782219	220 μ F, 50V, Elect. [P, W, Q]
C914	354782219	220 μ F, 50V, Elect.
C915, C916	354761019	100 μ F, 35V, Elect.
C919, C921	354742219	220 μ F, 16V, Elect.
C920	354754719	470 μ F, 25V, Elect.
C922	354772219	220 μ F, 63V, Elect. [D]
C922	354782219	220 μ F, 50V, Elect. [P, W, Q]
C923	354741019	100 μ F, 16V, Elect.
C925	354722219	220 μ F, 6.3V, Elect.
C931	354742209	22 μ F, 16V, Elect.
	Resistors	
R527, R528	442522704	27 Ω , 1/2W, Metal oxide film
R529, R530	5210062	N06HR4.7KBD, Semi-fixed
R535, R536	442529104	91 Ω , 1/2W, Metal oxide film
R537, R538	442521024	1 k Ω , 1/2W, Metal oxide film
R539, R540	442521014	100 Ω , 1/2W, Metal oxide film
R541-R544	442520224	2.2 Ω , 1/2W, Metal oxide film
R545, R546	441720104	1 Ω , 2W, Metal oxide film
R547-R550	4000080 or 4500022	0.47 Ω , 5W or 0.47 Ω , 5W, Metal plate
R559, R560	442520824	8.2 Ω , 1/2W, Metal oxide film
R564, R565	442520224	2.2 Ω , 1/2W, Metal oxide film
R658	441721224	1.2 k Ω , 2W, Metal oxide film [D]
R658	441729114	910 Ω , 2W, Metal oxide film [P, W, Q]
R911, R912	441722414	240 Ω , 2W, Metal oxide film
R913	442525624	5.6 k Ω , 1/2W, Metal oxide film [D]
R913	442524324	4.3 k Ω , 1/2W, Metal oxide film [P, W, Q]
R914	442525124	5.1 k Ω , 1/2W, Metal oxide film [D]
R914	442523624	3.6 k Ω , 1/2W, Metal oxide film [P, W, Q]
R915	441723914	390 Ω , 2W, Metal oxide film
R917	441621114	110 Ω , 1W, Metal oxide film
R918, R919	441721214	120 Ω , 2W, Metal oxide film
R920	442527524	7.5 k Ω , 1/2W, Metal oxide film [D]
R920	442525624	5.6 k Ω , 1/2W, Metal oxide film [P, W, Q]
R931	441621824	1.8 k Ω , 1W, Metal oxide film [D]
R931	441621524	1.5 k Ω , 1W, Metal oxide film [P, W, Q]
R932	442523914	390 Ω , 1/2W, Metal oxide film
R941	442522294	0.22 Ω , 1/2W, Metal oxide film
	Relay	
RL501	25065339	NRL-2P5A-DC24V-047
	Jumper sockets	
JL302a, JL901a	25050267	NSCT-3P95
JL903a		
JL902a	25050272	NSCT-8P100
	Radiator	
	27160209	RAD-67
	Bracket	
	27141059	(Ground)

SPEAKER SWITCH PC BOARD (NASW-3548-5) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L571, L572	231134	S-0.8E

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R571, R572	442520564	5.6 Ω, 1/2W, Metal oxide film
R573, R574	441623914	390 Ω, 1W, Metal oxide film
	Switch	
S571	25030290	NRSF-144-25SS
	Stereo jack	
P572	25045183	HLJ-4318-01-3020

SPEAKER TERMINAL PC BOARD (NAETC-3549-5, NAETC-3549-5A) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Terminal	
P571	25060134	NTM-8PDMN-063

SYSTEM CONTROL CIRCUIT PC BOARD (NADG-3564-3, NADA-3564-3A) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Photo receiving unit	
U701	24130003	GP1U50XS
	ICs	
Q301	22240014	μPC4570HA
Q305, Q307	22240050	μPC4570C
Q701	22240319	LC6538D-4297
Q706	22240243	LC6527C-3987
	Transistors	
Q702, Q705	2211183 or 2211255	2SC1740-R or 2SC1815-GR
Q704	2211183 or 2211255	2SC1740-R or 2SC1815-GR [D]
Q703	2213074 or 2211455	2SA933-R or 2SA1015-GR
Q707	2211504	2SA950-Y
	FL tube	
Q708	212074	CPF3027GR
	Diodes	
D701-D703 D706, D721 D722, D724 D704	223163	1SS133
D705, D707 D723	224150563 or 224450563 223145	05AZ5.6Z or MTZ5.6C, Zener 1S2076
D725	224150562 or 224450562 225141	05AZ5.6Y or MTZ5.6B, Zener SEL2213C, LED
	Osc. element	
X701, X702	3010150	CST4.00MGW
	Capacitors	
C301	354780229	2.2 μF, 50V, Elect.
C302	371121124	1100 pF, 50V, Mylar
C305	371121234	0.012 μF, 50V, Mylar
C307, C309 C310, C313 C314, C317 C318	354780229	2.2 μF, 50V, Elect.
C315, C316 C319, C320 C703, C721	371128224 354780109	8200 pF, 50V, Mylar 1 μF, 50V, Elect.
C321, C322 C325, C326 C701	371123934 371122234 3000051	0.039 μF, 50V, Mylar 0.022 μF, 50V, Mylar 0.047 F, 5.5V, Super
C705 C706, C707	354780339 354761009	3.3 μF, 50V, Elect. 10 μF, 35V, Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
C709	354781009	10 μF, 50V, Elect.
C723	354741009	10 μF, 16V, Elect.
	Resistors	
R325	5104228	N11RHC250KWT22Z, Variable
R333, (R334) R347, (R348) R791	5104229 442525104	N14RHC100KWT22Z, Variable 51 Ω, 1/2W, Metal oxide film [D, P, W]
	Switches	
S301, S302 S701	25035588 25035548	NPS-142-L550 NPS-111-S510
	Holder	
	27190659B 27190697	(FL) (LED-ST)

KEY SWITCH PC BOARD (NASW-3565-3) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D731, D732	223163	1SS133
	Switches	
S702- S709	25035548	NPS-111-S510

EQUALIZER CIRCUIT PC BOARD (NAETC-3566-3, NAETC-3566-3A) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q101, Q102 Q401	22240191 222840661	NJM4565DD 4066B
	Transistors	
Q402 Q404-Q406 Q403	2211255 or 2211183 2211455 or 2213074	2SC1815-GR or 2SC1740-R 2SA1015-GR or 2SA933-R
	Capacitors	
C103, C104 C105, C106 C401, C403 C109, C110 C117, C118 C111, C112 C113, C114 C115, C116 C119, C120 C402, C404 C406	372121014 354741009 354721019 372121814 371126224 371121824 354742219 354724719 354741029	100 pF, 50V, Styrene [P, W, Q] 10 μF, 16V, Elect. 100 μF, 6.3V, Elect. 180 pF, 50V, Styrene 6200 pF, 50V, Mylar 1800 pF, 50V, Mylar 220 μF, 16V, Elect. 470 μF, 6.3V, Elect. 1000 μF, 16V, Elect.
R421	442526204	62 Ω, 1/2W, Metal oxide film
	Resistor	
P203 P401	25045326 25045205	NPJ-6PDBL182 NPJ-3PDYE085
	Socket ass'y	
P402	2000971	NSAS-4P923
	Jumper socket	
JL401a	25050270	NSCT-6P98

SELECTOR SWITCH CIRCUIT PC BOARD (NAAF-3567-3, NAAF-3567-3A) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q201	22240280	LC7821N

CIRCUIT NO.	PART NO.	DESCRIPTION
Q207, Q209 Q251	22240025 22240050	LC4966 μ PC4570C
Transistors		
Q203, Q204	2212285 or 2212286	2SC2878-A or 2SC2878-B
Q205, Q206	2211255 or 2211183	2SC1815-GR or 2SC1740-R
Q801, Q804 Q805	2213074 or 2211455	2SA933-R or 2SA1015-GR
Q802, Q803 Q806	2211183 or 2211255	2SC1740-R or 2SC1815-GR
Diodes		
D801, D802	224150562 or 224450562	05AZ5.6Y or MTZ5.6B, Zener
Capacitors		
C211-C214 C251-C254 C811	354780229	2.2 μ F, 50V, Elect.
C813, C816 C814	354784709 354780109	47 μ F, 50V, Elect. 1 μ F, 50V, Elect.
Terminals		
P201, P202	25045326	NPJ-6PDBL-182
Jumper sockets		
JL204a, JL301a JL701a	25050267 25050270	NSCT-3P95 NSCT-6P98
Switch		
S201	25065286	NSS-22112

POWER SWITCH CIRCUIT PC BOARD (NAPS-3568-3, NAPS-3568-3A, NAPS-3568-3B) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
D905	223163	1SS133 [D, P, W]
Δ C901, C902	3500065A	0.01 μ F, AC400V/125V, IS
Δ S901	25035550	NPS-111-L512P
	25060092	NTM-1S33
	25065269	NRL-1P5A-DC12-36ZA [D]
Δ RL901 Δ RL901	25065248	NRL-1P15A-DC12-29ZA [P, W]
	250113	SN5051 [D, W]
Δ F901a Δ F902a Δ F903a	25050065 25050065	YSH4037 [P, W, Q] YSH4037 [P]

VOLUME CONTROL CIRCUIT PC BOARD (NAETC-3569-3) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
Q751	22240322	LB1639
Diodes		
D752, D753	223163	1SS133
Capacitors		
C751	354741009	10 μ F, 16V, Elect.
C752	354780339	3.3 μ F, 50V, Elect.
Resistors		
R361, (R362)	5104234	N16RGM50KA30F, Variable

CIRCUIT NO.	PART NO.	DESCRIPTION
P351	Socket ass'y 2000635A	NSAS-4P591
	Plate 27141059,	

BUS TERMINAL PC BOARD (NAETC-3570-3, NAETC-3570-3A) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
P701	Mini jack 25045172	HSJ-1003-01-020

VIDEO TERMINAL PC BOARD (NAETC-3571-3, NAETC-3571-3A) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
P204	Terminal 25045334	NPJ-3PDBL186

VOLUME INDICATOR PC BOARD (NADIS-3572-3) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
D751	Diode 225141	SEL2213C, LED
	Holder 27190545	(LED)

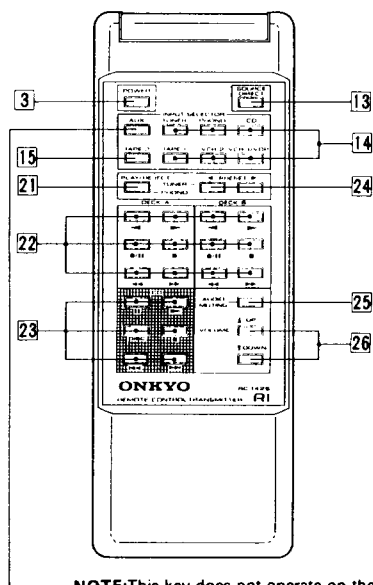
POWER INPUT TRANSISTOR PC BOARD (NAETC-4121-5) PART LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
Q507, Q508	Transistors 2213677 or 2213678	2SC3067-G or 2SC3067-H
P501, P502	Plugs 25055330	NPLG-5P313

NOTE [D]: Only 120V model
[P]: Only 230V model
[W]: Only 120V/220V model
[Q]: Only 240V model

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

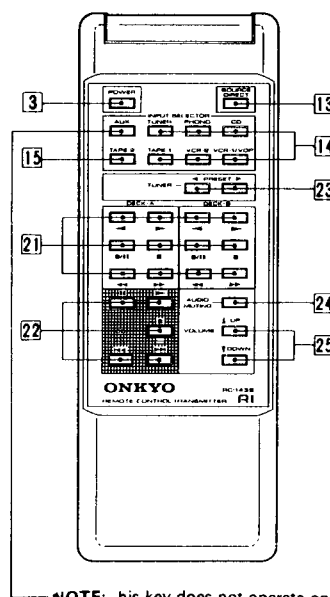
Remote control transmitter controls (RC-142S)



NOTE: This key does not operate on the A-RV400.

- 21. Phono operation key (PLAY/REJECT)
- 22. Tape operation keys (DECK-A, DECK-B)
REVERSE PLAY, FORWARD PLAY, REC PAUSE,
STOP, FAST REWIND, FAST FORWARD
- 23. CD operation key (CD)
PAUSE, PLAY, STOP, DISC, UP, DOWN
- 24. Tuner operation keys (PRESET)
- 25. Audio muting keys (AUDIO MUTING)
- 26. Volume keys (UP, DOWN)

Remote control transmitter controls (RC143S)



NOTE: his key does not operate on the A-RV400.

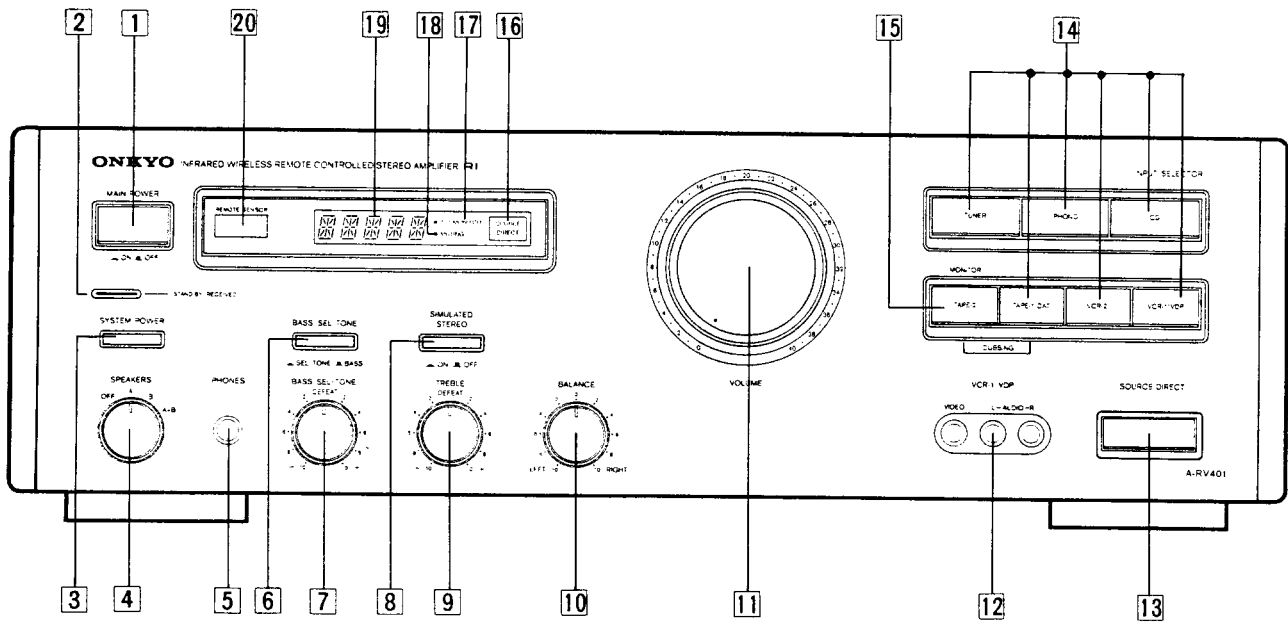
- 21. Tape operation keys (DECK-A, DECK-B)
REVERSE PLAY, FORWARD PLAY, REC PAUSE,
STOP, FAST REWIND, FAST FORWARD
- 22. CD Operation keys (CD)
PAUSE, PLAY, STOP, DOWN, UP
- 23. Tuner operation keys (PRESET)
- 24. Audio muting key (AUDIO MUTING)
- 25. Volume keys (UP, DOWN)

PARTS LIST OF PACKING

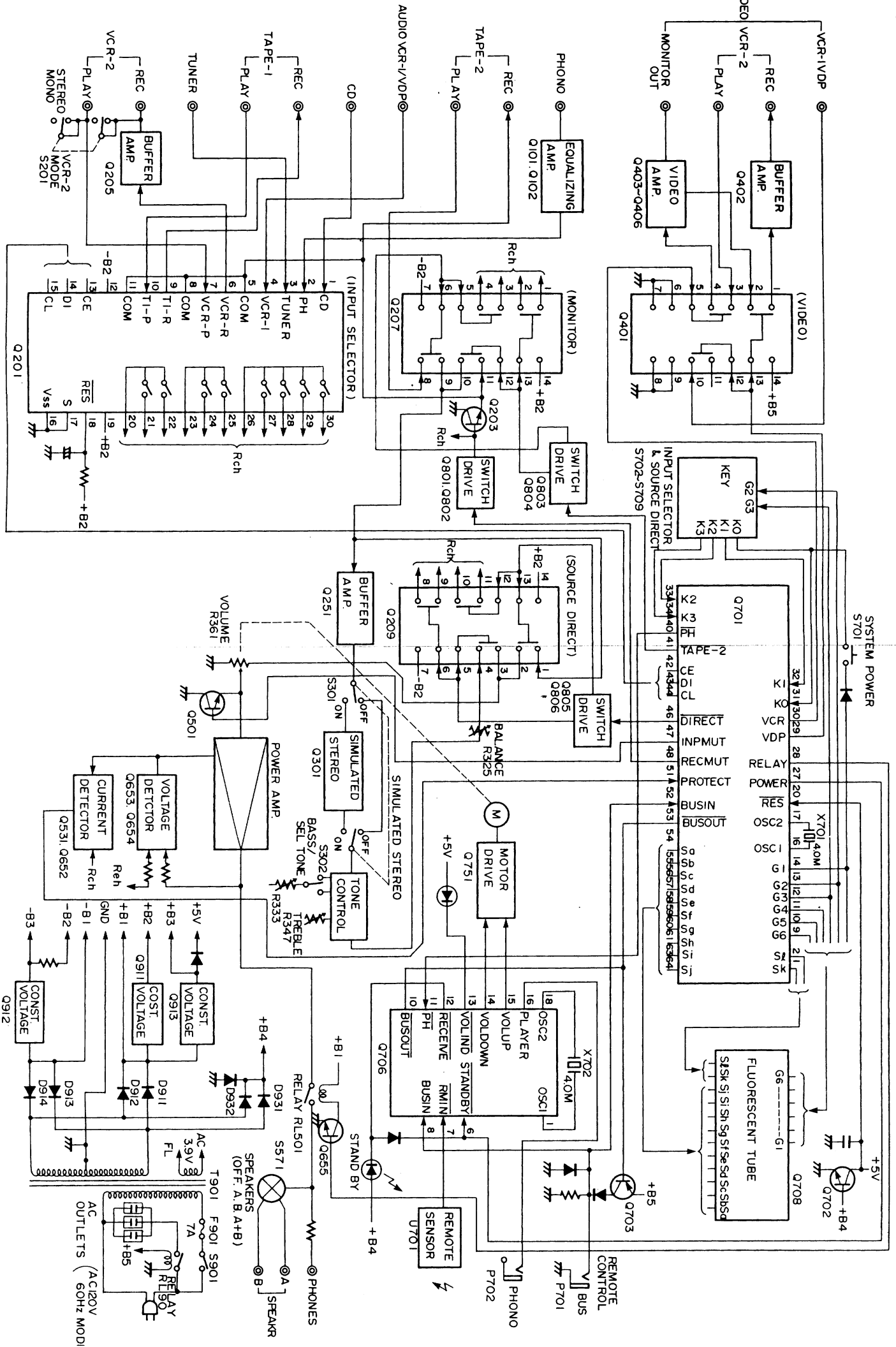
REF. NO.	PART NO.	DESCRIPTION
A851	29052156	MASTER CARTON BOX
A852	29091448B	PAD, LEFT
A853	29091449B	PAD, RIGHT
A854	261504	W=30 mm, PAPER TAPE
A865	29100033A	POLY-VINYL BAG
A866	282301	SEALING HOOK
A867	29110071-1	W=50 mm, DAMPLON TAPE
A868	29360778	LABEL (FLASH) [N]
	28330079	CAP (SPEAKER) [F]
ACCESSORY BAG ASS'Y		
A901	29341586	INSTRUCTION MANUAL [D]
	29341627	INSTRUCTION MANUAL [C]
	29341588	INSTRUCTION MANUAL [P, W, Q]
A902	291000097	350 x 250, POLY-VINYL BAG
A903	24140142A	RC-142S, REMOTE CONTROL UNIT [D]
	24140143	RC-143S, REMOTE CONTROL UNIT [P, W, Q]
A904	3010054	UM-3, TOW BATTERIES
A905	2010200	2.5 MINI PLUG
	29365019	WARRANTY CARD [N]
	29365024A	WARRANTY CARD [F]
	29365029	WARRANTY CARD [A]
	29100107	POLY-VINYL BAG [F]
	29358002H	SERVICE STATION LIST [N]
	25055018	CV-K-1, CONVERSION PLUG [W]

NOTE: [D]: ONLY 120V MODEL
[P]: ONLY 230V MODEL
[Q]: ONLY 240V MODEL
[W]: ONLY 120V/220V MODEL
[N]: ONLY U.S.A. MODEL
[C]: ONLY CANADIAN MODEL
[F]: ONLY FRENCH MODEL
[A]: ONLY AUSTRALIAN MODEL

FRONT PANEL FACILITIES

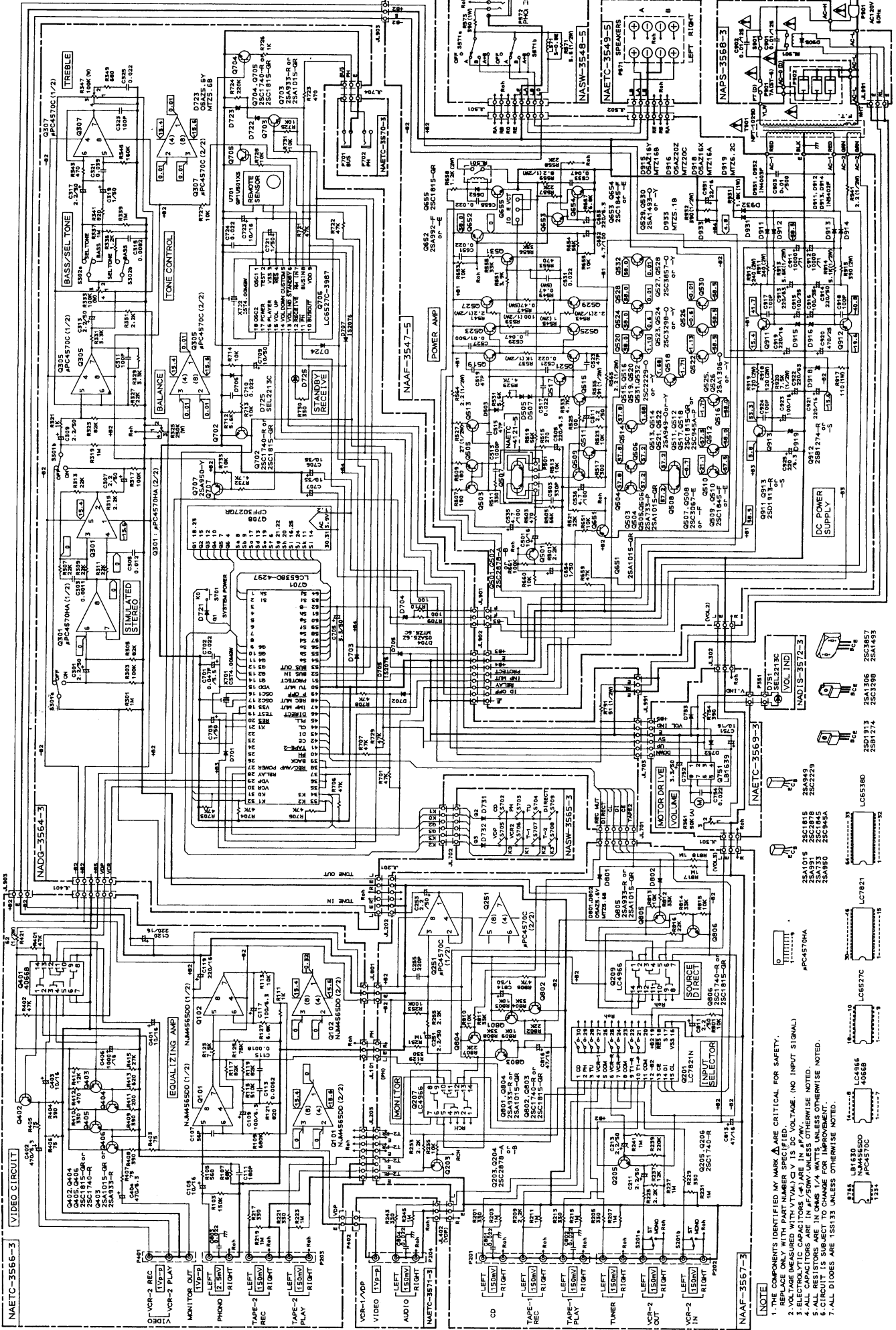


1. Main power switch (MAIN POWER)
2. Stand-by/Received indicator
3. System power button (SYSTEM POWER)
4. Speaker selector (SPEAKERS)
OFF, A, B, A+B
5. Headphone jack (PHONES)
6. Bass/Selective tone switch (BASS/SEL-TONE)
BASS, SEL-TONE
7. Bass control/Selective tone control knob (BASS/SEL-TONE)
8. Simulated stereo switch (SIMULATED STEREO)
9. Treble control knob (TREBLE)
10. Balance control knob (BALANCE)
11. Volume control knob (VOLUME)
12. Video cassette recorder or Video disk player input jack (VCR-1/VDP)
13. Source direct button (SOURCE DIRECT)
14. Input selector buttons (INPUT SELECTOR)
Audio selectors ----- TUNER, PHONO, CD, TAPE-1/DAT
Video selectors ----- VCR-1/VDP, VCR-2
15. Tape monitor button (TAPE-2/MONITOR)
16. Source direct indicator
17. T-2 Monitor indicator
18. Muting indicator
19. Input selector display
20. Remote control sensor



CHEMATIC DIAGRAM (120V Model)

A B C D E F G



- NOTE**
1. THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
 2. VOLTAGE MEASURED WITH VTVM. C.V IS DC VOLTAGE, (NO INPUT SIGNAL).
 3. ELECTROLYTIC CAPACITORS (C) ARE IN μF UNLESS OTHERWISE NOTED.
 4. ALL RESISTORS ARE IN Ω UNLESS OTHERWISE NOTED.
 5. ALL RESISTORS ARE IN $\text{k}\Omega$ UNLESS OTHERWISE NOTED.
 6. CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.
 7. ALL DIODES ARE 1N5133 UNLESS OTHERWISE NOTED.