


ONKYO® SERVICE MANUAL

Integrated Stereo Amplifier MODEL A-8700

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

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  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

Continuous Power Output:	2 × 160 watts at 4 ohms, 1 kHz (DIN) 2 × 115 watts at 8 ohms, 1 kHz (DIN) 105 watts per channel, min, RMS, at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.008% Total harmonic distortion.
Dynamic Power:	303 watts at 2 ohms, 235 watts at 4 ohms
Total Harmonic Distortion	0.008% at rated power 0.008% at 1 watt output
Intermodulation Distortion:	0.005% at rated power
Damping Factor:	150 at 8 ohms (1 kHz)
Input Sensitivity/ Impedance:	Phono (MM): 2.5 mV/50 kohms Phone (MC): 160 μ V/130 ohms CD: 150 mV/30 kohms TUNER: 150 mV/30 kohms Tape Play: 150 mV/30 kohms
Output Level/Impedance:	Tape Rec: 150 mV/1.0 kohms (Phono)
Phono Overload:	Phono (MM): 200 mV RMS. at 1 kHz. 0.012% THD.
Tone Control (Vol - 20dB):	BASS: ± 8 dB at 100 Hz TREBLE: ± 8 dB at 10 kHz
High Cut:	6 kHz (6 dB/Octave) (TREBLE min.)
Frequency Response:	CD, Tuner: 2 Hz - 50 kHz (+0, -1 dB)
RIAA Deviation:	Phono (MM): ± 0.3 dB, 20 Hz - 20 kHz
Subsonic Filler (MM SUBSONIC, MC SUBSONIC):	20 Hz (-3 dB, 6 dB/Oct.)
Signal to Noise Ratio (IHF-A):	Phono (MM): 94 dB (5.0 mV input) Phono (MC): 75 dB (0.5 mV input) CD (DIRECT): 107 dB
Muting:	-20 dB
Power Supply:	European models: AC220V, 50 Hz USA & Canadian models: AC 120V, 60 Hz U.K & Australia models: AC240V, 50 Hz Worldwide models: AC120 and 220V switchable, 50/60 Hz
Dimensions (W×H×D):	435 × 157 × 391 mm 17-1/8" × 6-3/16" × 15-3/8"
Weight:	13.5 kg, 29.8 lbs

Specifications and features are subject to change without notice.

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, Primary fuse (120V, 120V/220V models)
F902	252077 or 252077CC	4A-SE-EAK or 4A-SE-EAK Primary fuse (220V, 240V, 120V/220V models)

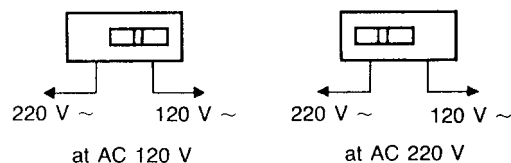
2. Insulation resistance measurement (Only U.S.A. model)

Connect the insulating-resistance tester between the plug of power supply cable and the terminal GND on the back panel.

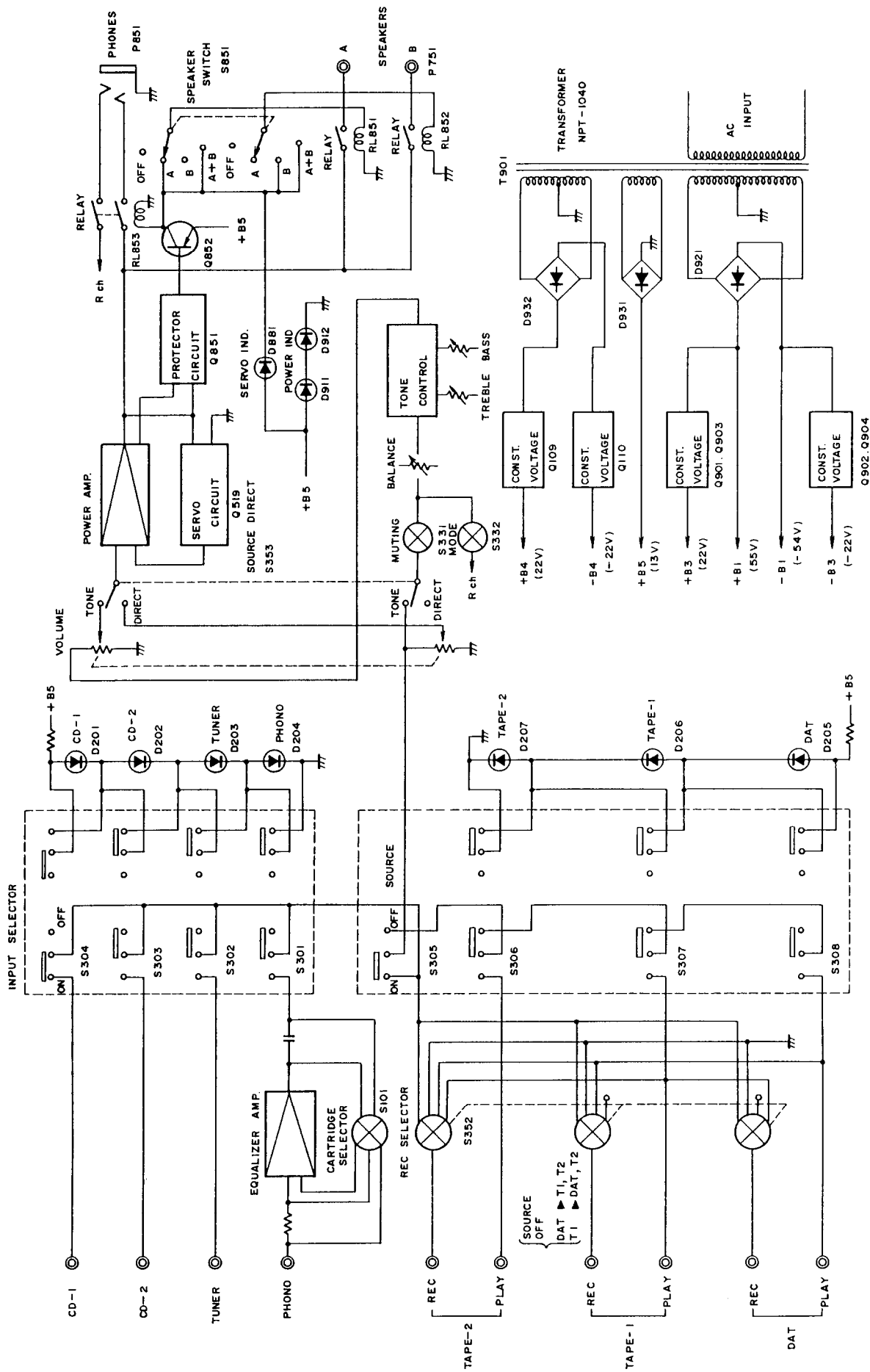
Specifications; More than 10 M Ω at 500V.

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 turning the power switch on. 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 turning the power switch on. Models without a voltage selector can only be used in areas where the power supply is the same as that of the unit.

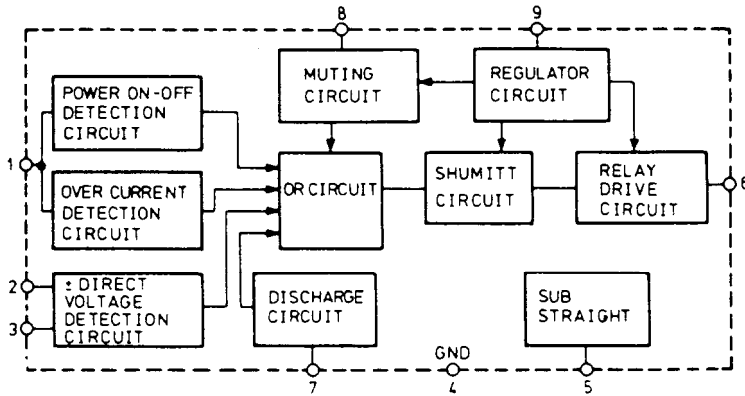


BLOCK DIAGRAM

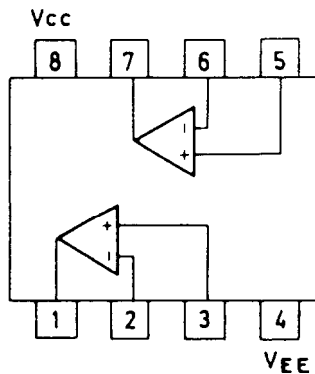


IC BLOCK DIAGRAM

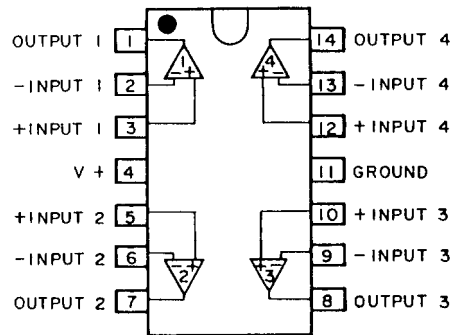
TA7317P (Protective circuit)



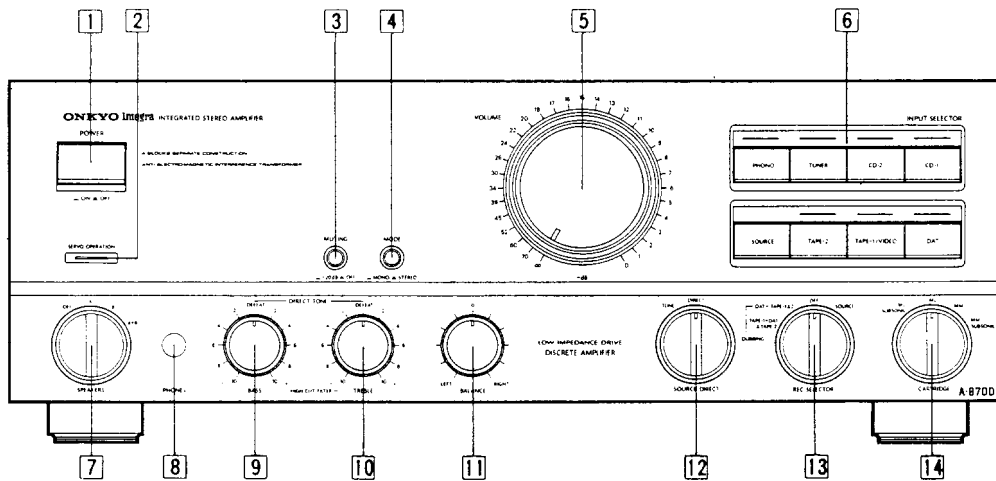
NJM4560DX (OP Amp.) NJM5532DD



NJM2902N (OP Amp)



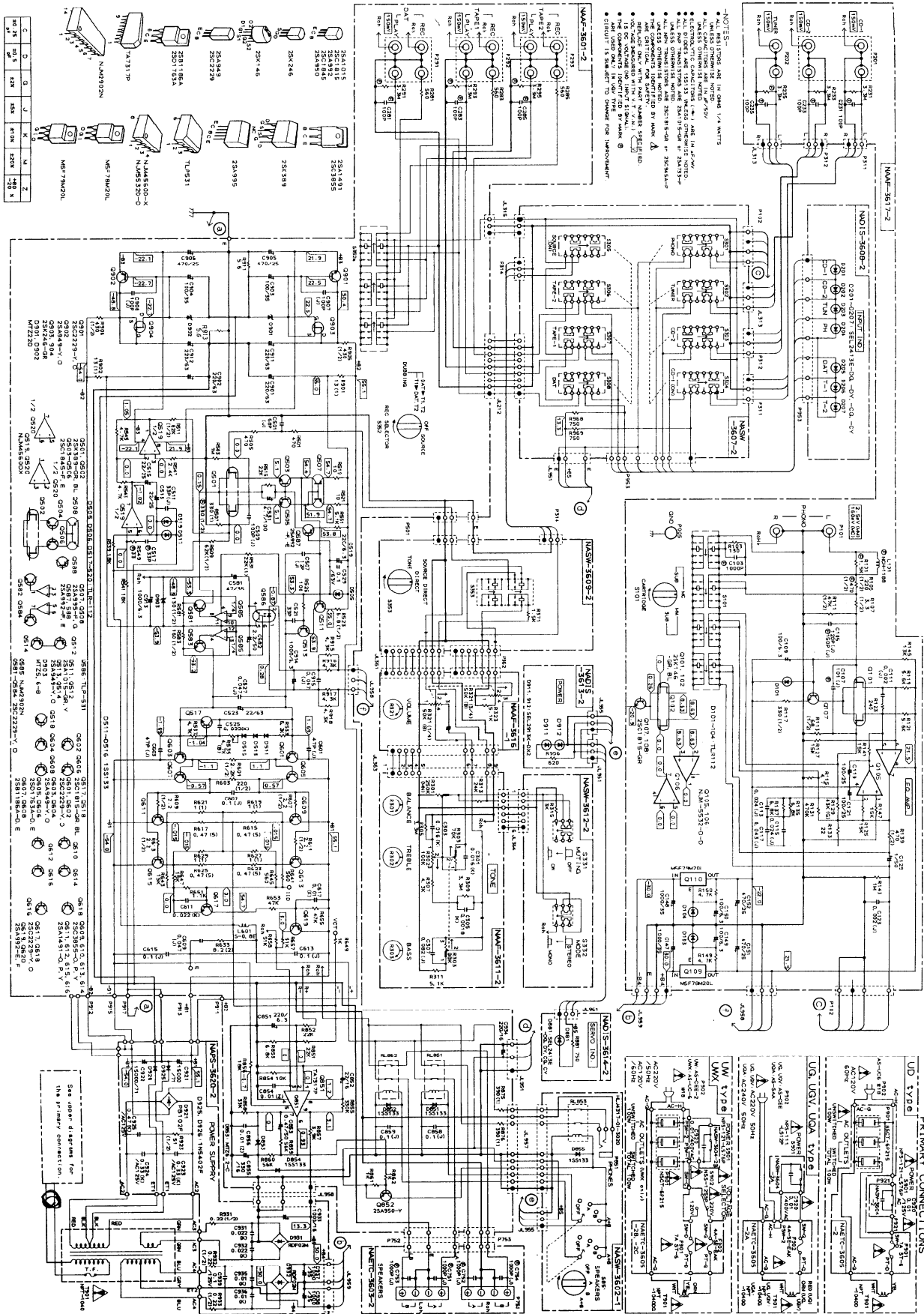
FRONT PANEL FACILITIES



1. Power switch (POWER)
2. Servo operation indicator (SERVO OPERATION)
3. Muting switch (MUTING)
4. Mode selector switch (MODE)
STEREO, MONO
5. Volume control (VOLUME)
6. Input selector and Indicators (INPUT SELECTOR)
PHONO, TUNER, CD-2, CD-1, SOURCE,
TAPE-2, TAPE-1/VIDEO, DAT
7. Speaker selector switch (SPEAKERS)
OFF, A, B, A+B
8. Headphone jack (PHONES)
9. Bass control (BASS)
10. Treble control (TREBLE)
11. Balance control (BALANCE)
12. Source direct switch (SOURCE DIRECT)
TONE, DIRECT
13. Recording source selector switch (REC SELECTOR)
TAPE-1→DAT & TAPE-2/DAT→TAPE-1 & TAPE
OFF
SOURCE (PHONO, TUNER, CD-1 or CD-2)
14. Cartridge selector switch (CARTRIDGE)
MC SUBSONIC, MC, MM, MM SUBSONIC

SCHEMATIC DIAGRAM

A B C D E F G H



C	D	E	F	G	H	J	K	L	M	N	Z
10	20	30	40	50	60	70	80	90	100	110	120

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

ONKYO CORPORATION

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 R535 (R635) so that the voltage at test point VCT-IID on the NAAF-3601 circuit board is $15\text{mV} \pm 5\text{mV}$.
- Note) Semi-fixed resistors enclosed in parentheses () are for the right channel.

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 SERVO indicator LED should light at the same time.
 - (3) The relay should turn OFF approximately 0.5 seconds after the power switch is turned OFF.
- 2) Check of DC detection and servo circuitry operation
 - (1) Turn the power on with no load.
 - (2) After the speaker relay turns ON, apply DC+200mV 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-200mV is applied.

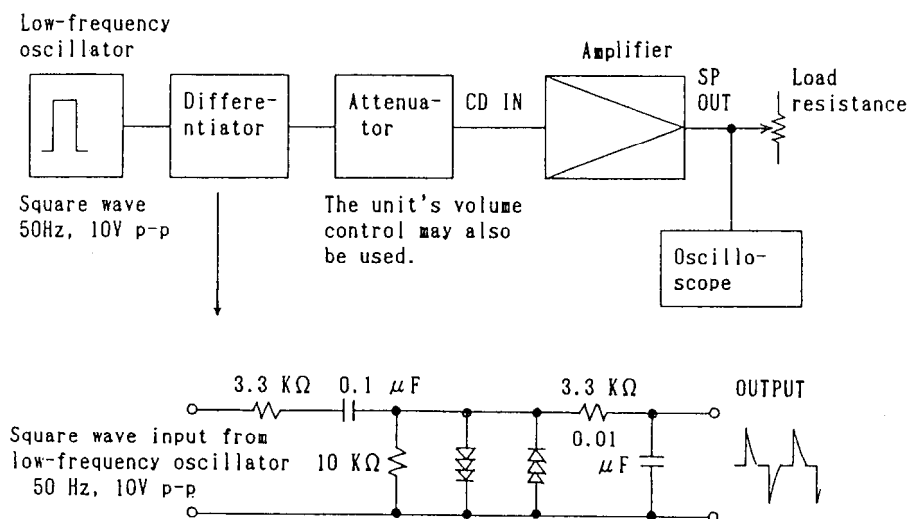
Note) Under no circumstances connect a load or short the speaker terminals when performing the above test.

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 35V p-p 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 1 minute.

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



CHASSIS-EXPLODED VIEW-PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
A001	27110504A	FRONT BRACKET	▲ S901	25035550	NPS-111-L512P, POWER SWITCH [G][A][B]
A002	27150273	SHIELD PLATE	▲ S902	25065123	NSS-1258P, SLIDE SWITCH [W]
A003	27121283A	BACK PANELL [D]	▲ C920	3500065A	0.01μF, AC400V/125V, CAPACITOR
A003	27121283-1A	BACK PANELL [G]			GROUND TERMINAL
A003	27121283-3A	BACK PANELL [W]			AS-UC-6 #18 or [D]
A003	27121283-5	BACK PANELL [A][B]	P005	25060044	AS-UC-6 #18 or [D]
A004	27300750	BUSHING (CABLE)	▲ P902	253123 or 253136 or 253140 or 253146	AS-UC-6 #18 or [D]
A006	27130579-1B (27130579B) (27190717)	BRACKET ASS'Y (LEFT) BRACKET (L) HOLDER (S)			AS-UC-6 #18, POWER SUPPLY CABLE [D]
A007	27270213	SPACER (PT)	▲ P902	253148 or 253150	AS-CEE or [G]
A008	27190607	KGLS-16S, HOLDER			AS-CEE, POWER SUPPLY CABLE [G]
A009	27130580-1A (27130580A) (27190717)	BRACKET ASS'Y (RIGHT) BRACKET (R) HOLDER (S)	▲ P902	253092-1A	AS-CEE-2, POWER SUPPLY CABLE [W]
A012	27160243	HEATSINK	▲ P902	253118	AS-SAA, POWER SUPPLY CABLE [A]
A013	27141334	BRACKET (H)	▲ P902	728320 or 728328	2-0.75BS16 BLK/GRY or [B]
A014	27130581	BRACKET (EQ)			2-0.75BS16 BLK/GRY, POWER SUPPLY CABLE [B]
A015	27141353	BRACKET (U)	▲ F901	252052	7A ST-6, FUSE [D][W]
A018	27273120	JOINT (S)	▲ F902	252077 or 252077CC	4A-SE-EAK or [G][W][A][B]
A019	838430088	SPACER	U001	1A181501-2	4A-SE-EAK, FUSE [G][W][A][B]
A025	830440109	4TTC+10CBC, TAP-TIGHT SCREW			NAAF-3601-2, MAIN CIRCUIT PC BOARD ASS'Y
A030	27175011C	CUSHION	U003	1A181503-2	NAETC-3603-2, SPEAKER TERMINAL PC BOARD ASS'Y
A301	28184441A	TOP COVER	U004	1A181504-2	NASW-3604-2, POWER SWITCH PC BOARD ASS'Y [D]
A302	28140020	t4×10×40, CUSHION	U004	1A181504-2A	NASW-3604-2A, POWER SWITCH PC BOARD ASS'Y [G][A][B]
A303	28140695	t1.5×25×240, CUSHION	U004	1A181504-2B	NASW-3604-2B, POWER SWITCH PC BOARD ASS'Y [W]
A304	28140972	t1.5×25×140, CUSHION	U005	1A181505-2	NAETC-3605-2, FUSE PC BOARD ASS'Y [D]
A305	28140877	t4×10×100, CUSHION	U005	1A181505-2A	NAETC-3605-2A, FUSE PC BOARD ASS'Y [G][A][B]
A308	1A181121 (28125204) (28125205) (27265182A) (27265185) (27265186) (27267608) (27267569A) (28323721B) (28198695) (28198719)	FRONT PANEL ASS'Y END CAP (L) END CAP (R) COSMETIC RING (VOL) COSMETIC RING (TONE) COSMETIC RING (SP) GUIDE (PUSH) GUIDE (POW) KNOB ASS'Y (SEL) FACET (POW) FACET (MUT)	U005	1A181505-2B	NAETC-3605-2B, FUSE PC BOARD ASS'Y [W]
A322	28199174	FILM	U006	1A181507-2	NASW-3607-2, INPUT SELECTOR SWITCH PC BOARD ASS'Y
A324	28199181	FILM	U007	1A181508-2	NADIS-3608-2, INPUT LED PC BOARD ASS'Y
A601	27170262B	BOTTOM BOARD	U008	1A181509-2	NASW-3609-2, SOURCE DIRECT SWITCH PC BOARD ASS'Y
A602	27175227 (28140949)	BOTTOM LEG FELT	U009	1A181516-1	NAAF-3616-1, VOLUME CONTROL PC BOARD ASS'Y
A603	28140761	CUSHION (BOTTOM BOARD)	U010	1A181511-2	NAAF-3611-2, TONE CONTROL CIRCUIT PC BOARD ASS'Y
A701	834430088	3TTS+8BBC, TAP-TIGHT SCREW	U011	1A181512-2	NASW-3612-2, MUTING/MODE SWITCH PC BOARD ASS'Y
A702	838440108	4TTB+10BBC, TAP-TIGHT SCREW	U012	1A181513-2	NADIS-3613-2, POWER LED PC BOARD ASS'Y
A802	28323760	KNOB (VOL)	U013	1A181514-2	NADIS-3614-2, SERVO LED PC BOARD ASS'Y
A803	28323549	KNOB (TONE)	U014	1A181517-2	NAAF-3617-2, EQUALIZER CIRCUIT PC BOARD ASS'Y
A804	28323763	KNOB (SP), SCREW UP TYPE	U015	1A181520-2	NAPS-3620-2, POWER SUPPLY PC BOARD ASS'Y
(A804)	28323762 (27180431)	KNOB (SP), INSERT TYPE SPRING (KNOB), INSERT TYPE	U016	1A181502-2	NASW-3602-2, SPEAKER SWITCH PC BOARD ASS'Y
A805	28323545-1	KNOB (PA)			
A806	28323175	KNOB (POW)			
Q609, Q610	2201703 or	2SC3855-O or			
Q613, Q614	2201706 or 2201704	2SC3855-P or 2SC3855-Y, TRANSISTOR			
Q611, Q612	2201693 or	2SA1491-O or			
Q615, Q616	2201696 or 2201694	2SA1491-P or 2SA1491-Y, TRANSISTOR			
▲ T901	2300460A	NPT-1040D, POWER TRANSFORMER [D]			
▲ T901	2300461A	NPT-1040G, POWER TRANSFORMER [G]			
▲ T901	2300462	NPT-1040DG, POWER TRANSFORMER [W]			
▲ T901	2300463A	NPT-1040Q, POWER TRANSFORMER [A][B]			
S101	25030312A	NRSF-104-20BU, CARTRIDGE SWITCH			
S352	25030314B	NRSF-104-20BU, REC-SELECTOR SWITCH			
▲ S901	25035614	NPS-121-L576P, POWER SWITCH [D][W]			

NOTE [D]: ONLY 120V MODELS
[G]: ONLY 220V MODELS
[W]: ONLY 120V/220V MODELS
[A]: ONLY AUSTRALIAN MODELS
[B]: ONLY BRITISH MODELS

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

PRINTED CIRCUIT BOARD PARTS LIST

MAIN CIRCUIT PC BOARD (NAAF-3601-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION	CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs		C529, C530	374791044	0.1 μ F, 63V, Film (TF)
Q519, Q520	222570	NJM4560DX	C607, C608		
Q585	22240040	NJM2902N	C613~C616		
Q851	222584	TA7317P	C531, C532	354790479	4.7 μ F, 100V, Elect.
	Transistors		C581, C582	354764709	47 μ F, 35V, Elect.
Q501, Q502	2212805 or 2212806	2SK389GR or 2SK389BL	C611, C612	379122235	0.022 μ F, 50V, Film (DEW)
Q503~Q506	2211733 or 2211732	2SC1845E or 2SC1845F	C617, C618	379121035	0.01 μ F, 50V, Film (DEW)
Q507, Q508,	2211515 or 2211516	2SA995F or 2SA995G	C851	354722219	220 μ F, 6.3V, Elect.
Q511, Q512	2211455 or 2211454	2SA1015GR or 2SA1015Y	C852	354742209	22 μ F, 16V, Elect.
Q513, Q514	2211354 or 2211353	2SA949Y or 2SA949O	C853	354784799	0.47 μ F, 50V, Elect.
Q517, Q518	2211255 or 2211256	2SC1815GR or 2SC1815BL	C855	354743319	330 μ F, 16V, Elect.
Q581~Q584	2211634 or	2SC2229Y or	C858, C859	374721044	0.1 μ F, 50V, Film (TF)
Q601, Q602	2211633	2SC2229O	C901, C902	354772219	220 μ F, 63V, Elect.
Q587, Q588	2211792 or 2211793	2SA992F or 2SA992E	C903, C904	354761019	100 μ F, 35V, Elect.
Q603, Q604	2211354 or 2211353	2SA949Y or 2SA949O	C905, C906	354751029	1000 μ F, 25V, Elect.
Q605, Q606	2202034 or 2202035	2SD1763AD or 2SD1763AE	C911, C912	354772219	220 μ F, 63V, Elect.
Q607, Q608	2202024 or 2202025	2SB1186AD or 2SB1186AE	C913	354721029	1000 μ F, 6.3V, Elect.
Q617, Q618	2211634 or 2211633	2SC2229Y or 2SC2229O	C914	391221027	1000 μ F, 6.3V, Elect. (MUSE)
Q619, Q620	2211792 or 2211793	2SA992F or 2SA992E	C915	374724734	0.047 μ F, 50V, Film (TF)
Q852	2211504	2SA950Y	C934	354742219	220 μ F, 16V, Elect.
Q901	2211634 or 2211633	2SC2229Y or 2SC2229O			
Q902	2211354 or 2211353	2SA949Y or 2SA949O	Resistors		
Q903, Q904	2211945	2SK246GR	R507, R508	441623614	360 Ω , 1W, Metal oxide film
	Photo coupler		R523, R524	442520684	6.8 Ω , 1/2W Metal oxide film
Q586	226007	TLP-531	R527, R528	441622234	22 k Ω , 1W, Metal oxide film
	Diodes		R535, R536	5210062 or 5210216	N06HR4.7KBD or N06HR5KBD, Semi-fixed
D505, D506	225251	TLR112, LED	R581, R582	442521314	130 Ω , 1/2W, Metal oxide film
D517~D520			R583, R584	442521614	160 Ω , 1/2W, Metal oxide film
D511~D516	223163	1SS133	R601, R602	442522224	2.2k Ω , 1/2W, Metal oxide film
D851, D852			R603, R604	442522214	220 Ω , 1/2W, Metal oxide film
D854			R607~R614	442520224	2.2 Ω , 1/2W, Metal oxide film
D853	224450623	MTZ6.2C, Zener	R615~R618	4000080	0.47 Ω , 5W, Metal plate
D901, D902	224452204	MTZ22D, Zener	R623~R626		
D903	224450562	MTZ5.6B, Zener	R619~R622	441620104	1 Ω , 1W, Metal oxide film
	Coils		R627~R630		
L601, L602	231134S	S-0.8E	R633, R634	441720824	8.2 Ω , 2W, Metal oxide film
	Capacitors		R641, R642	442525614	560 Ω , 1/2W, Metal oxide film
C501, C502	372126804	68 pF, 50V, Styrene	R645, R646		
C509, C510	372121014	100 pF, 50V, Styrene	R643, R644	442521534	15 k Ω , 1/2W, Metal oxide film
C511, C512	372123304	33 pF, 50V, Styrene	R647, R648		
C513~C516	391252207	22 μ F, 25V, Elect. (MUSE)	R875, R876	441623914	390 Ω , 1W, Metal oxide film
C519, C520	354722219	220 μ F, 6.3V, Elect.	R901, R902	441621304	13 Ω , 1W, Metal oxide film
C523, C524	354772209	22 μ F, 63V, Elect.	R905, R906	442524314	430 Ω , 1/2W, Metal oxide film
C525, C526	379122235	0.022 μ F, 50V, Film (DEW)			
C527, C528	374794734	0.047 μ F, 63V, Film (TF)	Switch		
C609, C610			S352a	25065367	NSS-64140, Slide
			Relay		
			RL851, RL852	25065316	NRL-2P7A-DC12-43
			Terminals		
			P291~P293	25045165	NPJ-4PDBL59
			Plug		
			P501a	25055133	NPLG-3P117
			Socket ass'y		
			P752	2009990003	NSAS-06P0007
			P753	2009990004	NSAS-06P0008
			Jumper socket		
			JL212	25050273	NSCT-9P101
			JL315, JL951	25050267	NSCT-3P95
			JL958		
			JL957	25050273	NSCT-9P101
			Bracket		
			27141059		
			27300877		Plate, bus

CIRCUIT NO.	PART NO.	DESCRIPTION
	Clamp	
	27301186	MSA-1606, Holder clamp

SPEAKER SWITCH PC BOARD (NASW-3602-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diode	
D855	223163	1SS133
	Switch	
S851	25030311A	NRSF-124-20BU
	Relay	
RL853	25065174	NRL-2P1A-DC12-09
	Stereo jack	
P851	25045164	HLJ4317-01-3020
	Shield plate	
	27150208	

SPEAKER TERMINAL PC BOARD (NAETC-3603-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Terminal	
P751	25060138	NTM-8PDMN066

POWER SWITCH PC BOARD (NASW-3604-2, NASW-3604-2A, NASW-3604-2B)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C920	3500065A	0.01 μ F, AC400V/125V, Capacitor
	Switch	
S901	25035614	NPS-121-L576P [D][W]
S901	25035550	NPS-111-L512P [G][A][B]

FUSE PC BOARD (NAETC-3605-2, NAETC-3605-2A, NAETC-3605-2B)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Fuse holder	
F901a	250113	S-N5051 [D][W]
F902a	25050065	YSH403T [G][W][A][B]
	Fuse label	
F901b	29360486	7A/125V [D][W]
F902b	29360374	T4A/250V [G][W][A][B]
	Terminal	
	25060092	NTM-1S33
	Socket	
P901	25050388	NSCT-6P215, AC outlet [D]
P921	2009990005	NSAS-04P0009, Socket ass'y [D]

INPUT SELECTOR SWITCH PC BOARD (NASW-3607-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switches	
S301, S305	25035613	NPS-442-L575
	Socket ass'y	
P102	2009990012	NSAS-8P-0021
P311	2009990018	NSAS-6P0042
P312	2009990017	NSAS-6P0041
P314	2000949	NSAS-6P901
P953	2009990007	NSAS-16P0011
	Jumper	
JL212	2050014	NCS-9P2E37

INPUT LED PC BOARD (NADIS-3608-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D201~D207	225137DG or 225137DY or 225137CG	SEL2413E-DG or SEL2413E-DY or SEL2413E-CG, LED
	Holder	
	27190530	Holder (LED)

SOURCE DIRECT SWITCH PC BOARD (NASW-3609-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switch	
S353	25030313B	NRSF-142-20SS
	Sockets ass'y	
P501	2009990002	NSAS-08P0006
P362	2009990019	NSAS-14P0043

TONE CONTROL CIRCUIT PC BOARD (NAAF-3611-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C301~C304	374721635	0.016 μ F, 50V, Film (TF)
C305, C306	374721825	1800 pF, 50V, Film (TF)
C307, C308	374728234	0.082 μ F, 50V, Film (TF)
	Resistors	
R301	5148107A	N16RGM C250KMN25, Variable
R302	5142002	N16RGM11C100K25, Variable
R303	5144011	N16ROM11C70K88K25, Variable

MUTING/MODE SWITCH PC BOARD (NASW-3612-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switch	
S331, S332	25035601	NPS-222-L565

POWER LED PC BOARD (NADIS-3613-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D911, D912	225142DX2	SEL2913K-DX2, LED
	Jumper socket	
JL955	25050267	NSCT-3P95
	Holder	
	27190678	Holder, LED

SERVO LED PC BOARD (NADIS-3614-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D881	225137DG or 225137DY or 225137CG or 225137CY	SEL2413E-DG or SEL2413E-DY or SEL2413E-CG or SEL2413E-CY, LED
	Holder	
	27190679	Holder, LED

VOLUME CONTROL PC BOARD (NAAF-3616-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistor	
R321	5104252	N27DGL50KBT25, Variable

EQUALIZER CIRCUIT PC BOARD (NAAF-3617-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q105, Q106	222902	NJM5532D-D
Q109	222780205MIT	M5F78M20L
Q110	222790205MIT	M5F79M20L
	Transistors	
Q101, Q102	2211535 or 2211536	2SK146GR or 2SK146BL
Q107, Q108	2211255	2SC1815GR
	Diodes	
D101~D104	225251	TLR112
	Capacitors	
C105, C106	372121214	120 pF, 50V, Styrene
C109, C110	354721019	100 μ F, 6.3V, Elect.
C111, C112	372122024	2000 pF, 50V, Styrene
C113~C116	379122434	0.024 μ F, 50V, Film (DEW)
C117, C118	379124334	0.043 μ F, 50V, Film (DEW)
C119~C122	391651017	100 μ F, 25V, Film (FS)
C123, C124	379122024	2000 pF, 50V, Film (DEW)
C129, C130	354780109	1 μ F, 50V, Elect.
C147, C148	354761029	1000 μ F, 35V, Elect.
C149, C150	354721019	100 μ F, 6.3V, Elect.
C151, C152	354754719	470 μ F, 25V, Elect.
	Resistor	
R117, R118	442523314	330 Ω , 1/2W, Metal oxide film
	Switch	
S101	25065366	NSS-84139, Slide
	Terminals	
P101	25045190	NPJ-2PDBL74
P201	25045202	NPJ-4PDBL83
P202	25045182	NPJ-2PDBL72
	Jumper socket	
JL959	25050271	NSCT-7P99
	Clamp	
	27300833	WS-2NS

POWER SUPPLY PC BOARD (NAPS-3620-2)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D921	22380014	PB102F
D925, D926	22380003	1N5402F
D931, D932	22380013	RDF02M
	Capacitors	
C921, C922	3500101A	15000 μ F, 71V, Elect.
C923, C924	374503345	0.33 μ F, 125V, Elect. (ME)
C925	374504745	0.47 μ F, 125V, Elect. (ME)
C931, C932	379122235	0.022 μ F, 50V, Film (DEW)
C933	354741029	1000 μ F, 16V, Elect.
C935, C936	379121035	0.01 μ F, 50V, Film (DEW)
C937, C938	354761029	1000 μ F, 35V, Elect.
C939	374501045	0.1 μ F, 125V, Film (ME)
	Resistors	
R923	442525104	51 Ω , 1/2W, Metal oxide film
R931	442520104	1 Ω , 1/2W, Metal oxide film
R932, R933	442522294	0.22 Ω , 1/2W, Metal oxide film
	Bracket	
	27301212	Bus

[D]: Only 120V model
 [G]: Only 220V model
 [W]: Only 120V/220V model
 [A]: Only Australian model
 [B]: Only British model

PARTS LIST OF PACKING

REF. NO.	PART NO.	DESCRIPTION
A851	29051942	MASTER CARTON BOX
A852	29091125-1D	PAD, LEFT
A853	29091126-1D	PAD, RIGHT
A854	261504	PAPER TAPE
A866	29100063	500 × 750, POLY-VINYL BAG
A867	282301	SEALING HOOK
A867	260012 or 29110071-1	DAMPLON TAPE (W=50) or DAMPLON TAPE (W=50)
	29360778	LABEL (FLASH) [N]
	29380054	AC COORD TAG [B]
	29360863	LABEL (CAUTION) [B]
ACCESSARY BAG		
	29341429	INSTRUCTION MANUAL [D][N]
	29341430	INSTRUCTION MANUAL [G][W][A][B]
	29365019	WARRANTY CARD [N]
	29365022	WARRANTY CARD [B]
	29358002G	SERVICE STATION LIST [N]
	25055018	CONVERSION PLUG CV-K-1 [W]
	29100006A	350 × 250, POLY-VINYL BAG

NOTE [D]: ONLY 120V MODEL
 [G]: ONLY 220V MODEL
 [W]: ONLY 120V/220V MODEL
 [N]: ONLY U.S.A. MODEL
 [A]: ONLY AUSTRALIAN MODEL
 [B]: ONLY BRITISH MODEL

SYSTEM CONNECTIONS

Do not plug in the power cord until all connections have been made.

Ground connection is not necessary for turntables without ground leads.

