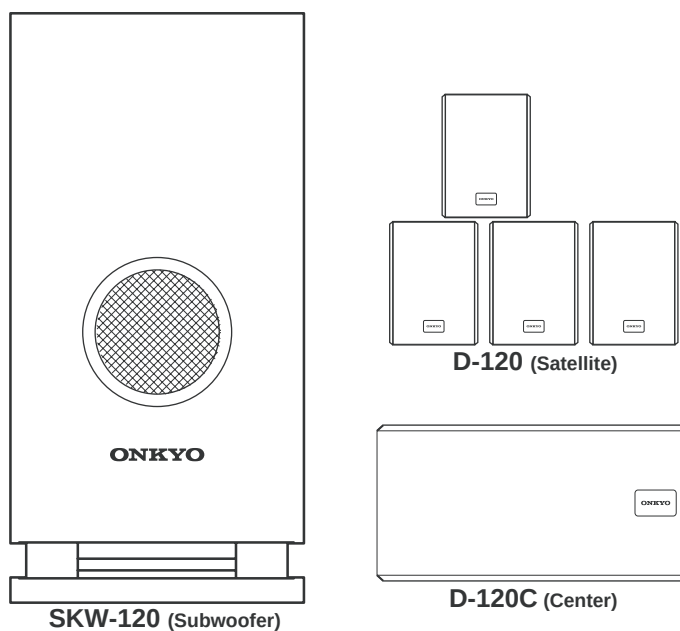


ONKYO SERVICE MANUAL

HTP-120 SKW-120/D-120C/D-120 SPEAKER SYSTEM



Black model

BMDD	120V AC, 60Hz
------	---------------

SAFETY-RELATED COMPONENT WARNING!!

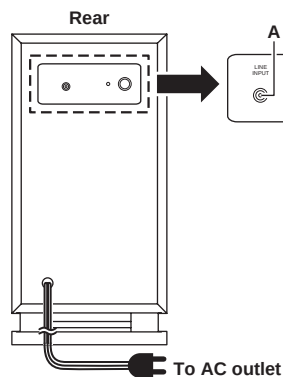
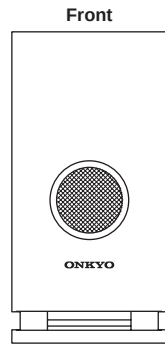
THE MARK  FOUND ON SOME COMPONENT PARTS INDICATES THE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK.

WHEN REPLACING, BE SURE TO USE PARTS OF IDENTICAL DESIGNATION.

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.

PANEL VIEW

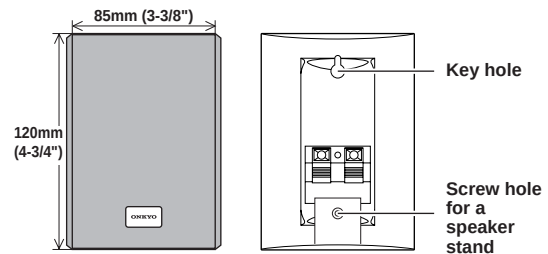
Subwoofer SKW-120



- A. LINE INPUT (input jack)**
Connect this jack to the SUBWOOFER PREOUT jack of the DR-S2.2.
- B. Indicator**
The indicator changes from red to green when the subwoofer receives a signal.
- C. OUTPUT LEVEL (Output level adjusting knob)**
Use this knob to adjust the output level of the subwoofer.

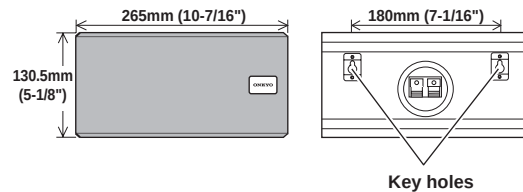
Satellite speakers D-120

(Front left/right, Surround left/right)



The badge can be rotated depending on the angle you position the speaker.

Center speaker D-120C



The badge can be rotated depending on the angle you position the speaker.

The satellite speakers (D-120) and the center speaker (D-120C) have colored labels on the backs for easy identification. Match the color of the label with the corresponding speaker cable when connecting the speakers. The DR-S2.2 SPEAKER terminals are also colored to match the corresponding speaker cable. Connect the cable with a colored line to the negative (–) terminal.

The label colors and the corresponding speakers are as follows:

Front left speaker and speaker cable:	White
Front right speaker and speaker cable:	Red
Center speaker and speaker cable:	Green
Surround left speaker and speaker cable:	Blue
Surround right speaker and speaker cable:	Grey

A

B

C

D

SPECIFICATIONS

1

Subwoofer SKW-120

Type	Bass-reflex with built-in power amplifier
Use	For superbass-range reproduction
Frequency response	30-120 Hz (when used with the DR-S2.2)
Maximum output power	60 W
Dynamic output power	120 W
Input impedance	9.5 k ohm
Sensitivity	Line 65 mV
Speaker	20-cm woofer
Power supply	AC 120 V, 60 Hz
Power consumption	70 W (AC 120 V, 60 Hz)
Dimensions (W × H × D)	235 × 493 × 488 mm 9-1/4" × 19-7/16" × 19-3/16"
Weight	14.3 kg 31.5 lbs
Others	Auto standby on/off

Center speaker D-120C

Type	2 way bass reflex
Frequency response	100 Hz-25 kHz
Maximum input power	50 W
Output sound pressure level	85 dB/W/m
Impedance	6 ohm
Speaker	8-cm woofer × 2 1.5-cm tweeter
Cabinet capacity	1.5 L
Dimensions (W × H × D)	265 × 130.5 × 79.5 mm 10-7/16" 5-1/8" 3-1/8"
Weight	1.3 kg 2.9 lbs.
Others	Magnetic shielding

2

Satellite speaker D-120

Type	2 way bass reflex
Frequency response	100 Hz-25 kHz
Maximum input power	40 W
Output sound pressure level	82 dB/W/m
Impedance	6 ohm
Speaker	8-cm woofer 1.5-cm tweeter
Cabinet capacity	0.8 L
Dimensions (W × H × D)	85 × 120 × 112 mm 3-3/8" × 4-3/4" × 4-7/16"
Weight	0.7 kg 1.5 lbs.
Others	Magnetic shielding

Accessories

Audio connection cable (1 pc.)
 3.5 m speaker cables (3 pcs.: white, red, green)
 8 m speaker cables (2 pcs.: blue, grey)
 Spacers for Subwoofer (4 pcs.)
 Spacers for Satellite and Center speakers (black, 20 pcs.)
 Horizontal mounting base (1 pc.)
 Double-faced adhesive tapes (2 pcs.)
 Cushioning pads (2 pcs.)
 Instruction manual (this manual)

Specifications and appearance may subject to change for improvement without prior notice.

3

4

5

SERVICE NOTE

1. Replacing the fuses



This symbol located near the fuses indicates that the fuse used is fast operating type. For continued protection against fire hazard, replace with same type fuse. For fuse rating refer to the marking adjacent to the symbol.



Ce symbole indique que le fusible utilise est a rapide. Pour une protection permanente, n'utiliser que fusibles de meme type. Ce dernier est la qu le present symbol est appse.

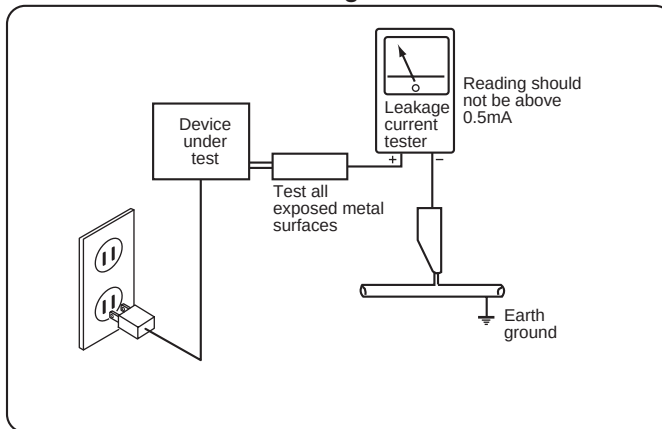
CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252159 or 252253	2A-UL/T-237 or 2A-T/UL-ST2

2. Safety-check out

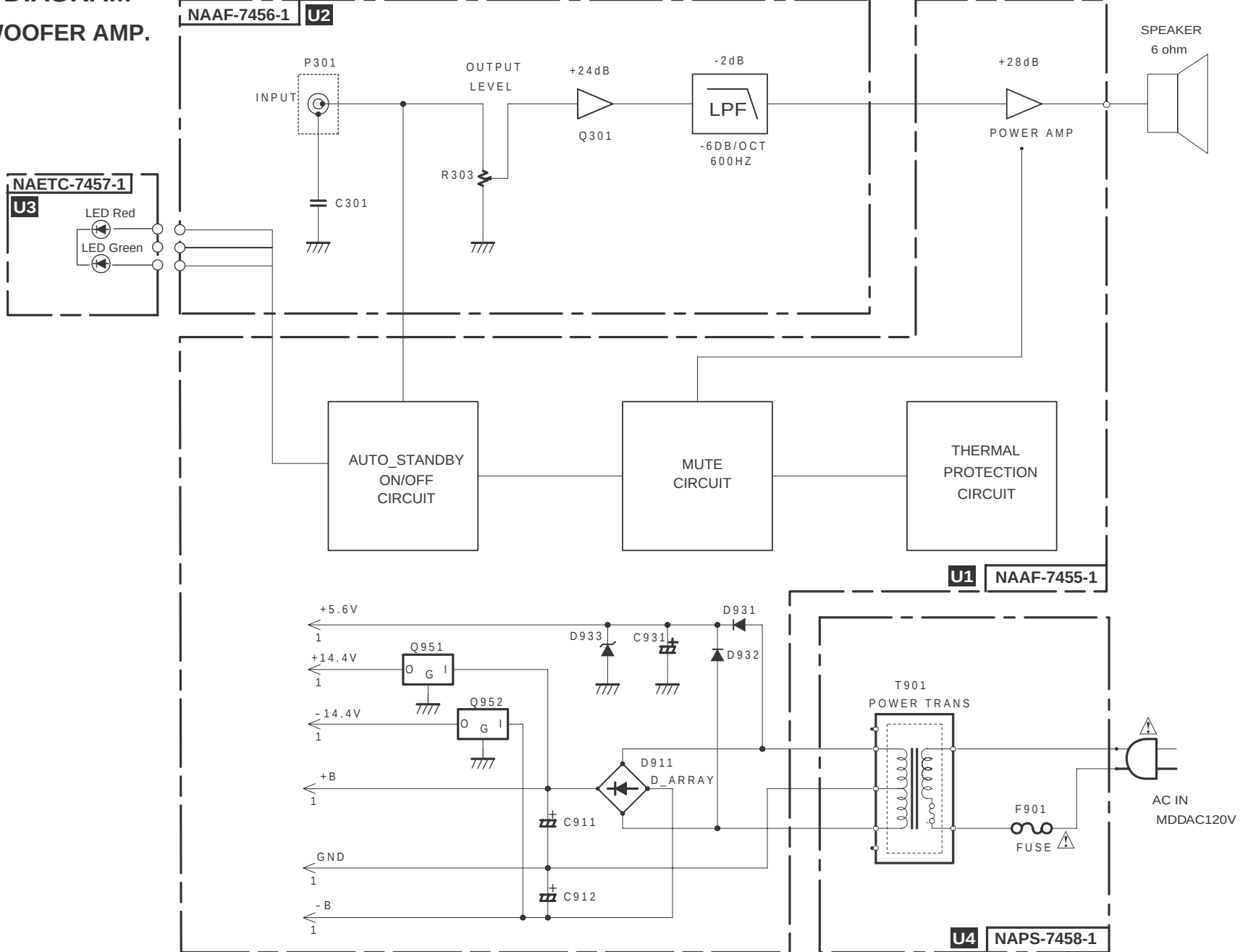
After correcting the original service problem, perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and screw on the back panel.

Specifications: 3.3M ohm $\pm$ 10% at 500V.

AC Leakage Test



BLOCK DIAGRAM SUB WOOFER AMP.

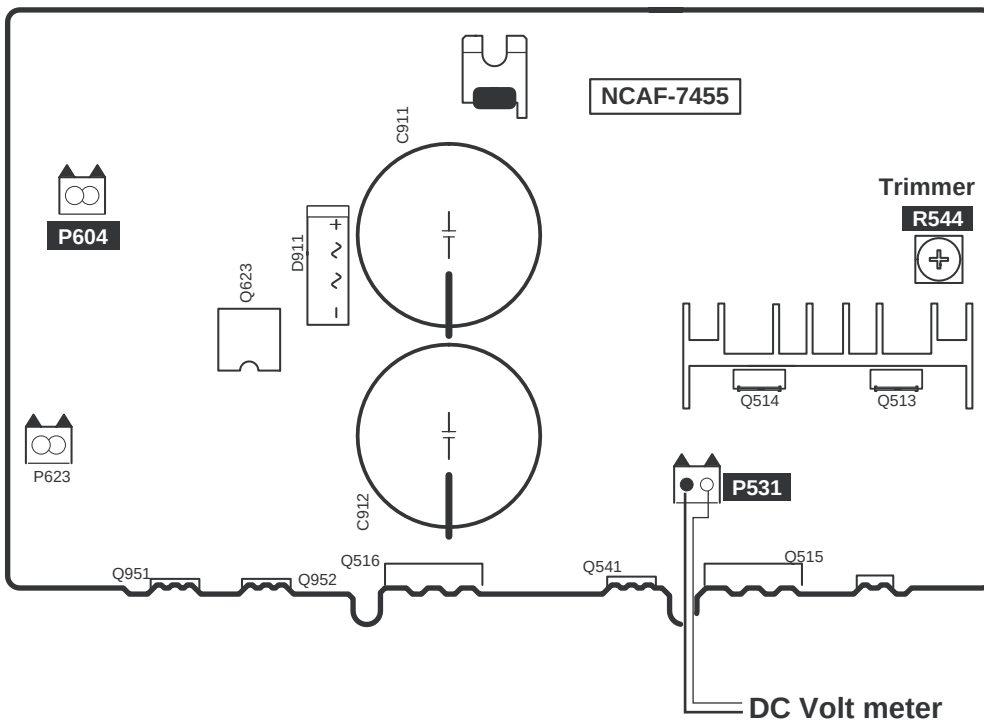


IDLING ADJUSTMENT

Adjustment of Idling current

- 1). Cancel the Auto standby ON mode.
P604 is short.
- 2). Connect the DC volt meter to P531.
- 3). At the no load and no input signal condition.
- 4). Turn on the power switch.
And adjust 0.25mV by trimmer (R544) on Main PC board.
- 5). After heat run for about 5 minutes, and set 4mV by R544 again.

Printed circuit board view from component side



Setting position of shipping

Output level ----- MIN

EXPLODED VIEW PARTS LIST

Amp section

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

REF. NO.	PART NO.	DESCRIPTION
U1	1W232555-1A	NAAF-7455-1A, Main circuit PC board assy
U2	1W232556-1A	NAAF-7456-1A, Output level control PC board assy
U3	1W232557-1A	NAETC-7457-1A, LED PC board assy
U4	1W232558-1A	NAPS-7458-1A, Power transformer PC board assy
A1	27160467	Heat sink, SKW-205AMP
A2	801433	3SMS8W.SW+14B(BC), Self tapping screw (6)
A3	27130745	Bracket (2)
A4	838130088	3TTB+8B, Self tapping screw (7)
A6	27141661	Retainer
A8	28184777	Cover
A9	28141322A	Cushion
A10	28141475	Cushion t2X5X160 (2)
A11	28141476	Cushion t2X5X80 (2)
A41	27122963	Rear panel (Amp. Section)
A42	838430088	3TTB+8B(BC), Self tapping screw (13)
A43	830440109	4TTC+10C(BC), Self tapping screw (4)
A44	28141473	Cushion, t2X5X415 (2)
A45	28141474	Cushion, t2X5X195 (2)
A46	28141334	Cushion
A47	27 301941	Cord bushing, KF-41
A48	28325405	Knob, OUTPUT LEVEL
E901	260208	Wire tie
Q515	* 2202524	2SC4468-Y or
	* 2202523	2SC4468-O or
	* 2202526	2SC4468-P or
	* 2203062	2SC5198-R or
	* 2203063	2SC5198-O, Transistor
Q516	* 2202514	2SA1695-Y or
	* 2202513	2SA1695-O or
	* 2202516	2SA1695-P or
	* 2203052	2SA1941-R or
	* 2203053	2SA1941-O, Transistor
Q515A, Q516A	223021	TBM-51W 9043, Isolation sheet
Q541	2202104	2SC3423-Y or
	2202103	2SC3423-O
Q951	2202754	2SD1266-P
Q952	2202764	2SB941-P, Transistor
R602	4000144	PTH9M04-2.2K, Thermistor
T901	23 01487	NPT-1396D, Power transformer
F901	 252159	2A-UL/T-237 or
	 252253	2A-T/UL-ST2, Fuse
P901	 253272HIT	Power cord, AS-UC-6#18
A50	28141503	Cushion

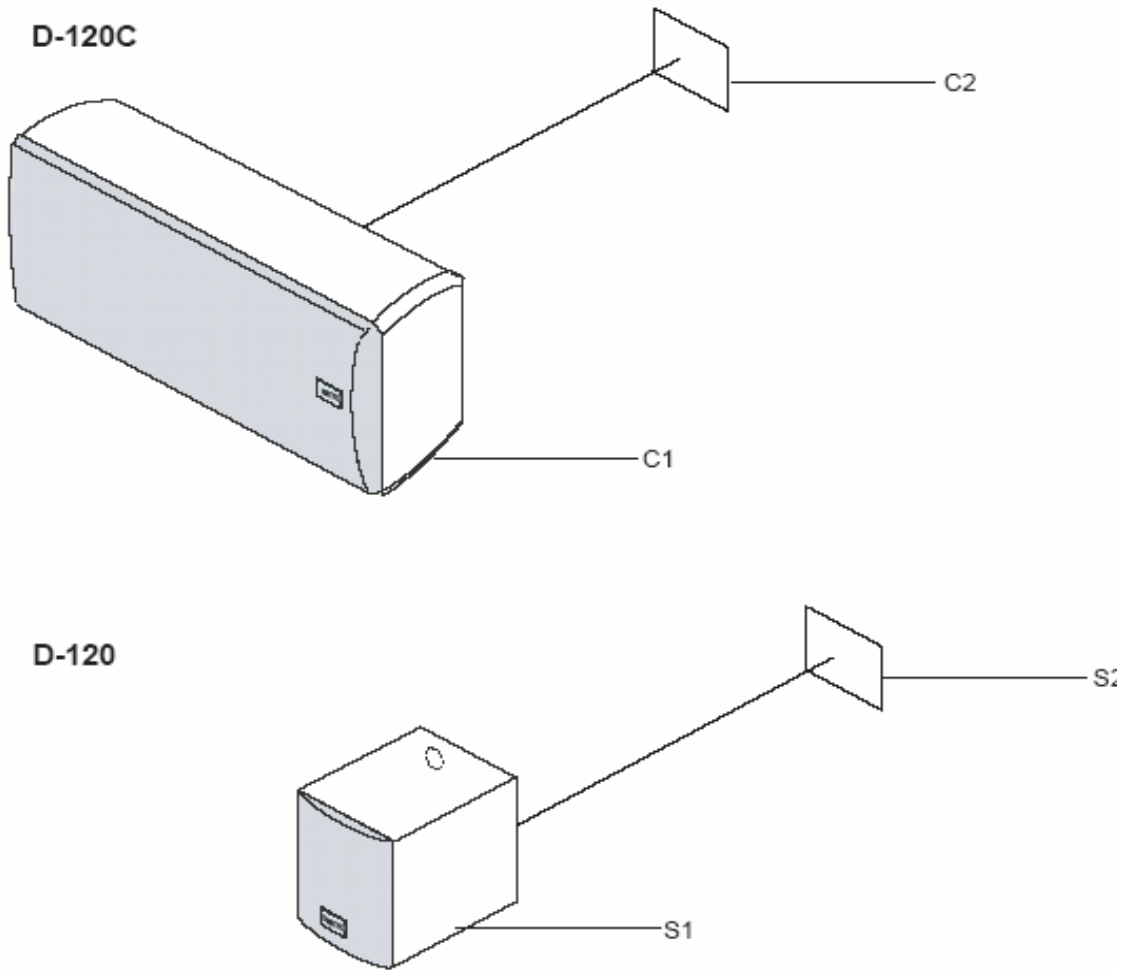
CAUTION: Replacement of the transistor of mark *****, if necessary, must be made from the same beta group (HFE) as the original type.

EXPLODED VIEW PARTS LIST**Cabinet section**

	PART NO.	DESCRIPTION	QTY
B02	KK200001-01	W20170A, SP assy	1
B03		Cabinet assy (Box+paper duct+ plastic duct+sound absorbent)	1
B05	58-000-302-01	Foot	4
B06	76-200-030-01	Bottom board	1
B07	838440204	4STB+20A(BC), Amp, SP Unit	16
B08	70-015-450-01	4 x 50, Bottom board	4
B10	61-000-652-01	Socket assy	
	AM200008-01	SP Syatem	1



EXPLODED VIEW



PARTS LIST

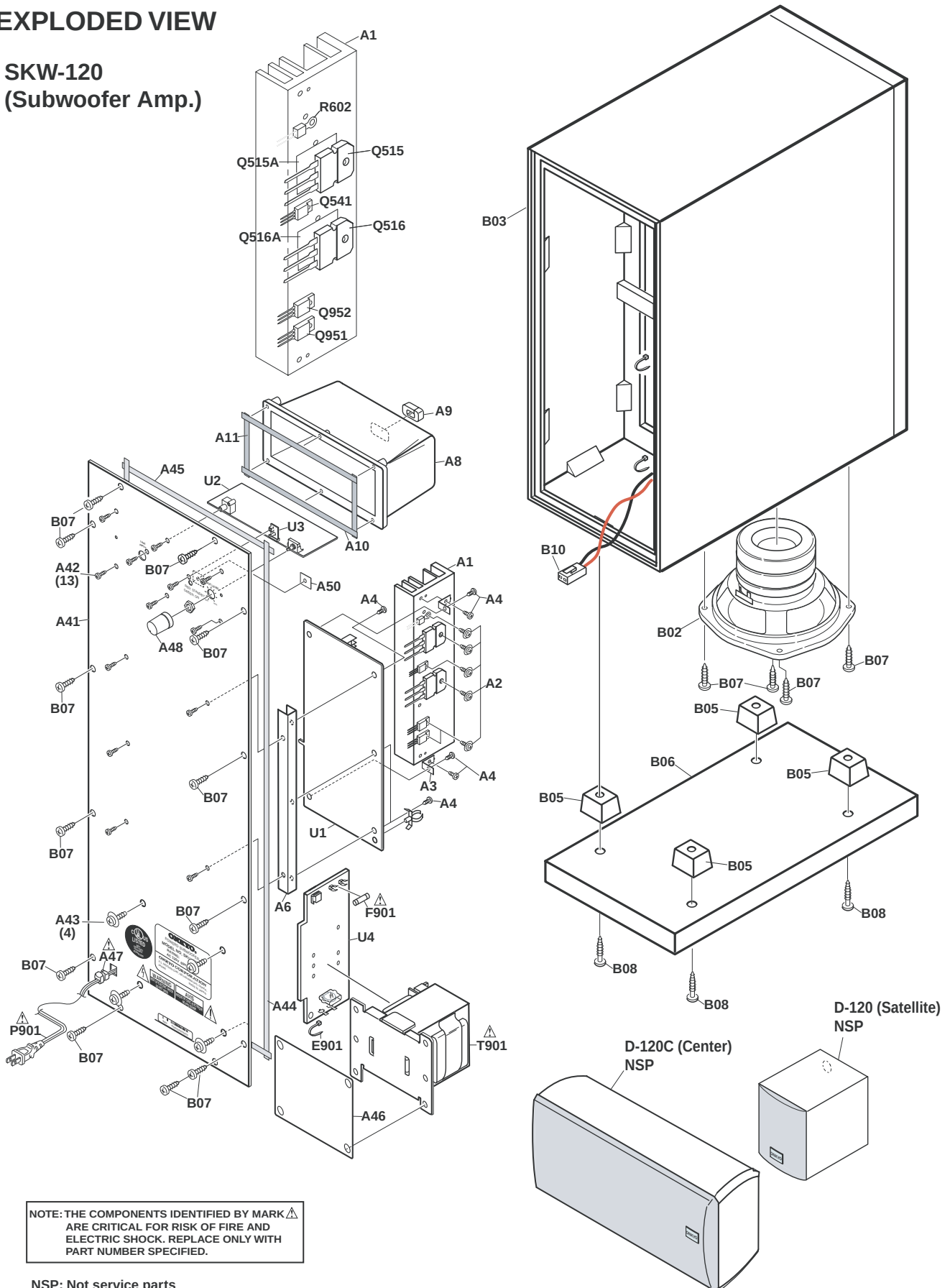
REF. NO.	PART NO.	DESCRIPTION
C 1	AZ077003-01	Center speaker assy
C 2	60-001-906-01	Rating label
S 1	AZ077002-01	Satellite speaker assy
S 2	60-001-907-01	Rating label

HTP-120

— S2

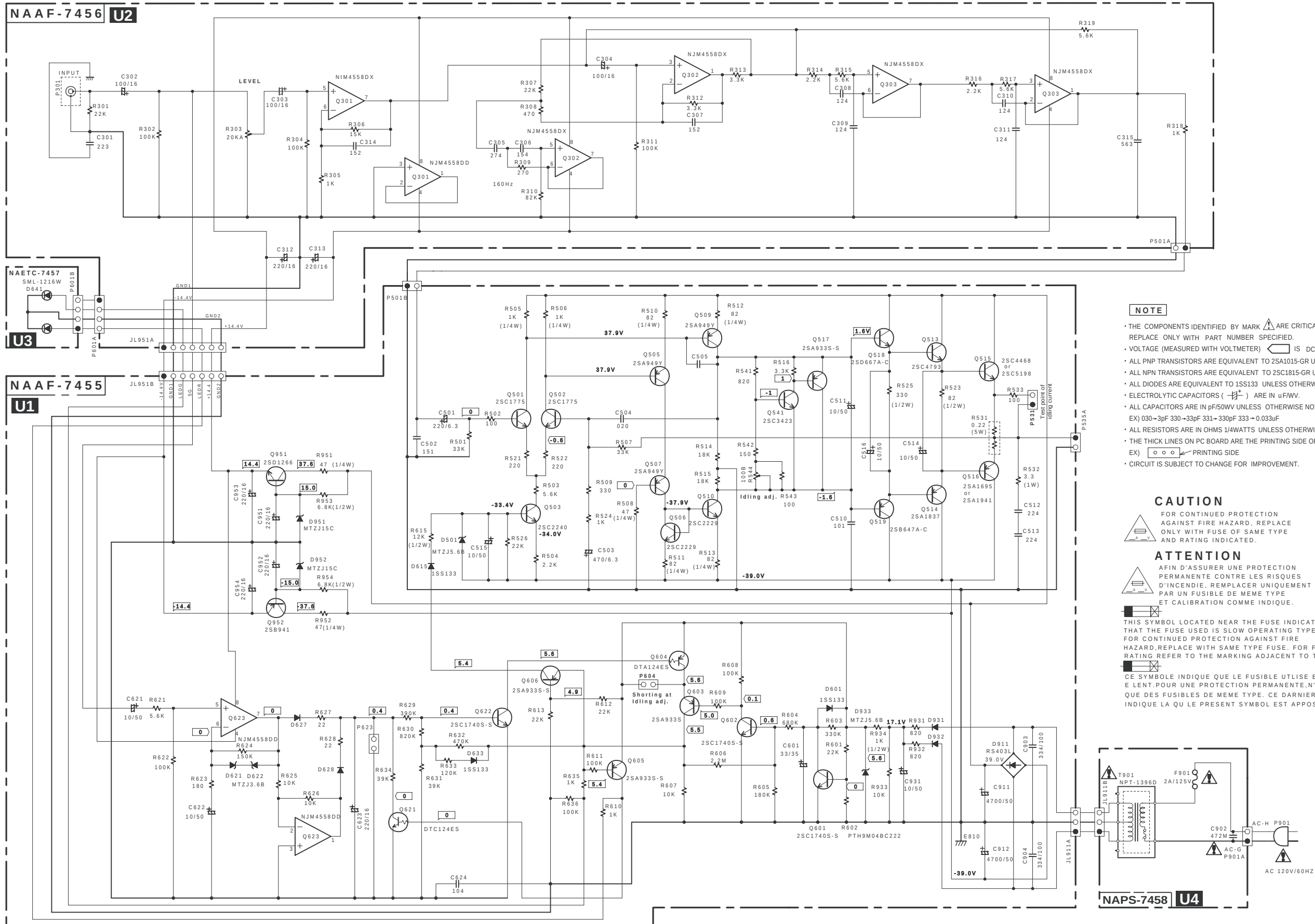
EXPLODED VIEW

SKW-120 (Subwoofer Amp.)



SCHEMATIC DIAGRAM

AMP. SECTION



A

B

C

D

SCHEMATIC DIAGRAM

AMP. SECTION

NAAF-7456

U2

NAETC-7457

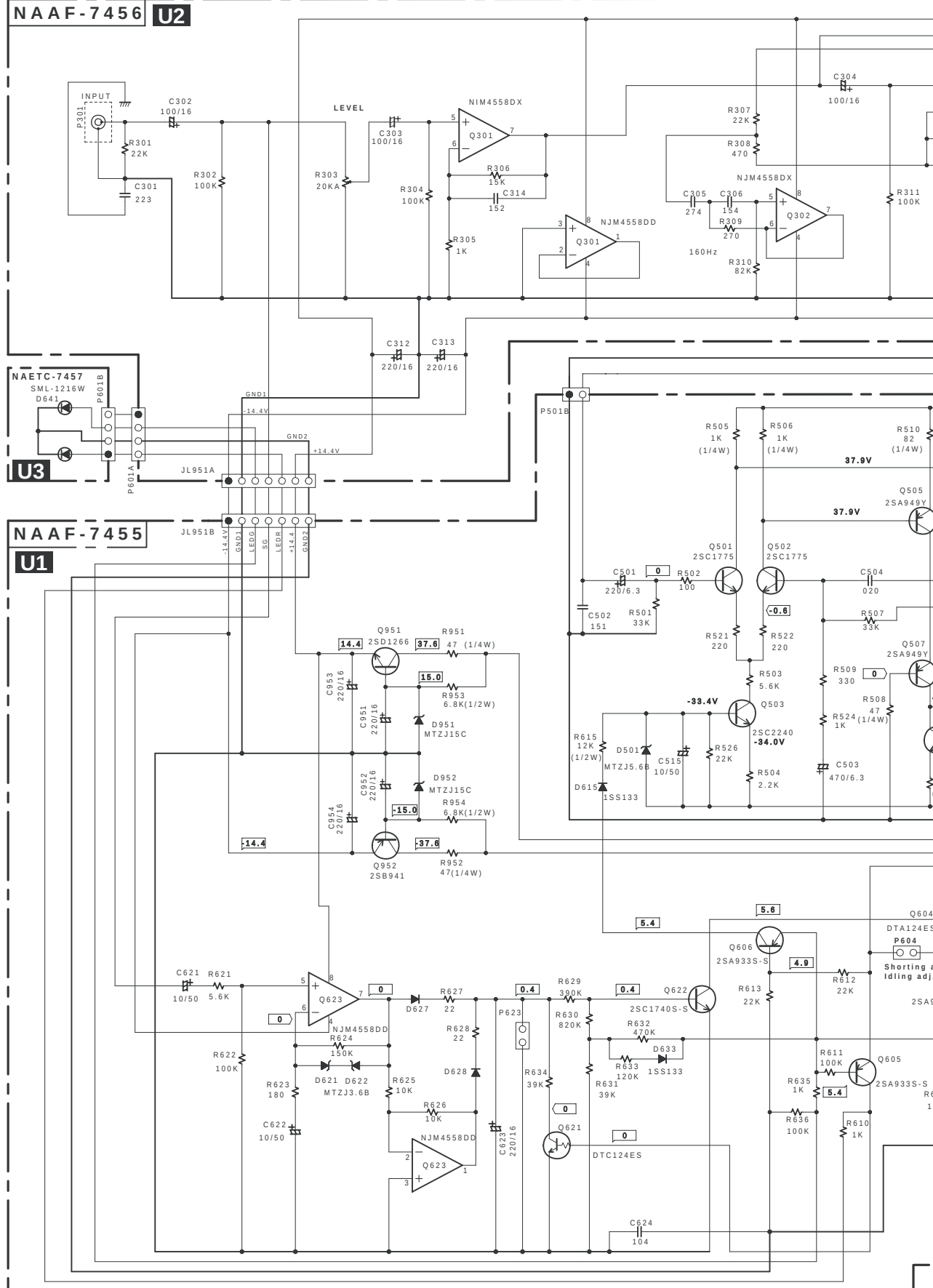
SML-1216W

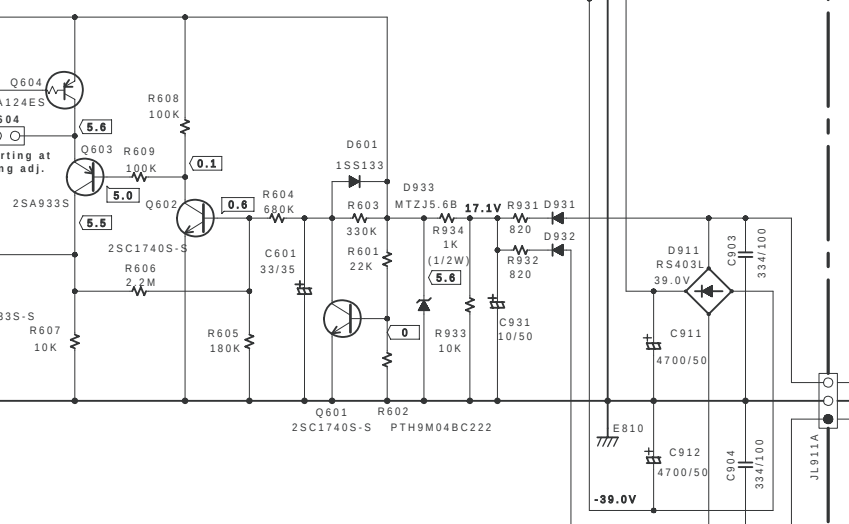
D641

U3

NAAF-7455

U1





NAPS-7458 **U4**

A

B

C

D

PACKING VIEW

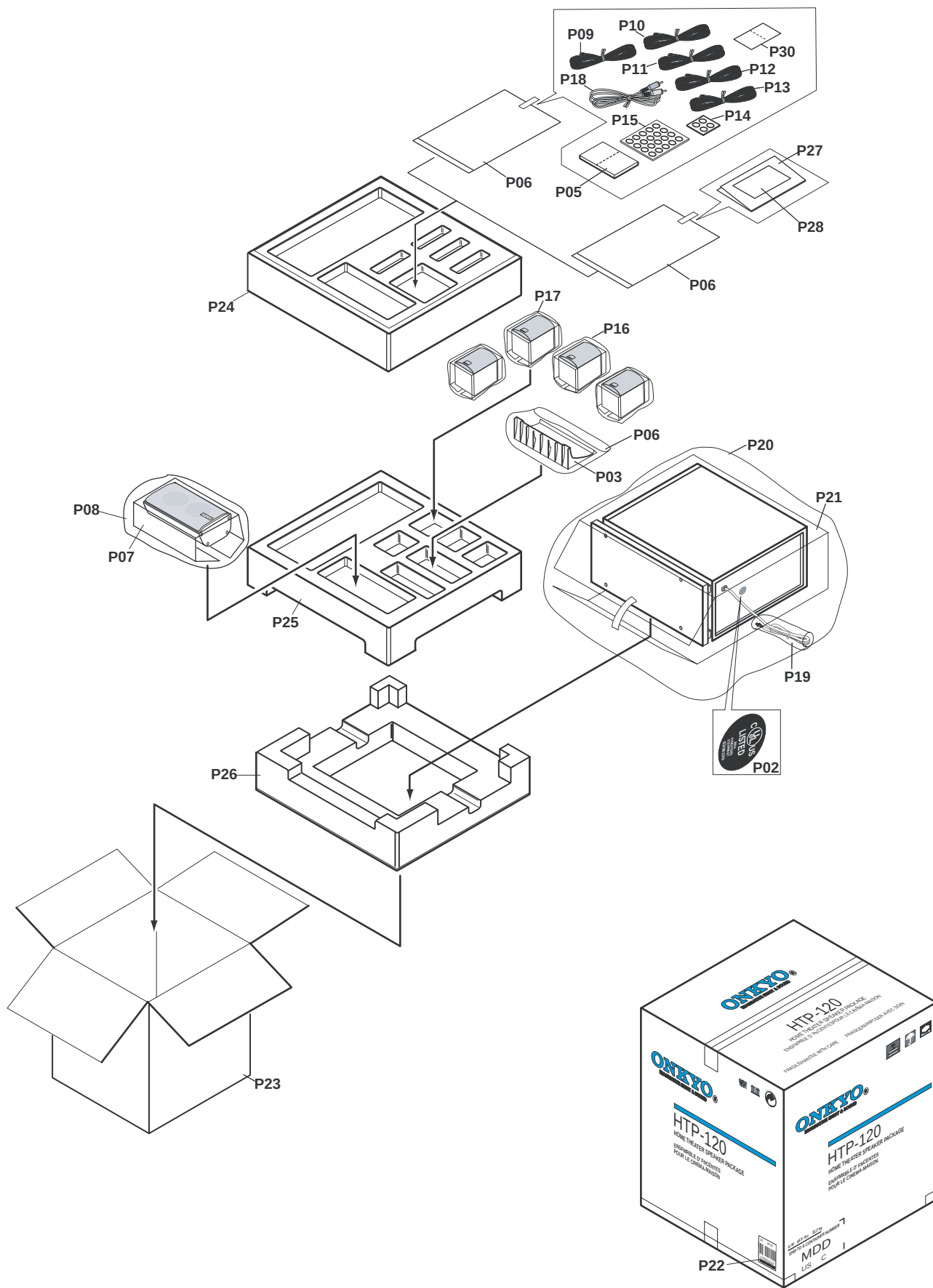
1

2

3

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5



PACKING PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
P02	60-001-848-01	UL label
P03	57-000-564-01	Stand base
P05	65-000-203-01	Spacer (5t x 20 x 2)
P06	85-000-198-01	Poly bag (Accessories, Stand, 0.03t x 250 x 350)
P07	85-000-354-61	Protect sheet (Center, 0.5t x 420 x 300)
P08	85-000-376-21	Poly bag (Center, 0.015t x 350 x 400)
P09	62-000-425-01	Cord assy (Green 3.5m)
P10	62-000-425-11	Cord assy (White 3.5m)
P11	62-000-425-21	Cord assy (Red 3.5m)
P12	62-000-426-01	Cord assy (Blue 8m)
P13	62-000-426-11	Cord assy (Gray 8m)
P14	65-000-204-01	Foot (Sub woofer, t1 x ϕ 15 x 4)
P15	65-000-216-01	Foot (Satellite, t1 x ϕ 7.8 x 20)
P16	85-000-376-71	Poly bag (Satellite, 0.015t x 250 x 280)
P17	85-000-400-21	Protect sheet (Satellite, 0.5t x 460 x 150)
P18	62-000-394-01	Connection cord (MONO BLACK, 3m)
P19	85-000-354-21	Protect sheet (Power cord, 0.5t x 200 x 200)
P20	85-000-462-01	Poly bag (Sub woofer, 0.015t x 750 x 880)
P21	85-000-400-11	Protect sheet (Sub woofer, 0.5t x 1550 x 500)
P22	89-000-545-01	Bar code label
P23	84-001-983-01	Carton box
P24	80-000-491-01	Cushion A (TOP)
P25	80-000-491-11	Cushion B (MID)
P26	80-000-491-21	Cushion C (BOTTOM)
P27	87-001-050-01	Instruction manual
P28	29365090	Warranty card
P30	65-000-202-01	Seal

PRINTED CIRCUIT BOARD PARTS LIST

U1: MAIN CIRCUIT PC BOARD (NAAF-7455)

CIRCUIT NO.	PART NO.	DESCRIPTION
IC		
Q623	222502	NJM4558D-X
Transistors		
Q501,Q502	2215116	2SC1775-F or
	2210755	2SC1775A-E or
	2210756	2SC1775A-F or
	2215115	2SC1775-E
Q503,Q507,	2211406	2SC2240-BL
Q510	C623,	
Q505	2211354	2SA949-Y
Q506	2211634	2SC2229-Y
Q510	2211634	2SC2229-Y
Q513	2202800	2SC4793
Q514	2202790	2SA1837
Q517	2213355	2SA933S-S
Q517 or	2213354	2SA933S-R
Q517 or	2215995	KTA1267-GR
Q518	2211654	2SC2235-Y
Q519	2211644	2SA965-Y
Q603,Q605,	2213355	2SA933S-S or
Q606	2213354	2SA933S-R or
	2215995	KTA1267-GR
Q604,Q621	2215810	KRC103M or
	2213160	DTC124ES or
	2214220	RN1203
Q601,Q602,	2213285	2SC1740S-S or
Q622	2213284	2SC1740S-R or
	2215864	KTC3199-GR
Diodes		
D501,D933	224470562	MTZJ5.6B, Zener
D601,D615,	223163	1SS133 or
D627,D628,	223205	1SS270A, Silicon
D633,D931,		
D932		
D621,D622	224470362	MTZJ3.6B, Zener
D911	22380021	RS403L, Silicon
D951,D952	224471503	MTZJ15C, Zener
Plugs		
P501B	25055132	NPLG-2P116
P531, P604,	25055038	NPLG-2P29
P623	Q513A	
P535A	25055165	NPLG-2P149
JL951B	25055628	NPLG-7P590
Socket		
JL911A	25051107	NSCT-3P894
Terminals		
E813	25060312	NTM-1P243(M1699)
P901A	25060092	NTM-1S33
Capacitors		
C501	354722219	220uF,6.3V, Elect.
C502	374721515	150pF+/-5%, 50V, Plastic
C503	354724719	470uF,6.3V, Elect.
C511,	354781009	10uF,50V, Elect.
C514-C516		
C512,C513	374722244	0.22uF +/-5%, 50V, Plastic
C601	354763309	33uF,35V, Elect.
	354742219	220F,16V, Elect.
C951-C952,		
C953,C954		
C624	374721044	0.1uF +/-5%, 50V, Plastic
C903,C904	374733344	0.33uF +/-5%, 100V, Plastic
C911,C912	3504349	4700uF, 50V, Elect.
C621-C622,	354781009	10uF,50V, Elect.
C931		
Resistors		
R505,R506	415471024	1k ohm+/-5%, 1/4W, Carbon
R508,R951,	415474704	47 ohm+/-5%, 1/4W, Carbon
R952		
R510-R513	415478204	82 ohm+/-5%, 1/4W, Carbon
R523	443528204	82 ohm+/-5%, 1/2W,
		Metal oxide
R525	443523314	330 ohm+/-5%, 1/2W,
		Metal oxide
R531	4500245	0.22 ohm, 5W, Metal plate
	4000201	
	4500031	
R532	453630334	3.3 ohm+/-5%, 1W, Metal
R544	5210359	N06HR100BC, Trim,
		Idling adjust
R615,R934	443521234	12k ohm+/-5%, 1/2W,
		Metal oxide
R931,R932	443628214	820 ohm+/-5%, 1W,
		Metal oxide
R953,R954	443526824	6.8k ohm+/-5%, 1/2W,
		Metal oxide
Retainer		
E810	27141059	Ground
Heat sink		
	27160209	HEAT-SINK(RAD-67)
Screws		
Q513B,Q514B	82143010	3P+10FN(BC), Tapping

PRINTED CIRCUIT BOARD PARTS LIST

U2: OUTPUT CONTROL PC BOARD (NAAF-7456)

CIRCUIT NO PART NO. DESCRIPTION

IC		
Q301	222502	NJM4558D-X
Socket		
JL951A	25051091	NSCT-7P878
Socket AS		
P501A	2009990602U	NSAS-4P0815
Pin jack		
P301	25045567	NPJ-1PDBL382
Plug		
P601A	25055804	NPLG-4P760
Resistor		
R303	5125490	N11RL20KA25Z, Volume
Capacitors		
C302,C303	354741019	100uF, 16V, Elect.
C312,C303	354742219	220uF, 16V, Elect.
C314	374721524	1500pF +/-5%, 50V, Plastic
C315	374725634	0.056uF +/-5%, 50V, Plastic

U3: LED PC BOARD (NAETC-7457)

CIRCUIT NO PART NO. DESCRIPTION

P601B	25051526	NSCT-4P1313
D641	225295	SML1216W

U4: POWER TRANSFORMER PC BOARD (NAPS-7458)

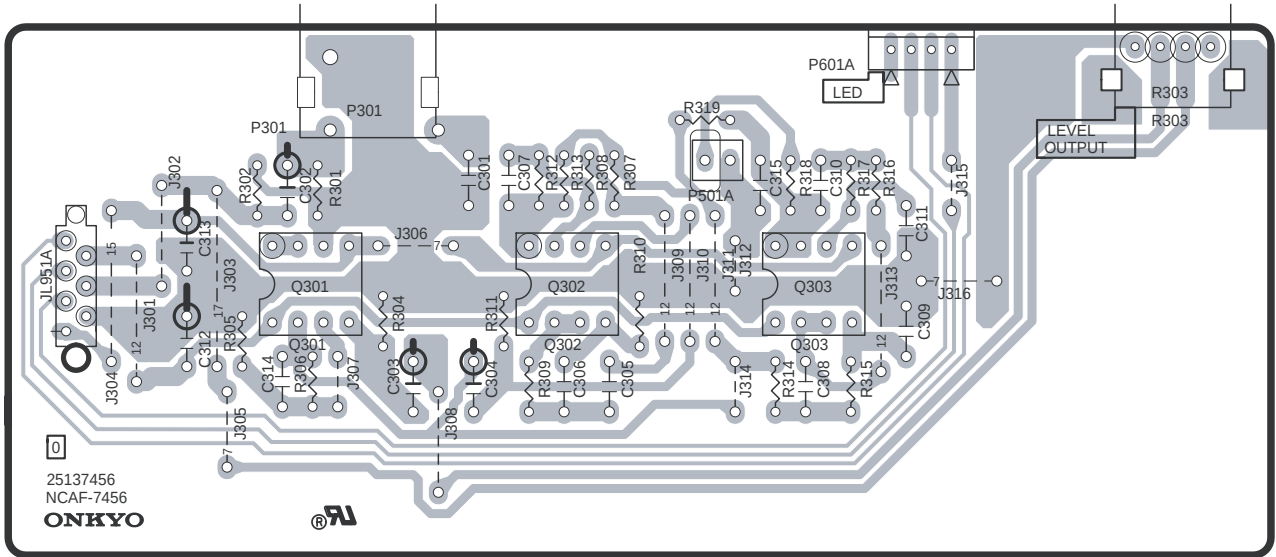
CIRCUIT NO PART NO. DESCRIPTION

Capacitor		
C902	3300054	DE1310E472M-KH
Fuse holders		
F901A	25052133	NSCT-1P2031
F901B	25052133	NSCT-1P2031
Socket		
JL911B	25050280	NSCT-3P108
Other		
C902A	27301216	SB1925A, Capacitor cover

A B C D

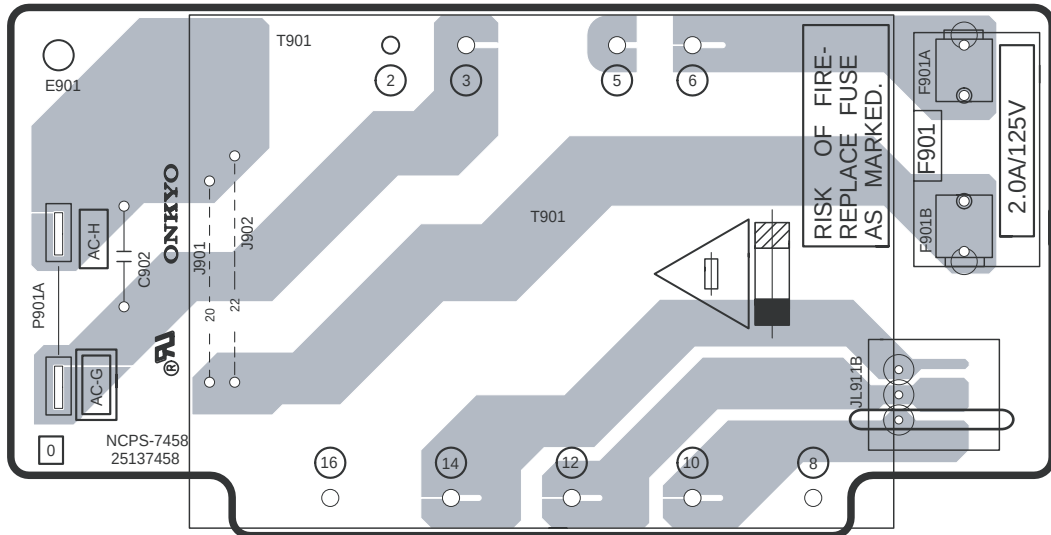
PRINTED CIRCUIT BOARD VIEW 2

U2 OUTPUT CONTROL PC BOARD (NAAF-7456)



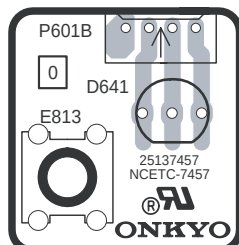
Soldering side view

U4 POWER TRANSFORMER PC BOARD (NAPS-7458)



Soldering side view

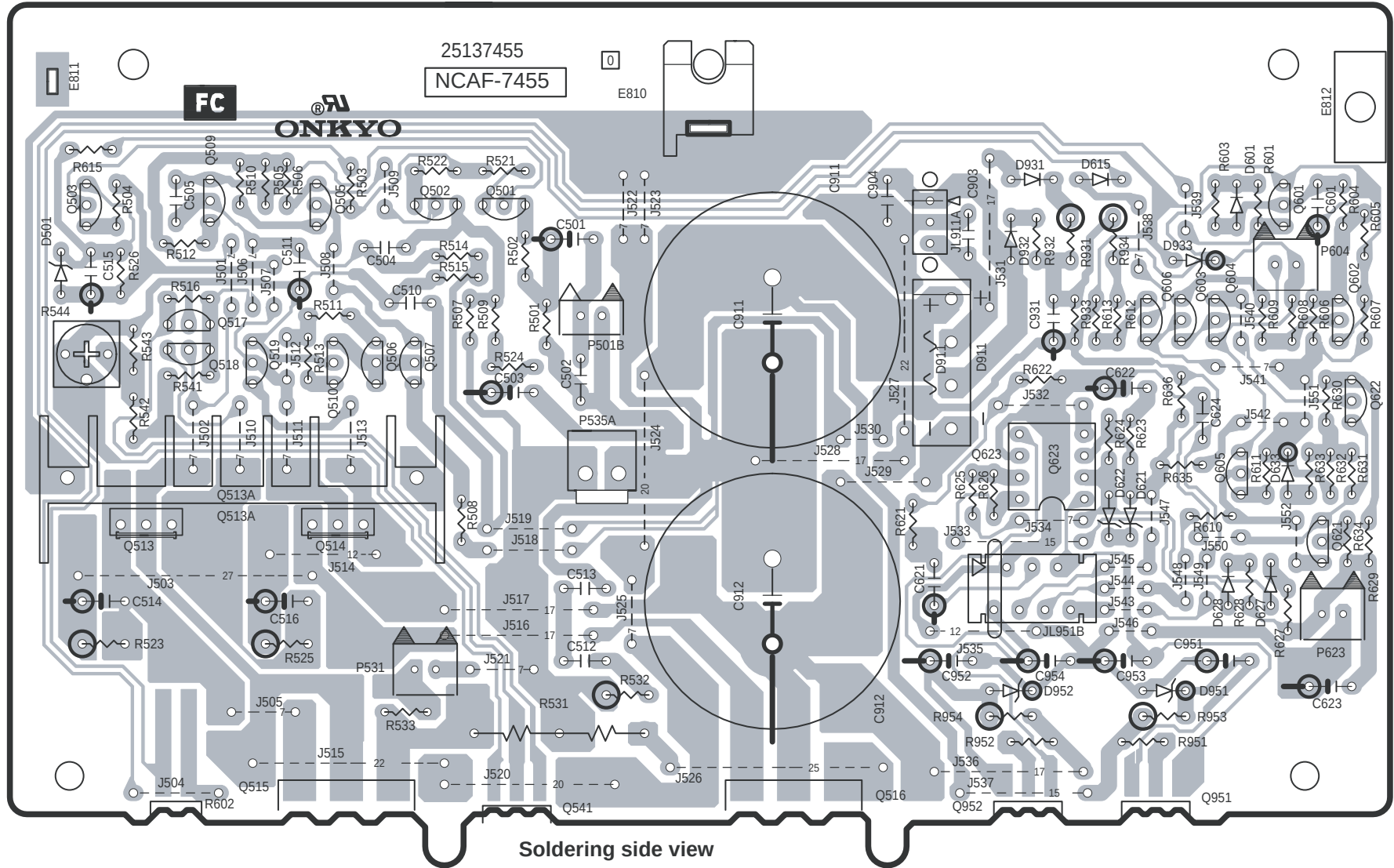
U4 LED PC BOARD (NAETC-7457)



Soldering side view

PRINTED CIRCUIT BOARD VIEW 1

U1 MAIN CIRCUIT PC BOARD



ONKYO CORPORATION

Sales & Product Planning Div. : 2-1, Nisshin-cho, Neyagawa-shi, OSAKA 572-8540, JAPAN
Tel: 072-831-8111 Fax: 072-833-5222

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