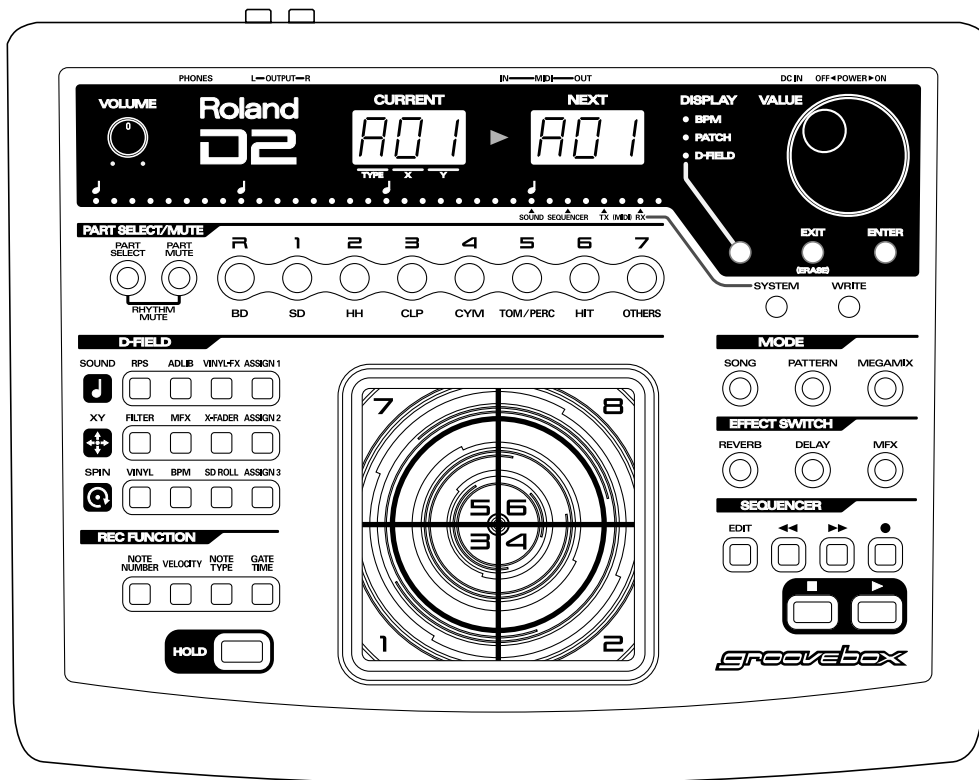




SERVICE NOTES

Issued by RJA

SPECIFICATIONS.....	2	CIRCUIT BOARD(MAIN)	22
LOCATION OF CONTROLS PARTS LIST	4	CIRCUIT DIAGRAM(MAIN 1/2)	24
LOCATION OF CONTROLS	5	CIRCUIT DAIGRAM(MAIN 2/2)	26
EXPLODED VIEW PARTS LIST	6	CIRCUIT BOARD(PANEL/JACK).....	28
EXPLODED VIEW	7	CIRCUIT DIAGRAM(PANEL/JACK).....	32
WIRING DIAGRAM.....	8	ERROR MESSAGES	34
PARTS LIST.....	10		
CHECKING THE VERSION NUMBER.....	14		
USERS DATA SAVE AND LOAD.....	14		
RESTORING THE FACTORY SETTINGS.....	14		
SYSTEM SOFTWARE UPDATE PROCEDURE	15		
TEST MODE.....	16		
BLOCK DIAGRAM.....	20		



Copyright © 2001 ROLAND CORPORATION

All rights reserved. No part of this publication may be reproduced in any form without the written permission of ROLAND CORPORATION.

SPECIFICATIONS

D2 : GROOVEBOX

• Sound generator:

Maximum Polyphony	64 voices
Parts	16 (Main: 8 + RPS: 8)
Patches	Preset 600
	User 256
Rhythm set	Preset 30
	User 20
Effects Reverb	6
	Delay 2
	MX 25

• Sequencer:

Tracks	8
Resolution	96 TPQN
Tempo	20.0 - 240.0 (max.)
Maximum Note Storage	approx. 40,000 notes
Patterns	Preset 157
	RPS 232
	User 100
Songs	25
Recording Method	New Step REC
	D-Field REC
Arpeggiator	Preset 43
	User 10
Real-time Quantize	GRID/SHUFFLE/GROOVE
RPS Set	30
Pattern Set	20
MEGAMIX Set	20

• Controller

D-FIELD Controller

• Connectors

Headphones Jack (Stereo miniature phone type)

Output Jacks (L, R) (RCA phono type)

MIDI Connectors (IN/OUT)

DC IN Jack

• Power Supply

AC Adaptor (DC9V)

• Current Draw

1000 mA

• Dimensions

325 (W) x 256 (D) x 55 (H) mm

12-13/16 (W) x 10-1/8 (D) x 2-3/16 (H) inches

• Weight

1.4 kg / 3 lb 2 oz (excluding AC Adaptor)

• Accessories

Owner's Manual English (#71898212)

AC Adaptor ACI-120C (#00905767)

AC Adaptor ACI-230C (#01018312)

or

AC Adaptor PSB-1U (#01901578)

AC Cord Set 230 V (#01903356)

AC Cord Set 240 V (#01903367)

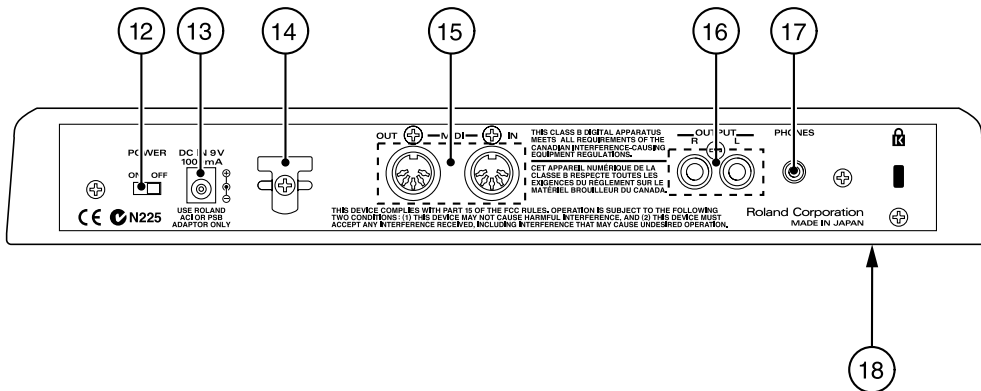
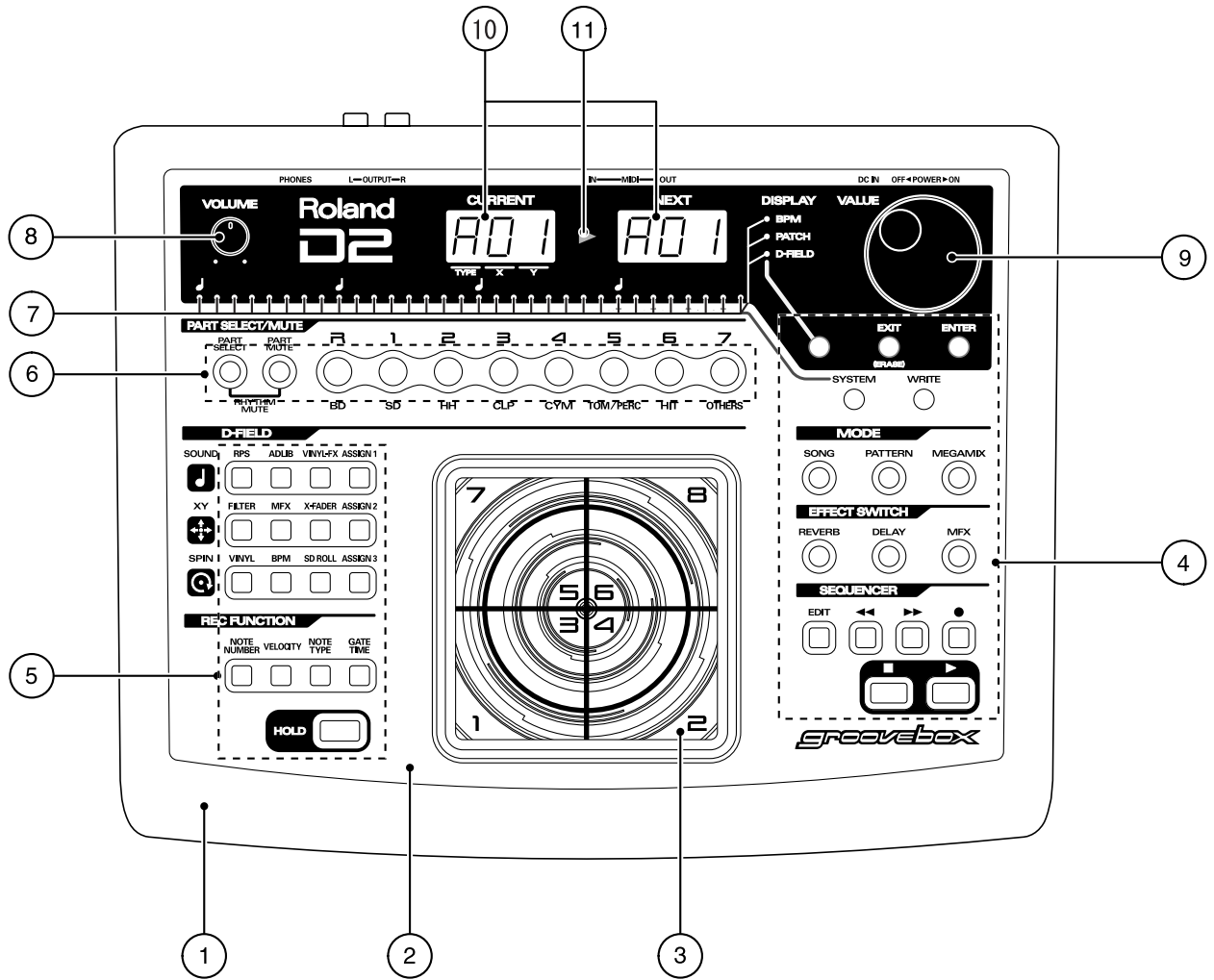
EURO CONVERTER PLUG ECP01-5A (#00905234)

* In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

LOCATION OF CONTROLS PARTS LIST

No.	Part Code	Part Name	Q'ty
1	02671789	TOP CASE	1
2	02671801	TOP PANEL	1
3	71898145	XY-PAD ASSY	1
4	02671834	RUBBER SW C	1
	02671234	LED LNJ812K86RA1	7
	02671245	LED SML-310LTT86	1
5	02671812	RUBBER SW A	1
	02671234	LED LNJ812K86RA1	17
6	02671823	RUBBER SW B	1
	02671234	LED LNJ812K86RA1	10
7	02671245	LED SML-310LTT86	35
8	22480260	P R-KNOB MF BLK/LCG	1
	02671289	12M/M ROTARY POT. RK12L12C	1
9	22485303	D R-KNOB L BLK 248-303	1
	02671212	ROTARY ENCODER EVE GB1 F15 24B	1
10	01784978	LED SML-020MLT	1
11	01342534	LED SL-9351S	2
12	02671312	SLIDE SWITCH SLG-22-465	1
13	22360712	CORD HOOK 236-712	1
14	13449720	DC JACK HEC2305-01-250	1
15	13429676	MIDI CONNECTOR YKF51-5048	1
16	00451445	RCA(PIN) YKC21-3040	1
17	02456390	3.5MM JACK YKB21-5290	1
18	02671790	BOTTOM COVER	1

LOCATION OF CONTROLS

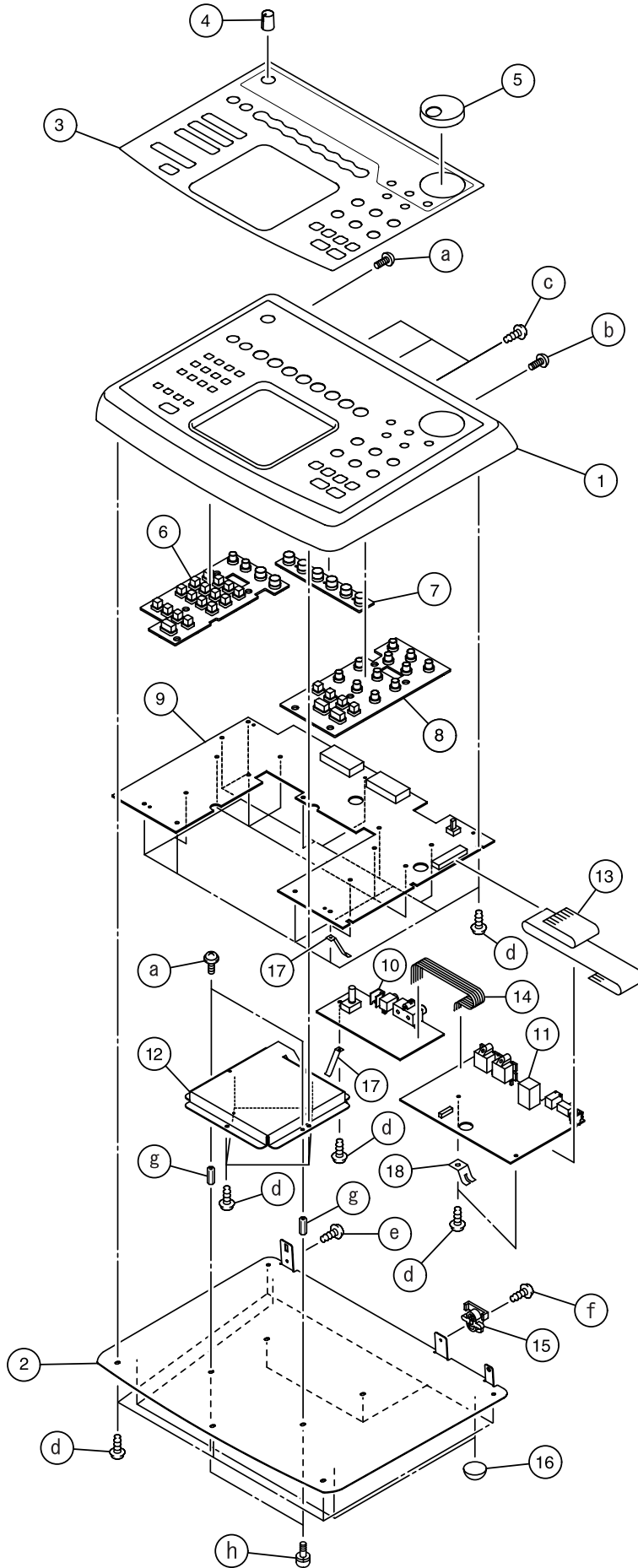


EXPLODED VIEW PARTS LIST

No.	Part Code	Part Name	Q'ty
1	02671789	TOP CASE	1
2	02671790	BOTTOM COVER	1
3	02671801	TOP PANEL	1
4	22480260	P R-KNOB MF BLK/LCG	1
5	22485303	D R-KNOB L BLK 248-303	1
6	02671812	RUBBER SW A	1
7	02671823	RUBBER SW B	1
8	02671834	RUBBER SW C	1
9	71898123	PANEL BOARD ASSY	1
10	71898134	JACK BOARD ASSY	1
11	71898101	MAIN BOARD ASSY	1
12	71898145	XY-PAD ASSY	1
13	02670889	BAN CARD BNCD-P=1.00-K-26-80	1
14	02673889	RIBON CABL JWFV 9x70-P2.0	1
15	22360712	CORD HOOK 236-712	1
16	12359137	FOOT SJ-5012 BLK	4
17	01120545	LEAF	2
18	22175349	LEAF SPRING 217-349	1

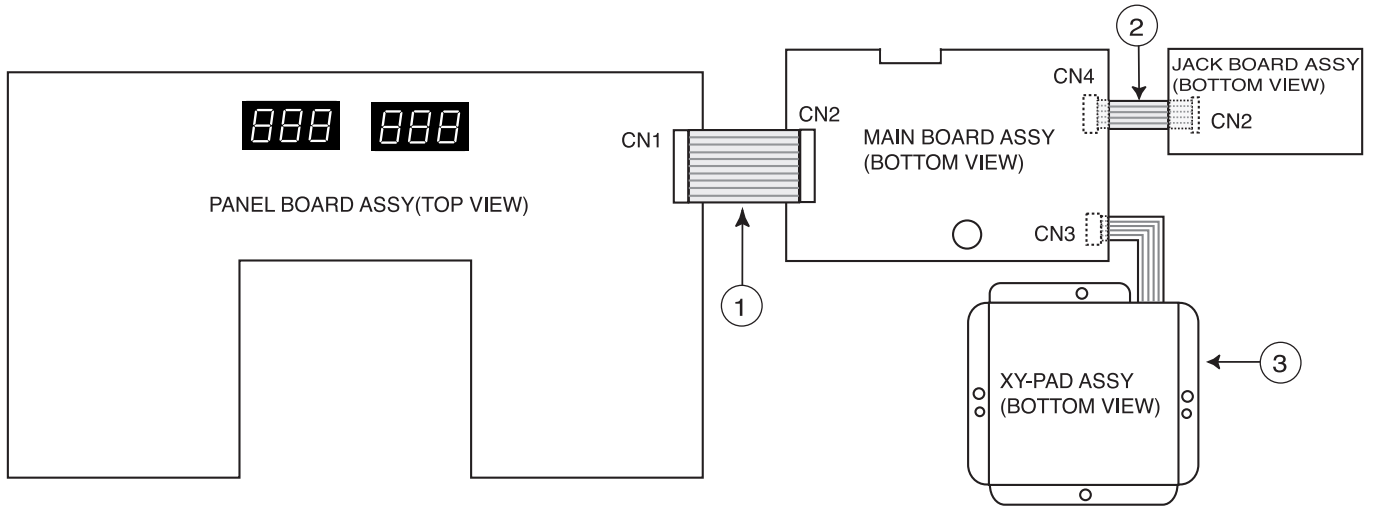
No.	Part Code	Part Name	Q'ty
a			
b	40011501	SCREW M3x8 PAN MACHINE W/SW+PW BZC	1
c	40011312	SCREW 3x8 BINDING TAPTITE P BZC	3
d	40011301	SCREW M3x6 BINDING TAPTITE P FE BZC	32
e	40011101	SCREW 3x8 BINDING TAPTITE B BZC	1
f	40012312	SCREW 3x12 BINDING TAPTITE B FE BZC	1
g	22155569	STANDOFF M3-L5.5-H19.5	2

EXPLODED VIEW



WIRING DIAGRAM

No.	Part Code	Part Name	Q'ty
1	02670889	BAN CARD BNCD-P=1.00-K-26-80	1
2	02673889	RIBON CABL JWFV 9X70-P2.0	1
3	71898145	XY-PAD ASSY	1



PARTS LIST

SAFETY PRECAUTIONS:

The parts marked Δ have safety-related characteristics. Use only listed parts for replacement.

SAFETY PRECAUTIONS:

The parts marked Δ have safety-related characteristics. Use only listed parts for replacement.

Ex.	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER
	10	22575241	Sharp Key	C-20/50
	15	2247017300	Knob (orange)	DAC-15D

Failure to completely fill the above items with correct number and description will result in delayed or even undelivered replacement.

NOTE: The parts marked # are new. (initial parts)

MB -> MAIN BOARD ASSY, PB -> PANEL BOARD ASSY, JB -> JACK BOARD ASSY

CASING

#	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	QTY
#		02671790	BOTTOM COVER		1
#		02671789	TOP CASE		1
#		02671801	TOP PANEL		1

KNOB, BUTTON

#	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	QTY
		22480260	P R-KNOB	MF BLK/LCG	1
		22485303	D R-KNOB	L BLK 248-303	1
#		02671812	RUBBER SW A	for ALPHA-DIAL	1
#		02671823	RUBBER SW B		1
#		02671834	RUBBER SW C		1

SWITCH

#	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	QTY
#		02671312	SLG-22-465	SLIDE SWITCH	1
				SW2 on MB	

JACK,EXT TERMINAL

#	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	QTY
		00451445	YKC21-3040	PIN JACK(RCA)	1
		02456390	YKB21-5290 (STEREO)	3.5MM JACK	1
		13429676	YKF51-5048 (TWIN)	MIDI CONNECTOR	1
		13449720	HEC2305-01-250	DC JACK	1
				JK2 on JB	
				JK1 on JB	
				JK1 on MB	
				JK2 on MB	

DISPLAY UNIT

#	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	QTY
		01342534	SL-9351S	LED 7 SEGMENT	2
				LED1,LED2 on PB	

NOTE: Replacement SL-9351S should be made on a unit base.

PCB ASSY

#	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	QTY
#		71898101	MAIN BOARD ASSY		1
			NOTE: 'MAIN BOARD ASSY' includes the following parts.		
#		02014090	HEATSINK	K217 H25	1
		12199584	GROUNDING TERMINAL	M1698	1
		40011501	SCREW M3X8	PAN MACHINE W/SW+PW BZC	1
#		71898123	PANEL BOARD ASSY		1
#		71898134	JACK BOARD ASSY		1
			NOTE: 'JACK BOARD ASSY' includes the following parts.		
#		02673889	RIBBON CABLE	JWFV 9X70-P2.0	1
		12199584	GROUNDING TERMINAL	M1698	1
				TER1 on JB. TER1 on MB	

IC

#	QTY	PART NUMBER	DESCRIPTION	MODEL NUMBER	QTY
#		02672601	HD6437016E21FD2 VER1.00	IC (32BIT CPU)	1
		01679978	RA09-002XP6TC203C180AF002	IC (CUSTOM)	1
		01342978	TC160G22AF-1253	IC (CUSTOM)	1
#		02233912	LHMN06NH	IC (MASK ROM)	1
		01561945	LH28F160S5T-L70	IC (FLASH MEMORY)	1
		01783123	LH28F400BVE-BL85	IC (FLASH MEMORY/BLANK)	1
		01897201	PCM1716E	IC (AD/DA)	1
		01906712	LC324260AJ-60-TLM	IC (DRAM)	1
		02450401	GM71C18163CJ-6	IC (DRAM)	1
		01677701	HD74HC574FPPEL	IC (CMOS)	1
		15259884	TC7S08F(TE85L)	IC (CMOS)	1
		15259885	TC7S32F(TE85L)	IC (CMOS)	1
		15249104	TC7S04F(TE85L)	IC (CMOS)	1
		15249111	TC7WU04F(TE12L)	IC (CMOS)	1
		15259704H0	HD74HC138FPPEL	IC (HS-CMOS)	3
		15189261	M5218AFP-600E	IC (BIPOLAR OP AMP)	2
		15289105	UPC4570G2-E2	IC (BIPOLAR OP AMP)	1
		15289128	BA10324AF	IC (OP AMP)	1
		15289125	PC-410KT 178FAY	IC (PHOTO COUPLER)	1
		02014645	BA17805T	IC (REGULATOR)	1
		02561601	TA48M033F(TE16L S)	IC (REGULATOR)	1
				IC3 on MB	
				IC12 on MB	
				IC6 on MB	
				IC13 on MB	
				IC4 on MB	
				IC5 on MB	
				IC21 on MB	
				IC19 on MB	
				IC7 on MB	
				IC4 on PB	
				IC23 on MB	
				IC8 on MB	
				IC1 on MB	
				IC14 on MB	
				IC3,IC2,IC1 on PB	
				IC5,IC6 on JB	
				IC22 on MB	
				IC10 on MB	
				IC2 on MB	
				IC11 on MB	
				IC16 on MB	

IC					
	02234778	NJM2360AM-TE3	IC (REGULATOR)	IC15 on MB	1
	15199937	M51953BFP-600C	IC (RESET)	IC20 on MB	1
TRANSISTOR					
#	02671012	2SA1530A-T12-1R	TRANSISTOR	Q11 on MB	1
#	02671023	2SC3052-T12-1E	TRANSISTOR	Q12,Q13 on MB	2
#	02671001	2SC3440-T12-1E	TRANSISTOR	Q10 on MB	1
#	02670989	DTB113ZK-146T	TRANSISTOR	Q5,Q4 on MB. Q5,Q4,Q1,Q3,Q12,Q15,Q6,Q13,Q11, Q10,Q9,Q2,Q8,Q7,Q14 on PB	15 +2
	15329536	RN1442-A(TE85L)	TRANSISTOR	Q25,Q24 on JB	2
#	02671267	RT1N141C-T12-1	TRANSISTOR	Q14,Q9,Q7 on MB. Q16,Q17,Q18,Q19,Q20,Q22,Q23,Q21 on PB	8 +3
#	02671278	RT1N140C-T12-1	TRANSISTOR	Q3,Q2 on MB	2
#	02671256	RT1P141C-T12-1	TRANSISTOR	Q1,Q6,Q8 on MB. Q26 on PB	1 +3
DIODE					
	01017512	RB411D T146	SCHOTTKY DIODE	D3 on MB	1
	02014778	U1GC44(TE12L)	RECTIFIER DIODE	D2 on MB	1
	01565678	RD5.1M-T2B	ZENER DIODE	D5 on MB	1
#	02671245	SML-310LTT86	LED	LED24,LED92,LED70,LED72,LED74, LED108,LED82,LED68,LED86,LED80 ,LED94,LED96,LED98,LED104,LED1 06,LED8,LED20,LED109,LED22,LED 10,LED12,LED84,LED14,LED62,LED 26,LED32,LED34,LED60,LED38,LED 44,LED46,LED48,LED50,LED56,LED 58,LED36 on PB	36
#	02671234	LNJ812K86RA1	LED	LED89,LED65,LED64,LED66,LED75, LED76,LED77,LED78,LED63,LED88, LED41,LED102,LED101,LED100,LED 99,LED87,LED27,LED90,LED4,LED5, LED6,LED16,LED51,LED18,LED54,L ED28,LED29,LED30,LED39,LED40,L ED42,LED52,LED53,LED17 on PB	34
	01784978	SML-020MLT	LED	LED15 on PB	1
	02233890	DCB010-TB	DIODE ARRAY	D1,D4 on MB	2
	15339130	MA142WK-(TX)	DIODE ARRAY	DA4,DA3,DA1 on MB. DA2,DA21,DA20,DA19,DA18,DA17, DA16,DA22,DA1,DA14,DA3,DA4,D A5,DA6,DA7,DA8,DA9,DA10,DA11, DA12,DA13,DA15 on PB	22 +3
	01897178	MA142WA-(TX)	DIODE ARRAY	DA6,DA5 on MB	2
RESISTOR					
	15399952	MCR50JZH470 1/2W	CHIP RESISTOR	R43,R48 on JB	2
#	02675401	SR73K2HTE 0.36 OHMJ	MTL.FILM RESISTOR	R63 on MB	1
	01011856	RPC05T 0R0 J	MTL.FILM RESISTOR	C16 on JB. R44,R101,R55,R54,R110,R58,R111,R5 7 on MB. R4,R5,R1,R3,R7,R2,R8,R6 on PB	8 +1 +8
	00566912	RPC05T 220 J	MTL.FILM RESISTOR	R37,R39 on MB	2
	00566967	RPC05T 470 J	MTL.FILM RESISTOR	R45 on MB	1
	00566990	RPC05T 680 J	MTL.FILM RESISTOR	R46 on JB	1
	00567023	RPC05T 101 J	MTL.FILM RESISTOR	R59,R53 on JB. R78,R6,R8,R13,R15,R30,R41,R53,R59, R71,R74,R77 on MB	2 +12
	00567034	RPC05T 121 J	MTL.FILM RESISTOR	R5 on MB. R24,R10,R12,R14,R16,R18,R22,R25,R 28,R30,R32,R34,R36,R38,R40,R20 on PB	16 +1
	00567067	RPC05T 221 J	MTL.FILM RESISTOR	R2,R3,R38 on MB	3
	00567078	RPC05T 271 J	MTL.FILM RESISTOR	R69,R42 on MB	2
	00567112	RPC05T 471 J	MTL.FILM RESISTOR	R22,R24 on MB	2
	00567123	RPC05T 561 J	MTL.FILM RESISTOR	R63 on PB	1
	00567134	RPC05T 681 J	MTL.FILM RESISTOR	R52,R58 on JB	2
	00567156	RPC05T 102 J	MTL.FILM RESISTOR	R95,R51,R52,R76,R98,R104,R62 on MB	7
	00567190	RPC05T 222 J	MTL.FILM RESISTOR	R84,R89 on MB	2
	00567212	RPC05T 332 J	MTL.FILM RESISTOR	R40,R88,R83 on MB	3
	00567245	RPC05T 472 J	MTL.FILM RESISTOR	R93,R9 on MB	2
	00567256	RPC05T 562 J	MTL.FILM RESISTOR	R62,R61 on JB. R80,R87 on MB	2 +2
	00567267	RPC05T 682 J	MTL.FILM RESISTOR	R47,R42 on JB. R61,R68 on MB	2 +2
	00567278	RPC05T 822 J	MTL.FILM RESISTOR	R41,R45 on JB. R64 on MB	2 +1
	00567289	RPC05T 103 J	MTL.FILM RESISTOR	R57,R51 on JB. R70,R65,R92,R49,R43,R36,R4,R79,R5 0 on MB	2 +9
	00567345	RPC05T 333 J	MTL.FILM RESISTOR	R50,R56 on JB	2
	00567378	RPC05T 473 J	MTL.FILM RESISTOR	R97,R99,R66,R91 on MB	4
	00567412	RPC05T 104 J	MTL.FILM RESISTOR	R49,R60,R44,R55 on JB. R56,R86,R90,R60 on MB	4 +4

RESISTOR					
	00567501	RPC05T 474 J	MTL.FILM RESISTOR	R7,R11 on MB	2
	00567556	RPC05T 105 J	MTL.FILM RESISTOR	R67 on MB	1
	01906667	MNR14 EOAB J 100	RESISTOR ARRAY	RA8,RA3,RA4,RA5,RA7,RA9,RA10,RA11,RA13,RA14,RA6 on MB	11
	01906678	MNR14 EOAB J 103	RESISTOR ARRAY	RA17,RA18,RA19,RA16 on MB	4
	01457145	EXBE10C103J	RESISTOR ARRAY	RA1,RA2,RA12,RA15 on MB	4
POTENTIOMETER					
#	02671289	RK12L12C	12M/M ROTARY POT.	VR1 on JB	1
CAPACITOR					
	02345145	RV2-16V101M-R	CHEMICAL CAPACITOR	C145,C147,C140,C92,C91 on MB. C35,C2,C34 on PB	3 +5
	01674612	ECJ1VB1H103K	CERAMIC CAPACITOR	C28,C139,C133,C52,C51,C29,C148 on MB	7
#	01674456	ECJ1VC1H821J	CERAMIC CAPACITOR	C134,C127 on MB	2
	01674701	ECJ1VF1E104Z 0.1UF/16VK	CERAMIC CAPACITOR	C28,C26,C21,C19,C12,C14 on JB. C96,C79,C109,C77,C76,C75,C81,C83,C113,C84,C110,C116,C117,C80,C144,C99,C100,C102,C103,C105,C106,C94,C146,C86,C143,C141,C98,C97,C95,C93,C90,C89,C151,C15,C26,C24,C23,C22	7 +6 +67
	01674712	ECJ1VF1A105Z	CERAMIC CAPACITOR	C74,C20,C78,C19,C18,C31,C16,C21,C13,C12,C11,C10,C9,C8,C7,C6,C5,C4,C1,C17,C42,C70,C34,C33,C50,C71,C46,C72,C73 on MB. C5,C6,C39,C4,C3,C1,C38 on PB	13
	01674334	ECUV1H101JCV	CERAMIC CAPACITOR	C128,C38,C37,C36,C32,C125,C129,C123,C126,C41,C124,C122,C130 on MB C30,C24 on JB,C64,C56,C57,C58,C59,C60,C61,C55,C63,C69,C65,C66,C67,C68,C149,C62,C53,C45,C14,C54 on MB	2 +20
	01674278	ECUV1H470JCV	CERAMIC CAPACITOR	C27,C22 on JB	2
	01674401	ECUV1H331JCV	CERAMIC CAPACITOR	C9,C7 on JB,C104 on MB	2 +1
	01674212	ECUV1H220JCV	CERAMIC CAPACITOR	C44,C43 on MB	2
	01674356	ECUV1H151JCV	CERAMIC CAPACITOR	C150 on MB	1
	01674190	ECUV1H150JCV	CERAMIC CAPACITOR	C112,C111 on MB	2
	01674423	ECUV1H471JCV	CERAMIC CAPACITOR	C35 on MB	1
	02230290	MCH185C102KK	CERAMIC CAPACITOR	C8,C17 on JB	2
	01900834	RA2-16V101M-T2	CHEMICAL CAPACITOR	C10,C13,C18,C20 on JB	4
	02014923	RA2-35V470MT2	CHEMICAL CAPACITOR	C40,C29,C23,C41 on JB	4
	02345101	RV2-16V100M-R	CHEMICAL CAPACITOR	C30,C142,C115,C138,C118,C131,C135,C137 on MB	8
#	02345234	RV2-6V101M-R	CHEMICAL CAPACITOR	C2,C101,C88,C49,C3,C39 on MB	6
	02670734	RV2-16V331MG10	CHEMICAL CAPACITOR	C107,C108 on MB	2
	13639557M0	ECA1CM102B	CHEMICAL CAPACITOR	C85 on MB	1
	01340845	ECA0JM222B	CHEMICAL CAPACITOR	C82 on MB	1
INDUCTOR, COIL, FILTER					
	01346089	SBC3-331-551	CHOKO COIL	L6,L7 on MB	2
	01783590	BLM11B601SPT	FERRITE-BEAD	L3,L5,L1,L6,L7,L4,L2 on JB	7
	01565578	N1608Z601T01	FERRITE-BEAD	L16,L23,L22,L21,L20,L19,L17,L15,L14,L13,L12,L11,L10,L9,L8,L24,L18 on MB	17
	01787056	N1608Z102T01	FERRITE-BEAD	L25 on MB	1
	01783601	BLM21B601SPT	FERRITE-BEAD	L2,L3,L1,L5,L4 on MB	5
	01565612	DSS310-93D223S50	EMI FILTER	FL1 on MB	1
CRYSTAL, RESONATOR					
#	02670967	CX-49G 7.056MHZ	CRYSTAL	X1 on MB	1
#	02670978	CX-49G 24.576MHZ	CRYSTAL	X2 on MB	1
ENCODER					
#	02671212	EVE GB1 F15 24B	ROTARY ENCODER	EN1 on PB	1
CONNECTOR					
#	02671201	26FMN-STK	CONNECTOR	CN1 on PB	1
#	02670912	26FMN-SMT-TF	CONNECTOR	CN2 on MB	1
	13429298	51048-0900(9P)	CABLE HOLDER	CN2 on JB	1
	13369604	52147-0910(9P)	WIRE TRAP	CN4 on MB	1
	13379107	SLP8R-5	CONNECTOR	CN3 on MB	1

WIRING, CABLE

#	02670889	BAN CARD	BNCD-P=1.00-K-26-80	1
---	----------	----------	---------------------	---

PICKUP,SENSOR

#	71898145		XY-PAD ASSY	1
---	----------	--	-------------	---

SCREWS

	40011490	SCREW M3x6	PAN MACHINE W/PW BZC	5
	40011301	SCREW 3x6	BINDING TAPTITE P FE BZC	32
	40011101	SCREW 3x8	BINDING TAPTITE B BZC	1
	40011312	SCREW 3x8	BINDING TAPTITE P BZC	3
	40011501	SCREW M3x8	PAN MACHINE W/SW+PW BZC	4
	40012312	SCREW 3x12	BINDING TAPTITE B FE BZC	1
#	22155569	STANDOFF	M3-L5.5-H19.5	2

PACKING

#	02670723	PACKING CASE COLOR		1
#	02670689	PAD L		1
#	02670690	PAD R		1
#	02670701	ADAPTOR PAD		1
#	02678956	OUTER PACKING CASE		1

MISCELLANEOUS

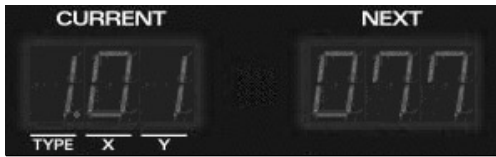
	40122812	ACETATE TAPE	NITTO NO.5 BLK W15MM 30M	15
	22360712	CORD HOOK	236-712	1
	13429298	CABLE HOLDER	51048-0900(9P) CN2 on JB	1
	22175349	LEAF SPRING		1
	01120545	LEAF		2
	12359137	RUBBER FOOT	SJ-5012 BLK	4

ACCESSORIES (STANDARD)

#	71898089	OWNER'S MANUAL SET	JAPANESE	1
#	71898212	OWNER'S MANUAL SET	ENGLISH	1
△	00905756	AC ADAPTOR	ACI-100C	1
△	00905767	AC ADAPTOR	ACI-120C	1
△	01018312	AC ADAPTOR	ACI-230C	1
△	01901578	AC ADAPTOR WITHOUT AC CORD	PSB-1U UNIVERSAL	1
△	01903356	AC CORD SET	230V 1.0M FOR PSB	1
△	01903367	AC CORD SET	240V 1.0M FOR PSB	1
△	00905234	EURO CONVERTER PLUG	ECP01-5A (PLUG for 230 V)	1
	40232334	WARRANTY CARD	(JAPAN ONLY)	1

CHECKING THE VERSION NUMBER

You can select any test item by pressing the [VELOCITY] button while holding down the [ENTER] button.
The 7-segment display on the left shows the version number of the program.

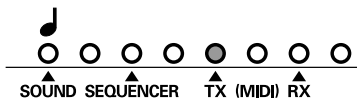


After checking is completed, turn off the machine.

USERS DATA SAVE AND LOAD

Recording the data of all D2 data on an external sequencer

1. Press [SYSTEM] several times to access the MIDI transmission setting display.



2. Press [ENTER] to access the Bulk Dump setting display.



3. Turn [VALUE] to select either "ALL" (transmit all data).
4. Press [ENTER].
The display will ask "SurE" (are you sure you want to proceed with the transmission?)



* To cancel the operation, press [EXIT].

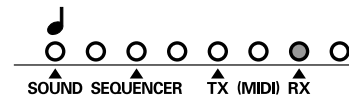
5. Set your connected MIDI device so it is ready to receive data.
6. Press [ENTER] to begin the transmission.



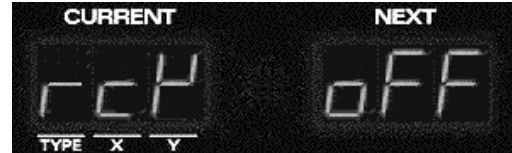
Once the data transmission has been completed, the previous display will reappear.

Restoring data for all D2 data from a MIDI sequencer back to the D2

1. Press [SYSTEM] several times to access the MIDI reception setting display.



2. Press [ENTER] several times to access the Bulk Load setting display.



3. Turn [VALUE] to select either "ALL" (receive all data).
4. Press [ENTER].
The display will ask "SurE" (are you sure you want to proceed with the reception?).



* To cancel the operation, press [EXIT].

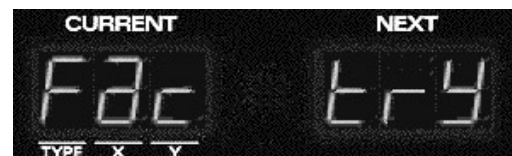
5. Press [ENTER] and reception will begin.



6. Transmit data from the connected MIDI device.
Once the data reception has been completed, the previous display will reappear.

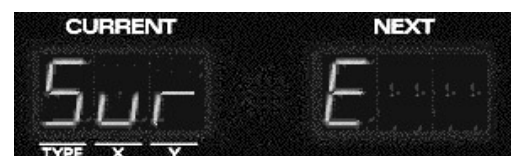
RESTORING THE FACTORY SETTINGS

1. Hold down [WRITE] and press [SYSTEM].
"Factory" will blink in the display.



2. Press [ENTER].
The display will ask "SurE" (are you sure you want to proceed with the reset?).

* If you decide not to execute the operation, press [EXIT].



3. Press [ENTER].
The display will indicate "Factory," and the Factory Reset operation will be executed.

Once the Factory Reset is complete, the D2 will be in the same state as it is normally after being powered-up.

* Approximately 2 minutes are required for the Factory Reset operation.

SYSTEM SOFTWARE UPDATE PROCEDURE

Overview

The D2 employs a 16Mbit flash memory for the system program and a 4Mbit flash memory for user data.

Up data (control program) of the flash memory is stored in the CPU (SH-2).

Data for updating is contained in 32 SMF files.

You can update the system program version in the following manner.

Using an MIDI cable, connect the D2 to a programmable logic controller (such as an MC-80) that is capable of reproducing SMF data and then load the data.

Updating is only available via MIDI.

Note:

After updating is completed, you must execute factory reset.

Since this operation resets the user data, be sure to backup the data before executing factory reset.

For details, refer to the section covering the data saving and loading procedure.

Equipment Used for Updating

The following must be prepared before proceeding with updating.

A programmable logic controller capable of reproducing SMF data (such as an MC-80).

MIDI cable

Two SMF data disks (2HD) for updating (F#17041065)

Each disk contains the following files.

The file names remain the same even after the version number is changed.

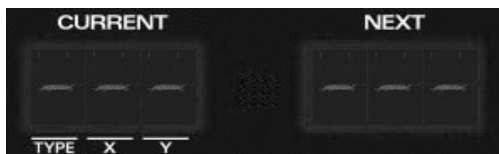
Update Disk (1/2) Update Disk (2/2)

D0000000.MID	S0000000.MID
D0000001.MID	S0000001.MID
D0000002.MID	S0000002.MID
D0000003.MID	S0000003.MID
D0000004.MID	S0000004.MID
D0000005.MID	S0000005.MID
D0000006.MID	S0000006.MID
D0000007.MID	S0000007.MID
D0000008.MID	S0000008.MID
D0000009.MID	S0000009.MID
D0000010.MID	S0000010.MID
D0000011.MID	S0000011.MID
D0000012.MID	S0000012.MID
D0000013.MID	S0000013.MID
D0000014.MID	S0000014.MID
D0000015.MID	S0000015.MID
D0000016.MID	S0000016.MID

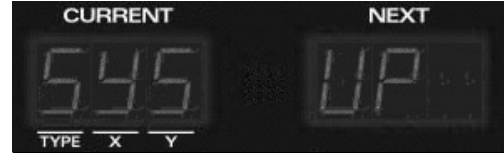
Updating Procedure

1. Connect the power cords of the respective equipment and then make sure that power is turned on.
2. Check the prior-to-update version number of the D2.
3. Connect MIDI OUT of the programmable logic controller to MIDI IN of the D2 using the MIDI cable.
4. Turn the D2's power on while holding down the [ENTER], [RPS] and [ASSIGN1] buttons at the same time.

"—" will be displayed on the 7-segment LED.



5. Hit the [2] and [5] buttons of [PART SELECT/MUTE] in this order. "SYSUP" will be displayed on the 7-segment LED followed by "000000", indicating that the standby-for-updating mode is turned on.



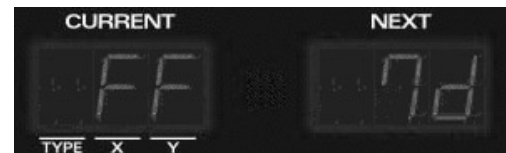
6. Load the SMF data for updating from the programmable logic controller to the D2.
Thirty-two files from D0000000.MID to S0000016.MID will be reproduced in the numbered order.
7. As long as loading is continued, the "000000" display on the 7-segment LED flashes and the "BEAT SCAN LED" is lights up from the left to the right.
Loading of one file is completed as the flashing display on the 7-segment LED is replaced with "—".
Loading of a single SMF file take about 1 minute.
8. When all 32 files have been loaded, updating is completed.
After making sure that updating has been completed, execute factory reset by turning on the D2's power again.
9. Make sure that the following updating ends successfully.

Check to confirm normal end of updating:

1. Make sure that the version number after updating and the check sum are correct.
2. Turn the D2's power on while holding down the [EXIT], [RPS] and [ASSIGN1] buttons at the same time.
"SYS—" will be displayed on the 7-segment LED.

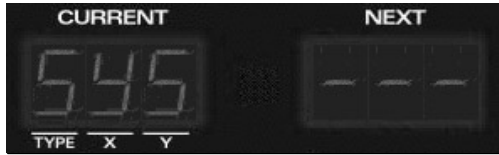


3. After a short while, the 7-segment LED will display "SYS000" and the check sum ("FF 7d", for instance) alternately.



If the 7-segment LED displays "SYS—" and the check sum ("FF 7d", for instance) alternately, updating has not ended successfully.

Repeat the updating procedure from the first step.



Actions to be taken when normal startup of the D2 is disabled

Overview

The D2 is equipped with a flash memory for saving user data.

If you inadvertently turn the D2's power off while writing data to the flash memory, normal startup will be disabled (the display freezes on the start screen) depending on the seriousness of the damage done to the flash memory.

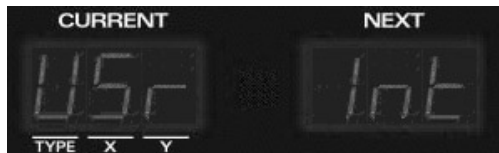
Since the problem cannot be fixed by simply executing updating, initialize the flash memory first and then execute updating to restore the normal state.

Note, however, that the restoring operation detetes all user data.

1. Turn the D2's power on while holding down the [ENTER], [RPS] and [ASSIGN1] buttons at the same time.

The 7-segment LED will display "—".

2. Press the [1] and [7] buttons of [PART SELECT/MUTE] in this order. "UsrInt" will be displayed on the 7-segment LED, and the [R] to [7] LEDs of [PART SELECT/MUTE] will light up sequentially.



3. When the 7-segment LED display becomes "000000" and all [PART ELECT/MUTE] LEDs are lit, initialization of the flash memory is complete.

It takes about 10 seconds.



4. Turn the D2's power off and on again to start automatic factory reset. After factory reset, the D2 will automatically start up from the same screen as when power is turned on.
5. Proceed with updating after initializing the flash memory according to the above procedure.

TEST MODE

Required Items

1. MIDI Cable
2. Monitor Speaker
3. Audio Cable

How to Enter the Test Mode

1. Connect a monitor speaker to OUTPUT.
2. Turn on the unit's power while pressing both the [VELOCITY] and [ENTER] buttons.

Basic Operations in the Test Mode

The basic operations are as follows:

[FWD] or [PLAY]: Go to the next Test screen.

[BWD]: Go to the last Test screen.

[REC]: Perform sound or other test.

[HOLD]+[EXIT]: Interrupt switch or other test.

You can select any test item by pressing the [D-FIELDMODE] button while holding down the [HOLD] button.

The test items you can select are as follows:

The Switch Test Items

[RPS]	VERSION CHECK
[ADLIB]	DEVICE TEST
[VINYL-FX]	MIDI TEST
[ASSIGN1]	D-FIELD TEST
[FILTER]	SW/LED TEST
[MPX]	ENCODER TEST
[X-FADER]	SOUND TEST
[ASSIGN2]	EFFECT TEST
[VINYL]	FACTORY RESET

Test Items

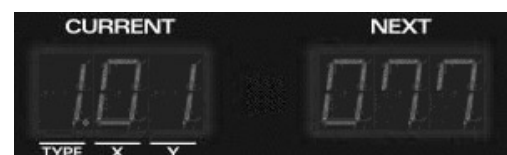
The test consists of the following nine items:

1. VERSION CHECK
2. DEVICE TEST
3. MIDI TEST
4. D-FIELD TEST
5. SW/LED TEST
6. ENCODER TEST
7. SOUND TEST
8. EFFECT TEST
9. FACTORY RESET

How to Go Through the Test Mode

1. VERSION CHECK

The system starts to check the version number automatically after you entered the Test Mode.



The 7-segment display on the left shows the version number of the program.

After checking is completed, the system goes to the next test item automatically.

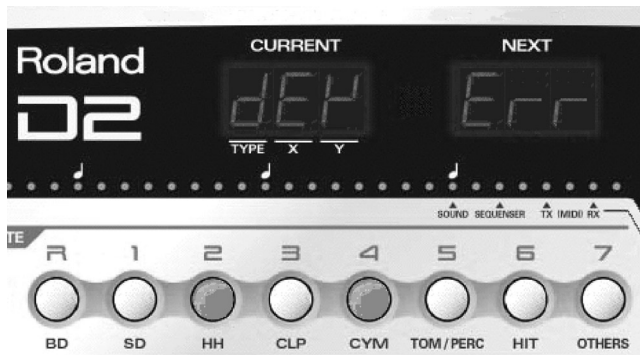
2.DEVICE TEST

This item tests the devices mounted on the main board.
 If the results were normal, the system goes to the next test item automatically.
 If the results were abnormal, the LED in the [PART SELECT/MUTE] section lights up indicating the error number of the abnormal device, and the test is interrupted.

The LEDs light up in the [PART SELECT/MUTE] section to indicate the abnormal devices as follows:

LED	Corresponding device
1	CPU's internal RAM (IC3)
2	D-RAM (IC7)
3	Program pattern ROM (IC4)
4	User memory (IC5)

Example: If the D-RAM (IC7) and the user memory (IC5) are defective.

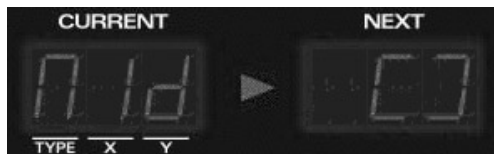


3.MIDI TEST

This item tests the MIDI connections.
 Before the MIDI cable is connected



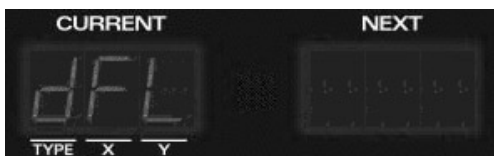
Connect MIDI IN and MIDI OUT of the unit with a MIDI cable.
 The 7-segment display shows the following:
 After the MIDI cable is connected



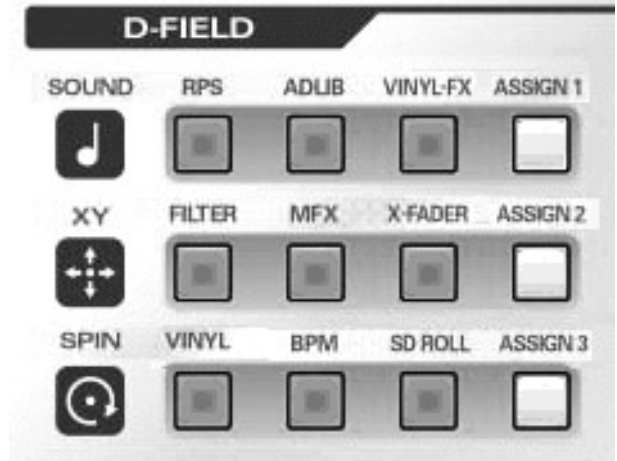
Check to see that the [BEAT LED] blinks alternately between red and green while MIDI IN is connected to MIDI OUT.
 Removing the MIDI cable to invoke MIDI-offline causes the system goes to the next test item automatically.

4.D-FIELD TEST

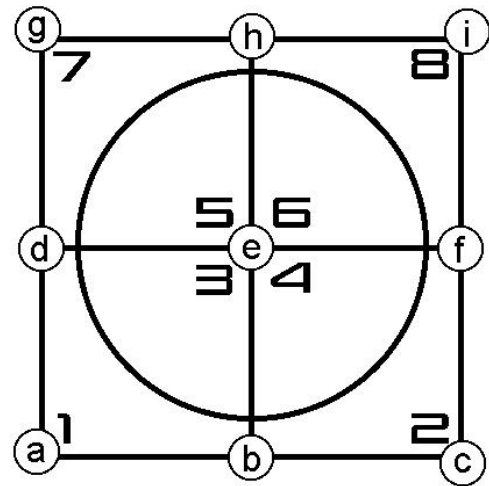
This item tests the D-FIELD operation.



The nine D-FIELD MODE LEDs light up when you enter this test item.



"—" is displayed while you keep your fingers off D-FIELD.
 If you operate D_FILED, the 7-segment indicates the X and Y coordinates with numbers 0-127.
 If you touch any of the nine D-FIELD sections (refer to the figure below), the LED of the corresponding D-FIELD MODE is turned off.



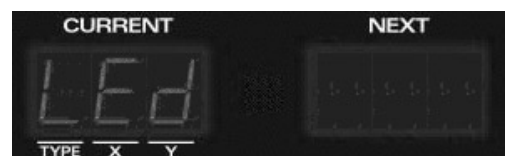
The D-FIELD sections correspond to the following LED:

Section D-FILED	Corresponding LED
a	[VINYL]
b	[BPM]
c	[SD ROLL]
d	[FILTER]
e	[MFX]
f	[X-FADER]
g	[RPS]
h	[ADLIB]
i	[VINYL-FX]

If the LEDs of all the corresponding D-FIELD MODES are turned off, the system considers that the results to be normal, and goes to the next test item automatically.

5.SW/LED TEST

This item tests the operations of all the LEDs except [BEAT LED], [BEAT SCAN LED] and [7-Segment LED] and switches.



Press all the switches one by one.
 As you press each switch a sound is heard and its corresponding number is

displayed until you release it.

When you press a switch with an LED, the LED is turned off.

After you release the switch, the number of the remaining unchecked switches is displayed.

Special correspondence of switches and LEDs

Switch	LED
[DISPLAY]	[BPM]
[EXIT]	[PATCH]
[ENTER]	[D-FIELD]

The system goes to the next test item automatically after you have pressed all the switches.

6.ENCODER TEST

This item tests the encoder, [BEAT SCAN LED] and [7-segment LED].



Turn the encoder clockwise.

Check to see that all the [BEAT SCAN LEDs] light up one by one from the left as you turn the encoder.

Check to see that all the [7-segment LEDs] light up one by one from the left.

Check to see that the [BEAT SCAN LEDs] at both ends blink.

Press the [PLAY] or [FWD] button, and the system goes to the next test item automatically.

7.SOUND TEST

This item tests the sound output from OUTPUT L/R.

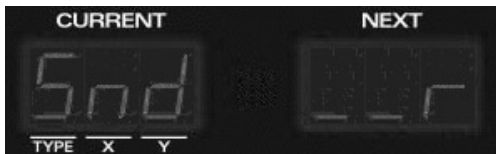
Check to see that Lch and Rch output sine and triangular waves, respectively.



Press the [REC] or [ENTER] button, and check to see that the sine wave is output only from Lch.



Press the [REC] or [ENTER] button, and check to see that the triangular wave is output only from Rch.



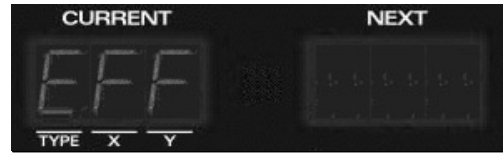
Press the [REC] or [ENTER] button, and check to see that OUTPUT L/R outputs no signals.



Press the [PLAY] or [FWD] button, and the system goes to the next test item automatically.

8.EFFECT TEST

This item tests the internal RAM of the sound chip (IC12) and the DRAM for effects.



Check to see that a single tone is output.

Press the [REC] or [ENTER] button, and the single tone is output again.

Press the [PLAY] or [FWD] button, and the system goes to the next test item automatically.

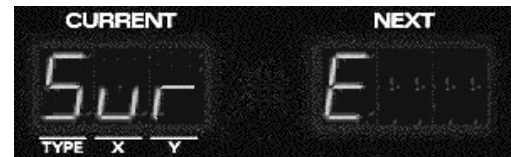
9.FACTORY RESET

This item restores the settings made when the unit was shipped from the factory.



* If you don't want to start FACTORY RESET, turn off the unit's power now. Press the [REC] button, and "SurE" is displayed.

* If you don't want to go any further and cancel FACTORY RESET, press the [EXIT] button.

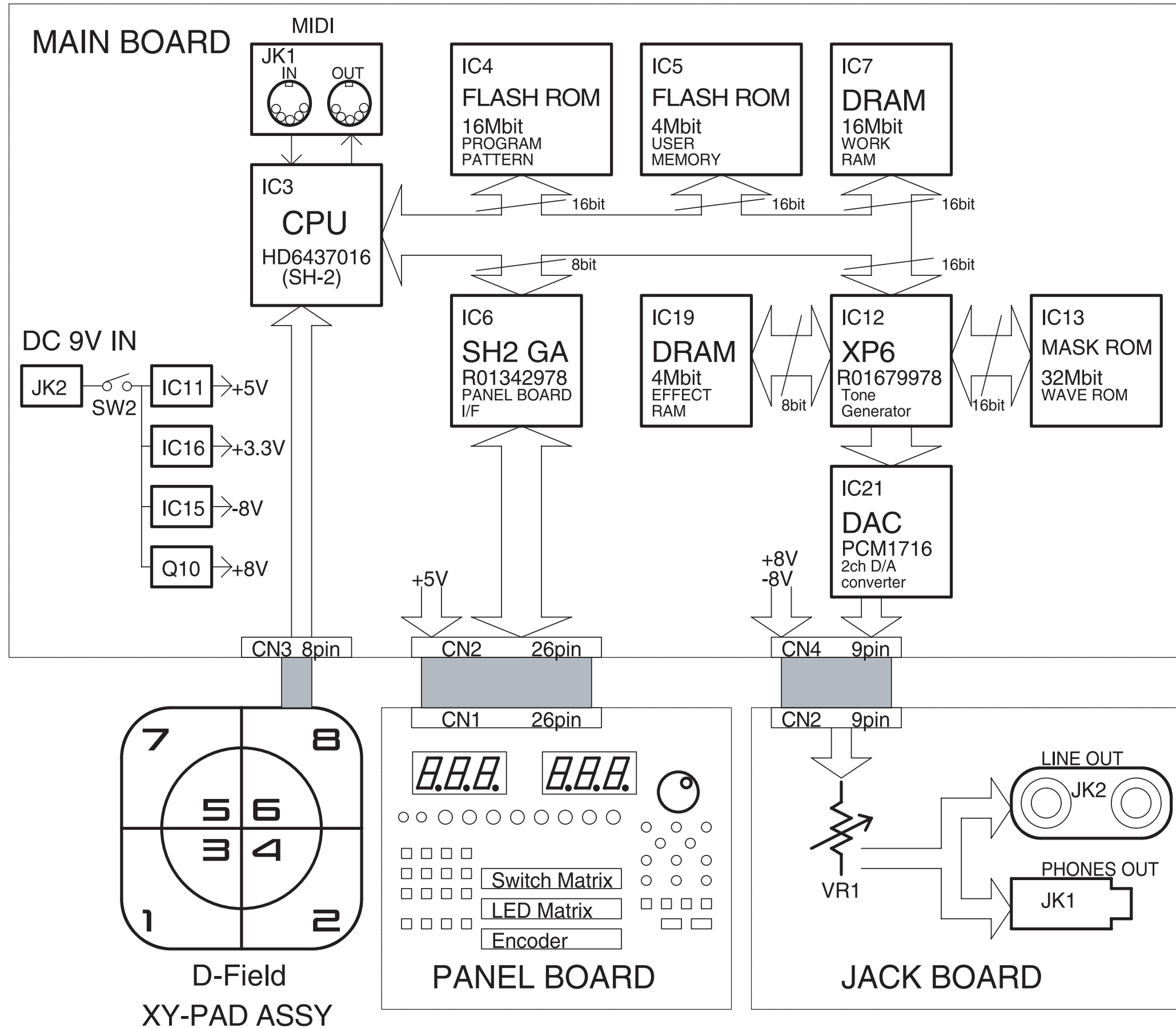


Press the [ENTER] button, and "Factory" is displayed and FACTORY RESET is executed.

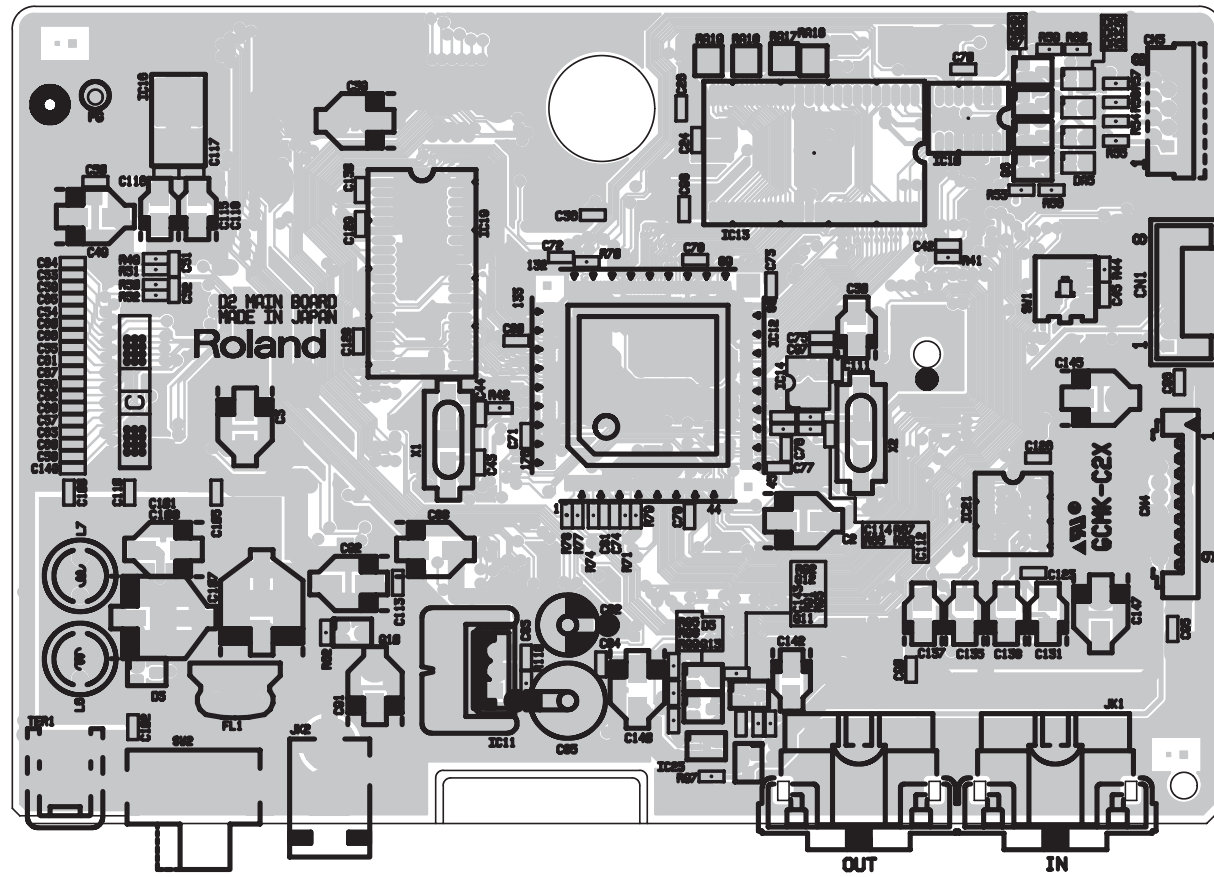
* FACTORY RESET takes about 2 minutes to complete.

After FACTORY RESET is completed, the system reboots automatically and shows the same screen as that displayed when the unit was turned on.

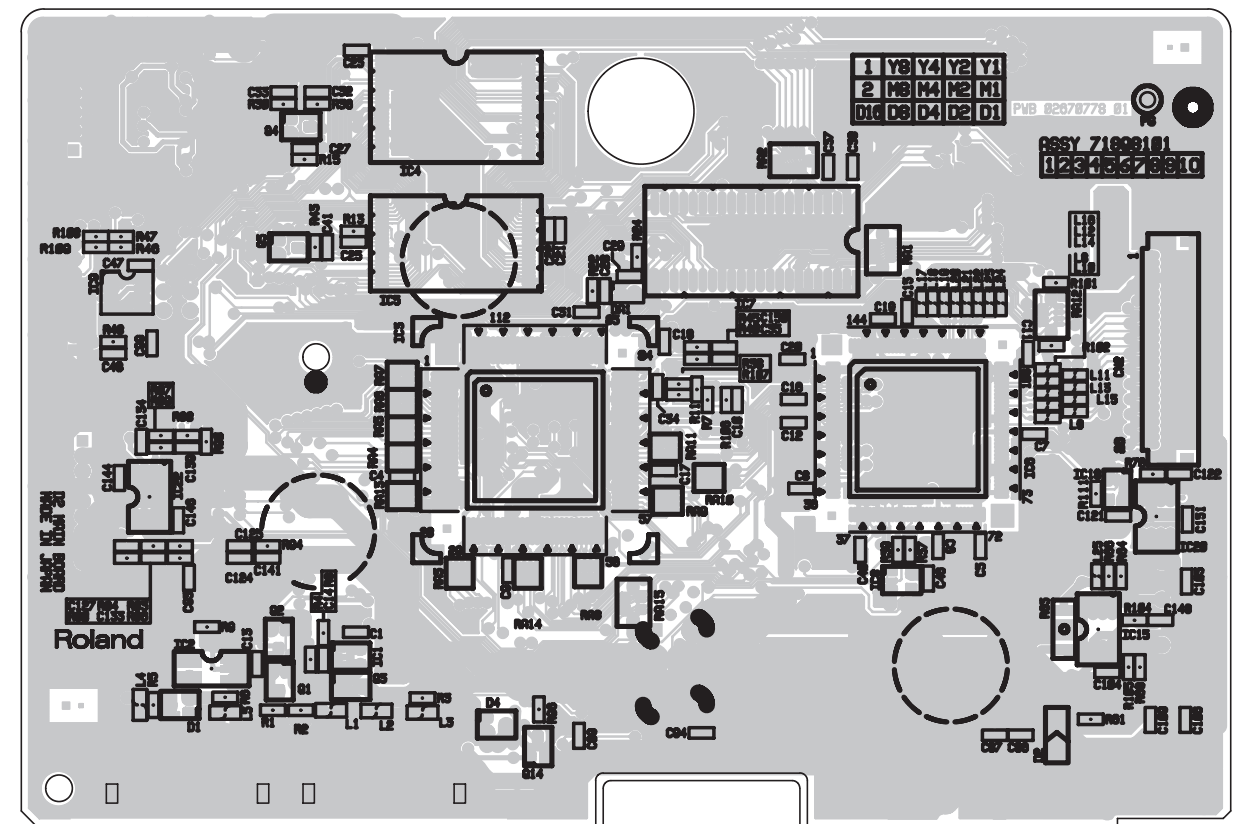
BLOCK DIAGRAM



CIRCUIT BOARD(MAIN)

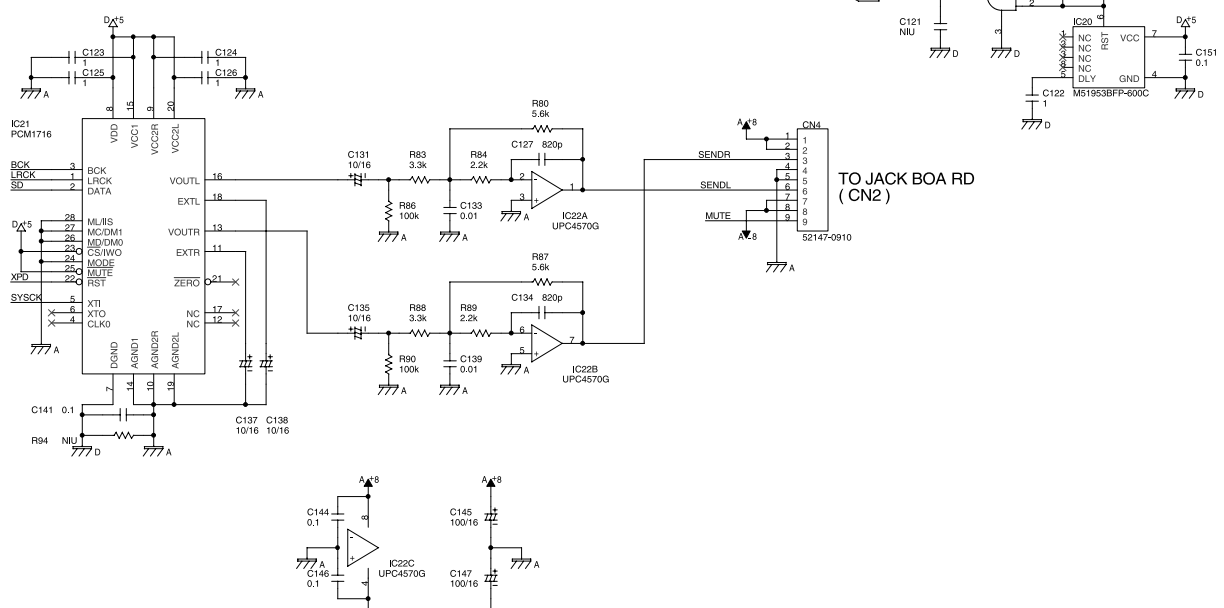
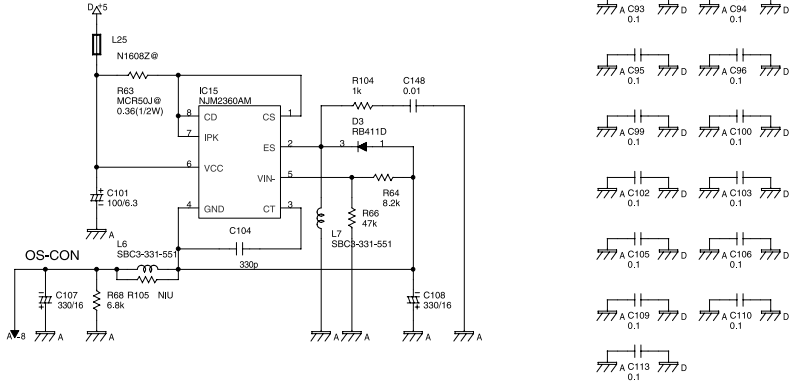
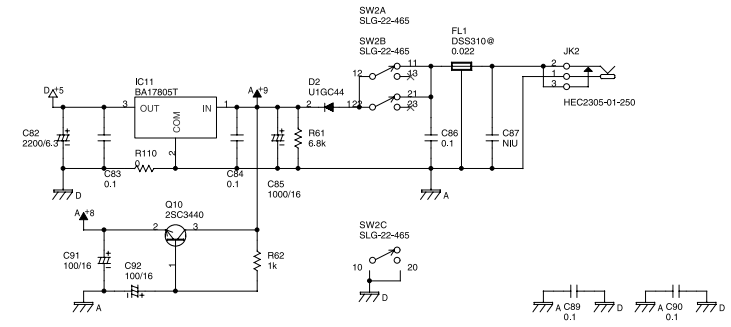
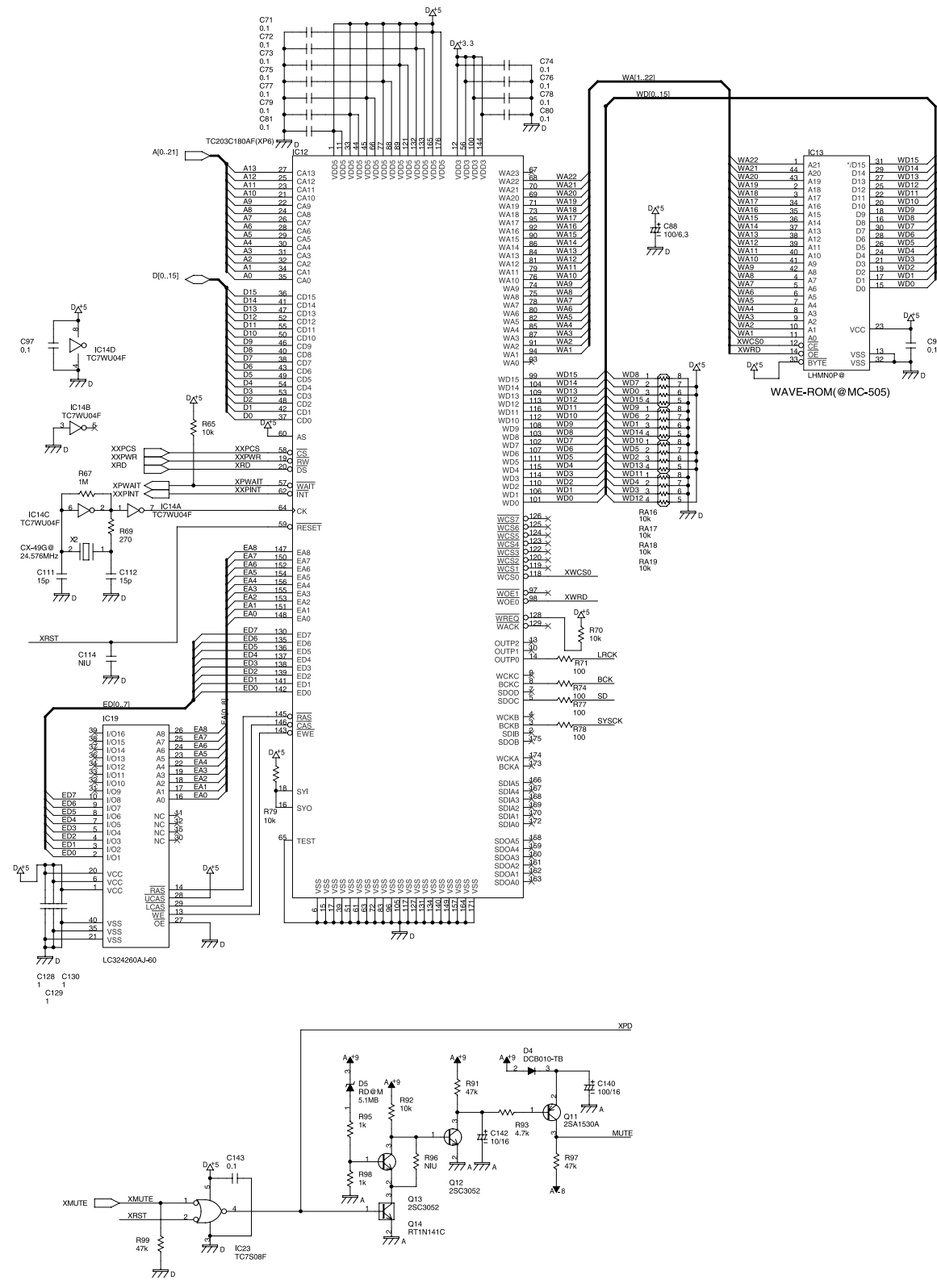


View from component side.

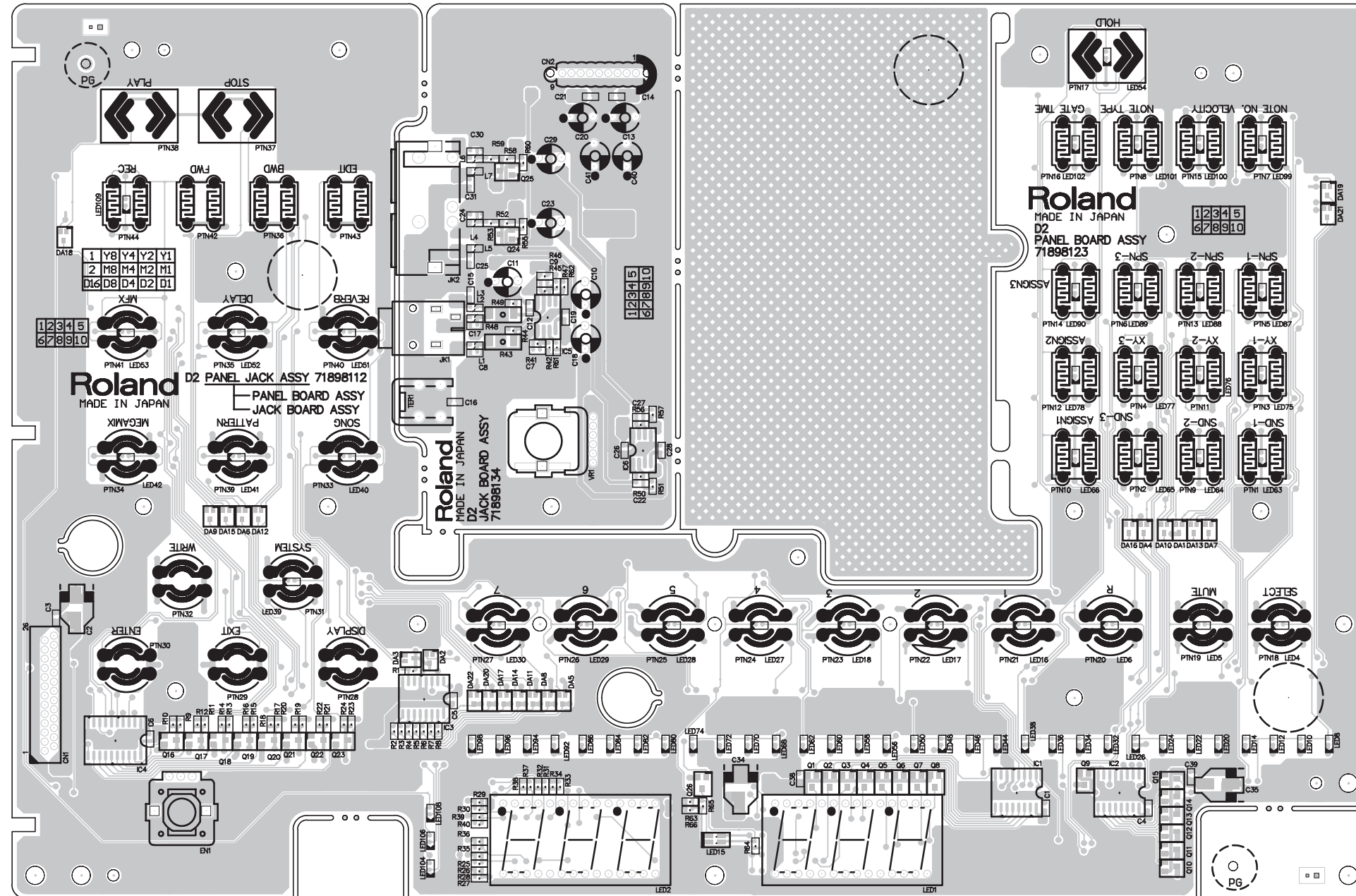


View from foil side.

CIRCUIT DAIGRAM(MAIN 2/2)

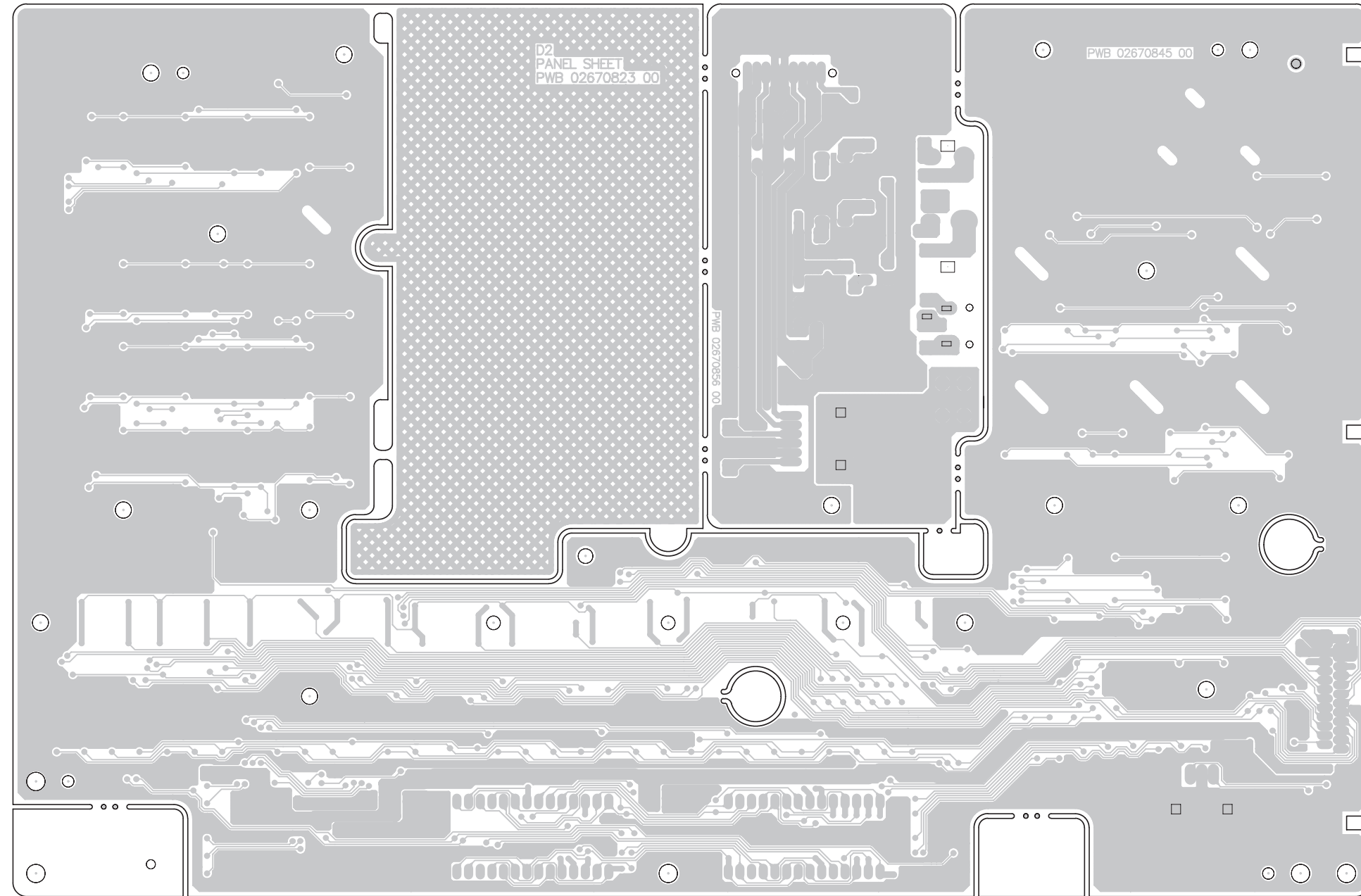


CIRCUIT BOARD(PANEL/JACK)



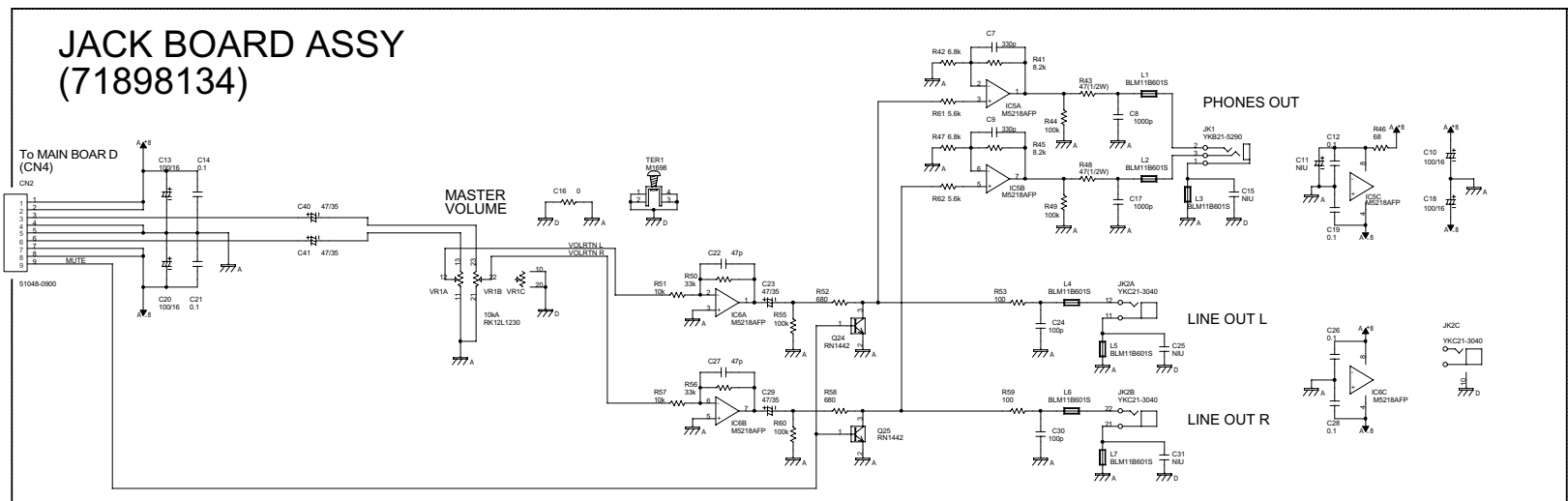
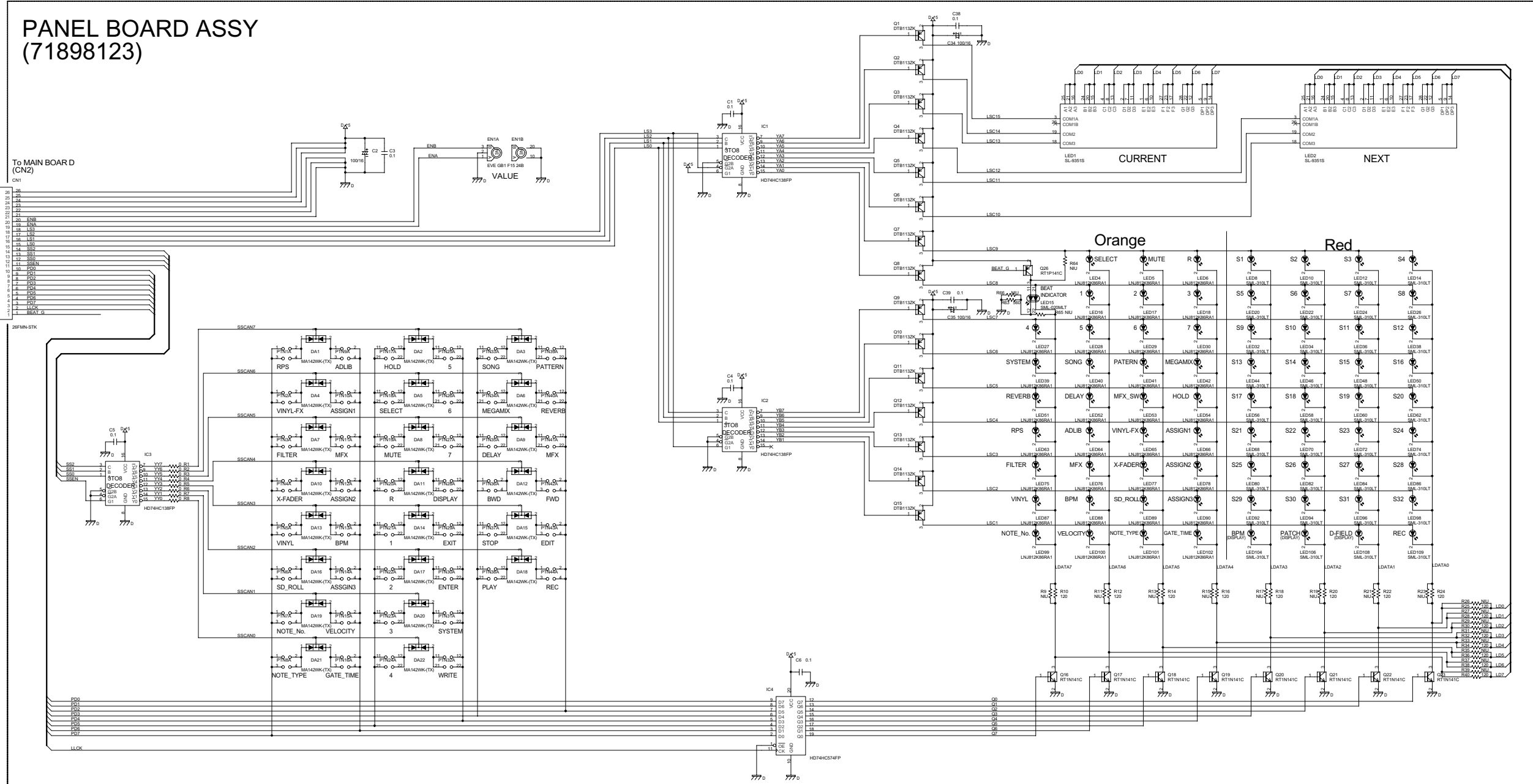
View from component side.

CIRCUIT BOARD(PANEL/JACK)



View from foil side.

CIRCUIT DIAGRAM(PANEL/JACK)



ERROR MESSAGES

Error Message List

Display	Meaning	Action
	There is a problem with the internal system.	Please contact your dealer or a nearby Roland service center.
	It is possible that the contents of user memory have been lost.	Please perform the Factory Reset operation. If this does not resolve the problem, contact your dealer or a nearby Roland service center.
	A button held down since power-up exists.	Be careful not to leave the buttons held down (such as being caught between the panels).
	That operation cannot be performed because the D2 is now playing back.	Press [■] to stop playback before performing the operation.
	That operation cannot be performed because the pattern has been mega-mixed.	Save the pattern, or re-select the pattern.
	The data cannot be registered in a RPS set (or MEGAMIX set) because there are multiple un-muted parts.	Decide on one part of the phrase that you wish to register, and mute all of the remaining parts.
	There is no item to edit.	(This will be displayed if there is no editable parameter when you press [EDIT].)
	Playback is not possible because no performance data has been recorded in the pattern.	Select a pattern that contains data.
	No further pattern recording is possible because the maximum number of notes recordable in one pattern has been exceeded.	Delete unwanted data from the pattern being recorded.
	No further song recording is possible because the maximum number of patterns recordable in one song has been exceeded.	Up to 50 patterns can be recorded in one song. No more patterns than this can be recorded.
	The pattern cannot be saved because of insufficient user memory.	Either initialize unwanted patterns, or save the data on an external sequencer.

Display

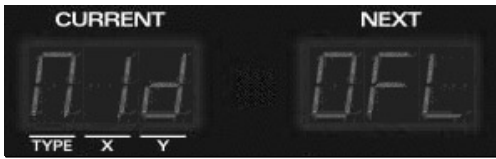
Meaning

Action



Since a large amount of MIDI messages was received in a short time (or because there was too much pattern data), the D2 was not able to process the MIDI messages.

Reduce the amount of MIDI messages transmitted to the D2.



There is a problem with the MIDI cable connection.

Make sure that the MIDI cable has not been disconnected or broken.