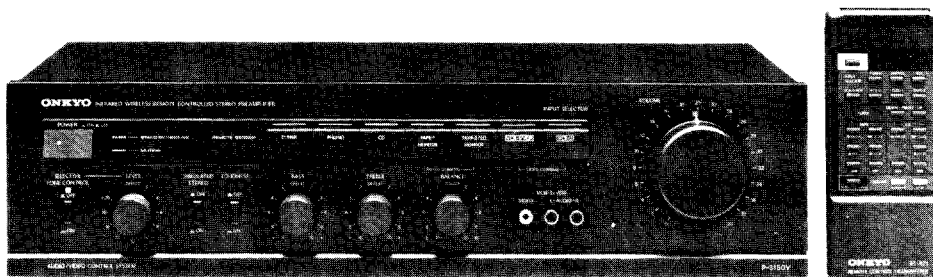


ONKYO® SERVICE MANUAL

Infrared Wireless Remote Controlled Stereo preamplifier MODEL P-3150V



UD

120V AC, 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.

TABLE OF CONTENTS

Specifications	2
Block diagram	3
Circuit description	4
Chassis-exploded view	6
Front panel facilities	7
Printed board parts list	8
IC Block diagram	10
Printed circuit board view	13
Schematic diagram	17
System connections	19
Packing procedures	20

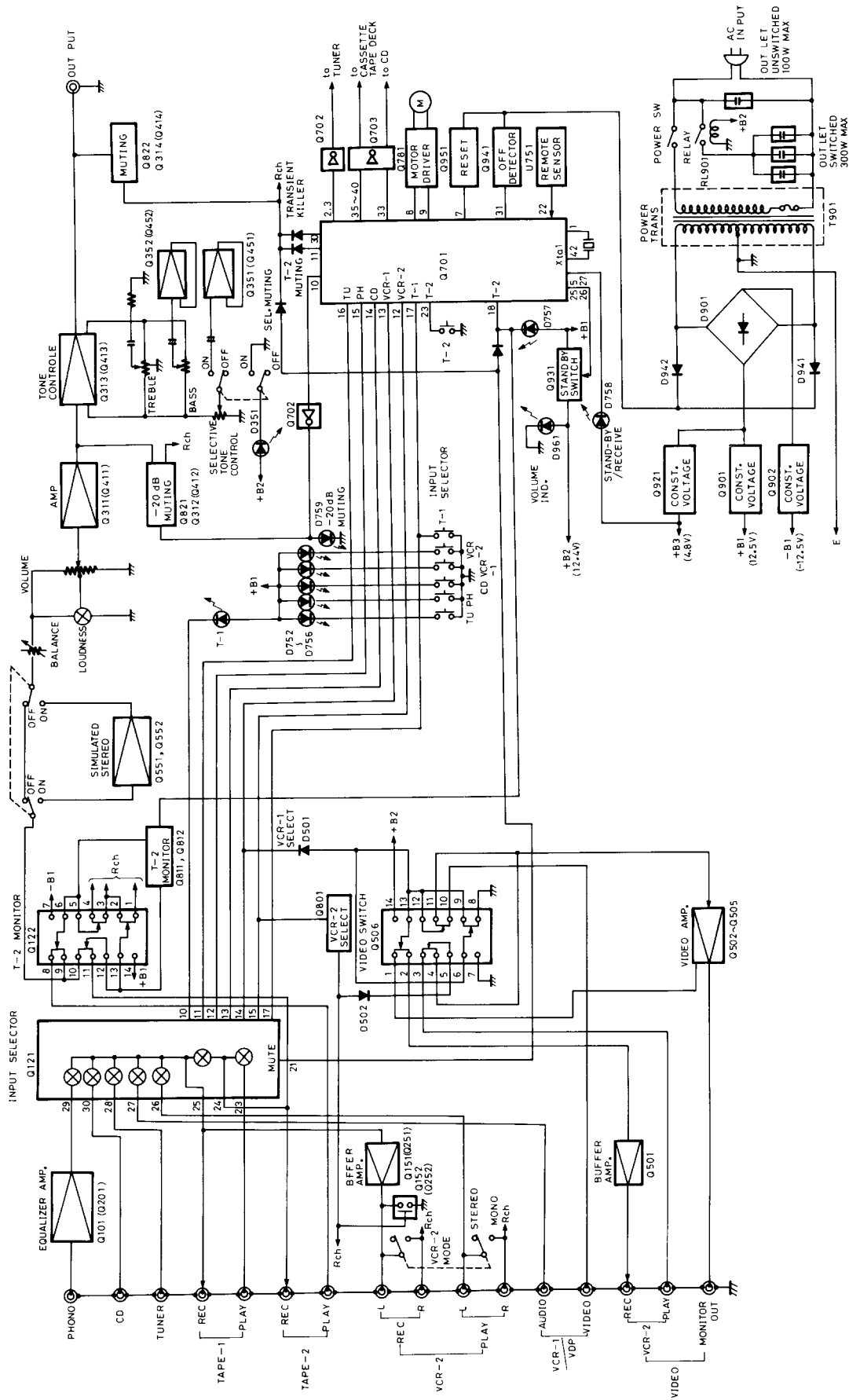
ONKYO®
AUDIO COMPONENTS

SPECIFICATIONS

Rated Output and Impedance:	1V/3.3 Kohms MAX 5V
Total Harmonic Distortion:	0.009%
IM Distortion:	0.09%
Frequency Response:	15 – 30,000 Hz ±1dB
Sensitivity and Impedance:	Phono: 2.5mV/50 kohms Tuner, CD, Tape Play VCR, VDP Sound: 150mV/50 kohms Tape Rec: 150mV/2.2 kohms (phono)
Phono Overload:	120mV RMS at 1 kHz, 0.09% THD
Bass Control:	±10 dB at 100Hz
Treble Control:	±10 dB at 10,000 Hz
Selective Tone Control:	+15 dB at 50Hz +6 dB at 10,000Hz
Signal to Noise Ratio:	Phono: 72dB (IHFA-202, 5mV input, 1 V output) Tape Play: 80dB (IHF A-202, 0.5V input, 1 V output)
Loudness Control:	+6 dB at 70 Hz, +5 dB at 10 kHz
Audio Muting:	-20dB
General	
Power Supply:	AC120V, 60Hz
Dimensions (W x H x D):	435 x 110 x 273mm 17-1/8" x 4-5/16" x 10-3/4"
Weight:	3.7kg, 8.2 lbs.

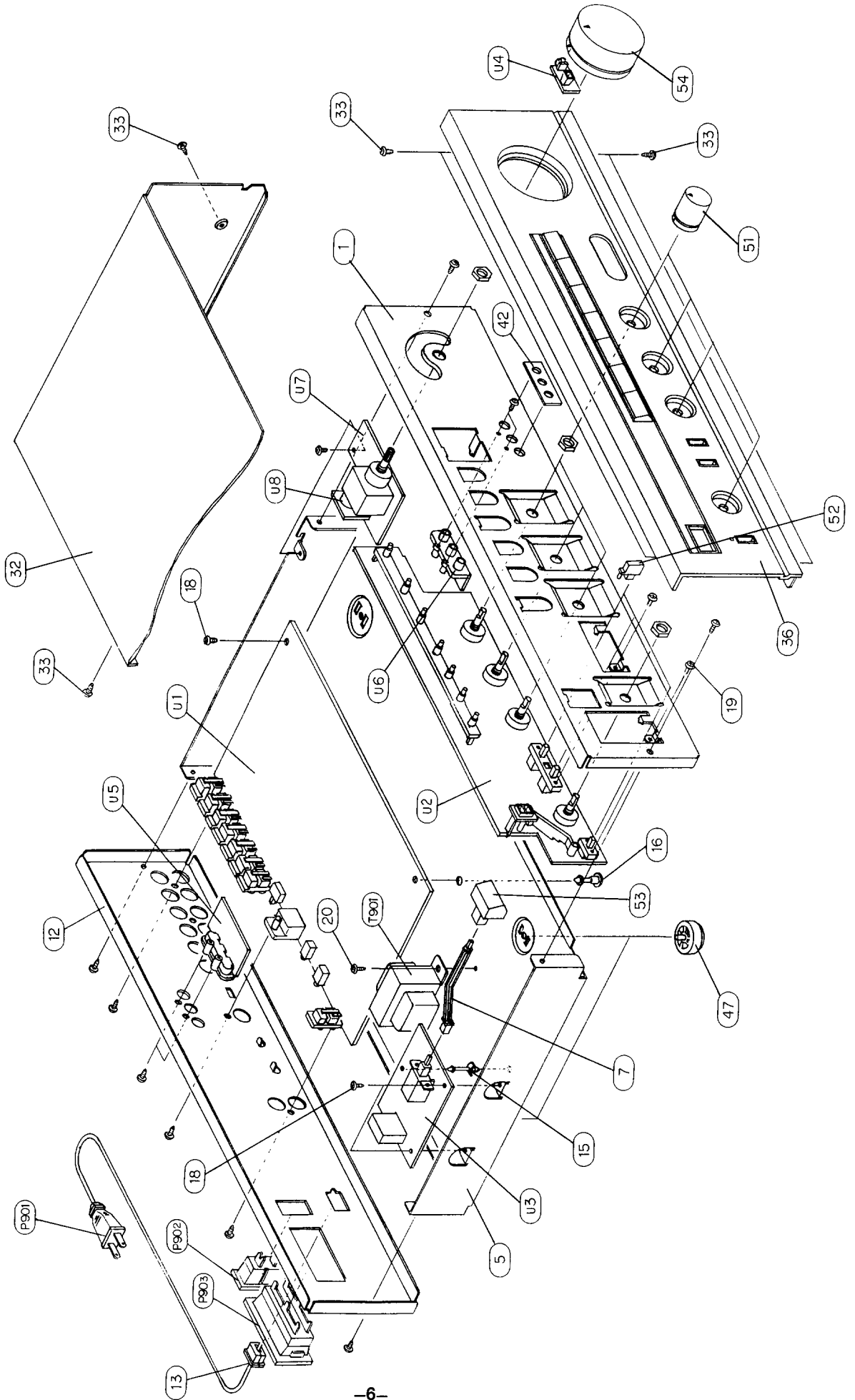
Specifications and features are subject to change without notice.

BLOCK DIAGRAM



Pin No.	Code	Explanation
11	MUT-2	Muting signal output terminal for TAPE-2 change-over "H" during 200mS change-over time to TAPE-2
12	VCR-2	Selector signal output terminal for VCR-2 change-over "L" during 200mS after pushing remote control VCR-2 KEY
13	VCR-1	Selector signal output terminal for VCR-1 change-over "L" during 200mS after pushing remote control VCR-1 KEY
14	CD	Selector CD change-over signal output terminal "L" during 200mS after pushing remote control CD KEY
15	PH	Selector PHONO change-over signal output terminal "L" during 200mS after pushing remote control PHONO KEY
16	TU	Selector signal output terminal for TUNER change-over "L" during 200mS after pushing remote control TUNER KEY
17	T-1	Selector signal output terminal for TAPE-1 change-over "L" during 200mS after pushing remote control TAPE-1 KEY
18	T-2	Selector signal output terminal for TAPE-1 change-over Switching of "H" ↔ "L" by means of remote control TAPE-2 KEY
21	GND	GND terminal
22	REM IN	Remote control signal input terminal
23	T-2 CTL	TAPE-2 ON/OFF control input terminal T-2 output is changed-over with "L" input
24	PROTECT	Protection function input terminal; with "H" input, output SP CTL "H"
25	CONT IN	Power source condition input terminal; connects to POWER output; POWER ON with "H"
26	POWER	Power source control output terminal Switching of "H" ↔ "L" (ON = "H")
27	STBY	Terminal for indication during STANDBY; POWER reversing output
28	INIT	Output terminal for start of selector "L" during 300mS when power source is ON
29	B. UP	Output terminal for back up during STANDBY
30	SP CTL	Speaker control output terminal ("L" = speaker output ON)
31	M. OFF	Main power source OFF detection terminal
33	CD MODE	Serial signal output terminal for CD control use
35	REW	Cassette deck control signal output terminal "H" during 200mS after pushing remote control REW KEY
36	FF	Cassette deck control signal output terminal "H" during 200mS after pushing remote control FF KEY
37	REC	Cassette deck control signal output terminal "H" during 200mS after pushing remote control REC KEY
38	STOP	Cassette deck control signal output terminal "H" during pushing of remote control STOP KEY
39	PAUSE	Cassette deck control signal output terminal "H" during 200mS after pushing remote control PAUSE KEY
40	PLAY	Cassette deck control signal output terminal "H" during 200mS after pushing remote control PLAY KEY
41	V _{DD}	Power source terminal
42	Extal	Ceramic resonator connection terminal

CHASSIS-EXPLODED VIEW

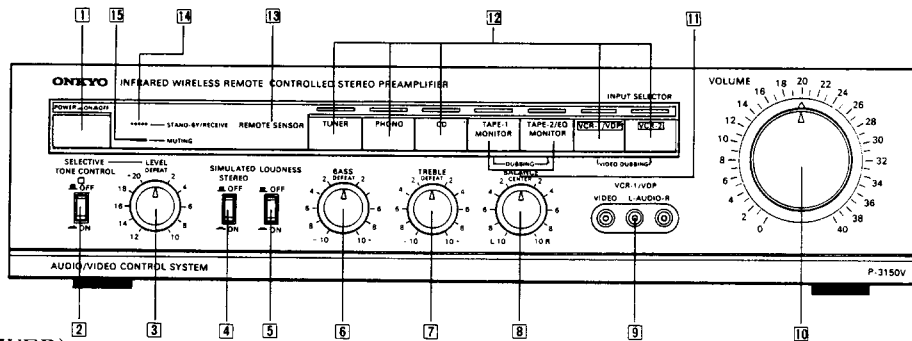


CHASSIS-EXPLODED VIEW PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
1	27110318	FRONT BRACKET
5	27100114	CHASSIS
7	27273036A	JOINT
12	27120924A	BACK PANEL
13	27300750	BUSHING (CORD)
15	27190513	HOLDER
16	27190266	HOLDER
18	831130088	TAP-TIGHT SCREW 3TTW + 8B
19	82143006	PAN-HEAD SCREW 3P + 6FN BC
20	834430068	TAP-TIGHT SCREW 3TTS + 6BBC
32	28184342	TOP COVER
33	834430088	TAP-TIGHT SCREW 3TTS + 8BBC
36	1A043121	FRONT PANEL
42	27262415	PLATE (T)
47	27175142	LEG
51	28322622A	KNOB (TONE)
52	28322213	KNOB (PUSH)
53	28322795A	KNOB (POW)
54	28322620A	KNOB AS (VOL)
△ T901	2300175	POWER TRANSFORMER NPT-947D
△ P901	253123 or 253136 or 253140	AC CORD AS-UC-6 #18 or AC CORD AS-UC-6 #18 or AC CORD AS-UC-6 #18
△ P902	25050290	AC OUTLET NSCT-2P118T
△ P903	25050336	AC OUTLET NSCT-6P163
U1	1A043580-1	NAAF-2880-1, MAIN PC BOARD ASS'Y
U2	1A043581-1	NASW-2881-1, SIMULATED STEREO PC BOARD ASS'Y
U3	1A043582-1	NASW-2882-1, PWOER SWITCH PC BOARD ASS'Y
U4	1A043583-1	NADIS-2883-1, VOLUME LED PC BOARD ASS'Y
U5	1A043584-1	NAETC-2884-1, VIDEO CIRCUIT PC BOARD ASS'Y
U6	1A043585-1	NAETC-2885-1, VCR-1/VDP INPUT TEMINAL PC BOARD ASS'Y
U7	1A043586-1	NATEC-2886-1, MOTOR DRIVE PC BOARD ASS'Y
U8	1A043587-1	NAETC-2887-1, MOTOR CIRCUIT PC BOARD ASS'Y

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

FRONT PANEL FACILITIES



1. Power Switch (POWER)
2. Selective Tone Control Switch and Indicator (SELECTIVE TONE CONTROL)
3. Selective Tone Control (SELECTIVE TONE CONTROL LEVEL)
4. Simulated Stereo (SIMULATED STEREO)
5. Loudness Control (LOUDNESS)
6. Bass Control (BASS)
7. Treble Control (TREBLE)
8. Balance Control (BALANCE)
9. Video Cassette Recorder or Video Disc Player Input Jack (VCR-1/VDP)
10. Volume Control and Indicator (VOLUME)
11. Tape Monitor Switches and Indicators (MONITOR)
TAPE-1, TAPE-2/EQ
12. Input Selector Switch and Indicators (INPUT SELECTOR)
TUNER, PHONO, CD, VCR-1/VDP, VCR-2
13. Remote Control Sensor
14. Stand-By/Receive Indicator
15. Muting Indicator

PRINTED CIRCUIT BOARD-PARTS LIST

MAIN PC BOARD (NAAF-2880-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q101, (Q201) Q313, (Q413)	222534	NJM4559DX
Q121	222996	LC7818
Q122	22240025	LC4966
Q151, (Q251) Q311, (Q411)	222502	NJM4558DX
Q701	22240024	LM6405G-2077
Q702	222919	TD62554S
Q703	222945	TD62504P
Transistors		
Q152, Q252 Q312, Q314 Q412, Q414	2212285 or 2212286	2SC2878A or 2SC2878B
Q801, Q812 Q821, Q822	2211455 or 2210803	2SA1015GR or 2SA733P
Q811, Q941 Q951	2211255 or 2210746	2SC1815GR or 2SC945A
Q901, Q921	2201754 or 2201755	2SD1913R or 2SD1913S
Q902	2201764 or 2201765	2SB1274R or 2SB1274S
Q931	2211504	2SA950Y
Diodes		
D701~D704 D951	223145 or 223124 or 223150	1S2076TD or 1S2473 or US1040
D901	223862 or 223890	WL01 or W01RL
D902, D903	2239652 or 2243242	RD13EB2 or MTZ13B
D921	2239471 or 2243151	RD5.6EB1 or MTZ5.6A
D941, D942	223880F	GP101N4003
Transducer		
X701	3010099	CSA4.00MG, Ceramic
Capacitors		
C101, C107 C151, C152 C201, C207 C251, C252 C311, C313 C314, C316 C411, C413 C414, C416 C104, C204 C312, C412 C703	354780229	2.2 μ F, 50V, Elect.
C105, C205 C106, C206 C108, C109 C153, C253 C801, C821 C154, C155 C317~C320 C705, C706 C803, C804 C802	371126224 371121824 354742219 354780109 354780339	6200pF, 50V, Mylar 1800pF, 50V, Mylar 220 μ F, 16V, Elect. 1 μ F, 50V, Elect. 3.3 μ F, 50V, Elect.
C851 C904 C905 C906, C907 C921 C910, C911 C912, C913	379122235 354763329 354781029 354762219 354741019 354744719	0.1 μ F, 50V, Elect. 0.022 μ F, 50V, Film (DEW) 3300 μ F, 35V, Elect. 1000 μ F, 35V, Elect. 220 μ F, 35V, Elect. 100 μ F, 16V, Elect. 470 μ F, 16V, Elect.

C923, C924 C931 C941 C951	354722219 354744709 354764709 354761009	220 μ F, 6.3V, Elect. 47 μ F, 16V, Elect. 47 μ F, 35V, Elect. 10 μ F, 35V, Elect.
Resistors		
R707~R713 R901, R902 R903 R904 R921 R941	49121392407 442520104F 441520334F 441524704F 441724704F 441622224F	3.9K Ω \times 7, 1/8W, Network 1 Ω , 1/2W, Metal oxide film 3.3 Ω , 1/2W, Metal oxide film 47 Ω , 1/2W, Metal oxide film 47 Ω , 2W, Metal oxide film 2.2k Ω , 1W, Metal oxide film
Switch		
S121	25065286	NSS-22112, Slide
Terminals		
P101~P103 P301	25045213 25045182	NPJ-6PDBL92 NPJ-2PDBL72
Sockets		
P701	25050294 2000558 2000557 25050270	NSCT-8P121, DIN socket NSAS-6P514, Socket ass'y NSAS-6P513, Socket ass'y NSCT-6P-98, Jamper socket
Jacks		
P702, P703	25045215	S-G8515
Radiator		
	27160166	

SIMULATED STEREO PC BOARD (NASW-2881-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
Photo receiving unit		
→ U751	241068	BX-1407
ICs		
Q351, Q352 (Q451, Q452) Q551, (Q552)	222956 222502	NJM2068DD NJM4558DX
Diodes		
D351 D751~D754 D757 D758, D759 D755, D756	225141 225137CG or 225137DG or 225137DY 225141	SEL2213C SEL2413ECG or SEL2413EDG or SEL2413EDY SEL2213C
Capacitors		
C302 C351, C451 C352, C452 C551, C554 C353, C453 C354, C357 C358, C454 C555, C556 C751 C355, C356 C455, C456 C402 C552 C553	371123934 371128224 354780229 371125134 354780339 371122234 371123934 371121124 371121234	0.039 μ F, 50V, Mylar 8200pF, 50V, Mylar 2.2 μ F, 50V, Elect. 0.051 μ F, 50V, Mylar 3.3 μ F, 50V, Elect. 0.022 μ F, 50V, Mylar 0.039 μ F, 50V, Mylar 1100pF, 50V, Mylar 0.012 μ F, 50V, Mylar
Resistors		
R302 R351, (R451) R358, R363 (R458), (R463)	5104192 5104197 5104196	N16RHC250KW25Z, Variable N16RGH50KRD25Z, Variable N16RGHC100KWT25Z, Variable

Switches		
S301, (S551)	25035534	NPS-222-L496
S351	25035552	NPS-142-L514
S751~S757	25035548	NPS-111-S510
Holders		
	27190505	(LED-7)
	27190506	(LED-3)
Shield cover		
	27225081	

POWER SWITCH PC BOARD (NASW-2882-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
Diodes		
D971	223145 or 223124 or 223150	1S2076TD 1S2473 US1040
Capacitors		
C901, C902	3500065A	0.01 μ F, AC400V/125V, IS
Switch		
S901	25035550	NPS-111-L512P
Relay		
RL901	25065269	NRL-1P5A-DC12-36

VOLUME LED PC BOARD (NADIS-2883-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	225141	SEL2213C, LED
	2000635	NSAS-4P591, Socket ass'y
	27190478A	Holder

VIDEO CIRCUIT PC BOARD (NAETC-2884-1)-PARTS LIST

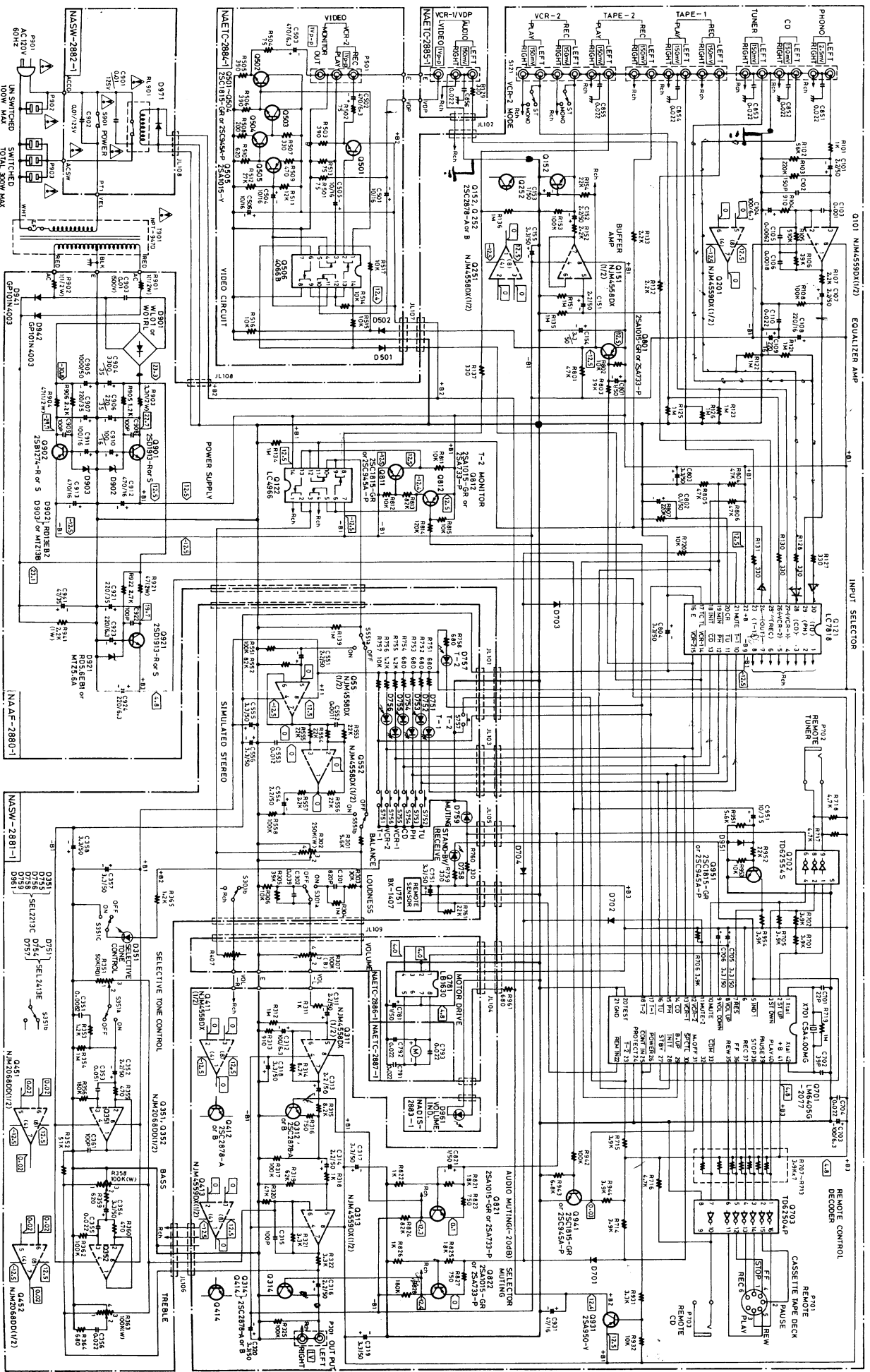
CIRCUIT NO.	PART NO.	DESCRIPTION
ICs		
Q506	222575 or 222840661	TC4066BP or 4066B
Transistors		
Q501~Q504	2211255 or 2210746	2SC1815GR or 2SC945AP
Q505	2211454	2SA1015Y
Diodes		
D501, D502	223145 or 223124 or 223150	1S2076TD or 1S2473 or US1040
Capacitors		
C501, C504	354741009	10 μ F, 16V, Elect.
C505, C506		
C502, C503	354724719	470 μ F, 6.3V, Elect.
Terminal		
P501	25045205	NPJ-3PDYE085

VCR-1/VDP INPUT TERMINAL PC BOARD (NAETC-2885-1)-PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
P104	25045206	NPJ-3PDYE086, Input terminal

MOTOR DRIVE PC BOARD (NAETC-2886-1)-PARTS LIST

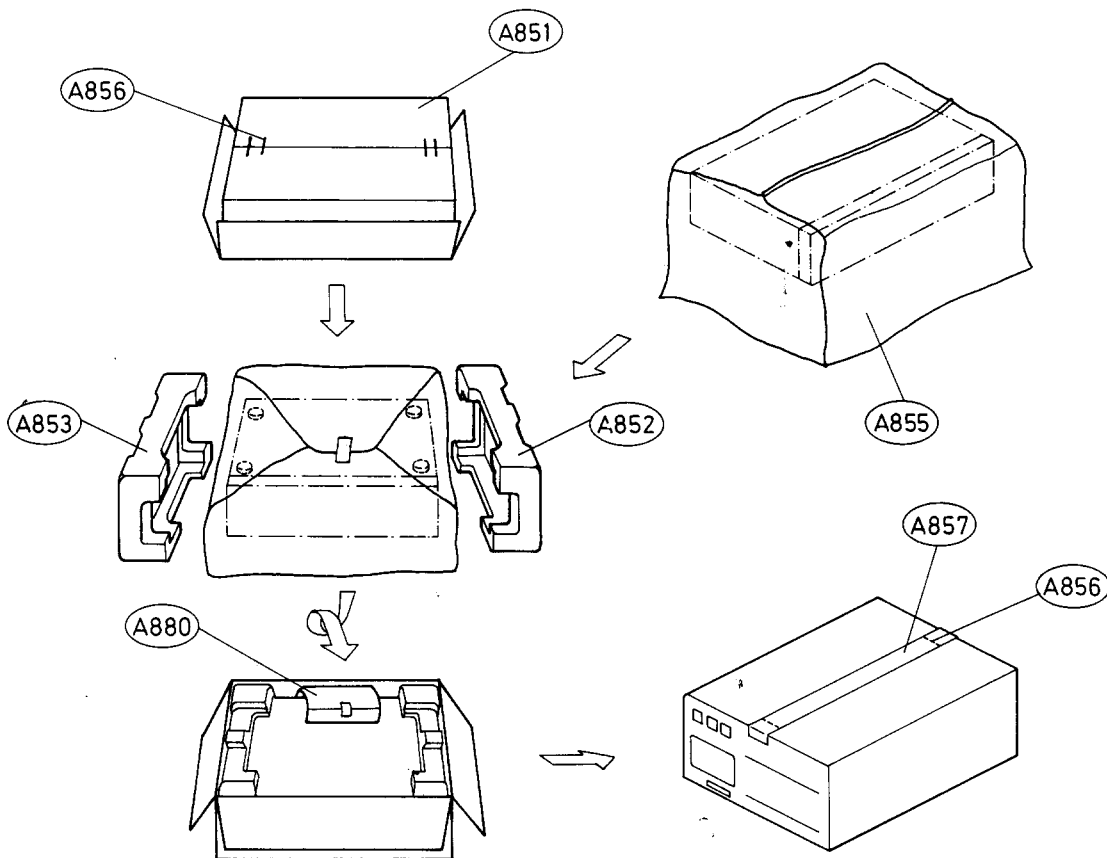
CIRCUIT NO.	PART NO.	DESCRIPTION
IC		
Q781	222963	LB1630
Capacitor		
C781	354780109	1 μ F, 50V, Elect.
Resistor		
R307, (R407)	5104195	N16RGL100KBT20, Variable



NOTES:
 • ALL RESISTORS ARE IN OHMS UNLESS OTHERWISE SPECIFIED.
 • ALL CAPACITORS ARE IN P.F./M.F. UNLESS OTHERWISE NOTED.
 • ELECTROLYTIC CAPACITORS (E.P.) ARE IN P.F./M.F. UNLESS OTHERWISE NOTED.
 • THE OPERATIONS IDENTIFIED BY MARK Δ ARE CRITICAL FOR SAFETY.

• ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
 • ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 • DIMENSIONS IN PARENTHESES ARE FOR REFERENCE ONLY.
 • DIMENSIONS IN SQUARE BRACKETS ARE FOR REFERENCE ONLY.

PACKING PROCEDURES



PACKING MATERIALS

REF. NO.	PART NO.	DESCRIPTION
A851	29051435A	MASTER CARTON BOX
A852	29090987	PAD, L
A853	29090988	PAD, R
A855	29100063	750×580mm, POLY-VINYL BAG
A856	282301	SEALING HOOK
A857	260012	DAMPLON TAPE
A880	ACCESSORY BAG ASS'Y	
	29341094	INSTRUCTION MANUAL
	29365019	WARRANTY CARD [N]
	29358002E	SERVICE STATION LIST [N]
	29100006A	250×350mm, POLY-VINYL BAG FOR ACCESSORY
	2010159	2.5mm PLUG CORD
	2010141	CONNECTION CABLE, DIN

NOTE: [N]: Only U.S.A. Models

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