

Service Information



Model Nakamichi 1000II (3 Head Cassette System)
Serial No. from 3145181
Subject Modification of the Capacitors
on the Logic Control Circuit

No. NR-0021 (1/4)
Date 7/19/77

I. General:

A. Purpose:

A momentary touch on the Touch Control Switch may conduct an erroneous operation (wrong mode is set).

(Touch Control Switch is adopted for the Models bearing serial Nos. 3142836 and greater.)

Causes:

Defective matching between Touch Control Switch circuit and next stage, Logic Control circuit.

Each output of the Touch Control Switch is conducted to each Flip-Flop in the Logic Control circuit and the Flip-Flop includes a capacitor which acts to delay the activation speed of the Flip-Flop in order to prevent erroneous operation caused by noise.

Current delay time of the Flip-Flop is matched for the previous Control Button Ass'y of mechanical spring contact, but not for the Touch Control Switch Ass'y of semiconductor switch.

Countermeasure:

The value of the capacitors has been decreased 10 times to increase the activation speed of the Flip-Flops.

Note: When above modification is made on current Touch Control Switch Ass'y, please refer to "III. Modification Procedures".

B. Modification:

1. Part No. of the Logic Control P.C.B. Ass'y has been changed from BA03688A to BA03952A.
2. As the part No. of the Logic Control P.C.B. Ass'y has been changed, Mechanism Ass'y No. of N-1000II has also been changed from CA05213B to CA05237A.
3. Modification on Logic Control P.C.B. Ass'y

Current Parts (Logic Control P.C.B. Ass'y: BA03688A)

C615,622,625	OB01863A	Electrolytic Capacitor	3.3 μ F 16 V ...	3 pcs.
C623	OB01405A	Electrolytic Capacitor	1 μ F 16 V ...	1 pce.

New Parts (Logic Control P.C.B. Ass'y: BA03952A)

C615,622,625 OB05949A Tantalum Capacitor 0.33 μ F 35 V .. 3 pcs.
 C623 OB05781A Tantalum Capacitor 0.1 μ F 35 V .. 1 pce.

C. Compatibility (of new Logic Control P.C.B. Ass'y with the current Model):
 Possible (for the Models of Touch Control Switch bearing serial Nos.
 3142836 and greater).

II. Modified Parts List:

<u>Part No.</u>	<u>Description</u>
CA05237A	Mechanism Ass'y N-1000II 1 pce.
BA03952A	Logic Control P.C.B. Ass'y ... 1 pce.

<u>Schematic Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	
	BA03952A	Logic Control P.C.B. Ass'y	
	OB07593B	Logic Control P.C.B.	
L601,603,605	OB06041B	IC	N7400A
L602,606	OB06042B	IC	N7410A
L604	OB06043C	IC	N7420A
L607	OB06044C	IC	N7474A
L608	OB06027A	IC	RC4709
Q601,602,605	OB01824A	Transistor	2SC828
606,608,611			
612,613,616			
618,622,626			
627,628,629			
630			
Q607,609	OB06013A	Transistor	2SA733
Q610,614	OB06020A	Transistor	2SC1096
Q615,617,619	OB01910A	Transistor	2SC900
Q620,621,623	OB01338A	Transistor	2SC735
624,625			
D601,602,603	OB01501U	Silicon Diode	V06C
D604,605	OB00030A	Germanium Diode	1N60 (P)
D606,607	OB01909A	Silicon Diode	1S1555
D608	OB01599A	Silicon Varistor	KB162
ZD601	OB06014A	Zener Diode	06R
VR601	OB07058A	Semi-fixed Volume	50K
R601,602	OB01920A	Carbon Resistor	100K ERD-25V J
R603,604,641	OB01833A	Carbon Resistor	10K ERD-25V J
649,664,666			
R605,606,657	OB05566A	Carbon Resistor	2.2K ERD-25V J
R607,608	OB05596A	Carbon Resistor	220K ERD-25V J
R609,610	OB05591A	Carbon Resistor	15K ERD-25V J
R611,612,621	OB01795A	Carbon Resistor	4.7K ERD-25V J
625,632,633			
636,678			
R613,614	OB05505A	Carbon Resistor	1.5K ERD-25V J
R615,616	OB05691A	Carbon Resistor	390 ERD-25T J

<u>Schematic Ref. No.</u>	<u>Part No.</u>	<u>Description</u>		
R620,623,624 645	OB05661A	Carbon Resistor	22K	ERD-25V J
R622	OB05670A	Carbon Resistor	1.8M	ERD-25V J
R626,629	OB05678A	Carbon Resistor	560	ERD-25V J
R627	OB05565A	Carbon Resistor	1.2K	ERD-25V J
R628,643,651 681,682	OB05673A	Carbon Resistor	5.6K	ERD-25V J
R630,662,669	OB05562A	Carbon Resistor	47K	ERD-25V J
R631,642,650	OB05563A	Carbon Resistor	56K	ERD-25V J
R634	OB01830A	Carbon Resistor	1.8K	ERD-25V J
R635,638,648	OB01933A	Carbon Resistor	220	ERD-25T J
R637	OB05572A	Carbon Resistor	470	ERD-12V J
R639	OB01682A	Carbon Resistor	6.8K	ERD-25T J
R640,661,671	OB05608A	Carbon Resistor	220	ERD-25V J
R652,653,654 655,656,658 659,663,665 667	OB01781A	Carbon Resistor	1K	ERD-25V J
R660	OB01679A	Carbon Resistor	100	ERD-25T J
R668	OB01877A	Carbon Resistor	6.8K	ERD-25V J
R670	OB05558A	Carbon Resistor	100	ERD-25V J
R679	OB05663A	Carbon Resistor	10	ERD-25V J
C601,602	OB05657A	Tantalum Capacitor	4.7 μ	16V
C603,604	OB01288A	Ceramic Capacitor	100P	50V
C605,606	OB05745A	Ceramic Capacitor	3P	50V
C607,608	OB05581A	Tantalum Capacitor	10 μ	20V
C609	OB01411A	Electrolytic Capacitor	100 μ	6.3V
C610	OB01405A	Electrolytic Capacitor	1 μ	16V
C611	OB01772A	Mylar Capacitor	0.12 μ	50V K
C612	OB01392A	Electrolytic Capacitor	470 μ	16V
C613	OB01400A	Electrolytic Capacitor	100 μ	16V
C614,618,624	OB01412A	Electrolytic Capacitor	10 μ	16V
C615,622,625	OB05949A	Tantalum Capacitor	0.33 μ	35V
C616,619	OB01404A	Electrolytic Capacitor	47 μ	6.3V
C617	OB01609A	Mylar Capacitor	0.01 μ	50V K
C620,621,629	OB01862A	Electrolytic Capacitor	22 μ	16V
C623	OB05781A	Tantalum Capacitor	0.1 μ	35V
C626,628	OB05638A	Tantalum Capacitor	1 μ	35V
C632,633	OB01603A	Mylar Capacitor	0.1 μ	50V K
C634,635	OB05530A	Mylar Capacitor	6800P	50V K
C636,637	OB01456A	Ceramic Capacitor	47P	50V
RL601,602	OB07001A	Relay	LC1-C	
	OB03067A	Wiring Holder	(2 pcs.)	
	OB08001A	Tab	(3 pcs.)	
	OB07535D	19P Plug Board (D)	(1 pce.)	
	OB07629B	19P Plug Board	(1 pce.)	
	OE00174A	Earth Lug B-4	(1 pce.)	
	OE00607A	Screw M3x8 Philips Pan Head (3A)	(3 pcs.)	
	BA03808A	19P Connector Ass'y	(3 pcs.)	
	OC05157C	P.C.B. Holder A	(2 pcs.)	
	OE00507A	Nut Hex. M3	(4 pcs.)	
	OE00518A	Screw M3x8 Philips Flat Head	(1 pce.)	
	OE00581A	Washer 3mm Spring	(1 pce.)	
	OB05110A	HP Separate Plug Cord	(1 pce.)	

III. Modification Procedures for the current Models:

A. Parts removed:

C615,622,625	OB01863A	Electrolytic Capacitor	3.3 μ F 16 V ...	3 pcs.
C623	OB01405A	Electrolytic Capacitor	1 μ F 16 V ...	1 pce.

B. Parts required:

C615,622,625	OB05949A	Tantalum Capacitor	0.33 μ F 35 V	3 pcs.
C623	OB05781A	Tantalum Capacitor	0.1 μ F 35 V	1 pce.

C. Modification procedures:

1. Disassemble the Cabinet Ass'y by removing 5 screws.
2. Disassemble the Logic Control P.C.B. Ass'y by removing 2 screws and 4 connectors.
3. Remove capacitors C615, C622, C623 and C625.
4. Mount the new capacitors C615, C622, C623 and C625.
5. Assemble the Logic Control P.C.B. Ass'y by mounting 2 screws and 4 connectors.
6. Check to insure that the N-1000II operates accurately in each Play, Stop, FF, Rew, Record and Pause mode.
7. Assemble the Cabinet Ass'y by mounting 5 screws.